



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 20, 2020 – 06:07 PM BST

PDB ID : 4KZX
Title : Rabbit 40S ribosomal subunit in complex with eIF1.
Authors : Lomakin, I.B.; Steitz, T.A.
Deposited on : 2013-05-30
Resolution : 7.81 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

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

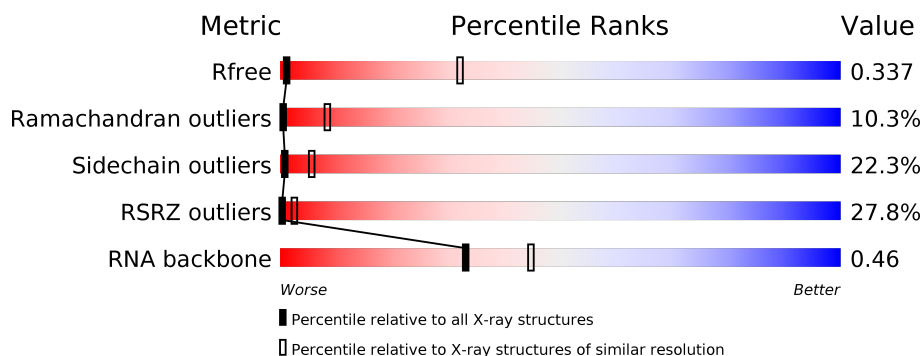
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 7.81 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1005 (11.50-3.90)
Ramachandran outliers	138981	1003 (11.50-3.90)
Sidechain outliers	138945	1003 (11.50-3.86)
RSRZ outliers	127900	1004 (9.50-3.80)
RNA backbone	3102	1079 (11.50-3.00)

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

Mol	Chain	Length	Quality of chain
1	A	295	<div> <div>6%</div> <div> <div>47%</div> <div>20%</div> <div>• •</div> <div>29%</div> </div> </div>
2	B	264	<div> <div>30%</div> <div> <div>56%</div> <div>22%</div> <div>•</div> <div>19%</div> </div> </div>
3	C	278	<div> <div>2%</div> <div> <div>57%</div> <div>21%</div> <div>• •</div> <div>19%</div> </div> </div>
4	D	243	<div> <div>32%</div> <div> <div>62%</div> <div>26%</div> <div>5%</div> <div>7%</div> </div> </div>
5	E	263	<div> <div>35%</div> <div> <div>67%</div> <div>29%</div> <div>•</div> </div> </div>
6	F	204	<div> <div>15%</div> <div> <div>67%</div> <div>21%</div> <div>• •</div> <div>6%</div> </div> </div>

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

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Mol	Chain	Length	Quality of chain
32	f	156	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>13%19%17%8%54%</div></div>
33	g	317	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>14%74%20%</div></div>
34	i	1863	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>24%7%64%25%</div></div>
35	l	113	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>3%47%25%25%</div></div>

2 Entry composition [i](#)

There are 35 unique types of molecules in this entry. The entry contains 77211 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 40S ribosomal protein SA.

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

- Molecule 2 is a protein called 40S ribosomal protein S3a.

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

- Molecule 3 is a protein called 40S ribosomal protein S2.

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

- Molecule 4 is a protein called 40S ribosomal protein S3.

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

- Molecule 5 is a protein called 40S ribosomal protein S4X.

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

- Molecule 6 is a protein called 40S ribosomal protein S5.

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

- Molecule 7 is a protein called 40S ribosomal protein S6.

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

- Molecule 8 is a protein called 40S ribosomal protein S7.

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

- Molecule 9 is a protein called 40S ribosomal protein S8.

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

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

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

- Molecule 11 is a protein called 40S ribosomal protein S10.

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

- Molecule 12 is a protein called 40S ribosomal protein S11.

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

- Molecule 13 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	124	Total	C	N	O	S	0	0	0
			950	594	169	179	8			

- Molecule 14 is a protein called 40S ribosomal protein S13.

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

- Molecule 15 is a protein called 40S ribosomal protein S14.

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

- Molecule 16 is a protein called 40S ribosomal protein S15.

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

- Molecule 17 is a protein called 40S ribosomal protein S16.

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

- Molecule 18 is a protein called 40S ribosomal protein S17.

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

- Molecule 19 is a protein called 40S ribosomal protein S18.

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

- Molecule 20 is a protein called 40S ribosomal protein S19.

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

- Molecule 21 is a protein called 40S ribosomal protein S20.

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

- Molecule 22 is a protein called 40S ribosomal protein S21.

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

- Molecule 23 is a protein called 40S ribosomal protein S15A.

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

- Molecule 24 is a protein called 40S ribosomal protein S23.

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

There is a discrepancy between the modelled and reference sequences:

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

- Molecule 25 is a protein called 40S ribosomal protein S24.

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

- Molecule 26 is a protein called 40S ribosomal protein S25.

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

- Molecule 27 is a protein called 40S ribosomal protein S26.

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

- Molecule 28 is a protein called 40S ribosomal protein S27.

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

- Molecule 29 is a protein called 40S ribosomal protein S28.

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

- Molecule 30 is a protein called 40S ribosomal protein S29.

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

- Molecule 31 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	e	59	Total	C	N	O	S	0	0	0
			473	293	104	75	1			

- Molecule 32 is a protein called 40S ribosomal protein S27A.

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

- Molecule 33 is a protein called 40S ribosomal protein RACK1.

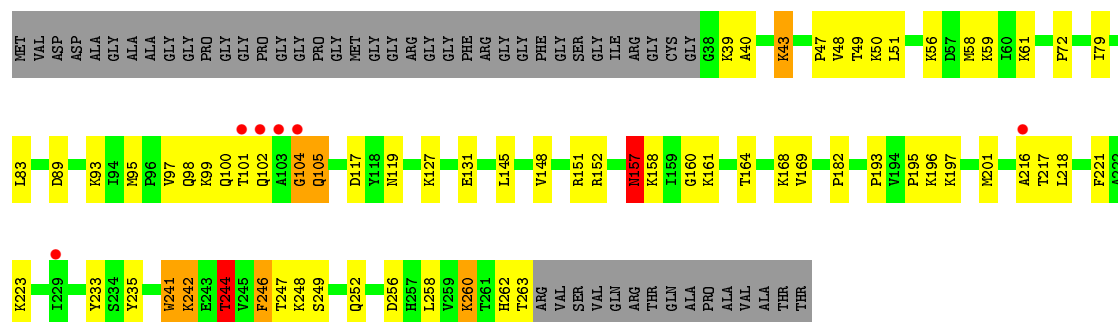
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	g	313	Total	C	N	O	S	0	0	0
			2436	1535	424	465	12			

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

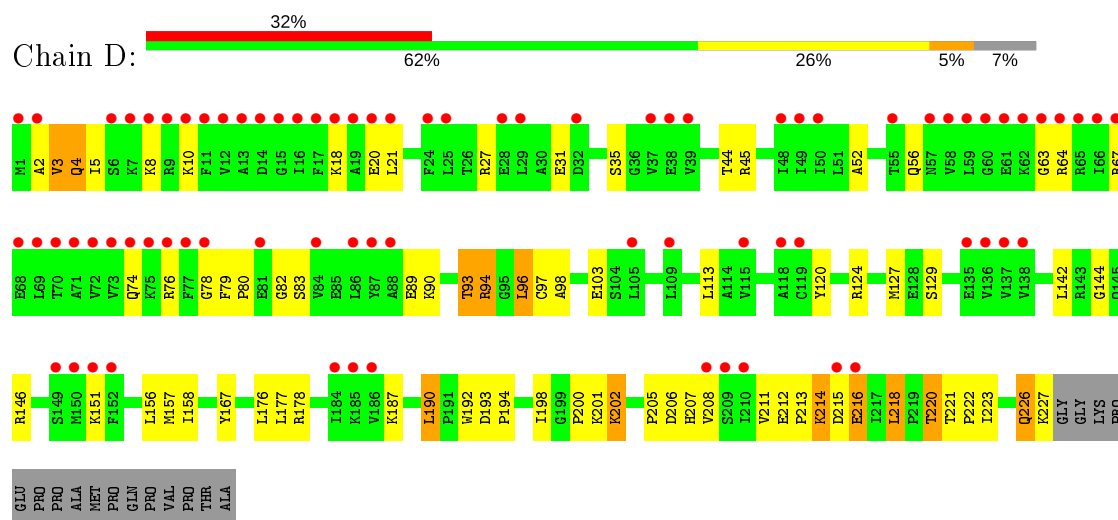
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	i	1797	Total	C	N	O	P	0	0	0
			37514	16712	6633	12373	1796			

- Molecule 35 is a protein called Eukaryotic translation initiation factor 1.

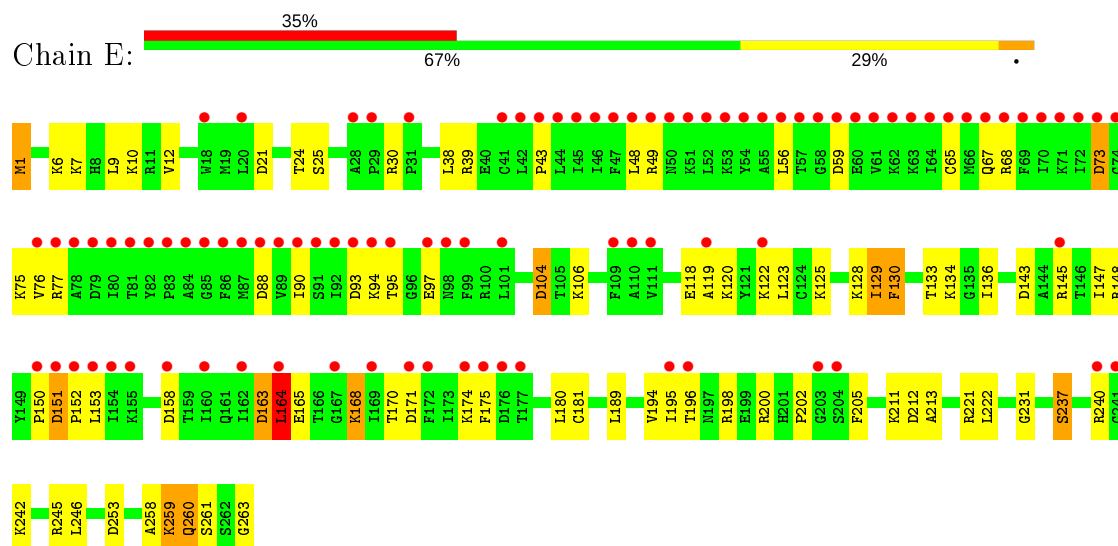
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	l	85	Total	C	N	O	S	0	0	0
			691	438	125	126	2			



• Molecule 4: 40S ribosomal protein S3

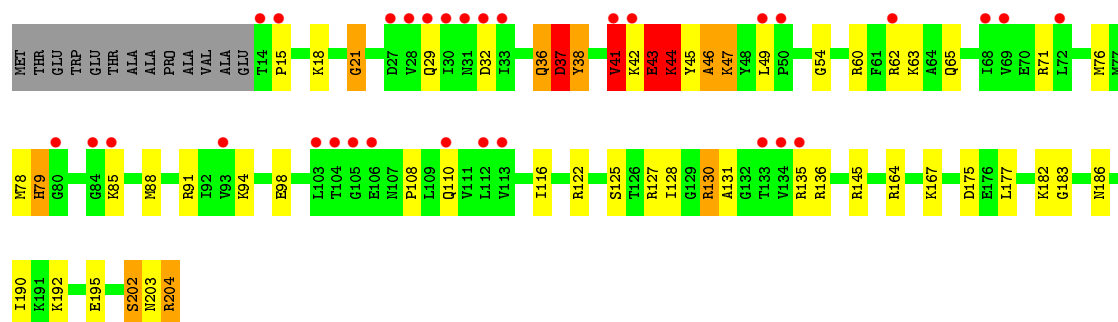


• Molecule 5: 40S ribosomal protein S4X

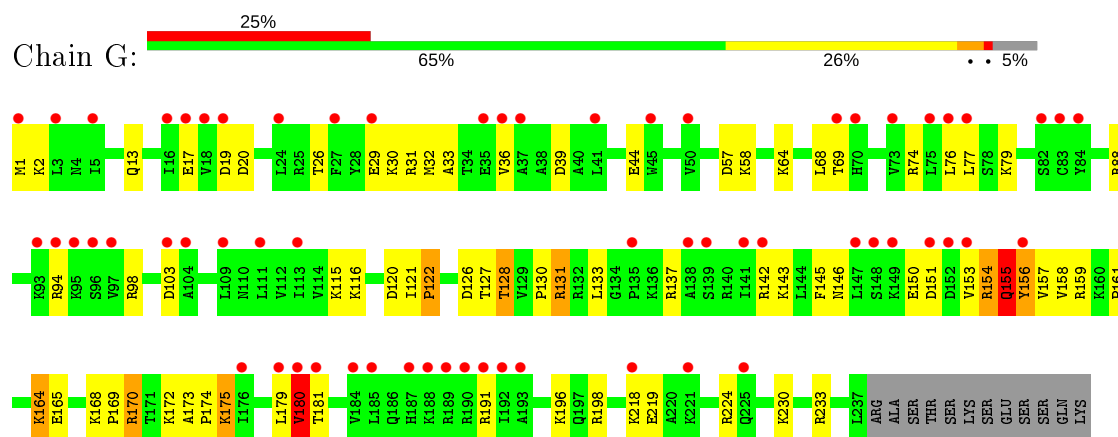


• Molecule 6: 40S ribosomal protein S5

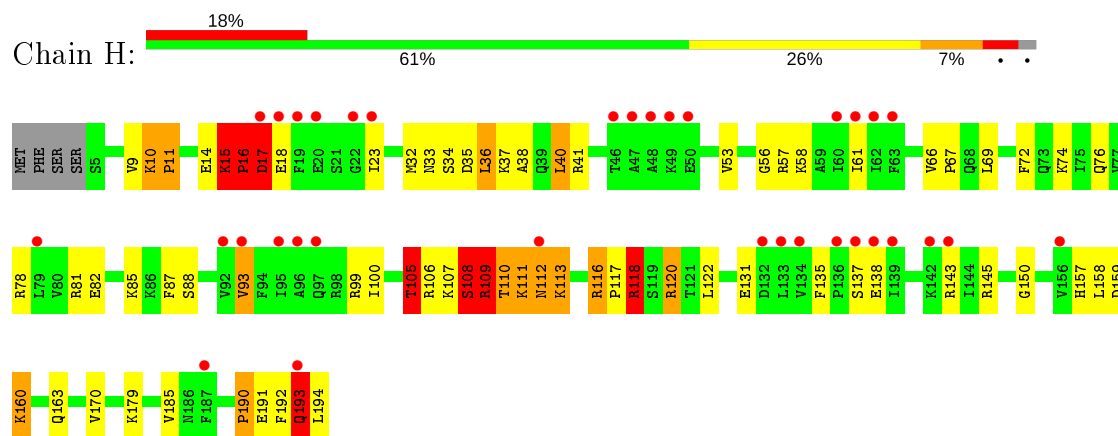




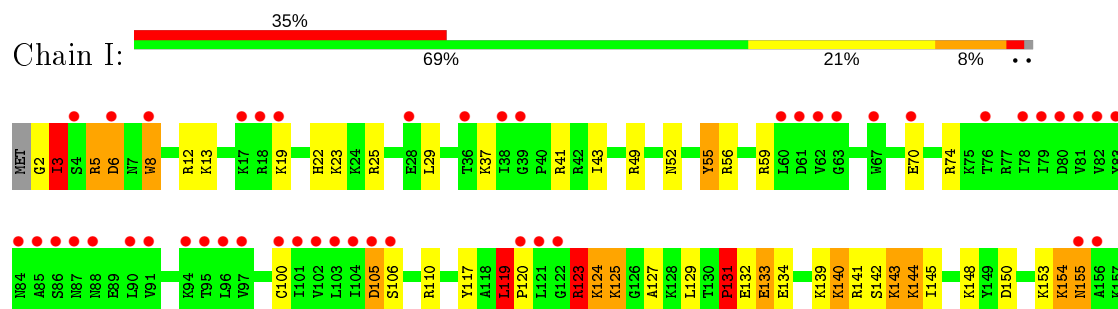
• Molecule 7: 40S ribosomal protein S6



• Molecule 8: 40S ribosomal protein S8

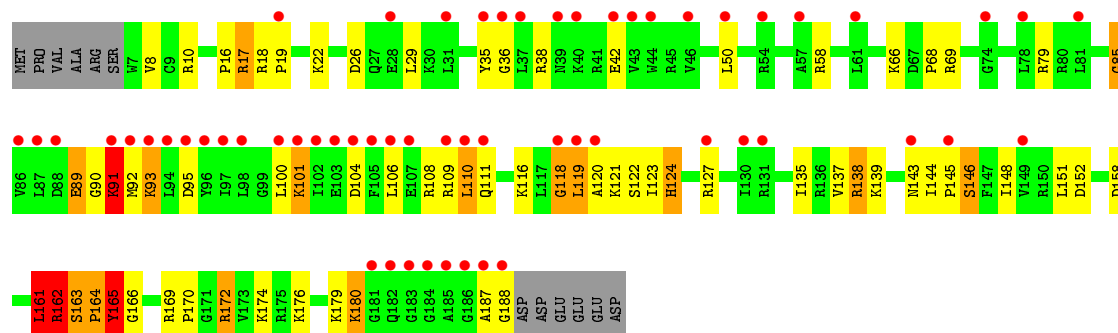


• Molecule 9: 40S ribosomal protein S8

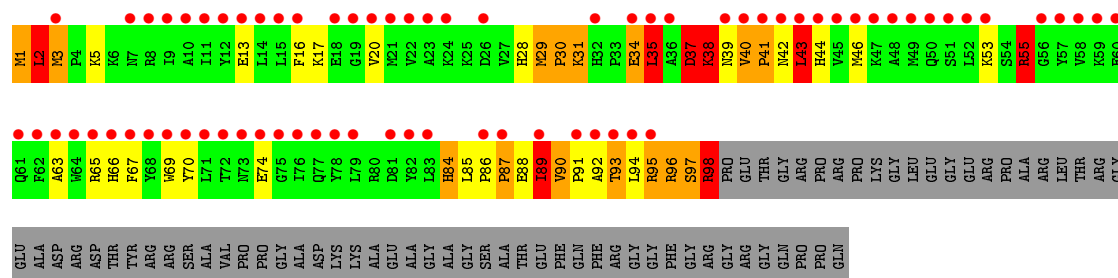
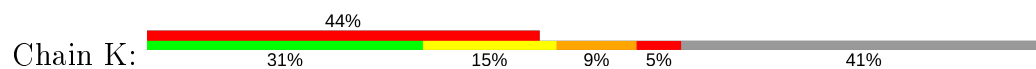




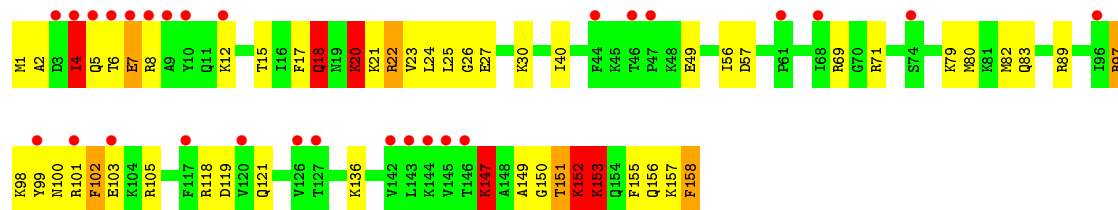
• Molecule 10: 40S Ribosomal protein S9



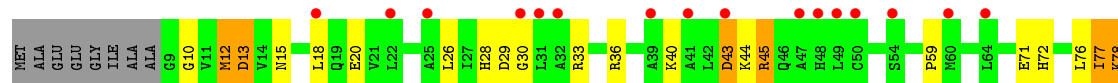
• Molecule 11: 40S ribosomal protein S10

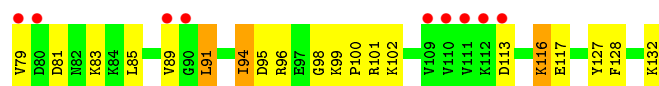


• Molecule 12: 40S ribosomal protein S11

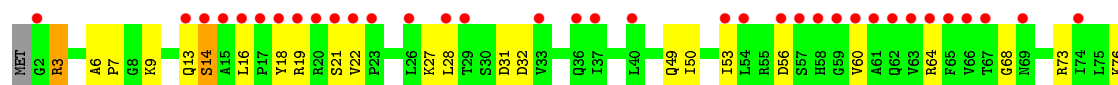


• Molecule 13: 40S ribosomal protein S12

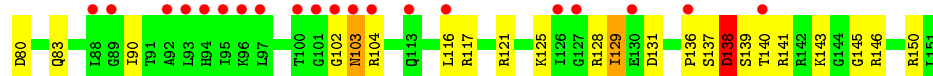
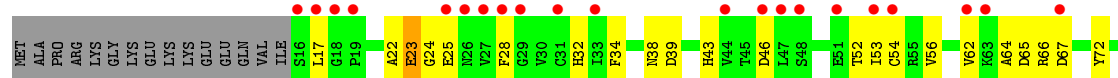




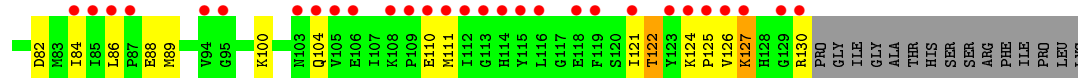
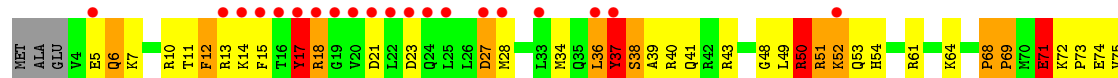
- Molecule 14: 40S ribosomal protein S13



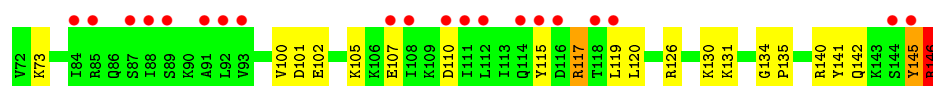
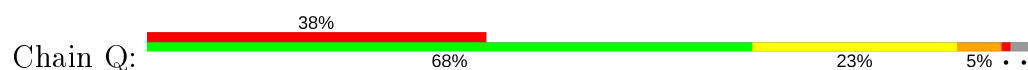
- Molecule 15: 40S ribosomal protein S14



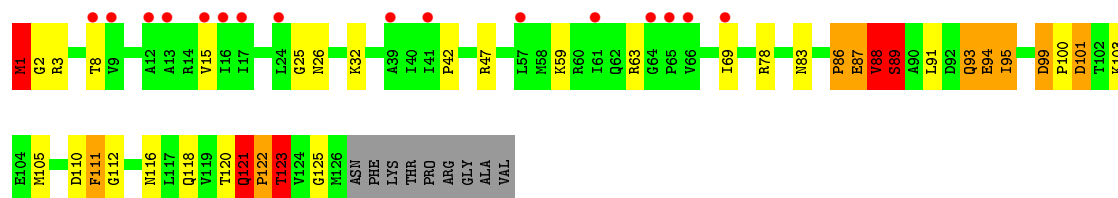
- Molecule 16: 40S ribosomal protein S15



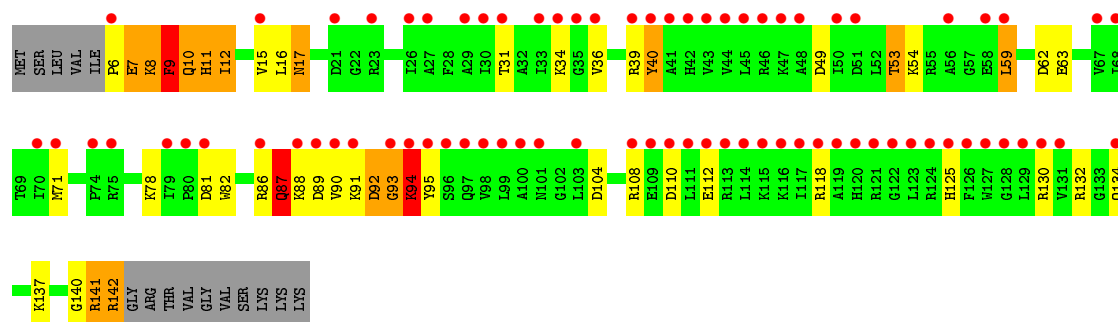
- Molecule 17: 40S ribosomal protein S16



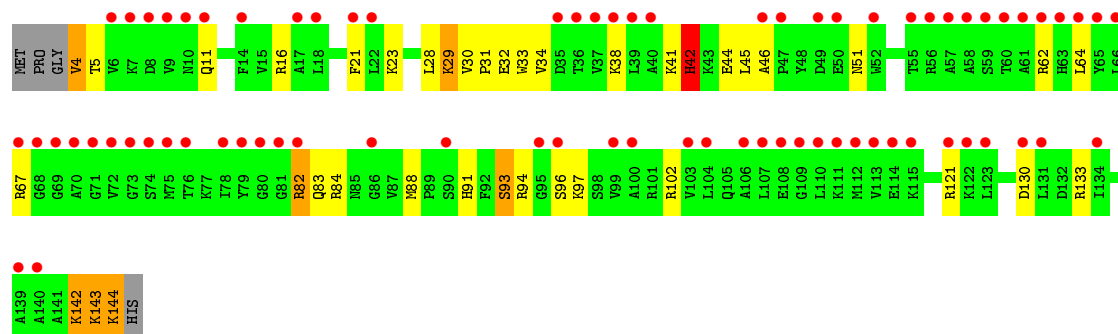
- Molecule 18: 40S ribosomal protein S17



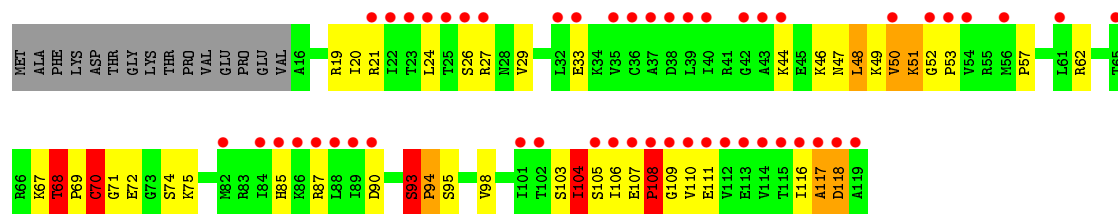
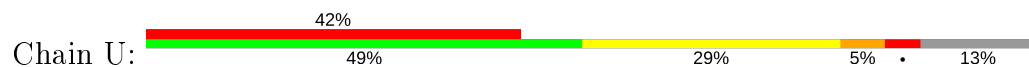
- Molecule 19: 40S ribosomal protein S18



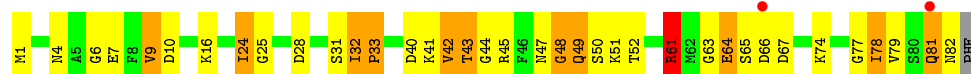
- Molecule 20: 40S ribosomal protein S19



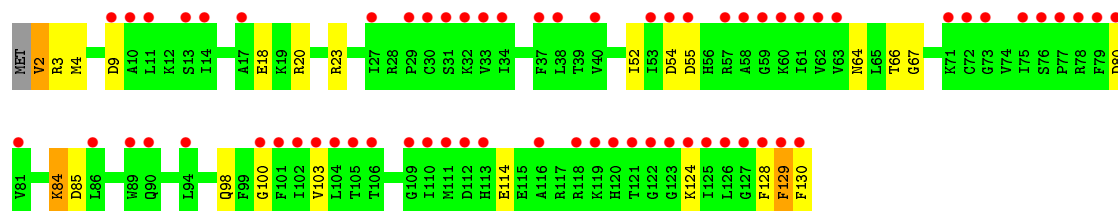
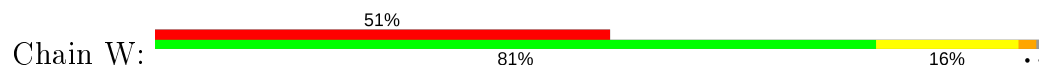
- Molecule 21: 40S ribosomal protein S20



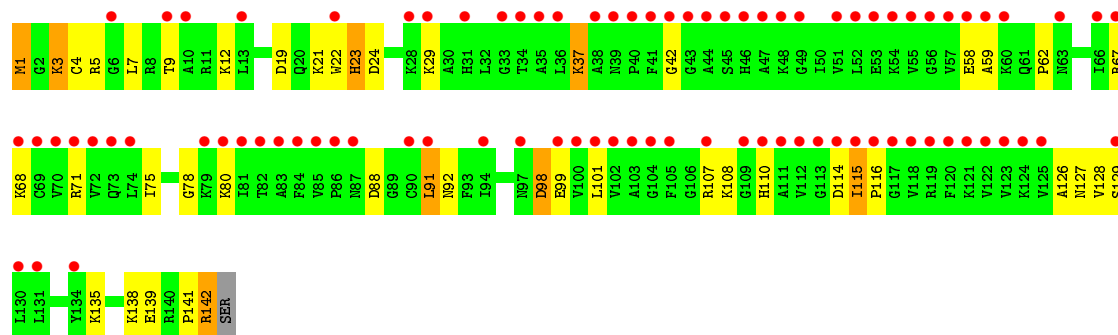
- Molecule 22: 40S ribosomal protein S21



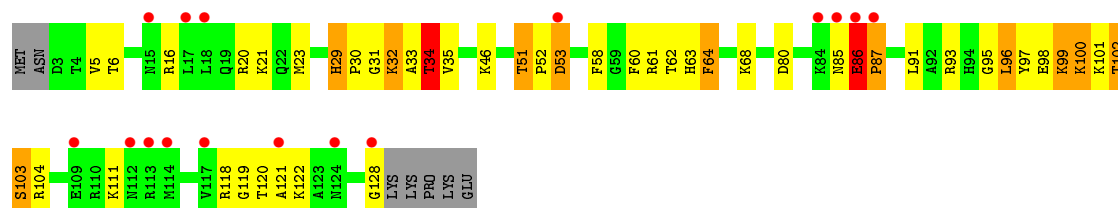
• Molecule 23: 40S ribosomal protein S15A



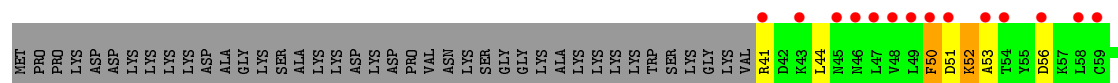
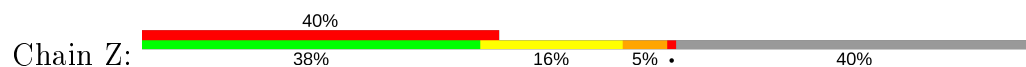
• Molecule 24: 40S ribosomal protein S23

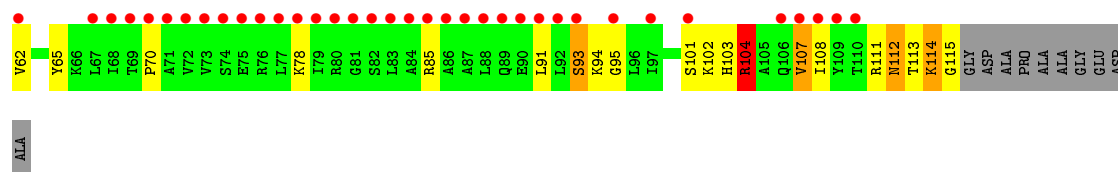


• Molecule 25: 40S ribosomal protein S24

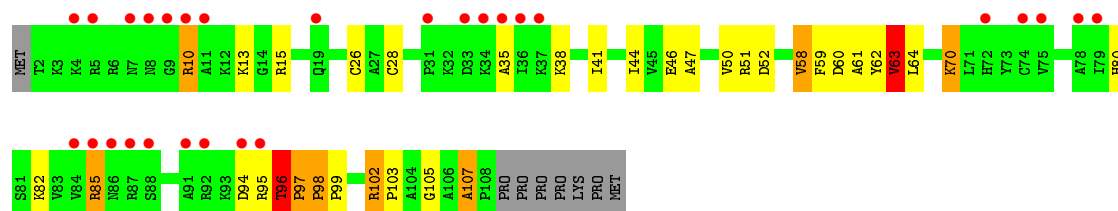


• Molecule 26: 40S ribosomal protein S25

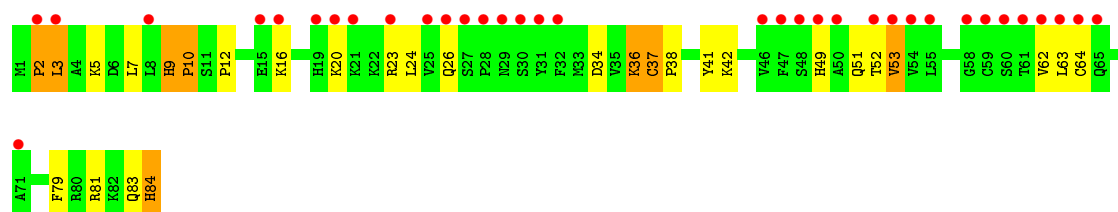
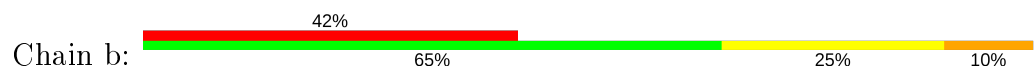




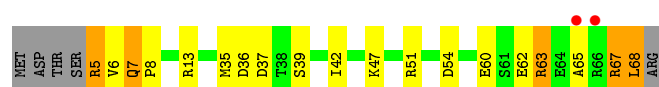
- Molecule 27: 40S ribosomal protein S26



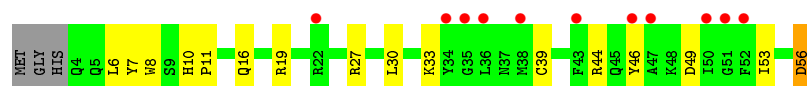
- Molecule 28: 40S ribosomal protein S27



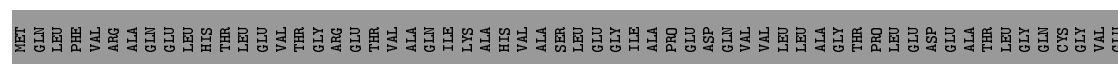
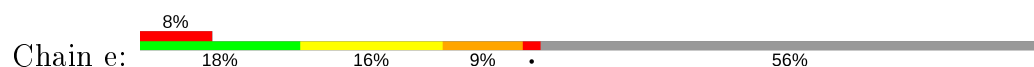
- Molecule 29: 40S ribosomal protein S28

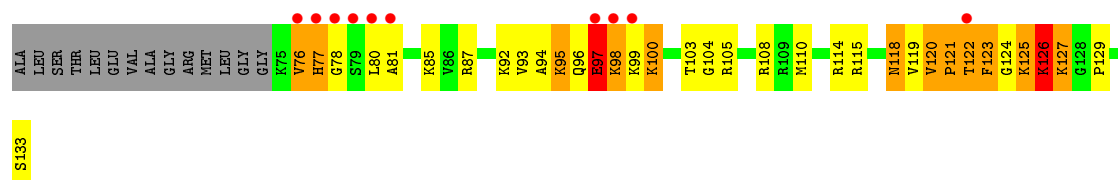


- Molecule 30: 40S ribosomal protein S29

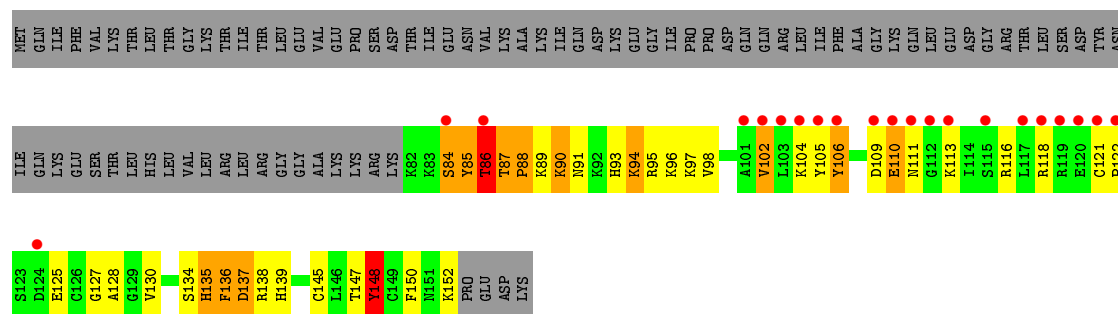
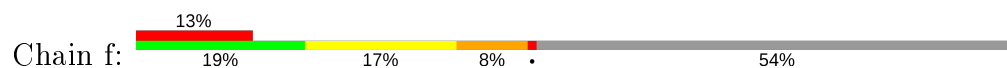


- Molecule 31: 40S ribosomal protein S30

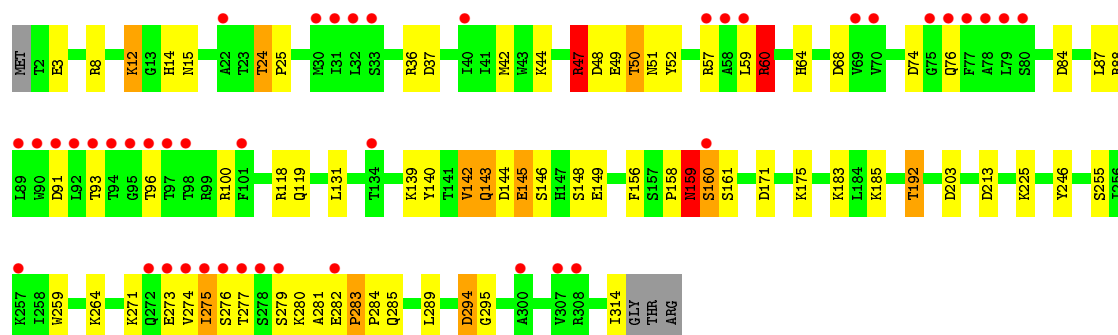
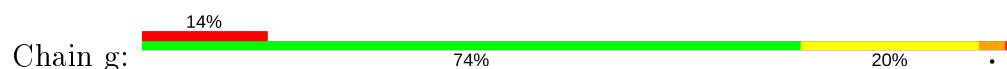




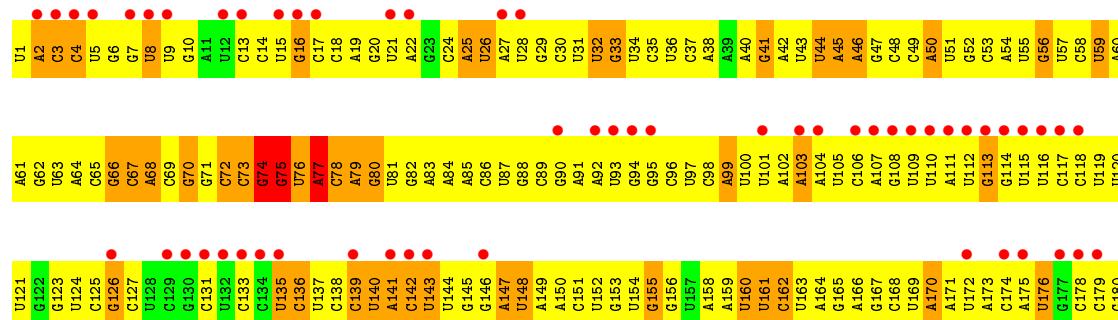
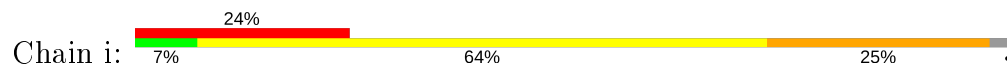
- Molecule 32: 40S ribosomal protein S27A



- Molecule 33: 40S ribosomal protein RACK1

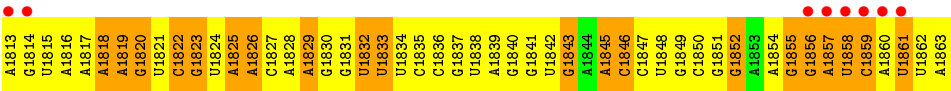


- Molecule 34: 18S ribosomal RNA

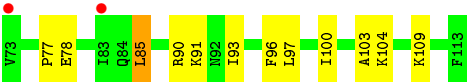
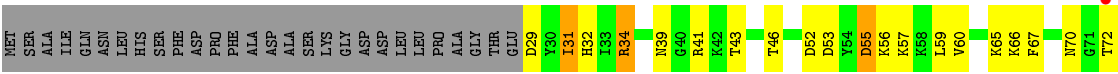




G1753	G1693	G1633	G1572	G1512	G1452	G1392	G1332	A1272	C1212	U1150	C1090	A1030
G1754	A1694	G1634	U1573	C1513	U1453	U1393	C1333	G1273	A1213	U1151	U1091	A1031
U1755	A1695	A1635	A1574	U1514	G1454	G1394	G1334	G1274	C1214	U1152	G1092	A1032
C1756	C1696	A1636	A1575	G1515	G1455	C1395	U1335	C1275	C1215	G1153	G1093	G1033
G1757	G1697	U1637	C1576	G1516	C1456	U1396	U1336	G1276	A1216	G1154	C1094	U1034
G1758	C1698	U1638	G1577	A1517	G1457	A1397	C1337	G1277	G1217	G1155	G1095	U1035
C1759	C1699	C1639	C1578	C1518	U1458	A1398	U1338	A1278	G1218	U1157	A1096	G1036
C1760	C1700	C1640	C1579	G1519	U1459	C1399	U1339	C1279	A1219	C1158	U1097	G1037
G1701	G1701	C1641	U1580	C1520	U1460	U1400	A1340	C1280	G1220	C1159	G1098	A1038
U1702	U1702	A1642	U1581	G1521	A1461	A1401	G1341	G1281	U1221	G1160	G1099	G1039
C1703	C1703	G1643	G1582	C1522	G1462	G1402	U1342	G1282	U1222	G1161	G1100	G1040
G1704	G1704	U1644	A1583	G1523	C1463	U1403	U1343	G1283	G1223	G1162	G1101	U1041
G1705	G1705	A1645	A1584	C1524	C1464	U1404	G1344	U1284	A1224	G1163	C1102	U1042
G1765	G1765	A1646	C1585	U1525	A1465	A1405	G1345	U1285	G1225	G1164	G1103	C1043
C1766	C1766	C1647	C1586	A1526	C1466	C1406	U1346	G1286	C1226	G1165	G1104	A1044
A1707	A1707	U1648	C1587	C1527	G1467	G1407	G1347	G1287	C1227	A1166	C1105	A1045
C1768	C1768	U1649	C1588	A1528	C1468	C1408	G1348	C1288	U1228	G1167	G1106	A1046
U1709	U1709	G1650	C1589	C1529	G1469	A1409	A1349	A1289	G1229	U1168	U1107	G1047
G1710	G1710	C1651	U1590	U1530	A1470	A1410	G1350	G1290	C1230	A1169	U1108	A1048
C1711	C1711	G1652	U1591	G1531	G1471	C1411	C1351	A1291	G1231	U1170	A1109	C1049
G1712	G1712	C1653	C1592	A1532	A1472	C1412	G1352	U1292	G1232	G1171	U1110	G1050
G1713	G1713	G1653	U1593	C1533	U1473	C1413	A1353	U1293	C1233	G1172	U1111	A1051
A1714	A1714	C1654	G1594	U1534	U1474	C1414	U1354	G1294	U1234	U1173	C1112	U1052
U1715	U1715	C1655	G1595	G1535	G1475	C1415	U1355	A1295	A1235	U1174	C1113	C1053
U1716	U1716	A1656	A1596	G1536	A1476	G1416	U1356	U1296	A1236	G1175	C1114	A1054
G1717	G1717	U1657	U1597	C1537	G1477	A1417	G1357	A1297	A1237	C1176	A1115	G1055
G1718	G1718	A1658	U1598	U1538	C1478	G1418	U1358	G1298	U1238	A1177	U1116	A1056
C1719	C1719	G1659	G1599	C1539	C1479	C1419	C1359	C1299	U1239	A1178	U1117	U1057
U1720	U1720	G1660	C1600	A1540	U1480	G1420	U1360	U1300	U1240	A1058	A1118	A1058
G1721	G1721	C1661	G1601	G1541	U1481	G1421	G1361	C1301	G1241	G1181	G1119	C1059
C1722	C1722	U1662	A1602	C1542	A1482	U1422	G1362	U1302	A1242	U1182	C1120	C1060
U1723	U1723	G1663	C1603	G1543	A1483	C1423	U1363	U1303	C1243	G1183	C1121	G1061
A1724	A1724	C1664	U1604	U1544	G1484	G1424	U1364	U1304	U1244	A1184	G1122	U1062
U1725	U1725	C1665	G1605	U1545	A1485	G1425	A1365	C1305	C1245	G1185	C1123	C1063
G1786	G1786	U1666	G1606	G1546	G1486	C1426	A1366	U1306	A1246	A1186	C1124	G1064
A1787	A1787	G1667	G1607	G1547	G1487	G1427	U1367	C1307	A1247	C1187	G1125	U1065
C1788	C1788	U1668	G1608	C1548	U1488	U1428	U1368	G1308	C1248	U1188	G1126	A1066
G1789	G1789	G1669	C1609	C1549	C1489	C1429	G1369	A1309	A1249	U1189	G1127	G1067
U1730	U1730	A1670	A1609	U1550	U1490	C1430	C1370	U1310	C1250	A1190	C1128	U1068
G1731	G1731	U1671	U1610	A1551	G1491	C1431	G1371	U1311	G1251	A1191	A1129	U1069
C1732	C1732	U1672	U1611	C1552	U1492	C1432	A1372	C1312	G1252	A1192	G1130	C1070
G1793	G1793	A1673	G1612	C1553	G1493	C1433	U1373	U1313	G1253	G1193	C1131	C1071
A1794	A1794	A1674	C1613	C1554	A1494	A1434	A1374	G1314	A1254	G1194	U1132	G1072
C1735	C1735	G1675	A1614	U1555	U1495	A1435	A1375	U1315	A1255	A1195	U1133	A1073
U1736	U1736	C1676	U1615	A1556	G1496	C1436	C1376	G1316	A1256	A1196	G1134	C1074
C1737	C1737	U1677	U1616	C1557	G1497	U1437	C1377	G1317	C1257	U1197	C1135	C1075
G1738	G1738	C1678	U1617	G1558	C1498	U1438	A1378	G1318	C1258	U1198	G1136	A1076
C1739	C1739	U1679	A1618	C1559	C1499	C1439	A1379	U1319	U1259	G1199	G1137	U1077
U1740	U1740	U1680	A1618	G1560	U1500	U1440	C1380	G1320	C1260	A1200	G1138	A1078
C1801	C1801	G1681	C1621	G1561	U1501	U1441	G1381	G1321	A1261	C1201	A1139	A1079
U1802	U1802	C1682	C1622	G1562	A1502	A1442	A1382	U1322	C1262	G1202	A1140	A1080
A1803	A1803	C1683	C1623	G1563	G1493	G1443	G1383	U1323	C1263	G1203	A1141	C1081
G1744	G1744	U1684	C1624	A1564	A1504	A1444	A1384	G1324	C1264	A1204	C1142	G1082
C1805	C1805	U1685	A1625	G1565	U1505	G1445	C1385	U1325	G1265	A1205	C1143	A1083
U1806	U1806	U1686	U1626	G1566	G1506	G1446	U1386	G1326	G1266	G1206	A1144	U1084
A1807	A1807	U1687	G1627	G1567	U1507	G1447	C1387	C1327	C1267	G1207	A1145	G1085
G1748	G1748	A1628	A1628	C1567	U1507	G1447	U1388	A1328	C1268	G1208	A1146	C1086
U1809	U1809	U1689	A1629	G1568	C1508	A1448	G1389	A1329	C1269	C1209	G1147	G1087
C1750	C1750	A1690	C1630	U1569	G1509	C1449	G1390	U1329	G1270	A1210	U1148	G1088
G1810	G1810	C1691	G1631	G1570	A1450	A1450	C1391	G1330	G1271	C1149	C1149	A1089
A1812	A1812	A1692	A1632	G1571	G1511	A1451	C1391	G1331	G1271	C1149	C1149	A1089



● Molecule 35: Eukaryotic translation initiation factor 1



4 Data and refinement statistics

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α , β , γ	292.12Å 292.12Å 477.67Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	58.11 – 7.81 64.21 – 7.81	Depositor EDS
% Data completeness (in resolution range)	94.8 (58.11-7.81) 94.9 (64.21-7.81)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.96 (at 7.40Å)	Xtriage
Refinement program	PHENIX 1.7.3_928	Depositor
R, R_{free}	0.347 , 0.347 0.334 , 0.337	Depositor DCC
R_{free} test set	1305 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	667.2	Xtriage
Anisotropy	0.309	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.22 , 117.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.34$, $\langle L^2 \rangle = 0.17$	Xtriage
Estimated twinning fraction	0.120 for -h,-k,l	Xtriage
F_o, F_c correlation	0.86	EDS
Total number of atoms	77211	wwPDB-VP
Average B, all atoms (Å ²)	216.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.66% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.76	2/1679 (0.1%)	1.06	16/2283 (0.7%)
2	B	0.79	6/1769 (0.3%)	1.08	20/2367 (0.8%)
3	C	0.97	7/1778 (0.4%)	1.19	19/2399 (0.8%)
4	D	1.03	6/1792 (0.3%)	1.30	22/2412 (0.9%)
5	E	0.76	4/2125 (0.2%)	0.98	23/2856 (0.8%)
6	F	1.00	5/1531 (0.3%)	1.21	17/2059 (0.8%)
7	G	0.97	15/1946 (0.8%)	1.23	25/2590 (1.0%)
8	H	1.09	9/1553 (0.6%)	2.19	29/2079 (1.4%)
9	I	1.11	7/1708 (0.4%)	1.51	33/2278 (1.4%)
10	J	1.27	19/1522 (1.2%)	1.51	42/2031 (2.1%)
11	K	1.21	7/851 (0.8%)	1.78	32/1147 (2.8%)
12	L	1.10	6/1319 (0.5%)	1.40	17/1761 (1.0%)
13	M	1.00	3/960 (0.3%)	1.23	7/1287 (0.5%)
14	N	0.83	3/1232 (0.2%)	1.00	12/1656 (0.7%)
15	O	0.61	0/1029	1.05	12/1380 (0.9%)
16	P	0.75	1/1079 (0.1%)	1.43	32/1437 (2.2%)
17	Q	0.70	3/1142 (0.3%)	1.12	15/1528 (1.0%)
18	R	1.23	10/1031 (1.0%)	1.64	30/1383 (2.2%)
19	S	1.21	11/1157 (1.0%)	1.61	36/1548 (2.3%)
20	T	0.95	3/1132 (0.3%)	1.25	13/1517 (0.9%)
21	U	0.96	1/832 (0.1%)	1.59	28/1117 (2.5%)
22	V	0.75	1/626 (0.2%)	1.39	15/839 (1.8%)
23	W	0.85	4/1051 (0.4%)	0.86	9/1406 (0.6%)
24	X	1.00	8/1124 (0.7%)	1.24	21/1500 (1.4%)
25	Y	0.93	3/1038 (0.3%)	1.42	20/1380 (1.4%)
26	Z	1.04	5/604 (0.8%)	1.35	17/810 (2.1%)
27	a	0.89	4/860 (0.5%)	1.60	21/1156 (1.8%)
28	b	1.02	2/673 (0.3%)	1.36	12/902 (1.3%)
29	c	0.80	1/508 (0.2%)	1.18	8/680 (1.2%)
30	d	0.89	2/455 (0.4%)	0.79	3/603 (0.5%)
31	e	1.46	5/478 (1.0%)	1.43	11/628 (1.8%)
32	f	1.10	4/593 (0.7%)	1.49	15/786 (1.9%)
33	g	0.91	1/2493 (0.0%)	1.29	26/3394 (0.8%)
34	i	2.42	1848/41880 (4.4%)	2.22	2570/65161 (3.9%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
35	l	1.00	3/701 (0.4%)	1.11	4/936 (0.4%)
All	All	1.85	2019/82251 (2.5%)	1.87	3232/119296 (2.7%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

