



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 6, 2024 – 01:31 AM EDT

PDB ID : 2F4V
Title : 30S ribosome + designer antibiotic
Authors : Murray, J.B.; Meroueh, S.O.; Russell, R.J.; Lentzen, G.; Haddad, J.; Mobashery, S.
Deposited on : 2005-11-24
Resolution : 3.80 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 types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 2022.3.0, CSD as543be (2022)
Xtrriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

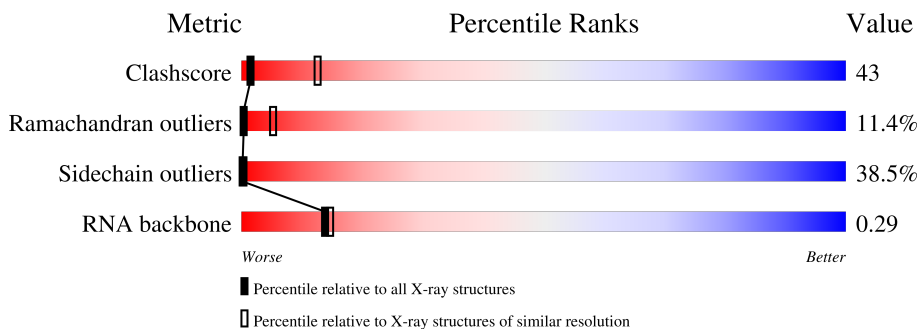
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.80 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))
Clashscore	180529	1005 (3.96-3.64)
Ramachandran outliers	177936	1044 (3.98-3.62)
Sidechain outliers	177891	1039 (3.98-3.62)
RNA backbone	3690	1131 (4.60-3.00)

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 of 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 $\leq 5\%$.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1511	11% 37% 36% 17%
2	Z	4	100%
3	B	256	20% 45% 24% 7%
4	C	239	20% 37% 24% 5% 14%
5	D	209	21% 45% 28% 5%
6	E	162	20% 40% 31% 7%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
7	F	101	
8	G	156	
9	H	138	
10	I	128	
11	J	105	
12	K	129	
13	L	132	
14	M	126	
15	N	61	
16	O	89	
17	P	88	
18	Q	105	
19	R	88	
20	S	93	
21	T	106	

2 Entry composition [i](#)

There are 26 unique types of molecules in this entry. The entry contains 51728 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 RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	A	1507	32391	14418	6002	10465	1506	22	0	0

- Molecule 2 is a RNA chain called 5'-R(P*UP*UP*CP*U)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	Z	4	80	36	9	31	4	0	0	0

- Molecule 3 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	B	237	1923	1226	344	348	5	0	0	0

- Molecule 4 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	C	206	1612	1016	314	281	1	0	0	0

- Molecule 5 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	D	208	1703	1066	339	291	7	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	199	GLN	ASN	conflict	UNP P80373
D	201	ASN	GLN	conflict	UNP P80373

- Molecule 6 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	E	150	1146	724	217	201	4	0	0	0

- Molecule 7 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	F	101	843	531	155	154	3	0	0	0

- Molecule 8 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	G	155	1257	781	252	218	6	0	0	0

- Molecule 9 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	H	138	1116	705	215	193	3	0	0	0

- Molecule 10 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
10	I	127	1011	639	198	174	0	0	0

- Molecule 11 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	J	98	792	498	156	137	1	0	0	0

- Molecule 12 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	K	119	885	549	168	165	3	0	0	0

- Molecule 13 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	L	125	975	614	196	164	1	0	0	0

- Molecule 14 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	M	125	997	617	207	171	2	0	0	0

- Molecule 15 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	N	60	492	312	104	72	4	0	0	0

- Molecule 16 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
16	O	88	734	459	147	126	2	0	0	0

- Molecule 17 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
17	P	83	700	443	139	117	1	0	0	0

- Molecule 18 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
18	Q	104	857	547	161	147	2	0	0	0

- Molecule 19 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
19	R	73	597	380	118	99	0	0	0

- Molecule 20 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	S	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			

- Molecule 21 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	T	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

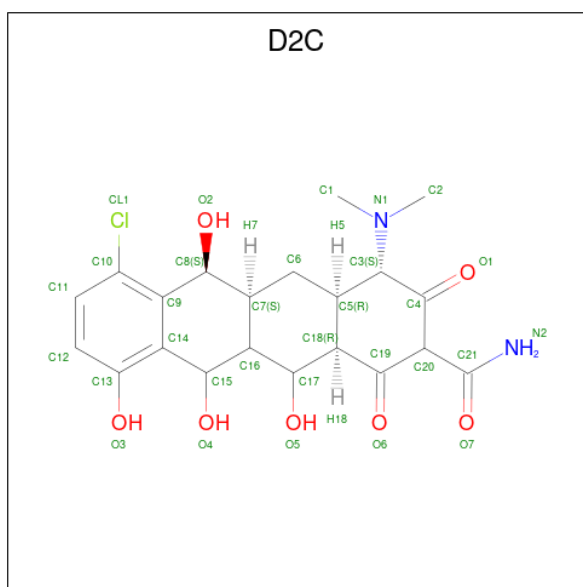
- Molecule 22 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
22	A	98	Total	Mg	0	0
			98	98		
22	Z	1	Total	Mg	0	0
			1	1		
22	D	1	Total	Mg	0	0
			1	1		
22	M	1	Total	Mg	0	0
			1	1		

- Molecule 23 is POTASSIUM ION (three-letter code: K) (formula: K).

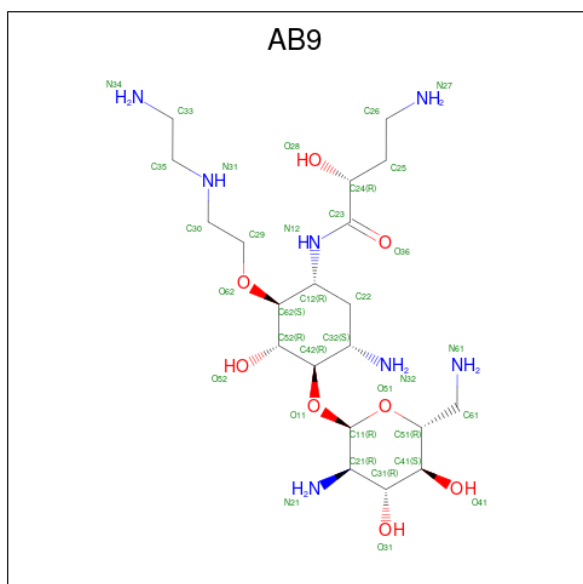
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
23	A	12	Total	K	0	0
			12	12		

- Molecule 24 is (2S,4S,4AR,5AS,6S,11R,11AS,12R,12AR)-7-CHLORO-4-(DIMETHYLAMINO)-6,10,11,12-TETRAHYDROXY-1,3-DIOXO-1,2,3,4,4A,5,5A,6,11,11A,12,12A-DODECAHYDROTETRACENE-2-CARBOXAMIDE (three-letter code: D2C) (formula: C₂₁H₂₅ClN₂O₇).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
			Total	C	Cl	N			O
24	A	1	31	21	1	2	7	0	0

- Molecule 25 is (2R)-4-AMINO-N-{(1R,2S,3R,4R,5S)-5-AMINO-2-[(2-AMINOETHYL)AMINO]ETHOXY}-4-[(2,6-DIAMINO-2,6-DIDEOXY-ALPHA-D-GLUCOPYRANOSYL)OXY]-3-HYDROXYCYCLOHEXYL}-2-HYDROXYBUTANAMIDE (three-letter code: AB9) (formula: $C_{20}H_{43}N_7O_8$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
25	A	1	35	20	7	8	0	0

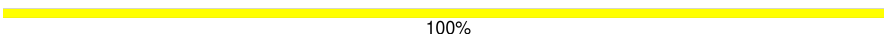
- Molecule 26 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
26	D	1	Total 1	Zn 1	0	0
26	N	1	Total 1	Zn 1	0	0

A696	A697	A698	A699	A700	A701	A702	A703	A704	A705	A706	A707	A708	A709	A710	A711	A712	A713	A714	A715	A716	A717	A718	A719	A720	A721	A722	A723	A724	A725	A726	A727	A728	A729	A730	A731	A732	A733	A734	A735	A736	A737	A738	A739	A740	A741	A742	A743	A744	A745	A746	A747	A748	A749	A750	A751	A752	A753	A754	A755	A756						
U757	G758	A759	G760	G761	G762	G763	G764	G765	G766	G767	G768	G769	G770	G771	G772	G773	G774	G775	G776	G777	G778	G779	G780	G781	G782	G783	G784	G785	G786	G787	G788	G789	G790	G791	G792	G793	G794	G795	G796	G797	G798	G799	G800	G801	G802	G803	G804	G805	G806	G807	G808	G809	G810	G811	G812	G813	G814	G815	G816							
C817	C818	C819	C820	C821	C822	C823	C824	C825	C826	C827	C828	C829	C830	C831	C832	C833	C834	C835	C836	C837	C838	C839	C840	C841	C842	C843	C844	C845	C846	C847	C848	C849	C850	C851	C852	C853	C854	C855	C856	C857	C858	C859	C860	C861	C862	C863	C864	C865	C866	C867	C868	C869	C870	C871	C872	C873	C874	C875	C876	C877	C878	C879	C880	C881	C882	C883
U884	G885	G886	G887	G888	G889	G890	G891	G892	G893	G894	G895	G896	G897	G898	G899	G900	G901	G902	G903	G904	G905	G906	G907	G908	G909	G910	G911	G912	G913	G914	G915	G916	G917	G918	G919	G920	G921	G922	G923	G924	G925	G926	G927	G928	G929	G930	G931	G932	G933	G934	G935	G936	G937	G938	G939	G940	G941	G942	G943	G944						
G945	A946	G947	G948	G949	G950	G951	G952	G953	G954	G955	G956	G957	G958	G959	G960	G961	G962	G963	G964	G965	G966	G967	G968	G969	G970	G971	G972	G973	G974	G975	G976	G977	G978	G979	G980	G981	G982	G983	G984	G985	G986	G987	G988	G989	G990	G991	G992	G993	G994	G995	G996	G997	G998	G999	A1000	A1001	A1002	A1003	A1004	A1005	A1006	A1007	A1008	A1009	A1010	
G1006	G1007	G1008	G1009	G1010	G1011	G1012	G1013	G1014	G1015	G1016	G1017	G1018	G1019	G1020	G1021	G1022	G1023	G1024	G1025	G1026	G1027	G1028	G1029	G1030	G1031	G1032	G1033	G1034	G1035	G1036	G1037	G1038	G1039	G1040	G1041	G1042	G1043	G1044	G1045	G1046	G1047	G1048	G1049	G1050	G1051	G1052	G1053	G1054	G1055	G1056	G1057	G1058	G1059	G1060	G1061											
U1062	C1063	U1064	U1065	U1066	U1067	U1068	U1069	U1070	U1071	U1072	U1073	U1074	U1075	U1076	U1077	U1078	U1079	U1080	U1081	U1082	U1083	U1084	U1085	U1086	U1087	U1088	U1089	U1090	U1091	U1092	U1093	U1094	U1095	U1096	U1097	U1098	U1099	U1100	U1101	U1102	U1103	U1104	U1105	U1106	U1107	U1108	U1109	U1110	U1111	U1112	U1113	U1114	U1115	U1116	U1117	U1118	U1119	U1120	U1121							
U1122	A1123	G1124	G1125	G1126	G1127	G1128	G1129	G1130	G1131	G1132	G1133	G1134	G1135	G1136	G1137	G1138	G1139	G1140	G1141	G1142	G1143	G1144	G1145	G1146	G1147	G1148	G1149	G1150	G1151	G1152	G1153	G1154	G1155	G1156	G1157	G1158	G1159	G1160	G1161	G1162	G1163	G1164	G1165	G1166	G1167	G1168	G1169	G1170	G1171	G1172	G1173	G1174	G1175	G1176	G1177	G1178	G1179	G1180	G1181	G1182	G1183					
G1184	G1185	G1186	G1187	G1188	G1189	G1190	G1191	G1192	G1193	G1194	G1195	G1196	G1197	G1198	G1199	G1200	G1201	G1202	G1203	G1204	G1205	G1206	G1207	G1208	G1209	G1210	G1211	G1212	G1213	G1214	G1215	G1216	G1217	G1218	G1219	G1220	G1221	G1222	G1223	G1224	G1225	G1226	G1227	G1228	G1229	G1230	G1231	G1232	G1233	G1234	G1235	G1236	G1237	G1238	G1239	G1240	G1241	G1242	G1243							
A1245	C1246	U1247	A1248	G1249	G1250	A1251	A1252	G1253	G1254	G1255	G1256	U1257	G1258	C1259	C1260	A1261	C1262	C1263	C1264	G1265	G1266	C1267	A1268	C1269	C1270	G1271	G1272	G1273	G1274	A1275	G1276	G1277	A1278	A1279	A1280	U1281	C1282	G1283	C1284	A1285	A1286	A1287	A1288	A1289	G1290	G1291	G1294	G1295	C1296	C1297	C1298	A1299	G1300	U1301	U1302	C1303	G1304	G1305								
A1306	U1307	U1308	G1309	G1310	G1311	G1312	U1313	C1314	U1315	U1316	U1317	U1318	A1319	C1320	C1321	C1322	G1323	A1324	C1327	C1328	A1329	U1330	G1331	A1332	A1333	G1334	C1335	C1336	G1337	G1338	A1339	A1340	U1341	C1342	G1343	C1344	U1345	A1346	U1347	U1348	A1349	A1350	U1351	C1352	C1353	C1354	G1355	G1356	A1357	U1358	C1359	A1360	G1361	C1362	C1363	U1364	U1365									
C1366	C1367	G1368	C1369	G1370	U1371	U1372	G1373	A1374	A1375	U1376	A1377	C1378	G1379	U1380	U1381	C1382	C1383	C1384	G1385	G1386	G1387	G1388	C1389	U1390	U1391	G1392	G1393	A1394	C1395	A1396	C1397	A1398	C1399	C1400	G1401	G1402	C1403	C1404	G1405	U1406	U1407	U1408	C1409	G1410	C1411	C1412	A1413	U1414	G1415	G1416	G1417	A1418	G1419	G1420	G1421	G1422	G1423	C1424	U1425	U1426	C1426					
U1427	A1428	C1429	C1430	C1431	C1432	A1433	A1434	G1435	U1436	U1437	A1438	C1439	C1440	G1441	G1442	C1443	A1446	C1447	C1448	C1449	U1450	A1451	C1452	G1453	C1454	U1455	C1456	C1457	C1458	C1459	A1460	G1461	G1464	C1465	C1466	G1467	A1468	G1471	U1472	A1473	G1474	G1475	G1478	C1479	G1482	A1483	C1484	U1485	G1486	G1487	G1488	G1489	C1490	G1491	A1492	A1493	G1494	U1495								
C1496	G1497	U1498	A1499	A1500	A1501	A1502	A1503	G1504	U1505	U1506	A1507	C1508	C1509	U1510	G1511	U1512	A1514	C1514	C1515	U1516	G1517	A1518	U1519	G1520	C1521	U1522	C1523	C1524	A1525	G1526	C1527	U1528	C1529	G1530	A1531	U1532	C1533	A1534	G1537	G1538	G1539	G1540	G1541	G1542	G1543	G1544	G1545	G1546	G1547	G1548	G1549	G1550	G1551	G1552	G1553	G1554										

• Molecule 2: 5'-R(P*UP*UP*CP*U)-3'

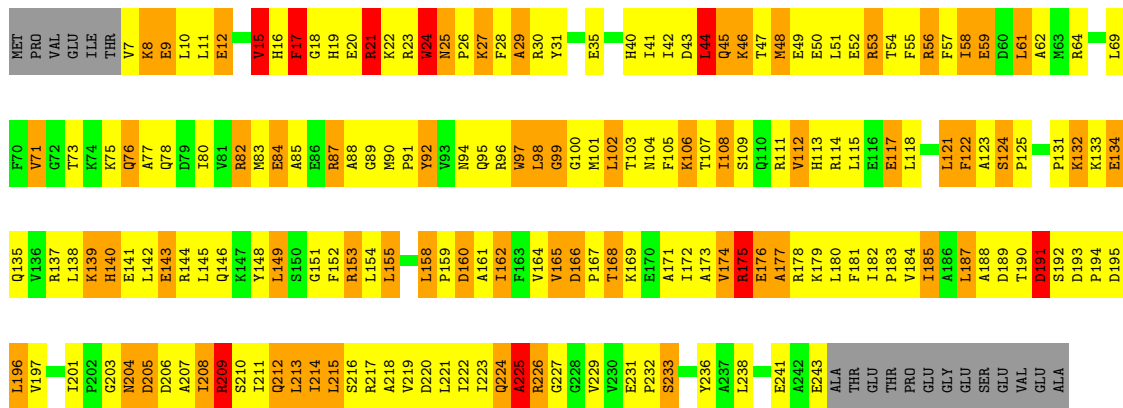
Chain Z:



U3
U4
C5
U6

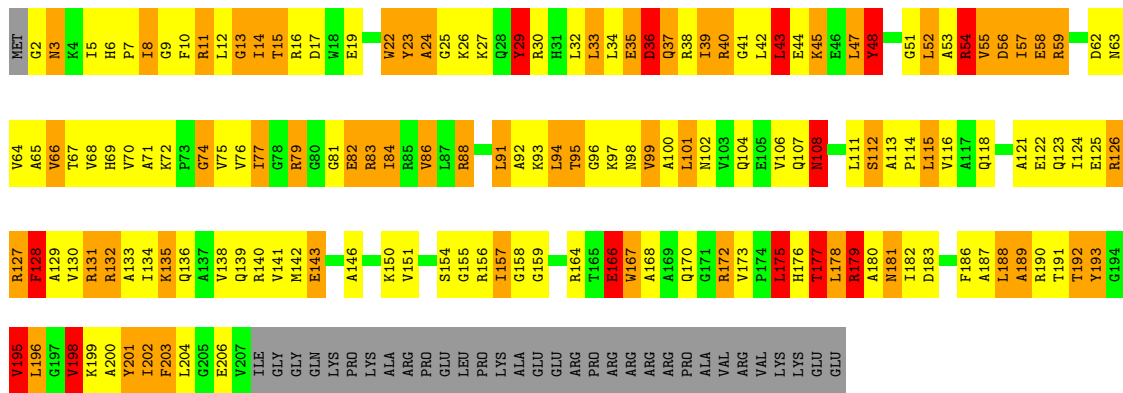
• Molecule 3: 30S ribosomal protein S2

Chain B: 20% 45% 24% 7%



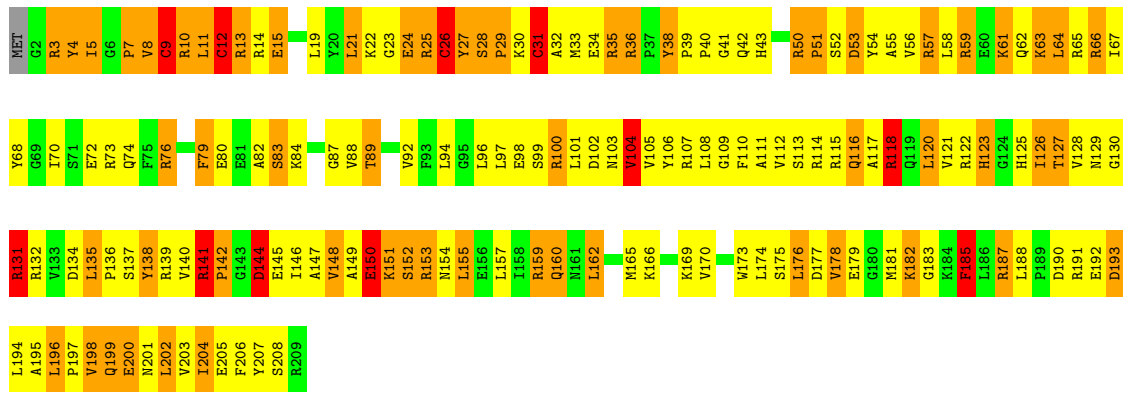
• Molecule 4: 30S ribosomal protein S3

Chain C: 20% 37% 24% 5% 14%

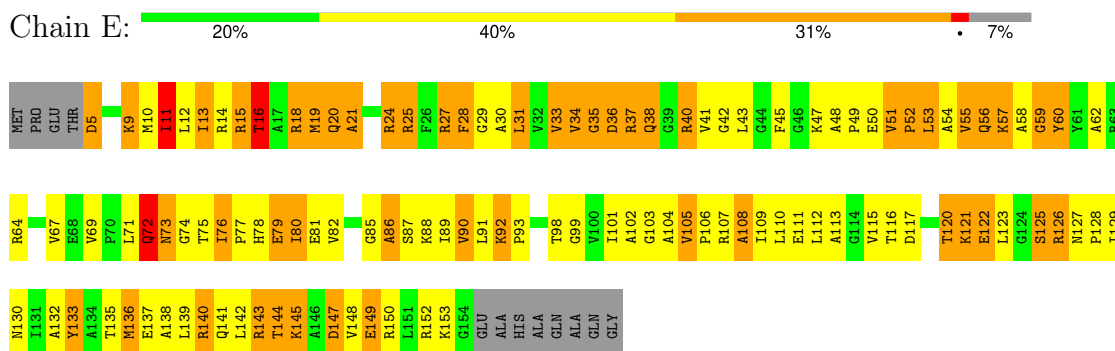


• Molecule 5: 30S ribosomal protein S4

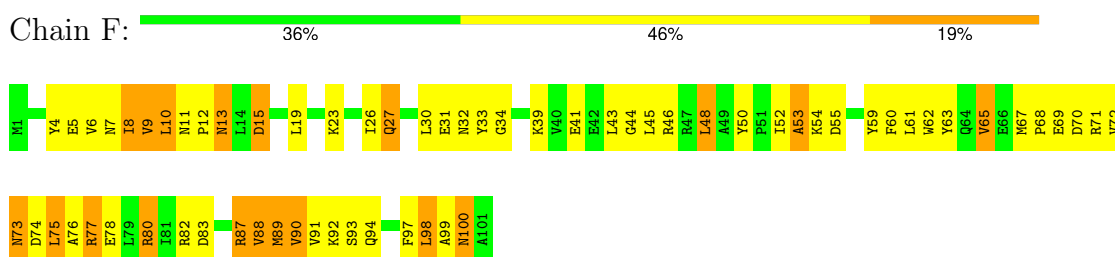
Chain D: 21% 45% 28% 5%



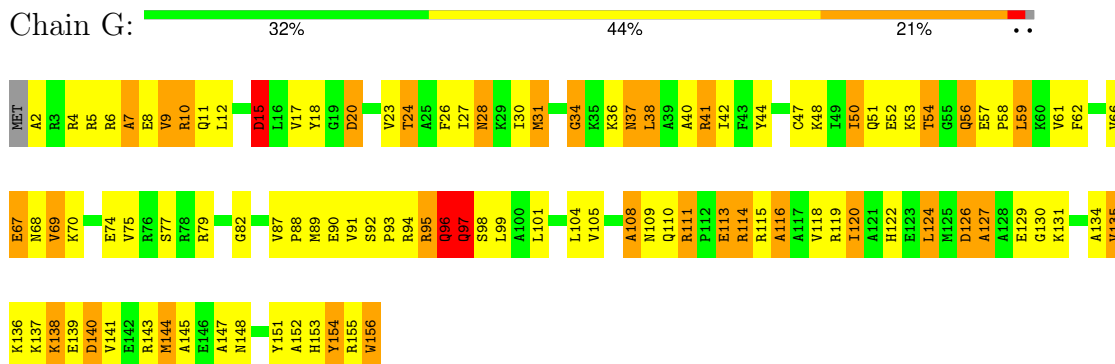
- Molecule 6: 30S ribosomal protein S5



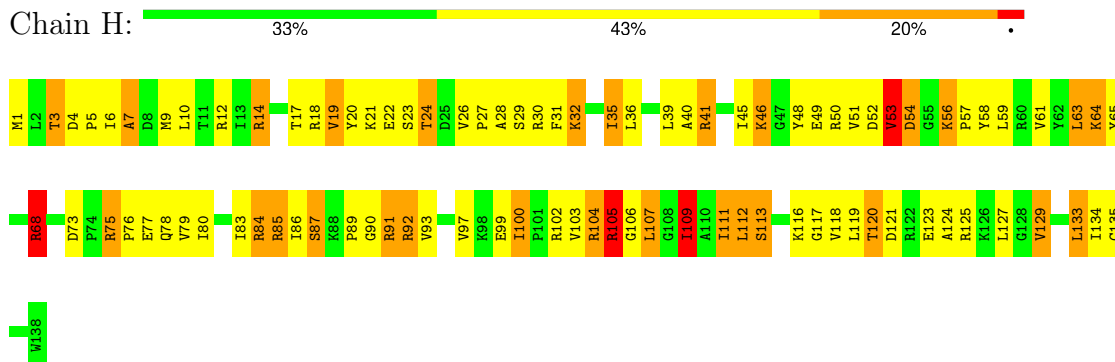
- Molecule 7: 30S ribosomal protein S6



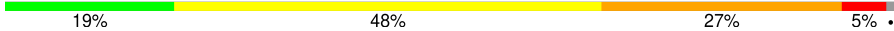
- Molecule 8: 30S ribosomal protein S7

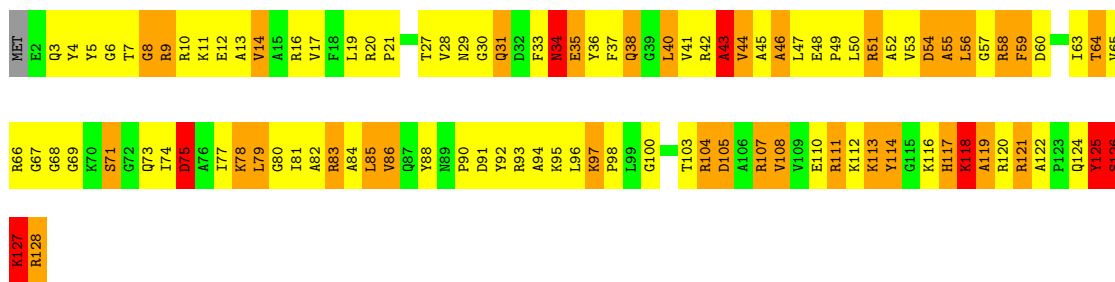


- Molecule 9: 30S ribosomal protein S8



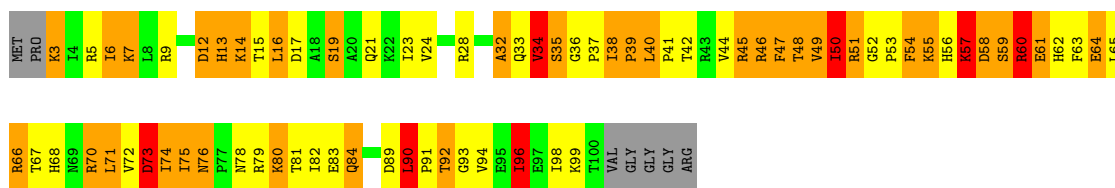
- Molecule 10: 30S ribosomal protein S9

Chain I: 

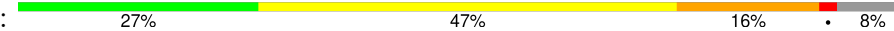


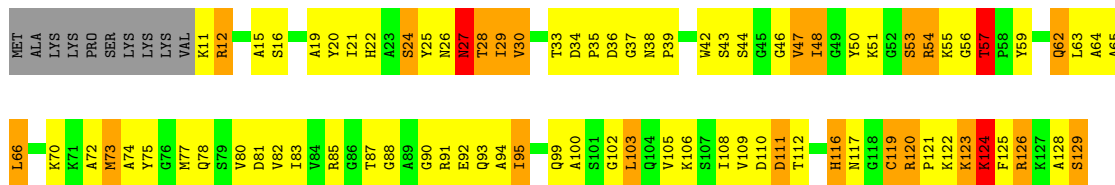
• Molecule 11: 30S ribosomal protein S10

Chain J: 

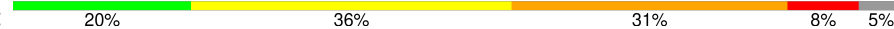


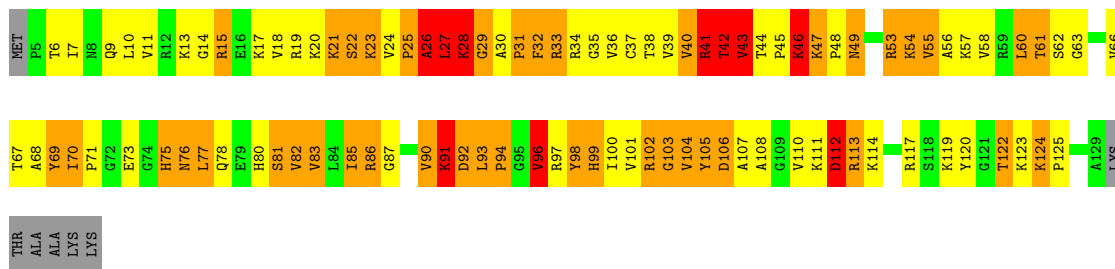
• Molecule 12: 30S ribosomal protein S11

Chain K: 




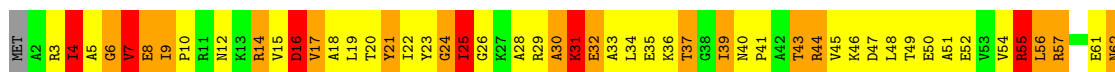
• Molecule 13: 30S ribosomal protein S12

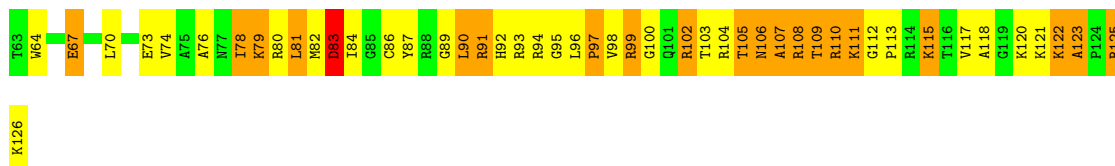
Chain L: 



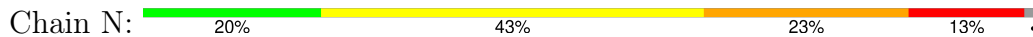
• Molecule 14: 30S ribosomal protein S13

Chain M: 

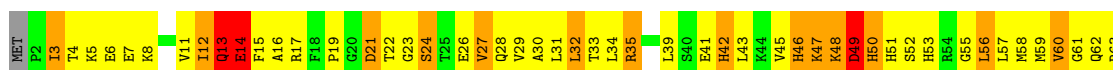




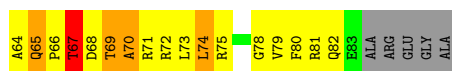
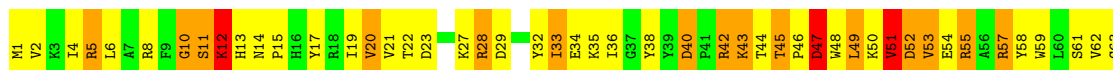
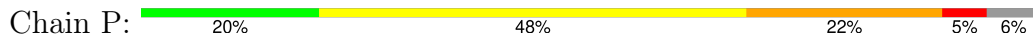
- Molecule 15: 30S ribosomal protein S14



- Molecule 16: 30S ribosomal protein S15



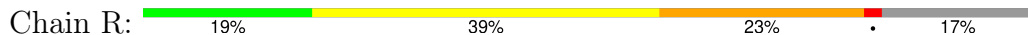
- Molecule 17: 30S ribosomal protein S16



- Molecule 18: 30S ribosomal protein S17

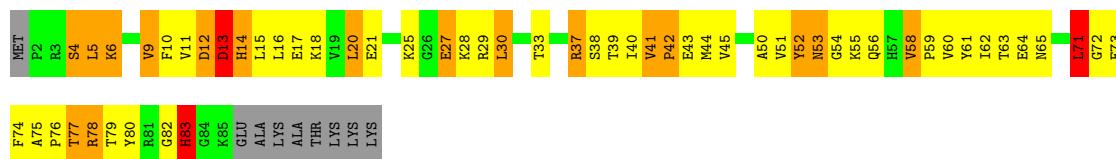


- Molecule 19: 30S ribosomal protein S18

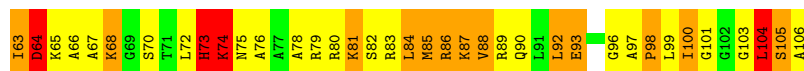
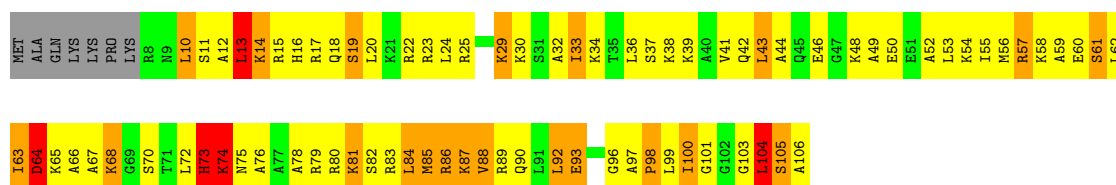
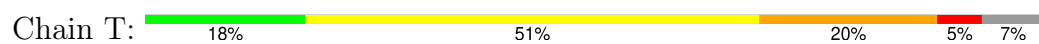




- Molecule 20: 30S ribosomal protein S19



- Molecule 21: 30S ribosomal protein S20



4 Data and refinement statistics

Xtrriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, α , β , γ	403.32Å 403.32Å 176.69Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 – 3.80	Depositor
% Data completeness (in resolution range)	97.2 (30.00-3.80)	Depositor
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
Refinement program	REFMAC 5.1.24	Depositor
R, R_{free}	0.259 , 0.315	Depositor
Estimated twinning fraction	No twinning to report.	Xtrriage
Total number of atoms	51728	wwPDB-VP
Average B, all atoms (Å ²)	84.0	wwPDB-VP

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: K, AB9, D2C, MG, ZN

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	1.70	440/36247 (1.2%)	1.64	607/56545 (1.1%)
2	Z	2.01	1/87 (1.1%)	1.60	0/132
3	B	0.84	1/1958 (0.1%)	0.69	5/2640 (0.2%)
4	C	0.91	1/1636 (0.1%)	0.66	3/2205 (0.1%)
5	D	0.81	1/1733 (0.1%)	0.66	5/2318 (0.2%)
6	E	1.14	1/1162 (0.1%)	0.75	3/1564 (0.2%)
7	F	0.73	0/856	0.65	2/1154 (0.2%)
8	G	0.89	1/1276 (0.1%)	0.64	4/1709 (0.2%)
9	H	1.18	1/1136 (0.1%)	0.80	2/1527 (0.1%)
10	I	0.79	0/1029	0.67	5/1378 (0.4%)
11	J	0.81	1/805 (0.1%)	0.75	3/1082 (0.3%)
12	K	0.99	0/900	0.73	2/1213 (0.2%)
13	L	0.87	0/991	0.67	3/1327 (0.2%)
14	M	0.87	1/1008 (0.1%)	0.69	3/1347 (0.2%)
15	N	0.86	0/501	0.63	0/664
16	O	0.88	0/745	0.67	3/992 (0.3%)
17	P	1.16	1/716 (0.1%)	0.82	2/963 (0.2%)
18	Q	1.01	0/870	0.71	3/1159 (0.3%)
19	R	0.92	0/603	0.72	1/799 (0.1%)
20	S	0.70	0/689	0.66	2/926 (0.2%)
21	T	1.07	0/764	0.68	0/1006
All	All	1.47	450/55712 (0.8%)	1.41	658/82650 (0.8%)

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
3	B	0	2
4	C	0	6

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
5	D	0	6
6	E	0	5
7	F	0	1
9	H	0	5
10	I	0	4
11	J	0	6
12	K	0	5
13	L	0	8
14	M	0	4
15	N	0	8
17	P	0	4
18	Q	0	1
20	S	0	5
21	T	0	4
All	All	0	74

All (450) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1169	A	O3'-P	35.46	2.03	1.61
1	A	1227	A	N9-C4	-13.10	1.29	1.37
1	A	1346	A	C3'-O3'	11.14	1.57	1.42
1	A	1224	G	C3'-O3'	10.61	1.57	1.42
1	A	1129	C	C1'-N1	10.46	1.64	1.48
1	A	279	A	N9-C4	-10.23	1.31	1.37
1	A	1125	U	C3'-O3'	10.21	1.56	1.42
1	A	766	A	N9-C4	-9.68	1.32	1.37
1	A	975	A	N9-C4	-9.63	1.32	1.37
1	A	533	A	C3'-O3'	9.56	1.55	1.42
1	A	1064	G	N9-C4	-8.93	1.30	1.38
1	A	1192	C	C1'-N1	8.92	1.62	1.48
1	A	573	A	N7-C5	-8.91	1.33	1.39
1	A	1502	A	N9-C4	-8.88	1.32	1.37
1	A	723	U	C1'-N1	8.86	1.62	1.48
1	A	1199	U	C1'-N1	8.68	1.61	1.48
1	A	1397	C	C1'-N1	8.45	1.61	1.48
1	A	1509	C	C3'-O3'	-8.40	1.30	1.42
1	A	1073	U	C1'-N1	8.36	1.61	1.48
1	A	817	C	N1-C6	-8.35	1.32	1.37
1	A	1101	A	N9-C4	8.30	1.42	1.37
1	A	386	C	C3'-O3'	-8.26	1.30	1.42
1	A	1533	C	C1'-N1	8.23	1.61	1.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1281	U	C3'-O3'	8.17	1.53	1.42
1	A	1159	U	C1'-N1	8.15	1.60	1.48
1	A	60	A	C3'-O3'	8.14	1.53	1.42
1	A	115	G	C3'-O3'	8.07	1.53	1.42
1	A	812	C	C3'-O3'	8.01	1.53	1.42
1	A	458	C	C1'-N1	7.97	1.60	1.48
1	A	866	C	N3-C4	-7.93	1.28	1.33
1	A	687	A	C3'-O3'	7.93	1.53	1.42
2	Z	3	U	C1'-N1	7.93	1.60	1.48
1	A	401	C	C1'-N1	7.91	1.60	1.48
1	A	665	A	N9-C4	-7.89	1.33	1.37
1	A	1398	A	C3'-O3'	-7.85	1.31	1.42
1	A	1239	A	N9-C4	-7.69	1.33	1.37
1	A	919	A	C5-C4	-7.57	1.33	1.38
1	A	1281	U	C1'-N1	7.57	1.60	1.48
4	C	22	TRP	CB-CG	-7.55	1.36	1.50
1	A	82	U	C1'-N1	7.50	1.59	1.48
1	A	553	A	C3'-O3'	-7.47	1.31	1.42
1	A	1302	U	C3'-O3'	7.44	1.52	1.42
1	A	246	A	N9-C4	-7.42	1.33	1.37
1	A	181	G	C3'-O3'	7.41	1.52	1.42
1	A	5	U	N1-C2	7.40	1.45	1.38
1	A	1502	A	C5-C6	-7.39	1.34	1.41
1	A	1361(A)	C	C1'-N1	7.37	1.59	1.48
1	A	753	A	C6-N1	-7.32	1.30	1.35
1	A	1367	C	N1-C2	7.26	1.47	1.40
1	A	532	A	N9-C4	7.26	1.42	1.37
1	A	119	A	C3'-O3'	7.24	1.52	1.42
1	A	371	G	C3'-O3'	-7.19	1.32	1.42
1	A	1397	C	N1-C2	7.18	1.47	1.40
1	A	981	U	C2-N3	7.17	1.42	1.37
1	A	940	C	C3'-O3'	-7.10	1.32	1.42
1	A	279	A	N7-C5	-7.07	1.35	1.39
1	A	727	G	N7-C5	-7.06	1.35	1.39
1	A	766	A	C5-C6	-7.04	1.34	1.41
1	A	372	C	C3'-O3'	6.96	1.51	1.42
1	A	7	G	C1'-N9	-6.96	1.37	1.46
1	A	886	G	N9-C4	-6.95	1.32	1.38
1	A	859	A	N7-C5	-6.93	1.35	1.39
1	A	81	U	C1'-N1	6.92	1.59	1.48
1	A	298	A	N3-C4	-6.92	1.30	1.34
1	A	1117	G	O5'-C5'	-6.90	1.31	1.42

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	753	A	C6-N6	-6.90	1.28	1.33
1	A	921	U	C3'-O3'	-6.90	1.32	1.42
1	A	257	G	N9-C4	6.86	1.43	1.38
1	A	1369	C	C3'-O3'	-6.84	1.32	1.42
1	A	1275	A	N9-C4	6.83	1.42	1.37
1	A	378	G	C3'-O3'	-6.83	1.32	1.42
1	A	743	U	P-O5'	6.80	1.66	1.59
1	A	374	A	C3'-O3'	-6.76	1.32	1.42
1	A	520	A	N9-C4	6.73	1.41	1.37
1	A	377	G	N9-C4	6.73	1.43	1.38
1	A	1265	G	N9-C4	6.73	1.43	1.38
1	A	1073	U	C2-N3	6.72	1.42	1.37
1	A	389	A	N7-C5	-6.72	1.35	1.39
1	A	5	U	C3'-O3'	6.71	1.51	1.42
1	A	801	U	C4-O4	-6.71	1.18	1.23
1	A	421	U	C3'-O3'	6.71	1.51	1.42
1	A	1257	U	C1'-N1	6.71	1.58	1.48
1	A	613	C	C1'-N1	6.69	1.58	1.48
1	A	1126	U	P-O5'	6.69	1.66	1.59
1	A	393	A	C3'-O3'	-6.66	1.32	1.42
1	A	1074	G	C3'-O3'	-6.64	1.32	1.42
1	A	200	G	N1-C2	6.62	1.43	1.37
1	A	915	A	N7-C5	-6.59	1.35	1.39
1	A	1067	A	N9-C4	6.59	1.41	1.37
1	A	1126	U	C1'-N1	6.56	1.58	1.48
1	A	61	G	N7-C5	-6.55	1.35	1.39
1	A	1324	A	N7-C5	-6.54	1.35	1.39
1	A	1495	U	C1'-N1	6.53	1.58	1.48
1	A	1149	C	C3'-O3'	-6.53	1.33	1.42
1	A	334	C	C1'-N1	6.52	1.58	1.48
1	A	1090	U	C1'-N1	6.50	1.58	1.48
1	A	61	G	N3-C4	-6.49	1.30	1.35
1	A	1114	C	C1'-N1	6.47	1.58	1.48
1	A	1363	A	N9-C4	6.45	1.41	1.37
1	A	688	G	N9-C4	-6.45	1.32	1.38
1	A	766	A	N7-C5	-6.44	1.35	1.39
1	A	1085	U	C3'-O3'	6.44	1.51	1.42
1	A	574	A	C5-C6	-6.43	1.35	1.41
1	A	574	A	N7-C5	-6.41	1.35	1.39
1	A	1188	A	N9-C4	-6.41	1.34	1.37
1	A	149	A	C3'-O3'	-6.40	1.33	1.42
1	A	172	A	N7-C5	-6.39	1.35	1.39

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	351	G	C3'-O3'	6.39	1.51	1.42
1	A	460	A	N9-C4	6.39	1.41	1.37
1	A	1504	G	O5'-C5'	-6.39	1.32	1.42
1	A	440	A	N9-C4	6.38	1.41	1.37
1	A	828	A	N9-C4	-6.38	1.34	1.37
1	A	1514	C	C3'-O3'	-6.36	1.33	1.42
1	A	232	G	C3'-O3'	-6.35	1.33	1.42
1	A	688	G	N7-C5	-6.35	1.35	1.39
1	A	1135	U	C1'-N1	6.35	1.58	1.48
1	A	7	G	N9-C4	-6.34	1.32	1.38
1	A	1082	G	O5'-C5'	-6.34	1.32	1.42
1	A	1350	A	N3-C4	-6.34	1.31	1.34
1	A	595	G	C6-N1	-6.34	1.35	1.39
1	A	170	U	C3'-O3'	-6.33	1.33	1.42
1	A	294	U	C2-N3	-6.32	1.33	1.37
1	A	1101	A	C3'-O3'	6.32	1.50	1.42
1	A	5	U	C1'-N1	6.32	1.58	1.48
1	A	1235	U	C1'-N1	6.31	1.58	1.48
1	A	696	A	N7-C5	-6.31	1.35	1.39
1	A	700	G	C6-O6	6.30	1.29	1.24
1	A	688	G	C8-N7	-6.29	1.27	1.30
1	A	773	G	N9-C4	6.29	1.43	1.38
1	A	975	A	N3-C4	-6.29	1.31	1.34
1	A	1465	C	C1'-N1	6.28	1.58	1.48
1	A	782	A	N7-C5	-6.27	1.35	1.39
1	A	190(H)	G	P-O5'	6.27	1.66	1.59
1	A	1433	A	C3'-O3'	-6.25	1.33	1.42
9	H	105	ARG	NE-CZ	6.24	1.41	1.33
1	A	61	G	C5-C6	-6.24	1.36	1.42
1	A	1229	A	C3'-O3'	-6.24	1.33	1.42
1	A	518	C	C1'-N1	6.22	1.58	1.48
1	A	63	C	O5'-C5'	-6.21	1.32	1.42
1	A	279	A	N3-C4	-6.21	1.31	1.34
1	A	1521	G	C6-N1	-6.21	1.35	1.39
1	A	27	G	C6-N1	-6.20	1.35	1.39
1	A	281	G	C3'-O3'	6.19	1.50	1.42
1	A	240	C	C3'-O3'	-6.18	1.33	1.42
1	A	1064	G	N3-C4	-6.18	1.31	1.35
1	A	1188	A	N3-C4	-6.17	1.31	1.34
1	A	635	G	N3-C4	-6.17	1.31	1.35
1	A	935	A	N9-C4	-6.16	1.34	1.37
1	A	1434	A	N7-C5	-6.16	1.35	1.39

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	9	G	C5-C6	-6.15	1.36	1.42
1	A	1138	G	C3'-O3'	6.15	1.50	1.42
1	A	967	C	N1-C2	6.15	1.46	1.40
1	A	1347	G	N7-C5	-6.14	1.35	1.39
1	A	1195	C	C1'-N1	6.13	1.57	1.48
1	A	1510	U	C3'-O3'	-6.12	1.33	1.42
1	A	1380	U	C3'-O3'	6.12	1.50	1.42
1	A	701	C	C3'-O3'	6.11	1.50	1.42
1	A	1499	A	N9-C4	-6.10	1.34	1.37
1	A	81	U	O5'-C5'	6.10	1.54	1.44
1	A	821	G	C5-C4	-6.09	1.34	1.38
1	A	135	C	N1-C6	6.08	1.40	1.37
1	A	1182	G	C3'-O3'	6.06	1.50	1.42
1	A	222	U	C3'-O3'	-6.06	1.33	1.42
1	A	571	U	C1'-N1	6.06	1.57	1.48
1	A	53	A	C6-N1	-6.03	1.31	1.35
1	A	53	A	N7-C5	-6.03	1.35	1.39
14	M	7	VAL	CA-CB	6.02	1.67	1.54
1	A	375	U	C3'-O3'	-6.02	1.33	1.42
1	A	190	C	C3'-O3'	6.01	1.50	1.42
1	A	1370	G	C6-O6	6.01	1.29	1.24
1	A	385	C	C3'-O3'	-6.01	1.33	1.42
1	A	759	A	N9-C4	-6.00	1.34	1.37
1	A	700	G	C6-N1	6.00	1.43	1.39
1	A	919	A	N9-C4	-6.00	1.34	1.37
1	A	1125	U	P-O5'	5.99	1.65	1.59
1	A	1063	C	C3'-O3'	-5.99	1.33	1.42
1	A	163	C	C1'-N1	5.97	1.57	1.48
1	A	1079	G	C6-O6	5.96	1.29	1.24
6	E	28	PHE	CB-CG	-5.96	1.41	1.51
1	A	527	G	P-O5'	5.96	1.65	1.59
1	A	1299	A	N9-C4	-5.95	1.34	1.37
1	A	898	G	N9-C4	-5.94	1.33	1.38
1	A	1237	C	C1'-N1	5.93	1.57	1.48
1	A	572	A	N7-C5	-5.92	1.35	1.39
1	A	438	G	C3'-O3'	5.92	1.50	1.42
1	A	787	A	N9-C4	-5.92	1.34	1.37
1	A	27	G	N7-C5	-5.91	1.35	1.39
1	A	1129	C	N1-C2	5.90	1.46	1.40
1	A	440	A	N3-C4	5.90	1.38	1.34
1	A	1397	C	N1-C6	5.90	1.40	1.37
1	A	841	U	C1'-N1	5.88	1.57	1.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	409	G	P-O5'	5.88	1.65	1.59
1	A	644	G	C3'-O3'	-5.88	1.33	1.42
1	A	781	A	N3-C4	5.88	1.38	1.34
1	A	676	A	C3'-O3'	-5.87	1.33	1.42
1	A	9	G	N7-C5	-5.86	1.35	1.39
1	A	5	U	O3'-P	5.86	1.68	1.61
1	A	730	G	C3'-O3'	-5.86	1.33	1.42
1	A	946	A	C6-N1	-5.86	1.31	1.35
1	A	152	A	C5-C6	5.84	1.46	1.41
1	A	377	G	N3-C4	5.84	1.39	1.35
1	A	728	A	N9-C4	-5.84	1.34	1.37
1	A	325	A	N3-C4	-5.84	1.31	1.34
1	A	604	G	N7-C5	-5.84	1.35	1.39
1	A	49	U	C5'-C4'	5.83	1.58	1.51
1	A	266	G	C5-C6	-5.82	1.36	1.42
1	A	867	G	N9-C4	5.82	1.42	1.38
1	A	78	G	C6-N1	-5.81	1.35	1.39
1	A	1064	G	C2-N3	-5.81	1.28	1.32
1	A	1503	A	N3-C4	5.80	1.38	1.34
1	A	993	G	C3'-O3'	5.80	1.50	1.42
1	A	1067	A	C3'-O3'	5.80	1.50	1.42
1	A	815	A	O3'-P	-5.79	1.54	1.61
1	A	1467	G	C2-N3	5.79	1.37	1.32
1	A	566	G	C6-N1	-5.78	1.35	1.39
1	A	748	C	C3'-O3'	5.77	1.50	1.42
1	A	381	C	C1'-N1	5.77	1.57	1.48
1	A	1401	G	C6-N1	-5.77	1.35	1.39
1	A	484	G	C3'-O3'	5.77	1.50	1.42
1	A	1364	U	C3'-O3'	5.76	1.50	1.42
1	A	1247	U	C1'-N1	5.76	1.57	1.48
1	A	1531	A	N9-C4	5.76	1.41	1.37
1	A	181	G	N9-C4	5.75	1.42	1.38
1	A	782	A	C5-C6	-5.75	1.35	1.41
1	A	104	G	C2-N3	5.75	1.37	1.32
1	A	61	G	C6-N1	-5.75	1.35	1.39
1	A	1396	A	N9-C4	-5.75	1.34	1.37
1	A	310	G	N7-C5	-5.73	1.35	1.39
1	A	539	A	N9-C4	5.73	1.41	1.37
1	A	832	C	C1'-N1	5.72	1.57	1.48
1	A	823	G	C6-N1	-5.70	1.35	1.39
1	A	1092	A	N9-C4	5.69	1.41	1.37
1	A	731	G	C3'-O3'	-5.69	1.34	1.42

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	729	A	N3-C4	-5.68	1.31	1.34
1	A	814	A	N9-C4	-5.68	1.34	1.37
1	A	1249	C	C1'-N1	5.68	1.57	1.48
1	A	129(A)	G	C3'-O3'	5.66	1.50	1.42
1	A	930	C	N3-C4	-5.66	1.29	1.33
1	A	1079	G	N7-C5	-5.66	1.35	1.39
1	A	883	C	N3-C4	5.65	1.38	1.33
1	A	1062	U	C3'-O3'	-5.65	1.34	1.42
1	A	282	A	C6-N1	-5.64	1.31	1.35
1	A	50	A	N3-C4	5.64	1.38	1.34
1	A	62	U	N1-C2	5.64	1.43	1.38
1	A	409	G	O5'-C5'	5.64	1.53	1.44
1	A	920	U	C3'-O3'	-5.63	1.34	1.42
1	A	786	G	N7-C5	-5.63	1.35	1.39
1	A	513	C	C1'-N1	5.63	1.57	1.48
1	A	81	U	C5'-C4'	5.62	1.58	1.51
1	A	1467	G	N9-C4	5.61	1.42	1.38
1	A	1367	C	C4'-C3'	-5.60	1.47	1.52
1	A	266	G	N9-C4	-5.60	1.33	1.38
1	A	358	U	C1'-N1	5.60	1.57	1.48
1	A	653	A	N7-C5	-5.59	1.35	1.39
1	A	1129	C	O5'-C5'	5.59	1.53	1.44
1	A	973	G	N9-C4	-5.59	1.33	1.38
1	A	1460	A	C3'-O3'	-5.58	1.34	1.42
1	A	1125	U	O5'-C5'	5.58	1.53	1.44
1	A	173	U	C3'-O3'	5.57	1.50	1.42
1	A	727	G	C5-C4	-5.57	1.34	1.38
1	A	1398	A	N7-C5	-5.56	1.35	1.39
1	A	21	G	N7-C5	-5.56	1.35	1.39
1	A	633	G	C5-C6	-5.56	1.36	1.42
1	A	634	C	C3'-O3'	-5.56	1.34	1.42
1	A	279	A	C3'-O3'	5.56	1.50	1.42
1	A	666	G	C3'-O3'	-5.56	1.34	1.42
1	A	1083	U	C3'-O3'	5.56	1.50	1.42
1	A	1504	G	C3'-O3'	5.55	1.50	1.42
1	A	1065	U	C3'-O3'	5.55	1.50	1.42
1	A	739	C	C1'-N1	5.54	1.57	1.48
1	A	73	C	C1'-N1	5.54	1.57	1.48
1	A	887	G	N9-C4	-5.54	1.33	1.38
1	A	1119	C	C1'-N1	5.54	1.57	1.48
1	A	1125	U	O3'-P	5.54	1.67	1.61
1	A	109	A	N7-C5	-5.53	1.35	1.39

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	947	G	C3'-O3'	-5.53	1.34	1.42
1	A	738	C	O5'-C5'	-5.53	1.34	1.42
1	A	872	A	O3'-P	-5.53	1.54	1.61
1	A	1355	G	N9-C4	5.53	1.42	1.38
1	A	367	U	C3'-O3'	5.52	1.49	1.42
1	A	553	A	C6-N1	-5.52	1.31	1.35
1	A	1303	C	N1-C6	-5.52	1.33	1.37
1	A	489	C	C1'-N1	5.51	1.57	1.48
1	A	1079	G	C3'-O3'	-5.51	1.34	1.42
1	A	1018	C	C1'-N1	5.51	1.57	1.48
1	A	1526	G	N1-C2	-5.51	1.33	1.37
1	A	313	A	N9-C4	-5.51	1.34	1.37
1	A	382	A	C6-N1	-5.50	1.31	1.35
1	A	306	G	N3-C4	5.50	1.39	1.35
1	A	376	G	C3'-O3'	-5.50	1.34	1.42
1	A	556	C	C3'-O3'	-5.50	1.34	1.42
1	A	893	C	C1'-N1	5.48	1.56	1.48
1	A	397	A	C3'-O3'	5.48	1.49	1.42
1	A	293	G	N3-C4	-5.47	1.31	1.35
1	A	279	A	C5-C6	-5.45	1.36	1.41
1	A	857	C	C3'-O3'	-5.45	1.34	1.42
1	A	499	A	N9-C4	5.45	1.41	1.37
1	A	893	C	N1-C2	5.45	1.45	1.40
1	A	929	G	N7-C5	-5.45	1.35	1.39
1	A	635	G	C2-N3	-5.45	1.28	1.32
1	A	118	U	C3'-O3'	-5.45	1.34	1.42
1	A	1070	U	C3'-O3'	5.43	1.49	1.42
1	A	723	U	N1-C2	5.42	1.43	1.38
1	A	1278	U	C1'-N1	5.42	1.56	1.48
1	A	361	G	P-O5'	5.41	1.65	1.59
1	A	230	G	C6-O6	5.41	1.29	1.24
1	A	1233	G	C6-O6	5.40	1.29	1.24
1	A	533	A	C6-N1	-5.38	1.31	1.35
1	A	406	G	C6-N1	5.38	1.43	1.39
1	A	453	A	N9-C4	-5.37	1.34	1.37
1	A	901	A	N7-C5	-5.37	1.36	1.39
1	A	1367	C	C1'-N1	5.37	1.56	1.48
1	A	999	C	C1'-N1	5.36	1.56	1.48
1	A	924	C	C1'-N1	5.36	1.56	1.48
1	A	1196	U	C3'-O3'	5.36	1.49	1.42
1	A	1320	C	C3'-O3'	5.36	1.49	1.42
1	A	1063	C	C1'-N1	5.36	1.56	1.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1354	C	P-O5'	5.35	1.65	1.59
1	A	1054	C	N1-C2	5.35	1.45	1.40
1	A	839	U	C1'-N1	5.34	1.56	1.48
1	A	273	A	C3'-O3'	5.33	1.49	1.42
1	A	653	A	N9-C4	-5.33	1.34	1.37
1	A	982	U	C1'-N1	5.32	1.56	1.48
1	A	941	G	N7-C5	-5.32	1.36	1.39
1	A	203	U	C1'-N1	5.31	1.56	1.48
1	A	267	C	N1-C6	-5.31	1.33	1.37
1	A	780	A	C5-C6	-5.31	1.36	1.41
1	A	1361(A)	C	N1-C2	5.30	1.45	1.40
1	A	773	G	C3'-O3'	-5.30	1.34	1.42
11	J	57	LYS	CD-CE	5.30	1.64	1.51
1	A	560	U	C3'-O3'	5.30	1.49	1.42
1	A	588	G	N7-C5	-5.30	1.36	1.39
1	A	290	C	N3-C4	-5.29	1.30	1.33
1	A	696	A	C5-C6	-5.29	1.36	1.41
1	A	979	C	C3'-O3'	5.29	1.49	1.42
1	A	1277	C	C1'-N1	5.29	1.56	1.48
1	A	1366	C	C3'-O3'	-5.29	1.34	1.42
1	A	956	U	C1'-N1	-5.28	1.39	1.46
1	A	603	U	P-O5'	5.28	1.65	1.59
1	A	1020	U	C1'-N1	5.28	1.56	1.48
1	A	804	U	C1'-N1	5.28	1.56	1.48
1	A	735	C	C3'-O3'	-5.26	1.34	1.42
1	A	1211	U	C3'-O3'	5.25	1.49	1.42
1	A	405	U	C1'-N1	5.25	1.56	1.48
1	A	1393	U	C4'-C3'	-5.25	1.47	1.52
1	A	444	C	C1'-N1	5.25	1.56	1.48
1	A	1285	A	N9-C4	5.25	1.41	1.37
1	A	1368	G	N3-C4	5.24	1.39	1.35
1	A	294	U	N3-C4	-5.24	1.33	1.38
1	A	1066	C	P-O5'	5.24	1.65	1.59
1	A	1093	A	N7-C5	-5.24	1.36	1.39
1	A	914	A	O5'-C5'	-5.24	1.34	1.42
1	A	577	G	C1'-N9	-5.23	1.39	1.46
1	A	1333	A	C5-C4	-5.23	1.35	1.38
1	A	1183	A	C3'-O3'	5.23	1.49	1.42
1	A	1514	C	C1'-N1	5.23	1.56	1.48
8	G	5	ARG	CG-CD	5.23	1.65	1.51
1	A	1372	U	C1'-N1	5.23	1.56	1.48
1	A	246	A	C2'-C1'	-5.23	1.47	1.53

