



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 23, 2026 – 10:20 PM UTC

PDB ID : 2E5L / pdb_00002e5l
Title : A snapshot of the 30S ribosomal subunit capturing mRNA via the Shine-Dalgarno interaction
Authors : Kaminishi, T.; Wilson, D.N.; Takemoto, C.; Harms, J.M.; Kawazoe, M.; Schlunzen, F.; Hanawa-Suetsugu, K.; Shirouzu, M.; Fucini, P.; Yokoyama, S.; RIKEN Structural Genomics/Proteomics Initiative (RSGI)
Deposited on : 2006-12-21
Resolution : 3.30 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	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

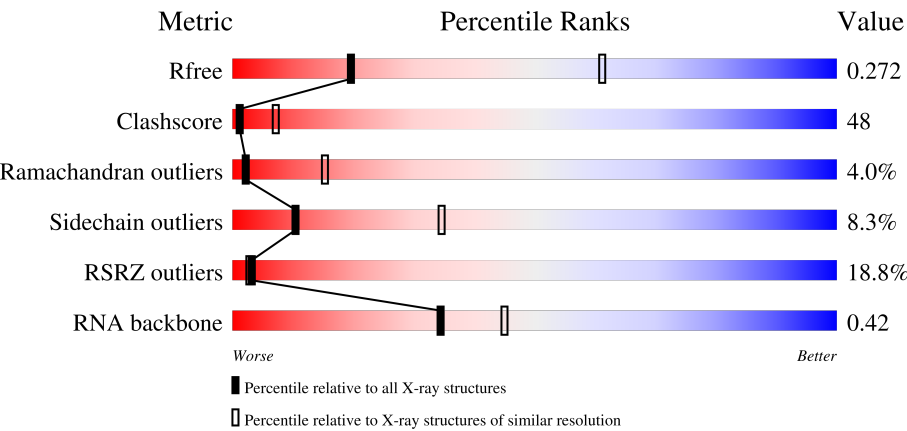
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	180053	1169 (3.32-3.28)
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)
RNA backbone	3983	1048 (3.60-3.00)

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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1520	7% 10% 59% 20% 10%
2	1	6	67% 17% 50% 33%
2	2	6	50% 33% 33% 33%
3	B	227	30% 43% 44% 10% ..

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	C	238	
5	D	208	
6	E	161	
7	F	101	
8	G	155	
9	H	138	
10	I	128	
11	J	104	
12	K	128	
13	L	131	
14	M	125	
15	N	60	
16	O	88	
17	P	88	
18	Q	104	
19	R	87	
20	S	92	
21	T	105	
22	V	26	

2 Entry composition

There are 23 unique types of molecules in this entry. The entry contains 51895 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
1	A	1517	Total	C	N	O	P	0	0	0
			32594	14508	6027	10542	1517			

- Molecule 2 is a RNA chain called 5'-R(*GP*AP*AP*AP*GP*A)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	1	6	Total	C	N	O	P	0	0	0
			131	60	30	36	5			
2	2	4	Total	C	N	O	P	0	0	0
			86	40	20	23	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	B	222	Total	C	N	O	S	0	0	0
			1811	1154	328	324	5			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	J	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	K	115	Total	C	N	O	S	0	0	0
			853	531	160	159	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	L	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	M	122	Total	C	N	O	S	0	0	0
			969	600	200	167	2			

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	S	80	Total	C	N	O	S	0	0	0
			647	414	119	112	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 a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
22	V	24	Total	C	N	O	0	0	0
			208	128	50	30			

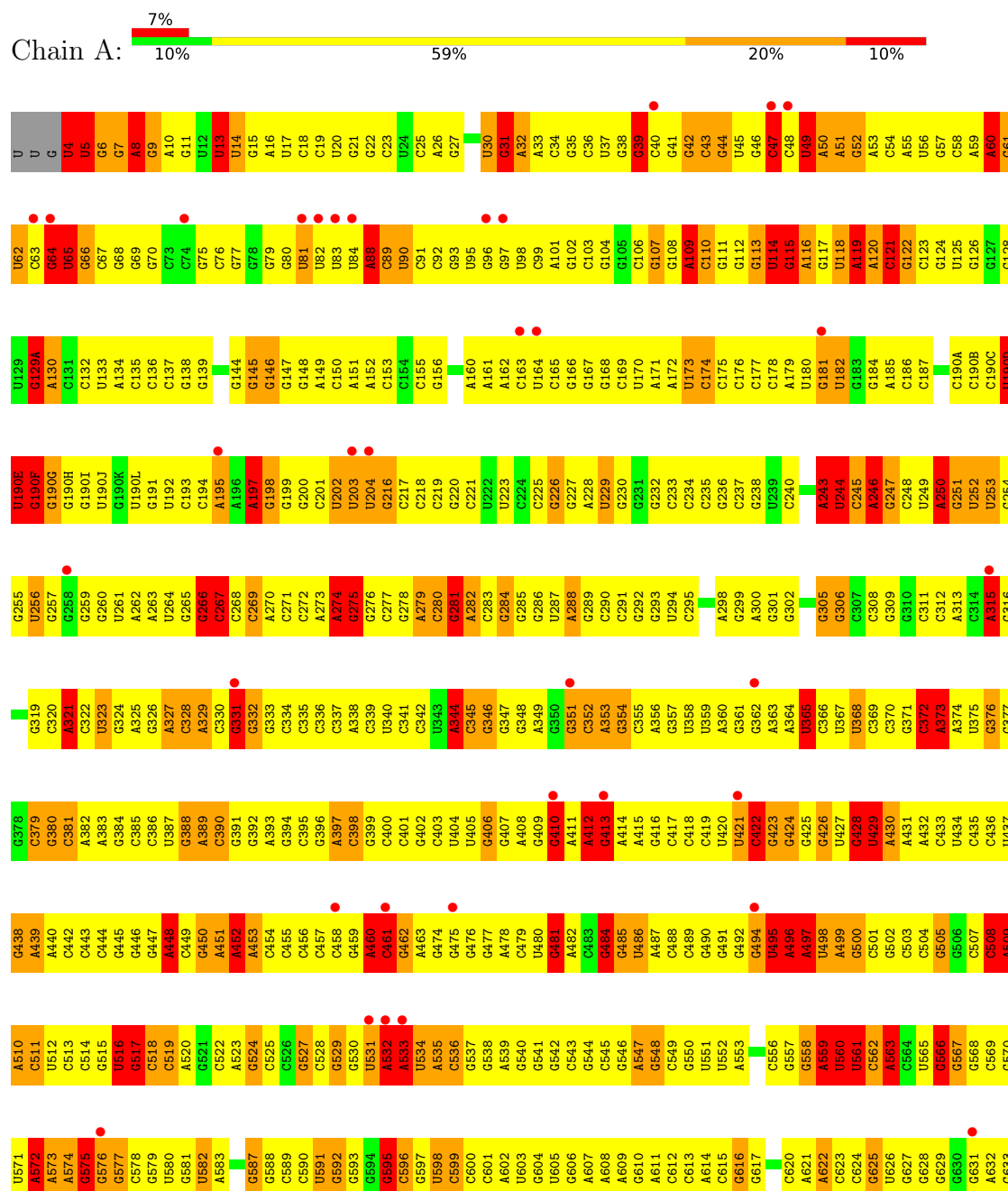
- Molecule 23 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

3 Residue-property plots

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

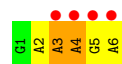
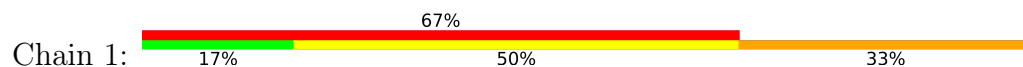
• Molecule 1: 16S ribosomal RNA



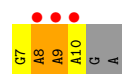
G1435	G1373	C1314	G1253	C1192	G1067	G1009	C948	G888	U820	G755	A694	G634
U1436	A1374	U1315	C1254	G1193	G1068	G1010	A949	A889	G821	C756	A695	G635
C1437	U1375	G1316	G1255	U1194	G1069	G1011	U950	G890	G822	U757	A696	G636
G1438	U1376	C1317	A1256	C1195	G1072	G1012	G951	G891	G823	G758	G697	G637
C1439	A1377	U1318	U1257	U1196	U1073	G1013	U952	A892	G824	A759	G698	G638
G1440	C1378	A1319	G1258	G1197	U1074	G1014	G953	C893	G825	G760	G699	G639
C1441	U1379	C1320	C1259	U1198	G1075	A1015	G954	G894	G826	G761	G700	G640
G1442	U1380	G1321	G1260	U1199	C1076	A1016	U955	G895	U827	C762	C701	U641
G1443	C1381	C1322	A1261	C1200	C1077	G1018	U956	C896	A828	A766	A702	A642
A1446	C1382	A1324	C1263	G1202	U1078	C1019	U957	G897	G829	A767	G703	G643
G1447	G1383	G1325	G1264	G1203	U1079	U1020	A958	G898	G830	A768	A704	G644
G1448	G1385	C1326	G1265	A1204	G1080	G1021	U959	C899	U831	A769	U705	G645
U1449	G1386	C1327	G1266	U1205	G1081	G1022	U960	A900	C832	C770	A706	G646
C1451	C1388	C1328	C1267	U1206	G1082	G1023	U961	A901	U833	G771	C707	C647
C1452	C1389	A1329	A1268	G1207	U1083	G1024	G962	G902	G836	U772	C708	G648
G1453	U1390	U1330	A1269	G1208	U1084	U1025	A964	G903	G837	G773	G709	G649
G1454	G1391	G1331	U1270	U1085	U1085	G1026	A965	U905	G838	G774	G710	G650
G1455	U1392	A1332	G1271	U1086	U1086	C1027	G966	G906	U839	G775	G711	G651
C1456	U1393	A1333	G1272	G1087	G1087	C1028	C967	A907	C840	G776	G712	A652
A1460	A1394	G1334	C1273	U1088	U1088	G1029	A968	A908	U841	A777	G713	A653
C1461	C1395	C1335	G1274	U1089	U1089	C1030	A974	A909	C848	G778	A715	G654
G1462	A1396	C1336	G1275	U1090	G1090	G1030A	C970	A910	C849	G779	A716	C656
C1463	C1397	G1337	G1276	U1091	G1091	C1030B	G971	U911	U850	A780	G717	G657
G1464	A1398	A1338	U1277	U1092	U1092	G1030C	C972	C912	G851	A781	G718	G658
C1465	C1399	A1339	A1278	A1093	A1093	A1030D	G973	A913	G852	A782	C719	U659
C1466	C1400	A1340	C1279	U1094	U1094	G1031	A975	A914	G853	C783	C720	G660
G1467	G1401	U1341	U1280	U1095	U1095	G1032	A976	A915	C854	C784	G721	G661
A1468	C1402	C1342	C1282	U1096	U1096	G1033	G977	G916	C855	G785	A722	G662
G1469	C1403	G1343	G1283	C1097	C1097	G1034	A978	G917	C857	G786	G723	A663
C1470	C1404	C1344	C1284	U1098	U1098	A1035	C979	A918	G858	A787	G724	G664
G1471	G1405	U1345	G1285	G1223	C1161	G1036	C980	A919	A859	U788	G725	A665
U1472	U1406	A1346	A1286	A1224	C1162	C1037	C981	U920	A860	U789	C726	A666
A1473	C1407	G1347	C1287	C1226	G1163	C1038	U981	U921	C861	A790	G727	G667
G1474	A1408	U1348	U1288	A1227	C1165	G1039	U982	G922	C862	G791	A728	U668
C1475	A1349	C1289	C1289	C1228	C1166	U1040	A983	A923	U863	A792	G729	U669
U1476	A1350	G1290	G1290	U1229	G1167	G1044	C984	C924	A864	A793	G730	G670
C1477	U1351	U1291	G1291	C1230	A1168	A1045	C985	G925	A865	A794	C731	G671
G1478	A1412	U1292	U1292	G1231	A1169	C1046	A986	G926	C866	C795	C732	U672
C1479	U1413	G1293	G1293	U1232	G1171	A1047	G987	G927	C867	C796	G733	G673
G1480	G1415	C1294	G1294	G1233	C1172	G1048	G988	G928	C868	C797	G734	G674
U1481	U1416	G1354	G1295	C1234	G1109	U1049	C989	G929	C869	U801	C735	A675
G1482	G1417	C1355	C1296	U1235	A1110	C1050	U990	C930	U870	A802	C736	G676
A1483	A1418	U1356	C1297	U1236	U1111	G1051	U991	C931	U871	A803	C737	U677
C1484	G1419	U1358	C1298	C1237	C1112	C1052	U992	C932	A872	G803	C738	U678
U1485	C1420	C1359	A1299	A1238	C1113	U1053	G993	G933	A873	U804	C739	C679
G1486	G1421	A1360	G1300	A1239	G1177	G1054	A994	C934	C874	C805	U740	G680
C1487	U1422	G1361	U1301	U1240	C1114	C1055	C995	A935	C875	C806	G741	C681
G1488	G1423	C1362	U1302	G1241	A1179	U1056	A996	C936	C876	A807	U742	G682
C1489	C1424	C1363	C1303	U1242	A1180	U1057	U997	A937	C877	C808	C743	G683
U1490	U1425	A1364	G1304	C1243	G1181	G1057	G998	A938	C878	C809	C744	A684
G1491	G1426	U1365	G1305	C1244	U1182	U1058	G1002	G939	C879	A811	C745	G685
A1492	U1427	C1366	U1306	A1245	G1183	C1059	G1003	C940	C880	C812	U746	U686
C1493	A1428	G1367	U1307	U1246	G1184	C1060	G1003A	C941	C881	C813	C747	A687
G1494	G1429	U1368	G1308	C1247	G1185	U1061	A1004	G942	C882	A814	C748	G688
U1495	C1430	C1369	U1309	U1248	G1186	G1062	A1005	C943	C883	A815	C749	C689
C1496	C1431	G1310	G1310	C1249	U1187	C1063	A1006	G944	U884	A816	U750	G690
G1497	G1432	C1311	G1311	U1250	U1188	U1064	C1007	G945	C885	C817	U751	G691
U1498	A1433	G1312	G1312	A1251	U1189	G1065	C1008	A946	C886	A753	C752	U692
A1499	U1372	U1313	U1313	A1252	C1128	C1066	G1008	G947	C887	A819	C754	G693



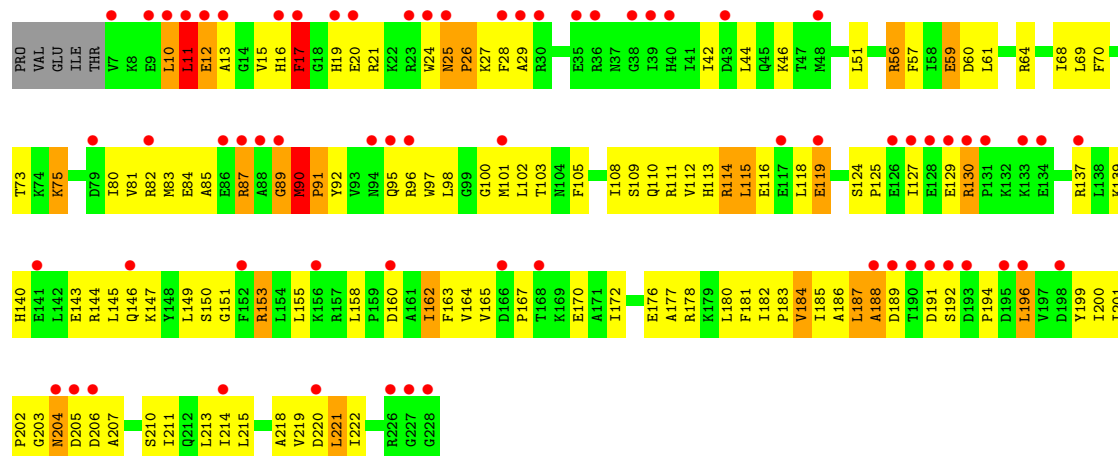
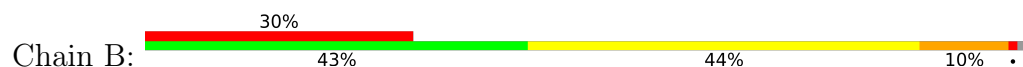
- Molecule 2: 5'-R(*GP*AP*AP*AP*GP*A)-3'



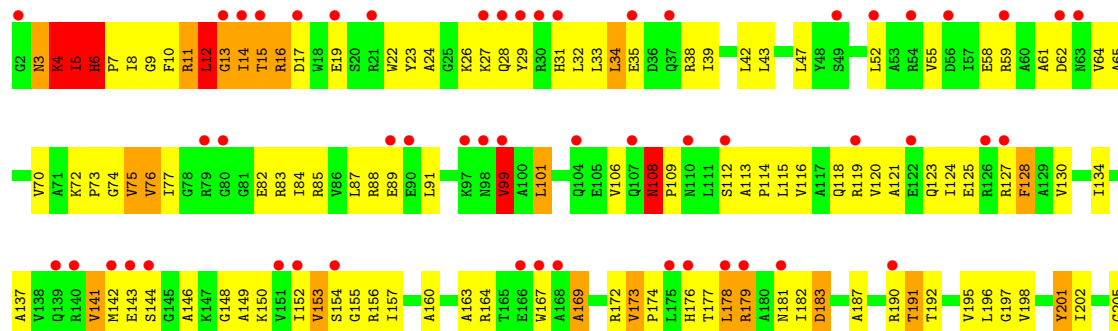
- Molecule 2: 5'-R(*GP*AP*AP*AP*GP*A)-3'

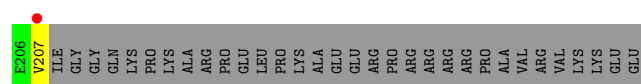


- Molecule 3: 30S ribosomal protein S2

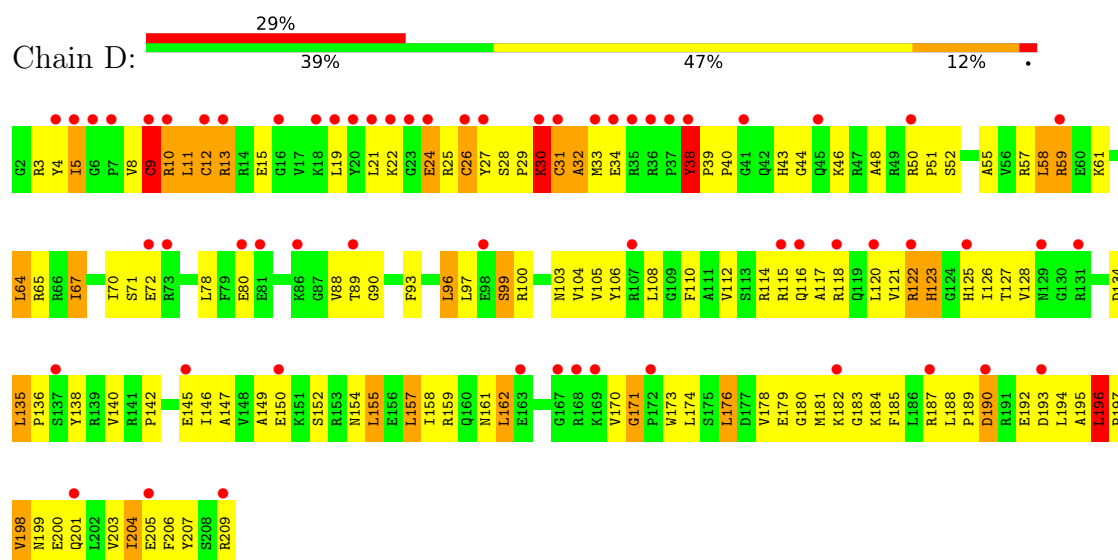


- Molecule 4: 30S ribosomal protein S3

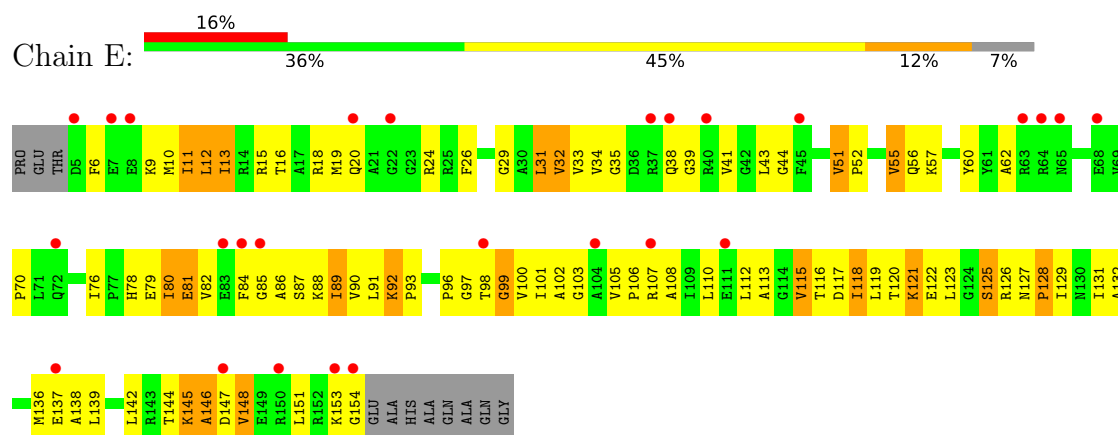




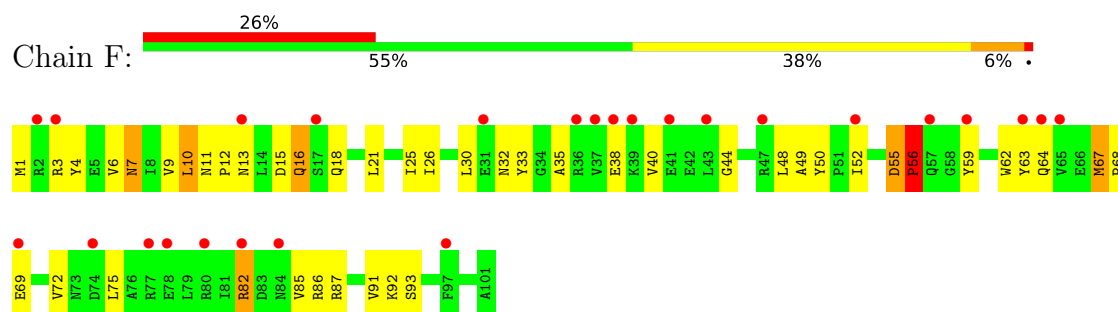
• Molecule 5: 30S ribosomal protein S4



• Molecule 6: 30S ribosomal protein S5

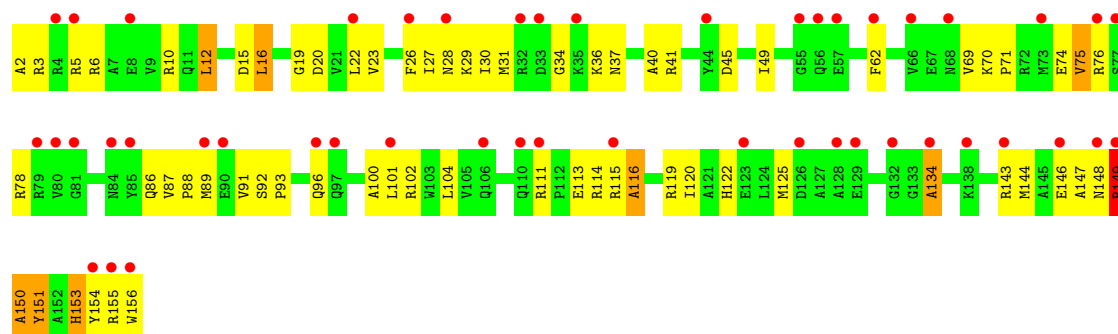


• Molecule 7: 30S ribosomal protein S6

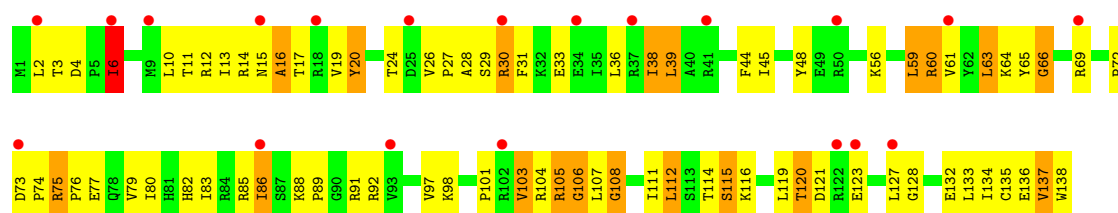
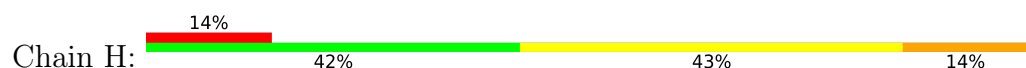


• Molecule 8: 30S ribosomal protein S7

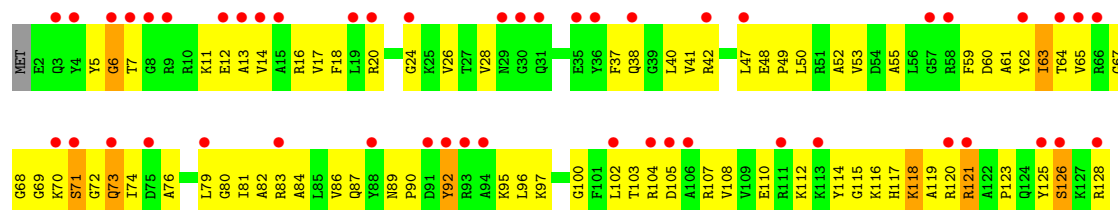




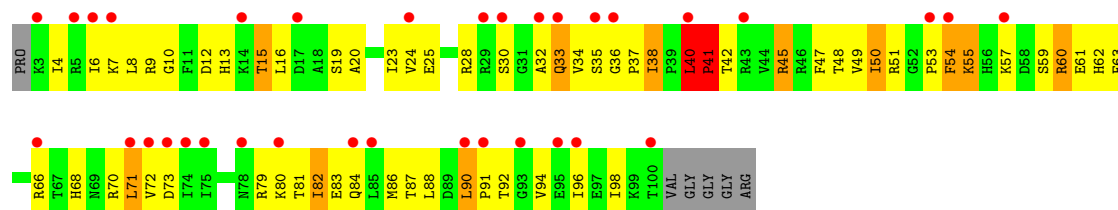
• Molecule 9: 30S ribosomal protein S8



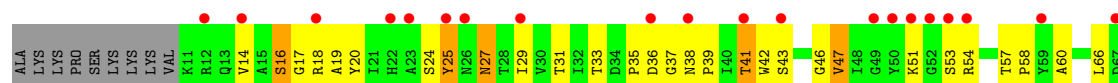
• Molecule 10: 30S ribosomal protein S9

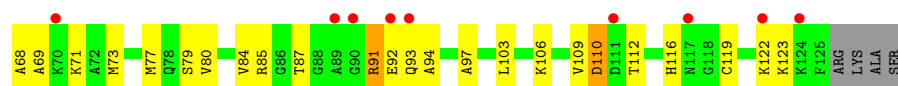


• Molecule 11: 30S ribosomal protein S10

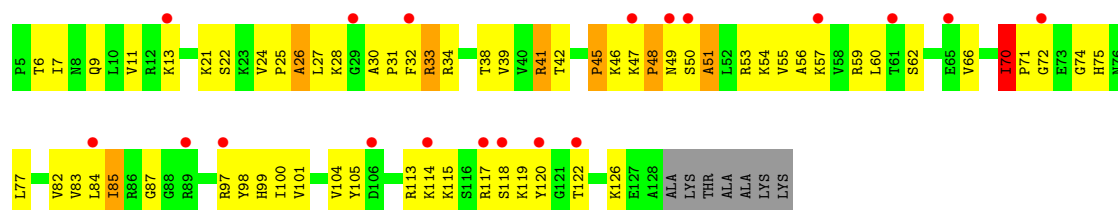


• Molecule 12: 30S ribosomal protein S11

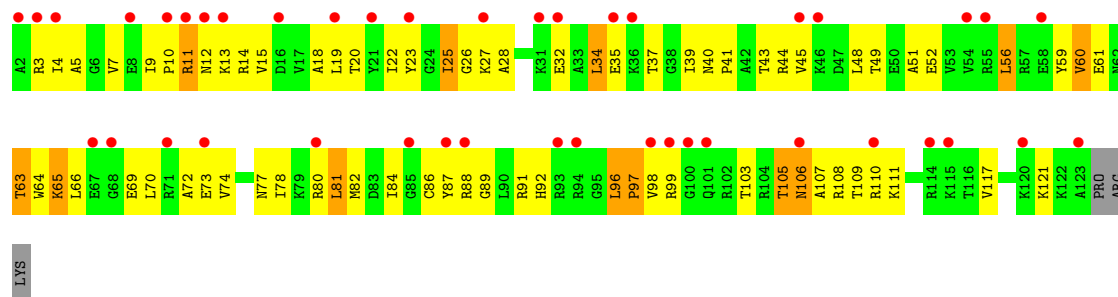




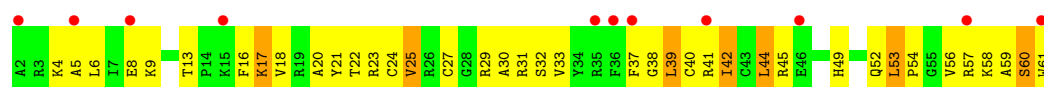
• Molecule 13: 30S ribosomal protein S12



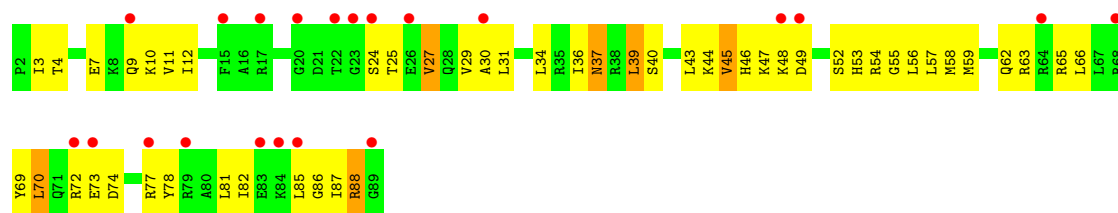
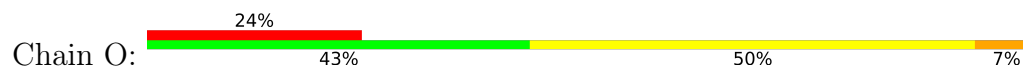
• Molecule 14: 30S ribosomal protein S13



• Molecule 15: 30S ribosomal protein S14

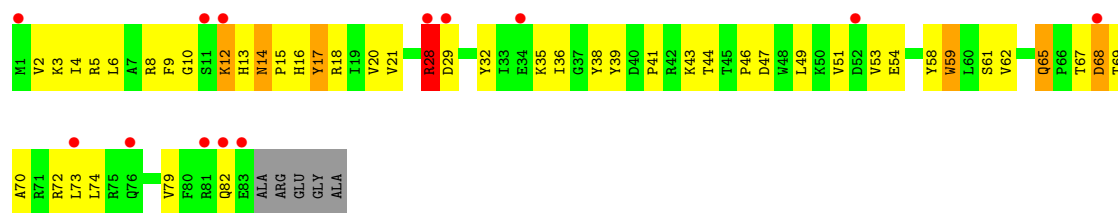


• Molecule 16: 30S ribosomal protein S15

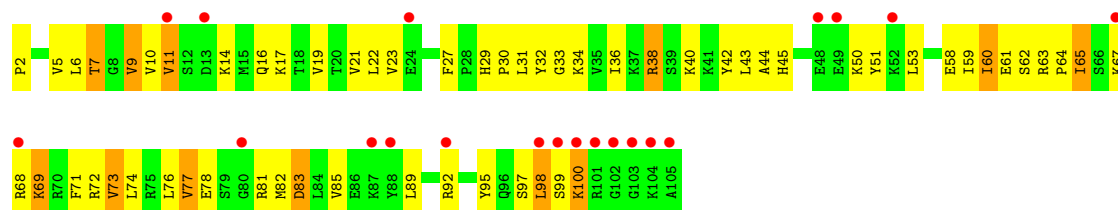


• Molecule 17: 30S ribosomal protein S16

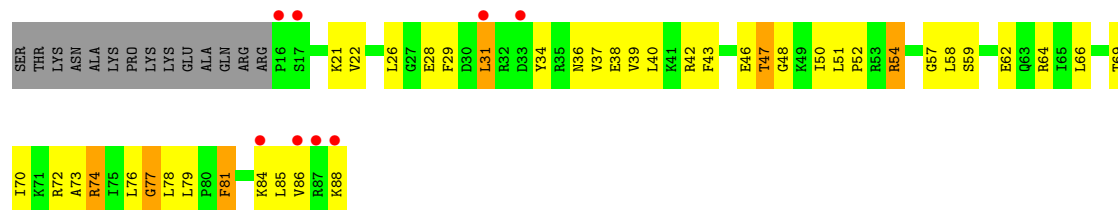




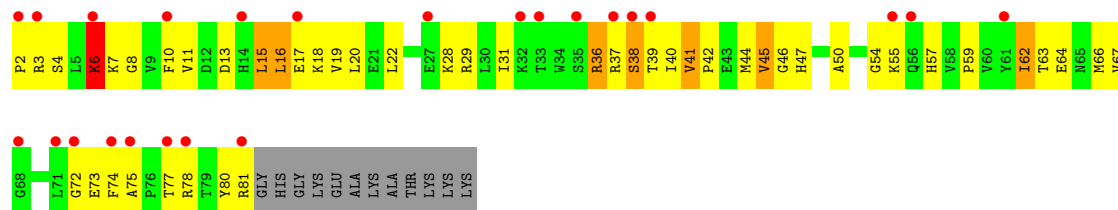
● Molecule 18: 30S ribosomal protein S17



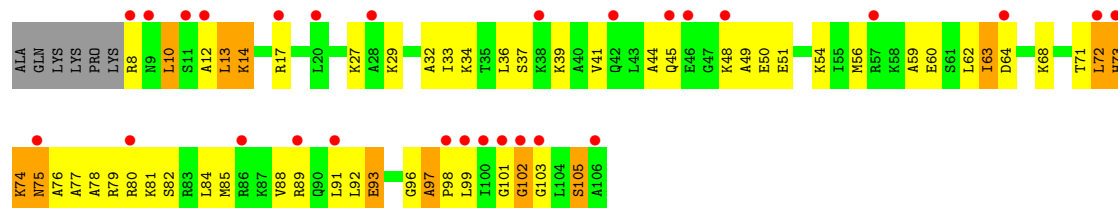
● Molecule 19: 30S ribosomal protein S18



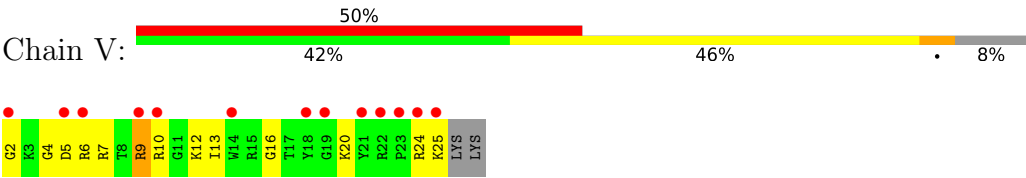
● Molecule 20: 30S ribosomal protein S19



● Molecule 21: 30S ribosomal protein S20



● Molecule 22: 30S ribosomal protein Thx



4 Data and refinement statistics

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, α , β , γ	411.79Å 411.79Å 173.16Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	148.83 – 3.30 148.83 – 3.30	Depositor EDS
% Data completeness (in resolution range)	97.0 (148.83-3.30) 97.1 (148.83-3.30)	Depositor EDS
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.23 (at 3.33Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.259 , 0.301 0.230 , 0.272	Depositor DCC
R_{free} test set	10897 reflections (5.07%)	wwPDB-VP
Wilson B-factor (Å ²)	96.4	Xtriage
Anisotropy	0.310	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.44 , 999.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.38$, $\langle L^2 \rangle = 0.21$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	51895	wwPDB-VP
Average B, all atoms (Å ²)	104.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.54% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.64	0/36482	1.06	224/56937 (0.4%)
2	1	0.51	0/148	0.90	0/230
2	2	0.38	0/97	0.81	0/150
3	B	0.89	2/1843 (0.1%)	1.33	25/2479 (1.0%)
4	C	0.83	0/1636	1.26	22/2205 (1.0%)
5	D	1.02	7/1733 (0.4%)	1.36	25/2318 (1.1%)
6	E	1.12	4/1162 (0.3%)	1.43	18/1564 (1.2%)
7	F	0.66	0/856	1.23	8/1154 (0.7%)
8	G	0.63	0/1276	1.07	6/1709 (0.4%)
9	H	1.00	2/1136 (0.2%)	1.55	19/1527 (1.2%)
10	I	0.65	0/1029	1.16	6/1378 (0.4%)
11	J	0.74	0/807	1.24	8/1085 (0.7%)
12	K	0.71	0/868	1.21	8/1173 (0.7%)
13	L	0.84	2/986 (0.2%)	1.23	8/1320 (0.6%)
14	M	0.67	0/979	1.23	14/1310 (1.1%)
15	N	0.85	0/501	1.30	7/664 (1.1%)
16	O	0.87	0/745	1.29	4/992 (0.4%)
17	P	0.82	0/716	1.22	8/963 (0.8%)
18	Q	1.01	4/870 (0.5%)	1.32	8/1159 (0.7%)
19	R	0.79	0/603	1.25	7/799 (0.9%)
20	S	0.65	1/661 (0.2%)	1.20	5/890 (0.6%)
21	T	0.64	0/764	1.12	5/1006 (0.5%)
22	V	0.65	0/212	0.93	0/277
All	All	0.72	22/56110 (0.0%)	1.13	435/83289 (0.5%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	1	127

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	D	12	CYS	CA-CB	12.18	1.73	1.53
5	D	12	CYS	CA-C	8.85	1.65	1.52
18	Q	77	VAL	CA-CB	-8.18	1.46	1.55
3	B	182	ILE	CA-CB	-7.81	1.44	1.54
13	L	26	ALA	CA-CB	7.20	1.62	1.53
18	Q	65	ILE	CA-CB	-7.16	1.44	1.55
3	B	162	ILE	CA-CB	-6.68	1.46	1.54
5	D	31	CYS	N-CA	6.45	1.55	1.46
13	L	85	ILE	CA-CB	-6.32	1.46	1.54
18	Q	73	VAL	CA-CB	-6.17	1.46	1.54
6	E	32	VAL	CA-CB	-5.99	1.46	1.54
9	H	137	VAL	CA-CB	-5.98	1.47	1.54
20	S	6	LYS	CA-C	5.94	1.60	1.52
6	E	51	VAL	CA-CB	-5.91	1.51	1.54
6	E	55	VAL	CA-CB	-5.84	1.47	1.54
18	Q	9	VAL	CA-CB	-5.83	1.47	1.54
9	H	16	ALA	CA-CB	-5.74	1.45	1.53
5	D	12	CYS	N-CA	5.41	1.52	1.46
5	D	204	ILE	CA-CB	-5.36	1.48	1.54
5	D	9	CYS	CA-C	5.30	1.59	1.52
5	D	12	CYS	CB-SG	5.22	1.98	1.81
6	E	125	SER	CA-C	-5.21	1.46	1.52

All (435) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	H	75	ARG	CA-C-N	12.91	135.98	119.84
9	H	75	ARG	C-N-CA	12.91	135.98	119.84
5	D	31	CYS	N-CA-C	-12.23	98.60	113.15
5	D	12	CYS	CA-CB-SG	11.09	139.90	114.40
3	B	158	LEU	CA-C-N	10.78	130.86	119.76
3	B	158	LEU	C-N-CA	10.78	130.86	119.76
1	A	511	C	N1-C1'-C2'	10.46	129.70	114.00
9	H	134	ILE	N-CA-C	10.33	120.24	110.53
1	A	1380	U	C2'-C3'-O3'	10.29	124.94	109.50
5	D	13	ARG	N-CA-C	10.24	122.52	111.36
3	B	172	ILE	N-CA-C	-10.01	101.63	110.74
9	H	108	GLY	N-CA-C	-9.97	98.34	112.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	119	A	C2'-C3'-O3'	9.87	124.30	109.50
1	A	1085	U	C2'-C3'-O3'	9.68	124.02	109.50
1	A	560	U	C2'-C3'-O3'	9.67	124.00	109.50
14	M	35	GLU	N-CA-C	-9.63	100.86	111.36
5	D	12	CYS	N-CA-C	-9.60	95.53	111.37
1	A	1302	U	C2'-C3'-O3'	9.54	123.81	109.50
13	L	26	ALA	N-CA-C	-9.15	100.19	112.26
7	F	55	ASP	CA-C-N	8.99	131.08	119.84
7	F	55	ASP	C-N-CA	8.99	131.08	119.84
1	A	595	G	C2'-C3'-O3'	-8.96	96.07	109.50
12	K	91	ARG	N-CA-C	-8.84	101.61	111.07
5	D	26	CYS	N-CA-C	-8.80	101.23	113.20
1	A	566	G	C4'-C3'-O3'	-8.77	96.25	109.40
4	C	4	LYS	N-CA-C	8.71	129.35	110.80
1	A	934	C	N1-C1'-C2'	8.56	126.84	114.00
3	B	90	MET	CA-C-N	8.55	128.98	120.52
3	B	90	MET	C-N-CA	8.55	128.98	120.52
21	T	75	ASN	N-CA-C	-8.53	102.31	112.89
9	H	119	LEU	N-CA-C	8.48	122.78	109.81
1	A	246	A	N9-C1'-C2'	8.40	126.60	114.00
1	A	281	G	C2'-C3'-O3'	8.38	122.06	109.50
1	A	372	C	C2'-C3'-O3'	8.33	121.99	109.50
1	A	1129	C	C2'-C3'-O3'	8.31	121.97	109.50
1	A	115	G	C2'-C3'-O3'	8.26	121.89	109.50
1	A	1151	A	N9-C1'-C2'	8.21	126.31	114.00
1	A	1336	C	N1-C1'-C2'	8.18	126.27	114.00
6	E	113	ALA	N-CA-C	-8.12	103.35	113.18
1	A	511	C	C1'-C2'-O2'	-8.09	99.67	111.80
1	A	1297	C	C2'-C3'-O3'	8.02	121.53	109.50
1	A	595	G	C4'-C3'-O3'	8.01	121.42	109.40
3	B	20	GLU	N-CA-C	7.97	121.74	110.50
11	J	40	LEU	C-N-CD	-7.96	103.08	120.60
1	A	1347	G	C1'-C2'-O2'	-7.95	99.87	111.80
16	O	44	LYS	N-CA-C	-7.86	102.70	111.82
10	I	73	GLN	N-CA-C	-7.80	102.77	111.82
20	S	4	SER	N-CA-C	7.77	121.04	108.76
9	H	73	ASP	CA-C-N	7.77	129.55	119.84
9	H	73	ASP	C-N-CA	7.77	129.55	119.84
17	P	28	ARG	N-CA-C	-7.76	101.23	111.24
21	T	14	LYS	N-CA-C	-7.71	102.84	111.71
1	A	481	G	C4'-C3'-O3'	-7.70	101.45	113.00
15	N	53	LEU	CA-C-N	7.61	127.65	119.89

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	N	53	LEU	C-N-CA	7.61	127.65	119.89
3	B	89	GLY	N-CA-C	-7.57	95.25	113.18
1	A	1502	A	N9-C1'-C2'	7.54	125.32	114.00
1	A	960	U	N1-C1'-C2'	7.53	125.30	114.00
1	A	753	A	C4'-C3'-O3'	7.46	120.59	109.40
20	S	38	SER	N-CA-C	7.42	120.96	110.50
1	A	1190	G	C3'-C2'-O2'	-7.40	99.59	110.70
1	A	653	A	N9-C1'-C2'	7.40	125.10	114.00
1	A	563	A	N9-C1'-C2'	7.37	123.06	112.00
1	A	1528	U	C2'-C3'-O3'	7.37	120.55	109.50
1	A	460	A	N9-C1'-C2'	7.34	123.02	112.00
1	A	561	U	C2'-C3'-O3'	7.33	120.50	109.50
5	D	135	LEU	CA-C-N	7.31	127.17	119.05
5	D	135	LEU	C-N-CA	7.31	127.17	119.05
1	A	494	G	C2'-C3'-O3'	-7.27	102.80	113.70
1	A	511	C	O4'-C1'-C2'	7.26	113.06	105.80
6	E	92	LYS	CA-C-N	7.24	127.22	119.76
6	E	92	LYS	C-N-CA	7.24	127.22	119.76
1	A	1322	C	N1-C1'-C2'	7.23	124.84	114.00
4	C	108	ASN	CA-C-N	7.21	126.92	119.56
4	C	108	ASN	C-N-CA	7.21	126.92	119.56
18	Q	50	LYS	N-CA-C	7.18	118.90	111.14
5	D	155	LEU	N-CA-C	7.18	121.17	109.76
4	C	6	HIS	CA-C-N	7.17	128.80	119.84
4	C	6	HIS	C-N-CA	7.17	128.80	119.84
3	B	11	LEU	N-CA-C	-7.16	101.78	111.87
1	A	1124	G	N9-C1'-C2'	7.15	122.73	112.00
1	A	793	U	N1-C1'-C2'	7.15	122.73	112.00
15	N	20	ALA	N-CA-C	7.14	120.06	108.63
1	A	413	G	C4'-C3'-O3'	-7.11	102.34	113.00
11	J	40	LEU	CA-C-N	7.10	144.04	127.00
11	J	40	LEU	C-N-CA	7.10	144.04	127.00
1	A	266	G	C5'-C4'-C3'	-7.06	105.41	116.00
1	A	1285	A	C2'-C3'-O3'	7.06	120.09	109.50
1	A	31	G	C2'-C3'-O3'	7.03	120.04	109.50
1	A	305	G	N9-C1'-C2'	7.02	124.53	114.00
4	C	11	ARG	N-CA-C	7.02	122.14	113.50
1	A	752	G	C4'-C3'-O3'	-7.02	98.88	109.40
10	I	63	ILE	N-CA-C	6.93	118.47	108.48
1	A	1195	C	C4'-C3'-O3'	-6.92	102.62	113.00
1	A	1086	U	N1-C1'-C2'	6.89	122.34	112.00
1	A	508	C	C2'-C3'-O3'	-6.88	99.18	109.50

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	883	C	C2'-C3'-O3'	6.88	124.02	113.70
1	A	576	G	C4'-C3'-O3'	-6.87	99.10	109.40
1	A	1181	G	N9-C1'-C2'	6.85	124.27	114.00
1	A	1190	G	N9-C1'-C2'	6.83	122.24	112.00
1	A	1335	C	C4'-C3'-O3'	-6.77	102.85	113.00
11	J	50	ILE	CB-CA-C	-6.75	101.95	111.21
1	A	266	G	C2'-C3'-O3'	6.75	123.83	113.70
14	M	25	ILE	N-CA-C	6.74	118.00	108.36
1	A	1298	C	C2'-C3'-O3'	-6.74	99.39	109.50
1	A	815	A	C4'-C3'-O3'	-6.74	99.30	109.40
1	A	965	A	C2'-C3'-O3'	6.74	119.60	109.50
19	R	58	LEU	N-CA-C	6.71	118.51	110.19
5	D	38	TYR	CA-C-N	6.67	127.25	120.38
5	D	38	TYR	C-N-CA	6.67	127.25	120.38
1	A	1224	G	C2'-C3'-O3'	6.64	119.46	109.50
3	B	59	GLU	N-CA-C	-6.64	103.97	111.07
9	H	115	SER	N-CA-C	-6.62	105.06	113.01
17	P	51	VAL	N-CA-C	6.62	123.10	109.34
1	A	960	U	C2'-C3'-O3'	6.61	119.42	109.50
1	A	1225	A	C2'-C3'-O3'	-6.61	103.78	113.70
21	T	93	GLU	N-CA-C	-6.61	105.04	113.23
1	A	484	G	C2'-C3'-O3'	6.53	119.30	109.50
1	A	497	A	C2'-C3'-O3'	6.53	119.29	109.50
1	A	1213	A	C4'-C3'-O3'	-6.53	103.21	113.00
1	A	913	A	C1'-C2'-O2'	-6.52	102.02	111.80
9	H	66	GLY	CA-C-N	6.52	126.47	120.21
9	H	66	GLY	C-N-CA	6.52	126.47	120.21
1	A	818	G	N9-C1'-C2'	6.50	123.75	114.00
3	B	220	ASP	N-CA-C	-6.50	104.19	111.28
9	H	20	TYR	N-CA-C	6.50	120.06	111.28
1	A	976	G	N9-C1'-C2'	6.49	123.73	114.00
14	M	107	ALA	N-CA-C	-6.47	104.16	113.21
1	A	1346	A	C2'-C3'-O3'	6.46	119.19	109.50
1	A	422	C	C4'-C3'-O3'	-6.45	103.32	113.00
15	N	13	THR	CA-C-N	6.42	127.66	120.66
15	N	13	THR	C-N-CA	6.42	127.66	120.66
6	E	41	VAL	N-CA-C	6.41	117.14	108.17
11	J	25	GLU	N-CA-C	6.39	118.13	111.03
1	A	748	C	C2'-C3'-O3'	6.39	119.08	109.50
1	A	1399	C	C2'-C3'-O3'	-6.39	99.92	109.50
1	A	461	C	N1-C1'-C2'	6.39	121.58	112.00
14	M	34	LEU	N-CA-C	-6.37	106.09	114.31

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	P	14	ASN	CA-C-N	6.37	127.37	119.98
17	P	14	ASN	C-N-CA	6.37	127.37	119.98
4	C	183	ASP	N-CA-C	-6.37	101.95	110.55
1	A	47	C	N1-C1'-C2'	6.36	123.54	114.00
5	D	12	CYS	N-CA-CB	6.34	120.12	109.78
14	M	11	ARG	N-CA-C	6.34	118.49	108.79
6	E	52	PRO	N-CA-C	-6.33	104.31	113.75
5	D	31	CYS	N-CA-CB	6.33	120.21	110.46
1	A	274	A	C2'-C3'-O3'	6.32	118.98	109.50
1	A	1347	G	C5'-C4'-C3'	6.30	124.66	115.20
18	Q	21	VAL	N-CA-C	6.30	116.99	108.17
1	A	884	U	N1-C1'-C2'	6.30	123.44	114.00
1	A	1108	G	C4'-C3'-C2'	-6.29	96.31	102.60
16	O	47	LYS	N-CA-C	-6.29	105.59	113.20
17	P	68	ASP	N-CA-C	-6.29	104.11	110.97
1	A	575	G	N9-C1'-C2'	6.28	123.41	114.00
1	A	1050	G	C5'-C4'-C3'	6.28	125.41	116.00
6	E	81	GLU	N-CA-C	-6.27	100.36	110.32
1	A	109	A	C2'-C3'-O3'	-6.25	100.12	109.50
1	A	315	A	N9-C1'-C2'	6.24	123.36	114.00
4	C	5	ILE	N-CA-C	6.23	122.30	109.34
1	A	1139	G	C2'-C3'-O3'	6.23	118.84	109.50
1	A	815	A	N9-C1'-C2'	6.22	123.34	114.00
19	R	74	ARG	N-CA-C	-6.22	104.19	110.97
1	A	702	A	N9-C1'-C2'	6.22	123.33	114.00
8	G	151	TYR	N-CA-C	6.21	121.02	113.38
9	H	59	LEU	CA-C-N	-6.21	114.17	122.42
9	H	59	LEU	C-N-CA	-6.21	114.17	122.42
1	A	1065	U	C2'-C3'-O3'	6.20	118.80	109.50
20	S	6	LYS	N-CA-C	6.20	124.01	110.80
16	O	45	VAL	N-CA-C	-6.19	100.50	109.29
15	N	42	ILE	CB-CA-C	-6.18	103.94	112.04
1	A	516	U	N1-C1'-C2'	6.17	121.25	112.00
1	A	1505	G	C2'-C3'-O3'	6.16	122.94	113.70
1	A	560	U	C1'-C2'-O2'	-6.16	102.56	111.80
1	A	1364	U	C2'-C3'-O3'	6.16	118.73	109.50
5	D	33	MET	N-CA-C	-6.15	104.88	112.38
5	D	196	LEU	CA-C-N	6.15	127.52	119.84
5	D	196	LEU	C-N-CA	6.15	127.52	119.84
1	A	243	A	C2'-C3'-O3'	6.14	118.71	109.50
1	A	752	G	N9-C1'-C2'	6.14	123.20	114.00
1	A	1305	G	N9-C1'-C2'	6.13	121.19	112.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	871	U	C2'-C3'-O3'	-6.10	100.34	109.50
14	M	40	ASN	CA-C-N	6.09	127.45	119.84
14	M	40	ASN	C-N-CA	6.09	127.45	119.84
1	A	5	U	N1-C1'-C2'	6.08	123.13	114.00
3	B	188	ALA	N-CA-C	6.07	119.07	110.14
18	Q	77	VAL	CB-CA-C	-6.04	104.67	111.80
1	A	1498	U	C2'-C3'-O3'	6.04	118.55	109.50
4	C	85	ARG	N-CA-C	-6.03	104.61	111.07
1	A	1213	A	N9-C1'-C2'	6.02	121.03	112.00
1	A	114	U	C4'-C3'-O3'	-6.02	103.97	113.00
1	A	1530	G	N9-C1'-C2'	6.01	121.02	112.00
1	A	574	A	C2'-C3'-O3'	-6.01	104.69	113.70
12	K	66	LEU	N-CA-C	6.00	118.32	111.11
13	L	41	ARG	N-CA-C	6.00	117.83	109.31
1	A	190(E)	U	N1-C1'-C2'	6.00	123.00	114.00
1	A	740	U	C2'-C3'-O3'	-5.98	104.72	113.70
1	A	31	G	N9-C1'-C2'	5.98	122.97	114.00
3	B	87	ARG	N-CA-C	5.96	118.74	111.82
6	E	146	ALA	N-CA-C	-5.96	103.55	111.24
1	A	517	G	C4'-C3'-O3'	-5.96	100.46	109.40
14	M	65	LYS	N-CA-C	-5.95	102.11	110.50
1	A	365	U	N1-C1'-C2'	5.95	120.92	112.00
1	A	250	A	C2'-C3'-O3'	5.94	118.41	109.50
1	A	517	G	N9-C1'-C2'	5.92	122.89	114.00
3	B	162	ILE	CB-CA-C	-5.88	101.85	110.62
7	F	67	MET	CA-C-N	5.88	125.82	119.76
7	F	67	MET	C-N-CA	5.88	125.82	119.76
1	A	1281	U	C2'-C3'-O3'	5.88	118.32	109.50
6	E	100	VAL	CA-C-N	-5.87	117.38	122.96
6	E	100	VAL	C-N-CA	-5.87	117.38	122.96
13	L	66	VAL	N-CA-C	5.87	117.37	108.80
14	M	61	GLU	N-CA-C	5.87	117.75	111.36
1	A	109	A	N9-C1'-C2'	5.86	122.80	114.00
1	A	533	A	C2'-C3'-O3'	5.86	118.29	109.50
1	A	1362	C	C2'-C3'-O3'	-5.86	104.91	113.70
13	L	85	ILE	N-CA-C	5.84	116.89	108.48
3	B	91	PRO	N-CA-C	-5.83	102.44	111.13
5	D	126	ILE	N-CA-C	5.83	116.27	107.75
1	A	1189	C	C2'-C3'-O3'	-5.83	104.95	113.70
3	B	196	LEU	CB-CA-C	-5.83	100.64	110.44
20	S	62	ILE	N-CA-C	5.83	116.70	108.36
15	N	42	ILE	N-CA-C	-5.83	105.17	110.82