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

All (2019) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1683	C	O3'-P	41.12	2.10	1.61
34	i	1322	U	C2'-C1'	-25.29	1.25	1.53
34	i	66	G	C2'-C1'	-24.37	1.26	1.53
34	i	858	A	C2'-C1'	-23.82	1.27	1.53
34	i	652	G	C2'-C1'	-23.61	1.27	1.53
34	i	1307	C	C2'-C1'	-22.42	1.28	1.53
34	i	521	A	C2'-C1'	-22.15	1.28	1.53
34	i	1037	G	C2'-C1'	-22.11	1.29	1.53
34	i	1233	C	C2'-C1'	-21.69	1.29	1.53
34	i	145	G	C2'-C1'	-21.58	1.29	1.53
34	i	287	U	C2'-C1'	-21.30	1.29	1.53
4	D	5	ILE	C-N	21.20	1.82	1.34
34	i	299	G	C2'-C1'	-20.69	1.30	1.53
34	i	1327	C	C2'-C1'	-20.61	1.30	1.53
34	i	1393	U	C2'-C1'	-20.40	1.30	1.53
34	i	215	U	C2'-C1'	-20.23	1.31	1.53
34	i	1503	G	O4'-C1'	-19.92	1.15	1.41
34	i	630	A	C2'-C1'	-19.79	1.31	1.53
34	i	343	C	C2'-C1'	-19.71	1.31	1.53
34	i	612	C	C2'-C1'	-19.64	1.31	1.53
34	i	1407	G	C2'-C1'	-19.57	1.31	1.53
34	i	956	U	C2'-C1'	-19.55	1.31	1.53
34	i	1738	G	C2'-C1'	-19.51	1.31	1.53
34	i	1308	G	C2'-C1'	-19.43	1.31	1.53
34	i	1855	G	C2'-C1'	-19.39	1.32	1.53
34	i	684	A	C2'-C1'	-19.05	1.32	1.53
34	i	1496	G	C2'-C1'	-18.95	1.32	1.53
34	i	1159	C	C2'-C1'	-18.78	1.32	1.53
34	i	1227	C	C2'-C1'	-18.64	1.32	1.53
31	e	95	LYS	C-N	18.45	1.76	1.34
34	i	518	A	C2'-C1'	-18.33	1.33	1.53
34	i	1194	G	C2'-C1'	-18.31	1.33	1.53
34	i	1222	G	C2'-C1'	-17.92	1.33	1.53
34	i	1774	G	C2'-C1'	-17.84	1.33	1.53
34	i	443	C	C2'-C1'	-17.78	1.33	1.53
34	i	859	U	C2'-C1'	-17.74	1.33	1.53
34	i	1226	C	C2'-C1'	-17.63	1.33	1.53
34	i	606	A	C2'-C1'	-17.53	1.34	1.53
34	i	41	G	C2'-C1'	-17.44	1.34	1.53
34	i	389	C	O4'-C1'	17.42	1.64	1.41
34	i	1279	C	O4'-C1'	17.38	1.64	1.41
34	i	1472	A	O4'-C1'	-17.29	1.19	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1199	G	C2'-C1'	-17.26	1.34	1.53
34	i	984	C	O4'-C1'	17.11	1.63	1.41
34	i	1214	C	C2'-C1'	-17.09	1.34	1.53
34	i	1010	G	C2'-C1'	-17.07	1.34	1.53
10	J	118	GLY	C-N	17.00	1.73	1.34
34	i	1233	C	O4'-C1'	16.88	1.63	1.41
34	i	1258	C	C2'-C1'	-16.86	1.34	1.53
34	i	1348	G	C2'-C1'	-16.84	1.34	1.53
34	i	626	C	O4'-C1'	16.79	1.63	1.41
34	i	1044	G	C2'-C1'	-16.76	1.34	1.53
34	i	838	C	C2'-C1'	-16.71	1.34	1.53
34	i	1732	G	C2'-C1'	-16.66	1.35	1.53
34	i	929	G	C2'-C1'	-16.66	1.35	1.53
10	J	85	GLY	C-N	-16.65	0.95	1.34
34	i	94	G	C2'-C1'	-16.64	1.35	1.53
34	i	844	U	C2'-C1'	-16.55	1.35	1.53
34	i	1467	C	O4'-C1'	16.55	1.63	1.41
34	i	604	G	C2'-C1'	-16.52	1.35	1.53
34	i	92	A	C2'-C1'	-16.44	1.35	1.53
34	i	435	A	C2'-C1'	-16.42	1.35	1.53
34	i	1308	G	O4'-C1'	16.40	1.62	1.41
34	i	1325	U	C2'-C1'	-16.38	1.35	1.53
34	i	1733	C	O4'-C1'	16.38	1.62	1.41
34	i	1043	C	O4'-C1'	16.36	1.62	1.41
34	i	604	G	O4'-C1'	16.32	1.62	1.41
34	i	611	C	O4'-C1'	16.29	1.62	1.41
34	i	1571	G	C2'-C1'	-16.27	1.35	1.53
18	R	1	MET	N-CA	16.23	1.78	1.46
34	i	277	U	O4'-C1'	16.17	1.62	1.41
34	i	689	G	O4'-C1'	16.14	1.62	1.41
34	i	390	C	O4'-C1'	16.13	1.62	1.41
34	i	1847	C	C2'-C1'	-16.11	1.35	1.53
34	i	446	C	C2'-C1'	-16.06	1.35	1.53
34	i	1666	G	C2'-C1'	-16.04	1.35	1.53
34	i	1563	C	C2'-C1'	-16.00	1.35	1.53
34	i	143	U	C2'-C1'	-15.94	1.35	1.53
34	i	1012	U	O4'-C1'	15.94	1.62	1.41
34	i	792	G	C2'-C1'	-15.93	1.35	1.53
34	i	788	C	C2'-C1'	-15.91	1.35	1.53
34	i	446	C	O4'-C1'	15.86	1.62	1.41
34	i	1736	U	C2'-C1'	-15.79	1.35	1.53
34	i	1683	C	C2'-C1'	-15.75	1.36	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	581	U	C2'-C1'	-15.72	1.36	1.53
34	i	1305	C	O4'-C1'	15.72	1.62	1.41
34	i	286	C	O4'-C1'	15.70	1.62	1.41
34	i	1432	C	O4'-C1'	15.69	1.62	1.41
34	i	179	C	C2'-C1'	-15.69	1.36	1.53
34	i	225	C	O4'-C1'	15.66	1.62	1.41
34	i	794	G	O4'-C1'	15.66	1.62	1.41
34	i	594	A	O4'-C1'	15.66	1.62	1.41
34	i	830	C	C2'-C1'	-15.62	1.36	1.53
34	i	541	U	C2'-C1'	-15.57	1.36	1.53
34	i	1688	G	C2'-C1'	-15.55	1.36	1.53
34	i	909	A	O4'-C1'	15.54	1.61	1.41
34	i	1227	C	O4'-C1'	15.52	1.61	1.41
34	i	1660	G	C2'-C1'	-15.51	1.36	1.53
34	i	741	C	O4'-C1'	15.48	1.61	1.41
34	i	877	G	C2'-C1'	-15.46	1.36	1.53
34	i	1452	G	C2'-C1'	-15.46	1.36	1.53
34	i	1766	C	O4'-C1'	15.46	1.61	1.41
34	i	1288	C	O4'-C1'	15.43	1.61	1.41
34	i	1237	A	O4'-C1'	15.37	1.61	1.41
34	i	730	C	O4'-C1'	15.36	1.61	1.41
34	i	186	G	C2'-C1'	-15.35	1.36	1.53
18	R	1	MET	CA-CB	15.33	1.87	1.53
34	i	1393	U	O4'-C1'	15.31	1.61	1.41
34	i	1659	A	C2'-C1'	-15.29	1.36	1.53
34	i	657	U	C2'-C1'	-15.26	1.36	1.53
34	i	986	A	C2'-C1'	-15.22	1.36	1.53
34	i	1524	C	O4'-C1'	15.22	1.61	1.41
34	i	1012	U	C2'-C1'	-15.22	1.36	1.53
34	i	179	C	O4'-C1'	15.21	1.61	1.41
34	i	1018	U	C2'-C1'	-15.21	1.36	1.53
34	i	222	G	C2'-C1'	-15.18	1.36	1.53
34	i	62	G	C2'-C1'	-15.15	1.36	1.53
34	i	408	A	C2'-C1'	-15.13	1.36	1.53
34	i	1171	G	C2'-C1'	-15.10	1.36	1.53
34	i	1615	A	C2'-C1'	-15.09	1.36	1.53
34	i	225	C	C2'-C1'	-14.96	1.36	1.53
34	i	164	A	C2'-C1'	-14.96	1.36	1.53
34	i	4	C	C2'-C1'	-14.96	1.36	1.53
34	i	214	A	O4'-C1'	14.95	1.61	1.41
34	i	1307	C	O4'-C1'	14.95	1.61	1.41
34	i	1406	C	O4'-C1'	14.95	1.61	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1494	A	C2'-C1'	-14.85	1.37	1.53
34	i	538	C	O4'-C1'	14.82	1.60	1.41
34	i	1610	U	C2'-C1'	-14.81	1.37	1.53
34	i	205	G	C2'-C1'	-14.78	1.37	1.53
34	i	734	C	C2'-C1'	-14.78	1.37	1.53
34	i	838	C	O4'-C1'	14.77	1.60	1.41
34	i	188	U	C2'-C1'	-14.76	1.37	1.53
34	i	1587	C	O4'-C1'	14.75	1.60	1.41
34	i	970	C	O4'-C1'	14.73	1.60	1.41
34	i	914	U	C2'-C1'	-14.72	1.37	1.53
34	i	873	C	O4'-C1'	14.68	1.60	1.41
34	i	1413	C	O4'-C1'	14.68	1.60	1.41
34	i	1090	C	O4'-C1'	14.66	1.60	1.41
34	i	1703	C	O4'-C1'	14.66	1.60	1.41
34	i	728	U	C2'-C1'	-14.66	1.37	1.53
34	i	1142	C	C2'-C1'	-14.65	1.37	1.53
34	i	1216	A	C2'-C1'	-14.65	1.37	1.53
34	i	1289	A	O4'-C1'	14.62	1.60	1.41
10	J	188	GLY	C-O	-14.58	1.00	1.23
34	i	1656	A	C2'-C1'	-14.54	1.37	1.53
34	i	1699	C	O4'-C1'	14.54	1.60	1.41
34	i	1230	C	O4'-C1'	14.54	1.60	1.41
34	i	431	C	O4'-C1'	14.51	1.60	1.41
34	i	1263	C	C2'-C1'	-14.49	1.37	1.53
5	E	263	GLY	C-O	-14.49	1.00	1.23
34	i	1014	U	C2'-C1'	-14.49	1.37	1.53
25	Y	128	GLY	C-O	-14.49	1.00	1.23
34	i	81	U	C2'-C1'	-14.48	1.37	1.53
9	I	207	GLY	C-O	-14.46	1.00	1.23
21	U	93	SER	C-N	14.45	1.61	1.34
34	i	804	A	C2'-C1'	-14.43	1.37	1.53
26	Z	115	GLY	C-O	-14.42	1.00	1.23
34	i	1229	G	C2'-C1'	-14.40	1.37	1.53
9	I	43	ILE	C-N	14.38	1.67	1.34
2	B	233	GLY	C-O	-14.37	1.00	1.23
34	i	1611	U	C2'-C1'	-14.37	1.37	1.53
34	i	1828	A	C2'-C1'	-14.35	1.37	1.53
34	i	1376	C	O4'-C1'	14.34	1.60	1.41
34	i	845	A	C2'-C1'	-14.32	1.37	1.53
34	i	438	A	O4'-C1'	-14.31	1.23	1.41
34	i	1755	U	C2'-C1'	-14.29	1.37	1.53
34	i	144	U	O4'-C1'	14.29	1.60	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	215	U	O4'-C1'	14.28	1.60	1.41
34	i	1214	C	O4'-C1'	14.24	1.60	1.41
34	i	1416	G	C2'-C1'	-14.23	1.37	1.53
34	i	431	C	C2'-C1'	-14.21	1.37	1.53
34	i	1738	G	O4'-C1'	14.20	1.60	1.41
34	i	35	C	O4'-C1'	14.18	1.60	1.41
34	i	1144	A	O4'-C1'	-14.13	1.23	1.41
34	i	1691	C	O4'-C1'	14.10	1.59	1.41
34	i	1140	A	C2'-C1'	-14.09	1.37	1.53
34	i	1736	U	O4'-C1'	14.09	1.59	1.41
34	i	1602	A	C2'-C1'	-14.08	1.37	1.53
34	i	852	C	O4'-C1'	14.06	1.59	1.41
34	i	1801	C	C2'-C1'	-14.04	1.38	1.53
18	R	1	MET	CA-C	-14.03	1.16	1.52
34	i	1184	A	O4'-C1'	14.00	1.59	1.41
34	i	1520	C	O4'-C1'	14.00	1.59	1.41
34	i	187	C	O4'-C1'	13.98	1.59	1.41
34	i	830	C	O4'-C1'	13.95	1.59	1.41
34	i	1693	C	O4'-C1'	13.94	1.59	1.41
34	i	1251	G	C2'-C1'	-13.94	1.38	1.53
34	i	887	G	C2'-C1'	-13.93	1.38	1.53
34	i	1557	C	C2'-C1'	-13.91	1.38	1.53
34	i	1793	G	C2'-C1'	-13.91	1.38	1.53
34	i	1003	C	O4'-C1'	13.89	1.59	1.41
34	i	1587	C	C2'-C1'	-13.88	1.38	1.53
34	i	915	A	C2'-C1'	-13.88	1.38	1.53
34	i	168	C	O4'-C1'	13.88	1.59	1.41
34	i	947	C	O4'-C1'	13.86	1.59	1.41
34	i	623	C	C2'-C1'	-13.85	1.38	1.53
34	i	616	G	O4'-C1'	13.85	1.59	1.41
34	i	735	C	O4'-C1'	13.80	1.59	1.41
34	i	801	U	O4'-C1'	13.79	1.59	1.41
34	i	852	C	C2'-C1'	-13.79	1.38	1.53
34	i	1400	U	O4'-C1'	13.78	1.59	1.41
34	i	1617	U	O4'-C1'	13.78	1.59	1.41
34	i	1002	C	O4'-C1'	13.77	1.59	1.41
34	i	884	U	C2'-C1'	-13.74	1.38	1.53
34	i	1765	G	C2'-C1'	-13.74	1.38	1.53
34	i	1433	C	O4'-C1'	13.73	1.59	1.41
34	i	605	C	O4'-C1'	13.72	1.59	1.41
34	i	1427	G	C2'-C1'	-13.71	1.38	1.53
34	i	1419	C	O4'-C1'	13.70	1.59	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1263	C	O4'-C1'	13.68	1.59	1.41
34	i	340	C	O4'-C1'	13.65	1.59	1.41
34	i	377	C	O4'-C1'	13.62	1.59	1.41
34	i	564	A	O4'-C1'	13.61	1.59	1.41
34	i	1241	G	C2'-C1'	-13.60	1.38	1.53
34	i	1022	C	O4'-C1'	13.57	1.59	1.41
34	i	734	C	O4'-C1'	13.57	1.59	1.41
34	i	312	C	O4'-C1'	13.56	1.59	1.41
34	i	1404	U	O4'-C1'	13.55	1.59	1.41
34	i	1805	C	O4'-C1'	13.52	1.59	1.41
34	i	568	C	O4'-C1'	13.52	1.59	1.41
34	i	1411	C	O4'-C1'	13.51	1.59	1.41
34	i	402	G	O4'-C1'	13.49	1.59	1.41
34	i	903	G	C2'-C1'	-13.48	1.38	1.53
34	i	13	C	O4'-C1'	13.47	1.59	1.41
34	i	858	A	O4'-C1'	13.46	1.59	1.41
34	i	1436	C	O4'-C1'	13.44	1.59	1.41
34	i	1471	G	C2'-C1'	-13.44	1.38	1.53
34	i	1777	C	O4'-C1'	13.44	1.59	1.41
34	i	1091	U	C2'-C1'	-13.41	1.38	1.53
34	i	728	U	O4'-C1'	13.41	1.59	1.41
34	i	1623	C	C2'-C1'	-13.39	1.38	1.53
34	i	1267	C	O4'-C1'	13.38	1.59	1.41
34	i	1577	C	C2'-C1'	-13.38	1.38	1.53
34	i	538	C	C2'-C1'	-13.36	1.38	1.53
34	i	1847	C	O4'-C1'	13.36	1.59	1.41
34	i	548	G	C2'-C1'	-13.35	1.38	1.53
34	i	287	U	O4'-C1'	13.35	1.59	1.41
34	i	1063	C	O4'-C1'	13.31	1.58	1.41
34	i	1270	G	C2'-C1'	-13.31	1.38	1.53
34	i	1666	G	O4'-C1'	13.31	1.58	1.41
34	i	980	C	C2'-C1'	-13.31	1.38	1.53
34	i	1406	C	C2'-C1'	-13.30	1.38	1.53
34	i	1639	C	C2'-C1'	-13.29	1.38	1.53
34	i	144	U	C2'-C1'	-13.28	1.38	1.53
34	i	54	A	O4'-C1'	13.27	1.58	1.41
34	i	1074	C	C2'-C1'	-13.27	1.38	1.53
34	i	510	A	C2'-C1'	-13.26	1.38	1.53
34	i	1455	G	C2'-C1'	-13.23	1.38	1.53
34	i	1433	C	C2'-C1'	-13.21	1.38	1.53
34	i	1583	A	C2'-C1'	-13.20	1.38	1.53
34	i	1257	C	O4'-C1'	13.20	1.58	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1128	C	C2'-C1'	-13.18	1.38	1.53
34	i	1232	G	O4'-C1'	-13.17	1.24	1.41
34	i	174	C	O4'-C1'	13.14	1.58	1.41
34	i	986	A	O4'-C1'	13.13	1.58	1.41
34	i	1447	G	O4'-C1'	13.12	1.58	1.41
34	i	826	A	O4'-C1'	-13.11	1.24	1.41
34	i	542	G	C2'-C1'	-13.10	1.39	1.53
34	i	1683	C	O4'-C1'	13.07	1.58	1.41
34	i	1690	A	O4'-C1'	13.06	1.58	1.41
34	i	1546	U	C2'-C1'	-13.05	1.39	1.53
34	i	1771	G	C2'-C1'	-13.02	1.39	1.53
34	i	1390	G	C2'-C1'	-13.00	1.39	1.53
34	i	1015	C	O4'-C1'	12.98	1.58	1.41
34	i	565	A	O4'-C1'	12.98	1.58	1.41
34	i	1515	G	C2'-C1'	-12.97	1.39	1.53
34	i	1075	C	O4'-C1'	12.96	1.58	1.41
34	i	1600	G	C2'-C1'	-12.94	1.39	1.53
34	i	1122	G	C2'-C1'	-12.92	1.39	1.53
34	i	1715	U	C2'-C1'	12.91	1.67	1.53
34	i	1542	C	O4'-C1'	12.89	1.58	1.41
34	i	1792	C	C2'-C1'	-12.87	1.39	1.53
34	i	973	C	O4'-C1'	12.83	1.58	1.41
34	i	1539	C	O4'-C1'	12.81	1.58	1.41
34	i	687	G	O4'-C1'	12.80	1.58	1.41
34	i	274	G	C2'-C1'	-12.78	1.39	1.53
34	i	726	C	C2'-C1'	-12.78	1.39	1.53
34	i	1563	C	O4'-C1'	12.77	1.58	1.41
34	i	646	G	C2'-C1'	-12.74	1.39	1.53
34	i	981	G	C2'-C1'	-12.73	1.39	1.53
34	i	1087	C	O4'-C1'	12.73	1.58	1.41
34	i	539	C	O4'-C1'	12.72	1.58	1.41
34	i	853	U	C2'-C1'	-12.71	1.39	1.53
34	i	1160	G	C2'-C1'	-12.70	1.39	1.53
34	i	1856	G	O4'-C1'	12.70	1.58	1.41
34	i	1837	G	C2'-C1'	-12.69	1.39	1.53
34	i	282	G	C2'-C1'	-12.66	1.39	1.53
34	i	741	C	C2'-C1'	-12.66	1.39	1.53
34	i	324	C	O4'-C1'	12.64	1.58	1.41
34	i	1326	G	C2'-C1'	-12.63	1.39	1.53
34	i	788	C	O4'-C1'	12.62	1.58	1.41
34	i	193	C	O4'-C1'	12.62	1.58	1.41
34	i	985	C	O4'-C1'	12.61	1.58	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1786	G	C2'-C1'	-12.61	1.39	1.53
34	i	1079	A	C2'-C1'	-12.61	1.39	1.53
34	i	80	G	O4'-C1'	12.60	1.58	1.41
34	i	731	C	O4'-C1'	12.60	1.58	1.41
34	i	798	A	C2'-C1'	-12.57	1.39	1.53
34	i	546	U	C2'-C1'	-12.54	1.39	1.53
34	i	1677	C	O4'-C1'	12.52	1.57	1.41
34	i	1113	C	O4'-C1'	-12.50	1.25	1.41
34	i	1436	C	C2'-C1'	-12.47	1.39	1.53
34	i	484	C	O4'-C1'	12.46	1.57	1.41
34	i	1711	C	O4'-C1'	12.46	1.57	1.41
34	i	1063	C	C2'-C1'	-12.46	1.39	1.53
34	i	1579	G	C2'-C1'	-12.45	1.39	1.53
34	i	1003	C	C2'-C1'	-12.44	1.39	1.53
34	i	155	G	C2'-C1'	-12.44	1.39	1.53
34	i	48	C	O4'-C1'	12.44	1.57	1.41
34	i	1165	G	C2'-C1'	-12.43	1.39	1.53
34	i	1451	A	O4'-C1'	12.43	1.57	1.41
34	i	622	C	C2'-C1'	-12.43	1.39	1.53
34	i	1300	U	C2'-C1'	-12.42	1.39	1.53
34	i	907	C	C2'-C1'	-12.42	1.39	1.53
34	i	1632	A	C2'-C1'	12.41	1.67	1.53
34	i	1338	U	O4'-C1'	12.40	1.57	1.41
34	i	482	C	O4'-C1'	12.39	1.57	1.41
34	i	34	U	C2'-C1'	-12.36	1.39	1.53
34	i	1376	C	C2'-C1'	-12.36	1.39	1.53
34	i	1259	U	O4'-C1'	12.34	1.57	1.41
34	i	1261	A	C2'-C1'	-12.33	1.39	1.53
34	i	650	C	O4'-C1'	12.32	1.57	1.41
34	i	744	C	O4'-C1'	12.29	1.57	1.41
34	i	1002	C	C2'-C1'	-12.27	1.39	1.53
34	i	522	C	O4'-C1'	12.26	1.57	1.41
34	i	1322	U	O4'-C1'	12.26	1.57	1.41
34	i	64	A	O4'-C1'	-12.24	1.25	1.41
34	i	62	G	O4'-C1'	12.23	1.57	1.41
34	i	611	C	C2'-C1'	-12.23	1.40	1.53
34	i	1312	C	C2'-C1'	-12.21	1.40	1.53
34	i	1262	C	O4'-C1'	12.20	1.57	1.41
34	i	1222	G	O4'-C1'	12.20	1.57	1.41
13	M	132	LYS	C-OXT	-12.18	1.00	1.23
34	i	1116	U	C2'-C1'	-12.18	1.40	1.53
6	F	204	ARG	C-OXT	-12.17	1.00	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	H	194	LEU	C-O	-12.17	1.00	1.23
34	i	638	A	C2'-C1'	-12.16	1.40	1.53
34	i	970	C	C2'-C1'	-12.15	1.40	1.53
34	i	1066	A	C2'-C1'	-12.14	1.40	1.53
24	X	142	ARG	C-O	-12.13	1.00	1.23
28	b	84	HIS	C-OXT	-12.13	1.00	1.23
20	T	144	LYS	C-O	-12.13	1.00	1.23
34	i	1262	C	C2'-C1'	-12.12	1.40	1.53
14	N	151	ALA	C-OXT	-12.12	1.00	1.23
34	i	598	C	O4'-C1'	12.12	1.57	1.41
34	i	1734	C	O4'-C1'	12.12	1.57	1.41
34	i	1542	C	C2'-C1'	-12.11	1.40	1.53
4	D	227	LYS	C-O	-12.10	1.00	1.23
14	N	151	ALA	C-O	-12.09	1.00	1.23
34	i	1532	A	O4'-C1'	12.09	1.57	1.41
13	M	132	LYS	C-O	-12.08	1.00	1.23
23	W	130	PHE	C-OXT	-12.08	1.00	1.23
31	e	133	SER	C-OXT	-12.07	1.00	1.23
5	E	263	GLY	C-OXT	-12.07	1.00	1.23
23	W	130	PHE	C-O	-12.07	1.00	1.23
32	f	152	LYS	C-O	-12.07	1.00	1.23
34	i	369	C	C2'-C1'	-12.07	1.40	1.53
34	i	56	G	C2'-C1'	-12.06	1.40	1.53
34	i	1548	C	O4'-C1'	-12.05	1.25	1.41
34	i	1650	C	O4'-C1'	12.05	1.57	1.41
34	i	299	G	O4'-C1'	12.04	1.57	1.41
34	i	623	C	O4'-C1'	12.04	1.57	1.41
34	i	869	G	C2'-C1'	-12.03	1.40	1.53
3	C	263	THR	C-O	-12.02	1.00	1.23
31	e	133	SER	C-O	-12.02	1.00	1.23
33	g	314	ILE	C-O	-12.01	1.00	1.23
11	K	98	ARG	C-O	-12.01	1.00	1.23
30	d	56	ASP	C-O	-12.01	1.00	1.23
34	i	465	C	O4'-C1'	12.01	1.57	1.41
29	c	68	LEU	C-O	-12.00	1.00	1.23
34	i	1404	U	C2'-C1'	-12.00	1.40	1.53
34	i	1801	C	O4'-C1'	12.00	1.57	1.41
34	i	1524	C	C2'-C1'	-11.99	1.40	1.53
8	H	194	LEU	C-OXT	-11.99	1.00	1.23
1	A	209	GLU	C-O	-11.98	1.00	1.23
30	d	56	ASP	C-OXT	-11.97	1.00	1.23
12	L	158	PHE	C-OXT	-11.97	1.00	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	276	U	O4'-C1'	11.96	1.57	1.41
34	i	1737	C	C2'-C1'	-11.96	1.40	1.53
12	L	158	PHE	C-O	-11.96	1.00	1.23
34	i	1114	C	C2'-C1'	11.94	1.66	1.53
34	i	67	C	C2'-C1'	11.91	1.66	1.53
6	F	204	ARG	C-O	-11.90	1.00	1.23
34	i	971	G	C2'-C1'	-11.89	1.40	1.53
34	i	583	C	O4'-C1'	11.88	1.57	1.41
34	i	727	G	C2'-C1'	-11.88	1.40	1.53
34	i	1009	U	C2'-C1'	-11.88	1.40	1.53
28	b	84	HIS	C-O	-11.87	1.00	1.23
10	J	146	SER	C-N	11.87	1.61	1.34
34	i	1428	U	O4'-C1'	11.86	1.57	1.41
34	i	1788	C	O4'-C1'	11.86	1.57	1.41
34	i	396	U	C2'-C1'	-11.85	1.40	1.53
34	i	302	C	O4'-C1'	11.84	1.57	1.41
34	i	1628	A	O4'-C1'	11.84	1.57	1.41
34	i	1195	A	C2'-C1'	-11.83	1.40	1.53
34	i	1573	U	C2'-C1'	11.81	1.66	1.53
34	i	612	C	O4'-C1'	11.81	1.57	1.41
34	i	864	G	O4'-C1'	11.81	1.57	1.41
34	i	670	G	C2'-C1'	-11.80	1.40	1.53
34	i	664	C	C2'-C1'	-11.75	1.40	1.53
34	i	569	C	O4'-C1'	11.74	1.56	1.41
34	i	325	G	O4'-C1'	-11.73	1.26	1.41
34	i	318	U	C2'-C1'	-11.73	1.40	1.53
34	i	18	C	O4'-C1'	11.73	1.56	1.41
34	i	907	C	O4'-C1'	11.70	1.56	1.41
34	i	1387	C	O4'-C1'	11.67	1.56	1.41
34	i	1060	C	O4'-C1'	11.66	1.56	1.41
34	i	805	A	C2'-C1'	-11.65	1.40	1.53
34	i	1537	C	O4'-C1'	11.64	1.56	1.41
34	i	553	G	O4'-C1'	11.63	1.56	1.41
34	i	545	A	O4'-C1'	11.63	1.56	1.41
34	i	639	U	C2'-C1'	-11.62	1.40	1.53
34	i	906	G	C2'-C1'	-11.62	1.40	1.53
34	i	833	A	C2'-C1'	-11.61	1.40	1.53
34	i	667	G	C2'-C1'	-11.58	1.40	1.53
34	i	589	A	C2'-C1'	-11.55	1.40	1.53
34	i	549	G	C2'-C1'	-11.55	1.40	1.53
34	i	1114	C	O4'-C1'	-11.55	1.26	1.41
34	i	1732	G	O4'-C1'	11.55	1.56	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	471	C	C2'-C1'	-11.54	1.40	1.53
34	i	606	A	O4'-C1'	11.54	1.56	1.41
34	i	1698	C	O4'-C1'	11.54	1.56	1.41
34	i	668	U	C2'-C1'	-11.53	1.40	1.53
19	S	141	ARG	C-N	11.53	1.60	1.34
34	i	539	C	C2'-C1'	-11.52	1.40	1.53
34	i	559	A	C2'-C1'	-11.51	1.40	1.53
34	i	1260	C	C2'-C1'	-11.47	1.40	1.53
34	i	1074	C	O4'-C1'	11.46	1.56	1.41
34	i	48	C	C2'-C1'	-11.45	1.40	1.53
34	i	407	C	O4'-C1'	11.45	1.56	1.41
34	i	1101	G	C2'-C1'	-11.45	1.40	1.53
34	i	436	G	O4'-C1'	11.44	1.56	1.41
34	i	976	A	C2'-C1'	-11.44	1.40	1.53
34	i	500	G	C2'-C1'	-11.42	1.40	1.53
34	i	622	C	O4'-C1'	11.41	1.56	1.41
34	i	851	G	C2'-C1'	-11.40	1.40	1.53
34	i	1124	C	O4'-C1'	11.39	1.56	1.41
34	i	1323	G	C2'-C1'	-11.39	1.40	1.53
34	i	1202	G	C2'-C1'	-11.37	1.40	1.53
34	i	887	G	O4'-C1'	11.36	1.56	1.41
34	i	77	A	C2'-C1'	11.36	1.65	1.53
25	Y	86	GLU	C-N	11.36	1.55	1.34
34	i	1181	C	O4'-C1'	11.36	1.56	1.41
34	i	839	C	O4'-C1'	11.33	1.56	1.41
34	i	360	G	C2'-C1'	-11.32	1.40	1.53
34	i	947	C	C2'-C1'	-11.31	1.41	1.53
34	i	1025	G	C2'-C1'	-11.31	1.41	1.53
34	i	1669	G	O4'-C1'	11.31	1.56	1.41
34	i	1044	G	O4'-C1'	11.31	1.56	1.41
34	i	414	C	O4'-C1'	11.30	1.56	1.41
34	i	1775	A	C2'-C1'	-11.30	1.41	1.53
34	i	288	A	C2'-C1'	-11.28	1.41	1.53
23	W	2	VAL	C-N	11.26	1.59	1.34
34	i	900	A	O4'-C1'	11.26	1.56	1.41
34	i	1015	C	C2'-C1'	-11.25	1.41	1.53
34	i	521	A	O4'-C1'	11.24	1.56	1.41
34	i	1653	G	C2'-C1'	-11.24	1.41	1.53
34	i	323	G	C2'-C1'	-11.23	1.41	1.53
34	i	335	U	C2'-C1'	-11.23	1.41	1.53
34	i	436	G	C2'-C1'	-11.23	1.41	1.53
34	i	936	U	C2'-C1'	-11.20	1.41	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	479	A	O4'-C1'	11.20	1.56	1.41
34	i	395	G	C2'-C1'	-11.19	1.41	1.53
7	G	131	ARG	C-N	11.17	1.59	1.34
34	i	1792	C	O4'-C1'	11.16	1.56	1.41
34	i	964	U	O4'-C1'	11.16	1.56	1.41
7	G	131	ARG	CG-CD	11.15	1.79	1.51
34	i	1120	C	C2'-C1'	-11.15	1.41	1.53
34	i	871	A	O4'-C1'	11.15	1.56	1.41
34	i	452	C	C2'-C1'	-11.13	1.41	1.53
34	i	938	G	C2'-C1'	-11.13	1.41	1.53
34	i	1220	G	C2'-C1'	-11.13	1.41	1.53
34	i	635	C	O4'-C1'	11.12	1.56	1.41
34	i	402	G	C2'-C1'	-11.12	1.41	1.53
34	i	84	A	O4'-C1'	11.11	1.56	1.41
34	i	1238	U	C2'-C1'	-11.11	1.41	1.53
34	i	1448	A	O4'-C1'	11.08	1.56	1.41
34	i	347	C	C2'-C1'	-11.04	1.41	1.53
34	i	691	G	C2'-C1'	-11.04	1.41	1.53
34	i	1289	A	C2'-C1'	-11.03	1.41	1.53
34	i	4	C	O4'-C1'	11.00	1.55	1.41
34	i	1369	C	O4'-C1'	10.98	1.55	1.41
34	i	1585	C	O4'-C1'	10.97	1.55	1.41
34	i	1813	A	C2'-C1'	-10.97	1.41	1.53
18	R	1	MET	C-N	-10.96	1.13	1.33
34	i	1403	U	C2'-C1'	-10.96	1.41	1.53
34	i	1226	C	O4'-C1'	10.95	1.55	1.41
34	i	1834	U	C2'-C1'	-10.95	1.41	1.53
34	i	462	C	O4'-C1'	10.94	1.55	1.41
34	i	901	C	O4'-C1'	10.94	1.55	1.41
34	i	870	G	C2'-C1'	-10.92	1.41	1.53
34	i	547	U	C2'-C1'	-10.91	1.41	1.53
34	i	1048	A	O4'-C1'	10.90	1.55	1.41
34	i	1568	G	C2'-C1'	-10.89	1.41	1.53
34	i	432	C	O4'-C1'	10.87	1.55	1.41
34	i	839	C	C2'-C1'	-10.87	1.41	1.53
34	i	812	A	O4'-C1'	10.86	1.55	1.41
34	i	1729	G	C2'-C1'	-10.87	1.41	1.53
34	i	1716	U	C2'-C1'	10.86	1.65	1.53
34	i	308	C	O4'-C1'	10.85	1.55	1.41
34	i	483	A	C2'-C1'	-10.85	1.41	1.53
34	i	414	C	C2'-C1'	-10.84	1.41	1.53
34	i	664	C	O4'-C1'	10.84	1.55	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	640	A	O4'-C1'	10.83	1.55	1.41
34	i	1603	U	O4'-C1'	10.83	1.55	1.41
34	i	582	C	O4'-C1'	-10.83	1.27	1.41
34	i	1708	C	O4'-C1'	10.83	1.55	1.41
34	i	1050	G	C2'-C1'	-10.81	1.41	1.53
34	i	488	C	O4'-C1'	10.80	1.55	1.41
34	i	1208	G	C2'-C1'	-10.79	1.41	1.53
34	i	1527	C	C2'-C1'	-10.79	1.41	1.53
34	i	1176	C	O4'-C1'	10.78	1.55	1.41
34	i	975	C	O4'-C1'	10.76	1.55	1.41
34	i	1578	C	O4'-C1'	10.76	1.55	1.41
34	i	1159	C	O4'-C1'	10.76	1.55	1.41
34	i	1496	G	O4'-C1'	10.76	1.55	1.41
34	i	352	C	O4'-C1'	10.75	1.55	1.41
34	i	633	A	O4'-C1'	10.75	1.55	1.41
34	i	54	A	C2'-C1'	-10.72	1.41	1.53
34	i	507	C	C2'-C1'	-10.72	1.41	1.53
34	i	1207	G	C2'-C1'	-10.72	1.41	1.53
34	i	916	A	C2'-C1'	-10.72	1.41	1.53
34	i	1547	G	C2'-C1'	10.71	1.65	1.53
34	i	1209	C	O4'-C1'	10.71	1.55	1.41
34	i	1684	C	C2'-C1'	-10.70	1.41	1.53
34	i	1807	A	C2'-C1'	-10.70	1.41	1.53
34	i	1400	U	C2'-C1'	-10.68	1.41	1.53
34	i	605	C	C2'-C1'	-10.68	1.41	1.53
34	i	1257	C	C2'-C1'	-10.68	1.41	1.53
34	i	1301	C	C2'-C1'	-10.68	1.41	1.53
34	i	286	C	C2'-C1'	-10.66	1.41	1.53
34	i	1105	C	O4'-C1'	-10.65	1.27	1.41
34	i	1259	U	C2'-C1'	-10.63	1.41	1.53
34	i	1481	U	C2'-C1'	-10.63	1.41	1.53
19	S	54	LYS	N-CA	10.60	1.67	1.46
34	i	327	C	C2'-C1'	-10.60	1.41	1.53
34	i	143	U	O4'-C1'	10.60	1.55	1.41
34	i	1481	U	O4'-C1'	10.60	1.55	1.41
9	I	43	ILE	CA-C	-10.56	1.25	1.52
34	i	1280	A	O4'-C1'	10.55	1.55	1.41
34	i	1258	C	O4'-C1'	10.53	1.55	1.41
34	i	560	C	O4'-C1'	10.53	1.55	1.41
34	i	449	C	O4'-C1'	10.53	1.55	1.41
34	i	1700	C	O4'-C1'	10.53	1.55	1.41
34	i	875	C	C2'-C1'	-10.51	1.41	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1375	A	C2'-C1'	-10.50	1.41	1.53
34	i	1778	G	O4'-C1'	10.50	1.55	1.41
34	i	529	C	O4'-C1'	10.49	1.55	1.41
34	i	487	C	O4'-C1'	10.49	1.55	1.41
34	i	868	A	O4'-C1'	-10.49	1.28	1.41
34	i	825	C	O4'-C1'	10.49	1.55	1.41
34	i	1230	C	C2'-C1'	-10.49	1.41	1.53
34	i	416	A	O4'-C1'	10.48	1.55	1.41
34	i	50	A	C2'-C1'	-10.48	1.41	1.53
34	i	1752	G	C2'-C1'	-10.48	1.41	1.53
34	i	480	C	O4'-C1'	10.48	1.55	1.41
19	S	40	TYR	C-N	-10.47	1.09	1.34
34	i	984	C	C2'-C1'	-10.47	1.41	1.53
34	i	933	C	O4'-C1'	10.45	1.55	1.41
34	i	1835	C	O4'-C1'	10.45	1.55	1.41
34	i	1324	G	C2'-C1'	-10.45	1.41	1.53
34	i	1200	A	O4'-C1'	10.44	1.55	1.41
34	i	355	C	O4'-C1'	10.43	1.55	1.41
34	i	1578	C	C2'-C1'	-10.42	1.41	1.53
34	i	1617	U	C2'-C1'	-10.42	1.41	1.53
34	i	316	C	O4'-C1'	10.41	1.55	1.41
34	i	1624	C	C2'-C1'	-10.40	1.42	1.53
34	i	16	G	C2'-C1'	-10.39	1.42	1.53
34	i	729	C	O4'-C1'	10.39	1.55	1.41
34	i	547	U	O4'-C1'	10.39	1.55	1.41
34	i	1128	C	O4'-C1'	10.39	1.55	1.41
34	i	1486	G	C2'-C1'	-10.39	1.42	1.53
34	i	230	C	O4'-C1'	10.37	1.55	1.41
34	i	558	C	O4'-C1'	10.37	1.55	1.41
34	i	1309	A	C2'-C1'	-10.37	1.42	1.53
34	i	385	G	C2'-C1'	-10.36	1.42	1.53
34	i	170	A	O4'-C1'	-10.35	1.28	1.41
34	i	352	C	C2'-C1'	-10.35	1.42	1.53
34	i	178	C	C2'-C1'	-10.32	1.42	1.53
34	i	410	G	C2'-C1'	-10.32	1.42	1.53
34	i	1398	A	O4'-C1'	10.31	1.55	1.41
34	i	382	A	O4'-C1'	10.31	1.55	1.41
34	i	1755	U	O4'-C1'	10.29	1.55	1.41
34	i	52	G	C2'-C1'	-10.29	1.42	1.53
34	i	653	C	C2'-C1'	-10.29	1.42	1.53
34	i	1411	C	C2'-C1'	-10.28	1.42	1.53
34	i	1271	G	C2'-C1'	-10.26	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1576	C	O4'-C1'	10.23	1.54	1.41
34	i	1076	A	O4'-C1'	-10.22	1.28	1.41
34	i	1783	G	O4'-C1'	10.22	1.54	1.41
34	i	977	A	O4'-C1'	10.21	1.54	1.41
34	i	241	A	O4'-C1'	10.21	1.54	1.41
34	i	1682	C	O4'-C1'	10.21	1.54	1.41
34	i	1098	G	C2'-C1'	-10.21	1.42	1.53
34	i	1410	A	C2'-C1'	-10.20	1.42	1.53
34	i	1165	G	O4'-C1'	10.20	1.54	1.41
34	i	1377	G	O4'-C1'	-10.20	1.28	1.41
34	i	209	C	O4'-C1'	10.19	1.54	1.41
34	i	1272	A	O4'-C1'	10.19	1.54	1.41
34	i	315	C	C2'-C1'	10.19	1.64	1.53
34	i	823	A	C2'-C1'	-10.18	1.42	1.53
34	i	84	A	C2'-C1'	-10.18	1.42	1.53
34	i	79	A	C2'-C1'	10.17	1.64	1.53
34	i	683	G	C2'-C1'	-10.16	1.42	1.53
34	i	1827	C	O4'-C1'	10.15	1.54	1.41
34	i	1682	C	C2'-C1'	-10.15	1.42	1.53
34	i	75	G	C2'-C1'	-10.14	1.42	1.53
34	i	563	U	C2'-C1'	-10.12	1.42	1.53
34	i	1181	C	C2'-C1'	-10.12	1.42	1.53
34	i	1600	G	O4'-C1'	10.12	1.54	1.41
34	i	311	C	C2'-C1'	-10.09	1.42	1.53
34	i	76	U	O4'-C1'	10.08	1.54	1.41
34	i	1133	U	O4'-C1'	10.07	1.54	1.41
34	i	1740	A	C2'-C1'	10.05	1.64	1.53
34	i	1071	C	C2'-C1'	-10.05	1.42	1.53
34	i	1139	A	C2'-C1'	-10.04	1.42	1.53
34	i	82	G	C2'-C1'	10.04	1.64	1.53
34	i	1359	C	O4'-C1'	10.04	1.54	1.41
34	i	1312	C	O4'-C1'	10.03	1.54	1.41
34	i	1573	U	O4'-C1'	-10.03	1.28	1.41
34	i	1651	G	C2'-C1'	-10.02	1.42	1.53
34	i	313	C	O4'-C1'	10.02	1.54	1.41
34	i	1819	A	C2'-C1'	10.02	1.64	1.53
34	i	956	U	O4'-C1'	10.02	1.54	1.41
34	i	1779	C	C2'-C1'	10.01	1.64	1.53
34	i	1467	C	C2'-C1'	-10.00	1.42	1.53
34	i	1338	U	C2'-C1'	-10.00	1.42	1.53
34	i	809	A	O4'-C1'	10.00	1.54	1.41
34	i	149	A	O4'-C1'	10.00	1.54	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	193	C	C2'-C1'	-9.99	1.42	1.53
34	i	1766	C	C2'-C1'	-9.99	1.42	1.53
34	i	1787	A	O4'-C1'	9.99	1.54	1.41
34	i	120	U	C2'-C1'	-9.99	1.42	1.53
34	i	1504	A	C2'-C1'	9.99	1.64	1.53
34	i	1594	U	C2'-C1'	9.97	1.64	1.53
34	i	1209	C	C2'-C1'	-9.94	1.42	1.53
34	i	111	A	O4'-C1'	-9.93	1.28	1.41
34	i	855	G	C2'-C1'	-9.93	1.42	1.53
34	i	588	G	C2'-C1'	-9.93	1.42	1.53
34	i	946	C	O4'-C1'	9.92	1.54	1.41
34	i	1029	G	C2'-C1'	-9.92	1.42	1.53
34	i	1559	C	O4'-C1'	9.92	1.54	1.41
34	i	533	C	O4'-C1'	9.90	1.54	1.41
34	i	1096	A	O4'-C1'	9.90	1.54	1.41
34	i	428	G	C2'-C1'	9.90	1.64	1.53
34	i	1822	C	O4'-C1'	9.90	1.54	1.41
34	i	142	C	O4'-C1'	-9.89	1.28	1.41
34	i	560	C	C2'-C1'	-9.89	1.42	1.53
34	i	437	A	C2'-C1'	9.89	1.64	1.53
34	i	1006	G	O4'-C1'	-9.89	1.28	1.41
34	i	486	C	O4'-C1'	9.88	1.54	1.41
34	i	1201	C	C2'-C1'	-9.87	1.42	1.53
34	i	1316	G	O4'-C1'	-9.87	1.28	1.41
34	i	1428	U	C2'-C1'	-9.86	1.42	1.53
34	i	66	G	O4'-C1'	9.85	1.54	1.41
34	i	1678	C	O4'-C1'	9.84	1.54	1.41
34	i	392	C	O4'-C1'	9.83	1.54	1.41
34	i	1055	G	C2'-C1'	-9.82	1.42	1.53
34	i	85	A	C2'-C1'	-9.81	1.42	1.53
34	i	96	C	O4'-C1'	9.81	1.54	1.41
34	i	564	A	C2'-C1'	-9.79	1.42	1.53
34	i	1585	C	C2'-C1'	-9.75	1.42	1.53
34	i	1329	U	C2'-C1'	9.75	1.64	1.53
34	i	1320	G	C2'-C1'	-9.74	1.42	1.53
34	i	932	G	C2'-C1'	-9.74	1.42	1.53
34	i	1204	A	C2'-C1'	9.73	1.64	1.53
34	i	481	C	C2'-C1'	-9.72	1.42	1.53
34	i	654	A	C2'-C1'	-9.72	1.42	1.53
34	i	507	C	O4'-C1'	9.71	1.54	1.41
34	i	359	C	C2'-C1'	-9.71	1.42	1.53
34	i	1503	G	C2'-C1'	-9.71	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	298	G	O4'-C1'	-9.70	1.29	1.41
34	i	645	A	C2'-C1'	-9.70	1.42	1.53
34	i	888	U	C2'-C1'	-9.69	1.42	1.53
34	i	487	C	C2'-C1'	-9.66	1.42	1.53
34	i	1462	G	C2'-C1'	-9.65	1.42	1.53
34	i	511	A	C2'-C1'	-9.65	1.42	1.53
34	i	743	U	O4'-C1'	9.65	1.54	1.41
34	i	1120	C	O4'-C1'	9.64	1.54	1.41
34	i	1432	C	C2'-C1'	-9.64	1.42	1.53
34	i	1572	G	O4'-C1'	9.64	1.54	1.41
34	i	1808	G	C2'-C1'	-9.64	1.42	1.53
34	i	544	A	C2'-C1'	-9.62	1.42	1.53
34	i	1031	A	C2'-C1'	-9.62	1.42	1.53
34	i	88	G	C2'-C1'	-9.61	1.42	1.53
34	i	799	C	C2'-C1'	-9.61	1.42	1.53
34	i	419	C	O4'-C1'	9.61	1.54	1.41
34	i	13	C	C2'-C1'	-9.61	1.42	1.53
34	i	1251	G	O4'-C1'	9.60	1.54	1.41
34	i	448	A	O4'-C1'	9.59	1.54	1.41
34	i	1784	A	C2'-C1'	-9.58	1.42	1.53
34	i	67	C	O4'-C1'	-9.56	1.29	1.41
34	i	445	A	O4'-C1'	9.56	1.54	1.41
34	i	150	A	O4'-C1'	9.55	1.54	1.41
34	i	1707	A	C2'-C1'	-9.54	1.42	1.53
34	i	829	C	C2'-C1'	-9.54	1.42	1.53
34	i	31	U	C2'-C1'	9.54	1.63	1.53
34	i	457	G	O4'-C1'	9.53	1.54	1.41
34	i	1536	G	C2'-C1'	-9.53	1.42	1.53
34	i	1099	C	C2'-C1'	-9.53	1.42	1.53
34	i	1781	G	C2'-C1'	-9.53	1.42	1.53
34	i	1337	C	O4'-C1'	9.53	1.54	1.41
34	i	1742	C	O3'-P	-9.53	1.49	1.61
34	i	1296	U	O4'-C1'	-9.51	1.29	1.41
34	i	1790	G	C2'-C1'	-9.51	1.42	1.53
34	i	657	U	O4'-C1'	9.50	1.54	1.41
34	i	298	G	C2'-C1'	9.48	1.63	1.53
34	i	1548	C	C2'-C1'	9.47	1.63	1.53
34	i	1534	U	C2'-C1'	9.47	1.63	1.53
10	J	35	TYR	CD1-CE1	-9.46	1.25	1.39
19	S	6	PRO	CA-C	9.46	1.71	1.52
34	i	1464	C	O4'-C1'	9.46	1.53	1.41
34	i	1669	G	C2'-C1'	-9.45	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	884	U	O4'-C1'	9.45	1.53	1.41
34	i	1402	G	C2'-C1'	-9.45	1.43	1.53
34	i	1112	C	O4'-C1'	-9.43	1.29	1.41
34	i	1437	U	C2'-C1'	9.43	1.63	1.53
34	i	166	A	C2'-C1'	-9.42	1.43	1.53
34	i	1339	U	O4'-C1'	9.42	1.53	1.41
34	i	675	A	C2'-C1'	-9.42	1.43	1.53
34	i	285	U	O4'-C1'	9.42	1.53	1.41
34	i	1301	C	O4'-C1'	9.41	1.53	1.41
34	i	1440	U	C2'-C1'	-9.41	1.43	1.53
34	i	440	C	C2'-C1'	9.40	1.63	1.53
34	i	1029	G	O4'-C1'	9.40	1.53	1.41
34	i	1101	G	O4'-C1'	9.40	1.53	1.41
34	i	234	C	C2'-C1'	9.39	1.63	1.53
34	i	173	A	O4'-C1'	9.39	1.53	1.41
34	i	311	C	O4'-C1'	9.37	1.53	1.41
34	i	1713	G	C2'-C1'	-9.37	1.43	1.53
34	i	212	G	O4'-C1'	9.35	1.53	1.41
34	i	1025	G	O4'-C1'	9.35	1.53	1.41
34	i	614	C	O4'-C1'	9.33	1.53	1.41
34	i	927	C	O4'-C1'	9.33	1.53	1.41
34	i	726	C	O4'-C1'	9.33	1.53	1.41
34	i	980	C	O4'-C1'	9.33	1.53	1.41
34	i	1328	A	O4'-C1'	9.33	1.53	1.41
34	i	1118	A	C2'-C1'	9.30	1.63	1.53
34	i	1477	G	C2'-C1'	-9.30	1.43	1.53
34	i	944	C	O4'-C1'	9.29	1.53	1.41
4	D	96	LEU	C-N	9.28	1.55	1.34
34	i	1861	U	C2'-C1'	9.27	1.63	1.53
34	i	1335	U	P-O5'	-9.26	1.50	1.59
34	i	1622	C	O4'-C1'	9.24	1.53	1.41
34	i	939	U	O4'-C1'	9.24	1.53	1.41
34	i	1735	C	O4'-C1'	9.24	1.53	1.41
34	i	618	A	O4'-C1'	-9.24	1.29	1.41
34	i	1275	C	C2'-C1'	9.24	1.63	1.53
34	i	1365	A	C2'-C1'	-9.23	1.43	1.53
34	i	1557	C	O4'-C1'	9.23	1.53	1.41
34	i	481	C	O4'-C1'	9.23	1.53	1.41
34	i	790	A	O4'-C1'	9.22	1.53	1.41
34	i	1211	C	C2'-C1'	9.21	1.63	1.53
34	i	1618	A	C2'-C1'	9.20	1.63	1.53
34	i	1849	G	C2'-C1'	-9.19	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	367	G	C2'-C1'	-9.19	1.43	1.53
34	i	53	C	O4'-C1'	9.19	1.53	1.41
34	i	1729	G	O4'-C1'	9.19	1.53	1.41
34	i	1607	G	C2'-C1'	9.18	1.63	1.53
34	i	1460	C	O4'-C1'	9.18	1.53	1.41
34	i	666	C	O4'-C1'	9.16	1.53	1.41
34	i	678	U	O4'-C1'	-9.16	1.29	1.41
34	i	42	A	C2'-C1'	-9.15	1.43	1.53
34	i	332	C	O4'-C1'	9.14	1.53	1.41
34	i	666	C	C2'-C1'	-9.14	1.43	1.53
34	i	827	G	C2'-C1'	-9.14	1.43	1.53
34	i	405	A	C2'-C1'	9.14	1.63	1.53
19	S	40	TYR	CA-C	-9.14	1.29	1.52
34	i	650	C	C2'-C1'	-9.13	1.43	1.53
34	i	49	C	C2'-C1'	-9.11	1.43	1.53
34	i	683	G	O4'-C1'	9.11	1.53	1.41
34	i	1559	C	C2'-C1'	-9.11	1.43	1.53
34	i	1385	C	C2'-C1'	-9.11	1.43	1.53
34	i	1744	G	C2'-C1'	-9.10	1.43	1.53
34	i	895	U	O4'-C1'	9.09	1.53	1.41
2	B	155	TYR	CB-CG	-9.08	1.38	1.51
34	i	1040	G	C2'-C1'	-9.08	1.43	1.53
34	i	1177	A	C2'-C1'	-9.08	1.43	1.53
27	a	10	ARG	CD-NE	9.07	1.61	1.46
34	i	1565	G	O4'-C1'	-9.07	1.29	1.41
34	i	171	A	O4'-C1'	-9.06	1.29	1.41
34	i	804	A	O4'-C1'	9.06	1.53	1.41
34	i	1850	C	O4'-C1'	9.06	1.53	1.41
34	i	1780	U	O4'-C1'	9.04	1.53	1.41
3	C	47	PRO	N-CD	9.04	1.60	1.47
34	i	1028	C	C2'-C1'	-9.04	1.43	1.53
34	i	1341	G	O4'-C1'	9.04	1.53	1.41
8	H	109	ARG	CA-CB	-9.03	1.34	1.53
34	i	106	C	O4'-C1'	9.04	1.53	1.41
34	i	1049	C	O4'-C1'	9.03	1.53	1.41
34	i	972	G	C2'-C1'	-9.02	1.43	1.53
34	i	373	G	O4'-C1'	9.02	1.53	1.41
34	i	1018	U	O4'-C1'	9.02	1.53	1.41
34	i	69	C	O4'-C1'	9.01	1.53	1.41
34	i	653	C	O4'-C1'	9.00	1.53	1.41
34	i	1646	A	C2'-C1'	9.00	1.63	1.53
34	i	211	U	O4'-C1'	8.98	1.53	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1647	G	C2'-C1'	-8.97	1.43	1.53
34	i	41	G	O4'-C1'	8.96	1.53	1.41
34	i	677	C	C2'-C1'	-8.96	1.43	1.53
34	i	900	A	C2'-C1'	-8.95	1.43	1.53
34	i	1533	C	O4'-C1'	8.95	1.53	1.41
34	i	204	G	C2'-C1'	8.93	1.63	1.53
34	i	1385	C	O4'-C1'	8.92	1.53	1.41
34	i	170	A	C2'-C1'	-8.90	1.43	1.53
34	i	1791	U	O4'-C1'	8.90	1.53	1.41
34	i	292	A	C2'-C1'	8.88	1.63	1.53
27	a	97	PRO	C-N	8.88	1.51	1.34
34	i	1288	C	C2'-C1'	-8.87	1.43	1.53
34	i	1829	A	O4'-C1'	8.87	1.53	1.41
34	i	939	U	C2'-C1'	-8.85	1.43	1.53
34	i	1336	U	C2'-C1'	8.85	1.63	1.53
34	i	1176	C	C2'-C1'	-8.85	1.43	1.53
34	i	883	U	O4'-C1'	-8.84	1.30	1.41
34	i	1142	C	O4'-C1'	8.84	1.53	1.41
34	i	178	C	O4'-C1'	8.83	1.53	1.41
34	i	220	C	O4'-C1'	8.83	1.53	1.41
34	i	1039	G	C2'-C1'	-8.83	1.43	1.53
34	i	1678	C	C2'-C1'	-8.82	1.43	1.53
34	i	1407	G	O4'-C1'	8.81	1.53	1.41
34	i	69	C	C2'-C1'	-8.81	1.43	1.53
34	i	1054	A	O4'-C1'	8.81	1.53	1.41
34	i	1571	G	O4'-C1'	8.81	1.53	1.41
34	i	853	U	O4'-C1'	8.80	1.53	1.41
34	i	1478	C	O4'-C1'	8.80	1.53	1.41
7	G	36	VAL	CB-CG1	-8.79	1.34	1.52
34	i	1465	A	O4'-C1'	8.80	1.53	1.41
34	i	510	A	O4'-C1'	8.79	1.53	1.41
34	i	380	C	O4'-C1'	8.78	1.53	1.41
34	i	97	U	O4'-C1'	8.77	1.53	1.41
19	S	54	LYS	CA-C	8.76	1.75	1.52
34	i	1218	G	C2'-C1'	-8.76	1.43	1.53
34	i	1706	U	C2'-C1'	-8.76	1.43	1.53
34	i	1692	A	C2'-C1'	8.76	1.62	1.53
34	i	1104	G	O4'-C1'	-8.76	1.30	1.41
34	i	1370	C	O4'-C1'	8.75	1.53	1.41
34	i	575	C	O4'-C1'	8.75	1.53	1.41
34	i	1456	C	O4'-C1'	8.74	1.53	1.41
34	i	813	G	C2'-C1'	-8.74	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	432	C	C2'-C1'	-8.73	1.43	1.53
34	i	574	A	C2'-C1'	-8.73	1.43	1.53
34	i	194	C	O4'-C1'	8.73	1.52	1.41
34	i	936	U	O4'-C1'	8.71	1.52	1.41
34	i	26	U	O4'-C1'	8.71	1.52	1.41
34	i	1221	U	O4'-C1'	8.70	1.52	1.41
34	i	1225	G	C2'-C1'	-8.70	1.43	1.53
34	i	1221	U	C2'-C1'	-8.69	1.43	1.53
34	i	324	C	C2'-C1'	-8.68	1.43	1.53
34	i	1434	A	O4'-C1'	8.67	1.52	1.41
34	i	189	G	O4'-C1'	8.66	1.52	1.41
34	i	540	C	O4'-C1'	8.66	1.52	1.41
34	i	1560	C	O4'-C1'	8.66	1.52	1.41
34	i	844	U	O4'-C1'	8.66	1.52	1.41
34	i	1775	A	O4'-C1'	8.66	1.52	1.41
34	i	1813	A	O4'-C1'	8.65	1.52	1.41
34	i	670	G	O4'-C1'	8.64	1.52	1.41
34	i	1158	C	O4'-C1'	8.63	1.52	1.41
34	i	989	G	C2'-C1'	-8.62	1.43	1.53
34	i	354	A	C2'-C1'	-8.62	1.43	1.53
34	i	807	A	C2'-C1'	-8.62	1.43	1.53
34	i	30	C	O4'-C1'	8.61	1.52	1.41
34	i	50	A	O4'-C1'	8.61	1.52	1.41
34	i	1822	C	C2'-C1'	-8.61	1.43	1.53
34	i	1085	G	C2'-C1'	-8.60	1.43	1.53
34	i	168	C	C2'-C1'	-8.59	1.44	1.53
34	i	688	U	C2'-C1'	-8.58	1.44	1.53
34	i	1068	U	C2'-C1'	8.58	1.62	1.53
34	i	235	C	O4'-C1'	8.58	1.52	1.41
34	i	441	G	C2'-C1'	-8.58	1.44	1.53
34	i	1611	U	O4'-C1'	8.57	1.52	1.41
34	i	1414	C	C2'-C1'	-8.57	1.44	1.53
34	i	107	A	C2'-C1'	8.57	1.62	1.53
34	i	376	C	C2'-C1'	-8.57	1.44	1.53
34	i	147	A	C2'-C1'	8.56	1.62	1.53
34	i	1267	C	C2'-C1'	-8.56	1.44	1.53
34	i	17	C	O4'-C1'	8.56	1.52	1.41
34	i	543	U	O4'-C1'	8.56	1.52	1.41
34	i	1345	G	O4'-C1'	8.56	1.52	1.41
34	i	1825	A	O4'-C1'	8.55	1.52	1.41
34	i	1212	C	O4'-C1'	8.55	1.52	1.41
34	i	661	A	C2'-C1'	-8.55	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1624	C	O4'-C1'	8.54	1.52	1.41
34	i	453	C	O4'-C1'	8.54	1.52	1.41
34	i	33	G	C2'-C1'	-8.53	1.44	1.53
34	i	1630	C	O4'-C1'	8.53	1.52	1.41
34	i	990	C	C2'-C1'	-8.52	1.44	1.53
34	i	148	U	C2'-C1'	8.51	1.62	1.53
34	i	409	G	O4'-C1'	8.51	1.52	1.41
34	i	1440	U	O4'-C1'	8.50	1.52	1.41
34	i	443	C	O4'-C1'	8.49	1.52	1.41
34	i	649	G	O4'-C1'	-8.49	1.30	1.41
34	i	1185	A	O4'-C1'	8.49	1.52	1.41
34	i	1331	G	C2'-C1'	-8.49	1.44	1.53
34	i	1532	A	C2'-C1'	8.48	1.62	1.53
34	i	1527	C	O4'-C1'	8.48	1.52	1.41
34	i	1325	U	O4'-C1'	8.48	1.52	1.41
34	i	1495	U	C2'-C1'	-8.46	1.44	1.53
34	i	1490	U	C2'-C1'	8.46	1.62	1.53
34	i	1223	G	O4'-C1'	8.45	1.52	1.41
34	i	1264	C	O4'-C1'	8.44	1.52	1.41
34	i	824	G	O4'-C1'	-8.44	1.30	1.41
34	i	1569	C	C2'-C1'	-8.43	1.44	1.53
34	i	313	C	C2'-C1'	-8.43	1.44	1.53
34	i	1304	U	O4'-C1'	-8.43	1.30	1.41
10	J	164	PRO	C-N	8.43	1.53	1.34
34	i	625	G	C2'-C1'	-8.42	1.44	1.53
34	i	1200	A	C2'-C1'	-8.41	1.44	1.53
4	D	4	GLN	N-CA	-8.40	1.29	1.46
34	i	165	G	C2'-C1'	8.40	1.62	1.53
34	i	361	A	C2'-C1'	-8.40	1.44	1.53
34	i	1577	C	O4'-C1'	8.40	1.52	1.41
34	i	236	C	O4'-C1'	8.39	1.52	1.41
34	i	965	U	O4'-C1'	8.38	1.52	1.41
34	i	1807	A	O4'-C1'	8.38	1.52	1.41
34	i	937	C	O4'-C1'	8.37	1.52	1.41
34	i	1476	A	O4'-C1'	8.37	1.52	1.41
34	i	625	G	O4'-C1'	8.36	1.52	1.41
34	i	537	G	C2'-C1'	-8.36	1.44	1.53
34	i	923	C	O4'-C1'	8.36	1.52	1.41
34	i	1138	G	C2'-C1'	8.35	1.62	1.53
34	i	1295	A	C2'-C1'	8.35	1.62	1.53
34	i	1309	A	O4'-C1'	8.35	1.52	1.41
34	i	528	U	O4'-C1'	8.35	1.52	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	941	U	C2'-C1'	-8.35	1.44	1.53
34	i	1661	C	O4'-C1'	8.35	1.52	1.41
34	i	72	C	C2'-C1'	8.34	1.62	1.53
34	i	176	U	O4'-C1'	8.34	1.52	1.41
34	i	824	G	C2'-C1'	-8.34	1.44	1.53
34	i	832	G	C2'-C1'	8.33	1.62	1.53
34	i	596	G	O4'-C1'	-8.33	1.30	1.41
34	i	902	U	O4'-C1'	8.32	1.52	1.41
34	i	1292	U	C2'-C1'	-8.32	1.44	1.53
34	i	159	A	O4'-C1'	8.31	1.52	1.41
34	i	1079	A	O4'-C1'	8.31	1.52	1.41
34	i	219	U	O4'-C1'	8.31	1.52	1.41
34	i	1672	U	C2'-C1'	8.30	1.62	1.53
34	i	187	C	C2'-C1'	-8.29	1.44	1.53
34	i	1679	C	O4'-C1'	8.29	1.52	1.41
34	i	53	C	C2'-C1'	8.29	1.62	1.53
34	i	1304	U	C2'-C1'	8.29	1.62	1.53
34	i	1183	G	O4'-C1'	8.28	1.52	1.41
34	i	348	C	O4'-C1'	8.27	1.52	1.41
34	i	462	C	C2'-C1'	-8.27	1.44	1.53
34	i	1168	U	C2'-C1'	8.27	1.62	1.53
34	i	908	C	O4'-C1'	8.26	1.52	1.41
34	i	593	C	O4'-C1'	8.25	1.52	1.41
34	i	676	U	C2'-C1'	8.25	1.62	1.53
34	i	1785	A	O4'-C1'	8.25	1.52	1.41
34	i	557	C	O4'-C1'	8.24	1.52	1.41
34	i	1252	G	O4'-C1'	8.24	1.52	1.41
34	i	1367	U	O4'-C1'	8.24	1.52	1.41
34	i	1861	U	O4'-C1'	-8.23	1.30	1.41
34	i	40	A	C2'-C1'	8.22	1.62	1.53
34	i	1019	A	C2'-C1'	8.22	1.62	1.53
34	i	465	C	C2'-C1'	-8.22	1.44	1.53
34	i	918	A	C2'-C1'	8.21	1.62	1.53
34	i	875	C	O4'-C1'	8.20	1.52	1.41
34	i	18	C	C2'-C1'	-8.19	1.44	1.53
34	i	1102	C	C2'-C1'	8.19	1.62	1.53
34	i	1001	G	C2'-C1'	-8.18	1.44	1.53
35	l	67	PHE	CD2-CE2	-8.18	1.22	1.39
34	i	1401	A	C2'-C1'	-8.18	1.44	1.53
34	i	1075	C	C2'-C1'	-8.18	1.44	1.53
34	i	1480	A	O4'-C1'	8.18	1.52	1.41
34	i	1086	C	O4'-C1'	8.17	1.52	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	741	C	O3'-P	-8.16	1.51	1.61
34	i	943	G	C2'-C1'	-8.16	1.44	1.53
34	i	303	G	C2'-C1'	8.16	1.62	1.53
34	i	1699	C	C2'-C1'	-8.16	1.44	1.53
34	i	164	A	O4'-C1'	8.16	1.52	1.41
34	i	57	U	C2'-C1'	8.16	1.62	1.53
34	i	1140	A	O4'-C1'	8.16	1.52	1.41
34	i	1824	U	O4'-C1'	8.16	1.52	1.41
34	i	1394	G	C2'-C1'	-8.15	1.44	1.53
34	i	1425	G	O3'-P	-8.15	1.51	1.61
34	i	835	C	C2'-C1'	-8.14	1.44	1.53
34	i	955	G	C2'-C1'	-8.14	1.44	1.53
34	i	739	U	O4'-C1'	8.12	1.52	1.41
34	i	537	G	O4'-C1'	8.12	1.52	1.41
34	i	727	G	O4'-C1'	8.12	1.52	1.41
34	i	1447	G	C2'-C1'	-8.12	1.44	1.53
34	i	1261	A	O4'-C1'	8.11	1.52	1.41
34	i	1840	G	C2'-C1'	-8.11	1.44	1.53
34	i	1059	C	C2'-C1'	-8.11	1.44	1.53
34	i	1390	G	O4'-C1'	8.11	1.52	1.41
34	i	1028	C	O4'-C1'	8.09	1.52	1.41
34	i	317	G	O4'-C1'	-8.08	1.31	1.41
3	C	193	PRO	N-CD	8.08	1.59	1.47
34	i	1558	G	C2'-C1'	-8.08	1.44	1.53
34	i	1487	G	C2'-C1'	-8.07	1.44	1.53
34	i	1663	U	P-O5'	-8.07	1.51	1.59
34	i	618	A	C2'-C1'	8.06	1.62	1.53
34	i	1794	A	O4'-C1'	8.06	1.52	1.41
34	i	1450	A	O4'-C1'	8.06	1.52	1.41
34	i	1201	C	O4'-C1'	8.06	1.52	1.41