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	32	A	N9-C4	5.22	1.41	1.37
1	A	491	G	P-O5'	5.22	1.65	1.59
1	A	197	A	C6-N1	-5.22	1.31	1.35
1	A	825	G	N9-C8	-5.22	1.34	1.37
1	A	78	G	N1-C2	-5.22	1.33	1.37
1	A	834	C	C3'-O3'	-5.22	1.34	1.42
1	A	336	C	C1'-N1	5.21	1.56	1.48
1	A	1129	C	C3'-O3'	5.20	1.49	1.42
5	D	145	GLU	CG-CD	5.20	1.59	1.51
1	A	727	G	N9-C8	-5.20	1.34	1.37
1	A	501	C	C3'-O3'	-5.19	1.34	1.42
1	A	237	C	C1'-N1	5.18	1.56	1.48
1	A	904	C	N3-C4	-5.18	1.30	1.33
1	A	730	G	C3'-C2'	-5.18	1.47	1.52
1	A	304	U	C1'-N1	5.18	1.56	1.48
1	A	1270	C	C5'-C4'	5.17	1.57	1.51
1	A	828	A	N3-C4	-5.17	1.31	1.34
1	A	754	C	N1-C6	-5.17	1.34	1.37
1	A	1501	C	C3'-O3'	-5.17	1.34	1.42
1	A	1533	C	N1-C2	5.17	1.45	1.40
1	A	624	C	C3'-O3'	-5.16	1.34	1.42
1	A	1514	C	C4-N4	-5.16	1.29	1.33
1	A	1197	G	C4'-C3'	-5.16	1.47	1.52
1	A	325	A	N9-C4	-5.15	1.34	1.37
1	A	51	A	N7-C5	-5.15	1.36	1.39
1	A	1093	A	C5-C6	-5.15	1.36	1.41
1	A	124	G	N3-C4	-5.15	1.31	1.35
1	A	862	C	N1-C6	-5.15	1.34	1.37
1	A	243	A	C6-N1	-5.15	1.31	1.35
1	A	771	G	C8-N7	-5.15	1.27	1.30
1	A	704	A	N7-C5	-5.14	1.36	1.39
1	A	391	G	C3'-O3'	-5.14	1.34	1.42
1	A	558	G	N7-C5	-5.14	1.36	1.39
1	A	704	A	C6-N1	-5.14	1.31	1.35
1	A	239	U	C1'-N1	5.13	1.56	1.48
1	A	673	G	C4'-C3'	-5.13	1.47	1.52
1	A	920	U	C4'-C3'	-5.13	1.47	1.52
1	A	1511	G	C3'-O3'	-5.13	1.34	1.42
1	A	602	A	N7-C5	-5.13	1.36	1.39
1	A	920	U	C4-C5	5.13	1.48	1.43
1	A	5	U	C2-N3	5.13	1.41	1.37
1	A	282	A	N3-C4	-5.13	1.31	1.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	221	C	N3-C4	5.12	1.37	1.33
1	A	293	G	C6-N1	-5.12	1.35	1.39
1	A	974	A	P-O5'	5.12	1.64	1.59
1	A	686	U	C1'-N1	-5.12	1.39	1.46
1	A	721	G	C3'-O3'	5.11	1.49	1.42
1	A	257	G	P-O5'	5.11	1.64	1.59
1	A	732	C	N3-C4	-5.11	1.30	1.33
1	A	753	A	N7-C5	-5.11	1.36	1.39
1	A	1283	G	C3'-O3'	5.11	1.49	1.42
1	A	182	U	C1'-N1	5.10	1.56	1.48
1	A	313	A	N3-C4	-5.10	1.31	1.34
1	A	919	A	N9-C8	-5.10	1.33	1.37
1	A	190(F)	G	C2'-C1'	-5.09	1.47	1.53
1	A	136	C	N1-C6	-5.08	1.34	1.37
1	A	727	G	C5-C6	-5.08	1.37	1.42
1	A	778	G	N7-C5	-5.08	1.36	1.39
1	A	588	G	C6-N1	5.08	1.43	1.39
1	A	1084	G	C3'-O3'	5.07	1.49	1.42
1	A	319	G	C2-N3	5.07	1.36	1.32
1	A	328	C	O5'-C5'	-5.07	1.34	1.42
1	A	265	G	N9-C4	-5.07	1.33	1.38
1	A	866	C	C1'-N1	5.07	1.56	1.48
1	A	884	U	C3'-O3'	-5.06	1.35	1.42
1	A	20	U	C1'-N1	-5.06	1.39	1.46
3	B	205	ASP	CB-CG	5.06	1.62	1.51
1	A	1266	G	C5-C4	5.05	1.41	1.38
1	A	235	C	N1-C6	-5.05	1.34	1.37
1	A	53	A	N3-C4	-5.05	1.31	1.34
1	A	460	A	C3'-O3'	5.04	1.49	1.42
1	A	553	A	C4'-C3'	-5.04	1.47	1.52
1	A	300	A	N7-C5	-5.04	1.36	1.39
1	A	562	C	C4-C5	5.04	1.47	1.43
1	A	315	A	C3'-O3'	5.04	1.49	1.42
1	A	930	C	N1-C6	-5.04	1.34	1.37
1	A	1228	C	C3'-O3'	-5.03	1.35	1.42
1	A	140	A	P-O5'	5.03	1.64	1.59
1	A	401	C	N3-C4	5.03	1.37	1.33
17	P	38	TYR	CD2-CE2	5.03	1.46	1.39
1	A	1179	A	N9-C4	-5.02	1.34	1.37
1	A	1390	U	C1'-N1	5.02	1.56	1.48
1	A	1056	U	C3'-O3'	-5.02	1.35	1.42
1	A	557	G	C5-C4	-5.02	1.34	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	840	C	C3'-O3'	5.02	1.49	1.42
1	A	23	C	N1-C6	-5.01	1.34	1.37
1	A	131	C	N3-C4	-5.01	1.30	1.33
1	A	790	A	C5-C4	5.01	1.42	1.38
1	A	1239	A	C5-C4	-5.01	1.35	1.38
1	A	855	G	C3'-O3'	-5.01	1.35	1.42
1	A	382	A	N7-C5	-5.01	1.36	1.39

All (658) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1169	A	P-O3'-C3'	29.86	155.53	119.70
1	A	1525	G	C4'-C3'-C2'	-12.91	89.69	102.60
1	A	1346	A	P-O3'-C3'	11.99	134.09	119.70
1	A	1345	U	C1'-O4'-C4'	-11.81	100.45	109.90
1	A	1025	U	C1'-O4'-C4'	-11.60	100.62	109.90
1	A	1224	G	P-O3'-C3'	10.79	132.65	119.70
1	A	1183	A	C1'-O4'-C4'	-10.54	101.47	109.90
1	A	1529	G	C1'-O4'-C4'	-10.54	101.47	109.90
1	A	964	A	O4'-C1'-N9	-10.38	99.90	108.20
1	A	1380	U	P-O3'-C3'	10.22	131.96	119.70
1	A	1099	G	O4'-C1'-N9	10.20	116.36	108.20
1	A	686	U	C3'-C2'-C1'	-9.68	93.76	101.50
1	A	686	U	C1'-O4'-C4'	-9.65	102.18	109.90
1	A	1169	A	O3'-P-O5'	-9.65	85.67	104.00
1	A	566	G	O4'-C1'-N9	-9.47	100.62	108.20
1	A	980	C	C1'-O4'-C4'	-9.37	102.41	109.90
1	A	501	C	P-O3'-C3'	-9.28	108.56	119.70
1	A	115	G	P-O3'-C3'	9.25	130.80	119.70
1	A	1317	C	C1'-O4'-C4'	-9.23	102.52	109.90
1	A	1358	U	O4'-C1'-N1	9.22	115.58	108.20
1	A	1151	A	C1'-O4'-C4'	-9.21	102.53	109.90
1	A	290	C	P-O3'-C3'	-9.08	108.80	119.70
1	A	872	A	C1'-O4'-C4'	-9.08	102.64	109.90
1	A	1504	G	P-O3'-C3'	9.06	130.57	119.70
1	A	1125	U	P-O3'-C3'	9.01	130.51	119.70
1	A	533	A	P-O3'-C3'	8.97	130.47	119.70
1	A	48	C	P-O3'-C3'	8.92	130.40	119.70
1	A	328	C	P-O3'-C3'	8.92	130.40	119.70
1	A	173	U	C3'-C2'-C1'	-8.86	94.41	101.50
1	A	942	G	O4'-C1'-N9	8.82	115.26	108.20
1	A	1196	U	O4'-C1'-N1	8.82	115.26	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	197	A	P-O3'-C3'	8.81	130.27	119.70
1	A	1347	G	P-O3'-C3'	8.79	130.25	119.70
1	A	246	A	C1'-O4'-C4'	-8.77	102.89	109.90
1	A	1085	U	P-O3'-C3'	8.75	130.20	119.70
1	A	730	G	C4'-C3'-C2'	-8.73	93.87	102.60
1	A	1090	U	O4'-C1'-N1	8.69	115.16	108.20
1	A	266	G	P-O3'-C3'	8.63	130.06	119.70
1	A	1169	A	OP1-P-O3'	8.55	124.01	105.20
1	A	1522	U	C4'-C3'-C2'	-8.50	94.10	102.60
1	A	129(A)	G	O4'-C1'-N9	-8.48	101.42	108.20
1	A	1397	C	O4'-C1'-N1	8.42	114.93	108.20
1	A	279	A	P-O3'-C3'	8.38	129.76	119.70
1	A	1524	C	C4'-C3'-C2'	-8.32	94.28	102.60
1	A	702	A	C1'-O4'-C4'	-8.29	103.27	109.90
1	A	1306	A	O4'-C1'-N9	8.28	114.83	108.20
1	A	1067	A	O4'-C1'-N9	-8.26	101.59	108.20
1	A	656	C	C4'-C3'-C2'	-8.20	94.40	102.60
1	A	1065	U	C1'-O4'-C4'	-8.20	103.34	109.90
1	A	266	G	O4'-C1'-N9	-8.20	101.64	108.20
1	A	452	A	C3'-C2'-C1'	-8.11	95.02	101.50
1	A	1190	G	P-O3'-C3'	8.10	129.41	119.70
1	A	243	A	P-O3'-C3'	8.08	129.40	119.70
1	A	913	A	P-O3'-C3'	8.04	129.35	119.70
1	A	601	C	P-O3'-C3'	-7.99	110.11	119.70
1	A	1519	A	O4'-C1'-N9	7.98	114.59	108.20
1	A	687	A	P-O3'-C3'	7.97	129.27	119.70
1	A	288	A	C4'-C3'-C2'	-7.95	94.66	102.60
1	A	608	A	P-O3'-C3'	-7.93	110.18	119.70
1	A	387	U	O4'-C1'-N1	7.93	114.54	108.20
1	A	967	C	N1-C2-O2	7.93	123.66	118.90
1	A	405	U	P-O3'-C3'	7.92	129.20	119.70
1	A	1525	G	C1'-O4'-C4'	-7.88	103.60	109.90
1	A	529	G	C4'-C3'-C2'	-7.82	94.78	102.60
1	A	484	G	O4'-C1'-N9	-7.80	101.96	108.20
1	A	1054	C	O4'-C1'-N1	7.79	114.43	108.20
1	A	1067	A	P-O3'-C3'	7.77	129.03	119.70
1	A	1065	U	P-O3'-C3'	7.76	129.02	119.70
1	A	786	G	C8-N9-C4	-7.75	103.30	106.40
1	A	1531	A	O4'-C1'-N9	7.75	114.40	108.20
1	A	1301	U	P-O3'-C3'	7.73	128.98	119.70
1	A	60	A	P-O3'-C3'	7.71	128.95	119.70
1	A	575	G	P-O3'-C3'	7.68	128.92	119.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	863	U	O4'-C1'-N1	7.66	114.33	108.20
1	A	49	U	C5'-C4'-O4'	7.62	118.24	109.10
1	A	388	G	O4'-C1'-N9	-7.60	102.12	108.20
1	A	686	U	O4'-C1'-N1	7.58	114.27	108.20
1	A	315	A	C4'-C3'-C2'	-7.57	95.03	102.60
1	A	936	C	O4'-C1'-N1	-7.57	102.15	108.20
1	A	509	A	C3'-C2'-C1'	-7.56	95.45	101.50
1	A	346	G	C1'-O4'-C4'	-7.55	103.86	109.90
1	A	758	G	O4'-C1'-N9	7.55	114.24	108.20
1	A	812	C	P-O3'-C3'	7.54	128.75	119.70
1	A	793	U	C1'-O4'-C4'	-7.54	103.87	109.90
1	A	1025	U	O4'-C1'-N1	7.48	114.18	108.20
1	A	1050	G	C4'-C3'-C2'	-7.46	95.14	102.60
1	A	814	A	N9-C1'-C2'	-7.44	103.82	112.00
1	A	1235	U	C3'-C2'-C1'	-7.43	95.56	101.50
1	A	1365	G	O4'-C1'-N9	7.38	114.11	108.20
1	A	1214	C	C1'-O4'-C4'	-7.37	104.00	109.90
1	A	1498	U	P-O3'-C3'	7.37	128.54	119.70
1	A	1364	U	P-O3'-C3'	7.36	128.53	119.70
1	A	934	C	C1'-O4'-C4'	-7.34	104.03	109.90
1	A	739	C	C3'-C2'-C1'	-7.31	95.65	101.50
1	A	804	U	O4'-C1'-N1	7.29	114.03	108.20
1	A	81	U	O4'-C1'-N1	7.28	114.02	108.20
1	A	1192	C	C6-N1-C2	-7.26	117.40	120.30
1	A	1079	G	C8-N9-C4	-7.26	103.50	106.40
1	A	384	G	O4'-C1'-N9	7.24	113.99	108.20
9	H	52	ASP	CB-CG-OD2	7.22	124.80	118.30
1	A	559	A	C1'-O4'-C4'	-7.22	104.12	109.90
1	A	760	G	P-O3'-C3'	-7.20	111.06	119.70
1	A	108	G	O4'-C1'-N9	7.18	113.94	108.20
1	A	281	G	P-O3'-C3'	7.17	128.31	119.70
1	A	1331	G	O4'-C1'-N9	7.15	113.92	108.20
1	A	1380	U	C2'-C3'-O3'	7.14	125.20	109.50
1	A	1064	G	N3-C4-N9	-7.11	121.73	126.00
1	A	519	C	C1'-O4'-C4'	-7.10	104.22	109.90
1	A	898	G	C4'-C3'-C2'	-7.09	95.51	102.60
1	A	1317	C	O4'-C1'-N1	7.09	113.87	108.20
1	A	115	G	C2'-C3'-O3'	7.09	125.10	109.50
1	A	930	C	O4'-C4'-C3'	-7.07	96.93	104.00
1	A	965	A	P-O3'-C3'	7.07	128.18	119.70
1	A	6	G	C5'-C4'-O4'	7.03	117.53	109.10
1	A	1302	U	O4'-C1'-N1	-7.02	102.58	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	129	U	O4'-C1'-N1	7.01	113.81	108.20
1	A	279	A	N9-C1'-C2'	-6.98	104.32	112.00
1	A	1144	G	C3'-C2'-C1'	-6.98	95.92	101.50
1	A	382	A	O4'-C1'-N9	6.97	113.77	108.20
1	A	855	G	O4'-C1'-N9	6.95	113.76	108.20
1	A	1114	C	C3'-C2'-C1'	-6.95	95.94	101.50
1	A	781	A	C4'-C3'-C2'	-6.93	95.67	102.60
1	A	25	C	P-O3'-C3'	-6.92	111.40	119.70
1	A	609	A	O4'-C1'-N9	-6.90	102.68	108.20
1	A	1505	G	O4'-C1'-N9	6.89	113.71	108.20
1	A	641	U	O4'-C1'-N1	6.88	113.70	108.20
1	A	941	G	C8-N9-C4	-6.87	103.65	106.40
1	A	829	G	O4'-C1'-N9	-6.87	102.71	108.20
1	A	484	G	P-O3'-C3'	6.86	127.92	119.70
1	A	1510	U	C1'-O4'-C4'	-6.86	104.42	109.90
1	A	343	U	O4'-C1'-N1	6.85	113.68	108.20
9	H	54	ASP	CB-CG-OD2	6.83	124.45	118.30
1	A	878	G	P-O3'-C3'	-6.81	111.53	119.70
1	A	1515	C	N3-C4-N4	6.81	122.77	118.00
1	A	169	C	C1'-O4'-C4'	-6.81	104.45	109.90
1	A	1190	G	C8-N9-C4	-6.80	103.68	106.40
1	A	1107	C	C3'-C2'-C1'	-6.79	96.06	101.50
1	A	108	G	O4'-C4'-C3'	-6.79	97.21	104.00
1	A	119	A	P-O3'-C3'	6.78	127.84	119.70
1	A	1355	G	C8-N9-C4	-6.78	103.69	106.40
1	A	409	G	O4'-C1'-N9	6.77	113.62	108.20
1	A	5	U	O4'-C1'-N1	6.77	113.62	108.20
1	A	1502	A	C5-N7-C8	-6.77	100.52	103.90
1	A	130	A	P-O5'-C5'	-6.77	110.07	120.90
1	A	332	G	P-O3'-C3'	6.77	127.82	119.70
1	A	1139	G	C1'-O4'-C4'	-6.75	104.50	109.90
1	A	222	U	O4'-C4'-C3'	-6.75	97.25	104.00
1	A	1126	U	O4'-C1'-N1	6.75	113.60	108.20
1	A	1108	G	C4'-C3'-C2'	-6.74	95.86	102.60
1	A	1129	C	O4'-C1'-N1	6.73	113.58	108.20
1	A	1265	G	C8-N9-C4	-6.71	103.72	106.40
1	A	570	G	C8-N9-C4	-6.71	103.72	106.40
1	A	1302	U	P-O3'-C3'	6.71	127.75	119.70
1	A	907	A	O4'-C1'-N9	6.71	113.56	108.20
1	A	1073	U	O4'-C1'-N1	6.70	113.56	108.20
1	A	1190	G	O4'-C1'-C2'	-6.70	99.10	105.80
4	C	17	ASP	CB-CG-OD2	6.69	124.32	118.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	108	G	C1'-O4'-C4'	-6.68	104.56	109.90
1	A	950	U	P-O3'-C3'	-6.67	111.70	119.70
1	A	481	G	O4'-C1'-N9	6.66	113.53	108.20
1	A	21	G	C6-C5-N7	-6.64	126.41	130.40
1	A	1522	U	N3-C2-O2	-6.64	117.55	122.20
1	A	926	G	N9-C1'-C2'	-6.63	104.71	112.00
1	A	889	A	C3'-C2'-C1'	-6.62	96.21	101.50
1	A	652	U	O4'-C1'-N1	-6.61	102.91	108.20
1	A	947	G	P-O3'-C3'	-6.61	111.77	119.70
1	A	7	G	O4'-C1'-N9	-6.59	102.93	108.20
1	A	279	A	C2-N3-C4	-6.59	107.31	110.60
1	A	409	G	C3'-C2'-C1'	6.58	106.76	101.50
1	A	586	C	O4'-C1'-N1	6.57	113.46	108.20
1	A	217	C	C3'-C2'-C1'	-6.56	96.25	101.50
1	A	158	G	C8-N9-C4	-6.56	103.78	106.40
1	A	924	C	O4'-C1'-N1	6.56	113.45	108.20
1	A	879	C	C4'-C3'-C2'	-6.55	96.05	102.60
1	A	64	G	P-O3'-C3'	6.53	127.54	119.70
1	A	1101	A	P-O3'-C3'	6.52	127.53	119.70
1	A	243	A	C1'-O4'-C4'	-6.51	104.69	109.90
1	A	605	U	O4'-C1'-N1	6.50	113.40	108.20
1	A	531	U	C1'-O4'-C4'	-6.49	104.71	109.90
1	A	1446	A	C1'-O4'-C4'	-6.49	104.71	109.90
1	A	1247	U	C3'-C2'-C1'	-6.49	96.31	101.50
1	A	560	U	P-O3'-C3'	6.47	127.47	119.70
1	A	115	G	O4'-C1'-N9	-6.46	103.03	108.20
1	A	743	U	N1-C1'-C2'	-6.46	104.90	112.00
1	A	866	C	O4'-C1'-N1	6.44	113.35	108.20
1	A	1072	G	N9-C1'-C2'	-6.43	104.92	112.00
1	A	671	G	O4'-C1'-N9	6.43	113.34	108.20
1	A	542	G	C4'-C3'-C2'	-6.43	96.17	102.60
1	A	594	G	O4'-C1'-N9	6.42	113.33	108.20
1	A	1527	C	P-O3'-C3'	6.41	127.39	119.70
1	A	252	U	C1'-O4'-C4'	-6.40	104.78	109.90
1	A	1502	A	C4-C5-N7	6.38	113.89	110.70
1	A	1227	A	N9-C1'-C2'	-6.37	104.99	112.00
1	A	1345	U	O4'-C1'-N1	6.37	113.29	108.20
1	A	108	G	C4'-C3'-C2'	-6.35	96.25	102.60
1	A	604	G	C8-N9-C4	-6.35	103.86	106.40
1	A	1065	U	C5'-C4'-O4'	6.34	116.71	109.10
1	A	993	G	N9-C1'-C2'	6.34	122.24	114.00
1	A	1349	A	P-O3'-C3'	-6.34	112.10	119.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	372	C	C5'-C4'-O4'	6.33	116.70	109.10
1	A	90	U	C3'-C2'-C1'	-6.33	96.44	101.50
1	A	965	A	C4'-C3'-C2'	6.33	108.93	102.60
1	A	1183	A	P-O3'-C3'	6.33	127.30	119.70
17	P	40	ASP	CB-CG-OD2	6.33	123.99	118.30
1	A	408	A	C4'-C3'-C2'	-6.32	96.28	102.60
1	A	1305	G	P-O3'-C3'	6.31	127.28	119.70
1	A	521	G	O4'-C1'-N9	-6.31	103.16	108.20
1	A	818	G	C4'-C3'-C2'	-6.30	96.30	102.60
1	A	1397	C	N1-C2-O2	6.30	122.68	118.90
16	O	21	ASP	CB-CG-OD2	6.30	123.97	118.30
1	A	246	A	O4'-C1'-N9	6.29	113.23	108.20
1	A	1192	C	O4'-C1'-N1	6.29	113.23	108.20
1	A	1115	C	N1-C1'-C2'	-6.29	105.08	112.00
1	A	1526	G	C4'-C3'-C2'	-6.28	96.32	102.60
1	A	1380	U	O4'-C1'-N1	-6.28	103.17	108.20
1	A	1054	C	C2-N1-C1'	6.28	125.70	118.80
1	A	696	A	N1-C6-N6	6.27	122.36	118.60
1	A	104	G	N3-C4-N9	6.27	129.76	126.00
1	A	1502	A	N1-C6-N6	6.27	122.36	118.60
1	A	644	G	N9-C1'-C2'	-6.26	105.11	112.00
1	A	1099	G	N3-C4-N9	-6.25	122.25	126.00
1	A	159	G	C3'-C2'-C1'	-6.25	96.50	101.50
1	A	438	G	P-O3'-C3'	6.25	127.20	119.70
1	A	137	C	O4'-C1'-N1	6.24	113.19	108.20
1	A	488	C	C3'-C2'-C1'	-6.23	96.51	101.50
1	A	1525	G	C5'-C4'-O4'	6.22	116.57	109.10
1	A	795	C	O4'-C1'-N1	-6.22	103.23	108.20
1	A	992	U	P-O3'-C3'	6.21	127.16	119.70
1	A	939	G	C5'-C4'-O4'	6.21	116.55	109.10
1	A	1116	C	N1-C1'-C2'	-6.20	105.19	112.00
1	A	1004	A	O4'-C1'-N9	6.19	113.15	108.20
1	A	1504	G	C5'-C4'-O4'	-6.18	101.68	109.10
6	E	147	ASP	CB-CG-OD2	6.18	123.86	118.30
1	A	695	A	O4'-C1'-N9	6.18	113.14	108.20
1	A	1281	U	P-O3'-C3'	6.17	127.11	119.70
1	A	889	A	O4'-C1'-N9	6.17	113.13	108.20
7	F	15	ASP	CB-CG-OD2	6.16	123.84	118.30
1	A	1294	G	N1-C6-O6	6.15	123.59	119.90
1	A	489	C	C3'-C2'-C1'	-6.14	96.59	101.50
1	A	647	C	N1-C1'-C2'	-6.14	105.25	112.00
1	A	422	C	O4'-C1'-N1	6.14	113.11	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	257	G	N3-C4-N9	6.14	129.68	126.00
1	A	1395	C	O4'-C1'-N1	-6.14	103.29	108.20
1	A	129(A)	G	C5'-C4'-O4'	-6.13	101.74	109.10
1	A	867	G	C5-C6-O6	-6.13	124.92	128.60
1	A	674	G	P-O3'-C3'	-6.11	112.37	119.70
1	A	5	U	C3'-C2'-C1'	6.11	106.39	101.50
1	A	1052	U	O4'-C1'-N1	6.10	113.08	108.20
1	A	26	A	O4'-C1'-N9	-6.09	103.32	108.20
1	A	944	G	C4'-C3'-C2'	-6.09	96.51	102.60
1	A	945	G	O4'-C1'-N9	-6.09	103.33	108.20
1	A	736	C	C1'-O4'-C4'	-6.09	105.03	109.90
1	A	951	G	O4'-C1'-N9	6.08	113.07	108.20
1	A	770	C	O5'-P-OP2	-6.08	100.23	105.70
1	A	315	A	C3'-C2'-C1'	-6.06	96.65	101.50
1	A	292	G	C4'-C3'-C2'	-6.05	96.55	102.60
1	A	1048	G	C4'-C3'-C2'	-6.05	96.55	102.60
1	A	381	C	O4'-C1'-N1	6.03	113.03	108.20
1	A	1196	U	C1'-O4'-C4'	-6.03	105.08	109.90
1	A	897	C	O4'-C1'-N1	6.02	113.02	108.20
1	A	558	G	C8-N9-C4	-6.02	103.99	106.40
1	A	1093	A	P-O3'-C3'	6.02	126.92	119.70
1	A	875	C	C4'-C3'-C2'	-6.02	96.58	102.60
1	A	857	C	P-O3'-C3'	-6.01	112.49	119.70
1	A	1387	G	O4'-C1'-N9	-6.01	103.39	108.20
1	A	149	A	P-O3'-C3'	-6.00	112.50	119.70
1	A	16	A	N9-C1'-C2'	-6.00	105.40	112.00
1	A	38	G	O4'-C1'-N9	6.00	113.00	108.20
1	A	1526	G	C1'-O4'-C4'	-5.99	105.11	109.90
1	A	216	G	C1'-O4'-C4'	-5.98	105.11	109.90
7	F	83	ASP	CB-CG-OD2	5.98	123.68	118.30
1	A	278	G	O4'-C1'-N9	5.98	112.98	108.20
1	A	261	U	P-O3'-C3'	-5.97	112.53	119.70
1	A	7	G	P-O3'-C3'	5.97	126.86	119.70
1	A	1346	A	C1'-O4'-C4'	-5.97	105.12	109.90
1	A	1239	A	C3'-C2'-C1'	-5.96	96.73	101.50
1	A	220	G	N3-C4-C5	-5.95	125.63	128.60
1	A	112	G	C4'-C3'-C2'	-5.94	96.66	102.60
1	A	867	G	N3-C4-N9	5.94	129.56	126.00
1	A	372	C	C1'-O4'-C4'	-5.93	105.16	109.90
3	B	191	ASP	CB-CG-OD2	5.93	123.64	118.30
5	D	134	ASP	CB-CG-OD2	5.93	123.63	118.30
1	A	1077	G	C6-C5-N7	-5.92	126.84	130.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	824	C	C4'-C3'-C2'	-5.92	96.68	102.60
1	A	142	G	C4'-C3'-C2'	-5.91	96.69	102.60
1	A	372	C	P-O3'-C3'	5.91	126.79	119.70
1	A	860	A	N9-C1'-C2'	-5.91	105.50	112.00
1	A	911	U	C1'-O4'-C4'	-5.91	105.18	109.90
1	A	1067	A	C2-N3-C4	5.90	113.55	110.60
1	A	1175	G	C3'-C2'-C1'	-5.90	96.78	101.50
1	A	1067	A	C5-C6-N1	5.89	120.65	117.70
1	A	670	G	N9-C1'-C2'	-5.89	105.52	112.00
1	A	947	G	O4'-C1'-N9	-5.89	103.49	108.20
1	A	676	A	P-O3'-C3'	-5.89	112.63	119.70
1	A	1213	A	C1'-O4'-C4'	-5.89	105.19	109.90
1	A	717	C	C2-N1-C1'	5.89	125.28	118.80
1	A	271	C	O4'-C1'-N1	5.88	112.91	108.20
1	A	1126	U	C3'-C2'-C1'	5.88	106.20	101.50
1	A	859	A	N9-C1'-C2'	-5.88	105.53	112.00
1	A	1008	C	C3'-C2'-C1'	-5.88	96.80	101.50
1	A	127	G	N9-C1'-C2'	-5.87	105.54	112.00
1	A	576	G	C5'-C4'-O4'	5.87	116.14	109.10
1	A	1525	G	P-O3'-C3'	5.87	126.74	119.70
1	A	890	G	C3'-C2'-C1'	-5.86	96.81	101.50
1	A	458	C	O4'-C1'-N1	5.86	112.89	108.20
1	A	1331	G	O4'-C1'-C2'	-5.86	99.94	105.80
1	A	993	G	P-O3'-C3'	5.85	126.72	119.70
1	A	1446	A	C3'-C2'-C1'	-5.85	96.82	101.50
1	A	234	C	N3-C4-C5	5.85	124.24	121.90
1	A	967	C	N3-C2-O2	-5.84	117.81	121.90
1	A	220	G	C8-N9-C4	-5.84	104.07	106.40
1	A	265	G	O4'-C1'-N9	5.84	112.87	108.20
1	A	1190	G	N7-C8-N9	5.84	116.02	113.10
1	A	661	G	C8-N9-C4	-5.83	104.07	106.40
8	G	140	ASP	CB-CG-OD2	5.83	123.55	118.30
1	A	1030(A)	G	C8-N9-C4	-5.83	104.07	106.40
1	A	265	G	C4'-C3'-C2'	-5.82	96.78	102.60
1	A	379	C	O4'-C1'-N1	5.82	112.86	108.20
1	A	914	A	C4'-C3'-C2'	-5.82	96.78	102.60
1	A	1398	A	N1-C6-N6	5.81	122.08	118.60
1	A	47	C	C3'-C2'-C1'	-5.80	96.86	101.50
19	R	30	ASP	CB-CG-OD2	5.80	123.52	118.30
4	C	62	ASP	CB-CG-OD2	5.80	123.52	118.30
1	A	130	A	P-O3'-C3'	5.79	126.65	119.70
1	A	770	C	C4'-C3'-C2'	-5.79	96.81	102.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	725	G	C5-C6-O6	-5.78	125.13	128.60
1	A	577	G	N9-C1'-C2'	-5.78	105.64	112.00
1	A	1339	A	O4'-C1'-N9	5.78	112.82	108.20
3	B	166	ASP	CB-CG-OD2	5.78	123.50	118.30
1	A	1081	G	N9-C1'-C2'	-5.77	105.65	112.00
1	A	1329	A	C3'-C2'-C1'	-5.77	96.89	101.50
1	A	1346	A	C4'-C3'-O3'	5.77	124.53	113.00
6	E	5	ASP	CB-CG-OD2	5.76	123.48	118.30
1	A	421	U	P-O3'-C3'	5.76	126.61	119.70
1	A	318	G	N9-C1'-C2'	-5.75	105.67	112.00
1	A	685	G	O4'-C1'-N9	5.75	112.80	108.20
1	A	37	U	C3'-C2'-C1'	-5.75	96.90	101.50
1	A	1372	U	O4'-C1'-N1	5.74	112.79	108.20
1	A	486	U	O4'-C1'-N1	5.73	112.79	108.20
1	A	623	C	N3-C4-C5	5.73	124.19	121.90
1	A	643	C	P-O3'-C3'	-5.73	112.82	119.70
1	A	184	G	P-O3'-C3'	-5.72	112.83	119.70
1	A	1467	G	N3-C4-C5	-5.72	125.74	128.60
1	A	1074	G	C6-C5-N7	-5.72	126.97	130.40
1	A	911	U	O4'-C4'-C3'	-5.71	98.29	104.00
1	A	1283	G	C4'-C3'-C2'	-5.71	96.89	102.60
5	D	193	ASP	CB-CG-OD2	5.71	123.44	118.30
1	A	440	A	O4'-C1'-N9	5.71	112.77	108.20
1	A	250	A	P-O3'-C3'	5.70	126.54	119.70
1	A	50	A	O4'-C1'-N9	5.70	112.76	108.20
1	A	711	G	O4'-C1'-N9	5.70	112.76	108.20
1	A	1283	G	C8-N9-C4	-5.70	104.12	106.40
1	A	980	C	O4'-C1'-N1	5.70	112.76	108.20
1	A	1346	A	C3'-C2'-C1'	-5.70	96.94	101.50
1	A	1108	G	O4'-C1'-N9	5.69	112.75	108.20
1	A	635	G	N1-C6-O6	5.69	123.31	119.90
1	A	1446	A	O4'-C1'-N9	5.69	112.75	108.20
10	I	91	ASP	CB-CG-OD2	5.68	123.42	118.30
14	M	83	ASP	CB-CG-OD2	5.68	123.41	118.30
1	A	942	G	C8-N9-C4	-5.68	104.13	106.40
1	A	1224	G	O4'-C1'-N9	5.68	112.74	108.20
1	A	786	G	O4'-C1'-N9	5.68	112.74	108.20
1	A	9	G	C4-C5-N7	5.67	113.07	110.80
1	A	1050	G	C3'-C2'-C1'	-5.67	96.96	101.50
1	A	228	A	O4'-C1'-N9	5.67	112.74	108.20
1	A	604	G	C5'-C4'-O4'	5.67	115.90	109.10
1	A	624	C	N1-C1'-C2'	-5.67	105.76	112.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	575	G	C6-C5-N7	-5.66	127.00	130.40
1	A	16	A	O4'-C1'-N9	-5.65	103.68	108.20
1	A	980	C	C5'-C4'-O4'	5.65	115.88	109.10
1	A	835	U	N1-C1'-C2'	-5.65	105.78	112.00
1	A	18	C	N3-C4-C5	5.65	124.16	121.90
13	L	112	ASP	CB-CG-OD2	5.64	123.38	118.30
12	K	111	ASP	CB-CG-OD2	5.63	123.37	118.30
1	A	1054	C	N1-C2-O2	5.63	122.28	118.90
1	A	64	G	O4'-C1'-N9	5.63	112.70	108.20
1	A	1294	G	C5-C6-O6	-5.63	125.22	128.60
1	A	239	U	O4'-C1'-N1	5.62	112.70	108.20
1	A	570	G	P-O3'-C3'	5.62	126.44	119.70
1	A	9	G	C6-C5-N7	-5.62	127.03	130.40
1	A	1266	G	C8-N9-C4	-5.61	104.16	106.40
1	A	678	U	C4'-C3'-C2'	-5.60	97.00	102.60
1	A	568	G	C4'-C3'-C2'	-5.60	97.00	102.60
1	A	750	G	C8-N9-C4	-5.59	104.16	106.40
1	A	1021	G	C3'-C2'-C1'	-5.59	97.03	101.50
1	A	329	A	C3'-C2'-C1'	5.59	105.97	101.50
16	O	74	ASP	CB-CG-OD2	5.58	123.32	118.30
1	A	371	G	C8-N9-C4	-5.58	104.17	106.40
1	A	485	G	C1'-O4'-C4'	-5.58	105.44	109.90
1	A	562	C	O4'-C1'-N1	5.58	112.66	108.20
10	I	75	ASP	CB-CG-OD2	5.57	123.32	118.30
1	A	657	G	N9-C1'-C2'	-5.57	105.88	112.00
1	A	691	G	C4-C5-C6	5.57	122.14	118.80
1	A	564	C	OP1-P-OP2	5.56	127.94	119.60
1	A	62	U	N1-C2-O2	5.56	126.69	122.80
1	A	1195	C	C6-N1-C2	-5.56	118.08	120.30
1	A	31	G	P-O3'-C3'	5.56	126.37	119.70
1	A	332	G	C8-N9-C4	-5.55	104.18	106.40
4	C	183	ASP	CB-CG-OD2	5.55	123.30	118.30
1	A	773	G	C8-N9-C4	-5.55	104.18	106.40
1	A	1043	C	C1'-O4'-C4'	-5.55	105.46	109.90
1	A	944	G	N9-C1'-C2'	5.54	121.21	114.00
1	A	1286	A	C4'-C3'-C2'	-5.54	97.06	102.60
1	A	428	G	P-O3'-C3'	5.54	126.35	119.70
1	A	1294	G	C8-N9-C4	-5.54	104.19	106.40
1	A	1527	C	O5'-P-OP2	-5.54	100.72	105.70
1	A	971	G	C1'-O4'-C4'	-5.53	105.47	109.90
17	P	47	ASP	CB-CG-OD2	5.53	123.28	118.30
1	A	80	G	O4'-C1'-N9	-5.53	103.78	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1451	A	P-O3'-C3'	5.53	126.33	119.70
1	A	55	A	N9-C1'-C2'	-5.52	105.93	112.00
1	A	792	A	P-O3'-C3'	5.51	126.32	119.70
5	D	144	ASP	CB-CG-OD2	5.51	123.26	118.30
1	A	1202	G	C4-C5-N7	-5.51	108.60	110.80
14	M	47	ASP	CB-CG-OD2	5.50	123.25	118.30
1	A	27	G	C8-N9-C4	-5.50	104.20	106.40
1	A	577	G	C8-N9-C4	5.50	108.60	106.40
1	A	124	G	N9-C1'-C2'	-5.50	105.95	112.00
1	A	145	G	C8-N9-C4	-5.50	104.20	106.40
1	A	937	A	C3'-C2'-C1'	-5.49	97.11	101.50
1	A	997	U	C4'-C3'-C2'	-5.49	97.11	102.60
1	A	190(H)	G	C4'-C3'-C2'	-5.49	97.11	102.60
1	A	377	G	N3-C4-N9	5.47	129.28	126.00
1	A	790	A	N1-C6-N6	5.46	121.88	118.60
1	A	652	U	C3'-C2'-C1'	-5.46	97.13	101.50
1	A	1371	G	C5'-C4'-O4'	5.46	115.65	109.10
1	A	1144	G	C8-N9-C4	-5.46	104.22	106.40
1	A	1391	U	N1-C1'-C2'	-5.45	106.00	112.00
1	A	7	G	N9-C1'-C2'	-5.45	106.01	112.00
1	A	190(D)	U	C1'-O4'-C4'	-5.45	105.54	109.90
1	A	286	G	C1'-O4'-C4'	-5.45	105.54	109.90
1	A	944	G	C8-N9-C4	-5.44	104.22	106.40
1	A	1235	U	P-O3'-C3'	5.44	126.23	119.70
1	A	10	A	C4'-C3'-C2'	-5.44	97.16	102.60
1	A	1513	A	N9-C1'-C2'	-5.44	106.01	112.00
1	A	1331	G	C1'-O4'-C4'	-5.44	105.55	109.90
1	A	1397	C	C2-N1-C1'	5.44	124.78	118.80
1	A	529	G	C3'-C2'-C1'	-5.43	97.15	101.50
14	M	16	ASP	CB-CG-OD2	5.43	123.19	118.30
1	A	1178	G	C8-N9-C4	-5.43	104.23	106.40
1	A	701	C	P-O3'-C3'	5.43	126.21	119.70
1	A	776	G	O3'-P-O5'	-5.42	93.70	104.00
1	A	1367	C	C3'-C2'-C1'	5.42	105.84	101.50
1	A	19	C	P-O3'-C3'	5.41	126.19	119.70
1	A	105	G	C4'-C3'-C2'	-5.41	97.19	102.60
1	A	656	C	C3'-C2'-C1'	-5.41	97.17	101.50
1	A	273	A	O4'-C1'-N9	5.41	112.52	108.20
1	A	356	A	C4'-C3'-C2'	-5.40	97.20	102.60
1	A	1239	A	C8-N9-C4	5.40	107.96	105.80
1	A	332	G	O4'-C1'-N9	5.40	112.52	108.20
1	A	867	G	C4'-C3'-C2'	-5.40	97.20	102.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	12	U	N3-C4-O4	5.39	123.17	119.40
1	A	1091	U	C4'-C3'-C2'	-5.39	97.21	102.60
1	A	269	C	C6-N1-C2	5.39	122.45	120.30
1	A	1525	G	C3'-C2'-C1'	-5.38	97.19	101.50
11	J	89	ASP	CB-CG-OD2	5.38	123.15	118.30
3	B	160	ASP	CB-CG-OD2	5.38	123.14	118.30
1	A	180	U	C5'-C4'-O4'	5.38	115.55	109.10
1	A	1504	G	OP2-P-O3'	5.38	117.03	105.20
1	A	1521	G	N9-C4-C5	5.38	107.55	105.40
1	A	405	U	C2'-C3'-O3'	5.38	122.30	113.70
1	A	1190	G	N9-C1'-C2'	5.38	120.99	114.00
1	A	1305	G	C8-N9-C4	-5.38	104.25	106.40
1	A	1487	G	N1-C6-O6	5.38	123.13	119.90
1	A	232	G	O4'-C1'-N9	-5.37	103.90	108.20
1	A	24	U	N1-C1'-C2'	-5.37	106.09	112.00
1	A	968	A	N1-C6-N6	5.37	121.82	118.60
1	A	1352	C	C3'-C2'-C1'	5.36	105.79	101.50
1	A	853	G	N1-C6-O6	5.36	123.12	119.90
1	A	774	G	C8-N9-C4	-5.35	104.26	106.40
1	A	926	G	C3'-C2'-C1'	5.35	105.78	101.50
1	A	1213	A	C3'-C2'-C1'	-5.35	97.22	101.50
1	A	566	G	N9-C1'-C2'	5.34	120.95	114.00
1	A	480	U	O4'-C1'-N1	5.34	112.47	108.20
1	A	322	C	N3-C4-C5	5.34	124.03	121.90
1	A	858	G	C6-C5-N7	-5.34	127.20	130.40
1	A	1450	U	O4'-C1'-N1	5.33	112.47	108.20
1	A	922	G	C5'-C4'-O4'	5.33	115.50	109.10
1	A	942	G	C1'-O4'-C4'	-5.33	105.64	109.90
1	A	1073	U	N3-C4-O4	5.33	123.13	119.40
1	A	1190	G	C4'-C3'-C2'	-5.33	97.27	102.60
1	A	922	G	C6-C5-N7	-5.33	127.20	130.40
1	A	1064	G	N3-C2-N2	-5.33	116.17	119.90
11	J	12	ASP	CB-CG-OD2	5.33	123.09	118.30
1	A	185	A	C3'-C2'-C1'	-5.32	97.24	101.50
1	A	535	A	C1'-O4'-C4'	-5.32	105.64	109.90
1	A	811	C	O4'-C1'-N1	-5.32	103.94	108.20
1	A	929	G	C6-C5-N7	-5.32	127.21	130.40
1	A	366	C	C2-N1-C1'	5.32	124.65	118.80
1	A	509	A	P-O3'-C3'	5.32	126.08	119.70
1	A	1000	U	C3'-C2'-C1'	-5.32	97.25	101.50
1	A	1349	A	O4'-C1'-N9	5.32	112.45	108.20
1	A	1054	C	C6-N1-C1'	-5.31	114.43	120.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	460	A	C3'-C2'-C1'	5.31	105.75	101.50
1	A	1069	C	N3-C4-C5	-5.30	119.78	121.90
1	A	1448	C	P-O3'-C3'	-5.30	113.33	119.70
16	O	49	ASP	CB-CG-OD2	5.30	123.07	118.30
1	A	292	G	N1-C6-O6	5.30	123.08	119.90
11	J	58	ASP	CB-CG-OD2	5.30	123.07	118.30
1	A	656	C	P-O3'-C3'	5.29	126.05	119.70
1	A	1487	G	C5-C6-O6	-5.29	125.42	128.60
1	A	371	G	C5'-C4'-O4'	5.28	115.44	109.10
1	A	850	U	C3'-C2'-C1'	-5.28	97.27	101.50
1	A	28	G	N1-C6-O6	5.28	123.07	119.90
1	A	858	G	C5-C6-O6	-5.28	125.43	128.60
1	A	1091	U	O4'-C1'-N1	5.28	112.42	108.20
1	A	1227	A	C5-N7-C8	-5.28	101.26	103.90
20	S	12	ASP	CB-CG-OD2	5.28	123.05	118.30
1	A	104	G	O4'-C1'-N9	-5.28	103.98	108.20
8	G	15	ASP	CB-CG-OD2	5.28	123.05	118.30
1	A	120	A	P-O3'-C3'	-5.27	113.37	119.70
1	A	568	G	N9-C1'-C2'	5.27	120.86	114.00
1	A	1104	G	O4'-C1'-N9	5.27	112.42	108.20
1	A	1307	U	P-O3'-C3'	-5.27	113.38	119.70
6	E	36	ASP	CB-CG-OD2	5.27	123.04	118.30
1	A	516	U	O4'-C1'-N1	5.27	112.42	108.20
1	A	1067	A	N3-C4-C5	-5.27	123.11	126.80
1	A	1064	G	N9-C4-C5	5.27	107.51	105.40
8	G	126	ASP	CB-CG-OD2	5.26	123.04	118.30
10	I	60	ASP	CB-CG-OD2	5.26	123.04	118.30
1	A	972	C	C4'-C3'-C2'	-5.26	97.34	102.60
1	A	266	G	N9-C1'-C2'	5.26	120.84	114.00
1	A	876	G	N9-C1'-C2'	-5.26	106.22	112.00
1	A	1357	A	O4'-C1'-N9	5.26	112.41	108.20
1	A	911	U	C4'-C3'-C2'	-5.26	97.34	102.60
1	A	1013	G	O4'-C1'-N9	5.26	112.41	108.20
10	I	54	ASP	CB-CG-OD2	5.25	123.03	118.30
5	D	177	ASP	CB-CG-OD2	5.25	123.03	118.30
1	A	1248	A	C5'-C4'-O4'	5.25	115.40	109.10
1	A	1249	C	C6-N1-C2	-5.25	118.20	120.30
1	A	588	G	N1-C6-O6	5.24	123.05	119.90
1	A	1509	C	O3'-P-O5'	-5.24	94.04	104.00
1	A	639	G	N1-C6-O6	5.24	123.04	119.90
1	A	1498	U	C4'-C3'-C2'	5.24	107.84	102.60
1	A	1181	G	N9-C1'-C2'	5.23	120.80	114.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	Q	13	ASP	CB-CG-OD2	5.23	123.01	118.30
1	A	930	C	C3'-C2'-C1'	-5.23	97.32	101.50
1	A	257	G	N3-C4-C5	-5.22	125.99	128.60
1	A	1533	C	C3'-C2'-C1'	5.22	105.68	101.50
1	A	252	U	C5'-C4'-O4'	5.22	115.36	109.10
1	A	505	G	O4'-C1'-N9	-5.22	104.02	108.20
1	A	979	C	O4'-C1'-N1	5.22	112.37	108.20
1	A	773	G	N3-C4-C5	-5.21	125.99	128.60
1	A	1145	C	P-O3'-C3'	5.21	125.95	119.70
1	A	484	G	N9-C1'-C2'	5.21	120.77	114.00
1	A	1417	G	C3'-C2'-C1'	5.21	105.67	101.50
1	A	49	U	O4'-C1'-N1	5.20	112.36	108.20
1	A	644	G	C5-C6-O6	-5.20	125.48	128.60
12	K	36	ASP	CB-CG-OD2	5.20	122.98	118.30
1	A	859	A	C3'-C2'-C1'	5.20	105.66	101.50
1	A	1091	U	C1'-O4'-C4'	-5.20	105.74	109.90
1	A	1129	C	C6-N1-C2	-5.20	118.22	120.30
1	A	1218	C	C1'-O4'-C4'	-5.20	105.74	109.90
18	Q	46	ASP	CB-CG-OD2	5.20	122.98	118.30
1	A	1371	G	C8-N9-C4	-5.19	104.32	106.40
1	A	1434	A	N9-C1'-C2'	-5.19	106.29	112.00
1	A	1529	G	C5'-C4'-O4'	5.19	115.33	109.10
1	A	408	A	C3'-C2'-C1'	-5.19	97.35	101.50
1	A	674	G	O4'-C1'-N9	5.18	112.35	108.20
1	A	1062	U	O4'-C1'-N1	5.18	112.34	108.20
1	A	1159	U	O4'-C1'-N1	5.18	112.34	108.20
1	A	1454	G	C3'-C2'-C1'	-5.18	97.36	101.50
1	A	1230	C	O4'-C1'-N1	5.18	112.34	108.20
1	A	973	G	N3-C4-N9	-5.17	122.90	126.00
1	A	1079	G	C5-C6-N1	-5.17	108.91	111.50
1	A	131	C	N3-C2-O2	-5.17	118.28	121.90
1	A	1191	A	P-O3'-C3'	5.17	125.90	119.70
1	A	1331	G	C8-N9-C4	-5.17	104.33	106.40
1	A	1119	C	C3'-C2'-C1'	-5.16	97.37	101.50
1	A	1076	C	P-O3'-C3'	5.16	125.89	119.70
1	A	1202	G	O4'-C1'-N9	5.16	112.33	108.20
1	A	1297	C	C1'-O4'-C4'	-5.16	105.78	109.90
1	A	1248	A	C4'-C3'-C2'	-5.15	97.45	102.60
1	A	279	A	C5-N7-C8	-5.15	101.33	103.90
1	A	691	G	O4'-C1'-N9	-5.15	104.08	108.20
1	A	721	G	C3'-C2'-C1'	5.14	105.61	101.50
1	A	1389	C	C3'-C2'-C1'	-5.14	97.39	101.50

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1365	G	C8-N9-C4	-5.14	104.34	106.40
3	B	205	ASP	CB-CG-OD2	5.14	122.92	118.30
1	A	351	G	P-O3'-C3'	5.14	125.86	119.70
1	A	372	C	N1-C2-O2	5.13	121.98	118.90
1	A	750	G	N3-C4-C5	-5.13	126.03	128.60
1	A	1099	G	N9-C4-C5	5.12	107.45	105.40
1	A	1277	C	O4'-C1'-N1	5.12	112.30	108.20
1	A	1175	G	O4'-C1'-N9	5.12	112.30	108.20
1	A	1262	C	O4'-C1'-N1	5.12	112.29	108.20
1	A	593	G	C8-N9-C4	-5.12	104.35	106.40
1	A	1531	A	C8-N9-C4	-5.11	103.76	105.80
1	A	1358	U	C1'-O4'-C4'	-5.11	105.81	109.90
1	A	1515	C	N3-C4-C5	-5.11	119.86	121.90
1	A	1299	A	O4'-C1'-N9	-5.11	104.11	108.20
1	A	762	C	P-O3'-C3'	-5.11	113.57	119.70
1	A	1093	A	N1-C6-N6	5.11	121.66	118.60
1	A	816	A	O4'-C1'-N9	-5.10	104.12	108.20
1	A	658	G	O4'-C1'-N9	-5.10	104.12	108.20
18	Q	55	ASP	CB-CG-OD2	5.10	122.89	118.30
1	A	401	C	C4'-C3'-C2'	-5.09	97.51	102.60
1	A	815	A	P-O3'-C3'	-5.09	113.59	119.70
1	A	855	G	O4'-C4'-C3'	-5.09	98.91	104.00
1	A	1464	G	P-O3'-C3'	-5.09	113.59	119.70
1	A	311	C	C3'-C2'-C1'	-5.09	97.43	101.50
1	A	191	G	C3'-C2'-C1'	-5.09	97.43	101.50
1	A	1367	C	N1-C2-O2	5.09	121.95	118.90
13	L	106	ASP	CB-CG-OD2	5.09	122.88	118.30
1	A	733	A	C3'-C2'-C1'	-5.09	97.43	101.50
1	A	1502	A	C3'-C2'-C1'	-5.09	97.43	101.50
1	A	1079	G	N7-C8-N9	5.08	115.64	113.10
1	A	619	U	C5'-C4'-C3'	-5.08	107.87	116.00
1	A	623	C	N1-C1'-C2'	-5.07	106.42	112.00
1	A	1518	A	P-O3'-C3'	5.07	125.79	119.70
1	A	289	G	O4'-C1'-N9	5.07	112.26	108.20
1	A	1375	A	C5'-C4'-O4'	5.07	115.18	109.10
1	A	801	U	N3-C4-C5	5.07	117.64	114.60
13	L	92	ASP	CB-CG-OD2	5.07	122.86	118.30
5	D	53	ASP	CB-CG-OD2	5.07	122.86	118.30
1	A	366	C	N1-C2-O2	5.06	121.94	118.90
1	A	832	C	O4'-C1'-N1	5.06	112.25	108.20
1	A	918	A	O4'-C1'-N9	-5.06	104.15	108.20
1	A	1302	U	N1-C1'-C2'	5.06	120.58	114.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1346	A	C8-N9-C4	5.06	107.82	105.80
1	A	780	A	N9-C1'-C2'	-5.06	106.44	112.00
1	A	1249	C	C5-C6-N1	5.06	123.53	121.00
1	A	1351	U	P-O3'-C3'	-5.06	113.63	119.70
1	A	1361(A)	C	O4'-C1'-N1	5.05	112.24	108.20
1	A	142	G	N3-C4-C5	-5.05	126.08	128.60
1	A	248	C	C4'-C3'-C2'	-5.05	97.55	102.60
3	B	195	ASP	CB-CG-OD2	5.05	122.84	118.30
1	A	54	C	C4'-C3'-C2'	-5.05	97.55	102.60
1	A	796	C	C4'-C3'-C2'	-5.05	97.55	102.60
10	I	105	ASP	CB-CG-OD2	5.04	122.84	118.30
20	S	13	ASP	CB-CG-OD2	5.04	122.84	118.30
1	A	1387	G	P-O3'-C3'	-5.04	113.65	119.70
1	A	781	A	N9-C1'-C2'	-5.04	106.46	112.00
1	A	1341	U	P-O3'-C3'	-5.04	113.66	119.70
1	A	944	G	P-O3'-C3'	5.03	125.74	119.70
1	A	1276	G	C8-N9-C4	-5.03	104.39	106.40
1	A	1160	G	O4'-C1'-N9	5.03	112.23	108.20
1	A	733	A	C1'-O4'-C4'	-5.03	105.88	109.90
1	A	727	G	C5-C6-O6	-5.03	125.58	128.60
1	A	1115	C	O4'-C1'-N1	5.03	112.22	108.20
1	A	559	A	C3'-C2'-C1'	-5.03	97.48	101.50
1	A	319	G	N3-C4-C5	-5.03	126.09	128.60
1	A	858	G	C5'-C4'-O4'	5.03	115.13	109.10
1	A	907	A	N1-C6-N6	-5.02	115.59	118.60
1	A	89	C	C5'-C4'-O4'	5.02	115.12	109.10
1	A	604	G	C6-C5-N7	-5.02	127.39	130.40
1	A	36	C	C3'-C2'-C1'	-5.01	97.49	101.50
1	A	223	U	C4'-C3'-C2'	-5.01	97.58	102.60
1	A	982	U	N1-C1'-C2'	5.01	120.52	114.00
1	A	413	G	C3'-C2'-C1'	-5.01	97.49	101.50
1	A	1400	C	P-O3'-C3'	5.01	125.72	119.70
1	A	143	A	C8-N9-C4	5.01	107.81	105.80
1	A	1205	U	C4'-C3'-C2'	-5.01	97.59	102.60
1	A	656	C	C1'-O4'-C4'	-5.00	105.90	109.90
1	A	1383	C	P-O3'-C3'	-5.00	113.70	119.70
8	G	20	ASP	CB-CG-OD2	5.00	122.80	118.30
1	A	619	U	C3'-C2'-C1'	5.00	105.50	101.50
1	A	1300	G	C3'-C2'-C1'	-5.00	97.50	101.50

There are no chirality outliers.