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1094	G	C4'-C3'-O3'	-5.82	100.67	109.40
13	L	70	ILE	CA-C-N	5.82	127.13	120.85
13	L	70	ILE	C-N-CA	5.82	127.13	120.85
5	D	48	ALA	N-CA-C	5.81	117.77	108.41
10	I	110	GLU	N-CA-C	5.80	118.67	109.96
1	A	344	A	C2'-C3'-O3'	5.80	118.20	109.50
5	D	31	CYS	CB-CA-C	-5.79	99.64	110.36
3	B	64	ARG	N-CA-C	-5.79	106.18	113.18
1	A	991	U	N1-C1'-C2'	5.79	120.68	112.00
1	A	572	A	N9-C1'-C2'	5.77	120.66	112.00
18	Q	98	LEU	N-CA-C	5.77	119.53	111.74
1	A	448	A	N9-C1'-C2'	5.77	120.65	112.00
8	G	134	ALA	N-CA-C	-5.76	105.14	111.82
17	P	17	TYR	N-CA-C	5.74	118.92	110.59
17	P	59	TRP	N-CA-C	5.74	118.03	111.02
1	A	496	A	N9-C1'-C2'	5.74	122.61	114.00
6	E	115	VAL	N-CA-C	-5.74	103.73	110.21
1	A	575	G	C2'-C3'-O3'	5.74	118.11	109.50
1	A	916	G	C2'-C3'-O3'	-5.74	105.09	113.70
12	K	54	ARG	N-CA-C	5.74	117.61	111.36
3	B	221	LEU	N-CA-C	-5.73	104.72	110.97
1	A	993	G	C2'-C3'-O3'	5.73	118.09	109.50
12	K	112	THR	CA-C-N	5.72	127.00	119.84
12	K	112	THR	C-N-CA	5.72	127.00	119.84
17	P	46	PRO	N-CA-C	-5.72	106.40	113.84
1	A	31	G	C4'-C3'-O3'	-5.72	100.82	109.40
1	A	266	G	O3'-P-O5'	5.69	112.53	104.00
1	A	267	C	C4'-C3'-O3'	-5.69	104.47	113.00
1	A	1331	G	N9-C1'-C2'	5.69	120.53	112.00
6	E	51	VAL	N-CA-C	5.68	119.17	112.35
3	B	184	VAL	N-CA-C	5.67	116.11	108.17
1	A	1190	G	C4'-C3'-O3'	-5.67	104.50	113.00
19	R	50	ILE	CB-CA-C	-5.66	104.45	111.08
18	Q	73	VAL	CB-CA-C	-5.66	103.79	111.15
1	A	113	G	N9-C1'-C2'	5.65	120.47	112.00
12	K	51	LYS	N-CA-C	5.64	121.96	114.12
1	A	1068	G	C2'-C3'-O3'	-5.63	105.25	113.70
6	E	38	GLN	N-CA-C	-5.62	98.83	110.80
19	R	81	PHE	N-CA-C	-5.62	106.78	113.97
21	T	101	GLY	N-CA-C	-5.62	106.73	115.67
4	C	15	THR	N-CA-C	5.62	118.02	108.02
1	A	982	U	C4'-C3'-O3'	5.62	117.82	109.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1108	G	C5'-C4'-C3'	5.61	124.42	116.00
7	F	44	GLY	N-CA-C	5.61	118.34	111.45
19	R	47	THR	N-CA-C	-5.60	101.14	109.94
1	A	373	A	C2'-C3'-O3'	-5.60	105.30	113.70
9	H	103	VAL	N-CA-C	5.60	115.92	107.80
1	A	652	U	N1-C1'-C2'	5.59	122.39	114.00
12	K	25	TYR	N-CA-C	-5.59	106.05	112.92
1	A	460	A	C4'-C3'-O3'	-5.58	104.63	113.00
1	A	976	G	C4'-C3'-O3'	-5.58	101.03	109.40
1	A	721	G	N9-C1'-C2'	5.57	122.36	114.00
1	A	687	A	C2'-C3'-O3'	5.57	117.86	109.50
1	A	652	U	C4'-C3'-O3'	-5.57	101.05	109.40
4	C	205	GLY	N-CA-C	5.57	126.38	113.18
1	A	306	G	C3'-C2'-O2'	5.57	119.05	110.70
1	A	566	G	N9-C1'-C2'	5.56	122.34	114.00
1	A	1256	A	C3'-C2'-O2'	5.56	119.04	110.70
1	A	246	A	C4'-C3'-O3'	-5.55	101.07	109.40
9	H	4	ASP	CA-C-N	5.55	126.78	119.84
9	H	4	ASP	C-N-CA	5.55	126.78	119.84
1	A	651	C	C4'-C3'-O3'	-5.55	104.68	113.00
10	I	126	SER	N-CA-C	5.54	119.78	111.96
21	T	13	LEU	N-CA-C	-5.52	106.24	114.64
1	A	1389	C	C2'-C3'-O3'	-5.51	105.43	113.70
3	B	155	LEU	N-CA-C	5.51	117.71	108.23
1	A	452	A	N9-C1'-C2'	5.50	120.26	112.00
6	E	6	PHE	N-CA-C	5.50	118.45	110.42
1	A	1224	G	N9-C1'-C2'	5.50	122.25	114.00
3	B	191	ASP	N-CA-C	5.49	119.82	113.18
5	D	43	HIS	N-CA-C	5.48	119.60	113.02
1	A	121	C	C2'-C3'-O3'	-5.48	101.28	109.50
8	G	116	ALA	N-CA-C	5.47	117.33	111.36
13	L	13	LYS	N-CA-C	5.47	120.44	113.55
18	Q	9	VAL	N-CA-C	5.47	116.35	108.48
1	A	934	C	C4'-C3'-O3'	-5.46	101.20	109.40
3	B	115	LEU	N-CA-C	-5.46	105.24	111.14
6	E	70	PRO	N-CA-C	-5.46	102.70	111.38
1	A	65	U	N1-C1'-C2'	5.45	120.17	112.00
1	A	870	U	C2'-C3'-O3'	-5.45	101.33	109.50
3	B	105	PHE	N-CA-C	5.44	117.64	111.11
1	A	1297	C	N1-C1'-C2'	5.44	122.16	114.00
1	A	975	A	C2'-C3'-O3'	5.44	117.66	109.50
1	A	388	G	C4'-C3'-O3'	-5.43	101.25	109.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1181	G	C1'-C2'-O2'	-5.43	103.65	111.80
1	A	1498	U	N1-C1'-C2'	5.42	122.13	114.00
1	A	129(A)	G	C2'-C3'-O3'	5.42	117.63	109.50
6	E	145	LYS	N-CA-C	-5.42	105.77	112.38
9	H	33	GLU	N-CA-C	-5.41	104.80	111.40
1	A	1322	C	C4'-C3'-O3'	-5.40	101.29	109.40
1	A	43	C	C2'-C3'-O3'	-5.40	105.60	113.70
1	A	274	A	N9-C1'-C2'	5.40	122.10	114.00
1	A	653	A	C3'-C2'-O2'	-5.40	106.50	114.60
1	A	589	C	C2'-C3'-O3'	-5.39	105.61	113.70
5	D	10	ARG	N-CA-C	-5.39	105.83	112.90
8	G	149	ARG	N-CA-C	-5.39	105.92	113.37
1	A	1236	A	C5'-C4'-C3'	5.39	124.08	116.00
4	C	143	GLU	N-CA-C	5.38	117.56	111.11
1	A	88	A	C2'-C3'-O3'	5.37	121.76	113.70
1	A	64	G	C2'-C3'-O3'	-5.37	101.45	109.50
1	A	450	G	C2'-C3'-O3'	-5.36	105.65	113.70
1	A	509	A	C2'-C3'-O3'	5.36	121.73	113.70
1	A	1280	A	N9-C1'-C2'	5.36	122.03	114.00
6	E	32	VAL	N-CA-C	5.35	117.02	108.89
1	A	428	G	C2'-C3'-O3'	5.35	117.52	109.50
16	O	27	VAL	CB-CA-C	-5.35	105.12	111.97
1	A	505	G	C2'-C3'-O3'	-5.34	105.69	113.70
1	A	572	A	C4'-C3'-O3'	-5.34	104.99	113.00
1	A	1502	A	C2'-C3'-O3'	-5.33	101.50	109.50
4	C	62	ASP	N-CA-C	-5.33	106.94	113.50
1	A	877	C	C3'-C2'-O2'	-5.33	102.71	110.70
18	Q	29	HIS	CA-C-N	5.33	126.50	119.84
18	Q	29	HIS	C-N-CA	5.33	126.50	119.84
14	M	82	MET	N-CA-C	-5.32	105.38	111.07
1	A	1201	A	O4'-C1'-C2'	5.32	111.12	105.80
1	A	321	A	N9-C1'-C2'	5.32	119.97	112.00
1	A	1397	C	C1'-C2'-O2'	-5.31	103.83	111.80
19	R	46	GLU	N-CA-C	-5.31	106.06	112.54
1	A	1196	U	O4'-C4'-C3'	-5.31	100.79	106.10
4	C	169	ALA	N-CA-C	5.31	116.21	108.14
9	H	6	ILE	CB-CA-C	-5.30	104.98	112.14
1	A	323	U	C4'-C3'-O3'	-5.30	105.05	113.00
11	J	41	PRO	N-CA-C	5.30	125.88	112.10
1	A	1151	A	C4'-C3'-O3'	-5.30	101.45	109.40
6	E	115	VAL	CB-CA-C	-5.30	105.52	111.45
1	A	559	A	C2'-C3'-O3'	5.29	117.44	109.50

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1077	G	C1'-C2'-O2'	5.29	116.33	108.40
1	A	852	G	C2'-C3'-O3'	-5.29	105.77	113.70
10	I	92	TYR	N-CA-C	5.28	117.95	111.82
19	R	84	LYS	N-CA-C	-5.28	102.38	110.14
1	A	858	G	C2'-C3'-O3'	-5.27	105.79	113.70
7	F	49	ALA	N-CA-C	-5.27	105.61	111.36
4	C	99	VAL	N-CA-C	5.27	116.07	108.48
1	A	723	U	C2'-C3'-O3'	-5.26	105.80	113.70
1	A	1030(B)	C	C4'-C3'-O3'	-5.26	105.11	113.00
4	C	14	ILE	CA-C-N	-5.26	115.39	122.86
4	C	14	ILE	C-N-CA	-5.26	115.39	122.86
4	C	179	ARG	N-CA-C	-5.25	99.61	110.80
1	A	299	G	N9-C1'-C2'	5.25	119.88	112.00
1	A	47	C	C4'-C3'-O3'	-5.25	101.53	109.40
1	A	368	U	C4'-C3'-O3'	-5.25	105.13	113.00
1	A	1398	A	C5'-C4'-C3'	-5.25	108.13	116.00
1	A	960	U	O4'-C1'-C2'	5.25	111.05	105.80
1	A	42	G	C4'-C3'-O3'	-5.24	105.14	113.00
5	D	30	LYS	N-CA-C	5.24	121.97	110.80
8	G	150	ALA	N-CA-C	-5.24	105.74	111.82
1	A	817	C	C4'-C3'-O3'	5.24	117.25	109.40
1	A	429	U	C5'-C4'-O4'	5.23	116.94	109.10
4	C	75	VAL	CB-CA-C	-5.23	106.40	111.05
1	A	1187	G	C4'-C3'-O3'	-5.23	105.16	113.00
1	A	1306	A	C2'-C3'-O3'	-5.21	105.89	113.70
7	F	7	ASN	N-CA-C	5.21	116.74	108.67
1	A	1502	A	C1'-O4'-C4'	-5.20	104.50	109.70
4	C	42	LEU	N-CA-C	-5.20	106.27	113.18
1	A	1201	A	C2'-C3'-O3'	5.20	117.30	109.50
1	A	1053	G	C2'-C3'-O3'	-5.20	105.91	113.70
1	A	1060	C	C4'-C3'-O3'	-5.19	105.22	113.00
14	M	121	LYS	N-CA-C	5.18	117.37	110.53
1	A	1287	A	N9-C1'-C2'	5.17	119.76	112.00
1	A	1085	U	O4'-C1'-C2'	5.17	110.97	105.80
4	C	201	TYR	N-CA-C	-5.17	99.80	110.80
6	E	20	GLN	N-CA-C	-5.17	102.25	109.69
3	B	80	ILE	CB-CA-C	-5.16	105.61	111.55
1	A	1201	A	C4'-C3'-C2'	5.16	107.76	102.60
3	B	189	ASP	N-CA-C	5.16	114.85	108.19
1	A	47	C	O4'-C1'-C2'	5.16	110.96	105.80
1	A	1533	C	C2'-C3'-O3'	-5.15	105.97	113.70
5	D	171	GLY	CA-C-N	5.15	126.28	119.84

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	D	171	GLY	C-N-CA	5.15	126.28	119.84
1	A	916	G	C5'-C4'-C3'	5.15	123.72	116.00
1	A	965	A	O4'-C1'-C2'	5.15	110.95	105.80
1	A	190(F)	G	N9-C1'-C2'	5.14	121.72	114.00
1	A	1510	U	C4'-C3'-O3'	-5.14	105.30	113.00
11	J	28	ARG	N-CA-C	-5.13	106.86	113.23
1	A	1145	C	C3'-C2'-O2'	5.13	118.40	110.70
10	I	83	ARG	N-CA-C	5.13	118.32	111.75
11	J	54	PHE	N-CA-C	5.13	120.51	110.56
1	A	836	G	C5'-C4'-C3'	5.13	123.69	116.00
1	A	1182	G	C2'-C3'-O3'	5.12	117.18	109.50
3	B	192	SER	N-CA-C	5.12	117.13	110.53
14	M	97	PRO	N-CA-C	-5.12	103.80	111.57
1	A	13	U	O4'-C1'-C2'	5.11	110.91	105.80
1	A	63	C	C3'-C2'-O2'	5.11	118.37	110.70
1	A	4	U	N1-C1'-C2'	5.11	121.66	114.00
1	A	65	U	C2'-C3'-O3'	-5.11	106.04	113.70
1	A	625	G	C4'-C3'-O3'	-5.11	105.34	113.00
13	L	62	SER	N-CA-C	-5.10	106.56	112.89
20	S	36	ARG	N-CA-C	-5.10	105.96	113.61
1	A	575	G	O4'-C1'-C2'	5.09	110.89	105.80
1	A	1157	A	C2'-C3'-O3'	-5.09	101.87	109.50
1	A	1085	U	N1-C1'-C2'	5.09	121.63	114.00
1	A	717	C	C2'-C3'-O3'	-5.08	101.88	109.50
1	A	532	A	C4'-C3'-O3'	-5.07	105.39	113.00
4	C	26	LYS	N-CA-C	-5.07	107.16	113.55
9	H	101	PRO	N-CA-C	5.07	119.99	111.32
1	A	917	G	C4'-C3'-O3'	-5.07	105.40	113.00
1	A	8	A	N9-C1'-C2'	5.06	121.59	114.00
1	A	890	G	N9-C1'-C2'	5.06	119.59	112.00
5	D	24	GLU	N-CA-C	-5.05	103.81	110.43
8	G	144	MET	N-CA-C	-5.05	107.51	113.97
14	M	96	LEU	CA-C-N	-5.05	115.36	120.31
14	M	96	LEU	C-N-CA	-5.05	115.36	120.31
1	A	381	C	C2'-C3'-O3'	-5.04	106.14	113.70
5	D	123	HIS	N-CA-C	-5.03	106.56	113.30
1	A	826	C	C2'-C3'-O3'	-5.03	106.16	113.70
1	A	1024	G	C2'-C3'-O3'	-5.03	106.16	113.70
12	K	116	HIS	N-CA-C	-5.02	104.07	111.81
1	A	1064	G	C4'-C3'-O3'	5.02	116.93	109.40
7	F	56	PRO	N-CA-C	5.01	122.79	112.47
1	A	451	A	O4'-C1'-C2'	5.01	110.81	105.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	376	G	C4'-C3'-O3'	-5.01	105.49	113.00
1	A	914	A	C4'-C3'-C2'	-5.00	97.60	102.60
1	A	1267	C	C2'-C3'-O3'	-5.00	106.20	113.70

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	511	C	C1'

All (127) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1023	G	Sidechain
1	A	1033	G	Sidechain
1	A	1066	C	Sidechain
1	A	1067	A	Sidechain
1	A	107	G	Sidechain
1	A	1077	G	Sidechain
1	A	1079	G	Sidechain
1	A	108	G	Sidechain
1	A	1085	U	Sidechain
1	A	1089	G	Sidechain
1	A	1092	A	Sidechain
1	A	1100	C	Sidechain
1	A	1124	G	Sidechain
1	A	1139	G	Sidechain
1	A	114	U	Sidechain
1	A	1166	G	Sidechain
1	A	1168	A	Sidechain
1	A	118	U	Sidechain
1	A	1181	G	Sidechain
1	A	1190	G	Sidechain
1	A	1195	C	Sidechain
1	A	120	A	Sidechain
1	A	1203	C	Sidechain
1	A	1224	G	Sidechain
1	A	1238	A	Sidechain
1	A	1256	A	Sidechain
1	A	1268	A	Sidechain
1	A	1281	U	Sidechain
1	A	1306	A	Sidechain
1	A	1322	C	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	A	1336	C	Sidechain
1	A	1370	G	Sidechain
1	A	1372	U	Sidechain
1	A	1393	U	Sidechain
1	A	1398	A	Sidechain
1	A	1434	A	Sidechain
1	A	145	G	Sidechain
1	A	146	G	Sidechain
1	A	1498	U	Sidechain
1	A	1503	A	Sidechain
1	A	1525	G	Sidechain
1	A	1533	C	Sidechain
1	A	190(D)	U	Sidechain
1	A	190(E)	U	Sidechain
1	A	190(F)	G	Sidechain
1	A	197	A	Sidechain
1	A	226	G	Sidechain
1	A	229	U	Sidechain
1	A	244	U	Sidechain
1	A	256	U	Sidechain
1	A	266	G	Sidechain
1	A	269	C	Sidechain
1	A	274	A	Sidechain
1	A	275	G	Sidechain
1	A	284	G	Sidechain
1	A	30	U	Sidechain
1	A	315	A	Sidechain
1	A	321	A	Sidechain
1	A	331	G	Sidechain
1	A	365	U	Sidechain
1	A	379	C	Sidechain
1	A	380	G	Sidechain
1	A	39	G	Sidechain
1	A	410	G	Sidechain
1	A	412	A	Sidechain
1	A	413	G	Sidechain
1	A	424	G	Sidechain
1	A	426	G	Sidechain
1	A	448	A	Sidechain
1	A	461	C	Sidechain
1	A	47	C	Sidechain
1	A	481	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	A	484	G	Sidechain
1	A	49	U	Sidechain
1	A	495	U	Sidechain
1	A	516	U	Sidechain
1	A	517	G	Sidechain
1	A	524	G	Sidechain
1	A	529	G	Sidechain
1	A	549	C	Sidechain
1	A	566	G	Sidechain
1	A	575	G	Sidechain
1	A	582	U	Sidechain
1	A	587	G	Sidechain
1	A	591	U	Sidechain
1	A	592	G	Sidechain
1	A	599	C	Sidechain
1	A	60	A	Sidechain
1	A	603	U	Sidechain
1	A	622	A	Sidechain
1	A	652	U	Sidechain
1	A	654	G	Sidechain
1	A	657	G	Sidechain
1	A	666	G	Sidechain
1	A	679	C	Sidechain
1	A	686	U	Sidechain
1	A	727	G	Sidechain
1	A	740	U	Sidechain
1	A	752	G	Sidechain
1	A	757	U	Sidechain
1	A	760	G	Sidechain
1	A	767	A	Sidechain
1	A	773	G	Sidechain
1	A	785	G	Sidechain
1	A	801	U	Sidechain
1	A	804	U	Sidechain
1	A	812	C	Sidechain
1	A	833	U	Sidechain
1	A	853	G	Sidechain
1	A	854	G	Sidechain
1	A	861	G	Sidechain
1	A	868	C	Sidechain
1	A	870	U	Sidechain
1	A	872	A	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	A	874	G	Sidechain
1	A	879	C	Sidechain
1	A	881	G	Sidechain
1	A	920	U	Sidechain
1	A	926	G	Sidechain
1	A	941	G	Sidechain
1	A	946	A	Sidechain
1	A	947	G	Sidechain
1	A	953	G	Sidechain
1	A	955	U	Sidechain
1	A	971	G	Sidechain
1	A	974	A	Sidechain
1	A	993	G	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	32594	0	16454	3163	0
2	1	131	0	68	14	0
2	2	86	0	46	9	0
3	B	1811	0	1861	103	0
4	C	1612	0	1677	139	0
5	D	1703	0	1763	133	0
6	E	1146	0	1207	97	0
7	F	843	0	857	37	0
8	G	1257	0	1296	82	0
9	H	1116	0	1177	99	0
10	I	1011	0	1043	109	0
11	J	794	0	840	83	0
12	K	853	0	868	55	0
13	L	970	0	1057	76	0
14	M	969	0	1039	81	0
15	N	492	0	529	53	0
16	O	734	0	771	50	0
17	P	700	0	720	53	0
18	Q	857	0	930	55	0
19	R	597	0	668	46	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
20	S	647	0	673	64	0
21	T	762	0	859	49	0
22	V	208	0	221	14	0
23	D	1	0	0	0	0
23	N	1	0	0	0	0
All	All	51895	0	36624	4218	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 48.

All (4218) 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)
1:A:1027:C:C2'	1:A:1028:C:H5''	1.48	1.40
1:A:390:C:H4'	17:P:28:ARG:NH2	1.46	1.28
1:A:1027:C:H2'	1:A:1028:C:C5'	1.65	1.25
1:A:243:A:H4'	1:A:244:U:C5'	1.65	1.24
1:A:839:U:H5'	1:A:840:C:C5	1.71	1.24
1:A:243:A:H4'	1:A:244:U:H5'	1.16	1.15
6:E:18:ARG:HG2	6:E:19:MET:H	1.12	1.13
1:A:1005:A:H2'	1:A:1006:C:H5'	1.23	1.12
1:A:1435:G:H2'	1:A:1436:U:C6	1.84	1.12
1:A:277:C:H5''	18:Q:68:ARG:HH22	1.06	1.12
1:A:429:U:H2'	5:D:25:ARG:HH12	1.16	1.11
1:A:389:A:H2'	1:A:390:C:H5'	1.31	1.11
1:A:1346:A:H2'	8:G:10:ARG:HH22	1.08	1.09
1:A:625:G:H2'	1:A:626:U:H6	1.10	1.09
1:A:1149:C:H2'	1:A:1150:U:H6	1.16	1.09
1:A:839:U:H5'	1:A:840:C:H5	0.96	1.08
1:A:39:G:O2'	1:A:40:C:H5'	1.54	1.08
1:A:266:G:C8	1:A:266:G:H5''	1.88	1.07
16:O:87:ILE:HG22	16:O:88:ARG:H	1.15	1.07
1:A:42:G:H2'	1:A:43:C:H6	1.19	1.07
1:A:109:A:H2'	1:A:326:G:N2	1.69	1.07
1:A:277:C:H5''	18:Q:68:ARG:NH2	1.69	1.07
1:A:582:U:H2'	1:A:583:A:C8	1.89	1.07
1:A:112:G:H21	1:A:354:G:H5'	1.14	1.07
1:A:1029:C:H2'	1:A:1030:C:H5''	1.38	1.06
1:A:22:G:H2'	1:A:23:C:H6	1.17	1.06
1:A:438:G:H4'	1:A:439:A:OP1	1.50	1.05
1:A:807:A:H2'	1:A:808:C:H6	1.22	1.05

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:345:C:H4'	1:A:346:G:O5'	1.57	1.05
1:A:547:A:H4'	1:A:548:G:O5'	1.50	1.05
1:A:1443:G:H5''	1:A:1446:A:H5'	1.38	1.04
1:A:57:G:H2'	1:A:58:C:H6	1.18	1.03
1:A:946:A:H2'	1:A:947:G:C8	1.91	1.03
1:A:1251:A:H2'	1:A:1252:A:C8	1.93	1.03
1:A:1057:G:H5''	4:C:154:SER:HB2	1.35	1.03
1:A:371:G:O2'	1:A:372:C:H5'	1.59	1.02
1:A:1126:U:H2'	1:A:1127:G:H8	1.20	1.02
1:A:390:C:C4'	17:P:28:ARG:HH22	1.72	1.02
4:C:33:LEU:HD11	15:N:53:LEU:HD22	1.41	1.01
1:A:625:G:H2'	1:A:626:U:C6	1.96	1.01
1:A:975:A:H4'	1:A:976:G:OP2	1.61	1.01
1:A:429:U:H2'	5:D:25:ARG:NH1	1.76	1.00
1:A:964:A:H1'	11:J:55:LYS:HE2	1.41	1.00
1:A:1292:U:H5'	10:I:38:GLN:NE2	1.76	1.00
1:A:351:G:H4'	1:A:352:C:OP1	1.61	1.00
1:A:1218:C:H2'	1:A:1219:U:C6	1.96	1.00
1:A:1086:U:H2'	1:A:1087:G:C8	1.96	1.00
1:A:1234:C:H5'	1:A:1365:G:OP1	1.62	1.00
1:A:1489:G:C3'	1:A:1490:C:H5''	1.92	0.99
1:A:1248:A:H1'	10:I:70:LYS:NZ	1.76	0.99
1:A:57:G:H2'	1:A:58:C:C6	1.96	0.99
1:A:664:G:H22	1:A:741:G:H1	1.08	0.99
1:A:939:G:H5''	8:G:102:ARG:HH22	1.19	0.99
1:A:1219:U:H2'	1:A:1220:G:H8	1.27	0.99
14:M:66:LEU:O	14:M:70:LEU:HB2	1.62	0.99
1:A:425:G:O2'	1:A:426:G:H5'	1.61	0.99
1:A:266:G:H5''	1:A:266:G:H8	1.24	0.99
1:A:1113:C:H4'	4:C:14:ILE:HD11	1.42	0.99
1:A:1349:A:H2'	1:A:1350:A:H8	1.22	0.99
1:A:1195:C:H3'	1:A:1196:U:H5'	1.44	0.98
1:A:328:C:H4'	1:A:329:A:O5'	1.62	0.98
1:A:1400:C:H4'	1:A:1401:G:OP2	1.63	0.98
1:A:1130:A:H62	1:A:1144:G:H21	1.09	0.98
1:A:447:G:H2'	1:A:485:G:N2	1.78	0.97
1:A:582:U:H2'	1:A:583:A:H8	1.23	0.97
1:A:517:G:O2'	1:A:530:G:H4'	1.64	0.97
1:A:1148:U:H4'	10:I:14:VAL:HG11	1.46	0.97
1:A:1176:A:H2'	1:A:1177:G:C8	1.98	0.97
1:A:1020:U:O2'	1:A:1021:G:H5'	1.63	0.97

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1413:A:H2	1:A:1487:G:H22	1.02	0.97
1:A:386:C:C2'	1:A:387:U:H5'	1.95	0.96
1:A:807:A:H2'	1:A:808:C:C6	1.98	0.96
1:A:948:C:O2'	1:A:949:A:H5'	1.66	0.96
1:A:939:G:H5''	8:G:102:ARG:NH2	1.79	0.96
1:A:753:A:H4'	1:A:754:C:O5'	1.62	0.96
6:E:120:THR:HG22	6:E:121:LYS:H	1.30	0.96
4:C:34:LEU:HG	15:N:25:VAL:HG21	1.44	0.96
1:A:1505:G:H8	1:A:1505:G:H3'	1.28	0.96
1:A:1319:A:H4'	1:A:1320:C:OP1	1.65	0.95
1:A:109:A:H2'	1:A:326:G:H21	1.25	0.95
1:A:1351:U:O2'	1:A:1352:C:H5'	1.66	0.95
1:A:551:U:H2'	1:A:552:U:C6	2.01	0.95
3:B:219:VAL:HA	3:B:222:ILE:HD12	1.49	0.95
1:A:112:G:N2	1:A:354:G:H5'	1.81	0.94
1:A:429:U:H4'	1:A:430:A:O5'	1.62	0.94
1:A:839:U:C5'	1:A:840:C:H5	1.79	0.94
1:A:1394:A:N6	1:A:1501:C:H5'	1.79	0.94
1:A:254:G:H21	18:Q:16:GLN:NE2	1.65	0.94
1:A:981:U:H2'	1:A:982:U:H5	1.32	0.94
1:A:872:A:H4'	1:A:873:A:OP1	1.66	0.94
1:A:414:A:C2	1:A:415:A:N9	2.36	0.94
1:A:60:A:H4'	1:A:61:G:O5'	1.64	0.94
1:A:840:C:H5''	1:A:841:U:OP1	1.66	0.94
1:A:370:C:O2'	1:A:371:G:H5'	1.68	0.93
1:A:946:A:H2'	1:A:947:G:H8	1.31	0.93
1:A:1323:G:H2'	1:A:1324:A:C8	2.04	0.93
1:A:981:U:H2'	1:A:982:U:C5	2.03	0.93
1:A:914:A:O2'	1:A:915:A:H5'	1.67	0.93
1:A:22:G:H2'	1:A:23:C:C6	2.04	0.93
5:D:170:VAL:HG21	5:D:176:LEU:HD22	1.51	0.93
5:D:9:CYS:SG	5:D:31:CYS:O	2.27	0.92
1:A:148:G:H2'	1:A:149:A:H8	1.33	0.92
1:A:423:G:N2	1:A:424:G:C8	2.37	0.92
1:A:556:C:C2'	1:A:557:G:H5'	2.00	0.92
1:A:1451:A:H5''	1:A:1452:C:C5	2.05	0.92
1:A:191:G:H2'	1:A:192:U:H6	1.33	0.92
1:A:1124:G:H5'	11:J:35:SER:O	1.68	0.92
1:A:1505:G:H3'	1:A:1505:G:C8	2.05	0.92
1:A:1029:C:C2'	1:A:1030:C:H5''	1.99	0.92
1:A:338:A:H2'	1:A:339:C:H6	1.35	0.91

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:110:ASP:HB3	19:R:85:LEU:HB3	1.51	0.91
1:A:1094:G:H5''	1:A:1095:U:H5	1.34	0.91
1:A:794:A:H2'	1:A:795:C:C6	2.06	0.91
1:A:882:C:O2'	1:A:883:C:H5'	1.70	0.91
1:A:1149:C:H2'	1:A:1150:U:C6	2.06	0.91
1:A:1329:A:O2'	1:A:1330:U:H5'	1.68	0.91
4:C:91:LEU:HD21	4:C:99:VAL:HG13	1.52	0.91
1:A:1137:C:H4'	1:A:1138:G:C2	2.05	0.91
1:A:605:U:O2'	1:A:606:G:H5'	1.69	0.91
1:A:1014:A:H2'	1:A:1015:A:C8	2.06	0.91
1:A:1086:U:H2'	1:A:1087:G:H8	1.32	0.91
1:A:889:A:H4'	1:A:890:G:OP1	1.70	0.90
1:A:1533:C:H4'	1:A:1534:A:OP1	1.69	0.90
1:A:625:G:C4	1:A:626:U:C5	2.59	0.90
1:A:1435:G:H2'	1:A:1436:U:H6	1.33	0.90
1:A:1349:A:H2'	1:A:1350:A:C8	2.06	0.90
1:A:1251:A:H2'	1:A:1252:A:H8	1.35	0.90
1:A:1193:G:O2'	1:A:1194:U:H5'	1.72	0.90
6:E:89:ILE:HD13	6:E:90:VAL:N	1.87	0.90
11:J:30:SER:HB3	11:J:80:LYS:HG3	1.51	0.90
1:A:1442:G:N2	1:A:1446:A:H3'	1.87	0.90
1:A:1219:U:H2'	1:A:1220:G:C8	2.07	0.90
1:A:1236:A:H4'	1:A:1304:G:H4'	1.53	0.89
1:A:178:C:H2'	1:A:179:A:H8	1.37	0.89
1:A:551:U:H2'	1:A:552:U:H6	1.36	0.89
1:A:203:U:H5''	1:A:204:U:OP1	1.72	0.89
1:A:1488:G:H2'	1:A:1489:G:C8	2.08	0.89
8:G:76:ARG:HD2	8:G:89:MET:SD	2.11	0.89
1:A:869:G:H4'	1:A:872:A:C8	2.08	0.89
1:A:967:C:H4'	10:I:128:ARG:HG3	1.54	0.89
1:A:1126:U:P	1:A:1126:U:H6	1.96	0.89
1:A:1250:A:H2'	1:A:1251:A:C8	2.08	0.89
1:A:922:G:H2'	1:A:923:A:C8	2.08	0.88
1:A:1352:C:H2'	1:A:1353:G:C8	2.08	0.88
1:A:579:G:H5'	1:A:728:A:H1'	1.56	0.88
1:A:1346:A:C2'	8:G:10:ARG:HH22	1.86	0.88
1:A:344:A:H5''	1:A:345:C:H5	1.38	0.88
1:A:1256:A:H2	1:A:1258:G:N1	1.71	0.88
1:A:1342:C:O2'	1:A:1343:G:H5'	1.73	0.88
1:A:992:U:H4'	1:A:993:G:O5'	1.73	0.88
1:A:382:A:H2'	1:A:383:A:C8	2.09	0.88

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:18:ARG:HG2	6:E:19:MET:N	1.89	0.88
1:A:531:U:H5''	1:A:532:A:OP1	1.74	0.88
1:A:981:U:H5'	15:N:21:TYR:CE1	2.08	0.88
1:A:1347:G:C8	10:I:107:ARG:HB3	2.08	0.87
1:A:36:C:H5''	13:L:122:THR:O	1.74	0.87
1:A:544:G:C5	1:A:545:C:C5	2.61	0.87
20:S:28:LYS:HG2	20:S:29:ARG:H	1.38	0.87
5:D:30:LYS:C	5:D:32:ALA:H	1.82	0.87
1:A:190(F):G:H4'	1:A:190(G):G:OP2	1.72	0.87
1:A:789:U:H2'	1:A:791:G:OP2	1.74	0.87
1:A:394:G:H2'	1:A:395:C:H6	1.40	0.87
1:A:1005:A:C2'	1:A:1006:C:H5'	2.04	0.87
1:A:22:G:O2'	1:A:23:C:H5'	1.74	0.87
1:A:181:G:O2'	1:A:182:U:H5'	1.75	0.86
1:A:556:C:O2'	1:A:557:G:H5'	1.73	0.86
1:A:559:A:H4'	1:A:560:U:O5'	1.75	0.86
1:A:1499:A:C2'	1:A:1500:A:H5'	2.05	0.86
1:A:961:U:C2'	1:A:962:C:H5'	2.05	0.86
1:A:1189:C:H5''	4:C:5:ILE:HD13	1.56	0.86
1:A:1518:A:H2'	1:A:1519:A:C8	2.10	0.86
1:A:820:U:H4'	1:A:821:G:OP2	1.73	0.86
1:A:1030:C:H2'	1:A:1030(A):G:C8	2.11	0.86
1:A:1300:G:HO2'	1:A:1301:U:H6	0.92	0.86
12:K:57:THR:HG23	12:K:60:ALA:H	1.40	0.86
1:A:939:G:C5'	8:G:102:ARG:HH22	1.88	0.86
1:A:965:A:C2	1:A:969:A:C2	2.63	0.86
1:A:344:A:H5''	1:A:345:C:C5	2.10	0.86
1:A:947:G:H2'	1:A:948:C:H6	1.41	0.86
1:A:1269:A:C2	1:A:1313:U:O4'	2.29	0.86
1:A:327:A:H4'	1:A:328:C:OP1	1.73	0.86
1:A:1532:U:H2'	1:A:1533:C:C6	2.10	0.86
1:A:624:C:O2'	1:A:625:G:H5'	1.76	0.85
1:A:1010:G:O2'	1:A:1011:G:H5'	1.76	0.85
1:A:1239:A:H4'	1:A:1240:U:O5'	1.72	0.85
1:A:1328:C:O2'	1:A:1329:A:H5'	1.75	0.85
1:A:1319:A:H2'	1:A:1323:G:N7	1.90	0.85
1:A:42:G:C4	1:A:43:C:C5	2.64	0.85
4:C:156:ARG:H	4:C:163:ALA:HA	1.41	0.85
1:A:250:A:H4'	1:A:251:G:O5'	1.76	0.85
1:A:1047:G:C2'	1:A:1048:G:H5'	2.06	0.85
1:A:1281:U:H4'	1:A:1282:C:OP2	1.76	0.85

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:113:HIS:HA	3:B:116:GLU:HG3	1.56	0.85
1:A:223:U:H5'	21:T:68:LYS:NZ	1.92	0.85
1:A:1016:A:H2'	1:A:1017:G:O4'	1.77	0.85
1:A:1196:U:H5''	1:A:1197:G:H5'	1.57	0.85
1:A:1126:U:C2	1:A:1127:G:C8	2.64	0.85
11:J:42:THR:HG23	11:J:68:HIS:HA	1.55	0.85
1:A:1346:A:H61	1:A:1374:A:H3'	1.41	0.85
1:A:1005:A:H2'	1:A:1006:C:C5'	2.05	0.84
1:A:1058:G:H2'	1:A:1059:C:H6	1.40	0.84
14:M:96:LEU:HB3	14:M:97:PRO:HD2	1.57	0.84
1:A:1130:A:N6	1:A:1144:G:H21	1.74	0.84
1:A:1521:G:H2'	1:A:1522:U:H6	1.42	0.84
1:A:277:C:C5'	18:Q:68:ARG:HH22	1.89	0.84
1:A:1540:U:H2'	1:A:1541:U:C6	2.13	0.84
1:A:443:C:H2'	1:A:444:C:H6	1.43	0.84
1:A:538:G:OP2	13:L:115:LYS:HG3	1.77	0.84
1:A:1292:U:P	8:G:41:ARG:HH22	2.00	0.84
1:A:940:C:O2'	1:A:941:G:H5'	1.78	0.84
1:A:1234:C:H1'	1:A:1364:U:O2	1.76	0.84
1:A:1489:G:C2'	1:A:1490:C:H5''	2.08	0.84
1:A:62:U:H5''	1:A:385:C:O2	1.77	0.84
1:A:556:C:H2'	1:A:557:G:H5'	1.59	0.84
1:A:1126:U:H2'	1:A:1127:G:C8	2.10	0.84
1:A:1352:C:H2'	1:A:1353:G:H8	1.42	0.84
11:J:55:LYS:HG3	11:J:55:LYS:O	1.77	0.84
16:O:54:ARG:HG2	16:O:58:MET:HE2	1.60	0.84
1:A:954:G:H21	1:A:1227:A:H62	1.25	0.84
1:A:191:G:C5	1:A:192:U:C5	2.66	0.83
1:A:670:G:H2'	1:A:671:G:O4'	1.76	0.83
1:A:346:G:H2'	1:A:347:G:H5'	1.60	0.83
1:A:794:A:H2'	1:A:795:C:H6	1.42	0.83
1:A:947:G:H2'	1:A:948:C:C6	2.12	0.83
1:A:961:U:H2'	1:A:962:C:H5'	1.58	0.83
1:A:386:C:H2'	1:A:387:U:H5'	1.58	0.83
1:A:1101:A:H4'	1:A:1102:A:O5'	1.78	0.83
1:A:486:U:H2'	1:A:486:U:O2	1.76	0.83
1:A:524:G:H2'	1:A:525:C:C6	2.14	0.83
1:A:664:G:OP1	19:R:64:ARG:HD3	1.79	0.83
1:A:399:G:O2'	1:A:400:C:H5'	1.78	0.83
1:A:428:G:H4'	1:A:429:U:O5'	1.75	0.83
1:A:958:A:N1	20:S:54:GLY:HA3	1.93	0.83

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1451:A:H5''	1:A:1452:C:H5	1.44	0.83
1:A:556:C:H2'	1:A:557:G:C5'	2.08	0.83
1:A:1356:G:H2'	1:A:1357:A:C8	2.12	0.83
1:A:454:C:H2'	1:A:455:C:H5'	1.61	0.83
1:A:1346:A:H2'	8:G:10:ARG:NH2	1.92	0.83
5:D:104:VAL:HG21	5:D:140:VAL:HG21	1.59	0.83
1:A:254:G:H21	18:Q:16:GLN:HE21	1.27	0.83
1:A:1007:C:H2'	1:A:1008:C:H6	1.43	0.82
1:A:1058:G:H2'	1:A:1059:C:C6	2.14	0.82
1:A:1225:A:H3'	1:A:1226:C:C6	2.13	0.82
1:A:1353:G:O2'	1:A:1354:C:H5'	1.77	0.82
1:A:1487:G:O2'	1:A:1488:G:H5'	1.78	0.82
1:A:1007:C:H2'	1:A:1008:C:C6	2.14	0.82
1:A:1121:U:O2'	1:A:1122:U:H5'	1.79	0.82
1:A:1201:A:H4'	1:A:1202:G:O5'	1.78	0.82
1:A:1248:A:H1'	10:I:70:LYS:HZ2	1.39	0.82
1:A:545:C:O2'	1:A:546:G:H5'	1.80	0.82
1:A:1129:C:O5'	1:A:1130:A:H5'	1.78	0.82
1:A:1502:A:H5''	1:A:1503:A:OP2	1.77	0.82
1:A:1532:U:H2'	1:A:1533:C:H6	1.42	0.82
1:A:1057:G:C5'	4:C:154:SER:HB2	2.10	0.81
1:A:358:U:H2'	1:A:359:U:C6	2.14	0.81
1:A:21:G:H2'	1:A:22:G:C8	2.15	0.81
1:A:390:C:H4'	17:P:28:ARG:HH22	0.76	0.81
1:A:1329:A:C2'	1:A:1330:U:H5'	2.10	0.81
1:A:1461:G:O2'	1:A:1462:G:H5'	1.80	0.81
3:B:178:ARG:HH21	9:H:74:PRO:HD3	1.45	0.81
9:H:69:ARG:HB2	9:H:74:PRO:HA	1.62	0.81
1:A:1190:G:HO2'	1:A:1191:A:P	2.03	0.81
1:A:954:G:N2	1:A:1227:A:H62	1.79	0.81
1:A:1124:G:O2'	1:A:1125:U:H5'	1.81	0.81
1:A:1343:G:H2'	1:A:1344:C:C6	2.14	0.81
2:2:9:A:O2'	2:2:10:A:H5'	1.79	0.81
1:A:1128:C:O2'	1:A:1130:A:H8	1.63	0.81
5:D:140:VAL:HG11	5:D:146:ILE:HD11	1.61	0.81
1:A:1488:G:H2'	1:A:1489:G:H8	1.46	0.81
1:A:694:A:H5'	12:K:53:SER:HB2	1.61	0.81
4:C:58:GLU:HB3	11:J:92:THR:HG21	1.63	0.81
1:A:15:G:C1'	6:E:24:ARG:HH12	1.93	0.80
1:A:1195:C:H3'	1:A:1196:U:C5'	2.11	0.80
1:A:718:G:H5'	1:A:719:C:OP2	1.80	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:484:G:H4'	1:A:485:G:O5'	1.81	0.80
1:A:900:A:O2'	1:A:901:A:H5'	1.80	0.80
1:A:1098:C:H2'	1:A:1099:G:O4'	1.81	0.80
1:A:1226:C:H4'	1:A:1227:A:OP1	1.78	0.80
1:A:1306:A:C2	1:A:1307:U:N1	2.49	0.80
1:A:42:G:H2'	1:A:43:C:C6	2.12	0.80
1:A:579:G:H2'	1:A:580:U:H6	1.46	0.80
1:A:1030(B):C:H2'	1:A:1030(C):G:H5''	1.64	0.80
1:A:501:C:H2'	1:A:502:G:H8	1.46	0.80
1:A:579:G:C4	1:A:580:U:C5	2.69	0.80
1:A:736:C:H2'	1:A:737:A:C8	2.17	0.80
1:A:1029:C:H2'	1:A:1030:C:C5'	2.11	0.80
1:A:838:G:H2'	1:A:839:U:H5''	1.63	0.80
1:A:1490:C:C5'	1:A:1490:C:H6	1.94	0.80
1:A:1491:G:H2'	1:A:1492:A:C8	2.15	0.80
1:A:840:C:H5'	1:A:848:C:O2	1.82	0.80
1:A:342:C:C2	1:A:348:G:N2	2.50	0.79
1:A:595:G:H2'	1:A:641:U:O4	1.81	0.79
1:A:1489:G:H3'	1:A:1490:C:H5''	1.64	0.79
1:A:414:A:C2	1:A:415:A:C1'	2.65	0.79
4:C:155:GLY:O	4:C:196:LEU:HD22	1.81	0.79
1:A:642:A:C5	1:A:643:C:C5	2.70	0.79
1:A:1054:C:O2'	1:A:1055:A:H5''	1.83	0.79
1:A:1126:U:C2'	1:A:1127:G:H8	1.94	0.79
1:A:1508:G:H2'	1:A:1509:C:H6	1.47	0.79
1:A:1149:C:C2	1:A:1150:U:C5	2.70	0.79
1:A:1256:A:H4'	1:A:1257:U:H5'	1.65	0.79
1:A:1323:G:H2'	1:A:1324:A:H8	1.43	0.79
1:A:383:A:H2'	1:A:384:G:H5'	1.64	0.79
10:I:17:VAL:HG21	10:I:80:GLY:HA3	1.64	0.79
1:A:80:G:H3'	1:A:81:U:H5''	1.65	0.79
1:A:447:G:H2'	1:A:485:G:H22	1.46	0.78
1:A:1391:U:H2'	1:A:1392:G:C8	2.17	0.78
15:N:23:ARG:HD3	15:N:30:ALA:HB2	1.64	0.78
1:A:173:U:C2	1:A:197:A:C2	2.71	0.78
4:C:154:SER:HB3	4:C:197:GLY:H	1.49	0.78
1:A:161:A:H2'	1:A:162:A:C8	2.18	0.78
1:A:168:G:O2'	1:A:169:C:H5'	1.83	0.78
1:A:692:U:H1'	1:A:695:A:N7	1.98	0.78
1:A:839:U:O2	1:A:839:U:H2'	1.82	0.78
11:J:45:ARG:HB3	11:J:45:ARG:HH11	1.48	0.78

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:HB3	1.84	0.78
1:A:607:A:C4	1:A:608:A:C8	2.72	0.78
1:A:967:C:C4'	10:I:128:ARG:HG3	2.14	0.78
1:A:1221:G:O3'	20:S:77:THR:HG21	1.84	0.78
1:A:346:G:C2'	1:A:347:G:H5'	2.13	0.77
1:A:1057:G:H2'	1:A:1058:G:H8	1.49	0.77
1:A:1325:C:O2'	1:A:1326:C:H5'	1.84	0.77
12:K:91:ARG:HD3	19:R:88:LYS:HE2	1.66	0.77
1:A:394:G:C4	1:A:395:C:C5	2.72	0.77
1:A:1225:A:H1'	20:S:78:ARG:NH1	1.99	0.77
4:C:33:LEU:HD11	15:N:53:LEU:CD2	2.13	0.77
1:A:947:G:C4	1:A:948:C:C5	2.73	0.77
1:A:1436:U:H2'	1:A:1437:C:C6	2.19	0.77
15:N:24:CYS:SG	15:N:39:LEU:HA	2.25	0.77
1:A:251:G:H4'	1:A:252:U:O5'	1.84	0.77
1:A:952:U:O2'	1:A:953:G:H5'	1.84	0.77
1:A:1225:A:H1'	20:S:78:ARG:HH11	1.49	0.77
1:A:233:C:O2'	1:A:234:C:H5'	1.83	0.77
1:A:1368:G:C2	1:A:1369:C:C6	2.72	0.77
1:A:1435:G:H2'	1:A:1436:U:C5	2.18	0.77
1:A:1499:A:H2'	1:A:1500:A:H5'	1.66	0.77
1:A:414:A:H2	1:A:415:A:H1'	1.48	0.77
1:A:453:A:C2	1:A:454:C:C2	2.72	0.77
1:A:57:G:C4	1:A:58:C:C5	2.72	0.77
1:A:650:G:C2'	1:A:651:C:H5'	2.13	0.77
1:A:1047:G:H2'	1:A:1048:G:H5'	1.67	0.77
14:M:81:LEU:H	14:M:81:LEU:CD2	1.98	0.77
1:A:32:A:H2'	1:A:33:A:C8	2.19	0.77
1:A:647:C:O2'	1:A:648:A:H5'	1.84	0.77
6:E:120:THR:HG22	6:E:121:LYS:N	1.98	0.77
1:A:499:A:O2'	1:A:500:G:C8	2.37	0.76
1:A:528:C:H41	13:L:49:ASN:CG	1.92	0.76
1:A:1136:U:H5''	1:A:1137:C:OP2	1.86	0.76
11:J:12:ASP:O	11:J:15:THR:HG22	1.85	0.76
11:J:54:PHE:CE2	11:J:55:LYS:HG2	2.20	0.76
1:A:404:U:H2'	1:A:405:U:H6	1.50	0.76
1:A:723:U:O2	1:A:723:U:H2'	1.84	0.76
20:S:36:ARG:HH21	20:S:75:ALA:HB3	1.46	0.76
1:A:802:A:H2'	1:A:803:G:H5'	1.67	0.76
1:A:1187:G:H2'	1:A:1188:A:C8	2.21	0.76
8:G:16:LEU:H	8:G:16:LEU:HD22	1.50	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:273:A:O2'	1:A:274:A:H5'	1.85	0.76
1:A:1475:G:H2'	1:A:1476:G:H8	1.50	0.76
5:D:100:ARG:O	5:D:104:VAL:HG23	1.84	0.76
1:A:1063:C:H2'	1:A:1064:G:C8	2.19	0.76
13:L:6:THR:OG1	13:L:9:GLN:HG3	1.85	0.76
1:A:277:C:O2'	1:A:278:G:H5'	1.86	0.76
1:A:389:A:H2'	1:A:390:C:C5'	2.12	0.76
1:A:650:G:H2'	1:A:651:C:H5'	1.66	0.76
1:A:1521:G:H2'	1:A:1522:U:C6	2.21	0.76
1:A:1530:G:O2'	1:A:1531:A:C8	2.39	0.76
1:A:1535:C:O5'	1:A:1535:C:H6	1.69	0.76
4:C:155:GLY:HA3	4:C:163:ALA:HB1	1.68	0.76
1:A:519:C:O2'	1:A:520:A:H5'	1.85	0.76
1:A:914:A:H2'	1:A:915:A:O5'	1.85	0.75
1:A:1347:G:N2	1:A:1373:G:H2'	2.00	0.75
16:O:55:GLY:O	16:O:59:MET:HG3	1.86	0.75
1:A:911:U:O2'	1:A:912:C:H5'	1.86	0.75
1:A:1064:G:H4'	1:A:1065:U:C5'	2.16	0.75
1:A:1489:G:H2'	1:A:1490:C:H5''	1.67	0.75
3:B:160:ASP:O	3:B:183:PRO:HD2	1.86	0.75
1:A:926:G:H3'	1:A:1505:G:H21	1.51	0.75
2:1:2:A:H2'	2:1:3:A:C8	2.20	0.75
1:A:236:G:H2'	1:A:237:C:H6	1.52	0.75
1:A:1511:G:O2'	1:A:1512:U:H5'	1.84	0.75
1:A:390:C:C4'	17:P:28:ARG:NH2	2.41	0.75
1:A:540:G:O2'	1:A:541:G:H5'	1.85	0.75
1:A:1015:A:H2'	1:A:1016:A:C8	2.21	0.75
1:A:1210:C:H5'	1:A:1214:C:N4	2.02	0.75
10:I:37:PHE:HD2	10:I:40:LEU:HD12	1.51	0.75
20:S:15:LEU:HA	20:S:18:LYS:HB3	1.67	0.75
1:A:434:U:C2	1:A:435:C:C5	2.74	0.75
1:A:743:U:H2'	1:A:744:C:C6	2.22	0.75
1:A:1190:G:OP1	4:C:5:ILE:HG12	1.87	0.75
1:A:1398:A:H8	1:A:1398:A:H5''	1.52	0.75
1:A:8:A:H1'	6:E:102:ALA:O	1.87	0.75
1:A:218:C:H4'	1:A:461:C:N4	2.02	0.75
1:A:489:C:O2'	1:A:490:G:H5'	1.85	0.75
1:A:1187:G:H3'	1:A:1188:A:H8	1.50	0.75
20:S:42:PRO:O	20:S:45:VAL:HG23	1.87	0.75
1:A:1026:G:H2'	1:A:1026:G:N3	1.99	0.75
6:E:153:LYS:HG2	6:E:154:GLY:N	2.01	0.75