34	i	1279	C	C2'-C1'	-8.06	1.44	1.53
19	S	95	TYR	CD1-CE1	-8.05	1.27	1.39
34	i	463	A	O4'-C1'	8.05	1.52	1.41
34	i	948	G	C2'-C1'	-8.04	1.44	1.53
34	i	152	U	C2'-C1'	-8.04	1.44	1.53
34	i	1522	C	O4'-C1'	8.04	1.52	1.41
34	i	959	A	O4'-C1'	-8.04	1.31	1.41
34	i	1386	U	C2'-C1'	-8.03	1.44	1.53
34	i	624	A	O4'-C1'	8.03	1.52	1.41
34	i	86	C	C2'-C1'	-8.02	1.44	1.53
34	i	492	C	O4'-C1'	8.02	1.52	1.41
34	i	924	G	C2'-C1'	-8.02	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1705	C	O4'-C1'	8.02	1.52	1.41
20	T	4	VAL	C-N	8.01	1.52	1.34
34	i	1733	C	C2'-C1'	-8.01	1.44	1.53
34	i	1537	C	C2'-C1'	-8.01	1.44	1.53
34	i	1800	A	C2'-C1'	-8.01	1.44	1.53
34	i	1061	G	C2'-C1'	-8.01	1.44	1.53
34	i	863	G	O4'-C1'	8.00	1.52	1.41
34	i	369	C	O4'-C1'	8.00	1.52	1.41
34	i	1046	A	C2'-C1'	-8.00	1.44	1.53
34	i	1107	U	O4'-C1'	8.00	1.52	1.41
7	G	36	VAL	CA-CB	-7.99	1.38	1.54
34	i	26	U	C2'-C1'	-7.99	1.44	1.53
34	i	953	A	C2'-C1'	-7.99	1.44	1.53
34	i	302	C	C2'-C1'	-7.99	1.44	1.53
34	i	1623	C	O4'-C1'	7.99	1.52	1.41
18	R	89	SER	CA-C	7.99	1.73	1.52
34	i	37	C	C2'-C1'	-7.99	1.44	1.53
34	i	599	U	O4'-C1'	7.98	1.52	1.41
34	i	607	G	C2'-C1'	-7.98	1.44	1.53
34	i	1327	C	O4'-C1'	7.98	1.52	1.41
34	i	1150	U	O4'-C1'	-7.97	1.31	1.41
34	i	1535	G	C2'-C1'	-7.97	1.44	1.53
34	i	486	C	C2'-C1'	-7.97	1.44	1.53
34	i	1579	G	O4'-C1'	7.97	1.52	1.41
34	i	630	A	O4'-C1'	7.96	1.52	1.41
34	i	829	C	O4'-C1'	7.95	1.51	1.41
34	i	988	A	O4'-C1'	7.95	1.51	1.41
34	i	1818	A	O4'-C1'	-7.95	1.31	1.41
34	i	338	A	C2'-C1'	-7.93	1.44	1.53
34	i	1482	A	P-O5'	-7.93	1.51	1.59
34	i	557	C	C2'-C1'	-7.92	1.44	1.53
34	i	1604	C	O4'-C1'	7.92	1.51	1.41
34	i	1446	G	C2'-C1'	-7.91	1.44	1.53
34	i	536	G	O4'-C1'	7.90	1.51	1.41
34	i	189	G	C2'-C1'	-7.90	1.44	1.53
34	i	1652	G	C2'-C1'	-7.90	1.44	1.53
7	G	131	ARG	N-CA	-7.88	1.30	1.46
34	i	1857	A	C2'-C1'	7.88	1.62	1.53
34	i	399	C	O4'-C1'	7.87	1.51	1.41
34	i	336	C	O4'-C1'	7.87	1.51	1.41
34	i	930	G	C2'-C1'	-7.87	1.44	1.53
34	i	1123	C	O4'-C1'	7.87	1.51	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1592	C	C2'-C1'	-7.86	1.44	1.53
34	i	1403	U	O4'-C1'	7.86	1.51	1.41
34	i	969	C	O4'-C1'	7.85	1.51	1.41
34	i	1321	G	O4'-C1'	7.85	1.51	1.41
34	i	1480	A	C2'-C1'	-7.84	1.44	1.53
34	i	190	A	O4'-C1'	7.83	1.51	1.41
34	i	1126	G	O4'-C1'	-7.83	1.31	1.41
34	i	337	G	O4'-C1'	7.81	1.51	1.41
34	i	447	C	O4'-C1'	7.79	1.51	1.41
34	i	1664	G	C2'-C1'	-7.77	1.44	1.53
34	i	1027	A	O4'-C1'	7.76	1.51	1.41
34	i	521	A	O3'-P	-7.76	1.51	1.61
34	i	211	U	O3'-P	-7.76	1.51	1.61
34	i	1687	U	C2'-C1'	-7.75	1.44	1.53
34	i	880	C	O4'-C1'	7.75	1.51	1.41
34	i	1638	U	O4'-C1'	7.75	1.51	1.41
34	i	29	G	C2'-C1'	-7.75	1.44	1.53
34	i	275	C	O4'-C1'	7.74	1.51	1.41
34	i	1071	C	O4'-C1'	7.74	1.51	1.41
34	i	1796	C	O4'-C1'	7.74	1.51	1.41
34	i	1444	A	C2'-C1'	-7.73	1.44	1.53
34	i	685	G	C1'-N9	-7.73	1.36	1.46
34	i	563	U	O4'-C1'	7.73	1.51	1.41
34	i	452	C	O4'-C1'	7.72	1.51	1.41
7	G	130	PRO	C-N	-7.72	1.16	1.34
34	i	200	U	C2'-C1'	-7.72	1.44	1.53
34	i	566	A	C2'-C1'	-7.72	1.44	1.53
34	i	37	C	O4'-C1'	7.71	1.51	1.41
34	i	49	C	O4'-C1'	7.71	1.51	1.41
34	i	119	U	C2'-C1'	-7.70	1.44	1.53
34	i	171	A	C2'-C1'	7.70	1.61	1.53
34	i	355	C	C2'-C1'	-7.70	1.44	1.53
34	i	876	G	C2'-C1'	7.70	1.61	1.53
34	i	368	U	C2'-C1'	-7.69	1.44	1.53
34	i	846	C	C2'-C1'	-7.69	1.44	1.53
34	i	1392	A	C2'-C1'	7.69	1.61	1.53
34	i	1385	C	P-O5'	-7.69	1.52	1.59
34	i	1332	C	O4'-C1'	7.69	1.51	1.41
34	i	874	G	C2'-C1'	-7.67	1.45	1.53
34	i	1187	C	O4'-C1'	7.67	1.51	1.41
34	i	872	C	O4'-C1'	7.67	1.51	1.41
34	i	60	A	O4'-C1'	-7.66	1.31	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1299	C	O4'-C1'	-7.65	1.31	1.41
34	i	544	A	O4'-C1'	-7.64	1.31	1.41
34	i	1245	C	O4'-C1'	7.64	1.51	1.41
34	i	1382	A	O4'-C1'	7.64	1.51	1.41
10	J	35	TYR	CD2-CE2	-7.63	1.27	1.39
34	i	725	C	O4'-C1'	7.63	1.51	1.41
34	i	1423	C	O4'-C1'	7.63	1.51	1.41
19	S	82	TRP	CA-CB	-7.63	1.37	1.53
34	i	1398	A	C2'-C1'	-7.62	1.45	1.53
34	i	226	A	C2'-C1'	-7.62	1.45	1.53
34	i	864	G	C2'-C1'	-7.62	1.45	1.53
34	i	460	G	C2'-C1'	-7.61	1.45	1.53
34	i	820	C	O4'-C1'	7.61	1.51	1.41
34	i	938	G	O4'-C1'	7.60	1.51	1.41
34	i	194	C	C2'-C1'	-7.60	1.45	1.53
34	i	1823	G	O4'-C1'	7.60	1.51	1.41
34	i	604	G	C1'-N9	-7.59	1.36	1.46
34	i	1633	G	O4'-C1'	7.59	1.51	1.41
34	i	449	C	C2'-C1'	-7.59	1.45	1.53
34	i	151	C	P-O5'	-7.58	1.52	1.59
34	i	377	C	C2'-C1'	-7.58	1.45	1.53
34	i	518	A	O4'-C1'	7.58	1.51	1.41
34	i	1045	A	O4'-C1'	-7.58	1.31	1.41
34	i	859	U	O4'-C1'	7.58	1.51	1.41
34	i	1343	U	O4'-C1'	7.58	1.51	1.41
34	i	271	G	O3'-P	-7.57	1.52	1.61
34	i	689	G	C1'-N9	-7.57	1.36	1.46
34	i	818	U	O4'-C1'	7.56	1.51	1.41
34	i	515	A	C2'-C1'	-7.56	1.45	1.53
34	i	202	U	C2'-C1'	-7.55	1.45	1.53
34	i	1493	G	O4'-C1'	7.55	1.51	1.41
34	i	278	U	O4'-C1'	7.55	1.51	1.41
34	i	1814	G	C2'-C1'	-7.55	1.45	1.53
34	i	1384	A	O4'-C1'	7.54	1.51	1.41
34	i	1041	U	O4'-C1'	7.54	1.51	1.41
34	i	1423	C	C2'-C1'	7.54	1.61	1.53
34	i	38	A	C2'-C1'	7.53	1.61	1.53
34	i	846	C	O4'-C1'	7.53	1.51	1.41
34	i	442	G	O4'-C1'	7.51	1.51	1.41
34	i	1292	U	O4'-C1'	7.50	1.51	1.41
7	G	170	ARG	CA-CB	7.50	1.70	1.53
34	i	1676	U	C2'-C1'	-7.49	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1799	G	O4'-C1'	7.49	1.51	1.41
34	i	1145	A	C2'-C1'	-7.49	1.45	1.53
34	i	386	U	O4'-C1'	7.48	1.51	1.41
34	i	1472	A	C2'-C1'	7.47	1.61	1.53
34	i	933	C	C2'-C1'	-7.47	1.45	1.53
34	i	95	G	C2'-C1'	-7.47	1.45	1.53
34	i	342	U	O4'-C1'	7.47	1.51	1.41
34	i	485	U	C2'-C1'	-7.46	1.45	1.53
34	i	1808	G	O4'-C1'	7.46	1.51	1.41
34	i	1138	G	O4'-C1'	-7.46	1.31	1.41
34	i	514	U	O4'-C1'	7.45	1.51	1.41
34	i	1835	C	C2'-C1'	-7.45	1.45	1.53
34	i	1626	U	C2'-C1'	-7.45	1.45	1.53
34	i	1260	C	O4'-C1'	7.45	1.51	1.41
34	i	621	U	C2'-C1'	-7.44	1.45	1.53
34	i	845	A	O4'-C1'	7.44	1.51	1.41
34	i	1345	G	C2'-C1'	-7.44	1.45	1.53
34	i	1123	C	C2'-C1'	-7.43	1.45	1.53
34	i	1778	G	C2'-C1'	-7.43	1.45	1.53
34	i	360	G	O4'-C1'	7.43	1.51	1.41
34	i	1137	G	O4'-C1'	-7.43	1.31	1.41
34	i	1006	G	C2'-C1'	7.43	1.61	1.53
34	i	399	C	C2'-C1'	-7.42	1.45	1.53
34	i	485	U	O4'-C1'	7.42	1.51	1.41
34	i	686	G	C2'-C1'	-7.41	1.45	1.53
34	i	493	C	O4'-C1'	7.41	1.51	1.41
34	i	656	U	O4'-C1'	7.41	1.51	1.41
34	i	1186	A	O4'-C1'	7.41	1.51	1.41
34	i	1151	U	O4'-C1'	7.40	1.51	1.41
10	J	164	PRO	N-CA	-7.40	1.34	1.47
34	i	1465	A	C2'-C1'	-7.40	1.45	1.53
34	i	343	C	O4'-C1'	7.39	1.51	1.41
34	i	1568	G	O4'-C1'	7.39	1.51	1.41
34	i	428	G	O4'-C1'	-7.39	1.32	1.41
34	i	1091	U	O4'-C1'	7.38	1.51	1.41
34	i	1850	C	C2'-C1'	-7.38	1.45	1.53
34	i	1340	A	O4'-C1'	7.37	1.51	1.41
34	i	3	C	C2'-C1'	7.36	1.61	1.53
34	i	982	G	C2'-C1'	-7.36	1.45	1.53
34	i	1313	U	O4'-C1'	7.36	1.51	1.41
34	i	1758	G	C5'-C4'	7.36	1.60	1.51
34	i	840	U	O4'-C1'	7.36	1.51	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	798	A	O4'-C1'	7.35	1.51	1.41
34	i	213	C	O4'-C1'	7.34	1.51	1.41
34	i	86	C	O4'-C1'	7.34	1.51	1.41
34	i	1798	U	O4'-C1'	7.34	1.51	1.41
34	i	347	C	O4'-C1'	7.33	1.51	1.41
34	i	1434	A	C2'-C1'	7.32	1.61	1.53
34	i	516	A	C2'-C1'	-7.30	1.45	1.53
34	i	743	U	O3'-P	-7.30	1.52	1.61
34	i	596	G	C2'-C1'	-7.30	1.45	1.53
34	i	1424	G	C2'-C1'	7.30	1.61	1.53
34	i	488	C	C2'-C1'	-7.30	1.45	1.53
10	J	91	LYS	C-O	-7.29	1.09	1.23
34	i	327	C	O4'-C1'	7.29	1.51	1.41
34	i	1363	U	O4'-C1'	7.29	1.51	1.41
34	i	86	C	P-O5'	-7.29	1.52	1.59
34	i	652	G	O4'-C1'	7.28	1.51	1.41
34	i	120	U	O4'-C1'	7.28	1.51	1.41
6	F	108	PRO	N-CD	7.27	1.58	1.47
34	i	1045	A	C2'-C1'	7.27	1.61	1.53
34	i	223	A	O4'-C1'	7.27	1.51	1.41
34	i	361	A	O4'-C1'	7.27	1.51	1.41
34	i	820	C	C2'-C1'	-7.27	1.45	1.53
14	N	137	PRO	N-CD	7.26	1.58	1.47
34	i	1059	C	O4'-C1'	7.26	1.51	1.41
16	P	122	THR	CA-CB	7.26	1.72	1.53
34	i	404	A	C2'-C1'	7.25	1.61	1.53
34	i	960	A	C2'-C1'	7.25	1.61	1.53
34	i	856	G	O4'-C1'	7.25	1.51	1.41
34	i	1293	U	C2'-C1'	7.25	1.61	1.53
9	I	3	ILE	CA-CB	-7.25	1.38	1.54
34	i	871	A	C2'-C1'	-7.24	1.45	1.53
34	i	85	A	O4'-C1'	7.24	1.51	1.41
34	i	456	G	C4'-C3'	7.23	1.61	1.53
34	i	225	C	O3'-P	-7.22	1.52	1.61
34	i	897	G	C2'-C1'	-7.22	1.45	1.53
34	i	1839	A	C2'-C1'	-7.22	1.45	1.53
34	i	1096	A	C2'-C1'	-7.22	1.45	1.53
34	i	216	U	O4'-C1'	7.21	1.51	1.41
34	i	470	G	C2'-C1'	-7.21	1.45	1.53
34	i	1223	G	C2'-C1'	-7.20	1.45	1.53
34	i	632	U	O4'-C1'	7.19	1.51	1.41
34	i	74	G	O4'-C1'	7.19	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	576	G	O4'-C1'	7.19	1.50	1.41
34	i	1668	U	C2'-C1'	-7.18	1.45	1.53
34	i	1008	A	C2'-C1'	-7.18	1.45	1.53
34	i	42	A	O4'-C1'	7.17	1.50	1.41
34	i	1405	A	O4'-C1'	7.17	1.50	1.41
34	i	660	A	O4'-C1'	-7.16	1.32	1.41
34	i	1387	C	C2'-C1'	-7.16	1.45	1.53
34	i	1489	C	C2'-C1'	7.16	1.61	1.53
34	i	916	A	O4'-C1'	7.14	1.50	1.41
34	i	1460	C	C2'-C1'	-7.14	1.45	1.53
34	i	632	U	C2'-C1'	-7.14	1.45	1.53
34	i	1355	U	C2'-C1'	7.14	1.61	1.53
34	i	937	C	C2'-C1'	-7.13	1.45	1.53
34	i	1259	U	C5'-C4'	7.13	1.59	1.51
25	Y	91	LEU	C-N	7.13	1.50	1.34
34	i	35	C	C2'-C1'	-7.12	1.45	1.53
34	i	1033	G	C2'-C1'	-7.12	1.45	1.53
7	G	131	ARG	CB-CG	7.11	1.71	1.52
34	i	818	U	C2'-C1'	-7.10	1.45	1.53
34	i	6	G	C2'-C1'	-7.10	1.45	1.53
34	i	382	A	C2'-C1'	-7.08	1.45	1.53
34	i	1583	A	O4'-C1'	7.08	1.50	1.41
34	i	1741	U	O3'-P	7.07	1.69	1.61
34	i	742	C	C2'-C1'	-7.07	1.45	1.53
8	H	111	LYS	CA-C	-7.07	1.34	1.52
34	i	735	C	C2'-C1'	-7.07	1.45	1.53
34	i	1654	U	O3'-P	-7.06	1.52	1.61
34	i	880	C	C2'-C1'	-7.05	1.45	1.53
34	i	860	A	C2'-C1'	-7.05	1.45	1.53
34	i	609	A	C2'-C1'	7.04	1.61	1.53
34	i	1717	G	O4'-C1'	7.04	1.50	1.41
34	i	104	A	O4'-C1'	7.03	1.50	1.41
34	i	390	C	C2'-C1'	-7.03	1.45	1.53
34	i	1250	C	O4'-C1'	7.03	1.50	1.41
34	i	1723	U	O4'-C1'	7.03	1.50	1.41
34	i	655	G	C2'-C1'	-7.02	1.45	1.53
34	i	418	U	C2'-C1'	7.01	1.61	1.53
24	X	24	ASP	CA-C	-7.01	1.34	1.52
2	B	133	TYR	CB-CG	-7.00	1.41	1.51
34	i	1043	C	C2'-C1'	-7.00	1.45	1.53
34	i	1125	G	C2'-C1'	-6.99	1.45	1.53
34	i	1256	A	C2'-C1'	-6.99	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1395	C	O4'-C1'	6.99	1.50	1.41
10	J	35	TYR	CE1-CZ	-6.98	1.29	1.38
34	i	959	A	C2'-C1'	-6.98	1.45	1.53
34	i	81	U	O4'-C1'	6.97	1.50	1.41
34	i	1021	U	C2'-C1'	6.97	1.61	1.53
34	i	983	A	O4'-C1'	6.97	1.50	1.41
34	i	668	U	O4'-C1'	6.97	1.50	1.41
34	i	1670	A	O4'-C1'	-6.96	1.32	1.41
34	i	556	U	C2'-C1'	6.95	1.60	1.53
34	i	876	G	O4'-C1'	-6.95	1.32	1.41
34	i	1174	U	C2'-C1'	-6.94	1.45	1.53
34	i	1681	G	C2'-C1'	-6.94	1.45	1.53
34	i	988	A	C2'-C1'	-6.93	1.45	1.53
34	i	1419	C	C2'-C1'	-6.93	1.45	1.53
34	i	1303	U	C2'-C1'	6.93	1.60	1.53
34	i	172	U	O4'-C1'	6.92	1.50	1.41
3	C	93	LYS	C-N	-6.92	1.18	1.34
34	i	1211	C	O4'-C1'	6.92	1.50	1.41
34	i	601	G	O4'-C1'	6.92	1.50	1.41
34	i	1175	G	C2'-C1'	-6.92	1.45	1.53
34	i	118	C	O4'-C1'	6.92	1.50	1.41
34	i	325	G	C2'-C1'	6.92	1.60	1.53
34	i	1519	G	O4'-C1'	-6.91	1.32	1.41
34	i	1836	C	C2'-C1'	-6.91	1.45	1.53
34	i	1054	A	C2'-C1'	-6.91	1.45	1.53
34	i	264	U	O3'-P	-6.91	1.52	1.61
34	i	619	A	C2'-C1'	6.91	1.60	1.53
34	i	231	C	C2'-C1'	-6.90	1.45	1.53
34	i	1255	A	O4'-C1'	-6.90	1.32	1.41
34	i	1044	G	C5'-C4'	6.90	1.59	1.51
34	i	1805	C	C2'-C1'	-6.90	1.45	1.53
34	i	1528	A	C2'-C1'	-6.89	1.45	1.53
34	i	1784	A	O4'-C1'	6.89	1.50	1.41
34	i	899	A	O4'-C1'	-6.89	1.32	1.41
34	i	1514	U	C2'-C1'	6.89	1.60	1.53
34	i	1731	G	C2'-C1'	-6.88	1.45	1.53
24	X	128	VAL	CA-CB	-6.88	1.40	1.54
34	i	674	G	C2'-C1'	-6.87	1.45	1.53
34	i	811	U	O4'-C1'	6.87	1.50	1.41
34	i	1696	C	O4'-C1'	6.87	1.50	1.41
34	i	812	A	C2'-C1'	-6.87	1.45	1.53
34	i	1782	A	O4'-C1'	6.87	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1691	C	C2'-C1'	-6.86	1.45	1.53
34	i	46	A	C2'-C1'	-6.86	1.45	1.53
34	i	823	A	O4'-C1'	6.85	1.50	1.41
34	i	464	G	C2'-C1'	-6.84	1.45	1.53
34	i	1843	G	C2'-C1'	-6.84	1.45	1.53
34	i	1039	G	O4'-C1'	6.84	1.50	1.41
34	i	59	U	C2'-C1'	6.83	1.60	1.53
34	i	969	C	C5'-C4'	6.83	1.59	1.51
34	i	996	C	O4'-C1'	6.83	1.50	1.41
34	i	489	G	C2'-C1'	-6.82	1.45	1.53
34	i	903	G	O4'-C1'	6.82	1.50	1.41
24	X	126	ALA	CA-CB	-6.81	1.38	1.52
34	i	1525	U	O4'-C1'	6.81	1.50	1.41
34	i	1391	C	O4'-C1'	6.80	1.50	1.41
34	i	434	G	O4'-C1'	-6.80	1.32	1.41
34	i	1032	A	C2'-C1'	-6.80	1.45	1.53
34	i	1621	C	O4'-C1'	6.80	1.50	1.41
34	i	1734	C	C2'-C1'	-6.80	1.45	1.53
34	i	435	A	O4'-C1'	6.79	1.50	1.41
19	S	95	TYR	CE1-CZ	-6.79	1.29	1.38
34	i	65	C	C2'-C1'	6.79	1.60	1.53
34	i	946	C	C2'-C1'	-6.79	1.45	1.53
34	i	1283	A	C2'-C1'	6.78	1.60	1.53
34	i	14	C	O4'-C1'	6.78	1.50	1.41
34	i	438	A	C2'-C1'	6.78	1.60	1.53
34	i	442	G	C2'-C1'	-6.76	1.46	1.53
34	i	470	G	O4'-C1'	6.75	1.50	1.41
34	i	941	U	O4'-C1'	6.75	1.50	1.41
34	i	1842	U	O4'-C1'	6.75	1.50	1.41
34	i	1452	G	O4'-C1'	6.74	1.50	1.41
34	i	1018	U	O3'-P	-6.73	1.53	1.61
34	i	1203	G	O4'-C1'	6.73	1.50	1.41
34	i	467	G	C2'-C1'	-6.72	1.46	1.53
34	i	314	U	O4'-C1'	-6.72	1.32	1.41
34	i	699	C	C5'-C4'	6.72	1.59	1.51
34	i	320	G	C2'-C1'	-6.72	1.46	1.53
34	i	1842	U	C2'-C1'	-6.72	1.46	1.53
34	i	118	C	C2'-C1'	-6.71	1.46	1.53
34	i	1051	A	C5'-C4'	6.71	1.59	1.51
34	i	147	A	O4'-C1'	-6.71	1.32	1.41
34	i	628	C	O4'-C1'	6.71	1.50	1.41
34	i	1743	G	C2'-C1'	-6.70	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1712	C	O4'-C1'	6.69	1.50	1.41
34	i	1810	G	C2'-C1'	-6.68	1.46	1.53
34	i	273	G	O4'-C1'	6.67	1.50	1.41
34	i	597	U	C2'-C1'	-6.67	1.46	1.53
7	G	157	VAL	CA-CB	-6.67	1.40	1.54
10	J	163	SER	C-N	-6.65	1.21	1.34
34	i	348	C	C2'-C1'	-6.65	1.46	1.53
34	i	513	A	O4'-C1'	6.65	1.50	1.41
34	i	1707	A	O4'-C1'	6.65	1.50	1.41
34	i	896	C	O4'-C1'	6.65	1.50	1.41
34	i	1538	U	P-O5'	-6.65	1.53	1.59
34	i	965	U	C2'-C1'	-6.64	1.46	1.53
34	i	1149	C	O4'-C1'	-6.64	1.33	1.41
34	i	1836	C	O4'-C1'	6.64	1.50	1.41
34	i	1797	U	O4'-C1'	6.64	1.50	1.41
34	i	397	G	C2'-C1'	6.63	1.60	1.53
34	i	1414	C	O4'-C1'	-6.63	1.33	1.41
34	i	1378	A	O4'-C1'	6.63	1.50	1.41
34	i	338	A	O4'-C1'	6.63	1.50	1.41
34	i	1244	U	C2'-C1'	-6.63	1.46	1.53
34	i	101	U	C2'-C1'	6.63	1.60	1.53
34	i	504	U	C2'-C1'	-6.62	1.46	1.53
34	i	1735	C	C2'-C1'	-6.62	1.46	1.53
34	i	201	G	C2'-C1'	6.62	1.60	1.53
34	i	1144	A	C2'-C1'	6.62	1.60	1.53
34	i	103	A	O4'-C1'	-6.61	1.33	1.41
34	i	370	G	O4'-C1'	-6.61	1.33	1.41
34	i	1626	U	O4'-C1'	6.61	1.50	1.41
34	i	411	G	O3'-P	-6.61	1.53	1.61
34	i	1072	G	C2'-C1'	-6.61	1.46	1.53
34	i	165	G	O4'-C1'	-6.60	1.33	1.41
34	i	913	U	C2'-C1'	6.59	1.60	1.53
34	i	1102	C	O4'-C1'	6.59	1.50	1.41
34	i	1243	C	O4'-C1'	6.58	1.50	1.41
34	i	9	U	O4'-C1'	6.58	1.50	1.41
19	S	95	TYR	CD2-CE2	-6.57	1.29	1.39
34	i	421	G	C2'-C1'	-6.56	1.46	1.53
34	i	1702	U	C2'-C1'	-6.56	1.46	1.53
34	i	1051	A	O4'-C1'	6.55	1.50	1.41
34	i	205	G	O4'-C1'	6.55	1.50	1.41
34	i	1035	C	O4'-C1'	6.55	1.50	1.41
34	i	799	C	O4'-C1'	6.52	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1234	U	C2'-C1'	-6.52	1.46	1.53
34	i	1031	A	O4'-C1'	6.52	1.50	1.41
34	i	1311	U	C5'-C4'	6.52	1.59	1.51
34	i	663	G	P-O5'	-6.51	1.53	1.59
34	i	958	A	C2'-C1'	6.51	1.60	1.53
34	i	928	G	C2'-C1'	-6.51	1.46	1.53
34	i	227	A	O4'-C1'	6.51	1.50	1.41
34	i	1797	U	C2'-C1'	-6.51	1.46	1.53
34	i	1667	U	C2'-C1'	-6.50	1.46	1.53
34	i	1737	C	O4'-C1'	6.50	1.50	1.41
34	i	1232	G	C3'-C2'	6.50	1.60	1.52
34	i	1061	G	O4'-C1'	6.50	1.50	1.41
34	i	1121	C	O4'-C1'	6.50	1.50	1.41
34	i	1634	G	O4'-C1'	6.50	1.50	1.41
34	i	1280	A	C2'-C1'	-6.49	1.46	1.53
34	i	300	G	C2'-C1'	-6.49	1.46	1.53
34	i	806	A	O4'-C1'	6.49	1.50	1.41
34	i	639	U	O4'-C1'	6.48	1.50	1.41
34	i	1603	U	C2'-C1'	-6.47	1.46	1.53
34	i	637	U	O4'-C1'	6.47	1.50	1.41
34	i	471	C	O4'-C1'	6.47	1.50	1.41
34	i	30	C	C2'-C1'	-6.47	1.46	1.53
34	i	1610	U	O4'-C1'	6.47	1.50	1.41
9	I	8	TRP	CD2-CE3	-6.47	1.30	1.40
3	C	72	PRO	N-CD	6.46	1.56	1.47
34	i	1463	C	O4'-C1'	6.46	1.50	1.41
34	i	1479	A	C2'-C1'	6.46	1.60	1.53
34	i	100	U	O4'-C1'	6.45	1.50	1.41
34	i	1173	U	O4'-C1'	6.44	1.50	1.41
34	i	1444	A	O4'-C1'	6.44	1.50	1.41
34	i	273	G	C2'-C1'	-6.44	1.46	1.53
34	i	1499	C	O4'-C1'	6.43	1.50	1.41
34	i	1622	C	C2'-C1'	-6.43	1.46	1.53
34	i	388	A	O4'-C1'	6.43	1.50	1.41
34	i	1392	A	O4'-C1'	-6.43	1.33	1.41
34	i	962	U	C2'-C1'	-6.42	1.46	1.53
34	i	94	G	O4'-C1'	6.42	1.50	1.41
34	i	1256	A	O3'-P	-6.41	1.53	1.61
34	i	406	U	C2'-C1'	6.40	1.60	1.53
34	i	139	C	C2'-C1'	6.40	1.60	1.53
34	i	627	U	C2'-C1'	6.39	1.60	1.53
34	i	898	G	C2'-C1'	-6.39	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1278	A	O4'-C1'	6.37	1.50	1.41
4	D	20	GLU	CG-CD	6.37	1.61	1.51
34	i	160	U	O4'-C1'	6.37	1.50	1.41
34	i	733	G	C2'-C1'	6.36	1.60	1.53
34	i	892	U	O4'-C1'	6.36	1.50	1.41
34	i	458	A	C2'-C1'	-6.36	1.46	1.53
34	i	461	G	O4'-C1'	-6.35	1.33	1.41
34	i	1103	G	C2'-C1'	-6.34	1.46	1.53
34	i	1215	C	O4'-C1'	6.34	1.49	1.41
34	i	494	G	C2'-C1'	-6.33	1.46	1.53
34	i	1569	C	O4'-C1'	6.33	1.49	1.41
34	i	1840	G	O4'-C1'	6.33	1.49	1.41
34	i	879	U	C5'-C4'	6.32	1.58	1.51
34	i	33	G	O4'-C1'	6.32	1.49	1.41
26	Z	104	ARG	CD-NE	-6.31	1.35	1.46
34	i	567	U	O4'-C1'	6.31	1.49	1.41
34	i	1334	G	O4'-C1'	6.30	1.49	1.41
34	i	1684	C	O4'-C1'	6.30	1.49	1.41
34	i	795	U	C2'-C1'	-6.30	1.46	1.53
34	i	826	A	C2'-C1'	6.30	1.60	1.53
34	i	1090	C	C2'-C1'	-6.30	1.46	1.53
34	i	1138	G	P-O5'	-6.30	1.53	1.59
10	J	101	LYS	N-CA	6.30	1.58	1.46
7	G	156	TYR	CB-CG	-6.29	1.42	1.51
34	i	1615	A	O4'-C1'	-6.29	1.33	1.41
34	i	290	A	C2'-C1'	6.29	1.60	1.53
34	i	1047	G	C2'-C1'	-6.29	1.46	1.53
34	i	408	A	O4'-C1'	6.28	1.49	1.41
34	i	1753	G	C2'-C1'	-6.28	1.46	1.53
34	i	1402	G	O4'-C1'	6.28	1.49	1.41
10	J	144	ILE	CA-CB	-6.27	1.40	1.54
5	E	150	PRO	N-CD	6.27	1.56	1.47
34	i	1426	C	C2'-C1'	6.27	1.60	1.53
34	i	1426	C	P-O5'	-6.26	1.53	1.59
34	i	974	G	C2'-C1'	-6.26	1.46	1.53
7	G	170	ARG	CA-C	-6.25	1.36	1.52
34	i	934	A	C2'-C1'	-6.25	1.46	1.53
34	i	954	G	O4'-C1'	-6.25	1.33	1.41
34	i	1085	G	O4'-C1'	6.25	1.49	1.41
18	R	89	SER	C-N	6.25	1.48	1.34
34	i	220	C	C2'-C1'	-6.25	1.46	1.53
34	i	1397	A	C2'-C1'	6.24	1.60	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1233	C	P-O5'	-6.24	1.53	1.59
34	i	1167	G	C5'-C4'	6.23	1.58	1.51
34	i	793	C	O3'-P	-6.23	1.53	1.61
34	i	469	C	O4'-C1'	6.22	1.49	1.41
34	i	945	G	C2'-C1'	-6.22	1.46	1.53
34	i	997	A	C2'-C1'	6.22	1.60	1.53
34	i	1030	A	C2'-C1'	6.22	1.60	1.53
34	i	1799	G	C2'-C1'	-6.22	1.46	1.53
34	i	920	G	P-O5'	-6.22	1.53	1.59
34	i	1032	A	C5'-C4'	6.22	1.58	1.51
34	i	528	U	C2'-C1'	-6.21	1.46	1.53
34	i	349	U	C2'-C1'	-6.21	1.46	1.53
34	i	1584	A	C2'-C1'	6.21	1.60	1.53
34	i	364	G	C2'-C1'	-6.20	1.46	1.53
34	i	1739	G	C2'-C1'	6.20	1.60	1.53
34	i	494	G	C3'-C2'	-6.19	1.46	1.52
34	i	806	A	C2'-C1'	-6.19	1.46	1.53
34	i	994	A	C2'-C1'	6.19	1.60	1.53
34	i	1121	C	C2'-C1'	-6.19	1.46	1.53
34	i	1415	C	O4'-C1'	6.19	1.49	1.41
34	i	1700	C	C2'-C1'	-6.19	1.46	1.53
17	Q	145	TYR	CD2-CE2	-6.18	1.30	1.39
34	i	889	U	C2'-C1'	6.18	1.60	1.53
34	i	1774	G	O4'-C1'	6.18	1.49	1.41
34	i	583	C	C2'-C1'	-6.18	1.46	1.53
34	i	337	G	C2'-C1'	-6.18	1.46	1.53
34	i	969	C	C2'-C1'	-6.17	1.46	1.53
34	i	389	C	C2'-C1'	-6.17	1.46	1.53
34	i	1740	A	O4'-C1'	-6.17	1.33	1.41
34	i	1791	U	P-O5'	-6.17	1.53	1.59
34	i	170	A	O3'-P	-6.17	1.53	1.61
34	i	404	A	O4'-C1'	6.17	1.49	1.41
34	i	678	U	C2'-C1'	6.17	1.60	1.53
34	i	1032	A	O4'-C1'	6.16	1.49	1.41
34	i	665	U	O4'-C1'	6.15	1.49	1.41
34	i	1078	A	O4'-C1'	6.15	1.49	1.41
34	i	1800	A	O4'-C1'	6.15	1.49	1.41
34	i	1167	G	C2'-C1'	6.14	1.60	1.53
34	i	1852	G	C2'-C1'	-6.14	1.46	1.53
34	i	1093	G	O4'-C1'	-6.14	1.33	1.41
34	i	370	G	P-O5'	-6.14	1.53	1.59
34	i	1657	U	O4'-C1'	6.13	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	36	VAL	CB-CG2	-6.13	1.40	1.52
34	i	1097	U	C2'-C1'	-6.13	1.46	1.53
34	i	629	C	C2'-C1'	-6.12	1.46	1.53
34	i	342	U	C4'-C3'	-6.12	1.46	1.53
34	i	1476	A	C2'-C1'	-6.12	1.46	1.53
24	X	116	PRO	CA-C	6.12	1.65	1.52
34	i	83	A	C2'-C1'	-6.11	1.46	1.53
34	i	477	U	C4'-C3'	6.11	1.59	1.53
34	i	356	U	O4'-C1'	6.11	1.49	1.41
34	i	1042	U	O4'-C1'	6.10	1.49	1.41
34	i	318	U	O4'-C1'	6.09	1.49	1.41
34	i	1284	U	C5'-C4'	6.09	1.58	1.51
34	i	656	U	C2'-C1'	6.09	1.60	1.53
34	i	1650	C	C2'-C1'	-6.09	1.46	1.53
18	R	86	PRO	N-CD	6.08	1.56	1.47
34	i	891	G	C2'-C1'	-6.08	1.46	1.53
34	i	396	U	O4'-C1'	6.08	1.49	1.41
34	i	1037	G	O4'-C1'	6.07	1.49	1.41
17	Q	145	TYR	CD1-CE1	-6.07	1.30	1.39
34	i	1132	U	O4'-C1'	6.06	1.49	1.41
34	i	1066	A	O4'-C1'	6.06	1.49	1.41
34	i	301	C	C2'-C1'	6.06	1.60	1.53
34	i	1016	A	C5'-C4'	6.06	1.58	1.51
34	i	529	C	C2'-C1'	-6.05	1.46	1.53
34	i	1119	C	C5'-C4'	6.05	1.58	1.51
34	i	1633	G	C2'-C1'	-6.05	1.46	1.53
34	i	472	G	C2'-C1'	-6.04	1.46	1.53
34	i	627	U	C5'-C4'	6.04	1.58	1.51
34	i	1628	A	C2'-C1'	-6.04	1.46	1.53
34	i	1804	U	O4'-C1'	6.04	1.49	1.41
7	G	131	ARG	C-O	-6.04	1.11	1.23
34	i	656	U	O3'-P	-6.03	1.53	1.61
34	i	335	U	O4'-C1'	6.03	1.49	1.41
18	R	111	PHE	CB-CG	-6.02	1.41	1.51
27	a	10	ARG	NE-CZ	6.02	1.40	1.33
3	C	195	PRO	N-CD	6.02	1.56	1.47
34	i	1040	G	O4'-C1'	6.02	1.49	1.41
34	i	1515	G	C4'-C3'	6.00	1.59	1.53
34	i	1710	A	O4'-C1'	6.00	1.49	1.41
34	i	351	U	C2'-C1'	6.00	1.59	1.53
34	i	1015	C	C4'-C3'	5.99	1.59	1.53
6	F	45	TYR	CB-CG	-5.99	1.42	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	867	U	O4'-C1'	-5.99	1.33	1.41
8	H	111	LYS	N-CA	5.99	1.58	1.46
34	i	1652	G	P-O5'	-5.99	1.53	1.59
34	i	1523	G	O4'-C1'	-5.99	1.33	1.41
34	i	797	U	P-O5'	-5.98	1.53	1.59
34	i	68	A	O4'-C1'	5.97	1.49	1.41
34	i	8	U	C2'-C1'	5.97	1.59	1.53
32	f	85	TYR	CE2-CZ	-5.96	1.30	1.38
34	i	601	G	C2'-C1'	-5.96	1.46	1.53
34	i	1311	U	O4'-C1'	-5.96	1.33	1.41
34	i	1427	G	O4'-C1'	5.96	1.49	1.41
34	i	1641	C	C4'-O4'	-5.96	1.37	1.45
34	i	1652	G	C4'-C3'	5.96	1.59	1.53
34	i	175	A	O4'-C1'	5.95	1.49	1.41
34	i	742	C	C5'-C4'	5.95	1.58	1.51
34	i	1296	U	C2'-C1'	5.95	1.59	1.53
34	i	805	A	O4'-C1'	5.94	1.49	1.41
34	i	1830	G	C2'-C1'	-5.94	1.46	1.53
34	i	146	G	C3'-O3'	5.93	1.50	1.42
34	i	1172	G	O4'-C1'	5.93	1.49	1.41
34	i	545	A	C2'-C1'	-5.93	1.46	1.53
4	D	4	GLN	C-N	-5.92	1.20	1.34
34	i	1845	A	C2'-C1'	5.92	1.59	1.53
34	i	565	A	C2'-C1'	-5.92	1.46	1.53
34	i	1161	G	C2'-C1'	5.91	1.59	1.53
34	i	1415	C	O3'-P	-5.91	1.54	1.61
34	i	1845	A	O4'-C1'	5.91	1.49	1.41
34	i	210	G	C2'-C1'	5.91	1.59	1.53
34	i	439	A	C5'-C4'	5.91	1.58	1.51
10	J	188	GLY	CA-C	5.91	1.61	1.51
34	i	54	A	C5'-C4'	5.91	1.58	1.51
34	i	415	G	P-O5'	-5.90	1.53	1.59
34	i	1373	U	C2'-C1'	-5.90	1.46	1.53
34	i	1639	C	O4'-C1'	5.90	1.49	1.41
34	i	930	G	O4'-C1'	5.90	1.49	1.41
34	i	155	G	O4'-C1'	5.89	1.49	1.41
34	i	214	A	C2'-C1'	-5.89	1.46	1.53
10	J	187	ALA	CA-C	5.89	1.68	1.52
34	i	279	G	C2'-C1'	5.89	1.59	1.53
34	i	566	A	O4'-C1'	5.89	1.49	1.41
34	i	449	C	C5'-C4'	5.88	1.58	1.51
34	i	602	U	C2'-C1'	-5.88	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	W	129	PHE	CB-CG	-5.88	1.41	1.51
34	i	795	U	C3'-C2'	5.88	1.59	1.52
34	i	1809	A	O4'-C1'	5.88	1.49	1.41
34	i	593	C	C2'-C1'	-5.87	1.46	1.53
34	i	1582	G	O4'-C1'	-5.87	1.34	1.41
24	X	23	HIS	N-CA	-5.86	1.34	1.46
34	i	990	C	O4'-C1'	5.86	1.49	1.41
34	i	391	A	C2'-C1'	5.86	1.59	1.53
34	i	1567	C	O4'-C1'	5.86	1.49	1.41
34	i	1073	A	O4'-C1'	5.85	1.49	1.41
34	i	1264	C	C2'-C1'	-5.85	1.47	1.53
34	i	1412	C	C2'-C1'	-5.85	1.47	1.53
35	l	67	PHE	CB-CG	-5.84	1.41	1.51
34	i	343	C	O3'-P	-5.84	1.54	1.61
34	i	1502	A	O4'-C1'	5.84	1.49	1.41
34	i	1048	A	O3'-P	-5.84	1.54	1.61
34	i	1777	C	C2'-C1'	-5.83	1.47	1.53
34	i	647	U	O4'-C1'	5.83	1.49	1.41
34	i	155	G	P-O5'	-5.82	1.53	1.59
34	i	1599	G	C3'-C2'	-5.82	1.46	1.52
34	i	1667	U	P-O5'	-5.82	1.53	1.59
34	i	106	C	C2'-C1'	-5.82	1.47	1.53
34	i	1394	G	O4'-C1'	5.82	1.49	1.41
34	i	1324	G	O4'-C1'	5.82	1.49	1.41
34	i	1730	A	O4'-C1'	5.82	1.49	1.41
5	E	130	PHE	CB-CG	-5.81	1.41	1.51
34	i	1473	U	O4'-C1'	5.81	1.49	1.41
34	i	1591	U	O4'-C1'	5.81	1.49	1.41
34	i	1776	G	C2'-C1'	-5.81	1.47	1.53
34	i	1564	A	C2'-C1'	5.81	1.59	1.53
34	i	1821	U	O4'-C1'	5.80	1.49	1.41
34	i	2	A	O4'-C1'	5.80	1.49	1.41
34	i	804	A	O3'-P	-5.79	1.54	1.61
8	H	67	PRO	N-CD	5.79	1.55	1.47
34	i	307	G	C2'-C1'	-5.79	1.47	1.53
34	i	1246	A	C2'-C1'	5.79	1.59	1.53
34	i	1711	C	C2'-C1'	-5.79	1.47	1.53
34	i	231	C	O4'-C1'	5.78	1.49	1.41
34	i	366	A	C2'-C1'	-5.78	1.47	1.53
34	i	649	G	C2'-C1'	5.78	1.59	1.53
34	i	1604	C	P-O5'	-5.78	1.53	1.59
34	i	306	C	O4'-C1'	5.77	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1402	G	C5'-C4'	5.77	1.58	1.51
34	i	1618	A	O4'-C1'	-5.77	1.34	1.41
34	i	1658	A	O4'-C1'	5.76	1.49	1.41
34	i	1544	U	O4'-C1'	5.76	1.49	1.41
32	f	136	PHE	CB-CG	-5.76	1.41	1.51
34	i	211	U	C2'-C1'	-5.76	1.47	1.53
34	i	1487	G	O4'-C1'	5.75	1.49	1.41
34	i	589	A	O4'-C1'	5.74	1.49	1.41
34	i	282	G	O4'-C1'	5.74	1.49	1.41
34	i	1760	C	C4'-C3'	5.74	1.59	1.53
34	i	1419	C	C5'-C4'	5.73	1.58	1.51
34	i	410	G	O4'-C1'	-5.73	1.34	1.41
34	i	99	A	P-O5'	-5.73	1.54	1.59
34	i	408	A	C5'-C4'	5.72	1.58	1.51
34	i	1647	G	O4'-C1'	5.72	1.49	1.41
34	i	1712	C	C2'-C1'	-5.71	1.47	1.53
34	i	1556	A	O4'-C1'	5.71	1.49	1.41
34	i	285	U	C2'-C1'	-5.71	1.47	1.53
34	i	1014	U	O4'-C1'	5.71	1.49	1.41
12	L	103	GLU	CG-CD	5.71	1.60	1.51
34	i	834	G	C2'-C1'	-5.71	1.47	1.53
34	i	721	C	P-O5'	5.71	1.65	1.59
34	i	1218	G	O4'-C1'	5.70	1.49	1.41
34	i	1727	G	C2'-C1'	-5.70	1.47	1.53
34	i	743	U	C2'-C1'	-5.69	1.47	1.53
34	i	1232	G	C2'-C1'	-5.69	1.47	1.53
34	i	550	A	C2'-C1'	-5.69	1.47	1.53
34	i	914	U	O4'-C1'	5.69	1.49	1.41
11	K	40	VAL	CB-CG1	-5.69	1.41	1.52
34	i	654	A	O4'-C1'	5.69	1.49	1.41
34	i	1680	U	C5'-C4'	5.68	1.58	1.51
34	i	97	U	C2'-C1'	-5.68	1.47	1.53
34	i	819	U	O4'-C1'	-5.68	1.34	1.41
34	i	1038	A	O4'-C1'	5.68	1.49	1.41
34	i	1799	G	C5'-C4'	5.68	1.58	1.51
34	i	319	G	C2'-C1'	-5.67	1.47	1.53
10	J	187	ALA	N-CA	5.67	1.57	1.46
34	i	1445	G	O4'-C1'	5.67	1.49	1.41
34	i	911	G	O4'-C1'	-5.67	1.34	1.41
34	i	1609	A	C2'-C1'	-5.67	1.47	1.53
34	i	1725	U	O4'-C1'	5.66	1.49	1.41
34	i	1272	A	P-O5'	-5.66	1.54	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1789	G	C2'-C1'	-5.66	1.47	1.53
34	i	1375	A	O4'-C1'	5.66	1.49	1.41
34	i	1414	C	O3'-P	-5.65	1.54	1.61
34	i	1577	C	C5'-C4'	5.65	1.58	1.51
34	i	430	G	C2'-C1'	-5.64	1.47	1.53
34	i	1366	A	O4'-C1'	5.64	1.49	1.41
34	i	1696	C	C5'-C4'	5.64	1.58	1.51
34	i	644	A	O4'-C1'	5.64	1.49	1.41
34	i	472	G	O4'-C1'	-5.64	1.34	1.41
34	i	1335	U	C2'-C1'	-5.63	1.47	1.53
34	i	794	G	O3'-P	-5.63	1.54	1.61
34	i	825	C	O3'-P	-5.63	1.54	1.61
31	e	77	HIS	C-N	5.63	1.43	1.33
34	i	965	U	C5'-C4'	5.62	1.58	1.51
34	i	1494	A	C4'-C3'	-5.62	1.47	1.52
10	J	188	GLY	N-CA	5.62	1.54	1.46
12	L	102	PHE	C-O	5.62	1.34	1.23
34	i	1310	U	O4'-C1'	-5.62	1.34	1.41
9	I	6	ASP	N-CA	-5.61	1.35	1.46
34	i	224	U	C5'-C4'	5.61	1.58	1.51
34	i	374	U	O4'-C1'	5.61	1.49	1.41
34	i	402	G	C5'-C4'	5.61	1.58	1.51
34	i	562	U	C2'-C1'	5.61	1.59	1.53
34	i	497	G	C5'-C4'	5.61	1.58	1.51
34	i	1332	C	P-O5'	-5.61	1.54	1.59
34	i	77	A	C4'-C3'	5.60	1.59	1.53
34	i	1718	G	O4'-C1'	-5.60	1.34	1.41
34	i	817	G	O3'-P	-5.60	1.54	1.61
32	f	148	TYR	CD1-CE1	-5.59	1.30	1.39
34	i	18	C	O3'-P	-5.59	1.54	1.61
34	i	36	U	O4'-C1'	5.59	1.49	1.41
34	i	1833	U	O3'-P	-5.59	1.54	1.61
34	i	93	U	C2'-C1'	5.59	1.59	1.53
34	i	1415	C	C2'-C1'	5.59	1.59	1.53
34	i	428	G	O3'-P	-5.58	1.54	1.61
34	i	98	C	O4'-C1'	5.58	1.49	1.41
31	e	97	GLU	CG-CD	-5.58	1.43	1.51
34	i	221	A	O4'-C1'	5.58	1.49	1.41
34	i	883	U	C5'-C4'	5.58	1.58	1.51
34	i	314	U	O3'-P	-5.57	1.54	1.61
17	Q	145	TYR	CB-CG	-5.57	1.43	1.51
34	i	1026	A	C2'-C1'	5.56	1.59	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1662	U	C2'-C1'	-5.56	1.47	1.53
34	i	1862	U	C4'-C3'	5.56	1.59	1.53
11	K	89	ILE	N-CA	-5.56	1.35	1.46
34	i	189	G	C3'-C2'	-5.56	1.46	1.52
34	i	586	U	C2'-C1'	-5.56	1.47	1.53
34	i	962	U	O4'-C1'	5.56	1.48	1.41
34	i	1379	A	O4'-C1'	5.56	1.48	1.41
34	i	1382	A	C5'-C4'	5.55	1.58	1.51
34	i	325	G	C4'-C3'	5.55	1.59	1.53
34	i	1356	U	C2'-C1'	-5.55	1.47	1.53
34	i	910	U	C2'-C1'	5.55	1.59	1.53
34	i	1567	C	C2'-C1'	-5.54	1.47	1.53
34	i	21	U	C2'-C1'	5.54	1.59	1.53
34	i	1372	A	C3'-C2'	-5.54	1.46	1.52
34	i	152	U	C5'-C4'	5.53	1.57	1.51
34	i	1395	C	C2'-C1'	-5.53	1.47	1.53
34	i	520	U	O3'-P	-5.53	1.54	1.61
34	i	94	G	O3'-P	-5.53	1.54	1.61
34	i	312	C	C2'-C1'	-5.53	1.47	1.53
34	i	317	G	C5'-C4'	5.53	1.57	1.51
34	i	839	C	O3'-P	-5.53	1.54	1.61
34	i	1780	U	C2'-C1'	-5.52	1.47	1.53
34	i	112	U	C5'-C4'	5.52	1.57	1.51
34	i	731	C	C2'-C1'	-5.51	1.47	1.53
34	i	574	A	O4'-C1'	5.51	1.48	1.41
34	i	1764	G	C5'-C4'	5.51	1.57	1.51
34	i	1829	A	C2'-C1'	-5.51	1.47	1.53
34	i	976	A	O4'-C1'	5.50	1.48	1.41
34	i	1412	C	O3'-P	-5.50	1.54	1.61
34	i	1439	C	O4'-C1'	5.50	1.48	1.41
34	i	1641	C	C5'-C4'	5.50	1.57	1.51
34	i	32	U	C2'-C1'	5.50	1.59	1.53
34	i	1702	U	O4'-C1'	5.50	1.48	1.41
34	i	390	C	C5'-C4'	5.50	1.57	1.51
34	i	343	C	P-O5'	-5.49	1.54	1.59
34	i	1302	U	C2'-C1'	-5.49	1.47	1.53
18	R	42	PRO	N-CD	5.49	1.55	1.47
34	i	577	A	C2'-C1'	-5.49	1.47	1.53
34	i	1821	U	C2'-C1'	-5.49	1.47	1.53
34	i	457	G	C2'-C1'	-5.48	1.47	1.53
34	i	1334	G	P-O5'	-5.48	1.54	1.59
34	i	418	U	O4'-C1'	-5.48	1.34	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1726	A	O4'-C1'	5.48	1.48	1.41
34	i	1649	G	C2'-C1'	-5.48	1.47	1.53
34	i	145	G	O4'-C1'	5.48	1.48	1.41
34	i	643	A	C2'-C1'	-5.48	1.47	1.53
34	i	186	G	O4'-C1'	5.47	1.48	1.41
34	i	1665	C	O4'-C1'	5.47	1.48	1.41
34	i	1564	A	P-O5'	-5.47	1.54	1.59
34	i	308	C	P-O5'	-5.47	1.54	1.59
35	l	66	LYS	CB-CG	-5.47	1.37	1.52
34	i	469	C	C2'-C1'	-5.46	1.47	1.53
34	i	411	G	C2'-C1'	-5.46	1.47	1.53
34	i	669	A	C2'-C1'	-5.46	1.47	1.53
34	i	1370	C	C2'-C1'	-5.46	1.47	1.53
34	i	272	C	O3'-P	-5.46	1.54	1.61
34	i	818	U	C4'-C3'	5.46	1.59	1.53
34	i	401	G	C2'-C1'	-5.46	1.47	1.53
34	i	854	A	O4'-C1'	5.46	1.48	1.41
34	i	979	A	O4'-C1'	5.46	1.48	1.41
34	i	1400	U	C4'-C3'	5.45	1.59	1.53
34	i	281	U	O3'-P	-5.45	1.54	1.61
34	i	112	U	O3'-P	-5.45	1.54	1.61
34	i	1332	C	C2'-C1'	-5.45	1.47	1.53
34	i	427	G	C2'-C1'	-5.44	1.47	1.53
34	i	1196	A	C2'-C1'	-5.44	1.47	1.53
34	i	460	G	O4'-C1'	5.44	1.48	1.41
34	i	730	C	O3'-P	-5.44	1.54	1.61
34	i	1424	G	O4'-C1'	-5.44	1.34	1.41
34	i	1076	A	O3'-P	-5.44	1.54	1.61
34	i	1248	C	O4'-C1'	5.44	1.48	1.41
34	i	34	U	C5'-C4'	5.43	1.57	1.51
34	i	45	A	C2'-C1'	-5.43	1.47	1.53
34	i	1124	C	O3'-P	-5.43	1.54	1.61
9	I	8	TRP	CB-CG	5.43	1.60	1.50
34	i	955	G	O4'-C1'	5.43	1.48	1.41
34	i	267	G	O3'-P	-5.43	1.54	1.61
34	i	1390	G	C4'-O4'	5.43	1.52	1.45
34	i	336	C	P-O5'	-5.43	1.54	1.59
34	i	867	U	C3'-O3'	5.42	1.49	1.42
34	i	1529	C	O4'-C1'	5.42	1.48	1.41
34	i	1673	A	O4'-C1'	-5.42	1.34	1.41
34	i	188	U	O4'-C1'	5.42	1.48	1.41
34	i	1819	A	O4'-C1'	-5.42	1.34	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	395	G	O4'-C1'	5.41	1.48	1.41
34	i	360	G	C4'-C3'	5.41	1.59	1.53
34	i	140	U	C2'-C1'	-5.41	1.47	1.53
34	i	1172	G	C2'-C1'	-5.41	1.47	1.53
34	i	1636	A	O3'-P	-5.41	1.54	1.61
34	i	1704	G	C2'-C1'	-5.41	1.47	1.53
34	i	796	U	P-O5'	-5.41	1.54	1.59
34	i	629	C	O4'-C1'	5.41	1.48	1.41
34	i	403	G	C2'-C1'	-5.40	1.47	1.53
34	i	1339	U	C2'-C1'	-5.40	1.47	1.53
34	i	1533	C	O3'-P	-5.40	1.54	1.61
26	Z	104	ARG	N-CA	-5.40	1.35	1.46
34	i	1418	G	C2'-C1'	5.40	1.59	1.53
34	i	573	A	O4'-C1'	5.39	1.48	1.41
34	i	1130	G	C2'-C1'	-5.39	1.47	1.53
34	i	1462	G	O3'-P	-5.39	1.54	1.61
34	i	290	A	C3'-C2'	-5.39	1.46	1.52
34	i	1657	U	C2'-C1'	-5.39	1.47	1.53
34	i	1373	U	O4'-C1'	5.39	1.48	1.41
10	J	144	ILE	C-N	5.38	1.44	1.34
34	i	1068	U	O4'-C1'	5.38	1.48	1.41
34	i	1847	C	P-O5'	-5.38	1.54	1.59
2	B	155	TYR	CD1-CE1	-5.38	1.31	1.39
34	i	82	G	O3'-P	-5.38	1.54	1.61
34	i	1027	A	C2'-C1'	-5.38	1.47	1.53
34	i	1088	G	O4'-C1'	5.37	1.48	1.41
34	i	73	C	O4'-C1'	5.37	1.48	1.41
7	G	180	VAL	CA-CB	-5.37	1.43	1.54
11	K	37	ASP	CB-CG	5.36	1.63	1.51
34	i	585	U	C2'-C1'	-5.36	1.47	1.53
34	i	1405	A	C5'-C4'	5.36	1.57	1.51
34	i	687	G	C2'-C1'	-5.36	1.47	1.53
34	i	216	U	C5'-C4'	5.36	1.57	1.51
34	i	346	C	C2'-C1'	-5.36	1.47	1.53
34	i	901	C	C2'-C1'	-5.36	1.47	1.53
34	i	1708	C	C2'-C1'	-5.35	1.47	1.53
34	i	98	C	C4'-C3'	5.35	1.59	1.53
8	H	111	LYS	CA-CB	5.34	1.65	1.53
34	i	1311	U	C2'-C1'	5.34	1.59	1.53
34	i	87	U	O4'-C1'	5.34	1.48	1.41
34	i	1638	U	C2'-C1'	-5.34	1.47	1.53
11	K	35	LEU	N-CA	-5.34	1.35	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1141	A	C2'-C1'	5.33	1.59	1.53
34	i	1056	A	C2'-C1'	-5.32	1.47	1.53
3	C	182	PRO	N-CD	5.32	1.55	1.47
34	i	1365	A	O4'-C1'	5.32	1.48	1.41
34	i	1812	A	C5'-C4'	5.32	1.57	1.51
12	L	20	LYS	N-CA	-5.32	1.35	1.46
34	i	1009	U	O4'-C1'	5.32	1.48	1.41
34	i	44	U	C2'-C1'	-5.31	1.47	1.53
34	i	1695	C	O4'-C1'	5.31	1.48	1.41
34	i	626	C	P-O5'	-5.31	1.54	1.59
34	i	1260	C	O3'-P	-5.30	1.54	1.61
34	i	1503	G	O3'-P	-5.30	1.54	1.61
34	i	1563	C	C5'-C4'	5.30	1.57	1.51
34	i	942	U	C2'-C1'	-5.29	1.47	1.53
34	i	1713	G	P-O5'	-5.29	1.54	1.59
34	i	1167	G	O3'-P	-5.28	1.54	1.61
34	i	484	C	C5'-C4'	5.28	1.57	1.51
34	i	542	G	O4'-C1'	5.27	1.48	1.41
34	i	1416	G	O4'-C1'	5.27	1.48	1.41
34	i	1523	G	P-O5'	-5.27	1.54	1.59
34	i	387	G	O4'-C1'	5.27	1.48	1.41
34	i	1119	C	O4'-C1'	5.27	1.48	1.41
34	i	1264	C	P-O5'	-5.27	1.54	1.59
34	i	1667	U	O4'-C1'	5.27	1.48	1.41
34	i	1795	A	C5'-C4'	5.27	1.57	1.51
24	X	139	GLU	CB-CG	5.26	1.62	1.52
34	i	1792	C	C5'-C4'	5.26	1.57	1.51
34	i	1730	A	C2'-C1'	-5.26	1.47	1.53
34	i	1637	U	C2'-C1'	5.26	1.59	1.53
34	i	1709	U	O4'-C1'	5.25	1.48	1.41
34	i	90	G	O4'-C1'	5.25	1.48	1.41
34	i	1848	U	C2'-C1'	5.25	1.59	1.53
34	i	1609	A	P-O5'	-5.25	1.54	1.59
34	i	217	U	P-O5'	-5.25	1.54	1.59
34	i	281	U	C2'-C1'	5.25	1.59	1.53
34	i	1543	G	C4'-C3'	-5.25	1.47	1.52
34	i	517	C	O4'-C1'	5.24	1.48	1.41
34	i	543	U	P-O5'	-5.24	1.54	1.59
13	M	116	LYS	N-CA	5.24	1.56	1.46
34	i	1146	A	C5'-C4'	5.23	1.57	1.51
6	F	130	ARG	N-CA	5.23	1.56	1.46
34	i	349	U	C5'-C4'	5.23	1.57	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	169	PRO	N-CD	5.23	1.55	1.47
34	i	1363	U	C2'-C1'	-5.22	1.47	1.53
34	i	1549	C	O3'-P	-5.22	1.54	1.61
34	i	83	A	O4'-C1'	5.21	1.48	1.41
34	i	1339	U	O3'-P	-5.21	1.54	1.61
34	i	266	G	C5'-C4'	5.21	1.57	1.51
34	i	1070	C	O4'-C1'	5.21	1.48	1.41
34	i	645	A	C5'-C4'	5.21	1.57	1.51
34	i	1346	U	O4'-C1'	5.21	1.48	1.41
34	i	659	A	C2'-C1'	5.21	1.59	1.53
34	i	1232	G	C4'-C3'	-5.21	1.47	1.52
34	i	1538	U	O4'-C1'	5.21	1.48	1.41
34	i	1808	G	C5'-C4'	5.20	1.57	1.51
34	i	1064	G	C2'-C1'	-5.20	1.47	1.53
34	i	1504	A	O4'-C1'	-5.20	1.34	1.41
34	i	683	G	C4'-O4'	5.20	1.52	1.45
34	i	1689	U	C5'-C4'	5.20	1.57	1.51
34	i	1287	A	C2'-C1'	5.19	1.59	1.53
34	i	917	G	O4'-C1'	5.19	1.48	1.41
34	i	1380	C	O4'-C1'	5.19	1.48	1.41
27	a	97	PRO	CA-C	5.19	1.63	1.52
34	i	139	C	O3'-P	-5.19	1.54	1.61
34	i	1341	G	C2'-C1'	-5.18	1.47	1.53
34	i	1344	G	C2'-C1'	5.18	1.59	1.53
34	i	1439	C	O3'-P	-5.18	1.54	1.61
34	i	1148	U	O4'-C1'	5.18	1.48	1.41
34	i	619	A	C5'-C4'	5.18	1.57	1.51
34	i	1344	G	O3'-P	-5.18	1.54	1.61
34	i	1776	G	C5'-C4'	5.18	1.57	1.51
34	i	1523	G	C5'-C4'	-5.18	1.45	1.51
34	i	861	A	C5'-C4'	5.17	1.57	1.51
34	i	662	A	C4'-C3'	5.17	1.58	1.53
34	i	78	C	C3'-C2'	5.17	1.58	1.52
2	B	41	ILE	N-CA	-5.16	1.36	1.46
34	i	603	C	C2'-C1'	5.16	1.59	1.53
34	i	978	G	C2'-C1'	-5.16	1.47	1.53
34	i	1546	U	O3'-P	-5.16	1.54	1.61
34	i	1766	C	C3'-C2'	-5.15	1.47	1.52
34	i	553	G	C5'-C4'	5.15	1.57	1.51
34	i	1858	U	P-O5'	-5.15	1.54	1.59
34	i	801	U	C2'-C1'	-5.15	1.47	1.53
24	X	115	ILE	CA-C	-5.14	1.39	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	176	U	P-O5'	-5.14	1.54	1.59
34	i	394	G	C5'-C4'	5.14	1.57	1.51
34	i	1279	C	O3'-P	-5.14	1.54	1.61
18	R	89	SER	N-CA	5.14	1.56	1.46
26	Z	104	ARG	CG-CD	5.14	1.64	1.51
34	i	1094	C	O4'-C1'	5.14	1.48	1.41
10	J	89	GLU	CG-CD	-5.14	1.44	1.51
34	i	116	U	O4'-C1'	5.14	1.48	1.41
34	i	241	A	C2'-C1'	5.13	1.58	1.53
34	i	1592	C	C4'-O4'	-5.13	1.38	1.45
34	i	597	U	O4'-C1'	5.13	1.48	1.41
22	V	33	PRO	N-CD	5.12	1.55	1.47
34	i	1618	A	C4'-C3'	-5.12	1.47	1.52
34	i	951	A	C5'-C4'	5.12	1.57	1.51
34	i	978	G	C5'-C4'	5.12	1.57	1.51
34	i	1543	G	C5'-C4'	5.12	1.57	1.51
34	i	1680	U	C2'-C1'	-5.12	1.47	1.53
34	i	1822	C	C3'-C2'	-5.12	1.47	1.52
34	i	1621	C	C2'-C1'	-5.11	1.47	1.53
34	i	1627	G	O4'-C1'	-5.11	1.35	1.41
34	i	1029	G	O3'-P	-5.11	1.55	1.61
34	i	659	A	O3'-P	-5.11	1.55	1.61
34	i	1177	A	C5'-C4'	5.11	1.57	1.51
34	i	665	U	C2'-C1'	-5.10	1.47	1.53
12	L	152	LYS	C-N	5.10	1.45	1.34
34	i	1206	G	O4'-C1'	-5.10	1.35	1.41
34	i	1417	A	O4'-C1'	5.10	1.48	1.41
11	K	93	THR	CA-C	5.10	1.66	1.52
34	i	113	G	C4'-C3'	5.10	1.58	1.53
34	i	326	A	C2'-C1'	5.10	1.58	1.53
34	i	288	A	C5'-C4'	5.09	1.57	1.51
34	i	1420	G	C5'-C4'	5.09	1.57	1.51
34	i	1039	G	C5'-C4'	5.09	1.57	1.51
34	i	421	G	C4'-C3'	-5.09	1.47	1.52
34	i	672	U	P-O5'	-5.08	1.54	1.59
34	i	95	G	O4'-C1'	5.08	1.48	1.41
34	i	674	G	C4'-C3'	5.08	1.58	1.53
34	i	791	A	O4'-C1'	5.08	1.48	1.41
2	B	155	TYR	CD2-CE2	-5.08	1.31	1.39
34	i	1168	U	O3'-P	-5.08	1.55	1.61
34	i	1199	G	O4'-C1'	5.08	1.48	1.41
34	i	1203	G	C2'-C1'	-5.08	1.47	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	790	A	C2'-C1'	-5.07	1.47	1.53
34	i	878	U	C4'-C3'	5.07	1.58	1.53
19	S	6	PRO	N-CA	5.07	1.55	1.47
34	i	853	U	P-O5'	5.07	1.64	1.59
34	i	1466	C	C2'-C1'	-5.07	1.47	1.53
34	i	1695	C	C2'-C1'	5.07	1.58	1.53
34	i	308	C	C2'-C1'	-5.07	1.47	1.53
34	i	1768	C	O4'-C1'	5.07	1.48	1.41
34	i	1314	G	C2'-C1'	-5.06	1.47	1.53
34	i	1558	G	C4'-C3'	5.06	1.58	1.53
34	i	1429	C	O3'-P	5.06	1.67	1.61
34	i	21	U	O4'-C1'	5.06	1.48	1.41
34	i	935	U	C5'-C4'	5.06	1.57	1.51
34	i	1328	A	P-O5'	-5.06	1.54	1.59
8	H	110	THR	CA-C	-5.05	1.39	1.52
34	i	667	G	O4'-C1'	5.05	1.48	1.41
26	Z	104	ARG	CB-CG	-5.05	1.39	1.52
34	i	112	U	C2'-C1'	5.05	1.58	1.53
34	i	102	A	O3'-P	-5.05	1.55	1.61
34	i	655	G	O4'-C1'	5.04	1.48	1.41
34	i	742	C	O4'-C1'	5.04	1.48	1.41
34	i	808	A	C2'-C1'	-5.04	1.47	1.53
34	i	1397	A	C5'-C4'	5.04	1.57	1.51
34	i	79	A	C5'-C4'	5.04	1.57	1.51
34	i	1703	C	P-O5'	-5.04	1.54	1.59
34	i	1364	U	O4'-C1'	5.03	1.48	1.41
34	i	1540	A	C2'-C1'	-5.03	1.47	1.53
8	H	118	ARG	CA-CB	-5.03	1.42	1.53
34	i	1235	U	O3'-P	-5.03	1.55	1.61
34	i	1157	U	C2'-C1'	5.03	1.58	1.53
34	i	1399	C	O4'-C1'	-5.03	1.35	1.41
34	i	1432	C	O3'-P	-5.03	1.55	1.61
34	i	1761	C	C4'-C3'	5.03	1.58	1.53
34	i	411	G	O4'-C1'	-5.03	1.35	1.41
1	A	200	ASP	CA-C	-5.02	1.39	1.52
34	i	1358	U	O4'-C1'	-5.02	1.35	1.41
34	i	1460	C	O3'-P	-5.02	1.55	1.61
34	i	1775	A	C5'-C4'	5.02	1.57	1.51
34	i	828	G	C2'-C1'	-5.02	1.47	1.53
20	T	82	ARG	CD-NE	5.02	1.54	1.46
11	K	31	LYS	N-CA	-5.01	1.36	1.46
34	i	298	G	O3'-P	-5.01	1.55	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1084	U	C4'-C3'	5.01	1.58	1.53
34	i	1602	A	O4'-C1'	5.01	1.48	1.41
34	i	1223	G	C5'-C4'	5.00	1.57	1.51