All (74) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	B	133	LYS	Peptide
3	B	225	ALA	Peptide
4	C	13	GLY	Peptide
4	C	166	GLU	Peptide
4	C	167	TRP	Peptide
4	C	177	THR	Peptide
4	C	178	LEU	Peptide
4	C	48	TYR	Peptide
5	D	11	LEU	Peptide
5	D	185	PHE	Peptide
5	D	195	ALA	Peptide
5	D	208	SER	Peptide
5	D	28	SER	Peptide
5	D	31	CYS	Peptide
6	E	14	ARG	Peptide
6	E	20	GLN	Peptide
6	E	35	GLY	Peptide
6	E	85	GLY	Peptide
6	E	86	ALA	Peptide
7	F	13	ASN	Peptide
9	H	109	ILE	Peptide
9	H	135	CYS	Peptide
9	H	27	PRO	Peptide
9	H	53	VAL	Peptide
9	H	90	GLY	Peptide
10	I	117	HIS	Peptide
10	I	125	TYR	Peptide
10	I	127	LYS	Peptide
10	I	43	ALA	Peptide
11	J	47	PHE	Peptide
11	J	49	VAL	Peptide
11	J	52	GLY	Peptide
11	J	57	LYS	Peptide
11	J	90	LEU	Peptide
11	J	96	ILE	Peptide
12	K	116	HIS	Peptide
12	K	126	ARG	Peptide
12	K	27	ASN	Peptide
12	K	48	ILE	Peptide
12	K	88	GLY	Peptide
13	L	25	PRO	Peptide
13	L	26	ALA	Peptide
13	L	43	VAL	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
13	L	46	LYS	Peptide
13	L	66	VAL	Peptide
13	L	77	LEU	Peptide
13	L	80	HIS	Peptide
13	L	94	PRO	Peptide
14	M	107	ALA	Peptide
14	M	112	GLY	Peptide
14	M	8	GLU	Peptide
14	M	97	PRO	Peptide
15	N	11	LYS	Peptide
15	N	21	TYR	Peptide
15	N	30	ALA	Peptide
15	N	32	SER	Peptide
15	N	42	ILE	Peptide
15	N	6	LEU	Peptide
15	N	8	GLU	Peptide
15	N	9	LYS	Peptide
17	P	15	PRO	Peptide
17	P	63	GLY	Peptide
17	P	64	ALA	Peptide
17	P	70	ALA	Peptide
18	Q	17	LYS	Peptide
20	S	37	ARG	Peptide
20	S	4	SER	Peptide
20	S	53	ASN	Peptide
20	S	71	LEU	Peptide
20	S	83	HIS	Peptide
21	T	10	LEU	Peptide
21	T	12	ALA	Peptide
21	T	48	LYS	Peptide
21	T	73	HIS	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	32391	0	16359	1894	0
2	Z	80	0	42	4	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	1923	0	1968	218	0
4	C	1612	0	1677	175	0
5	D	1703	0	1763	198	0
6	E	1146	0	1207	161	0
7	F	843	0	857	58	0
8	G	1257	0	1296	105	0
9	H	1116	0	1177	93	0
10	I	1011	0	1043	122	0
11	J	792	0	835	125	0
12	K	885	0	904	80	0
13	L	975	0	1062	129	0
14	M	997	0	1072	111	0
15	N	492	0	530	84	0
16	O	734	0	771	70	0
17	P	700	0	720	72	0
18	Q	857	0	930	70	0
19	R	597	0	668	68	0
20	S	674	0	699	56	0
21	T	762	0	859	97	0
22	A	98	0	0	0	0
22	D	1	0	0	0	0
22	M	1	0	0	0	0
22	Z	1	0	0	0	0
23	A	12	0	0	0	0
24	A	31	0	19	4	0
25	A	35	0	43	1	0
26	D	1	0	0	0	0
26	N	1	0	0	0	0
All	All	51728	0	36501	3715	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 43.

All (3715) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:89:MET:CE	8:G:89:MET:SD	2.02	1.45
1:A:492:G:H3'	1:A:494:G:OP2	1.29	1.32
6:E:80:ILE:CD1	6:E:91:LEU:HB2	1.62	1.29
1:A:70:G:H3'	1:A:73:C:P	1.72	1.27
15:N:40:CYS:O	15:N:43:CYS:HB2	1.23	1.27

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:33:THR:HG23	16:O:63:ARG:NH1	1.51	1.23
1:A:1249:C:O2'	10:I:73:GLN:NE2	1.71	1.22
3:B:162:ILE:O	3:B:185:ILE:HD12	1.42	1.20
4:C:7:PRO:O	4:C:11:ARG:HG2	1.40	1.20
1:A:1491:G:H5'	1:A:1491:G:C8	1.77	1.19
10:I:114:TYR:HD1	11:J:60:ARG:HB2	1.00	1.17
3:B:100:GLY:HA2	3:B:176:GLU:OE2	1.41	1.17
1:A:1169:A:O3'	1:A:1171:G:P	2.03	1.16
21:T:104:LEU:H	21:T:104:LEU:CD2	1.52	1.16
1:A:948:C:OP1	14:M:109:THR:HG22	1.42	1.15
4:C:5:ILE:HD13	4:C:10:PHE:HB2	1.26	1.15
10:I:114:TYR:CD1	11:J:60:ARG:HB2	1.80	1.15
11:J:90:LEU:HB3	11:J:91:PRO:HD3	1.21	1.15
13:L:97:ARG:HB2	13:L:98:TYR:CE1	1.79	1.15
1:A:444:C:H2'	1:A:445:G:H8	1.12	1.14
1:A:1497:G:H2'	1:A:1498:U:H5'	1.27	1.14
21:T:104:LEU:N	21:T:104:LEU:HD23	1.48	1.14
1:A:99:C:H3'	1:A:101:A:P	1.89	1.12
1:A:975:A:H5'	1:A:975:A:H8	1.12	1.12
1:A:1168:A:H2'	1:A:1169:A:C8	1.85	1.12
6:E:51:VAL:HB	6:E:52:PRO:HD3	1.32	1.12
8:G:120:ILE:CD1	8:G:120:ILE:H	1.58	1.11
1:A:373:A:H5'	1:A:373:A:H8	1.14	1.10
1:A:1314:C:OP2	20:S:6:LYS:HG2	1.49	1.10
5:D:26:CYS:HA	5:D:31:CYS:HB2	1.27	1.10
19:R:79:LEU:HD23	19:R:80:PRO:HD2	1.27	1.09
6:E:80:ILE:HD11	6:E:91:LEU:HB2	1.17	1.09
5:D:62:GLN:NE2	5:D:65:ARG:HH12	1.49	1.09
17:P:28:ARG:HG2	17:P:28:ARG:HH11	1.06	1.08
1:A:492:G:H3'	1:A:494:G:P	1.93	1.08
8:G:120:ILE:H	8:G:120:ILE:HD12	0.92	1.07
14:M:34:LEU:HD13	14:M:41:PRO:HA	1.36	1.07
1:A:392:G:H2'	1:A:393:A:C8	1.90	1.07
1:A:93:G:H3'	1:A:95:U:P	1.95	1.07
16:O:16:ALA:HB1	16:O:21:ASP:HB3	1.09	1.06
1:A:1399:C:H4'	1:A:1400:C:H5''	1.35	1.06
3:B:77:ALA:HB2	3:B:211:ILE:HD13	1.34	1.06
1:A:1182:G:H4'	1:A:1183:A:O5'	1.54	1.06
3:B:114:ARG:HH11	3:B:118:LEU:HD11	1.21	1.05
1:A:1400:C:H3'	1:A:1401:G:H5'	1.34	1.04
8:G:23:VAL:HG12	8:G:27:ILE:HD11	1.39	1.04

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:86:ARG:HH11	21:T:86:ARG:HG3	1.17	1.04
1:A:376:G:H5''	17:P:5:ARG:HG3	1.40	1.04
1:A:538:G:H2'	1:A:539:A:H8	1.20	1.04
21:T:73:HIS:O	21:T:74:LYS:HG2	1.55	1.04
8:G:120:ILE:HD12	8:G:120:ILE:N	1.69	1.03
14:M:96:LEU:HB3	14:M:97:PRO:HD2	1.35	1.03
16:O:16:ALA:CB	16:O:21:ASP:HB3	1.86	1.03
1:A:1250:A:H4'	10:I:68:GLY:H	0.89	1.02
14:M:49:THR:HB	14:M:52:GLU:HG3	1.36	1.02
1:A:350:G:H5'	1:A:350:G:H8	1.25	1.02
6:E:79:GLU:HB3	6:E:92:LYS:HG3	1.40	1.02
1:A:984:C:H2'	1:A:985:C:H6	1.23	1.02
1:A:1168:A:H2'	1:A:1169:A:H8	1.26	1.01
1:A:1250:A:H4'	10:I:68:GLY:N	1.74	1.01
6:E:51:VAL:HB	6:E:52:PRO:CD	1.90	1.01
1:A:1249:C:HO2'	10:I:73:GLN:NE2	1.50	1.00
13:L:6:THR:OG1	13:L:9:GLN:HG3	1.61	1.00
5:D:62:GLN:NE2	5:D:65:ARG:NH1	2.07	1.00
6:E:48:ALA:HB1	6:E:49:PRO:HD2	1.40	1.00
3:B:114:ARG:NH1	3:B:118:LEU:HD11	1.77	0.99
1:A:1077:G:N2	1:A:1080:A:OP2	1.96	0.99
1:A:1347:G:H22	1:A:1373:G:H2'	1.23	0.99
3:B:9:GLU:HG3	3:B:217:ARG:NH1	1.79	0.98
1:A:353:A:H5'	1:A:353:A:C8	1.96	0.98
1:A:444:C:H2'	1:A:445:G:C8	1.98	0.98
1:A:838:G:H2'	1:A:839:U:H5''	1.43	0.98
5:D:19:LEU:HD21	5:D:67:ILE:HG12	1.46	0.98
1:A:1497:G:C2'	1:A:1498:U:H5'	1.94	0.98
4:C:131:ARG:HG3	4:C:135:LYS:HE2	1.45	0.98
1:A:373:A:H5'	1:A:373:A:C8	1.98	0.98
12:K:54:ARG:O	12:K:57:THR:CG2	2.12	0.98
1:A:1060:C:O2'	1:A:1061:G:H5'	1.63	0.97
1:A:975:A:H5'	1:A:975:A:C8	1.98	0.97
1:A:1103:C:OP1	3:B:96:ARG:NH2	1.98	0.97
1:A:795:C:H5''	1:A:796:C:OP2	1.65	0.97
1:A:1263:C:H42	1:A:1272:G:H1	1.07	0.97
4:C:23:TYR:O	4:C:24:ALA:O	1.80	0.97
1:A:954:G:H21	1:A:1227:A:H62	1.12	0.97
19:R:78:LEU:HD12	19:R:78:LEU:N	1.77	0.97
1:A:353:A:C5'	1:A:353:A:H8	1.77	0.96
1:A:721:G:H4'	1:A:722:A:O5'	1.62	0.96

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:463:A:O3'	1:A:474:G:OP2	1.83	0.96
11:J:49:VAL:HA	11:J:50:ILE:HD12	1.48	0.96
6:E:80:ILE:HD11	6:E:91:LEU:CB	1.96	0.95
18:Q:66:SER:OG	18:Q:69:LYS:HB2	1.64	0.95
3:B:91:PRO:HG2	3:B:155:LEU:HD23	1.43	0.95
6:E:103:GLY:O	6:E:106:PRO:HD2	1.65	0.95
5:D:111:ALA:HB1	5:D:116:GLN:OE1	1.66	0.95
1:A:1356:G:H2'	1:A:1357:A:C8	2.01	0.95
3:B:118:LEU:HB3	3:B:142:LEU:HD12	1.48	0.95
1:A:152:A:N6	1:A:170:U:O2	2.01	0.94
1:A:1028:C:N4	1:A:1034:G:H1	1.63	0.94
1:A:1194:U:H2'	1:A:1195:C:H6	1.31	0.94
1:A:1435:G:H2'	1:A:1436:U:C6	2.02	0.94
1:A:382:A:H2'	1:A:383:A:H8	1.33	0.94
1:A:1152:A:H5'	11:J:13:HIS:HD2	1.32	0.93
1:A:154:C:O2	1:A:167:G:N2	1.99	0.93
14:M:78:ILE:HG22	14:M:79:LYS:H	1.34	0.93
3:B:44:LEU:HA	3:B:47:THR:OG1	1.68	0.93
1:A:382:A:H2'	1:A:383:A:C8	2.03	0.93
11:J:12:ASP:HB3	11:J:15:THR:HG22	1.51	0.93
1:A:1152:A:H5'	11:J:13:HIS:CD2	2.03	0.93
1:A:1391:U:H2'	1:A:1392:G:C8	2.04	0.93
1:A:1250:A:C4'	10:I:68:GLY:H	1.81	0.93
5:D:57:ARG:NH2	5:D:205:GLU:OE2	2.01	0.92
1:A:392:G:H2'	1:A:393:A:H8	1.20	0.92
10:I:125:TYR:H	10:I:125:TYR:HD2	1.07	0.92
1:A:538:G:H2'	1:A:539:A:C8	2.04	0.92
1:A:1010:G:H22	1:A:1020:U:H1'	1.34	0.92
1:A:1209:C:O2	1:A:1209:C:H2'	1.68	0.92
5:D:141:ARG:HB3	5:D:142:PRO:CD	1.99	0.92
12:K:19:ALA:HB2	12:K:80:VAL:HG11	1.52	0.92
21:T:73:HIS:C	21:T:74:LYS:HG2	1.89	0.92
1:A:1347:G:N2	1:A:1373:G:H2'	1.84	0.92
1:A:1364:U:O2'	1:A:1365:G:H5'	1.70	0.92
4:C:71:ALA:HA	4:C:106:VAL:HB	1.52	0.92
10:I:114:TYR:HD1	11:J:60:ARG:CB	1.82	0.92
1:A:797:C:OP1	12:K:124:LYS:HE2	1.69	0.91
14:M:90:LEU:HD23	14:M:93:ARG:HH12	1.32	0.91
1:A:536:C:H2'	1:A:537:G:C8	2.05	0.91
1:A:1343:G:H2'	1:A:1344:C:C6	2.05	0.91
12:K:43:SER:HA	12:K:47:VAL:HG21	1.49	0.91

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:420:U:H1'	1:A:424:G:N2	1.85	0.91
14:M:17:VAL:O	14:M:20:THR:HB	1.70	0.91
16:O:33:THR:HG23	16:O:63:ARG:HH11	1.17	0.91
1:A:436:C:H2'	1:A:437:U:H6	1.35	0.91
15:N:40:CYS:O	15:N:43:CYS:CB	2.16	0.91
1:A:669:U:H2'	1:A:670:G:C8	2.05	0.91
1:A:1028:C:H42	1:A:1034:G:H1	0.91	0.91
13:L:102:ARG:HH12	13:L:110:VAL:HA	1.34	0.91
18:Q:86:GLU:O	18:Q:90:ILE:HG13	1.68	0.91
1:A:1203:C:H2'	1:A:1204:A:O4'	1.69	0.91
5:D:61:LYS:CE	5:D:62:GLN:HE21	1.83	0.91
11:J:90:LEU:CB	11:J:91:PRO:HD3	2.00	0.91
13:L:97:ARG:HB2	13:L:98:TYR:CD1	2.05	0.91
17:P:19:ILE:HG22	17:P:36:ILE:HG13	1.52	0.91
1:A:447:G:H2'	1:A:485:G:H22	1.32	0.91
11:J:90:LEU:HB3	11:J:91:PRO:CD	2.00	0.91
11:J:56:HIS:O	11:J:58:ASP:N	2.02	0.90
1:A:500:G:N2	1:A:546:G:H1'	1.85	0.90
1:A:1491:G:C8	1:A:1491:G:C5'	2.54	0.90
13:L:81:SER:O	13:L:106:ASP:HB2	1.70	0.90
1:A:989:C:HO2'	1:A:1017:G:HO2'	1.17	0.90
4:C:126:ARG:O	4:C:127:ARG:HB2	1.70	0.90
16:O:16:ALA:HB1	16:O:21:ASP:CB	2.00	0.90
1:A:1356:G:H2'	1:A:1357:A:H8	1.33	0.90
1:A:707:C:H4'	12:K:20:TYR:CD2	2.05	0.90
1:A:1003(A):G:H2'	1:A:1004:A:H4'	1.53	0.89
1:A:1491:G:H5'	1:A:1491:G:H8	1.34	0.89
10:I:8:GLY:HA2	10:I:79:LEU:HB3	1.53	0.89
1:A:1047:G:C2'	1:A:1048:G:H5'	2.01	0.89
1:A:622:A:N7	1:A:623:C:C6	2.40	0.89
4:C:7:PRO:O	4:C:11:ARG:CG	2.20	0.89
5:D:62:GLN:HE22	5:D:65:ARG:NH1	1.65	0.89
5:D:117:ALA:O	5:D:121:VAL:HG23	1.72	0.89
1:A:581:G:N2	1:A:759:A:OP2	2.05	0.89
1:A:792:A:H4'	1:A:793:U:H5''	1.52	0.89
1:A:1305:G:HO2'	1:A:1306:A:H8	0.94	0.89
4:C:6:HIS:NE2	4:C:8:ILE:HB	1.88	0.89
12:K:54:ARG:O	12:K:57:THR:HG23	1.72	0.89
1:A:519:C:H2'	1:A:520:A:C8	2.08	0.89
4:C:11:ARG:NH1	4:C:178:LEU:HA	1.88	0.89
1:A:353:A:C8	1:A:353:A:C5'	2.55	0.88

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:539:A:H2'	1:A:540:G:H8	1.37	0.88
1:A:1455:G:O3'	1:A:1459:C:P	2.31	0.88
17:P:67:THR:HG22	17:P:68:ASP:N	1.88	0.88
1:A:328:C:O2	1:A:328:C:H2'	1.72	0.88
3:B:101:MET:HA	3:B:108:ILE:HD12	1.56	0.88
17:P:57:ARG:HG3	17:P:57:ARG:HH11	1.35	0.88
1:A:1315:U:OP2	20:S:6:LYS:NZ	2.06	0.88
4:C:54:ARG:O	4:C:55:VAL:HG23	1.73	0.88
3:B:84:GLU:HG3	3:B:219:VAL:HG21	1.55	0.88
5:D:63:LYS:HD3	5:D:198:VAL:HG23	1.53	0.88
1:A:492:G:C3'	1:A:494:G:P	2.61	0.88
10:I:48:GLU:N	10:I:49:PRO:HD2	1.89	0.88
14:M:81:LEU:H	14:M:81:LEU:CD2	1.86	0.88
21:T:104:LEU:H	21:T:104:LEU:HD23	0.73	0.87
1:A:350:G:H8	1:A:350:G:C5'	1.86	0.87
1:A:407:G:O2'	5:D:116:GLN:HG2	1.74	0.87
5:D:64:LEU:HD11	5:D:97:LEU:CD1	2.04	0.87
6:E:135:THR:O	6:E:138:ALA:HB3	1.74	0.87
11:J:37:PRO:HA	11:J:72:VAL:HG22	1.54	0.87
11:J:47:PHE:HD2	15:N:34:TYR:CE2	1.93	0.87
1:A:992:U:OP2	1:A:992:U:H6	1.58	0.87
4:C:8:ILE:HG22	4:C:9:GLY:N	1.89	0.87
4:C:11:ARG:HH12	4:C:178:LEU:HA	1.37	0.87
13:L:86:ARG:HH11	13:L:86:ARG:HG2	1.38	0.87
16:O:70:LEU:HD12	16:O:78:TYR:HB2	1.55	0.87
18:Q:12:SER:HB3	18:Q:20:THR:OG1	1.75	0.86
1:A:1323:G:H2'	1:A:1324:A:C8	2.10	0.86
13:L:75:HIS:CD2	13:L:77:LEU:H	1.93	0.86
1:A:1194:U:H2'	1:A:1195:C:C6	2.10	0.86
1:A:1400:C:H3'	1:A:1401:G:C5'	2.04	0.86
13:L:98:TYR:CD1	13:L:98:TYR:N	2.43	0.86
15:N:26:ARG:NH2	15:N:47:LEU:HD21	1.89	0.86
17:P:28:ARG:HG2	17:P:28:ARG:NH1	1.86	0.86
1:A:1366:C:H2'	1:A:1367:C:H6	1.40	0.86
8:G:38:LEU:O	8:G:42:ILE:HG13	1.75	0.86
17:P:67:THR:CG2	17:P:68:ASP:N	2.38	0.86
1:A:1152:A:C5'	11:J:13:HIS:HD2	1.88	0.86
1:A:1250:A:H2'	1:A:1251:A:C8	2.10	0.86
1:A:376:G:H2'	1:A:377:G:H8	1.37	0.86
1:A:1047:G:H2'	1:A:1048:G:H5'	1.56	0.86
7:F:80:ARG:HG3	7:F:88:VAL:HG21	1.56	0.86

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1366:C:H2'	1:A:1367:C:C6	2.11	0.86
4:C:112:SER:O	4:C:115:LEU:HD12	1.75	0.86
14:M:45:VAL:O	14:M:48:LEU:HB2	1.74	0.86
1:A:335:C:H2'	1:A:336:C:H6	1.40	0.86
4:C:8:ILE:HG22	4:C:9:GLY:H	1.39	0.86
21:T:67:ALA:O	21:T:73:HIS:CE1	2.28	0.86
1:A:1195:C:H3'	1:A:1196:U:H5''	1.57	0.86
1:A:1502:A:H2	1:A:1505:G:H1	1.22	0.85
8:G:111:ARG:NH1	8:G:122:HIS:HB3	1.90	0.85
1:A:99:C:C3'	1:A:101:A:P	2.63	0.85
15:N:12:ARG:C	15:N:14:PRO:HD3	1.95	0.85
1:A:1057:G:H2'	1:A:1058:G:C8	2.11	0.85
1:A:1091:U:O2	1:A:1093:A:H8	1.58	0.85
6:E:59:GLY:O	6:E:62:ALA:HB3	1.77	0.85
1:A:353:A:H5'	1:A:353:A:H8	1.36	0.85
1:A:560:U:H5'	1:A:566:G:N2	1.92	0.85
8:G:116:ALA:HA	8:G:119:ARG:NH2	1.91	0.85
1:A:254:G:OP1	18:Q:67:LYS:O	1.94	0.85
3:B:61:LEU:HD11	3:B:160:ASP:HB2	1.58	0.85
19:R:86:VAL:O	19:R:87:ARG:HB2	1.77	0.85
21:T:86:ARG:HG3	21:T:86:ARG:NH1	1.83	0.85
3:B:87:ARG:NH1	3:B:233:SER:HB3	1.92	0.85
1:A:393:A:H2'	1:A:394:G:H8	1.42	0.85
1:A:979:C:C5	1:A:980:C:C6	2.65	0.85
1:A:1369:C:H2'	1:A:1370:G:C8	2.12	0.85
6:E:36:ASP:O	6:E:37:ARG:HB2	1.75	0.85
1:A:1286:A:H8	1:A:1287:A:H4'	1.42	0.84
1:A:984:C:H2'	1:A:985:C:C6	2.12	0.84
19:R:76:LEU:HB2	19:R:78:LEU:CD1	2.07	0.84
21:T:13:LEU:HD22	21:T:14:LYS:N	1.91	0.84
1:A:1221:G:O3'	20:S:77:THR:HG21	1.76	0.84
12:K:123:LYS:O	12:K:125:PHE:N	2.10	0.84
1:A:539:A:H2'	1:A:540:G:C8	2.12	0.84
9:H:97:VAL:HA	9:H:100:ILE:HD12	1.60	0.84
1:A:518:C:H5''	1:A:519:C:C6	2.13	0.84
1:A:707:C:H5''	12:K:20:TYR:HD2	1.42	0.84
1:A:1490:C:C3'	1:A:1491:G:H5''	2.07	0.84
1:A:359:U:H2'	1:A:360:A:H8	1.43	0.84
1:A:644:G:C5	1:A:645:C:C5	2.66	0.84
1:A:503:C:H2'	1:A:504:C:H5'	1.60	0.84
1:A:804:U:H5''	1:A:805:C:OP2	1.77	0.83

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1491:G:C5'	1:A:1491:G:H8	1.89	0.83
13:L:27:LEU:O	13:L:29:GLY:N	2.10	0.83
14:M:78:ILE:CG2	14:M:79:LYS:H	1.91	0.83
9:H:9:MET:HG3	9:H:26:VAL:HG11	1.61	0.83
16:O:26:GLU:HA	16:O:81:LEU:HD11	1.60	0.83
1:A:350:G:H5'	1:A:350:G:C8	2.14	0.83
3:B:26:PRO:O	3:B:29:ALA:HB2	1.79	0.83
6:E:13:ILE:H	6:E:13:ILE:HD12	1.43	0.83
6:E:80:ILE:HD12	6:E:80:ILE:H	1.42	0.83
12:K:80:VAL:HG21	12:K:103:LEU:HD13	1.58	0.83
1:A:670:G:H1	1:A:736:C:H42	1.23	0.83
1:A:1154:G:H2'	1:A:1155:G:H8	1.44	0.83
8:G:26:PHE:CE2	8:G:30:ILE:HD11	2.12	0.83
1:A:923:A:H1'	1:A:1398:A:C2	2.14	0.83
3:B:184:VAL:HG12	3:B:197:VAL:HG13	1.58	0.83
14:M:37:THR:HG21	14:M:55:ARG:O	1.79	0.83
20:S:42:PRO:O	20:S:45:VAL:HG23	1.78	0.82
1:A:459:G:H5''	1:A:460:A:OP2	1.79	0.82
8:G:15:ASP:OD1	8:G:18:TYR:N	2.11	0.82
10:I:47:LEU:C	10:I:49:PRO:HD2	1.99	0.82
13:L:75:HIS:CD2	13:L:76:ASN:N	2.47	0.82
18:Q:58:GLU:O	18:Q:59:ILE:HD13	1.78	0.82
1:A:260:G:OP2	21:T:83:ARG:NH1	2.12	0.82
1:A:1053:G:N7	1:A:1200:C:H5''	1.95	0.82
1:A:1285:A:OP1	1:A:1285:A:C8	2.33	0.82
1:A:1179:A:O3'	10:I:103:THR:HG23	1.80	0.82
10:I:125:TYR:HD2	10:I:125:TYR:N	1.76	0.82
11:J:62:HIS:HB3	15:N:59:ALA:HB3	1.61	0.82
1:A:1091:U:O2	1:A:1093:A:C8	2.32	0.82
13:L:86:ARG:HH22	13:L:99:HIS:CD2	1.97	0.82
1:A:35:G:H2'	1:A:36:C:C6	2.15	0.82
6:E:80:ILE:CD1	6:E:91:LEU:CB	2.53	0.81
1:A:480:U:H2'	1:A:481:G:OP2	1.81	0.81
1:A:1298:C:H4'	1:A:1299:A:O4'	1.79	0.81
1:A:965:A:H4'	1:A:966:G:O5'	1.81	0.81
1:A:496:A:H4'	1:A:497:A:OP1	1.80	0.81
1:A:21:G:H2'	1:A:22:G:C8	2.16	0.81
1:A:1226:C:H2'	14:M:103:THR:OG1	1.80	0.81
1:A:1270:C:HO2'	1:A:1313:U:HO2'	1.22	0.81
6:E:30:ALA:O	6:E:45:PHE:HD1	1.62	0.81
6:E:107:ARG:HG2	6:E:111:GLU:HG3	1.61	0.81

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:111:ARG:HH12	8:G:122:HIS:HB3	1.45	0.81
4:C:129:ALA:HB3	4:C:132:ARG:HB2	1.61	0.81
14:M:78:ILE:CG2	14:M:79:LYS:N	2.43	0.81
1:A:1255:G:H2'	1:A:1279:A:N6	1.96	0.81
1:A:1403:C:O2	1:A:1403:C:H2'	1.79	0.81
13:L:28:LYS:C	13:L:30:ALA:H	1.84	0.81
1:A:337:C:H2'	1:A:338:A:H8	1.46	0.81
1:A:850:U:H3'	1:A:850:U:H6	1.46	0.80
1:A:129(A):G:O2'	1:A:190(E):U:H2'	1.81	0.80
1:A:254:G:H2'	1:A:255:G:H8	1.44	0.80
3:B:98:LEU:O	3:B:100:GLY:N	2.15	0.80
5:D:13:ARG:HD3	5:D:38:TYR:O	1.81	0.80
15:N:53:LEU:HD12	15:N:56:VAL:HG21	1.63	0.80
4:C:52:LEU:N	4:C:52:LEU:HD23	1.96	0.80
19:R:66:LEU:O	19:R:69:THR:N	2.14	0.80
1:A:1361(A):C:H2'	1:A:1362:C:H5''	1.62	0.80
3:B:25:ASN:HD22	3:B:25:ASN:C	1.84	0.80
3:B:111:ARG:HB3	3:B:149:LEU:HD11	1.62	0.80
6:E:116:THR:HG23	6:E:117:ASP:OD2	1.81	0.80
13:L:98:TYR:N	13:L:98:TYR:HD1	1.78	0.80
1:A:579:G:H5'	1:A:728:A:H1'	1.62	0.80
1:A:1111:A:N1	4:C:177:THR:OG1	2.14	0.80
4:C:118:GLN:O	4:C:121:ALA:HB3	1.82	0.80
13:L:87:GLY:H	13:L:98:TYR:HB3	1.46	0.80
8:G:56:GLN:HE21	8:G:56:GLN:H	1.29	0.80
1:A:37:U:O2'	1:A:500:G:H4'	1.81	0.79
1:A:93:G:C3'	1:A:95:U:P	2.69	0.79
1:A:262:A:C6	1:A:263:A:C6	2.70	0.79
1:A:384:G:H2'	1:A:385:C:C6	2.18	0.79
11:J:61:GLU:OE1	15:N:45:ARG:HD2	1.82	0.79
13:L:45:PRO:HG3	13:L:53:ARG:HD2	1.63	0.79
14:M:78:ILE:O	14:M:81:LEU:HD23	1.81	0.79
1:A:838:G:C2'	1:A:839:U:H5''	2.12	0.79
1:A:1255:G:H2'	1:A:1279:A:H62	1.47	0.79
7:F:9:VAL:HG23	7:F:87:ARG:HB2	1.63	0.79
1:A:653:A:OP1	9:H:56:LYS:HE2	1.83	0.79
4:C:52:LEU:HD23	4:C:52:LEU:H	1.44	0.79
1:A:954:G:H21	1:A:1227:A:N6	1.79	0.79
5:D:8:VAL:C	5:D:10:ARG:H	1.82	0.79
1:A:378:G:C2	1:A:386:C:O2	2.35	0.79
1:A:707:C:H4'	12:K:20:TYR:CE2	2.17	0.79

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:162:ILE:O	3:B:185:ILE:CD1	2.28	0.79
1:A:1314:C:N4	20:S:4:SER:OG	2.15	0.79
4:C:8:ILE:CG2	4:C:9:GLY:N	2.46	0.79
4:C:131:ARG:HG3	4:C:135:LYS:CE	2.11	0.79
1:A:1201:A:H4'	1:A:1202:G:O5'	1.83	0.79
21:T:74:LYS:HG3	21:T:75:ASN:H	1.48	0.79
1:A:436:C:H2'	1:A:437:U:C6	2.17	0.79
1:A:379:C:O2'	1:A:380:G:H5'	1.82	0.78
1:A:658:G:C2	1:A:749:C:N3	2.51	0.78
1:A:1360:A:H2'	1:A:1361:G:O4'	1.81	0.78
3:B:92:TYR:CD1	3:B:151:GLY:HA3	2.18	0.78
16:O:3:ILE:HG21	16:O:34:LEU:HD11	1.63	0.78
18:Q:90:ILE:C	18:Q:92:ARG:H	1.86	0.78
1:A:450:G:OP1	17:P:43:LYS:NZ	2.17	0.78
1:A:946:A:H2'	1:A:947:G:C8	2.18	0.78
1:A:1060:C:C5	4:C:2:GLY:HA2	2.18	0.78
1:A:1131:G:H22	1:A:1143:G:H21	1.30	0.78
1:A:1435:G:H2'	1:A:1436:U:H6	1.44	0.78
7:F:80:ARG:CG	7:F:88:VAL:HG21	2.13	0.78
9:H:112:LEU:N	9:H:112:LEU:CD2	2.45	0.78
1:A:463:A:C3'	1:A:474:G:OP2	2.30	0.78
5:D:162:LEU:HD21	5:D:178:VAL:HG12	1.63	0.78
6:E:80:ILE:CG2	9:H:104:ARG:HH22	1.96	0.78
11:J:63:PHE:HE1	15:N:45:ARG:HG3	1.49	0.78
1:A:263:A:O2'	1:A:264:U:H5'	1.83	0.78
1:A:422:C:O2	1:A:423:G:N2	2.16	0.78
1:A:1103:C:H5'	3:B:98:LEU:HD23	1.64	0.78
1:A:706:A:H5''	1:A:707:C:OP2	1.84	0.78
1:A:1235:U:C6	1:A:1235:U:H3'	2.19	0.78
5:D:128:VAL:HG12	5:D:129:ASN:ND2	1.98	0.78
6:E:137:GLU:O	6:E:141:GLN:HG3	1.84	0.78
1:A:106:C:H2'	1:A:107:G:H8	1.49	0.78
1:A:199:G:H2'	1:A:200:G:H5'	1.66	0.78
6:E:98:THR:HB	6:E:117:ASP:HB3	1.66	0.78
8:G:69:VAL:HG21	8:G:104:LEU:HD21	1.64	0.78
11:J:63:PHE:CE1	15:N:45:ARG:HG3	2.17	0.78
13:L:47:LYS:HB3	13:L:48:PRO:HD3	1.65	0.78
1:A:676:A:H2'	1:A:677:U:C6	2.19	0.78
1:A:736:C:OP1	19:R:68:LYS:HE2	1.83	0.78
1:A:1285:A:OP1	1:A:1285:A:H8	1.66	0.78
3:B:180:LEU:O	3:B:181:PHE:HB2	1.83	0.78