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:49:THR:HB	14:M:52:GLU:HG3	1.66	0.75
1:A:394:G:H2'	1:A:395:C:C6	2.21	0.74
1:A:959:A:H3'	1:A:960:U:H5''	1.66	0.74
1:A:605:U:C2'	1:A:606:G:H5'	2.16	0.74
1:A:1306:A:C2	1:A:1307:U:C6	2.75	0.74
11:J:90:LEU:H	11:J:91:PRO:HD2	1.52	0.74
1:A:293:G:C5	1:A:294:U:C5	2.75	0.74
1:A:328:C:O2	1:A:328:C:H2'	1.86	0.74
1:A:1196:U:H5''	1:A:1197:G:C5'	2.17	0.74
4:C:70:VAL:O	4:C:106:VAL:HG23	1.87	0.74
1:A:76:C:H2'	1:A:77:G:H8	1.52	0.74
1:A:1366:C:H2'	1:A:1367:C:C6	2.23	0.74
3:B:178:ARG:HG3	9:H:72:PRO:HA	1.67	0.74
1:A:487:A:H2'	1:A:488:C:O4'	1.87	0.74
1:A:579:G:C4	1:A:580:U:C6	2.75	0.74
1:A:1354:C:O2'	1:A:1355:G:H5'	1.86	0.74
7:F:9:VAL:HB	7:F:87:ARG:HB2	1.68	0.74
1:A:223:U:C5'	21:T:68:LYS:HZ2	2.00	0.74
1:A:261:U:O2	1:A:263:A:C8	2.40	0.74
1:A:577:G:H1'	1:A:816:A:C4	2.22	0.74
1:A:1514:C:O2'	1:A:1515:C:H5'	1.87	0.74
4:C:70:VAL:HG21	4:C:76:VAL:HG21	1.66	0.74
1:A:1505:G:C8	1:A:1505:G:C3'	2.68	0.74
5:D:201:GLN:HA	5:D:204:ILE:HD12	1.69	0.74
1:A:737:A:H2'	1:A:738:C:C6	2.23	0.74
1:A:1240:U:H4'	1:A:1241:G:OP2	1.87	0.74
1:A:1442:G:H21	1:A:1446:A:H3'	1.50	0.74
1:A:803:G:H2'	1:A:804:U:H6	1.52	0.74
1:A:1305:G:C5'	22:V:4:GLY:HA3	2.17	0.74
1:A:192:U:C2	1:A:193:C:C5	2.76	0.73
1:A:173:U:C2	1:A:197:A:N1	2.56	0.73
1:A:175:C:H2'	1:A:176:C:H6	1.53	0.73
1:A:370:C:C2	1:A:371:G:C8	2.76	0.73
1:A:591:U:H2'	1:A:592:G:H8	1.51	0.73
1:A:1049:U:H1'	1:A:1201:A:N7	2.03	0.73
1:A:1240:U:OP1	8:G:116:ALA:HB2	1.88	0.73
1:A:1369:C:H2'	1:A:1370:G:C8	2.23	0.73
19:R:36:ASN:O	19:R:39:VAL:HG12	1.88	0.73
1:A:404:U:H2'	1:A:405:U:C6	2.23	0.73
1:A:1243:C:H2'	1:A:1244:C:H6	1.53	0.73
1:A:1333:A:H2'	1:A:1334:G:O4'	1.87	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:20:U:O2'	1:A:21:G:H5'	1.88	0.73
1:A:382:A:C2	1:A:383:A:C4	2.76	0.73
1:A:529:G:C4'	1:A:533:A:C2	2.72	0.73
1:A:1508:G:O2'	1:A:1509:C:H5'	1.89	0.73
7:F:6:VAL:HB	7:F:63:TYR:HB2	1.71	0.73
1:A:1243:C:H2'	1:A:1244:C:C6	2.22	0.73
10:I:104:ARG:HG2	10:I:104:ARG:HH11	1.52	0.73
4:C:22:TRP:CZ2	4:C:32:LEU:HD22	2.24	0.73
1:A:1020:U:C2'	1:A:1021:G:H5'	2.19	0.73
1:A:1157:A:H1'	1:A:1181:G:N2	2.04	0.73
1:A:1372:U:H5''	10:I:71:SER:CB	2.18	0.73
1:A:180:U:C2'	1:A:181:G:H5'	2.18	0.73
1:A:1452:C:H4'	1:A:1453:G:O5'	1.89	0.73
4:C:10:PHE:CZ	4:C:178:LEU:HD13	2.24	0.73
1:A:218:C:C4'	1:A:461:C:N4	2.52	0.73
1:A:439:A:C4	1:A:497:A:C2	2.77	0.73
1:A:579:G:C5	1:A:580:U:C5	2.76	0.73
1:A:721:G:C6	1:A:733:A:C2	2.77	0.73
1:A:1230:C:O2'	1:A:1231:G:H5'	1.88	0.73
1:A:1126:U:P	1:A:1126:U:C6	2.81	0.73
1:A:1238:A:N7	1:A:1303:C:H1'	2.04	0.73
1:A:1413:A:H2'	1:A:1414:U:H6	1.53	0.73
5:D:104:VAL:HG11	5:D:146:ILE:CD1	2.18	0.73
10:I:48:GLU:N	10:I:49:PRO:HD2	2.04	0.73
1:A:99:C:H2'	1:A:101:A:C8	2.24	0.72
1:A:338:A:C4	1:A:339:C:C5	2.76	0.72
1:A:443:C:H2'	1:A:444:C:C6	2.24	0.72
1:A:1333:A:C8	1:A:1334:G:C8	2.77	0.72
1:A:1197:G:C2'	1:A:1198:G:H5'	2.20	0.72
4:C:154:SER:CB	4:C:197:GLY:H	2.02	0.72
5:D:64:LEU:HD23	5:D:198:VAL:HG21	1.70	0.72
1:A:1300:G:O2'	1:A:1301:U:H6	1.69	0.72
1:A:1366:C:H2'	1:A:1367:C:H6	1.52	0.72
1:A:1126:U:H6	1:A:1126:U:OP1	1.71	0.72
8:G:148:ASN:C	8:G:150:ALA:H	1.96	0.72
16:O:25:THR:O	16:O:29:VAL:HG23	1.89	0.72
1:A:35:G:H2'	1:A:36:C:H6	1.54	0.72
1:A:55:A:C2	1:A:56:U:N1	2.57	0.72
1:A:266:G:O3'	18:Q:67:LYS:HB2	1.89	0.72
1:A:1030:C:H6	1:A:1030:C:H5'	1.55	0.72
1:A:1356:G:H2'	1:A:1357:A:H8	1.52	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:50:ILE:HB	15:N:41:ARG:NH1	2.04	0.72
1:A:181:G:HO2'	1:A:182:U:H5'	1.52	0.72
1:A:452:A:C2	1:A:453:A:N9	2.57	0.72
1:A:642:A:C4	1:A:643:C:C5	2.78	0.72
4:C:195:VAL:O	4:C:196:LEU:HD23	1.90	0.72
5:D:28:SER:O	5:D:30:LYS:N	2.21	0.72
1:A:173:U:H5'	1:A:197:A:O4'	1.90	0.72
1:A:337:C:H2'	1:A:338:A:C8	2.24	0.72
1:A:1233:G:C4	1:A:1234:C:C5	2.77	0.72
1:A:1343:G:H2'	1:A:1344:C:H6	1.54	0.72
1:A:1440:C:H2'	1:A:1441:G:O4'	1.88	0.72
8:G:12:LEU:HD12	8:G:12:LEU:N	2.05	0.72
1:A:662:G:H2'	1:A:663:A:H8	1.54	0.72
1:A:1256:A:C2	1:A:1258:G:N1	2.57	0.72
1:A:1520:G:H2'	1:A:1521:G:H8	1.52	0.72
4:C:179:ARG:O	4:C:179:ARG:HG2	1.88	0.72
1:A:1360:A:H2'	1:A:1361:G:O4'	1.90	0.72
1:A:972:C:O2	1:A:972:C:H2'	1.88	0.72
1:A:55:A:C2	1:A:56:U:C2	2.78	0.71
1:A:976:G:OP2	1:A:1358:U:H1'	1.90	0.71
3:B:188:ALA:O	3:B:202:PRO:HA	1.89	0.71
6:E:144:THR:O	6:E:148:VAL:HG23	1.88	0.71
1:A:32:A:N6	1:A:553:A:C6	2.58	0.71
1:A:874:G:N2	9:H:15:ASN:HD21	1.87	0.71
1:A:243:A:C4'	1:A:244:U:C5'	2.60	0.71
1:A:715:A:H2'	1:A:716:A:O4'	1.90	0.71
1:A:1083:U:C5	1:A:1084:G:C6	2.78	0.71
1:A:101:A:C2	1:A:102:G:C8	2.79	0.71
1:A:1490:C:H5'	1:A:1490:C:C6	2.25	0.71
1:A:149:A:H2'	1:A:150:C:C6	2.25	0.71
1:A:1047:G:O2'	1:A:1048:G:H5'	1.90	0.71
1:A:1305:G:H22	1:A:1331:G:C2'	2.03	0.71
1:A:1346:A:N1	1:A:1374:A:H5''	2.04	0.71
4:C:123:GLN:O	4:C:128:PHE:HB2	1.91	0.71
6:E:153:LYS:HG2	6:E:154:GLY:H	1.53	0.71
1:A:338:A:C5	1:A:339:C:C5	2.79	0.71
1:A:432:A:C8	1:A:433:C:C5	2.79	0.71
1:A:1055:A:H1'	4:C:156:ARG:HH12	1.54	0.71
1:A:1067:A:HO2'	1:A:1068:G:H8	1.37	0.71
1:A:1309:G:P	14:M:88:ARG:HH21	2.14	0.71
7:F:7:ASN:ND2	19:R:34:TYR:HE1	1.89	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:101:A:O2'	1:A:102:G:H5'	1.91	0.71
1:A:191:G:H2'	1:A:192:U:C6	2.23	0.71
1:A:371:G:C2'	1:A:372:C:H5'	2.21	0.71
1:A:1542:U:H2'	1:A:1543:C:H6	1.56	0.71
17:P:74:LEU:HB3	17:P:79:VAL:HG21	1.73	0.71
1:A:190(A):C:C2'	1:A:190(B):C:H5'	2.20	0.71
1:A:509:A:O5'	1:A:509:A:H8	1.74	0.71
1:A:936:C:O2'	1:A:937:A:H5'	1.90	0.71
1:A:1486:G:H2'	1:A:1487:G:O4'	1.91	0.71
1:A:1540:U:H2'	1:A:1541:U:H6	1.55	0.71
19:R:76:LEU:O	19:R:78:LEU:HG	1.91	0.71
21:T:73:HIS:O	21:T:74:LYS:HB2	1.91	0.71
1:A:450:G:H5''	1:A:451:A:H3'	1.72	0.71
9:H:108:GLY:HA3	9:H:138:TRP:HB3	1.73	0.71
1:A:55:A:C2	1:A:56:U:C1'	2.74	0.70
1:A:448:A:C2	1:A:449:C:C4	2.79	0.70
1:A:600:C:H4'	9:H:128:GLY:O	1.91	0.70
1:A:736:C:H2'	1:A:737:A:H8	1.53	0.70
1:A:1010:G:H2'	1:A:1011:G:H8	1.56	0.70
1:A:202:U:H4'	1:A:203:U:OP2	1.92	0.70
1:A:448:A:C5	1:A:487:A:C2	2.79	0.70
1:A:807:A:C4	1:A:808:C:C5	2.79	0.70
8:G:40:ALA:HB3	10:I:41:VAL:HG21	1.72	0.70
1:A:487:A:H2'	1:A:488:C:C5'	2.21	0.70
1:A:499:A:H4'	1:A:500:G:OP1	1.91	0.70
1:A:170:U:O2'	1:A:171:A:H5'	1.92	0.70
1:A:294:U:H2'	1:A:295:C:H6	1.55	0.70
1:A:357:G:O2'	1:A:358:U:H5'	1.91	0.70
1:A:982:U:H4'	1:A:983:A:O5'	1.92	0.70
1:A:1006:C:O2'	1:A:1007:C:H5'	1.90	0.70
8:G:31:MET:SD	8:G:34:GLY:HA2	2.32	0.70
1:A:236:G:C5	1:A:237:C:C5	2.80	0.70
6:E:80:ILE:HD11	6:E:91:LEU:HD12	1.73	0.70
1:A:487:A:C2'	1:A:488:C:H5'	2.21	0.70
1:A:558:G:C8	1:A:559:A:C2	2.79	0.70
1:A:818:G:H3'	1:A:819:A:H5'	1.73	0.70
1:A:818:G:O2'	1:A:820:U:C5	2.44	0.70
1:A:908:A:O2'	1:A:909:A:H5'	1.91	0.70
1:A:22:G:H4'	1:A:885:G:C8	2.26	0.70
1:A:223:U:H5'	21:T:68:LYS:HZ2	1.53	0.70
1:A:1187:G:C3'	1:A:1188:A:H8	2.05	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:69:GLU:O	7:F:72:VAL:HG23	1.91	0.70
1:A:414:A:C2	1:A:415:A:C4	2.79	0.70
1:A:336:C:O2'	1:A:337:C:H5'	1.92	0.70
1:A:414:A:C2	1:A:415:A:C8	2.79	0.70
1:A:915:A:H2'	1:A:916:G:H5'	1.73	0.70
1:A:943:U:C2'	1:A:944:G:H5'	2.22	0.70
1:A:1278:U:C5'	1:A:1279:A:O4'	2.40	0.70
1:A:1355:G:O2'	1:A:1356:G:H5'	1.92	0.70
1:A:1542:U:H2'	1:A:1543:C:C6	2.27	0.70
1:A:243:A:C4'	1:A:244:U:H5'	2.08	0.70
1:A:767:A:H2'	1:A:768:A:H8	1.57	0.70
1:A:1189:C:C5'	4:C:5:ILE:HD13	2.21	0.70
1:A:1286:A:H2'	1:A:1287:A:H4'	1.73	0.69
1:A:1342:C:H2'	1:A:1343:G:H8	1.57	0.69
17:P:20:VAL:HG21	17:P:32:TYR:CB	2.22	0.69
17:P:20:VAL:HG21	17:P:32:TYR:HB2	1.73	0.69
1:A:321:A:H2'	1:A:322:C:H6	1.57	0.69
1:A:625:G:C5	1:A:626:U:C5	2.80	0.69
6:E:110:LEU:HD13	6:E:118:ILE:HD13	1.73	0.69
16:O:25:THR:HG21	16:O:70:LEU:CD2	2.22	0.69
1:A:437:U:O2'	5:D:123:HIS:HD2	1.75	0.69
1:A:643:C:H2'	1:A:644:G:H8	1.55	0.69
3:B:25:ASN:HD22	3:B:27:LYS:H	1.37	0.69
5:D:59:ARG:HH11	5:D:59:ARG:CG	2.05	0.69
1:A:50:A:N6	1:A:361:G:H4'	2.06	0.69
1:A:532:A:H62	4:C:160:ALA:HA	1.57	0.69
1:A:657:G:O2'	1:A:658:G:H5'	1.91	0.69
1:A:975:A:O2'	15:N:32:SER:HB2	1.92	0.69
1:A:1094:G:H5''	1:A:1095:U:C5	2.24	0.69
1:A:1281:U:H5'	1:A:1282:C:H5	1.57	0.69
1:A:642:A:H2'	1:A:643:C:H6	1.55	0.69
1:A:663:A:H2'	1:A:664:G:C8	2.27	0.69
1:A:1394:A:C5	1:A:1501:C:H4'	2.28	0.69
1:A:1402:C:O2	1:A:1500:A:N1	2.26	0.69
4:C:73:PRO:C	4:C:75:VAL:H	1.99	0.69
10:I:28:VAL:HA	10:I:63:ILE:O	1.93	0.69
15:N:6:LEU:HB3	15:N:23:ARG:NH2	2.07	0.69
1:A:321:A:O2'	1:A:322:C:H5'	1.91	0.69
1:A:914:A:H2'	1:A:915:A:C5'	2.23	0.69
1:A:1416:G:N2	1:A:1485:U:H1'	2.08	0.69
4:C:64:VAL:HB	4:C:99:VAL:HB	1.75	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:91:LEU:HD21	4:C:99:VAL:CG1	2.22	0.69
1:A:487:A:O2'	1:A:488:C:H5'	1.93	0.69
1:A:538:G:H5''	13:L:114:LYS:HB2	1.75	0.69
1:A:1338:G:H2'	1:A:1339:A:C8	2.28	0.69
1:A:1347:G:O2'	1:A:1348:U:P	2.51	0.69
1:A:1426:C:H2'	1:A:1427:U:H6	1.58	0.69
1:A:149:A:H2'	1:A:150:C:H6	1.57	0.69
1:A:429:U:H1'	1:A:430:A:H5''	1.73	0.69
1:A:1128:C:O2'	1:A:1130:A:C8	2.46	0.69
7:F:48:LEU:HD13	7:F:52:ILE:HG13	1.75	0.69
9:H:86:ILE:HD12	9:H:133:LEU:HD21	1.73	0.69
1:A:175:C:O2'	1:A:176:C:H5'	1.92	0.69
1:A:872:A:C2	1:A:874:G:C5	2.81	0.69
1:A:1388:C:O2'	1:A:1389:C:H5'	1.93	0.69
3:B:111:ARG:HG2	3:B:111:ARG:HH11	1.58	0.69
1:A:190(A):C:O2'	1:A:190(B):C:H5'	1.93	0.68
1:A:628:G:O2'	1:A:629:G:H5'	1.92	0.68
1:A:865:A:O2'	1:A:866:C:H5'	1.92	0.68
1:A:642:A:C5	1:A:643:C:C4	2.82	0.68
1:A:1147:C:H4'	10:I:5:TYR:CE1	2.28	0.68
3:B:115:LEU:HD23	3:B:153:ARG:NE	2.08	0.68
6:E:43:LEU:HB2	6:E:136:MET:HE2	1.74	0.68
1:A:190(L):U:O2'	1:A:191:G:H5'	1.94	0.68
1:A:377:G:OP1	17:P:3:LYS:HD2	1.94	0.68
1:A:458:C:C2	1:A:459:G:C8	2.82	0.68
1:A:597:G:C8	1:A:598:U:C5	2.81	0.68
1:A:658:G:H2'	1:A:659:U:H6	1.56	0.68
1:A:1030(B):C:H3'	1:A:1030(C):G:C5'	2.24	0.68
1:A:166:G:H2'	1:A:167:G:H8	1.58	0.68
1:A:402:G:O2'	1:A:403:C:H5'	1.93	0.68
1:A:405:U:H3'	1:A:406:G:H5'	1.74	0.68
1:A:529:G:H4'	1:A:533:A:C2	2.28	0.68
1:A:1157:A:H4'	1:A:1158:C:O5'	1.91	0.68
1:A:1220:G:H2'	1:A:1221:G:H8	1.57	0.68
18:Q:67:LYS:O	18:Q:68:ARG:HB3	1.93	0.68
1:A:452:A:N3	1:A:453:A:C8	2.61	0.68
1:A:1288:A:C2	1:A:1289:A:C4	2.81	0.68
14:M:59:TYR:O	14:M:63:THR:HG22	1.94	0.68
1:A:181:G:N2	1:A:195:A:C4	2.62	0.68
1:A:259:G:H2'	1:A:260:G:C8	2.28	0.68
1:A:266:G:C8	1:A:266:G:C5'	2.72	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1030(B):C:C2'	1:A:1030(C):G:H5''	2.24	0.68
1:A:1080:A:H4'	6:E:16:THR:HG21	1.76	0.68
1:A:1449:C:C2'	1:A:1450:U:H5'	2.23	0.68
2:2:9:A:C2'	2:2:10:A:H5'	2.23	0.68
1:A:13:U:O2	1:A:914:A:H3'	1.93	0.68
1:A:337:C:H2'	1:A:338:A:H8	1.59	0.68
1:A:449:C:H2'	1:A:450:G:O4'	1.94	0.68
1:A:540:G:C2'	1:A:541:G:H5'	2.24	0.68
1:A:877:C:OP1	9:H:88:LYS:HE3	1.93	0.68
1:A:1443:G:C5'	1:A:1446:A:H5'	2.20	0.68
4:C:150:LYS:HB3	4:C:201:TYR:HB2	1.76	0.68
21:T:50:GLU:HB2	21:T:99:LEU:HD12	1.75	0.68
1:A:355:C:C4	1:A:356:A:N7	2.61	0.68
1:A:379:C:O2'	1:A:380:G:H5'	1.94	0.68
1:A:406:G:H5''	5:D:5:ILE:HG21	1.75	0.68
1:A:1027:C:H2'	1:A:1028:C:H5''	0.71	0.68
1:A:1057:G:H2'	1:A:1058:G:C8	2.28	0.68
1:A:1225:A:H5'	1:A:1226:C:OP2	1.94	0.68
1:A:1449:C:H2'	1:A:1450:U:H5'	1.76	0.68
1:A:56:U:H2'	1:A:57:G:C8	2.28	0.68
1:A:203:U:C5'	1:A:204:U:OP1	2.42	0.68
1:A:639:G:O2'	1:A:640:A:H5'	1.94	0.68
1:A:767:A:H2'	1:A:768:A:C8	2.29	0.68
1:A:731:G:O2'	1:A:732:C:H5'	1.94	0.68
1:A:914:A:C2'	1:A:915:A:O5'	2.41	0.68
1:A:986:A:H2'	1:A:987:G:C8	2.29	0.68
12:K:57:THR:HG22	12:K:60:ALA:HB2	1.75	0.68
1:A:37:U:O2'	1:A:500:G:H4'	1.94	0.67
1:A:228:A:H2'	1:A:229:U:C6	2.28	0.67
1:A:425:G:C2'	1:A:426:G:H5'	2.23	0.67
1:A:1126:U:C6	1:A:1126:U:OP1	2.46	0.67
1:A:1250:A:H2'	1:A:1251:A:H8	1.59	0.67
1:A:1385:G:H2'	1:A:1386:G:O4'	1.94	0.67
1:A:1490:C:H6	1:A:1490:C:H5'	1.58	0.67
7:F:3:ARG:HB3	7:F:93:SER:HB2	1.76	0.67
1:A:459:G:H3'	1:A:460:A:H5''	1.75	0.67
1:A:713:G:H21	1:A:777:A:C4'	2.07	0.67
1:A:965:A:C2	1:A:969:A:N1	2.62	0.67
4:C:5:ILE:O	4:C:5:ILE:HG13	1.93	0.67
1:A:55:A:O2'	1:A:56:U:H5'	1.94	0.67
1:A:386:C:O2'	1:A:387:U:H5'	1.92	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:501:C:O3'	13:L:118:SER:HB2	1.94	0.67
1:A:1027:C:C2'	1:A:1028:C:C5'	2.42	0.67
1:A:1305:G:H5'	22:V:4:GLY:HA3	1.75	0.67
1:A:148:G:H2'	1:A:149:A:C8	2.24	0.67
1:A:323:U:H2'	1:A:324:G:O4'	1.94	0.67
1:A:684:A:H1'	12:K:38:ASN:HD22	1.60	0.67
1:A:700:G:O3'	1:A:703:G:H5'	1.95	0.67
1:A:757:U:H2'	1:A:758:G:O4'	1.94	0.67
1:A:1191:A:C4	1:A:1192:C:C5	2.82	0.67
1:A:32:A:N6	1:A:553:A:N6	2.42	0.67
1:A:642:A:C6	1:A:643:C:C4	2.82	0.67
1:A:1039:C:O2'	1:A:1040:U:H5'	1.94	0.67
1:A:1291:G:H4'	10:I:38:GLN:O	1.95	0.67
1:A:1368:G:OP1	11:J:62:HIS:HE1	1.77	0.67
16:O:87:ILE:HG22	16:O:88:ARG:N	1.95	0.67
1:A:197:A:H1'	1:A:198:G:O4'	1.94	0.67
1:A:1151:A:C2	1:A:1152:A:C5	2.82	0.67
1:A:1151:A:O2'	1:A:1152:A:C8	2.47	0.67
1:A:1191:A:H5''	4:C:4:LYS:NZ	2.08	0.67
5:D:93:PHE:CE1	5:D:97:LEU:HD11	2.28	0.67
6:E:115:VAL:HG12	6:E:116:THR:N	2.08	0.67
1:A:125:U:H2'	1:A:126:G:H8	1.59	0.67
1:A:245:C:O2'	1:A:246:A:H5'	1.95	0.67
1:A:582:U:C2'	1:A:583:A:H8	2.04	0.67
1:A:818:G:C2'	1:A:819:A:H5''	2.24	0.67
1:A:1492:A:H2'	1:A:1493:A:O4'	1.94	0.67
1:A:254:G:N2	18:Q:16:GLN:NE2	2.41	0.67
1:A:812:C:O2'	1:A:813:U:P	2.52	0.67
1:A:829:G:N2	1:A:830:G:C4	2.63	0.67
1:A:1318:A:H4'	20:S:10:PHE:CE2	2.29	0.67
10:I:17:VAL:HG21	10:I:80:GLY:CA	2.25	0.67
11:J:16:LEU:HD23	11:J:94:VAL:HG22	1.77	0.67
14:M:84:ILE:HG22	20:S:66:MET:HE2	1.76	0.67
1:A:76:C:O2'	1:A:77:G:H5'	1.95	0.67
1:A:338:A:C4	1:A:339:C:C6	2.82	0.67
1:A:411:A:C4	1:A:413:G:H1'	2.30	0.67
1:A:953:G:H2'	1:A:954:G:O4'	1.94	0.67
1:A:1490:C:C5'	1:A:1490:C:C6	2.78	0.67
13:L:47:LYS:HB2	13:L:48:PRO:HD3	1.77	0.67
1:A:459:G:H3'	1:A:460:A:C5'	2.24	0.67
1:A:1015:A:H2'	1:A:1016:A:H8	1.58	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1030(B):C:C3'	1:A:1030(C):G:H5''	2.25	0.67
5:D:104:VAL:HG11	5:D:146:ILE:HD12	1.77	0.67
7:F:1:MET:HG2	7:F:68:PRO:HA	1.77	0.67
7:F:40:VAL:HG23	7:F:62:TRP:O	1.96	0.67
9:H:13:ILE:O	9:H:17:THR:HG23	1.94	0.67
1:A:125:U:H2'	1:A:126:G:C8	2.30	0.66
1:A:458:C:C4	1:A:459:G:N7	2.63	0.66
1:A:544:G:C4	1:A:545:C:C5	2.83	0.66
9:H:111:ILE:HD12	9:H:135:CYS:SG	2.35	0.66
12:K:41:THR:HG21	12:K:71:LYS:HB2	1.77	0.66
1:A:895:G:H2'	1:A:896:C:H6	1.61	0.66
1:A:1436:U:H2'	1:A:1437:C:H6	1.60	0.66
1:A:1469:G:O2'	1:A:1470:G:H5'	1.95	0.66
10:I:18:PHE:HB2	10:I:62:TYR:O	1.95	0.66
1:A:376:G:H2'	1:A:377:G:H8	1.61	0.66
1:A:547:A:C4'	1:A:548:G:O5'	2.37	0.66
1:A:663:A:H2'	1:A:664:G:H8	1.60	0.66
1:A:854:G:H3'	1:A:871:U:O4	1.95	0.66
1:A:939:G:H5''	8:G:102:ARG:CZ	2.25	0.66
1:A:960:U:O2'	1:A:1223:C:H4'	1.95	0.66
10:I:13:ALA:HB2	10:I:68:GLY:HA3	1.77	0.66
17:P:20:VAL:HG22	17:P:21:VAL:N	2.10	0.66
1:A:281:G:O2'	1:A:282:A:OP2	2.14	0.66
1:A:668:G:O2'	1:A:669:U:H5'	1.94	0.66
1:A:994:A:C2	1:A:995:C:C6	2.83	0.66
1:A:1089:G:C5	1:A:1090:U:C5	2.83	0.66
1:A:1138:G:N2	1:A:1140:C:C5	2.63	0.66
1:A:1256:A:C2	1:A:1258:G:C6	2.83	0.66
1:A:341:C:C2	1:A:349:A:C2	2.83	0.66
1:A:393:A:C2	1:A:394:G:C8	2.83	0.66
5:D:30:LYS:C	5:D:32:ALA:N	2.48	0.66
1:A:89:C:C2'	1:A:90:U:O5'	2.44	0.66
1:A:173:U:N1	1:A:197:A:C2	2.63	0.66
1:A:827:U:H2'	1:A:870:U:O4	1.96	0.66
4:C:15:THR:O	4:C:16:ARG:HB2	1.94	0.66
5:D:157:LEU:HD23	5:D:161:ASN:HD21	1.61	0.66
6:E:11:ILE:HB	6:E:31:LEU:HB3	1.75	0.66
8:G:113:GLU:HB2	8:G:119:ARG:HG2	1.78	0.66
9:H:20:TYR:CE2	9:H:75:ARG:HD2	2.30	0.66
1:A:600:C:OP1	9:H:97:VAL:HG12	1.96	0.66
1:A:817:C:H1'	1:A:819:A:H5'	1.78	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1030(C):G:H5'	1:A:1030(C):G:H8	1.58	0.66
3:B:130:ARG:HH22	4:C:207:VAL:HG11	1.59	0.66
4:C:187:ALA:HB3	4:C:198:VAL:HB	1.77	0.66
13:L:28:LYS:HD2	13:L:33:ARG:HH22	1.61	0.66
1:A:191:G:C4	1:A:192:U:C5	2.84	0.66
1:A:503:C:H2'	1:A:504:C:H6	1.61	0.66
1:A:838:G:C2'	1:A:839:U:H5''	2.24	0.66
1:A:1033:G:O2'	1:A:1034:G:H5'	1.96	0.66
1:A:1067:A:O2'	1:A:1068:G:H8	1.78	0.66
1:A:1191:A:H2'	1:A:1192:C:C6	2.30	0.66
1:A:287:U:H2'	1:A:288:A:H8	1.59	0.66
1:A:687:A:H4'	12:K:47:VAL:HG23	1.77	0.66
1:A:698:G:H2'	1:A:699:C:C6	2.31	0.66
1:A:724:G:C2	1:A:725:G:C8	2.84	0.66
1:A:972:C:P	11:J:57:LYS:HD3	2.36	0.66
1:A:1539:C:O2	2:1:6:A:C2	2.48	0.66
3:B:115:LEU:HD23	3:B:153:ARG:HE	1.60	0.66
9:H:20:TYR:HE2	9:H:75:ARG:HD2	1.59	0.66
14:M:96:LEU:O	14:M:110:ARG:HG2	1.94	0.66
1:A:176:C:O2'	1:A:177:C:H5'	1.96	0.66
1:A:338:A:H2'	1:A:339:C:C6	2.26	0.66
1:A:1063:C:H2'	1:A:1064:G:H8	1.59	0.66
4:C:173:VAL:O	4:C:173:VAL:HG12	1.96	0.66
1:A:36:C:C2	1:A:37:U:C6	2.85	0.65
1:A:404:U:C2	1:A:405:U:C5	2.84	0.65
1:A:492:G:H2'	1:A:494:G:H8	1.59	0.65
1:A:1192:C:H2'	1:A:1193:G:O4'	1.95	0.65
1:A:1398:A:H5''	1:A:1398:A:C8	2.30	0.65
13:L:119:LYS:O	13:L:120:TYR:HB2	1.95	0.65
1:A:321:A:H2'	1:A:322:C:C6	2.31	0.65
1:A:722:A:C6	1:A:724:G:C5	2.83	0.65
1:A:1278:U:H5''	1:A:1279:A:O4'	1.97	0.65
1:A:1287:A:H2'	1:A:1288:A:C8	2.31	0.65
1:A:1305:G:N2	1:A:1331:G:O2'	2.29	0.65
14:M:4:ILE:HG22	14:M:5:ALA:N	2.11	0.65
1:A:192:U:H2'	1:A:193:C:H6	1.61	0.65
1:A:662:G:H2'	1:A:663:A:C8	2.32	0.65
1:A:1157:A:N3	1:A:1181:G:C2	2.64	0.65
1:A:1489:G:H2'	1:A:1490:C:O4'	1.96	0.65
6:E:148:VAL:HG21	9:H:107:LEU:HD22	1.77	0.65
12:K:91:ARG:CD	19:R:88:LYS:HE2	2.26	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:39:VAL:H	13:L:57:LYS:HB2	1.61	0.65
1:A:179:A:O2'	1:A:180:U:H5'	1.97	0.65
1:A:636:U:H5'	18:Q:2:PRO:HG2	1.77	0.65
1:A:1442:G:N3	1:A:1442:G:H2'	2.09	0.65
1:A:1509:C:C2	1:A:1510:U:C6	2.85	0.65
1:A:228:A:H4'	17:P:62:VAL:HG11	1.77	0.65
1:A:803:G:H2'	1:A:804:U:C6	2.30	0.65
1:A:814:A:H2'	1:A:816:A:H5''	1.77	0.65
1:A:1347:G:O2'	1:A:1348:U:OP2	2.15	0.65
5:D:8:VAL:HG22	5:D:115:ARG:NH2	2.11	0.65
6:E:12:LEU:O	6:E:12:LEU:HD13	1.96	0.65
6:E:34:VAL:HG12	6:E:35:GLY:N	2.11	0.65
18:Q:92:ARG:O	18:Q:95:TYR:HB2	1.96	0.65
1:A:551:U:C2	1:A:552:U:C5	2.84	0.65
1:A:767:A:H2'	1:A:768:A:O4'	1.95	0.65
1:A:1231:G:O2'	1:A:1232:U:H5'	1.97	0.65
19:R:59:SER:OG	19:R:62:GLU:HG3	1.96	0.65
1:A:673:G:H5''	7:F:87:ARG:NH1	2.12	0.65
16:O:25:THR:HG21	16:O:70:LEU:HD23	1.79	0.65
19:R:39:VAL:HG13	19:R:40:LEU:N	2.12	0.65
1:A:39:G:C2'	1:A:40:C:H5'	2.26	0.65
1:A:413:G:H22	1:A:428:G:H1'	1.62	0.65
1:A:434:U:N3	1:A:435:C:C5	2.64	0.65
1:A:485:G:HO2'	1:A:486:U:P	2.20	0.65
1:A:909:A:H2'	1:A:910:C:O4'	1.97	0.65
1:A:1413:A:H2	1:A:1487:G:N2	1.85	0.65
8:G:16:LEU:HD22	8:G:16:LEU:N	2.10	0.65
14:M:81:LEU:HA	14:M:84:ILE:CG1	2.26	0.65
1:A:1027:C:O2'	1:A:1028:C:H5''	1.94	0.65
1:A:1130:A:H62	1:A:1144:G:N2	1.90	0.65
1:A:1190:G:O2'	1:A:1191:A:P	2.49	0.65
1:A:1536:C:O5'	1:A:1536:C:H6	1.80	0.65
18:Q:62:SER:CB	18:Q:72:ARG:HG3	2.27	0.65
4:C:33:LEU:CD1	15:N:53:LEU:HD22	2.22	0.65
1:A:151:A:H2'	1:A:152:A:O4'	1.97	0.64
1:A:429:U:H5'	1:A:430:A:OP1	1.96	0.64
1:A:490:G:C4	1:A:491:G:C8	2.86	0.64
1:A:1226:C:OP2	14:M:103:THR:HG21	1.98	0.64
1:A:1305:G:H5''	22:V:4:GLY:CA	2.27	0.64
1:A:1406:U:H2'	1:A:1407:C:C6	2.32	0.64
1:A:1108:G:H2'	1:A:1109:C:H5'	1.79	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1125:U:O3'	1:A:1126:U:C5	2.49	0.64
1:A:35:G:H2'	1:A:36:C:C6	2.33	0.64
1:A:446:G:O2'	1:A:447:G:H5'	1.98	0.64
1:A:691:G:O2'	1:A:797:C:H4'	1.97	0.64
1:A:947:G:C5	1:A:948:C:C4	2.86	0.64
1:A:986:A:H4'	20:S:55:LYS:HD2	1.80	0.64
1:A:1442:G:H21	1:A:1446:A:H5''	1.63	0.64
1:A:35:G:C4	1:A:36:C:C5	2.86	0.64
1:A:129(A):G:N3	1:A:190(E):U:H5'	2.13	0.64
1:A:411:A:O2'	1:A:412:A:H5'	1.97	0.64
1:A:448:A:C5	1:A:487:A:N3	2.65	0.64
1:A:1056:U:O2'	1:A:1057:G:H5'	1.97	0.64
4:C:19:GLU:OE2	15:N:52:GLN:HG3	1.97	0.64
13:L:42:THR:HA	13:L:53:ARG:O	1.98	0.64
1:A:176:C:C2	1:A:177:C:C5	2.86	0.64
1:A:556:C:C2'	1:A:557:G:C5'	2.69	0.64
1:A:1019:C:O2'	1:A:1020:U:H5'	1.97	0.64
1:A:1218:C:H2'	1:A:1219:U:C5	2.32	0.64
1:A:1251:A:H4'	10:I:12:GLU:OE1	1.96	0.64
11:J:84:GLN:O	11:J:88:LEU:HD12	1.98	0.64
12:K:18:ARG:HB2	12:K:33:THR:CG2	2.28	0.64
14:M:34:LEU:HD13	14:M:41:PRO:HG3	1.80	0.64
21:T:85:MET:HE3	21:T:103:GLY:O	1.97	0.64
1:A:38:G:C2	1:A:397:A:C2	2.86	0.64
1:A:177:C:O2'	1:A:178:C:H5'	1.98	0.64
1:A:414:A:N3	1:A:415:A:C8	2.66	0.64
1:A:436:C:H2'	1:A:437:U:H6	1.61	0.64
1:A:818:G:H3'	1:A:819:A:C5'	2.27	0.64
1:A:1250:A:H5''	10:I:67:GLY:HA2	1.79	0.64
7:F:7:ASN:HD21	19:R:34:TYR:HE1	1.45	0.64
14:M:96:LEU:HB3	14:M:97:PRO:CD	2.28	0.64
1:A:223:U:C5'	21:T:68:LYS:NZ	2.60	0.64
1:A:926:G:C3'	1:A:1505:G:H21	2.09	0.64
1:A:1097:C:O2'	1:A:1168:A:H1'	1.97	0.64
1:A:1233:G:H2'	1:A:1234:C:H6	1.62	0.64
1:A:1236:A:H2'	1:A:1237:C:C6	2.32	0.64
1:A:1342:C:H2'	1:A:1343:G:C8	2.33	0.64
6:E:105:VAL:HB	6:E:106:PRO:HD3	1.79	0.64
9:H:12:ARG:NH1	9:H:27:PRO:HD3	2.13	0.64
11:J:50:ILE:HB	15:N:41:ARG:HH11	1.61	0.64
17:P:39:TYR:CD2	17:P:73:LEU:HD11	2.32	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:42:G:O2'	1:A:43:C:H5'	1.98	0.64
1:A:50:A:O2'	1:A:52:G:C8	2.51	0.64
1:A:64:G:N2	1:A:67:C:N4	2.45	0.64
1:A:277:C:C5'	18:Q:68:ARG:NH2	2.52	0.64
1:A:448:A:N6	1:A:487:A:C1'	2.61	0.64
1:A:735:C:O2'	1:A:736:C:H5'	1.97	0.64
1:A:1138:G:C2	1:A:1140:C:C6	2.86	0.64
1:A:1197:G:H2'	1:A:1198:G:H5'	1.78	0.64
1:A:1349:A:C2'	1:A:1350:A:H8	2.04	0.64
1:A:1390:U:H2'	1:A:1391:U:C6	2.33	0.64
8:G:40:ALA:HB1	10:I:41:VAL:HG11	1.80	0.64
11:J:62:HIS:HB3	15:N:59:ALA:HB3	1.79	0.64
1:A:191:G:C4	1:A:192:U:C6	2.86	0.64
1:A:384:G:H2'	1:A:385:C:C6	2.33	0.64
1:A:690:G:H8	1:A:690:G:O5'	1.81	0.64
1:A:838:G:H3'	1:A:840:C:H41	1.63	0.64
1:A:1191:A:H2'	1:A:1192:C:H6	1.61	0.64
1:A:1397:C:H4'	1:A:1398:A:OP2	1.98	0.64
1:A:1454:G:O2'	1:A:1455:G:H5'	1.97	0.64
9:H:29:SER:O	9:H:31:PHE:N	2.30	0.64
16:O:3:ILE:HD12	16:O:3:ILE:H	1.62	0.64
1:A:42:G:C5	1:A:43:C:C5	2.87	0.63
1:A:524:G:H2'	1:A:525:C:H6	1.63	0.63
1:A:607:A:N3	1:A:608:A:C8	2.66	0.63
1:A:634:C:O2'	1:A:635:G:H5'	1.98	0.63
1:A:1538:C:N3	2:1:6:A:N1	2.46	0.63
7:F:12:PRO:HG3	7:F:55:ASP:OD1	1.98	0.63
12:K:33:THR:HA	12:K:39:PRO:HA	1.79	0.63
17:P:20:VAL:HG22	17:P:21:VAL:H	1.62	0.63
1:A:597:G:C6	1:A:644:G:C6	2.86	0.63
1:A:964:A:C1'	11:J:55:LYS:HE2	2.24	0.63
1:A:1030:C:C2'	1:A:1030(A):G:C8	2.81	0.63
5:D:9:CYS:SG	5:D:31:CYS:C	2.80	0.63
6:E:12:LEU:CD1	6:E:31:LEU:HB2	2.28	0.63
17:P:21:VAL:HG21	17:P:59:TRP:CD1	2.33	0.63
17:P:74:LEU:O	17:P:79:VAL:HG23	1.99	0.63
1:A:147:G:O2'	1:A:148:G:H5'	1.98	0.63
1:A:423:G:N2	1:A:424:G:N7	2.45	0.63
1:A:448:A:C8	1:A:487:A:N1	2.66	0.63
1:A:914:A:C2'	1:A:915:A:C5'	2.77	0.63
1:A:1320:C:N4	20:S:36:ARG:HG3	2.13	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:83:VAL:HG22	13:L:84:LEU:H	1.63	0.63
1:A:642:A:H2'	1:A:643:C:C6	2.33	0.63
1:A:709:G:H2'	1:A:710:G:H8	1.64	0.63
1:A:753:A:H5'	1:A:754:C:C6	2.33	0.63
1:A:1303:C:N4	1:A:1304:G:C6	2.66	0.63
1:A:1375:A:H4'	8:G:29:LYS:NZ	2.14	0.63
1:A:1533:C:C4'	1:A:1534:A:OP1	2.45	0.63
7:F:50:TYR:CE1	19:R:77:GLY:HA2	2.34	0.63
17:P:6:LEU:HD23	17:P:17:TYR:CG	2.32	0.63
1:A:243:A:H4'	1:A:244:U:H5''	1.74	0.63
1:A:562:C:H41	1:A:884:U:H2'	1.62	0.63
1:A:687:A:H4'	1:A:688:G:O5'	1.98	0.63
1:A:1284:C:H3'	1:A:1285:A:H8	1.62	0.63
1:A:1320:C:O2'	1:A:1321:C:H5'	1.99	0.63
1:A:1399:C:O2	1:A:1401:G:C5	2.51	0.63
15:N:6:LEU:HB3	15:N:23:ARG:HH21	1.62	0.63
18:Q:76:LEU:HD23	18:Q:77:VAL:N	2.13	0.63
1:A:1064:G:O2'	1:A:1190:G:N2	2.31	0.63
1:A:1225:A:H5'	14:M:103:THR:OG1	1.98	0.63
1:A:1440:C:O2'	1:A:1441:G:H5'	1.98	0.63
8:G:75:VAL:HG11	8:G:86:GLN:HB3	1.80	0.63
10:I:26:VAL:HA	10:I:61:ALA:HB3	1.80	0.63
1:A:80:G:C3'	1:A:81:U:H5''	2.27	0.63
1:A:191:G:C6	1:A:192:U:C4	2.87	0.63
1:A:381:C:C2	1:A:382:A:C8	2.87	0.63
1:A:709:G:C4	1:A:710:G:C8	2.87	0.63
1:A:1330:U:H5''	14:M:23:TYR:O	1.99	0.63
1:A:17:U:H2'	1:A:18:C:C6	2.34	0.63
1:A:56:U:H2'	1:A:57:G:H8	1.64	0.63
1:A:132:C:H2'	1:A:133:U:O4'	1.98	0.63
1:A:274:A:HO2'	1:A:275:G:H8	1.47	0.63
1:A:523:A:H61	13:L:53:ARG:HH12	1.45	0.63
1:A:706:A:C1'	12:K:29:ILE:HD11	2.28	0.63
1:A:839:U:O2	1:A:839:U:C2'	2.47	0.63
1:A:869:G:C4'	1:A:872:A:C8	2.82	0.63
1:A:1135:U:H6	1:A:1135:U:O5'	1.82	0.63
1:A:1329:A:HO2'	1:A:1330:U:H5'	1.64	0.63
1:A:1364:U:O2'	1:A:1365:G:OP1	2.13	0.63
20:S:46:GLY:N	20:S:62:ILE:HG23	2.14	0.63
1:A:66:G:H4'	1:A:173:U:C5	2.34	0.63
1:A:499:A:H4'	1:A:500:G:H5'	1.79	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1053:G:C8	1:A:1199:U:C6	2.87	0.63
1:A:1225:A:H2'	1:A:1225:A:N3	2.13	0.63
1:A:1316:G:N2	1:A:1318:A:H3'	2.14	0.63
1:A:1360:A:H2'	1:A:1361:G:C8	2.34	0.63
1:A:1367:C:H4'	11:J:48:THR:HG21	1.81	0.63
14:M:84:ILE:HG21	20:S:66:MET:HB3	1.81	0.63
1:A:180:U:H2'	1:A:181:G:H5'	1.79	0.62
1:A:401:C:O2'	1:A:402:G:H5'	1.99	0.62
1:A:463:A:C4	1:A:474:G:C8	2.87	0.62
1:A:625:G:C6	1:A:626:U:C4	2.87	0.62
1:A:839:U:C5'	1:A:840:C:C5	2.63	0.62
1:A:1206:G:C6	1:A:1207:G:C5	2.87	0.62
1:A:1210:C:H4'	1:A:1214:C:C4	2.34	0.62
1:A:1250:A:H5''	10:I:67:GLY:CA	2.29	0.62
1:A:1256:A:N6	1:A:1278:U:H1'	2.13	0.62
1:A:1347:G:C2'	1:A:1348:U:OP2	2.47	0.62
1:A:1372:U:H5''	10:I:71:SER:HB2	1.81	0.62
5:D:25:ARG:C	5:D:27:TYR:H	2.07	0.62
5:D:64:LEU:CD2	5:D:198:VAL:HG21	2.29	0.62
6:E:144:THR:HG22	6:E:146:ALA:H	1.64	0.62
1:A:620:C:C6	5:D:135:LEU:HD13	2.34	0.62
1:A:650:G:O2'	1:A:651:C:H5'	1.98	0.62
1:A:1233:G:H2'	1:A:1234:C:C6	2.34	0.62
1:A:1268:A:H2'	1:A:1269:A:C8	2.34	0.62
1:A:1305:G:H5''	22:V:4:GLY:HA3	1.81	0.62
3:B:145:LEU:C	3:B:147:LYS:H	2.06	0.62
1:A:481:G:O2'	1:A:482:A:C8	2.52	0.62
1:A:486:U:O2	1:A:486:U:C2'	2.43	0.62
1:A:573:A:O2'	1:A:574:A:H5'	2.00	0.62
1:A:1157:A:C2	1:A:1181:G:C5	2.87	0.62
6:E:82:VAL:HG21	6:E:138:ALA:HA	1.80	0.62
13:L:28:LYS:C	13:L:30:ALA:H	2.07	0.62
17:P:20:VAL:HG21	17:P:32:TYR:CG	2.34	0.62
1:A:452:A:C4	1:A:453:A:C8	2.87	0.62
1:A:692:U:O2	1:A:694:A:H5''	2.00	0.62
1:A:1057:G:H5''	4:C:154:SER:CB	2.22	0.62
1:A:1110:A:H8	1:A:1110:A:O5'	1.82	0.62
6:E:116:THR:HG23	6:E:117:ASP:OD2	2.00	0.62
11:J:47:PHE:CZ	15:N:37:PHE:CE1	2.88	0.62
1:A:130:A:C8	18:Q:63:ARG:HG3	2.34	0.62
1:A:382:A:C2	1:A:383:A:C5	2.87	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:384:G:H2'	1:A:385:C:H6	1.64	0.62
1:A:958:A:C6	1:A:959:A:N1	2.68	0.62
1:A:969:A:H2'	1:A:970:C:H5'	1.81	0.62
1:A:1272:G:C4	1:A:1273:G:C8	2.88	0.62
1:A:1306:A:N3	1:A:1307:U:C6	2.68	0.62
1:A:1511:G:H2'	1:A:1512:U:O4'	2.00	0.62
1:A:113:G:C6	1:A:114:U:C4	2.88	0.62
1:A:192:U:H2'	1:A:193:C:C6	2.34	0.62
1:A:413:G:N2	1:A:428:G:H1'	2.14	0.62
1:A:463:A:H2'	1:A:474:G:H8	1.65	0.62
1:A:622:A:N7	1:A:623:C:C5	2.68	0.62
1:A:874:G:H21	9:H:15:ASN:HD21	1.46	0.62
1:A:1210:C:H5'	1:A:1214:C:H42	1.63	0.62
12:K:18:ARG:HB2	12:K:33:THR:HG23	1.81	0.62
1:A:35:G:C4	1:A:550:G:N2	2.68	0.62
1:A:129(A):G:C2	1:A:190(E):U:H5'	2.35	0.62
1:A:459:G:C3'	1:A:460:A:H5''	2.28	0.62
1:A:492:G:C2	1:A:494:G:H1'	2.34	0.62
1:A:975:A:C4'	1:A:976:G:OP2	2.43	0.62
2:2:7:G:N2	2:2:8:A:H1'	2.14	0.62
7:F:18:GLN:O	7:F:21:LEU:HB3	1.99	0.62
9:H:64:LYS:HG2	9:H:79:VAL:HG21	1.82	0.62
11:J:87:THR:O	11:J:88:LEU:HD23	1.99	0.62
1:A:98:U:C2	1:A:99:C:C5	2.87	0.62
1:A:986:A:H4'	20:S:55:LYS:CD	2.30	0.62
7:F:15:ASP:OD2	7:F:18:GLN:HG3	1.98	0.62
13:L:87:GLY:HA2	13:L:98:TYR:HA	1.82	0.62
1:A:457:C:O2'	1:A:458:C:H5'	2.00	0.62
1:A:592:G:O2'	1:A:593:G:H5'	2.00	0.62
1:A:910:C:H5''	13:L:97:ARG:HH22	1.64	0.62
1:A:958:A:C6	20:S:54:GLY:HA3	2.35	0.62
1:A:1047:G:H5''	15:N:4:LYS:HD2	1.82	0.62
1:A:1159:U:H5	1:A:1182:G:H2'	1.64	0.62
1:A:1210:C:C5'	1:A:1214:C:N4	2.62	0.62
1:A:1227:A:H8	1:A:1227:A:H3'	1.65	0.62
1:A:1402:C:C2	1:A:1403:C:C6	2.88	0.62
1:A:1414:U:H2'	1:A:1415:G:C8	2.35	0.62
1:A:1491:G:N1	1:A:1492:A:N6	2.48	0.62
1:A:391:G:H2'	1:A:392:G:O5'	2.00	0.62
1:A:746:A:N6	1:A:747:C:N4	2.47	0.62
1:A:914:A:C2'	1:A:915:A:H5'	2.29	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1030(A):G:N2	1:A:1030(C):G:O6	2.33	0.62
1:A:1258:G:O2'	1:A:1259:C:H5'	1.99	0.62
1:A:1372:U:H5''	10:I:71:SER:OG	2.00	0.62
1:A:1407:C:O2'	1:A:1408:A:H5'	2.00	0.62
1:A:953:G:N2	1:A:1229:A:C4	2.68	0.61
1:A:981:U:C5'	15:N:21:TYR:CE1	2.82	0.61
1:A:1038:C:C2	1:A:1039:C:C5	2.88	0.61
1:A:1161:C:H2'	1:A:1162:C:H6	1.65	0.61
1:A:1190:G:C2'	1:A:1191:A:OP2	2.47	0.61
1:A:1206:G:C5	1:A:1207:G:N7	2.68	0.61
1:A:1426:C:H2'	1:A:1427:U:C6	2.35	0.61
1:A:1499:A:O2'	1:A:1500:A:H5'	1.99	0.61
9:H:26:VAL:HG13	9:H:26:VAL:O	1.99	0.61
1:A:1186:G:N2	1:A:1187:G:H1'	2.15	0.61
1:A:1187:G:C4	1:A:1188:A:C8	2.88	0.61
1:A:1309:G:O2'	1:A:1310:G:H5'	1.99	0.61
1:A:425:G:HO2'	1:A:426:G:H5'	1.64	0.61
1:A:445:G:C4	1:A:446:G:C8	2.88	0.61
1:A:590:C:H2'	1:A:591:U:H6	1.65	0.61
1:A:760:G:H2'	1:A:761:G:H5'	1.82	0.61
1:A:370:C:H2'	1:A:371:G:H8	1.64	0.61
1:A:477:G:H2'	1:A:478:A:H8	1.66	0.61
1:A:754:C:C2'	1:A:754:C:O2	2.48	0.61
1:A:1225:A:H3'	1:A:1226:C:C5	2.35	0.61
3:B:25:ASN:ND2	3:B:27:LYS:H	1.98	0.61
10:I:50:LEU:C	10:I:52:ALA:H	2.08	0.61
1:A:41:G:H2'	1:A:42:G:C8	2.36	0.61
1:A:95:U:H2'	1:A:96:G:H8	1.64	0.61
1:A:342:C:N3	1:A:348:G:C2	2.68	0.61
1:A:559:A:P	6:E:126:ARG:HH22	2.23	0.61
1:A:1053:G:H2'	1:A:1199:U:H5	1.66	0.61
1:A:1089:G:C6	1:A:1090:U:C5	2.88	0.61
2:1:6:A:O3'	2:2:7:G:H5'	2.00	0.61
13:L:75:HIS:HD2	13:L:77:LEU:HB2	1.65	0.61
1:A:485:G:C2'	1:A:486:U:OP2	2.49	0.61
1:A:544:G:H2'	1:A:545:C:H6	1.65	0.61
1:A:681:C:H2'	1:A:682:G:H8	1.65	0.61
1:A:1103:C:H2'	1:A:1104:G:O4'	2.00	0.61
1:A:286:G:H2'	1:A:287:U:H6	1.65	0.61
1:A:413:G:H2'	1:A:428:G:N2	2.16	0.61
1:A:416:G:C5	1:A:417:C:C4	2.88	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:818:G:C3'	1:A:819:A:C5'	2.79	0.61
1:A:1107:C:N4	1:A:1108:G:N7	2.49	0.61
1:A:1331:G:O2'	1:A:1332:A:P	2.58	0.61
1:A:1375:A:C2	1:A:1376:U:C2	2.88	0.61
3:B:12:GLU:OE1	3:B:15:VAL:HG23	2.00	0.61
4:C:52:LEU:HD23	4:C:52:LEU:H	1.66	0.61
1:A:22:G:C4	1:A:23:C:C5	2.88	0.61
1:A:924:C:C2'	1:A:925:G:H5'	2.31	0.61
1:A:1059:C:H2'	1:A:1060:C:H6	1.66	0.61
1:A:1222:G:O2'	1:A:1223:C:H5'	2.00	0.61
1:A:1487:G:H2'	1:A:1488:G:H8	1.65	0.61
3:B:178:ARG:HH21	9:H:74:PRO:CD	2.14	0.61
6:E:151:LEU:HD21	9:H:79:VAL:HA	1.83	0.61
1:A:236:G:C4	1:A:237:C:C5	2.89	0.61
1:A:394:G:C5	1:A:395:C:C5	2.89	0.61
1:A:531:U:H4'	1:A:532:A:H5''	1.82	0.61
1:A:657:G:H2'	1:A:658:G:H8	1.66	0.61
1:A:665:A:C2	1:A:732:C:C2	2.89	0.61
1:A:961:U:H2'	1:A:962:C:C5'	2.30	0.61
1:A:972:C:O2	1:A:972:C:C2'	2.48	0.61
1:A:1145:C:H1'	1:A:1146:A:C8	2.35	0.61
1:A:1346:A:N9	8:G:10:ARG:NH2	2.48	0.61
6:E:31:LEU:HD23	6:E:44:GLY:O	2.00	0.61
9:H:88:LYS:HB3	9:H:89:PRO:HD2	1.81	0.61
1:A:41:G:H2'	1:A:42:G:H8	1.66	0.61
1:A:112:G:H21	1:A:354:G:C5'	2.01	0.61
1:A:262:A:H2'	1:A:263:A:C8	2.35	0.61
1:A:723:U:OP1	1:A:723:U:C6	2.54	0.61
1:A:778:G:O2'	1:A:779:C:H5'	1.99	0.61
1:A:828:A:H2'	1:A:829:G:O5'	2.00	0.61
1:A:1030:C:H2'	1:A:1030(A):G:H8	1.61	0.61
1:A:1181:G:O2'	1:A:1182:G:O5'	2.19	0.61
1:A:1216:G:H5''	15:N:5:ALA:CB	2.31	0.61
6:E:11:ILE:HG22	6:E:12:LEU:HD12	1.82	0.61
15:N:27:CYS:SG	15:N:29:ARG:CB	2.89	0.61
1:A:178:C:H2'	1:A:179:A:C8	2.29	0.60
1:A:577:G:H1'	1:A:816:A:N3	2.15	0.60
1:A:689:C:OP2	12:K:46:GLY:HA3	2.01	0.60
1:A:1125:U:O3'	1:A:1126:U:H5	1.82	0.60
1:A:1129:C:P	1:A:1130:A:H5'	2.40	0.60
1:A:1534:A:H2'	1:A:1535:C:C6	2.36	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:139:LEU:HD23	6:E:142:LEU:HD11	1.83	0.60
10:I:64:THR:HG22	10:I:65:VAL:H	1.66	0.60
21:T:29:LYS:O	21:T:32:ALA:HB3	2.01	0.60
1:A:175:C:C2	1:A:176:C:C5	2.89	0.60
1:A:287:U:H2'	1:A:288:A:C8	2.35	0.60
1:A:448:A:C4	1:A:487:A:C2	2.89	0.60
1:A:492:G:H2'	1:A:494:G:C8	2.35	0.60
1:A:611:A:C2'	1:A:612:C:H5'	2.31	0.60
1:A:622:A:C8	1:A:623:C:C5	2.89	0.60
1:A:651:C:C4	1:A:652:U:O4	2.53	0.60
1:A:949:A:C5	1:A:950:U:C4	2.89	0.60
1:A:965:A:O2'	1:A:966:G:OP2	2.19	0.60
1:A:986:A:C6	1:A:987:G:C6	2.89	0.60
1:A:1328:C:O2'	1:A:1329:A:C5'	2.49	0.60
1:A:1443:G:H5''	1:A:1446:A:C5'	2.24	0.60
20:S:62:ILE:HD12	20:S:66:MET:HG3	1.82	0.60
1:A:52:G:O2'	1:A:53:A:H5'	2.01	0.60
1:A:861:G:O2'	1:A:862:C:H5'	2.01	0.60
1:A:1161:C:H2'	1:A:1162:C:C6	2.36	0.60
1:A:1501:C:N4	1:A:1504:G:C2	2.70	0.60
1:A:1508:G:C5	1:A:1509:C:C5	2.89	0.60
5:D:13:ARG:HD2	5:D:38:TYR:O	2.01	0.60
1:A:55:A:C2	1:A:56:U:H1'	2.37	0.60
1:A:392:G:N1	1:A:393:A:C5	2.69	0.60
1:A:446:G:C2'	1:A:447:G:H5'	2.31	0.60
1:A:519:C:O2'	1:A:520:A:C5'	2.50	0.60
1:A:580:U:O2	1:A:580:U:H2'	2.01	0.60
1:A:1064:G:H4'	1:A:1065:U:H5'	1.82	0.60
1:A:1218:C:H2'	1:A:1219:U:H6	1.62	0.60
1:A:1299:A:C5	1:A:1301:U:O2	2.55	0.60
1:A:1451:A:O2'	1:A:1452:C:P	2.59	0.60
3:B:100:GLY:C	3:B:102:LEU:H	2.09	0.60
6:E:33:VAL:HG12	6:E:112:LEU:HD12	1.82	0.60
1:A:130:A:N1	1:A:233:C:H1'	2.16	0.60
12:K:17:GLY:O	12:K:80:VAL:HA	2.01	0.60
13:L:25:PRO:HD2	13:L:98:TYR:OH	2.01	0.60
1:A:698:G:H2'	1:A:699:C:H6	1.66	0.60
1:A:961:U:C2	1:A:983:A:C2	2.90	0.60
1:A:1085:U:H3'	1:A:1086:U:C5	2.37	0.60
1:A:1278:U:OP2	1:A:1278:U:C4	2.55	0.60
1:A:1349:A:C4	1:A:1350:A:C8	2.89	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1350:A:H2'	1:A:1351:U:C6	2.36	0.60
1:A:1518:A:H2'	1:A:1519:A:N9	2.17	0.60
8:G:104:LEU:HD23	8:G:134:ALA:HB1	1.83	0.60
1:A:21:G:H2'	1:A:22:G:H8	1.67	0.60
1:A:190(B):C:H2'	1:A:190(C):C:O4'	2.01	0.60
1:A:452:A:C2	1:A:453:A:C4	2.90	0.60
1:A:948:C:O2'	1:A:949:A:C5'	2.45	0.60
1:A:1186:G:H21	15:N:61:TRP:C	2.10	0.60
1:A:1216:G:H5''	15:N:5:ALA:HB2	1.82	0.60
1:A:77:G:C4	1:A:93:G:N2	2.70	0.60
1:A:452:A:C2	1:A:453:A:C8	2.89	0.60
1:A:620:C:N1	5:D:135:LEU:HD13	2.17	0.60
1:A:940:C:C2'	1:A:941:G:H5'	2.32	0.60
1:A:1054:C:OP1	1:A:1198:G:OP2	2.19	0.60
1:A:1187:G:C2'	1:A:1188:A:C8	2.85	0.60
16:O:39:LEU:HD13	16:O:56:LEU:HB2	1.82	0.60
1:A:75:G:O2'	1:A:76:C:H5'	2.02	0.60
1:A:1187:G:C2'	1:A:1188:A:H8	2.14	0.60
1:A:1291:G:C4	1:A:1292:U:C5	2.89	0.60
5:D:61:LYS:HA	5:D:203:VAL:HG22	1.83	0.60
1:A:556:C:H2'	1:A:557:G:O5'	2.02	0.60
1:A:804:U:H5''	1:A:805:C:OP2	2.02	0.60
1:A:872:A:C2	1:A:874:G:C6	2.90	0.60
1:A:926:G:C5	1:A:1505:G:C2	2.89	0.60
1:A:1144:G:H22	1:A:1146:A:N6	2.00	0.60
1:A:1145:C:O2'	1:A:1146:A:O5'	2.18	0.60
1:A:1306:A:N3	1:A:1306:A:H2'	2.16	0.60
1:A:1432:G:O5'	1:A:1432:G:H8	1.85	0.60
1:A:1480:G:H2'	1:A:1481:U:H6	1.66	0.60
6:E:89:ILE:HD13	6:E:89:ILE:C	2.26	0.60
10:I:114:TYR:CE1	11:J:59:SER:O	2.55	0.60
16:O:87:ILE:O	16:O:88:ARG:HB2	2.01	0.60
20:S:64:GLU:O	20:S:67:VAL:HG23	2.02	0.60
1:A:261:U:C5	21:T:79:ARG:NH1	2.70	0.59
1:A:451:A:H1'	1:A:452:A:C8	2.36	0.59
3:B:145:LEU:HD22	3:B:149:LEU:HD12	1.83	0.59
16:O:70:LEU:HB3	16:O:78:TYR:HB2	1.82	0.59
1:A:55:A:N1	1:A:56:U:C2	2.70	0.59
1:A:382:A:H2'	1:A:383:A:H8	1.65	0.59
1:A:485:G:H2'	1:A:486:U:OP2	2.02	0.59
1:A:532:A:N6	4:C:160:ALA:HA	2.16	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:544:G:C4	1:A:545:C:C6	2.90	0.59
1:A:995:C:O2	1:A:995:C:H2'	2.01	0.59
1:A:1239:A:H62	1:A:1299:A:H62	1.48	0.59
1:A:1244:C:OP2	22:V:9:ARG:HB2	2.02	0.59
1:A:1504:G:C5'	1:A:1505:G:H5'	2.32	0.59
1:A:147:G:C2	1:A:148:G:C8	2.89	0.59
1:A:872:A:C4	1:A:874:G:C8	2.90	0.59
1:A:955:U:H1'	1:A:1227:A:N6	2.17	0.59
1:A:1202:G:C4	15:N:42:ILE:HD13	2.36	0.59
1:A:1306:A:C2	1:A:1307:U:C1'	2.85	0.59
1:A:1375:A:H2'	1:A:1376:U:O4'	2.02	0.59
1:A:1415:G:H2'	1:A:1416:G:O4'	2.01	0.59
1:A:1424:C:O2'	1:A:1425:U:H5'	2.01	0.59
1:A:1450:U:O2'	1:A:1451:A:H8	1.86	0.59
1:A:1535:C:O2'	1:A:1536:C:H5'	2.02	0.59
1:A:50:A:N6	1:A:361:G:C4'	2.65	0.59
1:A:866:C:C2'	1:A:867:G:O5'	2.50	0.59
1:A:1135:U:H4'	1:A:1136:U:H5	1.67	0.59
1:A:1308:U:O2'	1:A:1309:G:H5'	2.03	0.59
6:E:11:ILE:HB	6:E:31:LEU:O	2.03	0.59
10:I:104:ARG:HG2	10:I:104:ARG:NH1	2.18	0.59
12:K:94:ALA:O	12:K:97:ALA:HB3	2.02	0.59
1:A:89:C:H2'	1:A:90:U:O4'	2.03	0.59
1:A:397:A:N7	1:A:547:A:O2'	2.36	0.59
1:A:773:G:C6	1:A:774:G:N7	2.71	0.59
1:A:1429:C:H2'	1:A:1430:C:C6	2.37	0.59
5:D:198:VAL:HG12	5:D:199:ASN:H	1.66	0.59
10:I:24:GLY:HA2	10:I:59:PHE:O	2.02	0.59
1:A:42:G:C4	1:A:43:C:C6	2.91	0.59
1:A:95:U:H2'	1:A:96:G:C8	2.37	0.59
1:A:414:A:OP2	1:A:428:G:N2	2.36	0.59
1:A:628:G:H2'	1:A:629:G:C8	2.37	0.59
1:A:757:U:O2'	1:A:879:C:H1'	2.02	0.59
1:A:1272:G:C5	1:A:1273:G:C8	2.90	0.59
1:A:247:G:OP2	18:Q:99:SER:HB2	2.03	0.59
1:A:625:G:C5	1:A:626:U:C4	2.90	0.59
1:A:802:A:C2'	1:A:803:G:H5'	2.33	0.59
1:A:1305:G:H5''	22:V:4:GLY:C	2.27	0.59
1:A:1502:A:C5'	1:A:1503:A:OP2	2.50	0.59
4:C:58:GLU:CB	11:J:92:THR:HG21	2.31	0.59
11:J:47:PHE:HB2	11:J:63:PHE:HB2	1.83	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:35:G:N2	13:L:118:SER:OG	2.35	0.59
1:A:113:G:C6	1:A:315:A:N6	2.70	0.59
1:A:391:G:C2'	1:A:392:G:O5'	2.51	0.59
1:A:438:G:C4'	1:A:439:A:OP1	2.40	0.59
1:A:515:G:H2'	1:A:516:U:O4'	2.03	0.59
1:A:766:A:H2'	1:A:767:A:H5'	1.84	0.59
1:A:924:C:O2'	1:A:925:G:H5'	2.03	0.59
1:A:1157:A:C2	1:A:1181:G:C4	2.91	0.59
10:I:47:LEU:C	10:I:49:PRO:HD2	2.27	0.59
1:A:16:A:O2'	6:E:16:THR:HG22	2.02	0.59
1:A:191:G:C5	1:A:192:U:C4	2.91	0.59
1:A:286:G:H2'	1:A:287:U:C6	2.36	0.59
1:A:390:C:H2'	1:A:391:G:C8	2.37	0.59
1:A:434:U:C2	1:A:435:C:C6	2.90	0.59
1:A:803:G:C5	1:A:804:U:C5	2.90	0.59
1:A:1107:C:C4	1:A:1108:G:C8	2.91	0.59
1:A:1292:U:P	10:I:38:GLN:HE22	2.26	0.59
1:A:1350:A:C6	1:A:1351:U:C4	2.91	0.59
1:A:1483:A:H2'	1:A:1484:C:C6	2.37	0.59
17:P:8:ARG:HG2	17:P:17:TYR:HE2	1.66	0.59
1:A:286:G:C6	1:A:287:U:C4	2.91	0.59
1:A:512:U:H2'	1:A:513:C:H6	1.67	0.59
1:A:607:A:C2	1:A:608:A:C8	2.90	0.59
1:A:915:A:H2'	1:A:916:G:C5'	2.32	0.59
1:A:1039:C:C2	1:A:1040:U:C6	2.91	0.59
1:A:1152:A:H5''	11:J:13:HIS:CD2	2.38	0.59
1:A:1498:U:O2'	1:A:1499:A:P	2.60	0.59
4:C:154:SER:OG	4:C:196:LEU:HA	2.03	0.59
10:I:73:GLN:O	10:I:76:ALA:HB3	2.03	0.59
10:I:96:LEU:HD23	10:I:102:LEU:HD11	1.84	0.59
14:M:37:THR:CG2	14:M:39:ILE:HG13	2.32	0.59
19:R:39:VAL:O	19:R:42:ARG:HB2	2.03	0.59
20:S:16:LEU:O	20:S:19:VAL:HG12	2.02	0.59
1:A:9:G:H2'	1:A:10:A:H8	1.66	0.58
1:A:101:A:C2	1:A:102:G:N9	2.71	0.58
1:A:202:U:O5'	1:A:202:U:H6	1.86	0.58
1:A:263:A:OP2	21:T:79:ARG:NH1	2.36	0.58
1:A:279:A:H5''	1:A:280:C:H3'	1.85	0.58
1:A:591:U:H2'	1:A:592:G:C8	2.37	0.58
1:A:1032:G:H2'	1:A:1033:G:C8	2.38	0.58
1:A:1210:C:C4'	1:A:1214:C:C4	2.86	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1475:G:H2'	1:A:1476:G:C8	2.34	0.58
5:D:59:ARG:CG	5:D:59:ARG:NH1	2.64	0.58
5:D:196:LEU:HB3	5:D:198:VAL:HG23	1.85	0.58
8:G:37:ASN:ND2	10:I:41:VAL:HG23	2.17	0.58
14:M:10:PRO:HB2	14:M:18:ALA:HB1	1.85	0.58
15:N:25:VAL:HG12	15:N:38:GLY:O	2.03	0.58
1:A:357:G:C2	1:A:358:U:C5	2.90	0.58
1:A:383:A:C2'	1:A:384:G:H5'	2.33	0.58
1:A:502:G:OP1	13:L:118:SER:N	2.35	0.58
1:A:578:C:O2'	1:A:728:A:N3	2.31	0.58
1:A:866:C:H2'	1:A:867:G:O5'	2.03	0.58
1:A:1100:C:O2'	1:A:1101:A:H5'	2.02	0.58
1:A:1413:A:O2'	1:A:1414:U:H5'	2.04	0.58
10:I:16:ARG:O	10:I:63:ILE:HG23	2.03	0.58
1:A:579:G:N3	1:A:580:U:C6	2.72	0.58
1:A:722:A:C2	1:A:724:G:N7	2.71	0.58
1:A:1181:G:O2'	1:A:1182:G:C8	2.55	0.58
3:B:200:ILE:HG22	3:B:201:ILE:N	2.18	0.58
4:C:3:ASN:O	4:C:4:LYS:HB2	2.03	0.58
6:E:15:ARG:HD3	6:E:26:PHE:CD2	2.38	0.58
17:P:20:VAL:CG2	17:P:32:TYR:HB2	2.33	0.58
20:S:17:GLU:HA	20:S:20:LEU:HG	1.85	0.58
1:A:345:C:C4'	1:A:346:G:O5'	2.42	0.58
1:A:412:A:O2'	1:A:413:G:OP2	2.20	0.58
1:A:1058:G:C4	1:A:1059:C:C5	2.90	0.58
1:A:1202:G:C2	15:N:42:ILE:HG21	2.39	0.58
1:A:1394:A:N7	1:A:1501:C:H4'	2.18	0.58
1:A:103:C:OP1	21:T:17:ARG:HD3	2.03	0.58
1:A:197:A:O2'	1:A:198:G:C8	2.55	0.58
1:A:413:G:H2'	1:A:428:G:H21	1.68	0.58
1:A:622:A:N7	1:A:623:C:C6	2.71	0.58
1:A:722:A:C4	1:A:724:G:C8	2.91	0.58
1:A:947:G:C6	1:A:948:C:N4	2.72	0.58
1:A:1080:A:H4'	6:E:16:THR:CG2	2.32	0.58
1:A:1136:U:H6	1:A:1136:U:O5'	1.87	0.58
1:A:1193:G:O2'	1:A:1194:U:C5'	2.50	0.58
1:A:1480:G:H2'	1:A:1481:U:C6	2.38	0.58
11:J:54:PHE:CD2	11:J:55:LYS:HG2	2.37	0.58
1:A:164:U:O2'	1:A:165:C:H5'	2.03	0.58
1:A:597:G:N7	1:A:598:U:C5	2.71	0.58
1:A:902:G:O2'	1:A:903:G:H5'	2.04	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1250:A:C6	1:A:1251:A:C6	2.91	0.58
1:A:1367:C:H5'	11:J:60:ARG:NH1	2.18	0.58
1:A:1483:A:H2'	1:A:1484:C:H6	1.69	0.58
1:A:1504:G:H5''	1:A:1505:G:H5'	1.85	0.58
6:E:11:ILE:O	6:E:12:LEU:HB3	2.03	0.58
18:Q:45:HIS:HB2	18:Q:69:LYS:HE2	1.86	0.58
1:A:256:U:H2'	1:A:257:G:H8	1.68	0.58
1:A:364:A:H2'	1:A:365:U:O2	2.04	0.58
1:A:994:A:H2'	1:A:994:A:N3	2.18	0.58
4:C:182:ILE:HA	4:C:202:ILE:O	2.04	0.58
1:A:113:G:C6	1:A:315:A:C6	2.92	0.58
1:A:259:G:H2'	1:A:260:G:H8	1.65	0.58
1:A:892:A:C6	1:A:893:C:C4	2.92	0.58
4:C:156:ARG:N	4:C:163:ALA:HA	2.16	0.58
13:L:83:VAL:HG22	13:L:100:ILE:HG23	1.84	0.58
20:S:41:VAL:HG23	20:S:44:MET:HG3	1.84	0.58
1:A:233:C:C2'	1:A:234:C:H5'	2.32	0.58
1:A:460:A:C5	1:A:462:G:C5	2.91	0.58
1:A:561:U:O2'	1:A:562:C:P	2.62	0.58
1:A:562:C:N4	1:A:884:U:C6	2.71	0.58
1:A:695:A:C2	1:A:696:A:C4	2.91	0.58
1:A:866:C:H2'	1:A:867:G:O4'	2.04	0.58
1:A:878:G:C5'	9:H:89:PRO:HG2	2.33	0.58
1:A:1485:U:O2	1:A:1485:U:H2'	2.02	0.58
4:C:32:LEU:HD21	4:C:59:ARG:NE	2.19	0.58
1:A:390:C:H2'	1:A:391:G:H8	1.67	0.58
1:A:614:A:C2	1:A:627:G:C2	2.91	0.58
1:A:872:A:C4'	1:A:873:A:OP1	2.47	0.58
1:A:1227:A:H3'	1:A:1227:A:C8	2.39	0.58
1:A:1366:C:O2'	1:A:1367:C:H5'	2.04	0.58
1:A:1429:C:H2'	1:A:1430:C:H6	1.69	0.58
4:C:55:VAL:O	4:C:55:VAL:HG12	2.02	0.58
16:O:56:LEU:HA	16:O:59:MET:HE2	1.85	0.58
1:A:622:A:C8	1:A:623:C:C6	2.92	0.57
1:A:1007:C:O2'	1:A:1008:C:H5'	2.04	0.57
1:A:1182:G:O2'	1:A:1183:A:OP2	2.22	0.57
1:A:1206:G:H8	1:A:1206:G:O5'	1.87	0.57
1:A:1532:U:C2	1:A:1533:C:C5	2.92	0.57
3:B:111:ARG:HG2	3:B:111:ARG:NH1	2.18	0.57
3:B:178:ARG:NH2	9:H:74:PRO:HB3	2.19	0.57
10:I:89:ASN:HB3	10:I:92:TYR:CE1	2.39	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:123:C:H5''	1:A:311:C:O2'	2.04	0.57
1:A:270:A:H2'	1:A:271:C:C6	2.39	0.57
1:A:518:C:H5''	1:A:519:C:C6	2.39	0.57
1:A:715:A:OP1	1:A:805:C:H1'	2.04	0.57
1:A:748:C:H1'	1:A:749:C:H5	1.69	0.57
1:A:1080:A:C4'	6:E:16:THR:HG21	2.34	0.57
1:A:1221:G:H5''	20:S:36:ARG:NH1	2.18	0.57
14:M:78:ILE:O	14:M:81:LEU:HD23	2.03	0.57
1:A:400:C:H2'	1:A:401:C:H6	1.68	0.57
1:A:496:A:H5''	1:A:497:A:OP1	2.04	0.57
1:A:501:C:H2'	1:A:502:G:C8	2.35	0.57
1:A:512:U:OP1	5:D:46:LYS:NZ	2.36	0.57
1:A:645:C:O2'	1:A:646:U:H5'	2.02	0.57
1:A:741:G:C2'	1:A:742:G:H5'	2.35	0.57
1:A:770:C:O4'	1:A:900:A:H2	1.87	0.57
1:A:815:A:H5''	1:A:817:C:N4	2.19	0.57
1:A:1290:G:C5	1:A:1291:G:N7	2.72	0.57
1:A:41:G:O2'	1:A:42:G:H5'	2.03	0.57
1:A:373:A:H1'	1:A:481:G:N3	2.19	0.57
1:A:1055:A:O2'	4:C:156:ARG:NH1	2.38	0.57
1:A:1245:A:H2'	1:A:1246:C:C6	2.39	0.57
1:A:1371:G:OP2	10:I:11:LYS:HE2	2.04	0.57
3:B:218:ALA:O	3:B:221:LEU:HB3	2.03	0.57
8:G:37:ASN:ND2	10:I:41:VAL:H	2.01	0.57
14:M:3:ARG:HG2	14:M:9:ILE:HG12	1.85	0.57
17:P:15:PRO:O	17:P:41:PRO:HD2	2.04	0.57
21:T:33:ILE:HD13	21:T:63:ILE:HG12	1.86	0.57
1:A:448:A:C6	1:A:487:A:N3	2.73	0.57
1:A:451:A:N7	1:A:481:G:C2	2.73	0.57
1:A:487:A:H2'	1:A:488:C:H5'	1.83	0.57
1:A:491:G:C2	1:A:492:G:C8	2.92	0.57
1:A:677:U:H1'	12:K:119:CYS:SG	2.44	0.57
1:A:685:G:H5'	12:K:39:PRO:O	2.04	0.57
1:A:815:A:H4'	1:A:817:C:C4	2.40	0.57
1:A:864:A:H2'	1:A:865:A:C8	2.40	0.57
1:A:1030(B):C:H3'	1:A:1030(C):G:H5''	1.84	0.57
1:A:1191:A:H5''	4:C:4:LYS:HZ3	1.69	0.57
1:A:1298:C:H2'	8:G:114:ARG:HH12	1.68	0.57
1:A:1313:U:OP2	20:S:6:LYS:HA	2.04	0.57
6:E:13:ILE:HA	6:E:29:GLY:O	2.04	0.57
6:E:122:GLU:O	6:E:123:LEU:HD23	2.04	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:51:TYR:CE1	18:Q:73:VAL:HG11	2.39	0.57
21:T:14:LYS:HA	21:T:17:ARG:HB3	1.86	0.57
1:A:144:G:C6	1:A:145:G:N7	2.72	0.57
1:A:485:G:O2'	1:A:486:U:P	2.61	0.57
1:A:611:A:H2'	1:A:612:C:H5'	1.86	0.57
1:A:625:G:C4	1:A:626:U:C6	2.93	0.57
1:A:1054:C:H3'	1:A:1054:C:C6	2.39	0.57
1:A:1085:U:H3'	1:A:1086:U:C6	2.40	0.57
1:A:1143:G:H2'	1:A:1144:G:O4'	2.03	0.57
1:A:1149:C:C2	1:A:1150:U:C6	2.91	0.57
1:A:1233:G:N3	1:A:1234:C:C6	2.72	0.57
1:A:1240:U:OP1	8:G:119:ARG:NH2	2.37	0.57
1:A:4:U:C4	9:H:105:ARG:HD2	2.39	0.57
1:A:374:A:C4	1:A:375:U:C5	2.93	0.57
1:A:449:C:H3'	1:A:450:G:H8	1.70	0.57
1:A:1038:C:O2	1:A:1039:C:C6	2.58	0.57
4:C:11:ARG:O	4:C:13:GLY:N	2.37	0.57
7:F:26:ILE:O	7:F:30:LEU:HG	2.05	0.57
1:A:14:U:N3	1:A:17:U:OP2	2.33	0.57
1:A:187:C:N3	21:T:105:SER:HB2	2.20	0.57
1:A:448:A:C8	1:A:487:A:C6	2.93	0.57
1:A:565:U:C4	1:A:566:G:C5	2.93	0.57
1:A:1148:U:C4'	10:I:14:VAL:HG11	2.27	0.57
1:A:1310:G:C2	1:A:1328:C:N3	2.72	0.57
1:A:1343:G:H1'	10:I:121:ARG:NH1	2.19	0.57
1:A:1504:G:O2'	1:A:1505:G:OP2	2.23	0.57
7:F:67:MET:HB2	7:F:68:PRO:CD	2.34	0.57
11:J:50:ILE:HA	11:J:60:ARG:HA	1.85	0.57
1:A:220:G:O2'	1:A:221:C:H5'	2.04	0.57
1:A:628:G:H2'	1:A:629:G:H8	1.69	0.57
1:A:1015:A:H8	1:A:1015:A:O5'	1.88	0.57
1:A:219:C:C4	1:A:220:G:N7	2.73	0.57
1:A:519:C:H2'	1:A:520:A:C8	2.40	0.57
1:A:955:U:H1'	1:A:1227:A:H61	1.69	0.57
1:A:1004:A:H2'	1:A:1005:A:C8	2.40	0.57
1:A:1005:A:H4'	1:A:1037:C:O2'	2.05	0.57
1:A:1278:U:H5'	1:A:1279:A:O4'	2.05	0.57
1:A:1301:U:C5	1:A:1303:C:C6	2.92	0.57
1:A:1358:U:H3'	1:A:1359:C:C5	2.40	0.57
8:G:92:SER:HB2	8:G:93:PRO:HD2	1.87	0.57
9:H:91:ARG:HG2	13:L:7:ILE:HG21	1.87	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:41:THR:HG21	12:K:71:LYS:CB	2.34	0.57
1:A:101:A:N3	1:A:102:G:C8	2.73	0.56
1:A:166:G:O2'	1:A:167:G:H5'	2.05	0.56
1:A:285:G:O2'	1:A:286:G:H5'	2.04	0.56
1:A:418:C:H2'	1:A:419:C:H6	1.70	0.56
1:A:505:G:H5'	1:A:534:U:H2'	1.87	0.56
1:A:714:G:N3	1:A:777:A:H1'	2.19	0.56
1:A:722:A:C6	1:A:724:G:C4	2.93	0.56
1:A:741:G:O2'	1:A:742:G:H5'	2.05	0.56
1:A:901:A:N7	1:A:902:G:H1'	2.19	0.56
4:C:6:HIS:CD2	4:C:8:ILE:HB	2.40	0.56
11:J:8:LEU:CD2	11:J:96:ILE:HG12	2.35	0.56
1:A:113:G:C2	1:A:114:U:C2	2.94	0.56
1:A:328:C:O2	1:A:328:C:C2'	2.52	0.56
1:A:512:U:H2'	1:A:513:C:C6	2.40	0.56
1:A:676:A:C6	1:A:677:U:C4	2.93	0.56
1:A:792:A:O2'	1:A:793:U:P	2.63	0.56
1:A:830:G:H2'	1:A:831:U:O4'	2.05	0.56
1:A:1061:G:N2	1:A:1197:G:H1'	2.20	0.56
1:A:1292:U:OP1	8:G:41:ARG:NH2	2.38	0.56
1:A:1302:U:O2'	1:A:1303:C:OP1	2.18	0.56
1:A:1503:A:O2'	1:A:1504:G:OP1	2.20	0.56
1:A:1508:G:C4	1:A:1509:C:C5	2.93	0.56
5:D:8:VAL:O	5:D:10:ARG:N	2.38	0.56
12:K:33:THR:OG1	12:K:37:GLY:C	2.48	0.56
1:A:160:A:H1'	1:A:344:A:C5	2.39	0.56
1:A:410:G:C2	1:A:429:U:C2	2.94	0.56
1:A:452:A:O2'	1:A:453:A:O5'	2.23	0.56
1:A:518:C:H5''	1:A:519:C:H6	1.70	0.56
1:A:840:C:H4'	1:A:841:U:O5'	2.05	0.56
1:A:910:C:H5''	13:L:97:ARG:NH2	2.19	0.56
1:A:943:U:H2'	1:A:944:G:H5'	1.88	0.56
1:A:1072:G:H2'	1:A:1073:U:O4'	2.04	0.56
1:A:1179:A:H5''	10:I:102:LEU:O	2.06	0.56
1:A:1195:C:C3'	1:A:1196:U:C5'	2.82	0.56
1:A:1520:G:C4	1:A:1521:G:N7	2.73	0.56
1:A:1532:U:C4	1:A:1533:C:N4	2.73	0.56
7:F:67:MET:HB2	7:F:68:PRO:HD2	1.87	0.56
13:L:117:ARG:O	13:L:118:SER:C	2.49	0.56
1:A:60:A:C4'	1:A:61:G:O5'	2.47	0.56
1:A:129(A):G:H4'	1:A:130:A:O5'	2.06	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:417:C:O5'	1:A:417:C:H6	1.89	0.56
1:A:517:G:H4'	1:A:519:C:C5	2.41	0.56
1:A:533:A:O2'	1:A:535:A:OP2	2.21	0.56
1:A:650:G:C6	1:A:651:C:C5	2.93	0.56
1:A:753:A:C4'	1:A:754:C:O5'	2.46	0.56
1:A:828:A:C2'	1:A:829:G:O5'	2.52	0.56
1:A:889:A:C4'	1:A:890:G:OP1	2.50	0.56
1:A:939:G:H5''	8:G:102:ARG:NH1	2.20	0.56
1:A:1120:G:O2'	1:A:1121:U:H5'	2.06	0.56
1:A:1168:A:H8	1:A:1168:A:O5'	1.88	0.56
1:A:1187:G:H3'	1:A:1188:A:C8	2.36	0.56
1:A:1225:A:C1'	20:S:78:ARG:NH1	2.67	0.56
1:A:1449:C:O2'	1:A:1450:U:H5'	2.05	0.56
3:B:100:GLY:C	3:B:102:LEU:N	2.62	0.56
12:K:84:VAL:HG22	12:K:109:VAL:O	2.06	0.56
1:A:59:A:H3'	1:A:331:G:H22	1.69	0.56
1:A:247:G:OP2	18:Q:100:LYS:HD2	2.04	0.56
1:A:257:G:C6	1:A:270:A:N1	2.73	0.56
1:A:448:A:N6	1:A:487:A:H1'	2.19	0.56
1:A:592:G:N2	1:A:593:G:C4	2.74	0.56
1:A:885:G:O2'	1:A:914:A:N1	2.33	0.56
1:A:1189:C:P	11:J:51:ARG:HH22	2.29	0.56
1:A:1539:C:H2'	1:A:1540:U:H6	1.70	0.56
1:A:89:C:H2'	1:A:90:U:O5'	2.06	0.56
1:A:116:A:H2'	1:A:117:G:O4'	2.06	0.56
1:A:392:G:C6	1:A:393:A:C5	2.93	0.56
1:A:624:C:O2'	1:A:625:G:C5'	2.50	0.56
1:A:886:G:C4	1:A:887:G:C8	2.94	0.56
1:A:1038:C:N3	1:A:1039:C:C5	2.74	0.56
12:K:57:THR:CG2	12:K:60:ALA:H	2.15	0.56
1:A:44:G:H2'	1:A:45:U:O4'	2.05	0.56
1:A:252:U:H2'	1:A:253:U:C6	2.39	0.56
1:A:445:G:C5	1:A:446:G:N7	2.74	0.56
1:A:627:G:O2'	1:A:628:G:H5'	2.06	0.56
1:A:766:A:C8	1:A:814:A:N6	2.74	0.56
1:A:1215:G:C2	1:A:1216:G:C8	2.94	0.56
1:A:1223:C:OP2	20:S:78:ARG:NH2	2.39	0.56
1:A:1256:A:H2	1:A:1258:G:C6	2.20	0.56
20:S:41:VAL:HG22	20:S:44:MET:HE2	1.87	0.56
1:A:123:C:OP1	1:A:312:C:H5'	2.06	0.56
1:A:162:A:O5'	1:A:162:A:H8	1.89	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:612:C:O2'	1:A:613:C:H5'	2.06	0.56
1:A:1058:G:N2	11:J:53:PRO:HG3	2.21	0.56
3:B:108:ILE:O	3:B:111:ARG:N	2.39	0.56
11:J:20:ALA:O	11:J:24:VAL:HG23	2.05	0.56
14:M:56:LEU:O	14:M:60:VAL:HG23	2.06	0.56
20:S:22:LEU:HD11	20:S:31:ILE:HD11	1.88	0.56
22:V:24:ARG:O	22:V:25:LYS:HB2	2.05	0.56
1:A:14:U:O2	1:A:16:A:C8	2.59	0.56
1:A:98:U:N3	1:A:99:C:C5	2.74	0.56
1:A:228:A:H2'	1:A:229:U:H6	1.70	0.56
1:A:559:A:OP2	6:E:126:ARG:NH2	2.31	0.56
1:A:789:U:C2	1:A:791:G:OP2	2.59	0.56
1:A:1149:C:C2'	1:A:1150:U:H6	2.03	0.56
1:A:1249:C:O2'	10:I:73:GLN:NE2	2.38	0.56
4:C:91:LEU:CD2	4:C:99:VAL:HG13	2.31	0.56
5:D:127:THR:HG22	5:D:128:VAL:N	2.21	0.56
17:P:6:LEU:HD23	17:P:17:TYR:CD1	2.40	0.56
1:A:114:U:H2'	1:A:115:G:C8	2.40	0.56
1:A:176:C:O2	1:A:177:C:C6	2.59	0.56
1:A:252:U:H2'	1:A:253:U:C5	2.41	0.56
1:A:402:G:C2'	1:A:403:C:H5'	2.35	0.56
1:A:445:G:H2'	1:A:446:G:H8	1.71	0.56
1:A:631:G:H2'	1:A:632:A:C8	2.40	0.56
1:A:746:A:C5	1:A:747:C:C5	2.94	0.56
1:A:1206:G:C4	1:A:1207:G:C8	2.95	0.56
1:A:1231:G:H4'	10:I:126:SER:OG	2.05	0.56
9:H:104:ARG:NH2	9:H:138:TRP:CH2	2.74	0.56
11:J:34:VAL:HG12	11:J:36:GLY:H	1.71	0.56
1:A:110:C:H2'	1:A:111:G:O4'	2.06	0.55
1:A:176:C:N3	1:A:177:C:C5	2.74	0.55
1:A:452:A:C2	1:A:453:A:H1'	2.41	0.55
1:A:774:G:N2	1:A:775:G:H1'	2.21	0.55
1:A:909:A:C8	1:A:910:C:C5	2.94	0.55
1:A:954:G:N2	1:A:1228:C:N3	2.54	0.55
1:A:1010:G:HO2'	1:A:1011:G:H5'	1.71	0.55
1:A:1168:A:H2'	1:A:1169:A:C8	2.42	0.55
1:A:1292:U:C5'	10:I:38:GLN:NE2	2.60	0.55
1:A:292:G:N2	1:A:309:G:C4	2.74	0.55
1:A:445:G:C6	1:A:490:G:C6	2.94	0.55
1:A:636:U:O2'	1:A:637:G:H5'	2.07	0.55
1:A:890:G:O2'	1:A:891:U:OP2	2.24	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1197:G:C8	1:A:1197:G:O5'	2.59	0.55
1:A:1329:A:H2'	1:A:1330:U:H5'	1.89	0.55
1:A:1390:U:H2'	1:A:1391:U:H6	1.72	0.55
8:G:15:ASP:HB3	8:G:19:GLY:H	1.71	0.55
8:G:146:GLU:HA	8:G:149:ARG:HB2	1.87	0.55
11:J:54:PHE:O	11:J:55:LYS:HB3	2.06	0.55
12:K:57:THR:OG1	12:K:58:PRO:HD2	2.05	0.55
1:A:22:G:C5	1:A:23:C:C5	2.94	0.55
1:A:55:A:H2	1:A:56:U:H1'	1.70	0.55
1:A:163:C:O2'	1:A:164:U:H5'	2.05	0.55
1:A:171:A:O2'	1:A:172:A:H5'	2.06	0.55
1:A:382:A:O2'	1:A:383:A:H5'	2.06	0.55
1:A:446:G:H2'	1:A:447:G:C5'	2.37	0.55
1:A:1157:A:N6	1:A:1180:A:C6	2.75	0.55
1:A:1248:A:H1'	10:I:70:LYS:CE	2.35	0.55
1:A:1290:G:C4	1:A:1291:G:C8	2.95	0.55
1:A:1303:C:H2'	1:A:1304:G:H5'	1.89	0.55
1:A:1451:A:C5'	1:A:1452:C:H5	2.17	0.55
5:D:134:ASP:O	5:D:136:PRO:HD3	2.07	0.55
9:H:48:TYR:HA	9:H:60:ARG:O	2.07	0.55
18:Q:61:GLU:HA	18:Q:71:PHE:CD1	2.41	0.55
1:A:328:C:H4'	1:A:329:A:C5'	2.36	0.55
1:A:961:U:O2	1:A:983:A:C4	2.59	0.55
1:A:969:A:C2'	1:A:970:C:H5'	2.37	0.55
1:A:1055:A:C5	1:A:1206:G:C2	2.94	0.55
1:A:1397:C:O2'	1:A:1398:A:P	2.64	0.55
1:A:1480:G:C6	1:A:1481:U:C4	2.94	0.55
1:A:64:G:H4'	1:A:65:U:O5'	2.07	0.55
1:A:319:G:C6	1:A:320:C:C5	2.95	0.55
1:A:1021:G:H2'	1:A:1022:G:O4'	2.06	0.55
1:A:1150:U:H4'	11:J:41:PRO:HD3	1.89	0.55
1:A:1225:A:C5'	14:M:103:THR:OG1	2.55	0.55
1:A:1521:G:O2'	1:A:1522:U:H5'	2.06	0.55
9:H:36:LEU:HD22	9:H:61:VAL:HG22	1.87	0.55
14:M:81:LEU:H	14:M:81:LEU:HD23	1.70	0.55
19:R:66:LEU:HD12	19:R:66:LEU:O	2.06	0.55
1:A:58:C:H2'	1:A:58:C:O2	2.05	0.55
1:A:113:G:C6	1:A:114:U:O4	2.60	0.55
1:A:339:C:C2	1:A:340:U:C5	2.94	0.55
1:A:391:G:C5	1:A:392:G:C8	2.95	0.55
1:A:454:C:C2'	1:A:455:C:H5'	2.36	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:522:C:H2'	1:A:523:A:O4'	2.06	0.55
1:A:637:G:O2'	1:A:638:G:H5'	2.06	0.55
1:A:725:G:H2'	1:A:726:C:H6	1.71	0.55
1:A:877:C:H1'	9:H:3:THR:CG2	2.37	0.55
1:A:945:G:O6	1:A:1337:G:C6	2.59	0.55
1:A:1012:U:O2'	1:A:1013:G:H5'	2.07	0.55
1:A:1231:G:C2'	1:A:1232:U:H5'	2.37	0.55
1:A:1332:A:C2	1:A:1333:A:C4	2.95	0.55
1:A:1433:A:O2'	1:A:1434:A:H5'	2.07	0.55
1:A:1509:C:N3	1:A:1510:U:C5	2.75	0.55
4:C:152:ILE:HG22	4:C:153:VAL:N	2.20	0.55
4:C:152:ILE:HD12	4:C:201:TYR:HE1	1.72	0.55
8:G:74:GLU:HG2	8:G:91:VAL:HG22	1.89	0.55
13:L:75:HIS:CD2	13:L:77:LEU:HB2	2.41	0.55
14:M:73:GLU:O	14:M:77:ASN:HB2	2.06	0.55
14:M:81:LEU:H	14:M:81:LEU:HD22	1.72	0.55
1:A:10:A:O2'	1:A:11:G:H5'	2.07	0.55
1:A:373:A:C2	1:A:482:A:C6	2.94	0.55
1:A:522:C:H41	13:L:53:ARG:HH22	1.55	0.55
1:A:523:A:N6	13:L:53:ARG:HH12	2.04	0.55
1:A:723:U:O2	1:A:723:U:C2'	2.52	0.55
1:A:740:U:O2'	1:A:741:G:H5'	2.07	0.55
1:A:927:G:H4'	1:A:1503:A:N7	2.21	0.55
1:A:949:A:C8	1:A:950:U:C5	2.94	0.55
17:P:67:THR:HG22	17:P:68:ASP:N	2.22	0.55
20:S:11:VAL:HA	20:S:38:SER:HB3	1.89	0.55
1:A:7:G:H4'	1:A:8:A:OP1	2.06	0.55
1:A:99:C:H2'	1:A:101:A:H8	1.68	0.55
1:A:410:G:N2	1:A:429:U:N3	2.54	0.55
1:A:411:A:H3'	5:D:30:LYS:HZ1	1.70	0.55
1:A:452:A:H4'	17:P:72:ARG:NH2	2.22	0.55
1:A:608:A:C4	1:A:609:A:C8	2.95	0.55
1:A:722:A:N1	1:A:724:G:C5	2.75	0.55
1:A:836:G:C6	1:A:851:G:C6	2.94	0.55
1:A:961:U:C2	1:A:983:A:C4	2.95	0.55
1:A:1064:G:H4'	1:A:1065:U:H5''	1.88	0.55
1:A:1220:G:H2'	1:A:1221:G:C8	2.41	0.55
1:A:1250:A:H5''	10:I:67:GLY:C	2.31	0.55
1:A:1370:G:O2'	1:A:1371:G:H5'	2.07	0.55
1:A:1472:U:O2'	1:A:1473:A:H5'	2.06	0.55
6:E:144:THR:HG22	6:E:145:LYS:N	2.22	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:174:C:N3	1:A:175:C:C5	2.75	0.55
1:A:411:A:H1'	1:A:413:G:H1'	1.89	0.55
1:A:492:G:C4	1:A:494:G:C8	2.95	0.55
1:A:540:G:H2'	1:A:541:G:C5'	2.35	0.55
1:A:646:U:O2'	1:A:647:C:H5'	2.07	0.55
1:A:664:G:N2	1:A:741:G:H1	1.92	0.55
1:A:668:G:H2'	1:A:669:U:H6	1.72	0.55
1:A:925:G:C2	1:A:927:G:C8	2.95	0.55
1:A:1082:G:N1	1:A:1083:U:C2	2.74	0.55
1:A:1315:U:H2'	1:A:1316:G:O4'	2.06	0.55
1:A:1402:C:H2'	1:A:1403:C:O4'	2.07	0.55
1:A:1470:G:O2'	1:A:1471:G:H5'	2.07	0.55
4:C:125:GLU:C	4:C:127:ARG:H	2.15	0.55
8:G:69:VAL:HG21	8:G:104:LEU:HD21	1.88	0.55
9:H:26:VAL:CG1	9:H:59:LEU:HB2	2.37	0.55
16:O:3:ILE:HD12	16:O:3:ILE:N	2.21	0.55
17:P:4:ILE:HG12	17:P:21:VAL:HG22	1.88	0.55
1:A:369:C:O2'	1:A:370:C:H5'	2.07	0.55
1:A:370:C:N3	1:A:371:G:N7	2.55	0.55
1:A:391:G:C6	1:A:392:G:N7	2.75	0.55
1:A:642:A:C4	1:A:643:C:C6	2.95	0.55
1:A:822:C:O2'	1:A:823:G:H5'	2.07	0.55
1:A:909:A:C8	1:A:910:C:C6	2.95	0.55
1:A:953:G:C4	1:A:1229:A:C2	2.95	0.55
1:A:1206:G:H4'	4:C:192:THR:O	2.06	0.55
1:A:1331:G:C2'	1:A:1332:A:OP2	2.54	0.55
1:A:1435:G:C4	1:A:1436:U:C5	2.95	0.55
6:E:32:VAL:HG12	6:E:33:VAL:N	2.23	0.55
6:E:76:ILE:O	6:E:93:PRO:HB3	2.07	0.55
15:N:27:CYS:SG	15:N:29:ARG:HB3	2.46	0.55
1:A:236:G:H2'	1:A:237:C:C6	2.39	0.54
1:A:389:A:C2'	1:A:390:C:H5'	2.22	0.54
1:A:613:C:O2'	1:A:614:A:H5'	2.08	0.54
1:A:706:A:O4'	12:K:29:ILE:HD11	2.07	0.54
1:A:996:A:H2'	1:A:997:U:C6	2.43	0.54
1:A:1030(B):C:C3'	1:A:1030(C):G:C5'	2.84	0.54
1:A:1333:A:C5	1:A:1334:G:C8	2.96	0.54
1:A:1531:A:C5	1:A:1532:U:C4	2.95	0.54
4:C:12:LEU:HA	4:C:16:ARG:O	2.06	0.54
4:C:59:ARG:HD3	4:C:64:VAL:HG22	1.88	0.54
4:C:134:ILE:O	4:C:137:ALA:HB3	2.07	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:105:VAL:HG13	5:D:110:PHE:HB2	1.89	0.54
10:I:89:ASN:HB3	10:I:92:TYR:CD1	2.42	0.54
13:L:7:ILE:O	13:L:11:VAL:HG23	2.07	0.54
13:L:70:ILE:HG12	13:L:100:ILE:HD12	1.89	0.54
1:A:186:C:C2	1:A:187:C:C5	2.95	0.54
1:A:204:U:H4'	1:A:216:G:O5'	2.07	0.54
1:A:953:G:C2	1:A:1229:A:C4	2.96	0.54
1:A:1118:C:H1'	1:A:1179:A:C4	2.42	0.54
1:A:1287:A:C2	1:A:1353:G:H1'	2.43	0.54
1:A:1374:A:H2'	1:A:1375:A:H8	1.71	0.54
4:C:120:VAL:O	4:C:123:GLN:HB2	2.07	0.54
5:D:174:LEU:HD23	5:D:185:PHE:HA	1.88	0.54
9:H:16:ALA:O	9:H:19:VAL:HG22	2.08	0.54
21:T:56:MET:O	21:T:59:ALA:HB3	2.06	0.54
1:A:445:G:C6	1:A:446:G:N7	2.75	0.54
1:A:607:A:C2	1:A:608:A:N9	2.75	0.54
1:A:945:G:C2	1:A:946:A:C8	2.95	0.54
1:A:1372:U:H2'	1:A:1373:G:O4'	2.07	0.54
9:H:65:TYR:HA	9:H:79:VAL:HG23	1.88	0.54
1:A:20:U:C2'	1:A:21:G:H5'	2.38	0.54
1:A:92:C:H2'	1:A:93:G:C8	2.43	0.54
1:A:130:A:H5''	1:A:190(F):G:H2'	1.89	0.54
1:A:335:C:H2'	1:A:336:C:C6	2.42	0.54
1:A:426:G:O2'	1:A:427:U:H5'	2.08	0.54
1:A:575:G:C2	1:A:881:G:C4	2.95	0.54
1:A:877:C:O2'	9:H:3:THR:HG23	2.07	0.54
1:A:890:G:O2'	1:A:906:G:N1	2.40	0.54
1:A:1182:G:H4'	1:A:1183:A:O5'	2.07	0.54
1:A:1261:A:H62	1:A:1274:G:H21	1.55	0.54
1:A:1434:A:H2'	1:A:1435:G:C8	2.42	0.54
1:A:1539:C:H2'	1:A:1540:U:C6	2.42	0.54
1:A:9:G:C6	1:A:26:A:N6	2.75	0.54
1:A:172:A:C8	1:A:174:C:C5	2.96	0.54
1:A:190(A):C:H2'	1:A:190(B):C:H5'	1.89	0.54
1:A:243:A:C2	1:A:245:C:C2	2.96	0.54
1:A:451:A:N6	1:A:481:G:C4	2.75	0.54
1:A:754:C:O2	1:A:754:C:H2'	2.08	0.54
1:A:1086:U:C2'	1:A:1087:G:H8	2.12	0.54
1:A:1152:A:H5'	11:J:13:HIS:HB2	1.90	0.54
1:A:1311:G:C6	1:A:1312:G:N7	2.76	0.54
1:A:1347:G:H22	1:A:1374:A:P	2.30	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:124:SER:O	3:B:127:ILE:HG13	2.06	0.54
5:D:187:ARG:HD2	5:D:188:LEU:H	1.72	0.54
8:G:37:ASN:HD21	10:I:41:VAL:H	1.56	0.54
15:N:27:CYS:SG	15:N:29:ARG:HB2	2.47	0.54
16:O:82:ILE:HG23	16:O:87:ILE:H	1.73	0.54
21:T:91:LEU:C	21:T:93:GLU:H	2.16	0.54
1:A:67:C:O2'	1:A:171:A:H1'	2.08	0.54
1:A:81:U:C6	1:A:83:U:OP2	2.61	0.54
1:A:429:U:H4'	1:A:430:A:C5'	2.37	0.54
1:A:547:A:OP1	5:D:3:ARG:NH2	2.41	0.54
1:A:686:U:H2'	1:A:687:A:C8	2.43	0.54
1:A:949:A:C5	1:A:950:U:C5	2.96	0.54
1:A:1004:A:H5'	1:A:1025:U:O2	2.08	0.54
1:A:1104:G:P	3:B:111:ARG:HD2	2.48	0.54
1:A:1151:A:C2	1:A:1152:A:C4	2.95	0.54
4:C:157:ILE:HB	4:C:164:ARG:HH21	1.73	0.54
14:M:13:LYS:O	14:M:45:VAL:HG23	2.08	0.54
14:M:34:LEU:CD1	14:M:41:PRO:HG3	2.37	0.54
1:A:129(A):G:N3	1:A:190(E):U:C5'	2.70	0.54
1:A:414:A:N7	1:A:431:A:C2	2.76	0.54
1:A:658:G:H2'	1:A:659:U:C6	2.41	0.54
1:A:971:G:HO2'	1:A:1365:G:HO2'	1.55	0.54
1:A:1054:C:C6	1:A:1054:C:C3'	2.91	0.54
1:A:1298:C:C6	8:G:114:ARG:NH1	2.76	0.54
1:A:1305:G:O2'	1:A:1306:A:C8	2.60	0.54
1:A:1333:A:C2'	1:A:1334:G:H5'	2.37	0.54
3:B:140:HIS:O	3:B:143:GLU:HB2	2.08	0.54
1:A:31:G:O2'	1:A:32:A:P	2.66	0.54
1:A:190(D):U:O2'	1:A:190(E):U:H5'	2.07	0.54
1:A:448:A:C2	1:A:449:C:N3	2.76	0.54
1:A:1023:G:H2'	1:A:1023:G:N3	2.22	0.54
1:A:1055:A:H1'	4:C:156:ARG:NH1	2.21	0.54
1:A:1187:G:C2	1:A:1188:A:C4	2.96	0.54
1:A:1219:U:C2	1:A:1220:G:N7	2.75	0.54
1:A:1333:A:H2'	1:A:1334:G:C5'	2.38	0.54
1:A:1375:A:H4'	8:G:29:LYS:HZ3	1.73	0.54
1:A:1440:C:C2'	1:A:1441:G:H5'	2.38	0.54
3:B:16:HIS:O	3:B:44:LEU:HD11	2.07	0.54
3:B:187:LEU:HA	3:B:201:ILE:HB	1.90	0.54
5:D:8:VAL:C	5:D:10:ARG:H	2.15	0.54
13:L:75:HIS:HD2	13:L:77:LEU:CB	2.20	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:39:G:C6	1:A:40:C:C5	2.95	0.54
1:A:273:A:N6	1:A:274:A:N6	2.56	0.54
1:A:720:C:O5'	1:A:720:C:H6	1.91	0.54
1:A:1202:G:O2'	1:A:1203:C:H5'	2.08	0.54
1:A:1221:G:OP1	1:A:1321:C:N3	2.41	0.54
1:A:1415:G:O2'	1:A:1416:G:H5'	2.07	0.54
1:A:1454:G:H2'	1:A:1455:G:H8	1.73	0.54
14:M:37:THR:HG22	14:M:39:ILE:HG13	1.88	0.54
1:A:61:G:H2'	1:A:62:U:O4'	2.08	0.54
1:A:414:A:C2	1:A:415:A:H1'	2.27	0.54
1:A:479:C:O2'	1:A:480:U:H5'	2.08	0.54
1:A:533:A:C5	1:A:536:C:C4	2.96	0.54
1:A:568:G:N2	1:A:883:C:C2	2.76	0.54
1:A:895:G:H2'	1:A:896:C:C6	2.42	0.54
1:A:1058:G:C5	1:A:1059:C:C5	2.97	0.54
1:A:1306:A:C2	1:A:1307:U:C2	2.96	0.54
13:L:117:ARG:O	13:L:119:LYS:O	2.26	0.54
22:V:10:ARG:HA	22:V:13:ILE:HD12	1.90	0.54
1:A:148:G:N3	1:A:149:A:C8	2.76	0.53
1:A:386:C:H2'	1:A:387:U:C5'	2.33	0.53
1:A:402:G:C6	1:A:403:C:C5	2.95	0.53
1:A:492:G:N2	1:A:494:G:H1'	2.22	0.53
1:A:894:G:H2'	1:A:895:G:C8	2.42	0.53
1:A:924:C:H2'	1:A:925:G:H5'	1.90	0.53
1:A:1030(B):C:OP1	1:A:1030(B):C:O4'	2.26	0.53
1:A:1130:A:N6	1:A:1144:G:N2	2.51	0.53
1:A:1293:G:H2'	1:A:1294:G:O4'	2.08	0.53
1:A:1300:G:O2'	1:A:1301:U:C6	2.53	0.53
1:A:1329:A:P	14:M:28:ALA:HB3	2.48	0.53
1:A:1353:G:N2	1:A:1354:C:C2	2.76	0.53
1:A:1380:U:O2'	1:A:1381:U:OP2	2.23	0.53
3:B:100:GLY:N	3:B:176:GLU:OE2	2.41	0.53
5:D:157:LEU:CD2	5:D:161:ASN:HD21	2.20	0.53
19:R:43:PHE:HA	19:R:51:LEU:HD12	1.89	0.53
20:S:46:GLY:H	20:S:62:ILE:HG23	1.73	0.53
1:A:1157:A:N6	1:A:1180:A:C5	2.77	0.53
1:A:1319:A:C4'	1:A:1320:C:OP1	2.50	0.53
1:A:1333:A:O2'	1:A:1334:G:H5'	2.08	0.53
1:A:1367:C:C2	1:A:1368:G:C8	2.96	0.53
2:1:3:A:H2'	2:1:4:A:C8	2.42	0.53
5:D:120:LEU:HD23	5:D:125:HIS:HD2	1.73	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:12:LEU:HD13	6:E:31:LEU:HB2	1.91	0.53
11:J:82:ILE:HG22	11:J:82:ILE:O	2.08	0.53
1:A:144:G:N1	1:A:145:G:C5	2.76	0.53
1:A:166:G:N3	1:A:167:G:C8	2.76	0.53
1:A:692:U:O2	1:A:694:A:OP2	2.27	0.53
1:A:1010:G:O2'	1:A:1011:G:C5'	2.52	0.53
1:A:1525:G:O2'	1:A:1526:G:H5'	2.08	0.53
4:C:70:VAL:HG12	4:C:72:LYS:H	1.72	0.53
21:T:33:ILE:O	21:T:34:LYS:C	2.52	0.53
1:A:261:U:C6	21:T:79:ARG:NH1	2.76	0.53
1:A:940:C:C2	1:A:941:G:C8	2.97	0.53
4:C:5:ILE:O	4:C:6:HIS:C	2.51	0.53
9:H:123:GLU:O	9:H:127:LEU:HD23	2.08	0.53
10:I:79:LEU:O	10:I:82:ALA:HB3	2.08	0.53
13:L:85:ILE:HA	13:L:99:HIS:O	2.08	0.53
1:A:448:A:OP2	1:A:485:G:N2	2.39	0.53
1:A:597:G:C5	1:A:598:U:C6	2.96	0.53
1:A:659:U:O2'	1:A:660:G:H5'	2.09	0.53
1:A:872:A:C4	1:A:874:G:N7	2.77	0.53
1:A:986:A:H2'	1:A:987:G:H8	1.73	0.53
1:A:1123:A:O2'	11:J:38:ILE:HG23	2.08	0.53
14:M:65:LYS:HE2	14:M:69:GLU:HG2	1.89	0.53
1:A:116:A:H61	1:A:313:A:H1'	1.72	0.53
1:A:393:A:C4	1:A:394:G:C8	2.97	0.53
1:A:393:A:N3	1:A:394:G:C8	2.76	0.53
1:A:425:G:C2'	1:A:426:G:C5'	2.87	0.53
1:A:435:C:C2	1:A:436:C:C5	2.96	0.53
1:A:458:C:N3	1:A:459:G:C8	2.76	0.53
1:A:487:A:C2'	1:A:488:C:C5'	2.83	0.53
1:A:490:G:C5	1:A:491:G:N7	2.76	0.53
1:A:802:A:C8	1:A:803:G:C8	2.96	0.53
1:A:1197:G:O2'	1:A:1198:G:H5'	2.09	0.53
1:A:1281:U:H5'	1:A:1282:C:C5	2.40	0.53
4:C:70:VAL:C	4:C:106:VAL:HG23	2.33	0.53
16:O:25:THR:HG21	16:O:70:LEU:HD21	1.89	0.53
17:P:10:GLY:HA3	17:P:14:ASN:O	2.09	0.53
1:A:428:G:C2	1:A:430:A:N6	2.77	0.53
1:A:448:A:H2'	1:A:449:C:C6	2.44	0.53
1:A:544:G:C6	1:A:545:C:C5	2.97	0.53
1:A:746:A:O2'	1:A:747:C:H5'	2.08	0.53
1:A:921:U:H2'	1:A:922:G:O4'	2.09	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1124:G:O2'	1:A:1125:U:C5'	2.55	0.53
1:A:1347:G:C2'	1:A:1373:G:H1	2.21	0.53
4:C:195:VAL:C	4:C:196:LEU:HD23	2.34	0.53
9:H:66:GLY:O	9:H:76:PRO:HB3	2.09	0.53
10:I:48:GLU:N	10:I:49:PRO:CD	2.72	0.53
14:M:26:GLY:C	14:M:28:ALA:H	2.16	0.53
17:P:38:TYR:O	17:P:49:LEU:HD12	2.09	0.53
1:A:124:G:C5	1:A:125:U:C4	2.97	0.53
1:A:232:G:H1'	1:A:262:A:N1	2.23	0.53
1:A:411:A:H8	5:D:30:LYS:NZ	2.07	0.53
1:A:625:G:O2'	1:A:626:U:H5'	2.07	0.53
1:A:947:G:C6	1:A:948:C:C4	2.97	0.53
1:A:1164:G:O2'	1:A:1165:C:H5'	2.09	0.53
1:A:1256:A:O2'	1:A:1257:U:O4'	2.24	0.53
1:A:1309:G:N7	14:M:99:ARG:NH2	2.57	0.53
1:A:400:C:H2'	1:A:401:C:C6	2.44	0.53
1:A:680:C:O2'	1:A:681:C:H5'	2.09	0.53
1:A:927:G:C4	1:A:928:G:C8	2.97	0.53
1:A:940:C:H2'	1:A:941:G:O4'	2.09	0.53
1:A:1129:C:OP2	10:I:62:TYR:HE2	1.92	0.53
1:A:1291:G:C6	1:A:1292:U:O4	2.61	0.53
1:A:1364:U:HO2'	1:A:1365:G:P	2.29	0.53
1:A:1394:A:H62	1:A:1501:C:H5'	1.71	0.53
1:A:1411:C:H2'	1:A:1412:C:H6	1.72	0.53
1:A:1507:A:H2'	1:A:1508:G:C8	2.44	0.53
4:C:6:HIS:NE2	4:C:8:ILE:HB	2.24	0.53
5:D:149:ALA:HB3	5:D:152:SER:HB2	1.91	0.53
8:G:20:ASP:HB3	8:G:23:VAL:HG23	1.91	0.53
9:H:112:LEU:N	9:H:112:LEU:HD23	2.24	0.53
14:M:81:LEU:HD23	14:M:81:LEU:N	2.24	0.53
14:M:81:LEU:CD1	14:M:88:ARG:HD3	2.39	0.53
1:A:190(H):G:H2'	1:A:190(I):G:H8	1.74	0.53
1:A:657:G:C6	1:A:658:G:N7	2.76	0.53
1:A:802:A:H2'	1:A:803:G:C5'	2.36	0.53
1:A:818:G:O2'	1:A:820:U:H5	1.91	0.53
1:A:930:C:O2'	1:A:931:C:H5'	2.08	0.53
1:A:1151:A:O2'	1:A:1152:A:H8	1.92	0.53
1:A:1251:A:H4'	10:I:12:GLU:CD	2.34	0.53
1:A:1371:G:O3'	10:I:69:GLY:HA3	2.08	0.53
1:A:1449:C:H2'	1:A:1450:U:C5'	2.39	0.53
4:C:73:PRO:C	4:C:75:VAL:N	2.64	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:59:ARG:NH1	5:D:59:ARG:HG2	2.23	0.53
21:T:44:ALA:HB3	21:T:91:LEU:HD12	1.91	0.53
1:A:266:G:H8	1:A:266:G:C5'	2.10	0.52
1:A:344:A:O2'	1:A:345:C:P	2.67	0.52
1:A:636:U:H2'	1:A:637:G:H8	1.75	0.52
1:A:926:G:C6	1:A:1505:G:C6	2.97	0.52
1:A:1303:C:N4	1:A:1304:G:C5	2.77	0.52
1:A:1314:C:OP2	20:S:6:LYS:HB3	2.09	0.52
1:A:1346:A:H1'	1:A:1348:U:C5	2.44	0.52
1:A:1475:G:C4	1:A:1476:G:C8	2.97	0.52
1:A:1481:U:O2'	1:A:1482:G:H5'	2.09	0.52
5:D:117:ALA:O	5:D:121:VAL:HG23	2.09	0.52
8:G:143:ARG:O	8:G:147:ALA:HB2	2.09	0.52
10:I:37:PHE:CD2	10:I:40:LEU:HD12	2.40	0.52
13:L:84:LEU:O	13:L:100:ILE:HA	2.09	0.52
1:A:225:C:O2'	1:A:226:G:H5'	2.10	0.52
1:A:236:G:C4	1:A:237:C:C6	2.97	0.52
1:A:577:G:H2'	1:A:577:G:N3	2.24	0.52
1:A:657:G:C2	1:A:750:G:C4	2.98	0.52
1:A:918:A:N6	1:A:919:A:C6	2.77	0.52
1:A:971:G:O2'	1:A:1365:G:O2'	2.27	0.52
1:A:1053:G:N7	1:A:1199:U:H2'	2.25	0.52
1:A:1144:G:H22	1:A:1146:A:H62	1.57	0.52
1:A:1346:A:C4	8:G:10:ARG:CZ	2.92	0.52
12:K:16:SER:HB3	12:K:79:SER:HB3	1.90	0.52
17:P:69:THR:O	17:P:72:ARG:HB3	2.09	0.52
19:R:39:VAL:HG13	19:R:40:LEU:H	1.73	0.52
1:A:50:A:H62	1:A:361:G:H4'	1.74	0.52
1:A:64:G:C2	1:A:67:C:N4	2.78	0.52
1:A:236:G:C6	1:A:237:C:C4	2.97	0.52
1:A:354:G:C6	1:A:355:C:C5	2.97	0.52
1:A:558:G:C4	1:A:559:A:C2	2.97	0.52
1:A:590:C:C2	1:A:591:U:C5	2.98	0.52
1:A:920:U:O2'	1:A:921:U:H5'	2.09	0.52
1:A:953:G:N3	1:A:1229:A:C2	2.77	0.52
1:A:1080:A:O3'	6:E:16:THR:HG21	2.09	0.52
1:A:1145:C:H1'	1:A:1146:A:H8	1.72	0.52
1:A:1229:A:H2'	1:A:1230:C:C6	2.44	0.52
1:A:1249:C:O2	1:A:1249:C:H2'	2.09	0.52
1:A:1300:G:H2'	1:A:1301:U:OP2	2.09	0.52
4:C:155:GLY:HA2	4:C:164:ARG:O	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:142:PRO:HA	5:D:185:PHE:HD2	1.73	0.52
1:A:113:G:C5	1:A:114:U:C4	2.97	0.52
1:A:293:G:C4	1:A:294:U:C6	2.98	0.52
1:A:540:G:H2'	1:A:541:G:O4'	2.10	0.52
1:A:1060:C:O2'	1:A:1061:G:H5'	2.09	0.52
1:A:1202:G:C2'	1:A:1203:C:H5'	2.39	0.52
1:A:1462:G:H2'	1:A:1463:C:H6	1.74	0.52
11:J:8:LEU:HD23	11:J:96:ILE:HG12	1.90	0.52
21:T:13:LEU:C	21:T:13:LEU:HD12	2.34	0.52
1:A:197:A:N6	1:A:221:C:C5'	2.73	0.52
1:A:354:G:C2	1:A:355:C:C6	2.97	0.52
1:A:1054:C:H3'	1:A:1054:C:H6	1.75	0.52
1:A:1117:G:O3'	10:I:104:ARG:NH1	2.42	0.52
1:A:1128:C:O2'	1:A:1129:C:P	2.68	0.52
1:A:1137:C:H4'	1:A:1138:G:N2	2.25	0.52
1:A:1287:A:H2'	1:A:1288:A:H8	1.74	0.52
1:A:1324:A:C6	1:A:1325:C:C4	2.97	0.52
1:A:1326:C:OP1	22:V:12:LYS:NZ	2.42	0.52
1:A:1350:A:C2	1:A:1351:U:C2	2.97	0.52
1:A:1391:U:H2'	1:A:1392:G:H8	1.68	0.52
1:A:1528:U:O2'	1:A:1529:G:H3'	2.09	0.52
5:D:39:PRO:HG2	5:D:44:GLY:HA2	1.92	0.52
9:H:48:TYR:CD2	9:H:48:TYR:N	2.77	0.52
19:R:47:THR:HG22	19:R:48:GLY:H	1.74	0.52
1:A:496:A:H4'	1:A:497:A:OP1	2.08	0.52
1:A:691:G:H2'	1:A:692:U:H6	1.75	0.52
1:A:818:G:O2'	1:A:819:A:H5''	2.09	0.52
1:A:878:G:H5''	9:H:89:PRO:HG2	1.91	0.52
1:A:914:A:O2'	1:A:915:A:C5'	2.48	0.52
1:A:1220:G:O2'	1:A:1221:G:H5'	2.09	0.52
1:A:1413:A:N3	1:A:1414:U:C6	2.78	0.52
1:A:1497:G:H1'	1:A:1518:A:H2	1.74	0.52
3:B:204:ASN:HD22	3:B:205:ASP:N	2.08	0.52
12:K:16:SER:HA	12:K:79:SER:O	2.09	0.52
14:M:87:TYR:N	20:S:73:GLU:O	2.38	0.52
1:A:62:U:C5'	1:A:385:C:O2	2.54	0.52
1:A:389:A:C6	1:A:390:C:H1'	2.45	0.52
1:A:918:A:C6	1:A:919:A:C5	2.98	0.52
1:A:918:A:H2'	1:A:919:A:C8	2.45	0.52
1:A:928:G:H2'	1:A:929:G:H8	1.75	0.52
1:A:961:U:O2'	1:A:962:C:H5'	2.10	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1086:U:H3	1:A:1099:G:H1	1.57	0.52
1:A:1257:U:O2'	1:A:1258:G:P	2.67	0.52
1:A:1411:C:H2'	1:A:1412:C:C6	2.44	0.52
1:A:1494:G:C2	1:A:1495:U:C2	2.98	0.52
1:A:287:U:C2'	1:A:288:A:O5'	2.58	0.52
1:A:332:G:O2'	1:A:333:G:H5'	2.10	0.52
1:A:708:C:O2'	1:A:709:G:H5'	2.09	0.52
1:A:836:G:C6	1:A:851:G:C5	2.98	0.52
1:A:954:G:C5	1:A:955:U:C5	2.98	0.52
1:A:1057:G:C4'	4:C:154:SER:HB2	2.40	0.52
1:A:1083:U:H5	1:A:1084:G:C6	2.26	0.52
13:L:75:HIS:CD2	13:L:77:LEU:H	2.28	0.52
14:M:65:LYS:O	14:M:66:LEU:HD23	2.09	0.52
16:O:66:LEU:O	16:O:69:TYR:HB3	2.10	0.52
17:P:14:ASN:OD1	17:P:16:HIS:HE1	1.91	0.52
18:Q:31:LEU:HD23	18:Q:32:TYR:CZ	2.44	0.52
1:A:18:C:H2'	1:A:19:C:H6	1.75	0.52
1:A:57:G:C5	1:A:58:C:C5	2.98	0.52
1:A:226:G:C6	1:A:227:G:N7	2.78	0.52
1:A:246:A:C6	1:A:279:A:C5	2.97	0.52
1:A:277:C:C2'	1:A:278:G:O5'	2.58	0.52
1:A:419:C:C2	1:A:425:G:C2	2.98	0.52
1:A:446:G:H2'	1:A:447:G:H5'	1.91	0.52
1:A:451:A:N7	1:A:481:G:N1	2.57	0.52
1:A:644:G:C5	1:A:645:C:C5	2.98	0.52
1:A:746:A:C6	1:A:747:C:N4	2.78	0.52
1:A:1138:G:H3'	1:A:1138:G:N3	2.25	0.52
1:A:1157:A:H1'	1:A:1181:G:H22	1.73	0.52
1:A:1381:U:O2'	1:A:1382:C:H5'	2.10	0.52
5:D:52:SER:O	5:D:55:ALA:HB3	2.10	0.52
6:E:121:LYS:HD2	6:E:122:GLU:N	2.25	0.52
10:I:50:LEU:C	10:I:52:ALA:N	2.68	0.52
11:J:47:PHE:CE2	15:N:37:PHE:HE1	2.28	0.52
1:A:36:C:C5'	13:L:122:THR:O	2.52	0.52
1:A:191:G:O2'	1:A:192:U:H5'	2.10	0.52
1:A:859:A:O2'	1:A:860:A:H5'	2.09	0.52
1:A:926:G:H3'	1:A:1505:G:N2	2.23	0.52
1:A:1026:G:N2	1:A:1027:C:O4'	2.43	0.52
1:A:1108:G:H2'	1:A:1109:C:C5'	2.39	0.52
1:A:1167:A:C6	1:A:1168:A:C6	2.98	0.52
1:A:1187:G:C4	1:A:1188:A:N7	2.78	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1257:U:O2'	1:A:1258:G:OP2	2.24	0.52
1:A:1316:G:N1	1:A:1319:A:OP2	2.34	0.52
3:B:98:LEU:HB2	3:B:101:MET:HG3	1.92	0.52
3:B:124:SER:HB2	3:B:125:PRO:HD2	1.91	0.52
12:K:24:SER:HB3	12:K:27:ASN:O	2.09	0.52
12:K:84:VAL:O	12:K:84:VAL:HG23	2.10	0.52
14:M:4:ILE:HG22	14:M:5:ALA:H	1.73	0.52
16:O:77:ARG:HH11	16:O:77:ARG:HG3	1.74	0.52
20:S:44:MET:O	20:S:47:HIS:HD2	1.93	0.52
1:A:27:G:C5	1:A:557:G:C2	2.99	0.51
1:A:35:G:C6	1:A:36:C:N4	2.78	0.51
1:A:575:G:C2	1:A:881:G:N3	2.78	0.51
1:A:644:G:C2'	1:A:645:C:H5'	2.40	0.51
1:A:673:G:O3'	7:F:87:ARG:NH2	2.43	0.51
1:A:886:G:H2'	1:A:887:G:H8	1.75	0.51
1:A:926:G:C8	1:A:1505:G:N2	2.79	0.51
1:A:1237:C:H3'	1:A:1238:A:H5'	1.92	0.51
1:A:1480:G:C4	1:A:1481:U:C5	2.98	0.51
1:A:1495:U:H2'	1:A:1496:C:H6	1.74	0.51
6:E:80:ILE:HG22	9:H:104:ARG:NH2	2.24	0.51
16:O:7:GLU:O	16:O:11:VAL:HG23	2.10	0.51
1:A:174:C:C2	1:A:175:C:C6	2.98	0.51
1:A:604:G:N2	1:A:635:G:C4	2.78	0.51
1:A:712:A:H2'	1:A:713:G:O4'	2.10	0.51
1:A:818:G:O2'	1:A:820:U:C6	2.63	0.51
1:A:963:G:H21	11:J:55:LYS:HD3	1.75	0.51
1:A:1033:G:C2'	1:A:1034:G:H5'	2.40	0.51
1:A:1180:A:OP1	10:I:103:THR:HG23	2.09	0.51
1:A:1250:A:N6	1:A:1251:A:N6	2.58	0.51
1:A:1250:A:N7	1:A:1287:A:C8	2.78	0.51
1:A:1504:G:H4'	1:A:1505:G:O5'	2.10	0.51
12:K:77:MET:CE	12:K:80:VAL:HG22	2.40	0.51
13:L:84:LEU:HB3	13:L:101:VAL:HB	1.91	0.51
1:A:9:G:OP1	6:E:122:GLU:HG3	2.10	0.51
1:A:605:U:H2'	1:A:606:G:H5'	1.92	0.51
1:A:677:U:O5'	1:A:677:U:H6	1.93	0.51
1:A:677:U:H2'	1:A:678:U:C6	2.44	0.51
1:A:686:U:O4	1:A:703:G:O2'	2.23	0.51
1:A:1065:U:O2'	1:A:1066:C:OP2	2.26	0.51
1:A:1292:U:O2'	1:A:1293:G:H5'	2.10	0.51
1:A:1309:G:C6	1:A:1329:A:C2	2.98	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:10:LEU:HD12	7:F:59:TYR:HB3	1.92	0.51
7:F:82:ARG:HA	7:F:82:ARG:HE	1.76	0.51
8:G:75:VAL:CG1	8:G:86:GLN:HB3	2.40	0.51
14:M:70:LEU:C	14:M:72:ALA:N	2.64	0.51
16:O:39:LEU:HD22	16:O:43:LEU:HD11	1.92	0.51
1:A:16:A:N1	1:A:919:A:H2	2.09	0.51
1:A:185:A:H2'	1:A:186:C:C6	2.44	0.51
1:A:248:C:O2'	1:A:249:U:H5'	2.11	0.51
1:A:324:G:N2	1:A:327:A:C8	2.78	0.51
1:A:450:G:N7	1:A:481:G:O6	2.43	0.51
1:A:812:C:HO2'	1:A:813:U:P	2.32	0.51
1:A:926:G:H2'	1:A:1505:G:N3	2.26	0.51
1:A:1164:G:N1	1:A:1173:G:C6	2.79	0.51
1:A:1284:C:H3'	1:A:1285:A:C8	2.45	0.51
4:C:149:ALA:O	4:C:169:ALA:HB1	2.11	0.51
12:K:69:ALA:O	12:K:73:MET:HG2	2.10	0.51
14:M:11:ARG:HG2	14:M:12:ASN:N	2.26	0.51
14:M:70:LEU:C	14:M:72:ALA:H	2.19	0.51
15:N:29:ARG:HB3	15:N:40:CYS:HB3	1.92	0.51
1:A:460:A:C5	1:A:462:G:C6	2.99	0.51
1:A:895:G:C4	1:A:896:C:C5	2.98	0.51
1:A:947:G:C5	1:A:948:C:N4	2.78	0.51
1:A:1097:C:H1'	1:A:1169:A:H1'	1.93	0.51
1:A:1272:G:C6	1:A:1273:G:N7	2.78	0.51
1:A:1368:G:O2'	1:A:1369:C:H5'	2.10	0.51
1:A:1425:U:H2'	1:A:1426:C:C6	2.45	0.51
3:B:129:GLU:O	3:B:130:ARG:HB2	2.09	0.51
5:D:157:LEU:HD23	5:D:161:ASN:ND2	2.24	0.51
5:D:170:VAL:HG21	5:D:176:LEU:CD2	2.32	0.51
5:D:190:ASP:O	5:D:193:ASP:HB2	2.09	0.51
6:E:99:GLY:O	6:E:101:ILE:HG13	2.11	0.51
19:R:76:LEU:HB2	19:R:78:LEU:HD12	1.92	0.51
1:A:15:G:C1'	6:E:24:ARG:NH1	2.69	0.51
1:A:64:G:H4'	1:A:65:U:C5'	2.40	0.51
1:A:186:C:H2'	1:A:187:C:H6	1.75	0.51
1:A:372:C:O2'	1:A:373:A:OP2	2.24	0.51
1:A:449:C:C5	1:A:450:G:C5	2.99	0.51
1:A:481:G:OP2	1:A:481:G:O4'	2.28	0.51
1:A:1064:G:C2	1:A:1066:C:N4	2.78	0.51
1:A:1113:C:C4'	4:C:14:ILE:HD11	2.29	0.51
1:A:1520:G:H2'	1:A:1521:G:C8	2.40	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1521:G:C4	1:A:1522:U:C5	2.99	0.51
3:B:108:ILE:C	3:B:110:GLN:N	2.67	0.51
11:J:49:VAL:O	11:J:60:ARG:HA	2.10	0.51
13:L:119:LYS:O	13:L:120:TYR:CB	2.59	0.51
21:T:73:HIS:HB2	21:T:76:ALA:HB2	1.93	0.51
1:A:180:U:O2'	1:A:181:G:H5'	2.11	0.51
1:A:531:U:C5'	1:A:532:A:OP1	2.55	0.51
1:A:661:G:H8	1:A:661:G:H5''	1.74	0.51
1:A:926:G:C2'	1:A:1505:G:H21	2.23	0.51
1:A:939:G:H5''	8:G:102:ARG:HH12	1.76	0.51
1:A:959:A:C3'	1:A:960:U:H5''	2.38	0.51
1:A:1003:G:H2'	1:A:1003(A):G:O5'	2.11	0.51
1:A:1045:C:H3'	1:A:1045:C:C6	2.45	0.51
1:A:1151:A:N1	1:A:1152:A:C6	2.78	0.51
1:A:1197:G:O5'	1:A:1197:G:H8	1.92	0.51
1:A:1306:A:H2	1:A:1307:U:H1'	1.76	0.51
3:B:144:ARG:O	3:B:147:LYS:HB2	2.11	0.51
3:B:181:PHE:N	3:B:181:PHE:CD1	2.77	0.51
3:B:200:ILE:HG22	3:B:201:ILE:H	1.74	0.51
3:B:207:ALA:O	3:B:211:ILE:HG13	2.10	0.51
8:G:27:ILE:O	8:G:30:ILE:N	2.42	0.51
11:J:55:LYS:O	11:J:55:LYS:CG	2.56	0.51
1:A:25:C:C5	1:A:558:G:N2	2.79	0.51
1:A:245:C:C6	1:A:284:G:N2	2.79	0.51
1:A:286:G:O2'	1:A:287:U:H5'	2.10	0.51
1:A:319:G:C5	1:A:320:C:C5	2.99	0.51
1:A:397:A:N6	1:A:548:G:C5	2.79	0.51
1:A:403:C:O2'	5:D:122:ARG:NH2	2.42	0.51
1:A:423:G:N2	1:A:424:G:C5	2.78	0.51
1:A:509:A:C8	1:A:509:A:C3'	2.93	0.51
1:A:713:G:H21	1:A:777:A:H4'	1.74	0.51
1:A:836:G:C5	1:A:851:G:C6	2.99	0.51
1:A:1152:A:C5'	11:J:13:HIS:CD2	2.93	0.51
1:A:1156:G:H8	1:A:1156:G:O5'	1.94	0.51
1:A:1379:G:OP1	8:G:6:ARG:NH2	2.43	0.51
4:C:47:LEU:N	4:C:47:LEU:HD12	2.26	0.51
5:D:155:LEU:O	5:D:159:ARG:HB2	2.11	0.51
9:H:29:SER:C	9:H:31:PHE:H	2.17	0.51
1:A:20:U:H5'	1:A:572:A:N6	2.26	0.51
1:A:149:A:C2	1:A:150:C:C4	2.99	0.51
1:A:370:C:C2	1:A:371:G:N7	2.79	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:658:G:C4	1:A:659:U:C5	2.99	0.51
1:A:734:G:C4	1:A:735:C:C5	2.99	0.51
1:A:890:G:O2'	1:A:891:U:P	2.69	0.51
1:A:1225:A:N3	1:A:1225:A:C2'	2.72	0.51
1:A:1226:C:H5'	14:M:96:LEU:HD11	1.93	0.51
1:A:1348:U:C2	1:A:1349:A:C8	2.99	0.51
2:1:2:A:C6	2:1:3:A:N6	2.78	0.51
4:C:73:PRO:O	4:C:75:VAL:N	2.44	0.51
11:J:34:VAL:HG13	11:J:73:ASP:O	2.11	0.51
19:R:86:VAL:O	19:R:86:VAL:HG12	2.10	0.51
20:S:40:ILE:HD11	20:S:74:PHE:HE1	1.76	0.51
1:A:102:G:H5''	21:T:17:ARG:HH12	1.76	0.51
1:A:155:C:O2'	1:A:156:G:H5'	2.10	0.51
1:A:186:C:O3'	21:T:82:SER:OG	2.29	0.51
1:A:202:U:O2'	1:A:203:U:OP1	2.28	0.51
1:A:416:G:C6	1:A:417:C:C4	2.99	0.51
1:A:558:G:N9	1:A:559:A:C2	2.79	0.51
1:A:746:A:C6	1:A:747:C:C4	2.99	0.51
1:A:1049:U:H1'	1:A:1201:A:C8	2.46	0.51
1:A:1190:G:H2'	1:A:1191:A:OP2	2.09	0.51
1:A:1461:G:H2'	1:A:1462:G:H8	1.76	0.51
4:C:23:TYR:CD2	4:C:24:ALA:N	2.79	0.51
9:H:44:PHE:HB3	9:H:80:ILE:CG1	2.41	0.51
12:K:24:SER:OG	12:K:25:TYR:N	2.44	0.51
13:L:83:VAL:HG21	13:L:100:ILE:HD13	1.92	0.51
20:S:50:ALA:HA	20:S:59:PRO:HA	1.92	0.51
1:A:88:A:H8	1:A:88:A:O5'	1.94	0.50
1:A:254:G:O2'	1:A:255:G:H5'	2.11	0.50
1:A:262:A:C6	1:A:263:A:C6	2.99	0.50
1:A:375:U:OP1	17:P:69:THR:HG21	2.11	0.50
1:A:391:G:C6	1:A:392:G:C5	2.99	0.50
1:A:773:G:O2'	1:A:774:G:H5'	2.11	0.50
1:A:1053:G:N7	1:A:1199:U:C6	2.79	0.50
1:A:1154:G:O2'	1:A:1155:G:H5'	2.11	0.50
1:A:1346:A:C4	8:G:10:ARG:NH2	2.79	0.50
1:A:1472:U:H2'	1:A:1473:A:H8	1.76	0.50
1:A:1511:G:H8	1:A:1511:G:O5'	1.94	0.50
8:G:111:ARG:HB3	8:G:113:GLU:HG3	1.93	0.50
13:L:83:VAL:HG22	13:L:84:LEU:N	2.24	0.50
1:A:373:A:O2'	1:A:374:A:H5'	2.11	0.50
1:A:434:U:N3	1:A:435:C:C4	2.79	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:681:C:H2'	1:A:682:G:C8	2.45	0.50
1:A:858:G:O6	1:A:869:G:C8	2.64	0.50
1:A:1160:G:O2'	1:A:1161:C:H5'	2.11	0.50
1:A:1206:G:H2'	1:A:1207:G:O4'	2.11	0.50
1:A:1381:U:O2	1:A:1382:C:C6	2.64	0.50
1:A:1459:C:O2'	1:A:1460:A:H5'	2.10	0.50
4:C:174:PRO:C	4:C:176:HIS:H	2.18	0.50
14:M:89:GLY:O	14:M:92:HIS:HB2	2.12	0.50
15:N:6:LEU:HA	15:N:9:LYS:HB3	1.94	0.50
16:O:9:GLN:HA	16:O:12:ILE:HD12	1.92	0.50
22:V:12:LYS:O	22:V:16:GLY:N	2.41	0.50
1:A:41:G:C2	1:A:42:G:C5	2.99	0.50
1:A:414:A:O2'	1:A:415:A:H5'	2.11	0.50
1:A:429:U:C2'	5:D:25:ARG:HH12	2.05	0.50
1:A:448:A:C5	1:A:487:A:C4	2.99	0.50
1:A:463:A:C5	1:A:474:G:C8	3.00	0.50
1:A:686:U:O2	12:K:42:TRP:HZ2	1.93	0.50
1:A:865:A:C2'	1:A:866:C:H5'	2.41	0.50
1:A:1007:C:C2	1:A:1008:C:C5	2.99	0.50
1:A:1093:A:C2	1:A:1095:U:H5'	2.47	0.50
1:A:1318:A:O2'	20:S:37:ARG:HD2	2.12	0.50
1:A:1365:G:O2'	1:A:1366:C:H5'	2.11	0.50
1:A:1368:G:OP2	10:I:112:LYS:HD3	2.11	0.50
1:A:1435:G:C2'	1:A:1436:U:H6	2.15	0.50
1:A:1488:G:C2	1:A:1489:G:C5	2.99	0.50
3:B:17:PHE:N	3:B:17:PHE:CD1	2.79	0.50
5:D:3:ARG:HB2	5:D:118:ARG:HH12	1.76	0.50
9:H:26:VAL:HG13	9:H:59:LEU:HB2	1.93	0.50
9:H:83:ILE:HG23	9:H:83:ILE:O	2.11	0.50
14:M:84:ILE:C	14:M:86:CYS:H	2.19	0.50
19:R:43:PHE:C	19:R:51:LEU:HD12	2.36	0.50
1:A:199:G:O2'	1:A:200:G:H5'	2.11	0.50
1:A:507:C:H2'	1:A:508:C:C5	2.46	0.50
1:A:713:G:N2	1:A:777:A:C1'	2.75	0.50
1:A:876:G:H1'	9:H:11:THR:HG21	1.92	0.50
1:A:878:G:H5'	9:H:89:PRO:HG2	1.94	0.50
1:A:1154:G:O2'	1:A:1155:G:C5'	2.59	0.50
1:A:1193:G:C2	1:A:1194:U:C6	3.00	0.50
1:A:1304:G:H1'	1:A:1333:A:H61	1.77	0.50
1:A:1357:A:C5	1:A:1358:U:C4	2.99	0.50
1:A:1441:G:H5''	1:A:1442:G:C8	2.47	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1442:G:N3	1:A:1442:G:C2'	2.74	0.50
1:A:1462:G:H2'	1:A:1463:C:C6	2.47	0.50
1:A:1502:A:H2	1:A:1505:G:H1	1.59	0.50
4:C:27:LYS:O	4:C:31:HIS:HD2	1.95	0.50
7:F:11:ASN:OD1	7:F:13:ASN:N	2.44	0.50
8:G:12:LEU:N	8:G:12:LEU:CD1	2.71	0.50
8:G:16:LEU:H	8:G:16:LEU:CD2	2.20	0.50
11:J:7:LYS:HA	11:J:71:LEU:HD22	1.93	0.50
19:R:22:VAL:HG11	19:R:42:ARG:HB3	1.94	0.50
1:A:32:A:H61	1:A:553:A:N6	2.07	0.50
1:A:396:G:O2'	1:A:398:C:OP1	2.25	0.50
1:A:451:A:C1'	1:A:452:A:C8	2.93	0.50
1:A:457:C:H2'	1:A:458:C:H6	1.75	0.50
1:A:701:C:O2'	1:A:702:A:OP2	2.23	0.50
1:A:745:C:H2'	1:A:746:A:C8	2.47	0.50
1:A:909:A:OP1	13:L:21:LYS:HD3	2.11	0.50
1:A:927:G:O2'	1:A:928:G:H5'	2.11	0.50
1:A:1090:U:O2'	1:A:1091:U:H5'	2.12	0.50
1:A:1331:G:O2'	1:A:1332:A:OP2	2.29	0.50
1:A:1352:C:O2	1:A:1371:G:C2	2.63	0.50
1:A:1510:U:H2'	1:A:1511:G:N7	2.27	0.50
3:B:98:LEU:HB2	3:B:101:MET:CG	2.41	0.50
3:B:153:ARG:CB	3:B:153:ARG:HH11	2.24	0.50
6:E:127:ASN:O	6:E:128:PRO:C	2.54	0.50
14:M:84:ILE:CG2	20:S:66:MET:HE2	2.42	0.50
19:R:21:LYS:HD3	19:R:57:GLY:HA2	1.93	0.50
1:A:175:C:C2	1:A:176:C:C6	2.99	0.50
1:A:246:A:C5	1:A:279:A:C6	2.99	0.50
1:A:646:U:H2'	1:A:647:C:C6	2.47	0.50
1:A:650:G:C2	1:A:651:C:C6	3.00	0.50
1:A:986:A:O2'	20:S:55:LYS:HG3	2.11	0.50
1:A:1058:G:C5	1:A:1059:C:C4	2.99	0.50
1:A:1058:G:C6	1:A:1059:C:C4	2.99	0.50
1:A:1107:C:N4	1:A:1108:G:C5	2.80	0.50
1:A:1118:C:P	10:I:104:ARG:HH12	2.34	0.50
1:A:1248:A:H1'	10:I:70:LYS:HZ1	1.69	0.50
1:A:1309:G:C2'	1:A:1310:G:H5'	2.41	0.50
1:A:1311:G:O6	20:S:2:PRO:HB2	2.10	0.50
1:A:1347:G:H8	10:I:107:ARG:HB3	1.71	0.50
1:A:1486:G:H2'	1:A:1487:G:C8	2.47	0.50
3:B:162:ILE:HG22	3:B:163:PHE:N	2.27	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:103:ASN:O	5:D:106:TYR:HB3	2.12	0.50
9:H:82:HIS:HD2	9:H:138:TRP:NE1	2.09	0.50
16:O:36:ILE:HG12	16:O:59:MET:HE3	1.94	0.50
1:A:149:A:N3	1:A:150:C:C6	2.80	0.50
1:A:279:A:N1	18:Q:98:LEU:HD13	2.25	0.50
1:A:507:C:H2'	1:A:508:C:H5	1.77	0.50
1:A:509:A:C8	1:A:509:A:H3'	2.46	0.50
1:A:561:U:O2'	1:A:562:C:OP2	2.25	0.50
1:A:703:G:H2'	1:A:703:G:OP2	2.11	0.50
1:A:713:G:N2	1:A:777:A:H4'	2.27	0.50
1:A:725:G:C4	1:A:726:C:C5	3.00	0.50
1:A:1125:U:H2'	1:A:1126:U:OP2	2.12	0.50
6:E:84:PHE:O	6:E:86:ALA:N	2.41	0.50
11:J:37:PRO:HA	11:J:71:LEU:O	2.12	0.50
12:K:77:MET:HE1	12:K:80:VAL:HG22	1.94	0.50
1:A:39:G:C5	1:A:498:U:O4	2.65	0.50
1:A:112:G:C6	1:A:113:G:N7	2.80	0.50
1:A:190(L):U:N3	21:T:105:SER:OG	2.45	0.50
1:A:436:C:H2'	1:A:437:U:C6	2.45	0.50
1:A:453:A:C2	1:A:454:C:N1	2.80	0.50
1:A:767:A:C4	1:A:768:A:C8	3.00	0.50
1:A:1045:C:H2'	1:A:1046:A:O5'	2.12	0.50
1:A:1317:C:H2'	1:A:1318:A:O4'	2.10	0.50
1:A:1333:A:N7	1:A:1334:G:N7	2.60	0.50
1:A:1498:U:H1'	1:A:1499:A:N7	2.27	0.50
3:B:16:HIS:NE2	3:B:210:SER:HB3	2.26	0.50
8:G:12:LEU:HD12	8:G:12:LEU:H	1.77	0.50
15:N:44:LEU:C	15:N:44:LEU:HD12	2.36	0.50
1:A:15:G:C2	1:A:16:A:C4	3.00	0.50
1:A:355:C:N3	1:A:356:A:C8	2.80	0.50
1:A:408:A:N1	1:A:409:G:C5	2.80	0.50
1:A:688:G:O5'	12:K:47:VAL:HG23	2.12	0.50
1:A:721:G:N1	1:A:733:A:C2	2.80	0.50
1:A:1104:G:H4'	3:B:111:ARG:NH1	2.27	0.50