All (3232) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	H	109	ARG	NE-CZ-NH2	-53.46	93.57	120.30
34	i	1683	C	P-O3'-C3'	-46.88	63.44	119.70
8	H	109	ARG	NE-CZ-NH1	42.70	141.65	120.30
34	i	1774	G	P-O3'-C3'	38.10	165.42	119.70
34	i	1114	C	O4'-C1'-N1	35.28	136.42	108.20
34	i	582	C	O4'-C1'-N1	32.42	134.14	108.20
34	i	67	C	O4'-C1'-N1	31.30	133.24	108.20
34	i	72	C	O4'-C1'-N1	30.38	132.50	108.20
34	i	1683	C	OP1-P-O3'	-29.73	39.79	105.20
8	H	118	ARG	NE-CZ-NH1	29.45	135.02	120.30
34	i	678	U	O4'-C1'-N1	29.23	131.58	108.20
34	i	1548	C	O4'-C1'-N1	28.80	131.24	108.20
34	i	738	U	O4'-C1'-N1	28.36	130.89	108.20
34	i	793	C	O4'-C1'-N1	28.25	130.80	108.20
34	i	883	U	P-O3'-C3'	28.19	153.53	119.70
34	i	1299	C	O4'-C1'-N1	27.80	130.44	108.20
34	i	418	U	O4'-C1'-N1	27.45	130.16	108.20
34	i	1113	C	O4'-C1'-N1	27.32	130.06	108.20
34	i	1080	A	P-O3'-C3'	27.24	152.39	119.70
34	i	1817	A	P-O3'-C3'	27.21	152.35	119.70
34	i	521	A	P-O3'-C3'	26.65	151.68	119.70
34	i	1105	C	O4'-C1'-N1	25.72	128.78	108.20
34	i	1311	U	O4'-C1'-N1	25.30	128.44	108.20
34	i	1392	A	O4'-C1'-N9	24.85	128.08	108.20
34	i	1627	G	P-O3'-C3'	24.25	148.81	119.70
34	i	867	U	O4'-C1'-N1	24.18	127.55	108.20
34	i	730	C	P-O3'-C3'	23.88	148.35	119.70
34	i	1470	A	P-O3'-C3'	23.77	148.22	119.70
34	i	317	G	P-O3'-C3'	23.73	148.17	119.70
34	i	1564	A	O4'-C1'-N9	23.41	126.93	108.20
34	i	165	G	O4'-C1'-N9	23.31	126.85	108.20
34	i	1150	U	O4'-C1'-N1	23.14	126.72	108.20
34	i	66	G	P-O3'-C3'	23.07	147.38	119.70
34	i	1472	A	O4'-C1'-N9	23.01	126.61	108.20
34	i	1304	U	O4'-C1'-N1	22.99	126.59	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	211	U	P-O3'-C3'	22.84	147.10	119.70
34	i	793	C	P-O3'-C3'	22.76	147.02	119.70
34	i	544	A	O4'-C1'-N9	22.74	126.39	108.20
10	J	146	SER	O-C-N	-22.66	86.44	122.70
34	i	140	U	P-O3'-C3'	22.41	146.59	119.70
34	i	314	U	O4'-C1'-N1	22.37	126.10	108.20
34	i	836	C	P-O3'-C3'	22.28	146.44	119.70
34	i	876	G	O4'-C1'-N9	22.12	125.90	108.20
34	i	1552	C	O4'-C1'-N1	21.95	125.76	108.20
34	i	1776	G	O4'-C1'-N9	21.91	125.72	108.20
34	i	1573	U	O4'-C1'-N1	21.80	125.64	108.20
8	H	118	ARG	NE-CZ-NH2	-21.79	109.41	120.30
34	i	685	G	P-O3'-C3'	21.71	145.75	119.70
34	i	1516	C	P-O3'-C3'	21.53	145.54	119.70
34	i	298	G	O4'-C1'-N9	21.46	125.37	108.20
34	i	743	U	P-O3'-C3'	21.45	145.44	119.70
34	i	1296	U	O4'-C1'-N1	21.43	125.34	108.20
34	i	1664	G	P-O5'-C5'	21.35	155.07	120.90
34	i	722	C	P-O3'-C3'	21.23	145.18	119.70
34	i	1562	G	O4'-C1'-N9	21.17	125.14	108.20
34	i	1473	U	P-O3'-C3'	20.95	144.83	119.70
34	i	264	U	P-O3'-C3'	20.74	144.59	119.70
34	i	1391	C	P-O3'-C3'	20.70	144.54	119.70
34	i	1503	G	O4'-C1'-C2'	20.62	126.42	105.80
34	i	1819	A	O4'-C1'-N9	20.39	124.51	108.20
34	i	325	G	O4'-C1'-N9	20.21	124.37	108.20
34	i	1414	C	C3'-C2'-C1'	-20.12	85.40	101.50
34	i	618	A	O4'-C1'-N9	20.10	124.28	108.20
34	i	1112	C	O4'-C1'-N1	19.98	124.19	108.20
34	i	1392	A	P-O3'-C3'	19.93	143.61	119.70
34	i	1716	U	O4'-C1'-N1	19.89	124.11	108.20
34	i	1426	C	O4'-C1'-N1	19.68	123.94	108.20
34	i	319	G	P-O3'-C3'	19.55	143.16	119.70
34	i	1819	A	P-O3'-C3'	19.51	143.12	119.70
18	R	1	MET	CA-C-N	-19.45	77.31	116.20
34	i	317	G	O4'-C1'-N9	19.24	123.59	108.20
34	i	225	C	P-O3'-C3'	19.21	142.75	119.70
34	i	1471	G	P-O3'-C3'	19.12	142.64	119.70
34	i	1358	U	O4'-C1'-N1	18.98	123.38	108.20
34	i	697	G	P-O3'-C3'	18.88	142.36	119.70
34	i	78	C	P-O3'-C3'	18.81	142.28	119.70
34	i	1151	U	N1-C1'-C2'	18.80	138.44	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	142	C	O4'-C1'-N1	18.78	123.22	108.20
34	i	954	G	O4'-C1'-N9	18.66	123.13	108.20
34	i	126	G	P-O3'-C3'	18.64	142.07	119.70
34	i	688	U	P-O3'-C3'	18.63	142.06	119.70
34	i	180	G	P-O3'-C3'	-18.54	97.46	119.70
34	i	911	G	O4'-C1'-N9	18.45	122.96	108.20
34	i	883	U	O4'-C1'-N1	18.34	122.87	108.20
34	i	1673	A	O4'-C1'-N9	18.32	122.85	108.20
34	i	72	C	P-O3'-C3'	18.22	141.56	119.70
34	i	899	A	O4'-C1'-N9	18.21	122.77	108.20
34	i	1393	U	N1-C1'-C2'	18.07	137.49	114.00
34	i	1544	U	P-O3'-C3'	18.03	141.34	119.70
34	i	1226	C	N1-C1'-C2'	18.02	137.43	114.00
34	i	1133	U	P-O3'-C3'	18.00	141.30	119.70
34	i	1740	A	O4'-C1'-N9	17.85	122.48	108.20
34	i	727	G	P-O3'-C3'	17.82	141.09	119.70
34	i	1377	G	O4'-C1'-N9	17.73	122.38	108.20
34	i	1012	U	N1-C1'-C2'	17.65	136.95	114.00
34	i	428	G	O4'-C1'-N9	17.57	122.26	108.20
34	i	1316	G	O4'-C1'-N9	17.56	122.25	108.20
34	i	257	G	P-O3'-C3'	17.53	140.74	119.70
27	a	10	ARG	NE-CZ-NH2	17.45	129.02	120.30
7	G	131	ARG	CB-CA-C	17.42	145.24	110.40
34	i	189	G	P-O3'-C3'	17.41	140.59	119.70
34	i	346	C	O4'-C1'-N1	17.40	122.12	108.20
34	i	524	G	P-O3'-C3'	17.39	140.57	119.70
34	i	1045	A	O4'-C1'-N9	17.34	122.07	108.20
18	R	1	MET	N-CA-CB	17.23	141.62	110.60
34	i	1149	C	O4'-C1'-N1	17.21	121.97	108.20
34	i	1399	C	O4'-C1'-N1	17.15	121.92	108.20
34	i	1322	U	N1-C1'-C2'	17.13	136.27	114.00
34	i	135	U	P-O3'-C3'	17.11	140.23	119.70
34	i	819	U	O4'-C1'-N1	17.05	121.84	108.20
34	i	136	C	P-O3'-C3'	17.03	140.14	119.70
34	i	885	U	O4'-C1'-N1	16.98	121.79	108.20
34	i	74	G	O4'-C1'-N9	16.94	121.75	108.20
34	i	868	A	O4'-C1'-N9	16.92	121.74	108.20
34	i	1618	A	O4'-C1'-N9	16.90	121.72	108.20
22	V	61	ARG	NE-CZ-NH2	-16.89	111.85	120.30
34	i	239	U	P-O3'-C3'	16.80	139.87	119.70
34	i	1470	A	O4'-C1'-N9	16.79	121.63	108.20
34	i	826	A	O4'-C1'-N9	16.75	121.60	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	222	G	P-O3'-C3'	16.75	139.79	119.70
34	i	1563	C	N1-C1'-C2'	16.75	135.77	114.00
7	G	131	ARG	CB-CG-CD	16.66	154.91	111.60
34	i	1294	G	O4'-C1'-N9	16.57	121.46	108.20
16	P	37	TYR	N-CA-CB	-16.50	80.90	110.60
34	i	171	A	O4'-C1'-N9	16.39	121.31	108.20
34	i	358	U	P-O3'-C3'	16.34	139.31	119.70
34	i	299	G	N9-C1'-C2'	16.24	135.11	114.00
34	i	1233	C	N1-C1'-C2'	16.08	134.90	114.00
9	I	134	GLU	N-CA-CB	15.89	139.21	110.60
34	i	73	C	O4'-C1'-N1	15.88	120.90	108.20
34	i	141	A	P-O3'-C3'	15.87	138.74	119.70
34	i	1144	A	O4'-C1'-N9	15.83	120.86	108.20
34	i	620	U	O4'-C1'-N1	15.76	120.81	108.20
4	D	5	ILE	O-C-N	-15.63	97.69	122.70
34	i	138	C	P-O3'-C3'	15.55	138.36	119.70
25	Y	86	GLU	C-N-CD	-15.52	86.46	120.60
34	i	1425	G	P-O3'-C3'	15.52	138.32	119.70
34	i	1006	G	O4'-C1'-N9	15.50	120.60	108.20
34	i	1056	A	O4'-C1'-N9	15.48	120.58	108.20
34	i	295	C	P-O3'-C3'	15.46	138.26	119.70
34	i	1327	C	N1-C1'-C2'	15.45	134.08	114.00
34	i	64	A	O4'-C1'-N9	15.31	120.45	108.20
34	i	79	A	O4'-C1'-C2'	-15.27	90.53	105.80
10	J	146	SER	CA-C-N	15.24	150.74	117.20
27	a	102	ARG	C-N-CD	-15.22	87.12	120.60
34	i	396	U	P-O3'-C3'	15.20	137.94	119.70
34	i	1279	C	P-O3'-C3'	15.15	137.89	119.70
34	i	1663	U	O4'-C1'-N1	15.10	120.28	108.20
34	i	1543	G	O4'-C1'-N9	15.08	120.26	108.20
34	i	1607	G	O4'-C1'-N9	15.05	120.24	108.20
9	I	43	ILE	O-C-N	-15.05	98.62	122.70
34	i	60	A	O4'-C1'-N9	15.00	120.20	108.20
34	i	1670	A	O4'-C1'-N9	14.99	120.19	108.20
34	i	734	C	P-O3'-C3'	14.94	137.63	119.70
8	H	109	ARG	CD-NE-CZ	14.87	144.41	123.60
27	a	97	PRO	N-CA-C	14.82	150.64	112.10
34	i	1492	U	P-O3'-C3'	14.77	137.43	119.70
34	i	835	C	N1-C1'-C2'	14.72	133.14	114.00
34	i	857	A	O4'-C1'-N9	14.72	119.97	108.20
34	i	111	A	O4'-C1'-N9	14.71	119.97	108.20
34	i	478	U	P-O3'-C3'	14.68	137.32	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	215	U	N1-C1'-C2'	14.66	133.06	114.00
34	i	538	C	P-O3'-C3'	14.61	137.23	119.70
34	i	1773	G	O4'-C1'-N9	14.60	119.88	108.20
34	i	835	C	C3'-C2'-C1'	-14.55	89.86	101.50
34	i	1424	G	O4'-C1'-N9	14.54	119.84	108.20
34	i	1594	U	O4'-C1'-N1	14.54	119.83	108.20
34	i	1390	G	P-O3'-C3'	14.53	137.14	119.70
34	i	1475	G	O4'-C1'-N9	14.51	119.81	108.20
34	i	133	C	P-O3'-C3'	14.48	137.08	119.70
34	i	720	A	P-O3'-C3'	14.46	137.05	119.70
34	i	1344	G	O4'-C1'-N9	14.46	119.77	108.20
34	i	383	U	O4'-C1'-N1	14.44	119.75	108.20
34	i	543	U	O4'-C1'-N1	14.42	119.73	108.20
34	i	1227	C	N1-C1'-C2'	14.39	132.71	114.00
34	i	581	U	O4'-C1'-N1	14.39	119.71	108.20
20	T	93	SER	N-CA-CB	14.39	132.08	110.50
34	i	1412	C	O4'-C1'-N1	14.34	119.67	108.20
34	i	1412	C	P-O3'-C3'	14.27	136.82	119.70
34	i	1637	U	O4'-C1'-N1	14.27	119.61	108.20
25	Y	103	SER	O-C-N	-14.26	99.88	122.70
34	i	1010	G	O4'-C1'-C2'	14.24	120.41	107.60
34	i	1235	U	P-O3'-C3'	-14.23	102.63	119.70
34	i	210	G	O4'-C1'-N9	14.21	119.57	108.20
14	N	81	ALA	C-N-CD	-14.16	89.45	120.60
34	i	1824	U	P-O3'-C3'	14.14	136.67	119.70
7	G	170	ARG	CA-CB-CG	14.12	144.46	113.40
34	i	1818	A	O4'-C1'-N9	14.10	119.48	108.20
34	i	1861	U	O4'-C1'-N1	14.07	119.46	108.20
34	i	1414	C	O4'-C1'-N1	14.07	119.45	108.20
34	i	1293	U	O4'-C1'-N1	14.06	119.44	108.20
25	Y	86	GLU	N-CA-C	14.03	148.89	111.00
9	I	184	ARG	NE-CZ-NH1	-14.03	113.28	120.30
34	i	677	C	O4'-C1'-N1	13.99	119.39	108.20
34	i	912	A	O4'-C1'-N9	13.99	119.39	108.20
34	i	295	C	C4'-C3'-O3'	-13.96	80.09	109.40
19	S	40	TYR	CB-CG-CD1	13.95	129.37	121.00
34	i	649	G	O4'-C1'-N9	13.92	119.34	108.20
34	i	1018	U	N1-C1'-C2'	13.91	132.09	114.00
34	i	1721	G	O4'-C1'-N9	13.90	119.32	108.20
34	i	240	C	P-O3'-C3'	13.85	136.32	119.70
34	i	1413	C	O4'-C1'-C2'	-13.81	91.99	105.80
34	i	794	G	P-O3'-C3'	13.77	136.22	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	276	U	P-O3'-C3'	13.75	136.20	119.70
34	i	454	A	P-O3'-C3'	-13.74	103.21	119.70
34	i	1773	G	P-O3'-C3'	13.72	136.16	119.70
19	S	141	ARG	O-C-N	-13.70	100.78	122.70
28	b	36	LYS	C-N-CA	13.70	155.94	121.70
34	i	313	C	P-O3'-C3'	13.67	136.10	119.70
34	i	1754	G	O4'-C1'-N9	13.66	119.13	108.20
34	i	287	U	N1-C1'-C2'	13.61	131.70	114.00
34	i	556	U	O4'-C1'-N1	13.57	119.06	108.20
34	i	1862	U	P-O3'-C3'	13.55	135.96	119.70
34	i	1449	C	O4'-C1'-N1	13.50	119.00	108.20
34	i	1510	G	O4'-C1'-N9	13.49	118.99	108.20
34	i	548	G	O4'-C1'-N9	13.46	118.97	108.20
20	T	4	VAL	N-CA-C	13.45	147.32	111.00
34	i	1393	U	O4'-C1'-N1	-13.45	97.44	108.20
34	i	829	C	P-O3'-C3'	13.44	135.82	119.70
34	i	530	U	O4'-C1'-N1	13.41	118.93	108.20
34	i	478	U	O4'-C1'-N1	13.41	118.92	108.20
34	i	960	A	O4'-C1'-N9	13.40	118.92	108.20
34	i	889	U	O4'-C1'-N1	13.38	118.90	108.20
34	i	1769	U	O4'-C1'-N1	13.37	118.90	108.20
34	i	519	A	P-O3'-C3'	-13.36	103.67	119.70
34	i	1741	U	P-O3'-C3'	13.35	135.72	119.70
34	i	1011	U	O4'-C1'-N1	13.35	118.88	108.20
34	i	830	C	N1-C1'-C2'	13.34	131.34	114.00
34	i	1548	C	C3'-C2'-C1'	-13.32	90.84	101.50
7	G	131	ARG	CA-CB-CG	13.30	142.66	113.40
34	i	1257	C	N1-C1'-C2'	13.25	131.23	114.00
34	i	837	G	O4'-C1'-N9	13.23	118.78	108.20
34	i	406	U	O4'-C1'-N1	13.21	118.77	108.20
34	i	24	C	P-O3'-C3'	13.21	135.56	119.70
27	a	97	PRO	CB-CA-C	-13.20	78.99	112.00
34	i	438	A	O4'-C1'-N9	13.20	118.76	108.20
34	i	1482	A	O4'-C1'-N9	13.19	118.75	108.20
34	i	277	U	O4'-C1'-N1	-13.16	97.67	108.20
11	K	55	ARG	CG-CD-NE	13.16	139.44	111.80
34	i	742	C	P-O3'-C3'	13.15	135.48	119.70
34	i	1261	A	N9-C1'-C2'	13.14	131.08	114.00
34	i	1514	U	O4'-C1'-N1	13.14	118.71	108.20
34	i	627	U	O4'-C1'-N1	13.13	118.70	108.20
34	i	1616	U	O4'-C1'-N1	13.12	118.69	108.20
34	i	1523	G	O4'-C1'-N9	13.04	118.63	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1841	G	O4'-C1'-N9	13.03	118.62	108.20
34	i	147	A	O4'-C1'-N9	13.02	118.61	108.20
34	i	1715	U	P-O3'-C3'	13.01	135.31	119.70
34	i	1503	G	O4'-C1'-N9	12.99	118.59	108.20
34	i	1459	U	C4'-C3'-O3'	-12.99	82.13	109.40
34	i	1307	C	N1-C1'-C2'	12.98	130.87	114.00
34	i	876	G	P-O3'-C3'	12.96	135.26	119.70
34	i	415	G	O4'-C1'-N9	12.92	118.54	108.20
34	i	869	G	P-O3'-C3'	12.92	135.20	119.70
34	i	1406	C	N1-C1'-C2'	12.89	130.76	114.00
34	i	721	C	P-O3'-C3'	12.88	135.16	119.70
34	i	1402	G	P-O3'-C3'	12.88	135.15	119.70
34	i	594	A	P-O3'-C3'	12.85	135.12	119.70
34	i	456	G	O4'-C1'-N9	12.85	118.48	108.20
34	i	123	G	O4'-C1'-N9	12.84	118.47	108.20
34	i	1	U	O4'-C1'-N1	12.80	118.44	108.20
34	i	1429	C	O3'-P-O5'	-12.80	79.68	104.00
34	i	1249	A	O4'-C1'-N9	12.79	118.43	108.20
34	i	1240	U	O4'-C1'-N1	12.78	118.43	108.20
34	i	622	C	N1-C1'-C2'	12.75	130.58	114.00
34	i	1168	U	O4'-C1'-N1	12.75	118.40	108.20
34	i	126	G	C4'-C3'-O3'	-12.74	82.64	109.40
34	i	38	A	O4'-C1'-N9	12.73	118.38	108.20
34	i	59	U	O4'-C1'-N1	12.73	118.38	108.20
34	i	1533	C	P-O3'-C3'	12.73	134.97	119.70
34	i	1565	G	O4'-C1'-N9	12.69	118.35	108.20
34	i	139	C	P-O3'-C3'	12.67	134.90	119.70
34	i	1238	U	N1-C1'-C2'	12.66	130.46	114.00
24	X	23	HIS	O-C-N	-12.65	102.46	122.70
18	R	88	VAL	O-C-N	-12.62	102.51	122.70
34	i	170	A	O4'-C1'-C2'	12.61	118.95	107.60
17	Q	18	THR	N-CA-CB	12.60	134.23	110.30
18	R	89	SER	N-CA-C	12.55	144.89	111.00
34	i	24	C	C1'-C2'-O2'	-12.53	73.02	110.60
34	i	1145	A	O4'-C1'-N9	12.53	118.22	108.20
34	i	75	G	O4'-C1'-N9	12.53	118.22	108.20
34	i	816	U	O4'-C1'-N1	12.51	118.21	108.20
34	i	1104	G	O4'-C1'-N9	12.49	118.19	108.20
34	i	1588	C	P-O3'-C3'	12.48	134.68	119.70
34	i	616	G	C3'-C2'-C1'	12.47	111.48	101.50
34	i	77	A	P-O3'-C3'	12.46	134.65	119.70
7	G	170	ARG	N-CA-CB	12.44	133.00	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	831	C	P-O5'-C5'	12.39	140.72	120.90
34	i	881	U	O4'-C1'-N1	12.38	118.10	108.20
34	i	66	G	C1'-O4'-C4'	-12.36	100.01	109.90
34	i	696	G	P-O3'-C3'	12.33	134.50	119.70
34	i	1044	G	N9-C1'-C2'	12.32	130.01	114.00
34	i	1097	U	O4'-C1'-N1	12.31	118.05	108.20
16	P	17	TYR	CB-CG-CD2	-12.31	113.62	121.00
34	i	280	G	O4'-C1'-N9	12.29	118.03	108.20
34	i	20	G	O4'-C1'-N9	12.28	118.03	108.20
34	i	866	A	O4'-C1'-N9	12.27	118.02	108.20
34	i	1414	C	O4'-C1'-C2'	12.27	118.64	107.60
34	i	1753	G	O4'-C1'-N9	12.25	118.00	108.20
34	i	1430	C	P-O3'-C3'	12.25	134.40	119.70
34	i	542	G	P-O3'-C3'	12.23	134.38	119.70
34	i	359	C	O4'-C1'-N1	12.23	117.98	108.20
17	Q	146	ARG	NE-CZ-NH2	12.21	126.41	120.30
34	i	986	A	N9-C1'-C2'	12.20	129.86	114.00
4	D	4	GLN	CG-CD-OE1	-12.19	97.22	121.60
34	i	1081	C	P-O5'-C5'	-12.19	101.40	120.90
34	i	329	A	C4'-C3'-O3'	-12.18	83.82	109.40
34	i	4	C	N1-C1'-C2'	12.18	129.83	114.00
34	i	1126	G	O4'-C1'-N9	12.14	117.91	108.20
34	i	1167	G	O4'-C1'-N9	12.13	117.91	108.20
34	i	1716	U	N1-C1'-C2'	-12.13	98.23	114.00
34	i	1469	G	O3'-P-O5'	12.13	127.04	104.00
34	i	146	G	O4'-C1'-N9	12.11	117.89	108.20
34	i	426	G	O4'-C1'-N9	12.11	117.89	108.20
34	i	1188	U	O4'-C1'-N1	12.11	117.88	108.20
34	i	1397	A	P-O3'-C3'	12.11	134.23	119.70
34	i	1550	U	O4'-C1'-N1	12.10	117.88	108.20
33	g	24	THR	C-N-CD	-12.10	93.99	120.60
34	i	531	U	O4'-C1'-N1	12.09	117.88	108.20
34	i	237	G	P-O3'-C3'	12.08	134.19	119.70
25	Y	86	GLU	CA-C-O	-12.08	94.74	120.10
34	i	224	U	O4'-C1'-N1	12.06	117.85	108.20
34	i	1562	G	C3'-C2'-C1'	-12.04	91.87	101.50
34	i	412	U	O4'-C1'-N1	12.03	117.82	108.20
34	i	1838	U	O4'-C1'-N1	12.01	117.81	108.20
34	i	1310	U	O4'-C1'-N1	11.98	117.78	108.20
34	i	857	A	N9-C1'-C2'	-11.97	98.43	114.00
31	e	95	LYS	O-C-N	-11.95	103.57	122.70
34	i	915	A	P-O3'-C3'	11.95	134.04	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	K	1	MET	N-CA-CB	-11.93	89.12	110.60
34	i	520	U	O4'-C1'-N1	11.93	117.75	108.20
34	i	1372	A	O4'-C1'-N9	11.93	117.74	108.20
34	i	596	G	O4'-C1'-N9	11.92	117.74	108.20
34	i	1659	A	P-O3'-C3'	11.91	134.00	119.70
34	i	1607	G	N9-C1'-C2'	-11.88	98.56	114.00
34	i	1231	G	O4'-C1'-N9	11.87	117.70	108.20
34	i	807	A	P-O3'-C3'	11.87	133.94	119.70
34	i	1549	C	O3'-P-O5'	-11.86	81.47	104.00
34	i	1255	A	O4'-C1'-N9	11.85	117.68	108.20
34	i	1355	U	O4'-C1'-N1	11.85	117.68	108.20
34	i	868	A	P-O3'-C3'	11.85	133.92	119.70
34	i	179	C	N1-C1'-C2'	11.85	129.40	114.00
34	i	278	U	P-O3'-C3'	11.83	133.90	119.70
34	i	1538	U	P-O3'-C3'	11.82	133.88	119.70
34	i	1671	U	O4'-C1'-N1	11.82	117.65	108.20
34	i	1418	G	O4'-C1'-N9	11.80	117.64	108.20
18	R	1	MET	C-N-CA	-11.79	97.54	122.30
34	i	1446	G	O4'-C1'-N9	11.79	117.63	108.20
34	i	1315	U	O4'-C1'-N1	11.78	117.63	108.20
34	i	1494	A	C1'-O4'-C4'	-11.78	100.47	109.90
34	i	796	U	O4'-C1'-N1	11.78	117.62	108.20
4	D	4	GLN	N-CA-CB	-11.77	89.41	110.60
34	i	1233	C	C1'-O4'-C4'	-11.76	100.49	109.90
34	i	835	C	O4'-C1'-N1	11.76	117.61	108.20
34	i	1670	A	N9-C1'-C2'	-11.74	98.73	114.00
2	B	41	ILE	CB-CA-C	11.73	135.06	111.60
34	i	1806	U	O4'-C1'-N1	11.72	117.58	108.20
34	i	1103	G	O4'-C1'-N9	11.71	117.57	108.20
34	i	1515	G	N9-C1'-C2'	11.69	129.20	114.00
34	i	570	U	P-O3'-C3'	-11.67	105.69	119.70
34	i	461	G	O4'-C1'-N9	11.67	117.54	108.20
34	i	1833	U	O4'-C1'-N1	11.67	117.54	108.20
9	I	134	GLU	CB-CA-C	-11.66	87.08	110.40
13	M	99	LYS	C-N-CD	-11.65	94.97	120.60
34	i	1828	A	N9-C1'-C2'	11.62	129.10	114.00
34	i	1319	U	O4'-C1'-N1	11.61	117.49	108.20
34	i	734	C	N1-C1'-C2'	11.61	129.09	114.00
34	i	526	A	P-O3'-C3'	-11.60	105.78	119.70
34	i	1157	U	O4'-C1'-N1	11.59	117.47	108.20
34	i	1007	A	O4'-C1'-N9	11.59	117.47	108.20
18	R	1	MET	N-CA-C	-11.57	79.77	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	417	U	O4'-C1'-N1	11.56	117.45	108.20
34	i	817	G	O4'-C1'-N9	11.56	117.45	108.20
12	L	153	LYS	O-C-N	-11.55	104.22	122.70
34	i	225	C	C3'-C2'-C1'	11.54	110.73	101.50
34	i	929	G	C1'-O4'-C4'	-11.51	100.69	109.90
34	i	277	U	C3'-C2'-C1'	11.51	110.70	101.50
34	i	1437	U	O4'-C1'-N1	11.50	117.40	108.20
34	i	672	U	O4'-C1'-N1	11.50	117.40	108.20
10	J	146	SER	C-N-CA	11.49	150.43	121.70
34	i	1718	G	O4'-C1'-N9	11.49	117.39	108.20
34	i	800	U	O4'-C1'-N1	11.49	117.39	108.20
34	i	31	U	O4'-C1'-N1	11.46	117.37	108.20
34	i	1552	C	P-O3'-C3'	11.47	133.46	119.70
34	i	728	U	P-O3'-C3'	11.44	133.43	119.70
34	i	365	U	O4'-C1'-N1	11.43	117.34	108.20
34	i	368	U	O4'-C1'-N1	11.40	117.32	108.20
9	I	6	ASP	CB-CG-OD2	-11.40	108.04	118.30
34	i	385	G	O4'-C1'-N9	11.39	117.31	108.20
34	i	536	G	P-O3'-C3'	11.39	133.37	119.70
34	i	1000	U	O4'-C1'-N1	11.38	117.31	108.20
34	i	728	U	P-O5'-C5'	11.36	139.08	120.90
34	i	358	U	O4'-C1'-N1	11.36	117.29	108.20
34	i	1643	G	C4'-C3'-O3'	11.33	135.65	113.00
34	i	413	U	O4'-C1'-N1	11.31	117.25	108.20
34	i	1206	G	O4'-C1'-N9	11.29	117.23	108.20
34	i	1237	A	C3'-C2'-C1'	11.29	110.53	101.50
34	i	474	A	P-O3'-C3'	11.27	133.23	119.70
34	i	1414	C	P-O3'-C3'	11.27	133.22	119.70
34	i	1500	U	O4'-C1'-N1	11.25	117.20	108.20
34	i	1405	A	P-O3'-C3'	11.24	133.19	119.70
34	i	145	G	C1'-O4'-C4'	-11.24	100.91	109.90
34	i	411	G	O4'-C1'-N9	11.24	117.19	108.20
34	i	861	A	O4'-C1'-N9	11.23	117.19	108.20
4	D	5	ILE	CA-C-N	11.23	141.91	117.20
34	i	1496	G	N9-C1'-C2'	11.21	128.57	114.00
12	L	20	LYS	N-CA-CB	-11.20	90.44	110.60
34	i	1815	U	O4'-C1'-N1	11.20	117.16	108.20
34	i	1742	C	P-O3'-C3'	11.17	133.10	119.70
34	i	1348	G	C1'-O4'-C4'	-11.15	100.98	109.90
27	a	98	PRO	C-N-CD	-11.14	96.09	120.60
34	i	947	C	C3'-C2'-C1'	11.12	110.40	101.50
34	i	520	U	C4'-C3'-O3'	-11.11	86.07	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	170	A	C1'-O4'-C4'	-11.11	101.01	109.90
34	i	1848	U	O4'-C1'-N1	11.05	117.04	108.20
34	i	1715	U	O4'-C1'-N1	11.04	117.03	108.20
34	i	1414	C	C1'-O4'-C4'	-11.02	101.08	109.90
34	i	1648	U	O4'-C1'-N1	11.01	117.01	108.20
34	i	207	U	P-O3'-C3'	11.00	132.90	119.70
34	i	340	C	O4'-C1'-C2'	-10.99	94.81	105.80
34	i	913	U	O4'-C1'-N1	10.99	116.99	108.20
34	i	1255	A	O4'-C1'-C2'	10.98	117.48	107.60
34	i	1024	A	P-O3'-C3'	-10.97	106.53	119.70
34	i	948	G	O4'-C1'-N9	10.96	116.97	108.20
34	i	1738	G	N9-C1'-C2'	10.96	128.25	114.00
34	i	1432	C	C3'-C2'-C1'	10.92	110.24	101.50
34	i	1194	G	O4'-C1'-C2'	10.92	117.43	107.60
34	i	1154	G	O4'-C1'-N9	10.92	116.93	108.20
34	i	1772	C	O4'-C1'-N1	10.91	116.93	108.20
34	i	1290	G	O4'-C1'-N9	10.91	116.93	108.20
34	i	918	A	O4'-C1'-N9	10.90	116.92	108.20
34	i	1062	U	O4'-C1'-N1	10.90	116.92	108.20
34	i	61	A	O4'-C1'-N9	10.88	116.91	108.20
18	R	86	PRO	CA-N-CD	-10.88	96.27	111.50
34	i	832	G	O4'-C1'-N9	10.88	116.91	108.20
24	X	91	LEU	CA-CB-CG	10.87	140.30	115.30
34	i	1138	G	O4'-C1'-N9	10.87	116.89	108.20
34	i	103	A	O4'-C1'-N9	10.86	116.89	108.20
34	i	827	G	O4'-C1'-N9	10.85	116.88	108.20
26	Z	107	VAL	N-CA-CB	-10.85	87.64	111.50
34	i	684	A	O4'-C1'-N9	10.85	116.88	108.20
34	i	862	U	O4'-C1'-N1	10.84	116.87	108.20
34	i	1408	C	P-O3'-C3'	10.84	132.70	119.70
34	i	671	U	O4'-C1'-N1	10.82	116.86	108.20
34	i	676	U	O4'-C1'-N1	10.82	116.85	108.20
34	i	684	A	O4'-C1'-C2'	10.81	117.33	107.60
34	i	1672	U	O4'-C1'-N1	10.80	116.84	108.20
34	i	1193	G	O4'-C1'-N9	10.80	116.84	108.20
34	i	631	A	O4'-C1'-N9	10.78	116.83	108.20
18	R	89	SER	CA-C-N	10.78	140.91	117.20
34	i	907	C	P-O5'-C5'	10.76	138.12	120.90
34	i	1037	G	C1'-O4'-C4'	-10.75	101.30	109.90
34	i	405	A	O4'-C1'-N9	10.74	116.80	108.20
34	i	477	U	P-O3'-C3'	10.73	132.57	119.70
34	i	200	U	O4'-C1'-N1	10.72	116.78	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	436	G	N9-C1'-C2'	10.70	127.91	114.00
19	S	87	GLN	O-C-N	-10.70	105.59	122.70
34	i	1546	U	O4'-C1'-C2'	10.69	117.22	107.60
34	i	592	G	O4'-C1'-N9	10.68	116.75	108.20
34	i	991	G	O4'-C1'-N9	10.68	116.74	108.20
34	i	1632	A	P-O3'-C3'	10.66	132.49	119.70
34	i	858	A	N9-C1'-C2'	10.66	127.86	114.00
34	i	835	C	C1'-O4'-C4'	-10.66	101.38	109.90
19	S	40	TYR	CB-CG-CD2	-10.65	114.61	121.00
34	i	522	C	O4'-C1'-C2'	-10.65	95.15	105.80
34	i	1021	U	O4'-C1'-N1	10.65	116.72	108.20
34	i	57	U	O4'-C1'-N1	10.64	116.71	108.20
34	i	1536	G	O4'-C1'-N9	10.64	116.71	108.20
34	i	1111	U	O4'-C1'-N1	10.63	116.70	108.20
34	i	521	A	C1'-O4'-C4'	-10.61	101.41	109.90
34	i	1743	G	O4'-C1'-N9	10.60	116.68	108.20
34	i	878	U	O4'-C1'-N1	10.60	116.68	108.20
9	I	6	ASP	CB-CG-OD1	10.57	127.81	118.30
34	i	1354	U	O4'-C1'-N1	10.57	116.66	108.20
34	i	1329	U	O4'-C1'-N1	10.57	116.65	108.20
34	i	1615	A	N9-C1'-C2'	10.56	127.73	114.00
34	i	1724	U	O4'-C1'-N1	10.56	116.65	108.20
19	S	88	LYS	CB-CA-C	10.56	131.51	110.40
27	a	10	ARG	CD-NE-CZ	10.56	138.38	123.60
34	i	143	U	N1-C1'-C2'	10.56	127.72	114.00
34	i	1555	U	O4'-C1'-N1	10.54	116.63	108.20
34	i	1407	G	C1'-O4'-C4'	-10.54	101.47	109.90
34	i	154	U	O4'-C1'-N1	10.53	116.62	108.20
34	i	894	U	P-O3'-C3'	10.53	132.34	119.70
34	i	915	A	N9-C1'-C2'	10.53	127.69	114.00
34	i	1012	U	C3'-C2'-C1'	10.53	109.92	101.50
34	i	1308	G	O4'-C1'-N9	-10.52	99.78	108.20
34	i	204	G	O4'-C1'-N9	10.52	116.61	108.20
34	i	1346	U	O4'-C1'-N1	10.51	116.61	108.20
34	i	1674	A	P-O3'-C3'	10.50	132.31	119.70
34	i	1299	C	C3'-C2'-C1'	-10.50	93.10	101.50
34	i	1170	U	O4'-C1'-N1	10.49	116.59	108.20
34	i	739	U	O4'-C1'-N1	10.48	116.59	108.20
34	i	1079	A	C1'-O4'-C4'	-10.47	101.52	109.90
34	i	1210	A	P-O3'-C3'	10.46	132.26	119.70
34	i	1570	G	O4'-C1'-N9	10.46	116.57	108.20
34	i	1295	A	O4'-C1'-N9	10.46	116.57	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1856	G	O4'-C1'-C2'	-10.44	95.36	105.80
34	i	93	U	O4'-C1'-N1	10.44	116.55	108.20
34	i	794	G	O4'-C1'-C2'	-10.44	95.36	105.80
34	i	490	A	O3'-P-O5'	-10.42	84.21	104.00
34	i	1479	A	O4'-C1'-N9	10.40	116.52	108.20
34	i	19	A	O4'-C1'-N9	10.39	116.51	108.20
34	i	1255	A	C3'-C2'-C1'	-10.39	93.19	101.50
34	i	1074	C	N1-C1'-C2'	10.39	127.50	114.00
34	i	1404	U	N1-C1'-C2'	10.38	127.49	114.00
34	i	1584	A	O4'-C1'-N9	10.38	116.50	108.20
7	G	170	ARG	CB-CG-CD	10.37	138.56	111.60
34	i	789	G	O4'-C1'-N9	10.37	116.49	108.20
34	i	542	G	O4'-C1'-N9	10.36	116.49	108.20
34	i	1288	C	C3'-C2'-C1'	10.36	109.78	101.50
34	i	79	A	O4'-C1'-N9	10.35	116.48	108.20
15	O	129	ILE	CB-CA-C	-10.35	90.91	111.60
34	i	1010	G	O4'-C1'-N9	10.31	116.45	108.20
34	i	385	G	C1'-O4'-C4'	-10.30	101.66	109.90
34	i	322	G	O4'-C1'-N9	10.28	116.42	108.20
34	i	170	A	C3'-C2'-C1'	-10.26	93.29	101.50
10	J	138	ARG	N-CA-C	10.25	138.69	111.00
18	R	2	GLY	O-C-N	-10.25	106.30	122.70
34	i	167	G	O4'-C1'-N9	10.25	116.40	108.20
34	i	141	A	O4'-C1'-C2'	-10.24	95.56	105.80
34	i	815	G	O4'-C1'-N9	10.24	116.39	108.20
34	i	585	U	O4'-C1'-N1	10.23	116.39	108.20
34	i	1551	A	P-O3'-C3'	10.23	131.98	119.70
34	i	792	G	O4'-C1'-N9	10.23	116.38	108.20
34	i	65	C	P-O3'-C3'	10.22	131.97	119.70
34	i	1774	G	C1'-O4'-C4'	-10.21	101.74	109.90
5	E	171	ASP	N-CA-C	10.20	138.53	111.00
34	i	1075	C	C3'-C2'-C1'	10.20	109.66	101.50
34	i	935	U	O4'-C1'-N1	10.19	116.36	108.20
34	i	74	G	C3'-C2'-C1'	10.19	109.65	101.50
34	i	517	C	O4'-C1'-N1	10.19	116.35	108.20
34	i	168	C	N1-C1'-C2'	10.17	127.22	114.00
34	i	349	U	O4'-C1'-N1	10.17	116.34	108.20
34	i	1072	G	O4'-C1'-N9	10.17	116.34	108.20
34	i	1857	A	O4'-C1'-C2'	-10.17	95.63	105.80
34	i	1683	C	OP2-P-O3'	10.17	127.57	105.20
11	K	43	LEU	CA-CB-CG	10.16	138.68	115.30
11	K	55	ARG	NE-CZ-NH1	10.16	125.38	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1662	U	O4'-C1'-N1	10.15	116.32	108.20
34	i	1811	G	O4'-C1'-N9	10.15	116.32	108.20
34	i	1615	A	O4'-C1'-N9	10.14	116.31	108.20
34	i	102	A	P-O3'-C3'	10.14	131.87	119.70
34	i	546	U	P-O5'-C5'	10.14	137.12	120.90
34	i	1416	G	C1'-O4'-C4'	-10.14	101.79	109.90
34	i	1303	U	P-O3'-C3'	10.13	131.86	119.70
34	i	287	U	C1'-O4'-C4'	-10.12	101.80	109.90
21	U	71	GLY	N-CA-C	10.11	138.38	113.10
34	i	865	A	P-O3'-C3'	10.11	131.83	119.70
34	i	1408	C	O3'-P-O5'	-10.11	84.80	104.00
34	i	300	G	O4'-C1'-N9	10.08	116.26	108.20
34	i	662	A	O4'-C1'-N9	10.08	116.26	108.20
34	i	1414	C	P-O5'-C5'	10.08	137.03	120.90
34	i	1397	A	O4'-C1'-N9	10.06	116.25	108.20
34	i	1643	G	P-O3'-C3'	10.05	131.76	119.70
34	i	1722	G	O4'-C1'-N9	10.05	116.24	108.20
34	i	1232	G	O4'-C1'-C2'	10.04	116.64	107.60
34	i	1281	G	C4'-C3'-O3'	10.04	133.09	113.00
34	i	1258	C	N1-C1'-C2'	10.04	127.05	114.00
34	i	73	C	O4'-C1'-C2'	-10.03	95.77	105.80
34	i	795	U	O4'-C1'-N1	10.03	116.22	108.20
34	i	590	G	O4'-C1'-N9	10.02	116.22	108.20
34	i	971	G	O4'-C1'-N9	10.02	116.21	108.20
34	i	1472	A	N9-C1'-C2'	-10.02	100.98	114.00
34	i	204	G	N9-C1'-C2'	-10.01	100.99	114.00
34	i	546	U	C4'-C3'-C2'	-10.00	92.60	102.60
4	D	4	GLN	CG-CD-NE2	9.98	140.66	116.70
8	H	110	THR	CA-C-O	-9.98	99.14	120.10
11	K	1	MET	CB-CG-SD	9.98	142.33	112.40
34	i	31	U	P-O3'-C3'	9.98	131.67	119.70
34	i	1532	A	O4'-C1'-C2'	-9.98	95.82	105.80
34	i	663	G	O4'-C1'-N9	9.96	116.17	108.20
34	i	1435	A	O4'-C1'-N9	9.96	116.17	108.20
24	X	23	HIS	CB-CA-C	9.95	130.30	110.40
34	i	547	U	N1-C1'-C2'	9.95	126.93	114.00
34	i	1276	G	O4'-C1'-N9	9.93	116.15	108.20
7	G	180	VAL	CB-CA-C	-9.93	92.54	111.40
9	I	43	ILE	CA-C-O	9.92	140.94	120.10
34	i	914	U	N1-C1'-C2'	9.91	126.88	114.00
34	i	1715	U	C1'-O4'-C4'	9.90	117.82	109.90
34	i	1211	C	O4'-C1'-C2'	-9.89	95.91	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	5	U	O4'-C1'-N1	9.89	116.11	108.20
34	i	1771	G	C3'-C2'-C1'	-9.88	93.59	101.50
34	i	1798	U	O4'-C1'-N1	9.88	116.10	108.20
34	i	121	U	O4'-C1'-N1	9.87	116.09	108.20
34	i	665	U	O4'-C1'-N1	9.86	116.09	108.20
34	i	344	U	O4'-C1'-N1	9.86	116.09	108.20
34	i	105	U	O4'-C1'-N1	9.85	116.08	108.20
34	i	189	G	C1'-O4'-C4'	-9.83	102.03	109.90
34	i	616	G	O4'-C1'-C2'	-9.83	95.97	105.80
34	i	1234	U	O4'-C1'-N1	9.83	116.06	108.20
34	i	92	A	N9-C1'-C2'	9.82	126.77	114.00
34	i	879	U	O4'-C1'-N1	9.82	116.06	108.20
34	i	1232	G	O4'-C1'-N9	9.82	116.06	108.20
34	i	1151	U	O4'-C1'-N1	9.80	116.04	108.20
34	i	1004	A	P-O3'-C3'	9.79	131.45	119.70
33	g	142	VAL	CA-C-N	-9.79	95.66	117.20
18	R	42	PRO	CA-N-CD	-9.78	97.80	111.50
34	i	1551	A	O4'-C1'-N9	9.78	116.03	108.20
34	i	1251	G	C1'-O4'-C4'	-9.77	102.08	109.90
34	i	1803	A	O4'-C1'-N9	9.76	116.01	108.20
34	i	1036	G	O4'-C1'-N9	9.76	116.00	108.20
34	i	1659	A	N9-C1'-C2'	9.75	126.68	114.00
19	S	91	LYS	CG-CD-CE	9.74	141.13	111.90
34	i	1194	G	C1'-O4'-C4'	-9.74	102.11	109.90
34	i	1413	C	C3'-C2'-C1'	9.74	109.29	101.50
28	b	36	LYS	N-CA-C	9.73	137.27	111.00
34	i	468	G	O4'-C1'-N9	9.72	115.97	108.20
34	i	810	U	O4'-C1'-N1	9.71	115.97	108.20
34	i	1010	G	C1'-O4'-C4'	-9.70	102.14	109.90
21	U	104	ILE	N-CA-C	-9.70	84.80	111.00
34	i	1503	G	C1'-O4'-C4'	-9.70	102.14	109.90
34	i	1249	A	P-O3'-C3'	9.69	131.33	119.70
34	i	520	U	O4'-C4'-C3'	-9.69	94.31	104.00
34	i	80	G	C3'-C2'-C1'	9.69	109.25	101.50
1	A	200	ASP	CB-CA-C	-9.68	91.03	110.40
34	i	743	U	O4'-C1'-N1	9.68	115.95	108.20
3	C	93	LYS	C-N-CA	9.67	145.87	121.70
34	i	626	C	C3'-C2'-C1'	9.67	109.24	101.50
34	i	1771	G	O4'-C1'-N9	9.67	115.94	108.20
34	i	381	C	O4'-C1'-N1	9.67	115.93	108.20
33	g	159	ASN	N-CA-C	9.66	137.08	111.00
34	i	1126	G	N9-C1'-C2'	-9.66	101.37	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	928	G	O4'-C1'-N9	9.66	115.93	108.20
34	i	1163	G	O4'-C1'-N9	9.66	115.93	108.20
34	i	1716	U	P-O3'-C3'	9.66	131.29	119.70
34	i	1132	U	O4'-C1'-N1	9.65	115.92	108.20
34	i	1328	A	O4'-C1'-C2'	-9.64	96.16	105.80
10	J	89	GLU	N-CA-C	9.64	137.03	111.00
34	i	397	G	O4'-C1'-N9	9.64	115.91	108.20
34	i	1115	A	O4'-C1'-N9	9.64	115.91	108.20
34	i	1490	U	P-O3'-C3'	9.62	131.24	119.70
34	i	321	C	O4'-C1'-N1	9.62	115.89	108.20
34	i	647	U	O4'-C1'-N1	9.62	115.89	108.20
34	i	1333	C	O4'-C1'-N1	9.62	115.89	108.20
34	i	1432	C	P-O3'-C3'	9.61	131.23	119.70
34	i	830	C	C1'-O4'-C4'	-9.60	102.22	109.90
18	R	1	MET	CA-C-O	9.60	140.25	120.10
34	i	1530	U	P-O3'-C3'	9.59	131.21	119.70
34	i	1077	U	O4'-C1'-N1	9.59	115.87	108.20
34	i	66	G	N9-C1'-C2'	9.58	126.46	114.00
19	S	54	LYS	N-CA-C	9.58	136.87	111.00
34	i	1288	C	O4'-C1'-N1	-9.57	100.54	108.20
34	i	1599	G	O4'-C1'-N9	9.57	115.86	108.20
34	i	824	G	O4'-C1'-C2'	9.55	116.20	107.60
34	i	545	A	P-O3'-C3'	9.55	131.16	119.70
18	R	3	ARG	N-CA-CB	9.54	127.77	110.60
4	D	193	ASP	N-CA-C	-9.54	85.25	111.00
34	i	394	G	O4'-C1'-N9	9.53	115.83	108.20
34	i	999	U	O4'-C1'-N1	9.52	115.81	108.20
34	i	1490	U	O4'-C1'-N1	9.51	115.81	108.20
34	i	67	C	C3'-C2'-C1'	-9.51	93.89	101.50
34	i	826	A	C3'-C2'-C1'	-9.51	93.89	101.50
34	i	160	U	P-O3'-C3'	9.50	131.10	119.70
9	I	105	ASP	CB-CG-OD2	9.50	126.85	118.30
34	i	838	C	C3'-C2'-C1'	9.48	109.08	101.50
34	i	1291	A	O4'-C1'-N9	9.47	115.77	108.20
27	a	63	VAL	C-N-CA	9.46	145.36	121.70
34	i	434	G	O4'-C1'-N9	9.46	115.77	108.20
34	i	1140	A	N9-C1'-C2'	9.46	126.29	114.00
34	i	1564	A	O5'-P-OP2	-9.46	97.19	105.70
25	Y	103	SER	CA-C-N	9.45	138.00	117.20
34	i	1546	U	O4'-C1'-N1	9.45	115.76	108.20
34	i	987	G	O4'-C1'-N9	9.44	115.75	108.20
34	i	1215	C	O4'-C1'-N1	9.43	115.75	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1585	C	N1-C1'-C2'	9.43	126.26	114.00
34	i	951	A	O4'-C1'-N9	9.43	115.74	108.20
34	i	909	A	C3'-C2'-C1'	9.43	109.04	101.50
34	i	883	U	P-O5'-C5'	9.42	135.98	120.90
34	i	961	U	O4'-C1'-N1	9.42	115.74	108.20
34	i	1802	U	O4'-C1'-N1	9.41	115.73	108.20
34	i	207	U	C4'-C3'-O3'	9.41	131.82	113.00
34	i	1204	A	O4'-C1'-N9	9.41	115.73	108.20
8	H	111	LYS	N-CA-CB	9.40	127.53	110.60
34	i	1845	A	O4'-C1'-C2'	-9.40	96.40	105.80
34	i	504	U	O4'-C1'-N1	9.39	115.72	108.20
34	i	642	U	O4'-C1'-N1	9.39	115.72	108.20
27	a	10	ARG	CB-CG-CD	9.39	136.02	111.60
34	i	1125	G	O4'-C1'-N9	9.39	115.71	108.20
34	i	1266	G	O4'-C1'-N9	9.39	115.71	108.20
34	i	431	C	N1-C1'-C2'	9.39	126.20	114.00
34	i	1013	U	O4'-C1'-N1	9.39	115.71	108.20
34	i	1582	G	O4'-C1'-N9	9.39	115.71	108.20
34	i	651	U	O4'-C1'-N1	9.38	115.71	108.20
34	i	1317	G	O4'-C1'-N9	9.38	115.70	108.20
34	i	424	G	C4'-C3'-O3'	-9.35	89.77	109.40
34	i	1197	U	O4'-C1'-N1	9.35	115.68	108.20
4	D	82	GLY	C-N-CA	-9.34	98.34	121.70
34	i	51	U	O4'-C1'-N1	9.34	115.67	108.20
34	i	892	U	O4'-C1'-N1	9.34	115.67	108.20
34	i	1068	U	O4'-C1'-N1	9.33	115.66	108.20
34	i	1153	G	O4'-C1'-N9	9.32	115.66	108.20
34	i	1444	A	P-O3'-C3'	9.32	130.88	119.70
26	Z	104	ARG	CD-NE-CZ	-9.31	110.57	123.60
34	i	840	U	O4'-C1'-N1	9.30	115.64	108.20
34	i	793	C	C3'-C2'-C1'	9.30	108.94	101.50
34	i	561	U	O4'-C1'-N1	9.30	115.64	108.20
34	i	728	U	N1-C1'-C2'	9.30	126.09	114.00
22	V	61	ARG	NE-CZ-NH1	9.29	124.95	120.30
34	i	79	A	C5'-C4'-O4'	9.29	120.24	109.10
33	g	274	VAL	O-C-N	-9.28	107.86	122.70
7	G	122	PRO	CA-N-CD	-9.27	98.52	111.50
34	i	408	A	N9-C1'-C2'	9.27	126.05	114.00
34	i	1642	A	O4'-C1'-N9	9.27	115.61	108.20
34	i	524	G	O3'-P-O5'	-9.27	86.39	104.00
34	i	905	G	O3'-P-O5'	9.27	121.61	104.00
34	i	1228	U	O4'-C1'-N1	9.27	115.61	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1037	G	O4'-C1'-C2'	9.26	115.94	107.60
34	i	1288	C	N1-C1'-C2'	9.26	126.03	114.00
34	i	1736	U	N1-C1'-C2'	9.25	126.03	114.00
7	G	157	VAL	N-CA-C	9.25	135.97	111.00
34	i	1786	G	O4'-C1'-C2'	9.25	115.92	107.60
21	U	94	PRO	CA-N-CD	-9.24	98.56	111.50
34	i	660	A	O4'-C1'-N9	9.24	115.59	108.20
34	i	1810	G	O4'-C1'-N9	9.24	115.59	108.20
34	i	619	A	O4'-C1'-N9	9.23	115.59	108.20
34	i	551	A	C4'-C3'-O3'	-9.22	90.04	109.40
34	i	1617	U	O4'-C1'-N1	-9.22	100.83	108.20
2	B	40	ASN	C-N-CA	-9.21	98.66	121.70
19	S	40	TYR	N-CA-C	9.21	135.87	111.00
34	i	107	A	O4'-C1'-N9	9.21	115.57	108.20
34	i	1199	G	N9-C1'-C2'	9.21	125.97	114.00
21	U	53	PRO	CA-N-CD	-9.20	98.61	111.50
12	L	17	PHE	O-C-N	9.20	137.42	122.70
34	i	446	C	N1-C1'-C2'	9.20	125.96	114.00
34	i	147	A	N9-C1'-C2'	-9.19	101.90	112.00
34	i	995	G	O4'-C1'-N9	9.18	115.55	108.20
34	i	152	U	O4'-C1'-N1	9.18	115.54	108.20
34	i	1065	U	P-O3'-C3'	9.18	130.72	119.70
34	i	1403	U	N1-C1'-C2'	9.18	125.93	114.00
34	i	1129	A	O4'-C1'-N9	9.17	115.54	108.20
34	i	1360	U	O3'-P-O5'	9.17	121.43	104.00
34	i	910	U	O4'-C1'-N1	9.16	115.53	108.20
34	i	855	G	O4'-C1'-N9	9.15	115.52	108.20
34	i	214	A	C3'-C2'-C1'	9.13	108.81	101.50
34	i	1076	A	O4'-C1'-N9	9.13	115.51	108.20
34	i	1261	A	C3'-C2'-C1'	9.13	108.80	101.50
16	P	37	TYR	CB-CG-CD2	-9.12	115.53	121.00
34	i	53	C	O4'-C1'-C2'	-9.12	96.68	105.80
34	i	1102	C	O4'-C1'-N1	9.12	115.50	108.20
34	i	1743	G	P-O5'-C5'	9.11	135.47	120.90
34	i	1022	C	C3'-C2'-C1'	9.10	108.78	101.50
34	i	641	U	O4'-C1'-N1	9.09	115.47	108.20
34	i	414	C	N1-C1'-C2'	9.07	125.80	114.00
4	D	5	ILE	C-N-CA	9.07	144.36	121.70
34	i	99	A	O4'-C1'-N9	9.06	115.45	108.20
34	i	735	C	N1-C1'-C2'	9.05	125.77	114.00
34	i	730	C	O4'-C1'-C2'	-9.05	96.75	105.80
12	L	17	PHE	CA-C-N	-9.04	97.31	117.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1189	U	O4'-C1'-N1	9.04	115.43	108.20
34	i	1523	G	C3'-C2'-C1'	-9.04	94.27	101.50
9	I	105	ASP	CB-CG-OD1	-9.04	110.17	118.30
34	i	824	G	C3'-C2'-C1'	-9.04	94.27	101.50
34	i	114	G	O4'-C1'-N9	9.03	115.43	108.20
34	i	437	A	O4'-C1'-C2'	-9.03	96.77	105.80
34	i	24	C	O3'-P-O5'	-9.03	86.85	104.00
34	i	298	G	C3'-C2'-C1'	-9.03	94.28	101.50
34	i	89	C	O4'-C1'-N1	9.02	115.42	108.20
34	i	60	A	C3'-C2'-C1'	-9.02	94.29	101.50
19	S	53	THR	O-C-N	-9.01	108.28	122.70
27	a	10	ARG	NH1-CZ-NH2	-9.01	109.49	119.40
34	i	56	G	O4'-C1'-N9	9.01	115.41	108.20
34	i	609	A	O4'-C1'-N9	9.01	115.41	108.20
34	i	1472	A	C1'-O4'-C4'	9.01	117.10	109.90
34	i	1515	G	C1'-O4'-C4'	-9.00	102.70	109.90
34	i	1469	G	P-O3'-C3'	9.00	130.50	119.70
21	U	93	SER	C-N-CD	8.99	147.28	128.40
34	i	1455	G	C1'-O4'-C4'	-8.98	102.71	109.90
34	i	1847	C	N1-C1'-C2'	8.98	125.68	114.00
34	i	1683	C	O3'-P-O5'	8.98	121.06	104.00
34	i	1427	G	O4'-C1'-N9	8.97	115.38	108.20
34	i	652	G	N9-C1'-C2'	8.97	125.66	114.00
34	i	1272	A	N9-C1'-C2'	-8.96	102.14	112.00
34	i	1824	U	C3'-C2'-C1'	8.96	108.67	101.50
34	i	640	A	C3'-C2'-C1'	8.95	108.66	101.50
34	i	482	C	O4'-C1'-C2'	-8.95	96.85	105.80
34	i	484	C	C3'-C2'-C1'	8.95	108.66	101.50
34	i	1214	C	N1-C1'-C2'	8.94	125.62	114.00
24	X	62	PRO	CA-N-CD	-8.93	99.00	111.50
34	i	201	G	O4'-C1'-N9	8.93	115.34	108.20
34	i	653	C	N1-C1'-C2'	8.93	125.61	114.00
27	a	97	PRO	N-CA-CB	-8.92	92.60	103.30
34	i	1631	G	O4'-C1'-N9	8.92	115.33	108.20
10	J	165	TYR	CB-CA-C	8.91	128.23	110.40
34	i	405	A	N9-C1'-C2'	-8.91	102.19	112.00
34	i	1405	A	P-O5'-C5'	8.91	135.16	120.90
34	i	689	G	P-O3'-C3'	8.91	130.39	119.70
34	i	733	G	C1'-O4'-C4'	8.91	117.03	109.90
34	i	947	C	P-O5'-C5'	8.91	135.15	120.90
28	b	12	PRO	CA-N-CD	-8.90	99.04	111.50
34	i	1473	U	P-O5'-C5'	8.90	135.15	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1687	U	O4'-C1'-N1	8.90	115.32	108.20
34	i	1855	G	O4'-C1'-C2'	8.90	115.61	107.60
34	i	956	U	N1-C1'-C2'	8.90	125.57	114.00
34	i	1546	U	C1'-O4'-C4'	-8.89	102.78	109.90
19	S	142	ARG	CB-CA-C	-8.89	92.61	110.40
34	i	542	G	P-O5'-C5'	8.89	135.13	120.90
34	i	1184	A	O4'-C1'-C2'	-8.89	96.91	105.80
34	i	1716	U	O4'-C1'-C2'	-8.89	96.91	105.80
34	i	325	G	N9-C1'-C2'	-8.89	102.22	112.00
34	i	543	U	O4'-C1'-C2'	-8.89	96.91	105.80
34	i	1861	U	C3'-C2'-C1'	-8.89	94.39	101.50
34	i	501	U	O4'-C1'-N1	8.87	115.30	108.20
34	i	444	U	O4'-C1'-N1	8.87	115.30	108.20
34	i	847	C	O3'-P-O5'	-8.87	87.15	104.00
34	i	189	G	N9-C1'-C2'	8.87	125.53	114.00
34	i	1191	A	O4'-C1'-N9	8.87	115.29	108.20
34	i	25	A	N9-C1'-C2'	-8.86	102.26	112.00
34	i	1068	U	C1'-O4'-C4'	8.86	116.99	109.90
19	S	88	LYS	C-N-CA	-8.85	99.59	121.70
34	i	234	C	C1'-O4'-C4'	8.84	116.97	109.90
34	i	234	C	O4'-C1'-C2'	-8.84	96.96	105.80
19	S	94	LYS	CA-C-N	-8.84	97.75	117.20
34	i	1776	G	C3'-C2'-C1'	-8.84	94.43	101.50
34	i	212	G	O4'-C1'-N9	8.84	115.27	108.20
34	i	738	U	P-O3'-C3'	8.84	130.30	119.70
34	i	1335	U	O4'-C1'-N1	8.84	115.27	108.20
34	i	1596	A	P-O3'-C3'	8.83	130.30	119.70
34	i	1775	A	P-O3'-C3'	8.83	130.29	119.70
22	V	67	ASP	CB-CA-C	8.82	128.05	110.40
34	i	548	G	C3'-C2'-C1'	-8.82	94.44	101.50
34	i	1159	C	N1-C1'-C2'	8.82	125.46	114.00
34	i	108	G	O4'-C1'-N9	8.81	115.25	108.20
25	Y	52	PRO	CA-N-CD	-8.81	99.17	111.50
33	g	145	GLU	N-CA-C	-8.80	87.23	111.00
34	i	58	C	O4'-C1'-N1	8.80	115.24	108.20
34	i	583	C	C3'-C2'-C1'	8.80	108.54	101.50
34	i	1436	C	C3'-C2'-C1'	8.80	108.54	101.50
34	i	963	C	O4'-C1'-N1	8.80	115.24	108.20
34	i	1501	U	O4'-C1'-N1	8.80	115.24	108.20
34	i	1428	U	C3'-C2'-C1'	8.79	108.53	101.50
34	i	1222	G	N9-C1'-C2'	8.79	125.42	114.00
34	i	224	U	N1-C1'-C2'	-8.79	102.33	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	104	GLY	N-CA-C	8.78	135.04	113.10
34	i	299	G	C1'-O4'-C4'	-8.76	102.90	109.90
6	F	130	ARG	NE-CZ-NH1	8.75	124.68	120.30
34	i	959	A	O4'-C1'-N9	8.75	115.20	108.20
34	i	472	G	O4'-C1'-N9	8.75	115.20	108.20
34	i	1706	U	O4'-C1'-N1	8.74	115.19	108.20
34	i	951	A	P-O3'-C3'	8.73	130.18	119.70
34	i	1104	G	P-O3'-C3'	8.73	130.18	119.70
34	i	837	G	C1'-C2'-O2'	-8.73	84.41	110.60
34	i	611	C	N1-C1'-C2'	8.72	125.34	114.00
34	i	1676	U	O4'-C1'-N1	8.72	115.18	108.20
34	i	222	G	C1'-O4'-C4'	-8.72	102.92	109.90
34	i	455	A	P-O3'-C3'	8.72	130.16	119.70
25	Y	86	GLU	CB-CA-C	-8.71	92.98	110.40
34	i	1232	G	C3'-C2'-C1'	-8.71	94.53	101.50
34	i	1388	U	O4'-C1'-N1	8.71	115.17	108.20
17	Q	134	GLY	C-N-CD	-8.71	101.44	120.60
34	i	564	A	C3'-C2'-C1'	8.70	108.46	101.50
34	i	1770	G	O4'-C1'-N9	8.69	115.15	108.20
34	i	1131	C	O4'-C1'-N1	8.68	115.15	108.20
34	i	1576	C	O4'-C1'-C2'	-8.68	97.12	105.80
34	i	140	U	O4'-C1'-N1	8.67	115.14	108.20
34	i	1208	G	N9-C1'-C2'	8.67	125.27	114.00
34	i	1466	C	O4'-C1'-N1	8.67	115.13	108.20
34	i	1425	G	O4'-C1'-N9	8.66	115.13	108.20
21	U	67	LYS	C-N-CA	-8.66	100.05	121.70
8	H	111	LYS	N-CA-C	-8.65	87.64	111.00
34	i	1548	C	P-O3'-C3'	8.65	130.08	119.70
34	i	669	A	O4'-C1'-N9	8.64	115.11	108.20
34	i	872	C	O4'-C1'-N1	8.64	115.11	108.20
34	i	1003	C	C3'-C2'-C1'	8.64	108.41	101.50
34	i	903	G	N9-C1'-C2'	8.64	125.23	114.00
34	i	1108	U	O4'-C1'-N1	8.64	115.11	108.20
34	i	835	C	P-O3'-C3'	8.63	130.06	119.70
34	i	1601	G	O4'-C1'-N9	8.64	115.11	108.20
34	i	1272	A	O4'-C1'-C2'	-8.63	97.17	105.80
34	i	21	U	O4'-C1'-N1	8.63	115.10	108.20
10	J	118	GLY	O-C-N	-8.62	108.91	122.70
34	i	43	U	O4'-C1'-N1	8.62	115.10	108.20
34	i	929	G	O4'-C1'-N9	8.62	115.10	108.20
34	i	79	A	C4'-C3'-C2'	-8.61	93.99	102.60
34	i	159	A	O4'-C1'-N9	8.61	115.09	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	161	U	O4'-C1'-C2'	-8.59	97.21	105.80
34	i	1229	G	C1'-O4'-C4'	-8.59	103.03	109.90
34	i	792	G	P-O3'-C3'	8.58	130.00	119.70
6	F	45	TYR	CA-CB-CG	-8.58	97.10	113.40
9	I	184	ARG	N-CA-CB	8.57	126.03	110.60
34	i	1646	A	N9-C1'-C2'	-8.57	102.57	112.00
34	i	1726	A	O4'-C1'-N9	8.57	115.06	108.20
34	i	972	G	P-O5'-C5'	8.57	134.61	120.90
34	i	1067	G	O4'-C1'-N9	8.57	115.06	108.20
28	b	10	PRO	CA-N-CD	-8.57	99.50	111.50
34	i	1199	G	C1'-O4'-C4'	-8.56	103.05	109.90
34	i	180	G	C4'-C3'-O3'	8.56	130.12	113.00
32	f	122	PRO	CA-N-CD	-8.56	99.52	111.50
34	i	296	U	P-O3'-C3'	-8.56	109.43	119.70
34	i	849	C	O3'-P-O5'	8.55	120.25	104.00
34	i	1044	G	C1'-O4'-C4'	-8.54	103.06	109.90
8	H	36	LEU	CA-CB-CG	-8.54	95.65	115.30
34	i	1198	U	N1-C1'-C2'	-8.54	102.61	112.00
16	P	17	TYR	CB-CA-C	8.53	127.47	110.40
34	i	153	G	O4'-C1'-N9	8.53	115.03	108.20
34	i	929	G	O4'-C1'-C2'	8.53	115.28	107.60
34	i	1517	A	O4'-C1'-N9	8.53	115.02	108.20
34	i	1109	A	O4'-C1'-N9	8.53	115.02	108.20
34	i	234	C	O4'-C1'-N1	8.53	115.02	108.20
11	K	87	PRO	C-N-CA	8.52	143.01	121.70
16	P	69	PRO	CA-N-CD	-8.52	99.58	111.50
34	i	795	U	N1-C1'-C2'	8.52	125.07	114.00
34	i	1325	U	C1'-O4'-C4'	-8.52	103.09	109.90
34	i	604	G	C3'-C2'-C1'	8.51	108.31	101.50
10	J	161	LEU	O-C-N	-8.51	109.08	122.70
34	i	1655	C	O4'-C1'-N1	8.51	115.01	108.20
34	i	1581	U	O4'-C1'-N1	8.51	115.00	108.20
27	a	80	HIS	N-CA-CB	-8.48	95.33	110.60
34	i	442	G	C3'-C2'-C1'	8.48	108.28	101.50
34	i	1442	A	P-O3'-C3'	8.47	129.87	119.70
34	i	544	A	C3'-C2'-C1'	-8.47	94.72	101.50
34	i	848	G	P-O3'-C3'	8.46	129.85	119.70
34	i	1458	U	C4'-C3'-O3'	8.46	129.92	113.00
34	i	343	C	C5'-C4'-C3'	8.46	129.53	116.00
34	i	1272	A	C3'-C2'-C1'	8.46	108.26	101.50
34	i	1425	G	N9-C1'-C2'	-8.45	102.70	112.00
34	i	1118	A	O4'-C1'-C2'	-8.45	97.35	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1205	A	O4'-C1'-N9	8.45	114.96	108.20
34	i	25	A	O4'-C1'-C2'	-8.44	97.36	105.80
34	i	1002	C	N1-C1'-C2'	8.44	124.97	114.00
34	i	1685	U	O4'-C1'-N1	8.44	114.95	108.20
34	i	727	G	O3'-P-O5'	8.43	120.02	104.00
31	e	95	LYS	CA-C-N	8.43	135.75	117.20
34	i	1504	A	N9-C1'-C2'	-8.43	102.73	112.00
34	i	276	U	C3'-C2'-C1'	8.42	108.24	101.50
34	i	849	C	P-O3'-C3'	-8.42	109.59	119.70
34	i	602	U	O4'-C1'-N1	8.42	114.93	108.20
34	i	1208	G	C1'-O4'-C4'	-8.41	103.17	109.90
8	H	108	SER	N-CA-CB	8.41	123.12	110.50
19	S	95	TYR	N-CA-CB	-8.41	95.47	110.60
34	i	131	C	P-O3'-C3'	8.40	129.78	119.70
34	i	144	U	N1-C1'-C2'	8.40	124.92	114.00
34	i	385	G	C3'-C2'-C1'	-8.40	94.78	101.50
34	i	1728	U	O4'-C1'-N1	8.40	114.92	108.20
34	i	1411	C	N1-C1'-C2'	8.39	124.91	114.00
34	i	1014	U	N1-C1'-C2'	8.39	124.90	114.00
34	i	1082	G	O3'-P-O5'	-8.38	88.07	104.00
4	D	193	ASP	C-N-CD	8.38	146.00	128.40
21	U	70	CYS	C-N-CA	8.38	139.90	122.30
34	i	276	U	O4'-C1'-N1	-8.38	101.50	108.20
34	i	518	A	C1'-O4'-C4'	-8.38	103.20	109.90
34	i	1178	A	O4'-C1'-N9	8.38	114.90	108.20
34	i	28	U	O4'-C1'-N1	8.38	114.90	108.20
5	E	43	PRO	CA-N-CD	-8.37	99.78	111.50
7	G	170	ARG	CB-CA-C	-8.37	93.66	110.40
34	i	546	U	O4'-C1'-N1	8.37	114.89	108.20
34	i	966	G	P-O3'-C3'	8.37	129.74	119.70
34	i	1322	U	C3'-C2'-C1'	8.36	108.19	101.50
34	i	1434	A	O4'-C1'-C2'	-8.36	97.44	105.80
17	Q	18	THR	CA-CB-OG1	8.36	126.56	109.00
34	i	739	U	O4'-C1'-C2'	-8.35	97.45	105.80
34	i	859	U	C1'-O4'-C4'	-8.35	103.22	109.90
34	i	512	A	O4'-C1'-N9	8.35	114.88	108.20
34	i	1316	G	C3'-C2'-C1'	-8.35	94.82	101.50
34	i	1292	U	O4'-C1'-N1	8.35	114.88	108.20
34	i	97	U	N1-C1'-C2'	8.34	124.84	114.00
34	i	1529	C	O4'-C1'-C2'	-8.34	97.46	105.80
34	i	1198	U	O4'-C1'-N1	8.34	114.87	108.20
34	i	1526	A	O4'-C1'-N9	8.33	114.87	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	824	G	O4'-C1'-N9	8.33	114.86	108.20
34	i	1464	C	O4'-C1'-N1	8.32	114.86	108.20
34	i	1714	A	C1'-O4'-C4'	8.32	116.56	109.90
34	i	1804	U	O4'-C1'-N1	8.32	114.86	108.20
34	i	691	G	P-O3'-C3'	8.31	129.68	119.70
34	i	1468	C	C4'-C3'-O3'	8.31	129.62	113.00
34	i	1474	U	O4'-C1'-N1	8.31	114.85	108.20
34	i	543	U	C4'-C3'-C2'	-8.31	94.29	102.60
34	i	1110	U	O4'-C1'-N1	8.31	114.85	108.20
34	i	1151	U	C5'-C4'-O4'	8.31	119.07	109.10
34	i	103	A	C3'-C2'-C1'	-8.30	94.86	101.50
34	i	733	G	N9-C1'-C2'	-8.30	102.87	112.00
34	i	964	U	O4'-C1'-C2'	-8.29	97.51	105.80
34	i	1513	C	O4'-C1'-N1	8.29	114.83	108.20
34	i	376	C	N1-C1'-C2'	8.29	124.77	114.00
34	i	1014	U	C1'-O4'-C4'	-8.29	103.27	109.90
26	Z	104	ARG	NE-CZ-NH1	-8.28	116.16	120.30
34	i	639	U	C1'-O4'-C4'	-8.28	103.27	109.90
34	i	1226	C	C1'-O4'-C4'	-8.28	103.27	109.90
34	i	1376	C	C3'-C2'-C1'	8.28	108.13	101.50
34	i	1137	G	O4'-C1'-N9	8.28	114.83	108.20
27	a	58	VAL	CB-CA-C	-8.28	95.68	111.40
34	i	82	G	O4'-C1'-C2'	-8.27	97.53	105.80
34	i	1688	G	C1'-O4'-C4'	-8.27	103.28	109.90
10	J	180	LYS	C-N-CA	8.27	139.67	122.30
34	i	887	G	C1'-O4'-C4'	-8.26	103.29	109.90
1	A	133	PRO	CA-N-CD	-8.26	99.93	111.50
12	L	147	LYS	N-CA-C	8.26	133.29	111.00
32	f	87	THR	N-CA-C	-8.25	88.72	111.00
34	i	80	G	P-O5'-C5'	8.25	134.10	120.90
34	i	389	C	C3'-C2'-C1'	8.25	108.10	101.50
34	i	520	U	P-O3'-C3'	8.25	129.60	119.70
34	i	1336	U	O4'-C1'-N1	8.25	114.80	108.20
34	i	1691	C	N1-C1'-C2'	8.25	124.72	114.00
14	N	7	PRO	CA-N-CD	-8.24	99.96	111.50
19	S	6	PRO	N-CA-C	8.24	133.52	112.10
34	i	156	G	P-O3'-C3'	-8.24	109.82	119.70
34	i	315	C	P-O3'-C3'	8.24	129.58	119.70
34	i	1332	C	O4'-C1'-N1	8.24	114.79	108.20
34	i	546	U	N1-C1'-C2'	8.23	124.70	114.00
34	i	1344	G	N9-C1'-C2'	-8.23	102.94	112.00
34	i	1618	A	C3'-C2'-C1'	-8.23	94.91	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	P	37	TYR	CB-CG-CD1	8.23	125.94	121.00
34	i	837	G	O4'-C4'-C3'	-8.23	95.77	104.00
34	i	1010	G	C3'-C2'-C1'	-8.23	94.92	101.50
34	i	291	U	O4'-C1'-N1	8.22	114.78	108.20
34	i	1777	C	O4'-C1'-C2'	-8.22	97.58	105.80
34	i	451	U	O4'-C1'-N1	8.21	114.77	108.20
34	i	1307	C	C1'-O4'-C4'	-8.21	103.33	109.90
34	i	36	U	O4'-C1'-N1	8.21	114.77	108.20
34	i	1233	C	C3'-C2'-C1'	8.20	108.06	101.50
21	U	93	SER	CA-C-N	-8.20	94.15	117.10
34	i	905	G	P-O3'-C3'	-8.19	109.87	119.70
34	i	313	C	C3'-C2'-C1'	8.19	108.06	101.50
34	i	186	G	C1'-O4'-C4'	-8.19	103.35	109.90
3	C	93	LYS	O-C-N	-8.19	109.60	122.70
34	i	38	A	N9-C1'-C2'	-8.19	102.99	112.00
34	i	908	C	C3'-C2'-C1'	8.19	108.05	101.50
34	i	1305	C	O4'-C1'-C2'	-8.19	97.61	105.80
9	I	5	ARG	O-C-N	-8.18	109.61	122.70
34	i	1715	U	O4'-C1'-C2'	-8.18	97.62	105.80
34	i	578	G	O3'-P-O5'	-8.18	88.46	104.00
34	i	303	G	O4'-C1'-N9	8.17	114.74	108.20
34	i	605	C	N1-C1'-C2'	8.17	124.62	114.00
34	i	311	C	C3'-C2'-C1'	8.17	108.03	101.50
34	i	1660	G	O4'-C1'-C2'	8.16	114.95	107.60
34	i	1850	C	O4'-C1'-N1	8.15	114.72	108.20
25	Y	87	PRO	CA-N-CD	-8.15	100.09	111.50
34	i	1006	G	C3'-C2'-C1'	-8.15	94.98	101.50
21	U	103	SER	C-N-CA	-8.14	101.34	121.70
34	i	162	C	P-O3'-C3'	8.14	129.47	119.70
34	i	1632	A	O4'-C1'-N9	8.14	114.71	108.20
21	U	57	PRO	CA-N-CD	-8.14	100.11	111.50
34	i	435	A	C1'-O4'-C4'	-8.14	103.39	109.90
34	i	927	C	C5'-C4'-C3'	-8.13	102.99	116.00
34	i	334	U	O4'-C1'-N1	8.13	114.70	108.20
34	i	630	A	C1'-O4'-C4'	-8.13	103.39	109.90
34	i	909	A	O4'-C1'-C2'	-8.13	97.67	105.80
12	L	153	LYS	C-N-CA	8.13	142.02	121.70
34	i	851	G	O4'-C1'-N9	8.12	114.70	108.20
34	i	1026	A	O4'-C1'-N9	8.12	114.70	108.20
34	i	520	U	N1-C1'-C2'	-8.12	103.07	112.00
34	i	679	U	P-O3'-C3'	-8.12	109.96	119.70
21	U	93	SER	O-C-N	8.12	136.52	121.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1034	U	O4'-C1'-N1	8.11	114.69	108.20
34	i	357	U	O4'-C1'-N1	8.11	114.69	108.20
34	i	351	U	O4'-C1'-N1	8.11	114.69	108.20
11	K	55	ARG	NE-CZ-NH2	-8.10	116.25	120.30
34	i	1191	A	O4'-C4'-C3'	-8.10	95.90	104.00
34	i	1615	A	C1'-O4'-C4'	-8.08	103.44	109.90
34	i	1836	C	O4'-C1'-N1	8.08	114.66	108.20
34	i	281	U	O4'-C1'-N1	8.07	114.66	108.20
34	i	1068	U	O4'-C1'-C2'	-8.07	97.73	105.80
34	i	1534	U	O4'-C1'-C2'	-8.07	97.73	105.80
34	i	1133	U	C2'-C3'-O3'	8.07	127.25	109.50
34	i	1467	C	N1-C1'-C2'	8.06	124.48	114.00
34	i	1651	G	O4'-C1'-N9	8.06	114.65	108.20
34	i	939	U	O4'-C1'-N1	8.06	114.65	108.20
34	i	854	A	O4'-C1'-C2'	-8.06	97.74	105.80
34	i	1322	U	C1'-O4'-C4'	-8.06	103.45	109.90
11	K	84	HIS	CB-CA-C	-8.05	94.29	110.40
34	i	217	U	O4'-C1'-N1	8.05	114.64	108.20
34	i	495	G	O4'-C1'-N9	8.05	114.64	108.20
34	i	145	G	N9-C1'-C2'	8.04	124.45	114.00
34	i	333	A	O4'-C1'-N9	8.04	114.63	108.20
34	i	429	A	N9-C1'-C2'	-8.04	103.16	112.00
34	i	1093	G	O4'-C1'-N9	8.04	114.63	108.20
34	i	205	G	N9-C1'-C2'	8.03	124.44	114.00
34	i	491	C	P-O3'-C3'	8.03	129.34	119.70
34	i	844	U	N1-C1'-C2'	8.03	124.44	114.00
34	i	238	G	O4'-C1'-N9	8.02	114.62	108.20
34	i	562	U	O4'-C1'-N1	8.02	114.61	108.20
34	i	1161	G	N9-C1'-C2'	-8.02	103.18	112.00
17	Q	31	LEU	N-CA-C	8.01	132.64	111.00