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:219:VAL:HA	3:B:222:ILE:HD12	1.66	0.78
4:C:166:GLU:HA	4:C:166:GLU:OE2	1.83	0.78
11:J:49:VAL:O	11:J:60:ARG:O	2.02	0.78
13:L:97:ARG:HB2	13:L:98:TYR:HE1	1.47	0.78
1:A:409:G:H2'	1:A:410:G:C8	2.19	0.78
1:A:818:G:C3'	1:A:819:A:H5'	2.14	0.78
13:L:55:VAL:HG12	13:L:56:ALA:N	1.97	0.78
1:A:252:U:H2'	1:A:253:U:C6	2.19	0.78
5:D:62:GLN:HE22	5:D:65:ARG:HH12	1.19	0.78
1:A:783:C:H2'	1:A:784:C:H5'	1.66	0.77
1:A:854:G:H3'	1:A:871:U:O4	1.82	0.77
12:K:30:VAL:HG21	12:K:65:ALA:HA	1.66	0.77
13:L:81:SER:O	13:L:106:ASP:CB	2.32	0.77
1:A:10:A:OP2	6:E:126:ARG:HG3	1.82	0.77
11:J:48:THR:HG22	11:J:62:HIS:NE2	1.99	0.77
11:J:76:ASN:HB3	11:J:78:ASN:ND2	1.98	0.77
1:A:826:C:H2'	1:A:827:U:H6	1.50	0.77
6:E:15:ARG:HH11	6:E:15:ARG:CG	1.97	0.77
1:A:622:A:N7	1:A:623:C:C5	2.53	0.77
1:A:850:U:H3'	1:A:850:U:C6	2.18	0.77
19:R:78:LEU:N	19:R:78:LEU:CD1	2.47	0.77
1:A:190(L):U:O2	21:T:105:SER:HB2	1.82	0.77
1:A:1455:G:HO3'	1:A:1459:C:P	2.07	0.77
3:B:187:LEU:HD23	3:B:201:ILE:CG2	2.14	0.77
1:A:949:A:C2	1:A:1233:G:N3	2.53	0.77
13:L:86:ARG:HG2	13:L:86:ARG:NH1	1.95	0.77
14:M:90:LEU:HD23	14:M:93:ARG:NH1	1.99	0.77
1:A:1454:G:O2'	1:A:1455:G:H5'	1.85	0.77
3:B:26:PRO:O	3:B:29:ALA:CB	2.32	0.77
21:T:86:ARG:HH11	21:T:86:ARG:CG	1.96	0.77
1:A:1523:G:H2'	1:A:1524:C:H6	1.50	0.77
4:C:187:ALA:O	4:C:198:VAL:HG23	1.84	0.77
1:A:447:G:H2'	1:A:485:G:N2	2.00	0.77
19:R:78:LEU:HD12	19:R:78:LEU:H	1.49	0.77
1:A:942:G:N3	1:A:943:U:C6	2.52	0.76
10:I:128:ARG:O	10:I:128:ARG:HG2	1.83	0.76
1:A:362:G:N2	1:A:365:U:OP2	2.17	0.76
1:A:437:U:HO2'	5:D:125:HIS:HE2	0.78	0.76
3:B:118:LEU:HB3	3:B:142:LEU:CD1	2.15	0.76
4:C:33:LEU:HD11	15:N:53:LEU:HB3	1.67	0.76
5:D:64:LEU:HD23	5:D:198:VAL:HG11	1.65	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:438:G:H4'	1:A:439:A:OP1	1.85	0.76
5:D:83:SER:HA	5:D:89:THR:HG23	1.68	0.76
1:A:1112:C:O2	4:C:179:ARG:HB2	1.86	0.76
4:C:155:GLY:HA3	4:C:196:LEU:HB3	1.67	0.76
20:S:72:GLY:C	20:S:74:PHE:H	1.88	0.76
4:C:178:LEU:O	4:C:179:ARG:HB2	1.86	0.76
6:E:72:GLN:O	6:E:73:ASN:HB3	1.86	0.76
1:A:401:C:C6	1:A:401:C:H3'	2.21	0.76
5:D:128:VAL:HG12	5:D:129:ASN:HD22	1.49	0.76
1:A:1511:G:H2'	1:A:1512:U:O4'	1.85	0.76
6:E:144:THR:H	6:E:147:ASP:HB2	1.50	0.76
1:A:1063:C:H3'	1:A:1064:G:H2'	1.68	0.75
5:D:61:LYS:HE2	5:D:62:GLN:HE21	1.49	0.75
1:A:942:G:C4	1:A:943:U:C5	2.74	0.75
5:D:83:SER:HA	5:D:89:THR:CG2	2.15	0.75
6:E:36:ASP:OD1	6:E:37:ARG:N	2.19	0.75
5:D:11:LEU:C	5:D:13:ARG:N	2.38	0.75
13:L:31:PRO:HB2	13:L:32:PHE:CD2	2.22	0.75
14:M:113:PRO:O	14:M:115:LYS:NZ	2.18	0.75
1:A:254:G:H2'	1:A:255:G:C8	2.21	0.75
1:A:1281:U:H5'	1:A:1282:C:H5	1.51	0.75
7:F:100:ASN:O	19:R:28:GLU:HB3	1.87	0.75
17:P:57:ARG:HG3	17:P:57:ARG:NH1	1.98	0.75
1:A:1443:G:H4'	1:A:1446:A:P	2.26	0.75
10:I:125:TYR:N	10:I:125:TYR:CD2	2.49	0.75
5:D:67:ILE:HG22	5:D:68:TYR:CD1	2.21	0.75
6:E:74:GLY:HA3	6:E:116:THR:HG22	1.67	0.75
18:Q:66:SER:O	18:Q:70:ARG:NH1	2.20	0.75
5:D:63:LYS:CD	5:D:198:VAL:HG23	2.17	0.75
16:O:46:HIS:C	16:O:48:LYS:H	1.90	0.75
1:A:359:U:H2'	1:A:360:A:C8	2.21	0.75
4:C:10:PHE:CE2	4:C:178:LEU:HD13	2.22	0.75
6:E:80:ILE:HG22	9:H:104:ARG:HH22	1.50	0.75
9:H:59:LEU:O	9:H:61:VAL:HG23	1.87	0.75
4:C:191:THR:HG22	4:C:192:THR:H	1.52	0.75
9:H:112:LEU:N	9:H:112:LEU:HD23	2.01	0.75
15:N:26:ARG:HH22	15:N:47:LEU:HD21	1.50	0.75
1:A:1221:G:O4'	20:S:54:GLY:HA3	1.87	0.74
7:F:76:ALA:O	7:F:78:GLU:N	2.20	0.74
13:L:75:HIS:HD2	13:L:77:LEU:H	1.33	0.74
15:N:36:PHE:O	15:N:36:PHE:CD1	2.40	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:540:G:H2'	1:A:541:G:O4'	1.87	0.74
1:A:948:C:H42	1:A:1233:G:H1	1.33	0.74
1:A:987:G:H1	1:A:1218:C:H42	1.35	0.74
3:B:225:ALA:O	3:B:226:ARG:HB2	1.86	0.74
4:C:129:ALA:HB3	4:C:132:ARG:CB	2.16	0.74
5:D:5:ILE:HG22	5:D:5:ILE:O	1.86	0.74
9:H:112:LEU:HD23	9:H:112:LEU:H	1.51	0.74
1:A:767:A:H2'	1:A:768:A:C8	2.21	0.74
1:A:959:A:H3'	1:A:960:U:H5''	1.69	0.74
5:D:41:GLY:O	5:D:43:HIS:N	2.19	0.74
14:M:81:LEU:H	14:M:81:LEU:HD22	1.51	0.74
5:D:21:LEU:HD11	5:D:26:CYS:SG	2.28	0.74
6:E:33:VAL:HA	6:E:42:GLY:O	1.87	0.74
1:A:1240:U:H4'	8:G:38:LEU:HD11	1.68	0.74
1:A:1499:A:C2'	1:A:1500:A:H5'	2.18	0.74
1:A:1116:C:H2'	1:A:1117:G:H5''	1.69	0.74
1:A:1124:G:O2'	1:A:1145:C:N4	2.21	0.74
15:N:23:ARG:HD3	15:N:29:ARG:O	1.88	0.74
1:A:1112:C:O2	4:C:179:ARG:CB	2.35	0.74
19:R:76:LEU:HB2	19:R:78:LEU:HD11	1.70	0.74
1:A:707:C:H5''	12:K:20:TYR:CD2	2.23	0.74
1:A:1526:G:C2'	1:A:1527:C:H5'	2.17	0.74
4:C:107:GLN:O	4:C:108:ASN:HB3	1.86	0.74
5:D:150:GLU:HA	5:D:153:ARG:HB2	1.70	0.74
1:A:376:G:H2'	1:A:377:G:C8	2.22	0.73
1:A:570:G:N3	1:A:571:U:C5	2.56	0.73
4:C:29:TYR:OH	15:N:54:PRO:HD2	1.86	0.73
9:H:73:ASP:OD2	9:H:75:ARG:NE	2.20	0.73
1:A:976:G:H4'	1:A:977:A:OP1	1.86	0.73
3:B:178:ARG:HH22	9:H:68:ARG:NH2	1.85	0.73
15:N:41:ARG:HG3	15:N:42:ILE:H	1.53	0.73
1:A:959:A:C2	1:A:1222:G:O4'	2.40	0.73
6:E:15:ARG:HH11	6:E:15:ARG:HG2	1.52	0.73
13:L:86:ARG:NH2	13:L:99:HIS:CD2	2.56	0.73
1:A:335:C:H2'	1:A:336:C:C6	2.23	0.73
6:E:34:VAL:HG23	6:E:42:GLY:HA3	1.68	0.73
9:H:111:ILE:HG22	9:H:134:ILE:HB	1.70	0.73
1:A:1276:G:O5'	1:A:1276:G:H8	1.71	0.73
1:A:1296:C:H4'	1:A:1302:U:H5	1.51	0.73
5:D:21:LEU:HD12	5:D:22:LYS:H	1.53	0.73
1:A:35:G:H2'	1:A:36:C:H6	1.52	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:515:G:C5	1:A:516:U:C5	2.77	0.73
1:A:564:C:O2	1:A:564:C:H2'	1.88	0.73
1:A:833:U:O2	1:A:854:G:C2	2.42	0.73
10:I:128:ARG:O	10:I:128:ARG:CG	2.36	0.73
17:P:21:VAL:HG21	17:P:59:TRP:CD1	2.24	0.73
1:A:97:G:H5''	1:A:98:U:OP2	1.89	0.73
1:A:481:G:O2'	1:A:483:C:N4	2.21	0.73
1:A:731:G:OP1	1:A:766:A:H1'	1.89	0.73
4:C:195:VAL:O	4:C:196:LEU:HD23	1.87	0.73
5:D:25:ARG:C	5:D:27:TYR:H	1.92	0.73
16:O:78:TYR:CE1	16:O:82:ILE:HD11	2.24	0.73
1:A:503:C:C2'	1:A:504:C:H5'	2.18	0.73
4:C:150:LYS:HG2	4:C:151:VAL:N	2.04	0.73
6:E:81:GLU:HG3	6:E:90:VAL:HG13	1.69	0.73
1:A:622:A:C8	1:A:623:C:C6	2.77	0.73
1:A:1305:G:H2'	1:A:1331:G:N2	2.03	0.73
1:A:1343:G:H4'	10:I:122:ALA:HB3	1.71	0.73
3:B:55:PHE:HA	3:B:58:ILE:HG13	1.71	0.73
5:D:79:PHE:O	5:D:82:ALA:N	2.22	0.73
1:A:401:C:H3'	1:A:401:C:H6	1.54	0.73
1:A:839:U:O2	1:A:839:U:H2'	1.87	0.72
1:A:84:U:H3'	1:A:88:A:P	2.29	0.72
15:N:40:CYS:C	15:N:43:CYS:HB2	2.08	0.72
17:P:67:THR:CG2	17:P:68:ASP:H	2.00	0.72
1:A:854:G:C2	1:A:855:G:C8	2.77	0.72
4:C:91:LEU:HD11	4:C:99:VAL:HG22	1.70	0.72
21:T:64:ASP:O	21:T:67:ALA:HB3	1.89	0.72
1:A:377:G:C2	1:A:387:U:O2	2.43	0.72
1:A:1228:C:OP1	14:M:115:LYS:HG2	1.89	0.72
4:C:6:HIS:HD2	4:C:8:ILE:H	1.37	0.72
11:J:15:THR:O	11:J:19:SER:HB3	1.89	0.72
14:M:49:THR:HG22	14:M:51:ALA:H	1.53	0.72
15:N:41:ARG:HG3	15:N:42:ILE:N	2.04	0.72
1:A:509:A:C8	1:A:509:A:H3'	2.24	0.72
1:A:794:A:H2'	1:A:795:C:H6	1.55	0.72
17:P:5:ARG:HG2	17:P:6:LEU:N	2.04	0.72
17:P:50:LYS:C	17:P:51:VAL:HG22	2.09	0.72
20:S:71:LEU:HD22	20:S:72:GLY:H	1.55	0.72
1:A:266:G:C5'	1:A:266:G:C8	2.72	0.72
1:A:794:A:H2'	1:A:795:C:C6	2.25	0.72
4:C:55:VAL:O	4:C:55:VAL:HG12	1.88	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:119:LEU:HB3	9:H:123:GLU:HB3	1.70	0.72
1:A:157:G:C2	1:A:158:G:C8	2.77	0.72
1:A:356:A:H2'	1:A:357:G:H5'	1.71	0.72
1:A:458:C:C2	1:A:459:G:C8	2.78	0.72
11:J:76:ASN:HB3	11:J:78:ASN:HD21	1.54	0.72
14:M:96:LEU:HB3	14:M:97:PRO:CD	2.17	0.72
15:N:37:PHE:HE2	15:N:53:LEU:HD13	1.55	0.72
5:D:26:CYS:HA	5:D:31:CYS:CB	2.16	0.72
6:E:139:LEU:O	6:E:141:GLN:N	2.21	0.72
6:E:152:ARG:O	9:H:64:LYS:NZ	2.23	0.72
1:A:353:A:H8	1:A:353:A:H5''	1.55	0.71
1:A:1346:A:C8	1:A:1348:U:C2	2.78	0.71
3:B:187:LEU:HD23	3:B:201:ILE:HG22	1.72	0.71
1:A:99:C:H2'	1:A:101:A:C8	2.26	0.71
1:A:602:A:C2	1:A:637:G:C2	2.78	0.71
3:B:208:ILE:HA	3:B:211:ILE:HD12	1.72	0.71
19:R:59:SER:HB3	19:R:62:GLU:OE1	1.90	0.71
1:A:625:G:H2'	1:A:626:U:C6	2.25	0.71
6:E:27:ARG:HG3	6:E:28:PHE:N	2.04	0.71
1:A:185:A:H5''	1:A:186:C:OP2	1.90	0.71
1:A:350:G:C5'	1:A:350:G:C8	2.71	0.71
1:A:639:G:C2'	1:A:640:A:H5'	2.21	0.71
1:A:1064:G:H5'	1:A:1066:C:O4'	1.91	0.71
1:A:526:C:OP2	13:L:91:LYS:NZ	2.17	0.71
1:A:1113:C:H42	1:A:1187:G:H1	1.36	0.71
1:A:1264:C:H2'	1:A:1265:G:H8	1.54	0.71
1:A:1286:A:C8	1:A:1287:A:H4'	2.25	0.71
10:I:9:ARG:HG3	10:I:14:VAL:HG12	1.70	0.71
18:Q:95:TYR:O	18:Q:97:SER:N	2.24	0.71
1:A:90:U:H3'	1:A:90:U:C6	2.26	0.71
1:A:977:A:O2'	1:A:978:A:H5''	1.89	0.71
1:A:1234:C:C2'	1:A:1235:U:H5'	2.20	0.71
1:A:1314:C:OP2	20:S:6:LYS:CG	2.34	0.71
1:A:5:U:O2	1:A:5:U:H2'	1.90	0.71
1:A:882:C:O2'	1:A:883:C:H5'	1.90	0.71
1:A:922:G:N3	1:A:1396:A:C2	2.58	0.71
1:A:1361:G:C2'	1:A:1361(A):C:H5'	2.21	0.71
10:I:43:ALA:O	10:I:45:ALA:N	2.23	0.71
11:J:5:ARG:HA	11:J:73:ASP:OD1	1.91	0.71
1:A:480:U:C2'	1:A:481:G:OP2	2.37	0.71
6:E:142:LEU:O	6:E:143:ARG:HG2	1.91	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:102:ARG:NH1	13:L:110:VAL:HA	2.04	0.71
19:R:33:ASP:O	19:R:35:ARG:N	2.22	0.71
1:A:707:C:C5'	12:K:20:TYR:HD2	2.04	0.71
1:A:931:C:O2	1:A:1386:G:N2	2.18	0.71
1:A:1235:U:H2'	1:A:1236:A:O5'	1.90	0.71
7:F:62:TRP:C	7:F:63:TYR:HD2	1.94	0.71
1:A:734:G:H2'	1:A:735:C:C6	2.26	0.71
1:A:922:G:N2	1:A:1396:A:C4	2.59	0.71
15:N:12:ARG:O	15:N:14:PRO:HD3	1.90	0.71
7:F:50:TYR:HE1	19:R:77:GLY:HA2	1.56	0.70
18:Q:4:LYS:H	18:Q:61:GLU:HB2	1.56	0.70
20:S:72:GLY:O	20:S:74:PHE:N	2.24	0.70
21:T:49:ALA:O	21:T:53:LEU:HD12	1.90	0.70
1:A:18:C:O2'	1:A:19:C:H5'	1.91	0.70
1:A:872:A:O2'	1:A:873:A:H3'	1.91	0.70
1:A:1454:G:C2'	1:A:1455:G:H5'	2.20	0.70
21:T:75:ASN:O	21:T:78:ALA:N	2.24	0.70
1:A:1364:U:O2'	1:A:1365:G:C5'	2.38	0.70
14:M:34:LEU:CD1	14:M:41:PRO:HA	2.18	0.70
1:A:111:G:H5''	1:A:112:G:OP2	1.91	0.70
1:A:247:G:O6	1:A:278:G:C6	2.44	0.70
1:A:1009:G:N3	1:A:1009:G:H2'	2.07	0.70
11:J:16:LEU:HD22	11:J:94:VAL:HG13	1.74	0.70
1:A:1126:U:C2	1:A:1127:G:N7	2.60	0.70
1:A:1379:G:O6	8:G:2:ALA:HB3	1.91	0.70
15:N:21:TYR:HE2	15:N:23:ARG:NE	1.90	0.70
4:C:180:ALA:HB1	4:C:182:ILE:CD1	2.22	0.70
13:L:43:VAL:HG13	13:L:44:THR:H	1.57	0.70
14:M:49:THR:CB	14:M:52:GLU:HG3	2.16	0.70
20:S:53:ASN:HB2	20:S:56:GLN:H	1.55	0.70
1:A:266:G:C8	1:A:266:G:H5''	2.27	0.70
3:B:12:GLU:OE1	3:B:12:GLU:HA	1.89	0.70
7:F:62:TRP:O	7:F:63:TYR:HD2	1.75	0.70
14:M:5:ALA:HB3	14:M:8:GLU:HB2	1.72	0.70
1:A:88:A:H2'	1:A:89:C:O4'	1.91	0.70
1:A:90:U:H3'	1:A:90:U:H6	1.56	0.70
1:A:358:U:H2'	1:A:359:U:C6	2.27	0.70
1:A:1064:G:H4'	1:A:1065:U:H5'	1.73	0.70
1:A:1102:A:H2'	1:A:1103:C:C6	2.26	0.70
1:A:1258:G:OP2	1:A:1258:G:H8	1.74	0.70
11:J:16:LEU:HD12	11:J:70:ARG:HG3	1.74	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:492:G:O3'	1:A:494:G:P	2.50	0.70
1:A:781:A:C5	1:A:802:A:C2	2.79	0.70
1:A:1264:C:H2'	1:A:1265:G:C8	2.27	0.70
15:N:24:CYS:HB3	15:N:28:GLY:N	2.07	0.70
1:A:518:C:H5''	1:A:519:C:H6	1.55	0.69
1:A:1126:U:OP2	1:A:1281:U:O2	2.10	0.69
1:A:1281:U:H5'	1:A:1282:C:C5	2.27	0.69
5:D:11:LEU:C	5:D:13:ARG:H	1.96	0.69
1:A:437:U:O2'	5:D:125:HIS:NE2	2.08	0.69
1:A:568:G:H2'	1:A:569:C:H5'	1.73	0.69
1:A:976:G:C4'	1:A:977:A:OP1	2.40	0.69
9:H:10:LEU:HB3	9:H:83:ILE:HD11	1.74	0.69
1:A:657:G:H2'	1:A:658:G:H8	1.57	0.69
4:C:39:ILE:O	4:C:43:LEU:HB2	1.92	0.69
8:G:116:ALA:O	8:G:120:ILE:HD13	1.92	0.69
1:A:451:A:O5'	1:A:451:A:H8	1.75	0.69
1:A:838:G:H1	1:A:848:C:H42	1.41	0.69
1:A:914:A:C2	1:A:915:A:C4	2.81	0.69
1:A:1139:G:H4'	1:A:1140:C:H5''	1.73	0.69
4:C:6:HIS:CD2	4:C:8:ILE:H	2.10	0.69
10:I:111:ARG:HH11	10:I:111:ARG:CG	2.06	0.69
20:S:78:ARG:H	20:S:78:ARG:HD2	1.57	0.69
9:H:30:ARG:HG2	9:H:30:ARG:HH11	1.56	0.69
1:A:63:C:H5'	1:A:64:G:OP2	1.93	0.69
1:A:674:G:H2'	1:A:675:A:H8	1.58	0.69
1:A:880:C:H2'	1:A:881:G:H8	1.56	0.69
1:A:1158:C:C5	1:A:1160:G:H1'	2.27	0.69
3:B:182:ILE:HG23	3:B:183:PRO:HD2	1.75	0.69
5:D:204:ILE:HG22	5:D:205:GLU:N	2.07	0.69
8:G:91:VAL:HG12	8:G:96:GLN:NE2	2.08	0.69
17:P:74:LEU:O	17:P:79:VAL:HG23	1.91	0.69
3:B:9:GLU:HG3	3:B:217:ARG:HH12	1.55	0.69
5:D:149:ALA:O	5:D:151:LYS:N	2.25	0.69
11:J:38:ILE:HB	11:J:71:LEU:HB3	1.73	0.69
13:L:27:LEU:C	13:L:29:GLY:H	1.91	0.69
17:P:74:LEU:HD13	17:P:79:VAL:HG11	1.75	0.69
18:Q:40:LYS:HD3	18:Q:42:TYR:CZ	2.28	0.69
1:A:501:C:H2'	1:A:502:G:H8	1.56	0.69
1:A:1040:U:H2'	1:A:1041:A:C8	2.28	0.69
1:A:1157:A:H4'	1:A:1158:C:O5'	1.93	0.69
3:B:88:ALA:O	3:B:90:MET:N	2.25	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:102:LEU:N	3:B:102:LEU:CD1	2.55	0.69
4:C:35:GLU:HG2	4:C:59:ARG:HH12	1.58	0.69
13:L:32:PHE:HB3	13:L:85:ILE:O	1.93	0.69
18:Q:75:ARG:HH12	18:Q:77:VAL:HG13	1.56	0.69
1:A:149:A:C2	1:A:150:C:C2	2.80	0.69
1:A:736:C:H2'	1:A:737:A:C8	2.28	0.69
1:A:1226:C:H4'	1:A:1227:A:OP1	1.91	0.69
10:I:113:LYS:N	10:I:113:LYS:HD2	2.08	0.69
1:A:200:G:C5'	1:A:200:G:H8	2.06	0.69
1:A:680:C:H42	1:A:710:G:H1	1.40	0.69
4:C:180:ALA:HB1	4:C:182:ILE:HD11	1.75	0.69
1:A:45:U:H3	1:A:396:G:H1	1.41	0.68
8:G:67:GLU:HG3	8:G:67:GLU:O	1.92	0.68
20:S:83:HIS:N	20:S:83:HIS:CD2	2.61	0.68
1:A:250:A:H4'	1:A:251:G:O5'	1.93	0.68
1:A:1502:A:H2	1:A:1505:G:N1	1.89	0.68
11:J:46:ARG:HG2	11:J:46:ARG:NH1	2.08	0.68
12:K:24:SER:C	12:K:26:ASN:H	1.97	0.68
1:A:337:C:H2'	1:A:338:A:C8	2.28	0.68
1:A:1152:A:C4'	11:J:13:HIS:HD2	2.06	0.68
1:A:1227:A:H2'	1:A:1228:C:O5'	1.92	0.68
1:A:1347:G:H3'	10:I:108:VAL:O	1.94	0.68
1:A:1508:G:H2'	1:A:1509:C:C6	2.28	0.68
3:B:101:MET:HG2	3:B:108:ILE:HD12	1.74	0.68
5:D:64:LEU:HD21	5:D:94:LEU:HD21	1.75	0.68
6:E:71:LEU:HD21	6:E:115:VAL:HG22	1.75	0.68
8:G:155:ARG:O	8:G:156:TRP:HB2	1.92	0.68
1:A:463:A:H3'	1:A:474:G:OP2	1.93	0.68
1:A:502:G:H2'	1:A:503:C:C6	2.28	0.68
1:A:979:C:H5	1:A:980:C:C5	2.11	0.68
1:A:1231:G:H2'	1:A:1232:U:C6	2.27	0.68
4:C:5:ILE:HD13	4:C:10:PHE:CB	2.15	0.68
6:E:18:ARG:NH2	6:E:25:ARG:HG2	2.08	0.68
21:T:65:LYS:O	21:T:68:LYS:HB2	1.93	0.68
1:A:1154:G:H2'	1:A:1155:G:C8	2.27	0.68
16:O:78:TYR:CZ	16:O:82:ILE:HD11	2.28	0.68
1:A:1350:A:C6	1:A:1351:U:N3	2.62	0.68
5:D:23:GLY:O	5:D:27:TYR:HB2	1.94	0.68
13:L:102:ARG:NH2	13:L:108:ALA:O	2.27	0.68
1:A:116:A:H2'	1:A:117:G:C8	2.29	0.68
1:A:491:G:C4	1:A:492:G:C8	2.82	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:536:C:H2'	1:A:537:G:H8	1.57	0.68
1:A:1138:G:N2	1:A:1140:C:O2	2.26	0.68
1:A:1235:U:H3'	1:A:1235:U:H6	1.57	0.68
16:O:26:GLU:OE1	16:O:77:ARG:HD2	1.93	0.68
21:T:79:ARG:HE	21:T:83:ARG:HH22	1.39	0.68
1:A:706:A:H1'	12:K:29:ILE:HD11	1.75	0.68
1:A:1066:C:H2'	1:A:1067:A:H5'	1.75	0.68
1:A:1526:G:O2'	1:A:1527:C:H5'	1.94	0.68
3:B:84:GLU:HG3	3:B:219:VAL:CG2	2.24	0.68
5:D:64:LEU:HD11	5:D:97:LEU:HD13	1.74	0.68
1:A:960:U:H1'	1:A:1223:C:H5'	1.76	0.68
1:A:1010:G:H2'	1:A:1011:G:C8	2.29	0.68
1:A:1314:C:N3	1:A:1315:U:C5	2.62	0.68
7:F:50:TYR:HE1	19:R:77:GLY:CA	2.07	0.68
15:N:21:TYR:HE2	15:N:23:ARG:HE	1.41	0.68
1:A:575:G:OP1	1:A:575:G:H4'	1.94	0.68
1:A:657:G:H4'	16:O:28:GLN:HG2	1.76	0.68
10:I:95:LYS:O	10:I:96:LEU:HD12	1.93	0.68
8:G:23:VAL:O	8:G:27:ILE:HG13	1.93	0.67
10:I:114:TYR:CE1	11:J:59:SER:O	2.47	0.67
1:A:1048:G:H5''	15:N:3:ARG:HG3	1.74	0.67
1:A:1197:G:H5''	24:A:1636:D2C:O5	1.92	0.67
1:A:1288:A:C5	1:A:1289:A:N7	2.62	0.67
8:G:26:PHE:O	8:G:30:ILE:HD12	1.95	0.67
1:A:1015:A:H2'	1:A:1016:A:C8	2.29	0.67
1:A:1342:C:O3'	10:I:125:TYR:HE2	1.75	0.67
1:A:1377:A:H3'	1:A:1377:A:C8	2.28	0.67
1:A:376:G:N3	1:A:389:A:C2	2.62	0.67
6:E:72:GLN:O	6:E:73:ASN:CB	2.42	0.67
6:E:74:GLY:CA	6:E:116:THR:HG22	2.24	0.67
14:M:30:ALA:O	14:M:33:ALA:N	2.27	0.67
1:A:439:A:N6	1:A:497:A:H1'	2.08	0.67
1:A:767:A:H2'	1:A:768:A:H8	1.58	0.67
1:A:914:A:N1	1:A:915:A:C4	2.62	0.67
5:D:15:GLU:HG2	5:D:63:LYS:HG3	1.77	0.67
19:R:50:ILE:HG12	19:R:70:ILE:HD13	1.76	0.67
1:A:95:U:H2'	1:A:96:G:C8	2.30	0.67
1:A:1055:A:C8	1:A:1206:G:N2	2.63	0.67
6:E:80:ILE:HD13	6:E:91:LEU:HB2	1.71	0.67
11:J:12:ASP:HB3	11:J:15:THR:CG2	2.24	0.67
12:K:54:ARG:O	12:K:57:THR:HG22	1.94	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:78:LEU:CD1	19:R:78:LEU:H	2.07	0.67
1:A:976:G:H8	1:A:1358:U:HO2'	1.42	0.67
1:A:1130:A:OP2	1:A:1131:G:OP2	2.13	0.67
19:R:67:ALA:O	19:R:71:LYS:HG3	1.94	0.67
1:A:1229:A:C2	1:A:1230:C:C5	2.83	0.67
1:A:1455:G:H3'	1:A:1459:C:OP2	1.95	0.67
5:D:9:CYS:HA	5:D:12:CYS:HB2	1.77	0.67
8:G:15:ASP:OD2	8:G:44:TYR:OH	2.13	0.67
10:I:50:LEU:HB3	10:I:55:ALA:HB3	1.76	0.67
15:N:24:CYS:HB3	15:N:28:GLY:CA	2.25	0.67
1:A:418:C:O2	1:A:425:G:N2	2.23	0.67
1:A:1228:C:H6	1:A:1228:C:H5''	1.58	0.67
1:A:1285:A:H4'	1:A:1286:A:O5'	1.95	0.67
3:B:42:ILE:HD12	3:B:203:GLY:HA2	1.77	0.67
10:I:8:GLY:CA	10:I:79:LEU:HB3	2.23	0.67
10:I:71:SER:HA	10:I:74:ILE:HD12	1.76	0.67
21:T:56:MET:HE3	21:T:104:LEU:HD21	1.75	0.67
21:T:73:HIS:O	21:T:74:LYS:CG	2.40	0.67
1:A:639:G:H2'	1:A:640:A:H5'	1.76	0.67
1:A:707:C:H2'	1:A:708:C:C6	2.30	0.67
1:A:707:C:O3'	12:K:20:TYR:HE2	1.78	0.67
1:A:1525:G:C8	1:A:1525:G:H3'	2.29	0.67
4:C:66:VAL:O	4:C:68:VAL:N	2.28	0.67
19:R:55:ARG:HB3	19:R:55:ARG:CZ	2.25	0.67
1:A:275:G:H5''	1:A:275:G:C8	2.29	0.66
4:C:129:ALA:CB	4:C:132:ARG:HB2	2.25	0.66
7:F:7:ASN:O	7:F:88:VAL:HA	1.96	0.66
10:I:34:ASN:HD22	10:I:34:ASN:H	1.42	0.66
13:L:117:ARG:HG2	13:L:122:THR:O	1.96	0.66
1:A:109:A:C4	1:A:327:A:C2	2.83	0.66
1:A:854:G:N1	1:A:855:G:N7	2.43	0.66
1:A:923:A:C1'	1:A:1398:A:C2	2.78	0.66
3:B:97:TRP:HZ2	3:B:102:LEU:HD13	1.60	0.66
4:C:91:LEU:HD21	4:C:99:VAL:HG13	1.77	0.66
19:R:66:LEU:HG	19:R:70:ILE:CD1	2.24	0.66
1:A:358:U:H2'	1:A:359:U:H6	1.59	0.66
1:A:1227:A:OP1	20:S:80:TYR:OH	2.10	0.66
1:A:1403:C:O2	1:A:1403:C:C2'	2.42	0.66
11:J:47:PHE:HD2	15:N:34:TYR:HE2	1.39	0.66
1:A:976:G:C5'	1:A:977:A:OP1	2.44	0.66
5:D:141:ARG:HB3	5:D:142:PRO:HD2	1.76	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:53:ARG:NH1	13:L:92:ASP:OD2	2.28	0.66
1:A:1152:A:C5'	11:J:13:HIS:CD2	2.72	0.66
1:A:1187:G:H2'	1:A:1188:A:H8	1.61	0.66
3:B:48:MET:HA	3:B:51:LEU:HD12	1.78	0.66
1:A:1081:G:OP1	6:E:16:THR:OG1	2.14	0.66
3:B:161:ALA:HB1	3:B:185:ILE:HD11	1.75	0.66
13:L:28:LYS:O	13:L:30:ALA:N	2.29	0.66
1:A:499:A:C4'	1:A:500:G:H5'	2.26	0.66
1:A:803:G:C5	1:A:804:U:C5	2.84	0.66
1:A:923:A:H1'	1:A:1398:A:N3	2.10	0.66
4:C:139:GLN:O	4:C:143:GLU:N	2.28	0.66
6:E:67:VAL:HG13	6:E:67:VAL:O	1.95	0.66
11:J:56:HIS:C	11:J:58:ASP:H	1.97	0.66
1:A:459:G:H3'	1:A:460:A:H5'	1.78	0.66
3:B:87:ARG:HH21	3:B:219:VAL:HB	1.61	0.66
3:B:167:PRO:HG3	3:B:188:ALA:HB2	1.78	0.66
13:L:111:LYS:O	13:L:112:ASP:HB2	1.96	0.66
21:T:56:MET:CE	21:T:104:LEU:HD21	2.26	0.66
1:A:91:C:H2'	1:A:92:C:H6	1.59	0.66
1:A:676:A:H2'	1:A:677:U:H6	1.59	0.66
1:A:1015:A:H2'	1:A:1016:A:H8	1.60	0.66
1:A:1047:G:H8	1:A:1047:G:O5'	1.77	0.66
1:A:1055:A:N7	1:A:1206:G:N1	2.44	0.66
1:A:836:G:C6	1:A:851:G:C6	2.84	0.66
4:C:6:HIS:NE2	4:C:8:ILE:CB	2.59	0.66
5:D:79:PHE:CD1	5:D:207:TYR:HD1	2.14	0.66
6:E:51:VAL:O	6:E:54:ALA:HB3	1.96	0.66
1:A:448:A:C5	1:A:487:A:C2	2.84	0.65
13:L:41:ARG:HD2	13:L:42:THR:H	1.61	0.65
1:A:95:U:H2'	1:A:96:G:H8	1.61	0.65
1:A:942:G:H2'	1:A:943:U:C6	2.31	0.65
1:A:1189:C:H5''	1:A:1190:G:OP2	1.95	0.65
3:B:182:ILE:CG2	3:B:183:PRO:HD2	2.26	0.65
1:A:1003(A):G:H2'	1:A:1004:A:C4'	2.24	0.65
1:A:1288:A:N7	1:A:1289:A:N7	2.43	0.65
1:A:1366:C:C2	1:A:1367:C:C5	2.84	0.65
10:I:82:ALA:O	10:I:86:VAL:HG23	1.96	0.65
12:K:33:THR:CG2	12:K:37:GLY:HA2	2.26	0.65
1:A:715:A:H8	1:A:715:A:O5'	1.80	0.65
3:B:176:GLU:O	3:B:177:ALA:C	2.35	0.65
1:A:948:C:OP1	14:M:109:THR:CG2	2.34	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:987:G:O5'	1:A:987:G:H8	1.79	0.65
1:A:1314:C:C2	1:A:1315:U:C5	2.84	0.65
1:A:1347:G:O2'	1:A:1348:U:OP2	2.14	0.65
3:B:117:GLU:O	3:B:121:LEU:HB2	1.97	0.65
6:E:80:ILE:HG23	9:H:104:ARG:NH2	2.10	0.65
1:A:1381:U:C4	1:A:1382:C:C5	2.85	0.65
4:C:15:THR:HG21	4:C:179:ARG:HA	1.78	0.65
8:G:92:SER:HB2	8:G:93:PRO:HD2	1.78	0.65
9:H:119:LEU:HD13	9:H:124:ALA:HA	1.76	0.65
10:I:28:VAL:HA	10:I:63:ILE:O	1.97	0.65
10:I:50:LEU:HD11	10:I:81:ILE:HG21	1.78	0.65
19:R:66:LEU:HG	19:R:70:ILE:HD12	1.77	0.65
1:A:291:C:O2'	1:A:292:G:H5'	1.96	0.65
1:A:382:A:C2	1:A:383:A:C4	2.84	0.65
1:A:1392:G:H2'	1:A:1393:U:H6	1.62	0.65
5:D:149:ALA:C	5:D:151:LYS:H	2.00	0.65
6:E:34:VAL:HG22	6:E:62:ALA:HB1	1.78	0.65
17:P:28:ARG:HH11	17:P:28:ARG:CG	1.96	0.65
1:A:983:A:H3'	1:A:983:A:N3	2.11	0.65
1:A:1350:A:C2	1:A:1351:U:O2	2.50	0.65
1:A:1438:G:H2'	1:A:1439:C:C6	2.31	0.65
8:G:15:ASP:HB3	8:G:20:ASP:H	1.61	0.65
17:P:57:ARG:HH11	17:P:57:ARG:CG	2.07	0.65
21:T:13:LEU:C	21:T:13:LEU:CD2	2.66	0.65
21:T:43:LEU:HD12	21:T:52:ALA:HA	1.78	0.65
1:A:861:G:H2'	1:A:862:C:H6	1.62	0.65
1:A:1158:C:H5	1:A:1160:G:H1'	1.61	0.65
1:A:1182:G:C4'	1:A:1183:A:O5'	2.37	0.65
4:C:191:THR:HG21	4:C:193:TYR:CZ	2.32	0.65
21:T:13:LEU:HD22	21:T:13:LEU:C	2.16	0.65
1:A:62:U:H2'	1:A:63:C:C6	2.32	0.65
1:A:200:G:H2'	1:A:201:C:O4'	1.97	0.65
3:B:25:ASN:HD21	3:B:27:LYS:HB2	1.60	0.65
3:B:111:ARG:CB	3:B:149:LEU:HD11	2.27	0.65
3:B:217:ARG:O	3:B:220:ASP:HB2	1.96	0.65
4:C:91:LEU:HD23	4:C:92:ALA:N	2.11	0.65
13:L:67:THR:HG23	13:L:67:THR:O	1.97	0.65
1:A:1056:U:O2'	1:A:1057:G:H5'	1.97	0.64
5:D:21:LEU:CD1	5:D:22:LYS:H	2.10	0.64
9:H:19:VAL:HG23	9:H:19:VAL:O	1.96	0.64
1:A:62:U:H2'	1:A:63:C:H6	1.61	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:669:U:H2'	1:A:670:G:H8	1.56	0.64
1:A:753:A:H4'	1:A:754:C:O5'	1.97	0.64
7:F:44:GLY:HA2	7:F:60:PHE:H	1.63	0.64
20:S:41:VAL:HG12	20:S:42:PRO:HD2	1.78	0.64
21:T:82:SER:O	21:T:86:ARG:HB2	1.97	0.64
1:A:373:A:C8	1:A:373:A:C5'	2.78	0.64
1:A:623:C:O2	1:A:623:C:H2'	1.98	0.64
1:A:1399:C:H4'	1:A:1400:C:C5'	2.21	0.64
3:B:17:PHE:HD1	3:B:18:GLY:H	1.44	0.64
7:F:9:VAL:CG2	7:F:87:ARG:HB2	2.26	0.64
9:H:103:VAL:HG21	9:H:109:ILE:C	2.18	0.64
20:S:72:GLY:O	20:S:74:PHE:HD1	1.79	0.64
1:A:522:C:OP2	13:L:69:TYR:OH	2.12	0.64
1:A:1063:C:OP2	1:A:1064:G:O2'	2.14	0.64
1:A:1187:G:H2'	1:A:1188:A:C8	2.33	0.64
6:E:90:VAL:O	6:E:120:THR:HA	1.97	0.64
6:E:103:GLY:O	6:E:106:PRO:CD	2.43	0.64
11:J:46:ARG:HG2	11:J:46:ARG:HH11	1.61	0.64
15:N:32:SER:HB2	15:N:41:ARG:HB3	1.78	0.64
1:A:779:C:H2'	1:A:780:A:O4'	1.96	0.64
1:A:864:A:H2'	1:A:865:A:C8	2.31	0.64
1:A:1074:G:O2'	3:B:103:THR:HG22	1.96	0.64
1:A:1169:A:HO3'	1:A:1171:G:P	2.19	0.64
1:A:1316:G:O2'	1:A:1318:A:N7	2.26	0.64
8:G:23:VAL:HG12	8:G:27:ILE:CD1	2.23	0.64
11:J:16:LEU:CD2	11:J:94:VAL:HG13	2.28	0.64
15:N:36:PHE:O	15:N:36:PHE:HD1	1.79	0.64
16:O:76:GLU:O	16:O:78:TYR:N	2.31	0.64
1:A:705:U:H3'	1:A:706:A:H8	1.63	0.64
1:A:1092:A:C5'	1:A:1092:A:H8	2.10	0.64
1:A:1100:C:O5'	1:A:1100:C:H6	1.80	0.64
1:A:1161:C:H2'	1:A:1162:C:C6	2.33	0.64
13:L:6:THR:HG1	13:L:9:GLN:HG3	1.61	0.64
19:R:79:LEU:HD23	19:R:80:PRO:CD	2.15	0.64
1:A:109:A:C6	1:A:326:G:C6	2.86	0.64
1:A:895:G:H2'	1:A:896:C:H6	1.62	0.64
1:A:960:U:H5'	1:A:960:U:O2	1.97	0.64
1:A:1119:C:H3'	1:A:1119:C:C6	2.33	0.64
3:B:101:MET:CA	3:B:108:ILE:HD12	2.27	0.64
6:E:51:VAL:CB	6:E:52:PRO:CD	2.69	0.64
14:M:22:ILE:HB	14:M:25:ILE:HD12	1.80	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1055:A:C8	1:A:1206:G:C2	2.85	0.64
1:A:1066:C:O2'	1:A:1067:A:H5''	1.98	0.64
3:B:102:LEU:HD13	3:B:102:LEU:H	1.62	0.64
5:D:79:PHE:CD1	5:D:207:TYR:CD1	2.86	0.64
14:M:40:ASN:ND2	14:M:41:PRO:HD2	2.12	0.64
20:S:39:THR:HG22	20:S:40:ILE:H	1.61	0.64
1:A:113:G:H1	1:A:314:C:H42	1.44	0.64
1:A:390:C:H2'	1:A:391:G:C8	2.33	0.64
1:A:401:C:OP2	5:D:73:ARG:NH2	2.31	0.64
1:A:750:G:N3	16:O:23:GLY:HA3	2.13	0.64
1:A:1328:C:H2'	1:A:1329:A:O4'	1.97	0.64
1:A:1499:A:H2'	1:A:1500:A:H5'	1.78	0.64
12:K:34:ASP:HB2	12:K:35:PRO:CD	2.28	0.64
20:S:39:THR:HG22	20:S:40:ILE:N	2.13	0.64
1:A:409:G:H2'	1:A:410:G:H8	1.62	0.63
1:A:528:C:H41	13:L:49:ASN:HD21	1.44	0.63
1:A:942:G:N3	1:A:943:U:C5	2.66	0.63
1:A:1438:G:H2'	1:A:1439:C:H6	1.63	0.63
1:A:1513:A:H2'	1:A:1514:C:C6	2.33	0.63
6:E:19:MET:CE	6:E:24:ARG:HH11	2.11	0.63
1:A:55:A:H2'	1:A:56:U:C6	2.32	0.63
1:A:253:U:H2'	1:A:254:G:C8	2.33	0.63
1:A:522:C:H2'	1:A:523:A:O4'	1.99	0.63
1:A:529:G:H3'	1:A:529:G:C8	2.33	0.63
1:A:580:U:H4'	16:O:57:LEU:HD23	1.80	0.63
1:A:942:G:H2'	1:A:943:U:H6	1.63	0.63
1:A:1234:C:H2'	1:A:1235:U:H5'	1.80	0.63
3:B:114:ARG:HD3	3:B:141:GLU:OE1	1.99	0.63
3:B:218:ALA:O	3:B:222:ILE:HG13	1.98	0.63
8:G:116:ALA:O	8:G:120:ILE:CD1	2.46	0.63
1:A:176:C:H2'	1:A:176:C:O2	1.98	0.63
1:A:384:G:H2'	1:A:385:C:H6	1.60	0.63
1:A:656:C:H3'	1:A:656:C:C6	2.33	0.63
4:C:11:ARG:HB2	4:C:15:THR:OG1	1.98	0.63
4:C:123:GLN:NE2	4:C:140:ARG:HH22	1.96	0.63
5:D:8:VAL:C	5:D:10:ARG:N	2.52	0.63
16:O:56:LEU:HD23	16:O:57:LEU:N	2.13	0.63
21:T:33:ILE:O	21:T:34:LYS:C	2.36	0.63
1:A:1103:C:C5'	3:B:98:LEU:CD2	2.76	0.63
6:E:80:ILE:HD12	6:E:80:ILE:N	2.09	0.63
1:A:1367:C:O2	1:A:1368:G:C8	2.52	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:88:ARG:HG2	4:C:91:LEU:HD22	1.81	0.63
8:G:18:TYR:CD2	8:G:59:LEU:HD13	2.33	0.63
1:A:549:C:H2'	1:A:550:G:H8	1.64	0.63
1:A:818:G:H3'	1:A:819:A:H5'	1.78	0.63
1:A:858:G:O2'	1:A:859:A:H5'	1.99	0.63
1:A:985:C:O2	1:A:985:C:H2'	1.99	0.63
6:E:13:ILE:HD12	6:E:13:ILE:N	2.10	0.63
1:A:355:C:H5''	1:A:389:A:OP2	1.99	0.63
1:A:879:C:O2'	1:A:880:C:H5'	1.98	0.63
14:M:89:GLY:O	14:M:92:HIS:N	2.23	0.63
16:O:78:TYR:O	16:O:80:ALA:N	2.32	0.63
1:A:826:C:H2'	1:A:827:U:C6	2.32	0.63
1:A:1459:C:H2'	1:A:1460:A:H8	1.64	0.63
3:B:25:ASN:ND2	3:B:27:LYS:HB2	2.13	0.63
3:B:118:LEU:CB	3:B:142:LEU:HD12	2.24	0.63
13:L:31:PRO:HB2	13:L:32:PHE:CE2	2.33	0.63
18:Q:40:LYS:HD3	18:Q:42:TYR:OH	1.98	0.63
1:A:839:U:H5'	1:A:840:C:H5	1.64	0.63
1:A:1068:G:N7	1:A:1094:G:C8	2.67	0.63
1:A:1391:U:H2'	1:A:1392:G:H8	1.60	0.63
4:C:188:LEU:O	4:C:189:ALA:CB	2.46	0.63
6:E:48:ALA:CB	6:E:49:PRO:HD2	2.23	0.63
7:F:76:ALA:C	7:F:78:GLU:H	1.99	0.63
17:P:67:THR:HG23	17:P:68:ASP:H	1.62	0.63
20:S:78:ARG:CG	20:S:78:ARG:HH11	2.12	0.63
1:A:497:A:N3	1:A:497:A:H2'	2.14	0.62
1:A:1305:G:H2'	1:A:1331:G:H22	1.63	0.62
3:B:25:ASN:ND2	3:B:27:LYS:H	1.97	0.62
8:G:68:ASN:O	8:G:138:LYS:HE2	1.99	0.62
1:A:1235:U:C2'	1:A:1236:A:O5'	2.46	0.62
1:A:1263:C:O2	1:A:1263:C:H2'	1.97	0.62
1:A:1526:G:H2'	1:A:1527:C:H5'	1.81	0.62
10:I:33:PHE:C	10:I:35:GLU:H	2.03	0.62
15:N:4:LYS:C	15:N:6:LEU:H	2.01	0.62
1:A:1067:A:O2'	1:A:1093:A:O3'	2.14	0.62
1:A:1406:U:H2'	1:A:1407:C:H6	1.63	0.62
4:C:123:GLN:HE22	4:C:140:ARG:HH22	1.45	0.62
21:T:87:LYS:O	21:T:88:VAL:C	2.38	0.62
1:A:734:G:H2'	1:A:735:C:H6	1.63	0.62
1:A:781:A:H2'	1:A:781:A:N3	2.14	0.62
1:A:1053:G:O2'	1:A:1054:C:OP2	2.18	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1247:U:C6	1:A:1247:U:H3'	2.35	0.62
1:A:1503:A:C8	1:A:1531:A:N3	2.68	0.62
5:D:21:LEU:CD1	5:D:26:CYS:SG	2.87	0.62
17:P:34:GLU:OE1	17:P:55:ARG:NH1	2.31	0.62
20:S:9:VAL:HG12	20:S:10:PHE:H	1.63	0.62
1:A:235:C:O2'	1:A:236:G:H5'	1.98	0.62
1:A:268:C:H2'	1:A:269:C:H6	1.64	0.62
1:A:1399:C:C4'	1:A:1400:C:H5''	2.22	0.62
5:D:10:ARG:O	5:D:10:ARG:HG2	1.99	0.62
8:G:23:VAL:CG1	8:G:27:ILE:HD11	2.24	0.62
10:I:9:ARG:HG3	10:I:14:VAL:CG1	2.28	0.62
1:A:245:C:O2	1:A:283:C:N3	2.32	0.62
1:A:644:G:C6	1:A:645:C:C5	2.87	0.62
9:H:103:VAL:O	9:H:104:ARG:HB2	1.98	0.62
14:M:81:LEU:CD2	14:M:81:LEU:N	2.57	0.62
1:A:1055:A:C2	1:A:1056:U:H1'	2.34	0.62
1:A:1279:A:H4'	1:A:1280:A:OP1	1.99	0.62
1:A:1305:G:C8	1:A:1305:G:OP2	2.53	0.62
5:D:32:ALA:O	5:D:36:ARG:N	2.32	0.62
11:J:47:PHE:CD2	15:N:34:TYR:CE2	2.83	0.62
14:M:81:LEU:H	14:M:81:LEU:HD23	1.64	0.62
17:P:51:VAL:O	17:P:52:ASP:C	2.37	0.62
1:A:42:G:C2	1:A:401:C:O2	2.53	0.62
1:A:983:A:OP1	15:N:3:ARG:NH2	2.33	0.62
1:A:1229:A:C2	1:A:1230:C:C4	2.88	0.62
5:D:7:PRO:O	5:D:10:ARG:HB3	1.98	0.62
5:D:138:TYR:C	5:D:138:TYR:CD2	2.73	0.62
13:L:40:VAL:O	13:L:40:VAL:HG12	1.99	0.62
18:Q:9:VAL:HG21	18:Q:84:LEU:HD13	1.80	0.62
1:A:314:C:H2'	1:A:315:A:H5'	1.82	0.62
1:A:670:G:H1	1:A:736:C:N4	1.96	0.62
1:A:1167:A:H8	1:A:1167:A:O5'	1.83	0.62
6:E:137:GLU:HG2	6:E:140:ARG:HH11	1.65	0.62
8:G:108:ALA:O	8:G:110:GLN:N	2.32	0.62
9:H:117:GLY:O	9:H:119:LEU:HG	1.99	0.62
10:I:111:ARG:HH11	10:I:111:ARG:HG3	1.64	0.62
12:K:33:THR:OG1	12:K:38:ASN:C	2.38	0.62
12:K:33:THR:HG21	12:K:37:GLY:HA2	1.81	0.62
16:O:4:THR:N	16:O:7:GLU:OE2	2.27	0.62
19:R:39:VAL:HG13	19:R:40:LEU:HD23	1.80	0.62
1:A:925:G:H1	1:A:1391:U:H3	1.46	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:25:ASN:HD22	3:B:27:LYS:H	1.47	0.62
13:L:75:HIS:HD2	13:L:77:LEU:N	1.98	0.62
14:M:81:LEU:HA	14:M:84:ILE:HG12	1.81	0.62
15:N:37:PHE:CE2	15:N:53:LEU:HD13	2.33	0.62
17:P:6:LEU:HD23	17:P:17:TYR:CG	2.34	0.62
21:T:89:ARG:HH22	21:T:106:ALA:HB2	1.65	0.62
1:A:256:U:O2'	1:A:257:G:H5'	2.00	0.61
1:A:499:A:H4'	1:A:500:G:H5'	1.82	0.61
1:A:653:A:H2'	1:A:653:A:N3	2.15	0.61
1:A:662:G:O2'	1:A:836:G:H5''	2.00	0.61
6:E:27:ARG:HG3	6:E:28:PHE:H	1.62	0.61
21:T:74:LYS:CG	21:T:75:ASN:H	2.06	0.61
1:A:299:G:H2'	1:A:300:A:C8	2.35	0.61
1:A:975:A:C8	1:A:975:A:C5'	2.80	0.61
1:A:1249:C:C6	1:A:1249:C:H3'	2.35	0.61
7:F:50:TYR:CE1	19:R:77:GLY:HA3	2.35	0.61
13:L:28:LYS:C	13:L:30:ALA:N	2.52	0.61
14:M:5:ALA:O	14:M:6:GLY:C	2.37	0.61
17:P:57:ARG:NH1	17:P:79:VAL:O	2.33	0.61
18:Q:83:ASP:OD1	18:Q:84:LEU:N	2.33	0.61
18:Q:90:ILE:C	18:Q:92:ARG:N	2.53	0.61
1:A:96:G:H5''	1:A:97:G:OP2	2.00	0.61
1:A:149:A:C2	1:A:150:C:N3	2.68	0.61
1:A:1377:A:C8	1:A:1377:A:C3'	2.83	0.61
1:A:1508:G:H2'	1:A:1509:C:H6	1.65	0.61
5:D:149:ALA:C	5:D:151:LYS:N	2.53	0.61
18:Q:95:TYR:C	18:Q:97:SER:H	2.03	0.61
1:A:1057:G:C5	1:A:1204:A:C2	2.88	0.61
1:A:1147:C:H4'	10:I:5:TYR:CE1	2.35	0.61
1:A:1316:G:N1	1:A:1319:A:OP2	2.31	0.61
1:A:1455:G:C3'	1:A:1459:C:OP2	2.48	0.61
1:A:1521:G:C2	1:A:1522:U:C2	2.89	0.61
13:L:22:SER:OG	13:L:23:LYS:N	2.34	0.61
14:M:32:GLU:O	14:M:35:GLU:HB3	2.00	0.61
1:A:988:G:N2	1:A:1218:C:C2	2.68	0.61
3:B:16:HIS:HB2	3:B:210:SER:HB3	1.83	0.61
3:B:100:GLY:CA	3:B:176:GLU:OE2	2.33	0.61
15:N:27:CYS:SG	15:N:29:ARG:HG3	2.41	0.61
19:R:36:ASN:HB3	19:R:39:VAL:HG12	1.80	0.61
1:A:262:A:C6	1:A:263:A:N6	2.69	0.61
1:A:689:C:P	12:K:46:GLY:HA3	2.41	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1092:A:H8	1:A:1092:A:O5'	1.83	0.61
10:I:79:LEU:HD23	10:I:83:ARG:HD2	1.82	0.61
12:K:33:THR:HG1	12:K:38:ASN:C	2.02	0.61
19:R:87:ARG:HB3	19:R:87:ARG:HH11	1.64	0.61
1:A:193:C:H1'	21:T:60:GLU:OE1	2.00	0.61
1:A:657:G:H2'	1:A:658:G:C8	2.36	0.61
1:A:666:G:H5'	1:A:726:C:H1'	1.83	0.61
1:A:801:U:O2'	1:A:802:A:H5'	2.01	0.61
1:A:979:C:C5	1:A:980:C:C5	2.86	0.61
1:A:1103:C:H5''	3:B:98:LEU:HD21	1.81	0.61
1:A:1142:G:H2'	1:A:1142:G:N3	2.14	0.61
1:A:1345:U:C2	1:A:1377:A:N1	2.69	0.61
3:B:51:LEU:O	3:B:55:PHE:HD1	1.84	0.61
3:B:223:ILE:HD12	3:B:226:ARG:HH11	1.64	0.61
11:J:49:VAL:CA	11:J:50:ILE:HD12	2.28	0.61
1:A:298:A:H5''	1:A:299:G:OP2	2.00	0.61
1:A:677:U:H3	1:A:713:G:H22	1.48	0.61
1:A:1161:C:H2'	1:A:1162:C:C5	2.35	0.61
1:A:1429:C:H42	1:A:1471:G:H1	1.48	0.61
1:A:1496:C:N4	25:A:1637:AB9:O28	2.33	0.61
6:E:80:ILE:CG2	9:H:104:ARG:NH2	2.62	0.61
10:I:48:GLU:N	10:I:49:PRO:CD	2.63	0.61
10:I:86:VAL:HG13	10:I:92:TYR:HB2	1.81	0.61
19:R:19:LYS:O	19:R:20:ALA:CB	2.48	0.61
1:A:325:A:H2'	1:A:326:G:C8	2.36	0.61
1:A:501:C:H2'	1:A:502:G:C8	2.35	0.61
1:A:502:G:H2'	1:A:503:C:H6	1.65	0.61
1:A:850:U:C6	1:A:850:U:C3'	2.82	0.61
1:A:977:A:H2'	1:A:978:A:C5'	2.30	0.61
1:A:1372:U:H2'	1:A:1373:G:O4'	2.00	0.61
1:A:1495:U:C2	1:A:1496:C:C5	2.88	0.61
6:E:139:LEU:C	6:E:141:GLN:H	2.02	0.61
1:A:148:G:H2'	1:A:149:A:H8	1.66	0.61
1:A:614:A:C2	1:A:627:G:C2	2.88	0.61
1:A:818:G:O2'	1:A:819:A:C5'	2.49	0.61
1:A:854:G:C6	1:A:855:G:N7	2.69	0.61
1:A:1075:C:C2'	1:A:1076:C:H5'	2.30	0.61
1:A:1203:C:O5'	1:A:1203:C:H6	1.83	0.61
1:A:1208:C:C4	1:A:1209:C:H5	2.19	0.61
5:D:67:ILE:HG22	5:D:68:TYR:HD1	1.65	0.61
13:L:39:VAL:O	13:L:41:ARG:N	2.32	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:82:MET:HA	18:Q:85:VAL:HG23	1.82	0.61
1:A:264:U:H4'	18:Q:63:ARG:HD3	1.83	0.60
1:A:394:G:H2'	1:A:395:C:H6	1.66	0.60
1:A:659:U:OP2	16:O:8:LYS:HE2	2.01	0.60
1:A:803:G:H8	1:A:803:G:O5'	1.84	0.60
1:A:1113:C:N4	1:A:1187:G:H1	1.97	0.60
1:A:1160:G:H2'	1:A:1161:C:O5'	2.00	0.60
1:A:1333:A:H2'	1:A:1334:G:O4'	2.01	0.60
1:A:1495:U:H2'	1:A:1496:C:H6	1.65	0.60
10:I:57:GLY:O	10:I:58:ARG:CG	2.49	0.60
13:L:55:VAL:CG1	13:L:56:ALA:N	2.63	0.60
1:A:256:U:C2'	1:A:257:G:H5'	2.31	0.60
1:A:459:G:H3'	1:A:460:A:C5'	2.31	0.60
1:A:507:C:H2'	1:A:508:C:C5	2.36	0.60
1:A:537:G:H2'	1:A:538:G:H8	1.65	0.60
1:A:549:C:H2'	1:A:550:G:C8	2.35	0.60
1:A:620:C:H2'	1:A:621:A:O4'	2.00	0.60
1:A:803:G:H2'	1:A:804:U:O4'	2.00	0.60
1:A:922:G:C2	1:A:1396:A:C2	2.89	0.60
1:A:1361(A):C:C2'	1:A:1362:C:H5''	2.31	0.60
1:A:1525:G:OP2	12:K:120:ARG:NH2	2.34	0.60
3:B:28:PHE:O	3:B:30:ARG:N	2.35	0.60
4:C:128:PHE:HE2	4:C:132:ARG:HH11	1.48	0.60
6:E:141:GLN:O	6:E:143:ARG:NH1	2.34	0.60
8:G:66:VAL:HG12	8:G:67:GLU:N	2.15	0.60
10:I:118:LYS:O	10:I:119:ALA:HB3	2.01	0.60
11:J:47:PHE:CD2	15:N:34:TYR:HE2	2.19	0.60
1:A:357:G:H2'	1:A:358:U:H6	1.66	0.60
1:A:308:C:H2'	1:A:309:G:H8	1.65	0.60
1:A:627:G:H2'	1:A:628:G:H8	1.65	0.60
1:A:1151:A:O2'	1:A:1152:A:O5'	2.17	0.60
1:A:1343:G:H2'	1:A:1344:C:H6	1.61	0.60
2:Z:4:U:H2'	2:Z:5:C:C6	2.36	0.60
16:O:3:ILE:HG21	16:O:34:LEU:CD1	2.32	0.60
16:O:39:LEU:CD1	16:O:56:LEU:HB2	2.31	0.60
17:P:75:ARG:O	17:P:78:GLY:N	2.28	0.60
21:T:63:ILE:O	21:T:65:LYS:N	2.35	0.60
1:A:410:G:H5'	5:D:30:LYS:NZ	2.16	0.60
1:A:959:A:N1	1:A:1222:G:C4'	2.65	0.60
1:A:964:A:H5''	1:A:965:A:OP2	2.01	0.60
1:A:1116:C:C2'	1:A:1117:G:H5''	2.31	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1498:U:O2'	1:A:1499:A:OP2	2.18	0.60
3:B:168:THR:HG21	3:B:191:ASP:O	2.02	0.60
5:D:5:ILE:O	5:D:5:ILE:CG2	2.49	0.60
10:I:50:LEU:CD1	10:I:81:ILE:HG21	2.32	0.60
16:O:32:LEU:HD12	16:O:63:ARG:HB2	1.81	0.60
1:A:865:A:O2'	1:A:866:C:H5'	2.01	0.60
4:C:111:LEU:HD21	4:C:146:ALA:H	1.66	0.60
6:E:102:ALA:HB2	6:E:120:THR:OG1	2.01	0.60
8:G:137:LYS:HA	8:G:140:ASP:HB2	1.84	0.60
1:A:190(L):U:C2	21:T:105:SER:HB2	2.37	0.60
1:A:1262:C:O2'	1:A:1263:C:O5'	2.19	0.60
1:A:1296:C:H4'	1:A:1302:U:C5	2.36	0.60
1:A:1497:G:C2'	1:A:1498:U:C5'	2.74	0.60
5:D:92:VAL:HG12	5:D:96:LEU:HD13	1.83	0.60
6:E:91:LEU:HD23	6:E:120:THR:HG23	1.84	0.60
8:G:120:ILE:O	8:G:124:LEU:HD12	2.01	0.60
11:J:79:ARG:HD3	11:J:82:ILE:HD12	1.82	0.60
1:A:543:C:O2'	1:A:544:G:H5'	2.01	0.60
1:A:789:U:O2	1:A:791:G:C8	2.54	0.60
1:A:807:A:H2'	1:A:808:C:C6	2.37	0.60
1:A:945:G:C2	1:A:946:A:C8	2.89	0.60
1:A:1262:C:O2'	1:A:1263:C:H6	1.85	0.60
1:A:1392:G:N2	1:A:1502:A:H8	2.00	0.60
3:B:77:ALA:CB	3:B:211:ILE:HD13	2.21	0.60
3:B:114:ARG:HH11	3:B:118:LEU:CD1	2.04	0.60
4:C:113:ALA:N	4:C:114:PRO:CD	2.64	0.60
6:E:15:ARG:CG	6:E:15:ARG:NH1	2.59	0.60
1:A:393:A:N3	1:A:394:G:C8	2.70	0.60
1:A:491:G:H2'	1:A:492:G:O4'	2.01	0.60
1:A:737:A:H1'	7:F:73:ASN:ND2	2.17	0.60
1:A:981:U:H5''	1:A:982:U:O5'	2.01	0.60
1:A:1101:A:H4'	1:A:1102:A:O5'	2.01	0.60
1:A:1230:C:O2'	1:A:1231:G:H5'	2.02	0.60
4:C:113:ALA:N	4:C:114:PRO:HD3	2.17	0.60
14:M:19:LEU:O	14:M:22:ILE:HD12	2.01	0.60
1:A:181:G:H4'	1:A:182:U:H5'	1.84	0.60
1:A:201:C:N4	1:A:203:U:C2	2.70	0.60
1:A:322:C:H4'	21:T:23:ARG:HD2	1.83	0.60
1:A:882:C:C2'	1:A:883:C:H5'	2.32	0.60
1:A:916:G:H2'	1:A:917:G:H8	1.66	0.60
1:A:932:C:H6	1:A:932:C:H5''	1.66	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1229:A:H2'	1:A:1230:C:C6	2.37	0.60
3:B:75:LYS:HA	3:B:78:GLN:HB2	1.83	0.60
3:B:97:TRP:CZ2	3:B:102:LEU:HD13	2.36	0.60
13:L:75:HIS:HD2	13:L:76:ASN:N	1.96	0.60
1:A:283:C:C2	1:A:284:G:C8	2.90	0.59
1:A:818:G:O2'	1:A:819:A:H5'	2.01	0.59
1:A:1225:A:H2'	1:A:1225:A:N3	2.16	0.59
9:H:104:ARG:O	9:H:106:GLY:N	2.35	0.59
10:I:50:LEU:HD11	10:I:81:ILE:CG2	2.32	0.59
1:A:52:G:O2'	1:A:53:A:H5'	2.01	0.59
1:A:200:G:C5'	1:A:200:G:C8	2.85	0.59
1:A:1179:A:H2'	1:A:1180:A:O4'	2.02	0.59
4:C:6:HIS:CD2	4:C:6:HIS:C	2.73	0.59
12:K:73:MET:CE	12:K:102:GLY:HA3	2.32	0.59
13:L:81:SER:O	13:L:106:ASP:CG	2.39	0.59
1:A:136:C:H42	1:A:227:G:H1	1.50	0.59
1:A:390:C:H2'	1:A:391:G:H8	1.66	0.59
1:A:543:C:C2'	1:A:544:G:H5'	2.32	0.59
1:A:1068:G:N3	1:A:1191:A:C2	2.70	0.59
1:A:1282:C:O2	1:A:1282:C:H2'	2.02	0.59
1:A:1507:A:H2'	1:A:1508:G:C8	2.36	0.59
4:C:35:GLU:OE1	4:C:95:THR:HG21	2.01	0.59
4:C:52:LEU:N	4:C:52:LEU:CD2	2.63	0.59
5:D:11:LEU:HA	5:D:14:ARG:H	1.67	0.59
6:E:76:ILE:HG22	6:E:93:PRO:HG3	1.84	0.59
8:G:47:CYS:O	8:G:50:ILE:HG22	2.03	0.59
15:N:24:CYS:HB3	15:N:28:GLY:H	1.65	0.59
1:A:22:G:H2'	1:A:23:C:C6	2.37	0.59
1:A:192:U:H4'	21:T:103:GLY:H	1.66	0.59
1:A:286:G:C5	1:A:287:U:C5	2.90	0.59
1:A:314:C:C2'	1:A:315:A:H5'	2.31	0.59
1:A:878:G:H5'	9:H:89:PRO:HG2	1.84	0.59
1:A:1377:A:H3'	1:A:1377:A:H8	1.64	0.59
6:E:48:ALA:HB1	6:E:49:PRO:CD	2.25	0.59
8:G:24:THR:O	8:G:28:ASN:ND2	2.36	0.59
9:H:6:ILE:O	9:H:7:ALA:C	2.41	0.59
13:L:45:PRO:HG3	13:L:53:ARG:CD	2.32	0.59
15:N:6:LEU:HD23	15:N:21:TYR:OH	2.02	0.59
1:A:938:A:H1'	1:A:1376:U:O2'	2.02	0.59
1:A:977:A:C2'	1:A:978:A:C5'	2.80	0.59
1:A:1121:U:H2'	1:A:1122:U:C6	2.37	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1513:A:N1	1:A:1523:G:C6	2.70	0.59
5:D:8:VAL:O	5:D:10:ARG:N	2.36	0.59
6:E:19:MET:HE2	6:E:24:ARG:HH11	1.68	0.59
9:H:85:ARG:HD3	9:H:87:SER:O	2.01	0.59
19:R:33:ASP:C	19:R:35:ARG:H	2.06	0.59
20:S:62:ILE:HG23	20:S:62:ILE:O	2.02	0.59
1:A:181:G:H4'	1:A:182:U:C5'	2.32	0.59
1:A:362:G:C8	1:A:362:G:H3'	2.37	0.59
1:A:448:A:C4	1:A:487:A:C2	2.90	0.59
1:A:1152:A:O3'	11:J:13:HIS:NE2	2.36	0.59
1:A:1158:C:C5	1:A:1160:G:C1'	2.84	0.59
1:A:1316:G:H4'	15:N:18:VAL:HG11	1.84	0.59
7:F:8:ILE:HD12	7:F:61:LEU:HB3	1.85	0.59
1:A:836:G:C5	1:A:851:G:C6	2.91	0.59
1:A:1366:C:H5''	1:A:1367:C:OP2	2.03	0.59
5:D:64:LEU:O	5:D:64:LEU:HD13	2.03	0.59
6:E:11:ILE:CG1	6:E:31:LEU:HB3	2.33	0.59
10:I:34:ASN:H	10:I:34:ASN:ND2	2.00	0.59
11:J:50:ILE:H	11:J:60:ARG:HD2	1.66	0.59
12:K:24:SER:O	12:K:26:ASN:N	2.36	0.59
1:A:570:G:C4	1:A:571:U:C5	2.91	0.59
1:A:972:C:O2'	11:J:57:LYS:HB3	2.02	0.59
1:A:1157:A:O4'	1:A:1158:C:O2	2.20	0.59
1:A:1495:U:H2'	1:A:1496:C:C6	2.38	0.59
11:J:45:ARG:O	11:J:64:GLU:HA	2.02	0.59
12:K:119:CYS:O	12:K:121:PRO:HD3	2.02	0.59
14:M:87:TYR:HA	14:M:90:LEU:HD12	1.85	0.59
16:O:74:ASP:O	16:O:76:GLU:N	2.36	0.59
1:A:253:U:H2'	1:A:254:G:H8	1.68	0.59
1:A:1258:G:OP2	1:A:1258:G:C8	2.56	0.59
1:A:1259:C:O2'	1:A:1284:C:H1'	2.02	0.59
1:A:1490:C:C2'	1:A:1491:G:H5''	2.32	0.59
5:D:99:SER:O	5:D:140:VAL:HG23	2.02	0.59
11:J:7:LYS:HG3	11:J:71:LEU:CD2	2.33	0.59
18:Q:85:VAL:O	18:Q:86:GLU:C	2.41	0.59
1:A:45:U:H2'	1:A:46:G:C8	2.37	0.59
1:A:300:A:H8	1:A:300:A:O5'	1.85	0.59
1:A:410:G:H5'	5:D:30:LYS:HZ2	1.67	0.59
1:A:767:A:H2'	1:A:768:A:O4'	2.03	0.59
1:A:806:C:O2'	1:A:807:A:H5'	2.03	0.59
1:A:1455:G:O3'	1:A:1459:C:OP2	2.19	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:193:ASP:HB3	3:B:196:LEU:HD11	1.85	0.59
8:G:124:LEU:O	8:G:127:ALA:HB3	2.02	0.59
10:I:111:ARG:HG3	10:I:111:ARG:NH1	2.17	0.59
1:A:356:A:C2'	1:A:357:G:H5'	2.32	0.58
1:A:394:G:H2'	1:A:395:C:C6	2.38	0.58
1:A:583:A:H5''	1:A:584:G:OP2	2.02	0.58
1:A:1055:A:C2	1:A:1056:U:C1'	2.85	0.58
1:A:1057:G:H2'	1:A:1058:G:H8	1.66	0.58
20:S:11:VAL:HG12	20:S:12:ASP:O	2.03	0.58
1:A:65:U:C5	1:A:381:C:C4	2.91	0.58
1:A:883:C:C2'	1:A:884:U:O5'	2.51	0.58
1:A:1063:C:H2'	1:A:1064:G:C8	2.37	0.58
1:A:1490:C:H5''	1:A:1491:G:OP2	2.03	0.58
1:A:1523:G:C5	1:A:1524:C:C5	2.91	0.58
3:B:92:TYR:CE1	3:B:151:GLY:HA3	2.38	0.58
5:D:63:LYS:HE2	5:D:197:PRO:O	2.04	0.58
6:E:30:ALA:O	6:E:45:PHE:CD1	2.51	0.58
14:M:78:ILE:HG23	14:M:79:LYS:N	2.17	0.58
17:P:21:VAL:HG21	17:P:59:TRP:NE1	2.19	0.58
18:Q:62:SER:OG	18:Q:72:ARG:HG3	2.03	0.58
1:A:1251:A:H4'	10:I:12:GLU:OE1	2.03	0.58
1:A:1266:G:H21	1:A:1270:C:H42	1.50	0.58
4:C:141:VAL:O	4:C:146:ALA:HB2	2.03	0.58
5:D:170:VAL:CG2	5:D:174:LEU:HB2	2.34	0.58
9:H:30:ARG:HG2	9:H:30:ARG:NH1	2.16	0.58
1:A:577:G:H1'	1:A:816:A:N3	2.18	0.58
1:A:604:G:C5	1:A:605:U:C5	2.91	0.58
1:A:1078:U:H5''	1:A:1079:G:OP2	2.04	0.58
5:D:22:LYS:O	5:D:26:CYS:HB2	2.03	0.58
6:E:34:VAL:CG2	6:E:62:ALA:HB1	2.33	0.58
14:M:91:ARG:O	14:M:95:GLY:N	2.32	0.58
14:M:91:ARG:NH1	14:M:96:LEU:HD13	2.19	0.58
1:A:1304:G:H1'	1:A:1333:A:H61	1.67	0.58
1:A:1361:G:H2'	1:A:1361(A):C:H5'	1.84	0.58
1:A:1507:A:H2'	1:A:1508:G:H8	1.69	0.58
4:C:191:THR:HG22	4:C:192:THR:N	2.16	0.58
7:F:50:TYR:CE1	19:R:77:GLY:CA	2.86	0.58
18:Q:13:ASP:C	18:Q:15:MET:H	2.07	0.58
1:A:411:A:C8	1:A:413:G:C8	2.92	0.58
1:A:533:A:C5	1:A:536:C:C4	2.92	0.58
1:A:948:C:N3	1:A:1233:G:N2	2.44	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:72:LYS:O	4:C:74:GLY:N	2.37	0.58
4:C:126:ARG:O	4:C:127:ARG:CB	2.44	0.58
1:A:407:G:O2'	5:D:116:GLN:CG	2.49	0.58
1:A:580:U:H2'	1:A:581:G:O4'	2.03	0.58
1:A:730:G:N2	1:A:765:G:H5''	2.19	0.58
1:A:1152:A:OP1	11:J:68:HIS:CE1	2.57	0.58
1:A:1255:G:C2'	1:A:1279:A:N6	2.67	0.58
7:F:6:VAL:HG12	7:F:7:ASN:N	2.19	0.58
10:I:13:ALA:HB2	10:I:67:GLY:O	2.02	0.58
12:K:80:VAL:CG2	12:K:103:LEU:HD13	2.33	0.58
14:M:96:LEU:CB	14:M:97:PRO:HD2	2.21	0.58
16:O:13:GLN:O	16:O:15:PHE:N	2.37	0.58
6:E:105:VAL:CG1	6:E:132:ALA:HB2	2.33	0.58
12:K:128:ALA:O	12:K:129:SER:HB2	2.03	0.58
14:M:105:THR:O	14:M:107:ALA:N	2.37	0.58
17:P:4:ILE:HA	17:P:20:VAL:O	2.04	0.58
1:A:376:G:C2	1:A:389:A:N1	2.72	0.58
1:A:378:G:H2'	1:A:379:C:C6	2.39	0.58
1:A:492:G:HO3'	1:A:494:G:P	2.25	0.58
1:A:1299:A:C5	1:A:1301:U:O2	2.57	0.58
3:B:102:LEU:CD1	3:B:102:LEU:H	2.16	0.58
5:D:21:LEU:O	5:D:113:SER:HB2	2.04	0.58
5:D:103:ASN:O	5:D:105:VAL:N	2.37	0.58
5:D:104:VAL:CG2	5:D:185:PHE:HD1	2.17	0.58
1:A:437:U:H2'	5:D:123:HIS:HD2	1.69	0.58
1:A:877:C:O2'	9:H:3:THR:HB	2.04	0.58
1:A:981:U:O5'	1:A:981:U:H6	1.87	0.58
3:B:219:VAL:HA	3:B:222:ILE:CD1	2.34	0.58
4:C:6:HIS:NE2	4:C:8:ILE:CG2	2.67	0.58
5:D:61:LYS:CE	5:D:62:GLN:NE2	2.62	0.58
11:J:47:PHE:HD2	15:N:34:TYR:CD2	2.21	0.58
13:L:53:ARG:HD3	13:L:93:LEU:HD21	1.85	0.58
1:A:401:C:C6	1:A:401:C:C3'	2.86	0.57
1:A:883:C:H2'	1:A:884:U:O5'	2.03	0.57
1:A:960:U:O2	1:A:960:U:H2'	2.04	0.57
1:A:1103:C:H5'	3:B:98:LEU:CD2	2.34	0.57
1:A:1141:C:O2'	1:A:1142:G:O4'	2.20	0.57
1:A:1189:C:P	11:J:51:ARG:HH22	2.27	0.57
1:A:1402:C:O2	1:A:1500:A:N1	2.37	0.57
4:C:193:TYR:HE1	4:C:196:LEU:HD21	1.68	0.57
5:D:62:GLN:O	5:D:66:ARG:HB2	2.03	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:43:VAL:HG22	13:L:44:THR:HG23	1.86	0.57
21:T:41:VAL:O	21:T:43:LEU:N	2.36	0.57
21:T:56:MET:O	21:T:59:ALA:HB3	2.04	0.57
1:A:685:G:N2	1:A:686:U:C4	2.72	0.57
1:A:1259:C:O2	1:A:1283:G:H1'	2.03	0.57
1:A:1366:C:O2'	11:J:60:ARG:NH2	2.37	0.57
6:E:20:GLN:O	6:E:21:ALA:C	2.42	0.57
14:M:90:LEU:O	14:M:93:ARG:N	2.37	0.57
16:O:33:THR:CG2	16:O:63:ARG:NH1	2.47	0.57
1:A:99:C:O3'	1:A:101:A:P	2.63	0.57
1:A:390:C:O3'	17:P:28:ARG:NH2	2.37	0.57
1:A:1103:C:C5'	3:B:98:LEU:HD23	2.33	0.57
1:A:1435:G:H2'	1:A:1436:U:C5	2.38	0.57
4:C:68:VAL:HG12	4:C:70:VAL:CG2	2.34	0.57
11:J:46:ARG:HH12	11:J:64:GLU:HB3	1.69	0.57
16:O:76:GLU:O	16:O:77:ARG:C	2.42	0.57
19:R:45:SER:HB2	19:R:49:LYS:HB2	1.85	0.57
1:A:42:G:H1	1:A:400:C:H42	1.52	0.57
1:A:743:U:H2'	1:A:744:C:C6	2.39	0.57
1:A:913:A:O2'	1:A:914:A:OP2	2.22	0.57
1:A:1316:G:N2	1:A:1318:A:H3'	2.19	0.57
1:A:1392:G:H2'	1:A:1393:U:C6	2.39	0.57
1:A:781:A:H5'	1:A:782:A:OP2	2.05	0.57
4:C:173:VAL:O	4:C:173:VAL:HG12	2.05	0.57
6:E:142:LEU:C	6:E:143:ARG:HG2	2.25	0.57
16:O:33:THR:HG23	16:O:63:ARG:HH12	1.60	0.57
1:A:175:C:C2	1:A:176:C:C6	2.92	0.57
1:A:1145:C:H4'	1:A:1146:A:O5'	2.04	0.57
1:A:1157:A:O4'	1:A:1158:C:C2	2.58	0.57
1:A:1365:G:C5	1:A:1366:C:C4	2.92	0.57
6:E:89:ILE:HD12	6:E:121:LYS:O	2.05	0.57
1:A:653:A:H5''	9:H:56:LYS:HD3	1.85	0.57
1:A:1060:C:O2'	1:A:1061:G:C5'	2.45	0.57
1:A:1232:U:H2'	1:A:1233:G:H8	1.70	0.57
6:E:11:ILE:HG13	6:E:31:LEU:HD13	1.87	0.57
9:H:17:THR:HB	9:H:78:GLN:HE22	1.70	0.57
1:A:93:G:H3'	1:A:95:U:OP2	2.04	0.57
1:A:254:G:H4'	18:Q:18:THR:HG21	1.86	0.57
1:A:564:C:O2	1:A:564:C:C2'	2.48	0.57
1:A:1518:A:H2'	1:A:1519:A:C8	2.40	0.57
3:B:208:ILE:O	3:B:210:SER:N	2.38	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:56:ASP:N	4:C:56:ASP:OD1	2.37	0.57
5:D:199:GLN:HA	5:D:199:GLN:NE2	2.19	0.57
8:G:120:ILE:CD1	8:G:120:ILE:N	2.36	0.57
1:A:17:U:H1'	1:A:1080:A:H1'	1.87	0.57
1:A:157:G:N3	1:A:158:G:C8	2.73	0.57
1:A:315:A:H2'	1:A:315:A:O5'	2.05	0.57
1:A:627:G:H2'	1:A:628:G:C8	2.39	0.57
1:A:1153:C:P	11:J:13:HIS:HE2	2.28	0.57
1:A:1195:C:H3'	1:A:1196:U:C5'	2.31	0.57
1:A:1231:G:H2'	1:A:1232:U:H6	1.67	0.57
1:A:1259:C:H42	1:A:1276:G:H1	1.52	0.57
1:A:1349:A:H2'	1:A:1350:A:C8	2.40	0.57
4:C:8:ILE:HG12	4:C:16:ARG:HG2	1.87	0.57
11:J:38:ILE:HB	11:J:72:VAL:H	1.69	0.57
16:O:29:VAL:HG11	16:O:67:LEU:HD21	1.87	0.57
17:P:50:LYS:C	17:P:51:VAL:CG2	2.73	0.57
1:A:153:C:H42	1:A:168:G:H1	1.53	0.57
1:A:313:A:H2'	1:A:314:C:C6	2.39	0.57
1:A:338:A:C2	1:A:339:C:C2	2.93	0.57
1:A:448:A:C6	1:A:487:A:N3	2.73	0.57
1:A:506:G:C6	1:A:507:C:C4	2.93	0.57
1:A:1099:G:H2'	1:A:1100:C:C6	2.40	0.57
3:B:180:LEU:HB2	3:B:182:ILE:HD12	1.87	0.57
3:B:225:ALA:O	3:B:226:ARG:CB	2.53	0.57
5:D:108:LEU:HG	5:D:174:LEU:HD22	1.87	0.57
6:E:137:GLU:HG2	6:E:140:ARG:NH1	2.20	0.57
13:L:55:VAL:HG12	13:L:56:ALA:H	1.68	0.57
19:R:58:LEU:HD13	19:R:62:GLU:HB2	1.87	0.57
1:A:369:C:N3	1:A:370:C:C5	2.73	0.56
1:A:520:A:H5''	1:A:521:G:OP2	2.05	0.56
1:A:1010:G:N1	1:A:1020:U:O2	2.38	0.56
4:C:173:VAL:O	4:C:175:LEU:N	2.34	0.56
11:J:76:ASN:CB	11:J:78:ASN:ND2	2.67	0.56
17:P:6:LEU:HD23	17:P:17:TYR:CD2	2.39	0.56
1:A:124:G:H2'	1:A:125:U:C6	2.39	0.56
1:A:397:A:H3'	1:A:397:A:N3	2.20	0.56
1:A:705:U:H5''	1:A:706:A:OP2	2.05	0.56
1:A:814:A:N7	1:A:816:A:C4	2.73	0.56
1:A:914:A:C2	1:A:915:A:N9	2.73	0.56
1:A:941:G:N1	1:A:942:G:C8	2.73	0.56
3:B:162:ILE:C	3:B:185:ILE:HD12	2.24	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:162:LEU:CD2	5:D:178:VAL:HG12	2.32	0.56
20:S:78:ARG:HH11	20:S:78:ARG:HB3	1.70	0.56
1:A:119:A:H5''	1:A:120:A:H5'	1.86	0.56
1:A:524:G:H2'	1:A:525:C:C6	2.40	0.56
1:A:736:C:H2'	1:A:737:A:H8	1.68	0.56
1:A:946:A:C2	1:A:947:G:C5	2.93	0.56
1:A:961:U:OP1	1:A:1223:C:O2'	2.23	0.56
1:A:1184:G:O2'	1:A:1185:G:H5'	2.05	0.56
1:A:1323:G:H2'	1:A:1324:A:H8	1.65	0.56
1:A:1348:U:C2	1:A:1349:A:C8	2.93	0.56
3:B:78:GLN:O	3:B:94:ASN:OD1	2.24	0.56
5:D:26:CYS:CA	5:D:31:CYS:HB2	2.17	0.56
6:E:77:PRO:HB2	6:E:78:HIS:HD2	1.71	0.56
15:N:26:ARG:HH22	15:N:47:LEU:CD2	2.18	0.56
20:S:78:ARG:HH11	20:S:78:ARG:CB	2.18	0.56
1:A:243:A:C2	1:A:246:A:C8	2.93	0.56
1:A:455:C:H42	1:A:477:G:H1	1.52	0.56
1:A:533:A:O2'	1:A:534:U:H5''	2.05	0.56
1:A:1066:C:C2'	1:A:1067:A:H5'	2.35	0.56
1:A:1305:G:OP2	1:A:1305:G:H8	1.87	0.56
5:D:199:GLN:HG3	5:D:202:LEU:HB2	1.86	0.56
9:H:56:LYS:O	9:H:58:TYR:HD1	1.88	0.56
1:A:166:G:H2'	1:A:167:G:O5'	2.06	0.56
1:A:328:C:H4'	1:A:329:A:C5'	2.35	0.56
1:A:502:G:C2	1:A:503:C:C2	2.93	0.56
1:A:570:G:C2	1:A:571:U:C5	2.94	0.56
1:A:959:A:N1	1:A:1222:G:H4'	2.19	0.56
1:A:1511:G:C6	1:A:1512:U:N3	2.74	0.56
3:B:213:LEU:O	3:B:217:ARG:HG2	2.05	0.56
4:C:131:ARG:O	4:C:132:ARG:C	2.43	0.56
10:I:6:GLY:N	10:I:84:ALA:HB2	2.20	0.56
1:A:279:A:OP2	18:Q:95:TYR:OH	2.22	0.56
1:A:1348:U:H6	1:A:1348:U:H5'	1.71	0.56
5:D:150:GLU:HA	5:D:153:ARG:CB	2.34	0.56
7:F:99:ALA:O	7:F:100:ASN:HB2	2.04	0.56
8:G:15:ASP:CG	8:G:17:VAL:H	2.09	0.56
18:Q:5:VAL:HA	18:Q:59:ILE:O	2.05	0.56
1:A:426:G:H2'	1:A:427:U:O4'	2.06	0.56
1:A:865:A:C2'	1:A:866:C:H5'	2.35	0.56
1:A:1025:U:OP1	1:A:1025:U:H4'	2.03	0.56
1:A:1139:G:H4'	1:A:1140:C:C5'	2.35	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1206:G:C4	1:A:1207:G:C8	2.94	0.56
3:B:212:GLN:O	3:B:213:LEU:C	2.43	0.56
3:B:223:ILE:HG23	3:B:224:GLN:N	2.20	0.56
17:P:78:GLY:C	17:P:80:PHE:H	2.09	0.56
21:T:14:LYS:O	21:T:17:ARG:HB2	2.06	0.56
1:A:55:A:H2'	1:A:56:U:H6	1.70	0.56
1:A:168:G:O2'	1:A:169:C:H5'	2.05	0.56
1:A:696:A:O5'	1:A:696:A:H8	1.89	0.56
1:A:1190:G:O2'	1:A:1191:A:O5'	2.17	0.56
1:A:1499:A:O2'	1:A:1500:A:H5'	2.06	0.56
3:B:85:ALA:O	3:B:88:ALA:O	2.23	0.56
3:B:97:TRP:HH2	3:B:176:GLU:CD	2.09	0.56
5:D:13:ARG:CD	5:D:38:TYR:O	2.51	0.56
1:A:665:A:H2'	1:A:732:C:O2	2.06	0.56
1:A:858:G:N2	1:A:870:U:OP2	2.35	0.56
1:A:949:A:H1'	1:A:1364:U:H3	1.70	0.56
1:A:1017:G:H8	1:A:1017:G:O5'	1.89	0.56
4:C:39:ILE:C	4:C:41:GLY:H	2.09	0.56
9:H:14:ARG:HB3	9:H:14:ARG:NH1	2.20	0.56
14:M:8:GLU:C	14:M:9:ILE:HG13	2.25	0.56
1:A:40:C:H5''	1:A:41:G:OP2	2.06	0.56
1:A:200:G:H5'	1:A:200:G:C8	2.41	0.56
1:A:690:G:H2'	1:A:691:G:O4'	2.05	0.56
1:A:1148:U:OP1	10:I:7:THR:HG21	2.06	0.56
1:A:1235:U:C6	1:A:1235:U:C3'	2.87	0.56
3:B:44:LEU:O	3:B:47:THR:HB	2.05	0.56
21:T:29:LYS:O	21:T:32:ALA:HB3	2.06	0.56
1:A:148:G:N3	1:A:149:A:C8	2.75	0.55
1:A:160:A:C6	1:A:346:G:O6	2.60	0.55
1:A:267:C:C2'	1:A:268:C:H5'	2.36	0.55
1:A:408:A:H3'	1:A:408:A:C8	2.41	0.55
1:A:1218:C:H2'	1:A:1219:U:C6	2.40	0.55
5:D:206:PHE:CD1	5:D:206:PHE:O	2.59	0.55
6:E:35:GLY:N	6:E:112:LEU:HD13	2.21	0.55
7:F:97:PHE:CB	19:R:32:ARG:HH21	2.19	0.55
1:A:193:C:C2	1:A:194:C:C5	2.93	0.55
1:A:375:U:H2'	1:A:376:G:C8	2.41	0.55
1:A:646:U:H2'	1:A:647:C:C6	2.41	0.55
1:A:1103:C:H5''	3:B:98:LEU:CD2	2.36	0.55
3:B:104:ASN:OD1	3:B:107:THR:OG1	2.24	0.55
5:D:120:LEU:HD23	5:D:125:HIS:HB2	1.87	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:13:ILE:CD1	6:E:13:ILE:O	2.54	0.55
8:G:115:ARG:HB3	8:G:118:VAL:HG23	1.86	0.55
9:H:20:TYR:HD1	9:H:65:TYR:CE2	2.24	0.55
9:H:86:ILE:HG21	9:H:133:LEU:HB3	1.88	0.55
16:O:78:TYR:O	16:O:79:ARG:C	2.44	0.55
18:Q:74:LEU:HD23	18:Q:74:LEU:C	2.26	0.55
1:A:60:A:H5'	1:A:60:A:C8	2.41	0.55
1:A:252:U:H2'	1:A:253:U:C5	2.41	0.55
1:A:346:G:H2'	1:A:347:G:O4'	2.06	0.55
1:A:500:G:H22	1:A:546:G:H1'	1.66	0.55
1:A:706:A:C5	1:A:707:C:C5	2.94	0.55
1:A:1350:A:C2	1:A:1351:U:C2	2.93	0.55
5:D:65:ARG:O	5:D:66:ARG:C	2.43	0.55
11:J:63:PHE:HD2	15:N:57:ARG:O	1.90	0.55
18:Q:58:GLU:C	18:Q:59:ILE:HD13	2.27	0.55
1:A:281:G:O2'	1:A:282:A:OP2	2.18	0.55
1:A:761:G:H2'	1:A:762:C:C6	2.42	0.55
1:A:836:G:C6	1:A:851:G:C5	2.95	0.55
1:A:959:A:C3'	1:A:960:U:H5''	2.37	0.55
1:A:1088:G:H8	1:A:1088:G:O5'	1.89	0.55
1:A:1229:A:H2'	1:A:1230:C:H6	1.72	0.55
1:A:1240:U:H3	8:G:30:ILE:CG2	2.19	0.55
1:A:1346:A:O4'	1:A:1348:U:C6	2.59	0.55
1:A:1385:G:H2'	1:A:1386:G:O4'	2.06	0.55
3:B:166:ASP:OD1	3:B:205:ASP:HB2	2.05	0.55
8:G:37:ASN:HD21	10:I:41:VAL:HG23	1.70	0.55
11:J:78:ASN:O	11:J:80:LYS:N	2.39	0.55
14:M:122:LYS:O	14:M:123:ALA:HB2	2.06	0.55
18:Q:9:VAL:O	18:Q:11:VAL:HG13	2.05	0.55
18:Q:59:ILE:HG23	18:Q:71:PHE:HB3	1.89	0.55
1:A:590:C:OP1	9:H:30:ARG:N	2.36	0.55
1:A:668:G:O2'	16:O:46:HIS:HB3	2.07	0.55
1:A:937:A:H5''	1:A:938:A:OP2	2.07	0.55
1:A:1269:A:N1	1:A:1312:G:O2'	2.35	0.55
7:F:5:GLU:HG2	7:F:62:TRP:CZ2	2.41	0.55
7:F:62:TRP:C	7:F:63:TYR:CD2	2.77	0.55
13:L:35:GLY:O	13:L:83:VAL:HG12	2.07	0.55
13:L:102:ARG:HH11	13:L:110:VAL:HG22	1.72	0.55
14:M:10:PRO:HB2	14:M:18:ALA:HB1	1.88	0.55
19:R:59:SER:HB3	19:R:62:GLU:CD	2.26	0.55
1:A:434:U:H2'	1:A:435:C:C6	2.42	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:58:ALA:O	6:E:59:GLY:C	2.45	0.55
10:I:46:ALA:HB2	10:I:74:ILE:HG23	1.89	0.55
13:L:87:GLY:N	13:L:98:TYR:HB3	2.17	0.55
1:A:200:G:C8	1:A:200:G:H3'	2.41	0.55
1:A:261:U:O2	1:A:263:A:C8	2.60	0.55
1:A:949:A:C2	1:A:1233:G:C4	2.94	0.55
1:A:1352:C:H2'	1:A:1353:G:C8	2.41	0.55
4:C:14:ILE:O	4:C:14:ILE:HG22	2.06	0.55
6:E:47:LYS:O	6:E:48:ALA:HB2	2.07	0.55
8:G:108:ALA:C	8:G:110:GLN:H	2.09	0.55
10:I:7:THR:O	10:I:7:THR:HG22	2.06	0.55
11:J:61:GLU:HG2	11:J:62:HIS:H	1.71	0.55
1:A:200:G:C8	1:A:200:G:C3'	2.89	0.55
1:A:1124:G:H21	1:A:1126:U:H3	1.53	0.55
3:B:51:LEU:HD23	3:B:55:PHE:CE1	2.42	0.55
5:D:64:LEU:HD11	5:D:97:LEU:HD11	1.85	0.55
5:D:190:ASP:O	5:D:193:ASP:N	2.40	0.55
12:K:123:LYS:C	12:K:125:PHE:H	2.10	0.55
18:Q:12:SER:HB3	18:Q:20:THR:CB	2.37	0.55
1:A:181:G:N1	1:A:195:A:C8	2.75	0.55
1:A:636:U:H5''	1:A:637:G:OP2	2.07	0.55
1:A:668:G:H8	1:A:668:G:O5'	1.90	0.55
1:A:755:G:H1'	9:H:1:MET:HE3	1.89	0.55
1:A:1472:U:O5'	1:A:1472:U:H6	1.90	0.55
3:B:30:ARG:HG3	3:B:31:TYR:CD2	2.42	0.55
3:B:105:PHE:C	3:B:105:PHE:CD2	2.78	0.55
10:I:41:VAL:O	10:I:44:VAL:HG21	2.07	0.55
15:N:29:ARG:HB2	15:N:40:CYS:HB3	1.89	0.55
1:A:552:U:H2'	1:A:553:A:O4'	2.07	0.55
1:A:645:C:H2'	1:A:645:C:O2	2.05	0.55
1:A:915:A:N7	1:A:916:G:C8	2.75	0.55
1:A:1521:G:N1	1:A:1522:U:C2	2.75	0.55
12:K:53:SER:O	12:K:55:LYS:N	2.40	0.55
21:T:74:LYS:CG	21:T:75:ASN:N	2.70	0.55
1:A:79:G:H2'	1:A:79:G:N3	2.22	0.54
1:A:570:G:C2	1:A:571:U:C4	2.95	0.54
1:A:977:A:O2'	1:A:978:A:C5'	2.54	0.54
1:A:1107:C:H3'	1:A:1107:C:C6	2.41	0.54
1:A:1443:G:O5'	1:A:1443:G:H8	1.90	0.54
3:B:82:ARG:HA	3:B:92:TYR:CD2	2.42	0.54
3:B:173:ALA:O	3:B:176:GLU:HB2	2.07	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:174:VAL:O	3:B:176:GLU:N	2.40	0.54
5:D:127:THR:HG23	5:D:147:ALA:HB3	1.88	0.54
8:G:37:ASN:ND2	10:I:41:VAL:HG23	2.21	0.54
9:H:6:ILE:O	9:H:10:LEU:HG	2.06	0.54
4:C:156:ARG:N	4:C:196:LEU:HD22	2.22	0.54
7:F:63:TYR:O	7:F:65:VAL:HG13	2.07	0.54
9:H:86:ILE:HG22	9:H:87:SER:N	2.21	0.54
9:H:104:ARG:O	9:H:105:ARG:C	2.45	0.54
11:J:16:LEU:HD22	11:J:94:VAL:CG1	2.37	0.54
11:J:51:ARG:HG2	15:N:45:ARG:NH1	2.23	0.54
13:L:41:ARG:HD2	13:L:42:THR:O	2.07	0.54
21:T:41:VAL:O	21:T:44:ALA:N	2.40	0.54
1:A:296:U:O2'	1:A:297:G:H5'	2.07	0.54
1:A:437:U:H2'	1:A:437:U:O2	2.07	0.54
1:A:658:G:H2'	1:A:659:U:C6	2.42	0.54
1:A:922:G:C6	1:A:923:A:C6	2.96	0.54
1:A:1053:G:HO2'	1:A:1054:C:P	2.30	0.54
1:A:1055:A:N7	1:A:1206:G:C2	2.75	0.54
1:A:1112:C:O2	4:C:179:ARG:HB3	2.07	0.54
1:A:1129:C:P	1:A:1130:A:H8	2.30	0.54
6:E:91:LEU:HD23	6:E:120:THR:CG2	2.37	0.54
9:H:63:LEU:HD22	9:H:63:LEU:H	1.72	0.54
11:J:50:ILE:N	11:J:60:ARG:HA	2.23	0.54
14:M:15:VAL:HG23	14:M:41:PRO:O	2.08	0.54
1:A:247:G:C6	1:A:278:G:C2	2.96	0.54
1:A:260:G:H2'	1:A:261:U:C6	2.42	0.54
1:A:353:A:C2'	1:A:354:G:OP2	2.55	0.54
1:A:602:A:N3	1:A:637:G:C2	2.76	0.54
1:A:776:G:N2	1:A:802:A:OP2	2.31	0.54
1:A:978:A:O2'	1:A:1322:C:N3	2.33	0.54
1:A:992:U:OP2	1:A:992:U:C6	2.49	0.54
1:A:1092:A:C5'	1:A:1092:A:C8	2.90	0.54
3:B:25:ASN:C	3:B:25:ASN:ND2	2.56	0.54
5:D:59:ARG:NE	5:D:59:ARG:HA	2.22	0.54
7:F:48:LEU:HD13	7:F:52:ILE:HD12	1.89	0.54
8:G:56:GLN:HE21	8:G:56:GLN:N	2.01	0.54
14:M:81:LEU:HD23	14:M:81:LEU:N	2.20	0.54
1:A:977:A:C2'	1:A:978:A:H5''	2.37	0.54
1:A:1525:G:C8	1:A:1525:G:C3'	2.90	0.54
1:A:1530:G:H4'	1:A:1530:G:OP1	2.07	0.54
3:B:187:LEU:CD2	3:B:201:ILE:HG22	2.38	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:11:ILE:HG12	6:E:31:LEU:HB3	1.89	0.54
11:J:53:PRO:HA	15:N:41:ARG:HH21	1.72	0.54
13:L:61:THR:C	13:L:63:GLY:H	2.10	0.54
21:T:33:ILE:HD12	21:T:33:ILE:H	1.72	0.54
1:A:292:G:H8	1:A:292:G:O5'	1.91	0.54
1:A:486:U:H2'	1:A:486:U:O2	2.07	0.54
1:A:705:U:H3'	1:A:706:A:C8	2.43	0.54
1:A:707:C:C4'	12:K:20:TYR:CD2	2.86	0.54
1:A:976:G:H5'	1:A:977:A:OP1	2.06	0.54
1:A:990:C:N3	1:A:1216:G:C2	2.75	0.54
1:A:1150:U:O2	1:A:1150:U:H2'	2.07	0.54
1:A:1227:A:C2'	1:A:1228:C:O5'	2.56	0.54
3:B:16:HIS:CD2	3:B:204:ASN:HB2	2.42	0.54
6:E:79:GLU:O	9:H:104:ARG:NH1	2.41	0.54
7:F:9:VAL:HG13	7:F:60:PHE:CD2	2.43	0.54
10:I:8:GLY:HA2	10:I:79:LEU:HD22	1.90	0.54
1:A:255:G:H2'	1:A:256:U:C6	2.42	0.54
1:A:357:G:C2	1:A:358:U:C4	2.96	0.54
1:A:1228:C:H2'	1:A:1229:A:H8	1.73	0.54
1:A:1237:C:O2	1:A:1334:G:O2'	2.24	0.54
4:C:35:GLU:O	4:C:36:ASP:C	2.46	0.54
7:F:94:GLN:HB2	19:R:32:ARG:HD3	1.89	0.54
11:J:38:ILE:HG22	11:J:71:LEU:HB2	1.88	0.54
13:L:76:ASN:HD21	13:L:107:ALA:HA	1.73	0.54
14:M:19:LEU:O	14:M:22:ILE:CD1	2.56	0.54
14:M:73:GLU:O	14:M:76:ALA:HB3	2.07	0.54
17:P:43:LYS:HB3	17:P:48:TRP:CG	2.43	0.54
18:Q:83:ASP:O	18:Q:86:GLU:HB2	2.07	0.54
5:D:36:ARG:HB2	5:D:38:TYR:CE1	2.42	0.54
10:I:97:LYS:O	10:I:100:GLY:N	2.41	0.54
13:L:27:LEU:C	13:L:29:GLY:N	2.57	0.54
20:S:5:LEU:O	20:S:6:LYS:CB	2.55	0.54
1:A:941:G:C2	1:A:942:G:C8	2.95	0.54
3:B:132:LYS:HA	3:B:135:GLN:HB2	1.89	0.54
4:C:122:GLU:O	4:C:125:GLU:N	2.39	0.54
6:E:75:THR:HG23	6:E:76:ILE:N	2.22	0.54
1:A:193:C:H2'	1:A:194:C:H6	1.71	0.54
1:A:395:C:O2	1:A:395:C:H2'	2.06	0.54
1:A:663:A:H2'	1:A:664:G:O4'	2.08	0.54
1:A:691:G:C8	1:A:691:G:H3'	2.43	0.54
1:A:740:U:H6	1:A:740:U:H5''	1.73	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:854:G:N1	1:A:855:G:C8	2.76	0.54
1:A:939:G:C6	1:A:940:C:N4	2.76	0.54
1:A:1055:A:C6	1:A:1056:U:C6	2.96	0.54
1:A:1230:C:O2	1:A:1230:C:H2'	2.07	0.54
1:A:1366:C:C2'	1:A:1367:C:C6	2.90	0.54
1:A:1496:C:H2'	1:A:1497:G:C8	2.43	0.54
3:B:215:LEU:O	3:B:218:ALA:HB3	2.08	0.54
7:F:8:ILE:HB	7:F:61:LEU:HB2	1.90	0.54
10:I:19:LEU:HD22	10:I:59:PHE:CD2	2.42	0.54
13:L:45:PRO:HB3	13:L:92:ASP:HB3	1.90	0.54
1:A:20:U:H1'	1:A:916:G:N2	2.22	0.53
1:A:369:C:C2	1:A:370:C:C5	2.96	0.53
1:A:440:A:O3'	1:A:442:C:P	2.65	0.53
1:A:444:C:N3	1:A:491:G:C2	2.76	0.53
1:A:622:A:C8	1:A:623:C:C5	2.96	0.53
1:A:795:C:C5'	1:A:796:C:OP2	2.48	0.53
1:A:869:G:H5''	1:A:870:U:OP1	2.07	0.53
1:A:1236:A:H4'	1:A:1304:G:H4'	1.90	0.53
1:A:1255:G:H3'	1:A:1279:A:H61	1.72	0.53
1:A:1306:A:C4	1:A:1307:U:C6	2.96	0.53
1:A:1413:A:H2	1:A:1487:G:H22	1.56	0.53
1:A:1473:A:H2'	1:A:1474:G:O4'	2.08	0.53
4:C:131:ARG:O	4:C:134:ILE:HD12	2.07	0.53
11:J:39:PRO:HA	11:J:70:ARG:NH2	2.23	0.53
18:Q:53:LEU:HG	18:Q:54:GLY:N	2.23	0.53
1:A:14:U:O2	1:A:17:U:H5	1.90	0.53
1:A:275:G:H5''	1:A:275:G:H8	1.71	0.53
1:A:515:G:C4	1:A:516:U:C6	2.96	0.53
1:A:570:G:H1'	1:A:820:U:C4	2.44	0.53
1:A:751:U:H1'	16:O:23:GLY:O	2.07	0.53
1:A:958:A:C6	20:S:55:LYS:HB2	2.42	0.53
1:A:1186:G:H5''	1:A:1187:G:OP2	2.08	0.53
1:A:1205:U:H1'	4:C:195:VAL:HG22	1.89	0.53
1:A:1213:A:C2	1:A:1215:G:C8	2.96	0.53
3:B:24:TRP:CD1	3:B:24:TRP:C	2.82	0.53
3:B:166:ASP:CG	3:B:205:ASP:HB2	2.29	0.53
19:R:58:LEU:HD13	19:R:62:GLU:CB	2.38	0.53
21:T:74:LYS:HG3	21:T:75:ASN:N	2.21	0.53
1:A:90:U:C6	1:A:90:U:C3'	2.91	0.53
1:A:376:G:C2	1:A:389:A:C2	2.96	0.53
1:A:726:C:H2'	1:A:727:G:H8	1.72	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1202:G:H8	1:A:1202:G:OP1	1.91	0.53
1:A:1208:C:H2'	1:A:1209:C:H6	1.73	0.53
5:D:116:GLN:O	5:D:120:LEU:HB2	2.08	0.53
6:E:41:VAL:HG22	6:E:113:ALA:HA	1.91	0.53
14:M:16:ASP:N	14:M:16:ASP:OD1	2.40	0.53
1:A:1347:G:C5	10:I:107:ARG:NH1	2.76	0.53
6:E:80:ILE:HA	9:H:104:ARG:HH12	1.74	0.53
8:G:56:GLN:H	8:G:56:GLN:NE2	2.02	0.53
10:I:3:GLN:HG3	10:I:20:ARG:HE	1.73	0.53
14:M:15:VAL:O	14:M:19:LEU:HG	2.09	0.53
14:M:30:ALA:O	14:M:32:GLU:N	2.42	0.53
17:P:10:GLY:HA3	17:P:14:ASN:O	2.09	0.53
19:R:43:PHE:C	19:R:51:LEU:HD12	2.28	0.53
20:S:51:VAL:HG23	20:S:60:VAL:HG23	1.90	0.53
1:A:1075:C:H2'	1:A:1076:C:H5'	1.89	0.53
7:F:6:VAL:HB	7:F:63:TYR:HB2	1.89	0.53
7:F:87:ARG:HD2	19:R:76:LEU:HA	1.91	0.53
9:H:87:SER:HB2	9:H:133:LEU:O	2.08	0.53
9:H:116:LYS:HD2	9:H:129:VAL:HG21	1.89	0.53
1:A:408:A:H5'	5:D:116:GLN:HG3	1.90	0.53
1:A:426:G:OP1	5:D:38:TYR:OH	2.22	0.53
1:A:652:U:C5	1:A:752:G:C4	2.97	0.53
1:A:880:C:H2'	1:A:881:G:C8	2.41	0.53
1:A:1345:U:C4	1:A:1377:A:C2	2.97	0.53
1:A:1523:G:H2'	1:A:1524:C:C6	2.37	0.53
4:C:180:ALA:CB	4:C:182:ILE:CD1	2.86	0.53
5:D:120:LEU:HD22	5:D:126:ILE:HD11	1.90	0.53
8:G:41:ARG:O	8:G:44:TYR:N	2.41	0.53
9:H:103:VAL:HG21	9:H:109:ILE:O	2.08	0.53
11:J:12:ASP:OD2	11:J:15:THR:N	2.36	0.53
12:K:44:SER:H	12:K:47:VAL:HB	1.74	0.53
13:L:43:VAL:HG13	13:L:44:THR:N	2.20	0.53
1:A:427:U:H4'	1:A:541:G:H5''	1.89	0.53
1:A:1075:C:H5'	3:B:103:THR:HG21	1.90	0.53
1:A:1152:A:P	11:J:68:HIS:CE1	3.02	0.53
1:A:1216:G:C2	1:A:1217:C:C4	2.97	0.53
3:B:71:VAL:O	3:B:165:VAL:HG22	2.09	0.53
4:C:101:LEU:HD23	4:C:102:ASN:H	1.72	0.53
6:E:91:LEU:CD2	6:E:120:THR:HG23	2.39	0.53
8:G:91:VAL:HG12	8:G:96:GLN:HE21	1.73	0.53
1:A:378:G:C6	1:A:379:C:N4	2.77	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:781:A:C4	1:A:802:A:C2	2.96	0.53
1:A:899:C:O5'	1:A:899:C:H6	1.91	0.53
1:A:1151:A:H5'	11:J:41:PRO:HA	1.90	0.53
1:A:1152:A:H4'	11:J:13:HIS:HD2	1.73	0.53
1:A:1288:A:N3	1:A:1353:G:H1'	2.23	0.53
5:D:25:ARG:C	5:D:27:TYR:N	2.62	0.53
5:D:59:ARG:HA	5:D:59:ARG:HE	1.73	0.53
5:D:79:PHE:O	5:D:80:GLU:C	2.46	0.53
6:E:59:GLY:O	6:E:62:ALA:CB	2.54	0.53
8:G:120:ILE:HG22	8:G:124:LEU:HD12	1.91	0.53
9:H:29:SER:HB3	9:H:32:LYS:HB2	1.90	0.53
9:H:87:SER:HA	9:H:93:VAL:HG23	1.89	0.53
10:I:64:THR:HG23	10:I:65:VAL:N	2.24	0.53
14:M:23:TYR:HB2	14:M:67:GLU:OE2	2.09	0.53
1:A:19:C:H2'	1:A:20:U:H6	1.73	0.53
1:A:1003(A):G:C2'	1:A:1004:A:H4'	2.32	0.53
1:A:1063:C:H2'	1:A:1064:G:H8	1.74	0.53
1:A:1096:C:C4	1:A:1097:C:C5	2.97	0.53
3:B:51:LEU:HD23	3:B:55:PHE:HE1	1.72	0.53
4:C:3:ASN:ND2	4:C:3:ASN:H	2.06	0.53
5:D:67:ILE:CG2	5:D:68:TYR:CD1	2.91	0.53
5:D:128:VAL:O	5:D:129:ASN:HB2	2.08	0.53
6:E:91:LEU:CD2	6:E:120:THR:CG2	2.86	0.53
6:E:139:LEU:C	6:E:141:GLN:N	2.59	0.53
8:G:28:ASN:ND2	8:G:28:ASN:H	2.06	0.53
17:P:21:VAL:HG12	17:P:33:ILE:HD12	1.90	0.53
1:A:414:A:H2'	1:A:415:A:O4'	2.09	0.53
1:A:642:A:N3	9:H:113:SER:OG	2.41	0.53
1:A:1003(A):G:N2	1:A:1039:C:C2	2.77	0.53
1:A:1056:U:O2	1:A:1057:G:C8	2.62	0.53
3:B:167:PRO:HG2	3:B:192:SER:HB2	1.90	0.53
8:G:92:SER:O	8:G:93:PRO:C	2.48	0.53
13:L:61:THR:O	13:L:63:GLY:N	2.42	0.53
1:A:66:G:C6	1:A:67:C:C5	2.98	0.52
1:A:915:A:H2'	1:A:916:G:H5'	1.91	0.52
1:A:959:A:C2	1:A:1222:G:C4'	2.92	0.52
5:D:24:GLU:O	5:D:27:TYR:HB3	2.09	0.52
5:D:58:LEU:HD23	5:D:58:LEU:C	2.29	0.52
6:E:13:ILE:HA	6:E:29:GLY:O	2.08	0.52
7:F:53:ALA:C	7:F:54:LYS:HG2	2.28	0.52
10:I:111:ARG:HH11	10:I:111:ARG:CB	2.21	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:49:VAL:HG13	15:N:41:ARG:HD2	1.90	0.52
12:K:19:ALA:CB	12:K:80:VAL:HG11	2.30	0.52
20:S:52:TYR:CD1	20:S:56:GLN:O	2.62	0.52
1:A:19:C:C2	1:A:20:U:C6	2.98	0.52
1:A:453:A:C2	1:A:454:C:C2	2.96	0.52
1:A:826:C:C2	1:A:827:U:C5	2.97	0.52
1:A:1266:G:N2	1:A:1270:C:H42	2.07	0.52
1:A:1346:A:C8	1:A:1348:U:N3	2.78	0.52
3:B:101:MET:CG	3:B:108:ILE:HD12	2.38	0.52
3:B:189:ASP:OD1	3:B:205:ASP:HB3	2.09	0.52
5:D:138:TYR:C	5:D:138:TYR:HD2	2.12	0.52
9:H:14:ARG:HH11	9:H:14:ARG:CG	2.21	0.52
11:J:12:ASP:OD1	11:J:13:HIS:N	2.43	0.52
1:A:171:A:H2'	1:A:172:A:O4'	2.09	0.52
1:A:247:G:H4'	1:A:247:G:OP1	2.09	0.52
1:A:933:G:H5''	1:A:934:C:OP2	2.10	0.52
1:A:1438:G:C2	1:A:1464:G:C2	2.97	0.52
3:B:101:MET:HG2	3:B:108:ILE:CD1	2.38	0.52
8:G:96:GLN:O	8:G:97:GLN:C	2.47	0.52
8:G:105:VAL:O	8:G:108:ALA:HB3	2.09	0.52
17:P:4:ILE:O	17:P:5:ARG:HB3	2.08	0.52
1:A:78:G:N2	1:A:79:G:H1'	2.24	0.52
1:A:152:A:C6	1:A:170:U:O2	2.63	0.52
1:A:451:A:O5'	1:A:451:A:C8	2.60	0.52
1:A:837:G:C2	1:A:850:U:O2	2.62	0.52
1:A:865:A:H2'	1:A:866:C:C6	2.44	0.52
1:A:924:C:H5'	1:A:1399:C:OP2	2.10	0.52
1:A:1394:A:C5	1:A:1501:C:H4'	2.44	0.52
4:C:131:ARG:HG3	4:C:135:LYS:NZ	2.24	0.52
4:C:199:LYS:HB3	4:C:201:TYR:HE1	1.75	0.52
5:D:199:GLN:CA	5:D:199:GLN:HE21	2.22	0.52
10:I:50:LEU:HD23	10:I:56:LEU:H	1.74	0.52
12:K:73:MET:HE3	12:K:102:GLY:HA3	1.92	0.52
13:L:86:ARG:HH11	13:L:86:ARG:CG	2.12	0.52
21:T:72:LEU:HB3	21:T:76:ALA:HB3	1.90	0.52
1:A:166:G:C2	1:A:167:G:C8	2.98	0.52
1:A:166:G:C2'	1:A:167:G:O5'	2.58	0.52
1:A:374:A:C5	1:A:375:U:C5	2.98	0.52
1:A:393:A:C2	1:A:394:G:C8	2.97	0.52
1:A:640:A:C2'	1:A:641:U:H5'	2.39	0.52
1:A:1149:C:H5''	1:A:1150:U:OP2	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:83:ARG:HG2	4:C:86:VAL:HG12	1.91	0.52
9:H:31:PHE:O	9:H:32:LYS:C	2.48	0.52
14:M:10:PRO:HB3	14:M:21:TYR:HD1	1.74	0.52
14:M:109:THR:HG23	14:M:110:ARG:N	2.24	0.52
15:N:53:LEU:CD1	15:N:56:VAL:HG21	2.38	0.52
19:R:55:ARG:HB3	19:R:55:ARG:NH1	2.25	0.52
20:S:52:TYR:HA	20:S:56:GLN:O	2.10	0.52
1:A:53:A:H61	1:A:358:U:H3	1.58	0.52
1:A:223:U:H5'	21:T:68:LYS:NZ	2.25	0.52
1:A:255:G:O2'	1:A:256:U:H5'	2.09	0.52
1:A:818:G:N2	1:A:820:U:C2	2.77	0.52
1:A:1096:C:N3	1:A:1097:C:C5	2.78	0.52
1:A:1144:G:C8	1:A:1144:G:H3'	2.44	0.52
1:A:1502:A:C2'	1:A:1502:A:N3	2.72	0.52
6:E:30:ALA:O	6:E:45:PHE:HA	2.09	0.52
11:J:32:ALA:HB2	11:J:76:ASN:HD22	1.75	0.52
15:N:24:CYS:CB	15:N:29:ARG:H	2.23	0.52
1:A:116:A:H2'	1:A:117:G:H8	1.75	0.52
1:A:256:U:H2'	1:A:257:G:H5'	1.91	0.52
1:A:978:A:C4	1:A:1319:A:C2	2.97	0.52
1:A:1010:G:H2'	1:A:1011:G:H8	1.72	0.52
1:A:1123:A:O3'	11:J:36:GLY:HA3	2.09	0.52
1:A:1129:C:H4'	1:A:1130:A:OP2	2.09	0.52
1:A:1402:C:H2'	1:A:1403:C:H6	1.75	0.52
3:B:106:LYS:O	3:B:109:SER:OG	2.28	0.52
10:I:11:LYS:N	10:I:104:ARG:HH21	2.08	0.52
10:I:114:TYR:CE1	11:J:60:ARG:HB2	2.42	0.52
19:R:37:VAL:O	19:R:39:VAL:N	2.43	0.52
1:A:819:A:H4'	1:A:820:U:OP2	2.10	0.52
1:A:1095:U:H2'	1:A:1096:C:C6	2.45	0.52
1:A:1430:C:C2	1:A:1471:G:N2	2.78	0.52
3:B:102:LEU:N	3:B:102:LEU:HD12	2.24	0.52
1:A:403:C:H2'	1:A:404:U:H6	1.74	0.52
1:A:781:A:C8	1:A:802:A:C2	2.98	0.52
1:A:1107:C:C4	1:A:1108:G:C8	2.98	0.52
1:A:1366:C:C2'	1:A:1367:C:H6	2.16	0.52
3:B:102:LEU:HB2	3:B:176:GLU:OE1	2.10	0.52
3:B:180:LEU:HB2	3:B:182:ILE:CD1	2.39	0.52
5:D:199:GLN:HE21	5:D:199:GLN:C	2.13	0.52
6:E:15:ARG:O	6:E:16:THR:C	2.48	0.52
10:I:118:LYS:O	10:I:119:ALA:CB	2.58	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:25:PRO:C	13:L:27:LEU:N	2.63	0.52
13:L:53:ARG:HD3	13:L:93:LEU:CD2	2.39	0.52
18:Q:7:THR:O	18:Q:23:VAL:HG23	2.10	0.52
18:Q:78:GLU:OE1	18:Q:81:ARG:HD3	2.09	0.52
21:T:41:VAL:C	21:T:43:LEU:N	2.63	0.52
1:A:397:A:C6	1:A:548:G:N7	2.78	0.52
1:A:437:U:H3	1:A:496:A:H62	1.58	0.52
1:A:664:G:H22	1:A:741:G:H1	1.57	0.52
4:C:131:ARG:CG	4:C:135:LYS:NZ	2.73	0.52
6:E:144:THR:O	6:E:147:ASP:N	2.43	0.52
13:L:56:ALA:HB2	13:L:70:ILE:HD11	1.92	0.52
14:M:5:ALA:CB	14:M:22:ILE:HG21	2.40	0.52
1:A:54:C:H42	1:A:357:G:H1	1.58	0.51
1:A:937:A:N6	1:A:1345:U:O4	2.43	0.51
2:Z:4:U:H2'	2:Z:5:C:H6	1.75	0.51
3:B:76:GLN:NE2	3:B:207:ALA:H	2.07	0.51
8:G:27:ILE:CG2	8:G:40:ALA:HA	2.40	0.51
14:M:49:THR:C	14:M:51:ALA:H	2.13	0.51
5:D:3:ARG:HG2	5:D:118:ARG:CZ	2.40	0.51
11:J:3:LYS:N	11:J:75:ILE:HA	2.25	0.51
18:Q:62:SER:CB	18:Q:72:ARG:HG3	2.40	0.51
1:A:590:C:N3	1:A:650:G:C2	2.78	0.51
1:A:691:G:O2'	1:A:797:C:H4'	2.10	0.51
1:A:786:G:C2	1:A:797:C:C2	2.99	0.51
1:A:989:C:O2'	1:A:990:C:H5'	2.11	0.51
1:A:1137:C:H4'	1:A:1138:G:N2	2.26	0.51
1:A:1247:U:H3'	1:A:1247:U:H6	1.76	0.51
3:B:167:PRO:HG3	3:B:188:ALA:CB	2.40	0.51
6:E:144:THR:O	6:E:145:LYS:C	2.47	0.51
9:H:24:THR:HG22	9:H:63:LEU:HD21	1.91	0.51
11:J:7:LYS:O	11:J:96:ILE:HA	2.11	0.51
17:P:74:LEU:N	17:P:74:LEU:HD23	2.24	0.51
20:S:71:LEU:HD22	20:S:72:GLY:N	2.24	0.51
1:A:69:G:H2'	1:A:70:G:H8	1.76	0.51
1:A:615:C:C6	1:A:615:C:H3'	2.45	0.51
1:A:714:G:H2'	1:A:715:A:C8	2.45	0.51
1:A:1056:U:O2	1:A:1056:U:H2'	2.10	0.51
1:A:1192:C:H2'	1:A:1193:G:O4'	2.09	0.51
1:A:1435:G:C4	1:A:1436:U:C5	2.98	0.51
3:B:44:LEU:O	3:B:47:THR:CB	2.58	0.51
4:C:19:GLU:HB3	4:C:40:ARG:HH22	1.75	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:41:ARG:HB2	9:H:41:ARG:CZ	2.40	0.51
9:H:104:ARG:C	9:H:106:GLY:N	2.63	0.51
9:H:121:ASP:O	9:H:125:ARG:HB2	2.11	0.51
12:K:122:LYS:O	12:K:123:LYS:C	2.48	0.51
16:O:46:HIS:C	16:O:48:LYS:N	2.58	0.51
20:S:5:LEU:O	20:S:6:LYS:HB2	2.09	0.51
21:T:75:ASN:O	21:T:76:ALA:C	2.47	0.51
1:A:9:G:OP2	6:E:121:LYS:NZ	2.38	0.51
1:A:115:G:H1'	1:A:116:A:N7	2.25	0.51
1:A:362:G:OP1	13:L:61:THR:HG22	2.10	0.51
1:A:416:G:H2'	1:A:417:C:O4'	2.10	0.51
1:A:533:A:O2'	1:A:535:A:OP2	2.27	0.51
1:A:592:G:C2	1:A:648:A:C2	2.98	0.51
1:A:656:C:C6	1:A:656:C:C3'	2.94	0.51
4:C:53:ALA:O	4:C:54:ARG:HB2	2.09	0.51
6:E:51:VAL:O	6:E:54:ALA:N	2.38	0.51
9:H:4:ASP:OD2	9:H:85:ARG:NH1	2.44	0.51
10:I:47:LEU:C	10:I:49:PRO:CD	2.74	0.51
11:J:44:VAL:HG22	11:J:66:ARG:HB3	1.93	0.51
13:L:93:LEU:O	13:L:96:VAL:CG2	2.58	0.51
20:S:83:HIS:N	20:S:83:HIS:HD2	2.07	0.51
1:A:141:A:H1'	1:A:182:U:O2	2.11	0.51
1:A:223:U:H5'	21:T:68:LYS:HZ1	1.75	0.51
1:A:437:U:H5'	5:D:155:LEU:HD11	1.91	0.51
1:A:488:C:O5'	1:A:488:C:H6	1.93	0.51
1:A:1208:C:N3	1:A:1209:C:C5	2.79	0.51
15:N:32:SER:CB	15:N:41:ARG:HB3	2.40	0.51
16:O:74:ASP:C	16:O:76:GLU:H	2.13	0.51
19:R:47:THR:HG22	19:R:83:GLU:O	2.11	0.51
1:A:511:C:C4	1:A:512:U:O4	2.63	0.51
1:A:965:A:C2	1:A:969:A:C2	2.98	0.51
1:A:972:C:H4'	11:J:57:LYS:HB3	1.93	0.51
1:A:1184:G:H2'	1:A:1185:G:H8	1.75	0.51
1:A:1229:A:N3	1:A:1230:C:C5	2.79	0.51
4:C:23:TYR:HD2	11:J:94:VAL:N	2.09	0.51
5:D:41:GLY:C	5:D:43:HIS:H	2.14	0.51
9:H:56:LYS:O	9:H:58:TYR:CD1	2.64	0.51
10:I:4:TYR:CD1	10:I:88:TYR:HB2	2.46	0.51
12:K:33:THR:OG1	12:K:37:GLY:C	2.49	0.51
14:M:22:ILE:HB	14:M:25:ILE:CD1	2.40	0.51
14:M:108:ARG:O	14:M:109:THR:C	2.48	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:77:ARG:O	16:O:80:ALA:HB3	2.11	0.51
1:A:328:C:O2	1:A:328:C:C2'	2.46	0.51
1:A:644:G:C5	1:A:645:C:C6	2.98	0.51
1:A:864:A:H3'	1:A:865:A:H8	1.76	0.51
1:A:925:G:O4'	1:A:1502:A:C5	2.64	0.51
1:A:1073:U:H3	1:A:1102:A:H61	1.58	0.51
1:A:1160:G:C2'	1:A:1161:C:O5'	2.57	0.51
1:A:1400:C:C3'	1:A:1401:G:C5'	2.82	0.51
3:B:139:LYS:O	3:B:143:GLU:HB2	2.11	0.51
5:D:32:ALA:C	5:D:34:GLU:N	2.64	0.51
10:I:21:PRO:HA	10:I:59:PHE:HA	1.92	0.51
21:T:34:LYS:HB3	21:T:38:LYS:NZ	2.26	0.51
1:A:404:U:O2'	1:A:405:U:H5'	2.11	0.51
1:A:428:G:C2	1:A:430:A:N6	2.79	0.51
1:A:922:G:H4'	6:E:20:GLN:HA	1.93	0.51
1:A:1014:A:H3'	1:A:1015:A:C8	2.45	0.51
1:A:1449:C:O2	1:A:1449:C:H2'	2.09	0.51
3:B:211:ILE:O	3:B:215:LEU:HB2	2.11	0.51
3:B:223:ILE:HG23	3:B:224:GLN:H	1.74	0.51
5:D:24:GLU:O	5:D:27:TYR:CB	2.59	0.51
10:I:79:LEU:O	10:I:80:GLY:C	2.49	0.51
13:L:35:GLY:HA3	13:L:58:VAL:HG11	1.93	0.51
14:M:14:ARG:HG2	14:M:14:ARG:HH11	1.76	0.51
1:A:570:G:O6	1:A:873:A:C2	2.64	0.51
4:C:22:TRP:N	4:C:22:TRP:CD1	2.71	0.51
8:G:135:VAL:O	8:G:139:GLU:HG3	2.10	0.51
12:K:24:SER:C	12:K:26:ASN:N	2.62	0.51
14:M:17:VAL:O	14:M:20:THR:CB	2.51	0.51
14:M:23:TYR:HB3	14:M:67:GLU:H	1.74	0.51
15:N:4:LYS:C	15:N:6:LEU:N	2.62	0.51
17:P:5:ARG:CG	17:P:6:LEU:N	2.73	0.51
1:A:109:A:C6	1:A:327:A:C6	2.99	0.50
1:A:174:C:O2'	1:A:175:C:H5'	2.11	0.50
1:A:273:A:N6	1:A:274:A:C6	2.79	0.50
1:A:321:A:C2	1:A:333:G:C2	2.98	0.50
1:A:783:C:C2'	1:A:784:C:H5'	2.40	0.50
1:A:976:G:H2'	1:A:1361(A):C:H42	1.74	0.50
7:F:44:GLY:HA2	7:F:60:PHE:N	2.25	0.50
13:L:55:VAL:CG1	13:L:56:ALA:H	2.23	0.50
16:O:35:ARG:HB3	16:O:59:MET:HE3	1.93	0.50
17:P:21:VAL:CG1	17:P:33:ILE:HD12	2.40	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:167:G:H2'	1:A:168:G:H8	1.76	0.50
1:A:640:A:H2'	1:A:641:U:H5'	1.92	0.50
1:A:803:G:C6	1:A:804:U:C4	2.99	0.50
1:A:1237:C:H4'	1:A:1334:G:N2	2.25	0.50
1:A:1286:A:H2'	1:A:1287:A:H4'	1.92	0.50
1:A:1346:A:C5	8:G:10:ARG:NH2	2.79	0.50
1:A:1355:G:C2'	1:A:1356:G:H5'	2.40	0.50
1:A:1371:G:OP1	10:I:11:LYS:O	2.28	0.50
1:A:1428:A:H2'	1:A:1429:C:C6	2.46	0.50
3:B:178:ARG:HH22	9:H:68:ARG:HH21	1.57	0.50
3:B:208:ILE:O	3:B:209:ARG:C	2.49	0.50
16:O:78:TYR:C	16:O:80:ALA:N	2.64	0.50
1:A:1066:C:C2'	1:A:1067:A:C5'	2.90	0.50
1:A:1227:A:C2	20:S:83:HIS:HB2	2.46	0.50
1:A:1365:G:C5	1:A:1366:C:C5	2.99	0.50
1:A:1406:U:H2'	1:A:1407:C:C6	2.45	0.50
1:A:1507:A:H5''	1:A:1507:A:H8	1.76	0.50
5:D:62:GLN:O	5:D:66:ARG:HD3	2.11	0.50
6:E:13:ILE:O	6:E:13:ILE:HD13	2.11	0.50
13:L:69:TYR:C	13:L:69:TYR:CD2	2.85	0.50
1:A:382:A:N3	1:A:383:A:C8	2.79	0.50
1:A:429:U:C4	1:A:431:A:N6	2.76	0.50
1:A:505:G:H5''	1:A:506:G:OP2	2.11	0.50
1:A:509:A:C8	1:A:509:A:C3'	2.93	0.50
1:A:793:U:O4	1:A:1517:G:H5''	2.12	0.50
1:A:976:G:N7	1:A:1358:U:C2	2.79	0.50
1:A:1118:C:H1'	1:A:1179:A:C4	2.47	0.50
3:B:112:VAL:HG12	3:B:153:ARG:HG2	1.91	0.50
20:S:17:GLU:O	20:S:21:GLU:HB2	2.12	0.50
1:A:20:U:O2	1:A:20:U:H2'	2.12	0.50
1:A:644:G:C4	1:A:645:C:C6	2.99	0.50
1:A:762:C:O5'	1:A:762:C:H6	1.94	0.50
1:A:977:A:H2'	1:A:978:A:H5'	1.93	0.50
1:A:1048:G:C8	1:A:1048:G:H3'	2.46	0.50
6:E:28:PHE:O	6:E:47:LYS:HA	2.11	0.50
18:Q:4:LYS:H	18:Q:61:GLU:CB	2.21	0.50
1:A:37:U:N3	1:A:38:G:C8	2.80	0.50
1:A:463:A:O3'	1:A:474:G:P	2.68	0.50
1:A:512:U:H2'	1:A:513:C:C6	2.46	0.50
1:A:1125:U:H3	11:J:5:ARG:HE	1.59	0.50
6:E:67:VAL:O	6:E:67:VAL:CG1	2.58	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:75:HIS:CD2	13:L:76:ASN:H	2.27	0.50
19:R:36:ASN:O	19:R:39:VAL:HG12	2.12	0.50
1:A:109:A:H3'	1:A:110:C:H5'	1.93	0.50
1:A:362:G:C8	1:A:362:G:C3'	2.94	0.50
1:A:426:G:P	5:D:36:ARG:HH21	2.33	0.50
1:A:992:U:H4'	1:A:993:G:O5'	2.11	0.50
1:A:1249:C:C6	1:A:1249:C:C3'	2.94	0.50
4:C:115:LEU:O	4:C:118:GLN:N	2.44	0.50
6:E:33:VAL:HG11	6:E:109:ILE:HG12	1.93	0.50
8:G:26:PHE:CD2	8:G:30:ILE:HD11	2.47	0.50
14:M:14:ARG:HB3	14:M:16:ASP:OD1	2.12	0.50
14:M:109:THR:HG23	14:M:110:ARG:H	1.76	0.50
20:S:72:GLY:C	20:S:74:PHE:N	2.54	0.50
1:A:437:U:H3'	1:A:438:G:H8	1.76	0.50
1:A:888:G:H8	1:A:888:G:O5'	1.93	0.50
1:A:1065:U:C5	1:A:1190:G:C4	3.00	0.50
1:A:1513:A:C6	1:A:1523:G:C6	3.00	0.50
3:B:102:LEU:O	3:B:105:PHE:HB2	2.12	0.50
4:C:19:GLU:HB3	4:C:40:ARG:NH2	2.27	0.50
4:C:123:GLN:HE22	4:C:140:ARG:NH2	2.08	0.50
5:D:199:GLN:NE2	5:D:199:GLN:CA	2.75	0.50
6:E:101:ILE:O	6:E:120:THR:OG1	2.28	0.50
6:E:107:ARG:O	6:E:109:ILE:N	2.45	0.50
11:J:32:ALA:HB2	11:J:76:ASN:ND2	2.27	0.50
13:L:102:ARG:NH1	13:L:110:VAL:CA	2.74	0.50
16:O:39:LEU:HD13	16:O:56:LEU:HB2	1.93	0.50
1:A:664:G:H1	1:A:741:G:H1	1.59	0.50
1:A:986:A:C2	1:A:1220:G:C2	3.00	0.50
1:A:1168:A:C6	1:A:1169:A:C6	3.00	0.50
1:A:1342:C:O2'	10:I:124:GLN:HB2	2.12	0.50
1:A:1368:G:C2	1:A:1369:C:C6	2.99	0.50
6:E:148:VAL:HG21	9:H:107:LEU:HD13	1.94	0.50
7:F:33:TYR:HD2	7:F:71:ARG:HD2	1.76	0.50
11:J:17:ASP:O	11:J:21:GLN:HB2	2.12	0.50
13:L:35:GLY:HA3	13:L:58:VAL:CG1	2.42	0.50
19:R:66:LEU:O	19:R:67:ALA:C	2.50	0.50
1:A:18:C:C2'	1:A:19:C:H5'	2.42	0.49
1:A:129(A):G:H4'	1:A:130:A:OP2	2.12	0.49
1:A:358:U:C2	1:A:359:U:C5	2.99	0.49
1:A:374:A:H5''	1:A:375:U:OP2	2.12	0.49
1:A:983:A:HO2'	1:A:1049:U:HO2'	1.57	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1053:G:C4	1:A:1199:U:C5	3.00	0.49
3:B:185:ILE:HD12	3:B:185:ILE:H	1.77	0.49
4:C:54:ARG:O	4:C:55:VAL:CG2	2.55	0.49
7:F:26:ILE:HG21	7:F:63:TYR:HE1	1.76	0.49
11:J:12:ASP:CG	11:J:14:LYS:H	2.15	0.49
15:N:24:CYS:HB3	15:N:29:ARG:H	1.77	0.49
18:Q:82:MET:HA	18:Q:85:VAL:CG2	2.42	0.49
1:A:13:U:O2	1:A:914:A:H3'	2.11	0.49
1:A:84:U:H5''	1:A:88:A:OP2	2.12	0.49
1:A:109:A:N6	1:A:326:G:C6	2.80	0.49
1:A:167:G:H2'	1:A:168:G:C8	2.48	0.49
1:A:288:A:C2'	1:A:289:G:O5'	2.61	0.49
1:A:357:G:H2'	1:A:358:U:C6	2.47	0.49
1:A:363:A:OP1	13:L:61:THR:OG1	2.19	0.49
1:A:577:G:H1'	1:A:816:A:C2	2.46	0.49
1:A:673:G:H5''	1:A:674:G:OP2	2.11	0.49
1:A:691:G:C8	1:A:691:G:C3'	2.94	0.49
1:A:738:C:OP2	7:F:92:LYS:HE2	2.12	0.49
1:A:1226:C:C4	14:M:104:ARG:HG3	2.47	0.49
1:A:1378:C:H3'	1:A:1379:G:H5''	1.93	0.49
1:A:1413:A:C2	1:A:1414:U:C2	3.01	0.49
1:A:1502:A:H5'	1:A:1504:G:N7	2.27	0.49
5:D:159:ARG:O	5:D:160:GLN:C	2.50	0.49
12:K:22:HIS:HA	12:K:85:ARG:O	2.11	0.49
20:S:9:VAL:HG12	20:S:10:PHE:N	2.26	0.49
1:A:69:G:H2'	1:A:70:G:C8	2.47	0.49
1:A:502:G:C6	1:A:544:G:N1	2.80	0.49
1:A:546:G:OP1	5:D:73:ARG:HB2	2.11	0.49
1:A:577:G:H1'	1:A:816:A:C4	2.48	0.49
1:A:942:G:C2	1:A:943:U:C6	3.00	0.49
1:A:977:A:H2'	1:A:978:A:H5''	1.93	0.49
1:A:1082:G:H5''	1:A:1083:U:OP2	2.13	0.49
1:A:1120:G:N2	1:A:1153:C:O2	2.43	0.49
1:A:1226:C:N4	14:M:104:ARG:HG3	2.27	0.49
1:A:1372:U:O2'	1:A:1373:G:H5'	2.12	0.49
1:A:1437:C:H2'	1:A:1438:G:C8	2.47	0.49
3:B:77:ALA:HB2	3:B:211:ILE:CD1	2.24	0.49
4:C:141:VAL:HG11	4:C:202:ILE:HG12	1.94	0.49
5:D:55:ALA:O	5:D:59:ARG:HG2	2.12	0.49
6:E:15:ARG:O	6:E:16:THR:O	2.30	0.49
10:I:33:PHE:CE1	10:I:37:PHE:CE1	3.01	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:32:ARG:O	19:R:34:TYR:N	2.44	0.49
1:A:529:G:C8	1:A:529:G:C3'	2.94	0.49
1:A:651:C:C2'	1:A:652:U:H5'	2.42	0.49
1:A:957:U:O2	1:A:960:U:C2	2.65	0.49
1:A:1068:G:N7	1:A:1094:G:H8	2.09	0.49
1:A:1102:A:H1'	3:B:99:GLY:HA3	1.94	0.49
1:A:1201:A:HO2'	1:A:1202:G:P	2.34	0.49
4:C:39:ILE:C	4:C:41:GLY:N	2.65	0.49
5:D:152:SER:O	5:D:155:LEU:HB2	2.11	0.49
12:K:82:VAL:CG1	12:K:83:ILE:N	2.75	0.49
12:K:94:ALA:O	12:K:95:ILE:C	2.51	0.49
13:L:67:THR:O	13:L:67:THR:CG2	2.60	0.49
16:O:60:VAL:HG12	16:O:61:GLY:N	2.27	0.49
17:P:75:ARG:HA	17:P:80:PHE:HD1	1.76	0.49
1:A:287:U:O2'	1:A:288:A:H5'	2.12	0.49
1:A:292:G:C3'	1:A:292:G:C8	2.95	0.49
1:A:357:G:C2	1:A:358:U:C5	3.00	0.49
1:A:939:G:P	8:G:95:ARG:HH12	2.36	0.49
1:A:959:A:H5''	1:A:960:U:OP2	2.13	0.49
1:A:991:U:C6	1:A:1212:U:C2	3.01	0.49
1:A:1003(A):G:C4	1:A:1004:A:H1'	2.47	0.49
1:A:1119:C:C6	1:A:1119:C:C3'	2.94	0.49
1:A:1121:U:H2'	1:A:1122:U:H6	1.75	0.49
1:A:1144:G:H2'	1:A:1145:C:H5'	1.95	0.49
1:A:1240:U:N3	8:G:30:ILE:HG23	2.27	0.49
1:A:1395:C:H6	1:A:1395:C:O5'	1.95	0.49
1:A:1402:C:H2'	1:A:1403:C:C6	2.47	0.49
1:A:1502:A:N3	1:A:1502:A:H2'	2.28	0.49
3:B:71:VAL:HG23	3:B:164:VAL:HA	1.94	0.49
7:F:80:ARG:CG	7:F:88:VAL:CG2	2.89	0.49
10:I:4:TYR:CG	10:I:88:TYR:HB2	2.48	0.49
13:L:104:VAL:O	13:L:105:TYR:HB2	2.13	0.49
17:P:11:SER:O	17:P:14:ASN:N	2.36	0.49
1:A:251:G:H4'	1:A:252:U:O5'	2.12	0.49
1:A:268:C:H2'	1:A:269:C:C6	2.44	0.49
1:A:429:U:O4	1:A:431:A:N6	2.46	0.49
1:A:946:A:N1	1:A:947:G:C6	2.81	0.49
1:A:969:A:H61	14:M:126:LYS:CB	2.25	0.49
1:A:982:U:H4'	1:A:983:A:O5'	2.12	0.49
1:A:1348:U:H4'	10:I:120:ARG:HG3	1.93	0.49
3:B:166:ASP:OD1	3:B:205:ASP:CB	2.61	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:42:LEU:O	4:C:43:LEU:C	2.50	0.49
5:D:88:VAL:O	5:D:92:VAL:HG23	2.12	0.49
14:M:30:ALA:O	14:M:31:LYS:C	2.48	0.49
1:A:575:G:HO2'	1:A:821:G:H5'	1.77	0.49
1:A:709:G:H2'	1:A:710:G:H8	1.77	0.49
1:A:945:G:C8	1:A:1337:G:H1'	2.48	0.49
1:A:1069:C:O3'	6:E:25:ARG:NH2	2.45	0.49
1:A:1131:G:H22	1:A:1143:G:N2	2.04	0.49
1:A:1142:G:H5''	1:A:1143:G:OP2	2.11	0.49
5:D:30:LYS:HA	5:D:35:ARG:HE	1.78	0.49
5:D:141:ARG:HB3	5:D:142:PRO:HD3	1.90	0.49
14:M:22:ILE:HG22	14:M:23:TYR:N	2.27	0.49
17:P:43:LYS:HA	17:P:48:TRP:CB	2.41	0.49
17:P:78:GLY:C	17:P:80:PHE:N	2.64	0.49
19:R:86:VAL:O	19:R:87:ARG:CB	2.56	0.49
1:A:192:U:C4'	21:T:103:GLY:H	2.26	0.49
1:A:617:G:O6	1:A:623:C:N4	2.44	0.49
1:A:722:A:H5''	1:A:722:A:N3	2.27	0.49
1:A:812:C:OP1	1:A:903:G:H1'	2.13	0.49
1:A:1097:C:O2	1:A:1097:C:H2'	2.12	0.49
1:A:1191:A:O2'	1:A:1192:C:H5'	2.13	0.49
1:A:1370:G:H2'	1:A:1371:G:H8	1.78	0.49
4:C:115:LEU:O	4:C:116:VAL:C	2.50	0.49
5:D:150:GLU:CA	5:D:153:ARG:HB2	2.40	0.49
8:G:137:LYS:O	8:G:141:VAL:HG23	2.13	0.49
9:H:89:PRO:HA	9:H:92:ARG:NH1	2.28	0.49
11:J:76:ASN:CB	11:J:78:ASN:HD21	2.22	0.49
12:K:70:LYS:O	12:K:73:MET:HB2	2.13	0.49
12:K:123:LYS:C	12:K:125:PHE:N	2.66	0.49
16:O:13:GLN:O	16:O:14:GLU:C	2.51	0.49
21:T:92:LEU:O	21:T:93:GLU:C	2.51	0.49
1:A:149:A:C2	1:A:150:C:C4	3.01	0.49
1:A:656:C:H2'	1:A:657:G:O5'	2.13	0.49
1:A:1247:U:O2	1:A:1291:G:C2	2.65	0.49
1:A:1291:G:H4'	10:I:38:GLN:O	2.12	0.49
1:A:1365:G:C6	1:A:1366:C:C4	3.00	0.49
1:A:1422:G:H8	1:A:1422:G:O5'	1.96	0.49
7:F:7:ASN:HA	7:F:61:LEU:O	2.12	0.49
8:G:67:GLU:HA	8:G:70:LYS:HE3	1.95	0.49
9:H:4:ASP:O	9:H:7:ALA:HB3	2.13	0.49
12:K:82:VAL:HG12	12:K:108:ILE:HG23	1.95	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:39:ILE:HG21	14:M:48:LEU:HD21	1.95	0.49
18:Q:75:ARG:HH11	18:Q:75:ARG:HG3	1.77	0.49
21:T:54:LYS:HA	21:T:57:ARG:HH12	1.78	0.49
1:A:107:G:N2	1:A:108:G:H1'	2.28	0.49
1:A:129(A):G:C2	1:A:190(E):U:H5''	2.47	0.49
1:A:570:G:C6	1:A:873:A:C2	3.00	0.49
1:A:623:C:C2	1:A:624:C:C6	3.01	0.49
1:A:1010:G:N2	1:A:1020:U:H1'	2.16	0.49
1:A:1081:G:P	6:E:16:THR:OG1	2.71	0.49
1:A:1104:G:H4'	3:B:111:ARG:NH2	2.28	0.49
1:A:1142:G:C2	1:A:1143:G:H1'	2.47	0.49
1:A:1209:C:O2	1:A:1209:C:C2'	2.45	0.49
1:A:1239:A:C4	1:A:1298:C:N4	2.81	0.49
1:A:1250:A:N6	1:A:1354:C:O4'	2.38	0.49
1:A:1523:G:C4	1:A:1524:C:C5	3.00	0.49
24:A:1636:D2C:H11A	24:A:1636:D2C:H18	1.95	0.49
3:B:59:GLU:O	3:B:62:ALA:HB3	2.13	0.49
3:B:109:SER:O	3:B:112:VAL:HG23	2.13	0.49
4:C:35:GLU:O	4:C:37:GLN:N	2.46	0.49
5:D:120:LEU:HD22	5:D:126:ILE:CD1	2.43	0.49
13:L:6:THR:O	13:L:7:ILE:C	2.50	0.49
13:L:86:ARG:NH2	13:L:99:HIS:HD2	2.07	0.49
13:L:98:TYR:HD1	13:L:98:TYR:H	1.59	0.49
1:A:290:C:C5	1:A:291:C:H5	2.31	0.48
1:A:1184:G:H8	1:A:1184:G:O5'	1.95	0.48
1:A:1394:A:N7	1:A:1501:C:H4'	2.28	0.48
1:A:1399:C:C2	1:A:1401:G:C5	3.01	0.48
1:A:1486:G:H2'	1:A:1487:G:O4'	2.12	0.48
5:D:196:LEU:HD23	5:D:197:PRO:HD2	1.95	0.48
6:E:102:ALA:HB1	6:E:106:PRO:HG2	1.94	0.48
7:F:5:GLU:O	7:F:90:VAL:HA	2.13	0.48
18:Q:75:ARG:NH1	18:Q:77:VAL:HG13	2.26	0.48
1:A:1065:U:H4'	1:A:1066:C:H5'	1.95	0.48
1:A:1074:G:C6	1:A:1075:C:C4	3.01	0.48
1:A:1167:A:O5'	1:A:1167:A:C8	2.63	0.48
4:C:95:THR:HG22	4:C:97:LYS:HE3	1.94	0.48
6:E:86:ALA:O	6:E:125:SER:N	2.43	0.48
11:J:61:GLU:HG2	11:J:62:HIS:N	2.28	0.48
14:M:49:THR:C	14:M:51:ALA:N	2.67	0.48
16:O:11:VAL:O	16:O:12:ILE:C	2.51	0.48
1:A:53:A:C6	1:A:54:C:C2	3.02	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:264:U:H3'	1:A:264:U:C6	2.49	0.48
1:A:601:C:C2	1:A:638:G:N2	2.81	0.48
1:A:1249:C:O5'	1:A:1249:C:H6	1.96	0.48
1:A:1333:A:H2'	1:A:1334:G:H8	1.78	0.48
1:A:1377:A:C2'	1:A:1378:C:OP2	2.61	0.48
1:A:1513:A:H2'	1:A:1514:C:H6	1.77	0.48
3:B:107:THR:C	3:B:109:SER:N	2.67	0.48
4:C:172:ARG:HB2	4:C:203:PHE:CE2	2.49	0.48
6:E:107:ARG:C	6:E:109:ILE:H	2.17	0.48
10:I:10:ARG:HG3	10:I:11:LYS:HB2	1.94	0.48
15:N:44:LEU:C	15:N:44:LEU:HD12	2.33	0.48
18:Q:22:LEU:HD13	18:Q:41:LYS:HG2	1.95	0.48
21:T:72:LEU:HB3	21:T:76:ALA:CB	2.43	0.48
1:A:200:G:C8	1:A:200:G:C4'	2.97	0.48
1:A:252:U:H2'	1:A:253:U:H6	1.73	0.48
1:A:255:G:O6	1:A:266:G:O6	2.32	0.48
1:A:420:U:O2	1:A:424:G:C2	2.67	0.48
1:A:991:U:C5	1:A:1212:U:H1'	2.49	0.48
1:A:1208:C:C2	1:A:1209:C:C6	3.01	0.48
3:B:58:ILE:O	3:B:59:GLU:C	2.51	0.48
3:B:92:TYR:CD1	3:B:92:TYR:C	2.86	0.48
5:D:79:PHE:HD2	5:D:79:PHE:C	2.16	0.48
6:E:60:TYR:CD2	6:E:60:TYR:C	2.87	0.48
14:M:5:ALA:CB	14:M:22:ILE:HG12	2.43	0.48
14:M:48:LEU:HD22	14:M:52:GLU:HB2	1.95	0.48
17:P:52:ASP:C	17:P:52:ASP:OD2	2.51	0.48
1:A:1279:A:O2'	1:A:1281:U:OP2	2.22	0.48
1:A:1432:G:C8	1:A:1432:G:H3'	2.49	0.48
24:A:1636:D2C:O5	24:A:1636:D2C:O4	2.31	0.48
5:D:148:VAL:CG2	5:D:181:MET:HB3	2.43	0.48
16:O:39:LEU:HD12	16:O:56:LEU:HB2	1.95	0.48
17:P:11:SER:O	17:P:12:LYS:C	2.52	0.48
21:T:78:ALA:O	21:T:79:ARG:C	2.51	0.48
1:A:106:C:O2'	1:A:107:G:H5'	2.14	0.48
1:A:176:C:O2	1:A:176:C:C2'	2.62	0.48
1:A:354:G:C6	1:A:355:C:C4	3.02	0.48
1:A:771:G:O2'	1:A:772:U:H5'	2.14	0.48
1:A:858:G:H8	1:A:858:G:O5'	1.97	0.48
1:A:976:G:C8	1:A:1358:U:O2	2.67	0.48
1:A:1081:G:P	6:E:16:THR:HG1	2.36	0.48
1:A:1117:G:O3'	10:I:104:ARG:HD2	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1166:G:C8	1:A:1166:G:H3'	2.48	0.48
1:A:1240:U:H1'	8:G:38:LEU:HD21	1.95	0.48
1:A:1381:U:C2	1:A:1382:C:C6	3.02	0.48
4:C:6:HIS:CD2	4:C:8:ILE:N	2.79	0.48
5:D:61:LYS:HE2	5:D:62:GLN:NE2	2.25	0.48
10:I:45:ALA:C	10:I:47:LEU:H	2.17	0.48
11:J:38:ILE:CB	11:J:71:LEU:HB3	2.42	0.48
15:N:21:TYR:C	15:N:21:TYR:CD2	2.87	0.48
21:T:63:ILE:O	21:T:66:ALA:N	2.45	0.48
1:A:157:G:C6	1:A:158:G:N7	2.82	0.48
1:A:506:G:C5	1:A:507:C:C4	3.02	0.48
1:A:570:G:H2'	1:A:571:U:C6	2.49	0.48
1:A:647:C:N4	1:A:648:A:N6	2.62	0.48
1:A:1086:U:H3	1:A:1099:G:H22	1.60	0.48
1:A:1163:C:H42	1:A:1173:G:H1	1.60	0.48
1:A:1241:G:C6	1:A:1242:C:N4	2.81	0.48
1:A:1345:U:C2	1:A:1377:A:C2	3.02	0.48
1:A:1348:U:C6	1:A:1348:U:C5'	2.97	0.48
1:A:1363:A:C4	1:A:1365:G:C6	3.02	0.48
1:A:1453:G:N2	1:A:1454:G:C5	2.81	0.48
5:D:105:VAL:HG13	5:D:110:PHE:HB2	1.95	0.48
6:E:99:GLY:O	6:E:117:ASP:HA	2.13	0.48
7:F:98:LEU:HB3	19:R:30:ASP:HA	1.96	0.48
10:I:65:VAL:HG22	10:I:66:ARG:N	2.29	0.48
10:I:97:LYS:N	10:I:98:PRO:HD2	2.27	0.48
13:L:90:VAL:O	13:L:92:ASP:N	2.46	0.48
13:L:100:ILE:HG22	13:L:101:VAL:N	2.28	0.48
1:A:128:G:H5'	18:Q:2:PRO:HA	1.94	0.48
1:A:132:C:O2'	1:A:133:U:H5'	2.14	0.48
1:A:581:G:O6	1:A:758:G:C8	2.67	0.48
1:A:652:U:O4	1:A:752:G:O2'	2.21	0.48
1:A:1128:C:N3	1:A:1144:G:N2	2.62	0.48
1:A:1208:C:C2	1:A:1209:C:C5	3.02	0.48
1:A:1216:G:H5''	15:N:5:ALA:HB2	1.95	0.48
1:A:1283:G:H2'	1:A:1284:C:O4'	2.14	0.48
24:A:1636:D2C:H5	24:A:1636:D2C:H13	1.51	0.48
3:B:92:TYR:CE1	3:B:151:GLY:CA	2.97	0.48
3:B:134:GLU:O	3:B:138:LEU:HG	2.14	0.48
3:B:145:LEU:O	3:B:149:LEU:HB2	2.14	0.48
6:E:82:VAL:HG12	6:E:89:ILE:HG22	1.95	0.48
8:G:92:SER:CB	8:G:93:PRO:HD2	2.44	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:108:ALA:O	8:G:111:ARG:N	2.42	0.48
10:I:11:LYS:H	10:I:104:ARG:HH21	1.62	0.48
10:I:49:PRO:HB3	10:I:82:ALA:HB2	1.95	0.48
11:J:38:ILE:CG2	11:J:71:LEU:CB	2.92	0.48
11:J:46:ARG:HH11	11:J:46:ARG:CG	2.24	0.48
21:T:29:LYS:O	21:T:33:ILE:HD12	2.14	0.48
1:A:142:G:O2'	1:A:195:A:N6	2.47	0.48
1:A:153:C:N4	1:A:168:G:H1	2.11	0.48
1:A:286:G:C6	1:A:287:U:C4	3.01	0.48
1:A:786:G:C6	1:A:787:A:C5	3.02	0.48
1:A:1097:C:O2'	1:A:1168:A:N3	2.44	0.48
1:A:1106:G:O2'	1:A:1107:C:H5'	2.14	0.48
3:B:24:TRP:CD1	3:B:25:ASN:N	2.82	0.48
3:B:54:THR:O	3:B:57:PHE:HB3	2.13	0.48
4:C:55:VAL:O	4:C:55:VAL:CG1	2.59	0.48
5:D:79:PHE:C	5:D:79:PHE:CD2	2.86	0.48
8:G:91:VAL:CG1	8:G:96:GLN:HE21	2.27	0.48
10:I:82:ALA:O	10:I:86:VAL:CG2	2.60	0.48
14:M:74:VAL:C	14:M:76:ALA:H	2.16	0.48
1:A:197:A:H4'	1:A:198:G:O5'	2.13	0.48
1:A:512:U:H2'	1:A:513:C:H6	1.79	0.48
1:A:1003(A):G:C2	1:A:1004:A:H1'	2.49	0.48
1:A:1416:G:H2'	1:A:1417:G:H5'	1.95	0.48
10:I:86:VAL:HG12	10:I:90:PRO:HA	1.96	0.48
10:I:93:ARG:O	10:I:94:ALA:C	2.51	0.48
11:J:24:VAL:HG21	11:J:37:PRO:HD3	1.94	0.48
14:M:98:VAL:C	14:M:100:GLY:H	2.17	0.48
16:O:28:GLN:O	16:O:30:ALA:N	2.46	0.48
1:A:252:U:C4	1:A:253:U:O4	2.67	0.47
1:A:319:G:N2	1:A:334:C:O2	2.40	0.47
1:A:838:G:H1	1:A:848:C:N4	2.08	0.47
1:A:1101:A:C4'	1:A:1102:A:O5'	2.62	0.47
6:E:108:ALA:HA	6:E:111:GLU:HB2	1.96	0.47
11:J:81:THR:O	11:J:84:GLN:N	2.35	0.47
12:K:16:SER:O	12:K:35:PRO:HG3	2.14	0.47
19:R:33:ASP:C	19:R:35:ARG:N	2.65	0.47
20:S:78:ARG:HD2	20:S:78:ARG:N	2.26	0.47
21:T:84:LEU:O	21:T:87:LYS:N	2.47	0.47
1:A:285:G:H2'	1:A:285:G:N3	2.29	0.47
1:A:404:U:H2'	1:A:405:U:H6	1.79	0.47
1:A:420:U:H1'	1:A:424:G:H22	1.71	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:477:G:C2	1:A:478:A:C5	3.02	0.47
1:A:719:C:H42	19:R:74:ARG:HH12	1.61	0.47
1:A:950:U:C5	14:M:102:ARG:NH1	2.82	0.47
1:A:1060:C:O2	1:A:1198:G:C2	2.67	0.47
1:A:1095:U:P	1:A:1108:G:H1	2.37	0.47
1:A:1288:A:C8	1:A:1289:A:C8	3.02	0.47
1:A:1443:G:H5'	1:A:1446:A:H3'	1.94	0.47
1:A:1525:G:P	12:K:120:ARG:HH21	2.37	0.47
3:B:105:PHE:O	3:B:106:LYS:C	2.52	0.47
4:C:11:ARG:HH12	4:C:178:LEU:CA	2.17	0.47
5:D:30:LYS:HD3	5:D:35:ARG:HH21	1.78	0.47
7:F:44:GLY:HA3	7:F:59:TYR:CE1	2.49	0.47
8:G:154:TYR:N	8:G:154:TYR:CD2	2.82	0.47
9:H:40:ALA:O	9:H:41:ARG:C	2.50	0.47
20:S:52:TYR:HD1	20:S:56:GLN:O	1.97	0.47
1:A:78:G:C2	1:A:79:G:C8	3.02	0.47
1:A:935:A:C2'	1:A:936:C:O5'	2.61	0.47
1:A:964:A:O2'	11:J:55:LYS:HD2	2.14	0.47
1:A:1148:U:H2'	1:A:1149:C:O4'	2.13	0.47
4:C:58:GLU:HG2	11:J:92:THR:CB	2.45	0.47
4:C:201:TYR:C	4:C:202:ILE:HG13	2.33	0.47
5:D:190:ASP:O	5:D:191:ARG:C	2.52	0.47
6:E:11:ILE:HG13	6:E:31:LEU:HB3	1.96	0.47
7:F:67:MET:HB2	7:F:68:PRO:CD	2.44	0.47
8:G:154:TYR:N	8:G:154:TYR:HD2	2.12	0.47
10:I:113:LYS:N	10:I:113:LYS:CD	2.77	0.47
19:R:66:LEU:HG	19:R:70:ILE:HD11	1.96	0.47
1:A:235:C:H5'	18:Q:70:ARG:HD3	1.96	0.47
1:A:392:G:C2	1:A:393:A:C5	3.02	0.47
1:A:568:G:C2'	1:A:569:C:H5'	2.42	0.47
1:A:582:U:H5''	16:O:64:ARG:HH22	1.78	0.47
1:A:640:A:C6	1:A:641:U:C4	3.02	0.47
1:A:726:C:H2'	1:A:727:G:C8	2.49	0.47
1:A:978:A:C6	1:A:1318:A:C6	3.03	0.47
1:A:1053:G:O2'	1:A:1054:C:P	2.72	0.47
1:A:1112:C:N3	4:C:178:LEU:HB3	2.29	0.47
1:A:1114:C:H1'	15:N:60:SER:HB3	1.97	0.47
1:A:1197:G:C2'	1:A:1198:G:H5'	2.44	0.47
3:B:52:GLU:O	3:B:54:THR:N	2.48	0.47
4:C:10:PHE:CZ	4:C:178:LEU:HD13	2.50	0.47
12:K:33:THR:HG23	12:K:37:GLY:HA2	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:54:PRO:C	15:N:56:VAL:H	2.18	0.47
16:O:52:SER:O	16:O:53:HIS:C	2.52	0.47
21:T:13:LEU:O	21:T:15:ARG:N	2.47	0.47
1:A:160:A:H1'	1:A:344:A:N7	2.29	0.47
1:A:237:C:H5''	1:A:238:G:OP2	2.15	0.47
1:A:1205:U:H1'	4:C:195:VAL:CG2	2.44	0.47
1:A:1345:U:N3	1:A:1377:A:C2	2.82	0.47
14:M:96:LEU:O	14:M:110:ARG:NH1	2.44	0.47
17:P:75:ARG:HA	17:P:80:PHE:CD1	2.49	0.47
18:Q:67:LYS:O	18:Q:68:ARG:HB2	2.14	0.47
1:A:52:G:C2'	1:A:53:A:H5'	2.45	0.47
1:A:809:G:C6	1:A:810:C:C5	3.03	0.47
1:A:836:G:H2'	1:A:837:G:H8	1.80	0.47
1:A:840:C:O5'	1:A:840:C:H6	1.98	0.47
1:A:914:A:C2	1:A:915:A:C1'	2.98	0.47
1:A:939:G:C6	1:A:940:C:C4	3.02	0.47
1:A:1066:C:O2'	1:A:1067:A:C5'	2.61	0.47
1:A:1121:U:O2'	1:A:1122:U:O5'	2.28	0.47
4:C:6:HIS:HD2	4:C:8:ILE:N	2.07	0.47
4:C:113:ALA:O	4:C:116:VAL:N	2.48	0.47
5:D:29:PRO:O	5:D:30:LYS:HG2	2.15	0.47
8:G:24:THR:HA	8:G:27:ILE:HD12	1.97	0.47
9:H:14:ARG:NH1	9:H:14:ARG:CB	2.78	0.47
10:I:114:TYR:HE1	11:J:59:SER:O	1.96	0.47
11:J:6:ILE:HD11	11:J:73:ASP:H	1.79	0.47
12:K:46:GLY:O	12:K:47:VAL:C	2.53	0.47
1:A:130:A:O2'	1:A:131:C:O5'	2.24	0.47
1:A:150:C:C2'	1:A:151:A:O5'	2.63	0.47
1:A:193:C:H2'	1:A:194:C:C6	2.49	0.47
1:A:226:G:C2	1:A:227:G:C8	3.02	0.47
1:A:247:G:C6	1:A:278:G:N1	2.82	0.47
1:A:313:A:H2'	1:A:314:C:H6	1.79	0.47
1:A:354:G:H2'	1:A:354:G:N3	2.29	0.47
1:A:393:A:H2'	1:A:394:G:C8	2.34	0.47
1:A:408:A:C6	1:A:409:G:N7	2.82	0.47
1:A:675:A:H1'	12:K:116:HIS:CD2	2.50	0.47
1:A:718:G:N7	1:A:719:C:C5	2.83	0.47
1:A:754:C:O2	1:A:754:C:H3'	2.14	0.47
1:A:862:C:O2	1:A:862:C:H2'	2.14	0.47
1:A:895:G:H2'	1:A:896:C:C6	2.48	0.47
1:A:951:G:H2'	1:A:952:U:O4'	2.15	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1103:C:P	3:B:96:ARG:HH22	2.38	0.47
1:A:1131:G:H2'	1:A:1132:C:C6	2.50	0.47
1:A:1238:A:C4	1:A:1303:C:O2'	2.66	0.47
1:A:1262:C:O2'	1:A:1263:C:O4'	2.32	0.47
1:A:1366:C:C4	1:A:1367:C:N4	2.83	0.47
1:A:1454:G:H2'	1:A:1455:G:H5'	1.96	0.47
3:B:15:VAL:HG12	3:B:209:ARG:HB3	1.97	0.47
3:B:171:ALA:O	3:B:175:ARG:HB2	2.15	0.47
4:C:68:VAL:HG12	4:C:70:VAL:HG23	1.97	0.47
4:C:139:GLN:O	4:C:142:MET:N	2.48	0.47
4:C:182:ILE:HA	4:C:202:ILE:O	2.15	0.47
5:D:141:ARG:CB	5:D:142:PRO:CD	2.77	0.47
5:D:199:GLN:HA	5:D:199:GLN:HE21	1.79	0.47
12:K:62:GLN:O	12:K:63:LEU:C	2.52	0.47
13:L:40:VAL:HG21	13:L:77:LEU:C	2.35	0.47
13:L:77:LEU:HD21	13:L:107:ALA:N	2.30	0.47
13:L:97:ARG:C	13:L:98:TYR:CD1	2.86	0.47
14:M:84:ILE:HD11	14:M:86:CYS:HB2	1.96	0.47
17:P:66:PRO:C	17:P:67:THR:O	2.51	0.47
19:R:22:VAL:O	19:R:22:VAL:HG12	2.14	0.47
1:A:1113:C:OP2	1:A:1113:C:H6	1.98	0.47
1:A:1208:C:N3	1:A:1209:C:H5	2.11	0.47
1:A:1346:A:C4	8:G:10:ARG:NH2	2.83	0.47
6:E:50:GLU:O	6:E:51:VAL:C	2.52	0.47
6:E:55:VAL:O	6:E:58:ALA:HB3	2.15	0.47
9:H:28:ALA:HA	9:H:59:LEU:HD12	1.97	0.47
10:I:33:PHE:C	10:I:35:GLU:N	2.68	0.47
13:L:75:HIS:HD2	13:L:76:ASN:H	1.61	0.47
13:L:93:LEU:HD12	13:L:96:VAL:HG21	1.96	0.47
16:O:28:GLN:C	16:O:30:ALA:N	2.68	0.47
17:P:43:LYS:HA	17:P:48:TRP:HB3	1.96	0.47
21:T:44:ALA:O	21:T:46:GLU:N	2.47	0.47
1:A:243:A:C2	1:A:245:C:C2	3.03	0.47
1:A:604:G:C6	1:A:605:U:C4	3.02	0.47
1:A:765:G:N2	1:A:812:C:HO2'	2.13	0.47
5:D:83:SER:HA	5:D:89:THR:HG21	1.94	0.47
8:G:88:PRO:HG2	8:G:152:ALA:HB2	1.97	0.47
8:G:141:VAL:O	8:G:144:MET:N	2.47	0.47
9:H:48:TYR:CD1	9:H:48:TYR:C	2.88	0.47
9:H:64:LYS:HG2	9:H:79:VAL:HG21	1.97	0.47
10:I:114:TYR:CD2	10:I:114:TYR:N	2.82	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:49:LEU:HD11	17:P:73:LEU:HB3	1.96	0.47
1:A:262:A:N1	1:A:263:A:C6	2.83	0.47
1:A:437:U:HO2'	5:D:125:HIS:CE1	2.26	0.47
1:A:504:C:C2	1:A:542:G:N2	2.83	0.47
1:A:616:G:C2	1:A:617:G:N7	2.83	0.47
1:A:850:U:H6	1:A:850:U:C3'	2.21	0.47
1:A:864:A:H3'	1:A:865:A:C8	2.49	0.47
1:A:988:G:N2	1:A:1218:C:O2	2.48	0.47
1:A:994:A:H61	1:A:1046:A:H2	1.62	0.47
5:D:31:CYS:O	5:D:33:MET:N	2.45	0.47
5:D:87:GLY:O	5:D:88:VAL:C	2.54	0.47
6:E:129:ILE:H	6:E:129:ILE:HD12	1.80	0.47
11:J:47:PHE:CD2	15:N:34:TYR:CD2	3.01	0.47
12:K:27:ASN:O	12:K:56:GLY:HA2	2.14	0.47
18:Q:16:GLN:O	18:Q:18:THR:OG1	2.18	0.47
1:A:488:C:H3'	1:A:488:C:C6	2.49	0.46
1:A:491:G:C5	1:A:492:G:N7	2.83	0.46
1:A:818:G:C2'	1:A:819:A:H5'	2.44	0.46
1:A:838:G:C3'	1:A:839:U:H5''	2.45	0.46
1:A:925:G:C2	1:A:927:G:C8	3.03	0.46
1:A:932:C:H42	1:A:1385:G:H1	1.61	0.46
1:A:955:U:H2'	1:A:956:U:C6	2.49	0.46
1:A:1014:A:H2'	1:A:1015:A:C8	2.50	0.46
3:B:182:ILE:CG2	3:B:183:PRO:CD	2.92	0.46
4:C:45:LYS:HE2	4:C:45:LYS:HB3	1.64	0.46
4:C:139:GLN:O	4:C:140:ARG:C	2.53	0.46
5:D:104:VAL:HG23	5:D:185:PHE:HD1	1.80	0.46
10:I:30:GLY:C	10:I:31:GLN:HG2	2.35	0.46
10:I:36:TYR:CD2	10:I:37:PHE:CE2	3.02	0.46
10:I:81:ILE:O	10:I:85:LEU:HD12	2.15	0.46
11:J:47:PHE:N	11:J:63:PHE:O	2.48	0.46
14:M:79:LYS:O	14:M:83:ASP:HB2	2.15	0.46
14:M:82:MET:O	14:M:93:ARG:NH2	2.47	0.46
1:A:231:G:H2'	1:A:231:G:N3	2.28	0.46
1:A:290:C:C4	1:A:291:C:C5	3.03	0.46
1:A:413:G:N2	1:A:428:G:O2'	2.49	0.46
1:A:434:U:H2'	1:A:435:C:C1'	2.46	0.46
1:A:451:A:C5	1:A:481:G:C6	3.04	0.46
1:A:564:C:C4	1:A:565:U:C4	3.02	0.46
1:A:794:A:C4	1:A:795:C:C5	3.03	0.46
1:A:921:U:O2	6:E:19:MET:HB2	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1003:G:N2	1:A:1039:C:N3	2.63	0.46
3:B:180:LEU:CB	3:B:182:ILE:HD12	2.45	0.46
5:D:57:ARG:HE	5:D:205:GLU:HB3	1.81	0.46
5:D:101:LEU:C	5:D:103:ASN:N	2.68	0.46
8:G:6:ARG:O	8:G:7:ALA:O	2.33	0.46
10:I:50:LEU:CD1	10:I:81:ILE:CG2	2.92	0.46
21:T:41:VAL:C	21:T:43:LEU:H	2.18	0.46
1:A:165:C:H2'	1:A:166:G:H8	1.79	0.46
1:A:200:G:C2'	1:A:201:C:O5'	2.63	0.46
1:A:427:U:O2'	1:A:541:G:OP1	2.33	0.46
1:A:588:G:C8	1:A:753:A:C2	3.03	0.46
1:A:597:G:C4	1:A:644:G:C2	3.03	0.46
1:A:978:A:H1'	1:A:1322:C:O2	2.15	0.46
1:A:1057:G:O2'	1:A:1058:G:H5'	2.16	0.46
1:A:1102:A:H2'	1:A:1103:C:H6	1.75	0.46
1:A:1232:U:H2'	1:A:1233:G:C8	2.50	0.46
5:D:128:VAL:HG22	5:D:146:ILE:HG13	1.97	0.46
7:F:30:LEU:HD23	7:F:75:LEU:HD11	1.97	0.46
7:F:97:PHE:HB3	19:R:32:ARG:HH21	1.79	0.46
8:G:95:ARG:HG3	8:G:99:LEU:HD12	1.96	0.46
11:J:38:ILE:CG2	11:J:71:LEU:HB3	2.45	0.46
13:L:100:ILE:CG2	13:L:101:VAL:N	2.78	0.46
14:M:8:GLU:HA	14:M:9:ILE:HG13	1.98	0.46
21:T:97:ALA:HB1	21:T:98:PRO:HD3	1.97	0.46
1:A:106:C:C2	1:A:107:G:C8	3.04	0.46
1:A:264:U:C6	1:A:264:U:C3'	2.99	0.46
1:A:855:G:H2'	1:A:856:C:C6	2.51	0.46
1:A:880:C:C3'	1:A:880:C:C6	2.99	0.46
1:A:1003:G:C8	1:A:1003:G:O5'	2.68	0.46
1:A:1490:C:H2'	1:A:1491:G:H5''	1.98	0.46
3:B:108:ILE:HG22	3:B:152:PHE:CE2	2.51	0.46
3:B:111:ARG:HB3	3:B:149:LEU:CD1	2.37	0.46
4:C:122:GLU:HA	4:C:125:GLU:HB2	1.97	0.46
5:D:4:TYR:O	5:D:5:ILE:HB	2.14	0.46
8:G:61:VAL:O	8:G:62:PHE:C	2.54	0.46
8:G:119:ARG:O	8:G:120:ILE:C	2.54	0.46
9:H:119:LEU:HD13	9:H:124:ALA:CA	2.45	0.46
11:J:64:GLU:H	11:J:64:GLU:HG3	1.60	0.46
14:M:102:ARG:NH1	14:M:105:THR:OG1	2.49	0.46
17:P:6:LEU:HD23	17:P:17:TYR:CB	2.45	0.46
1:A:157:G:C4	1:A:158:G:C8	3.03	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:382:A:C2	1:A:383:A:C5	3.04	0.46
1:A:394:G:H2'	1:A:394:G:N3	2.30	0.46
1:A:537:G:H2'	1:A:538:G:C8	2.47	0.46
1:A:696:A:H2'	1:A:697:U:O4'	2.16	0.46
1:A:1065:U:H5	1:A:1190:G:C4	2.34	0.46
1:A:1090:U:H2'	1:A:1091:U:H6	1.80	0.46
1:A:1152:A:C4'	11:J:13:HIS:CD2	2.95	0.46
1:A:1154:G:N3	1:A:1155:G:C8	2.84	0.46
1:A:1250:A:C6	1:A:1287:A:C2	3.03	0.46
4:C:193:TYR:CE1	4:C:196:LEU:HD21	2.49	0.46
5:D:103:ASN:C	5:D:105:VAL:N	2.69	0.46
6:E:71:LEU:HD21	6:E:115:VAL:CG2	2.43	0.46
6:E:105:VAL:HG11	6:E:132:ALA:HB2	1.97	0.46
8:G:111:ARG:NH1	8:G:122:HIS:CB	2.73	0.46
9:H:104:ARG:C	9:H:106:GLY:H	2.19	0.46
17:P:74:LEU:HD13	17:P:79:VAL:HG21	1.96	0.46
18:Q:86:GLU:O	18:Q:89:LEU:HB2	2.15	0.46
19:R:73:ALA:O	19:R:74:ARG:C	2.53	0.46
20:S:78:ARG:HH11	20:S:78:ARG:HG3	1.80	0.46
1:A:46:G:C2	1:A:396:G:C2	3.03	0.46
1:A:193:C:C1'	21:T:60:GLU:OE1	2.64	0.46
1:A:664:G:H22	1:A:741:G:H22	1.63	0.46
1:A:1240:U:C4'	8:G:38:LEU:HD11	2.42	0.46
1:A:1347:G:C8	10:I:107:ARG:HB3	2.51	0.46
1:A:1367:C:C2	1:A:1368:G:C8	3.03	0.46
3:B:55:PHE:HA	3:B:58:ILE:CG1	2.43	0.46
6:E:9:LYS:HB3	6:E:33:VAL:HG23	1.96	0.46
6:E:15:ARG:NH1	6:E:15:ARG:HG3	2.28	0.46
6:E:41:VAL:O	6:E:67:VAL:HG12	2.16	0.46
12:K:90:GLY:O	12:K:91:ARG:C	2.52	0.46
14:M:89:GLY:O	14:M:90:LEU:C	2.54	0.46
14:M:107:ALA:CB	14:M:111:LYS:HG3	2.46	0.46
20:S:80:TYR:CZ	20:S:82:GLY:HA2	2.50	0.46
1:A:113:G:H1	1:A:314:C:N4	2.12	0.46
1:A:266:G:H5'	1:A:266:G:H8	1.81	0.46
1:A:320:C:HO2'	1:A:321:A:C4'	2.29	0.46
1:A:738:C:OP1	7:F:92:LYS:HD3	2.16	0.46
1:A:879:C:C2'	1:A:880:C:H5'	2.45	0.46
1:A:976:G:O2'	1:A:977:A:H5'	2.15	0.46
1:A:1003:G:O5'	1:A:1003:G:H8	1.98	0.46
1:A:1271:G:H5'	1:A:1314:C:H5''	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1500:A:C2'	1:A:1501:C:H5'	2.45	0.46
3:B:112:VAL:HG11	3:B:153:ARG:HA	1.97	0.46
5:D:185:PHE:C	5:D:185:PHE:CD2	2.89	0.46
11:J:23:ILE:O	11:J:23:ILE:CG2	2.63	0.46
14:M:14:ARG:HG2	14:M:14:ARG:NH1	2.29	0.46
14:M:122:LYS:O	14:M:123:ALA:CB	2.63	0.46
20:S:78:ARG:HG3	20:S:78:ARG:NH1	2.31	0.46
1:A:392:G:C4	1:A:393:A:N7	2.83	0.46
1:A:507:C:H2'	1:A:508:C:H5	1.81	0.46
1:A:691:G:H8	1:A:691:G:O5'	1.98	0.46
1:A:838:G:N2	1:A:849:C:C2	2.84	0.46
1:A:956:U:C2	1:A:1225:A:C2	3.04	0.46
1:A:980:C:H3'	1:A:981:U:C6	2.51	0.46
1:A:1121:U:O4	1:A:1152:A:N1	2.49	0.46
1:A:1314:C:C2	1:A:1315:U:C6	3.04	0.46
5:D:103:ASN:C	5:D:105:VAL:H	2.19	0.46
5:D:141:ARG:CB	5:D:142:PRO:HD3	2.46	0.46
15:N:23:ARG:HD3	15:N:23:ARG:HA	1.51	0.46
16:O:27:VAL:O	16:O:30:ALA:HB3	2.15	0.46
17:P:22:THR:HG23	17:P:23:ASP:O	2.16	0.46
18:Q:68:ARG:N	18:Q:70:ARG:HH12	2.14	0.46
1:A:575:G:C5	1:A:881:G:C2	3.04	0.46
1:A:731:G:OP1	1:A:766:A:C1'	2.59	0.46
1:A:791:G:C6	1:A:792:A:N7	2.84	0.46
1:A:946:A:C2	1:A:1236:A:C2	3.04	0.46
1:A:959:A:H2	1:A:1222:G:O4'	1.94	0.46
1:A:1381:U:N3	1:A:1382:C:C5	2.83	0.46
1:A:1507:A:H8	1:A:1507:A:C5'	2.29	0.46
3:B:87:ARG:CZ	3:B:233:SER:HB3	2.45	0.46
3:B:158:LEU:HD23	3:B:159:PRO:HD2	1.97	0.46
4:C:122:GLU:O	4:C:123:GLN:C	2.53	0.46
5:D:52:SER:O	5:D:55:ALA:N	2.48	0.46
6:E:51:VAL:O	6:E:54:ALA:CB	2.62	0.46
8:G:50:ILE:HG21	8:G:58:PRO:HA	1.98	0.46
13:L:46:LYS:CG	13:L:47:LYS:H	2.29	0.46
13:L:102:ARG:HH12	13:L:110:VAL:CA	2.18	0.46
14:M:29:ARG:HD3	14:M:64:TRP:CE2	2.51	0.46
19:R:66:LEU:HD12	19:R:66:LEU:HA	1.75	0.46
20:S:78:ARG:CG	20:S:78:ARG:NH1	2.76	0.46
20:S:83:HIS:CD2	20:S:83:HIS:H	2.34	0.46
1:A:91:C:H2'	1:A:92:C:O5'	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:175:C:N3	1:A:176:C:C5	2.84	0.46
1:A:223:U:H5''	21:T:68:LYS:HZ2	1.80	0.46
1:A:259:G:H2'	1:A:260:G:O4'	2.15	0.46
1:A:519:C:H2'	1:A:520:A:H8	1.69	0.46
1:A:625:G:C6	1:A:626:U:C4	3.04	0.46
1:A:722:A:O2'	1:A:723:U:C2	2.69	0.46
1:A:941:G:C6	1:A:942:G:N7	2.84	0.46
1:A:959:A:C2	1:A:1222:G:C1'	2.99	0.46
1:A:1112:C:N3	4:C:178:LEU:N	2.63	0.46
1:A:1240:U:H3	8:G:30:ILE:HG22	1.81	0.46
1:A:1306:A:C5	1:A:1307:U:C5	3.03	0.46
4:C:167:TRP:O	4:C:168:ALA:HB2	2.16	0.46
6:E:69:VAL:O	6:E:69:VAL:HG12	2.16	0.46
7:F:7:ASN:HD21	19:R:34:TYR:HE1	1.62	0.46
9:H:14:ARG:HH11	9:H:14:ARG:HG2	1.81	0.46
10:I:50:LEU:O	10:I:52:ALA:N	2.48	0.46
13:L:10:LEU:HD23	13:L:10:LEU:HA	1.70	0.46
20:S:17:GLU:HA	20:S:20:LEU:HD23	1.98	0.46
1:A:64:G:H4'	1:A:65:U:O5'	2.15	0.45
1:A:160:A:C5	1:A:346:G:O6	2.69	0.45
1:A:257:G:H8	1:A:257:G:O5'	1.99	0.45
1:A:266:G:C5'	1:A:266:G:H8	2.26	0.45
1:A:367:U:O2	1:A:369:C:C6	2.69	0.45
1:A:444:C:C2'	1:A:445:G:H8	2.03	0.45
1:A:639:G:O2'	1:A:640:A:H5'	2.17	0.45
1:A:643:C:C3'	1:A:643:C:C6	2.99	0.45
1:A:705:U:O2	1:A:705:U:H2'	2.16	0.45
1:A:1030(D):A:H5''	1:A:1031:G:OP2	2.16	0.45
1:A:1105:A:H2'	1:A:1106:G:H8	1.80	0.45
1:A:1125:U:O4	11:J:5:ARG:HG3	2.15	0.45
1:A:1265:G:C4	1:A:1271:G:N2	2.84	0.45
10:I:19:LEU:HD23	10:I:19:LEU:HA	1.79	0.45
12:K:73:MET:HE1	12:K:102:GLY:HA3	1.99	0.45
17:P:19:ILE:CG2	17:P:36:ILE:HG13	2.35	0.45
1:A:106:C:H2'	1:A:107:G:C8	2.39	0.45
1:A:127:G:HO2'	18:Q:2:PRO:N	2.15	0.45
1:A:256:U:H2'	1:A:257:G:C5'	2.46	0.45
1:A:292:G:C8	1:A:292:G:H3'	2.51	0.45
1:A:623:C:O2	1:A:623:C:C2'	2.60	0.45
1:A:749:C:H2'	1:A:750:G:H8	1.80	0.45
1:A:914:A:N1	1:A:915:A:N3	2.65	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:926:G:H22	2:Z:4:U:P	2.38	0.45
1:A:1153:C:H2'	1:A:1154:G:O4'	2.16	0.45
1:A:1228:C:H2'	1:A:1229:A:C8	2.51	0.45
1:A:1295:G:O2'	1:A:1302:U:O4	2.23	0.45
1:A:1296:C:C4'	1:A:1302:U:C5	2.98	0.45
1:A:1327:C:O2'	1:A:1328:C:H5'	2.17	0.45
1:A:1459:C:H2'	1:A:1460:A:C8	2.47	0.45
1:A:1510:U:O2	1:A:1510:U:H2'	2.16	0.45
3:B:162:ILE:CG2	3:B:184:VAL:HG22	2.46	0.45
5:D:54:TYR:O	5:D:55:ALA:C	2.54	0.45
6:E:107:ARG:O	6:E:110:LEU:N	2.49	0.45
10:I:45:ALA:C	10:I:47:LEU:N	2.69	0.45
12:K:73:MET:C	12:K:75:TYR:H	2.20	0.45
14:M:44:ARG:O	14:M:45:VAL:C	2.54	0.45
15:N:21:TYR:CE2	15:N:23:ARG:NE	2.73	0.45
17:P:4:ILE:O	17:P:66:PRO:HA	2.16	0.45
19:R:87:ARG:HH11	19:R:87:ARG:CB	2.29	0.45
1:A:504:C:C2	1:A:542:G:C2	3.04	0.45
1:A:521:G:OP2	13:L:54:LYS:NZ	2.34	0.45
1:A:781:A:C2	1:A:1514:C:H1'	2.51	0.45
1:A:803:G:C4	1:A:804:U:C6	3.04	0.45
1:A:880:C:H3'	1:A:880:C:H6	1.81	0.45
1:A:922:G:H2'	1:A:923:A:O4'	2.16	0.45
1:A:1123:A:C2	1:A:1151:A:N1	2.84	0.45
1:A:1185:G:H2'	1:A:1186:G:H8	1.82	0.45
1:A:1350:A:H8	1:A:1350:A:O5'	2.00	0.45
3:B:178:ARG:C	3:B:180:LEU:N	2.69	0.45
10:I:79:LEU:O	10:I:82:ALA:N	2.49	0.45
15:N:4:LYS:O	15:N:6:LEU:N	2.49	0.45
18:Q:22:LEU:HD12	18:Q:22:LEU:HA	1.57	0.45
1:A:157:G:N1	1:A:158:G:N7	2.64	0.45
1:A:184:G:H2'	1:A:185:A:C8	2.51	0.45
1:A:417:C:H5''	1:A:418:C:OP2	2.17	0.45
1:A:462:G:C2	1:A:463:A:C4	3.04	0.45
1:A:513:C:H5''	1:A:514:C:OP2	2.17	0.45
1:A:515:G:C6	1:A:516:U:C5	3.05	0.45
1:A:615:C:C6	1:A:615:C:C3'	3.00	0.45
1:A:672:U:H4'	7:F:80:ARG:NH1	2.30	0.45
1:A:935:A:H2'	1:A:936:C:O5'	2.17	0.45
1:A:1152:A:O3'	11:J:13:HIS:CD2	2.69	0.45
1:A:1240:U:N3	8:G:30:ILE:CG2	2.79	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1393:U:O2'	1:A:1501:C:O2'	2.34	0.45
3:B:100:GLY:O	3:B:104:ASN:N	2.49	0.45
3:B:219:VAL:O	3:B:220:ASP:C	2.55	0.45
4:C:178:LEU:O	4:C:178:LEU:HG	2.16	0.45
8:G:26:PHE:HA	8:G:101:LEU:HD22	1.97	0.45
10:I:71:SER:CA	10:I:74:ILE:HD12	2.44	0.45
1:A:59:A:H2'	1:A:59:A:N3	2.31	0.45
1:A:125:U:H2'	1:A:126:G:C8	2.51	0.45
1:A:160:A:H2'	1:A:161:A:O4'	2.15	0.45
1:A:299:G:H8	1:A:299:G:O5'	2.00	0.45
1:A:414:A:C2	1:A:415:A:C4	3.05	0.45
1:A:618:C:N3	1:A:622:A:N6	2.65	0.45
1:A:818:G:O2'	1:A:819:A:H5''	2.16	0.45
1:A:1061:G:C6	1:A:1062:U:N3	2.85	0.45
1:A:1107:C:C6	1:A:1107:C:C3'	2.99	0.45
1:A:1460:A:C2	1:A:1461:G:H1'	2.52	0.45
7:F:89:MET:HE2	19:R:76:LEU:HD21	1.99	0.45
1:A:41:G:H2'	1:A:42:G:C8	2.52	0.45
1:A:44:G:N2	1:A:45:U:H1'	2.31	0.45
1:A:293:G:C6	1:A:294:U:C4	3.04	0.45
1:A:372:C:H4'	1:A:373:A:O5'	2.16	0.45
1:A:1074:G:O3'	3:B:103:THR:CG2	2.64	0.45
1:A:1123:A:N3	11:J:39:PRO:HG3	2.32	0.45
1:A:1419:G:O6	1:A:1482:G:N2	2.49	0.45
3:B:19:HIS:HB2	3:B:204:ASN:CG	2.37	0.45
3:B:71:VAL:O	3:B:165:VAL:CG2	2.64	0.45
3:B:174:VAL:C	3:B:176:GLU:N	2.70	0.45
4:C:186:PHE:CE1	4:C:187:ALA:O	2.70	0.45
8:G:31:MET:SD	8:G:34:GLY:HA2	2.57	0.45
10:I:77:ILE:HG23	10:I:81:ILE:CD1	2.46	0.45
10:I:120:ARG:O	10:I:121:ARG:C	2.55	0.45
12:K:111:ASP:O	12:K:112:THR:C	2.55	0.45
14:M:15:VAL:HB	14:M:34:LEU:HD11	1.99	0.45
21:T:56:MET:HE2	21:T:88:VAL:HG11	1.98	0.45
1:A:42:G:H1	1:A:400:C:N4	2.14	0.45
1:A:781:A:N7	1:A:802:A:C2	2.85	0.45
1:A:880:C:C6	1:A:880:C:H3'	2.51	0.45
1:A:894:G:H2'	1:A:895:G:H8	1.80	0.45
1:A:1167:A:C6	1:A:1168:A:C6	3.04	0.45
1:A:1229:A:H5''	1:A:1230:C:OP2	2.17	0.45
1:A:1298:C:H2'	8:G:114:ARG:NH1	2.32	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:105:PHE:O	3:B:107:THR:N	2.50	0.45
4:C:22:TRP:CH2	4:C:32:LEU:O	2.70	0.45
4:C:57:ILE:CG2	4:C:58:GLU:N	2.79	0.45
4:C:138:VAL:O	4:C:142:MET:N	2.46	0.45
7:F:30:LEU:O	7:F:34:GLY:N	2.50	0.45
8:G:6:ARG:O	8:G:6:ARG:HG2	2.16	0.45
8:G:108:ALA:C	8:G:110:GLN:N	2.69	0.45
12:K:53:SER:C	12:K:55:LYS:H	2.19	0.45
13:L:75:HIS:CD2	13:L:77:LEU:N	2.72	0.45
14:M:49:THR:HG22	14:M:51:ALA:N	2.27	0.45
16:O:3:ILE:CG2	16:O:34:LEU:HD11	2.40	0.45
18:Q:60:ILE:C	18:Q:71:PHE:HD1	2.20	0.45
1:A:56:U:H2'	1:A:57:G:C8	2.52	0.45
1:A:109:A:C3'	1:A:110:C:H5'	2.47	0.45
1:A:122:G:N2	1:A:123:C:H1'	2.32	0.45
1:A:408:A:C8	1:A:408:A:C3'	2.99	0.45
1:A:560:U:C5'	1:A:566:G:N2	2.73	0.45
1:A:684:A:H2'	1:A:685:G:O5'	2.15	0.45
1:A:989:C:O2	1:A:1217:C:N3	2.50	0.45
5:D:111:ALA:HB1	5:D:116:GLN:HB3	1.99	0.45
9:H:9:MET:HG3	9:H:26:VAL:HG21	1.99	0.45
14:M:8:GLU:CA	14:M:9:ILE:HG13	2.46	0.45
18:Q:45:HIS:HA	18:Q:69:LYS:CE	2.47	0.45
21:T:67:ALA:O	21:T:73:HIS:ND1	2.47	0.45
1:A:505:G:C6	1:A:506:G:O6	2.70	0.45
1:A:878:G:H1'	9:H:3:THR:HG21	1.98	0.45
1:A:943:U:C2	1:A:944:G:C8	3.05	0.45
1:A:955:U:H2'	1:A:956:U:H6	1.82	0.45
1:A:991:U:H3	1:A:1215:G:H1	1.64	0.45
1:A:1057:G:C4	1:A:1204:A:C2	3.04	0.45
1:A:1365:G:H2'	1:A:1366:C:C6	2.52	0.45
1:A:1365:G:H2'	1:A:1366:C:H6	1.82	0.45
3:B:9:GLU:HG3	3:B:217:ARG:CZ	2.44	0.45
3:B:187:LEU:HA	3:B:201:ILE:HB	1.98	0.45
8:G:115:ARG:HB3	8:G:118:VAL:CG2	2.47	0.45
13:L:10:LEU:HD21	13:L:15:ARG:HD3	1.99	0.45
14:M:74:VAL:O	14:M:76:ALA:N	2.50	0.45
15:N:36:PHE:CD1	15:N:36:PHE:C	2.90	0.45
15:N:36:PHE:CD1	15:N:37:PHE:CE1	3.05	0.45
18:Q:56:VAL:HG12	18:Q:77:VAL:HG23	1.99	0.45
1:A:129(A):G:N2	1:A:190(E):U:H5''	2.32	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:160:A:C6	1:A:161:A:C2	3.05	0.45
1:A:247:G:C5	1:A:278:G:C2	3.05	0.45
1:A:324:G:H8	1:A:324:G:O5'	2.00	0.45
1:A:491:G:H2'	1:A:492:G:H8	1.82	0.45
1:A:720:C:O5'	1:A:720:C:H6	2.00	0.45
1:A:1047:G:C3'	1:A:1048:G:H5'	2.42	0.45
1:A:1416:G:C6	1:A:1417:G:C5	3.05	0.45
3:B:71:VAL:HG23	3:B:164:VAL:HG13	1.97	0.45
3:B:162:ILE:HG22	3:B:184:VAL:HA	1.99	0.45
3:B:178:ARG:C	3:B:180:LEU:H	2.19	0.45
4:C:88:ARG:HG2	4:C:91:LEU:CD2	2.47	0.45
5:D:165:MET:HG2	5:D:176:LEU:HD21	1.98	0.45
8:G:66:VAL:CG1	8:G:67:GLU:N	2.80	0.45
10:I:6:GLY:HA3	10:I:83:ARG:HB3	1.98	0.45
10:I:47:LEU:CA	10:I:49:PRO:HD2	2.46	0.45
19:R:36:ASN:O	19:R:37:VAL:C	2.53	0.45
20:S:40:ILE:HG12	20:S:62:ILE:HD11	1.99	0.45
21:T:60:GLU:O	21:T:61:SER:C	2.54	0.45
21:T:89:ARG:HH12	21:T:106:ALA:HB2	1.82	0.45
1:A:38:G:H22	1:A:397:A:H5''	1.82	0.44
1:A:373:A:H2'	1:A:374:A:H8	1.82	0.44
1:A:615:C:H3'	1:A:615:C:H6	1.82	0.44
1:A:925:G:C6	1:A:927:G:N7	2.85	0.44
1:A:975:A:H4'	1:A:976:G:O5'	2.16	0.44
1:A:1060:C:C2	1:A:1198:G:C2	3.06	0.44
1:A:1092:A:C8	1:A:1092:A:H5'	2.52	0.44
1:A:1105:A:H2'	1:A:1106:G:C8	2.52	0.44
1:A:1119:C:H3'	1:A:1119:C:H6	1.79	0.44
1:A:1303:C:O2	1:A:1303:C:H2'	2.15	0.44
1:A:1453:G:H2'	1:A:1454:G:O4'	2.17	0.44
1:A:1511:G:C6	1:A:1512:U:C2	3.05	0.44
3:B:167:PRO:HG2	3:B:192:SER:CB	2.47	0.44
5:D:106:TYR:CD2	5:D:106:TYR:C	2.90	0.44
13:L:43:VAL:HG12	13:L:55:VAL:HG21	1.98	0.44
14:M:52:GLU:O	14:M:56:LEU:HB2	2.17	0.44
16:O:24:SER:HB3	16:O:27:VAL:H	1.81	0.44
16:O:49:ASP:O	16:O:51:HIS:N	2.49	0.44
1:A:689:C:H4'	1:A:705:U:O2'	2.18	0.44
3:B:19:HIS:HB2	3:B:204:ASN:OD1	2.17	0.44
3:B:91:PRO:HG2	3:B:155:LEU:CD2	2.32	0.44
4:C:6:HIS:HD2	4:C:6:HIS:C	2.19	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:3:ARG:HA	5:D:3:ARG:HD3	1.58	0.44
15:N:12:ARG:H	15:N:12:ARG:HG3	1.53	0.44
1:A:285:G:C2	1:A:286:G:C8	3.06	0.44
1:A:543:C:H2'	1:A:544:G:H5'	2.00	0.44
1:A:1186:G:C2	1:A:1187:G:C8	3.06	0.44
1:A:1247:U:C6	1:A:1247:U:C3'	2.99	0.44
1:A:1265:G:H5''	1:A:1266:G:OP2	2.17	0.44
1:A:1333:A:H2'	1:A:1334:G:C8	2.53	0.44
1:A:1401:G:OP2	2:Z:6:U:H3'	2.17	0.44
3:B:162:ILE:HG21	3:B:184:VAL:HG22	1.98	0.44
3:B:223:ILE:CG2	3:B:224:GLN:H	2.31	0.44
4:C:29:TYR:CE2	4:C:33:LEU:HD12	2.52	0.44
5:D:64:LEU:CD1	5:D:97:LEU:HD11	2.47	0.44
6:E:148:VAL:O	6:E:149:GLU:C	2.55	0.44
12:K:42:TRP:CZ3	12:K:47:VAL:HG23	2.53	0.44
15:N:24:CYS:SG	15:N:27:CYS:SG	3.15	0.44
19:R:22:VAL:HB	19:R:56:THR:HA	1.99	0.44
19:R:76:LEU:HD12	19:R:78:LEU:HD13	2.00	0.44
1:A:291:C:O2	1:A:291:C:H2'	2.16	0.44
1:A:392:G:C6	1:A:393:A:N6	2.85	0.44
1:A:443:C:H2'	1:A:444:C:C6	2.52	0.44
1:A:452:A:H1'	1:A:453:A:C8	2.51	0.44
1:A:797:C:OP1	12:K:124:LYS:HG3	2.17	0.44
1:A:942:G:C6	1:A:1342:C:C4	3.05	0.44
1:A:976:G:H8	1:A:1358:U:O2'	1.97	0.44
1:A:1229:A:C4	1:A:1230:C:C5	3.06	0.44
1:A:1365:G:C6	1:A:1366:C:N3	2.85	0.44
1:A:1443:G:C4'	1:A:1446:A:P	3.01	0.44
4:C:128:PHE:HE2	4:C:132:ARG:NH1	2.15	0.44
4:C:188:LEU:O	4:C:189:ALA:HB3	2.16	0.44
5:D:97:LEU:O	5:D:100:ARG:HB2	2.17	0.44
9:H:58:TYR:O	9:H:59:LEU:HG	2.18	0.44
9:H:112:LEU:N	9:H:112:LEU:HD22	2.32	0.44
11:J:56:HIS:O	11:J:59:SER:OG	2.35	0.44
12:K:33:THR:OG1	12:K:38:ASN:N	2.50	0.44
13:L:71:PRO:HG2	13:L:102:ARG:HG3	2.00	0.44
14:M:14:ARG:NH1	14:M:16:ASP:OD2	2.51	0.44
14:M:19:LEU:HB3	14:M:25:ILE:HG21	1.99	0.44
18:Q:19:VAL:HG23	18:Q:21:VAL:HG23	2.00	0.44
19:R:74:ARG:HD3	19:R:80:PRO:O	2.17	0.44
1:A:186:C:C2	1:A:187:C:C5	3.05	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:243:A:N7	1:A:281:G:C2	2.85	0.44
1:A:348:G:H2'	1:A:349:A:H8	1.83	0.44
1:A:707:C:C4'	12:K:20:TYR:HD2	2.29	0.44
1:A:784:C:H3'	1:A:784:C:C6	2.53	0.44
1:A:939:G:H2'	1:A:940:C:C6	2.51	0.44
1:A:1115:C:O2'	1:A:1116:C:H5'	2.16	0.44
1:A:1435:G:C6	1:A:1436:U:O4	2.70	0.44
1:A:1454:G:O5'	1:A:1454:G:H8	2.01	0.44
3:B:12:GLU:HG3	3:B:213:LEU:HD13	2.00	0.44
3:B:15:VAL:HG13	3:B:209:ARG:HH11	1.81	0.44
3:B:92:TYR:C	3:B:92:TYR:HD1	2.21	0.44
4:C:15:THR:HG21	4:C:179:ARG:CA	2.45	0.44
4:C:22:TRP:HH2	4:C:32:LEU:O	2.00	0.44
6:E:126:ARG:HD3	6:E:126:ARG:HA	1.53	0.44
8:G:67:GLU:O	8:G:67:GLU:CG	2.62	0.44
10:I:111:ARG:NH1	15:N:61:TRP:OXT	2.50	0.44
13:L:71:PRO:HB2	13:L:120:TYR:HE2	1.82	0.44
16:O:74:ASP:C	16:O:76:GLU:N	2.69	0.44
17:P:42:ARG:NH1	17:P:42:ARG:HB3	2.32	0.44
18:Q:8:GLY:O	18:Q:56:VAL:HA	2.18	0.44
21:T:19:SER:O	21:T:20:LEU:C	2.56	0.44
21:T:73:HIS:C	21:T:74:LYS:CG	2.66	0.44
1:A:267:C:H2'	1:A:268:C:H5'	1.98	0.44
1:A:285:G:N2	1:A:286:G:H1'	2.33	0.44
1:A:290:C:H2'	1:A:291:C:O4'	2.18	0.44
1:A:426:G:OP1	5:D:36:ARG:NH2	2.34	0.44
1:A:560:U:H5'	1:A:566:G:H21	1.75	0.44
1:A:668:G:H4'	16:O:48:LYS:HB3	1.99	0.44
1:A:950:U:O5'	1:A:950:U:H6	2.01	0.44
1:A:1114:C:C4	1:A:1115:C:H5	2.36	0.44
1:A:1130:A:N3	1:A:1130:A:H2'	2.33	0.44
1:A:1208:C:H2'	1:A:1209:C:C6	2.53	0.44
1:A:1355:G:H2'	1:A:1356:G:H5'	1.99	0.44
3:B:44:LEU:H	3:B:44:LEU:HG	1.40	0.44
3:B:122:PHE:O	3:B:125:PRO:HD2	2.17	0.44
5:D:38:TYR:HB2	5:D:39:PRO:HD2	2.00	0.44
5:D:111:ALA:HB2	5:D:120:LEU:CD1	2.47	0.44
6:E:143:ARG:HH11	6:E:143:ARG:CG	2.31	0.44
11:J:35:SER:OG	11:J:73:ASP:O	2.33	0.44
15:N:47:LEU:O	15:N:50:LYS:N	2.51	0.44
17:P:28:ARG:HG3	17:P:29:ASP:OD2	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:58:TYR:O	17:P:61:SER:N	2.50	0.44
17:P:65:GLN:HA	17:P:66:PRO:HD2	1.63	0.44
1:A:290:C:C5	1:A:291:C:C5	3.06	0.44
1:A:355:C:H2'	1:A:356:A:O4'	2.18	0.44
1:A:606:G:H5''	1:A:607:A:H5'	1.98	0.44
1:A:686:U:O4	1:A:703:G:O2'	2.29	0.44
1:A:789:U:O2	1:A:791:G:N7	2.51	0.44
1:A:858:G:H1	1:A:869:G:H3'	1.82	0.44
1:A:1061:G:C6	1:A:1197:G:C6	3.06	0.44
1:A:1064:G:C2	1:A:1066:C:N4	2.86	0.44
1:A:1126:U:P	1:A:1281:U:O2	2.76	0.44
1:A:1240:U:H3	8:G:30:ILE:HG23	1.82	0.44
1:A:1287:A:C6	1:A:1288:A:C6	3.06	0.44
1:A:1324:A:H1'	1:A:1361(A):C:H4'	2.00	0.44
1:A:1525:G:H2'	1:A:1526:G:O5'	2.16	0.44
3:B:46:LYS:O	3:B:47:THR:C	2.56	0.44
5:D:11:LEU:O	5:D:12:CYS:C	2.56	0.44
5:D:67:ILE:CG2	5:D:68:TYR:HD1	2.27	0.44
6:E:19:MET:HE1	6:E:24:ARG:HH11	1.81	0.44
6:E:138:ALA:O	6:E:141:GLN:HB2	2.18	0.44
8:G:127:ALA:O	8:G:130:GLY:N	2.51	0.44
9:H:4:ASP:HA	9:H:5:PRO:HD2	1.90	0.44
13:L:85:ILE:HG23	13:L:86:ARG:N	2.33	0.44
14:M:20:THR:O	14:M:22:ILE:N	2.51	0.44
17:P:21:VAL:O	17:P:32:TYR:HB2	2.17	0.44
17:P:53:VAL:O	17:P:54:GLU:C	2.56	0.44
18:Q:11:VAL:HB	18:Q:88:TYR:CD2	2.52	0.44
1:A:19:C:C2	1:A:20:U:C5	3.06	0.44
1:A:349:A:H2'	1:A:350:G:H5''	2.00	0.44
1:A:454:C:H5''	1:A:455:C:OP2	2.17	0.44
1:A:781:A:C4	1:A:802:A:H2	2.36	0.44
1:A:913:A:H1'	1:A:914:A:O4'	2.17	0.44
1:A:1056:U:O4	1:A:1200:C:N3	2.51	0.44
1:A:1246:C:H42	1:A:1291:G:H1	1.65	0.44
3:B:118:LEU:CD2	3:B:142:LEU:HB2	2.47	0.44
3:B:139:LYS:HB2	3:B:139:LYS:HE3	1.85	0.44
4:C:133:ALA:O	4:C:136:GLN:N	2.51	0.44
6:E:102:ALA:CB	6:E:120:THR:OG1	2.65	0.44
13:L:97:ARG:CB	13:L:98:TYR:CD1	2.91	0.44
16:O:42:HIS:CD2	16:O:42:HIS:C	2.91	0.44
18:Q:36:ILE:H	18:Q:36:ILE:HG13	1.46	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:106:C:O2	1:A:379:C:H4'	2.18	0.44
1:A:157:G:C2	1:A:158:G:N7	2.86	0.44
1:A:199:G:H2'	1:A:200:G:C5'	2.43	0.44
1:A:564:C:H5''	1:A:565:U:OP2	2.17	0.44
1:A:592:G:C2'	1:A:593:G:H5'	2.47	0.44
1:A:643:C:C6	1:A:643:C:H3'	2.52	0.44
1:A:784:C:C6	1:A:784:C:C3'	3.00	0.44
1:A:922:G:N2	1:A:1396:A:C5	2.86	0.44
1:A:1096:C:C2	1:A:1097:C:C5	3.06	0.44
1:A:1185:G:N3	1:A:1186:G:C8	2.86	0.44
1:A:1281:U:H3'	1:A:1281:U:H6	1.83	0.44
5:D:11:LEU:O	5:D:13:ARG:N	2.51	0.44
5:D:130:GLY:O	5:D:131:ARG:C	2.55	0.44
6:E:92:LYS:HA	6:E:93:PRO:HD3	1.82	0.44
8:G:115:ARG:O	8:G:116:ALA:C	2.56	0.44
15:N:60:SER:O	15:N:61:TRP:HB3	2.18	0.44
17:P:74:LEU:O	17:P:79:VAL:CG2	2.65	0.44
20:S:58:VAL:HG12	20:S:59:PRO:HD2	2.00	0.44
1:A:286:G:C5	1:A:287:U:C4	3.05	0.43
1:A:288:A:H2'	1:A:289:G:H4'	1.99	0.43
1:A:622:A:C8	1:A:622:A:H3'	2.53	0.43
1:A:642:A:C2'	1:A:643:C:H5'	2.48	0.43
1:A:766:A:C8	1:A:814:A:C6	3.06	0.43
1:A:881:G:C2	1:A:882:C:C2	3.06	0.43
1:A:949:A:H1'	1:A:1364:U:N3	2.31	0.43
1:A:969:A:H61	14:M:126:LYS:HB2	1.83	0.43
1:A:1144:G:H8	1:A:1144:G:O5'	2.01	0.43
1:A:1363:A:H1'	1:A:1365:G:N7	2.33	0.43
1:A:1399:C:C2	1:A:1502:A:N6	2.86	0.43
1:A:1437:C:H2'	1:A:1438:G:H8	1.83	0.43
5:D:109:GLY:O	5:D:111:ALA:N	2.51	0.43
6:E:89:ILE:HD12	6:E:89:ILE:HA	1.77	0.43
9:H:48:TYR:O	9:H:48:TYR:CG	2.71	0.43
9:H:91:ARG:HG3	13:L:7:ILE:HG13	1.98	0.43
12:K:29:ILE:HB	12:K:44:SER:HB2	2.00	0.43
13:L:77:LEU:HD11	13:L:107:ALA:HB2	2.00	0.43
16:O:33:THR:CG2	16:O:63:ARG:HH11	2.07	0.43
17:P:42:ARG:HB3	17:P:42:ARG:HH11	1.82	0.43
18:Q:63:ARG:HA	18:Q:64:PRO:HD2	1.72	0.43
18:Q:90:ILE:O	18:Q:92:ARG:N	2.51	0.43
1:A:194:C:O2'	21:T:68:LYS:HD3	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:351:G:O5'	1:A:351:G:H8	2.01	0.43
1:A:686:U:C2	1:A:687:A:N7	2.86	0.43
1:A:688:G:C6	1:A:700:G:C2	3.06	0.43
1:A:778:G:H8	1:A:778:G:O5'	2.01	0.43
1:A:990:C:C4	1:A:1216:G:N2	2.86	0.43
1:A:1197:G:H2'	1:A:1198:G:H5'	2.00	0.43
4:C:8:ILE:O	4:C:12:LEU:N	2.51	0.43
4:C:40:ARG:O	4:C:44:GLU:HB2	2.18	0.43
5:D:64:LEU:CD2	5:D:198:VAL:HG11	2.41	0.43
5:D:76:ARG:O	5:D:79:PHE:HB3	2.17	0.43
5:D:120:LEU:CD2	5:D:126:ILE:HD11	2.48	0.43
5:D:126:ILE:HD13	5:D:126:ILE:N	2.33	0.43
6:E:107:ARG:C	6:E:109:ILE:N	2.71	0.43
10:I:40:LEU:C	10:I:42:ARG:H	2.21	0.43
10:I:126:SER:HB2	10:I:127:LYS:H	1.57	0.43
12:K:62:GLN:CG	12:K:63:LEU:N	2.82	0.43
13:L:40:VAL:HG21	13:L:78:GLN:N	2.33	0.43
14:M:15:VAL:HG22	14:M:43:THR:O	2.17	0.43
14:M:24:GLY:O	14:M:25:ILE:C	2.56	0.43
14:M:117:VAL:HG12	14:M:118:ALA:H	1.82	0.43
1:A:143:A:C2	1:A:221:C:O2	2.71	0.43
1:A:219:C:C4	1:A:220:G:C8	3.07	0.43
1:A:477:G:H5''	1:A:478:A:P	2.59	0.43
1:A:568:G:C6	1:A:569:C:N4	2.86	0.43
1:A:991:U:H6	1:A:1212:U:C2	2.36	0.43
3:B:73:THR:HG23	3:B:95:GLN:O	2.18	0.43
4:C:94:LEU:HD12	4:C:95:THR:OG1	2.17	0.43
4:C:159:GLY:HA2	4:C:193:TYR:CD2	2.53	0.43
9:H:30:ARG:O	9:H:31:PHE:C	2.56	0.43
12:K:123:LYS:O	12:K:124:LYS:C	2.56	0.43
13:L:93:LEU:O	13:L:96:VAL:HG23	2.17	0.43
15:N:24:CYS:HB3	15:N:28:GLY:HA2	2.00	0.43
16:O:52:SER:O	16:O:55:GLY:N	2.51	0.43
1:A:784:C:H2'	1:A:785:G:O4'	2.18	0.43
1:A:1281:U:H3'	1:A:1281:U:C6	2.53	0.43
1:A:1483:A:H2'	1:A:1484:C:O4'	2.17	0.43
3:B:124:SER:H	3:B:125:PRO:CD	2.31	0.43
3:B:193:ASP:HA	3:B:194:PRO:HD2	1.88	0.43
4:C:32:LEU:O	4:C:35:GLU:HB3	2.18	0.43
5:D:113:SER:OG	5:D:116:GLN:HB2	2.18	0.43
6:E:34:VAL:HG23	6:E:42:GLY:CA	2.44	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:82:VAL:O	6:E:88:LYS:HA	2.18	0.43
11:J:9:ARG:O	11:J:9:ARG:CG	2.65	0.43
12:K:59:TYR:O	12:K:62:GLN:HB3	2.19	0.43
14:M:26:GLY:O	14:M:28:ALA:N	2.41	0.43
1:A:189:G:H1	1:A:190(J):U:H3	1.66	0.43
1:A:316:G:N2	1:A:338:A:C4	2.86	0.43
1:A:436:C:C2	1:A:437:U:C5	3.06	0.43
1:A:560:U:H4'	1:A:561:U:H5''	2.00	0.43
1:A:674:G:N2	1:A:717:C:O2	2.51	0.43
1:A:994:A:N7	1:A:1216:G:H4'	2.33	0.43
1:A:1056:U:O4	1:A:1200:C:C2	2.71	0.43
1:A:1085:U:H5'	1:A:1094:G:N2	2.34	0.43
1:A:1504:G:O2'	1:A:1505:G:OP2	2.32	0.43
3:B:134:GLU:HA	3:B:137:ARG:HB3	1.99	0.43
3:B:223:ILE:CG2	3:B:224:GLN:N	2.82	0.43
4:C:6:HIS:HD2	4:C:7:PRO:N	2.16	0.43
4:C:57:ILE:HG23	4:C:58:GLU:N	2.34	0.43
4:C:141:VAL:O	4:C:146:ALA:CB	2.66	0.43
5:D:8:VAL:HB	5:D:21:LEU:HD22	2.00	0.43
8:G:111:ARG:HB3	8:G:113:GLU:HG2	2.01	0.43
11:J:38:ILE:HG22	11:J:71:LEU:CB	2.49	0.43
13:L:47:LYS:HB3	13:L:48:PRO:CD	2.44	0.43
13:L:101:VAL:O	13:L:103:GLY:N	2.51	0.43
15:N:24:CYS:HB3	15:N:29:ARG:N	2.34	0.43
16:O:48:LYS:O	16:O:50:HIS:N	2.44	0.43
18:Q:13:ASP:O	18:Q:15:MET:N	2.51	0.43
18:Q:18:THR:HG23	18:Q:69:LYS:HE3	2.00	0.43
18:Q:56:VAL:O	18:Q:77:VAL:HG23	2.18	0.43
21:T:63:ILE:C	21:T:65:LYS:N	2.69	0.43
21:T:65:LYS:O	21:T:68:LYS:N	2.40	0.43
1:A:70:G:H5''	1:A:73:C:P	2.59	0.43
1:A:166:G:N3	1:A:167:G:C8	2.87	0.43
1:A:262:A:N6	1:A:263:A:N6	2.67	0.43
1:A:337:C:C2	1:A:338:A:N7	2.87	0.43
1:A:642:A:C6	1:A:643:C:N3	2.87	0.43
1:A:824:C:C3'	1:A:824:C:C6	3.01	0.43
1:A:941:G:C6	1:A:942:G:C8	3.07	0.43
1:A:992:U:OP2	1:A:992:U:O4'	2.37	0.43
1:A:1185:G:C2	1:A:1186:G:C8	3.06	0.43
1:A:1490:C:H3'	1:A:1491:G:H5''	1.95	0.43
1:A:1512:U:H2'	1:A:1513:A:C8	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:178:ARG:HH22	9:H:68:ARG:HH22	1.64	0.43
5:D:68:TYR:OH	5:D:98:GLU:OE1	2.17	0.43
9:H:53:VAL:O	9:H:53:VAL:CG1	2.67	0.43
10:I:75:ASP:O	10:I:78:LYS:HB3	2.19	0.43
10:I:92:TYR:O	10:I:96:LEU:HB2	2.19	0.43
11:J:19:SER:HB2	11:J:91:PRO:CD	2.48	0.43
12:K:64:ALA:O	12:K:65:ALA:C	2.55	0.43
17:P:20:VAL:HG13	17:P:21:VAL:O	2.19	0.43
17:P:67:THR:HB	17:P:70:ALA:HB2	2.01	0.43
20:S:51:VAL:O	20:S:58:VAL:HG23	2.18	0.43
21:T:22:ARG:O	21:T:25:ARG:N	2.52	0.43
1:A:13:U:C5	1:A:916:G:O6	2.72	0.43
1:A:80:G:H2'	1:A:81:U:H5'	2.01	0.43
1:A:223:U:C5'	21:T:68:LYS:HZ2	2.32	0.43
1:A:463:A:P	17:P:75:ARG:HH12	2.41	0.43
1:A:506:G:C6	1:A:507:C:N4	2.87	0.43
1:A:625:G:C6	1:A:626:U:O4	2.72	0.43
1:A:647:C:H42	1:A:648:A:N6	2.17	0.43
1:A:942:G:C2	1:A:943:U:C5	3.07	0.43
1:A:953:G:H2'	1:A:954:G:O4'	2.19	0.43
1:A:1206:G:C6	1:A:1207:G:C5	3.07	0.43
1:A:1309:G:C6	1:A:1329:A:C2	3.06	0.43
1:A:1343:G:C6	1:A:1344:C:N4	2.87	0.43
1:A:1478:C:O5'	1:A:1478:C:H6	2.01	0.43
4:C:76:VAL:O	4:C:83:ARG:HD2	2.18	0.43
9:H:35:ILE:H	9:H:35:ILE:HG13	1.44	0.43
10:I:17:VAL:HG11	10:I:81:ILE:HA	2.00	0.43
11:J:90:LEU:CB	11:J:91:PRO:CD	2.76	0.43
12:K:72:ALA:HB1	12:K:77:MET:HG3	1.99	0.43
13:L:46:LYS:HD2	13:L:47:LYS:H	1.84	0.43
14:M:5:ALA:HB2	14:M:22:ILE:HG12	2.01	0.43
21:T:14:LYS:HG2	21:T:18:GLN:HE22	1.82	0.43
1:A:368:U:O2'	1:A:369:C:P	2.76	0.43
1:A:380:G:C2	1:A:384:G:C6	3.06	0.43
1:A:451:A:C6	1:A:481:G:C5	3.07	0.43
1:A:1183:A:O2'	1:A:1184:G:OP1	2.29	0.43
1:A:1410:G:C2'	1:A:1411:C:O5'	2.67	0.43
1:A:1471:G:H8	1:A:1471:G:O5'	2.02	0.43
3:B:103:THR:HA	3:B:180:LEU:HD11	2.00	0.43
4:C:77:ILE:HA	4:C:84:ILE:HG22	2.00	0.43
5:D:104:VAL:HG23	5:D:185:PHE:CD1	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:9:LYS:O	6:E:33:VAL:N	2.39	0.43
8:G:153:HIS:CE1	8:G:154:TYR:HE2	2.36	0.43
10:I:33:PHE:CE1	10:I:37:PHE:HE1	2.37	0.43
20:S:5:LEU:O	20:S:6:LYS:HG3	2.18	0.43
1:A:118:U:C5	1:A:288:A:C6	3.07	0.43
1:A:132:C:C2'	1:A:133:U:H5'	2.49	0.43
1:A:193:C:O2	1:A:194:C:C6	2.72	0.43
1:A:289:G:C6	1:A:290:C:N4	2.87	0.43
1:A:313:A:H2'	1:A:314:C:O4'	2.18	0.43
1:A:362:G:O3'	13:L:33:ARG:NH1	2.52	0.43
1:A:376:G:C4	1:A:389:A:C2	3.07	0.43
1:A:378:G:C6	1:A:379:C:C4	3.06	0.43
1:A:487:A:H2'	1:A:488:C:O4'	2.18	0.43
1:A:540:G:C2'	1:A:541:G:O4'	2.64	0.43
1:A:578:C:H2'	1:A:579:G:O4'	2.19	0.43
1:A:689:C:OP1	12:K:44:SER:OG	2.25	0.43
1:A:987:G:H1	1:A:1218:C:N4	2.10	0.43
1:A:1114:C:O5'	1:A:1114:C:H6	2.01	0.43
1:A:1187:G:C2	1:A:1188:A:C4	3.07	0.43
1:A:1348:U:H6	1:A:1348:U:C5'	2.31	0.43
1:A:1515:C:H2'	1:A:1516:G:C8	2.54	0.43
4:C:64:VAL:HG12	4:C:65:ALA:H	1.84	0.43
5:D:64:LEU:HD21	5:D:94:LEU:CD2	2.48	0.43
6:E:55:VAL:O	6:E:56:GLN:C	2.56	0.43
6:E:79:GLU:O	9:H:104:ARG:CZ	2.67	0.43
6:E:130:ASN:HA	6:E:133:TYR:HB2	2.00	0.43
7:F:11:ASN:HA	7:F:12:PRO:HD2	1.78	0.43
13:L:68:ALA:HB3	13:L:100:ILE:HD11	2.00	0.43
16:O:76:GLU:C	16:O:78:TYR:N	2.72	0.43
17:P:67:THR:HG22	17:P:69:THR:N	2.34	0.43
17:P:74:LEU:CD1	17:P:79:VAL:HG11	2.46	0.43
21:T:68:LYS:HD2	21:T:68:LYS:HA	1.72	0.43
21:T:93:GLU:O	21:T:96:GLY:N	2.43	0.43
1:A:21:G:C2	1:A:22:G:C6	3.07	0.43
1:A:136:C:O2'	17:P:65:GLN:OE1	2.35	0.43
1:A:504:C:N3	1:A:542:G:C2	2.86	0.43
1:A:984:C:C2	1:A:985:C:C5	3.07	0.43
1:A:1005:A:C4	1:A:1026:G:N2	2.86	0.43
1:A:1255:G:C3'	1:A:1279:A:H61	2.31	0.43
1:A:1418:A:N6	1:A:1419:G:C2	2.87	0.43
1:A:1509:C:C5'	1:A:1510:U:OP2	2.67	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:66:VAL:O	4:C:66:VAL:HG12	2.19	0.43
5:D:61:LYS:NZ	5:D:62:GLN:NE2	2.67	0.43
9:H:75:ARG:HA	9:H:76:PRO:HD3	1.92	0.43
11:J:60:ARG:HD2	11:J:60:ARG:HA	1.74	0.43
14:M:91:ARG:O	14:M:95:GLY:CA	2.66	0.43
14:M:125:ARG:HD2	14:M:126:LYS:H	1.84	0.43
1:A:192:U:C4	1:A:193:C:C5	3.07	0.42
1:A:376:G:C2	1:A:389:A:C6	3.07	0.42
1:A:426:G:P	5:D:36:ARG:NH2	2.92	0.42
1:A:459:G:C6	1:A:461:C:OP2	2.72	0.42
1:A:767:A:O2'	1:A:768:A:H5'	2.19	0.42
1:A:919:A:O2'	1:A:1080:A:N1	2.48	0.42
1:A:1092:A:H8	1:A:1092:A:H5'	1.84	0.42
1:A:1162:C:O2	1:A:1162:C:H2'	2.17	0.42
3:B:215:LEU:HD23	3:B:215:LEU:HA	1.93	0.42
4:C:36:ASP:HB3	4:C:40:ARG:NH1	2.34	0.42
6:E:18:ARG:HE	6:E:25:ARG:HB3	1.84	0.42
7:F:97:PHE:HB2	19:R:32:ARG:HH21	1.82	0.42
8:G:151:TYR:OH	12:K:54:ARG:HD3	2.18	0.42
12:K:34:ASP:HB2	12:K:35:PRO:HD2	1.99	0.42
12:K:53:SER:C	12:K:55:LYS:N	2.73	0.42
13:L:75:HIS:CG	13:L:76:ASN:N	2.86	0.42
16:O:3:ILE:HA	16:O:7:GLU:OE2	2.19	0.42
1:A:374:A:C6	1:A:375:U:C4	3.08	0.42
1:A:1114:C:H1'	15:N:60:SER:CB	2.49	0.42
1:A:1151:A:H5''	11:J:42:THR:OG1	2.19	0.42
1:A:1320:C:H2'	1:A:1321:C:O4'	2.19	0.42
1:A:1431:C:H2'	1:A:1432:G:H5'	2.00	0.42
3:B:15:VAL:CG1	3:B:209:ARG:HH11	2.31	0.42
3:B:214:ILE:O	3:B:215:LEU:C	2.56	0.42
4:C:6:HIS:CD2	4:C:8:ILE:HB	2.53	0.42
8:G:74:GLU:HA	8:G:141:VAL:HG12	2.01	0.42
12:K:99:GLN:HA	12:K:105:VAL:HG21	2.01	0.42
12:K:103:LEU:H	12:K:103:LEU:HG	1.58	0.42
13:L:124:LYS:HA	13:L:125:PRO:HD3	1.83	0.42
16:O:78:TYR:O	16:O:82:ILE:HD12	2.18	0.42
18:Q:17:LYS:HB3	18:Q:46:ASP:O	2.19	0.42
1:A:694:A:N6	1:A:787:A:O2'	2.49	0.42
1:A:853:G:C2'	1:A:854:G:O5'	2.67	0.42
1:A:922:G:H2'	1:A:923:A:C8	2.54	0.42
1:A:1151:A:HO2'	1:A:1152:A:P	2.43	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1250:A:H8	1:A:1250:A:H5''	1.83	0.42
1:A:1377:A:H2'	1:A:1378:C:OP2	2.18	0.42
3:B:16:HIS:CE1	3:B:203:GLY:HA3	2.54	0.42
6:E:129:ILE:HD12	6:E:129:ILE:N	2.34	0.42
8:G:62:PHE:C	8:G:62:PHE:CD2	2.93	0.42
13:L:86:ARG:O	13:L:86:ARG:HG3	2.18	0.42
16:O:78:TYR:CD1	16:O:82:ILE:HD11	2.55	0.42
18:Q:14:LYS:H	18:Q:14:LYS:HG3	1.55	0.42
18:Q:20:THR:HG23	18:Q:43:LEU:CD2	2.49	0.42
19:R:58:LEU:HD23	19:R:58:LEU:HA	1.78	0.42
20:S:14:HIS:O	20:S:18:LYS:HB2	2.20	0.42
1:A:178:C:C2'	1:A:179:A:O5'	2.68	0.42
1:A:708:C:OP1	12:K:85:ARG:NH2	2.49	0.42
1:A:990:C:C4	1:A:1216:G:C2	3.07	0.42
1:A:1202:G:C4	15:N:42:ILE:HD12	2.54	0.42
1:A:1206:G:C5	1:A:1207:G:N7	2.87	0.42
1:A:1288:A:H2	1:A:1370:G:H21	1.66	0.42
1:A:1289:A:H5'	1:A:1290:G:OP2	2.18	0.42
1:A:1401:G:C2	1:A:1402:C:H1'	2.54	0.42
1:A:1479:C:O5'	1:A:1479:C:H6	2.01	0.42
3:B:24:TRP:CG	3:B:25:ASN:N	2.87	0.42
3:B:52:GLU:O	3:B:53:ARG:C	2.58	0.42
5:D:64:LEU:O	5:D:67:ILE:HB	2.20	0.42
6:E:36:ASP:OD1	6:E:36:ASP:C	2.58	0.42
10:I:77:ILE:HG22	10:I:78:LYS:N	2.33	0.42
16:O:27:VAL:O	16:O:31:LEU:HD12	2.19	0.42
17:P:42:ARG:H	17:P:42:ARG:HG2	1.49	0.42
18:Q:58:GLU:HG3	18:Q:75:ARG:HG2	2.01	0.42
19:R:69:THR:O	19:R:70:ILE:C	2.56	0.42
21:T:63:ILE:O	21:T:64:ASP:C	2.56	0.42
1:A:5:U:O2	1:A:5:U:C2'	2.64	0.42
1:A:579:G:N2	1:A:763:G:C4	2.87	0.42
1:A:642:A:H2'	1:A:643:C:H5'	2.02	0.42
1:A:1064:G:N2	1:A:1190:G:H2'	2.35	0.42
1:A:1099:G:C5	1:A:1100:C:C4	3.07	0.42
1:A:1241:G:H2'	1:A:1242:C:C6	2.55	0.42
1:A:1309:G:C5	1:A:1329:A:C2	3.07	0.42
1:A:1368:G:C2'	1:A:1369:C:H5'	2.49	0.42
1:A:1425:U:H3	1:A:1475:G:H1	1.67	0.42
3:B:52:GLU:C	3:B:54:THR:N	2.71	0.42
3:B:84:GLU:CG	3:B:216:SER:HA	2.50	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:187:LEU:HD13	3:B:204:ASN:O	2.19	0.42
3:B:189:ASP:HB3	3:B:205:ASP:H	1.84	0.42
6:E:105:VAL:HG12	6:E:132:ALA:HB2	2.01	0.42
9:H:46:LYS:HG3	9:H:64:LYS:HB2	2.00	0.42
9:H:84:ARG:HB3	9:H:84:ARG:HH11	1.84	0.42
10:I:43:ALA:O	10:I:46:ALA:N	2.51	0.42
13:L:61:THR:C	13:L:63:GLY:N	2.73	0.42
13:L:69:TYR:HE2	13:L:71:PRO:HA	1.82	0.42
14:M:74:VAL:C	14:M:76:ALA:N	2.72	0.42
16:O:35:ARG:HB3	16:O:59:MET:CE	2.50	0.42
20:S:13:ASP:HA	20:S:16:LEU:HB3	2.02	0.42
1:A:282:A:C4	1:A:283:C:C6	3.07	0.42
1:A:286:G:C4	1:A:287:U:C6	3.07	0.42
1:A:709:G:C4	1:A:710:G:C8	3.08	0.42
1:A:1111:A:H2'	1:A:1112:C:O5'	2.20	0.42
1:A:1132:C:H2'	1:A:1133:G:H8	1.84	0.42
1:A:1257:U:H4'	1:A:1258:G:OP2	2.19	0.42
1:A:1266:G:H21	1:A:1270:C:N4	2.16	0.42
1:A:1439:C:O2	1:A:1439:C:H2'	2.20	0.42
3:B:21:ARG:H	3:B:21:ARG:HG3	1.66	0.42
3:B:85:ALA:CB	3:B:92:TYR:HB3	2.49	0.42
5:D:25:ARG:HE	5:D:30:LYS:HB3	1.84	0.42
7:F:7:ASN:HB2	7:F:89:MET:HB3	2.02	0.42
7:F:27:GLN:O	7:F:31:GLU:HG2	2.18	0.42
8:G:138:LYS:C	8:G:140:ASP:H	2.23	0.42
21:T:81:LYS:HB3	21:T:81:LYS:HE2	1.48	0.42
1:A:223:U:C5'	21:T:68:LYS:NZ	2.83	0.42
1:A:404:U:H2'	1:A:405:U:C6	2.54	0.42
1:A:824:C:C6	1:A:824:C:H3'	2.54	0.42
1:A:1005:A:H1'	1:A:1036:G:H22	1.83	0.42
1:A:1022:G:H2'	1:A:1023:G:C8	2.55	0.42
1:A:1454:G:H2'	1:A:1455:G:H8	1.84	0.42
1:A:1455:G:C3'	1:A:1459:C:P	3.08	0.42
3:B:108:ILE:O	3:B:108:ILE:CG2	2.68	0.42
3:B:166:ASP:HA	3:B:167:PRO:HD2	1.95	0.42
4:C:66:VAL:HG12	4:C:68:VAL:HG23	2.01	0.42
4:C:86:VAL:O	4:C:86:VAL:HG13	2.18	0.42
4:C:172:ARG:H	4:C:172:ARG:HG2	1.52	0.42
5:D:173:TRP:HB2	5:D:187:ARG:O	2.19	0.42
6:E:52:PRO:C	6:E:54:ALA:N	2.72	0.42
9:H:35:ILE:O	9:H:36:LEU:C	2.58	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:57:GLY:O	10:I:58:ARG:HG2	2.19	0.42
18:Q:60:ILE:HG13	18:Q:61:GLU:N	2.34	0.42
1:A:150:C:H2'	1:A:151:A:O5'	2.18	0.42
1:A:199:G:C2'	1:A:200:G:H5'	2.45	0.42
1:A:395:C:O2	1:A:395:C:C2'	2.66	0.42
1:A:529:G:O2'	1:A:533:A:C6	2.72	0.42
1:A:582:U:O2	1:A:582:U:H2'	2.19	0.42
1:A:597:G:N7	1:A:598:U:C5	2.88	0.42
1:A:1056:U:O2	1:A:1056:U:C2'	2.67	0.42
1:A:1233:G:N2	1:A:1234:C:C2	2.87	0.42
1:A:1260:C:O5'	1:A:1284:C:H4'	2.20	0.42
1:A:1368:G:O2'	1:A:1369:C:H5'	2.19	0.42
1:A:1525:G:H2'	1:A:1526:G:C5'	2.49	0.42
3:B:28:PHE:O	3:B:29:ALA:C	2.57	0.42
3:B:114:ARG:NH1	3:B:118:LEU:CD1	2.67	0.42
9:H:10:LEU:HB3	9:H:83:ILE:CD1	2.45	0.42
13:L:15:ARG:HD2	13:L:15:ARG:HA	1.90	0.42
14:M:18:ALA:O	14:M:21:TYR:N	2.40	0.42
14:M:57:ARG:O	14:M:61:GLU:HB2	2.19	0.42
15:N:46:GLU:O	15:N:49:HIS:HB2	2.20	0.42
20:S:80:TYR:OH	20:S:82:GLY:HA2	2.19	0.42
1:A:255:G:H1'	18:Q:16:GLN:NE2	2.35	0.42
1:A:482:A:H2'	1:A:483:C:O4'	2.19	0.42
1:A:978:A:C5	1:A:1319:A:C2	3.08	0.42
1:A:991:U:C6	1:A:1212:U:O2	2.72	0.42
1:A:1152:A:OP1	11:J:68:HIS:ND1	2.53	0.42
4:C:35:GLU:HB3	4:C:36:ASP:H	1.70	0.42
4:C:36:ASP:OD2	4:C:36:ASP:N	2.37	0.42
5:D:13:ARG:HB3	5:D:40:PRO:HD3	2.02	0.42
5:D:79:PHE:CE1	5:D:207:TYR:CD1	3.07	0.42
6:E:71:LEU:CD2	6:E:115:VAL:HG22	2.48	0.42
11:J:56:HIS:O	11:J:57:LYS:C	2.55	0.42
13:L:119:LYS:O	13:L:120:TYR:HB2	2.20	0.42
20:S:14:HIS:ND1	20:S:14:HIS:N	2.68	0.42
21:T:70:SER:O	21:T:70:SER:OG	2.30	0.42
21:T:74:LYS:HB2	21:T:74:LYS:HE3	1.92	0.42
21:T:88:VAL:O	21:T:90:GLN:N	2.53	0.42
1:A:131:C:H2'	1:A:132:C:C6	2.54	0.42
1:A:193:C:O3'	21:T:61:SER:HB2	2.20	0.42
1:A:690:G:N2	1:A:698:G:C6	2.88	0.42
1:A:864:A:C6	1:A:865:A:C6	3.08	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:896:C:O2	1:A:896:C:H2'	2.20	0.42
1:A:918:A:H2'	1:A:919:A:C8	2.55	0.42
1:A:1124:G:C2'	1:A:1145:C:H41	2.33	0.42
1:A:1141:C:C2	1:A:1142:G:C8	3.07	0.42
1:A:1230:C:O2	1:A:1230:C:C2'	2.68	0.42
1:A:1237:C:C4'	1:A:1334:G:H21	2.32	0.42
1:A:1510:U:O2	1:A:1510:U:C2'	2.62	0.42
3:B:138:LEU:C	3:B:140:HIS:N	2.73	0.42
4:C:157:ILE:O	4:C:158:GLY:C	2.58	0.42
4:C:191:THR:HG21	4:C:193:TYR:CE1	2.55	0.42
6:E:87:SER:OG	6:E:130:ASN:HB2	2.20	0.42
7:F:4:TYR:HA	7:F:91:VAL:O	2.19	0.42
8:G:87:VAL:HA	8:G:88:PRO:HD3	1.80	0.42
8:G:145:ALA:C	8:G:147:ALA:H	2.22	0.42
11:J:46:ARG:NH1	11:J:64:GLU:HB3	2.32	0.42
11:J:56:HIS:C	11:J:58:ASP:N	2.58	0.42
13:L:10:LEU:O	13:L:14:GLY:HA2	2.20	0.42
13:L:55:VAL:O	13:L:70:ILE:HD12	2.20	0.42
21:T:54:LYS:HA	21:T:57:ARG:NH1	2.34	0.42
1:A:130:A:H5'	18:Q:63:ARG:HE	1.85	0.41
1:A:354:G:N1	1:A:355:C:C4	2.88	0.41
1:A:516:U:C4	1:A:517:G:C6	3.08	0.41
1:A:674:G:OP1	7:F:87:ARG:NH2	2.53	0.41
1:A:761:G:H2'	1:A:762:C:H6	1.83	0.41
1:A:861:G:C4	1:A:862:C:C6	3.08	0.41
1:A:949:A:N1	1:A:1233:G:C4	2.88	0.41
1:A:989:C:HO2'	1:A:990:C:H5'	1.84	0.41
1:A:1124:G:H2'	1:A:1145:C:C5	2.54	0.41
1:A:1152:A:H4'	11:J:13:HIS:CD2	2.54	0.41
1:A:1233:G:C8	1:A:1233:G:H5''	2.55	0.41
1:A:1368:G:H5''	10:I:112:LYS:O	2.20	0.41
3:B:43:ASP:O	3:B:45:GLN:N	2.53	0.41
5:D:98:GLU:OE2	5:D:107:ARG:NE	2.44	0.41
5:D:121:VAL:HA	5:D:126:ILE:HG12	2.00	0.41
9:H:99:GLU:O	9:H:100:ILE:C	2.58	0.41
11:J:79:ARG:HH11	11:J:82:ILE:HD12	1.84	0.41
12:K:50:TYR:CD2	12:K:54:ARG:HB2	2.55	0.41
16:O:33:THR:OG1	16:O:63:ARG:HD2	2.19	0.41
21:T:104:LEU:CD2	21:T:104:LEU:N	2.26	0.41
1:A:45:U:O2	1:A:396:G:N2	2.41	0.41
1:A:109:A:H4'	1:A:110:C:OP2	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:433:C:H2'	1:A:434:U:C6	2.56	0.41
1:A:490:G:O2'	1:A:491:G:H5'	2.20	0.41
1:A:512:U:C3'	1:A:512:U:C6	3.03	0.41
1:A:545:C:H2'	1:A:546:G:O4'	2.20	0.41
1:A:705:U:C4	1:A:706:A:C5	3.08	0.41
1:A:1014:A:C3'	1:A:1015:A:C8	3.03	0.41
1:A:1084:G:C5	1:A:1085:U:C4	3.07	0.41
1:A:1161:C:H2'	1:A:1162:C:H6	1.80	0.41
1:A:1277:C:HO2'	1:A:1279:A:H8	1.60	0.41
3:B:207:ALA:O	3:B:208:ILE:C	2.58	0.41
4:C:58:GLU:HG2	11:J:92:THR:HB	2.02	0.41
5:D:14:ARG:HD3	5:D:14:ARG:C	2.40	0.41
5:D:50:ARG:O	5:D:51:PRO:C	2.59	0.41
5:D:144:ASP:N	5:D:144:ASP:OD1	2.53	0.41
6:E:127:ASN:OD1	6:E:129:ILE:HB	2.21	0.41
7:F:69:GLU:HA	7:F:72:VAL:HG23	2.02	0.41
8:G:113:GLU:HG2	8:G:113:GLU:H	1.64	0.41
11:J:9:ARG:O	11:J:9:ARG:HG3	2.18	0.41
17:P:33:ILE:H	17:P:33:ILE:HG13	1.62	0.41
18:Q:26:GLN:HE21	18:Q:37:LYS:HE2	1.85	0.41
20:S:39:THR:CG2	20:S:40:ILE:N	2.83	0.41
1:A:117:G:H8	1:A:117:G:O5'	2.02	0.41
1:A:1004:A:H5''	1:A:1025:U:C4	2.55	0.41
1:A:1131:G:O6	1:A:1139:G:O6	2.38	0.41
1:A:1358:U:OP1	15:N:35:ARG:HB2	2.20	0.41
1:A:1412:C:C2	1:A:1489:G:N2	2.88	0.41
5:D:152:SER:O	5:D:154:ASN:N	2.54	0.41
11:J:9:ARG:HB3	11:J:9:ARG:NH1	2.35	0.41
11:J:67:THR:O	11:J:67:THR:HG22	2.21	0.41
13:L:23:LYS:C	13:L:24:VAL:CG2	2.88	0.41
13:L:24:VAL:O	13:L:26:ALA:N	2.54	0.41
14:M:22:ILE:CB	14:M:25:ILE:HD12	2.48	0.41
16:O:39:LEU:HA	16:O:39:LEU:HD23	1.73	0.41
16:O:73:GLU:OE2	16:O:73:GLU:HA	2.14	0.41
19:R:44:LEU:N	19:R:51:LEU:HD12	2.34	0.41
1:A:62:U:C2	1:A:63:C:C5	3.09	0.41
1:A:149:A:H2	1:A:150:C:C2	2.35	0.41
1:A:192:U:H2'	1:A:193:C:H6	1.85	0.41
1:A:204:U:H4'	1:A:216:G:P	2.61	0.41
1:A:262:A:N1	1:A:263:A:N1	2.67	0.41
1:A:411:A:C2	1:A:413:G:H1'	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:418:C:H2'	1:A:419:C:C6	2.55	0.41
1:A:426:G:C2	1:A:427:U:C2	3.08	0.41
1:A:512:U:C6	1:A:512:U:H3'	2.56	0.41
1:A:563:A:HO2'	1:A:566:G:HO2'	1.44	0.41
1:A:622:A:C8	1:A:622:A:C3'	3.04	0.41
1:A:940:C:H2'	1:A:941:G:C8	2.55	0.41
1:A:1125:U:O4	11:J:73:ASP:OD2	2.38	0.41
1:A:1521:G:C2'	1:A:1522:U:O5'	2.68	0.41
3:B:50:GLU:O	3:B:51:LEU:C	2.58	0.41
3:B:118:LEU:HD22	3:B:142:LEU:HB2	2.01	0.41
4:C:6:HIS:NE2	4:C:8:ILE:HG22	2.35	0.41
4:C:131:ARG:HG2	4:C:135:LYS:NZ	2.36	0.41
5:D:68:TYR:CE2	5:D:97:LEU:HB3	2.56	0.41
8:G:120:ILE:HG22	8:G:124:LEU:CD1	2.51	0.41
10:I:46:ALA:HA	10:I:78:LYS:HB2	2.03	0.41
10:I:46:ALA:HB1	10:I:77:ILE:CG2	2.51	0.41
15:N:21:TYR:CD2	15:N:21:TYR:O	2.73	0.41
16:O:58:MET:O	16:O:62:GLN:N	2.44	0.41
19:R:37:VAL:O	19:R:38:GLU:C	2.58	0.41
21:T:29:LYS:O	21:T:33:ILE:CD1	2.69	0.41
21:T:39:LYS:HG2	21:T:55:ILE:HD12	2.03	0.41
21:T:84:LEU:HD23	21:T:84:LEU:HA	1.87	0.41
1:A:253:U:C2	1:A:254:G:C8	3.08	0.41
1:A:457:C:C4	1:A:458:C:C5	3.09	0.41
1:A:625:G:H2'	1:A:626:U:H6	1.82	0.41
1:A:633:G:H5''	1:A:634:C:OP2	2.20	0.41
1:A:1227:A:C3'	1:A:1227:A:C8	3.04	0.41
1:A:1240:U:OP1	8:G:119:ARG:NH2	2.48	0.41
1:A:1299:A:C5	1:A:1301:U:C2	3.08	0.41
1:A:1346:A:H61	1:A:1374:A:H3'	1.85	0.41
1:A:1347:G:C2	1:A:1373:G:C4	3.08	0.41
1:A:1500:A:H2'	1:A:1501:C:H5'	2.02	0.41
4:C:38:ARG:O	4:C:41:GLY:HA3	2.20	0.41
4:C:79:ARG:O	4:C:82:GLU:HG2	2.21	0.41
5:D:57:ARG:HA	5:D:202:LEU:HD23	2.02	0.41
7:F:10:LEU:HD12	7:F:59:TYR:HB3	2.03	0.41
13:L:93:LEU:N	13:L:93:LEU:HD23	2.35	0.41
14:M:4:ILE:HB	14:M:5:ALA:H	1.53	0.41
18:Q:104:LYS:HG3	18:Q:105:ALA:N	2.36	0.41
1:A:7:G:H5'	1:A:298:A:O4'	2.21	0.41
1:A:91:C:C2'	1:A:92:C:O5'	2.68	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:142:G:N3	1:A:196:A:H2	2.18	0.41
1:A:267:C:O2'	1:A:268:C:H5'	2.20	0.41
1:A:373:A:C2	1:A:482:A:C6	3.08	0.41
1:A:407:G:C6	1:A:408:A:C6	3.08	0.41
1:A:568:G:N3	1:A:574:A:H2	2.19	0.41
1:A:645:C:O2	1:A:645:C:C2'	2.69	0.41
1:A:757:U:H2'	1:A:758:G:O4'	2.19	0.41
1:A:856:C:H5''	1:A:857:C:OP2	2.21	0.41
1:A:908:A:C2'	1:A:909:A:H5'	2.51	0.41
1:A:951:G:C6	1:A:952:U:C5	3.09	0.41
1:A:974:A:H8	1:A:974:A:OP1	2.03	0.41
1:A:1131:G:N2	1:A:1143:G:H21	2.07	0.41
1:A:1332:A:C2	1:A:1333:A:C4	3.08	0.41
4:C:42:LEU:O	4:C:44:GLU:N	2.54	0.41
5:D:135:LEU:HA	5:D:136:PRO:HD3	1.95	0.41
6:E:52:PRO:O	6:E:54:ALA:N	2.54	0.41
8:G:127:ALA:O	8:G:129:GLU:N	2.54	0.41
9:H:56:LYS:HA	9:H:57:PRO:HD2	1.85	0.41
19:R:51:LEU:HA	19:R:52:PRO:HD3	1.84	0.41
20:S:75:ALA:HA	20:S:76:PRO:HD3	1.90	0.41
1:A:36:C:C4	1:A:37:U:C5	3.09	0.41
1:A:333:G:H2'	1:A:334:C:C6	2.56	0.41
1:A:440:A:H5''	1:A:442:C:C5	2.56	0.41
1:A:496:A:C4'	1:A:497:A:OP1	2.58	0.41
1:A:503:C:C2'	1:A:504:C:C5'	2.95	0.41
1:A:692:U:O2	1:A:694:A:C8	2.74	0.41
1:A:749:C:OP2	1:A:750:G:OP2	2.39	0.41
1:A:1103:C:H2'	1:A:1104:G:O4'	2.21	0.41
1:A:1114:C:C4	1:A:1115:C:C5	3.09	0.41
1:A:1176:A:H2'	1:A:1177:G:O4'	2.21	0.41
1:A:1314:C:C4	1:A:1315:U:C5	3.09	0.41
1:A:1371:G:O3'	10:I:69:GLY:HA3	2.20	0.41
3:B:12:GLU:HG3	3:B:213:LEU:CD1	2.51	0.41
3:B:103:THR:HB	3:B:176:GLU:OE2	2.20	0.41
3:B:222:ILE:HG13	3:B:222:ILE:H	1.71	0.41
4:C:47:LEU:O	4:C:48:TYR:C	2.58	0.41
5:D:109:GLY:O	5:D:110:PHE:C	2.59	0.41
6:E:89:ILE:HD13	6:E:122:GLU:HG3	2.01	0.41
6:E:127:ASN:HA	6:E:128:PRO:HD3	1.76	0.41
6:E:136:MET:C	6:E:138:ALA:N	2.74	0.41
8:G:54:THR:HB	8:G:56:GLN:NE2	2.36	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:63:PHE:CZ	15:N:45:ARG:HG3	2.56	0.41
12:K:110:ASP:HB2	19:R:88:LYS:HG3	2.02	0.41
16:O:6:GLU:O	16:O:7:GLU:C	2.57	0.41
17:P:45:THR:C	17:P:47:ASP:H	2.23	0.41
18:Q:13:ASP:C	18:Q:15:MET:N	2.73	0.41
20:S:77:THR:HB	20:S:78:ARG:HD2	2.02	0.41
1:A:8:A:N6	5:D:205:GLU:O	2.54	0.41
1:A:19:C:H2'	1:A:20:U:O5'	2.21	0.41
1:A:77:G:H2'	1:A:78:G:H8	1.86	0.41
1:A:190(A):C:O5'	1:A:190(A):C:H6	2.04	0.41
1:A:191:G:H1'	21:T:105:SER:HB3	2.02	0.41
1:A:282:A:C5	1:A:283:C:C5	3.08	0.41
1:A:351:G:O5'	1:A:351:G:C8	2.74	0.41
1:A:406:G:H1'	1:A:496:A:N1	2.36	0.41
1:A:477:G:H5''	1:A:478:A:OP2	2.21	0.41
1:A:592:G:C6	1:A:593:G:N7	2.89	0.41
1:A:633:G:C6	1:A:634:C:C4	3.09	0.41
1:A:885:G:C2	1:A:913:A:N1	2.89	0.41
1:A:945:G:C6	1:A:1337:G:C5	3.08	0.41
1:A:1107:C:N4	1:A:1108:G:N7	2.69	0.41
1:A:1117:G:H4'	10:I:104:ARG:NH1	2.36	0.41
1:A:1349:A:C6	1:A:1374:A:C8	3.08	0.41
1:A:1432:G:C8	1:A:1432:G:C3'	3.03	0.41
4:C:23:TYR:HB3	11:J:93:GLY:C	2.40	0.41
4:C:64:VAL:HG12	4:C:65:ALA:N	2.35	0.41
4:C:133:ALA:O	4:C:134:ILE:C	2.59	0.41
4:C:181:ASN:C	4:C:182:ILE:HG13	2.40	0.41
5:D:94:LEU:HD23	5:D:97:LEU:HD12	2.02	0.41
6:E:54:ALA:O	6:E:57:LYS:N	2.53	0.41
8:G:31:MET:HE3	8:G:34:GLY:HA2	2.02	0.41
11:J:33:GLN:C	11:J:34:VAL:HG23	2.41	0.41
12:K:33:THR:HG23	12:K:34:ASP:O	2.20	0.41
13:L:60:LEU:HD13	13:L:60:LEU:HA	1.92	0.41
14:M:4:ILE:H	14:M:4:ILE:HG13	1.56	0.41
15:N:24:CYS:SG	15:N:39:LEU:HA	2.61	0.41
15:N:39:LEU:HB2	15:N:43:CYS:HB3	2.03	0.41
21:T:50:GLU:HB2	21:T:100:ILE:HD13	2.03	0.41
1:A:152:A:H3'	1:A:153:C:H6	1.86	0.41
1:A:165:C:H2'	1:A:166:G:C8	2.55	0.41
1:A:361:G:O6	1:A:362:G:N1	2.54	0.41
1:A:444:C:N4	1:A:491:G:H1	2.18	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:481:G:HO2'	1:A:483:C:N4	2.19	0.41
1:A:506:G:O6	1:A:507:C:N4	2.53	0.41
1:A:575:G:O2'	1:A:821:G:H5'	2.20	0.41
1:A:671:G:N3	1:A:671:G:H2'	2.35	0.41
1:A:707:C:C5'	12:K:20:TYR:CD2	2.90	0.41
1:A:913:A:HO2'	1:A:914:A:P	2.43	0.41
1:A:981:U:H5'	15:N:21:TYR:CE1	2.55	0.41
1:A:1181:G:H4'	1:A:1182:G:OP1	2.21	0.41
1:A:1255:G:C6	1:A:1279:A:C8	3.09	0.41
1:A:1266:G:H3'	1:A:1266:G:C8	2.54	0.41
1:A:1440:C:O2	1:A:1440:C:H2'	2.20	0.41
1:A:1454:G:C2	1:A:1455:G:C5	3.09	0.41
1:A:1459:C:C2	1:A:1460:A:C8	3.09	0.41
3:B:108:ILE:HG22	3:B:108:ILE:O	2.21	0.41
3:B:196:LEU:H	3:B:196:LEU:HG	1.74	0.41
6:E:112:LEU:HD23	6:E:112:LEU:HA	1.67	0.41
7:F:97:PHE:HB3	19:R:32:ARG:NH2	2.36	0.41
9:H:10:LEU:CB	9:H:83:ILE:HD11	2.47	0.41
9:H:36:LEU:HA	9:H:39:LEU:HD23	2.02	0.41
9:H:120:THR:HG23	9:H:123:GLU:CD	2.40	0.41
13:L:7:ILE:O	13:L:11:VAL:HG23	2.20	0.41
13:L:32:PHE:CD2	13:L:32:PHE:N	2.89	0.41
13:L:102:ARG:NH1	13:L:110:VAL:HG22	2.34	0.41
15:N:11:LYS:HG2	15:N:13:THR:HB	2.02	0.41
15:N:44:LEU:C	15:N:44:LEU:CD1	2.89	0.41
16:O:63:ARG:O	16:O:64:ARG:C	2.58	0.41
17:P:70:ALA:C	17:P:72:ARG:N	2.74	0.41
17:P:74:LEU:HD22	17:P:74:LEU:HA	1.44	0.41
19:R:22:VAL:O	19:R:22:VAL:CG1	2.69	0.41
20:S:50:ALA:HA	20:S:58:VAL:O	2.21	0.41
21:T:13:LEU:CD2	21:T:14:LYS:N	2.72	0.41
21:T:13:LEU:O	21:T:14:LYS:C	2.58	0.41
21:T:16:HIS:O	21:T:17:ARG:C	2.59	0.41
21:T:33:ILE:HD12	21:T:33:ILE:N	2.34	0.41
21:T:44:ALA:C	21:T:46:GLU:N	2.73	0.41
21:T:56:MET:HE1	21:T:104:LEU:HD21	2.00	0.41
1:A:28:G:O2'	1:A:296:U:H5''	2.21	0.41
1:A:160:A:N6	1:A:161:A:C2	2.89	0.41
1:A:191:G:C1'	21:T:105:SER:HB3	2.51	0.41
1:A:247:G:C6	1:A:278:G:C6	3.08	0.41
1:A:375:U:H2'	1:A:376:G:H8	1.83	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:401:C:H2'	1:A:402:G:C8	2.56	0.41
1:A:833:U:H2'	1:A:834:C:C6	2.56	0.41
1:A:836:G:N1	1:A:851:G:C5	2.89	0.41
1:A:949:A:C2	1:A:1233:G:C2	3.07	0.41
5:D:59:ARG:NE	5:D:59:ARG:CA	2.82	0.41
6:E:34:VAL:O	6:E:42:GLY:N	2.42	0.41
8:G:37:ASN:O	8:G:38:LEU:C	2.60	0.41
10:I:4:TYR:CE1	10:I:88:TYR:HB2	2.57	0.41
12:K:63:LEU:O	12:K:66:LEU:N	2.54	0.41
13:L:76:ASN:ND2	13:L:106:ASP:O	2.54	0.41
16:O:31:LEU:O	16:O:34:LEU:HB3	2.20	0.41
1:A:93:G:O3'	1:A:95:U:P	2.78	0.40
1:A:175:C:O5'	1:A:175:C:H6	2.04	0.40
1:A:287:U:H2'	1:A:288:A:O5'	2.21	0.40
1:A:354:G:C6	1:A:355:C:N4	2.89	0.40
1:A:486:U:O2	1:A:486:U:C2'	2.69	0.40
1:A:730:G:N3	1:A:765:G:H4'	2.37	0.40
1:A:945:G:C6	1:A:1337:G:C4	3.09	0.40
1:A:1048:G:C8	1:A:1048:G:C3'	3.04	0.40
1:A:1088:G:O5'	1:A:1088:G:C8	2.73	0.40
1:A:1126:U:H2'	1:A:1127:G:N7	2.36	0.40
1:A:1221:G:C6	1:A:1222:G:N7	2.89	0.40
1:A:1357:A:C6	1:A:1358:U:C4	3.09	0.40
1:A:1361:G:C3'	1:A:1361(A):C:H5'	2.50	0.40
1:A:1520:G:H2'	1:A:1521:G:H8	1.85	0.40
3:B:96:ARG:O	3:B:98:LEU:HD12	2.21	0.40
4:C:52:LEU:C	4:C:54:ARG:H	2.23	0.40
5:D:200:GLU:HA	5:D:203:VAL:HG23	2.02	0.40
10:I:114:TYR:C	10:I:116:LYS:H	2.24	0.40
11:J:6:ILE:O	11:J:71:LEU:O	2.39	0.40
12:K:82:VAL:HG13	12:K:83:ILE:N	2.35	0.40
13:L:75:HIS:CD2	13:L:75:HIS:C	2.95	0.40
13:L:117:ARG:NH2	13:L:124:LYS:HD3	2.36	0.40
14:M:62:ASN:HD22	14:M:62:ASN:HA	1.74	0.40
15:N:42:ILE:HB	15:N:43:CYS:H	1.75	0.40
1:A:190(H):G:H2'	1:A:190(I):G:O5'	2.21	0.40
1:A:262:A:H2'	1:A:263:A:C8	2.56	0.40
1:A:401:C:H6	1:A:401:C:C3'	2.26	0.40
1:A:815:A:O2'	1:A:1527:C:O4'	2.39	0.40
1:A:818:G:C3'	1:A:819:A:C5'	2.91	0.40
1:A:1055:A:C6	1:A:1056:U:C5	3.09	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1335:C:H2'	1:A:1335:C:O5'	2.21	0.40
1:A:1509:C:H5'	1:A:1510:U:OP2	2.20	0.40
4:C:131:ARG:CG	4:C:135:LYS:HZ1	2.34	0.40
4:C:180:ALA:HB1	4:C:182:ILE:CG1	2.51	0.40
5:D:140:VAL:HG11	5:D:146:ILE:HD11	2.03	0.40
6:E:11:ILE:HG12	6:E:11:ILE:H	1.48	0.40
6:E:36:ASP:OD2	6:E:40:ARG:HB2	2.21	0.40
7:F:7:ASN:HB2	7:F:89:MET:O	2.22	0.40
11:J:6:ILE:HD12	11:J:71:LEU:O	2.22	0.40
13:L:93:LEU:HA	13:L:94:PRO:HD3	1.82	0.40
17:P:40:ASP:OD2	17:P:42:ARG:HG2	2.21	0.40
17:P:43:LYS:HB3	17:P:48:TRP:CD1	2.56	0.40
19:R:56:THR:O	19:R:57:GLY:C	2.59	0.40
1:A:378:G:C2	1:A:386:C:C2	3.07	0.40
1:A:477:G:C2	1:A:478:A:N7	2.90	0.40
1:A:536:C:C2	1:A:537:G:N7	2.90	0.40
1:A:764:C:N4	1:A:765:G:C6	2.89	0.40
1:A:802:A:C8	1:A:802:A:H3'	2.57	0.40
1:A:1057:G:C5	1:A:1204:A:N1	2.89	0.40
1:A:1332:A:C2	1:A:1333:A:C5	3.09	0.40
1:A:1347:G:C4	10:I:107:ARG:NH1	2.89	0.40
3:B:174:VAL:C	3:B:176:GLU:H	2.24	0.40
5:D:97:LEU:HD23	5:D:97:LEU:HA	1.75	0.40
5:D:182:LYS:HB3	5:D:183:GLY:H	1.52	0.40
6:E:91:LEU:HD21	6:E:120:THR:CG2	2.50	0.40
6:E:128:PRO:O	6:E:129:ILE:C	2.60	0.40
11:J:74:ILE:H	11:J:74:ILE:HG13	1.57	0.40
13:L:21:LYS:HA	13:L:21:LYS:HD2	1.80	0.40
14:M:5:ALA:HB2	14:M:22:ILE:HG21	2.03	0.40
15:N:9:LYS:C	15:N:11:LYS:N	2.75	0.40
15:N:23:ARG:CD	15:N:29:ARG:O	2.62	0.40
16:O:6:GLU:HG2	16:O:7:GLU:H	1.85	0.40
1:A:241:C:O2'	1:A:242:C:H5'	2.22	0.40
1:A:440:A:C3'	1:A:442:C:P	3.09	0.40
1:A:518:C:OP2	1:A:530:G:H4'	2.21	0.40
1:A:658:G:N2	1:A:749:C:N3	2.68	0.40
1:A:671:G:C2	1:A:672:U:H1'	2.55	0.40
1:A:684:A:C2	12:K:39:PRO:HG2	2.57	0.40
1:A:918:A:H2'	1:A:919:A:O4'	2.21	0.40
1:A:1120:G:C2	1:A:1121:U:C4	3.10	0.40
1:A:1120:G:O5'	1:A:1120:G:H8	2.05	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1466:C:H2'	1:A:1467:G:H5'	2.03	0.40
1:A:1503:A:OP1	1:A:1531:A:O2'	2.39	0.40
5:D:125:HIS:C	5:D:126:ILE:HD13	2.41	0.40
6:E:52:PRO:O	6:E:53:LEU:C	2.60	0.40
7:F:26:ILE:HG21	7:F:63:TYR:CE1	2.55	0.40
9:H:92:ARG:HD2	9:H:92:ARG:HA	1.78	0.40
13:L:55:VAL:O	13:L:70:ILE:CD1	2.70	0.40
15:N:43:CYS:O	15:N:44:LEU:C	2.60	0.40
18:Q:75:ARG:HG3	18:Q:75:ARG:NH1	2.36	0.40
1:A:27:G:H2'	1:A:28:G:H8	1.86	0.40
1:A:142:G:C2	1:A:222:U:C2	3.10	0.40
1:A:179:A:H5''	1:A:180:U:OP2	2.21	0.40
1:A:420:U:C2	1:A:424:G:N1	2.89	0.40
1:A:422:C:O2'	1:A:423:G:P	2.79	0.40
1:A:987:G:O5'	1:A:987:G:C8	2.68	0.40
5:D:61:LYS:HE3	5:D:62:GLN:HE21	1.77	0.40
5:D:101:LEU:C	5:D:103:ASN:H	2.25	0.40
9:H:85:ARG:CD	9:H:87:SER:O	2.67	0.40
15:N:14:PRO:O	15:N:15:LYS:C	2.59	0.40
15:N:61:TRP:N	15:N:61:TRP:CE3	2.90	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
3	B	235/256 (92%)	153 (65%)	48 (20%)	34 (14%)	0 3
4	C	204/239 (85%)	120 (59%)	51 (25%)	33 (16%)	0 2
5	D	206/209 (99%)	145 (70%)	37 (18%)	24 (12%)	0 5
6	E	148/162 (91%)	110 (74%)	24 (16%)	14 (10%)	0 8