1:A:1206:G:C5	1:A:1207:G:C8	3.00	0.50
1:A:1223:C:P	20:S:78:ARG:HH22	2.35	0.50
1:A:1240:U:H5''	1:A:1241:G:C8	2.47	0.50
6:E:11:ILE:HD11	6:E:108:ALA:HB3	1.93	0.50
20:S:62:ILE:HD12	20:S:66:MET:SD	2.52	0.50
1:A:42:G:N3	1:A:43:C:C6	2.79	0.49
1:A:57:G:C2'	1:A:58:C:H6	2.07	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:69:G:H2'	1:A:70:G:H8	1.77	0.49
1:A:402:G:C5	1:A:403:C:C5	3.00	0.49
1:A:531:U:H4'	1:A:532:A:C5'	2.41	0.49
1:A:1234:C:H4'	1:A:1364:U:H1'	1.93	0.49
1:A:1367:C:OP1	10:I:115:GLY:N	2.36	0.49
1:A:1414:U:H2'	1:A:1415:G:H8	1.77	0.49
9:H:97:VAL:HG13	9:H:98:LYS:N	2.27	0.49
13:L:83:VAL:CG2	13:L:100:ILE:HG23	2.42	0.49
14:M:22:ILE:HD12	14:M:25:ILE:HD12	1.92	0.49
1:A:60:A:H1'	1:A:61:G:O4'	2.12	0.49
1:A:369:C:N3	1:A:370:C:C5	2.80	0.49
1:A:416:G:C6	1:A:417:C:N3	2.80	0.49
1:A:496:A:C4'	1:A:497:A:OP1	2.61	0.49
1:A:674:G:P	7:F:87:ARG:HH22	2.35	0.49
1:A:859:A:H2'	1:A:860:A:H8	1.77	0.49
1:A:910:C:H2'	1:A:911:U:C6	2.47	0.49
1:A:1509:C:O2'	1:A:1510:U:H5'	2.12	0.49
3:B:165:VAL:O	3:B:167:PRO:HD3	2.13	0.49
4:C:148:GLY:HA3	4:C:172:ARG:O	2.12	0.49
9:H:114:THR:C	9:H:116:LYS:N	2.67	0.49
11:J:79:ARG:HH11	11:J:82:ILE:HD12	1.76	0.49
18:Q:76:LEU:HD23	18:Q:76:LEU:C	2.37	0.49
20:S:15:LEU:O	20:S:19:VAL:N	2.42	0.49
21:T:75:ASN:O	21:T:78:ALA:HB3	2.11	0.49
1:A:68:G:H5'	1:A:171:A:H1'	1.93	0.49
1:A:280:C:O2	18:Q:38:ARG:HG3	2.13	0.49
1:A:392:G:C2	1:A:393:A:C8	3.00	0.49
1:A:476:G:H2'	1:A:477:G:H8	1.76	0.49
1:A:516:U:C5	1:A:517:G:C6	3.01	0.49
1:A:604:G:C2	1:A:635:G:C5	3.00	0.49
1:A:616:G:N2	1:A:625:G:C4	2.79	0.49
1:A:723:U:OP1	1:A:723:U:C5	2.65	0.49
1:A:753:A:H5'	1:A:754:C:C5	2.46	0.49
1:A:770:C:O4'	1:A:900:A:C2	2.65	0.49
1:A:922:G:H2'	1:A:923:A:H8	1.69	0.49
1:A:948:C:HO2'	1:A:949:A:H5'	1.74	0.49
1:A:1039:C:H2'	1:A:1040:U:H6	1.77	0.49
1:A:1173:G:C4	1:A:1174:G:C8	3.00	0.49
1:A:1309:G:C6	1:A:1329:A:N1	2.80	0.49
1:A:1418:A:C6	1:A:1483:A:C5	3.00	0.49
1:A:1430:C:O2'	1:A:1431:C:H5'	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:4:TYR:CG	5:D:5:ILE:N	2.75	0.49
5:D:176:LEU:O	5:D:176:LEU:HD23	2.12	0.49
18:Q:5:VAL:HA	18:Q:59:ILE:O	2.12	0.49
18:Q:62:SER:HB2	18:Q:72:ARG:HG3	1.92	0.49
1:A:113:G:C4	1:A:114:U:C5	3.00	0.49
1:A:508:C:OP1	5:D:209:ARG:NH2	2.45	0.49
1:A:919:A:O2'	1:A:920:U:H5'	2.12	0.49
1:A:940:C:HO2'	1:A:941:G:H5'	1.74	0.49
1:A:1089:G:C5	1:A:1090:U:C6	3.00	0.49
1:A:1128:C:C2	1:A:1139:G:O6	2.65	0.49
1:A:1158:C:O2	1:A:1158:C:C2'	2.61	0.49
1:A:1541:U:H6	1:A:1541:U:O5'	1.96	0.49
4:C:119:ARG:O	4:C:123:GLN:HG3	2.11	0.49
8:G:70:LYS:HB3	8:G:96:GLN:HB3	1.93	0.49
8:G:148:ASN:C	8:G:150:ALA:N	2.62	0.49
10:I:90:PRO:C	10:I:92:TYR:H	2.18	0.49
18:Q:81:ARG:HG3	18:Q:81:ARG:O	2.12	0.49
1:A:69:G:C2	1:A:70:G:C8	3.01	0.49
1:A:277:C:H2'	1:A:278:G:O5'	2.12	0.49
1:A:439:A:C5	1:A:497:A:C2	3.01	0.49
1:A:505:G:C6	1:A:535:A:C2	3.01	0.49
1:A:665:A:N3	1:A:732:C:C2	2.81	0.49
1:A:684:A:H1'	12:K:38:ASN:ND2	2.25	0.49
1:A:690:G:C6	1:A:691:G:N1	2.81	0.49
1:A:947:G:C5	1:A:948:C:C5	3.00	0.49
1:A:981:U:H2'	1:A:982:U:C6	2.46	0.49
1:A:993:G:H4'	1:A:994:A:OP2	2.12	0.49
1:A:1030:C:C2'	1:A:1030(A):G:H8	2.21	0.49
1:A:1057:G:C4	1:A:1058:G:C8	3.00	0.49
1:A:1148:U:H2'	1:A:1149:C:O4'	2.12	0.49
1:A:1158:C:N3	1:A:1160:G:N7	2.61	0.49
1:A:1309:G:C2	1:A:1329:A:N3	2.81	0.49
1:A:1311:G:N2	1:A:1327:C:C2	2.81	0.49
5:D:162:LEU:N	5:D:162:LEU:HD23	2.26	0.49
13:L:26:ALA:O	13:L:28:LYS:N	2.45	0.49
1:A:41:G:N1	1:A:42:G:C6	2.81	0.49
1:A:245:C:C2'	1:A:246:A:H5'	2.43	0.49
1:A:522:C:O2'	1:A:523:A:H5'	2.12	0.49
1:A:523:A:C2	1:A:527:G:O6	2.65	0.49
1:A:588:G:C5	1:A:753:A:C5	3.01	0.49
1:A:643:C:H2'	1:A:644:G:C8	2.44	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:820:U:C4'	1:A:821:G:OP2	2.54	0.49
1:A:958:A:C6	1:A:959:A:C6	3.01	0.49
1:A:1155:G:H2'	1:A:1156:G:C8	2.48	0.49
1:A:1164:G:C6	1:A:1173:G:C6	3.00	0.49
1:A:1231:G:H2'	1:A:1232:U:H6	1.77	0.49
1:A:1284:C:H2'	1:A:1285:A:N7	2.27	0.49
5:D:70:ILE:HD11	5:D:100:ARG:NE	2.27	0.49
8:G:113:GLU:O	8:G:119:ARG:HD3	2.12	0.49
11:J:47:PHE:CZ	15:N:37:PHE:CZ	3.01	0.49
14:M:39:ILE:O	14:M:41:PRO:HD3	2.13	0.49
19:R:73:ALA:HB3	19:R:79:LEU:CD1	2.43	0.49
1:A:92:C:H2'	1:A:93:G:H8	1.76	0.49
1:A:184:G:O2'	1:A:185:A:H5'	2.13	0.49
1:A:376:G:H4'	17:P:5:ARG:NH1	2.28	0.49
1:A:392:G:C6	1:A:393:A:N7	2.80	0.49
1:A:401:C:H2'	1:A:402:G:H8	1.77	0.49
1:A:410:G:N2	1:A:429:U:C2	2.80	0.49
1:A:572:A:N1	1:A:864:A:C5	2.81	0.49
1:A:572:A:C2	1:A:864:A:C6	3.01	0.49
1:A:722:A:H5'	1:A:723:U:OP2	2.11	0.49
1:A:981:U:C2'	1:A:982:U:C5	2.88	0.49
1:A:998:G:C6	1:A:1044:A:C6	3.01	0.49
1:A:1148:U:H4'	10:I:14:VAL:CG1	2.30	0.49
1:A:1149:C:N3	1:A:1150:U:C5	2.80	0.49
1:A:1162:C:N3	1:A:1175:G:C2	2.81	0.49
1:A:1459:C:H2'	1:A:1460:A:C5'	2.42	0.49
1:A:1495:U:H2'	1:A:1496:C:C6	2.48	0.49
4:C:39:ILE:HG22	4:C:43:LEU:HD12	1.94	0.49
10:I:64:THR:HG22	10:I:65:VAL:N	2.27	0.49
1:A:160:A:H1'	1:A:344:A:C6	2.48	0.49
1:A:197:A:H4'	1:A:198:G:O5'	2.13	0.49
1:A:277:C:O2'	1:A:278:G:C5'	2.59	0.49
1:A:496:A:C5'	1:A:497:A:OP1	2.60	0.49
1:A:587:G:C2	1:A:755:G:C5	3.01	0.49
1:A:705:U:C4	1:A:706:A:C6	3.01	0.49
1:A:1135:U:O2'	1:A:1136:U:C6	2.60	0.49
1:A:1227:A:C8	1:A:1227:A:C3'	2.94	0.49
1:A:1250:A:C6	1:A:1251:A:N6	2.80	0.49
1:A:1378:C:C5	1:A:1379:G:C8	3.00	0.49
1:A:1431:C:H2'	1:A:1432:G:H5'	1.95	0.49
6:E:11:ILE:HD11	6:E:108:ALA:CB	2.43	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:31:THR:HG23	12:K:42:TRP:HB3	1.93	0.49
13:L:32:PHE:HA	13:L:85:ILE:O	2.12	0.49
13:L:84:LEU:HD13	13:L:105:TYR:HE1	1.76	0.49
19:R:74:ARG:HB3	19:R:81:PHE:CE1	2.48	0.49
1:A:41:G:C6	1:A:42:G:O6	2.66	0.49
1:A:173:U:C6	1:A:197:A:C2	3.01	0.49
1:A:321:A:H2	1:A:332:G:H22	1.60	0.49
1:A:334:C:O5'	1:A:334:C:H6	1.96	0.49
1:A:355:C:N3	1:A:356:A:N7	2.61	0.49
1:A:451:A:C2	1:A:480:U:C4	3.01	0.49
1:A:528:C:N4	13:L:49:ASN:OD1	2.45	0.49
1:A:714:G:H2'	1:A:715:A:C8	2.47	0.49
1:A:724:G:O2'	1:A:725:G:H5'	2.12	0.49
1:A:853:G:O2'	1:A:854:G:H5'	2.12	0.49
1:A:1019:C:C2'	1:A:1020:U:H5'	2.43	0.49
1:A:1054:C:P	1:A:1197:G:OP1	2.71	0.49
1:A:1089:G:C6	1:A:1090:U:C4	3.00	0.49
1:A:1157:A:C6	1:A:1180:A:C6	3.00	0.49
1:A:1226:C:H5'	14:M:96:LEU:CD1	2.42	0.49
1:A:1368:G:H5'	10:I:112:LYS:O	2.13	0.49
1:A:1487:G:O2'	1:A:1488:G:C5'	2.58	0.49
4:C:88:ARG:O	4:C:91:LEU:HB3	2.12	0.49
6:E:144:THR:HB	6:E:147:ASP:H	1.78	0.49
17:P:8:ARG:HG2	17:P:17:TYR:CE2	2.47	0.49
19:R:74:ARG:HB3	19:R:81:PHE:CZ	2.47	0.49
1:A:295:C:O2	1:A:295:C:H2'	2.12	0.49
1:A:714:G:C2	1:A:777:A:H1'	2.48	0.49
1:A:725:G:C5	1:A:726:C:C5	3.01	0.49
1:A:792:A:O2'	1:A:793:U:OP2	2.30	0.49
1:A:933:G:O6	8:G:3:ARG:NH2	2.46	0.49
1:A:1368:G:N3	1:A:1369:C:C6	2.81	0.49
1:A:1513:A:C2	1:A:1523:G:C5	3.01	0.49
4:C:114:PRO:O	4:C:118:GLN:HG3	2.13	0.49
9:H:111:ILE:C	9:H:112:LEU:HD23	2.38	0.49
16:O:82:ILE:O	16:O:86:GLY:N	2.45	0.49
19:R:76:LEU:O	19:R:78:LEU:N	2.46	0.49
1:A:80:G:H3'	1:A:81:U:C5'	2.39	0.48
1:A:101:A:C2	1:A:102:G:C4	3.01	0.48
1:A:197:A:N6	1:A:221:C:H5'	2.27	0.48
1:A:218:C:O4'	1:A:461:C:N4	2.45	0.48
1:A:418:C:H2'	1:A:419:C:C6	2.48	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:429:U:H6	5:D:25:ARG:HH22	1.59	0.48
1:A:651:C:C2'	1:A:652:U:O5'	2.61	0.48
1:A:774:G:C2	1:A:775:G:H1'	2.47	0.48
1:A:1087:G:H2'	1:A:1088:G:H8	1.78	0.48
1:A:1128:C:O2'	1:A:1129:C:OP1	2.29	0.48
1:A:1307:U:N3	1:A:1308:U:C4	2.81	0.48
1:A:1400:C:C4'	1:A:1401:G:OP2	2.49	0.48
1:A:1433:A:N6	1:A:1434:A:C6	2.81	0.48
1:A:1459:C:H2'	1:A:1460:A:O5'	2.11	0.48
1:A:1542:U:OP2	1:A:1542:U:C6	2.66	0.48
11:J:61:GLU:OE1	15:N:45:ARG:NH1	2.46	0.48
13:L:45:PRO:HG2	13:L:51:ALA:N	2.28	0.48
19:R:39:VAL:CG1	19:R:40:LEU:N	2.76	0.48
1:A:4:U:N3	9:H:105:ARG:HD2	2.27	0.48
1:A:175:C:O2	1:A:176:C:C6	2.66	0.48
1:A:282:A:H3'	1:A:283:C:C6	2.48	0.48
1:A:374:A:C6	1:A:375:U:C4	3.01	0.48
1:A:420:U:N3	1:A:424:G:C6	2.81	0.48
1:A:626:U:H5''	17:P:38:TYR:CD2	2.48	0.48
1:A:803:G:H2'	1:A:804:U:O4'	2.11	0.48
1:A:837:G:N2	1:A:850:U:H1'	2.27	0.48
1:A:926:G:C4	1:A:1505:G:C2	3.00	0.48
1:A:1089:G:O6	1:A:1090:U:C4	2.67	0.48
1:A:1113:C:O5'	1:A:1113:C:H6	1.95	0.48
1:A:1152:A:H4'	11:J:13:HIS:HD2	1.78	0.48
1:A:1231:G:C5	1:A:1232:U:C5	3.00	0.48
1:A:1498:U:O2'	1:A:1499:A:C8	2.58	0.48
6:E:115:VAL:CG1	6:E:116:THR:N	2.75	0.48
8:G:16:LEU:HD21	10:I:42:ARG:HG2	1.94	0.48
8:G:155:ARG:O	8:G:156:TRP:HB2	2.12	0.48
9:H:26:VAL:HG12	9:H:59:LEU:O	2.13	0.48
9:H:114:THR:C	9:H:116:LYS:H	2.20	0.48
11:J:10:GLY:HA3	11:J:16:LEU:HD21	1.94	0.48
14:M:81:LEU:CD2	14:M:81:LEU:N	2.68	0.48
1:A:31:G:O2'	1:A:32:A:O5'	2.31	0.48
1:A:32:A:C2	1:A:33:A:C4	3.02	0.48
1:A:36:C:C4	1:A:37:U:C5	3.02	0.48
1:A:218:C:C4'	1:A:461:C:H41	2.25	0.48
1:A:425:G:H2'	1:A:426:G:C5'	2.43	0.48
1:A:650:G:H2'	1:A:651:C:C5'	2.40	0.48
1:A:705:U:O4	1:A:706:A:C6	2.66	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1028:C:C2	1:A:1034:G:C2	3.01	0.48
1:A:1367:C:N3	1:A:1368:G:N7	2.61	0.48
1:A:1463:C:O2'	1:A:1464:G:H5'	2.13	0.48
1:A:1486:G:C2'	1:A:1487:G:O4'	2.61	0.48
3:B:178:ARG:HH22	9:H:74:PRO:HB3	1.78	0.48
5:D:11:LEU:O	5:D:12:CYS:C	2.55	0.48
13:L:45:PRO:HB2	13:L:49:ASN:O	2.12	0.48
21:T:73:HIS:O	21:T:74:LYS:CB	2.61	0.48
1:A:287:U:H2'	1:A:288:A:O5'	2.13	0.48
1:A:429:U:O3'	5:D:22:LYS:NZ	2.45	0.48
1:A:886:G:N3	1:A:887:G:C8	2.82	0.48
1:A:1240:U:HO2'	1:A:1241:G:P	2.37	0.48
1:A:1285:A:H4'	1:A:1286:A:O5'	2.12	0.48
1:A:1451:A:HO2'	1:A:1452:C:P	2.37	0.48
10:I:84:ALA:O	10:I:87:GLN:HB2	2.12	0.48
20:S:63:THR:HG22	20:S:64:GLU:N	2.29	0.48
1:A:34:C:H2'	1:A:35:G:H8	1.78	0.48
1:A:46:G:O2'	1:A:365:U:H1'	2.14	0.48
1:A:293:G:C6	1:A:294:U:C4	3.02	0.48
1:A:342:C:C2	1:A:348:G:C2	3.01	0.48
1:A:363:A:OP1	13:L:33:ARG:HG3	2.14	0.48
1:A:590:C:N3	1:A:591:U:C5	2.82	0.48
1:A:690:G:C6	1:A:691:G:C6	3.01	0.48
1:A:877:C:O2	9:H:3:THR:HG21	2.13	0.48
1:A:913:A:H4'	1:A:914:A:O5'	2.13	0.48
1:A:981:U:C2	1:A:982:U:C4	3.01	0.48
1:A:986:A:C6	1:A:1220:G:C6	3.02	0.48
1:A:1073:U:O2'	1:A:1074:G:H5'	2.13	0.48
6:E:103:GLY:O	6:E:106:PRO:HD2	2.14	0.48
14:M:26:GLY:O	14:M:28:ALA:N	2.44	0.48
1:A:197:A:N3	1:A:198:G:H1'	2.28	0.48
1:A:328:C:O2'	1:A:329:A:OP2	2.31	0.48
1:A:597:G:C6	1:A:644:G:O6	2.67	0.48
1:A:713:G:N2	1:A:777:A:C4'	2.74	0.48
1:A:964:A:OP1	1:A:1199:U:OP1	2.31	0.48
1:A:1121:U:H2'	1:A:1122:U:C6	2.49	0.48
1:A:1263:C:H2'	1:A:1264:C:C6	2.49	0.48
1:A:1529:G:H5''	1:A:1530:G:OP2	2.12	0.48
8:G:40:ALA:CB	10:I:41:VAL:HG11	2.43	0.48
10:I:89:ASN:O	10:I:92:TYR:HB2	2.14	0.48
21:T:51:GLU:HA	21:T:54:LYS:HB2	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:49:U:H1'	13:L:28:LYS:NZ	2.28	0.48
1:A:246:A:C4	1:A:279:A:N6	2.82	0.48
1:A:394:G:N3	1:A:395:C:C6	2.81	0.48
1:A:532:A:O2'	1:A:533:A:OP1	2.28	0.48
1:A:535:A:H5''	1:A:536:C:OP2	2.13	0.48
1:A:544:G:C5	1:A:545:C:H5	2.22	0.48
1:A:598:U:H2'	1:A:599:C:C6	2.48	0.48
1:A:642:A:C8	1:A:643:C:C5	3.02	0.48
1:A:668:G:O2'	16:O:46:HIS:HD2	1.96	0.48
1:A:805:C:H2'	1:A:806:C:C5'	2.44	0.48
1:A:917:G:H2'	1:A:918:A:O4'	2.14	0.48
1:A:1202:G:C4	15:N:42:ILE:CD1	2.96	0.48
1:A:1223:C:H3'	1:A:1224:G:H5''	1.95	0.48
1:A:1327:C:H2'	1:A:1328:C:C6	2.49	0.48
1:A:1422:G:O2'	1:A:1423:G:H5'	2.13	0.48
4:C:8:ILE:O	4:C:11:ARG:N	2.40	0.48
20:S:40:ILE:HG23	20:S:44:MET:HE3	1.95	0.48
1:A:67:C:O2'	1:A:68:G:H5'	2.13	0.48
1:A:286:G:C5	1:A:287:U:C4	3.02	0.48
1:A:341:C:O2	1:A:349:A:C2	2.66	0.48
1:A:345:C:H5''	1:A:346:G:OP1	2.14	0.48
1:A:376:G:O2'	1:A:377:G:H5'	2.14	0.48
1:A:392:G:C4	1:A:393:A:C8	3.02	0.48
1:A:434:U:H2'	1:A:435:C:C6	2.49	0.48
1:A:434:U:O2	1:A:435:C:C6	2.67	0.48
1:A:552:U:O2	13:L:31:PRO:HB3	2.14	0.48
1:A:581:G:C2	1:A:582:U:C5	3.02	0.48
1:A:1128:C:C2	1:A:1144:G:N2	2.81	0.48
1:A:1180:A:O2'	1:A:1181:G:H5'	2.13	0.48
1:A:1193:G:C2	1:A:1194:U:C5	3.01	0.48
1:A:1238:A:H5'	1:A:1336:C:H41	1.79	0.48
1:A:1358:U:H3'	1:A:1359:C:C6	2.48	0.48
3:B:92:TYR:CE2	3:B:151:GLY:HA3	2.48	0.48
7:F:10:LEU:CD1	7:F:59:TYR:HB3	2.43	0.48
9:H:6:ILE:HD11	9:H:31:PHE:CD2	2.49	0.48
14:M:59:TYR:CE1	14:M:63:THR:HG21	2.49	0.48
1:A:6:G:N2	6:E:98:THR:OG1	2.46	0.48
1:A:36:C:N3	1:A:37:U:C5	2.82	0.48
1:A:455:C:O2'	1:A:456:C:H5'	2.14	0.48
1:A:543:C:O2'	1:A:544:G:H5'	2.13	0.48
1:A:596:C:O2'	1:A:597:G:H5'	2.14	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:818:G:C3'	1:A:819:A:H5''	2.44	0.48
1:A:854:G:H3'	1:A:871:U:C4	2.48	0.48
1:A:910:C:H2'	1:A:911:U:H6	1.79	0.48
1:A:949:A:N7	1:A:950:U:C5	2.82	0.48
1:A:1074:G:O2'	1:A:1075:C:H5'	2.14	0.48
1:A:1094:G:C5'	1:A:1095:U:H5	2.18	0.48
1:A:1152:A:OP1	11:J:68:HIS:ND1	2.47	0.48
1:A:1248:A:C4	1:A:1249:C:C5	3.01	0.48
1:A:1329:A:C2'	1:A:1330:U:C5'	2.88	0.48
1:A:1371:G:O2'	1:A:1372:U:H5'	2.13	0.48
3:B:164:VAL:O	3:B:186:ALA:HA	2.14	0.48
4:C:34:LEU:HD23	4:C:34:LEU:O	2.14	0.48
13:L:22:SER:C	13:L:24:VAL:H	2.20	0.48
16:O:3:ILE:H	16:O:3:ILE:CD1	2.25	0.48
1:A:22:G:O2'	1:A:23:C:C5'	2.56	0.48
1:A:274:A:O2'	1:A:275:G:H8	1.97	0.48
1:A:325:A:H2'	1:A:326:G:O4'	2.13	0.48
1:A:370:C:O2	1:A:371:G:C8	2.66	0.48
1:A:449:C:C6	1:A:450:G:C8	3.02	0.48
1:A:1045:C:C6	1:A:1045:C:C3'	2.97	0.48
1:A:1074:G:C2	1:A:1102:A:C5	3.02	0.48
1:A:1195:C:C3'	1:A:1196:U:H5'	2.31	0.48
1:A:1202:G:H2'	1:A:1203:C:C5'	2.44	0.48
12:K:84:VAL:HG22	12:K:110:ASP:HA	1.96	0.48
15:N:44:LEU:HD12	15:N:44:LEU:O	2.14	0.48
1:A:15:G:C4'	6:E:24:ARG:HH12	2.27	0.47
1:A:293:G:C4	1:A:294:U:C5	3.01	0.47
1:A:338:A:H2'	1:A:339:C:O4'	2.14	0.47
1:A:545:C:O2	1:A:545:C:H2'	2.14	0.47
1:A:575:G:C4	1:A:881:G:N2	2.82	0.47
1:A:792:A:H4'	1:A:793:U:H5''	1.96	0.47
1:A:1026:G:N3	1:A:1026:G:C2'	2.74	0.47
1:A:1047:G:H2'	1:A:1048:G:C5'	2.41	0.47
1:A:1054:C:C2'	1:A:1055:A:H5''	2.43	0.47
1:A:1333:A:N7	1:A:1334:G:C8	2.81	0.47
1:A:1480:G:C5	1:A:1481:U:C4	3.02	0.47
4:C:118:GLN:O	4:C:121:ALA:HB3	2.14	0.47
8:G:122:HIS:HA	8:G:125:MET:HE2	1.96	0.47
12:K:43:SER:HB3	12:K:68:ALA:HB2	1.94	0.47
1:A:39:G:C2'	1:A:40:C:C5'	2.92	0.47
1:A:128:G:C2	1:A:234:C:O2	2.67	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:148:G:C2	1:A:149:A:N7	2.82	0.47
1:A:248:C:C2'	1:A:249:U:H5'	2.43	0.47
1:A:254:G:OP1	18:Q:67:LYS:O	2.32	0.47
1:A:452:A:C2	1:A:453:A:C1'	2.97	0.47
1:A:455:C:O5'	1:A:455:C:H6	1.97	0.47
1:A:479:C:C2'	1:A:480:U:H5'	2.44	0.47
1:A:821:G:H2'	1:A:822:C:C6	2.49	0.47
1:A:901:A:N7	1:A:902:G:C1'	2.77	0.47
1:A:948:C:C4	14:M:106:ASN:ND2	2.83	0.47
1:A:991:U:O2'	1:A:992:U:H5'	2.14	0.47
1:A:1139:G:O2'	1:A:1140:C:P	2.71	0.47
1:A:1287:A:C6	1:A:1288:A:C6	3.02	0.47
6:E:44:GLY:N	6:E:62:ALA:HB2	2.28	0.47
7:F:91:VAL:HG13	19:R:72:ARG:NH2	2.29	0.47
12:K:84:VAL:HG21	19:R:88:LYS:HD3	1.96	0.47
1:A:33:A:H2'	1:A:34:C:C6	2.50	0.47
1:A:166:G:C4	1:A:167:G:C8	3.02	0.47
1:A:341:C:N3	1:A:349:A:C2	2.82	0.47
1:A:376:G:H2'	1:A:377:G:C8	2.45	0.47
1:A:474:G:C2	1:A:475:G:C8	3.01	0.47
1:A:781:A:H2'	1:A:782:A:C5'	2.44	0.47
1:A:838:G:N2	1:A:849:C:C2	2.82	0.47
1:A:893:C:H2'	1:A:894:G:H8	1.79	0.47
1:A:936:C:H2'	1:A:937:A:O5'	2.13	0.47
1:A:1125:U:C2'	1:A:1126:U:OP2	2.62	0.47
1:A:1392:G:N2	1:A:1502:A:C8	2.81	0.47
3:B:130:ARG:NH2	4:C:207:VAL:HG11	2.26	0.47
4:C:73:PRO:O	4:C:77:ILE:HG12	2.14	0.47
7:F:7:ASN:ND2	19:R:34:TYR:CE1	2.76	0.47
17:P:20:VAL:CG2	17:P:21:VAL:H	2.27	0.47
1:A:16:A:N1	1:A:919:A:C2	2.82	0.47
1:A:370:C:C2'	1:A:371:G:H5'	2.44	0.47
1:A:401:C:H2'	1:A:402:G:C8	2.49	0.47
1:A:540:G:C4	1:A:541:G:C8	3.02	0.47
1:A:657:G:C2	1:A:750:G:C5	3.02	0.47
1:A:694:A:C6	1:A:695:A:C4	3.01	0.47
1:A:743:U:H2'	1:A:744:C:H6	1.79	0.47
1:A:805:C:H2'	1:A:806:C:O5'	2.14	0.47
1:A:872:A:C5	1:A:874:G:C8	3.02	0.47
1:A:1154:G:H2'	1:A:1155:G:H8	1.79	0.47
1:A:1217:C:C4	1:A:1218:C:C5	3.02	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1256:A:C2	1:A:1258:G:C2	3.02	0.47
1:A:1329:A:H2'	1:A:1330:U:C5'	2.43	0.47
1:A:1392:G:N2	1:A:1502:A:H8	2.12	0.47
1:A:1401:G:C2	1:A:1402:C:H1'	2.49	0.47
10:I:86:VAL:HG13	10:I:90:PRO:HA	1.95	0.47
13:L:55:VAL:HG12	13:L:56:ALA:N	2.30	0.47
18:Q:64:PRO:C	18:Q:65:ILE:HG13	2.37	0.47
22:V:20:LYS:O	22:V:20:LYS:HG2	2.15	0.47
1:A:57:G:C6	1:A:58:C:N4	2.83	0.47
1:A:129(A):G:O2'	1:A:190(E):U:C6	2.67	0.47
1:A:172:A:N7	1:A:174:C:C4	2.82	0.47
1:A:509:A:H8	1:A:509:A:C5'	2.27	0.47
1:A:540:G:C2'	1:A:541:G:C5'	2.89	0.47
1:A:760:G:C2'	1:A:761:G:H5'	2.45	0.47
1:A:981:U:C5'	15:N:21:TYR:CZ	2.97	0.47
1:A:981:U:H5''	15:N:21:TYR:CZ	2.50	0.47
1:A:1305:G:OP1	22:V:2:GLY:HA2	2.14	0.47
1:A:1306:A:N7	1:A:1332:A:N7	2.63	0.47
1:A:1359:C:O5'	1:A:1359:C:H6	1.97	0.47
3:B:10:LEU:HD12	3:B:10:LEU:N	2.29	0.47
6:E:120:THR:CG2	6:E:121:LYS:H	2.11	0.47
9:H:2:LEU:HD23	9:H:3:THR:N	2.29	0.47
18:Q:67:LYS:O	18:Q:68:ARG:CB	2.62	0.47
19:R:66:LEU:HD11	19:R:70:ILE:HD11	1.96	0.47
1:A:394:G:C6	1:A:395:C:C4	3.03	0.47
1:A:520:A:H2	1:A:536:C:O2	1.97	0.47
1:A:582:U:C2'	1:A:583:A:C8	2.80	0.47
1:A:607:A:O2'	1:A:608:A:H5'	2.14	0.47
1:A:818:G:H2'	1:A:820:U:OP2	2.14	0.47
1:A:861:G:OP1	9:H:75:ARG:NH2	2.46	0.47
1:A:1130:A:C4	1:A:1146:A:C2	3.03	0.47
1:A:1272:G:C5	1:A:1273:G:N7	2.82	0.47
1:A:1497:G:C5	1:A:1498:U:C5	3.03	0.47
4:C:64:VAL:O	4:C:99:VAL:HG23	2.15	0.47
6:E:97:GLY:N	6:E:117:ASP:OD1	2.46	0.47
13:L:60:LEU:HD22	13:L:60:LEU:N	2.29	0.47
14:M:91:ARG:NH2	14:M:96:LEU:HD13	2.29	0.47
16:O:77:ARG:HG3	16:O:77:ARG:NH1	2.30	0.47
1:A:9:G:H2'	1:A:10:A:C8	2.48	0.47
1:A:20:U:H2'	1:A:21:G:O4'	2.14	0.47
1:A:59:A:C3'	1:A:331:G:H22	2.27	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:113:G:H2'	1:A:114:U:O4'	2.15	0.47
1:A:358:U:H2'	1:A:359:U:H6	1.72	0.47
1:A:415:A:C6	1:A:416:G:C5	3.02	0.47
1:A:459:G:N2	1:A:462:G:N7	2.63	0.47
1:A:488:C:O5'	1:A:488:C:H6	1.98	0.47
1:A:545:C:H5''	5:D:72:GLU:OE1	2.14	0.47
1:A:665:A:H2'	1:A:732:C:O2	2.15	0.47
1:A:766:A:C2'	1:A:767:A:H5'	2.45	0.47
1:A:785:G:C2	1:A:786:G:C8	3.03	0.47
1:A:803:G:C4	1:A:804:U:C6	3.03	0.47
1:A:943:U:O2'	1:A:944:G:H5'	2.13	0.47
1:A:1016:A:O2'	1:A:1017:G:H5'	2.14	0.47
1:A:1052:U:H2'	1:A:1055:A:OP1	2.13	0.47
1:A:1149:C:C6	1:A:1150:U:H5	2.33	0.47
1:A:1272:G:O2'	1:A:1273:G:H5'	2.15	0.47
1:A:1367:C:C5'	11:J:60:ARG:HH11	2.28	0.47
1:A:1491:G:C2	1:A:1492:A:N6	2.82	0.47
1:A:1538:C:C2	2:1:6:A:N1	2.82	0.47
3:B:145:LEU:C	3:B:147:LYS:N	2.71	0.47
5:D:64:LEU:HD23	5:D:198:VAL:HG11	1.95	0.47
5:D:173:TRP:C	5:D:174:LEU:HG	2.38	0.47
6:E:11:ILE:HG21	6:E:31:LEU:HD13	1.97	0.47
6:E:78:HIS:HD1	9:H:104:ARG:CD	2.28	0.47
6:E:118:ILE:HG12	6:E:119:LEU:N	2.29	0.47
13:L:115:LYS:O	13:L:117:ARG:N	2.47	0.47
17:P:3:LYS:HA	17:P:65:GLN:O	2.14	0.47
17:P:6:LEU:HD12	17:P:6:LEU:N	2.29	0.47
17:P:12:LYS:O	17:P:13:HIS:HB2	2.15	0.47
22:V:5:ASP:C	22:V:7:ARG:H	2.23	0.47
1:A:190(D):U:O2'	1:A:190(E):U:C5'	2.63	0.47
1:A:228:A:C4'	17:P:62:VAL:HG11	2.43	0.47
1:A:374:A:N1	1:A:390:C:O2'	2.45	0.47
1:A:452:A:C2'	1:A:453:A:O5'	2.63	0.47
1:A:456:C:N4	1:A:457:C:N4	2.62	0.47
1:A:609:A:O2'	1:A:610:G:H5'	2.15	0.47
1:A:645:C:H2'	1:A:646:U:C6	2.49	0.47
1:A:829:G:C2	1:A:830:G:C5	3.03	0.47
1:A:960:U:C2	1:A:1225:A:N7	2.83	0.47
1:A:1126:U:C2'	1:A:1127:G:C8	2.84	0.47
1:A:1248:A:H2'	1:A:1249:C:H6	1.80	0.47
1:A:1343:G:C6	1:A:1344:C:C4	3.02	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1489:G:H2'	1:A:1490:C:C5'	2.40	0.47
1:A:1531:A:C6	1:A:1532:U:C4	3.03	0.47
1:A:147:G:N3	1:A:148:G:C8	2.83	0.47
1:A:246:A:O3'	1:A:247:G:H4'	2.15	0.47
1:A:319:G:O2'	1:A:320:C:H5'	2.15	0.47
1:A:408:A:C2	1:A:409:G:C4	3.02	0.47
1:A:437:U:O2'	5:D:123:HIS:CD2	2.62	0.47
1:A:1059:C:O2'	1:A:1060:C:H5'	2.15	0.47
1:A:1212:U:O2'	1:A:1213:A:O5'	2.29	0.47
1:A:1215:G:H2'	1:A:1215:G:N3	2.30	0.47
1:A:1466:C:H2'	1:A:1467:G:O4'	2.15	0.47
5:D:173:TRP:CD1	5:D:174:LEU:HG	2.50	0.47
9:H:36:LEU:HD22	9:H:61:VAL:CG2	2.45	0.47
14:M:4:ILE:CG2	14:M:5:ALA:N	2.78	0.47
14:M:65:LYS:HG2	14:M:69:GLU:HB3	1.97	0.47
17:P:28:ARG:HG2	17:P:29:ASP:N	2.30	0.47
19:R:85:LEU:HD12	19:R:86:VAL:H	1.79	0.47
1:A:115:G:H1'	1:A:116:A:N7	2.30	0.47
1:A:262:A:C6	1:A:263:A:N6	2.83	0.47
1:A:302:G:N3	1:A:556:C:H4'	2.30	0.47
1:A:518:C:C5	1:A:530:G:C4	3.03	0.47
1:A:562:C:H4'	1:A:563:A:O5'	2.15	0.47
1:A:590:C:C4	1:A:591:U:C5	3.03	0.47
1:A:658:G:N3	1:A:659:U:C6	2.83	0.47
1:A:744:C:H2'	1:A:745:C:C6	2.50	0.47
1:A:783:C:H2'	1:A:784:C:H5'	1.97	0.47
1:A:900:A:O2'	1:A:901:A:C5'	2.57	0.47
1:A:1263:C:H2'	1:A:1264:C:H6	1.80	0.47
1:A:1442:G:H22	1:A:1446:A:H8	1.63	0.47
5:D:88:VAL:O	5:D:90:GLY:N	2.48	0.47
6:E:12:LEU:HD13	6:E:12:LEU:C	2.40	0.47
8:G:26:PHE:HD1	8:G:101:LEU:HD22	1.80	0.47
8:G:36:LYS:HG2	10:I:42:ARG:NH2	2.30	0.47
8:G:100:ALA:O	8:G:104:LEU:HG	2.14	0.47
14:M:15:VAL:HG23	14:M:43:THR:O	2.15	0.47
14:M:34:LEU:HD22	14:M:39:ILE:HB	1.96	0.47
1:A:64:G:H4'	1:A:65:U:H5''	1.97	0.46
1:A:96:G:H2'	1:A:97:G:O4'	2.15	0.46
1:A:121:C:H5'	1:A:122:G:OP1	2.15	0.46
1:A:322:C:O2'	1:A:323:U:H5'	2.16	0.46
1:A:458:C:C4	1:A:459:G:C5	3.03	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:480:U:C2'	1:A:481:G:OP2	2.63	0.46
1:A:657:G:C5	1:A:658:G:N7	2.83	0.46
1:A:780:A:O2'	1:A:781:A:H5''	2.15	0.46
1:A:974:A:OP1	15:N:29:ARG:NH2	2.48	0.46
1:A:1135:U:O3'	1:A:1136:U:C5	2.68	0.46
1:A:1321:C:P	20:S:3:ARG:HH12	2.39	0.46
9:H:86:ILE:HD12	9:H:133:LEU:CD2	2.44	0.46
14:M:32:GLU:HG2	14:M:32:GLU:O	2.15	0.46
16:O:29:VAL:O	16:O:30:ALA:C	2.57	0.46
20:S:22:LEU:HD22	20:S:28:LYS:HB2	1.97	0.46
1:A:38:G:N1	1:A:397:A:C2	2.83	0.46
1:A:181:G:N2	1:A:195:A:C5	2.84	0.46
1:A:341:C:O2'	1:A:342:C:H5'	2.15	0.46
1:A:448:A:C8	1:A:487:A:C2	3.03	0.46
1:A:460:A:C4	1:A:462:G:N7	2.83	0.46
1:A:515:G:O2'	1:A:516:U:H5'	2.16	0.46
1:A:524:G:C4	1:A:525:C:C5	3.04	0.46
1:A:662:G:O2'	1:A:663:A:H5'	2.16	0.46
1:A:803:G:C6	1:A:804:U:C4	3.03	0.46
1:A:970:C:O2	1:A:1231:G:H1'	2.15	0.46
1:A:1052:U:C4	1:A:1200:C:C2	3.03	0.46
1:A:1053:G:N2	1:A:1056:U:C4	2.83	0.46
1:A:1150:U:O2	1:A:1150:U:H2'	2.16	0.46
1:A:1198:G:H2'	1:A:1199:U:O4'	2.15	0.46
1:A:1205:U:H1'	4:C:195:VAL:CG2	2.46	0.46
1:A:1225:A:H5'	14:M:103:THR:CG2	2.45	0.46
1:A:1248:A:N3	10:I:70:LYS:HD2	2.30	0.46
1:A:1326:C:H2'	1:A:1327:C:C6	2.50	0.46
1:A:1509:C:C2	1:A:1510:U:C5	3.03	0.46
1:A:1513:A:C2	1:A:1523:G:C6	3.03	0.46
7:F:55:ASP:HA	7:F:56:PRO:HD2	1.65	0.46
14:M:70:LEU:O	14:M:74:VAL:HG23	2.14	0.46
1:A:39:G:C2	1:A:40:C:C6	3.03	0.46
1:A:79:G:C2	1:A:91:C:C2	3.04	0.46
1:A:354:G:C5	1:A:355:C:C5	3.04	0.46
1:A:362:G:N2	1:A:365:U:OP2	2.48	0.46
1:A:397:A:N3	1:A:397:A:H5''	2.31	0.46
1:A:448:A:N7	1:A:487:A:C6	2.84	0.46
1:A:540:G:H2'	1:A:541:G:H5'	1.95	0.46
1:A:673:G:H2'	1:A:674:G:C8	2.50	0.46
1:A:920:U:N3	1:A:921:U:C4	2.83	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:926:G:H2'	1:A:1505:G:H21	1.81	0.46
1:A:1057:G:C2'	1:A:1058:G:H8	2.25	0.46
1:A:1068:G:C2	1:A:1069:C:C6	3.04	0.46
1:A:1135:U:O5'	1:A:1135:U:C6	2.66	0.46
1:A:1144:G:N2	1:A:1146:A:N6	2.64	0.46
1:A:1173:G:OP1	8:G:5:ARG:NH1	2.48	0.46
1:A:1183:A:O2'	1:A:1184:G:P	2.74	0.46
1:A:1250:A:H4'	10:I:68:GLY:O	2.15	0.46
1:A:1346:A:C8	8:G:10:ARG:NH2	2.83	0.46
1:A:1376:U:H2'	1:A:1377:A:C8	2.50	0.46
3:B:11:LEU:O	3:B:13:ALA:N	2.48	0.46
3:B:130:ARG:HH22	4:C:207:VAL:CG1	2.28	0.46
5:D:25:ARG:C	5:D:27:TYR:N	2.74	0.46
14:M:81:LEU:HA	14:M:84:ILE:HG12	1.98	0.46
17:P:20:VAL:CG2	17:P:21:VAL:N	2.78	0.46
17:P:53:VAL:HG23	17:P:54:GLU:N	2.31	0.46
1:A:15:G:H1'	6:E:24:ARG:HH12	1.78	0.46
1:A:33:A:H2'	1:A:34:C:H6	1.80	0.46
1:A:193:C:O2'	1:A:194:C:H5'	2.15	0.46
1:A:502:G:C2	1:A:503:C:C2	3.03	0.46
1:A:542:G:P	5:D:10:ARG:NH2	2.89	0.46
1:A:560:U:H5'	1:A:566:G:N2	2.30	0.46
1:A:651:C:N3	1:A:652:U:C4	2.84	0.46
1:A:684:A:O2'	12:K:38:ASN:HB3	2.15	0.46
1:A:761:G:C6	1:A:762:C:C4	3.03	0.46
1:A:819:A:H5''	1:A:820:U:OP2	2.14	0.46
1:A:821:G:H2'	1:A:822:C:H6	1.81	0.46
1:A:1072:G:H2'	1:A:1073:U:C6	2.51	0.46
1:A:1348:U:H2'	1:A:1349:A:H8	1.79	0.46
1:A:1526:G:O2'	1:A:1527:C:H5'	2.16	0.46
5:D:158:ILE:CG2	5:D:181:MET:HE2	2.45	0.46
11:J:16:LEU:CD2	11:J:94:VAL:HG22	2.45	0.46
16:O:24:SER:HB2	16:O:27:VAL:HG23	1.97	0.46
1:A:69:G:C2	1:A:70:G:N7	2.84	0.46
1:A:229:U:H2'	1:A:230:G:H8	1.80	0.46
1:A:300:A:C8	1:A:301:G:C8	3.03	0.46
1:A:435:C:O2'	1:A:436:C:H5'	2.15	0.46
1:A:458:C:C4	1:A:459:G:C8	3.04	0.46
1:A:653:A:O4'	9:H:56:LYS:HE2	2.16	0.46
1:A:807:A:C5	1:A:808:C:C5	3.04	0.46
1:A:840:C:C5'	1:A:841:U:OP1	2.52	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:981:U:N1	1:A:982:U:C5	2.84	0.46
1:A:1063:C:C6	1:A:1064:G:C8	3.03	0.46
1:A:1181:G:H2'	1:A:1182:G:N7	2.31	0.46
1:A:1187:G:C6	1:A:1188:A:C6	3.04	0.46
1:A:1306:A:C4	1:A:1307:U:C6	3.03	0.46
7:F:4:TYR:O	7:F:64:GLN:HA	2.16	0.46
16:O:45:VAL:HG12	16:O:46:HIS:N	2.30	0.46
18:Q:10:VAL:O	18:Q:53:LEU:HD12	2.14	0.46
18:Q:97:SER:O	18:Q:98:LEU:HD12	2.15	0.46
1:A:191:G:C8	1:A:192:U:C5	3.04	0.46
1:A:440:A:C5'	1:A:442:C:OP2	2.64	0.46
1:A:495:U:H5''	1:A:496:A:OP2	2.16	0.46
1:A:509:A:C8	1:A:509:A:C4'	2.99	0.46
1:A:515:G:C2'	1:A:516:U:H5'	2.45	0.46
1:A:661:G:H5''	1:A:661:G:C8	2.50	0.46
1:A:805:C:O2'	1:A:806:C:H5'	2.16	0.46
1:A:927:G:H2'	1:A:928:G:H8	1.80	0.46
1:A:1057:G:H4'	4:C:154:SER:CB	2.46	0.46
1:A:1238:A:N7	1:A:1303:C:C1'	2.76	0.46
1:A:1261:A:C4	1:A:1262:C:C6	3.04	0.46
1:A:1291:G:C6	1:A:1292:U:C4	3.04	0.46
1:A:1306:A:C2	1:A:1307:U:H1'	2.51	0.46
1:A:1308:U:OP1	14:M:98:VAL:N	2.46	0.46
1:A:1342:C:O2'	1:A:1343:G:C5'	2.56	0.46
1:A:1442:G:H22	1:A:1446:A:H3'	1.75	0.46
1:A:1538:C:H42	2:1:6:A:H61	1.63	0.46
3:B:25:ASN:O	3:B:27:LYS:N	2.49	0.46
3:B:114:ARG:O	3:B:118:LEU:HG	2.16	0.46
11:J:49:VAL:HG13	15:N:41:ARG:HB2	1.98	0.46
14:M:81:LEU:HD12	14:M:88:ARG:HD3	1.97	0.46
1:A:256:U:H2'	1:A:257:G:C8	2.50	0.46
1:A:256:U:C2	1:A:257:G:C8	3.04	0.46
1:A:277:C:H5'	18:Q:68:ARG:NH1	2.31	0.46
1:A:309:G:H5''	17:P:29:ASP:O	2.14	0.46
1:A:380:G:C6	1:A:384:G:O6	2.69	0.46
1:A:445:G:N3	1:A:446:G:C8	2.83	0.46
1:A:460:A:N7	1:A:462:G:C6	2.84	0.46
1:A:478:A:O2'	1:A:479:C:H5'	2.14	0.46
1:A:509:A:N3	1:A:543:C:O2'	2.43	0.46
1:A:674:G:H5'	7:F:50:TYR:CE2	2.50	0.46
1:A:738:C:H2'	1:A:739:C:H6	1.80	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:748:C:H4'	1:A:749:C:O5'	2.16	0.46
1:A:767:A:C2'	1:A:768:A:H8	2.27	0.46
1:A:778:G:H2'	1:A:779:C:O4'	2.16	0.46
1:A:827:U:O2'	9:H:19:VAL:HG11	2.16	0.46
1:A:961:U:N1	1:A:983:A:C2	2.84	0.46
1:A:1082:G:C6	1:A:1083:U:N3	2.84	0.46
1:A:1087:G:H2'	1:A:1088:G:C8	2.50	0.46
1:A:1126:U:H6	1:A:1126:U:O5'	1.99	0.46
9:H:28:ALA:HB2	9:H:59:LEU:HG	1.96	0.46
13:L:47:LYS:HB2	13:L:48:PRO:CD	2.44	0.46
17:P:58:TYR:HE1	17:P:59:TRP:CZ3	2.33	0.46
20:S:22:LEU:HD21	20:S:28:LYS:HD2	1.98	0.46
1:A:64:G:N2	1:A:67:C:C4	2.84	0.46
1:A:113:G:O6	1:A:315:A:N6	2.49	0.46
1:A:118:U:C5	1:A:288:A:C2	3.04	0.46
1:A:124:G:H2'	1:A:125:U:C6	2.50	0.46
1:A:235:C:O2'	1:A:236:G:H5'	2.16	0.46
1:A:391:G:C6	1:A:392:G:C8	3.04	0.46
1:A:445:G:C2	1:A:446:G:C8	3.04	0.46
1:A:624:C:HO2'	1:A:625:G:H5'	1.75	0.46
1:A:781:A:H2'	1:A:782:A:H5'	1.97	0.46
1:A:805:C:H2'	1:A:806:C:H5'	1.98	0.46
1:A:947:G:C4	1:A:948:C:C4	3.04	0.46
1:A:1030(A):G:H4'	1:A:1030(B):C:OP2	2.16	0.46
1:A:1067:A:H4'	1:A:1068:G:O5'	2.15	0.46
1:A:1306:A:C8	1:A:1332:A:C5	3.04	0.46
1:A:1371:G:C5	1:A:1372:U:C5	3.04	0.46
1:A:1538:C:O2	2:1:6:A:N1	2.49	0.46
5:D:180:GLY:O	5:D:182:LYS:HG3	2.16	0.46
9:H:10:LEU:HD23	9:H:10:LEU:HA	1.52	0.46
16:O:66:LEU:HA	16:O:66:LEU:HD23	1.68	0.46
18:Q:7:THR:O	18:Q:23:VAL:HG13	2.16	0.46
20:S:47:HIS:O	20:S:62:ILE:HG22	2.16	0.46
1:A:56:U:P	21:T:8:ARG:HH22	2.37	0.46
1:A:182:U:O4	1:A:223:U:H1'	2.16	0.46
1:A:190(I):G:H2'	1:A:190(J):U:O4'	2.15	0.46
1:A:243:A:C2	1:A:245:C:N3	2.84	0.46
1:A:597:G:C4	1:A:598:U:C6	3.03	0.46
1:A:815:A:H5''	1:A:817:C:H41	1.80	0.46
1:A:918:A:C6	1:A:919:A:C6	3.04	0.46
1:A:1010:G:H2'	1:A:1011:G:C8	2.44	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1055:A:N6	1:A:1206:G:C6	2.84	0.46
1:A:1129:C:OP2	10:I:62:TYR:CE2	2.69	0.46
1:A:1187:G:N3	1:A:1188:A:C8	2.83	0.46
1:A:1215:G:C8	1:A:1215:G:OP2	2.68	0.46
1:A:1415:G:C4	1:A:1416:G:C8	3.04	0.46
4:C:87:LEU:O	4:C:91:LEU:HB2	2.15	0.46
4:C:191:THR:HG22	4:C:192:THR:H	1.80	0.46
11:J:6:ILE:O	11:J:71:LEU:HD22	2.16	0.46
12:K:87:THR:HG23	12:K:91:ARG:HH21	1.81	0.46
16:O:11:VAL:HG21	16:O:34:LEU:HD12	1.98	0.46
1:A:354:G:C6	1:A:355:C:C4	3.03	0.46
1:A:371:G:O2'	1:A:372:C:C5'	2.47	0.46
1:A:451:A:H2	1:A:480:U:C4	2.34	0.46
1:A:848:C:H2'	1:A:849:C:H6	1.80	0.46
1:A:858:G:C8	1:A:869:G:O6	2.69	0.46
1:A:949:A:H2'	1:A:950:U:H6	1.81	0.46
1:A:951:G:O2'	1:A:952:U:H5'	2.16	0.46
1:A:1106:G:OP1	4:C:172:ARG:HD3	2.15	0.46
1:A:1181:G:O2'	1:A:1182:G:O4'	2.34	0.46
1:A:1347:G:H8	10:I:107:ARG:O	1.99	0.46
1:A:1374:A:C4	1:A:1375:A:C8	3.04	0.46
1:A:1504:G:H4'	1:A:1505:G:C5'	2.46	0.46
6:E:91:LEU:HD22	6:E:118:ILE:HD11	1.97	0.46
9:H:45:ILE:O	9:H:45:ILE:HG13	2.14	0.46
19:R:69:THR:O	19:R:72:ARG:HB2	2.16	0.46
1:A:274:A:O2'	1:A:275:G:P	2.74	0.45
1:A:652:U:O4	1:A:752:G:O2'	2.31	0.45
1:A:707:C:OP1	12:K:85:ARG:NH1	2.49	0.45
1:A:903:G:O2'	1:A:904:C:H5'	2.16	0.45
1:A:1074:G:C5	1:A:1075:C:C4	3.05	0.45
1:A:1227:A:OP1	20:S:80:TYR:OH	2.20	0.45
1:A:1287:A:C6	1:A:1288:A:N6	2.84	0.45
1:A:1305:G:C8	1:A:1305:G:OP2	2.70	0.45
4:C:76:VAL:O	4:C:83:ARG:HB3	2.16	0.45
7:F:10:LEU:HB3	7:F:85:VAL:HA	1.98	0.45
14:M:70:LEU:O	14:M:72:ALA:N	2.50	0.45
16:O:36:ILE:HD12	16:O:63:ARG:HD3	1.97	0.45
20:S:62:ILE:CD1	20:S:66:MET:HG3	2.46	0.45
1:A:187:C:C2	21:T:105:SER:HB2	2.51	0.45
1:A:393:A:C6	1:A:394:G:N7	2.84	0.45
1:A:582:U:C2	1:A:760:G:C6	3.04	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:608:A:C2	1:A:609:A:N9	2.85	0.45
1:A:694:A:C5	1:A:695:A:C8	3.04	0.45
1:A:1037:C:H6	1:A:1037:C:O5'	1.99	0.45
1:A:1349:A:C2'	1:A:1350:A:C8	2.87	0.45
1:A:1417:G:HO2'	1:A:1418:A:H8	1.55	0.45
1:A:1450:U:HO2'	1:A:1451:A:H8	1.59	0.45
1:A:1451:A:O2'	1:A:1452:C:OP1	2.30	0.45
1:A:1530:G:O2'	1:A:1531:A:H8	1.91	0.45
1:A:1531:A:C5	1:A:1532:U:C5	3.04	0.45
5:D:78:LEU:HD23	5:D:78:LEU:HA	1.71	0.45
7:F:21:LEU:O	7:F:25:ILE:HG13	2.16	0.45
9:H:76:PRO:O	9:H:77:GLU:C	2.59	0.45
9:H:104:ARG:O	9:H:105:ARG:C	2.59	0.45
11:J:47:PHE:CE2	15:N:37:PHE:CE1	3.04	0.45
14:M:81:LEU:HB2	14:M:86:CYS:HB3	1.97	0.45
21:T:88:VAL:O	21:T:89:ARG:C	2.60	0.45
1:A:4:U:C5'	1:A:5:U:OP2	2.64	0.45
1:A:89:C:H2'	1:A:90:U:H6	1.81	0.45
1:A:145:G:C2	1:A:146:G:C8	3.03	0.45
1:A:177:C:H2'	1:A:178:C:H6	1.81	0.45
1:A:476:G:C2	1:A:477:G:C5	3.03	0.45
1:A:476:G:N3	1:A:477:G:C8	2.84	0.45
1:A:503:C:H2'	1:A:504:C:C6	2.46	0.45
1:A:1451:A:H5''	1:A:1452:C:C6	2.48	0.45
8:G:27:ILE:O	8:G:28:ASN:C	2.59	0.45
9:H:26:VAL:O	9:H:26:VAL:CG1	2.63	0.45
9:H:104:ARG:C	9:H:106:GLY:N	2.73	0.45
16:O:70:LEU:C	16:O:72:ARG:N	2.70	0.45
16:O:85:LEU:HD23	16:O:85:LEU:HA	1.75	0.45
1:A:53:A:N1	1:A:54:C:C2	2.85	0.45
1:A:290:C:H2'	1:A:291:C:O4'	2.16	0.45
1:A:448:A:N7	1:A:487:A:C5	2.85	0.45
1:A:502:G:H2'	1:A:503:C:O4'	2.17	0.45
1:A:611:A:C5	1:A:612:C:C5	3.04	0.45
1:A:731:G:OP1	1:A:766:A:H1'	2.15	0.45
1:A:946:A:O2'	1:A:947:G:H5'	2.15	0.45
1:A:977:A:H3'	1:A:977:A:N3	2.31	0.45
1:A:1105:A:O2'	1:A:1106:G:H5'	2.15	0.45
1:A:1149:C:C4	1:A:1150:U:C5	3.05	0.45
1:A:1169:A:H8	1:A:1169:A:O5'	1.99	0.45
1:A:1190:G:OP1	4:C:4:LYS:O	2.35	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1250:A:C8	1:A:1287:A:N7	2.85	0.45
1:A:1347:G:N2	1:A:1374:A:OP2	2.49	0.45
1:A:1450:U:O2'	1:A:1451:A:C8	2.64	0.45
1:A:1520:G:C2	1:A:1521:G:C5	3.05	0.45
3:B:73:THR:O	3:B:73:THR:HG22	2.17	0.45
3:B:90:MET:HA	3:B:91:PRO:HD3	1.62	0.45
5:D:127:THR:HB	5:D:147:ALA:HB3	1.97	0.45
11:J:19:SER:HB2	11:J:91:PRO:HG3	1.98	0.45
16:O:24:SER:O	16:O:25:THR:C	2.59	0.45
21:T:77:ALA:O	21:T:80:ARG:HB2	2.16	0.45
1:A:176:C:HO2'	1:A:177:C:H5'	1.79	0.45
1:A:273:A:N6	1:A:274:A:C6	2.84	0.45
1:A:294:U:C2	1:A:295:C:C5	3.04	0.45
1:A:336:C:H2'	1:A:337:C:H6	1.81	0.45
1:A:410:G:C2	1:A:429:U:N3	2.83	0.45
1:A:761:G:H2'	1:A:762:C:C6	2.52	0.45
1:A:826:C:H4'	9:H:12:ARG:HG2	1.97	0.45
1:A:838:G:C2	1:A:849:C:C2	3.04	0.45
1:A:1030(C):G:H5'	1:A:1030(C):G:C8	2.46	0.45
1:A:1178:G:C8	1:A:1178:G:H3'	2.52	0.45
1:A:1198:G:O2'	11:J:54:PHE:CE2	2.70	0.45
1:A:1217:C:H2'	1:A:1218:C:O4'	2.15	0.45
1:A:1350:A:O2'	1:A:1351:U:H5'	2.17	0.45
3:B:44:LEU:C	3:B:46:LYS:N	2.73	0.45
3:B:84:GLU:HG3	3:B:215:LEU:HB3	1.99	0.45
5:D:149:ALA:O	5:D:150:GLU:C	2.59	0.45
7:F:1:MET:HB3	7:F:67:MET:O	2.16	0.45
7:F:35:ALA:HB2	7:F:67:MET:HB3	1.97	0.45
8:G:36:LYS:HG2	10:I:42:ARG:HH22	1.81	0.45
9:H:10:LEU:O	9:H:13:ILE:HB	2.16	0.45
17:P:67:THR:HG22	17:P:68:ASP:H	1.79	0.45
18:Q:19:VAL:HG22	18:Q:44:ALA:HB3	1.98	0.45
20:S:28:LYS:HG2	20:S:29:ARG:N	2.18	0.45
21:T:72:LEU:HD23	21:T:72:LEU:HA	1.67	0.45
1:A:277:C:H5'	18:Q:68:ARG:HH12	1.82	0.45
1:A:292:G:C2	1:A:309:G:C2	3.04	0.45
1:A:375:U:C2	1:A:376:G:C8	3.05	0.45
1:A:635:G:C6	1:A:636:U:C4	3.04	0.45
1:A:644:G:H2'	1:A:645:C:H5'	1.99	0.45
1:A:706:A:H1'	12:K:29:ILE:HD11	1.98	0.45
1:A:778:G:C6	1:A:779:C:C4	3.05	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:949:A:H2'	1:A:950:U:O4'	2.17	0.45
1:A:1002:G:C2'	1:A:1003:G:H5'	2.47	0.45
1:A:1083:U:C5	1:A:1084:G:C5	3.04	0.45
1:A:1100:C:O2	1:A:1102:A:OP1	2.35	0.45
1:A:1285:A:O2'	1:A:1286:A:OP2	2.28	0.45
1:A:1288:A:C2	1:A:1289:A:C5	3.05	0.45
1:A:1290:G:C6	1:A:1291:G:N7	2.85	0.45
1:A:1350:A:C5	1:A:1351:U:C4	3.05	0.45
4:C:154:SER:HB3	4:C:197:GLY:N	2.25	0.45
5:D:64:LEU:HD22	5:D:64:LEU:HA	1.76	0.45
5:D:112:VAL:HG23	5:D:116:GLN:OE1	2.17	0.45
10:I:50:LEU:O	10:I:52:ALA:N	2.50	0.45
19:R:37:VAL:HG21	19:R:78:LEU:HB3	1.98	0.45
1:A:152:A:N6	1:A:170:U:O2	2.49	0.45
1:A:558:G:C5	1:A:559:A:C2	3.04	0.45
1:A:806:C:H2'	1:A:807:A:H8	1.82	0.45
1:A:811:C:H4'	1:A:900:A:N6	2.32	0.45
1:A:877:C:H1'	9:H:3:THR:HG22	1.99	0.45
1:A:1095:U:P	1:A:1108:G:H1	2.40	0.45
1:A:1181:G:C2'	1:A:1182:G:C8	3.00	0.45
1:A:1224:G:H2'	20:S:78:ARG:NH2	2.32	0.45
1:A:1472:U:H2'	1:A:1473:A:C8	2.51	0.45
1:A:1475:G:O2'	1:A:1476:G:H5'	2.16	0.45
4:C:35:GLU:O	4:C:38:ARG:HB2	2.17	0.45
10:I:95:LYS:HD3	10:I:95:LYS:HA	1.72	0.45
18:Q:11:VAL:HG11	18:Q:22:LEU:HB2	1.98	0.45
20:S:28:LYS:HD3	20:S:31:ILE:HD11	1.99	0.45
1:A:60:A:H2	1:A:107:G:N3	2.15	0.45
1:A:102:G:H2'	1:A:103:C:H6	1.82	0.45
1:A:392:G:C5	1:A:393:A:N7	2.85	0.45
1:A:960:U:C2	1:A:1225:A:C5	3.05	0.45
1:A:1061:G:C2	1:A:1197:G:N3	2.85	0.45
1:A:1072:G:C5	1:A:1073:U:C4	3.04	0.45
1:A:1148:U:O3'	10:I:14:VAL:HG21	2.17	0.45
1:A:1251:A:H2'	1:A:1252:A:O4'	2.17	0.45
1:A:1277:C:O4'	1:A:1282:C:H1'	2.17	0.45
1:A:1305:G:OP2	1:A:1305:G:O4'	2.35	0.45
4:C:23:TYR:CG	4:C:24:ALA:N	2.84	0.45
5:D:174:LEU:CD2	5:D:185:PHE:HA	2.46	0.45
10:I:102:LEU:HA	10:I:102:LEU:HD23	1.65	0.45
14:M:37:THR:HG21	14:M:39:ILE:HD11	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:R:73:ALA:HB3	19:R:79:LEU:HD12	1.98	0.45
20:S:62:ILE:HD12	20:S:66:MET:CG	2.46	0.45
1:A:201:C:H42	1:A:203:U:H1'	1.81	0.45
1:A:503:C:C2	1:A:504:C:C5	3.05	0.45
1:A:522:C:C2'	1:A:523:A:H5'	2.47	0.45
1:A:538:G:P	13:L:115:LYS:HG3	2.56	0.45
1:A:1059:C:H2'	1:A:1060:C:C6	2.49	0.45
1:A:1102:A:C6	1:A:1103:C:N4	2.85	0.45
1:A:1164:G:N2	1:A:1173:G:C4	2.85	0.45
1:A:1238:A:C4	1:A:1303:C:O2'	2.69	0.45
1:A:1238:A:C6	1:A:1303:C:H4'	2.52	0.45
1:A:1286:A:C8	1:A:1287:A:H4'	2.51	0.45
1:A:1303:C:C4	1:A:1304:G:C5	3.05	0.45
1:A:1318:A:H4'	20:S:10:PHE:CD2	2.51	0.45
1:A:1350:A:H2'	1:A:1351:U:H6	1.82	0.45
1:A:1399:C:C2	1:A:1401:G:C4	3.04	0.45
1:A:1401:G:C5	1:A:1402:C:C5	3.05	0.45
1:A:1542:U:H2'	1:A:1543:C:O4'	2.17	0.45
2:1:4:A:H2'	2:1:5:G:H8	1.82	0.45
5:D:61:LYS:HD3	5:D:206:PHE:CE2	2.52	0.45
9:H:14:ARG:O	9:H:16:ALA:N	2.49	0.45
10:I:17:VAL:HG21	10:I:80:GLY:C	2.42	0.45
11:J:40:LEU:HD23	11:J:40:LEU:HA	1.66	0.45
13:L:75:HIS:HD2	13:L:77:LEU:CG	2.30	0.45
14:M:87:TYR:O	14:M:88:ARG:C	2.59	0.45
20:S:19:VAL:O	20:S:22:LEU:HB2	2.16	0.45
1:A:124:G:C6	1:A:125:U:N3	2.85	0.45
1:A:138:G:C6	1:A:226:G:C6	3.05	0.45
1:A:149:A:O2'	1:A:150:C:H5'	2.17	0.45
1:A:398:C:O2'	1:A:399:G:H5'	2.17	0.45
1:A:636:U:H2'	1:A:637:G:C8	2.53	0.45
1:A:943:U:C2	1:A:944:G:C8	3.05	0.45
1:A:978:A:C6	1:A:1318:A:C6	3.05	0.45
1:A:1029:C:H42	1:A:1032:G:H1	1.63	0.45
1:A:1060:C:OP1	15:N:45:ARG:NH2	2.50	0.45
1:A:1107:C:N4	1:A:1108:G:C8	2.84	0.45
1:A:1151:A:C2	1:A:1152:A:C6	3.05	0.45
1:A:1234:C:C4'	1:A:1364:U:H1'	2.47	0.45
1:A:1296:C:H4'	1:A:1302:U:O4	2.16	0.45
1:A:1358:U:H2'	1:A:1359:C:C6	2.51	0.45
2:2:9:A:HO2'	2:2:10:A:H5'	1.78	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:65:ARG:HH21	5:D:71:SER:HA	1.81	0.45
5:D:190:ASP:O	5:D:193:ASP:N	2.42	0.45
8:G:26:PHE:HD1	8:G:101:LEU:CD2	2.30	0.45
10:I:90:PRO:C	10:I:92:TYR:N	2.75	0.45
11:J:40:LEU:HB3	11:J:41:PRO:HB2	1.98	0.45
14:M:10:PRO:HG2	14:M:10:PRO:O	2.17	0.45
18:Q:44:ALA:O	18:Q:69:LYS:HE3	2.17	0.45
1:A:26:A:H2'	1:A:27:G:H5'	1.99	0.44
1:A:40:C:C2	1:A:41:G:C8	3.05	0.44
1:A:119:A:C5	1:A:240:C:C4	3.05	0.44
1:A:262:A:N1	1:A:263:A:C6	2.84	0.44
1:A:272:C:O2'	1:A:273:A:H5'	2.16	0.44
1:A:476:G:N1	1:A:477:G:C5	2.85	0.44
1:A:633:G:H2'	1:A:634:C:C6	2.51	0.44
1:A:657:G:N2	1:A:750:G:N9	2.65	0.44
1:A:683:G:H2'	1:A:684:A:O4'	2.17	0.44
1:A:707:C:H5''	12:K:20:TYR:CD2	2.51	0.44
1:A:781:A:H2	1:A:1514:C:C4'	2.30	0.44
1:A:868:C:O2'	1:A:873:A:H2'	2.17	0.44
1:A:927:G:C6	1:A:1391:U:C2	3.04	0.44
1:A:977:A:C8	1:A:1223:C:C2	3.05	0.44
1:A:1191:A:N3	1:A:1192:C:C5	2.85	0.44
1:A:1442:G:N2	1:A:1446:A:C3'	2.70	0.44
3:B:16:HIS:NE2	3:B:210:SER:CB	2.80	0.44
3:B:108:ILE:O	3:B:109:SER:C	2.59	0.44
4:C:152:ILE:CG2	4:C:153:VAL:N	2.79	0.44
8:G:115:ARG:O	8:G:119:ARG:HG3	2.17	0.44
11:J:8:LEU:HB2	11:J:70:ARG:HB2	1.98	0.44
11:J:86:MET:O	11:J:86:MET:HE3	2.17	0.44
18:Q:82:MET:O	18:Q:85:VAL:N	2.50	0.44
21:T:10:LEU:C	21:T:12:ALA:H	2.24	0.44
21:T:36:LEU:HD12	21:T:62:LEU:HD12	1.99	0.44
1:A:371:G:C2'	1:A:372:C:C5'	2.95	0.44
1:A:414:A:N3	1:A:414:A:H2'	2.32	0.44
1:A:633:G:H2'	1:A:634:C:H6	1.81	0.44
1:A:877:C:O2	9:H:3:THR:CG2	2.66	0.44
1:A:1039:C:C2	1:A:1040:U:C5	3.05	0.44
1:A:1083:U:C4	1:A:1084:G:C2	3.06	0.44
1:A:1316:G:H22	1:A:1318:A:H3'	1.83	0.44
1:A:1317:C:C6	15:N:16:PHE:CD2	3.06	0.44
3:B:109:SER:O	3:B:112:VAL:HB	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:6:HIS:CD2	4:C:9:GLY:H	2.35	0.44
4:C:173:VAL:O	4:C:173:VAL:CG1	2.64	0.44
11:J:61:GLU:OE2	15:N:49:HIS:HE1	2.00	0.44
16:O:66:LEU:O	16:O:69:TYR:N	2.50	0.44
1:A:75:G:C2'	1:A:76:C:O5'	2.66	0.44
1:A:76:C:O2'	1:A:77:G:C5'	2.64	0.44
1:A:118:U:O4	1:A:288:A:H2'	2.18	0.44
1:A:197:A:O2'	1:A:198:G:P	2.75	0.44
1:A:286:G:C5	1:A:287:U:C5	3.05	0.44
1:A:355:C:C2	1:A:356:A:C8	3.05	0.44
1:A:374:A:H2'	1:A:375:U:H6	1.82	0.44
1:A:407:G:O2'	1:A:408:A:H5'	2.17	0.44
1:A:621:A:C6	1:A:622:A:C6	3.05	0.44
1:A:665:A:N3	1:A:732:C:H2'	2.32	0.44
1:A:741:G:H2'	1:A:742:G:H5'	1.97	0.44
1:A:893:C:H2'	1:A:894:G:C8	2.52	0.44
1:A:953:G:C2	1:A:1229:A:C2	3.05	0.44
1:A:1287:A:N6	1:A:1288:A:N6	2.66	0.44
1:A:1401:G:C5	1:A:1402:C:C6	3.05	0.44
3:B:187:LEU:HD21	3:B:214:ILE:HG13	2.00	0.44
3:B:204:ASN:ND2	3:B:205:ASP:N	2.64	0.44
4:C:115:LEU:HD23	4:C:115:LEU:HA	1.78	0.44
5:D:70:ILE:HD11	5:D:100:ARG:CD	2.47	0.44
5:D:176:LEU:HA	5:D:183:GLY:HA2	1.99	0.44
15:N:38:GLY:C	15:N:39:LEU:HG	2.43	0.44
17:P:9:PHE:CE2	17:P:18:ARG:HD2	2.52	0.44
18:Q:82:MET:O	18:Q:83:ASP:C	2.61	0.44
19:R:52:PRO:HB2	19:R:54:ARG:HG3	1.99	0.44
1:A:65:U:C5	1:A:381:C:N4	2.85	0.44
1:A:112:G:C2	1:A:113:G:C8	3.06	0.44
1:A:369:C:C2	1:A:370:C:C5	3.05	0.44
1:A:411:A:N9	1:A:413:G:H1'	2.32	0.44
1:A:533:A:O2'	1:A:534:U:P	2.74	0.44
1:A:624:C:H2'	1:A:625:G:H8	1.81	0.44
1:A:642:A:C6	1:A:643:C:N4	2.85	0.44
1:A:1138:G:C2	1:A:1140:C:C5	3.05	0.44
1:A:1195:C:H2'	1:A:1197:G:H5'	1.98	0.44
1:A:1205:U:H5''	4:C:190:ARG:CZ	2.46	0.44
1:A:1212:U:O4'	1:A:1212:U:OP2	2.36	0.44
1:A:1233:G:N2	1:A:1234:C:C2	2.85	0.44
1:A:1240:U:P	8:G:116:ALA:HB2	2.56	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1257:U:C2'	1:A:1258:G:OP2	2.64	0.44
1:A:1301:U:C6	1:A:1303:C:C5	3.06	0.44
1:A:1403:C:O2	1:A:1403:C:H2'	2.16	0.44
1:A:1408:A:C6	1:A:1494:G:C6	3.05	0.44
1:A:1469:G:HO2'	1:A:1470:G:H5'	1.82	0.44
1:A:1511:G:C2'	1:A:1512:U:H5'	2.47	0.44
1:A:1539:C:H3'	1:A:1539:C:H6	1.82	0.44
3:B:98:LEU:HB2	3:B:101:MET:SD	2.58	0.44
6:E:80:ILE:HD12	6:E:80:ILE:O	2.17	0.44
6:E:136:MET:O	6:E:137:GLU:C	2.61	0.44
7:F:25:ILE:O	7:F:26:ILE:C	2.60	0.44
1:A:109:A:H4'	1:A:110:C:OP2	2.18	0.44
1:A:175:C:N3	1:A:176:C:C5	2.85	0.44
1:A:544:G:C6	1:A:545:C:C4	3.05	0.44
1:A:573:A:C2	1:A:574:A:C2	3.06	0.44
1:A:805:C:C6	1:A:805:C:H3'	2.52	0.44
1:A:882:C:O2'	1:A:883:C:C5'	2.55	0.44
1:A:898:G:N2	1:A:900:A:H3'	2.32	0.44
1:A:936:C:H2'	1:A:937:A:C5'	2.47	0.44
1:A:945:G:H2'	1:A:946:A:H5'	2.00	0.44
1:A:1103:C:C5'	3:B:98:LEU:HD22	2.48	0.44
1:A:1126:U:OP2	1:A:1281:U:O2	2.35	0.44
1:A:1129:C:O5'	1:A:1130:A:C5'	2.57	0.44
1:A:1306:A:N1	1:A:1307:U:C2	2.86	0.44
1:A:1514:C:C2'	1:A:1515:C:H5'	2.46	0.44
1:A:1533:C:O2'	1:A:1534:A:C8	2.71	0.44
1:A:1536:C:O2'	1:A:1537:U:H5'	2.18	0.44
2:1:3:A:O2'	2:1:4:A:OP1	2.30	0.44
3:B:42:ILE:HD12	3:B:203:GLY:HA2	1.99	0.44
6:E:43:LEU:CB	6:E:136:MET:HE2	2.43	0.44
6:E:79:GLU:O	6:E:80:ILE:HG23	2.17	0.44
9:H:75:ARG:HA	9:H:76:PRO:HD3	1.74	0.44
17:P:36:ILE:HG13	17:P:36:ILE:O	2.16	0.44
19:R:70:ILE:C	19:R:72:ARG:N	2.74	0.44
1:A:62:U:O2'	1:A:379:C:H1'	2.18	0.44
1:A:246:A:C4	1:A:279:A:C6	3.06	0.44
1:A:262:A:OP2	21:T:73:HIS:CD2	2.71	0.44
1:A:418:C:N3	1:A:426:G:C2	2.86	0.44
1:A:421:U:H5'	1:A:422:C:OP2	2.18	0.44
1:A:433:C:C2	1:A:434:U:C5	3.05	0.44
1:A:489:C:C2'	1:A:490:G:H5'	2.47	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:560:U:H5''	1:A:561:U:H3'	1.99	0.44
1:A:588:G:C6	1:A:753:A:C8	3.05	0.44
1:A:590:C:OP1	9:H:30:ARG:N	2.38	0.44
1:A:767:A:C6	1:A:768:A:C5	3.06	0.44
1:A:859:A:H2'	1:A:860:A:C8	2.53	0.44
1:A:994:A:N7	1:A:1216:G:H4'	2.33	0.44
1:A:1030(C):G:H2'	1:A:1030(D):A:C8	2.52	0.44
1:A:1191:A:OP1	4:C:4:LYS:HE2	2.16	0.44
1:A:1311:G:C6	1:A:1312:G:C5	3.05	0.44
1:A:1320:C:C2	20:S:72:GLY:HA3	2.52	0.44
6:E:57:LYS:O	6:E:60:TYR:N	2.50	0.44
6:E:151:LEU:HD23	6:E:151:LEU:O	2.18	0.44
8:G:113:GLU:HB2	8:G:119:ARG:CG	2.46	0.44
10:I:118:LYS:HB3	10:I:119:ALA:H	1.66	0.44
18:Q:40:LYS:HD3	18:Q:42:TYR:CZ	2.53	0.44
19:R:39:VAL:CG1	19:R:40:LEU:H	2.30	0.44
1:A:191:G:N7	1:A:192:U:C5	2.85	0.44
1:A:216:G:H2'	1:A:217:C:C6	2.53	0.44
1:A:275:G:H5'	18:Q:14:LYS:HB3	2.00	0.44
1:A:509:A:C6	1:A:510:A:C6	3.06	0.44
1:A:760:G:H2'	1:A:761:G:C5'	2.47	0.44
1:A:802:A:H8	1:A:802:A:O5'	2.00	0.44
1:A:825:G:C6	1:A:826:C:C4	3.05	0.44
1:A:955:U:C2'	1:A:956:U:H5'	2.48	0.44
1:A:960:U:N3	1:A:1225:A:C5	2.86	0.44
1:A:1009:G:C2	1:A:1010:G:C8	3.05	0.44
1:A:1020:U:C2'	1:A:1021:G:C5'	2.94	0.44
1:A:1030(A):G:H2'	1:A:1030(A):G:N3	2.32	0.44
3:B:19:HIS:CE1	3:B:206:ASP:HB3	2.52	0.44
3:B:28:PHE:O	3:B:29:ALA:C	2.61	0.44
3:B:70:PHE:O	3:B:92:TYR:HA	2.17	0.44
4:C:174:PRO:C	4:C:176:HIS:N	2.75	0.44
5:D:50:ARG:HA	5:D:51:PRO:HD3	1.82	0.44
17:P:28:ARG:HG2	17:P:29:ASP:OD2	2.17	0.44
1:A:58:C:O2	1:A:58:C:C2'	2.65	0.44
1:A:264:U:O2'	18:Q:63:ARG:HG2	2.17	0.44
1:A:344:A:OP2	1:A:345:C:N4	2.50	0.44
1:A:362:G:OP2	13:L:34:ARG:NH2	2.51	0.44
1:A:409:G:H2'	1:A:410:G:O5'	2.17	0.44
1:A:452:A:N3	1:A:453:A:N9	2.64	0.44
1:A:463:A:O2'	1:A:474:G:H5'	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:738:C:H6	1:A:738:C:O5'	2.00	0.44
1:A:955:U:O2'	1:A:956:U:H5'	2.18	0.44
1:A:1030:C:O2'	1:A:1030(A):G:C8	2.70	0.44
1:A:1045:C:C2'	1:A:1046:A:O5'	2.66	0.44
1:A:1162:C:C2	1:A:1175:G:C2	3.06	0.44
1:A:1190:G:H8	1:A:1190:G:O5'	2.01	0.44
1:A:1343:G:C4	1:A:1344:C:C5	3.06	0.44
1:A:1442:G:N2	1:A:1446:A:C8	2.85	0.44
4:C:3:ASN:O	4:C:4:LYS:CB	2.66	0.44
5:D:59:ARG:HH11	5:D:59:ARG:HG3	1.78	0.44
6:E:11:ILE:HG12	6:E:33:VAL:HG23	1.99	0.44
6:E:81:GLU:OE1	6:E:88:LYS:NZ	2.51	0.44
11:J:42:THR:HG23	11:J:68:HIS:CA	2.37	0.44
13:L:54:LYS:N	13:L:54:LYS:HD2	2.33	0.44
16:O:39:LEU:HD12	16:O:59:MET:CE	2.48	0.44
1:A:153:C:N3	1:A:169:C:N4	2.66	0.44
1:A:177:C:O2'	1:A:178:C:C5'	2.65	0.44
1:A:321:A:N3	1:A:322:C:C6	2.86	0.44
1:A:439:A:N6	1:A:497:A:H1'	2.33	0.44
1:A:487:A:H2'	1:A:488:C:C4'	2.48	0.44
1:A:513:C:H2'	1:A:514:C:O4'	2.18	0.44
1:A:638:G:O2'	1:A:639:G:H5'	2.17	0.44
1:A:656:C:H2'	1:A:657:G:O5'	2.18	0.44
1:A:687:A:H4'	12:K:47:VAL:CG2	2.46	0.44
1:A:724:G:N2	1:A:725:G:C1'	2.81	0.44
1:A:736:C:O2'	1:A:737:A:H5'	2.17	0.44
1:A:774:G:H2'	1:A:775:G:O4'	2.18	0.44
1:A:981:U:C2	1:A:982:U:C5	3.06	0.44
1:A:1081:G:N2	1:A:1082:G:H1'	2.32	0.44
1:A:1159:U:C5	1:A:1182:G:H2'	2.50	0.44
1:A:1266:G:C5	1:A:1268:A:OP2	2.71	0.44
1:A:1298:C:H5''	1:A:1299:A:OP1	2.18	0.44
1:A:1316:G:O2'	15:N:18:VAL:HG11	2.18	0.44
3:B:17:PHE:N	3:B:17:PHE:HD1	2.15	0.44
3:B:81:VAL:O	3:B:82:ARG:C	2.61	0.44
5:D:187:ARG:CD	5:D:188:LEU:H	2.30	0.44
5:D:199:ASN:O	5:D:200:GLU:C	2.61	0.44
9:H:44:PHE:HD1	9:H:80:ILE:HG12	1.82	0.44
10:I:6:GLY:O	10:I:7:THR:HB	2.18	0.44
11:J:4:ILE:HG23	11:J:98:ILE:HG21	2.00	0.44
15:N:57:ARG:HG2	15:N:58:LYS:H	1.82	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:293:G:H2'	1:A:294:U:H6	1.83	0.43
1:A:399:G:H2'	1:A:400:C:O4'	2.18	0.43
1:A:402:G:H2'	1:A:403:C:C5'	2.48	0.43
1:A:450:G:C8	1:A:481:G:O6	2.71	0.43
1:A:485:G:O2'	1:A:486:U:O5'	2.35	0.43
1:A:605:U:C4	1:A:606:G:C6	3.05	0.43
1:A:749:C:H2'	1:A:750:G:H8	1.82	0.43
1:A:838:G:C3'	1:A:839:U:H5''	2.47	0.43
1:A:934:C:C4	1:A:1345:U:C5	3.06	0.43
1:A:1055:A:C6	1:A:1206:G:C6	3.06	0.43
1:A:1127:G:N2	1:A:1145:C:C2	2.82	0.43
1:A:1330:U:O4	1:A:1331:G:N1	2.51	0.43
1:A:1355:G:C2	1:A:1356:G:C4	3.06	0.43
1:A:1520:G:N3	1:A:1521:G:N7	2.66	0.43
3:B:98:LEU:O	3:B:101:MET:HG3	2.18	0.43
3:B:100:GLY:O	3:B:102:LEU:N	2.51	0.43
5:D:121:VAL:O	5:D:134:ASP:HA	2.18	0.43
5:D:194:LEU:HD12	5:D:196:LEU:HG	1.98	0.43
9:H:24:THR:HG23	9:H:24:THR:O	2.18	0.43
10:I:50:LEU:HD21	10:I:81:ILE:CG2	2.48	0.43
15:N:31:ARG:HA	15:N:31:ARG:HD2	1.73	0.43
1:A:190(A):C:H2'	1:A:190(B):C:C5'	2.48	0.43
1:A:264:U:H4'	18:Q:63:ARG:HD3	2.00	0.43
1:A:286:G:C4	1:A:287:U:C5	3.06	0.43
1:A:414:A:C5	1:A:431:A:C2	3.06	0.43
1:A:445:G:O2'	1:A:446:G:H5'	2.18	0.43
1:A:459:G:C3'	1:A:460:A:C5'	2.91	0.43
1:A:502:G:H2'	1:A:503:C:H6	1.83	0.43
1:A:676:A:C5	1:A:677:U:C4	3.06	0.43
1:A:817:C:C2	1:A:819:A:O4'	2.72	0.43
1:A:1221:G:OP1	1:A:1320:C:N4	2.50	0.43
1:A:1272:G:H2'	1:A:1273:G:O4'	2.18	0.43
1:A:1369:C:H2'	1:A:1370:G:O4'	2.17	0.43
1:A:1480:G:C5	1:A:1481:U:C5	3.07	0.43
1:A:1494:G:O2'	1:A:1495:U:H5'	2.18	0.43
4:C:108:ASN:HA	4:C:109:PRO:HD2	1.68	0.43
4:C:154:SER:OG	4:C:155:GLY:N	2.51	0.43
5:D:19:LEU:HA	5:D:19:LEU:HD23	1.64	0.43
5:D:64:LEU:O	5:D:67:ILE:HB	2.18	0.43
1:A:79:G:H5''	1:A:79:G:H8	1.83	0.43
1:A:414:A:C4	1:A:415:A:C8	3.06	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:458:C:N4	1:A:459:G:C5	2.87	0.43
1:A:480:U:H2'	1:A:481:G:OP2	2.18	0.43
1:A:481:G:O2'	1:A:482:A:H8	2.00	0.43
1:A:541:G:O2'	1:A:542:G:H5'	2.19	0.43
1:A:565:U:C5	1:A:566:G:C4	3.06	0.43
1:A:613:C:C2	1:A:628:G:N2	2.86	0.43
1:A:658:G:O2'	1:A:659:U:H5'	2.18	0.43
1:A:724:G:N2	1:A:725:G:N9	2.66	0.43
1:A:887:G:H2'	1:A:888:G:O4'	2.18	0.43
1:A:939:G:C6	1:A:940:C:C4	3.06	0.43
1:A:988:G:C6	1:A:989:C:C4	3.05	0.43
1:A:1360:A:H2'	1:A:1361:G:H8	1.82	0.43
1:A:1426:C:O2'	1:A:1427:U:H5'	2.18	0.43
11:J:47:PHE:CZ	15:N:37:PHE:HE1	2.37	0.43
11:J:51:ARG:HG2	11:J:61:GLU:HB2	1.99	0.43
1:A:113:G:C5	1:A:315:A:N1	2.86	0.43
1:A:166:G:C2	1:A:167:G:C5	3.05	0.43
1:A:265:G:H2'	1:A:267:C:H5	1.83	0.43
1:A:267:C:H2'	1:A:268:C:C6	2.53	0.43
1:A:660:G:H2'	1:A:661:G:O5'	2.18	0.43
1:A:886:G:O2'	1:A:887:G:H5'	2.18	0.43
1:A:1004:A:C5'	1:A:1025:U:O2	2.66	0.43
1:A:1109:C:O2'	1:A:1110:A:H5'	2.18	0.43
1:A:1219:U:C2	1:A:1220:G:C8	3.07	0.43
1:A:1343:G:C5	1:A:1344:C:C4	3.06	0.43
1:A:1539:C:H3'	1:A:1539:C:C6	2.52	0.43
2:1:6:A:H2'	2:2:7:G:O4'	2.18	0.43
5:D:201:GLN:O	5:D:205:GLU:HG3	2.18	0.43
7:F:75:LEU:O	7:F:75:LEU:HD13	2.18	0.43
13:L:50:SER:O	13:L:51:ALA:HB2	2.18	0.43
21:T:76:ALA:O	21:T:80:ARG:HG2	2.18	0.43
1:A:118:U:C5	1:A:288:A:C6	3.07	0.43
1:A:166:G:C4	1:A:167:G:N7	2.87	0.43
1:A:192:U:N3	1:A:193:C:C5	2.87	0.43
1:A:333:G:C6	1:A:334:C:N4	2.87	0.43
1:A:377:G:C2	1:A:387:U:O2	2.70	0.43
1:A:570:G:C6	1:A:571:U:O4	2.72	0.43
1:A:625:G:C6	1:A:626:U:O4	2.72	0.43
1:A:664:G:H2'	1:A:666:G:OP1	2.18	0.43
1:A:741:G:H2'	1:A:742:G:C5'	2.48	0.43
1:A:805:C:C6	1:A:805:C:C3'	3.01	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:986:A:N1	1:A:1220:G:C6	2.86	0.43
1:A:1231:G:C4	1:A:1232:U:C5	3.06	0.43
1:A:1314:C:H2'	1:A:1315:U:C6	2.53	0.43
1:A:1319:A:C8	1:A:1323:G:C5	3.06	0.43
3:B:57:PHE:CZ	3:B:199:TYR:HE1	2.37	0.43
5:D:108:LEU:HD23	5:D:108:LEU:HA	1.88	0.43
5:D:127:THR:HG22	5:D:128:VAL:H	1.83	0.43
6:E:34:VAL:CG1	6:E:35:GLY:N	2.80	0.43
6:E:91:LEU:HA	6:E:91:LEU:HD23	1.58	0.43
8:G:78:ARG:NH1	8:G:154:TYR:HB3	2.34	0.43
15:N:37:PHE:HB3	15:N:39:LEU:HD12	2.00	0.43
21:T:48:LYS:O	21:T:50:GLU:N	2.51	0.43
1:A:15:G:H2'	1:A:16:A:O4'	2.18	0.43
1:A:101:A:H2'	1:A:102:G:H8	1.83	0.43
1:A:448:A:C6	1:A:487:A:C4	3.06	0.43
1:A:452:A:N3	1:A:453:A:C1'	2.81	0.43
1:A:474:G:N3	1:A:475:G:C8	2.86	0.43
1:A:575:G:C4	1:A:881:G:C2	3.07	0.43
1:A:725:G:N3	1:A:726:C:C6	2.86	0.43
1:A:808:C:OP1	16:O:48:LYS:HE2	2.19	0.43
1:A:997:U:O2'	1:A:998:G:H5'	2.19	0.43
1:A:1114:C:H1'	15:N:60:SER:HB3	1.99	0.43
1:A:1291:G:H2'	1:A:1292:U:C6	2.53	0.43
3:B:188:ALA:O	3:B:203:GLY:N	2.42	0.43
4:C:101:LEU:C	4:C:101:LEU:HD23	2.44	0.43
4:C:130:VAL:CB	4:C:157:ILE:HG23	2.49	0.43
9:H:74:PRO:O	9:H:76:PRO:HD3	2.18	0.43
10:I:17:VAL:CG2	10:I:80:GLY:HA3	2.43	0.43
1:A:36:C:N3	1:A:37:U:C6	2.87	0.43
1:A:36:C:O2	1:A:501:C:H5'	2.19	0.43
1:A:357:G:C2	1:A:358:U:C6	3.07	0.43
1:A:421:U:C5'	1:A:422:C:OP2	2.67	0.43
1:A:440:A:H3'	1:A:442:C:C6	2.54	0.43
1:A:454:C:N4	1:A:478:A:C2	2.86	0.43
1:A:479:C:H2'	1:A:480:U:O4'	2.19	0.43
1:A:551:U:C4	1:A:552:U:O4	2.72	0.43
1:A:651:C:N4	1:A:652:U:O4	2.51	0.43
1:A:706:A:H1'	12:K:29:ILE:CD1	2.49	0.43
1:A:885:G:C2	1:A:886:G:N7	2.87	0.43
1:A:1080:A:O3'	6:E:16:THR:CG2	2.66	0.43
1:A:1173:G:H2'	1:A:1174:G:H8	1.84	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1221:G:O2'	20:S:77:THR:HG21	2.19	0.43
1:A:1392:G:O2'	1:A:1502:A:H5'	2.19	0.43
1:A:1418:A:H2'	1:A:1419:G:O4'	2.18	0.43
1:A:1480:G:O2'	1:A:1481:U:H5'	2.18	0.43
4:C:64:VAL:HG12	4:C:65:ALA:N	2.32	0.43
6:E:117:ASP:O	6:E:118:ILE:HB	2.19	0.43
8:G:45:ASP:O	8:G:49:ILE:HG13	2.18	0.43
9:H:83:ILE:HA	9:H:136:GLU:O	2.19	0.43
9:H:89:PRO:HA	9:H:92:ARG:NE	2.33	0.43
9:H:127:LEU:HD22	9:H:127:LEU:N	2.34	0.43
13:L:30:ALA:HA	13:L:31:PRO:HD3	1.79	0.43
14:M:81:LEU:HA	14:M:84:ILE:HG13	2.00	0.43
15:N:16:PHE:N	15:N:16:PHE:CD1	2.86	0.43
18:Q:19:VAL:CG2	18:Q:44:ALA:HB3	2.48	0.43
1:A:172:A:N7	1:A:174:C:C5	2.86	0.43
1:A:176:C:O2'	1:A:177:C:C5'	2.66	0.43
1:A:346:G:H2'	1:A:347:G:C5'	2.40	0.43
1:A:408:A:H2'	1:A:409:G:O5'	2.19	0.43
1:A:668:G:H2'	1:A:669:U:C6	2.51	0.43
1:A:720:C:C3'	1:A:720:C:C6	3.01	0.43
1:A:777:A:C6	1:A:778:G:C4	3.06	0.43
1:A:979:C:H2'	1:A:980:C:H5'	2.01	0.43
1:A:1278:U:O5'	1:A:1278:U:C2	2.72	0.43
1:A:1287:A:H2	1:A:1353:G:H1'	1.81	0.43
1:A:1301:U:C4	1:A:1303:C:H1'	2.54	0.43
1:A:1381:U:O2	1:A:1381:U:H2'	2.18	0.43
3:B:101:MET:HA	3:B:108:ILE:HD13	2.00	0.43
5:D:61:LYS:HD2	5:D:207:TYR:OH	2.19	0.43
6:E:151:LEU:CD2	9:H:79:VAL:HA	2.47	0.43
8:G:87:VAL:HA	8:G:88:PRO:HD2	1.89	0.43
9:H:83:ILE:HG13	9:H:137:VAL:HG22	1.99	0.43
11:J:19:SER:CB	11:J:91:PRO:HG3	2.49	0.43
14:M:11:ARG:CG	14:M:12:ASN:N	2.81	0.43
18:Q:27:PHE:CE1	18:Q:36:ILE:HD11	2.53	0.43
19:R:34:TYR:H	19:R:34:TYR:HD2	1.60	0.43
1:A:106:C:H2'	1:A:107:G:H8	1.84	0.43
1:A:279:A:H3'	18:Q:95:TYR:OH	2.19	0.43
1:A:354:G:O2'	1:A:355:C:H5'	2.19	0.43
1:A:355:C:N4	1:A:356:A:N7	2.66	0.43
1:A:434:U:H2'	1:A:435:C:H6	1.82	0.43
1:A:450:G:N2	1:A:482:A:H61	2.16	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:522:C:H42	1:A:528:C:N4	2.17	0.43
1:A:529:G:O4'	1:A:533:A:C2	2.71	0.43
1:A:658:G:C6	1:A:749:C:N4	2.87	0.43
1:A:716:A:C6	1:A:717:C:N3	2.87	0.43
1:A:957:U:H6	1:A:957:U:O5'	2.02	0.43
1:A:1057:G:O2'	1:A:1058:G:H5'	2.19	0.43
1:A:1135:U:O3'	1:A:1136:U:H5	2.01	0.43
1:A:1191:A:H5''	4:C:4:LYS:HZ1	1.82	0.43
1:A:1212:U:O2'	1:A:1213:A:C8	2.72	0.43
1:A:1249:C:H1'	10:I:70:LYS:HG3	2.01	0.43
1:A:1309:G:C5	1:A:1329:A:C2	3.07	0.43
1:A:1507:A:H2'	1:A:1508:G:H8	1.82	0.43
1:A:1528:U:O2'	1:A:1529:G:P	2.77	0.43
3:B:187:LEU:HD23	3:B:201:ILE:CG2	2.49	0.43
5:D:195:ALA:O	5:D:196:LEU:C	2.61	0.43
13:L:98:TYR:CD1	13:L:98:TYR:N	2.87	0.43
14:M:49:THR:HG22	14:M:51:ALA:H	1.83	0.43
16:O:37:ASN:HD22	16:O:37:ASN:HA	1.57	0.43
1:A:181:G:C2	1:A:195:A:C8	3.07	0.43
1:A:186:C:N3	1:A:187:C:C5	2.87	0.43
1:A:428:G:C5	1:A:430:A:C6	3.07	0.43
1:A:537:G:OP1	13:L:113:ARG:NH2	2.47	0.43
1:A:625:G:N3	1:A:626:U:C6	2.86	0.43
1:A:642:A:C5	9:H:115:SER:HA	2.54	0.43
1:A:762:C:O5'	1:A:762:C:H6	2.02	0.43
1:A:778:G:C2'	1:A:779:C:H5'	2.48	0.43
1:A:998:G:C6	1:A:1044:A:N6	2.87	0.43
1:A:1029:C:C2	1:A:1033:G:N2	2.87	0.43
1:A:1074:G:N2	1:A:1102:A:C8	2.87	0.43
1:A:1108:G:C5	1:A:1109:C:C5	3.06	0.43
1:A:1121:U:H2'	1:A:1122:U:H6	1.83	0.43
1:A:1188:A:N3	1:A:1188:A:H2'	2.34	0.43
1:A:1239:A:N6	1:A:1299:A:H62	2.17	0.43
1:A:1407:C:H6	1:A:1407:C:O5'	2.01	0.43
1:A:1419:G:H2'	1:A:1420:C:C6	2.54	0.43
1:A:1452:C:C4'	1:A:1453:G:O5'	2.63	0.43
1:A:1501:C:N4	1:A:1504:G:N3	2.66	0.43
3:B:130:ARG:HD3	3:B:130:ARG:HA	1.75	0.43
4:C:101:LEU:C	4:C:101:LEU:CD2	2.91	0.43
11:J:81:THR:C	11:J:83:GLU:H	2.27	0.43
13:L:82:VAL:HG12	13:L:83:VAL:N	2.34	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:7:GLU:O	16:O:10:LYS:HB3	2.19	0.43
18:Q:22:LEU:HA	18:Q:22:LEU:HD12	1.64	0.43
1:A:22:G:C4	1:A:23:C:C6	3.07	0.42
1:A:579:G:H2'	1:A:580:U:C6	2.38	0.42
1:A:805:C:C2'	1:A:806:C:H5'	2.49	0.42
1:A:942:G:C2	1:A:943:U:C6	3.06	0.42
1:A:976:G:OP2	1:A:1358:U:O2'	2.34	0.42
1:A:1057:G:C5'	4:C:154:SER:CB	2.91	0.42
1:A:1080:A:H5''	6:E:16:THR:HG21	2.01	0.42
1:A:1113:C:H1'	4:C:178:LEU:CD2	2.49	0.42
1:A:1181:G:H2'	1:A:1182:G:C8	2.54	0.42
1:A:1213:A:C2	1:A:1215:G:H1'	2.54	0.42
1:A:1402:C:C4	1:A:1403:C:C4	3.07	0.42
1:A:1509:C:H2'	1:A:1510:U:O4'	2.18	0.42
1:A:1523:G:C5	1:A:1524:C:C5	3.07	0.42
3:B:149:LEU:HD23	3:B:149:LEU:HA	1.77	0.42
6:E:10:MET:HE3	6:E:10:MET:HB2	1.80	0.42
7:F:15:ASP:O	7:F:16:GLN:C	2.62	0.42
18:Q:60:ILE:HD13	18:Q:61:GLU:O	2.19	0.42
19:R:29:PHE:CE1	19:R:31:LEU:HD23	2.54	0.42
21:T:37:SER:HB3	21:T:84:LEU:HD12	2.00	0.42
1:A:160:A:O5'	1:A:160:A:H8	2.02	0.42
1:A:197:A:H1'	1:A:198:G:C1'	2.48	0.42
1:A:255:G:C6	1:A:256:U:O4	2.72	0.42
1:A:257:G:C2	1:A:270:A:C2	3.07	0.42
1:A:394:G:C4	1:A:395:C:C6	3.07	0.42
1:A:407:G:H2'	1:A:408:A:H8	1.84	0.42
1:A:409:G:OP1	5:D:24:GLU:O	2.37	0.42
1:A:432:A:H3'	1:A:433:C:C6	2.54	0.42
1:A:592:G:C2	1:A:593:G:C8	3.07	0.42
1:A:686:U:O2'	1:A:687:A:O5'	2.32	0.42
1:A:1202:G:H2'	1:A:1203:C:H5'	2.00	0.42
1:A:1204:A:C5	1:A:1205:U:C5	3.07	0.42
1:A:1318:A:N3	20:S:37:ARG:NH1	2.67	0.42
1:A:1368:G:H4'	15:N:61:TRP:HZ2	1.84	0.42
1:A:1520:G:C2	1:A:1521:G:N7	2.86	0.42
3:B:57:PHE:O	3:B:60:ASP:HB3	2.18	0.42
5:D:201:GLN:CA	5:D:204:ILE:HD12	2.44	0.42
16:O:70:LEU:C	16:O:72:ARG:H	2.27	0.42
17:P:20:VAL:HG23	17:P:35:LYS:HA	2.02	0.42
20:S:80:TYR:CG	20:S:81:ARG:N	2.87	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:66:G:C4'	1:A:173:U:C5	3.02	0.42
1:A:69:G:N3	1:A:70:G:C8	2.87	0.42
1:A:201:C:N4	1:A:203:U:H1'	2.34	0.42
1:A:255:G:O6	1:A:266:G:O6	2.36	0.42
1:A:411:A:H2'	1:A:412:A:H4'	2.00	0.42
1:A:551:U:N3	1:A:552:U:C4	2.86	0.42
1:A:691:G:C5	1:A:692:U:H5	2.38	0.42
1:A:742:G:H2'	1:A:743:U:C5'	2.48	0.42
1:A:973:G:H2'	1:A:974:A:OP1	2.20	0.42
1:A:1095:U:H2'	1:A:1096:C:C6	2.54	0.42
1:A:1196:U:O2'	1:A:1197:G:OP2	2.36	0.42
1:A:1237:C:H4'	1:A:1334:G:N2	2.34	0.42
1:A:1319:A:C4	1:A:1323:G:C8	3.08	0.42
1:A:1488:G:C2	1:A:1489:G:C4	3.07	0.42
3:B:75:LYS:O	3:B:75:LYS:HD3	2.18	0.42
5:D:145:GLU:HG2	5:D:184:LYS:HE2	2.01	0.42
6:E:43:LEU:HD23	6:E:43:LEU:C	2.43	0.42
7:F:33:TYR:HB2	7:F:75:LEU:HD23	2.01	0.42
11:J:7:LYS:CE	11:J:9:ARG:HH21	2.32	0.42
16:O:27:VAL:O	16:O:31:LEU:HD13	2.19	0.42
18:Q:6:LEU:O	18:Q:58:GLU:HA	2.19	0.42
1:A:4:U:C4'	1:A:5:U:OP2	2.68	0.42
1:A:9:G:N3	1:A:10:A:C8	2.87	0.42
1:A:124:G:C6	1:A:125:U:C4	3.08	0.42
1:A:190(L):U:C2'	1:A:191:G:H5'	2.48	0.42
1:A:392:G:C2	1:A:393:A:C4	3.07	0.42
1:A:418:C:C2	1:A:419:C:C5	3.06	0.42
1:A:463:A:H2'	1:A:474:G:O4'	2.18	0.42
1:A:545:C:O2	1:A:545:C:C2'	2.67	0.42
1:A:692:U:H5'	1:A:797:C:C5'	2.49	0.42
1:A:949:A:H2'	1:A:950:U:C6	2.54	0.42
1:A:1052:U:O4	1:A:1200:C:H2'	2.18	0.42
1:A:1052:U:O4	1:A:1200:C:C2	2.73	0.42
1:A:1126:U:O2'	1:A:1127:G:OP1	2.35	0.42
1:A:1128:C:H1'	1:A:1146:A:H61	1.85	0.42
1:A:1321:C:H2'	1:A:1322:C:C6	2.54	0.42
1:A:1438:G:H2'	1:A:1439:C:C6	2.55	0.42
1:A:1508:G:H2'	1:A:1509:C:C6	2.38	0.42
5:D:25:ARG:HH21	5:D:30:LYS:HD3	1.85	0.42
5:D:38:TYR:H	5:D:38:TYR:HD2	1.60	0.42
5:D:170:VAL:O	5:D:171:GLY:C	2.61	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:136:MET:O	6:E:139:LEU:N	2.52	0.42
9:H:108:GLY:HA3	9:H:138:TRP:CB	2.46	0.42
18:Q:43:LEU:HD23	18:Q:43:LEU:HA	1.53	0.42
1:A:59:A:C2'	1:A:331:G:H22	2.33	0.42
1:A:190(H):G:O2'	1:A:190(I):G:H5'	2.19	0.42
1:A:193:C:O4'	21:T:60:GLU:OE1	2.37	0.42
1:A:402:G:C6	1:A:403:C:C4	3.08	0.42
1:A:595:G:C4	1:A:641:U:C4	3.07	0.42
1:A:642:A:N6	1:A:643:C:N4	2.67	0.42
1:A:815:A:C4'	1:A:817:C:N4	2.83	0.42
1:A:853:G:H2'	1:A:854:G:H8	1.84	0.42
1:A:978:A:C4	1:A:1319:A:C2	3.07	0.42
1:A:1074:G:C6	1:A:1075:C:C4	3.07	0.42
1:A:1270:C:O2'	1:A:1314:C:H5'	2.19	0.42
1:A:1278:U:H5''	1:A:1279:A:C5'	2.50	0.42
1:A:1425:U:H2'	1:A:1426:C:H6	1.83	0.42
3:B:56:ARG:HG2	3:B:57:PHE:N	2.35	0.42
5:D:70:ILE:HD11	5:D:100:ARG:HD2	2.01	0.42
5:D:99:SER:O	5:D:140:VAL:HG23	2.20	0.42
6:E:11:ILE:HA	6:E:11:ILE:HD13	1.54	0.42
11:J:32:ALA:O	11:J:33:GLN:C	2.62	0.42
16:O:39:LEU:HD12	16:O:59:MET:HE2	2.02	0.42
16:O:39:LEU:O	16:O:43:LEU:HG	2.20	0.42
16:O:70:LEU:HA	16:O:70:LEU:HD22	1.74	0.42
19:R:28:GLU:H	19:R:28:GLU:CD	2.27	0.42
1:A:15:G:N2	1:A:16:A:H1'	2.35	0.42
1:A:22:G:O4'	1:A:885:G:H1'	2.19	0.42
1:A:60:A:P	1:A:60:A:H8	2.43	0.42
1:A:166:G:O2'	1:A:167:G:C5'	2.67	0.42
1:A:201:C:H2'	1:A:202:U:H3'	2.00	0.42
1:A:233:C:C2'	1:A:234:C:C5'	2.97	0.42
1:A:269:C:H2'	1:A:270:A:C8	2.55	0.42
1:A:446:G:C2'	1:A:447:G:C5'	2.94	0.42
1:A:509:A:N6	1:A:510:A:N6	2.67	0.42
1:A:604:G:C6	1:A:605:U:C4	3.07	0.42
1:A:657:G:N2	1:A:750:G:C8	2.88	0.42
1:A:767:A:C5	1:A:768:A:N7	2.88	0.42
1:A:864:A:H3'	1:A:865:A:C8	2.55	0.42
1:A:973:G:H3'	1:A:974:A:H5''	2.02	0.42
1:A:996:A:C6	1:A:997:U:O4	2.72	0.42
1:A:1030:C:H42	1:A:1031:G:H1	1.66	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1113:C:H1'	4:C:178:LEU:HD23	2.01	0.42
1:A:1157:A:C2	1:A:1181:G:C6	3.08	0.42
1:A:1159:U:H1'	1:A:1182:G:N2	2.35	0.42
1:A:1441:G:C5'	1:A:1442:G:C8	3.03	0.42
3:B:124:SER:CB	3:B:125:PRO:HD2	2.49	0.42
4:C:201:TYR:O	4:C:202:ILE:HG13	2.20	0.42
5:D:8:VAL:HG11	5:D:21:LEU:HB3	2.01	0.42
8:G:12:LEU:CD1	8:G:12:LEU:H	2.32	0.42
9:H:83:ILE:O	9:H:83:ILE:CG2	2.67	0.42
16:O:39:LEU:O	16:O:40:SER:C	2.63	0.42
18:Q:76:LEU:HD23	18:Q:77:VAL:C	2.45	0.42
19:R:38:GLU:H	19:R:38:GLU:CD	2.26	0.42
21:T:88:VAL:O	21:T:91:LEU:N	2.50	0.42
1:A:15:G:H1'	6:E:24:ARG:NH1	2.35	0.42
1:A:138:G:H2'	1:A:139:G:C8	2.55	0.42
1:A:144:G:C6	1:A:145:G:C5	3.07	0.42
1:A:463:A:C8	1:A:474:G:C8	3.07	0.42
1:A:567:G:H2'	1:A:568:G:O4'	2.20	0.42
1:A:571:U:H3'	1:A:572:A:C5'	2.49	0.42
1:A:704:A:N6	12:K:42:TRP:CZ2	2.88	0.42
1:A:781:A:C5	1:A:802:A:C2	3.07	0.42
1:A:1030(A):G:C5'	1:A:1030(B):C:OP2	2.68	0.42
1:A:1129:C:O2'	1:A:1130:A:OP2	2.32	0.42
1:A:1130:A:OP2	1:A:1131:G:OP2	2.38	0.42
1:A:1183:A:C2'	1:A:1184:G:OP1	2.68	0.42
1:A:1278:U:OP2	1:A:1278:U:N3	2.52	0.42
1:A:1319:A:C8	1:A:1323:G:C6	3.08	0.42
1:A:1344:C:H4'	10:I:120:ARG:HB2	2.02	0.42
1:A:1462:G:O2'	1:A:1463:C:H5'	2.20	0.42
1:A:1518:A:H2'	1:A:1519:A:C1'	2.50	0.42
1:A:1539:C:C6	1:A:1539:C:C3'	3.03	0.42
4:C:10:PHE:CE1	4:C:178:LEU:HD13	2.55	0.42
4:C:64:VAL:HG12	4:C:99:VAL:HG21	2.01	0.42
6:E:57:LYS:O	6:E:60:TYR:HB3	2.20	0.42
8:G:26:PHE:HB2	8:G:62:PHE:HZ	1.84	0.42
11:J:92:THR:O	11:J:92:THR:HG22	2.20	0.42
15:N:54:PRO:O	15:N:56:VAL:HG23	2.20	0.42
16:O:45:VAL:HG12	16:O:46:HIS:H	1.83	0.42
16:O:62:GLN:O	16:O:63:ARG:C	2.63	0.42
17:P:82:GLN:O	17:P:82:GLN:HG3	2.20	0.42
19:R:37:VAL:CG2	19:R:78:LEU:HB3	2.49	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:56:MET:HE2	21:T:84:LEU:HD23	2.01	0.42
1:A:7:G:C2	1:A:298:A:N1	2.88	0.42
1:A:7:G:C2	1:A:298:A:C6	3.08	0.42
1:A:42:G:O2'	1:A:43:C:C5'	2.68	0.42
1:A:81:U:N3	1:A:84:U:OP2	2.53	0.42
1:A:104:G:H4'	1:A:174:C:O4'	2.20	0.42
1:A:429:U:C4'	1:A:430:A:O5'	2.49	0.42
1:A:453:A:N1	1:A:454:C:C2	2.88	0.42
1:A:542:G:P	5:D:10:ARG:HH22	2.42	0.42
1:A:769:G:C2	1:A:770:C:C6	3.08	0.42
1:A:862:C:O2'	1:A:863:U:H5'	2.20	0.42
1:A:900:A:N1	1:A:901:A:C2	2.88	0.42
1:A:939:G:C6	1:A:940:C:N4	2.88	0.42
1:A:997:U:C2'	1:A:998:G:H5'	2.50	0.42
1:A:1118:C:H2'	1:A:1119:C:O4'	2.20	0.42
1:A:1127:G:N2	1:A:1147:C:N4	2.67	0.42
1:A:1226:C:C6	14:M:103:THR:OG1	2.72	0.42
1:A:1250:A:H4'	10:I:68:GLY:N	2.35	0.42
1:A:1253:G:C2	1:A:1254:C:C2	3.07	0.42
1:A:1485:U:O2	1:A:1485:U:C2'	2.66	0.42
3:B:68:ILE:O	3:B:91:PRO:HD2	2.20	0.42
4:C:24:ALA:HB3	4:C:29:TYR:HD1	1.84	0.42
4:C:112:SER:O	4:C:116:VAL:HG23	2.20	0.42
4:C:113:ALA:HB3	4:C:183:ASP:CG	2.45	0.42
5:D:88:VAL:C	5:D:90:GLY:N	2.77	0.42
5:D:136:PRO:C	5:D:138:TYR:H	2.28	0.42
5:D:178:VAL:C	5:D:180:GLY:N	2.77	0.42
6:E:129:ILE:O	6:E:132:ALA:HB3	2.20	0.42
19:R:70:ILE:O	19:R:74:ARG:HG3	2.19	0.42
20:S:28:LYS:HD3	20:S:31:ILE:CD1	2.50	0.42
1:A:25:C:C5	1:A:558:G:C2	3.08	0.42
1:A:128:G:C2	1:A:234:C:C2	3.07	0.42
1:A:174:C:C2	1:A:175:C:C5	3.08	0.42
1:A:190(C):C:C5	1:A:190(D):U:C5	3.07	0.42
1:A:432:A:N7	1:A:433:C:C5	2.88	0.42
1:A:617:G:H4'	17:P:44:THR:HB	2.02	0.42
1:A:652:U:O2'	1:A:653:A:H5''	2.19	0.42
1:A:849:C:C2	1:A:850:U:C6	3.07	0.42
1:A:994:A:C8	1:A:1216:G:H4'	2.55	0.42
1:A:1108:G:N7	1:A:1109:C:C5	2.87	0.42
1:A:1130:A:OP1	10:I:20:ARG:NH2	2.53	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1224:G:O2'	1:A:1225:A:OP1	2.32	0.42
1:A:1238:A:C8	1:A:1303:C:H1'	2.53	0.42
1:A:1310:G:N1	1:A:1328:C:N4	2.68	0.42
1:A:1433:A:C8	1:A:1467:G:N2	2.88	0.42
4:C:10:PHE:CE2	4:C:178:LEU:HD13	2.55	0.42
6:E:127:ASN:HA	6:E:128:PRO:HD2	1.77	0.42
7:F:15:ASP:O	7:F:18:GLN:N	2.50	0.42
10:I:53:VAL:C	10:I:55:ALA:H	2.27	0.42
10:I:69:GLY:O	10:I:73:GLN:N	2.53	0.42
10:I:117:HIS:NE2	10:I:123:PRO:HB3	2.35	0.42
11:J:49:VAL:CG1	11:J:50:ILE:N	2.82	0.42
12:K:14:VAL:O	12:K:14:VAL:HG12	2.19	0.42
12:K:84:VAL:CG2	12:K:110:ASP:HA	2.49	0.42
20:S:22:LEU:CD2	20:S:28:LYS:HD2	2.50	0.42
21:T:78:ALA:O	21:T:79:ARG:C	2.60	0.42
1:A:136:C:H2'	1:A:137:C:H6	1.84	0.42
1:A:392:G:N3	1:A:393:A:C8	2.88	0.42
1:A:463:A:N7	1:A:474:G:N7	2.68	0.42
1:A:746:A:C4	1:A:747:C:C5	3.07	0.42
1:A:927:G:C2'	1:A:928:G:O5'	2.68	0.42
1:A:929:G:O6	1:A:1389:C:N4	2.53	0.42
1:A:951:G:C6	1:A:1231:G:C6	3.08	0.42
1:A:1295:G:H4'	14:M:14:ARG:HH22	1.85	0.42
1:A:1300:G:C2'	1:A:1301:U:OP2	2.68	0.42
1:A:1324:A:C5	1:A:1325:C:C5	3.08	0.42
1:A:1328:C:O3'	14:M:28:ALA:HB3	2.19	0.42
1:A:1341:U:O5'	1:A:1341:U:H6	2.03	0.42
1:A:1343:G:C6	1:A:1344:C:N4	2.88	0.42
1:A:1372:U:OP2	10:I:11:LYS:HD3	2.19	0.42
1:A:1459:C:C2'	1:A:1460:A:H5'	2.50	0.42
1:A:1509:C:N3	1:A:1510:U:C4	2.88	0.42
3:B:11:LEU:HD12	3:B:11:LEU:H	1.85	0.42
4:C:33:LEU:HD23	4:C:33:LEU:C	2.44	0.42
5:D:21:LEU:HA	5:D:21:LEU:HD23	1.86	0.42
5:D:38:TYR:CD2	5:D:38:TYR:N	2.86	0.42
5:D:39:PRO:HB2	5:D:40:PRO:HD2	2.02	0.42
8:G:151:TYR:HA	8:G:153:HIS:CE1	2.55	0.42
1:A:35:G:C6	1:A:550:G:N1	2.88	0.41
1:A:116:A:O5'	1:A:116:A:H8	2.03	0.41
1:A:237:C:O2'	1:A:238:G:H5'	2.19	0.41
1:A:321:A:C4	1:A:322:C:C5	3.08	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:508:C:H4'	1:A:509:A:O5'	2.20	0.41
1:A:533:A:C5	1:A:536:C:N4	2.88	0.41
1:A:591:U:C2	1:A:592:G:C8	3.08	0.41
1:A:592:G:C6	1:A:648:A:C6	3.08	0.41
1:A:676:A:O2'	1:A:677:U:H5'	2.20	0.41
1:A:773:G:C6	1:A:807:A:N6	2.88	0.41
1:A:879:C:H2'	1:A:880:C:C6	2.55	0.41
1:A:963:G:H2'	1:A:964:A:H5'	2.02	0.41
1:A:1019:C:H2'	1:A:1020:U:C5'	2.50	0.41
1:A:1333:A:C4	1:A:1334:G:C8	3.08	0.41
1:A:1367:C:OP2	10:I:112:LYS:NZ	2.53	0.41
1:A:1368:G:C2'	1:A:1369:C:H5'	2.50	0.41
1:A:1399:C:H1'	1:A:1401:G:C8	2.55	0.41
1:A:1431:C:C2'	1:A:1432:G:H5'	2.50	0.41
1:A:1460:A:P	21:T:27:LYS:NZ	2.93	0.41
1:A:1490:C:C6	1:A:1490:C:C4'	3.03	0.41
2:1:5:G:N3	2:1:5:G:H2'	2.34	0.41
3:B:118:LEU:O	3:B:119:GLU:C	2.63	0.41
5:D:146:ILE:H	5:D:146:ILE:HG13	1.70	0.41
11:J:71:LEU:HD13	11:J:72:VAL:N	2.35	0.41
16:O:54:ARG:C	16:O:56:LEU:N	2.77	0.41
19:R:34:TYR:CD2	19:R:34:TYR:N	2.79	0.41
1:A:68:G:H2'	1:A:69:G:O5'	2.20	0.41
1:A:134:A:C2	1:A:135:C:C2	3.07	0.41
1:A:229:U:H2'	1:A:230:G:C8	2.55	0.41
1:A:620:C:H3'	1:A:621:A:C8	2.55	0.41
1:A:772:U:C4	1:A:773:G:N7	2.89	0.41
1:A:857:C:H2'	1:A:858:G:O4'	2.19	0.41
1:A:1054:C:OP1	1:A:1197:G:OP1	2.38	0.41
1:A:1126:U:HO2'	1:A:1127:G:P	2.43	0.41
1:A:1147:C:O2	10:I:16:ARG:NH1	2.52	0.41
1:A:1240:U:H3	8:G:30:ILE:HG22	1.85	0.41
1:A:1248:A:C5	1:A:1290:G:N1	2.88	0.41
1:A:1402:C:H2'	1:A:1403:C:H6	1.85	0.41
1:A:1411:C:H5''	13:L:41:ARG:HH12	1.85	0.41
4:C:6:HIS:HD2	4:C:9:GLY:H	1.68	0.41
8:G:22:LEU:HG	8:G:62:PHE:HE2	1.85	0.41
14:M:105:THR:HB	14:M:106:ASN:H	1.52	0.41
1:A:75:G:H2'	1:A:76:C:O5'	2.20	0.41
1:A:243:A:N6	1:A:281:G:O2'	2.52	0.41
1:A:308:C:H2'	1:A:309:G:H8	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:344:A:C8	1:A:344:A:O5'	2.73	0.41
1:A:380:G:C2	1:A:384:G:C6	3.09	0.41
1:A:463:A:C8	1:A:474:G:N7	2.89	0.41
1:A:533:A:C8	1:A:536:C:N4	2.89	0.41
1:A:556:C:C2'	1:A:557:G:O5'	2.65	0.41
1:A:587:G:N2	1:A:755:G:C8	2.88	0.41
1:A:720:C:C6	1:A:720:C:H3'	2.55	0.41
1:A:766:A:H2'	1:A:767:A:C5'	2.48	0.41
1:A:777:A:C6	1:A:778:G:C5	3.09	0.41
1:A:808:C:P	16:O:48:LYS:HE2	2.60	0.41
1:A:964:A:O2'	11:J:55:LYS:CE	2.68	0.41
1:A:1075:C:H5'	1:A:1101:A:N6	2.35	0.41
1:A:1136:U:C5'	1:A:1137:C:OP2	2.62	0.41
1:A:1233:G:C6	1:A:1234:C:C4	3.08	0.41
1:A:1324:A:C4	1:A:1325:C:C5	3.08	0.41
1:A:1355:G:N2	1:A:1356:G:C4	2.89	0.41
3:B:145:LEU:O	3:B:147:LYS:N	2.53	0.41
4:C:6:HIS:HA	4:C:7:PRO:HD2	1.67	0.41
5:D:173:TRP:CD2	5:D:189:PRO:HB3	2.55	0.41
10:I:53:VAL:C	10:I:55:ALA:N	2.78	0.41
13:L:45:PRO:HG2	13:L:50:SER:HA	2.02	0.41
13:L:70:ILE:HA	13:L:71:PRO:HD2	1.88	0.41
14:M:63:THR:HG23	14:M:64:TRP:H	1.83	0.41
1:A:83:U:C4	1:A:84:U:C4	3.09	0.41
1:A:279:A:H4'	1:A:280:C:OP2	2.20	0.41
1:A:440:A:H5''	1:A:442:C:OP2	2.21	0.41
1:A:442:C:O5'	1:A:442:C:H6	2.03	0.41
1:A:523:A:N6	13:L:53:ARG:NH1	2.69	0.41
1:A:533:A:N6	1:A:536:C:C2	2.89	0.41
1:A:605:U:C2'	1:A:606:G:C5'	2.93	0.41
1:A:608:A:N3	1:A:609:A:C8	2.88	0.41
1:A:661:G:N2	1:A:745:C:C2	2.88	0.41
1:A:725:G:C4	1:A:726:C:C6	3.08	0.41
1:A:936:C:C2'	1:A:937:A:O5'	2.68	0.41
1:A:951:G:H2'	1:A:952:U:O5'	2.20	0.41
1:A:1119:C:O2'	1:A:1120:G:H5'	2.21	0.41
1:A:1177:G:H8	1:A:1177:G:O5'	2.03	0.41
1:A:1291:G:N3	1:A:1292:U:C5	2.89	0.41
1:A:1377:A:O2'	8:G:2:ALA:HB3	2.20	0.41
1:A:1415:G:C2'	1:A:1416:G:H5'	2.50	0.41
3:B:214:ILE:HD12	3:B:214:ILE:HG23	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:57:ARG:CZ	6:E:107:ARG:HH11	2.32	0.41
5:D:96:LEU:O	5:D:97:LEU:C	2.63	0.41
6:E:55:VAL:H	6:E:55:VAL:HG23	1.53	0.41
8:G:69:VAL:O	8:G:71:PRO:HD3	2.21	0.41
12:K:73:MET:SD	12:K:103:LEU:HD21	2.60	0.41
1:A:174:C:C4	1:A:175:C:C5	3.08	0.41
1:A:252:U:C2	1:A:253:U:C5	3.09	0.41
1:A:266:G:C8	1:A:266:G:C4'	3.03	0.41
1:A:490:G:H2'	1:A:491:G:H8	1.85	0.41
1:A:761:G:C5	1:A:762:C:C4	3.08	0.41
1:A:872:A:N3	1:A:874:G:N7	2.68	0.41
1:A:948:C:C5	14:M:106:ASN:ND2	2.88	0.41
1:A:970:C:C2	1:A:1231:G:H1'	2.55	0.41
1:A:1030(C):G:H2'	1:A:1030(D):A:O4'	2.21	0.41
1:A:1301:U:C6	1:A:1303:C:C6	3.08	0.41
1:A:1347:G:H22	1:A:1373:G:H2'	1.79	0.41
1:A:1428:A:H2'	1:A:1429:C:C6	2.56	0.41
1:A:1504:G:HO2'	1:A:1505:G:P	2.42	0.41
1:A:1535:C:C2'	1:A:1536:C:H5'	2.50	0.41
2:1:4:A:H2'	2:1:5:G:C8	2.56	0.41
5:D:24:GLU:O	5:D:25:ARG:HB3	2.21	0.41
9:H:6:ILE:H	9:H:6:ILE:HG12	1.65	0.41
12:K:122:LYS:O	12:K:123:LYS:C	2.63	0.41
13:L:72:GLY:C	13:L:74:GLY:H	2.29	0.41
14:M:108:ARG:NH1	14:M:111:LYS:HD2	2.34	0.41
1:A:51:A:H4'	1:A:52:G:C5'	2.51	0.41
1:A:55:A:N3	1:A:56:U:C6	2.89	0.41
1:A:276:G:C6	1:A:277:C:C4	3.08	0.41
1:A:300:A:N7	1:A:301:G:C8	2.89	0.41
1:A:338:A:N3	1:A:339:C:C6	2.88	0.41
1:A:411:A:C1'	1:A:413:G:H1'	2.50	0.41
1:A:439:A:C6	1:A:497:A:N3	2.88	0.41
1:A:537:G:H2'	1:A:538:G:C8	2.56	0.41
1:A:558:G:C8	1:A:559:A:N3	2.88	0.41
1:A:686:U:HO2'	1:A:687:A:C5'	2.34	0.41
1:A:825:G:C5	1:A:826:C:C5	3.09	0.41
1:A:936:C:C2'	1:A:937:A:H5'	2.50	0.41
1:A:1111:A:C2	4:C:177:THR:HG23	2.55	0.41
1:A:1291:G:O3'	10:I:38:GLN:NE2	2.49	0.41
1:A:1346:A:HO2'	1:A:1347:G:P	2.44	0.41
1:A:1378:C:OP1	8:G:6:ARG:O	2.37	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1418:A:C5	1:A:1483:A:C6	3.08	0.41
2:2:7:G:H2'	2:2:8:A:O5'	2.21	0.41
2:2:9:A:C2'	2:2:10:A:C5'	2.96	0.41
4:C:89:GLU:C	4:C:91:LEU:N	2.76	0.41
4:C:116:VAL:HG21	4:C:202:ILE:HD11	2.03	0.41
5:D:114:ARG:O	5:D:117:ALA:N	2.53	0.41
10:I:117:HIS:O	10:I:118:LYS:HG3	2.20	0.41
12:K:19:ALA:HB2	12:K:80:VAL:HG11	2.02	0.41
12:K:57:THR:O	12:K:60:ALA:HB3	2.20	0.41
17:P:41:PRO:O	17:P:43:LYS:HG3	2.20	0.41
1:A:193:C:H2'	1:A:194:C:C6	2.56	0.41
1:A:406:G:H5''	5:D:5:ILE:CG2	2.48	0.41
1:A:502:G:C6	1:A:503:C:C4	3.09	0.41
1:A:538:G:H2'	1:A:539:A:C8	2.55	0.41
1:A:926:G:C2	1:A:1505:G:C4	3.08	0.41
1:A:949:A:C6	1:A:950:U:C4	3.09	0.41
1:A:962:C:O2'	1:A:963:G:H5'	2.21	0.41
1:A:1002:G:H2'	1:A:1003:G:H5'	2.02	0.41
1:A:1030(A):G:H5''	1:A:1030(B):C:O5'	2.21	0.41
1:A:1138:G:N2	1:A:1140:C:C4	2.89	0.41
1:A:1164:G:C2	1:A:1173:G:C2	3.09	0.41
1:A:1239:A:C4'	1:A:1240:U:O5'	2.58	0.41
3:B:59:GLU:O	3:B:60:ASP:C	2.62	0.41
3:B:102:LEU:O	3:B:180:LEU:HD11	2.20	0.41
8:G:37:ASN:HD21	10:I:40:LEU:HA	1.86	0.41
13:L:104:VAL:O	13:L:105:TYR:HB2	2.20	0.41
13:L:113:ARG:HB2	13:L:122:THR:HG21	2.02	0.41
1:A:10:A:H2'	1:A:11:G:H8	1.86	0.41
1:A:83:U:H2'	1:A:84:U:C6	2.56	0.41
1:A:177:C:C2	1:A:178:C:C5	3.08	0.41
1:A:190(G):G:N3	1:A:190(G):G:H2'	2.36	0.41
1:A:279:A:H5'	1:A:281:G:O4'	2.21	0.41
1:A:509:A:O4'	5:D:58:LEU:HD12	2.20	0.41
1:A:703:G:OP2	1:A:703:G:H3'	2.21	0.41
1:A:956:U:O2'	1:A:957:U:H5'	2.20	0.41
1:A:1030:C:O2'	1:A:1030(A):G:H8	2.04	0.41
1:A:1030(A):G:C4'	1:A:1030(B):C:OP2	2.68	0.41
1:A:1074:G:O3'	3:B:103:THR:HG21	2.20	0.41
1:A:1104:G:O5'	3:B:111:ARG:HD2	2.21	0.41
1:A:1106:G:O2'	1:A:1107:C:H5'	2.21	0.41
1:A:1120:G:H8	1:A:1120:G:O5'	2.04	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1199:U:H4'	11:J:54:PHE:CE1	2.55	0.41
1:A:1202:G:H2'	1:A:1203:C:O4'	2.20	0.41
1:A:1245:A:C6	1:A:1246:C:N4	2.88	0.41
1:A:1248:A:C5	1:A:1290:G:C2	3.09	0.41
1:A:1256:A:O2'	1:A:1257:U:P	2.79	0.41
1:A:1306:A:C8	1:A:1332:A:C6	3.09	0.41
1:A:1364:U:O2'	1:A:1365:G:P	2.78	0.41
1:A:1461:G:C4	1:A:1462:G:C8	3.09	0.41
1:A:1497:G:H2'	1:A:1498:U:H6	1.84	0.41
5:D:32:ALA:C	5:D:34:GLU:N	2.76	0.41
5:D:71:SER:O	5:D:72:GLU:C	2.64	0.41
5:D:200:GLU:O	5:D:203:VAL:N	2.54	0.41
9:H:38:ILE:HG22	9:H:39:LEU:N	2.35	0.41
9:H:120:THR:OG1	9:H:123:GLU:HB2	2.20	0.41
10:I:97:LYS:C	10:I:100:GLY:H	2.29	0.41
13:L:55:VAL:HG12	13:L:56:ALA:H	1.86	0.41
13:L:75:HIS:HD2	13:L:77:LEU:HG	1.86	0.41
17:P:67:THR:HB	17:P:70:ALA:H	1.84	0.41
20:S:13:ASP:O	20:S:17:GLU:HG2	2.21	0.41
1:A:17:U:O4'	1:A:1080:A:H1'	2.21	0.41
1:A:101:A:HO2'	1:A:102:G:H5'	1.84	0.41
1:A:177:C:H2'	1:A:178:C:C6	2.56	0.41
1:A:273:A:C6	1:A:274:A:C6	3.08	0.41
1:A:275:G:H5'	18:Q:14:LYS:CB	2.50	0.41
1:A:281:G:O2'	1:A:282:A:P	2.79	0.41
1:A:302:G:H8	1:A:302:G:O5'	2.03	0.41
1:A:376:G:C4	1:A:389:A:C2	3.08	0.41
1:A:382:A:O2'	1:A:383:A:C5'	2.69	0.41
1:A:391:G:C4	1:A:392:G:C8	3.09	0.41
1:A:411:A:C8	5:D:30:LYS:NZ	2.81	0.41
1:A:436:C:C2	1:A:437:U:C5	3.09	0.41
1:A:448:A:N6	1:A:487:A:N9	2.69	0.41
1:A:601:C:H2'	1:A:602:A:H8	1.86	0.41
1:A:620:C:H2'	1:A:621:A:O4'	2.21	0.41
1:A:682:G:C6	1:A:709:G:C6	3.09	0.41
1:A:756:C:H2'	1:A:757:U:O4'	2.19	0.41
1:A:757:U:O2'	1:A:879:C:O2	2.36	0.41
1:A:838:G:C2	1:A:849:C:N3	2.89	0.41
1:A:940:C:C2'	1:A:941:G:C5'	2.99	0.41
1:A:944:G:H3'	1:A:945:G:C5'	2.51	0.41
1:A:1111:A:N1	4:C:177:THR:HG23	2.36	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1220:G:N2	20:S:54:GLY:O	2.52	0.41
1:A:1300:G:O2'	1:A:1301:U:O4'	2.38	0.41
1:A:1310:G:N1	1:A:1328:C:C4	2.89	0.41
1:A:1367:C:C5'	11:J:60:ARG:NH1	2.84	0.41
1:A:1394:A:N6	1:A:1500:A:O2'	2.53	0.41
1:A:1533:C:O2'	1:A:1534:A:N7	2.53	0.41
3:B:51:LEU:HA	3:B:51:LEU:HD23	1.75	0.41
3:B:85:ALA:C	3:B:87:ARG:N	2.78	0.41
3:B:177:ALA:O	3:B:178:ARG:C	2.64	0.41
3:B:194:PRO:C	3:B:196:LEU:H	2.29	0.41
3:B:213:LEU:HD23	3:B:213:LEU:C	2.46	0.41
4:C:28:GLN:O	4:C:29:TYR:C	2.63	0.41
4:C:120:VAL:O	4:C:121:ALA:C	2.63	0.41
5:D:195:ALA:O	5:D:196:LEU:O	2.39	0.41
9:H:63:LEU:HA	9:H:63:LEU:HD12	1.77	0.41
11:J:49:VAL:HG12	11:J:50:ILE:N	2.36	0.41
15:N:17:LYS:HB2	15:N:17:LYS:HE2	1.78	0.41
18:Q:19:VAL:O	18:Q:19:VAL:HG23	2.20	0.41
18:Q:89:LEU:HD23	18:Q:89:LEU:HA	1.86	0.41
20:S:63:THR:HG22	20:S:64:GLU:H	1.86	0.41
21:T:37:SER:O	21:T:41:VAL:HG23	2.21	0.41
21:T:97:ALA:HA	21:T:98:PRO:HD2	1.97	0.41
1:A:76:C:C2	1:A:77:G:C8	3.09	0.41
1:A:339:C:O2	1:A:339:C:H2'	2.21	0.41
1:A:359:U:O2'	1:A:360:A:H5'	2.21	0.41
1:A:393:A:O2'	1:A:394:G:H5'	2.21	0.41
1:A:411:A:N6	1:A:429:U:C6	2.89	0.41
1:A:436:C:C2	1:A:437:U:C6	3.09	0.41
1:A:572:A:C2	1:A:864:A:C2	3.09	0.41
1:A:642:A:N7	9:H:115:SER:HA	2.35	0.41
1:A:652:U:O2'	1:A:653:A:P	2.79	0.41
1:A:815:A:C5'	1:A:817:C:N4	2.83	0.41
1:A:888:G:N1	1:A:889:A:N6	2.69	0.41
1:A:953:G:N1	1:A:1229:A:C6	2.89	0.41
1:A:971:G:H5''	1:A:972:C:H5''	2.03	0.41
1:A:1139:G:HO2'	1:A:1140:C:P	2.43	0.41
1:A:1189:C:OP1	11:J:51:ARG:NH2	2.49	0.41
1:A:1248:A:N6	1:A:1290:G:C5	2.89	0.41
1:A:1333:A:C2'	1:A:1334:G:C5'	2.98	0.41
4:C:112:SER:C	4:C:116:VAL:HG23	2.45	0.41
4:C:137:ALA:O	4:C:141:VAL:HG23	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:114:ARG:O	5:D:115:ARG:C	2.63	0.41
9:H:44:PHE:HB3	9:H:80:ILE:HG12	2.03	0.41
17:P:53:VAL:O	17:P:54:GLU:C	2.64	0.41
19:R:51:LEU:HA	19:R:52:PRO:HD3	1.88	0.41
1:A:17:U:H4'	1:A:1080:A:O4'	2.22	0.40
1:A:226:G:C5	1:A:227:G:C8	3.09	0.40
1:A:342:C:H6	1:A:342:C:O5'	2.03	0.40
1:A:538:G:H4'	13:L:114:LYS:HD2	2.02	0.40
1:A:551:U:N3	1:A:552:U:C5	2.90	0.40
1:A:604:G:C6	1:A:605:U:N3	2.89	0.40
1:A:614:A:H2'	1:A:615:C:C6	2.56	0.40
1:A:787:A:O2'	1:A:788:U:H5'	2.21	0.40
1:A:918:A:C2	1:A:919:A:C4	3.09	0.40
1:A:946:A:C4	1:A:947:G:N7	2.89	0.40
1:A:1051:C:H2'	1:A:1052:U:O4'	2.21	0.40
1:A:1074:G:C6	1:A:1102:A:C6	3.08	0.40
1:A:1087:G:C2	1:A:1088:G:C5	3.09	0.40
1:A:1130:A:P	10:I:20:ARG:HH22	2.44	0.40
1:A:1157:A:N3	1:A:1181:G:N1	2.68	0.40
1:A:1230:C:H2'	1:A:1231:G:H8	1.86	0.40
1:A:1257:U:HO2'	1:A:1258:G:P	2.43	0.40
1:A:1397:C:OP2	6:E:24:ARG:NH2	2.48	0.40
1:A:1401:G:N2	1:A:1402:C:H1'	2.37	0.40
1:A:1404:C:O4'	1:A:1499:A:C2	2.74	0.40
1:A:1476:G:C2	1:A:1477:C:C2	3.09	0.40
4:C:7:PRO:HG2	4:C:8:ILE:H	1.86	0.40
4:C:177:THR:C	4:C:179:ARG:H	2.29	0.40
5:D:178:VAL:O	5:D:180:GLY:N	2.54	0.40
6:E:34:VAL:HG12	6:E:35:GLY:H	1.84	0.40
9:H:10:LEU:HD12	9:H:85:ARG:HG2	2.03	0.40
9:H:45:ILE:CG2	9:H:80:ILE:HD11	2.51	0.40
1:A:55:A:H2'	1:A:56:U:C6	2.56	0.40
1:A:192:U:O4'	21:T:102:GLY:O	2.39	0.40
1:A:226:G:O2'	1:A:227:G:H5'	2.21	0.40
1:A:285:G:H2'	1:A:286:G:H8	1.86	0.40
1:A:357:G:N1	1:A:358:U:C4	2.89	0.40
1:A:568:G:C6	1:A:569:C:N4	2.90	0.40
1:A:663:A:C2	1:A:664:G:C4	3.09	0.40
1:A:963:G:C2'	1:A:964:A:H5'	2.51	0.40
1:A:965:A:O2'	1:A:966:G:P	2.80	0.40
1:A:1280:A:O4'	11:J:41:PRO:HG2	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1298:C:N1	8:G:114:ARG:NH1	2.69	0.40
1:A:1417:G:N2	1:A:1484:C:N4	2.69	0.40
1:A:1505:G:O2'	1:A:1506:U:OP2	2.29	0.40
3:B:92:TYR:CE2	3:B:151:GLY:CA	3.04	0.40
3:B:163:PHE:HA	3:B:185:ILE:O	2.22	0.40
5:D:188:LEU:HA	5:D:188:LEU:HD23	1.89	0.40
8:G:87:VAL:O	8:G:88:PRO:C	2.64	0.40
11:J:50:ILE:HG22	11:J:51:ARG:N	2.35	0.40
14:M:81:LEU:HB2	14:M:86:CYS:CB	2.52	0.40
1:A:262:A:OP1	21:T:73:HIS:ND1	2.55	0.40
1:A:267:C:H2'	1:A:268:C:H6	1.86	0.40
1:A:344:A:O5'	1:A:344:A:H8	2.04	0.40
1:A:410:G:N2	1:A:429:U:H3	2.19	0.40
1:A:502:G:C4	1:A:503:C:C6	3.10	0.40
1:A:605:U:H2'	1:A:606:G:C5'	2.50	0.40
1:A:678:U:H2'	1:A:679:C:O4'	2.21	0.40
1:A:785:G:C6	1:A:786:G:N7	2.89	0.40
1:A:935:A:C6	8:G:3:ARG:NH2	2.90	0.40
1:A:981:U:C6	1:A:982:U:C6	3.09	0.40
1:A:1128:C:C2'	1:A:1129:C:H5''	2.52	0.40
1:A:1137:C:H5'	1:A:1138:G:C6	2.57	0.40
1:A:1248:A:C1'	10:I:70:LYS:HZ2	2.22	0.40
1:A:1345:U:C2	1:A:1377:A:C2	3.09	0.40
1:A:1465:C:O2'	1:A:1466:C:H5'	2.21	0.40
3:B:57:PHE:CD2	3:B:199:TYR:CE1	3.09	0.40
3:B:97:TRP:HZ2	3:B:102:LEU:CD1	2.34	0.40
3:B:178:ARG:CG	9:H:72:PRO:HA	2.44	0.40
4:C:130:VAL:HG11	4:C:157:ILE:HG23	2.02	0.40
5:D:158:ILE:HG21	5:D:181:MET:HE2	2.02	0.40
9:H:44:PHE:C	9:H:45:ILE:CG2	2.94	0.40
12:K:16:SER:CB	12:K:79:SER:HB3	2.51	0.40
17:P:5:ARG:HH11	17:P:5:ARG:HG3	1.86	0.40
19:R:22:VAL:O	19:R:26:LEU:HB2	2.21	0.40
1:A:98:U:C2	1:A:99:C:C6	3.09	0.40
1:A:102:G:H2'	1:A:103:C:C6	2.56	0.40
1:A:173:U:O2	1:A:197:A:N1	2.52	0.40
1:A:197:A:O2'	1:A:198:G:O4'	2.35	0.40
1:A:250:A:O2'	1:A:251:G:OP2	2.35	0.40
1:A:254:G:N2	18:Q:16:GLN:HE21	2.04	0.40
1:A:295:C:O2	1:A:295:C:C2'	2.68	0.40
1:A:315:A:H4'	1:A:353:A:N1	2.35	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:394:G:C6	1:A:395:C:N4	2.89	0.40
1:A:432:A:H3'	1:A:433:C:H6	1.86	0.40
1:A:435:C:N3	1:A:436:C:C5	2.89	0.40
1:A:453:A:N3	1:A:453:A:H2'	2.37	0.40
1:A:509:A:O5'	1:A:509:A:C8	2.64	0.40
1:A:523:A:H61	13:L:53:ARG:NH1	2.13	0.40
1:A:550:G:C6	1:A:551:U:C4	3.09	0.40
1:A:597:G:C8	1:A:598:U:C6	3.08	0.40
1:A:779:C:H2'	1:A:780:A:O4'	2.22	0.40
1:A:812:C:O2'	1:A:813:U:O5'	2.40	0.40
1:A:1055:A:C2'	4:C:156:ARG:NH1	2.85	0.40
1:A:1164:G:H2'	1:A:1165:C:H6	1.86	0.40
1:A:1306:A:C5	1:A:1332:A:N7	2.89	0.40
1:A:1325:C:C2'	1:A:1326:C:H5'	2.52	0.40
1:A:1333:A:C8	1:A:1334:G:N7	2.90	0.40
1:A:1343:G:OP1	10:I:125:TYR:HE2	2.04	0.40
1:A:1350:A:C4	1:A:1351:U:C5	3.09	0.40
1:A:1520:G:N3	1:A:1521:G:C8	2.90	0.40
1:A:1539:C:O2'	1:A:1540:U:H5'	2.22	0.40
2:2:9:A:H2'	2:2:10:A:C5'	2.51	0.40
6:E:89:ILE:C	6:E:89:ILE:CD1	2.94	0.40
6:E:92:LYS:HA	6:E:93:PRO:HD2	1.88	0.40
9:H:2:LEU:HD23	9:H:2:LEU:C	2.46	0.40
12:K:57:THR:HG22	12:K:60:ALA:CB	2.48	0.40
13:L:28:LYS:C	13:L:30:ALA:N	2.73	0.40
1:A:149:A:C2	1:A:150:C:C5	3.10	0.40
1:A:204:U:O2	1:A:204:U:H2'	2.20	0.40
1:A:294:U:H2'	1:A:295:C:C6	2.44	0.40
1:A:414:A:N1	1:A:415:A:C4	2.88	0.40
1:A:452:A:HO2'	1:A:453:A:C4'	2.35	0.40
1:A:492:G:H2'	1:A:494:G:O4'	2.21	0.40
1:A:565:U:O4	1:A:566:G:C6	2.73	0.40
1:A:657:G:C4	1:A:658:G:C8	3.09	0.40
1:A:660:G:C2'	1:A:661:G:O5'	2.70	0.40
1:A:695:A:N3	1:A:695:A:H2'	2.35	0.40
1:A:1054:C:O2'	1:A:1055:A:C5'	2.63	0.40
1:A:1097:C:C1'	1:A:1169:A:H1'	2.50	0.40
1:A:1267:C:O2	22:V:20:LYS:HD3	2.21	0.40
1:A:1371:G:C6	1:A:1372:U:C4	3.10	0.40
5:D:187:ARG:CG	5:D:188:LEU:N	2.84	0.40
6:E:51:VAL:O	6:E:55:VAL:HG23	2.22	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:87:GLN:NE2	10:I:87:GLN:HA	2.36	0.40
10:I:114:TYR:C	10:I:116:LYS:H	2.30	0.40
14:M:19:LEU:O	14:M:20:THR:C	2.65	0.40
14:M:22:ILE:HG22	14:M:23:TYR:N	2.36	0.40
14:M:48:LEU:HD23	14:M:48:LEU:HA	1.85	0.40
16:O:53:HIS:O	16:O:57:LEU:CD1	2.70	0.40
21:T:60:GLU:HG3	21:T:81:LYS:HE3	2.02	0.40
21:T:62:LEU:HD23	21:T:62:LEU:HA	1.93	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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	220/227 (97%)	169 (77%)	39 (18%)	12 (6%)	1	10
4	C	204/238 (86%)	149 (73%)	42 (21%)	13 (6%)	1	8
5	D	206/208 (99%)	165 (80%)	31 (15%)	10 (5%)	1	12
6	E	148/161 (92%)	113 (76%)	30 (20%)	5 (3%)	3	18
7	F	99/101 (98%)	83 (84%)	14 (14%)	2 (2%)	6	27
8	G	153/155 (99%)	129 (84%)	23 (15%)	1 (1%)	18	49
9	H	136/138 (99%)	113 (83%)	21 (15%)	2 (2%)	8	32
10	I	125/128 (98%)	94 (75%)	25 (20%)	6 (5%)	2	12
11	J	96/104 (92%)	75 (78%)	14 (15%)	7 (7%)	1	6
12	K	113/128 (88%)	88 (78%)	22 (20%)	3 (3%)	4	22
13	L	122/131 (93%)	96 (79%)	21 (17%)	5 (4%)	2	15
14	M	120/125 (96%)	89 (74%)	26 (22%)	5 (4%)	2	14
15	N	58/60 (97%)	45 (78%)	13 (22%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	O	86/88 (98%)	70 (81%)	14 (16%)	2 (2%)	5	25
17	P	81/88 (92%)	64 (79%)	16 (20%)	1 (1%)	10	37
18	Q	102/104 (98%)	86 (84%)	11 (11%)	5 (5%)	1	12
19	R	71/87 (82%)	57 (80%)	13 (18%)	1 (1%)	9	33
20	S	78/92 (85%)	63 (81%)	11 (14%)	4 (5%)	1	11
21	T	97/105 (92%)	72 (74%)	17 (18%)	8 (8%)	0	5
22	V	22/26 (85%)	19 (86%)	1 (4%)	2 (9%)	0	3
All	All	2337/2494 (94%)	1839 (79%)	404 (17%)	94 (4%)	2	15