34	i	490	A	P-O3'-C3'	8.01	129.31	119.70
34	i	1229	G	O4'-C1'-C2'	8.01	114.81	107.60
34	i	41	G	O4'-C1'-N9	-8.00	101.80	108.20
34	i	1655	C	P-O3'-C3'	-8.00	110.10	119.70
34	i	570	U	C4'-C3'-O3'	8.00	128.99	113.00
34	i	1660	G	C1'-O4'-C4'	-8.00	103.50	109.90
34	i	744	C	C3'-C2'-C1'	7.99	107.89	101.50
34	i	619	A	O4'-C1'-C2'	-7.99	97.81	105.80
34	i	1060	C	O4'-C1'-C2'	-7.99	97.81	105.80
34	i	520	U	P-O5'-C5'	-7.98	108.13	120.90
34	i	435	A	N9-C1'-C2'	7.97	124.36	114.00
34	i	1650	C	N1-C1'-C2'	7.97	124.36	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1786	G	C3'-C2'-C1'	-7.97	95.12	101.50
34	i	366	A	O4'-C1'-N9	7.97	114.58	108.20
34	i	1046	A	O4'-C1'-N9	7.97	114.57	108.20
34	i	464	G	N9-C1'-C2'	7.96	124.36	114.00
34	i	598	C	C3'-C2'-C1'	7.96	107.87	101.50
34	i	1095	G	O4'-C1'-N9	7.96	114.57	108.20
34	i	1686	U	O4'-C1'-N1	7.96	114.57	108.20
34	i	645	A	O4'-C1'-N9	7.96	114.57	108.20
34	i	890	G	O4'-C1'-N9	7.96	114.56	108.20
34	i	1030	A	O4'-C1'-N9	7.96	114.56	108.20
34	i	1741	U	C4'-C3'-O3'	7.95	128.91	113.00
34	i	1289	A	N9-C1'-C2'	7.95	124.34	114.00
34	i	1359	C	C3'-C2'-C1'	7.95	107.86	101.50
34	i	80	G	O4'-C1'-C2'	-7.95	97.85	105.80
7	G	131	ARG	C-N-CA	-7.95	101.83	121.70
34	i	1537	C	C1'-O4'-C4'	-7.95	103.54	109.90
34	i	1707	A	O4'-C1'-N9	7.95	114.56	108.20
34	i	1786	G	C1'-O4'-C4'	-7.94	103.55	109.90
34	i	1117	G	O4'-C1'-N9	7.94	114.55	108.20
34	i	960	A	C1'-O4'-C4'	7.94	116.25	109.90
34	i	1303	U	O4'-C1'-N1	7.93	114.55	108.20
34	i	1312	C	N1-C1'-C2'	7.93	124.31	114.00
34	i	1515	G	O3'-P-O5'	7.93	119.06	104.00
34	i	549	G	O4'-C1'-N9	7.92	114.54	108.20
34	i	872	C	O4'-C1'-C2'	-7.92	97.88	105.80
34	i	467	G	O4'-C1'-N9	7.92	114.53	108.20
34	i	525	G	P-O3'-C3'	7.92	129.20	119.70
34	i	207	U	O3'-P-O5'	-7.92	88.96	104.00
34	i	650	C	N1-C1'-C2'	7.91	124.29	114.00
34	i	1111	U	P-O3'-C3'	7.91	129.19	119.70
34	i	1369	C	C3'-C2'-C1'	7.91	107.83	101.50
34	i	77	A	N9-C1'-C2'	-7.91	103.30	112.00
34	i	905	G	C4'-C3'-O3'	7.91	128.82	113.00
34	i	1653	G	O4'-C1'-C2'	7.91	114.72	107.60
34	i	117	C	O4'-C1'-N1	7.91	114.52	108.20
34	i	33	G	O4'-C1'-N9	7.90	114.52	108.20
34	i	96	C	N1-C1'-C2'	7.89	124.26	114.00
34	i	986	A	C3'-C2'-C1'	7.89	107.81	101.50
26	Z	104	ARG	N-CA-CB	-7.89	96.40	110.60
26	Z	70	PRO	CA-N-CD	-7.89	100.45	111.50
9	I	184	ARG	CB-CA-C	-7.89	94.62	110.40
34	i	342	U	C3'-C2'-C1'	7.88	107.81	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	917	G	O4'-C1'-N9	7.88	114.50	108.20
34	i	316	C	O4'-C1'-C2'	-7.88	97.92	105.80
34	i	1677	C	O4'-C1'-C2'	-7.88	97.92	105.80
34	i	626	C	P-O5'-C5'	7.87	133.50	120.90
34	i	1297	A	C4'-C3'-O3'	7.87	128.75	113.00
34	i	40	A	O4'-C1'-N9	7.87	114.50	108.20
34	i	1348	G	O4'-C1'-C2'	7.87	114.69	107.60
34	i	147	A	C1'-O4'-C4'	7.87	116.19	109.90
34	i	368	U	C1'-O4'-C4'	-7.86	103.61	109.90
34	i	1860	A	P-O3'-C3'	7.86	129.13	119.70
34	i	791	A	O4'-C1'-N9	7.86	114.48	108.20
34	i	1471	G	P-O5'-C5'	7.85	133.47	120.90
34	i	1678	C	N1-C1'-C2'	7.85	124.21	114.00
34	i	222	G	O4'-C1'-C2'	7.85	114.66	107.60
34	i	1091	U	N1-C1'-C2'	7.84	124.20	114.00
34	i	329	A	C2'-C3'-O3'	7.84	126.75	109.50
7	G	161	PRO	CA-N-CD	-7.84	100.52	111.50
34	i	342	U	O4'-C1'-C2'	-7.84	97.96	105.80
34	i	817	G	P-O3'-C3'	7.84	129.11	119.70
34	i	821	A	P-O3'-C3'	-7.83	110.30	119.70
34	i	541	U	N1-C1'-C2'	7.83	124.18	114.00
34	i	1136	G	O4'-C1'-N9	7.83	114.47	108.20
34	i	1779	C	O4'-C1'-C2'	-7.83	97.97	105.80
8	H	15	LYS	C-N-CD	-7.83	103.38	120.60
34	i	977	A	C3'-C2'-C1'	7.82	107.76	101.50
34	i	1725	U	O4'-C1'-N1	7.82	114.46	108.20
11	K	35	LEU	CA-CB-CG	-7.82	97.33	115.30
34	i	1386	U	O4'-C1'-N1	7.82	114.45	108.20
34	i	1449	C	N1-C1'-C2'	7.81	124.16	114.00
34	i	1666	G	N9-C1'-C2'	7.81	124.16	114.00
34	i	1539	C	C3'-C2'-C1'	7.81	107.75	101.50
34	i	429	A	O4'-C1'-N9	7.81	114.45	108.20
34	i	1524	C	N1-C1'-C2'	7.81	124.15	114.00
34	i	1420	G	O4'-C1'-N9	7.81	114.44	108.20
34	i	1655	C	C5'-C4'-C3'	-7.80	103.52	116.00
34	i	1632	A	N9-C1'-C2'	-7.80	103.42	112.00
34	i	733	G	O4'-C1'-N9	7.80	114.44	108.20
34	i	1485	A	O4'-C1'-N9	7.80	114.44	108.20
25	Y	51	THR	C-N-CD	-7.79	103.45	120.60
34	i	612	C	N1-C1'-C2'	7.79	124.13	114.00
34	i	1709	U	O4'-C1'-N1	7.79	114.43	108.20
34	i	594	A	O4'-C1'-C2'	-7.79	98.01	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	735	C	O4'-C1'-C2'	-7.79	98.01	105.80
34	i	82	G	O4'-C1'-N9	7.78	114.42	108.20
16	P	36	LEU	CA-C-N	-7.77	100.10	117.20
24	X	23	HIS	CA-C-N	7.77	134.30	117.20
7	G	155	GLN	O-C-N	-7.76	110.28	122.70
34	i	169	U	P-O3'-C3'	7.76	129.01	119.70
34	i	907	C	N1-C1'-C2'	7.76	124.08	114.00
34	i	1696	C	O4'-C1'-C2'	-7.75	98.05	105.80
9	I	5	ARG	C-N-CA	7.75	141.07	121.70
34	i	904	A	O3'-P-O5'	-7.75	89.28	104.00
34	i	1841	G	N9-C1'-C2'	-7.74	103.49	112.00
9	I	178	ARG	CG-CD-NE	-7.73	95.56	111.80
34	i	301	C	O4'-C1'-N1	7.73	114.39	108.20
34	i	690	C	O4'-C1'-N1	7.73	114.39	108.20
34	i	1692	A	O4'-C1'-N9	7.72	114.38	108.20
34	i	227	A	C1'-O4'-C4'	7.72	116.08	109.90
34	i	76	U	O4'-C1'-N1	7.72	114.38	108.20
17	Q	146	ARG	NE-CZ-NH1	-7.71	116.44	120.30
34	i	1405	A	C5'-C4'-C3'	7.71	128.33	116.00
34	i	1003	C	N1-C1'-C2'	7.71	124.02	114.00
34	i	1771	G	C1'-O4'-C4'	-7.70	103.74	109.90
31	e	77	HIS	C-N-CA	7.70	138.47	122.30
3	C	148	VAL	C-N-CD	-7.70	103.67	120.60
10	J	166	GLY	C-N-CA	-7.70	106.14	122.30
20	T	42	HIS	CB-CA-C	-7.70	95.01	110.40
34	i	164	A	C1'-O4'-C4'	-7.69	103.75	109.90
34	i	1606	G	O4'-C1'-N9	7.69	114.36	108.20
34	i	3	C	O4'-C1'-C2'	-7.69	98.11	105.80
34	i	524	G	C4'-C3'-O3'	7.69	128.38	113.00
34	i	2	A	P-O3'-C3'	7.69	128.93	119.70
2	B	37	ALA	C-N-CA	-7.68	102.49	121.70
34	i	1092	G	O4'-C1'-N9	7.68	114.34	108.20
34	i	902	U	O4'-C1'-N1	7.67	114.34	108.20
34	i	171	A	N9-C1'-C2'	-7.67	103.56	112.00
34	i	191	C	C4'-C3'-O3'	7.67	128.34	113.00
34	i	296	U	O4'-C1'-N1	7.67	114.34	108.20
34	i	1182	U	O4'-C1'-N1	7.67	114.33	108.20
34	i	987	G	O4'-C1'-C2'	7.67	114.50	107.60
34	i	218	A	O4'-C1'-N9	7.66	114.33	108.20
34	i	595	A	O4'-C1'-N9	7.66	114.33	108.20
34	i	1828	A	O4'-C1'-N9	7.66	114.33	108.20
34	i	659	A	O4'-C1'-N9	7.66	114.33	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	J	93	LYS	C-N-CA	7.66	140.84	121.70
18	R	89	SER	O-C-N	-7.66	110.45	122.70
34	i	1056	A	N9-C1'-C2'	7.65	123.95	114.00
34	i	1448	A	C3'-C2'-C1'	7.65	107.62	101.50
34	i	931	G	O4'-C1'-N9	7.65	114.32	108.20
5	E	259	LYS	N-CA-C	7.64	131.64	111.00
34	i	594	A	C3'-C2'-C1'	7.64	107.61	101.50
34	i	959	A	O4'-C1'-C2'	7.63	114.47	107.60
34	i	1215	C	C3'-C2'-C1'	7.63	107.60	101.50
34	i	1289	A	C3'-C2'-C1'	7.63	107.60	101.50
19	S	6	PRO	CA-C-N	7.63	133.98	117.20
34	i	446	C	C3'-C2'-C1'	7.63	107.60	101.50
34	i	1859	C	C4'-C3'-O3'	7.63	128.25	113.00
34	i	521	A	O4'-C4'-C3'	-7.62	96.38	104.00
34	i	554	A	O4'-C1'-N9	7.62	114.30	108.20
34	i	1134	C	O3'-P-O5'	7.62	118.48	104.00
34	i	1597	U	O3'-P-O5'	-7.62	89.53	104.00
34	i	630	A	N9-C1'-C2'	7.61	123.90	114.00
34	i	526	A	C4'-C3'-O3'	7.61	128.22	113.00
34	i	1447	G	C3'-C2'-C1'	7.61	107.59	101.50
34	i	1263	C	N1-C1'-C2'	7.59	123.86	114.00
33	g	274	VAL	C-N-CA	-7.58	102.74	121.70
12	L	153	LYS	CA-C-N	7.58	133.88	117.20
34	i	1632	A	C1'-O4'-C4'	7.58	115.96	109.90
34	i	78	C	N1-C1'-C2'	-7.57	103.67	112.00
34	i	1771	G	O4'-C1'-C2'	7.57	114.41	107.60
34	i	35	C	C3'-C2'-C1'	7.57	107.55	101.50
34	i	825	C	O4'-C1'-C2'	-7.57	98.23	105.80
34	i	1043	C	C3'-C2'-C1'	7.57	107.55	101.50
34	i	1488	U	O4'-C1'-N1	7.56	114.25	108.20
34	i	1591	U	O4'-C1'-N1	7.56	114.25	108.20
34	i	848	G	C4'-C3'-O3'	-7.56	93.52	109.40
34	i	400	G	O4'-C1'-N9	7.56	114.25	108.20
6	F	36	GLN	N-CA-C	-7.55	90.61	111.00
34	i	1517	A	C5'-C4'-O4'	7.55	118.16	109.10
34	i	689	G	O4'-C1'-C2'	-7.55	98.25	105.80
4	D	94	ARG	CB-CA-C	-7.54	95.31	110.40
13	M	10	GLY	N-CA-C	7.54	131.96	113.10
34	i	1720	U	O4'-C1'-N1	7.54	114.23	108.20
34	i	837	G	P-O5'-C5'	7.54	132.96	120.90
34	i	1530	U	O3'-P-O5'	-7.54	89.68	104.00
9	I	55	TYR	CA-CB-CG	-7.53	99.08	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1689	U	O4'-C1'-N1	7.53	114.23	108.20
34	i	628	C	O4'-C1'-N1	7.53	114.23	108.20
34	i	450	A	O4'-C1'-N9	7.53	114.22	108.20
34	i	639	U	N1-C1'-C2'	7.53	123.79	114.00
34	i	1406	C	C3'-C2'-C1'	7.53	107.52	101.50
34	i	1690	A	O4'-C1'-C2'	-7.52	98.28	105.80
34	i	1270	G	C3'-C2'-C1'	7.51	107.51	101.50
34	i	385	G	O4'-C1'-C2'	7.51	114.36	107.60
16	P	52	LYS	C-N-CA	-7.51	102.92	121.70
34	i	1269	C	P-O3'-C3'	-7.51	110.69	119.70
34	i	522	C	O4'-C1'-N1	7.51	114.21	108.20
34	i	1113	C	C3'-C2'-C1'	-7.51	95.49	101.50
34	i	1028	C	N1-C1'-C2'	7.50	123.76	114.00
6	F	131	ALA	C-N-CA	-7.50	106.54	122.30
10	J	161	LEU	C-N-CA	-7.50	102.94	121.70
34	i	606	A	N9-C1'-C2'	7.50	123.75	114.00
34	i	529	C	O4'-C1'-N1	7.50	114.20	108.20
8	H	109	ARG	CA-CB-CG	-7.49	96.92	113.40
34	i	865	A	O4'-C1'-N9	7.49	114.19	108.20
34	i	1505	U	C4'-C3'-O3'	-7.49	93.67	109.40
34	i	296	U	P-O5'-C5'	7.49	132.88	120.90
34	i	1055	G	P-O3'-C3'	7.49	128.69	119.70
34	i	1499	C	O4'-C1'-N1	7.49	114.19	108.20
21	U	104	ILE	N-CA-CB	7.48	128.01	110.80
34	i	976	A	C1'-O4'-C4'	-7.48	103.92	109.90
34	i	794	G	P-O5'-C5'	7.48	132.86	120.90
34	i	1396	U	O4'-C1'-N1	7.48	114.18	108.20
34	i	1413	C	C1'-O4'-C4'	7.48	115.88	109.90
34	i	168	C	C3'-C2'-C1'	7.48	107.48	101.50
34	i	420	C	O4'-C1'-N1	7.47	114.18	108.20
34	i	188	U	O4'-C1'-N1	7.47	114.17	108.20
34	i	1410	A	O4'-C1'-N9	7.47	114.17	108.20
34	i	1258	C	C1'-O4'-C4'	-7.46	103.93	109.90
34	i	1424	G	N9-C1'-C2'	-7.46	103.79	112.00
34	i	795	U	P-O3'-C3'	7.46	128.65	119.70
34	i	484	C	O4'-C1'-C2'	-7.45	98.35	105.80
34	i	1237	A	P-O3'-C3'	7.45	128.64	119.70
34	i	853	U	C1'-O4'-C4'	-7.45	103.94	109.90
10	J	17	ARG	CB-CA-C	-7.44	95.52	110.40
34	i	436	G	C3'-C2'-C1'	7.44	107.45	101.50
34	i	76	U	P-O5'-C5'	7.44	132.80	120.90
34	i	1776	G	C5'-C4'-C3'	7.44	127.90	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1043	C	O4'-C1'-C2'	-7.43	98.36	105.80
5	E	75	LYS	N-CA-C	7.43	131.07	111.00
34	i	170	A	O4'-C1'-N9	7.43	114.15	108.20
34	i	1630	C	O4'-C1'-N1	7.43	114.15	108.20
34	i	1648	U	P-O3'-C3'	7.43	128.62	119.70
34	i	927	C	O4'-C1'-C2'	-7.43	98.37	105.80
34	i	1600	G	C1'-O4'-C4'	-7.43	103.96	109.90
32	f	148	TYR	CA-CB-CG	-7.42	99.30	113.40
34	i	1559	C	N1-C1'-C2'	7.42	123.65	114.00
34	i	1504	A	C1'-O4'-C4'	7.42	115.83	109.90
34	i	797	U	O4'-C1'-N1	7.42	114.13	108.20
8	H	106	ARG	NE-CZ-NH1	-7.41	116.60	120.30
34	i	230	C	O4'-C1'-N1	7.41	114.13	108.20
34	i	798	A	C1'-O4'-C4'	-7.41	103.97	109.90
19	S	9	PHE	N-CA-C	7.41	130.99	111.00
34	i	604	G	N9-C1'-C2'	7.41	123.63	114.00
34	i	1194	G	C3'-C2'-C1'	-7.41	95.58	101.50
34	i	1533	C	C4'-C3'-C2'	-7.40	95.20	102.60
34	i	35	C	O4'-C1'-C2'	-7.40	98.40	105.80
34	i	210	G	N9-C1'-C2'	-7.39	103.86	112.00
34	i	1664	G	O4'-C1'-N9	7.39	114.11	108.20
34	i	1244	U	O4'-C1'-N1	7.39	114.11	108.20
34	i	1667	U	O4'-C1'-N1	7.39	114.11	108.20
34	i	534	G	O4'-C1'-N9	7.39	114.11	108.20
34	i	743	U	O4'-C1'-C2'	-7.39	98.41	105.80
10	J	144	ILE	CA-CB-CG1	-7.38	96.97	111.00
18	R	3	ARG	NE-CZ-NH2	7.38	123.99	120.30
18	R	1	MET	O-C-N	7.38	135.74	123.20
33	g	50	THR	C-N-CA	-7.38	103.26	121.70
34	i	514	U	O4'-C1'-N1	7.38	114.10	108.20
34	i	841	G	P-O3'-C3'	-7.37	110.85	119.70
34	i	1186	A	O4'-C1'-C2'	-7.37	98.43	105.80
23	W	100	GLY	N-CA-C	-7.37	94.67	113.10
24	X	115	ILE	N-CA-C	-7.37	91.10	111.00
28	b	9	HIS	C-N-CD	-7.37	104.39	120.60
34	i	1237	A	O4'-C1'-C2'	-7.37	98.43	105.80
34	i	81	U	N1-C1'-C2'	7.36	123.57	114.00
18	R	1	MET	CB-CA-C	7.36	125.12	110.40
10	J	180	LYS	CB-CA-C	-7.35	95.70	110.40
34	i	1773	G	N9-C1'-C2'	-7.35	103.91	112.00
34	i	1773	G	C3'-C2'-C1'	-7.35	95.62	101.50
25	Y	64	PHE	C-N-CA	-7.35	106.87	122.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	34	U	C1'-O4'-C4'	-7.35	104.02	109.90
9	I	3	ILE	N-CA-C	7.34	130.83	111.00
34	i	1504	A	O4'-C1'-N9	7.34	114.07	108.20
34	i	1404	U	C1'-O4'-C4'	-7.34	104.03	109.90
34	i	656	U	O4'-C1'-C2'	-7.34	98.46	105.80
4	D	82	GLY	O-C-N	-7.33	110.97	122.70
34	i	17	C	O4'-C1'-N1	7.33	114.07	108.20
34	i	1305	C	C3'-C2'-C1'	7.33	107.36	101.50
9	I	133	GLU	O-C-N	-7.33	110.97	122.70
21	U	93	SER	C-N-CA	-7.33	91.22	122.00
34	i	893	U	O3'-P-O5'	-7.33	90.08	104.00
34	i	1433	C	C1'-O4'-C4'	-7.33	104.04	109.90
34	i	432	C	C3'-C2'-C1'	7.33	107.36	101.50
34	i	1459	U	P-O5'-C5'	7.33	132.62	120.90
34	i	997	A	O4'-C1'-C2'	-7.32	98.48	105.80
34	i	187	C	O4'-C1'-C2'	-7.32	98.48	105.80
34	i	873	C	O4'-C1'-C2'	-7.32	98.48	105.80
34	i	1325	U	N1-C1'-C2'	7.32	123.51	114.00
34	i	1355	U	C1'-O4'-C4'	7.32	115.75	109.90
34	i	942	U	O4'-C1'-N1	7.32	114.05	108.20
34	i	1818	A	P-O3'-C3'	7.32	128.48	119.70
34	i	14	C	O4'-C1'-N1	7.31	114.05	108.20
34	i	980	C	N1-C1'-C2'	7.30	123.50	114.00
34	i	1019	A	C1'-O4'-C4'	7.30	115.74	109.90
34	i	547	U	O4'-C1'-C2'	-7.30	98.50	105.80
24	X	23	HIS	C-N-CA	7.30	139.95	121.70
34	i	985	C	O4'-C1'-C2'	-7.30	98.50	105.80
34	i	1560	C	O4'-C1'-C2'	-7.30	98.50	105.80
34	i	1527	C	C3'-C2'-C1'	7.30	107.34	101.50
34	i	277	U	O4'-C1'-C2'	-7.29	98.51	105.80
34	i	410	G	C1'-O4'-C4'	-7.29	104.07	109.90
34	i	798	A	O4'-C1'-N9	7.29	114.03	108.20
34	i	1068	U	P-O3'-C3'	7.29	128.44	119.70
34	i	608	C	O4'-C1'-N1	7.28	114.02	108.20
34	i	731	C	O4'-C1'-N1	7.28	114.02	108.20
35	l	67	PHE	CB-CG-CD2	-7.27	115.71	120.80
34	i	1845	A	P-O3'-C3'	7.27	128.43	119.70
34	i	27	A	O4'-C1'-N9	7.27	114.02	108.20
34	i	689	G	C3'-C2'-C1'	7.27	107.31	101.50
34	i	574	A	P-O5'-C5'	7.27	132.53	120.90
34	i	1204	A	N9-C1'-C2'	-7.27	104.00	112.00
34	i	684	A	C3'-C2'-C1'	-7.26	95.69	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1127	G	O4'-C1'-N9	7.26	114.01	108.20
34	i	1637	U	C1'-O4'-C4'	7.26	115.71	109.90
34	i	791	A	O4'-C1'-C2'	-7.26	98.54	105.80
34	i	1015	C	N1-C1'-C2'	7.25	123.43	114.00
33	g	275	ILE	N-CA-C	7.25	130.57	111.00
34	i	64	A	N9-C1'-C2'	-7.25	104.03	112.00
32	f	88	PRO	O-C-N	-7.25	111.10	122.70
34	i	1675	G	O4'-C1'-N9	7.25	114.00	108.20
14	N	19	ARG	N-CA-C	-7.25	91.43	111.00
34	i	1451	A	O4'-C1'-C2'	-7.25	98.56	105.80
34	i	503	G	O4'-C1'-N9	7.24	113.99	108.20
34	i	1041	U	O4'-C1'-N1	7.24	113.99	108.20
34	i	1666	G	C1'-O4'-C4'	-7.24	104.11	109.90
34	i	1717	G	P-O5'-C5'	7.24	132.49	120.90
34	i	1557	C	N1-C1'-C2'	7.24	123.41	114.00
18	R	89	SER	C-N-CA	-7.24	103.61	121.70
34	i	225	C	N1-C1'-C2'	7.24	123.41	114.00
34	i	359	C	N1-C1'-C2'	7.23	123.40	114.00
34	i	542	G	C3'-C2'-C1'	-7.23	95.72	101.50
34	i	57	U	C1'-O4'-C4'	7.23	115.68	109.90
8	H	110	THR	CA-C-N	7.23	133.10	117.20
34	i	454	A	O3'-P-O5'	7.23	117.73	104.00
34	i	1590	U	N1-C1'-C2'	-7.23	104.05	112.00
34	i	170	A	C5'-C4'-C3'	-7.22	104.44	116.00
34	i	808	A	O4'-C1'-N9	7.22	113.98	108.20
34	i	306	C	O4'-C1'-N1	7.22	113.98	108.20
34	i	498	A	O4'-C1'-N9	7.22	113.98	108.20
34	i	1175	G	O4'-C1'-N9	7.22	113.97	108.20
34	i	1059	C	C3'-C2'-C1'	7.22	107.27	101.50
8	H	191	GLU	O-C-N	-7.21	111.16	122.70
34	i	545	A	O4'-C1'-C2'	-7.21	98.58	105.80
34	i	1311	U	C3'-C2'-C1'	-7.21	95.73	101.50
34	i	740	G	C3'-C2'-C1'	7.21	107.27	101.50
11	K	37	ASP	CB-CG-OD2	7.21	124.79	118.30
34	i	1301	C	O4'-C1'-N1	7.21	113.97	108.20
34	i	673	G	O4'-C1'-N9	7.20	113.96	108.20
34	i	1672	U	N1-C1'-C2'	-7.20	104.08	112.00
34	i	1001	G	O4'-C1'-N9	7.20	113.96	108.20
10	J	35	TYR	CA-C-N	-7.20	101.80	116.20
34	i	290	A	O4'-C1'-N9	7.20	113.96	108.20
34	i	364	G	O4'-C1'-N9	7.20	113.96	108.20
34	i	106	C	O4'-C1'-N1	7.20	113.96	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	J	164	PRO	N-CA-CB	-7.20	94.67	103.30
18	R	1	MET	CA-CB-CG	7.19	125.52	113.30
34	i	162	C	C4'-C3'-O3'	7.19	127.38	113.00
34	i	60	A	O4'-C1'-C2'	7.19	114.07	107.60
34	i	1738	G	C1'-O4'-C4'	-7.19	104.15	109.90
34	i	279	G	N9-C1'-C2'	-7.18	104.10	112.00
34	i	1326	G	C1'-O4'-C4'	-7.18	104.15	109.90
34	i	567	U	O4'-C1'-N1	7.18	113.94	108.20
34	i	431	C	C1'-O4'-C4'	-7.18	104.16	109.90
34	i	1184	A	C3'-C2'-C1'	7.18	107.24	101.50
34	i	1693	C	C3'-C2'-C1'	7.17	107.24	101.50
34	i	1161	G	O4'-C1'-N9	7.17	113.94	108.20
34	i	166	A	O4'-C1'-N9	7.17	113.94	108.20
34	i	827	G	C3'-C2'-C1'	-7.17	95.77	101.50
34	i	332	C	C3'-C2'-C1'	7.17	107.23	101.50
34	i	834	G	O4'-C1'-N9	7.17	113.93	108.20
34	i	541	U	P-O5'-C5'	7.17	132.37	120.90
34	i	1767	C	O4'-C1'-N1	7.16	113.93	108.20
34	i	1781	G	O4'-C1'-N9	7.16	113.93	108.20
34	i	1827	C	C3'-C2'-C1'	7.16	107.23	101.50
34	i	1852	G	O4'-C1'-N9	7.16	113.93	108.20
4	D	52	ALA	C-N-CA	-7.16	103.81	121.70
34	i	1287	A	P-O3'-C3'	7.16	128.29	119.70
11	K	35	LEU	N-CA-C	-7.16	91.68	111.00
34	i	1452	G	C1'-O4'-C4'	-7.16	104.17	109.90
34	i	1517	A	P-O3'-C3'	-7.16	111.11	119.70
34	i	1656	A	C1'-O4'-C4'	-7.16	104.17	109.90
34	i	830	C	P-O3'-C3'	7.15	128.28	119.70
18	R	111	PHE	N-CA-C	7.15	130.31	111.00
34	i	1766	C	C3'-C2'-C1'	7.15	107.22	101.50
34	i	1210	A	O4'-C1'-N9	7.15	113.92	108.20
34	i	368	U	C4'-C3'-C2'	-7.14	95.45	102.60
34	i	49	C	N1-C1'-C2'	7.14	123.29	114.00
34	i	1116	U	N1-C1'-C2'	7.14	123.28	114.00
34	i	1060	C	C3'-C2'-C1'	7.14	107.21	101.50
34	i	1275	C	O4'-C1'-C2'	-7.14	98.66	105.80
34	i	1634	G	C3'-C2'-C1'	7.14	107.21	101.50
2	B	147	ASN	C-N-CA	-7.14	103.86	121.70
14	N	14	SER	CB-CA-C	-7.14	96.54	110.10
34	i	1118	A	N9-C1'-C2'	-7.13	104.15	112.00
19	S	93	GLY	CA-C-N	-7.13	101.52	117.20
34	i	1668	U	O4'-C1'-N1	7.13	113.90	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	53	ARG	NE-CZ-NH1	-7.13	116.74	120.30
34	i	342	U	O4'-C1'-N1	7.13	113.90	108.20
10	J	91	LYS	O-C-N	-7.12	111.30	122.70
34	i	1661	C	O4'-C1'-N1	7.12	113.90	108.20
34	i	1045	A	C4'-C3'-C2'	-7.12	95.48	102.60
18	R	2	GLY	CA-C-N	7.11	132.85	117.20
27	a	97	PRO	CA-CB-CG	7.11	118.31	104.80
34	i	145	G	O4'-C1'-C2'	7.11	114.00	107.60
34	i	1459	U	O4'-C1'-N1	7.11	113.89	108.20
34	i	894	U	P-O5'-C5'	7.11	132.28	120.90
34	i	1438	U	O4'-C1'-N1	7.11	113.89	108.20
34	i	1663	U	O5'-P-OP2	-7.11	99.30	105.70
20	T	4	VAL	N-CA-CB	-7.10	95.87	111.50
34	i	1052	U	P-O3'-C3'	-7.10	111.17	119.70
34	i	684	A	C1'-O4'-C4'	-7.10	104.22	109.90
34	i	91	A	O4'-C1'-N9	7.10	113.88	108.20
34	i	241	A	O4'-C1'-C2'	-7.10	98.70	105.80
34	i	299	G	P-O3'-C3'	7.09	128.21	119.70
34	i	997	A	C1'-O4'-C4'	7.09	115.57	109.90
16	P	49	LEU	CA-C-N	7.09	132.79	117.20
34	i	286	C	N1-C1'-C2'	7.09	123.21	114.00
24	X	22	TRP	C-N-CA	-7.09	103.98	121.70
34	i	635	C	C3'-C2'-C1'	7.09	107.17	101.50
34	i	956	U	C1'-O4'-C4'	-7.09	104.23	109.90
34	i	1288	C	P-O5'-C5'	-7.09	109.56	120.90
34	i	1578	C	C3'-C2'-C1'	7.09	107.17	101.50
34	i	1019	A	N9-C1'-C2'	-7.08	104.21	112.00
19	S	142	ARG	N-CA-CB	-7.08	97.85	110.60
34	i	970	C	N1-C1'-C2'	7.08	123.21	114.00
15	O	145	GLY	N-CA-C	7.08	130.80	113.10
34	i	149	A	C3'-C2'-C1'	7.08	107.16	101.50
34	i	409	G	O4'-C1'-C2'	-7.08	98.72	105.80
34	i	32	U	O4'-C1'-N1	7.07	113.86	108.20
34	i	227	A	C3'-C2'-C1'	7.07	107.16	101.50
34	i	1755	U	P-O5'-C5'	7.07	132.22	120.90
34	i	167	G	N9-C1'-C2'	-7.07	104.22	112.00
34	i	906	G	O4'-C1'-N9	7.07	113.86	108.20
11	K	1	MET	N-CA-C	7.06	130.07	111.00
34	i	279	G	O4'-C1'-N9	7.06	113.85	108.20
34	i	100	U	O4'-C1'-N1	7.06	113.85	108.20
34	i	267	G	P-O3'-C3'	7.06	128.17	119.70
34	i	1783	G	O4'-C1'-C2'	-7.06	98.74	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	899	A	C3'-C2'-C1'	-7.06	95.85	101.50
34	i	1858	U	P-O5'-C5'	7.06	132.19	120.90
34	i	58	C	N1-C1'-C2'	-7.06	104.24	112.00
34	i	1503	G	C1'-C2'-O2'	7.05	131.76	110.60
34	i	53	C	C1'-O4'-C4'	7.05	115.54	109.90
34	i	53	C	C3'-C2'-C1'	7.05	107.14	101.50
34	i	1425	G	P-O5'-C5'	7.05	132.18	120.90
34	i	1239	U	O4'-C1'-N1	7.04	113.83	108.20
34	i	1788	C	O4'-C1'-C2'	-7.04	98.76	105.80
34	i	981	G	O4'-C1'-N9	7.04	113.83	108.20
34	i	1478	C	O4'-C1'-N1	7.04	113.83	108.20
34	i	127	C	P-O3'-C3'	7.04	128.14	119.70
34	i	1042	U	O4'-C1'-N1	7.03	113.82	108.20
34	i	1847	C	C1'-O4'-C4'	-7.03	104.28	109.90
20	T	82	ARG	NE-CZ-NH1	7.03	123.81	120.30
34	i	518	A	N9-C1'-C2'	7.03	123.13	114.00
34	i	587	G	O4'-C1'-N9	7.02	113.82	108.20
3	C	258	LEU	CB-CG-CD2	7.02	122.94	111.00
34	i	47	G	O4'-C1'-N9	7.02	113.82	108.20
34	i	275	C	O4'-C1'-C2'	-7.02	98.78	105.80
8	H	109	ARG	O-C-N	7.02	133.93	122.70
34	i	1671	U	P-O3'-C3'	-7.01	111.28	119.70
34	i	275	C	C3'-C2'-C1'	7.01	107.11	101.50
10	J	123	ILE	CB-CA-C	7.01	125.62	111.60
34	i	1542	C	C3'-C2'-C1'	7.01	107.11	101.50
34	i	1546	U	C3'-C2'-C1'	-7.01	95.89	101.50
21	U	118	ASP	CB-CG-OD1	7.00	124.60	118.30
34	i	908	C	O4'-C1'-N1	7.00	113.80	108.20
34	i	31	U	C1'-O4'-C4'	7.00	115.50	109.90
34	i	1047	G	O4'-C1'-N9	7.00	113.80	108.20
34	i	1363	U	O4'-C1'-N1	7.00	113.80	108.20
34	i	637	U	O4'-C1'-N1	7.00	113.80	108.20
34	i	729	C	O4'-C1'-C2'	-7.00	98.80	105.80
34	i	315	C	O4'-C1'-C2'	-6.99	98.81	105.80
19	S	93	GLY	O-C-N	6.98	133.87	122.70
34	i	1837	G	C1'-O4'-C4'	-6.98	104.31	109.90
34	i	1105	C	C3'-C2'-C1'	-6.98	95.92	101.50
34	i	1651	G	C1'-O4'-C4'	-6.98	104.32	109.90
34	i	945	G	O4'-C1'-N9	6.98	113.78	108.20
34	i	1118	A	C1'-O4'-C4'	6.98	115.48	109.90
34	i	407	C	C3'-C2'-C1'	6.97	107.08	101.50
34	i	726	C	P-O3'-C3'	6.97	128.07	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	T	82	ARG	NH1-CZ-NH2	-6.97	111.73	119.40
34	i	1339	U	O4'-C1'-N1	6.97	113.78	108.20
34	i	1693	C	O4'-C1'-C2'	-6.97	98.83	105.80
34	i	93	U	O4'-C1'-C2'	-6.96	98.84	105.80
34	i	1329	U	N1-C1'-C2'	-6.96	104.34	112.00
34	i	1205	A	N9-C1'-C2'	-6.96	104.34	112.00
34	i	1093	G	C5'-C4'-O4'	6.96	117.45	109.10
34	i	1642	A	C3'-C2'-C1'	-6.96	95.93	101.50
20	T	82	ARG	NE-CZ-NH2	6.96	123.78	120.30
34	i	465	C	C3'-C2'-C1'	6.96	107.07	101.50
34	i	1405	A	O4'-C1'-C2'	-6.96	98.84	105.80
20	T	4	VAL	CA-C-N	6.96	132.50	117.20
34	i	499	G	O4'-C1'-N9	6.96	113.76	108.20
34	i	1503	G	C3'-C2'-C1'	-6.96	95.94	101.50
34	i	510	A	C1'-O4'-C4'	-6.95	104.34	109.90
4	D	83	SER	N-CA-CB	6.95	120.92	110.50
34	i	262	G	P-O3'-C3'	6.95	128.04	119.70
25	Y	31	GLY	N-CA-C	6.95	130.47	113.10
34	i	1739	G	C1'-O4'-C4'	6.95	115.46	109.90
34	i	41	G	C1'-O4'-C4'	-6.94	104.35	109.90
34	i	74	G	P-O3'-C3'	6.94	128.03	119.70
34	i	1328	A	C3'-C2'-C1'	6.94	107.05	101.50
34	i	1373	U	O4'-C1'-N1	6.94	113.75	108.20
34	i	1648	U	N1-C1'-C2'	-6.94	104.37	112.00
11	K	55	ARG	CB-CG-CD	6.94	129.64	111.60
34	i	1099	C	O4'-C1'-N1	6.94	113.75	108.20
34	i	1426	C	O4'-C1'-C2'	-6.94	98.86	105.80
34	i	1584	A	N9-C1'-C2'	-6.94	104.37	112.00
34	i	1640	C	P-O3'-C3'	6.93	128.02	119.70
34	i	1693	C	P-O3'-C3'	6.93	128.02	119.70
34	i	274	G	O4'-C1'-C2'	6.93	113.84	107.60
34	i	636	G	O4'-C1'-N9	6.93	113.74	108.20
34	i	792	G	C3'-C2'-C1'	-6.93	95.96	101.50
28	b	79	PHE	N-CA-C	6.93	129.70	111.00
34	i	507	C	N1-C1'-C2'	6.93	123.00	114.00
34	i	389	C	O4'-C1'-C2'	-6.92	98.88	105.80
32	f	148	TYR	N-CA-C	6.92	129.67	111.00
34	i	1782	A	O4'-C1'-N9	6.92	113.73	108.20
34	i	438	A	C3'-C2'-C1'	-6.91	95.97	101.50
34	i	1053	C	O4'-C1'-N1	6.91	113.73	108.20
34	i	725	C	O4'-C1'-C2'	-6.91	98.89	105.80
34	i	877	G	C1'-O4'-C4'	-6.91	104.37	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	860	A	O4'-C1'-N9	6.91	113.72	108.20
34	i	1638	U	C3'-C2'-C1'	6.90	107.02	101.50
34	i	373	G	C3'-C2'-C1'	6.89	107.02	101.50
11	K	2	LEU	CA-CB-CG	-6.89	99.46	115.30
34	i	369	C	P-O3'-C3'	6.89	127.96	119.70
34	i	63	U	O4'-C1'-N1	6.88	113.71	108.20
34	i	1402	G	N9-C1'-C2'	6.88	122.95	114.00
3	C	242	LYS	N-CA-C	6.88	129.58	111.00
34	i	374	U	N1-C1'-C2'	6.88	122.95	114.00
2	B	77	ASP	CB-CG-OD1	6.88	124.49	118.30
34	i	571	U	P-O3'-C3'	-6.88	111.44	119.70
22	V	67	ASP	CB-CG-OD2	6.88	124.49	118.30
34	i	1777	C	C3'-C2'-C1'	6.88	107.00	101.50
34	i	597	U	N1-C1'-C2'	6.88	122.94	114.00
34	i	377	C	N1-C1'-C2'	6.87	122.93	114.00
34	i	609	A	N9-C1'-C2'	-6.87	104.44	112.00
18	R	123	THR	CB-CA-C	-6.87	93.05	111.60
34	i	1647	G	O4'-C1'-N9	6.87	113.69	108.20
11	K	2	LEU	N-CA-C	6.87	129.54	111.00
34	i	343	C	N1-C1'-C2'	6.86	122.92	114.00
34	i	1604	C	O4'-C1'-N1	6.86	113.69	108.20
34	i	1128	C	O4'-C1'-N1	6.86	113.69	108.20
34	i	1497	C	O3'-P-O5'	-6.86	90.97	104.00
18	R	87	GLU	CB-CA-C	-6.86	96.68	110.40
34	i	989	G	O4'-C1'-N9	6.85	113.68	108.20
24	X	128	VAL	N-CA-C	6.85	129.50	111.00
34	i	1479	A	N9-C1'-C2'	-6.85	104.46	112.00
34	i	369	C	C3'-C2'-C1'	6.85	106.98	101.50
34	i	741	C	C3'-C2'-C1'	6.85	106.98	101.50
2	B	133	TYR	N-CA-CB	-6.84	98.28	110.60
34	i	509	A	O4'-C1'-C2'	-6.84	98.96	105.80
34	i	321	C	O4'-C1'-C2'	-6.84	98.96	105.80
34	i	978	G	O4'-C1'-N9	6.84	113.67	108.20
34	i	1533	C	O4'-C1'-C2'	-6.84	98.96	105.80
3	C	105	GLN	N-CA-C	6.83	129.45	111.00
34	i	365	U	P-O5'-C5'	6.83	131.83	120.90
34	i	1603	U	O4'-C1'-N1	6.83	113.66	108.20
34	i	1530	U	C4'-C3'-O3'	6.83	126.65	113.00
34	i	900	A	C1'-O4'-C4'	-6.83	104.44	109.90
34	i	227	A	O4'-C1'-C2'	-6.82	98.98	105.80
34	i	1633	G	C3'-C2'-C1'	6.82	106.96	101.50
34	i	1423	C	O4'-C1'-C2'	-6.82	98.98	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1114	C	C1'-O4'-C4'	6.82	115.36	109.90
34	i	1216	A	C1'-O4'-C4'	-6.81	104.45	109.90
34	i	845	A	O4'-C1'-N9	6.81	113.65	108.20
34	i	1173	U	O4'-C1'-N1	6.81	113.65	108.20
34	i	1774	G	O3'-P-O5'	6.81	116.93	104.00
8	H	110	THR	CA-CB-CG2	6.80	121.93	112.40
27	a	58	VAL	CG1-CB-CG2	-6.80	100.02	110.90
34	i	15	U	O4'-C1'-N1	6.80	113.64	108.20
34	i	31	U	N1-C1'-C2'	-6.80	104.53	112.00
34	i	125	C	O3'-P-O5'	6.79	116.91	104.00
34	i	1418	G	N9-C1'-C2'	-6.79	104.53	112.00
34	i	312	C	C3'-C2'-C1'	6.79	106.93	101.50
34	i	1171	G	C1'-O4'-C4'	-6.79	104.47	109.90
34	i	1656	A	C3'-C2'-C1'	-6.79	96.07	101.50
6	F	37	ASP	N-CA-C	6.78	129.32	111.00
33	g	142	VAL	O-C-N	6.78	133.54	122.70
34	i	65	C	C1'-O4'-C4'	6.78	115.32	109.90
34	i	850	A	P-O5'-C5'	6.77	131.74	120.90
34	i	312	C	P-O3'-C3'	6.77	127.83	119.70
34	i	862	U	C3'-C2'-C1'	-6.77	96.09	101.50
34	i	193	C	N1-C1'-C2'	6.76	122.79	114.00
34	i	540	C	O3'-P-O5'	-6.76	91.15	104.00
34	i	906	G	C1'-O4'-C4'	-6.76	104.49	109.90
34	i	1024	A	C5'-C4'-C3'	-6.76	105.18	116.00
34	i	1779	C	P-O3'-C3'	6.76	127.81	119.70
31	e	122	THR	O-C-N	-6.76	111.89	122.70
34	i	278	U	O4'-C1'-N1	-6.76	102.79	108.20
34	i	449	C	C5'-C4'-O4'	6.75	117.21	109.10
34	i	94	G	C1'-O4'-C4'	-6.75	104.50	109.90
34	i	1243	C	O4'-C1'-C2'	-6.75	99.05	105.80
13	M	13	ASP	CB-CG-OD1	-6.75	112.22	118.30
34	i	1754	G	N9-C1'-C2'	-6.75	104.57	112.00
34	i	53	C	O4'-C1'-N1	6.75	113.60	108.20
34	i	243	C	P-O3'-C3'	6.75	127.80	119.70
34	i	1775	A	C3'-C2'-C1'	6.75	106.90	101.50
34	i	790	A	C3'-C2'-C1'	6.75	106.90	101.50
34	i	1199	G	O4'-C1'-C2'	6.74	113.67	107.60
34	i	1859	C	C2'-C3'-O3'	-6.74	94.66	109.50
34	i	299	G	O4'-C1'-C2'	6.74	113.67	107.60
34	i	1366	A	O4'-C1'-C2'	-6.74	99.06	105.80
33	g	159	ASN	C-N-CA	-6.73	104.87	121.70
34	i	318	U	O4'-C1'-N1	6.73	113.58	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1202	G	O4'-C1'-N9	6.73	113.58	108.20
34	i	683	G	O4'-C4'-C3'	-6.73	97.27	104.00
23	W	2	VAL	C-N-CA	-6.73	104.89	121.70
21	U	48	LEU	CA-CB-CG	-6.72	99.83	115.30
34	i	1511	G	O4'-C1'-N9	6.72	113.58	108.20
34	i	1251	G	N9-C1'-C2'	6.72	122.74	114.00
34	i	1681	G	O4'-C1'-N9	6.72	113.58	108.20
34	i	1857	A	C1'-O4'-C4'	6.72	115.28	109.90
34	i	839	C	O4'-C1'-N1	6.72	113.58	108.20
10	J	179	LYS	C-N-CA	6.72	138.50	121.70
34	i	202	U	O4'-C1'-N1	6.72	113.58	108.20
27	a	85	ARG	NE-CZ-NH2	6.72	123.66	120.30
34	i	612	C	C1'-O4'-C4'	-6.72	104.53	109.90
2	B	41	ILE	CG1-CB-CG2	-6.71	96.63	111.40
2	B	155	TYR	CB-CA-C	-6.71	96.98	110.40
34	i	447	C	O4'-C1'-N1	6.71	113.57	108.20
34	i	471	C	N1-C1'-C2'	6.71	122.72	114.00
34	i	1545	G	P-O3'-C3'	6.71	127.75	119.70
34	i	1167	G	O4'-C1'-C2'	-6.70	99.10	105.80
6	F	130	ARG	N-CA-C	6.70	129.08	111.00
34	i	853	U	N1-C1'-C2'	6.70	122.70	114.00
34	i	657	U	C1'-O4'-C4'	-6.69	104.55	109.90
34	i	1778	G	N9-C1'-C2'	6.69	122.69	114.00
34	i	541	U	O4'-C1'-C2'	6.68	113.62	107.60
34	i	1277	G	O4'-C1'-N9	6.68	113.55	108.20
34	i	616	G	O4'-C1'-N9	-6.68	102.86	108.20
34	i	959	A	C3'-C2'-C1'	-6.68	96.16	101.50
34	i	550	A	O4'-C1'-N9	6.67	113.54	108.20
34	i	1656	A	O4'-C1'-N9	6.67	113.54	108.20
10	J	144	ILE	CB-CA-C	6.67	124.94	111.60
34	i	1251	G	P-O3'-C3'	-6.67	111.70	119.70
34	i	1350	G	C2'-C3'-O3'	6.67	124.37	113.70
34	i	443	C	C3'-C2'-C1'	6.67	106.83	101.50
34	i	1573	U	C1'-O4'-C4'	6.66	115.23	109.90
10	J	91	LYS	N-CA-C	-6.66	93.02	111.00
19	S	16	LEU	CB-CG-CD2	-6.66	99.69	111.00
34	i	1038	A	O4'-C1'-N9	6.65	113.52	108.20
34	i	1525	U	O4'-C1'-N1	6.65	113.52	108.20
34	i	1455	G	N9-C1'-C2'	6.65	122.64	114.00
18	R	121	GLN	C-N-CD	-6.65	105.97	120.60
34	i	307	G	P-O5'-C5'	6.65	131.53	120.90
34	i	1550	U	O4'-C4'-C3'	-6.64	97.36	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1727	G	O4'-C1'-N9	6.64	113.51	108.20
34	i	1496	G	C1'-O4'-C4'	-6.64	104.59	109.90
34	i	1652	G	C1'-O4'-C4'	-6.64	104.59	109.90
34	i	1682	C	C3'-C2'-C1'	6.64	106.81	101.50
34	i	1144	A	O4'-C1'-C2'	6.63	113.57	107.60
27	a	63	VAL	CB-CA-C	6.63	124.00	111.40
34	i	1819	A	C3'-C2'-C1'	-6.63	96.19	101.50
34	i	512	A	P-O5'-C5'	6.63	131.51	120.90
34	i	1280	A	O4'-C1'-C2'	-6.63	99.17	105.80
34	i	70	G	O3'-P-O5'	-6.63	91.40	104.00
34	i	1071	C	C1'-O4'-C4'	-6.63	104.60	109.90
11	K	89	ILE	CA-CB-CG1	-6.63	98.41	111.00
34	i	550	A	C3'-C2'-C1'	-6.62	96.20	101.50
34	i	920	G	O4'-C1'-N9	6.62	113.50	108.20
34	i	1266	G	N9-C1'-C2'	-6.62	104.71	112.00
7	G	157	VAL	CA-C-N	-6.62	102.63	117.20
34	i	1639	C	P-O3'-C3'	6.62	127.64	119.70
34	i	538	C	N1-C1'-C2'	6.62	122.61	114.00
34	i	1342	U	O4'-C1'-N1	6.62	113.49	108.20
34	i	823	A	N9-C1'-C2'	6.62	122.60	114.00
34	i	1222	G	C1'-O4'-C4'	-6.62	104.61	109.90
19	S	87	GLN	CA-C-N	6.61	131.75	117.20
34	i	1695	C	O4'-C1'-C2'	-6.61	99.19	105.80
34	i	534	G	C1'-O4'-C4'	6.61	115.18	109.90
16	P	36	LEU	N-CA-C	-6.60	93.17	111.00
34	i	1775	A	P-O5'-C5'	6.60	131.46	120.90
34	i	286	C	O4'-C1'-C2'	-6.60	99.20	105.80
34	i	548	G	C1'-O4'-C4'	-6.60	104.62	109.90
34	i	1541	G	O4'-C1'-N9	6.60	113.48	108.20
22	V	64	GLU	N-CA-C	6.60	128.82	111.00
34	i	40	A	C1'-O4'-C4'	6.60	115.18	109.90
34	i	158	A	O4'-C1'-N9	6.60	113.48	108.20
34	i	622	C	C3'-C2'-C1'	6.60	106.78	101.50
34	i	1387	C	O4'-C1'-N1	6.60	113.48	108.20
11	K	42	ASN	CA-C-N	6.59	131.71	117.20
34	i	1831	G	O4'-C1'-N9	6.59	113.47	108.20
34	i	190	A	O4'-C1'-C2'	-6.59	99.21	105.80
34	i	285	U	C3'-C2'-C1'	6.59	106.77	101.50
34	i	272	C	O3'-P-O5'	6.59	116.52	104.00
33	g	160	SER	N-CA-C	6.59	128.78	111.00
34	i	192	U	P-O5'-C5'	6.59	131.44	120.90
34	i	983	A	P-O5'-C5'	-6.59	110.36	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1154	G	N9-C1'-C2'	-6.58	104.76	112.00
34	i	305	U	P-O3'-C3'	-6.58	111.80	119.70
34	i	164	A	N9-C1'-C2'	6.58	122.56	114.00
34	i	432	C	N1-C1'-C2'	6.58	122.56	114.00
34	i	870	G	O4'-C1'-N9	6.58	113.46	108.20
34	i	1779	C	C1'-O4'-C4'	6.58	115.16	109.90
9	I	8	TRP	CG-CD2-CE3	-6.58	127.98	133.90
34	i	289	G	N9-C1'-C2'	-6.57	104.77	112.00
34	i	391	A	O4'-C1'-C2'	-6.57	99.23	105.80
10	J	101	LYS	N-CA-C	6.57	128.74	111.00
34	i	437	A	C1'-O4'-C4'	6.57	115.16	109.90
17	Q	18	THR	N-CA-C	-6.57	93.27	111.00
34	i	1861	U	P-O3'-C3'	6.57	127.58	119.70
34	i	1461	A	C1'-O4'-C4'	6.57	115.15	109.90
34	i	876	G	C3'-C2'-C1'	-6.56	96.25	101.50
34	i	1646	A	C1'-O4'-C4'	6.56	115.15	109.90
34	i	1664	G	O5'-P-OP2	6.56	118.58	110.70
34	i	1786	G	O4'-C1'-N9	6.56	113.45	108.20
34	i	1105	C	O4'-C1'-C2'	6.56	113.51	107.60
9	I	8	TRP	CB-CG-CD1	6.56	135.53	127.00
34	i	1467	C	C3'-C2'-C1'	6.56	106.75	101.50
15	O	43	HIS	N-CA-C	6.56	128.71	111.00
34	i	1816	A	O3'-P-O5'	-6.56	91.54	104.00
34	i	1250	C	O4'-C1'-N1	6.56	113.44	108.20
33	g	274	VAL	CA-C-N	6.55	131.62	117.20
34	i	390	C	O4'-C1'-C2'	-6.55	99.25	105.80
34	i	1385	C	P-O5'-C5'	6.55	131.39	120.90
3	C	217	THR	C-N-CA	6.55	138.08	121.70
34	i	1285	U	P-O3'-C3'	6.55	127.56	119.70
34	i	1861	U	O4'-C1'-C2'	-6.55	99.25	105.80
34	i	421	G	O4'-C1'-N9	6.54	113.43	108.20
34	i	459	A	O4'-C1'-C2'	-6.54	99.26	105.80
11	K	42	ASN	CA-C-O	-6.54	106.37	120.10
34	i	1519	G	O4'-C1'-N9	6.54	113.43	108.20
34	i	554	A	P-O3'-C3'	6.53	127.54	119.70
34	i	1071	C	N1-C1'-C2'	6.53	122.49	114.00
34	i	1816	A	C4'-C3'-O3'	-6.53	95.68	109.40
34	i	1859	C	P-O3'-C3'	-6.53	111.86	119.70
34	i	984	C	C3'-C2'-C1'	6.53	106.72	101.50
34	i	1376	C	N1-C1'-C2'	6.53	122.49	114.00
26	Z	107	VAL	CA-CB-CG2	6.53	120.69	110.90
34	i	1490	U	C2'-C3'-O3'	6.53	124.14	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	342	U	C5'-C4'-C3'	-6.52	105.56	116.00
34	i	541	U	C1'-O4'-C4'	-6.52	104.68	109.90
34	i	1673	A	C3'-C2'-C1'	-6.52	96.28	101.50
34	i	1088	G	O4'-C1'-N9	6.52	113.42	108.20
34	i	274	G	C1'-O4'-C4'	-6.52	104.68	109.90
34	i	340	C	C3'-C2'-C1'	6.52	106.72	101.50
34	i	553	G	O4'-C1'-C2'	-6.52	99.28	105.80
34	i	1513	C	P-O3'-C3'	-6.52	111.88	119.70
34	i	1794	A	C3'-C2'-C1'	6.52	106.71	101.50
34	i	190	A	O3'-P-O5'	6.52	116.38	104.00
34	i	62	G	C1'-O4'-C4'	-6.51	104.69	109.90
34	i	1135	C	O4'-C1'-N1	6.51	113.41	108.20
26	Z	115	GLY	CA-C-O	-6.51	108.88	120.60
34	i	1377	G	C3'-C2'-C1'	-6.51	96.29	101.50
9	I	207	GLY	CA-C-O	-6.51	108.88	120.60
34	i	581	U	P-O3'-C3'	6.51	127.51	119.70
34	i	728	U	C1'-O4'-C4'	-6.51	104.69	109.90
34	i	1785	A	O4'-C1'-C2'	-6.50	99.30	105.80
19	S	92	ASP	CB-CG-OD2	-6.50	112.45	118.30
34	i	837	G	C5'-C4'-O4'	6.50	116.90	109.10
34	i	1202	G	N9-C1'-C2'	6.50	122.45	114.00
34	i	1158	C	O4'-C1'-N1	6.50	113.40	108.20
34	i	1254	A	O4'-C1'-N9	6.50	113.40	108.20
34	i	211	U	O4'-C1'-N1	6.50	113.40	108.20
34	i	807	A	O4'-C1'-N9	6.50	113.40	108.20
34	i	208	G	P-O5'-C5'	6.50	131.29	120.90
34	i	882	A	C3'-C2'-C1'	6.49	106.69	101.50
34	i	1169	A	O4'-C1'-N9	6.49	113.40	108.20
22	V	81	GLN	O-C-N	-6.49	112.32	122.70
34	i	685	G	O3'-P-O5'	6.49	116.33	104.00
34	i	611	C	C3'-C2'-C1'	6.49	106.69	101.50
34	i	1082	G	P-O3'-C3'	6.48	127.48	119.70
34	i	401	G	O4'-C1'-N9	6.48	113.38	108.20
34	i	685	G	O4'-C1'-C2'	-6.48	99.32	105.80
34	i	1540	A	C5'-C4'-O4'	6.48	116.87	109.10
27	a	96	THR	O-C-N	6.47	133.40	121.10
21	U	70	CYS	O-C-N	-6.47	112.20	123.20
24	X	91	LEU	N-CA-C	-6.47	93.53	111.00
34	i	282	G	N9-C1'-C2'	6.47	122.41	114.00
34	i	837	G	C2'-C3'-O3'	-6.47	95.27	109.50
34	i	523	A	C2'-C3'-O3'	6.47	124.05	113.70
34	i	729	C	C3'-C2'-C1'	6.47	106.67	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	147	A	O4'-C1'-C2'	-6.46	99.33	105.80
34	i	1339	U	C3'-C2'-C1'	6.46	106.67	101.50
34	i	1369	C	O4'-C1'-C2'	-6.46	99.34	105.80
3	C	157	ASN	N-CA-C	6.46	128.44	111.00
9	I	119	LEU	C-N-CD	-6.46	106.39	120.60
16	P	18	ARG	NE-CZ-NH1	6.46	123.53	120.30
34	i	1702	U	N1-C1'-C2'	6.46	122.40	114.00
34	i	82	G	C1'-O4'-C4'	6.46	115.07	109.90
34	i	947	C	N1-C1'-C2'	6.46	122.39	114.00
34	i	1537	C	O5'-C5'-C4'	6.46	123.97	111.70
34	i	144	U	C1'-O4'-C4'	-6.46	104.74	109.90
34	i	957	G	O4'-C1'-N9	6.46	113.36	108.20
34	i	1202	G	C1'-O4'-C4'	-6.45	104.74	109.90
34	i	1502	A	P-O3'-C3'	6.45	127.44	119.70
10	J	188	GLY	CA-C-O	-6.45	108.99	120.60
34	i	310	G	C4'-C3'-O3'	6.45	125.90	113.00
34	i	79	A	O5'-C5'-C4'	6.45	123.96	111.70
34	i	1455	G	O4'-C1'-C2'	6.45	113.40	107.60
34	i	840	U	O4'-C1'-C2'	-6.45	99.35	105.80
34	i	639	U	O4'-C1'-N1	6.44	113.35	108.20
34	i	1284	U	O4'-C1'-N1	6.44	113.35	108.20
11	K	46	MET	N-CA-CB	6.44	122.19	110.60
34	i	840	U	P-O3'-C3'	-6.44	111.98	119.70
34	i	1284	U	N1-C1'-C2'	6.44	122.37	114.00
2	B	77	ASP	N-CA-C	6.44	128.38	111.00
34	i	1347	G	O4'-C1'-N9	6.44	113.35	108.20
34	i	428	G	N9-C1'-C2'	-6.43	104.92	112.00
34	i	1297	A	P-O3'-C3'	6.43	127.42	119.70
29	c	7	GLN	C-N-CD	-6.43	106.45	120.60
3	C	83	LEU	C-N-CA	-6.43	108.79	122.30
34	i	962	U	O4'-C1'-N1	6.43	113.34	108.20
34	i	277	U	P-O3'-C3'	6.42	127.41	119.70
34	i	1353	A	O4'-C1'-N9	6.42	113.34	108.20
26	Z	112	ASN	N-CA-CB	-6.42	99.04	110.60
34	i	372	C	P-O3'-C3'	-6.42	111.99	119.70
34	i	1151	U	P-O5'-C5'	6.42	131.18	120.90
34	i	794	G	C3'-C2'-C1'	6.42	106.64	101.50
34	i	155	G	C5'-C4'-C3'	6.42	126.27	116.00
34	i	176	U	N1-C1'-C2'	6.42	122.34	114.00
25	Y	128	GLY	CA-C-O	-6.41	109.05	120.60
34	i	1076	A	P-O3'-C3'	6.41	127.39	119.70
34	i	882	A	P-O3'-C3'	6.41	127.39	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1545	G	O4'-C1'-N9	6.41	113.33	108.20
33	g	284	PRO	N-CA-C	-6.41	95.44	112.10
34	i	236	C	O4'-C1'-N1	6.41	113.33	108.20
34	i	1656	A	N9-C1'-C2'	6.41	122.33	114.00
34	i	814	A	O4'-C1'-N9	6.40	113.32	108.20
5	E	263	GLY	CA-C-O	-6.40	109.07	120.60
34	i	1360	U	P-O3'-C3'	-6.40	112.02	119.70
34	i	1790	G	O4'-C1'-N9	6.40	113.32	108.20
34	i	10	G	P-O3'-C3'	-6.40	112.03	119.70
34	i	1204	A	O4'-C1'-C2'	-6.40	99.40	105.80
34	i	1510	G	N9-C1'-C2'	-6.39	104.97	112.00
34	i	1151	U	C3'-C2'-C1'	6.39	106.61	101.50
18	R	99	ASP	C-N-CD	-6.39	106.54	120.60
19	S	49	ASP	O-C-N	-6.39	112.48	122.70
34	i	192	U	O4'-C1'-N1	6.39	113.31	108.20
34	i	1422	U	O4'-C1'-N1	6.39	113.31	108.20
34	i	1534	U	C1'-O4'-C4'	6.39	115.01	109.90
34	i	1801	C	N1-C1'-C2'	6.39	122.31	114.00
34	i	1411	C	O4'-C1'-N1	6.39	113.31	108.20
34	i	1390	G	C1'-O4'-C4'	-6.38	104.79	109.90
34	i	8	U	O4'-C1'-N1	6.38	113.31	108.20
34	i	1206	G	C3'-C2'-C1'	-6.38	96.40	101.50
34	i	1361	G	C4'-C3'-O3'	-6.38	96.00	109.40
34	i	1377	G	N9-C1'-C2'	-6.38	104.98	112.00
34	i	1486	G	O4'-C1'-N9	6.38	113.30	108.20
34	i	1039	G	C3'-C2'-C1'	6.37	106.60	101.50
34	i	1521	G	O4'-C1'-N9	6.37	113.30	108.20
34	i	1405	A	C1'-O4'-C4'	6.37	115.00	109.90
34	i	29	G	O4'-C1'-N9	6.37	113.30	108.20
34	i	486	C	O4'-C1'-C2'	-6.37	99.43	105.80
34	i	150	A	O4'-C1'-C2'	-6.37	99.43	105.80
34	i	903	G	C1'-O4'-C4'	-6.37	104.81	109.90
28	b	53	VAL	N-CA-C	-6.36	93.82	111.00
34	i	70	G	N9-C1'-C2'	-6.36	105.00	112.00
34	i	1202	G	C3'-C2'-C1'	-6.36	96.41	101.50
34	i	1348	G	C3'-C2'-C1'	-6.36	96.41	101.50
34	i	38	A	C1'-O4'-C4'	6.36	114.99	109.90
34	i	1214	C	C3'-C2'-C1'	6.36	106.59	101.50
34	i	577	A	P-O3'-C3'	-6.36	112.07	119.70
34	i	1111	U	O4'-C1'-C2'	6.35	113.32	107.60
34	i	626	C	O4'-C1'-C2'	-6.35	99.45	105.80
2	B	76	ASN	N-CA-C	6.35	128.14	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	233	GLY	CA-C-O	-6.35	109.18	120.60
34	i	542	G	C1'-O4'-C4'	-6.34	104.82	109.90
34	i	1436	C	N1-C1'-C2'	6.34	122.25	114.00
7	G	128	THR	N-CA-CB	-6.34	98.25	110.30
34	i	9	U	O4'-C1'-N1	6.34	113.27	108.20
34	i	1122	G	C1'-O4'-C4'	-6.34	104.83	109.90
34	i	1141	A	O4'-C1'-N9	6.34	113.27	108.20
34	i	190	A	C5'-C4'-C3'	-6.34	105.86	116.00
34	i	1487	G	O4'-C1'-N9	6.34	113.27	108.20
34	i	522	C	P-O3'-C3'	6.33	127.30	119.70
34	i	597	U	P-O3'-C3'	6.33	127.30	119.70
34	i	1232	G	P-O3'-C3'	6.33	127.30	119.70
16	P	18	ARG	N-CA-CB	6.33	122.00	110.60
22	V	47	ASN	N-CA-C	-6.33	93.91	111.00
10	J	164	PRO	N-CD-CG	-6.33	93.71	103.20
34	i	1256	A	N9-C1'-C2'	6.33	122.23	114.00
34	i	1594	U	P-O5'-C5'	6.33	131.02	120.90
34	i	582	C	N1-C1'-C2'	-6.33	105.04	112.00
34	i	634	G	O4'-C1'-N9	6.33	113.26	108.20
34	i	1337	C	O4'-C1'-C2'	-6.32	99.48	105.80
10	J	162	ARG	N-CA-C	6.32	128.07	111.00
5	E	258	ALA	C-N-CA	-6.32	105.90	121.70
34	i	1665	C	O4'-C1'-N1	6.32	113.25	108.20
31	e	120	VAL	C-N-CD	-6.32	106.70	120.60
34	i	205	G	O4'-C1'-N9	6.32	113.25	108.20
19	S	92	ASP	N-CA-C	6.31	128.05	111.00
16	P	37	TYR	CB-CA-C	6.31	123.02	110.40
34	i	796	U	C5'-C4'-C3'	-6.31	105.90	116.00
16	P	68	PRO	C-N-CD	-6.31	106.72	120.60
34	i	1337	C	C3'-C2'-C1'	6.31	106.55	101.50
34	i	1384	A	O4'-C1'-N9	6.31	113.25	108.20
34	i	994	A	C1'-O4'-C4'	6.31	114.94	109.90
34	i	1514	U	N1-C1'-C2'	-6.30	105.07	112.00
34	i	1729	G	C3'-C2'-C1'	6.30	106.54	101.50
34	i	1774	G	N9-C1'-C2'	6.30	122.19	114.00
34	i	1858	U	O4'-C1'-N1	6.30	113.24	108.20
34	i	1089	A	O4'-C1'-N9	6.30	113.24	108.20
34	i	1837	G	O4'-C1'-C2'	6.30	113.27	107.60
34	i	635	C	O4'-C1'-C2'	-6.29	99.51	105.80
34	i	1425	G	O3'-P-O5'	-6.29	92.05	104.00
34	i	730	C	C3'-C2'-C1'	6.29	106.53	101.50
34	i	1293	U	C1'-O4'-C4'	6.29	114.93	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1480	A	P-O3'-C3'	6.29	127.24	119.70
34	i	62	G	N9-C1'-C2'	6.28	122.17	114.00
34	i	1657	U	O4'-C1'-N1	6.28	113.22	108.20
34	i	806	A	C3'-C2'-C1'	6.28	106.52	101.50
34	i	1207	G	N9-C1'-C2'	6.28	122.16	114.00
34	i	109	U	C4'-C3'-O3'	-6.28	96.22	109.40
34	i	1167	G	C3'-C2'-C1'	-6.28	96.48	101.50
31	e	120	VAL	CB-CA-C	-6.27	99.48	111.40
34	i	205	G	C1'-O4'-C4'	-6.27	104.88	109.90
34	i	341	G	O4'-C1'-N9	6.27	113.22	108.20
34	i	424	G	C2'-C3'-O3'	6.27	123.73	113.70
34	i	974	G	O4'-C1'-N9	6.27	113.22	108.20
34	i	1415	C	C3'-C2'-C1'	6.27	106.52	101.50
7	G	173	ALA	C-N-CD	-6.27	106.80	120.60
34	i	1563	C	C1'-O4'-C4'	-6.27	104.88	109.90
34	i	568	C	C3'-C2'-C1'	6.27	106.52	101.50
34	i	887	G	N9-C1'-C2'	6.27	122.15	114.00
34	i	341	G	N9-C1'-C2'	-6.26	105.11	112.00
34	i	486	C	O4'-C1'-N1	6.26	113.21	108.20
34	i	794	G	N9-C1'-C2'	6.26	122.14	114.00
34	i	1415	C	O4'-C1'-C2'	-6.26	99.54	105.80
15	O	102	GLY	C-N-CA	-6.26	106.05	121.70
34	i	509	A	N9-C1'-C2'	-6.26	105.11	112.00
34	i	1030	A	C1'-O4'-C4'	6.26	114.91	109.90
9	I	55	TYR	CB-CG-CD1	6.26	124.75	121.00
34	i	1636	A	C3'-C2'-C1'	6.26	106.51	101.50
1	A	186	ARG	C-N-CA	6.25	135.44	122.30
34	i	824	G	C1'-O4'-C4'	-6.25	104.90	109.90
35	l	85	LEU	CA-CB-CG	-6.25	100.92	115.30
34	i	958	A	N9-C1'-C2'	-6.25	105.12	112.00
34	i	1495	U	O4'-C1'-N1	6.25	113.20	108.20
16	P	18	ARG	CB-CG-CD	6.25	127.85	111.60
33	g	47	ARG	N-CA-C	-6.25	94.14	111.00
34	i	295	C	O3'-P-O5'	6.24	115.86	104.00
34	i	1445	G	P-O3'-C3'	6.24	127.19	119.70
34	i	1784	A	N9-C1'-C2'	6.24	122.11	114.00
8	H	106	ARG	CD-NE-CZ	6.24	132.33	123.60
34	i	831	C	P-O3'-C3'	6.24	127.18	119.70
34	i	1514	U	O4'-C1'-C2'	-6.24	99.56	105.80
34	i	174	C	O4'-C1'-C2'	-6.23	99.57	105.80
34	i	1807	A	C1'-O4'-C4'	-6.23	104.92	109.90
34	i	193	C	C3'-C2'-C1'	6.23	106.48	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	279	G	P-O5'-C5'	6.23	130.86	120.90
34	i	733	G	O4'-C1'-C2'	-6.22	99.58	105.80
3	C	258	LEU	CA-CB-CG	6.22	129.61	115.30
34	i	424	G	O3'-P-O5'	-6.22	92.18	104.00
34	i	1654	U	O3'-P-O5'	6.22	115.82	104.00
34	i	74	G	C4'-C3'-C2'	-6.22	96.38	102.60
34	i	1515	G	O4'-C1'-N9	6.21	113.17	108.20
34	i	940	A	C3'-C2'-C1'	6.21	106.47	101.50
34	i	1015	C	C3'-C2'-C1'	6.21	106.47	101.50
9	I	178	ARG	CD-NE-CZ	6.21	132.30	123.60
10	J	93	LYS	O-C-N	-6.21	112.76	122.70
34	i	825	C	P-O3'-C3'	6.21	127.16	119.70
34	i	1404	U	P-O3'-C3'	6.21	127.15	119.70
34	i	1486	G	C3'-C2'-C1'	-6.21	96.53	101.50
34	i	1658	A	C3'-C2'-C1'	6.21	106.47	101.50
34	i	1562	G	P-O3'-C3'	-6.21	112.25	119.70
34	i	1587	C	C1'-O4'-C4'	-6.21	104.93	109.90
34	i	356	U	O4'-C1'-N1	6.21	113.16	108.20
19	S	82	TRP	CB-CA-C	-6.20	97.99	110.40
33	g	50	THR	CB-CA-C	6.20	128.35	111.60
34	i	493	C	O4'-C1'-C2'	-6.20	99.60	105.80
34	i	1395	C	C5'-C4'-C3'	-6.20	106.08	116.00
34	i	1521	G	N9-C1'-C2'	-6.20	105.18	112.00
34	i	1663	U	C3'-C2'-C1'	-6.20	96.54	101.50
34	i	1196	A	O4'-C1'-N9	6.20	113.16	108.20
34	i	313	C	O4'-C1'-N1	6.19	113.15	108.20
34	i	1543	G	C3'-C2'-C1'	-6.19	96.55	101.50
34	i	954	G	C3'-C2'-C1'	-6.19	96.55	101.50
9	I	6	ASP	N-CA-CB	-6.19	99.46	110.60
6	F	130	ARG	N-CA-CB	6.19	121.73	110.60
6	F	46	ALA	C-N-CA	-6.18	106.24	121.70
34	i	837	G	P-O3'-C3'	6.18	127.12	119.70
34	i	1084	U	O4'-C1'-N1	6.18	113.15	108.20
34	i	544	A	C1'-O4'-C4'	-6.18	104.96	109.90
19	S	6	PRO	CA-C-O	-6.18	105.38	120.20
34	i	7	G	O4'-C1'-N9	6.18	113.14	108.20
34	i	343	C	C4'-C3'-C2'	6.17	108.78	102.60
34	i	1304	U	P-O3'-C3'	6.17	127.11	119.70
34	i	1796	C	O4'-C1'-N1	6.17	113.14	108.20
34	i	795	U	C1'-O4'-C4'	-6.17	104.96	109.90
34	i	1135	C	P-O5'-C5'	-6.17	111.03	120.90
34	i	1486	G	O4'-C1'-C2'	6.17	113.15	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	F	41	VAL	N-CA-C	-6.17	94.35	111.00
34	i	924	G	O4'-C1'-N9	6.17	113.13	108.20
34	i	1255	A	C1'-O4'-C4'	-6.17	104.97	109.90
15	O	143	LYS	CB-CA-C	-6.17	98.07	110.40
34	i	973	C	O4'-C1'-N1	6.16	113.13	108.20
12	L	152	LYS	CA-C-O	-6.16	107.16	120.10
34	i	1571	G	C1'-O4'-C4'	-6.16	104.97	109.90
34	i	1588	C	O4'-C1'-N1	6.16	113.13	108.20
34	i	445	A	C3'-C2'-C1'	6.16	106.43	101.50
10	J	145	PRO	N-CA-C	-6.16	96.09	112.10
31	e	121	PRO	CA-N-CD	-6.16	102.88	111.50
34	i	1238	U	C1'-O4'-C4'	-6.15	104.98	109.90
34	i	110	U	P-O3'-C3'	-6.15	112.32	119.70
34	i	1050	G	C1'-O4'-C4'	-6.15	104.98	109.90
34	i	1214	C	C1'-O4'-C4'	-6.15	104.98	109.90
13	M	116	LYS	N-CA-C	6.15	127.61	111.00
34	i	678	U	P-O3'-C3'	6.15	127.08	119.70
34	i	1855	G	C1'-O4'-C4'	-6.15	104.98	109.90
12	L	102	PHE	N-CA-C	-6.14	94.41	111.00
34	i	685	G	C5'-C4'-C3'	6.14	125.83	116.00
34	i	1570	G	C4'-C3'-C2'	-6.14	96.46	102.60
34	i	489	G	C1'-O4'-C4'	-6.14	104.99	109.90
34	i	210	G	P-O3'-C3'	-6.14	112.33	119.70
34	i	1227	C	C3'-C2'-C1'	6.14	106.41	101.50
34	i	1364	U	O4'-C1'-N1	6.14	113.11	108.20
34	i	1533	C	P-O5'-C5'	-6.13	111.08	120.90
10	J	180	LYS	N-CA-C	6.13	127.56	111.00
34	i	792	G	C1'-O4'-C4'	-6.13	105.00	109.90
34	i	1644	U	P-O3'-C3'	-6.13	112.34	119.70
34	i	126	G	O3'-P-O5'	6.13	115.65	104.00
34	i	272	C	O5'-P-OP1	-6.13	100.19	105.70
34	i	395	G	C1'-O4'-C4'	-6.13	105.00	109.90
34	i	1849	G	O4'-C1'-C2'	6.13	113.11	107.60
34	i	605	C	C1'-O4'-C4'	-6.12	105.00	109.90
34	i	1723	U	O4'-C1'-N1	6.12	113.09	108.20
19	S	9	PHE	C-N-CA	-6.12	106.41	121.70
16	P	17	TYR	N-CA-CB	6.12	121.61	110.60
34	i	1102	C	O4'-C1'-C2'	-6.11	99.69	105.80
34	i	1036	G	C3'-C2'-C1'	-6.11	96.61	101.50
34	i	1066	A	N9-C1'-C2'	6.11	121.94	114.00
34	i	1489	C	N1-C1'-C2'	-6.11	105.28	112.00
19	S	10	GLN	C-N-CA	6.11	136.97	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1361	G	P-O5'-C5'	6.11	130.67	120.90
34	i	1425	G	OP1-P-O3'	6.11	118.64	105.20
34	i	1646	A	O4'-C1'-N9	6.11	113.09	108.20
34	i	1433	C	N1-C1'-C2'	6.11	121.94	114.00
29	c	6	VAL	N-CA-C	6.10	127.48	111.00
34	i	1776	G	O4'-C4'-C3'	-6.10	97.90	104.00
34	i	1705	C	C3'-C2'-C1'	6.10	106.38	101.50
34	i	194	C	O4'-C1'-N1	6.10	113.08	108.20
34	i	2	A	O4'-C1'-N9	6.10	113.08	108.20
26	Z	104	ARG	CA-C-N	-6.10	103.79	117.20
34	i	1186	A	C3'-C2'-C1'	6.10	106.38	101.50
11	K	89	ILE	CA-CB-CG2	6.10	123.09	110.90
34	i	1698	C	C3'-C2'-C1'	6.09	106.38	101.50
34	i	903	G	C3'-C2'-C1'	-6.09	96.63	101.50
34	i	456	G	O4'-C1'-C2'	6.09	113.08	107.60
34	i	1440	U	O4'-C1'-N1	6.09	113.07	108.20
34	i	1621	C	O4'-C1'-N1	6.09	113.07	108.20
34	i	220	C	O4'-C1'-N1	6.09	113.07	108.20
34	i	352	C	N1-C1'-C2'	6.09	121.91	114.00
34	i	1519	G	O4'-C4'-C3'	-6.09	97.91	104.00
34	i	960	A	N9-C1'-C2'	-6.08	105.31	112.00
34	i	741	C	O4'-C1'-C2'	-6.08	99.72	105.80
2	B	151	ARG	C-N-CA	-6.08	106.50	121.70
34	i	410	G	O4'-C1'-C2'	6.08	113.07	107.60
34	i	549	G	N9-C1'-C2'	6.08	121.90	114.00
34	i	1181	C	N1-C1'-C2'	6.08	121.90	114.00
4	D	4	GLN	CA-C-O	6.08	132.86	120.10
32	f	134	SER	O-C-N	6.08	132.42	122.70
12	L	150	GLY	N-CA-C	-6.07	97.91	113.10
34	i	1300	U	C1'-O4'-C4'	-6.07	105.04	109.90
34	i	1148	U	O4'-C1'-N1	6.07	113.06	108.20
12	L	151	THR	C-N-CA	6.07	136.87	121.70
33	g	15	ASN	C-N-CA	-6.07	109.56	122.30
34	i	880	C	O4'-C1'-N1	6.07	113.05	108.20
34	i	1610	U	C1'-O4'-C4'	-6.07	105.05	109.90
25	Y	96	LEU	N-CA-CB	6.07	122.53	110.40
34	i	1187	C	O4'-C1'-N1	6.07	113.05	108.20
34	i	4	C	C1'-O4'-C4'	-6.06	105.05	109.90
34	i	973	C	O4'-C1'-C2'	-6.06	99.74	105.80
34	i	1623	C	C1'-O4'-C4'	-6.06	105.05	109.90
16	P	49	LEU	C-N-CA	-6.06	106.55	121.70
34	i	201	G	O4'-C1'-C2'	-6.06	99.74	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1489	C	O4'-C1'-N1	6.06	113.05	108.20
34	i	1355	U	O4'-C1'-C2'	-6.06	99.74	105.80
34	i	1743	G	O5'-C5'-C4'	6.06	123.21	111.70
34	i	581	U	N1-C1'-C2'	6.05	121.87	114.00
34	i	986	A	C1'-O4'-C4'	-6.05	105.06	109.90
34	i	327	C	O4'-C1'-N1	6.05	113.04	108.20
34	i	541	U	P-O3'-C3'	6.05	126.96	119.70
3	C	262	HIS	CB-CA-C	-6.05	98.31	110.40
34	i	1118	A	C4'-C3'-C2'	-6.04	96.56	102.60
34	i	209	C	P-O5'-C5'	6.04	130.57	120.90
34	i	563	U	N1-C1'-C2'	6.04	121.86	114.00
11	K	38	LYS	N-CA-C	-6.04	94.69	111.00
11	K	40	VAL	C-N-CD	-6.04	107.31	120.60
34	i	1702	U	O4'-C1'-N1	6.04	113.03	108.20
34	i	272	C	O5'-P-OP2	-6.04	100.27	105.70
34	i	410	G	O4'-C1'-N9	6.04	113.03	108.20
32	f	88	PRO	N-CA-C	-6.04	96.41	112.10
34	i	1547	G	P-O5'-C5'	6.04	130.56	120.90
34	i	1400	U	N1-C1'-C2'	6.03	121.84	114.00