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	F	99/101 (98%)	76 (77%)	17 (17%)	6 (6%)	1	15
8	G	153/156 (98%)	103 (67%)	36 (24%)	14 (9%)	0	9
9	H	136/138 (99%)	103 (76%)	26 (19%)	7 (5%)	1	17
10	I	125/128 (98%)	79 (63%)	33 (26%)	13 (10%)	0	7
11	J	96/105 (91%)	63 (66%)	20 (21%)	13 (14%)	0	3
12	K	117/129 (91%)	79 (68%)	25 (21%)	13 (11%)	0	6
13	L	123/132 (93%)	76 (62%)	29 (24%)	18 (15%)	0	3
14	M	123/126 (98%)	75 (61%)	31 (25%)	17 (14%)	0	3
15	N	58/61 (95%)	43 (74%)	8 (14%)	7 (12%)	0	5
16	O	86/89 (97%)	56 (65%)	22 (26%)	8 (9%)	0	9
17	P	81/88 (92%)	55 (68%)	17 (21%)	9 (11%)	0	6
18	Q	102/105 (97%)	73 (72%)	21 (21%)	8 (8%)	1	11
19	R	71/88 (81%)	50 (70%)	14 (20%)	7 (10%)	0	7
20	S	82/93 (88%)	58 (71%)	17 (21%)	7 (8%)	0	9
21	T	97/106 (92%)	60 (62%)	21 (22%)	16 (16%)	0	2
All	All	2342/2511 (93%)	1577 (67%)	497 (21%)	268 (11%)	0	5