All (94) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	B	12	GLU
3	B	21	ARG
3	B	24	TRP
3	B	130	ARG
4	C	4	LYS
4	C	16	ARG
4	C	61	ALA
4	C	146	ALA
5	D	9	CYS
5	D	30	LYS
9	H	30	ARG
10	I	121	ARG
11	J	33	GLN
11	J	40	LEU
11	J	41	PRO
11	J	55	LYS
12	K	16	SER
13	L	27	LEU
14	M	106	ASN
16	O	73	GLU
18	Q	69	LYS
21	T	74	LYS
3	B	17	PHE
4	C	12	LEU
4	C	178	LEU
5	D	29	PRO
5	D	89	THR
6	E	99	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
7	F	16	GLN
10	I	74	ILE
11	J	60	ARG
11	J	90	LEU
12	K	106	LYS
13	L	45	PRO
13	L	51	ALA
14	M	27	LYS
18	Q	33	GLY
19	R	77	GLY
21	T	49	ALA
21	T	73	HIS
21	T	92	LEU
3	B	83	MET
3	B	95	GLN
3	B	146	GLN
3	B	150	SER
4	C	181	ASN
5	D	32	ALA
10	I	72	GLY
10	I	108	VAL
10	I	118	LYS
12	K	27	ASN
17	P	12	LYS
20	S	6	LYS
3	B	26	PRO
5	D	154	ASN
5	D	179	GLU
6	E	121	LYS
13	L	46	LYS
14	M	80	ARG
16	O	88	ARG
18	Q	83	ASP
22	V	6	ARG
22	V	9	ARG
3	B	89	GLY
4	C	128	PHE
5	D	5	ILE
7	F	56	PRO
8	G	153	HIS
14	M	7	VAL
18	Q	17	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
18	Q	30	PRO
21	T	97	ALA
3	B	10	LEU
4	C	5	ILE
6	E	39	GLY
13	L	48	PRO
14	M	60	VAL
20	S	8	GLY
20	S	16	LEU
21	T	96	GLY
4	C	6	HIS
21	T	102	GLY
4	C	13	GLY
4	C	108	ASN
5	D	196	LEU
9	H	106	GLY
20	S	45	VAL
21	T	63	ILE
4	C	74	GLY
6	E	85	GLY
10	I	6	GLY
11	J	82	ILE
5	D	197	PRO
6	E	128	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	B	191/196 (97%)	172 (90%)	19 (10%)	7	27
4	C	160/187 (86%)	143 (89%)	17 (11%)	6	24
5	D	180/180 (100%)	161 (89%)	19 (11%)	6	24
6	E	115/122 (94%)	101 (88%)	14 (12%)	5	19
7	F	90/90 (100%)	84 (93%)	6 (7%)	15	42