27	a	107	ALA	C-N-CD	6.03	141.07	128.40
9	I	29	LEU	C-N-CA	6.03	134.96	122.30
33	g	213	ASP	CB-CG-OD2	-6.03	112.88	118.30
34	i	1534	U	C3'-C2'-C1'	6.03	106.32	101.50
34	i	1698	C	O4'-C1'-C2'	-6.03	99.77	105.80
34	i	204	G	O4'-C1'-C2'	-6.03	99.77	105.80
26	Z	112	ASN	N-CA-C	6.02	127.27	111.00
34	i	617	U	O4'-C1'-C2'	-6.02	99.78	105.80
34	i	1394	G	P-O3'-C3'	-6.02	112.48	119.70
34	i	826	A	O4'-C1'-C2'	6.02	113.02	107.60
34	i	1395	C	O4'-C1'-N1	6.02	113.01	108.20
34	i	1426	C	C1'-O4'-C4'	6.02	114.72	109.90
25	Y	86	GLU	CA-C-N	6.02	133.95	117.10
34	i	623	C	C3'-C2'-C1'	6.02	106.31	101.50
34	i	223	A	O4'-C1'-C2'	-6.01	99.79	105.80
34	i	1441	U	C4'-C3'-O3'	-6.01	96.77	109.40
25	Y	64	PHE	N-CA-CB	-6.01	99.78	110.60
7	G	173	ALA	O-C-N	-6.00	109.69	121.10
34	i	1172	G	O4'-C1'-N9	6.00	113.00	108.20
34	i	1845	A	C1'-O4'-C4'	6.00	114.70	109.90
18	R	88	VAL	C-N-CA	-6.00	106.70	121.70
34	i	1549	C	C2'-C3'-O3'	-6.00	96.30	109.50
6	F	135	ARG	CB-CA-C	6.00	122.39	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	K	41	PRO	N-CA-C	-6.00	96.51	112.10
21	U	117	ALA	O-C-N	6.00	132.29	122.70
34	i	858	A	C1'-O4'-C4'	-5.99	105.11	109.90
34	i	844	U	C1'-O4'-C4'	-5.99	105.11	109.90
34	i	853	U	P-O5'-C5'	-5.99	111.32	120.90
34	i	906	G	O4'-C1'-C2'	5.99	112.99	107.60
34	i	854	A	C3'-C2'-C1'	5.98	106.29	101.50
34	i	1846	C	N1-C1'-C2'	5.98	121.78	114.00
34	i	743	U	O3'-P-O5'	-5.98	92.64	104.00
34	i	1022	C	O4'-C1'-C2'	-5.98	99.82	105.80
9	I	132	GLU	CA-C-N	5.98	130.35	117.20
34	i	1441	U	P-O3'-C3'	-5.98	112.53	119.70
34	i	1535	G	O4'-C1'-N9	5.98	112.98	108.20
34	i	1535	G	C1'-O4'-C4'	-5.98	105.12	109.90
34	i	419	C	C3'-C2'-C1'	5.98	106.28	101.50
34	i	1547	G	O4'-C1'-C2'	-5.98	99.82	105.80
34	i	584	A	P-O3'-C3'	5.97	126.87	119.70
34	i	1348	G	O4'-C1'-N9	5.97	112.98	108.20
34	i	1558	G	C1'-O4'-C4'	-5.97	105.12	109.90
21	U	109	GLY	N-CA-C	-5.97	98.17	113.10
34	i	558	C	C3'-C2'-C1'	5.97	106.28	101.50
34	i	1114	C	C3'-C2'-C1'	-5.97	96.72	101.50
34	i	1678	C	C3'-C2'-C1'	5.97	106.28	101.50
34	i	1431	C	C5'-C4'-C3'	5.97	125.55	116.00
34	i	1834	U	O4'-C1'-N1	5.97	112.97	108.20
34	i	1112	C	O4'-C1'-C2'	5.96	112.97	107.60
34	i	1219	A	O4'-C1'-C2'	-5.96	99.84	105.80
34	i	848	G	O4'-C1'-N9	5.96	112.97	108.20
34	i	430	G	O4'-C1'-N9	5.96	112.97	108.20
34	i	1701	G	O4'-C1'-N9	5.96	112.97	108.20
34	i	970	C	C1'-O4'-C4'	-5.96	105.13	109.90
34	i	872	C	C3'-C2'-C1'	5.96	106.27	101.50
34	i	1403	U	O4'-C1'-N1	5.96	112.97	108.20
34	i	1431	C	C3'-C2'-C1'	5.96	106.27	101.50
34	i	1462	G	O4'-C1'-N9	5.96	112.97	108.20
34	i	1663	U	P-O3'-C3'	5.96	126.85	119.70
6	F	38	TYR	C-N-CA	-5.95	106.81	121.70
21	U	69	PRO	N-CA-C	-5.95	96.63	112.10
22	V	66	ASP	C-N-CA	-5.95	106.82	121.70
34	i	1367	U	O4'-C1'-N1	5.95	112.96	108.20
1	A	193	HIS	C-N-CD	-5.95	107.51	120.60
34	i	1577	C	N1-C1'-C2'	5.95	121.73	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	172	U	O4'-C1'-C2'	-5.95	99.85	105.80
34	i	946	C	C3'-C2'-C1'	5.95	106.26	101.50
22	V	32	ILE	C-N-CD	5.95	140.88	128.40
34	i	64	A	C3'-C2'-C1'	-5.95	96.74	101.50
34	i	139	C	C1'-O4'-C4'	5.95	114.66	109.90
34	i	959	A	P-O5'-C5'	-5.94	111.39	120.90
34	i	24	C	O4'-C1'-N1	5.94	112.95	108.20
34	i	115	U	O4'-C1'-N1	5.94	112.95	108.20
34	i	1740	A	C4'-C3'-C2'	-5.94	96.66	102.60
34	i	1742	C	C5'-C4'-O4'	5.94	116.23	109.10
11	K	90	VAL	N-CA-C	5.94	127.04	111.00
34	i	1087	C	O4'-C1'-C2'	-5.94	99.86	105.80
34	i	1138	G	C3'-C2'-C1'	-5.94	96.75	101.50
21	U	68	THR	N-CA-CB	-5.94	99.02	110.30
34	i	460	G	O4'-C1'-N9	5.94	112.95	108.20
34	i	1413	C	OP1-P-OP2	-5.94	110.69	119.60
34	i	392	C	O4'-C1'-C2'	-5.93	99.87	105.80
34	i	1391	C	O4'-C1'-N1	5.93	112.95	108.20
34	i	1571	G	N9-C1'-C2'	5.93	121.71	114.00
34	i	1408	C	C4'-C3'-O3'	5.93	124.86	113.00
34	i	1694	A	P-O3'-C3'	-5.93	112.58	119.70
34	i	1300	U	O4'-C1'-N1	5.93	112.94	108.20
34	i	1349	A	O3'-P-O5'	-5.93	92.73	104.00
34	i	1051	A	C3'-C2'-C1'	5.93	106.24	101.50
34	i	1019	A	O4'-C1'-C2'	-5.93	99.87	105.80
34	i	875	C	O4'-C1'-N1	5.92	112.94	108.20
34	i	278	U	P-O5'-C5'	5.92	130.37	120.90
34	i	788	C	N1-C1'-C2'	5.92	121.70	114.00
34	i	849	C	O4'-C1'-N1	5.92	112.94	108.20
35	l	97	LEU	CA-CB-CG	5.92	128.91	115.30
33	g	159	ASN	O-C-N	-5.92	113.23	122.70
34	i	684	A	P-O5'-C5'	5.91	130.36	120.90
34	i	793	C	P-O5'-C5'	5.91	130.36	120.90
34	i	1752	G	C1'-O4'-C4'	-5.91	105.17	109.90
34	i	832	G	C1'-O4'-C4'	5.91	114.62	109.90
34	i	1127	G	C5'-C4'-C3'	-5.91	106.55	116.00
34	i	1774	G	C3'-C2'-C1'	-5.90	96.78	101.50
34	i	1605	G	O4'-C1'-N9	5.90	112.92	108.20
34	i	402	G	C3'-C2'-C1'	5.89	106.21	101.50
34	i	623	C	N1-C1'-C2'	5.89	121.66	114.00
34	i	1091	U	C1'-O4'-C4'	-5.89	105.19	109.90
34	i	1393	U	C3'-C2'-C1'	5.89	106.21	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1527	C	N1-C1'-C2'	5.89	121.66	114.00
34	i	1733	C	C3'-C2'-C1'	5.89	106.21	101.50
34	i	192	U	O5'-C5'-C4'	-5.89	100.51	111.70
34	i	1118	A	C3'-C2'-C1'	5.89	106.21	101.50
34	i	1434	A	C3'-C2'-C1'	5.89	106.21	101.50
34	i	1134	C	C4'-C3'-O3'	-5.89	97.04	109.40
16	P	121	ILE	O-C-N	-5.88	113.29	122.70
34	i	544	A	O4'-C1'-C2'	5.88	112.90	107.60
34	i	611	C	C1'-O4'-C4'	-5.88	105.19	109.90
34	i	1303	U	N1-C1'-C2'	-5.88	105.53	112.00
34	i	603	C	C1'-O4'-C4'	5.88	114.61	109.90
34	i	1428	U	N1-C1'-C2'	5.88	121.64	114.00
34	i	77	A	O4'-C1'-N9	5.88	112.90	108.20
34	i	546	U	C5'-C4'-C3'	5.88	125.41	116.00
34	i	163	U	O4'-C4'-C3'	-5.88	98.12	104.00
34	i	730	C	O3'-P-O5'	5.88	115.17	104.00
34	i	1199	G	C3'-C2'-C1'	-5.88	96.80	101.50
34	i	1343	U	O4'-C1'-C2'	-5.88	99.92	105.80
34	i	1459	U	P-O3'-C3'	-5.88	112.65	119.70
8	H	16	PRO	O-C-N	-5.87	113.30	122.70
34	i	368	U	N1-C1'-C2'	5.87	121.63	114.00
34	i	528	U	C3'-C2'-C1'	5.87	106.20	101.50
27	a	96	THR	CA-C-N	-5.87	100.66	117.10
28	b	53	VAL	C-N-CA	-5.87	107.04	121.70
34	i	1732	G	C1'-O4'-C4'	-5.87	105.21	109.90
34	i	90	G	O4'-C1'-N9	5.86	112.89	108.20
34	i	830	C	C3'-C2'-C1'	-5.86	96.81	101.50
34	i	952	G	O4'-C1'-N9	5.86	112.89	108.20
34	i	1497	C	P-O3'-C3'	5.86	126.74	119.70
34	i	1800	A	N9-C1'-C2'	5.86	121.62	114.00
34	i	970	C	C3'-C2'-C1'	5.86	106.19	101.50
34	i	292	A	O4'-C1'-N9	5.86	112.89	108.20
34	i	1121	C	O4'-C1'-N1	5.85	112.88	108.20
34	i	54	A	N9-C1'-C2'	5.85	121.61	114.00
34	i	461	G	C5'-C4'-O4'	5.85	116.12	109.10
29	c	5	ARG	N-CA-C	5.85	126.80	111.00
34	i	163	U	O4'-C1'-N1	5.85	112.88	108.20
34	i	1251	G	C3'-C2'-C1'	-5.85	96.82	101.50
1	A	10	MET	N-CA-C	5.85	126.79	111.00
34	i	839	C	C3'-C2'-C1'	5.85	106.18	101.50
34	i	726	C	O4'-C1'-N1	5.85	112.88	108.20
34	i	1547	G	C1'-O4'-C4'	5.84	114.57	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	171	A	C1'-O4'-C4'	5.84	114.57	109.90
8	H	192	PHE	N-CA-C	5.84	126.76	111.00
34	i	190	A	O5'-P-OP2	-5.84	100.45	105.70
34	i	884	U	P-O5'-C5'	5.84	130.24	120.90
34	i	727	G	C5'-C4'-O4'	-5.83	102.10	109.10
20	T	30	VAL	N-CA-C	5.83	126.75	111.00
34	i	103	A	O4'-C1'-C2'	5.83	112.85	107.60
34	i	1047	G	C3'-C2'-C1'	-5.83	96.83	101.50
34	i	119	U	O4'-C1'-N1	5.83	112.86	108.20
34	i	1779	C	O4'-C1'-N1	5.83	112.86	108.20
34	i	897	G	O4'-C1'-N9	5.83	112.86	108.20
34	i	730	C	N1-C1'-C2'	5.83	121.57	114.00
34	i	1367	U	C3'-C2'-C1'	5.83	106.16	101.50
34	i	1230	C	C1'-O4'-C4'	-5.82	105.24	109.90
34	i	1343	U	O4'-C1'-N1	5.82	112.86	108.20
34	i	1345	G	N9-C1'-C2'	5.82	121.57	114.00
34	i	652	G	C1'-O4'-C4'	-5.82	105.24	109.90
34	i	1282	G	C4'-C3'-O3'	-5.82	97.18	109.40
33	g	12	LYS	C-N-CA	5.82	134.52	122.30
13	M	99	LYS	N-CA-C	5.81	126.69	111.00
34	i	621	U	O4'-C1'-N1	5.81	112.85	108.20
11	K	40	VAL	CB-CA-C	-5.81	100.36	111.40
34	i	1174	U	O4'-C1'-N1	5.81	112.84	108.20
34	i	1416	G	N9-C1'-C2'	5.81	121.55	114.00
34	i	1135	C	C4'-C3'-O3'	-5.81	97.21	109.40
34	i	21	U	O4'-C1'-C2'	-5.80	100.00	105.80
34	i	1414	C	N1-C1'-C2'	5.80	121.54	114.00
16	P	130	ARG	NE-CZ-NH1	5.80	123.20	120.30
34	i	610	G	C1'-O4'-C4'	5.80	114.54	109.90
34	i	633	A	O4'-C1'-C2'	-5.80	100.00	105.80
34	i	1065	U	P-O5'-C5'	-5.80	111.62	120.90
34	i	1485	A	P-O3'-C3'	5.80	126.66	119.70
4	D	96	LEU	O-C-N	-5.80	113.42	122.70
6	F	131	ALA	N-CA-C	5.80	126.65	111.00
34	i	1842	U	O4'-C1'-N1	5.79	112.84	108.20
34	i	1450	A	O4'-C1'-C2'	-5.79	100.01	105.80
34	i	277	U	N1-C1'-C2'	5.79	121.53	114.00
34	i	1020	A	O4'-C1'-N9	5.79	112.83	108.20
34	i	1494	A	O4'-C1'-C2'	5.79	112.81	107.60
34	i	1532	A	C3'-C2'-C1'	5.79	106.13	101.50
7	G	131	ARG	CG-CD-NE	5.78	123.95	111.80
34	i	914	U	C1'-O4'-C4'	-5.78	105.27	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	386	U	O4'-C1'-N1	5.78	112.82	108.20
34	i	1471	G	O4'-C1'-N9	5.78	112.82	108.20
12	L	4	ILE	N-CA-C	-5.78	95.40	111.00
34	i	1142	C	C1'-O4'-C4'	-5.78	105.28	109.90
34	i	1318	G	O4'-C1'-N9	5.78	112.82	108.20
11	K	29	MET	C-N-CD	-5.78	107.89	120.60
22	V	42	VAL	CB-CA-C	-5.78	100.42	111.40
34	i	148	U	O4'-C1'-N1	5.78	112.82	108.20
34	i	215	U	C1'-O4'-C4'	-5.78	105.28	109.90
34	i	1274	A	P-O5'-C5'	5.78	130.14	120.90
34	i	504	U	N1-C1'-C2'	5.78	121.51	114.00
34	i	1706	U	N1-C1'-C2'	5.77	121.50	114.00
5	E	170	THR	C-N-CA	5.77	136.13	121.70
8	H	40	LEU	CA-CB-CG	-5.77	102.03	115.30
34	i	1552	C	C2'-C3'-O3'	5.77	122.93	113.70
17	Q	17	LYS	O-C-N	-5.77	113.47	122.70
34	i	213	C	C3'-C2'-C1'	5.77	106.12	101.50
34	i	331	C	P-O3'-C3'	-5.77	112.78	119.70
34	i	55	U	O4'-C1'-N1	5.77	112.81	108.20
34	i	1407	G	C3'-C2'-C1'	-5.77	96.89	101.50
34	i	549	G	C3'-C2'-C1'	-5.77	96.89	101.50
34	i	1801	C	C1'-O4'-C4'	-5.77	105.29	109.90
7	G	155	GLN	C-N-CA	-5.76	107.29	121.70
34	i	998	U	O4'-C1'-N1	5.76	112.81	108.20
34	i	1532	A	C5'-C4'-C3'	-5.76	106.78	116.00
34	i	314	U	C3'-C2'-C1'	-5.76	96.89	101.50
34	i	820	C	O4'-C1'-N1	5.76	112.81	108.20
3	C	241	TRP	C-N-CA	-5.75	107.32	121.70
34	i	965	U	P-O3'-C3'	5.75	126.60	119.70
34	i	1058	A	C3'-C2'-C1'	5.75	106.10	101.50
34	i	1204	A	C1'-O4'-C4'	5.75	114.50	109.90
17	Q	146	ARG	CA-CB-CG	5.75	126.05	113.40
34	i	1589	A	C5'-C4'-C3'	5.75	125.20	116.00
34	i	1602	A	O4'-C1'-C2'	5.75	112.77	107.60
34	i	98	C	N1-C1'-C2'	-5.75	105.68	112.00
34	i	996	C	C3'-C2'-C1'	5.75	106.10	101.50
34	i	1790	G	C5'-C4'-O4'	5.75	115.99	109.10
34	i	923	C	O4'-C1'-N1	5.74	112.79	108.20
11	K	41	PRO	CA-N-CD	-5.74	103.47	111.50
24	X	98	ASP	N-CA-C	5.74	126.49	111.00
34	i	367	G	O4'-C1'-N9	5.74	112.79	108.20
34	i	1013	U	C1'-O4'-C4'	5.74	114.49	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1518	C	P-O5'-C5'	-5.74	111.72	120.90
34	i	1779	C	N1-C1'-C2'	-5.74	105.69	112.00
26	Z	104	ARG	N-CA-C	5.73	126.48	111.00
34	i	876	G	N9-C1'-C2'	-5.73	105.69	112.00
34	i	962	U	C5'-C4'-O4'	5.73	115.98	109.10
12	L	151	THR	CB-CA-C	5.73	127.07	111.60
34	i	332	C	O4'-C1'-N1	5.73	112.78	108.20
34	i	1227	C	O4'-C1'-N1	-5.73	103.62	108.20
34	i	1380	C	O4'-C1'-N1	5.73	112.78	108.20
34	i	1437	U	O4'-C1'-C2'	-5.73	100.07	105.80
34	i	597	U	O4'-C1'-N1	5.73	112.78	108.20
34	i	1110	U	C1'-O4'-C4'	5.73	114.48	109.90
34	i	373	G	O4'-C1'-N9	5.72	112.78	108.20
34	i	645	A	C5'-C4'-O4'	5.72	115.97	109.10
34	i	79	A	O3'-P-O5'	-5.72	93.13	104.00
34	i	1220	G	N9-C1'-C2'	5.72	121.44	114.00
34	i	434	G	C3'-C2'-C1'	-5.72	96.92	101.50
5	E	151	ASP	CB-CA-C	5.72	121.83	110.40
34	i	1390	G	C2'-C3'-O3'	5.72	122.85	113.70
34	i	206	A	O3'-P-O5'	5.71	114.86	104.00
34	i	274	G	N9-C1'-C2'	5.71	121.43	114.00
34	i	864	G	O4'-C1'-N9	-5.71	103.63	108.20
34	i	290	A	N9-C1'-C2'	-5.71	105.72	112.00
19	S	53	THR	CA-C-N	5.71	129.76	117.20
34	i	1771	G	P-O3'-C3'	-5.71	112.85	119.70
34	i	871	A	O4'-C1'-C2'	-5.71	100.09	105.80
34	i	1045	A	P-O3'-C3'	5.71	126.55	119.70
34	i	495	G	P-O3'-C3'	-5.70	112.86	119.70
34	i	78	C	O4'-C1'-N1	5.70	112.76	108.20
26	Z	107	VAL	C-N-CA	5.70	135.95	121.70
34	i	1826	A	P-O5'-C5'	5.70	130.02	120.90
20	T	4	VAL	O-C-N	-5.70	113.58	122.70
34	i	1705	C	O4'-C1'-C2'	-5.70	100.10	105.80
34	i	141	A	C2'-C3'-O3'	5.70	122.81	113.70
12	L	98	LYS	N-CA-C	-5.69	95.63	111.00
34	i	340	C	C1'-O4'-C4'	5.69	114.45	109.90
34	i	1309	A	O4'-C1'-C2'	-5.69	100.11	105.80
21	U	108	PRO	CA-N-CD	-5.69	103.53	111.50
34	i	151	C	C3'-C2'-C1'	5.69	106.05	101.50
34	i	376	C	C1'-O4'-C4'	-5.69	105.35	109.90
34	i	734	C	C3'-C2'-C1'	5.69	106.05	101.50
34	i	1018	U	C1'-O4'-C4'	-5.69	105.35	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1460	C	C3'-C2'-C1'	5.69	106.05	101.50
34	i	1753	G	C3'-C2'-C1'	-5.69	96.95	101.50
34	i	374	U	C1'-O4'-C4'	-5.69	105.35	109.90
11	K	42	ASN	N-CA-C	-5.68	95.66	111.00
20	T	51	ASN	C-N-CA	5.68	135.91	121.70
34	i	856	G	N9-C1'-C2'	5.68	121.39	114.00
34	i	1538	U	O4'-C1'-N1	5.68	112.75	108.20
8	H	111	LYS	CA-CB-CG	5.68	125.89	113.40
34	i	91	A	C1'-O4'-C4'	5.68	114.44	109.90
34	i	114	G	C1'-O4'-C4'	5.68	114.44	109.90
34	i	1417	A	O4'-C1'-N9	5.68	112.74	108.20
34	i	1057	U	O4'-C1'-N1	5.68	112.74	108.20
34	i	1100	G	O4'-C1'-N9	5.68	112.74	108.20
34	i	1407	G	O4'-C1'-C2'	5.67	112.71	107.60
34	i	1262	C	N1-C1'-C2'	5.67	121.37	114.00
34	i	1439	C	O4'-C1'-N1	5.67	112.74	108.20
34	i	1168	U	N1-C1'-C2'	-5.67	105.77	112.00
31	e	100	LYS	N-CA-C	-5.67	95.70	111.00
34	i	190	A	C5'-C4'-O4'	5.67	115.90	109.10
34	i	817	G	C2'-C3'-O3'	5.67	122.77	113.70
34	i	958	A	O4'-C1'-C2'	-5.67	100.13	105.80
34	i	1366	A	C1'-O4'-C4'	5.67	114.43	109.90
34	i	969	C	C3'-C2'-C1'	5.66	106.03	101.50
34	i	1327	C	C1'-O4'-C4'	-5.66	105.37	109.90
34	i	1633	G	O4'-C1'-N9	-5.66	103.67	108.20
34	i	1774	G	O4'-C1'-N9	5.66	112.73	108.20
34	i	895	U	O4'-C1'-N1	5.66	112.73	108.20
34	i	1528	A	O4'-C1'-N9	5.66	112.73	108.20
34	i	1608	G	C3'-C2'-C1'	-5.66	96.97	101.50
34	i	658	A	O4'-C1'-N9	5.66	112.73	108.20
34	i	1467	C	O4'-C1'-C2'	-5.66	100.14	105.80
34	i	1515	G	C5'-C4'-C3'	5.66	125.05	116.00
34	i	93	U	N1-C1'-C2'	-5.65	105.78	112.00
34	i	441	G	P-O5'-C5'	5.65	129.94	120.90
34	i	459	A	O4'-C1'-N9	5.65	112.72	108.20
34	i	1407	G	N9-C1'-C2'	5.65	121.35	114.00
34	i	516	A	C3'-C2'-C1'	-5.65	96.98	101.50
34	i	49	C	C1'-O4'-C4'	-5.65	105.38	109.90
34	i	1390	G	N9-C1'-C2'	5.65	121.34	114.00
34	i	625	G	C5'-C4'-C3'	5.65	125.03	116.00
34	i	1781	G	C3'-C2'-C1'	-5.64	96.98	101.50
34	i	597	U	C3'-C2'-C1'	5.64	106.01	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1413	C	C5'-C4'-C3'	5.64	125.02	116.00
34	i	388	A	C1'-O4'-C4'	5.64	114.41	109.90
34	i	927	C	C5'-C4'-O4'	5.64	115.86	109.10
24	X	58	GLU	N-CA-C	5.63	126.21	111.00
34	i	1501	U	O4'-C1'-C2'	-5.63	100.17	105.80
34	i	235	C	O4'-C1'-C2'	-5.63	100.17	105.80
34	i	742	C	C4'-C3'-C2'	-5.63	96.97	102.60
34	i	1198	U	C3'-C2'-C1'	5.62	106.00	101.50
34	i	469	C	C3'-C2'-C1'	5.62	106.00	101.50
34	i	804	A	N9-C1'-C2'	5.62	121.31	114.00
34	i	1219	A	C3'-C2'-C1'	5.62	106.00	101.50
34	i	1240	U	P-O3'-C3'	5.62	126.45	119.70
16	P	49	LEU	O-C-N	-5.62	113.71	122.70
34	i	1501	U	C1'-O4'-C4'	5.62	114.40	109.90
34	i	125	C	C4'-C3'-O3'	5.62	124.24	113.00
34	i	1271	G	C5'-C4'-C3'	5.62	124.99	116.00
34	i	805	A	P-O3'-C3'	5.62	126.44	119.70
8	H	105	THR	CB-CA-C	5.62	126.76	111.60
24	X	37	LYS	N-CA-C	5.62	126.16	111.00
33	g	294	ASP	N-CA-CB	-5.62	100.49	110.60
34	i	176	U	O4'-C1'-N1	5.62	112.69	108.20
34	i	1646	A	O4'-C1'-C2'	-5.62	100.18	105.80
34	i	308	C	C3'-C2'-C1'	5.61	105.99	101.50
34	i	741	C	C5'-C4'-C3'	5.61	124.98	116.00
34	i	818	U	O4'-C1'-N1	5.61	112.69	108.20
34	i	278	U	C3'-C2'-C1'	5.61	105.99	101.50
34	i	503	G	C1'-O4'-C4'	-5.61	105.41	109.90
34	i	1361	G	P-O3'-C3'	-5.61	112.97	119.70
34	i	188	U	C1'-O4'-C4'	-5.61	105.41	109.90
34	i	516	A	C5'-C4'-C3'	5.61	124.97	116.00
34	i	1817	A	C5'-C4'-O4'	-5.61	102.37	109.10
34	i	86	C	C3'-C2'-C1'	5.60	105.98	101.50
34	i	58	C	C1'-O4'-C4'	5.60	114.38	109.90
34	i	1691	C	C3'-C2'-C1'	5.60	105.98	101.50
34	i	1692	A	N9-C1'-C2'	-5.60	105.84	112.00
21	U	68	THR	CB-CA-C	5.60	126.72	111.60
33	g	143	GLN	N-CA-C	-5.60	95.88	111.00
34	i	1448	A	O4'-C1'-C2'	-5.60	100.20	105.80
34	i	1672	U	C1'-O4'-C4'	5.60	114.38	109.90
34	i	1821	U	O4'-C1'-N1	5.60	112.68	108.20
34	i	80	G	O4'-C1'-N9	5.60	112.68	108.20
34	i	1446	G	C3'-C2'-C1'	-5.60	97.02	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	P	53	GLN	CB-CA-C	5.60	121.59	110.40
34	i	1618	A	N9-C1'-C2'	-5.60	105.84	112.00
34	i	341	G	C4'-C3'-C2'	-5.59	97.00	102.60
34	i	667	G	C1'-O4'-C4'	-5.59	105.42	109.90
34	i	1152	U	O4'-C1'-N1	5.59	112.67	108.20
34	i	1411	C	O4'-C1'-C2'	-5.59	100.20	105.80
34	i	225	C	C2'-C3'-O3'	5.59	122.65	113.70
34	i	1042	U	O4'-C1'-C2'	-5.59	100.21	105.80
34	i	1739	G	O4'-C1'-N9	5.59	112.67	108.20
34	i	1144	A	C3'-C2'-C1'	-5.59	97.03	101.50
34	i	1246	A	C1'-O4'-C4'	5.59	114.37	109.90
34	i	286	C	C3'-C2'-C1'	5.59	105.97	101.50
34	i	1587	C	C3'-C2'-C1'	5.59	105.97	101.50
19	S	10	GLN	N-CA-C	5.58	126.08	111.00
34	i	569	C	O4'-C1'-C2'	-5.58	100.22	105.80
34	i	1078	A	C3'-C2'-C1'	5.58	105.97	101.50
34	i	398	A	O4'-C1'-C2'	-5.58	100.22	105.80
34	i	987	G	C3'-C2'-C1'	-5.58	97.03	101.50
34	i	1079	A	C3'-C2'-C1'	5.58	105.96	101.50
29	c	60	GLU	N-CA-C	-5.58	95.94	111.00
34	i	1138	G	N9-C1'-C2'	-5.58	105.86	112.00
32	f	148	TYR	C-N-CA	5.58	135.64	121.70
34	i	323	G	C1'-O4'-C4'	-5.57	105.44	109.90
34	i	1432	C	O4'-C1'-C2'	-5.57	100.23	105.80
34	i	1859	C	O4'-C1'-N1	5.57	112.66	108.20
34	i	789	G	C4'-C3'-C2'	-5.57	97.03	102.60
34	i	1044	G	P-O5'-C5'	5.57	129.82	120.90
34	i	143	U	C1'-O4'-C4'	-5.57	105.44	109.90
34	i	292	A	O4'-C1'-C2'	-5.57	100.23	105.80
34	i	648	U	O4'-C1'-N1	5.57	112.66	108.20
34	i	889	U	C1'-O4'-C4'	5.57	114.36	109.90
34	i	1313	U	O4'-C1'-N1	5.57	112.66	108.20
34	i	586	U	O4'-C1'-N1	5.57	112.66	108.20
34	i	1639	C	C3'-C2'-C1'	5.57	105.95	101.50
1	A	159	ILE	CA-CB-CG1	-5.57	100.42	111.00
32	f	125	GLU	CB-CA-C	5.56	121.53	110.40
34	i	86	C	O4'-C1'-N1	5.56	112.65	108.20
34	i	949	C	P-O3'-C3'	-5.56	113.02	119.70
34	i	1063	C	C1'-O4'-C4'	-5.56	105.45	109.90
34	i	1587	C	N1-C1'-C2'	5.56	121.23	114.00
21	U	70	CYS	CA-C-N	5.56	127.32	116.20
34	i	224	U	P-O5'-C5'	5.56	129.80	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	241	A	O4'-C1'-N9	5.56	112.65	108.20
34	i	895	U	O4'-C1'-C2'	-5.56	100.24	105.80
4	D	142	LEU	CB-CG-CD1	5.56	120.44	111.00
34	i	1542	C	N1-C1'-C2'	5.56	121.22	114.00
22	V	67	ASP	N-CA-CB	-5.55	100.60	110.60
34	i	1160	G	N9-C1'-C2'	5.55	121.22	114.00
34	i	391	A	C3'-C2'-C1'	5.55	105.94	101.50
34	i	1705	C	O4'-C1'-N1	5.55	112.64	108.20
27	a	70	LYS	CD-CE-NZ	5.55	124.47	111.70
6	F	47	LYS	CD-CE-NZ	-5.55	98.94	111.70
34	i	1409	G	P-O3'-C3'	-5.55	113.04	119.70
34	i	1471	G	C4'-C3'-C2'	-5.55	97.05	102.60
4	D	3	VAL	C-N-CA	5.54	135.56	121.70
34	i	230	C	O4'-C1'-C2'	-5.54	100.26	105.80
34	i	994	A	O4'-C1'-C2'	-5.54	100.26	105.80
34	i	1819	A	C2'-C3'-O3'	5.54	122.57	113.70
9	I	5	ARG	CA-C-N	5.54	129.39	117.20
20	T	45	LEU	O-C-N	-5.54	113.83	122.70
34	i	1070	C	O4'-C1'-N1	5.54	112.63	108.20
19	S	81	ASP	CB-CG-OD2	5.54	123.29	118.30
34	i	25	A	O4'-C1'-N9	5.54	112.63	108.20
34	i	539	C	O4'-C1'-N1	5.54	112.63	108.20
34	i	1851	G	O4'-C1'-C2'	5.54	112.58	107.60
34	i	350	A	O4'-C1'-N9	5.54	112.63	108.20
34	i	1058	A	O4'-C1'-N9	5.54	112.63	108.20
34	i	919	G	O4'-C1'-N9	5.53	112.63	108.20
34	i	1411	C	C3'-C2'-C1'	5.53	105.93	101.50
17	Q	6	PRO	CB-CA-C	-5.53	98.17	112.00
34	i	676	U	P-O3'-C3'	-5.53	113.06	119.70
34	i	329	A	P-O3'-C3'	-5.53	113.07	119.70
34	i	397	G	P-O3'-C3'	5.53	126.33	119.70
34	i	1382	A	O4'-C1'-C2'	-5.53	100.27	105.80
34	i	1716	U	O3'-P-O5'	5.53	114.50	104.00
15	O	103	ASN	N-CA-CB	5.52	120.54	110.60
34	i	874	G	C1'-O4'-C4'	-5.52	105.48	109.90
9	I	105	ASP	CB-CA-C	5.52	121.44	110.40
34	i	226	A	O4'-C1'-N9	5.52	112.62	108.20
34	i	606	A	C1'-O4'-C4'	-5.52	105.48	109.90
34	i	870	G	P-O3'-C3'	5.52	126.32	119.70
34	i	355	C	C3'-C2'-C1'	5.52	105.91	101.50
34	i	560	C	N1-C1'-C2'	5.52	121.17	114.00
34	i	1283	A	N9-C1'-C2'	-5.51	105.93	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	P	36	LEU	C-N-CA	5.51	135.48	121.70
34	i	1356	U	O4'-C1'-N1	5.51	112.61	108.20
34	i	13	C	O4'-C1'-N1	5.51	112.61	108.20
34	i	1370	C	O4'-C1'-N1	5.51	112.61	108.20
34	i	827	G	O4'-C1'-C2'	5.51	112.56	107.60
34	i	1837	G	P-O3'-C3'	-5.50	113.09	119.70
34	i	1639	C	C1'-O4'-C4'	-5.50	105.50	109.90
34	i	489	G	P-O5'-C5'	-5.50	112.10	120.90
34	i	1106	G	O4'-C1'-C2'	-5.50	100.30	105.80
34	i	1740	A	C3'-C2'-C1'	-5.50	97.10	101.50
34	i	540	C	C3'-C2'-C1'	5.50	105.90	101.50
34	i	679	U	O3'-P-O5'	-5.50	93.56	104.00
17	Q	145	TYR	C-N-CA	5.49	135.43	121.70
34	i	396	U	N1-C1'-C2'	5.49	121.14	114.00
34	i	522	C	C4'-C3'-C2'	-5.49	97.11	102.60
34	i	462	C	C3'-C2'-C1'	5.49	105.89	101.50
34	i	508	G	O4'-C1'-N9	5.49	112.59	108.20
34	i	1164	G	O4'-C1'-N9	5.49	112.59	108.20
34	i	101	U	O4'-C1'-N1	5.49	112.59	108.20
34	i	218	A	C3'-C2'-C1'	-5.49	97.11	101.50
25	Y	53	ASP	CB-CG-OD2	5.49	123.24	118.30
34	i	462	C	P-O3'-C3'	5.49	126.28	119.70
34	i	1274	A	O4'-C1'-N9	5.49	112.59	108.20
34	i	1854	A	P-O3'-C3'	-5.49	113.12	119.70
34	i	656	U	C3'-C2'-C1'	5.48	105.89	101.50
34	i	725	C	C1'-O4'-C4'	5.48	114.29	109.90
34	i	822	A	P-O3'-C3'	-5.48	113.12	119.70
34	i	929	G	C3'-C2'-C1'	-5.48	97.11	101.50
34	i	346	C	O4'-C1'-C2'	5.48	112.53	107.60
34	i	1370	C	N1-C1'-C2'	5.48	121.12	114.00
34	i	400	G	N9-C1'-C2'	-5.48	105.98	112.00
34	i	1323	G	C1'-O4'-C4'	-5.48	105.52	109.90
34	i	378	U	O4'-C1'-N1	5.47	112.58	108.20
17	Q	18	THR	C-N-CA	5.47	135.38	121.70
34	i	1638	U	O4'-C1'-N1	5.47	112.58	108.20
34	i	456	G	C3'-C2'-C1'	-5.47	97.12	101.50
34	i	560	C	C5'-C4'-O4'	5.47	115.66	109.10
34	i	1708	C	N1-C1'-C2'	5.47	121.11	114.00
34	i	964	U	O4'-C1'-N1	5.47	112.58	108.20
18	R	89	SER	CA-C-O	-5.47	108.62	120.10
34	i	1013	U	O4'-C1'-C2'	-5.47	100.33	105.80
34	i	1667	U	C1'-O4'-C4'	-5.47	105.53	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1259	U	C3'-C2'-C1'	5.46	105.87	101.50
34	i	1556	A	O4'-C1'-C2'	-5.46	100.34	105.80
34	i	1795	A	O4'-C1'-N9	5.46	112.57	108.20
34	i	146	G	O4'-C1'-C2'	-5.46	100.34	105.80
34	i	1035	C	O4'-C1'-N1	5.46	112.57	108.20
34	i	1094	C	O4'-C1'-N1	5.46	112.57	108.20
2	B	63	LYS	N-CA-C	5.46	125.73	111.00
34	i	1458	U	O4'-C1'-N1	5.46	112.57	108.20
34	i	1814	G	O4'-C1'-N9	5.46	112.57	108.20
3	C	241	TRP	O-C-N	-5.46	113.97	122.70
4	D	167	TYR	CA-CB-CG	-5.46	103.03	113.40
34	i	1848	U	N1-C1'-C2'	-5.45	106.00	112.00
34	i	1122	G	O4'-C1'-N9	5.45	112.56	108.20
34	i	1280	A	C5'-C4'-O4'	5.45	115.64	109.10
34	i	1661	C	C3'-C2'-C1'	5.45	105.86	101.50
29	c	36	ASP	CB-CG-OD2	5.45	123.20	118.30
34	i	314	U	O4'-C1'-C2'	5.44	112.50	107.60
34	i	225	C	C1'-O4'-C4'	-5.44	105.55	109.90
34	i	1271	G	O4'-C1'-N9	5.44	112.55	108.20
34	i	38	A	C5'-C4'-C3'	-5.44	107.30	116.00
19	S	89	ASP	CB-CA-C	-5.44	99.52	110.40
34	i	1437	U	C1'-O4'-C4'	5.44	114.25	109.90
34	i	1557	C	C3'-C2'-C1'	5.44	105.85	101.50
34	i	376	C	P-O5'-C5'	-5.44	112.20	120.90
34	i	536	G	O4'-C1'-C2'	-5.44	100.36	105.80
34	i	614	C	C5'-C4'-C3'	-5.44	107.30	116.00
34	i	1374	A	O4'-C1'-C2'	-5.44	100.36	105.80
34	i	619	A	C1'-O4'-C4'	5.43	114.25	109.90
34	i	882	A	O3'-P-O5'	5.43	114.33	104.00
34	i	1625	A	O4'-C1'-N9	5.43	112.55	108.20
34	i	3	C	C1'-O4'-C4'	5.43	114.25	109.90
34	i	404	A	O4'-C1'-C2'	-5.43	100.37	105.80
21	U	118	ASP	N-CA-C	-5.43	96.34	111.00
34	i	370	G	C1'-O4'-C4'	5.43	114.24	109.90
34	i	76	U	N1-C1'-C2'	5.43	121.06	114.00
34	i	1143	C	O4'-C1'-N1	5.43	112.54	108.20
34	i	1846	C	O4'-C1'-N1	5.43	112.54	108.20
34	i	101	U	O4'-C1'-C2'	-5.43	100.37	105.80
34	i	642	U	C1'-O4'-C4'	5.42	114.24	109.90
34	i	440	C	O4'-C1'-N1	5.42	112.54	108.20
34	i	94	G	N9-C1'-C2'	5.42	121.05	114.00
34	i	1561	G	N9-C1'-C2'	-5.42	106.03	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	116	U	O4'-C1'-N1	5.42	112.54	108.20
34	i	536	G	O4'-C1'-N9	5.42	112.54	108.20
34	i	1823	G	O4'-C1'-C2'	-5.42	100.38	105.80
34	i	282	G	C1'-O4'-C4'	-5.42	105.56	109.90
34	i	69	C	O4'-C1'-N1	5.42	112.53	108.20
34	i	71	G	C4'-C3'-O3'	5.41	123.83	113.00
34	i	139	C	O4'-C1'-N1	5.41	112.53	108.20
25	Y	62	THR	C-N-CA	-5.41	108.17	121.70
34	i	1166	A	C3'-C2'-C1'	-5.41	97.17	101.50
34	i	564	A	N9-C1'-C2'	5.41	121.03	114.00
34	i	819	U	O4'-C1'-C2'	5.41	112.47	107.60
34	i	1191	A	N9-C1'-C2'	-5.41	106.05	112.00
23	W	54	ASP	CB-CG-OD2	5.41	123.17	118.30
34	i	102	A	C1'-O4'-C4'	-5.41	105.57	109.90
34	i	727	G	N9-C1'-C2'	5.41	121.03	114.00
34	i	40	A	N9-C1'-C2'	-5.41	106.05	112.00
34	i	1344	G	P-O3'-C3'	5.41	126.19	119.70
34	i	1486	G	C1'-O4'-C4'	-5.41	105.57	109.90
34	i	502	A	O4'-C1'-N9	5.41	112.53	108.20
34	i	1181	C	C3'-C2'-C1'	5.41	105.82	101.50
34	i	1301	C	N1-C1'-C2'	5.41	121.03	114.00
3	C	216	ALA	O-C-N	-5.40	114.06	122.70
34	i	276	U	P-O5'-C5'	-5.40	112.26	120.90
34	i	188	U	P-O3'-C3'	-5.40	113.22	119.70
34	i	57	U	C3'-C2'-C1'	5.40	105.82	101.50
34	i	437	A	O4'-C1'-N9	5.40	112.52	108.20
34	i	1130	G	O4'-C1'-N9	5.40	112.52	108.20
34	i	790	A	O4'-C1'-C2'	-5.40	100.40	105.80
34	i	1384	A	P-O3'-C3'	-5.40	113.22	119.70
34	i	1423	C	O4'-C1'-N1	5.40	112.52	108.20
8	H	16	PRO	CA-N-CD	-5.39	103.95	111.50
28	b	34	ASP	CB-CG-OD2	5.39	123.16	118.30
34	i	960	A	O4'-C1'-C2'	-5.39	100.41	105.80
9	I	132	GLU	CA-C-O	-5.39	108.78	120.10
34	i	1165	G	C1'-O4'-C4'	-5.39	105.59	109.90
34	i	911	G	O4'-C1'-C2'	5.39	112.45	107.60
34	i	1280	A	N9-C1'-C2'	5.39	121.00	114.00
34	i	443	C	N1-C1'-C2'	5.39	121.00	114.00
34	i	516	A	C1'-O4'-C4'	-5.39	105.59	109.90
34	i	675	A	O4'-C1'-N9	5.39	112.51	108.20
34	i	1820	G	O4'-C1'-N9	5.39	112.51	108.20
34	i	640	A	O4'-C1'-C2'	-5.38	100.42	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	835	C	O3'-P-O5'	-5.38	93.77	104.00
34	i	1557	C	P-O3'-C3'	5.38	126.16	119.70
15	O	129	ILE	CG1-CB-CG2	5.38	123.24	111.40
34	i	427	G	N9-C1'-C2'	5.38	121.00	114.00
34	i	685	G	C1'-O4'-C4'	5.38	114.21	109.90
22	V	82	ASN	CB-CA-C	-5.38	99.64	110.40
34	i	742	C	O4'-C1'-N1	5.38	112.50	108.20
34	i	1819	A	C5'-C4'-O4'	5.38	115.56	109.10
34	i	1479	A	C4'-C3'-C2'	-5.38	97.22	102.60
10	J	35	TYR	C-N-CA	5.38	133.59	122.30
21	U	90	ASP	CB-CG-OD2	5.38	123.14	118.30
34	i	509	A	C1'-O4'-C4'	5.38	114.20	109.90
34	i	1624	C	O4'-C4'-C3'	-5.38	98.62	104.00
6	F	21	GLY	N-CA-C	-5.38	99.66	113.10
14	N	6	ALA	C-N-CD	5.38	139.69	128.40
34	i	1823	G	C5'-C4'-O4'	5.38	115.55	109.10
34	i	1003	C	O4'-C1'-C2'	-5.38	100.42	105.80
34	i	1608	G	O4'-C1'-N9	5.38	112.50	108.20
15	O	46	ASP	CB-CG-OD2	5.37	123.14	118.30
34	i	1535	G	P-O5'-C5'	-5.37	112.30	120.90
11	K	43	LEU	CB-CG-CD1	5.37	120.13	111.00
34	i	1036	G	O4'-C1'-C2'	5.37	112.43	107.60
34	i	1037	G	N9-C1'-C2'	5.37	120.98	114.00
34	i	1110	U	O4'-C1'-C2'	-5.37	100.43	105.80
10	J	100	LEU	N-CA-C	5.37	125.50	111.00
22	V	24	ILE	CB-CA-C	-5.37	100.86	111.60
34	i	906	G	O5'-P-OP1	-5.37	100.87	105.70
34	i	1318	G	C1'-O4'-C4'	5.37	114.19	109.90
34	i	459	A	C1'-O4'-C4'	5.37	114.19	109.90
34	i	1341	G	O4'-C1'-C2'	-5.37	100.44	105.80
34	i	1424	G	C3'-C2'-C1'	-5.37	97.21	101.50
14	N	151	ALA	CA-C-O	-5.36	108.84	120.10
23	W	9	ASP	CB-CG-OD2	5.36	123.13	118.30
34	i	139	C	C3'-C2'-C1'	5.36	105.79	101.50
34	i	1256	A	O4'-C1'-N9	5.36	112.49	108.20
34	i	1123	C	O4'-C1'-N1	5.36	112.49	108.20
34	i	1348	G	N9-C1'-C2'	5.36	120.97	114.00
34	i	1595	G	P-O3'-C3'	-5.36	113.27	119.70
16	P	82	ASP	CB-CG-OD2	5.36	123.12	118.30
24	X	114	ASP	CB-CG-OD2	5.36	123.12	118.30
34	i	820	C	N1-C1'-C2'	5.36	120.97	114.00
9	I	55	TYR	CB-CG-CD2	-5.36	117.79	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	370	G	O4'-C1'-N9	5.36	112.48	108.20
34	i	1419	C	O4'-C1'-N1	5.36	112.48	108.20
5	E	59	ASP	CB-CG-OD2	5.35	123.12	118.30
34	i	1539	C	O4'-C1'-C2'	-5.35	100.45	105.80
33	g	14	HIS	C-N-CA	-5.35	108.32	121.70
34	i	1127	G	O4'-C1'-C2'	-5.35	100.45	105.80
14	N	87	ASP	CB-CG-OD2	5.35	123.11	118.30
29	c	54	ASP	CB-CG-OD2	5.34	123.11	118.30
34	i	416	A	C3'-C2'-C1'	5.34	105.78	101.50
34	i	1027	A	C5'-C4'-O4'	5.34	115.51	109.10
34	i	1129	A	O5'-C5'-C4'	-5.34	101.55	111.70
34	i	1717	G	C5'-C4'-C3'	-5.34	107.45	116.00
3	C	244	THR	N-CA-C	5.34	125.42	111.00
7	G	170	ARG	CA-C-N	-5.34	105.45	117.20
34	i	306	C	P-O5'-C5'	-5.34	112.35	120.90
34	i	462	C	N1-C1'-C2'	5.34	120.94	114.00
34	i	1300	U	N1-C1'-C2'	5.34	120.94	114.00
34	i	540	C	O4'-C1'-C2'	-5.34	100.46	105.80
34	i	918	A	N9-C1'-C2'	-5.34	106.13	112.00
5	E	170	THR	O-C-N	5.33	131.24	122.70
34	i	103	A	P-O3'-C3'	5.33	126.10	119.70
22	V	28	ASP	CB-CG-OD2	5.33	123.10	118.30
31	e	95	LYS	C-N-CA	5.33	135.03	121.70
34	i	109	U	C2'-C3'-O3'	5.33	122.23	113.70
34	i	235	C	N1-C1'-C2'	5.33	120.93	114.00
34	i	1221	U	O4'-C1'-N1	5.33	112.47	108.20
34	i	77	A	C5'-C4'-C3'	5.33	124.53	116.00
34	i	1037	G	C3'-C2'-C1'	-5.33	97.24	101.50
34	i	1053	C	P-O3'-C3'	-5.33	113.31	119.70
34	i	613	G	O4'-C1'-N9	5.33	112.46	108.20
34	i	550	A	O5'-C5'-C4'	5.33	121.82	111.70
23	W	130	PHE	CA-C-O	-5.32	108.92	120.10
4	D	193	ASP	C-N-CA	-5.32	99.65	122.00
34	i	396	U	O4'-C1'-N1	5.32	112.46	108.20
34	i	852	C	C1'-O4'-C4'	-5.32	105.64	109.90
34	i	15	U	O4'-C1'-C2'	-5.32	100.48	105.80
15	O	39	ASP	CB-CG-OD2	5.32	123.09	118.30
34	i	317	G	C5'-C4'-O4'	5.32	115.48	109.10
34	i	1158	C	O4'-C1'-C2'	-5.32	100.48	105.80
34	i	1201	C	O4'-C1'-N1	5.32	112.45	108.20
34	i	1229	G	O4'-C1'-N9	5.32	112.45	108.20
8	H	16	PRO	C-N-CA	5.32	134.99	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	J	26	ASP	CB-CG-OD2	5.32	123.08	118.30
34	i	67	C	N1-C1'-C2'	-5.32	106.15	112.00
34	i	1233	C	C4'-C3'-C2'	-5.32	97.28	102.60
34	i	1473	U	C1'-O4'-C4'	-5.32	105.65	109.90
34	i	795	U	C4'-C3'-C2'	-5.31	97.29	102.60
34	i	1217	G	C3'-C2'-C1'	-5.31	97.25	101.50
23	W	80	ASP	CB-CG-OD2	5.31	123.08	118.30
34	i	1267	C	N1-C1'-C2'	5.31	120.90	114.00
34	i	901	C	O4'-C1'-N1	5.31	112.44	108.20
16	P	130	ARG	NE-CZ-NH2	-5.30	117.65	120.30
34	i	1150	U	C4'-C3'-C2'	-5.30	97.30	102.60
34	i	1611	U	C3'-C2'-C1'	5.30	105.74	101.50
6	F	46	ALA	O-C-N	-5.30	114.22	122.70
34	i	375	G	O4'-C1'-N9	5.30	112.44	108.20
10	J	124	HIS	N-CA-C	-5.30	96.69	111.00
34	i	235	C	O4'-C1'-N1	5.30	112.44	108.20
34	i	850	A	P-O3'-C3'	5.30	126.06	119.70
34	i	1209	C	N1-C1'-C2'	5.30	120.89	114.00
34	i	1635	A	N9-C1'-C2'	-5.30	106.17	112.00
4	D	93	THR	C-N-CA	5.30	134.94	121.70
34	i	923	C	C3'-C2'-C1'	5.30	105.74	101.50
34	i	1018	U	P-O3'-C3'	5.30	126.06	119.70
34	i	1416	G	O4'-C1'-C2'	5.30	112.37	107.60
12	L	158	PHE	CA-C-O	-5.29	108.98	120.10
34	i	1227	C	C1'-O4'-C4'	-5.29	105.66	109.90
24	X	142	ARG	CA-C-O	-5.29	108.99	120.10
34	i	516	A	O4'-C1'-N9	5.29	112.43	108.20
34	i	1279	C	C1'-O4'-C4'	-5.29	105.67	109.90
34	i	1338	U	C3'-C2'-C1'	5.29	105.73	101.50
34	i	994	A	N9-C1'-C2'	-5.29	106.18	112.00
34	i	1635	A	C3'-C2'-C1'	5.29	105.73	101.50
34	i	313	C	C2'-C3'-O3'	5.29	122.16	113.70
34	i	550	A	C1'-O4'-C4'	-5.29	105.67	109.90
34	i	1161	G	C5'-C4'-O4'	5.29	115.45	109.10
34	i	1357	G	C3'-C2'-C1'	5.29	105.73	101.50
3	C	233	TYR	CA-CB-CG	-5.29	103.36	113.40
34	i	88	G	O4'-C1'-N9	5.29	112.43	108.20
14	N	110	ASP	CB-CG-OD2	5.29	123.06	118.30
34	i	1234	U	C3'-C2'-C1'	-5.29	97.27	101.50
34	i	1453	U	P-O3'-C3'	-5.29	113.36	119.70
1	A	14	ASP	CB-CG-OD2	5.28	123.05	118.30
4	D	227	LYS	CA-C-O	-5.28	109.00	120.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	g	213	ASP	CB-CG-OD1	5.28	123.05	118.30
34	i	830	C	O4'-C1'-N1	5.28	112.43	108.20
10	J	104	ASP	CB-CG-OD2	5.28	123.05	118.30
34	i	655	G	N9-C1'-C2'	5.28	120.87	114.00
34	i	1695	C	O4'-C1'-N1	5.28	112.42	108.20
13	M	132	LYS	CA-C-O	-5.28	109.02	120.10
16	P	71	GLU	CA-C-N	-5.28	105.59	117.20
34	i	868	A	O4'-C1'-C2'	5.28	112.35	107.60
34	i	1340	A	P-O3'-C3'	5.28	126.03	119.70
34	i	142	C	O4'-C1'-C2'	5.28	112.35	107.60
34	i	1137	G	O4'-C1'-C2'	5.28	112.35	107.60
8	H	118	ARG	CB-CA-C	-5.27	99.86	110.40
16	P	71	GLU	C-N-CA	5.27	134.88	121.70
30	d	56	ASP	CA-C-O	-5.27	109.03	120.10
32	f	137	ASP	CB-CG-OD2	5.27	123.05	118.30
34	i	1423	C	C3'-C2'-C1'	5.27	105.72	101.50
1	A	53	ARG	CD-NE-CZ	-5.27	116.22	123.60
34	i	1807	A	O4'-C1'-N9	5.27	112.42	108.20
3	C	263	THR	CA-C-O	-5.27	109.03	120.10
1	A	53	ARG	N-CA-CB	-5.27	101.12	110.60
10	J	137	VAL	C-N-CA	5.27	134.87	121.70
34	i	332	C	O4'-C1'-C2'	-5.27	100.53	105.80
34	i	660	A	C1'-O4'-C4'	5.27	114.11	109.90
34	i	1024	A	C4'-C3'-O3'	-5.27	98.34	109.40
34	i	1255	A	C5'-C4'-O4'	5.27	115.42	109.10
34	i	1832	U	O4'-C1'-N1	5.27	112.41	108.20
34	i	1607	G	C3'-C2'-C1'	-5.27	97.29	101.50
34	i	859	U	O4'-C1'-C2'	5.26	112.34	107.60
34	i	1021	U	C1'-O4'-C4'	5.26	114.11	109.90
34	i	1455	G	C3'-C2'-C1'	-5.26	97.29	101.50
34	i	120	U	C3'-C2'-C1'	5.26	105.71	101.50
34	i	1695	C	N1-C1'-C2'	-5.26	106.21	112.00
34	i	66	G	O4'-C1'-C2'	5.26	112.33	107.60
34	i	109	U	P-O3'-C3'	-5.26	113.39	119.70
34	i	165	G	N9-C1'-C2'	-5.26	106.21	112.00
34	i	1208	G	O4'-C1'-N9	5.26	112.41	108.20
14	N	32	ASP	CB-CG-OD2	5.26	123.03	118.30
34	i	1714	A	C3'-C2'-C1'	5.26	105.71	101.50
34	i	1048	A	C3'-C2'-C1'	5.26	105.71	101.50
21	U	27	ARG	O-C-N	-5.26	114.29	122.70
34	i	1119	C	O4'-C1'-N1	5.25	112.40	108.20
1	A	130	ASP	CB-CG-OD2	5.25	123.03	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	I	191	GLU	CB-CA-C	-5.25	99.89	110.40
34	i	1298	G	C2'-C3'-O3'	-5.25	97.94	109.50
34	i	1703	C	C3'-C2'-C1'	5.25	105.70	101.50
34	i	65	C	O4'-C1'-C2'	-5.25	100.55	105.80
34	i	84	A	P-O5'-C5'	-5.25	112.50	120.90
34	i	1039	G	O4'-C1'-N9	5.25	112.40	108.20
34	i	1602	A	C1'-O4'-C4'	-5.25	105.70	109.90
1	A	209	GLU	CA-C-O	-5.25	109.08	120.10
6	F	43	GLU	N-CA-C	-5.25	96.83	111.00
7	G	57	ASP	CB-CG-OD2	5.25	123.02	118.30
17	Q	110	ASP	CB-CG-OD2	5.25	123.02	118.30
18	R	94	GLU	N-CA-C	-5.25	96.83	111.00
19	S	110	ASP	CB-CG-OD2	5.25	123.02	118.30
34	i	229	A	O4'-C1'-N9	5.25	112.40	108.20
34	i	542	G	O4'-C1'-C2'	5.25	112.32	107.60
34	i	895	U	P-O5'-C5'	5.25	129.30	120.90
5	E	258	ALA	O-C-N	-5.25	114.31	122.70
11	K	98	ARG	CA-C-O	-5.25	109.08	120.10
28	b	3	LEU	CB-CG-CD2	5.25	119.92	111.00
34	i	551	A	C2'-C3'-O3'	5.25	122.09	113.70
34	i	1001	G	O4'-C1'-C2'	5.25	112.32	107.60
34	i	1078	A	O4'-C1'-C2'	-5.25	100.55	105.80
34	i	1603	U	N1-C1'-C2'	5.25	120.82	114.00
6	F	204	ARG	CA-C-O	-5.24	109.09	120.10
34	i	71	G	C2'-C3'-O3'	-5.24	97.97	109.50
34	i	178	C	N1-C1'-C2'	5.24	120.82	114.00
34	i	189	G	O5'-C5'-C4'	5.24	121.66	111.70
34	i	988	A	C1'-O4'-C4'	-5.24	105.70	109.90
5	E	88	ASP	CB-CG-OD2	5.24	123.02	118.30
34	i	880	C	C3'-C2'-C1'	5.24	105.69	101.50
34	i	1688	G	O4'-C1'-C2'	5.24	112.32	107.60
19	S	104	ASP	CB-CG-OD2	5.24	123.02	118.30
29	c	68	LEU	CA-C-O	-5.24	109.10	120.10
34	i	22	A	C1'-O4'-C4'	5.24	114.09	109.90
27	a	52	ASP	CB-CG-OD2	5.24	123.01	118.30
34	i	297	C	O4'-C1'-N1	5.24	112.39	108.20
34	i	624	A	C3'-C2'-C1'	5.24	105.69	101.50
28	b	52	THR	O-C-N	5.24	131.08	122.70
34	i	1006	G	N9-C1'-C2'	-5.24	106.24	112.00
34	i	1491	G	O4'-C1'-N9	5.24	112.39	108.20
34	i	1683	C	C5'-C4'-O4'	5.24	115.38	109.10
34	i	33	G	C5'-C4'-O4'	5.23	115.38	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	108	ASP	CB-CG-OD2	5.23	123.01	118.30
34	i	382	A	C5'-C4'-O4'	5.23	115.38	109.10
5	E	73	ASP	CB-CG-OD2	5.23	123.01	118.30
16	P	21	ASP	CB-CG-OD2	5.23	123.01	118.30
34	i	1645	A	O4'-C1'-C2'	-5.23	100.57	105.80
7	G	151	ASP	CB-CG-OD2	5.23	123.01	118.30
34	i	78	C	C1'-O4'-C4'	-5.23	105.72	109.90
34	i	534	G	O4'-C1'-C2'	-5.23	100.57	105.80
34	i	1326	G	O4'-C1'-C2'	5.23	112.31	107.60
34	i	1580	U	O4'-C1'-N1	5.23	112.38	108.20
34	i	1742	C	C5'-C4'-C3'	5.23	124.37	116.00
5	E	253	ASP	CB-CG-OD2	5.23	123.00	118.30
8	H	56	GLY	N-CA-C	5.23	126.16	113.10
34	i	1645	A	P-O5'-C5'	-5.23	112.54	120.90
34	i	554	A	N9-C1'-C2'	-5.22	106.25	112.00
34	i	895	U	C3'-C2'-C1'	5.22	105.68	101.50
8	H	194	LEU	CA-C-O	-5.22	109.14	120.10
34	i	530	U	N1-C1'-C2'	-5.22	106.26	112.00
10	J	95	ASP	CB-CG-OD2	5.22	123.00	118.30
34	i	621	U	N1-C1'-C2'	5.22	120.78	114.00
34	i	1331	G	N9-C1'-C2'	5.22	120.78	114.00
34	i	1400	U	C3'-C2'-C1'	5.21	105.67	101.50
1	A	151	ASP	CB-CG-OD2	5.21	122.99	118.30
2	B	60	ASP	CB-CG-OD2	5.21	122.99	118.30
34	i	22	A	O4'-C1'-N9	5.21	112.37	108.20
34	i	271	G	OP1-P-O3'	5.21	116.66	105.20
34	i	906	G	C3'-C2'-C1'	-5.21	97.33	101.50
34	i	1473	U	O4'-C1'-N1	5.21	112.37	108.20
28	b	84	HIS	CA-C-O	-5.21	109.17	120.10
34	i	308	C	O4'-C1'-C2'	-5.21	100.59	105.80
34	i	1283	A	O4'-C1'-N9	5.21	112.37	108.20
34	i	1618	A	C1'-O4'-C4'	5.21	114.06	109.90
34	i	1051	A	C1'-O4'-C4'	5.20	114.06	109.90
26	Z	52	LYS	N-CA-C	-5.20	96.95	111.00
34	i	458	A	P-O5'-C5'	-5.20	112.58	120.90
34	i	1133	U	O4'-C1'-N1	5.20	112.36	108.20
34	i	1482	A	O5'-C5'-C4'	-5.20	101.82	111.70
24	X	138	LYS	O-C-N	-5.20	114.38	122.70
34	i	216	U	C3'-C2'-C1'	5.20	105.66	101.50
33	g	314	ILE	CA-C-O	-5.20	109.19	120.10
34	i	22	A	O4'-C1'-C2'	-5.20	100.60	105.80
34	i	207	U	N1-C1'-C2'	5.20	120.76	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	e	133	SER	CA-C-O	-5.20	109.19	120.10
34	i	1090	C	N1-C1'-C2'	5.20	120.75	114.00
34	i	1328	A	C4'-C3'-C2'	-5.20	97.40	102.60
34	i	1501	U	C3'-C2'-C1'	5.20	105.66	101.50
34	i	84	A	C5'-C4'-O4'	5.19	115.33	109.10
34	i	729	C	C4'-C3'-C2'	-5.19	97.41	102.60
32	f	152	LYS	CA-C-O	-5.19	109.19	120.10
34	i	323	G	O4'-C1'-N9	5.19	112.35	108.20
34	i	599	U	O4'-C1'-C2'	-5.19	100.61	105.80
24	X	88	ASP	CB-CG-OD2	5.19	122.97	118.30
26	Z	104	ARG	CB-CA-C	-5.19	100.02	110.40
34	i	1555	U	C4'-C3'-C2'	-5.19	97.41	102.60
34	i	461	G	N9-C1'-C2'	-5.19	106.29	112.00
34	i	516	A	O4'-C1'-C2'	5.19	112.27	107.60
34	i	1397	A	N9-C1'-C2'	-5.19	106.29	112.00
24	X	115	ILE	C-N-CD	-5.19	109.19	120.60
34	i	201	G	C1'-O4'-C4'	5.19	114.05	109.90
34	i	911	G	C3'-C2'-C1'	-5.19	97.35	101.50
34	i	1645	A	C1'-O4'-C4'	5.19	114.05	109.90
30	d	49	ASP	CB-CG-OD2	5.18	122.97	118.30
34	i	378	U	N1-C1'-C2'	5.18	120.74	114.00
34	i	1461	A	C3'-C2'-C1'	5.18	105.65	101.50
10	J	152	ASP	CB-CG-OD2	5.18	122.96	118.30
21	U	48	LEU	CB-CG-CD2	-5.18	102.19	111.00
34	i	1246	A	N9-C1'-C2'	-5.18	106.30	112.00
15	O	80	ASP	CB-CG-OD2	5.18	122.96	118.30
24	X	139	GLU	CB-CA-C	5.18	120.76	110.40
34	i	209	C	C3'-C2'-C1'	5.18	105.64	101.50
34	i	520	U	C4'-C3'-C2'	-5.18	97.42	102.60
34	i	1036	G	C1'-O4'-C4'	-5.18	105.76	109.90
34	i	1408	C	O5'-P-OP1	5.18	116.92	110.70
34	i	1427	G	N9-C1'-C2'	5.18	120.73	114.00
34	i	799	C	C3'-C2'-C1'	5.18	105.64	101.50
34	i	971	G	O4'-C4'-C3'	-5.18	98.82	104.00
34	i	1737	C	N1-C1'-C2'	5.18	120.73	114.00
34	i	346	C	C3'-C2'-C1'	-5.17	97.36	101.50
34	i	1130	G	C5'-C4'-O4'	5.17	115.31	109.10
9	I	133	GLU	CA-C-N	5.17	128.58	117.20
34	i	1308	G	N9-C1'-C2'	5.17	120.72	114.00
7	G	39	ASP	CB-CG-OD2	5.17	122.95	118.30
34	i	410	G	P-O3'-C3'	-5.17	113.50	119.70
34	i	480	C	O4'-C1'-C2'	-5.17	100.63	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1280	A	C5'-C4'-C3'	-5.17	107.73	116.00
34	i	1765	G	P-O3'-C3'	5.17	125.90	119.70
10	J	91	LYS	CA-C-N	5.17	128.56	117.20
16	P	27	ASP	CB-CG-OD2	5.17	122.95	118.30
23	W	2	VAL	O-C-N	-5.17	114.44	122.70
34	i	1137	G	P-O5'-C5'	5.17	129.16	120.90
18	R	101	ASP	CB-CG-OD2	5.17	122.95	118.30
19	S	62	ASP	CB-CG-OD2	5.17	122.95	118.30
34	i	994	A	C3'-C2'-C1'	5.17	105.63	101.50
34	i	832	G	N9-C1'-C2'	-5.16	106.32	112.00
5	E	21	ASP	CB-CG-OD2	5.16	122.94	118.30
16	P	37	TYR	CA-CB-CG	5.16	123.21	113.40
23	W	55	ASP	CB-CG-OD2	5.16	122.94	118.30
34	i	549	G	O4'-C4'-C3'	-5.16	98.84	104.00
9	I	8	TRP	CE3-CZ3-CH2	5.16	126.87	121.20
12	L	18	GLN	C-N-CA	-5.16	108.80	121.70
15	O	67	ASP	CB-CG-OD2	5.16	122.94	118.30
34	i	411	G	O4'-C1'-C2'	5.16	112.24	107.60
34	i	729	C	O4'-C1'-N1	5.16	112.33	108.20
13	M	43	ASP	CB-CG-OD2	5.16	122.94	118.30
34	i	608	C	C1'-O4'-C4'	5.16	114.02	109.90
34	i	107	A	C1'-O4'-C4'	5.15	114.02	109.90
1	A	53	ARG	CB-CG-CD	-5.15	98.20	111.60
34	i	1629	A	O4'-C1'-N9	5.15	112.32	108.20
34	i	1558	G	O4'-C1'-C2'	5.15	112.23	107.60
34	i	1568	G	O4'-C1'-N9	5.15	112.32	108.20
34	i	1658	A	O4'-C1'-C2'	-5.15	100.65	105.80
34	i	1833	U	C5'-C4'-O4'	5.15	115.28	109.10
34	i	1246	A	O4'-C1'-C2'	-5.15	100.65	105.80
16	P	51	ARG	N-CA-C	5.15	124.89	111.00
34	i	539	C	C3'-C2'-C1'	5.14	105.62	101.50
34	i	916	A	P-O3'-C3'	5.14	125.87	119.70
34	i	1575	A	O4'-C1'-N9	5.14	112.32	108.20
18	R	25	GLY	O-C-N	5.14	130.93	122.70
34	i	125	C	C5'-C4'-O4'	-5.14	102.93	109.10
26	Z	50	PHE	CB-CA-C	-5.14	100.12	110.40
34	i	1858	U	C5'-C4'-O4'	5.14	115.27	109.10
19	S	16	LEU	CA-C-N	-5.14	105.89	117.20
33	g	12	LYS	CB-CA-C	-5.14	100.12	110.40
34	i	439	A	O4'-C1'-N9	5.14	112.31	108.20
34	i	1656	A	O4'-C1'-C2'	5.14	112.23	107.60
34	i	1742	C	C4'-C3'-O3'	-5.13	98.62	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	E	164	LEU	C-N-CA	-5.13	108.87	121.70
34	i	740	G	O3'-P-O5'	-5.13	94.25	104.00
34	i	1379	A	O4'-C1'-N9	5.13	112.31	108.20
34	i	1544	U	N1-C1'-C2'	5.13	120.67	114.00
5	E	237	SER	N-CA-CB	-5.13	102.80	110.50
20	T	144	LYS	CA-C-O	-5.13	109.32	120.10
34	i	32	U	C5'-C4'-O4'	5.13	115.26	109.10
29	c	37	ASP	CB-CG-OD2	5.13	122.92	118.30
34	i	652	G	C3'-C2'-C1'	5.13	105.60	101.50
34	i	1262	C	C1'-O4'-C4'	-5.13	105.80	109.90
34	i	1562	G	O4'-C4'-C3'	-5.13	98.87	104.00
12	L	24	LEU	C-N-CA	5.13	134.52	121.70
34	i	160	U	O4'-C1'-N1	5.13	112.30	108.20
34	i	1328	A	N9-C1'-C2'	-5.13	106.36	112.00
34	i	1513	C	O4'-C4'-C3'	-5.12	98.88	104.00
5	E	158	ASP	CB-CG-OD2	5.12	122.91	118.30
16	P	28	MET	CA-C-N	-5.12	105.93	117.20
34	i	376	C	O4'-C1'-N1	5.12	112.30	108.20
34	i	1302	U	O4'-C1'-N1	5.12	112.30	108.20
34	i	1490	U	C3'-C2'-C1'	-5.12	97.40	101.50
7	G	180	VAL	N-CA-CB	-5.12	100.23	111.50
34	i	125	C	P-O3'-C3'	5.12	125.84	119.70
34	i	1651	G	C3'-C2'-C1'	-5.12	97.40	101.50
34	i	859	U	N1-C1'-C2'	5.12	120.65	114.00
25	Y	80	ASP	CB-CG-OD2	5.12	122.91	118.30
26	Z	51	ASP	CB-CG-OD2	5.12	122.90	118.30
34	i	72	C	P-O5'-C5'	5.12	129.08	120.90
34	i	1776	G	O5'-C5'-C4'	5.12	121.42	111.70
34	i	1609	A	O4'-C1'-N9	5.11	112.29	108.20
11	K	55	ARG	CD-NE-CZ	5.11	130.76	123.60
2	B	196	ASP	CB-CG-OD2	5.11	122.90	118.30
34	i	871	A	C3'-C2'-C1'	5.11	105.59	101.50
5	E	163	ASP	CB-CG-OD2	5.11	122.90	118.30
4	D	52	ALA	O-C-N	-5.11	114.53	122.70
34	i	1267	C	O4'-C1'-C2'	-5.11	100.69	105.80
2	B	104	ASP	CB-CG-OD2	5.11	122.89	118.30
32	f	134	SER	CA-C-N	-5.11	105.97	117.20
34	i	13	C	C3'-C2'-C1'	5.11	105.58	101.50
34	i	74	G	C1'-O4'-C4'	-5.11	105.81	109.90
34	i	376	C	C5'-C4'-C3'	-5.11	107.83	116.00
34	i	1560	C	O4'-C1'-N1	5.11	112.28	108.20
34	i	136	C	C5'-C4'-C3'	5.10	124.17	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	932	G	O4'-C1'-N9	5.10	112.28	108.20
34	i	1235	U	O3'-P-O5'	5.10	113.70	104.00
24	X	126	ALA	N-CA-C	-5.10	97.22	111.00
34	i	503	G	O4'-C1'-C2'	5.10	112.19	107.60
34	i	1614	A	P-O3'-C3'	5.10	125.82	119.70
34	i	1385	C	O5'-P-OP2	-5.10	101.11	105.70
15	O	131	ASP	CB-CG-OD2	5.10	122.89	118.30
34	i	984	C	O4'-C1'-N1	-5.10	104.12	108.20
34	i	1248	C	P-O3'-C3'	-5.10	113.58	119.70
34	i	78	C	O4'-C1'-C2'	-5.10	100.70	105.80
34	i	677	C	P-O3'-C3'	5.10	125.81	119.70
34	i	1272	A	C1'-O4'-C4'	5.10	113.98	109.90
34	i	1675	G	C3'-C2'-C1'	5.10	105.58	101.50
2	B	90	ASP	CB-CG-OD2	5.09	122.88	118.30
34	i	603	C	O4'-C1'-C2'	-5.09	100.71	105.80
34	i	660	A	P-O3'-C3'	5.09	125.81	119.70
34	i	1375	A	C5'-C4'-C3'	-5.09	107.85	116.00
34	i	1551	A	C5'-C4'-C3'	-5.09	107.85	116.00
34	i	1298	G	C5'-C4'-O4'	5.09	115.21	109.10
34	i	1308	G	C3'-C2'-C1'	5.09	105.57	101.50
34	i	1335	U	C5'-C4'-O4'	5.09	115.21	109.10
11	K	43	LEU	N-CA-C	-5.09	97.26	111.00
34	i	1541	G	C3'-C2'-C1'	-5.09	97.43	101.50
10	J	85	GLY	CA-C-N	-5.09	106.01	117.20
34	i	1386	U	N1-C1'-C2'	5.09	120.61	114.00
34	i	43	U	C5'-C4'-O4'	5.08	115.20	109.10
34	i	231	C	O4'-C1'-N1	5.08	112.27	108.20
34	i	1021	U	N1-C1'-C2'	-5.08	106.41	112.00
17	Q	67	ASP	CB-CG-OD2	5.08	122.87	118.30
34	i	419	C	O4'-C1'-C2'	-5.08	100.72	105.80
34	i	1078	A	C1'-O4'-C4'	5.08	113.97	109.90
34	i	1753	G	C1'-O4'-C4'	-5.08	105.84	109.90
5	E	104	ASP	CB-CG-OD2	5.08	122.87	118.30
32	f	106	TYR	N-CA-C	-5.08	97.29	111.00
34	i	1568	G	C4'-C3'-C2'	-5.08	97.52	102.60
35	l	67	PHE	N-CA-C	-5.08	97.29	111.00
34	i	1157	U	N1-C1'-C2'	-5.08	106.42	112.00
25	Y	29	HIS	C-N-CD	-5.08	109.44	120.60
34	i	629	C	O4'-C1'-N1	5.08	112.26	108.20
34	i	1106	G	C1'-O4'-C4'	5.08	113.96	109.90
34	i	1361	G	O4'-C1'-N9	5.08	112.26	108.20
34	i	1483	A	C4'-C3'-O3'	-5.08	98.74	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	152	LYS	CB-CA-C	5.07	120.55	110.40
16	P	23	ASP	CB-CG-OD2	5.07	122.87	118.30
34	i	1186	A	O4'-C1'-N9	5.07	112.26	108.20
34	i	292	A	N9-C1'-C2'	-5.07	106.42	112.00
34	i	794	G	O4'-C1'-N9	-5.07	104.14	108.20
18	R	110	ASP	CB-CG-OD2	5.07	122.86	118.30
24	X	19	ASP	CB-CG-OD2	5.07	122.86	118.30
26	Z	56	ASP	CB-CG-OD2	5.07	122.86	118.30
34	i	318	U	C5'-C4'-C3'	5.07	124.11	116.00
14	N	108	ASP	CB-CG-OD2	5.07	122.86	118.30
34	i	677	C	O4'-C1'-C2'	5.07	112.16	107.60
10	J	89	GLU	N-CA-CB	-5.07	101.48	110.60
34	i	410	G	C4'-C3'-C2'	-5.07	97.53	102.60
34	i	812	A	C3'-C2'-C1'	5.07	105.55	101.50
34	i	896	C	P-O5'-C5'	5.07	129.01	120.90
34	i	1610	U	N1-C1'-C2'	5.07	120.59	114.00
1	A	193	HIS	N-CA-C	5.07	124.67	111.00
8	H	191	GLU	C-N-CA	-5.07	109.04	121.70
10	J	158	ASP	CB-CG-OD2	5.07	122.86	118.30
31	e	118	ASN	N-CA-C	5.06	124.67	111.00
10	J	188	GLY	N-CA-C	5.06	125.76	113.10
34	i	689	G	N9-C1'-C2'	5.06	120.58	114.00
34	i	455	A	O3'-P-O5'	-5.06	94.39	104.00
5	E	129	ILE	CA-C-N	-5.06	106.07	117.20
34	i	1270	G	N9-C1'-C2'	5.06	120.57	114.00
5	E	143	ASP	CB-CG-OD2	5.05	122.85	118.30
23	W	85	ASP	CB-CG-OD2	5.05	122.85	118.30
33	g	143	GLN	CB-CA-C	-5.05	100.29	110.40
34	i	73	C	P-O3'-C3'	-5.05	113.64	119.70
34	i	341	G	O4'-C4'-C3'	-5.05	98.94	104.00
1	A	205	ARG	NE-CZ-NH1	5.05	122.83	120.30
34	i	1413	C	O4'-C4'-C3'	-5.05	98.95	104.00
34	i	1385	C	O4'-C1'-N1	5.05	112.24	108.20
7	G	103	ASP	CB-CG-OD2	5.05	122.84	118.30
34	i	124	U	O3'-P-O5'	-5.05	94.41	104.00
34	i	680	G	O4'-C1'-N9	5.05	112.24	108.20
34	i	1663	U	C4'-C3'-C2'	-5.05	97.55	102.60
14	N	31	ASP	CB-CG-OD2	5.05	122.84	118.30
34	i	839	C	C5'-C4'-O4'	5.05	115.16	109.10
34	i	1275	C	C1'-O4'-C4'	5.04	113.93	109.90
34	i	1711	C	N1-C1'-C2'	5.04	120.56	114.00
34	i	1023	A	O3'-P-O5'	5.04	113.58	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1730	A	N9-C1'-C2'	5.04	120.55	114.00
21	U	52	GLY	C-N-CD	-5.04	109.51	120.60
34	i	888	U	O4'-C1'-N1	5.04	112.23	108.20
34	i	1323	G	N9-C1'-C2'	5.04	120.55	114.00
34	i	88	G	O4'-C1'-C2'	5.04	112.13	107.60
34	i	309	A	O4'-C1'-N9	5.04	112.23	108.20
2	B	191	ASP	CB-CG-OD2	5.04	122.83	118.30
32	f	86	THR	N-CA-C	-5.03	97.41	111.00
34	i	850	A	O5'-C5'-C4'	-5.03	102.14	111.70
34	i	677	C	N1-C1'-C2'	5.03	120.54	114.00
34	i	1009	U	O4'-C1'-N1	5.03	112.22	108.20
34	i	1442	A	C4'-C3'-O3'	5.03	123.06	113.00
34	i	8	U	O4'-C1'-C2'	-5.03	100.77	105.80
34	i	1784	A	C1'-O4'-C4'	-5.03	105.88	109.90
22	V	66	ASP	CB-CG-OD2	5.03	122.82	118.30
34	i	645	A	C3'-C2'-C1'	5.03	105.52	101.50
34	i	1275	C	C3'-C2'-C1'	5.03	105.52	101.50
17	Q	31	LEU	C-N-CA	5.02	134.26	121.70
34	i	79	A	C1'-O4'-C4'	5.02	113.92	109.90
25	Y	34	THR	N-CA-C	5.02	124.56	111.00
34	i	610	G	O4'-C1'-C2'	-5.02	100.78	105.80
5	E	93	ASP	CB-CG-OD2	5.02	122.82	118.30
34	i	825	C	O5'-P-OP1	5.02	116.72	110.70
34	i	1014	U	O4'-C1'-N1	5.02	112.21	108.20
14	N	82	PRO	CA-C-N	-5.01	106.17	117.20
34	i	1470	A	O3'-P-O5'	5.01	113.53	104.00
34	i	1334	G	C4'-C3'-C2'	-5.01	97.59	102.60
34	i	1475	G	N9-C1'-C2'	-5.01	106.49	112.00
30	d	6	LEU	N-CA-C	-5.01	97.47	111.00
34	i	1426	C	N1-C1'-C2'	-5.01	106.49	112.00
3	C	98	GLN	N-CA-C	5.01	124.53	111.00
34	i	180	G	O3'-P-O5'	5.01	113.52	104.00
34	i	468	G	P-O5'-C5'	5.01	128.91	120.90
34	i	57	U	N1-C1'-C2'	-5.01	106.49	112.00
34	i	981	G	O4'-C1'-C2'	5.01	112.11	107.60
34	i	1147	G	O4'-C1'-N9	5.01	112.20	108.20
34	i	1452	G	N9-C1'-C2'	5.01	120.51	114.00
34	i	1458	U	C2-N1-C1'	5.01	123.71	117.70
34	i	933	C	O4'-C1'-N1	5.00	112.20	108.20
34	i	955	G	C3'-C2'-C1'	5.00	105.50	101.50
34	i	1405	A	O4'-C4'-C3'	-5.00	99.00	104.00
32	f	148	TYR	CB-CG-CD1	-5.00	118.00	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1135	C	C2-N1-C1'	5.00	124.31	118.80
34	i	1306	U	O4'-C1'-N1	5.00	112.20	108.20
34	i	1579	G	C3'-C2'-C1'	5.00	105.50	101.50
34	i	1862	U	O4'-C1'-N1	5.00	112.20	108.20
34	i	176	U	O4'-C1'-C2'	-5.00	100.80	105.80