All (268) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	B	17	PHE
3	B	29	ALA
3	B	99	GLY
3	B	106	LYS
3	B	131	PRO
3	B	134	GLU
3	B	175	ARG
3	B	209	ARG
3	B	226	ARG
4	C	24	ALA
4	C	35	GLU
4	C	43	LEU
4	C	54	ARG
4	C	55	VAL
4	C	67	THR
4	C	127	ARG
4	C	132	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	C	179	ARG
4	C	189	ALA
5	D	9	CYS
5	D	12	CYS
5	D	29	PRO
5	D	104	VAL
5	D	141	ARG
5	D	153	ARG
5	D	160	GLN
6	E	16	THR
6	E	37	ARG
6	E	38	GLN
6	E	72	GLN
6	E	73	ASN
7	F	77	ARG
7	F	100	ASN
8	G	7	ALA
8	G	108	ALA
9	H	105	ARG
10	I	43	ALA
10	I	44	VAL
10	I	55	ALA
10	I	58	ARG
10	I	118	LYS
10	I	119	ALA
11	J	32	ALA
11	J	34	VAL
11	J	50	ILE
11	J	54	PHE
11	J	57	LYS
12	K	100	ALA
12	K	124	LYS
13	L	27	LEU
13	L	28	LYS
13	L	40	VAL
13	L	41	ARG
13	L	96	VAL
14	M	4	ILE
14	M	7	VAL
14	M	106	ASN
14	M	123	ALA
15	N	3	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
15	N	42	ILE
15	N	43	CYS
17	P	51	VAL
17	P	52	ASP
17	P	67	THR
17	P	71	ARG
18	Q	14	LYS
18	Q	95	TYR
19	R	20	ALA
19	R	37	VAL
19	R	74	ARG
19	R	87	ARG
20	S	6	LYS
20	S	9	VAL
21	T	14	LYS
21	T	73	HIS
21	T	92	LEU
3	B	44	LEU
3	B	89	GLY
3	B	177	ALA
3	B	191	ASP
3	B	204	ASN
3	B	208	ILE
3	B	212	GLN
3	B	225	ALA
4	C	13	GLY
4	C	74	GLY
4	C	96	GLY
4	C	98	ASN
4	C	100	ALA
4	C	128	PHE
4	C	181	ASN
4	C	195	VAL
4	C	206	GLU
5	D	26	CYS
5	D	42	GLN
5	D	118	ARG
5	D	150	GLU
5	D	176	LEU
6	E	59	GLY
6	E	108	ALA
6	E	140	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
7	F	27	GLN
7	F	45	LEU
8	G	134	ALA
9	H	7	ALA
9	H	54	ASP
10	I	8	GLY
10	I	46	ALA
11	J	73	ASP
12	K	47	VAL
12	K	95	ILE
12	K	117	ASN
13	L	26	ALA
13	L	42	THR
13	L	91	LYS
13	L	103	GLY
13	L	112	ASP
14	M	30	ALA
14	M	31	LYS
14	M	55	ARG
15	N	13	THR
15	N	23	ARG
16	O	47	LYS
16	O	77	ARG
16	O	81	LEU
17	P	13	HIS
18	Q	49	GLU
20	S	27	GLU
20	S	73	GLU
21	T	13	LEU
21	T	88	VAL
21	T	93	GLU
3	B	59	GLU
3	B	123	ALA
3	B	124	SER
3	B	232	PRO
4	C	47	LEU
4	C	200	ALA
5	D	7	PRO
5	D	63	LYS
5	D	102	ASP
5	D	131	ARG
5	D	142	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	E	21	ALA
6	E	56	GLN
7	F	13	ASN
7	F	53	ALA
8	G	82	GLY
8	G	97	GLN
8	G	109	ASN
9	H	23	SER
9	H	68	ARG
10	I	34	ASN
11	J	39	PRO
11	J	60	ARG
12	K	12	ARG
12	K	25	TYR
12	K	74	ALA
13	L	29	GLY
13	L	31	PRO
13	L	62	SER
13	L	105	TYR
13	L	113	ARG
14	M	6	GLY
14	M	50	GLU
14	M	90	LEU
14	M	99	ARG
14	M	109	THR
15	N	5	ALA
15	N	44	LEU
16	O	79	ARG
17	P	46	PRO
18	Q	91	ARG
18	Q	96	GLN
19	R	38	GLU
19	R	67	ALA
20	S	77	THR
21	T	42	GLN
21	T	64	ASP
21	T	84	LEU
21	T	85	MET
21	T	104	LEU
3	B	20	GLU
3	B	21	ARG
3	B	24	TRP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	B	139	LYS
3	B	227	GLY
4	C	25	GLY
4	C	29	TYR
4	C	40	ARG
4	C	108	ASN
4	C	198	VAL
5	D	5	ILE
5	D	31	CYS
5	D	51	PRO
5	D	159	ARG
5	D	182	LYS
6	E	11	ILE
8	G	59	LEU
8	G	116	ALA
10	I	51	ARG
10	I	126	SER
11	J	40	LEU
11	J	55	LYS
12	K	28	THR
13	L	82	VAL
14	M	21	TYR
16	O	14	GLU
16	O	49	ASP
17	P	69	THR
18	Q	18	THR
19	R	34	TYR
20	S	30	LEU
21	T	74	LYS
3	B	41	ILE
3	B	56	ARG
3	B	122	PHE
3	B	143	GLU
4	C	36	ASP
5	D	4	TYR
6	E	104	ALA
6	E	136	MET
8	G	41	ARG
8	G	96	GLN
8	G	127	ALA
10	I	56	LEU
10	I	71	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	J	61	GLU
11	J	90	LEU
12	K	126	ARG
14	M	79	LYS
14	M	80	ARG
16	O	13	GLN
17	P	10	GLY
21	T	63	ILE
3	B	8	LYS
4	C	51	GLY
4	C	175	LEU
9	H	80	ILE
12	K	15	ALA
13	L	43	VAL
17	P	12	LYS
18	Q	86	GLU
4	C	39	ILE
8	G	9	VAL
13	L	55	VAL
14	M	25	ILE
16	O	19	PRO
18	Q	47	PRO
20	S	42	PRO
21	T	98	PRO
3	B	174	VAL
3	B	214	ILE
4	C	14	ILE
4	C	66	VAL
5	D	56	VAL
8	G	111	ARG
12	K	57	THR
12	K	120	ARG
4	C	81	GLY
8	G	34	GLY
9	H	100	ILE
21	T	33	ILE
6	E	51	VAL
11	J	76	ASN
14	M	24	GLY
3	B	15	VAL
21	T	101	GLY