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	G	126/126 (100%)	121 (96%)	5 (4%)	28	56
9	H	119/119 (100%)	107 (90%)	12 (10%)	7	26
10	I	98/99 (99%)	95 (97%)	3 (3%)	35	60
11	J	88/91 (97%)	82 (93%)	6 (7%)	14	42
12	K	87/98 (89%)	80 (92%)	7 (8%)	11	36
13	L	104/108 (96%)	99 (95%)	5 (5%)	23	52
14	M	97/100 (97%)	90 (93%)	7 (7%)	13	40
15	N	49/49 (100%)	41 (84%)	8 (16%)	2	11
16	O	79/79 (100%)	70 (89%)	9 (11%)	5	21
17	P	72/74 (97%)	68 (94%)	4 (6%)	19	47
18	Q	96/96 (100%)	87 (91%)	9 (9%)	8	30
19	R	64/76 (84%)	62 (97%)	2 (3%)	35	60
20	S	71/79 (90%)	65 (92%)	6 (8%)	10	33
21	T	76/81 (94%)	69 (91%)	7 (9%)	8	30
22	V	19/21 (90%)	19 (100%)	0	100	100
All	All	1981/2071 (96%)	1816 (92%)	165 (8%)	10	34

All (165) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	B	11	LEU
3	B	17	PHE
3	B	25	ASN
3	B	26	PRO
3	B	56	ARG
3	B	61	LEU
3	B	69	LEU
3	B	75	LYS
3	B	90	MET
3	B	96	ARG
3	B	114	ARG
3	B	119	GLU
3	B	137	ARG
3	B	139	LYS
3	B	153	ARG
3	B	170	GLU
3	B	184	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	B	187	LEU
3	B	204	ASN
4	C	3	ASN
4	C	12	LEU
4	C	17	ASP
4	C	34	LEU
4	C	76	VAL
4	C	82	GLU
4	C	84	ILE
4	C	99	VAL
4	C	101	LEU
4	C	124	ILE
4	C	141	VAL
4	C	142	MET
4	C	144	SER
4	C	153	VAL
4	C	167	TRP
4	C	173	VAL
4	C	191	THR
5	D	9	CYS
5	D	11	LEU
5	D	15	GLU
5	D	26	CYS
5	D	38	TYR
5	D	58	LEU
5	D	59	ARG
5	D	64	LEU
5	D	67	ILE
5	D	80	GLU
5	D	96	LEU
5	D	99	SER
5	D	122	ARG
5	D	157	LEU
5	D	162	LEU
5	D	176	LEU
5	D	190	ASP
5	D	192	GLU
5	D	198	VAL
6	E	9	LYS
6	E	11	ILE
6	E	12	LEU
6	E	13	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	E	31	LEU
6	E	56	GLN
6	E	80	ILE
6	E	87	SER
6	E	89	ILE
6	E	96	PRO
6	E	118	ILE
6	E	125	SER
6	E	131	ILE
6	E	148	VAL
7	F	10	LEU
7	F	32	ASN
7	F	38	GLU
7	F	82	ARG
7	F	86	ARG
7	F	92	LYS
8	G	12	LEU
8	G	16	LEU
8	G	75	VAL
8	G	120	ILE
8	G	149	ARG
9	H	6	ILE
9	H	38	ILE
9	H	39	LEU
9	H	60	ARG
9	H	63	LEU
9	H	86	ILE
9	H	103	VAL
9	H	105	ARG
9	H	112	LEU
9	H	120	THR
9	H	121	ASP
9	H	132	GLU
10	I	60	ASP
10	I	71	SER
10	I	105	ASP
11	J	15	THR
11	J	23	ILE
11	J	38	ILE
11	J	45	ARG
11	J	66	ARG
11	J	71	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	K	35	PRO
12	K	36	ASP
12	K	41	THR
12	K	47	VAL
12	K	92	GLU
12	K	93	GLN
12	K	110	ASP
13	L	33	ARG
13	L	38	THR
13	L	59	ARG
13	L	70	ILE
13	L	126	LYS
14	M	44	ARG
14	M	56	LEU
14	M	63	THR
14	M	81	LEU
14	M	105	THR
14	M	109	THR
14	M	117	VAL
15	N	8	GLU
15	N	17	LYS
15	N	22	THR
15	N	25	VAL
15	N	33	VAL
15	N	39	LEU
15	N	44	LEU
15	N	60	SER
16	O	4	THR
16	O	37	ASN
16	O	39	LEU
16	O	49	ASP
16	O	52	SER
16	O	65	ARG
16	O	70	LEU
16	O	74	ASP
16	O	81	LEU
17	P	2	VAL
17	P	28	ARG
17	P	47	ASP
17	P	65	GLN
18	Q	7	THR
18	Q	9	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
18	Q	11	VAL
18	Q	34	LYS
18	Q	38	ARG
18	Q	60	ILE
18	Q	74	LEU
18	Q	78	GLU
18	Q	100	LYS
19	R	31	LEU
19	R	54	ARG
20	S	6	LYS
20	S	7	LYS
20	S	15	LEU
20	S	39	THR
20	S	41	VAL
20	S	57	HIS
21	T	10	LEU
21	T	39	LYS
21	T	45	GLN
21	T	64	ASP
21	T	71	THR
21	T	72	LEU
21	T	105	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (51) such sidechains are listed below:

Mol	Chain	Res	Type
3	B	19	HIS
3	B	25	ASN
3	B	76	GLN
3	B	94	ASN
3	B	204	ASN
4	C	3	ASN
4	C	31	HIS
4	C	37	GLN
4	C	69	HIS
4	C	98	ASN
4	C	104	GLN
4	C	108	ASN
4	C	139	GLN
5	D	42	GLN
5	D	103	ASN
5	D	123	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	D	161	ASN
5	D	199	ASN
5	D	201	GLN
7	F	13	ASN
7	F	27	GLN
7	F	84	ASN
7	F	100	ASN
8	G	37	ASN
8	G	86	GLN
8	G	106	GLN
8	G	153	HIS
9	H	15	ASN
9	H	82	HIS
10	I	31	GLN
10	I	38	GLN
10	I	73	GLN
11	J	13	HIS
11	J	56	HIS
11	J	62	HIS
12	K	38	ASN
12	K	62	GLN
12	K	93	GLN
12	K	117	ASN
13	L	75	HIS
14	M	12	ASN
14	M	62	ASN
14	M	106	ASN
15	N	49	HIS
15	N	52	GLN
16	O	37	ASN
16	O	46	HIS
17	P	65	GLN
18	Q	16	GLN
20	S	47	HIS
21	T	75	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1517/1520 (99%)	338 (22%)	187 (12%)
2	1	5/6 (83%)	1 (20%)	1 (20%)