All (13) chirality outliers are listed below:

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

All (183) planarity outliers are listed below:

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

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Mol	Chain	Res	Type	Group
3	C	97	VAL	Mainchain,Peptide
4	D	144	GLY	Peptide
4	D	190	LEU	Mainchain
4	D	3	VAL	Mainchain,Peptide
4	D	96	LEU	Mainchain
5	E	1	MET	Peptide
5	E	129	ILE	Peptide
6	F	43	GLU	Peptide
6	F	44	LYS	Peptide
6	F	79	HIS	Peptide
7	G	155	GLN	Mainchain
8	H	105	THR	Peptide
8	H	108	SER	Peptide
8	H	109	ARG	Sidechain
8	H	113	LYS	Mainchain
8	H	118	ARG	Sidechain
8	H	16	PRO	Peptide
8	H	17	ASP	Peptide
8	H	190	PRO	Peptide
8	H	193	GLN	Peptide
8	H	53	VAL	Peptide
9	I	123	ARG	Mainchain
9	I	129	LEU	Mainchain
9	I	131	PRO	Mainchain
9	I	155	ASN	Peptide
9	I	190	LEU	Mainchain
9	I	2	GLY	Mainchain
9	I	3	ILE	Peptide
9	I	55	TYR	Sidechain
10	J	146	SER	Mainchain
10	J	16	PRO	Peptide
10	J	161	LEU	Mainchain,Peptide
10	J	162	ARG	Peptide
10	J	164	PRO	Mainchain
10	J	165	TYR	Peptide
10	J	85	GLY	Mainchain
10	J	90	GLY	Peptide
10	J	91	LYS	Mainchain
10	J	92	MET	Peptide
11	K	29	MET	Peptide
11	K	30	PRO	Peptide
11	K	37	ASP	Peptide

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Mol	Chain	Res	Type	Group
11	K	43	LEU	Peptide
11	K	55	ARG	Sidechain
11	K	70	TYR	Sidechain
11	K	86	PRO	Peptide
11	K	89	ILE	Mainchain
11	K	90	VAL	Mainchain
11	K	92	ALA	Peptide
11	K	97	SER	Peptide
12	L	147	LYS	Peptide
12	L	149	ALA	Mainchain
12	L	152	LYS	Mainchain
12	L	18	GLN	Peptide
12	L	26	GLY	Peptide
12	L	27	GLU	Peptide
12	L	97	ARG	Peptide
13	M	98	GLY	Peptide
14	N	13	GLN	Peptide
14	N	14	SER	Peptide
14	N	18	TYR	Peptide
14	N	82	PRO	Peptide
15	O	138	ASP	Peptide
16	P	17	TYR	Sidechain,Peptide
16	P	18	ARG	Sidechain
16	P	27	ASP	Peptide
16	P	36	LEU	Peptide
16	P	37	TYR	Peptide
16	P	38	SER	Peptide
16	P	48	GLY	Mainchain,Peptide
16	P	50	ARG	Peptide
17	Q	146	ARG	Sidechain
17	Q	31	LEU	Peptide
17	Q	43	GLU	Peptide
17	Q	47	LEU	Peptide
18	R	1	MET	Mainchain
18	R	122	PRO	Peptide
18	R	88	VAL	Mainchain,Peptide
18	R	89	SER	Peptide
19	S	10	GLN	Peptide
19	S	141	ARG	Mainchain
19	S	15	VAL	Peptide
19	S	40	TYR	Sidechain,Mainchain
19	S	8	LYS	Peptide

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Mol	Chain	Res	Type	Group
19	S	87	GLN	Mainchain
19	S	9	PHE	Peptide
19	S	93	GLY	Peptide
19	S	94	LYS	Peptide
20	T	142	LYS	Mainchain,Peptide
20	T	4	VAL	Mainchain,Peptide
20	T	42	HIS	Sidechain
20	T	82	ARG	Sidechain
21	U	104	ILE	Mainchain
21	U	105	SER	Mainchain
21	U	108	PRO	Peptide
21	U	46	LYS	Peptide
21	U	50	VAL	Peptide
21	U	68	THR	Peptide
21	U	70	CYS	Mainchain
21	U	93	SER	Mainchain
22	V	25	GLY	Peptide
22	V	48	GLY	Mainchain,Peptide
22	V	49	GLN	Peptide
22	V	61	ARG	Sidechain
22	V	63	GLY	Mainchain
22	V	81	GLN	Mainchain,Peptide
22	V	9	VAL	Peptide
23	W	2	VAL	Mainchain
23	W	84	LYS	Peptide
24	X	1	MET	Peptide
24	X	127	ASN	Peptide
24	X	23	HIS	Mainchain
24	X	42	GLY	Peptide
25	Y	103	SER	Peptide
25	Y	32	LYS	Peptide
25	Y	33	ALA	Peptide
25	Y	34	THR	Peptide
25	Y	85	ASN	Peptide
25	Y	86	GLU	Mainchain
26	Z	101	SER	Mainchain
26	Z	104	ARG	Sidechain,Mainchain
26	Z	41	ARG	Peptide
26	Z	93	SER	Peptide
26	Z	95	GLY	Peptide
27	a	96	THR	Mainchain,Peptide
28	b	2	PRO	Mainchain

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Mol	Chain	Res	Type	Group
28	b	36	LYS	Peptide
28	b	37	CYS	Mainchain
31	e	93	VAL	Mainchain
31	e	94	ALA	Mainchain,Peptide
31	e	96	GLN	Mainchain
31	e	97	GLU	Peptide
32	f	102	VAL	Peptide
32	f	105	TYR	Peptide
32	f	135	HIS	Mainchain
32	f	148	TYR	Peptide
32	f	84	SER	Peptide
32	f	90	LYS	Peptide
33	g	12	LYS	Peptide
33	g	142	VAL	Mainchain
33	g	148	SER	Mainchain
33	g	158	PRO	Peptide
33	g	159	ASN	Mainchain,Peptide
33	g	160	SER	Peptide
33	g	192	THR	Peptide
33	g	273	GLU	Peptide
33	g	283	PRO	Peptide
33	g	47	ARG	Peptide
33	g	59	LEU	Mainchain
33	g	60	ARG	Peptide

5.2 Too-close contacts [i](#)

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

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	206/295 (70%)	156 (76%)	23 (11%)	27 (13%)	0	5
2	B	213/264 (81%)	173 (81%)	25 (12%)	15 (7%)	1	14
3	C	224/278 (81%)	200 (89%)	13 (6%)	11 (5%)	2	20
4	D	225/243 (93%)	180 (80%)	23 (10%)	22 (10%)	0	10
5	E	261/263 (99%)	209 (80%)	28 (11%)	24 (9%)	1	11
6	F	189/204 (93%)	162 (86%)	15 (8%)	12 (6%)	1	17
7	G	235/249 (94%)	201 (86%)	19 (8%)	15 (6%)	1	16
8	H	188/194 (97%)	146 (78%)	11 (6%)	31 (16%)	0	3
9	I	204/208 (98%)	169 (83%)	12 (6%)	23 (11%)	0	7
10	J	180/194 (93%)	138 (77%)	18 (10%)	24 (13%)	0	5
11	K	96/165 (58%)	67 (70%)	11 (12%)	18 (19%)	0	2
12	L	156/158 (99%)	132 (85%)	10 (6%)	14 (9%)	1	11
13	M	122/132 (92%)	85 (70%)	16 (13%)	21 (17%)	0	3
14	N	148/151 (98%)	124 (84%)	18 (12%)	6 (4%)	3	23
15	O	134/151 (89%)	101 (75%)	14 (10%)	19 (14%)	0	4
16	P	125/145 (86%)	92 (74%)	16 (13%)	17 (14%)	0	4
17	Q	139/146 (95%)	109 (78%)	20 (14%)	10 (7%)	1	14
18	R	124/135 (92%)	96 (77%)	13 (10%)	15 (12%)	0	6
19	S	135/152 (89%)	106 (78%)	20 (15%)	9 (7%)	1	15
20	T	139/145 (96%)	119 (86%)	10 (7%)	10 (7%)	1	14
21	U	102/119 (86%)	76 (74%)	10 (10%)	16 (16%)	0	3
22	V	80/83 (96%)	55 (69%)	11 (14%)	14 (18%)	0	3
23	W	127/130 (98%)	110 (87%)	15 (12%)	2 (2%)	9	44
24	X	140/143 (98%)	121 (86%)	11 (8%)	8 (6%)	1	18
25	Y	124/133 (93%)	91 (73%)	15 (12%)	18 (14%)	0	4
26	Z	73/125 (58%)	52 (71%)	12 (16%)	9 (12%)	0	5
27	a	105/115 (91%)	72 (69%)	14 (13%)	19 (18%)	0	3
28	b	82/84 (98%)	57 (70%)	14 (17%)	11 (13%)	0	5
29	c	62/69 (90%)	44 (71%)	13 (21%)	5 (8%)	1	12
30	d	51/56 (91%)	46 (90%)	3 (6%)	2 (4%)	3	23

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
31	e	57/133 (43%)	37 (65%)	7 (12%)	13 (23%)	0	2
32	f	69/156 (44%)	38 (55%)	13 (19%)	18 (26%)	0	1
33	g	311/317 (98%)	271 (87%)	23 (7%)	17 (6%)	2	19
35	l	83/113 (74%)	49 (59%)	24 (29%)	10 (12%)	0	6
All	All	4909/5648 (87%)	3884 (79%)	520 (11%)	505 (10%)	0	8

All (505) Ramachandran outliers are listed below:

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

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Mol	Chain	Res	Type
4	D	220	THR
4	D	221	THR
4	D	222	PRO
4	D	223	ILE
4	D	226	GLN
5	E	12	VAL
5	E	24	THR
5	E	76	VAL
5	E	95	THR
5	E	163	ASP
5	E	196	THR
5	E	260	GLN
5	E	261	SER
6	F	43	GLU
6	F	44	LYS
6	F	202	SER
6	F	203	ASN
7	G	20	ASP
7	G	154	ARG
7	G	164	LYS
7	G	174	PRO
7	G	175	LYS
7	G	180	VAL
7	G	181	THR
8	H	15	LYS
8	H	16	PRO
8	H	33	ASN
8	H	35	ASP
8	H	66	VAL
8	H	88	SER
8	H	108	SER
8	H	109	ARG
8	H	110	THR
8	H	116	ARG
8	H	135	PHE
8	H	137	SER
8	H	138	GLU
8	H	160	LYS
8	H	190	PRO
9	I	8	TRP
9	I	120	PRO
9	I	124	LYS

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Mol	Chain	Res	Type
9	I	131	PRO
9	I	133	GLU
9	I	139	LYS
9	I	140	LYS
9	I	142	SER
9	I	143	LYS
9	I	145	ILE
9	I	153	LYS
9	I	154	LYS
9	I	158	ILE
9	I	206	LYS
10	J	19	PRO
10	J	22	LYS
10	J	36	GLY
10	J	110	LEU
10	J	111	GLN
10	J	118	GLY
10	J	119	LEU
10	J	122	SER
10	J	138	ARG
10	J	161	LEU
10	J	163	SER
10	J	169	ARG
10	J	170	PRO
10	J	172	ARG
11	K	2	LEU
11	K	3	MET
11	K	30	PRO
11	K	35	LEU
11	K	39	ASN
11	K	40	VAL
11	K	41	PRO
11	K	44	HIS
11	K	63	ALA
11	K	88	GLU
11	K	89	ILE
12	L	5	GLN
12	L	6	THR
12	L	7	GLU
12	L	20	LYS
12	L	23	VAL
12	L	147	LYS

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Mol	Chain	Res	Type
12	L	152	LYS
12	L	153	LYS
13	M	12	MET
13	M	15	ASN
13	M	44	LYS
13	M	72	HIS
13	M	77	ILE
13	M	78	LYS
13	M	79	VAL
13	M	81	ASP
13	M	89	VAL
13	M	96	ARG
13	M	100	PRO
13	M	116	LYS
13	M	117	GLU
14	N	22	VAL
15	O	23	GLU
15	O	52	THR
15	O	53	ILE
15	O	64	ALA
15	O	104	ARG
15	O	137	SER
15	O	138	ASP
15	O	139	SER
15	O	140	THR
16	P	6	GLN
16	P	11	THR
16	P	12	PHE
16	P	37	TYR
16	P	38	SER
16	P	68	PRO
16	P	69	PRO
16	P	71	GLU
16	P	73	PRO
16	P	75	VAL
16	P	125	PRO
16	P	126	VAL
16	P	127	LYS
17	Q	19	ALA
17	Q	61	GLU
17	Q	62	ARG
17	Q	117	ARG

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Mol	Chain	Res	Type
17	Q	119	LEU
17	Q	141	TYR
18	R	88	VAL
18	R	89	SER
18	R	100	PRO
18	R	101	ASP
18	R	121	GLN
18	R	123	THR
19	S	11	HIS
19	S	53	THR
19	S	59	LEU
19	S	90	VAL
20	T	5	THR
20	T	31	PRO
20	T	32	GLU
20	T	33	TRP
20	T	34	VAL
20	T	96	SER
20	T	143	LYS
21	U	51	LYS
21	U	94	PRO
21	U	95	SER
21	U	107	GLU
21	U	118	ASP
22	V	4	ASN
22	V	10	ASP
22	V	42	VAL
22	V	43	THR
22	V	44	GLY
22	V	50	SER
22	V	65	SER
22	V	78	ILE
24	X	3	LYS
24	X	4	CYS
25	Y	6	THR
25	Y	30	PRO
25	Y	34	THR
25	Y	86	GLU
25	Y	87	PRO
25	Y	100	LYS
25	Y	104	ARG
25	Y	120	THR

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Mol	Chain	Res	Type
26	Z	93	SER
26	Z	104	ARG
26	Z	108	ILE
26	Z	113	THR
27	a	28	CYS
27	a	46	GLU
27	a	47	ALA
27	a	58	VAL
27	a	59	PHE
27	a	61	ALA
27	a	63	VAL
27	a	64	LEU
27	a	98	PRO
27	a	99	PRO
27	a	103	PRO
28	b	62	VAL
28	b	63	LEU
28	b	64	CYS
29	c	8	PRO
29	c	67	ARG
30	d	8	TRP
31	e	76	VAL
31	e	78	GLY
31	e	81	ALA
31	e	98	LYS
31	e	119	VAL
31	e	121	PRO
31	e	126	LYS
32	f	84	SER
32	f	85	TYR
32	f	86	THR
32	f	91	ASN
32	f	102	VAL
32	f	106	TYR
32	f	110	GLU
32	f	128	ALA
33	g	3	GLU
33	g	48	ASP
33	g	52	TYR
33	g	96	THR
33	g	282	GLU
33	g	283	PRO

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Mol	Chain	Res	Type
35	l	34	ARG
35	l	96	PHE
35	l	100	ILE
35	l	103	ALA
1	A	7	VAL
1	A	96	ALA
1	A	112	ILE
1	A	140	VAL
1	A	159	ILE
1	A	186	ARG
1	A	190	SER
1	A	191	ARG
2	B	93	GLY
2	B	209	ASP
3	C	43	LYS
3	C	246	PHE
4	D	78	GLY
4	D	194	PRO
4	D	201	LYS
4	D	208	VAL
5	E	104	ASP
5	E	164	LEU
6	F	21	GLY
6	F	32	ASP
6	F	41	VAL
6	F	54	GLY
6	F	79	HIS
7	G	26	THR
7	G	146	ASN
7	G	153	VAL
8	H	11	PRO
8	H	17	ASP
8	H	38	ALA
8	H	41	ARG
8	H	76	GLN
8	H	100	ILE
8	H	112	ASN
8	H	120	ARG
8	H	159	ASP
8	H	193	GLN
9	I	22	HIS
9	I	192	GLY

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Mol	Chain	Res	Type
10	J	106	LEU
10	J	120	ALA
10	J	124	HIS
10	J	135	ILE
10	J	148	ILE
11	K	34	GLU
11	K	91	PRO
12	L	4	ILE
12	L	21	LYS
12	L	22	ARG
12	L	57	ASP
13	M	45	ARG
14	N	68	GLY
15	O	54	CYS
15	O	56	VAL
16	P	54	HIS
17	Q	32	ILE
17	Q	100	VAL
18	R	93	GLN
18	R	112	GLY
18	R	125	GLY
19	S	17	ASN
19	S	31	THR
19	S	140	GLY
20	T	142	LYS
21	U	74	SER
21	U	98	VAL
22	V	6	GLY
22	V	33	PRO
22	V	48	GLY
23	W	66	THR
24	X	59	ALA
25	Y	95	GLY
25	Y	99	LYS
25	Y	119	GLY
26	Z	53	ALA
27	a	35	ALA
28	b	2	PRO
28	b	38	PRO
28	b	81	ARG
31	e	77	HIS
31	e	104	GLY

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Mol	Chain	Res	Type
31	e	124	GLY
32	f	98	VAL
32	f	127	GLY
32	f	148	TYR
33	g	49	GLU
33	g	60	ARG
33	g	144	ASP
33	g	159	ASN
33	g	171	ASP
33	g	281	ALA
33	g	295	GLY
1	A	11	LYS
1	A	30	LEU
1	A	194	PRO
1	A	205	ARG
2	B	56	LYS
2	B	82	ARG
4	D	218	LEU
5	E	25	SER
5	E	168	LYS
5	E	194	VAL
5	E	205	PHE
7	G	69	THR
8	H	18	GLU
8	H	117	PRO
8	H	150	GLY
9	I	105	ASP
9	I	106	SER
9	I	144	LYS
10	J	91	LYS
11	K	28	HIS
11	K	87	PRO
13	M	91	LEU
14	N	28	LEU
15	O	32	HIS
16	P	17	TYR
16	P	39	ALA
18	R	86	PRO
20	T	29	LYS
21	U	70	CYS
21	U	93	SER
21	U	110	VAL

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Mol	Chain	Res	Type
24	X	92	ASN
25	Y	5	VAL
25	Y	53	ASP
25	Y	60	PHE
25	Y	63	HIS
27	a	13	LYS
27	a	97	PRO
27	a	102	ARG
27	a	107	ALA
28	b	7	LEU
29	c	65	ALA
31	e	127	LYS
31	e	129	PRO
32	f	137	ASP
32	f	138	ARG
33	g	84	ASP
33	g	255	SER
33	g	285	GLN
35	l	31	ILE
35	l	39	ASN
35	l	65	LYS
1	A	104	THR
2	B	224	GLU
3	C	244	THR
3	C	249	SER
5	E	30	ARG
5	E	119	ALA
5	E	189	LEU
6	F	37	ASP
7	G	33	ALA
7	G	122	PRO
10	J	151	LEU
10	J	162	ARG
11	K	67	PHE
11	K	95	ARG
12	L	119	ASP
13	M	29	ASP
13	M	113	ASP
15	O	17	LEU
15	O	83	GLN
16	P	50	ARG
18	R	95	ILE

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Mol	Chain	Res	Type
18	R	122	PRO
19	S	12	ILE
20	T	46	ALA
21	U	50	VAL
22	V	79	VAL
24	X	9	THR
24	X	129	SER
25	Y	102	THR
26	Z	111	ARG
26	Z	114	LYS
27	a	62	TYR
28	b	10	PRO
28	b	24	LEU
29	c	63	ARG
32	f	145	CYS
33	g	37	ASP
35	l	59	LEU
3	C	164	THR
4	D	80	PRO
5	E	90	ILE
5	E	134	LYS
5	E	213	ALA
9	I	52	ASN
9	I	59	ARG
11	K	38	LYS
12	L	2	ALA
13	M	59	PRO
13	M	94	ILE
13	M	95	ASP
14	N	3	ARG
14	N	138	ASN
15	O	22	ALA
15	O	38	ASN
17	Q	43	GLU
18	R	99	ASP
19	S	7	GLU
21	U	26	SER
21	U	116	ILE
21	U	117	ALA
23	W	67	GLY
24	X	78	GLY
24	X	99	GLU

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Mol	Chain	Res	Type
25	Y	51	THR
25	Y	121	ALA
26	Z	62	VAL
26	Z	78	LYS
27	a	105	GLY
29	c	39	SER
31	e	97	GLU
32	f	93	HIS
32	f	94	LYS
32	f	147	THR
35	l	41	ARG
1	A	23	THR
1	A	110	ASN
5	E	73	ASP
6	F	46	ALA
6	F	183	GLY
7	G	68	LEU
7	G	165	GLU
8	H	170	VAL
9	I	12	ARG
10	J	68	PRO
10	J	116	LYS
14	N	60	VAL
15	O	24	GLY
15	O	136	PRO
18	R	116	ASN
22	V	9	VAL
32	f	87	THR
4	D	63	GLY
9	I	119	LEU
21	U	104	ILE
22	V	77	GLY
2	B	24	PRO
5	E	152	PRO
8	H	10	LYS
1	A	95	GLY
1	A	98	PRO
3	C	161	LYS
5	E	195	ILE
5	E	231	GLY
15	O	62	VAL
17	Q	42	ILE

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

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	174/244 (71%)	140 (80%)	34 (20%)	1	8
2	B	196/231 (85%)	155 (79%)	41 (21%)	1	6
3	C	187/215 (87%)	147 (79%)	40 (21%)	1	6
4	D	190/202 (94%)	144 (76%)	46 (24%)	0	4
5	E	225/225 (100%)	173 (77%)	52 (23%)	1	4
6	F	161/170 (95%)	117 (73%)	44 (27%)	0	3
7	G	207/218 (95%)	157 (76%)	50 (24%)	0	4
8	H	170/174 (98%)	124 (73%)	46 (27%)	0	3
9	I	177/179 (99%)	142 (80%)	35 (20%)	1	8
10	J	157/168 (94%)	128 (82%)	29 (18%)	1	9
11	K	89/136 (65%)	61 (68%)	28 (32%)	0	2
12	L	142/142 (100%)	105 (74%)	37 (26%)	0	3
13	M	101/108 (94%)	78 (77%)	23 (23%)	1	5
14	N	130/131 (99%)	103 (79%)	27 (21%)	1	6
15	O	106/119 (89%)	87 (82%)	19 (18%)	2	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	P	116/130 (89%)	84 (72%)	32 (28%)	0	3
17	Q	117/121 (97%)	89 (76%)	28 (24%)	0	4
18	R	114/121 (94%)	90 (79%)	24 (21%)	1	6
19	S	119/132 (90%)	95 (80%)	24 (20%)	1	7
20	T	113/116 (97%)	87 (77%)	26 (23%)	1	4
21	U	94/107 (88%)	74 (79%)	20 (21%)	1	6
22	V	67/68 (98%)	50 (75%)	17 (25%)	0	3
23	W	112/113 (99%)	98 (88%)	14 (12%)	4	19
24	X	114/115 (99%)	91 (80%)	23 (20%)	1	7
25	Y	108/115 (94%)	85 (79%)	23 (21%)	1	6
26	Z	66/103 (64%)	53 (80%)	13 (20%)	1	8
27	a	91/99 (92%)	76 (84%)	15 (16%)	2	12
28	b	76/76 (100%)	63 (83%)	13 (17%)	2	11
29	c	57/62 (92%)	46 (81%)	11 (19%)	1	8
30	d	47/49 (96%)	35 (74%)	12 (26%)	0	3
31	e	49/106 (46%)	26 (53%)	23 (47%)	0	0
32	f	64/140 (46%)	43 (67%)	21 (33%)	0	2
33	g	272/275 (99%)	224 (82%)	48 (18%)	2	11
35	l	74/96 (77%)	57 (77%)	17 (23%)	1	4
All	All	4282/4806 (89%)	3327 (78%)	955 (22%)	1	5

All (955) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	LEU
1	A	7	VAL
1	A	10	MET
1	A	12	GLU
1	A	13	GLU
1	A	17	LYS
1	A	19	LEU
1	A	25	LEU
1	A	36	GLN
1	A	40	LYS
1	A	42	LYS

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Mol	Chain	Res	Type
1	A	44	ASP
1	A	52	LYS
1	A	58	LEU
1	A	63	ARG
1	A	73	ASP
1	A	88	LEU
1	A	89	LYS
1	A	102	ARG
1	A	117	ARG
1	A	128	ARG
1	A	139	TYR
1	A	147	LEU
1	A	159	ILE
1	A	169	HIS
1	A	181	GLU
1	A	186	ARG
1	A	188	THR
1	A	191	ARG
1	A	195	TRP
1	A	196	GLU
1	A	198	MET
1	A	204	TYR
1	A	207	PRO
2	B	19	LYS
2	B	20	LYS
2	B	21	VAL
2	B	22	VAL
2	B	34	LYS
2	B	41	ILE
2	B	48	LEU
2	B	52	THR
2	B	55	THR
2	B	56	LYS
2	B	75	GLN
2	B	78	GLU
2	B	82	ARG
2	B	83	LYS
2	B	89	GLU
2	B	94	LYS
2	B	115	LYS
2	B	116	LYS
2	B	131	ASP

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Mol	Chain	Res	Type
2	B	138	PHE
2	B	144	LYS
2	B	148	ASN
2	B	150	ILE
2	B	151	ARG
2	B	158	HIS
2	B	162	ARG
2	B	165	ARG
2	B	166	LYS
2	B	172	MET
2	B	181	LEU
2	B	182	LYS
2	B	195	LYS
2	B	208	HIS
2	B	211	PHE
2	B	213	ARG
2	B	214	LYS
2	B	219	LYS
2	B	222	LYS
2	B	223	PHE
2	B	227	LYS
2	B	229	MET
3	C	43	LYS
3	C	48	VAL
3	C	49	THR
3	C	50	LYS
3	C	51	LEU
3	C	56	LYS
3	C	58	MET
3	C	59	LYS
3	C	61	LYS
3	C	79	ILE
3	C	89	ASP
3	C	95	MET
3	C	99	LYS
3	C	100	GLN
3	C	101	THR
3	C	105	GLN
3	C	119	ASN
3	C	127	LYS
3	C	131	GLU
3	C	145	LEU

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Mol	Chain	Res	Type
3	C	151	ARG
3	C	152	ARG
3	C	157	ASN
3	C	158	LYS
3	C	168	LYS
3	C	169	VAL
3	C	196	LYS
3	C	197	LYS
3	C	201	MET
3	C	221	PHE
3	C	223	LYS
3	C	235	TYR
3	C	242	LYS
3	C	244	THR
3	C	246	PHE
3	C	247	THR
3	C	248	LYS
3	C	252	GLN
3	C	256	ASP
3	C	260	LYS
4	D	8	LYS
4	D	10	LYS
4	D	18	LYS
4	D	21	LEU
4	D	27	ARG
4	D	31	GLU
4	D	35	SER
4	D	44	THR
4	D	56	GLN
4	D	64	ARG
4	D	67	ARG
4	D	74	GLN
4	D	76	ARG
4	D	79	PHE
4	D	89	GLU
4	D	90	LYS
4	D	94	ARG
4	D	97	CYS
4	D	103	GLU
4	D	113	LEU
4	D	120	TYR
4	D	127	MET

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Mol	Chain	Res	Type
4	D	129	SER
4	D	146	ARG
4	D	151	LYS
4	D	156	LEU
4	D	157	MET
4	D	158	ILE
4	D	176	LEU
4	D	177	LEU
4	D	178	ARG
4	D	187	LYS
4	D	190	LEU
4	D	192	TRP
4	D	198	ILE
4	D	202	LYS
4	D	206	ASP
4	D	207	HIS
4	D	211	VAL
4	D	212	GLU
4	D	214	LYS
4	D	215	ASP
4	D	216	GLU
4	D	218	LEU
4	D	220	THR
4	D	226	GLN
5	E	1	MET
5	E	6	LYS
5	E	7	LYS
5	E	9	LEU
5	E	10	LYS
5	E	38	LEU
5	E	39	ARG
5	E	48	LEU
5	E	49	ARG
5	E	56	LEU
5	E	65	CYS
5	E	67	GLN
5	E	68	ARG
5	E	77	ARG
5	E	94	LYS
5	E	97	GLU
5	E	106	LYS
5	E	118	GLU

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Mol	Chain	Res	Type
5	E	120	LYS
5	E	122	LYS
5	E	123	LEU
5	E	125	LYS
5	E	128	LYS
5	E	130	PHE
5	E	133	THR
5	E	136	ILE
5	E	145	ARG
5	E	147	ILE
5	E	148	ARG
5	E	151	ASP
5	E	153	LEU
5	E	164	LEU
5	E	165	GLU
5	E	168	LYS
5	E	174	LYS
5	E	175	PHE
5	E	180	LEU
5	E	181	CYS
5	E	198	ARG
5	E	200	ARG
5	E	202	PRO
5	E	211	LYS
5	E	212	ASP
5	E	221	ARG
5	E	222	LEU
5	E	237	SER
5	E	240	ARG
5	E	242	LYS
5	E	245	ARG
5	E	246	LEU
5	E	259	LYS
5	E	260	GLN
6	F	15	PRO
6	F	18	LYS
6	F	29	GLN
6	F	36	GLN
6	F	37	ASP
6	F	38	TYR
6	F	41	VAL
6	F	42	LYS

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Mol	Chain	Res	Type
6	F	43	GLU
6	F	44	LYS
6	F	47	LYS
6	F	49	LEU
6	F	60	ARG
6	F	62	ARG
6	F	63	LYS
6	F	65	GLN
6	F	71	ARG
6	F	76	MET
6	F	78	MET
6	F	85	LYS
6	F	88	MET
6	F	91	ARG
6	F	94	LYS
6	F	98	GLU
6	F	110	GLN
6	F	116	ILE
6	F	122	ARG
6	F	125	SER
6	F	127	ARG
6	F	128	ILE
6	F	130	ARG
6	F	136	ARG
6	F	145	ARG
6	F	164	ARG
6	F	167	LYS
6	F	175	ASP
6	F	177	LEU
6	F	182	LYS
6	F	186	ASN
6	F	190	ILE
6	F	192	LYS
6	F	195	GLU
6	F	202	SER
6	F	204	ARG
7	G	1	MET
7	G	2	LYS
7	G	13	GLN
7	G	17	GLU
7	G	19	ASP
7	G	29	GLU

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Mol	Chain	Res	Type
7	G	30	LYS
7	G	31	ARG
7	G	32	MET
7	G	44	GLU
7	G	58	LYS
7	G	64	LYS
7	G	74	ARG
7	G	76	LEU
7	G	77	LEU
7	G	79	LYS
7	G	88	ARG
7	G	94	ARG
7	G	98	ARG
7	G	115	LYS
7	G	116	LYS
7	G	120	ASP
7	G	121	ILE
7	G	126	ASP
7	G	127	THR
7	G	128	THR
7	G	131	ARG
7	G	133	LEU
7	G	137	ARG
7	G	142	ARG
7	G	143	LYS
7	G	145	PHE
7	G	150	GLU
7	G	158	VAL
7	G	159	ARG
7	G	164	LYS
7	G	168	LYS
7	G	170	ARG
7	G	172	LYS
7	G	175	LYS
7	G	179	LEU
7	G	180	VAL
7	G	191	ARG
7	G	196	LYS
7	G	198	ARG
7	G	218	LYS
7	G	219	GLU
7	G	224	ARG

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Mol	Chain	Res	Type
7	G	230	LYS
7	G	233	ARG
8	H	9	VAL
8	H	10	LYS
8	H	11	PRO
8	H	14	GLU
8	H	15	LYS
8	H	16	PRO
8	H	17	ASP
8	H	23	ILE
8	H	32	MET
8	H	34	SER
8	H	36	LEU
8	H	37	LYS
8	H	40	LEU
8	H	57	ARG
8	H	58	LYS
8	H	61	ILE
8	H	69	LEU
8	H	72	PHE
8	H	74	LYS
8	H	78	ARG
8	H	81	ARG
8	H	82	GLU
8	H	85	LYS
8	H	87	PHE
8	H	93	VAL
8	H	99	ARG
8	H	105	THR
8	H	107	LYS
8	H	109	ARG
8	H	111	LYS
8	H	112	ASN
8	H	113	LYS
8	H	116	ARG
8	H	118	ARG
8	H	120	ARG
8	H	122	LEU
8	H	131	GLU
8	H	143	ARG
8	H	145	ARG
8	H	157	HIS

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

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Mol	Chain	Res	Type
10	J	10	ARG
10	J	17	ARG
10	J	18	ARG
10	J	29	LEU
10	J	38	ARG
10	J	42	GLU
10	J	50	LEU
10	J	58	ARG
10	J	66	LYS
10	J	69	ARG
10	J	79	ARG
10	J	89	GLU
10	J	93	LYS
10	J	101	LYS
10	J	108	ARG
10	J	109	ARG
10	J	110	LEU
10	J	119	LEU
10	J	121	LYS
10	J	127	ARG
10	J	139	LYS
10	J	143	ASN
10	J	162	ARG
10	J	165	TYR
10	J	172	ARG
10	J	174	LYS
10	J	176	LYS
10	J	180	LYS
11	K	1	MET
11	K	2	LEU
11	K	3	MET
11	K	5	LYS
11	K	13	GLU
11	K	16	PHE
11	K	17	LYS
11	K	20	VAL
11	K	31	LYS
11	K	34	GLU
11	K	35	LEU
11	K	37	ASP
11	K	38	LYS
11	K	43	LEU

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Mol	Chain	Res	Type
11	K	53	LYS
11	K	55	ARG
11	K	65	ARG
11	K	66	HIS
11	K	69	TRP
11	K	74	GLU
11	K	84	HIS
11	K	85	LEU
11	K	89	ILE
11	K	93	THR
11	K	94	LEU
11	K	95	ARG
11	K	96	ARG
11	K	98	ARG
12	L	1	MET
12	L	4	ILE
12	L	7	GLU
12	L	8	ARG
12	L	12	LYS
12	L	15	THR
12	L	18	GLN
12	L	20	LYS
12	L	22	ARG
12	L	25	LEU
12	L	30	LYS
12	L	40	ILE
12	L	49	GLU
12	L	56	ILE
12	L	69	ARG
12	L	71	ARG
12	L	79	LYS
12	L	80	MET
12	L	82	MET
12	L	83	GLN
12	L	89	ARG
12	L	97	ARG
12	L	99	TYR
12	L	100	ASN
12	L	101	ARG
12	L	102	PHE
12	L	105	ARG
12	L	118	ARG

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Mol	Chain	Res	Type
12	L	121	GLN
12	L	136	LYS
12	L	147	LYS
12	L	151	THR
12	L	153	LYS
12	L	155	PHE
12	L	156	GLN
12	L	157	LYS
12	L	158	PHE
13	M	12	MET
13	M	13	ASP
13	M	18	LEU
13	M	20	GLU
13	M	26	LEU
13	M	28	HIS
13	M	33	ARG
13	M	36	ARG
13	M	40	LYS
13	M	43	ASP
13	M	45	ARG
13	M	71	GLU
13	M	76	LEU
13	M	77	ILE
13	M	78	LYS
13	M	83	LYS
13	M	85	LEU
13	M	91	LEU
13	M	94	ILE
13	M	101	ARG
13	M	102	LYS
13	M	127	TYR
13	M	128	PHE
14	N	3	ARG
14	N	9	LYS
14	N	16	LEU
14	N	21	SER
14	N	27	LYS
14	N	49	GLN
14	N	50	ILE
14	N	53	ILE
14	N	56	ASP
14	N	64	ARG

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Mol	Chain	Res	Type
14	N	73	ARG
14	N	76	LYS
14	N	78	LYS
14	N	80	LEU
14	N	94	LYS
14	N	104	ARG
14	N	107	LYS
14	N	112	LYS
14	N	114	ARG
14	N	119	GLU
14	N	121	ARG
14	N	125	LEU
14	N	130	LYS
14	N	133	ARG
14	N	134	VAL
14	N	141	TYR
14	N	142	GLU
15	O	23	GLU
15	O	25	GLU
15	O	28	PHE
15	O	34	PHE
15	O	65	ASP
15	O	66	ARG
15	O	72	TYR
15	O	90	ILE
15	O	103	ASN
15	O	116	LEU
15	O	117	ARG
15	O	121	ARG
15	O	125	LYS
15	O	128	ARG
15	O	129	ILE
15	O	138	ASP
15	O	141	ARG
15	O	146	ARG
15	O	150	ARG
16	P	5	GLU
16	P	6	GLN
16	P	7	LYS
16	P	10	ARG
16	P	12	PHE
16	P	13	ARG

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Mol	Chain	Res	Type
16	P	14	LYS
16	P	15	PHE
16	P	17	TYR
16	P	34	MET
16	P	40	ARG
16	P	41	GLN
16	P	43	ARG
16	P	50	ARG
16	P	51	ARG
16	P	52	LYS
16	P	61	ARG
16	P	64	LYS
16	P	71	GLU
16	P	72	LYS
16	P	74	GLU
16	P	84	ILE
16	P	86	LEU
16	P	88	GLU
16	P	89	MET
16	P	100	LYS
16	P	104	GLN
16	P	110	GLU
16	P	111	MET
16	P	122	THR
16	P	124	LYS
16	P	127	LYS
17	Q	6	PRO
17	Q	7	LEU
17	Q	13	PHE
17	Q	17	LYS
17	Q	20	THR
17	Q	24	HIS
17	Q	26	LYS
17	Q	33	LYS
17	Q	37	ARG
17	Q	41	MET
17	Q	56	LEU
17	Q	62	ARG
17	Q	73	LYS
17	Q	101	ASP
17	Q	102	GLU
17	Q	105	LYS

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

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Mol	Chain	Res	Type
19	S	34	LYS
19	S	36	VAL
19	S	39	ARG
19	S	59	LEU
19	S	63	GLU
19	S	71	MET
19	S	78	LYS
19	S	86	ARG
19	S	87	GLN
19	S	92	ASP
19	S	94	LYS
19	S	118	ARG
19	S	125	HIS
19	S	130	ARG
19	S	132	ARG
19	S	134	GLN
19	S	137	LYS
19	S	142	ARG
20	T	11	GLN
20	T	16	ARG
20	T	21	PHE
20	T	23	LYS
20	T	28	LEU
20	T	29	LYS
20	T	38	LYS
20	T	41	LYS
20	T	42	HIS
20	T	44	GLU
20	T	62	ARG
20	T	64	LEU
20	T	67	ARG
20	T	83	GLN
20	T	84	ARG
20	T	88	MET
20	T	91	HIS
20	T	93	SER
20	T	94	ARG
20	T	97	LYS
20	T	102	ARG
20	T	121	ARG
20	T	130	ASP
20	T	133	ARG

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Mol	Chain	Res	Type
20	T	143	LYS
20	T	144	LYS
21	U	19	ARG
21	U	20	ILE
21	U	21	ARG
21	U	24	LEU
21	U	33	GLU
21	U	44	LYS
21	U	47	ASN
21	U	48	LEU
21	U	49	LYS
21	U	51	LYS
21	U	62	ARG
21	U	68	THR
21	U	72	GLU
21	U	75	LYS
21	U	85	HIS
21	U	87	ARG
21	U	104	ILE
21	U	106	ILE
21	U	108	PRO
21	U	111	GLU
22	V	1	MET
22	V	7	GLU
22	V	16	LYS
22	V	24	ILE
22	V	31	SER
22	V	32	ILE
22	V	40	ASP
22	V	41	LYS
22	V	43	THR
22	V	45	ARG
22	V	49	GLN
22	V	51	LYS
22	V	52	THR
22	V	61	ARG
22	V	64	GLU
22	V	74	LYS
22	V	78	ILE
23	W	3	ARG
23	W	4	MET
23	W	18	GLU

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Mol	Chain	Res	Type
23	W	20	ARG
23	W	23	ARG
23	W	52	ILE
23	W	64	ASN
23	W	84	LYS
23	W	98	GLN
23	W	103	VAL
23	W	114	GLU
23	W	124	LYS
23	W	128	PHE
23	W	129	PHE
24	X	1	MET
24	X	3	LYS
24	X	5	ARG
24	X	7	LEU
24	X	12	LYS
24	X	21	LYS
24	X	29	LYS
24	X	37	LYS
24	X	67	ARG
24	X	68	LYS
24	X	71	ARG
24	X	75	ILE
24	X	80	LYS
24	X	91	LEU
24	X	98	ASP
24	X	101	LEU
24	X	107	ARG
24	X	108	LYS
24	X	110	HIS
24	X	115	ILE
24	X	135	LYS
24	X	141	PRO
24	X	142	ARG
25	Y	16	ARG
25	Y	20	ARG
25	Y	21	LYS
25	Y	23	MET
25	Y	29	HIS
25	Y	32	LYS
25	Y	35	VAL
25	Y	46	LYS

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

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Mol	Chain	Res	Type
27	a	95	ARG
28	b	3	LEU
28	b	5	LYS
28	b	16	LYS
28	b	20	LYS
28	b	23	ARG
28	b	26	GLN
28	b	41	TYR
28	b	42	LYS
28	b	49	HIS
28	b	51	GLN
28	b	53	VAL
28	b	83	GLN
28	b	84	HIS
29	c	5	ARG
29	c	7	GLN
29	c	13	ARG
29	c	35	MET
29	c	42	ILE
29	c	47	LYS
29	c	51	ARG
29	c	62	GLU
29	c	63	ARG
29	c	67	ARG
29	c	68	LEU
30	d	7	TYR
30	d	10	HIS
30	d	16	GLN
30	d	19	ARG
30	d	27	ARG
30	d	30	LEU
30	d	33	LYS
30	d	39	CYS
30	d	44	ARG
30	d	46	TYR
30	d	53	ILE
30	d	56	ASP
31	e	76	VAL
31	e	80	LEU
31	e	85	LYS
31	e	87	ARG
31	e	92	LYS

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Mol	Chain	Res	Type
31	e	95	LYS
31	e	97	GLU
31	e	98	LYS
31	e	99	LYS
31	e	100	LYS
31	e	103	THR
31	e	105	ARG
31	e	108	ARG
31	e	110	MET
31	e	114	ARG
31	e	115	ARG
31	e	118	ASN
31	e	120	VAL
31	e	122	THR
31	e	123	PHE
31	e	125	LYS
31	e	126	LYS
31	e	127	LYS
32	f	86	THR
32	f	88	PRO
32	f	89	LYS
32	f	90	LYS
32	f	94	LYS
32	f	95	ARG
32	f	96	LYS
32	f	97	LYS
32	f	104	LYS
32	f	109	ASP
32	f	110	GLU
32	f	111	ASN
32	f	113	LYS
32	f	116	ARG
32	f	118	ARG
32	f	121	CYS
32	f	130	VAL
32	f	135	HIS
32	f	136	PHE
32	f	139	HIS
32	f	150	PHE
33	g	8	ARG
33	g	24	THR
33	g	25	PRO

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Mol	Chain	Res	Type
33	g	36	ARG
33	g	42	MET
33	g	44	LYS
33	g	47	ARG
33	g	50	THR
33	g	51	ASN
33	g	57	ARG
33	g	60	ARG
33	g	64	HIS
33	g	68	ASP
33	g	74	ASP
33	g	76	GLN
33	g	87	LEU
33	g	88	ARG
33	g	91	ASP
33	g	93	THR
33	g	100	ARG
33	g	118	ARG
33	g	119	GLN
33	g	131	LEU
33	g	139	LYS
33	g	140	TYR
33	g	143	GLN
33	g	145	GLU
33	g	146	SER
33	g	149	GLU
33	g	156	PHE
33	g	161	SER
33	g	175	LYS
33	g	183	LYS
33	g	185	LYS
33	g	192	THR
33	g	203	ASP
33	g	225	LYS
33	g	246	TYR
33	g	259	TRP
33	g	264	LYS
33	g	271	LYS
33	g	275	ILE
33	g	276	SER
33	g	277	THR
33	g	279	SER

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Mol	Chain	Res	Type
33	g	280	LYS
33	g	289	LEU
33	g	294	ASP
35	l	29	ASP
35	l	31	ILE
35	l	32	HIS
35	l	34	ARG
35	l	43	THR
35	l	46	THR
35	l	55	ASP
35	l	60	VAL
35	l	70	ASN
35	l	72	THR
35	l	78	GLU
35	l	85	LEU
35	l	90	ARG
35	l	91	LYS
35	l	93	ILE
35	l	104	LYS
35	l	109	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (114) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	24	HIS
1	A	36	GLN
1	A	50	ASN
1	A	81	ASN
1	A	141	ASN
1	A	169	HIS
2	B	75	GLN
2	B	76	ASN
2	B	101	HIS
2	B	118	GLN
2	B	124	HIS
2	B	147	ASN
2	B	148	ASN
2	B	179	ASN
2	B	186	ASN
2	B	202	GLN
2	B	232	HIS
3	C	100	GLN

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Mol	Chain	Res	Type
3	C	157	ASN
4	D	74	GLN
4	D	179	GLN
4	D	226	GLN
5	E	50	ASN
5	E	98	ASN
5	E	142	HIS
5	E	188	ASN
5	E	209	HIS
6	F	29	GLN
6	F	65	GLN
6	F	83	ASN
6	F	186	ASN
7	G	56	ASN
7	G	81	HIS
8	H	12	ASN
8	H	73	GLN
8	H	163	GLN
8	H	168	HIS
9	I	22	HIS
9	I	84	ASN
9	I	99	ASN
9	I	165	GLN
11	K	7	ASN
11	K	28	HIS
11	K	39	ASN
11	K	44	HIS
11	K	50	GLN
11	K	66	HIS
12	L	18	GLN
12	L	19	ASN
12	L	65	ASN
12	L	121	GLN
12	L	156	GLN
13	M	19	GLN
13	M	28	HIS
13	M	75	ASN
13	M	82	ASN
14	N	5	HIS
14	N	62	GLN
14	N	101	HIS
14	N	123	HIS

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Mol	Chain	Res	Type
15	O	20	GLN
15	O	79	GLN
16	P	41	GLN
16	P	53	GLN
16	P	79	HIS
16	P	103	ASN
16	P	114	HIS
16	P	128	HIS
17	Q	80	GLN
18	R	74	GLN
18	R	121	GLN
19	S	11	HIS
19	S	42	HIS
19	S	87	GLN
20	T	11	GLN
20	T	42	HIS
20	T	63	HIS
20	T	83	GLN
20	T	85	ASN
20	T	126	GLN
20	T	128	GLN
21	U	18	HIS
21	U	47	ASN
22	V	47	ASN
22	V	76	HIS
23	W	15	ASN
23	W	64	ASN
23	W	98	GLN
24	X	39	ASN
24	X	46	HIS
25	Y	29	HIS
25	Y	85	ASN
25	Y	89	HIS
25	Y	94	HIS
26	Z	103	HIS
28	b	49	HIS
28	b	83	GLN
28	b	84	HIS
29	c	26	GLN
30	d	26	ASN
30	d	28	HIS
32	f	151	ASN

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Mol	Chain	Res	Type
33	g	20	GLN
33	g	64	HIS
33	g	76	GLN
33	g	119	GLN
33	g	143	GLN
33	g	162	ASN
33	g	226	HIS
33	g	237	ASN
35	l	48	GLN
35	l	84	GLN
35	l	89	GLN
35	l	107	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
34	i	1721/1863 (92%)	498 (28%)	0

All (498) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
34	i	2	A
34	i	3	C
34	i	4	C
34	i	8	U
34	i	16	G
34	i	25	A
34	i	26	U
34	i	32	U
34	i	33	G
34	i	41	G
34	i	44	U
34	i	45	A
34	i	46	A
34	i	50	A
34	i	56	G
34	i	59	U
34	i	66	G
34	i	67	C
34	i	68	A
34	i	70	G

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Mol	Chain	Res	Type
34	i	72	C
34	i	73	C
34	i	74	G
34	i	75	G
34	i	76	U
34	i	77	A
34	i	78	C
34	i	79	A
34	i	80	G
34	i	99	A
34	i	103	A
34	i	113	G
34	i	126	G
34	i	139	C
34	i	140	U
34	i	141	A
34	i	142	C
34	i	143	U
34	i	147	A
34	i	148	U
34	i	155	G
34	i	160	U
34	i	161	U
34	i	162	C
34	i	170	A
34	i	176	U
34	i	182	C
34	i	183	G
34	i	187	C
34	i	188	U
34	i	189	G
34	i	190	A
34	i	191	C
34	i	197	U
34	i	198	U
34	i	199	G
34	i	203	G
34	i	205	G
34	i	206	A
34	i	212	G
34	i	213	C
34	i	223	A

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Mol	Chain	Res	Type
34	i	224	U
34	i	225	C
34	i	226	A
34	i	229	A
34	i	230	C
34	i	232	A
34	i	233	A
34	i	234	C
34	i	235	C
34	i	238	G
34	i	273	G
34	i	275	C
34	i	276	U
34	i	277	U
34	i	278	U
34	i	279	G
34	i	286	C
34	i	287	U
34	i	298	G
34	i	299	G
34	i	300	G
34	i	303	G
34	i	304	A
34	i	307	G
34	i	309	A
34	i	311	C
34	i	313	C
34	i	314	U
34	i	315	C
34	i	316	C
34	i	317	G
34	i	318	U
34	i	320	G
34	i	322	G
34	i	326	A
34	i	332	C
34	i	337	G
34	i	339	A
34	i	346	C
34	i	352	C
34	i	354	A
34	i	357	U

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Mol	Chain	Res	Type
34	i	359	C
34	i	375	G
34	i	376	C
34	i	379	A
34	i	382	A
34	i	390	C
34	i	397	G
34	i	398	A
34	i	399	C
34	i	416	A
34	i	438	A
34	i	440	C
34	i	442	G
34	i	449	C
34	i	454	A
34	i	456	G
34	i	460	G
34	i	461	G
34	i	462	C
34	i	463	A
34	i	464	G
34	i	466	A
34	i	472	G
34	i	477	U
34	i	482	C
34	i	484	C
34	i	486	C
34	i	515	A
34	i	521	A
34	i	522	C
34	i	523	A
34	i	525	G
34	i	537	G
34	i	539	C
34	i	541	U
34	i	542	G
34	i	543	U
34	i	546	U
34	i	547	U
34	i	549	G
34	i	550	A
34	i	554	A

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Mol	Chain	Res	Type
34	i	555	G
34	i	566	A
34	i	574	A
34	i	576	G
34	i	578	G
34	i	580	A
34	i	581	U
34	i	582	C
34	i	583	C
34	i	586	U
34	i	590	G
34	i	595	A
34	i	596	G
34	i	597	U
34	i	598	C
34	i	600	G
34	i	604	G
34	i	609	A
34	i	610	G
34	i	618	A
34	i	619	A
34	i	624	A
34	i	631	A
34	i	632	U
34	i	633	A
34	i	634	G
34	i	645	A
34	i	653	C
34	i	658	A
34	i	659	A
34	i	660	A
34	i	661	A
34	i	662	A
34	i	669	A
34	i	678	U
34	i	679	U
34	i	684	A
34	i	685	G
34	i	686	G
34	i	687	G
34	i	689	G
34	i	691	G

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Mol	Chain	Res	Type
34	i	725	C
34	i	727	G
34	i	728	U
34	i	729	C
34	i	730	C
34	i	731	C
34	i	734	C
34	i	735	C
34	i	739	U
34	i	740	G
34	i	743	U
34	i	744	C
34	i	793	C
34	i	794	G
34	i	795	U
34	i	806	A
34	i	807	A
34	i	808	A
34	i	814	A
34	i	817	G
34	i	818	U
34	i	826	A
34	i	827	G
34	i	830	C
34	i	831	C
34	i	832	G
34	i	833	A
34	i	834	G
34	i	835	C
34	i	836	C
34	i	838	C
34	i	839	C
34	i	841	G
34	i	843	A
34	i	849	C
34	i	860	A
34	i	864	G
34	i	865	A
34	i	866	A
34	i	867	U
34	i	869	G
34	i	870	G

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Mol	Chain	Res	Type
34	i	871	A
34	i	872	C
34	i	873	C
34	i	874	G
34	i	877	G
34	i	882	A
34	i	883	U
34	i	884	U
34	i	885	U
34	i	886	U
34	i	890	G
34	i	891	G
34	i	893	U
34	i	899	A
34	i	900	A
34	i	907	C
34	i	909	A
34	i	910	U
34	i	916	A
34	i	917	G
34	i	929	G
34	i	947	C
34	i	951	A
34	i	962	U
34	i	965	U
34	i	966	G
34	i	967	G
34	i	972	G
34	i	974	G
34	i	986	A
34	i	988	A
34	i	995	G
34	i	997	A
34	i	1004	A
34	i	1013	U
34	i	1019	A
34	i	1021	U
34	i	1027	A
34	i	1035	C
34	i	1041	U
34	i	1045	A
34	i	1046	A

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Mol	Chain	Res	Type
34	i	1047	G
34	i	1050	G
34	i	1056	A
34	i	1057	U
34	i	1058	A
34	i	1068	U
34	i	1069	U
34	i	1073	A
34	i	1074	C
34	i	1079	A
34	i	1092	G
34	i	1093	G
34	i	1105	C
34	i	1106	G
34	i	1107	U
34	i	1111	U
34	i	1112	C
34	i	1113	C
34	i	1114	C
34	i	1116	U
34	i	1119	C
34	i	1127	G
34	i	1132	U
34	i	1134	C
34	i	1136	G
34	i	1137	G
34	i	1139	A
34	i	1144	A
34	i	1145	A
34	i	1146	A
34	i	1149	C
34	i	1150	U
34	i	1151	U
34	i	1153	G
34	i	1154	G
34	i	1157	U
34	i	1162	G
34	i	1164	G
34	i	1199	G
34	i	1202	G
34	i	1204	A
34	i	1205	A

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Mol	Chain	Res	Type
34	i	1208	G
34	i	1210	A
34	i	1211	C
34	i	1212	C
34	i	1213	A
34	i	1217	G
34	i	1220	G
34	i	1232	G
34	i	1233	C
34	i	1238	U
34	i	1241	G
34	i	1247	A
34	i	1249	A
34	i	1250	C
34	i	1252	G
34	i	1253	G
34	i	1255	A
34	i	1256	A
34	i	1259	U
34	i	1260	C
34	i	1270	G
34	i	1271	G
34	i	1272	A
34	i	1274	A
34	i	1279	C
34	i	1280	A
34	i	1281	G
34	i	1296	U
34	i	1297	A
34	i	1299	C
34	i	1303	U
34	i	1304	U
34	i	1310	U
34	i	1311	U
34	i	1312	C
34	i	1313	U
34	i	1320	G
34	i	1325	U
34	i	1338	U
34	i	1339	U
34	i	1344	G
34	i	1354	U

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Mol	Chain	Res	Type
34	i	1367	U
34	i	1368	U
34	i	1369	C
34	i	1374	A
34	i	1390	G
34	i	1391	C
34	i	1392	A
34	i	1393	U
34	i	1394	G
34	i	1397	A
34	i	1398	A
34	i	1400	U
34	i	1402	G
34	i	1403	U
34	i	1405	A
34	i	1406	C
34	i	1408	C
34	i	1413	C
34	i	1414	C
34	i	1415	C
34	i	1422	U
34	i	1426	C
34	i	1431	C
34	i	1433	C
34	i	1445	G
34	i	1448	A
34	i	1450	A
34	i	1452	G
34	i	1455	G
34	i	1458	U
34	i	1461	A
34	i	1470	A
34	i	1471	G
34	i	1472	A
34	i	1473	U
34	i	1474	U
34	i	1485	A
34	i	1486	G
34	i	1489	C
34	i	1490	U
34	i	1491	G
34	i	1504	A