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
3	B	204/220 (93%)	125 (61%)	79 (39%)	0	0
4	C	160/188 (85%)	90 (56%)	70 (44%)	0	0
5	D	180/181 (99%)	105 (58%)	75 (42%)	0	0
6	E	115/123 (94%)	70 (61%)	45 (39%)	0	0
7	F	90/90 (100%)	63 (70%)	27 (30%)	0	1
8	G	126/127 (99%)	80 (64%)	46 (36%)	0	0
9	H	119/119 (100%)	78 (66%)	41 (34%)	0	1
10	I	98/99 (99%)	61 (62%)	37 (38%)	0	0
11	J	87/92 (95%)	51 (59%)	36 (41%)	0	0
12	K	90/99 (91%)	62 (69%)	28 (31%)	0	1
13	L	104/109 (95%)	53 (51%)	51 (49%)	0	0
14	M	100/101 (99%)	59 (59%)	41 (41%)	0	0
15	N	49/50 (98%)	26 (53%)	23 (47%)	0	0
16	O	79/80 (99%)	48 (61%)	31 (39%)	0	0
17	P	72/74 (97%)	45 (62%)	27 (38%)	0	0
18	Q	96/97 (99%)	69 (72%)	27 (28%)	0	2
19	R	64/77 (83%)	37 (58%)	27 (42%)	0	0
20	S	73/80 (91%)	47 (64%)	26 (36%)	0	0
21	T	76/82 (93%)	50 (66%)	26 (34%)	0	1
All	All	1982/2088 (95%)	1219 (62%)	763 (38%)	0	0