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Mol	Chain	Res	Type
34	i	1506	G
34	i	1507	U
34	i	1508	C
34	i	1511	G
34	i	1514	U
34	i	1515	G
34	i	1516	C
34	i	1519	G
34	i	1528	A
34	i	1530	U
34	i	1532	A
34	i	1535	G
34	i	1539	C
34	i	1540	A
34	i	1545	G
34	i	1546	U
34	i	1547	G
34	i	1548	C
34	i	1549	C
34	i	1551	A
34	i	1552	C
34	i	1553	C
34	i	1558	G
34	i	1559	C
34	i	1565	G
34	i	1573	U
34	i	1575	A
34	i	1577	C
34	i	1580	U
34	i	1582	G
34	i	1583	A
34	i	1593	G
34	i	1594	U
34	i	1595	G
34	i	1597	U
34	i	1599	G
34	i	1616	U
34	i	1617	U
34	i	1618	A
34	i	1627	G
34	i	1628	A
34	i	1632	A

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Mol	Chain	Res	Type
34	i	1633	G
34	i	1634	G
34	i	1643	G
34	i	1649	G
34	i	1652	G
34	i	1660	G
34	i	1675	G
34	i	1683	C
34	i	1684	C
34	i	1690	A
34	i	1694	A
34	i	1696	C
34	i	1697	G
34	i	1716	U
34	i	1717	G
34	i	1722	G
34	i	1724	U
34	i	1740	A
34	i	1741	U
34	i	1743	G
34	i	1745	C
34	i	1747	C
34	i	1748	G
34	i	1749	C
34	i	1750	C
34	i	1751	G
34	i	1755	U
34	i	1774	G
34	i	1775	A
34	i	1776	G
34	i	1777	C
34	i	1778	G
34	i	1779	C
34	i	1780	U
34	i	1790	G
34	i	1792	C
34	i	1799	G
34	i	1818	A
34	i	1819	A
34	i	1820	G
34	i	1822	C
34	i	1823	G

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Mol	Chain	Res	Type
34	i	1825	A
34	i	1826	A
34	i	1829	A
34	i	1832	U
34	i	1833	U
34	i	1843	G
34	i	1845	A
34	i	1846	C
34	i	1852	G
34	i	1855	G
34	i	1856	G
34	i	1857	A
34	i	1858	U
34	i	1859	C
34	i	1861	U
34	i	1863	A

There are no RNA pucker outliers to report.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
34	i	11
10	J	3
4	D	2
19	S	2
7	G	1
31	e	1
9	I	1
3	C	1
21	U	1
18	R	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	i	326:A	O3'	327:C	P	8.42
1	i	309:A	O3'	310:G	P	7.21
1	i	304:A	O3'	305:U	P	5.77
1	i	209:C	O3'	210:G	P	5.60
1	i	1826:A	O3'	1827:C	P	5.04
1	i	1698:C	O3'	1699:C	P	3.15
1	i	550:A	O3'	551:A	P	2.80
1	i	183:G	O3'	184:G	P	2.68
1	i	1206:G	O3'	1207:G	P	2.61
1	i	515:A	O3'	516:A	P	2.53
1	i	1683:C	O3'	1684:C	P	2.10
1	D	5:ILE	C	6:SER	N	1.82
1	e	95:LYS	C	96:GLN	N	1.76
1	J	118:GLY	C	119:LEU	N	1.73
1	I	43:ILE	C	44:HIS	N	1.67
1	J	146:SER	C	147:PHE	N	1.61
1	U	93:SER	C	94:PRO	N	1.61
1	S	141:ARG	C	142:ARG	N	1.60
1	D	4:GLN	C	5:ILE	N	1.20
1	C	93:LYS	C	94:ILE	N	1.18
1	G	130:PRO	C	131:ARG	N	1.16
1	R	1:MET	C	2:GLY	N	1.13
1	S	40:TYR	C	41:ALA	N	1.10
1	J	85:GLY	C	86:VAL	N	0.95

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	208/295 (70%)	0.01	19 (9%) 9 11	173, 263, 322, 332	0
2	B	215/264 (81%)	1.79	78 (36%) 0 1	128, 196, 242, 252	0
3	C	226/278 (81%)	0.12	6 (2%) 54 48	82, 160, 268, 295	0
4	D	227/243 (93%)	1.58	78 (34%) 0 2	167, 217, 294, 337	0
5	E	263/263 (100%)	2.15	93 (35%) 0 2	117, 216, 286, 299	0
6	F	191/204 (93%)	0.91	31 (16%) 1 4	191, 263, 305, 317	0
7	G	237/249 (95%)	1.13	63 (26%) 0 2	164, 242, 325, 343	0
8	H	190/194 (97%)	0.75	34 (17%) 1 4	187, 326, 368, 385	0
9	I	206/208 (99%)	1.83	73 (35%) 0 2	89, 239, 276, 287	0
10	J	182/194 (93%)	1.34	58 (31%) 0 2	89, 166, 231, 276	0
11	K	98/165 (59%)	4.84	73 (74%) 0 0	222, 291, 316, 323	0
12	L	158/158 (100%)	0.71	28 (17%) 1 4	77, 176, 261, 270	0
13	M	124/132 (93%)	1.14	25 (20%) 1 3	298, 378, 406, 431	0
14	N	150/151 (99%)	1.33	39 (26%) 0 2	87, 150, 275, 297	0
15	O	136/151 (90%)	1.25	41 (30%) 0 2	92, 194, 256, 272	0
16	P	127/145 (87%)	1.69	49 (38%) 0 1	234, 305, 340, 361	0
17	Q	141/146 (96%)	2.31	55 (39%) 0 1	166, 287, 321, 331	0
18	R	126/135 (93%)	0.64	16 (12%) 3 7	174, 225, 322, 329	0
19	S	137/152 (90%)	3.00	77 (56%) 0 1	217, 311, 344, 357	0
20	T	141/145 (97%)	3.25	75 (53%) 0 1	238, 311, 341, 349	0
21	U	104/119 (87%)	2.89	50 (48%) 0 1	167, 266, 306, 317	0
22	V	82/83 (98%)	-0.22	2 (2%) 59 52	164, 218, 318, 328	0
23	W	129/130 (99%)	2.24	66 (51%) 0 1	107, 159, 204, 218	0
24	X	142/143 (99%)	3.83	86 (60%) 0 0	50, 90, 134, 155	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	Y	126/133 (94%)	0.67	16 (12%) 3 7	156, 205, 243, 261	0
26	Z	75/125 (60%)	2.90	50 (66%) 0 0	292, 320, 350, 360	0
27	a	107/115 (93%)	1.20	28 (26%) 0 2	87, 129, 234, 249	0
28	b	84/84 (100%)	1.75	35 (41%) 0 1	164, 223, 303, 334	0
29	c	64/69 (92%)	-0.06	2 (3%) 49 42	175, 224, 274, 287	0
30	d	53/56 (94%)	1.00	11 (20%) 1 3	183, 212, 290, 295	0
31	e	59/133 (44%)	0.59	10 (16%) 1 4	103, 158, 182, 189	0
32	f	71/156 (45%)	1.07	21 (29%) 0 2	213, 332, 401, 415	0
33	g	313/317 (98%)	0.57	43 (13%) 3 6	235, 304, 346, 364	0
34	i	1797/1863 (96%)	1.41	446 (24%) 0 2	49, 184, 371, 475	0
35	l	85/113 (75%)	0.08	3 (3%) 44 39	223, 235, 250, 253	0
All	All	6774/7511 (90%)	1.43	1880 (27%) 0 2	49, 228, 347, 475	0

All (1880) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
34	i	252	C	72.0
34	i	251	C	49.1
34	i	250	G	45.1
34	i	249	C	31.8
24	X	83	ALA	23.9
34	i	253	G	21.9
34	i	697	G	21.0
21	U	36	CYS	18.5
24	X	69	CYS	17.4
20	T	60	THR	16.9
5	E	64	ILE	16.3
21	U	39	LEU	16.2
34	i	698	G	16.0
34	i	1858	U	16.0
5	E	60	GLU	15.8
24	X	122	VAL	15.4
20	T	61	ALA	15.0
20	T	64	LEU	15.0
24	X	102	VAL	14.8
11	K	21	MET	14.4
11	K	20	VAL	14.3
5	E	63	LYS	14.2

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Mol	Chain	Res	Type	RSRZ
11	K	69	TRP	14.2
17	Q	59	GLY	13.5
34	i	722	C	13.3
5	E	65	CYS	13.2
11	K	71	LEU	13.1
24	X	103	ALA	13.0
19	S	122	GLY	12.8
11	K	41	PRO	12.8
11	K	19	GLY	12.8
17	Q	58	LEU	12.7
11	K	45	VAL	12.6
5	E	69	PHE	12.6
24	X	84	PHE	12.3
21	U	40	ILE	12.3
24	X	59	ALA	12.0
11	K	15	LEU	11.8
11	K	22	VAL	11.4
34	i	261	G	11.3
24	X	115	ILE	11.2
20	T	59	SER	11.2
11	K	42	ASN	11.1
20	T	57	ALA	10.9
5	E	67	GLN	10.9
34	i	1762	A	10.7
9	I	84	ASN	10.7
24	X	101	LEU	10.6
11	K	11	ILE	10.5
20	T	58	ALA	10.5
24	X	85	VAL	10.5
21	U	35	VAL	10.5
34	i	699	C	10.5
21	U	26	SER	10.4
34	i	723	G	10.4
34	i	1859	C	10.3
17	Q	54	PRO	10.3
34	i	230	C	10.2
2	B	100	PHE	10.1
11	K	23	ALA	10.0
11	K	68	TYR	9.9
11	K	40	VAL	9.9
2	B	58	ALA	9.9
24	X	70	VAL	9.9

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Mol	Chain	Res	Type	RSRZ
34	i	1584	A	9.7
4	D	136	VAL	9.7
34	i	1860	A	9.7
34	i	720	A	9.7
5	E	61	VAL	9.6
20	T	56	ARG	9.5
24	X	56	GLY	9.5
34	i	1647	G	9.5
20	T	62	ARG	9.5
19	S	99	LEU	9.5
17	Q	108	ILE	9.4
24	X	114	ASP	9.4
2	B	47	THR	9.4
9	I	173	ALA	9.4
5	E	43	PRO	9.4
34	i	248	C	9.3
9	I	83	TYR	9.3
9	I	190	LEU	9.2
20	T	63	HIS	9.2
17	Q	89	SER	9.2
5	E	73	ASP	9.2
11	K	12	TYR	9.2
21	U	110	VAL	9.2
2	B	102	GLY	9.2
9	I	101	ILE	9.2
7	G	153	VAL	9.1
20	T	75	MET	9.1
26	Z	69	THR	9.1
17	Q	23	ALA	9.1
34	i	276	U	9.0
34	i	696	G	9.0
24	X	46	HIS	9.0
26	Z	70	PRO	9.0
21	U	25	THR	9.0
2	B	67	PHE	8.9
11	K	72	THR	8.9
24	X	82	THR	8.8
24	X	47	ALA	8.8
34	i	229	A	8.7
14	N	63	VAL	8.6
28	b	54	VAL	8.6
34	i	231	C	8.6

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Mol	Chain	Res	Type	RSRZ
34	i	1586	C	8.6
19	S	113	ARG	8.6
27	a	86	ASN	8.5
2	B	48	LEU	8.5
23	W	103	VAL	8.5
9	I	102	VAL	8.5
11	K	49	MET	8.5
16	P	125	PRO	8.4
16	P	112	ILE	8.4
33	g	78	ALA	8.4
5	E	42	LEU	8.3
9	I	171	LEU	8.3
5	E	84	ALA	8.3
24	X	41	PHE	8.3
24	X	120	PHE	8.3
11	K	10	ALA	8.2
16	P	113	GLY	8.2
17	Q	57	LEU	8.2
5	E	54	TYR	8.2
16	P	114	HIS	8.2
17	Q	92	LEU	8.2
17	Q	91	ALA	8.2
25	Y	17	LEU	8.1
10	J	97	ILE	8.1
20	T	76	THR	8.1
17	Q	55	VAL	8.0
11	K	36	ALA	8.0
14	N	62	GLN	8.0
24	X	118	VAL	8.0
2	B	215	VAL	8.0
34	i	719	C	8.0
24	X	45	SER	8.0
23	W	104	LEU	7.9
2	B	217	MET	7.9
24	X	55	VAL	7.9
9	I	198	TYR	7.9
7	G	151	ASP	7.9
16	P	110	GLU	7.8
2	B	61	GLY	7.7
2	B	25	PHE	7.7
14	N	60	VAL	7.7
26	Z	71	ALA	7.7

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Mol	Chain	Res	Type	RSRZ
34	i	1583	A	7.7
19	S	110	ASP	7.7
11	K	58	VAL	7.7
5	E	88	ASP	7.6
5	E	55	ALA	7.6
2	B	45	GLY	7.6
34	i	1585	C	7.6
11	K	64	TRP	7.6
5	E	57	THR	7.6
20	T	65	TYR	7.5
5	E	70	ILE	7.5
21	U	111	GLU	7.5
24	X	112	VAL	7.5
11	K	48	ALA	7.5
17	Q	53	GLU	7.5
11	K	46	MET	7.4
34	i	492	C	7.4
25	Y	18	LEU	7.4
10	J	95	ASP	7.4
4	D	68	GLU	7.4
4	D	73	VAL	7.4
23	W	111	MET	7.3
24	X	67	ARG	7.3
19	S	43	VAL	7.3
2	B	46	LYS	7.3
17	Q	61	GLU	7.3
11	K	18	GLU	7.3
11	K	70	TYR	7.2
19	S	123	LEU	7.2
34	i	277	U	7.2
4	D	7	LYS	7.2
23	W	127	GLY	7.2
24	X	81	ILE	7.2
28	b	53	VAL	7.2
19	S	119	ALA	7.2
19	S	125	HIS	7.1
11	K	44	HIS	7.1
5	E	58	GLY	7.1
4	D	15	GLY	7.1
9	I	172	LEU	7.1
6	F	133	THR	7.1
5	E	91	SER	7.1

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Mol	Chain	Res	Type	RSRZ
2	B	44	ILE	7.1
24	X	111	ALA	7.0
21	U	112	VAL	7.0
4	D	70	THR	7.0
2	B	103	MET	7.0
27	a	84	VAL	7.0
24	X	116	PRO	7.0
19	S	114	LEU	7.0
17	Q	112	LEU	6.9
19	S	115	LYS	6.9
34	i	254	G	6.9
34	i	1469	G	6.9
34	i	721	C	6.9
10	J	94	LEU	6.9
11	K	63	ALA	6.9
19	S	100	ALA	6.9
14	N	67	THR	6.9
2	B	65	ARG	6.9
20	T	36	THR	6.8
10	J	104	ASP	6.8
9	I	80	ASP	6.8
11	K	14	LEU	6.8
17	Q	22	VAL	6.8
24	X	86	PRO	6.7
19	S	44	VAL	6.7
34	i	580	A	6.7
6	F	31	ASN	6.7
4	D	119	CYS	6.7
2	B	88	THR	6.7
4	D	10	LYS	6.7
20	T	18	LEU	6.6
4	D	69	LEU	6.6
5	E	90	ILE	6.6
5	E	83	PRO	6.6
25	Y	124	ASN	6.6
26	Z	84	ALA	6.6
2	B	99	ASN	6.6
24	X	113	GLY	6.6
11	K	60	GLU	6.6
14	N	66	VAL	6.6
21	U	37	ALA	6.6
34	i	1012	U	6.6

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Mol	Chain	Res	Type	RSRZ
4	D	137	VAL	6.6
20	T	39	LEU	6.5
5	E	71	LYS	6.5
5	E	47	PHE	6.5
19	S	41	ALA	6.5
20	T	71	GLY	6.5
5	E	59	ASP	6.5
14	N	14	SER	6.5
6	F	29	GLN	6.5
19	S	98	VAL	6.5
9	I	158	ILE	6.4
17	Q	62	ARG	6.4
4	D	71	ALA	6.4
11	K	32	HIS	6.4
34	i	1254	A	6.4
11	K	43	LEU	6.4
34	i	1582	G	6.4
2	B	24	PRO	6.4
28	b	20	LYS	6.4
24	X	100	VAL	6.4
4	D	48	ILE	6.4
2	B	59	SER	6.4
17	Q	111	ILE	6.4
21	U	32	LEU	6.4
25	Y	85	ASN	6.4
34	i	303	G	6.3
5	E	89	VAL	6.3
20	T	6	VAL	6.3
5	E	46	ILE	6.3
4	D	11	PHE	6.3
15	O	26	ASN	6.3
19	S	124	ARG	6.3
24	X	104	GLY	6.3
30	d	47	ALA	6.2
9	I	100	CYS	6.2
34	i	1649	G	6.2
26	Z	48	VAL	6.2
34	i	1467	C	6.2
5	E	82	TYR	6.2
11	K	66	HIS	6.2
19	S	71	MET	6.2
4	D	72	VAL	6.2

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Mol	Chain	Res	Type	RSRZ
19	S	80	PRO	6.2
19	S	97	GLN	6.2
24	X	123	VAL	6.2
2	B	69	VAL	6.1
5	E	85	GLY	6.1
33	g	274	VAL	6.1
5	E	72	ILE	6.1
20	T	72	VAL	6.1
33	g	279	SER	6.1
19	S	118	ARG	6.1
17	Q	87	SER	6.1
34	i	130	G	6.1
34	i	260	G	6.1
2	B	62	LEU	6.0
20	T	79	TYR	6.0
20	T	46	ALA	6.0
5	E	92	ILE	6.0
9	I	28	GLU	6.0
23	W	121	THR	6.0
34	i	241	A	6.0
20	T	112	MET	6.0
34	i	305	U	6.0
2	B	86	LEU	6.0
26	Z	88	LEU	6.0
4	D	12	VAL	6.0
28	b	64	CYS	6.0
20	T	55	THR	6.0
34	i	263	G	6.0
14	N	59	GLY	6.0
34	i	1470	A	5.9
2	B	156	ALA	5.9
32	f	104	LYS	5.9
34	i	893	U	5.9
4	D	58	VAL	5.9
34	i	1648	U	5.9
15	O	47	LEU	5.9
21	U	38	ASP	5.9
5	E	44	LEU	5.9
19	S	116	LYS	5.9
4	D	152	PHE	5.8
4	D	28	GLU	5.8
20	T	37	VAL	5.8

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Mol	Chain	Res	Type	RSRZ
5	E	153	LEU	5.8
9	I	81	VAL	5.8
5	E	52	LEU	5.8
9	I	165	GLN	5.8
20	T	96	SER	5.8
5	E	101	LEU	5.8
25	Y	114	MET	5.8
6	F	69	VAL	5.8
34	i	1419	C	5.8
14	N	16	LEU	5.8
13	M	30	GLY	5.8
20	T	110	LEU	5.8
9	I	96	LEU	5.8
20	T	47	PRO	5.7
12	L	143	LEU	5.7
7	G	188	LYS	5.7
11	K	7	ASN	5.7
4	D	76	ARG	5.7
11	K	67	PHE	5.7
20	T	14	PHE	5.7
24	X	10	ALA	5.6
10	J	186	GLY	5.6
4	D	66	ILE	5.6
33	g	277	THR	5.6
34	i	724	C	5.6
26	Z	87	ALA	5.6
30	d	50	ILE	5.6
7	G	152	ASP	5.6
18	R	12	ALA	5.6
24	X	119	ARG	5.6
5	E	48	LEU	5.6
24	X	121	LYS	5.6
20	T	70	ALA	5.6
28	b	60	SER	5.6
19	S	120	HIS	5.6
15	O	103	ASN	5.6
11	K	92	ALA	5.6
2	B	84	PHE	5.5
26	Z	83	LEU	5.5
23	W	112	ASP	5.5
23	W	72	CYS	5.5
19	S	117	ILE	5.5

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Mol	Chain	Res	Type	RSRZ
19	S	45	LEU	5.5
15	O	25	GLU	5.5
34	i	262	G	5.5
24	X	117	GLY	5.5
7	G	179	LEU	5.5
14	N	58	HIS	5.5
17	Q	32	ILE	5.4
28	b	30	SER	5.4
15	O	95	ILE	5.4
34	i	403	G	5.4
2	B	50	THR	5.4
9	I	162	LEU	5.4
21	U	43	ALA	5.4
19	S	79	ILE	5.4
19	S	127	TRP	5.4
34	i	107	A	5.4
15	O	31	CYS	5.4
24	X	57	VAL	5.4
23	W	102	ILE	5.4
17	Q	56	LEU	5.4
4	D	20	GLU	5.4
19	S	121	ARG	5.4
14	N	57	SER	5.3
27	a	36	ILE	5.3
5	E	74	GLY	5.3
24	X	105	PHE	5.3
5	E	45	ILE	5.3
21	U	24	LEU	5.3
34	i	892	U	5.3
17	Q	50	LYS	5.3
2	B	49	VAL	5.3
24	X	130	LEU	5.3
34	i	1536	G	5.3
2	B	55	THR	5.3
9	I	185	ALA	5.3
14	N	15	ALA	5.3
4	D	60	GLY	5.3
28	b	26	GLN	5.3
5	E	66	MET	5.2
18	R	66	VAL	5.2
24	X	54	LYS	5.2
2	B	224	GLU	5.2

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Mol	Chain	Res	Type	RSRZ
4	D	21	LEU	5.2
9	I	103	LEU	5.2
16	P	109	PRO	5.2
23	W	61	ILE	5.2
33	g	91	ASP	5.2
33	g	92	LEU	5.2
27	a	9	GLY	5.2
34	i	1524	C	5.2
34	i	1466	C	5.2
24	X	71	ARG	5.2
4	D	65	ARG	5.2
21	U	105	SER	5.2
15	O	28	PHE	5.2
24	X	124	LYS	5.1
23	W	62	VAL	5.1
21	U	42	GLY	5.1
17	Q	21	ALA	5.1
4	D	138	VAL	5.1
20	T	95	GLY	5.1
24	X	34	THR	5.1
34	i	1758	G	5.1
11	K	8	ARG	5.1
24	X	40	PRO	5.1
26	Z	72	VAL	5.1
10	J	187	ALA	5.1
33	g	276	SER	5.1
34	i	269	C	5.1
15	O	94	HIS	5.1
16	P	130	ARG	5.1
17	Q	70	VAL	5.1
34	i	638	A	5.1
24	X	35	ALA	5.1
6	F	112	LEU	5.1
24	X	60	LYS	5.1
4	D	57	ASN	5.1
28	b	55	LEU	5.1
16	P	119	PHE	5.1
7	G	192	ILE	5.1
28	b	21	LYS	5.1
4	D	86	LEU	5.1
17	Q	88	ILE	5.1
27	a	5	ARG	5.0

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Mol	Chain	Res	Type	RSRZ
33	g	273	GLU	5.0
7	G	77	LEU	5.0
14	N	17	PRO	5.0
24	X	33	GLY	5.0
9	I	189	VAL	5.0
16	P	111	MET	5.0
5	E	97	GLU	5.0
4	D	16	ILE	5.0
33	g	79	LEU	5.0
28	b	19	HIS	5.0
19	S	27	ALA	5.0
15	O	29	GLY	5.0
19	S	129	LEU	5.0
27	a	7	ASN	5.0
34	i	1646	A	5.0
10	J	93	LYS	5.0
1	A	127	PRO	5.0
21	U	82	MET	5.0
34	i	228	A	5.0
4	D	77	PHE	5.0
34	i	142	C	5.0
2	B	89	GLU	4.9
34	i	1219	A	4.9
2	B	101	HIS	4.9
19	S	42	HIS	4.9
21	U	89	ILE	4.9
26	Z	73	VAL	4.9
7	G	191	ARG	4.9
9	I	38	ILE	4.9
17	Q	69	ARG	4.9
21	U	85	HIS	4.9
34	i	1468	C	4.9
23	W	128	PHE	4.9
20	T	38	LYS	4.9
20	T	9	VAL	4.9
9	I	156	ALA	4.9
19	S	40	TYR	4.9
9	I	78	ILE	4.9
5	E	99	PHE	4.9
10	J	184	GLY	4.9
30	d	51	GLY	4.9
4	D	17	PHE	4.9

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Mol	Chain	Res	Type	RSRZ
21	U	33	GLU	4.9
12	L	9	ALA	4.8
27	a	87	ARG	4.8
5	E	175	PHE	4.8
5	E	204	SER	4.8
23	W	60	LYS	4.8
7	G	18	VAL	4.8
34	i	867	U	4.8
11	K	93	THR	4.8
9	I	166	PHE	4.8
10	J	143	ASN	4.8
6	F	68	ILE	4.8
34	i	439	A	4.8
17	Q	63	PHE	4.8
23	W	126	LEU	4.8
24	X	42	GLY	4.8
11	K	79	LEU	4.8
4	D	208	VAL	4.8
28	b	61	THR	4.8
19	S	126	PHE	4.8
10	J	96	TYR	4.8
11	K	52	LEU	4.7
4	D	24	PHE	4.7
34	i	214	A	4.7
14	N	28	LEU	4.7
7	G	156	TYR	4.7
5	E	62	LYS	4.7
13	M	31	LEU	4.7
34	i	113	G	4.7
24	X	44	ALA	4.7
12	L	117	PHE	4.7
20	T	99	VAL	4.7
34	i	1587	C	4.7
5	E	154	ILE	4.7
10	J	98	LEU	4.7
20	T	107	LEU	4.7
34	i	1493	G	4.7
20	T	109	GLY	4.7
24	X	48	LYS	4.7
11	K	57	TYR	4.7
7	G	16	ILE	4.6
5	E	151	ASP	4.6

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Mol	Chain	Res	Type	RSRZ
23	W	130	PHE	4.6
5	E	81	THR	4.6
5	E	176	ASP	4.6
34	i	1471	G	4.6
34	i	1601	G	4.6
16	P	103	ASN	4.6
5	E	49	ARG	4.6
11	K	75	GLY	4.6
34	i	1652	G	4.6
5	E	76	VAL	4.6
34	i	117	C	4.6
20	T	100	ALA	4.6
2	B	90	ASP	4.6
4	D	13	ALA	4.6
10	J	100	LEU	4.6
32	f	103	LEU	4.6
34	i	863	G	4.6
10	J	185	ALA	4.6
2	B	23	ASP	4.6
2	B	135	LEU	4.5
34	i	339	A	4.5
19	S	74	PRO	4.5
34	i	268	G	4.5
9	I	85	ALA	4.5
19	S	46	ARG	4.5
34	i	271	G	4.5
34	i	1525	U	4.5
31	e	78	GLY	4.5
34	i	891	G	4.5
4	D	38	GLU	4.5
17	Q	51	LEU	4.5
18	R	16	ILE	4.5
7	G	148	SER	4.5
23	W	37	PHE	4.5
2	B	56	LYS	4.5
34	i	108	G	4.5
34	i	676	U	4.5
16	P	129	GLY	4.5
33	g	32	LEU	4.5
34	i	1537	C	4.5
20	T	52	TRP	4.5
9	I	155	ASN	4.5

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Mol	Chain	Res	Type	RSRZ
23	W	76	SER	4.5
1	A	134	LEU	4.5
17	Q	52	LEU	4.5
20	T	69	GLY	4.5
11	K	13	GLU	4.5
2	B	33	VAL	4.5
11	K	35	LEU	4.5
19	S	33	ILE	4.5
7	G	138	ALA	4.4
17	Q	144	SER	4.4
18	R	13	ALA	4.4
19	S	26	ILE	4.4
28	b	62	VAL	4.4
21	U	84	ILE	4.4
10	J	87	LEU	4.4
32	f	102	VAL	4.4
34	i	1581	U	4.4
11	K	47	LYS	4.4
19	S	30	ILE	4.4
4	D	63	GLY	4.4
6	F	41	VAL	4.4
1	A	145	ILE	4.4
14	N	61	ALA	4.4
33	g	59	LEU	4.4
17	Q	119	LEU	4.4
23	W	125	ILE	4.4
30	d	46	TYR	4.4
4	D	14	ASP	4.4
34	i	405	A	4.4
34	i	116	U	4.4
20	T	68	GLY	4.4
7	G	95	LYS	4.4
33	g	275	ILE	4.4
34	i	675	A	4.4
34	i	1153	G	4.4
34	i	1420	G	4.4
24	X	68	LYS	4.3
7	G	41	LEU	4.3
21	U	114	VAL	4.3
34	i	913	U	4.3
34	i	111	A	4.3
34	i	402	G	4.3

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Mol	Chain	Res	Type	RSRZ
34	i	1540	A	4.3
17	Q	115	TYR	4.3
24	X	72	VAL	4.3
34	i	894	U	4.3
9	I	82	VAL	4.3
10	J	57	ALA	4.3
19	S	128	GLY	4.3
14	N	36	GLN	4.3
19	S	111	LEU	4.3
28	b	52	THR	4.3
2	B	43	ASN	4.3
21	U	102	THR	4.3
24	X	107	ARG	4.3
26	Z	74	SER	4.3
34	i	677	C	4.3
4	D	19	ALA	4.3
17	Q	39	LEU	4.3
34	i	847	C	4.3
5	E	152	PRO	4.3
11	K	91	PRO	4.3
5	E	18	TRP	4.3
33	g	95	GLY	4.3
33	g	70	VAL	4.3
8	H	61	ILE	4.3
31	e	76	VAL	4.3
2	B	28	LYS	4.3
5	E	29	PRO	4.3
19	S	47	LYS	4.3
2	B	53	GLN	4.3
34	i	404	A	4.3
34	i	1661	C	4.2
20	T	66	LEU	4.2
23	W	53	ILE	4.2
4	D	64	ARG	4.2
2	B	133	TYR	4.2
34	i	126	G	4.2
18	R	64	GLY	4.2
10	J	86	VAL	4.2
9	I	174	CYS	4.2
34	i	645	A	4.2
23	W	122	GLY	4.2
4	D	67	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
11	K	61	GLN	4.2
34	i	1605	G	4.2
34	i	112	U	4.2
15	O	48	SER	4.2
28	b	48	SER	4.2
13	M	32	ALA	4.2
6	F	15	PRO	4.2
8	H	48	ALA	4.2
14	N	83	ASP	4.2
4	D	50	ILE	4.2
12	L	5	GLN	4.2
20	T	131	LEU	4.2
33	g	93	THR	4.2
34	i	332	C	4.2
2	B	221	PRO	4.2
17	Q	68	ILE	4.2
24	X	80	LYS	4.1
18	R	69	ILE	4.1
34	i	275	C	4.1
9	I	87	ASN	4.1
23	W	129	PHE	4.1
9	I	104	ILE	4.1
15	O	46	ASP	4.1
20	T	130	ASP	4.1
21	U	22	ILE	4.1
21	U	56	MET	4.1
23	W	105	THR	4.1
11	K	16	PHE	4.1
26	Z	47	LEU	4.1
4	D	29	LEU	4.1
34	i	1535	G	4.1
20	T	103	VAL	4.1
34	i	409	G	4.1
23	W	123	GLY	4.1
27	a	35	ALA	4.1
23	W	55	ASP	4.1
16	P	18	ARG	4.1
11	K	50	GLN	4.1
20	T	123	LEU	4.1
6	F	30	ILE	4.1
15	O	102	GLY	4.1
31	e	79	SER	4.1

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Mol	Chain	Res	Type	RSRZ
34	i	1523	G	4.1
9	I	95	THR	4.1
34	i	242	G	4.1
19	S	89	ASP	4.1
26	Z	107	VAL	4.1
32	f	106	TYR	4.1
20	T	40	ALA	4.1
26	Z	86	ALA	4.1
34	i	16	G	4.1
34	i	987	G	4.1
34	i	1579	G	4.1
12	L	101	ARG	4.1
14	N	33	VAL	4.1
2	B	60	ASP	4.0
6	F	32	ASP	4.0
34	i	1669	G	4.0
2	B	216	LYS	4.0
19	S	81	ASP	4.0
17	Q	6	PRO	4.0
17	Q	85	ARG	4.0
23	W	77	PRO	4.0
34	i	1650	C	4.0
27	a	92	ARG	4.0
7	G	141	ILE	4.0
14	N	65	PHE	4.0
26	Z	85	ARG	4.0
14	N	13	GLN	4.0
1	A	126	ASP	4.0
25	Y	53	ASP	4.0
21	U	86	LYS	4.0
34	i	725	C	4.0
34	i	735	C	4.0
5	E	203	GLY	4.0
20	T	113	VAL	4.0
7	G	84	TYR	4.0
2	B	54	GLY	4.0
5	E	77	ARG	4.0
7	G	3	LEU	4.0
34	i	1220	G	4.0
5	E	169	ILE	4.0
23	W	81	VAL	3.9
9	I	163	GLU	3.9

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Mol	Chain	Res	Type	RSRZ
21	U	119	ALA	3.9
34	i	411	G	3.9
16	P	87	PRO	3.9
26	Z	109	TYR	3.9
2	B	121	ILE	3.9
7	G	147	LEU	3.9
35	l	73	VAL	3.9
34	i	646	G	3.9
4	D	8	LYS	3.9
19	S	112	GLU	3.9
5	E	41	CYS	3.9
19	S	50	ILE	3.9
33	g	90	TRP	3.9
34	i	338	A	3.9
2	B	95	ASN	3.9
33	g	77	PHE	3.9
10	J	102	ILE	3.9
10	J	182	GLN	3.9
16	P	124	LYS	3.9
27	a	88	SER	3.9
34	i	982	G	3.9
7	G	111	LEU	3.9
16	P	118	GLU	3.9
24	X	39	ASN	3.9
4	D	59	LEU	3.9
34	i	115	U	3.9
33	g	94	THR	3.9
16	P	123	TYR	3.9
34	i	1857	A	3.9
5	E	50	ASN	3.9
15	O	27	VAL	3.9
11	K	62	PHE	3.8
33	g	89	LEU	3.8
4	D	75	LYS	3.8
8	H	49	LYS	3.8
34	i	665	U	3.8
2	B	66	VAL	3.8
34	i	1446	G	3.8
34	i	1651	G	3.8
23	W	86	LEU	3.8
5	E	93	ASP	3.8
8	H	138	GLU	3.8

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Mol	Chain	Res	Type	RSRZ
34	i	807	A	3.8
28	b	29	ASN	3.8
34	i	213	C	3.8
34	i	212	G	3.8
34	i	851	G	3.8
34	i	981	G	3.8
34	i	486	C	3.8
34	i	487	C	3.8
34	i	806	A	3.8
14	N	22	VAL	3.8
24	X	87	ASN	3.8
26	Z	68	ILE	3.8
26	Z	89	GLN	3.8
18	R	61	ILE	3.8
34	i	270	G	3.8
5	E	109	PHE	3.8
13	M	111	VAL	3.8
23	W	59	GLY	3.8
27	a	10	ARG	3.8
34	i	942	U	3.8
9	I	195	LEU	3.8
23	W	124	LYS	3.8
2	B	32	ASP	3.8
4	D	150	MET	3.8
34	i	408	A	3.8
30	d	52	PHE	3.8
2	B	52	THR	3.7
2	B	161	VAL	3.7
14	N	69	ASN	3.7
21	U	113	GLU	3.7
23	W	10	ALA	3.7
15	O	104	ARG	3.7
12	L	142	VAL	3.7
12	L	126	VAL	3.7
34	i	1668	U	3.7
15	O	19	PRO	3.7
20	T	78	ILE	3.7
7	G	75	LEU	3.7
9	I	201	LYS	3.7
34	i	267	G	3.7
34	i	1255	A	3.7
2	B	87	ILE	3.7

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Mol	Chain	Res	Type	RSRZ
19	S	6	PRO	3.7
34	i	243	C	3.7
34	i	345	G	3.7
34	i	406	U	3.7
20	T	104	LEU	3.7
11	K	3	MET	3.7
23	W	113	HIS	3.7
9	I	18	ARG	3.7
18	R	17	ILE	3.7
26	Z	79	ILE	3.7
15	O	53	ILE	3.7
9	I	170	LYS	3.7
5	E	171	ASP	3.7
17	Q	60	LYS	3.7
24	X	58	GLU	3.7
34	i	639	U	3.6
23	W	73	GLY	3.6
34	i	1761	C	3.6
34	i	1618	A	3.6
21	U	23	THR	3.6
16	P	17	TYR	3.6
19	S	90	VAL	3.6
20	T	74	SER	3.6
34	i	644	A	3.6
34	i	1532	A	3.6
6	F	50	PRO	3.6
28	b	28	PRO	3.6
9	I	86	SER	3.6
12	L	120	VAL	3.6
19	S	91	LYS	3.6
20	T	90	SER	3.6
34	i	810	U	3.6
9	I	17	LYS	3.6
16	P	108	LYS	3.6
34	i	397	G	3.6
34	i	1352	G	3.6
7	G	17	GLU	3.6
11	K	82	TYR	3.6
34	i	401	G	3.6
17	Q	93	VAL	3.6
8	H	95	ILE	3.6
16	P	104	GLN	3.6

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Mol	Chain	Res	Type	RSRZ
16	P	15	PHE	3.6
34	i	674	G	3.6
34	i	846	C	3.6
25	Y	112	ASN	3.6
26	Z	49	LEU	3.6
7	G	180	VAL	3.6
26	Z	90	GLU	3.6
34	i	795	U	3.6
34	i	1662	U	3.6
2	B	98	THR	3.6
6	F	104	THR	3.6
34	i	862	U	3.5
34	i	1531	G	3.5
16	P	24	GLN	3.5
16	P	95	GLY	3.5
16	P	121	ILE	3.5
28	b	2	PRO	3.5
27	a	34	LYS	3.5
7	G	142	ARG	3.5
34	i	438	A	3.5
34	i	476	A	3.5
3	C	103	ALA	3.5
9	I	6	ASP	3.5
1	A	159	ILE	3.5
10	J	43	VAL	3.5
13	M	110	VAL	3.5
23	W	30	CYS	3.5
34	i	664	C	3.5
27	a	79	ILE	3.5
5	E	51	LYS	3.5
10	J	118	GLY	3.5
34	i	95	G	3.5
34	i	1011	U	3.5
19	S	88	LYS	3.5
34	i	232	A	3.5
7	G	187	HIS	3.5
21	U	53	PRO	3.5
14	N	64	ARG	3.5
21	U	87	ARG	3.5
4	D	135	GLU	3.5
17	Q	110	ASP	3.5
34	i	336	C	3.5

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Mol	Chain	Res	Type	RSRZ
5	E	68	ARG	3.5
34	i	1043	C	3.5
7	G	37	ALA	3.5
16	P	16	THR	3.5
7	G	184	VAL	3.5
34	i	3	C	3.5
23	W	116	ALA	3.5
7	G	27	PHE	3.5
11	K	95	ARG	3.5
20	T	108	GLU	3.5
4	D	1	MET	3.5
34	i	440	C	3.5
2	B	57	ILE	3.5
34	i	505	G	3.5
6	F	93	VAL	3.5
34	i	1538	U	3.4
2	B	92	GLN	3.4
24	X	49	GLY	3.4
12	L	47	PRO	3.4
34	i	653	C	3.4
7	G	176	ILE	3.4
34	i	848	G	3.4
34	i	1064	G	3.4
34	i	1533	C	3.4
20	T	8	ASP	3.4
8	H	112	ASN	3.4
2	B	181	LEU	3.4
34	i	1088	G	3.4
23	W	110	ILE	3.4
34	i	131	C	3.4
10	J	183	GLY	3.4
20	T	122	LYS	3.4
34	i	266	G	3.4
34	i	143	U	3.4
15	O	97	LEU	3.4
24	X	90	CYS	3.4
4	D	88	ALA	3.4
4	D	151	LYS	3.4
9	I	197	PHE	3.4
9	I	202	ILE	3.4
34	i	106	C	3.4
30	d	36	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
6	F	14	THR	3.4
28	b	63	LEU	3.4
34	i	255	C	3.4
34	i	473	C	3.4
34	i	1604	C	3.4
15	O	33	ILE	3.4
20	T	80	GLY	3.4
16	P	105	VAL	3.4
9	I	194	GLU	3.4
23	W	32	LYS	3.4
26	Z	45	ASN	3.4
7	G	76	LEU	3.4
26	Z	41	ARG	3.4
25	Y	86	GLU	3.4
33	g	76	GLN	3.4
8	H	137	SER	3.4
16	P	85	ILE	3.4
20	T	21	PHE	3.4
30	d	35	GLY	3.3
33	g	80	SER	3.3
34	i	337	G	3.3
34	i	1757	G	3.3
7	G	190	ARG	3.3
2	B	30	TRP	3.3
34	i	941	U	3.3
2	B	68	GLU	3.3
17	Q	38	PRO	3.3
27	a	33	ASP	3.3
11	K	9	ILE	3.3
16	P	5	GLU	3.3
28	b	65	GLN	3.3
7	G	24	LEU	3.3
34	i	788	C	3.3
34	i	1748	G	3.3
34	i	504	U	3.3
34	i	692	U	3.3
10	J	145	PRO	3.3
9	I	4	SER	3.3
16	P	20	VAL	3.3
34	i	289	G	3.3
34	i	943	G	3.3
4	D	185	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
1	A	133	PRO	3.3
21	U	117	ALA	3.3
6	F	135	ARG	3.3
21	U	116	ILE	3.3
34	i	845	A	3.3
4	D	74	GLN	3.3
6	F	85	LYS	3.3
11	K	59	LYS	3.3
26	Z	75	GLU	3.3
33	g	40	ILE	3.3
19	S	35	GLY	3.3
16	P	23	ASP	3.3
34	i	441	G	3.3
4	D	2	ALA	3.3
19	S	67	VAL	3.3
9	I	191	GLU	3.3
3	C	102	GLN	3.3
34	i	809	A	3.3
9	I	159	SER	3.3
9	I	79	ILE	3.3
17	Q	65	GLY	3.3
28	b	31	TYR	3.3
7	G	36	VAL	3.3
14	N	2	GLY	3.3
34	i	861	A	3.3
2	B	91	VAL	3.3
4	D	37	VAL	3.3
8	H	139	ILE	3.3
15	O	101	GLY	3.3
34	i	141	A	3.3
34	i	647	U	3.3
21	U	101	ILE	3.3
23	W	106	THR	3.3
27	a	78	ALA	3.3
16	P	94	VAL	3.2
26	Z	50	PHE	3.2
34	i	1465	A	3.2
5	E	94	LYS	3.2
34	i	1516	C	3.2
20	T	86	GLY	3.2
14	N	37	ILE	3.2
16	P	126	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
26	Z	92	LEU	3.2
30	d	22	ARG	3.2
32	f	101	ALA	3.2
34	i	1653	G	3.2
10	J	103	GLU	3.2
2	B	70	SER	3.2
14	N	21	SER	3.2
34	i	1044	G	3.2
14	N	54	LEU	3.2
24	X	74	LEU	3.2
10	J	105	PHE	3.2
15	O	18	GLY	3.2
14	N	18	TYR	3.2
19	S	93	GLY	3.2
26	Z	81	GLY	3.2
8	H	134	VAL	3.2
5	E	177	THR	3.2
15	O	51	GLU	3.2
21	U	118	ASP	3.2
9	I	106	SER	3.2
4	D	115	VAL	3.2
10	J	106	LEU	3.2
20	T	50	GLU	3.2
34	i	1704	G	3.2
9	I	97	VAL	3.2
10	J	35	TYR	3.2
33	g	58	ALA	3.2
12	L	46	THR	3.2
8	H	136	PRO	3.2
24	X	94	ILE	3.2
34	i	739	U	3.2
28	b	27	SER	3.2
5	E	87	MET	3.2
21	U	88	LEU	3.2
34	i	129	C	3.2
34	i	282	G	3.2
28	b	71	ALA	3.2
34	i	808	A	3.2
34	i	980	C	3.2
34	i	175	A	3.1
9	I	122	GLY	3.1
23	W	9	ASP	3.1

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Mol	Chain	Res	Type	RSRZ
34	i	940	A	3.1
7	G	149	LYS	3.1
27	a	72	HIS	3.1
34	i	1421	G	3.1
8	H	142	LYS	3.1
5	E	122	LYS	3.1
5	E	240	ARG	3.1
12	L	61	PRO	3.1
34	i	114	G	3.1
34	i	1634	G	3.1
7	G	83	CYS	3.1
17	Q	24	HIS	3.1
32	f	105	TYR	3.1
34	i	1063	C	3.1
2	B	93	GLY	3.1
34	i	233	A	3.1
8	H	62	ILE	3.1
26	Z	91	LEU	3.1
34	i	109	U	3.1
28	b	23	ARG	3.1
7	G	189	ARG	3.1
11	K	78	TYR	3.1
13	M	113	ASP	3.1
34	i	4	C	3.1
34	i	9	U	3.1
18	R	24	LEU	3.1
19	S	86	ARG	3.1
10	J	81	LEU	3.1
11	K	56	GLY	3.1
26	Z	46	ASN	3.1
5	E	80	ILE	3.1
9	I	19	LYS	3.1
24	X	66	ILE	3.1
34	i	1227	C	3.1
7	G	135	PRO	3.1
16	P	13	ARG	3.1
34	i	1654	U	3.1
33	g	98	THR	3.1
34	i	178	C	3.1
18	R	8	THR	3.1
21	U	115	THR	3.1
23	W	34	ILE	3.1

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Mol	Chain	Res	Type	RSRZ
34	i	1218	G	3.1
34	i	1353	A	3.1
8	H	19	PHE	3.1
11	K	81	ASP	3.1
19	S	94	LYS	3.1
34	i	1764	G	3.1
7	G	1	MET	3.1
14	N	151	ALA	3.1
4	D	39	VAL	3.0
20	T	121	ARG	3.0
27	a	11	ALA	3.0
11	K	94	LEU	3.0
20	T	7	LYS	3.0
34	i	331	C	3.0
33	g	22	ALA	3.0
23	W	90	GLN	3.0
7	G	93	LYS	3.0
34	i	94	G	3.0
34	i	649	G	3.0
34	i	1270	G	3.0
8	H	60	ILE	3.0
34	i	2	A	3.0
34	i	1205	A	3.0
34	i	1812	A	3.0
7	G	113	ILE	3.0
13	M	112	LYS	3.0
20	T	111	LYS	3.0
19	S	95	TYR	3.0
34	i	238	G	3.0
6	F	28	VAL	3.0
8	H	92	VAL	3.0
20	T	67	ARG	3.0
7	G	35	GLU	3.0
19	S	59	LEU	3.0
16	P	36	LEU	3.0
20	T	35	ASP	3.0
10	J	127	ARG	3.0
34	i	410	G	3.0
19	S	39	ARG	3.0
34	i	133	C	3.0
2	B	29	ASP	3.0
8	H	50	GLU	3.0

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Mol	Chain	Res	Type	RSRZ
10	J	91	LYS	3.0
17	Q	64	ALA	3.0
27	a	8	ASN	3.0
27	a	75	VAL	3.0
34	i	1447	G	3.0
15	O	16	SER	3.0
34	i	886	U	3.0
12	L	145	VAL	3.0
27	a	37	LYS	3.0
10	J	19	PRO	3.0
15	O	116	LEU	3.0
13	M	80	ASP	2.9
16	P	27	ASP	2.9
26	Z	51	ASP	2.9
7	G	50	VAL	2.9
8	H	96	ALA	2.9
6	F	80	GLY	2.9
23	W	118	ARG	2.9
33	g	30	MET	2.9
34	i	1042	U	2.9
6	F	49	LEU	2.9
24	X	43	GLY	2.9
33	g	272	GLN	2.9
34	i	693	A	2.9
4	D	81	GLU	2.9
13	M	64	LEU	2.9
17	Q	116	ASP	2.9
11	K	73	ASN	2.9
32	f	119	ARG	2.9
34	i	691	G	2.9
34	i	938	G	2.9
9	I	169	GLY	2.9
16	P	37	TYR	2.9
10	J	37	LEU	2.9
23	W	11	LEU	2.9
10	J	46	VAL	2.9
13	M	60	MET	2.9
26	Z	77	LEU	2.9
19	S	29	ALA	2.9
21	U	90	ASP	2.9
16	P	33	LEU	2.9
17	Q	33	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
5	E	95	THR	2.9
26	Z	58	LEU	2.9
31	e	122	THR	2.9
34	i	531	U	2.9
17	Q	25	CYS	2.9
34	i	1813	A	2.9
18	R	41	ILE	2.9
24	X	53	GLU	2.9
34	i	306	C	2.9
23	W	119	LYS	2.9
4	D	186	VAL	2.9
19	S	58	GLU	2.9
2	B	136	HIS	2.9
10	J	42	GLU	2.9
27	a	91	ALA	2.9
10	J	88	ASP	2.9
20	T	81	GLY	2.9
23	W	31	SER	2.9
34	i	1253	G	2.9
10	J	78	LEU	2.9
1	A	153	PRO	2.9
2	B	96	CYS	2.9
1	A	146	ALA	2.9
15	O	89	GLY	2.9
34	i	683	G	2.9
15	O	62	VAL	2.9
34	i	656	U	2.9
34	i	1580	U	2.9
9	I	88	ASN	2.9
28	b	25	VAL	2.8
28	b	46	VAL	2.8
34	i	1606	G	2.8
12	L	96	ILE	2.8
16	P	52	LYS	2.8
30	d	38	MET	2.8
24	X	28	LYS	2.8
34	i	21	U	2.8
7	G	94	ARG	2.8
19	S	34	LYS	2.8
21	U	61	LEU	2.8
20	T	134	ILE	2.8
34	i	1549	C	2.8

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Mol	Chain	Res	Type	RSRZ
5	E	31	PRO	2.8
34	i	244	C	2.8
34	i	488	C	2.8
34	i	730	C	2.8
34	i	1603	U	2.8
1	A	152	SER	2.8
4	D	25	LEU	2.8
34	i	503	G	2.8
34	i	594	A	2.8
34	i	997	A	2.8
10	J	92	MET	2.8
34	i	118	C	2.8
34	i	134	C	2.8
8	H	132	ASP	2.8
19	S	21	ASP	2.8
17	Q	114	GLN	2.8
7	G	5	ILE	2.8
16	P	86	LEU	2.8
5	E	196	THR	2.8
15	O	127	GLY	2.8
26	Z	56	ASP	2.8
4	D	209	SER	2.8
18	R	65	PRO	2.8
34	i	172	U	2.8
15	O	67	ASP	2.8
34	i	657	U	2.8
25	Y	109	GLU	2.8
34	i	22	A	2.8
34	i	1756	C	2.8
5	E	167	GLY	2.8
10	J	40	LYS	2.8
33	g	134	THR	2.8
13	M	39	ALA	2.8
5	E	98	ASN	2.8
10	J	39	ASN	2.8
26	Z	76	ARG	2.8
2	B	22	VAL	2.8
11	K	65	ARG	2.8
34	i	1245	C	2.8
2	B	63	LYS	2.8
34	i	954	G	2.8
34	i	1667	U	2.8

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Mol	Chain	Res	Type	RSRZ
10	J	149	VAL	2.8
19	S	108	ARG	2.8
34	i	139	C	2.8
34	i	179	C	2.8
34	i	662	A	2.8
34	i	854	A	2.8
19	S	36	VAL	2.8
5	E	174	LYS	2.8
34	i	485	U	2.8
15	O	130	GLU	2.7
24	X	99	GLU	2.7
23	W	109	GLY	2.7
28	b	50	ALA	2.7
19	S	96	SER	2.7
17	Q	71	ARG	2.7
34	i	1552	C	2.7
1	A	124	VAL	2.7
2	B	164	ILE	2.7
33	g	278	SER	2.7
14	N	56	ASP	2.7
34	i	110	U	2.7
34	i	340	C	2.7
23	W	54	ASP	2.7
19	S	70	ILE	2.7
34	i	215	U	2.7
34	i	680	G	2.7
15	O	100	THR	2.7
9	I	105	ASP	2.7
9	I	175	ILE	2.7
16	P	21	ASP	2.7
31	e	98	LYS	2.7
28	b	15	GLU	2.7
12	L	10	TYR	2.7
19	S	15	VAL	2.7
34	i	93	U	2.7
34	i	1763	C	2.7
9	I	36	THR	2.7
17	Q	107	GLU	2.7
23	W	120	HIS	2.7
23	W	71	LYS	2.7
6	F	105	GLY	2.7
21	U	106	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
33	g	96	THR	2.7
34	i	7	G	2.7
34	i	659	A	2.7
24	X	110	HIS	2.7
8	H	93	VAL	2.7
4	D	18	LYS	2.7
34	i	407	C	2.7
25	Y	113	ARG	2.7
34	i	300	G	2.7
34	i	1252	G	2.7
19	S	31	THR	2.7
32	f	120	GLU	2.7
11	K	24	LYS	2.7
5	E	28	ALA	2.7
13	M	79	VAL	2.7
34	i	811	U	2.7
34	i	895	U	2.7
20	T	114	GLU	2.7
10	J	119	LEU	2.7
18	R	15	VAL	2.7
34	i	849	C	2.7
9	I	61	ASP	2.7
8	H	23	ILE	2.7
34	i	288	A	2.7
34	i	1027	A	2.7
3	C	216	ALA	2.7
1	A	122	LEU	2.7
1	A	158	ASP	2.7
20	T	82	ARG	2.7
23	W	13	SER	2.7
26	Z	93	SER	2.7
34	i	1759	C	2.7
34	i	859	U	2.7
4	D	49	ILE	2.7
12	L	103	GLU	2.7
9	I	120	PRO	2.7
10	J	130	ILE	2.7
24	X	79	LYS	2.7
31	e	97	GLU	2.7
34	i	343	C	2.7
5	E	158	ASP	2.6
21	U	52	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
16	P	14	LYS	2.6
16	P	106	GLU	2.6
19	S	48	ALA	2.6
34	i	394	G	2.6
34	i	1814	G	2.6
5	E	56	LEU	2.6
6	F	42	LYS	2.6
15	O	93	LEU	2.6
32	f	122	PRO	2.6
24	X	9	THR	2.6
24	X	38	ALA	2.6
31	e	81	ALA	2.6
28	b	3	LEU	2.6
34	i	805	A	2.6
33	g	97	THR	2.6
34	i	726	C	2.6
34	i	864	G	2.6
34	i	1856	G	2.6
11	K	86	PRO	2.6
9	I	90	LEU	2.6
7	G	225	GLN	2.6
34	i	301	C	2.6
34	i	593	C	2.6
4	D	55	THR	2.6
19	S	51	ASP	2.6
34	i	1645	A	2.6
6	F	72	LEU	2.6
11	K	53	LYS	2.6
24	X	134	TYR	2.6
31	e	77	HIS	2.6
34	i	823	A	2.6
1	A	148	CYS	2.6
15	O	140	THR	2.6
34	i	493	C	2.6
1	A	33	GLN	2.6
2	B	51	ARG	2.6
5	E	79	ASP	2.6
7	G	109	LEU	2.6
34	i	103	A	2.6
11	K	74	GLU	2.6
34	i	1655	C	2.6
7	G	103	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
14	N	40	LEU	2.6
20	T	17	ALA	2.6
26	Z	43	LYS	2.6
10	J	111	GLN	2.6
34	i	17	C	2.6
7	G	96	SER	2.6
15	O	54	CYS	2.6
10	J	101	LYS	2.6
26	Z	67	LEU	2.6
32	f	118	ARG	2.6
34	i	325	G	2.6
34	i	393	G	2.6
21	U	107	GLU	2.6
34	i	234	C	2.6
5	E	20	LEU	2.6
5	E	155	LYS	2.6
12	L	99	TYR	2.6
32	f	111	ASN	2.6
34	i	1541	G	2.6
7	G	104	ALA	2.6
25	Y	117	VAL	2.6
34	i	13	C	2.6
34	i	643	A	2.6
34	i	1482	A	2.6
7	G	221	LYS	2.6
10	J	181	GLY	2.6
26	Z	97	ILE	2.6
21	U	27	ARG	2.6
34	i	1588	C	2.6
34	i	1607	G	2.6
34	i	1621	C	2.6
33	g	300	ALA	2.6
14	N	19	ARG	2.6
11	K	89	ILE	2.6
8	H	156	VAL	2.5
34	i	341	G	2.5
34	i	734	C	2.6
34	i	1593	G	2.5
34	i	1602	A	2.5
9	I	39	GLY	2.5
14	N	23	PRO	2.5
5	E	241	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
19	S	101	ASN	2.5
34	i	247	C	2.5
34	i	969	C	2.5
4	D	9	ARG	2.5
19	S	134	GLN	2.5
34	i	371	C	2.5
34	i	1657	U	2.5
11	K	39	ASN	2.5
17	Q	145	TYR	2.5
19	S	130	ARG	2.5
20	T	49	ASP	2.5
23	W	94	LEU	2.5
34	i	1627	G	2.5
23	W	40	VAL	2.5
7	G	181	THR	2.5
11	K	87	PRO	2.5
23	W	79	PHE	2.5
34	i	663	G	2.5
20	T	22	LEU	2.5
34	i	335	U	2.5
5	E	150	PRO	2.5
9	I	63	GLY	2.5
26	Z	62	VAL	2.5
1	A	209	GLU	2.5
9	I	204	ALA	2.5
12	L	44	PHE	2.5
32	f	84	SER	2.5
27	a	95	ARG	2.5
34	i	963	C	2.5
34	i	435	A	2.5
34	i	804	A	2.5
13	M	41	ALA	2.5
17	Q	48	GLN	2.5
34	i	789	G	2.5
8	H	63	PHE	2.5
34	i	5	U	2.5
34	i	1611	U	2.5
18	R	57	LEU	2.5
34	i	610	G	2.5
34	i	694	G	2.5
34	i	803	G	2.5
2	B	26	SER	2.5

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Mol	Chain	Res	Type	RSRZ
34	i	1188	U	2.5
26	Z	78	LYS	2.5
34	i	1664	G	2.5
6	F	27	ASP	2.5
4	D	210	ILE	2.5
9	I	91	VAL	2.5
34	i	1544	U	2.5
15	O	88	LEU	2.5
27	a	4	LYS	2.5
21	U	50	VAL	2.5
26	Z	59	CYS	2.5
2	B	104	ASP	2.5
6	F	113	VAL	2.5
35	l	83	ILE	2.5
7	G	29	GLU	2.5
8	H	143	ARG	2.5
19	S	75	ARG	2.5
23	W	58	ALA	2.5
26	Z	80	ARG	2.5
32	f	115	SER	2.5
11	K	34	GLU	2.5
19	S	103	LEU	2.5
1	A	123	VAL	2.4
2	B	220	LYS	2.4
33	g	307	VAL	2.4
4	D	84	VAL	2.4
9	I	62	VAL	2.4
26	Z	108	ILE	2.4
3	C	229	ILE	2.4
4	D	32	ASP	2.4
32	f	109	ASP	2.4
26	Z	53	ALA	2.4
33	g	31	ILE	2.4
2	B	134	LEU	2.4
34	i	495	G	2.4
16	P	19	GLY	2.4
20	T	106	ALA	2.4
27	a	85	ARG	2.4
5	E	111	VAL	2.4
5	E	160	ILE	2.4
6	F	134	VAL	2.4
30	d	43	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
34	i	146	G	2.4
14	N	26	LEU	2.4
23	W	29	PRO	2.4
28	b	32	PHE	2.4
34	i	1539	C	2.4
25	Y	15	ASN	2.4
28	b	16	LYS	2.4
23	W	75	ILE	2.4
2	B	225	LEU	2.4
34	i	1010	G	2.4
28	b	49	HIS	2.4
34	i	1749	C	2.4
19	S	131	VAL	2.4
8	H	47	ALA	2.4
10	J	74	GLY	2.4
10	J	131	ARG	2.4
34	i	1663	U	2.4
34	i	1551	A	2.4
34	i	1575	A	2.4
23	W	14	ILE	2.4
12	L	4	ILE	2.4
12	L	8	ARG	2.4
34	i	286	C	2.4
5	E	172	PHE	2.4
11	K	77	GLN	2.4
15	O	63	LYS	2.4
16	P	84	ILE	2.4
20	T	73	GLY	2.4
21	U	109	GLY	2.4
23	W	101	PHE	2.4
5	E	145	ARG	2.4
13	M	90	GLY	2.4
24	X	36	LEU	2.4
26	Z	106	GLN	2.4
25	Y	87	PRO	2.4
34	i	272	C	2.4
34	i	1760	C	2.4
28	b	8	LEU	2.4
34	i	914	U	2.4
9	I	121	LEU	2.4
1	A	130	ASP	2.4
8	H	46	THR	2.4

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Mol	Chain	Res	Type	RSRZ
34	i	873	C	2.4
35	l	72	THR	2.4
24	X	51	VAL	2.4
21	U	44	LYS	2.4
34	i	27	A	2.4
24	X	73	GLN	2.4
13	M	50	CYS	2.4
26	Z	54	THR	2.4
32	f	117	LEU	2.4
23	W	33	VAL	2.4
25	Y	84	LYS	2.4
4	D	215	ASP	2.4
34	i	15	U	2.4
34	i	637	U	2.4
34	i	970	C	2.4
13	M	54	SER	2.4
17	Q	84	ILE	2.4
12	L	6	THR	2.4
31	e	80	LEU	2.3
34	i	1162	G	2.4
5	E	119	ALA	2.3
34	i	132	U	2.3
34	i	860	A	2.3
34	i	1244	U	2.3
34	i	1534	U	2.3
25	Y	128	GLY	2.3
20	T	115	LYS	2.3
5	E	164	LEU	2.3
11	K	83	LEU	2.3
16	P	25	LEU	2.3
5	E	162	ILE	2.3
34	i	1217	G	2.3
18	R	9	VAL	2.3
34	i	609	A	2.3
33	g	308	ARG	2.3
21	U	65	THR	2.3
2	B	97	LEU	2.3
19	S	56	ALA	2.3
34	i	824	G	2.3
11	K	26	ASP	2.3
32	f	110	GLU	2.3
34	i	844	U	2.3

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Mol	Chain	Res	Type	RSRZ
6	F	33	ILE	2.3
9	I	199	LEU	2.3
34	i	890	G	2.3
5	E	195	ILE	2.3
17	Q	67	ASP	2.3
34	i	28	U	2.3
24	X	31	HIS	2.3
5	E	86	PHE	2.3
23	W	78	ARG	2.3
26	Z	82	SER	2.3
33	g	33	SER	2.3
34	i	658	A	2.3
34	i	850	A	2.3
34	i	1400	U	2.3
6	F	84	GLY	2.3
4	D	62	LYS	2.3
33	g	69	VAL	2.3
34	i	1702	U	2.3
17	Q	49	TYR	2.3
34	i	1613	C	2.3
17	Q	66	VAL	2.3
34	i	412	U	2.3
23	W	27	ILE	2.3
34	i	1635	A	2.3
14	N	126	ALA	2.3
24	X	91	LEU	2.3
26	Z	101	SER	2.3
8	H	193	GLN	2.3
10	J	36	GLY	2.3
7	G	19	ASP	2.3
14	N	29	THR	2.3
14	N	53	ILE	2.3
4	D	118	ALA	2.3
16	P	116	LEU	2.3
2	B	83	LYS	2.3
11	K	51	SER	2.3
9	I	188	TYR	2.3
24	X	125	VAL	2.3
10	J	188	GLY	2.3
34	i	135	U	2.3
34	i	1553	C	2.3
16	P	22	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
21	U	21	ARG	2.3
34	i	1146	A	2.2
5	E	78	ALA	2.2
27	a	31	PRO	2.2
34	i	1228	U	2.2
7	G	70	HIS	2.2
28	b	59	CYS	2.2
23	W	17	ALA	2.2
24	X	29	LYS	2.2
31	e	99	LYS	2.2
33	g	75	GLY	2.2
34	i	344	U	2.2
34	i	240	C	2.2
9	I	60	LEU	2.2
34	i	415	G	2.2
33	g	160	SER	2.2
13	M	49	LEU	2.2
15	O	136	PRO	2.2
23	W	80	ASP	2.2
34	i	290	A	2.2
34	i	326	A	2.2
34	i	1686	U	2.2
20	T	139	ALA	2.2
34	i	420	C	2.2
34	i	852	C	2.2
4	D	61	GLU	2.2
2	B	126	ASP	2.2
14	N	139	TRP	2.2
13	M	48	HIS	2.2
23	W	89	TRP	2.2
7	G	193	ALA	2.2
10	J	120	ALA	2.2
3	C	101	THR	2.2
22	V	81	GLN	2.2
34	i	1445	G	2.2
34	i	1643	G	2.2
7	G	185	LEU	2.2
34	i	342	U	2.2
34	i	421	G	2.2
34	i	939	U	2.2
34	i	1562	G	2.2
23	W	100	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
7	G	218	LYS	2.2
12	L	12	LYS	2.2
11	K	76	ILE	2.2
4	D	78	GLY	2.2
18	R	39	ALA	2.2
34	i	12	U	2.2
7	G	69	THR	2.2
16	P	115	TYR	2.2
34	i	812	A	2.2
6	F	103	LEU	2.2
13	M	43	ASP	2.2
19	S	109	GLU	2.2
23	W	57	ARG	2.2
13	M	109	VAL	2.2
34	i	1660	G	2.2
34	i	1752	G	2.2
8	H	18	GLU	2.2
34	i	284	C	2.2
34	i	1190	A	2.2
4	D	87	TYR	2.2
8	H	187	PHE	2.2
27	a	74	CYS	2.2
34	i	1515	G	2.2
4	D	216	GLU	2.2
14	N	20	ARG	2.2
34	i	245	U	2.2
23	W	63	VAL	2.2
24	X	63	ASN	2.2
27	a	19	GLN	2.2
4	D	109	LEU	2.2
9	I	8	TRP	2.2
10	J	109	ARG	2.2
12	L	127	THR	2.2
2	B	223	PHE	2.2
24	X	129	SER	2.2
29	c	65	ALA	2.2
34	i	512	A	2.2
7	G	73	VAL	2.2
19	S	68	ILE	2.2
21	U	54	VAL	2.2
24	X	97	ASN	2.2
24	X	131	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	135	THR	2.2
34	i	946	C	2.2
34	i	1687	U	2.2
34	i	1861	U	2.2
13	M	47	ALA	2.2
34	i	1455	G	2.2
5	E	110	ALA	2.1
8	H	97	GLN	2.1
34	i	1591	U	2.1
10	J	50	LEU	2.1
10	J	107	GLU	2.1
34	i	1089	A	2.1
3	C	104	GLY	2.1
10	J	31	LEU	2.1
17	Q	29	ASN	2.1
33	g	257	LYS	2.1
34	i	297	C	2.1
34	i	1522	C	2.1
16	P	28	MET	2.1
34	i	206	A	2.1
34	i	309	A	2.1
7	G	97	VAL	2.1
16	P	127	LYS	2.1
24	X	6	GLY	2.1
29	c	66	ARG	2.1
32	f	112	GLY	2.1
34	i	177	G	2.1
9	I	168	GLN	2.1
15	O	113	GLN	2.1
4	D	149	SER	2.1
10	J	28	GLU	2.1
33	g	282	GLU	2.1
8	H	79	LEU	2.1
15	O	17	LEU	2.1
34	i	174	C	2.1
34	i	1387	C	2.1
5	E	53	LYS	2.1
26	Z	95	GLY	2.1
34	i	436	G	2.1
34	i	1600	G	2.1
6	F	62	ARG	2.1
8	H	133	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
19	S	23	ARG	2.1
34	i	839	C	2.1
10	J	44	TRP	2.1
32	f	113	LYS	2.1
34	i	1644	U	2.1
28	b	47	PHE	2.1
17	Q	118	THR	2.1
24	X	109	GLY	2.1
34	i	90	G	2.1
34	i	813	G	2.1
4	D	6	SER	2.1
7	G	139	SER	2.1
15	O	44	VAL	2.1
20	T	140	ALA	2.1
34	i	1240	U	2.1
13	M	18	LEU	2.1
24	X	13	LEU	2.1
20	T	10	ASN	2.1
34	i	220	C	2.1
34	i	1703	C	2.1
34	i	101	U	2.1
8	H	20	GLU	2.1
9	I	94	LYS	2.1
12	L	3	ASP	2.1
30	d	34	TYR	2.1
34	i	1448	A	2.1
13	M	25	ALA	2.1
34	i	302	C	2.1
34	i	592	G	2.1
34	i	1147	G	2.1
34	i	1701	G	2.1
2	B	160	GLN	2.1
10	J	54	ARG	2.1
24	X	22	TRP	2.1
34	i	92	A	2.1
34	i	1249	A	2.1
7	G	45	TRP	2.1
4	D	184	ILE	2.1
14	N	74	ILE	2.1
32	f	121	CYS	2.1
34	i	8	U	2.1
34	i	1189	U	2.1

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Mol	Chain	Res	Type	RSRZ
28	b	58	GLY	2.1
15	O	92	ALA	2.1
22	V	66	ASP	2.1
26	Z	110	THR	2.1
33	g	57	ARG	2.1
34	i	425	A	2.1
2	B	85	LYS	2.1
2	B	214	LYS	2.1
21	U	108	PRO	2.1
9	I	67	TRP	2.1
23	W	38	LEU	2.1
24	X	52	LEU	2.1
34	i	287	U	2.1
34	i	998	U	2.1
27	a	94	ASP	2.1
6	F	110	GLN	2.1
34	i	652	G	2.1
34	i	945	G	2.1
34	i	221	A	2.1
34	i	1637	U	2.1
10	J	61	LEU	2.0
25	Y	121	ALA	2.0
34	i	370	G	2.0
6	F	106	GLU	2.0
9	I	70	GLU	2.0
34	i	1658	A	2.0
12	L	146	THR	2.0
34	i	1705	C	2.0
15	O	126	ILE	2.0
9	I	76	THR	2.0
32	f	124	ASP	2.0
7	G	82	SER	2.0
12	L	7	GLU	2.0
13	M	22	LEU	2.0
8	H	22	GLY	2.0
32	f	86	THR	2.0
1	A	147	LEU	2.0
12	L	74	SER	2.0
13	M	89	VAL	2.0
34	i	104	A	2.0
8	H	17	ASP	2.0
34	i	216	U	2.0

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Mol	Chain	Res	Type	RSRZ
12	L	68	ILE	2.0
15	O	96	LYS	2.0
34	i	437	A	2.0
20	T	11	GLN	2.0
33	g	101	PHE	2.0
10	J	110	LEU	2.0
12	L	144	LYS	2.0
34	i	673	G	2.0
4	D	105	LEU	2.0
34	i	1453	U	2.0

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.