All (763) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	B	7	VAL
3	B	8	LYS
3	B	9	GLU
3	B	10	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	B	11	LEU
3	B	12	GLU
3	B	15	VAL
3	B	17	PHE
3	B	21	ARG
3	B	22	LYS
3	B	23	ARG
3	B	24	TRP
3	B	25	ASN
3	B	27	LYS
3	B	35	GLU
3	B	40	HIS
3	B	44	LEU
3	B	45	GLN
3	B	46	LYS
3	B	48	MET
3	B	49	GLU
3	B	53	ARG
3	B	56	ARG
3	B	58	ILE
3	B	61	LEU
3	B	64	ARG
3	B	69	LEU
3	B	71	VAL
3	B	76	GLN
3	B	80	ILE
3	B	82	ARG
3	B	83	MET
3	B	84	GLU
3	B	87	ARG
3	B	92	TYR
3	B	97	TRP
3	B	98	LEU
3	B	102	LEU
3	B	108	ILE
3	B	112	VAL
3	B	113	HIS
3	B	115	LEU
3	B	117	GLU
3	B	121	LEU
3	B	132	LYS
3	B	140	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	B	144	ARG
3	B	146	GLN
3	B	148	TYR
3	B	149	LEU
3	B	153	ARG
3	B	154	LEU
3	B	155	LEU
3	B	158	LEU
3	B	162	ILE
3	B	165	VAL
3	B	168	THR
3	B	169	LYS
3	B	172	ILE
3	B	175	ARG
3	B	176	GLU
3	B	179	LYS
3	B	185	ILE
3	B	187	LEU
3	B	190	THR
3	B	196	LEU
3	B	206	ASP
3	B	209	ARG
3	B	213	LEU
3	B	215	LEU
3	B	221	LEU
3	B	224	GLN
3	B	229	VAL
3	B	231	GLU
3	B	233	SER
3	B	236	TYR
3	B	238	LEU
3	B	241	GLU
3	B	243	GLU
4	C	3	ASN
4	C	8	ILE
4	C	11	ARG
4	C	15	THR
4	C	23	TYR
4	C	26	LYS
4	C	27	LYS
4	C	29	TYR
4	C	30	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	C	33	LEU
4	C	34	LEU
4	C	36	ASP
4	C	37	GLN
4	C	43	LEU
4	C	45	LYS
4	C	48	TYR
4	C	52	LEU
4	C	54	ARG
4	C	56	ASP
4	C	57	ILE
4	C	58	GLU
4	C	59	ARG
4	C	63	ASN
4	C	69	HIS
4	C	75	VAL
4	C	77	ILE
4	C	79	ARG
4	C	82	GLU
4	C	83	ARG
4	C	84	ILE
4	C	86	VAL
4	C	88	ARG
4	C	91	LEU
4	C	93	LYS
4	C	94	LEU
4	C	95	THR
4	C	99	VAL
4	C	101	LEU
4	C	104	GLN
4	C	108	ASN
4	C	112	SER
4	C	115	LEU
4	C	124	ILE
4	C	126	ARG
4	C	128	PHE
4	C	130	VAL
4	C	131	ARG
4	C	135	LYS
4	C	143	GLU
4	C	154	SER
4	C	157	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	C	164	ARG
4	C	166	GLU
4	C	170	GLN
4	C	172	ARG
4	C	175	LEU
4	C	176	HIS
4	C	177	THR
4	C	179	ARG
4	C	188	LEU
4	C	190	ARG
4	C	192	THR
4	C	193	TYR
4	C	195	VAL
4	C	196	LEU
4	C	198	VAL
4	C	201	TYR
4	C	202	ILE
4	C	203	PHE
4	C	204	LEU
5	D	3	ARG
5	D	8	VAL
5	D	9	CYS
5	D	10	ARG
5	D	12	CYS
5	D	13	ARG
5	D	15	GLU
5	D	21	LEU
5	D	24	GLU
5	D	25	ARG
5	D	26	CYS
5	D	27	TYR
5	D	28	SER
5	D	35	ARG
5	D	36	ARG
5	D	38	TYR
5	D	50	ARG
5	D	53	ASP
5	D	57	ARG
5	D	59	ARG
5	D	61	LYS
5	D	64	LEU
5	D	66	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	D	70	ILE
5	D	72	GLU
5	D	74	GLN
5	D	76	ARG
5	D	79	PHE
5	D	83	SER
5	D	84	LYS
5	D	89	THR
5	D	100	ARG
5	D	104	VAL
5	D	112	VAL
5	D	114	ARG
5	D	115	ARG
5	D	116	GLN
5	D	118	ARG
5	D	120	LEU
5	D	122	ARG
5	D	123	HIS
5	D	126	ILE
5	D	127	THR
5	D	131	ARG
5	D	132	ARG
5	D	135	LEU
5	D	137	SER
5	D	138	TYR
5	D	139	ARG
5	D	141	ARG
5	D	144	ASP
5	D	148	VAL
5	D	150	GLU
5	D	151	LYS
5	D	152	SER
5	D	155	LEU
5	D	157	LEU
5	D	162	LEU
5	D	166	LYS
5	D	169	LYS
5	D	175	SER
5	D	178	VAL
5	D	179	GLU
5	D	185	PHE
5	D	187	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	D	188	LEU
5	D	192	GLU
5	D	194	LEU
5	D	196	LEU
5	D	198	VAL
5	D	199	GLN
5	D	200	GLU
5	D	201	ASN
5	D	202	LEU
5	D	204	ILE
6	E	5	ASP
6	E	9	LYS
6	E	10	MET
6	E	11	ILE
6	E	12	LEU
6	E	13	ILE
6	E	15	ARG
6	E	16	THR
6	E	18	ARG
6	E	19	MET
6	E	24	ARG
6	E	25	ARG
6	E	27	ARG
6	E	31	LEU
6	E	33	VAL
6	E	34	VAL
6	E	38	GLN
6	E	40	ARG
6	E	43	LEU
6	E	52	PRO
6	E	53	LEU
6	E	55	VAL
6	E	57	LYS
6	E	60	TYR
6	E	64	ARG
6	E	72	GLN
6	E	76	ILE
6	E	79	GLU
6	E	80	ILE
6	E	90	VAL
6	E	92	LYS
6	E	105	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	E	120	THR
6	E	121	LYS
6	E	122	GLU
6	E	123	LEU
6	E	125	SER
6	E	126	ARG
6	E	133	TYR
6	E	143	ARG
6	E	144	THR
6	E	145	LYS
6	E	149	GLU
6	E	150	ARG
6	E	153	LYS
7	F	8	ILE
7	F	9	VAL
7	F	10	LEU
7	F	15	ASP
7	F	19	LEU
7	F	23	LYS
7	F	32	ASN
7	F	39	LYS
7	F	41	GLU
7	F	43	LEU
7	F	46	ARG
7	F	48	LEU
7	F	55	ASP
7	F	65	VAL
7	F	70	ASP
7	F	73	ASN
7	F	74	ASP
7	F	75	LEU
7	F	77	ARG
7	F	80	ARG
7	F	82	ARG
7	F	87	ARG
7	F	88	VAL
7	F	89	MET
7	F	90	VAL
7	F	93	SER
7	F	98	LEU
8	G	4	ARG
8	G	8	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
8	G	9	VAL
8	G	10	ARG
8	G	11	GLN
8	G	12	LEU
8	G	15	ASP
8	G	24	THR
8	G	28	ASN
8	G	31	MET
8	G	36	LYS
8	G	37	ASN
8	G	38	LEU
8	G	48	LYS
8	G	50	ILE
8	G	51	GLN
8	G	52	GLU
8	G	53	LYS
8	G	54	THR
8	G	56	GLN
8	G	57	GLU
8	G	67	GLU
8	G	69	VAL
8	G	75	VAL
8	G	77	SER
8	G	79	ARG
8	G	90	GLU
8	G	94	ARG
8	G	95	ARG
8	G	96	GLN
8	G	97	GLN
8	G	98	SER
8	G	113	GLU
8	G	114	ARG
8	G	120	ILE
8	G	124	LEU
8	G	126	ASP
8	G	131	LYS
8	G	135	VAL
8	G	136	LYS
8	G	138	LYS
8	G	143	ARG
8	G	144	MET
8	G	148	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
8	G	154	TYR
8	G	156	TRP
9	H	3	THR
9	H	12	ARG
9	H	14	ARG
9	H	18	ARG
9	H	19	VAL
9	H	21	LYS
9	H	22	GLU
9	H	24	THR
9	H	32	LYS
9	H	35	ILE
9	H	41	ARG
9	H	45	ILE
9	H	46	LYS
9	H	49	GLU
9	H	50	ARG
9	H	51	VAL
9	H	53	VAL
9	H	56	LYS
9	H	63	LEU
9	H	64	LYS
9	H	68	ARG
9	H	75	ARG
9	H	77	GLU
9	H	84	ARG
9	H	85	ARG
9	H	87	SER
9	H	91	ARG
9	H	92	ARG
9	H	102	ARG
9	H	104	ARG
9	H	105	ARG
9	H	107	LEU
9	H	109	ILE
9	H	111	ILE
9	H	112	LEU
9	H	113	SER
9	H	118	VAL
9	H	120	THR
9	H	127	LEU
9	H	129	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
9	H	133	LEU
10	I	9	ARG
10	I	14	VAL
10	I	16	ARG
10	I	27	THR
10	I	29	ASN
10	I	31	GLN
10	I	34	ASN
10	I	35	GLU
10	I	38	GLN
10	I	40	LEU
10	I	51	ARG
10	I	53	VAL
10	I	54	ASP
10	I	59	PHE
10	I	64	THR
10	I	75	ASP
10	I	78	LYS
10	I	79	LEU
10	I	83	ARG
10	I	85	LEU
10	I	86	VAL
10	I	97	LYS
10	I	104	ARG
10	I	105	ASP
10	I	107	ARG
10	I	108	VAL
10	I	110	GLU
10	I	111	ARG
10	I	113	LYS
10	I	114	TYR
10	I	117	HIS
10	I	118	LYS
10	I	121	ARG
10	I	125	TYR
10	I	126	SER
10	I	127	LYS
10	I	128	ARG
11	J	3	LYS
11	J	6	ILE
11	J	7	LYS
11	J	13	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	J	14	LYS
11	J	16	LEU
11	J	19	SER
11	J	28	ARG
11	J	34	VAL
11	J	35	SER
11	J	38	ILE
11	J	40	LEU
11	J	45	ARG
11	J	46	ARG
11	J	48	THR
11	J	50	ILE
11	J	51	ARG
11	J	54	PHE
11	J	57	LYS
11	J	59	SER
11	J	60	ARG
11	J	64	GLU
11	J	65	LEU
11	J	66	ARG
11	J	70	ARG
11	J	71	LEU
11	J	73	ASP
11	J	74	ILE
11	J	75	ILE
11	J	80	LYS
11	J	83	GLU
11	J	84	GLN
11	J	92	THR
11	J	96	ILE
11	J	98	ILE
11	J	99	LYS
12	K	11	LYS
12	K	12	ARG
12	K	21	ILE
12	K	24	SER
12	K	27	ASN
12	K	28	THR
12	K	29	ILE
12	K	30	VAL
12	K	48	ILE
12	K	51	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	K	53	SER
12	K	54	ARG
12	K	57	THR
12	K	62	GLN
12	K	66	LEU
12	K	73	MET
12	K	78	GLN
12	K	81	ASP
12	K	87	THR
12	K	92	GLU
12	K	93	GLN
12	K	103	LEU
12	K	106	LYS
12	K	109	VAL
12	K	119	CYS
12	K	123	LYS
12	K	124	LYS
12	K	129	SER
13	L	13	LYS
13	L	15	ARG
13	L	17	LYS
13	L	18	VAL
13	L	19	ARG
13	L	20	LYS
13	L	21	LYS
13	L	22	SER
13	L	23	LYS
13	L	27	LEU
13	L	28	LYS
13	L	32	PHE
13	L	33	ARG
13	L	34	ARG
13	L	36	VAL
13	L	37	CYS
13	L	38	THR
13	L	41	ARG
13	L	42	THR
13	L	43	VAL
13	L	46	LYS
13	L	47	LYS
13	L	49	ASN
13	L	53	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
13	L	54	LYS
13	L	57	LYS
13	L	60	LEU
13	L	61	THR
13	L	69	TYR
13	L	70	ILE
13	L	73	GLU
13	L	75	HIS
13	L	76	ASN
13	L	81	SER
13	L	82	VAL
13	L	83	VAL
13	L	85	ILE
13	L	86	ARG
13	L	90	VAL
13	L	91	LYS
13	L	93	LEU
13	L	96	VAL
13	L	98	TYR
13	L	99	HIS
13	L	102	ARG
13	L	104	VAL
13	L	113	ARG
13	L	114	LYS
13	L	122	THR
13	L	123	LYS
13	L	124	LYS
14	M	3	ARG
14	M	4	ILE
14	M	7	VAL
14	M	9	ILE
14	M	12	ASN
14	M	14	ARG
14	M	16	ASP
14	M	17	VAL
14	M	25	ILE
14	M	31	LYS
14	M	32	GLU
14	M	36	LYS
14	M	37	THR
14	M	39	ILE
14	M	43	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
14	M	44	ARG
14	M	46	LYS
14	M	54	VAL
14	M	55	ARG
14	M	56	LEU
14	M	57	ARG
14	M	62	ASN
14	M	67	GLU
14	M	70	LEU
14	M	78	ILE
14	M	81	LEU
14	M	83	ASP
14	M	91	ARG
14	M	94	ARG
14	M	99	ARG
14	M	102	ARG
14	M	105	THR
14	M	106	ASN
14	M	108	ARG
14	M	110	ARG
14	M	111	LYS
14	M	115	LYS
14	M	120	LYS
14	M	121	LYS
14	M	122	LYS
14	M	125	ARG
15	N	3	ARG
15	N	4	LYS
15	N	6	LEU
15	N	7	ILE
15	N	12	ARG
15	N	13	THR
15	N	16	PHE
15	N	17	LYS
15	N	21	TYR
15	N	23	ARG
15	N	26	ARG
15	N	31	ARG
15	N	32	SER
15	N	35	ARG
15	N	36	PHE
15	N	39	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
15	N	42	ILE
15	N	44	LEU
15	N	50	LYS
15	N	53	LEU
15	N	58	LYS
15	N	60	SER
15	N	61	TRP
16	O	3	ILE
16	O	5	LYS
16	O	12	ILE
16	O	13	GLN
16	O	14	GLU
16	O	17	ARG
16	O	22	THR
16	O	24	SER
16	O	27	VAL
16	O	32	LEU
16	O	35	ARG
16	O	41	GLU
16	O	42	HIS
16	O	43	LEU
16	O	45	VAL
16	O	46	HIS
16	O	47	LYS
16	O	48	LYS
16	O	50	HIS
16	O	56	LEU
16	O	60	VAL
16	O	64	ARG
16	O	65	ARG
16	O	68	ARG
16	O	70	LEU
16	O	71	GLN
16	O	72	ARG
16	O	73	GLU
16	O	81	LEU
16	O	83	GLU
16	O	88	ARG
17	P	1	MET
17	P	2	VAL
17	P	5	ARG
17	P	8	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
17	P	11	SER
17	P	12	LYS
17	P	20	VAL
17	P	27	LYS
17	P	28	ARG
17	P	33	ILE
17	P	35	LYS
17	P	42	ARG
17	P	43	LYS
17	P	44	THR
17	P	45	THR
17	P	47	ASP
17	P	49	LEU
17	P	51	VAL
17	P	53	VAL
17	P	55	ARG
17	P	57	ARG
17	P	62	VAL
17	P	65	GLN
17	P	67	THR
17	P	74	LEU
17	P	81	ARG
17	P	82	GLN
18	Q	5	VAL
18	Q	6	LEU
18	Q	7	THR
18	Q	14	LYS
18	Q	23	VAL
18	Q	34	LYS
18	Q	35	VAL
18	Q	36	ILE
18	Q	38	ARG
18	Q	50	LYS
18	Q	52	LYS
18	Q	53	LEU
18	Q	57	VAL
18	Q	58	GLU
18	Q	59	ILE
18	Q	76	LEU
18	Q	77	VAL
18	Q	78	GLU
18	Q	81	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
18	Q	84	LEU
18	Q	85	VAL
18	Q	86	GLU
18	Q	87	LYS
18	Q	92	ARG
18	Q	95	TYR
18	Q	96	GLN
18	Q	100	LYS
19	R	18	ARG
19	R	19	LYS
19	R	21	LYS
19	R	25	THR
19	R	26	LEU
19	R	31	LEU
19	R	36	ASN
19	R	38	GLU
19	R	40	LEU
19	R	41	LYS
19	R	44	LEU
19	R	47	THR
19	R	50	ILE
19	R	53	ARG
19	R	54	ARG
19	R	55	ARG
19	R	58	LEU
19	R	59	SER
19	R	69	THR
19	R	75	ILE
19	R	76	LEU
19	R	78	LEU
19	R	82	THR
19	R	84	LYS
19	R	86	VAL
19	R	87	ARG
19	R	88	LYS
20	S	5	LEU
20	S	13	ASP
20	S	14	HIS
20	S	15	LEU
20	S	20	LEU
20	S	25	LYS
20	S	27	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
20	S	28	LYS
20	S	29	ARG
20	S	30	LEU
20	S	33	THR
20	S	37	ARG
20	S	38	SER
20	S	41	VAL
20	S	43	GLU
20	S	44	MET
20	S	52	TYR
20	S	58	VAL
20	S	61	TYR
20	S	63	THR
20	S	64	GLU
20	S	65	ASN
20	S	71	LEU
20	S	78	ARG
20	S	79	THR
20	S	83	HIS
21	T	10	LEU
21	T	11	SER
21	T	13	LEU
21	T	19	SER
21	T	24	LEU
21	T	29	LYS
21	T	30	LYS
21	T	36	LEU
21	T	37	SER
21	T	43	LEU
21	T	57	ARG
21	T	58	LYS
21	T	61	SER
21	T	62	LEU
21	T	64	ASP
21	T	68	LYS
21	T	74	LYS
21	T	80	ARG
21	T	81	LYS
21	T	85	MET
21	T	86	ARG
21	T	87	LYS
21	T	99	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	T	100	ILE
21	T	104	LEU
21	T	105	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (38) such sidechains are listed below:

Mol	Chain	Res	Type
3	B	25	ASN
3	B	94	ASN
3	B	135	GLN
3	B	212	GLN
4	C	3	ASN
4	C	6	HIS
4	C	123	GLN
4	C	176	HIS
5	D	62	GLN
5	D	123	HIS
5	D	129	ASN
5	D	199	GLN
7	F	73	ASN
8	G	37	ASN
8	G	56	GLN
8	G	96	GLN
8	G	106	GLN
8	G	148	ASN
9	H	78	GLN
10	I	34	ASN
10	I	73	GLN
11	J	68	HIS
11	J	76	ASN
11	J	78	ASN
12	K	27	ASN
13	L	49	ASN
13	L	75	HIS
13	L	76	ASN
13	L	99	HIS
14	M	40	ASN
14	M	62	ASN
16	O	37	ASN
18	Q	16	GLN
18	Q	96	GLN
20	S	53	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
20	S	65	ASN
21	T	18	GLN
21	T	73	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1494/1511 (98%)	656 (43%)	162 (10%)
2	Z	3/4 (75%)	0	0
All	All	1497/1515 (98%)	656 (43%)	162 (10%)

All (656) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	8	A
1	A	9	G
1	A	13	U
1	A	16	A
1	A	17	U
1	A	18	C
1	A	20	U
1	A	25	C
1	A	31	G
1	A	32	A
1	A	36	C
1	A	37	U
1	A	38	G
1	A	39	G
1	A	40	C
1	A	44	G
1	A	47	C
1	A	48	C
1	A	49	U
1	A	50	A
1	A	51	A
1	A	52	G
1	A	54	C
1	A	55	A
1	A	56	U
1	A	59	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	60	A
1	A	61	G
1	A	63	C
1	A	64	G
1	A	65	U
1	A	66	G
1	A	67	C
1	A	70	G
1	A	75	G
1	A	78	G
1	A	81	U
1	A	82	U
1	A	84	U
1	A	92	C
1	A	96	G
1	A	97	G
1	A	109	A
1	A	110	C
1	A	111	G
1	A	116	A
1	A	120	A
1	A	121	C
1	A	126	G
1	A	129(A)	G
1	A	130	A
1	A	131	C
1	A	145	G
1	A	149	A
1	A	150	C
1	A	152	A
1	A	153	C
1	A	154	C
1	A	156	G
1	A	160	A
1	A	162	A
1	A	163	C
1	A	167	G
1	A	169	C
1	A	170	U
1	A	179	A
1	A	182	U
1	A	183	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	185	A
1	A	187	C
1	A	190(E)	U
1	A	190(G)	G
1	A	190(L)	U
1	A	195	A
1	A	197	A
1	A	198	G
1	A	200	G
1	A	201	C
1	A	202	U
1	A	203	U
1	A	204	U
1	A	217	C
1	A	220	G
1	A	221	C
1	A	222	U
1	A	226	G
1	A	231	G
1	A	236	G
1	A	237	C
1	A	240	C
1	A	244	U
1	A	245	C
1	A	246	A
1	A	247	G
1	A	250	A
1	A	251	G
1	A	252	U
1	A	258	G
1	A	263	A
1	A	264	U
1	A	265	G
1	A	266	G
1	A	267	C
1	A	268	C
1	A	269	C
1	A	271	C
1	A	275	G
1	A	279	A
1	A	280	C
1	A	281	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	282	A
1	A	283	C
1	A	285	G
1	A	288	A
1	A	289	G
1	A	290	C
1	A	293	G
1	A	294	U
1	A	298	A
1	A	311	C
1	A	315	A
1	A	316	G
1	A	317	G
1	A	318	G
1	A	321	A
1	A	325	A
1	A	326	G
1	A	327	A
1	A	328	C
1	A	329	A
1	A	330	C
1	A	332	G
1	A	333	G
1	A	336	C
1	A	344	A
1	A	345	C
1	A	346	G
1	A	347	G
1	A	350	G
1	A	351	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	355	C
1	A	365	U
1	A	367	U
1	A	368	U
1	A	372	C
1	A	373	A
1	A	374	A
1	A	384	G
1	A	390	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	391	G
1	A	393	A
1	A	397	A
1	A	398	C
1	A	400	C
1	A	406	G
1	A	409	G
1	A	410	G
1	A	411	A
1	A	412	A
1	A	413	G
1	A	414	A
1	A	415	A
1	A	417	C
1	A	421	U
1	A	422	C
1	A	423	G
1	A	424	G
1	A	426	G
1	A	429	U
1	A	430	A
1	A	433	C
1	A	435	C
1	A	437	U
1	A	439	A
1	A	443	C
1	A	445	G
1	A	452	A
1	A	453	A
1	A	454	C
1	A	459	G
1	A	460	A
1	A	461	C
1	A	462	G
1	A	476	G
1	A	480	U
1	A	481	G
1	A	482	A
1	A	484	G
1	A	485	G
1	A	487	A
1	A	490	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	496	A
1	A	497	A
1	A	498	U
1	A	500	G
1	A	502	G
1	A	504	C
1	A	505	G
1	A	506	G
1	A	508	C
1	A	509	A
1	A	510	A
1	A	511	C
1	A	513	C
1	A	517	G
1	A	518	C
1	A	519	C
1	A	520	A
1	A	521	G
1	A	527	G
1	A	529	G
1	A	531	U
1	A	532	A
1	A	533	A
1	A	534	U
1	A	535	A
1	A	536	C
1	A	537	G
1	A	545	C
1	A	547	A
1	A	550	G
1	A	555	C
1	A	556	C
1	A	559	A
1	A	560	U
1	A	561	U
1	A	562	C
1	A	564	C
1	A	567	G
1	A	570	G
1	A	572	A
1	A	573	A
1	A	575	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	576	G
1	A	577	G
1	A	582	U
1	A	583	A
1	A	593	G
1	A	594	G
1	A	596	C
1	A	607	A
1	A	617	G
1	A	620	C
1	A	623	C
1	A	624	C
1	A	633	G
1	A	636	U
1	A	640	A
1	A	653	A
1	A	654	G
1	A	655	A
1	A	657	G
1	A	661	G
1	A	665	A
1	A	670	G
1	A	671	G
1	A	673	G
1	A	675	A
1	A	681	C
1	A	683	G
1	A	685	G
1	A	686	U
1	A	688	G
1	A	693	G
1	A	695	A
1	A	696	A
1	A	700	G
1	A	701	C
1	A	702	A
1	A	703	G
1	A	704	A
1	A	705	U
1	A	707	C
1	A	715	A
1	A	718	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	721	G
1	A	722	A
1	A	723	U
1	A	724	G
1	A	725	G
1	A	726	C
1	A	731	G
1	A	734	G
1	A	735	C
1	A	736	C
1	A	748	C
1	A	749	C
1	A	752	G
1	A	754	C
1	A	755	G
1	A	759	A
1	A	762	C
1	A	764	C
1	A	767	A
1	A	773	G
1	A	774	G
1	A	777	A
1	A	779	C
1	A	781	A
1	A	784	C
1	A	785	G
1	A	787	A
1	A	789	U
1	A	792	A
1	A	793	U
1	A	794	A
1	A	795	C
1	A	799	G
1	A	801	U
1	A	803	G
1	A	804	U
1	A	805	C
1	A	809	G
1	A	810	C
1	A	813	U
1	A	815	A
1	A	817	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	818	G
1	A	819	A
1	A	821	G
1	A	825	G
1	A	828	A
1	A	833	U
1	A	837	G
1	A	839	U
1	A	840	C
1	A	841	U
1	A	854	G
1	A	856	C
1	A	857	C
1	A	858	G
1	A	859	A
1	A	866	C
1	A	869	G
1	A	870	U
1	A	872	A
1	A	873	A
1	A	874	G
1	A	876	G
1	A	877	C
1	A	881	G
1	A	883	C
1	A	884	U
1	A	886	G
1	A	888	G
1	A	889	A
1	A	891	U
1	A	900	A
1	A	902	G
1	A	908	A
1	A	910	C
1	A	913	A
1	A	914	A
1	A	917	G
1	A	919	A
1	A	921	U
1	A	926	G
1	A	927	G
1	A	932	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	933	G
1	A	934	C
1	A	935	A
1	A	937	A
1	A	938	A
1	A	939	G
1	A	942	G
1	A	943	U
1	A	945	G
1	A	948	C
1	A	954	G
1	A	960	U
1	A	961	U
1	A	964	A
1	A	965	A
1	A	966	G
1	A	967	C
1	A	969	A
1	A	971	G
1	A	972	C
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	978	A
1	A	979	C
1	A	981	U
1	A	983	A
1	A	984	C
1	A	987	G
1	A	989	C
1	A	991	U
1	A	992	U
1	A	993	G
1	A	994	A
1	A	1000	U
1	A	1002	G
1	A	1004	A
1	A	1005	A
1	A	1006	C
1	A	1008	C
1	A	1009	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1010	G
1	A	1011	G
1	A	1017	G
1	A	1021	G
1	A	1022	G
1	A	1023	G
1	A	1024	G
1	A	1025	U
1	A	1026	G
1	A	1027	C
1	A	1028	C
1	A	1029	C
1	A	1030(B)	C
1	A	1030(C)	G
1	A	1031	G
1	A	1032	G
1	A	1033	G
1	A	1034	G
1	A	1035	A
1	A	1037	C
1	A	1038	C
1	A	1042	G
1	A	1043	C
1	A	1044	A
1	A	1045	C
1	A	1046	A
1	A	1048	G
1	A	1049	U
1	A	1050	G
1	A	1053	G
1	A	1054	C
1	A	1057	G
1	A	1062	U
1	A	1064	G
1	A	1065	U
1	A	1066	C
1	A	1067	A
1	A	1068	G
1	A	1070	U
1	A	1076	C
1	A	1077	G
1	A	1078	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1082	G
1	A	1085	U
1	A	1086	U
1	A	1092	A
1	A	1093	A
1	A	1094	G
1	A	1095	U
1	A	1096	C
1	A	1097	C
1	A	1099	G
1	A	1101	A
1	A	1102	A
1	A	1106	G
1	A	1108	G
1	A	1109	C
1	A	1110	A
1	A	1113	C
1	A	1117	G
1	A	1118	C
1	A	1122	U
1	A	1124	G
1	A	1125	U
1	A	1126	U
1	A	1127	G
1	A	1128	C
1	A	1129	C
1	A	1130	A
1	A	1131	G
1	A	1134	G
1	A	1136	U
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1140	C
1	A	1141	C
1	A	1142	G
1	A	1144	G
1	A	1145	C
1	A	1146	A
1	A	1148	U
1	A	1151	A
1	A	1152	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1153	C
1	A	1158	C
1	A	1159	U
1	A	1160	G
1	A	1161	C
1	A	1162	C
1	A	1171	G
1	A	1176	A
1	A	1182	G
1	A	1183	A
1	A	1184	G
1	A	1186	G
1	A	1187	G
1	A	1188	A
1	A	1190	G
1	A	1191	A
1	A	1192	C
1	A	1196	U
1	A	1197	G
1	A	1198	G
1	A	1200	C
1	A	1201	A
1	A	1202	G
1	A	1206	G
1	A	1209	C
1	A	1210	C
1	A	1211	U
1	A	1212	U
1	A	1213	A
1	A	1214	C
1	A	1215	G
1	A	1218	C
1	A	1219	U
1	A	1224	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1228	C
1	A	1229	A
1	A	1233	G
1	A	1234	C
1	A	1235	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1236	A
1	A	1238	A
1	A	1240	U
1	A	1241	G
1	A	1245	A
1	A	1250	A
1	A	1251	A
1	A	1253	G
1	A	1256	A
1	A	1257	U
1	A	1258	G
1	A	1260	C
1	A	1263	C
1	A	1265	G
1	A	1268	A
1	A	1269	A
1	A	1270	C
1	A	1273	G
1	A	1278	U
1	A	1279	A
1	A	1280	A
1	A	1281	U
1	A	1282	C
1	A	1286	A
1	A	1287	A
1	A	1290	G
1	A	1291	G
1	A	1297	C
1	A	1300	G
1	A	1302	U
1	A	1305	G
1	A	1311	G
1	A	1312	G
1	A	1316	G
1	A	1317	C
1	A	1320	C
1	A	1322	C
1	A	1323	G
1	A	1327	C
1	A	1328	C
1	A	1332	A
1	A	1337	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1338	G
1	A	1340	A
1	A	1344	C
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1348	U
1	A	1349	A
1	A	1353	G
1	A	1354	C
1	A	1355	G
1	A	1360	A
1	A	1361(A)	C
1	A	1362	C
1	A	1363	A
1	A	1364	U
1	A	1365	G
1	A	1366	C
1	A	1368	G
1	A	1370	G
1	A	1371	G
1	A	1372	U
1	A	1379	G
1	A	1380	U
1	A	1381	U
1	A	1384	C
1	A	1386	G
1	A	1396	A
1	A	1397	C
1	A	1398	A
1	A	1400	C
1	A	1401	G
1	A	1402	C
1	A	1403	C
1	A	1404	C
1	A	1407	C
1	A	1408	A
1	A	1409	C
1	A	1410	G
1	A	1418	A
1	A	1419	G
1	A	1423	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1427	U
1	A	1437	C
1	A	1440	C
1	A	1442	G
1	A	1447	G
1	A	1450	U
1	A	1451	A
1	A	1452	C
1	A	1453	G
1	A	1454	G
1	A	1460	A
1	A	1468	A
1	A	1472	U
1	A	1478	C
1	A	1483	A
1	A	1487	G
1	A	1490	C
1	A	1491	G
1	A	1492	A
1	A	1494	G
1	A	1497	G
1	A	1498	U
1	A	1499	A
1	A	1503	A
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1507	A
1	A	1509	C
1	A	1514	C
1	A	1517	G
1	A	1519	A
1	A	1520	G
1	A	1522	U
1	A	1525	G
1	A	1526	G
1	A	1527	C
1	A	1528	U
1	A	1529	G
1	A	1530	G
1	A	1533	C

All (162) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	7	G
1	A	30	U
1	A	48	C
1	A	51	A
1	A	60	A
1	A	64	G
1	A	115	G
1	A	119	A
1	A	129(A)	G
1	A	151	A
1	A	181	G
1	A	197	A
1	A	202	U
1	A	203	U
1	A	243	A
1	A	244	U
1	A	246	A
1	A	250	A
1	A	251	G
1	A	266	G
1	A	275	G
1	A	279	A
1	A	281	G
1	A	288	A
1	A	293	G
1	A	315	A
1	A	328	C
1	A	329	A
1	A	345	C
1	A	350	G
1	A	351	G
1	A	353	A
1	A	367	U
1	A	372	C
1	A	373	A
1	A	405	U
1	A	409	G
1	A	410	G
1	A	412	A
1	A	421	U
1	A	428	G
1	A	429	U
1	A	438	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	453	A
1	A	460	A
1	A	461	C
1	A	481	G
1	A	484	G
1	A	485	G
1	A	496	A
1	A	497	A
1	A	499	A
1	A	504	C
1	A	509	A
1	A	518	C
1	A	531	U
1	A	533	A
1	A	535	A
1	A	536	C
1	A	559	A
1	A	560	U
1	A	575	G
1	A	576	G
1	A	619	U
1	A	650	G
1	A	652	U
1	A	653	A
1	A	656	C
1	A	687	A
1	A	701	C
1	A	702	A
1	A	703	G
1	A	721	G
1	A	722	A
1	A	734	G
1	A	793	U
1	A	812	C
1	A	817	C
1	A	818	G
1	A	872	A
1	A	873	A
1	A	913	A
1	A	934	C
1	A	960	U
1	A	965	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	971	G
1	A	974	A
1	A	975	A
1	A	976	G
1	A	980	C
1	A	992	U
1	A	993	G
1	A	1024	G
1	A	1027	C
1	A	1049	U
1	A	1053	G
1	A	1064	G
1	A	1065	U
1	A	1066	C
1	A	1067	A
1	A	1085	U
1	A	1092	A
1	A	1101	A
1	A	1108	G
1	A	1117	G
1	A	1124	G
1	A	1126	U
1	A	1129	C
1	A	1139	G
1	A	1145	C
1	A	1151	A
1	A	1159	U
1	A	1182	G
1	A	1187	G
1	A	1190	G
1	A	1192	C
1	A	1196	U
1	A	1200	C
1	A	1201	A
1	A	1212	U
1	A	1213	A
1	A	1214	C
1	A	1224	G
1	A	1225	A
1	A	1233	G
1	A	1235	U
1	A	1240	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1256	A
1	A	1257	U
1	A	1262	C
1	A	1263	C
1	A	1278	U
1	A	1279	A
1	A	1280	A
1	A	1281	U
1	A	1285	A
1	A	1297	C
1	A	1301	U
1	A	1317	C
1	A	1319	A
1	A	1320	C
1	A	1322	C
1	A	1331	G
1	A	1337	G
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1348	U
1	A	1364	U
1	A	1380	U
1	A	1396	A
1	A	1417	G
1	A	1451	A
1	A	1491	G
1	A	1498	U
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1507	A
1	A	1509	C
1	A	1525	G
1	A	1529	G

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 117 ligands modelled in this entry, 115 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	D2C	A	1636	22	31,34,34	4.34	11 (35%)	37,54,54	2.47	16 (43%)
25	AB9	A	1637	-	35,36,36	2.20	3 (8%)	43,49,49	1.65	3 (6%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	D2C	A	1636	22	-	6/6/64/64	0/4/4/4
25	AB9	A	1637	-	-	11/24/64/64	0/2/2/2

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	A	1636	D2C	C16-C15	-15.94	1.40	1.53
24	A	1636	D2C	C16-C17	-12.35	1.37	1.53
25	A	1637	AB9	O36-C23	10.63	1.43	1.23
24	A	1636	D2C	C18-C5	-7.06	1.44	1.54
24	A	1636	D2C	C14-C15	-6.64	1.43	1.52
25	A	1637	AB9	C23-N12	6.25	1.47	1.34
24	A	1636	D2C	C20-C21	4.37	1.62	1.53
25	A	1637	AB9	C24-C23	2.77	1.55	1.52
24	A	1636	D2C	O2-C8	2.76	1.48	1.42
24	A	1636	D2C	C6-C5	-2.57	1.49	1.53

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	A	1636	D2C	O5-C17	-2.48	1.36	1.43
24	A	1636	D2C	C9-C8	2.21	1.54	1.52
24	A	1636	D2C	C21-N2	2.03	1.37	1.32
24	A	1636	D2C	O4-C15	-2.02	1.38	1.42

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	A	1637	AB9	O36-C23-N12	-7.27	109.94	122.96
25	A	1637	AB9	O36-C23-C24	-6.29	111.32	120.61
24	A	1636	D2C	O5-C17-C18	5.18	121.55	109.80
24	A	1636	D2C	O4-C15-C14	5.09	122.53	110.56
24	A	1636	D2C	C18-C17-C16	4.88	118.55	110.45
24	A	1636	D2C	C7-C16-C17	4.55	121.75	111.30
24	A	1636	D2C	C7-C16-C15	4.07	118.89	110.87
24	A	1636	D2C	O4-C15-C16	3.83	118.30	110.83
24	A	1636	D2C	O6-C19-C18	-3.77	115.72	122.57
24	A	1636	D2C	C3-C4-C20	3.74	121.89	113.71
24	A	1636	D2C	O5-C17-C16	3.43	119.43	111.25
24	A	1636	D2C	C7-C6-C5	-2.79	105.77	110.23
24	A	1636	D2C	O1-C4-C20	-2.73	118.14	121.97
25	A	1637	AB9	O51-C51-C61	2.67	111.20	106.07
24	A	1636	D2C	C2-N1-C3	-2.66	108.04	114.10
24	A	1636	D2C	C11-C10-C9	-2.42	119.17	122.38
24	A	1636	D2C	C6-C5-C3	2.29	117.12	113.54
24	A	1636	D2C	C1-N1-C3	-2.09	109.35	114.10
24	A	1636	D2C	C5-C18-C19	2.02	116.77	109.64

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	A	1636	D2C	C4-C3-N1-C1
24	A	1636	D2C	C5-C3-N1-C1
24	A	1636	D2C	C4-C3-N1-C2
24	A	1636	D2C	C4-C20-C21-O7
24	A	1636	D2C	C19-C20-C21-O7
25	A	1637	AB9	N12-C23-C24-C25
25	A	1637	AB9	N12-C23-C24-O28
25	A	1637	AB9	O28-C24-C25-C26
25	A	1637	AB9	N34-C33-C35-N31
25	A	1637	AB9	C41-C51-C61-N61

Continued on next page...

Continued from previous page...

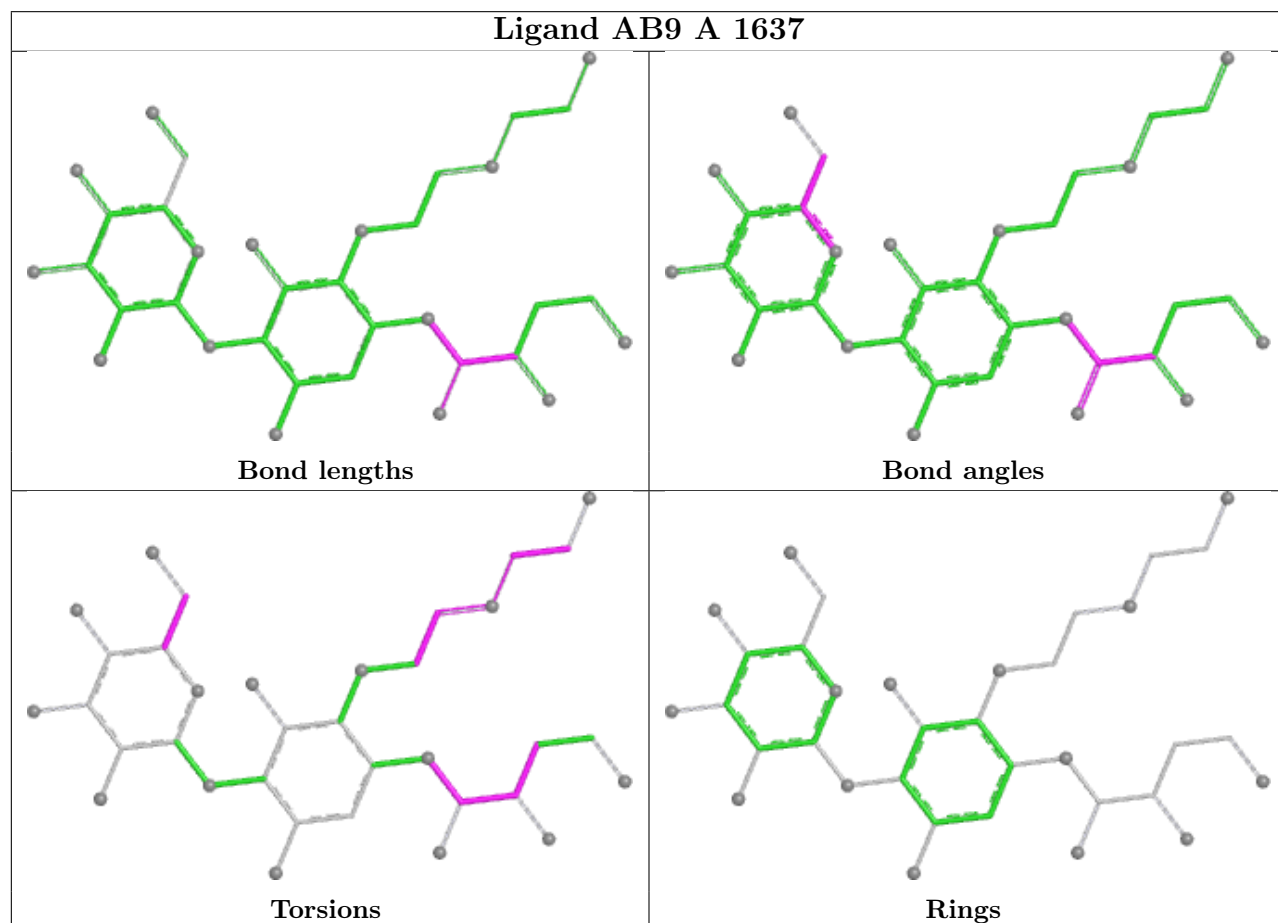
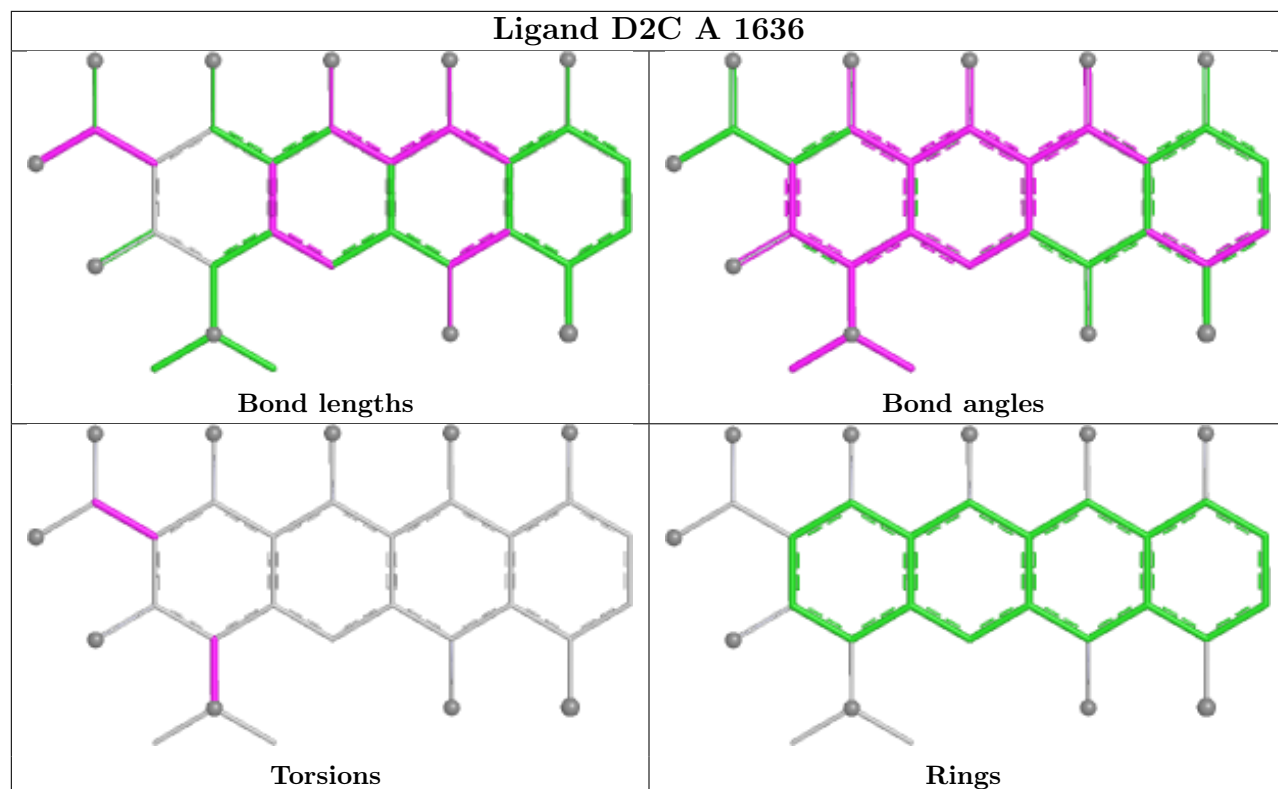
Mol	Chain	Res	Type	Atoms
25	A	1637	AB9	O51-C51-C61-N61
25	A	1637	AB9	O36-C23-N12-C12
25	A	1637	AB9	C29-C30-N31-C35
25	A	1637	AB9	C23-C24-C25-C26
24	A	1636	D2C	C5-C3-N1-C2
25	A	1637	AB9	C33-C35-N31-C30
25	A	1637	AB9	O62-C29-C30-N31

There are no ring outliers.

2 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	A	1636	D2C	4	0
25	A	1637	AB9	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



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
1	A	13

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	841:U	O3'	848:C	P	5.02
1	A	84:U	O3'	88:A	P	3.79
1	A	1533:C	O3'	1534:A	P	3.45
1	A	70:G	O3'	73:C	P	3.36
1	A	204:U	O3'	216:G	P	3.36
1	A	1443:G	O3'	1446:A	P	2.95
1	A	93:G	O3'	95:U	P	2.78
1	A	463:A	O3'	474:G	P	2.68
1	A	440:A	O3'	442:C	P	2.65
1	A	99:C	O3'	101:A	P	2.63
1	A	492:G	O3'	494:G	P	2.50
1	A	1455:G	O3'	1459:C	P	2.31
1	A	1169:A	O3'	1171:G	P	2.03

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.