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	2	3/6 (50%)	2 (66%)	0
All	All	1525/1532 (99%)	341 (22%)	188 (12%)

All (341) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	5	U
1	A	6	G
1	A	7	G
1	A	8	A
1	A	9	G
1	A	13	U
1	A	14	U
1	A	31	G
1	A	32	A
1	A	39	G
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	61	G
1	A	62	U
1	A	64	G
1	A	65	U
1	A	66	G
1	A	81	U
1	A	82	U
1	A	89	C
1	A	90	U
1	A	109	A
1	A	110	C
1	A	116	A
1	A	120	A
1	A	121	C
1	A	122	G
1	A	129(A)	G
1	A	130	A
1	A	173	U
1	A	174	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	182	U
1	A	190(D)	U
1	A	190(E)	U
1	A	190(F)	G
1	A	190(G)	G
1	A	195	A
1	A	197	A
1	A	198	G
1	A	202	U
1	A	203	U
1	A	204	U
1	A	216	G
1	A	244	U
1	A	245	C
1	A	246	A
1	A	247	G
1	A	251	G
1	A	252	U
1	A	253	U
1	A	266	G
1	A	267	C
1	A	275	G
1	A	280	C
1	A	281	G
1	A	282	A
1	A	288	A
1	A	289	G
1	A	306	G
1	A	316	G
1	A	328	C
1	A	329	A
1	A	330	C
1	A	331	G
1	A	332	G
1	A	345	C
1	A	346	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	367	U
1	A	368	U
1	A	373	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	388	G
1	A	389	A
1	A	390	C
1	A	397	A
1	A	398	C
1	A	406	G
1	A	410	G
1	A	412	A
1	A	413	G
1	A	421	U
1	A	422	C
1	A	423	G
1	A	428	G
1	A	429	U
1	A	430	A
1	A	439	A
1	A	452	A
1	A	453	A
1	A	460	A
1	A	461	C
1	A	462	G
1	A	481	G
1	A	484	G
1	A	485	G
1	A	486	U
1	A	495	U
1	A	497	A
1	A	498	U
1	A	500	G
1	A	508	C
1	A	509	A
1	A	510	A
1	A	511	C
1	A	517	G
1	A	518	C
1	A	519	C
1	A	527	G
1	A	532	A
1	A	533	A
1	A	534	U
1	A	535	A
1	A	536	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	548	G
1	A	558	G
1	A	559	A
1	A	560	U
1	A	561	U
1	A	562	C
1	A	563	A
1	A	567	G
1	A	572	A
1	A	573	A
1	A	575	G
1	A	576	G
1	A	577	G
1	A	595	G
1	A	596	C
1	A	598	U
1	A	616	G
1	A	641	U
1	A	642	A
1	A	652	U
1	A	653	A
1	A	654	G
1	A	665	A
1	A	686	U
1	A	688	G
1	A	701	C
1	A	702	A
1	A	703	G
1	A	704	A
1	A	717	C
1	A	718	G
1	A	721	G
1	A	722	A
1	A	723	U
1	A	724	G
1	A	748	C
1	A	749	C
1	A	752	G
1	A	753	A
1	A	754	C
1	A	755	G
1	A	777	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	781	A
1	A	782	A
1	A	792	A
1	A	793	U
1	A	805	C
1	A	813	U
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	820	U
1	A	821	G
1	A	828	A
1	A	839	U
1	A	840	C
1	A	841	U
1	A	867	G
1	A	870	U
1	A	871	U
1	A	872	A
1	A	873	A
1	A	874	G
1	A	884	U
1	A	885	G
1	A	889	A
1	A	890	G
1	A	902	G
1	A	914	A
1	A	915	A
1	A	916	G
1	A	926	G
1	A	927	G
1	A	934	C
1	A	935	A
1	A	945	G
1	A	960	U
1	A	961	U
1	A	966	G
1	A	968	A
1	A	969	A
1	A	971	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
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	982	U
1	A	983	A
1	A	984	C
1	A	989	C
1	A	991	U
1	A	992	U
1	A	993	G
1	A	994	A
1	A	1003	G
1	A	1003(A)	G
1	A	1004	A
1	A	1006	C
1	A	1022	G
1	A	1023	G
1	A	1024	G
1	A	1025	U
1	A	1027	C
1	A	1028	C
1	A	1030	C
1	A	1030(A)	G
1	A	1030(B)	C
1	A	1030(C)	G
1	A	1050	G
1	A	1054	C
1	A	1055	A
1	A	1064	G
1	A	1065	U
1	A	1066	C
1	A	1068	G
1	A	1085	U
1	A	1086	U
1	A	1101	A
1	A	1102	A
1	A	1104	G
1	A	1108	G
1	A	1124	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1125	U
1	A	1126	U
1	A	1127	G
1	A	1129	C
1	A	1130	A
1	A	1131	G
1	A	1134	G
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1140	C
1	A	1145	C
1	A	1146	A
1	A	1152	A
1	A	1157	A
1	A	1158	C
1	A	1159	U
1	A	1160	G
1	A	1171	G
1	A	1183	A
1	A	1184	G
1	A	1191	A
1	A	1196	U
1	A	1197	G
1	A	1200	C
1	A	1201	A
1	A	1202	G
1	A	1212	U
1	A	1213	A
1	A	1215	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1239	A
1	A	1240	U
1	A	1241	G
1	A	1257	U
1	A	1258	G
1	A	1278	U
1	A	1279	A
1	A	1282	C
1	A	1285	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1286	A
1	A	1287	A
1	A	1298	C
1	A	1299	A
1	A	1300	G
1	A	1301	U
1	A	1302	U
1	A	1303	C
1	A	1305	G
1	A	1320	C
1	A	1322	C
1	A	1332	A
1	A	1337	G
1	A	1338	G
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1348	U
1	A	1353	G
1	A	1363	A
1	A	1364	U
1	A	1365	G
1	A	1370	G
1	A	1381	U
1	A	1394	A
1	A	1395	C
1	A	1398	A
1	A	1399	C
1	A	1400	C
1	A	1401	G
1	A	1442	G
1	A	1443	G
1	A	1446	A
1	A	1447	G
1	A	1452	C
1	A	1453	G
1	A	1490	C
1	A	1499	A
1	A	1502	A
1	A	1503	A
1	A	1504	G
1	A	1505	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1506	U
1	A	1507	A
1	A	1517	G
1	A	1520	G
1	A	1529	G
1	A	1530	G
1	A	1534	A
1	A	1542	U
2	1	4	A
2	2	8	A
2	2	9	A

All (188) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	4	U
1	A	5	U
1	A	7	G
1	A	8	A
1	A	13	U
1	A	30	U
1	A	31	G
1	A	47	C
1	A	48	C
1	A	49	U
1	A	50	A
1	A	51	A
1	A	60	A
1	A	64	G
1	A	88	A
1	A	89	C
1	A	109	A
1	A	115	G
1	A	119	A
1	A	121	C
1	A	129(A)	G
1	A	130	A
1	A	173	U
1	A	181	G
1	A	190(D)	U
1	A	190(E)	U
1	A	190(F)	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	197	A
1	A	202	U
1	A	204	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	274	A
1	A	279	A
1	A	280	C
1	A	281	G
1	A	305	G
1	A	315	A
1	A	327	A
1	A	328	C
1	A	329	A
1	A	344	A
1	A	345	C
1	A	351	G
1	A	366	C
1	A	367	U
1	A	372	C
1	A	388	G
1	A	421	U
1	A	428	G
1	A	429	U
1	A	438	G
1	A	484	G
1	A	485	G
1	A	496	A
1	A	497	A
1	A	499	A
1	A	508	C
1	A	509	A
1	A	511	C
1	A	517	G
1	A	518	C
1	A	531	U
1	A	533	A
1	A	535	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	547	A
1	A	559	A
1	A	560	U
1	A	561	U
1	A	562	C
1	A	566	G
1	A	575	G
1	A	576	G
1	A	595	G
1	A	641	U
1	A	652	U
1	A	653	A
1	A	686	U
1	A	687	A
1	A	701	C
1	A	702	A
1	A	703	G
1	A	717	C
1	A	721	G
1	A	733	A
1	A	748	C
1	A	752	G
1	A	753	A
1	A	792	A
1	A	812	C
1	A	815	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	820	U
1	A	840	C
1	A	870	U
1	A	871	U
1	A	872	A
1	A	873	A
1	A	883	C
1	A	884	U
1	A	889	A
1	A	913	A
1	A	914	A
1	A	934	C
1	A	960	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	965	A
1	A	968	A
1	A	971	G
1	A	974	A
1	A	975	A
1	A	976	G
1	A	982	U
1	A	992	U
1	A	993	G
1	A	1021	G
1	A	1049	U
1	A	1064	G
1	A	1065	U
1	A	1067	A
1	A	1085	U
1	A	1094	G
1	A	1101	A
1	A	1126	U
1	A	1128	C
1	A	1129	C
1	A	1139	G
1	A	1145	C
1	A	1151	A
1	A	1157	A
1	A	1159	U
1	A	1181	G
1	A	1182	G
1	A	1183	A
1	A	1190	G
1	A	1196	U
1	A	1200	C
1	A	1201	A
1	A	1214	C
1	A	1224	G
1	A	1225	A
1	A	1226	C
1	A	1239	A
1	A	1240	U
1	A	1256	A
1	A	1257	U
1	A	1278	U
1	A	1280	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1281	U
1	A	1285	A
1	A	1297	C
1	A	1298	C
1	A	1299	A
1	A	1300	G
1	A	1301	U
1	A	1302	U
1	A	1319	A
1	A	1322	C
1	A	1331	G
1	A	1336	C
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1363	A
1	A	1364	U
1	A	1380	U
1	A	1394	A
1	A	1396	A
1	A	1397	C
1	A	1399	C
1	A	1400	C
1	A	1451	A
1	A	1452	C
1	A	1498	U
1	A	1502	A
1	A	1503	A
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1528	U
1	A	1529	G
1	A	1533	C
2	1	3	A

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 2 ligands modelled in this entry, 2 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	1517/1520 (99%)	0.44	113 (7%) 20 15	44, 89, 178, 199	0
2	1	6/6 (100%)	2.43	4 (66%) 0 0	199, 199, 199, 199	0
2	2	4/6 (66%)	2.40	3 (75%) 0 0	185, 193, 195, 198	0
3	B	222/227 (97%)	1.42	68 (30%) 1 1	46, 104, 169, 199	0
4	C	206/238 (86%)	1.28	54 (26%) 1 1	49, 107, 172, 198	0
5	D	208/208 (100%)	1.29	61 (29%) 1 1	32, 90, 156, 199	0
6	E	150/161 (93%)	0.82	26 (17%) 4 4	32, 72, 151, 195	0
7	F	101/101 (100%)	1.43	26 (25%) 1 1	63, 116, 167, 182	0
8	G	155/155 (100%)	1.61	47 (30%) 1 1	70, 133, 184, 199	0
9	H	138/138 (100%)	0.68	20 (14%) 6 5	31, 72, 145, 181	0
10	I	127/128 (99%)	1.84	49 (38%) 1 1	55, 147, 191, 199	0
11	J	98/104 (94%)	1.74	34 (34%) 1 1	64, 138, 198, 199	0
12	K	115/128 (89%)	1.18	29 (25%) 1 1	59, 111, 172, 190	0
13	L	124/131 (94%)	1.09	19 (15%) 5 5	46, 104, 165, 199	0
14	M	122/125 (97%)	1.57	42 (34%) 1 1	71, 127, 180, 198	0
15	N	60/60 (100%)	0.97	11 (18%) 3 3	56, 89, 158, 190	0
16	O	88/88 (100%)	1.21	21 (23%) 2 1	45, 100, 167, 185	0
17	P	83/88 (94%)	1.04	13 (15%) 5 4	38, 91, 146, 185	0
18	Q	104/104 (100%)	0.95	20 (19%) 3 3	49, 90, 172, 199	0
19	R	73/87 (83%)	0.75	8 (10%) 10 9	46, 103, 175, 199	0
20	S	80/92 (86%)	1.39	24 (30%) 1 1	74, 136, 187, 199	0
21	T	99/105 (94%)	1.44	28 (28%) 1 1	69, 122, 182, 199	0
22	V	24/26 (92%)	2.17	13 (54%) 0 0	72, 120, 168, 199	0
All	All	3904/4026 (96%)	0.96	733 (18%) 3 3	31, 99, 178, 199	0

All (733) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	C	107	GLN	9.4
1	A	1129	C	9.4
6	E	154	GLY	9.0
4	C	143	GLU	8.9
3	B	19	HIS	8.6
7	F	41	GLU	8.2
1	A	81	U	7.7
11	J	73	ASP	7.5
10	I	105	ASP	7.3
21	T	73	HIS	7.2
1	A	461	C	7.1
14	M	23	TYR	7.1
3	B	191	ASP	7.0
20	S	3	ARG	7.0
4	C	15	THR	6.9
5	D	18	LYS	6.8
4	C	14	ILE	6.6
5	D	33	MET	6.5
3	B	16	HIS	6.4
3	B	9	GLU	6.4
11	J	5	ARG	6.2
14	M	12	ASN	6.2
18	Q	103	GLY	6.2
11	J	71	LEU	6.2
5	D	35	ARG	6.1
5	D	37	PRO	6.1
5	D	23	GLY	6.0
12	K	50	TYR	6.0
15	N	15	LYS	5.9
3	B	189	ASP	5.9
8	G	33	ASP	5.9
22	V	5	ASP	5.9
21	T	11	SER	5.8
14	M	27	LYS	5.7
5	D	31	CYS	5.7
1	A	990	C	5.7
8	G	97	GLN	5.6
7	F	38	GLU	5.6
5	D	19	LEU	5.5
1	A	991	U	5.5
12	K	90	GLY	5.5
9	H	30	ARG	5.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	B	119	GLU	5.4
14	M	11	ARG	5.4
8	G	155	ARG	5.4
14	M	21	TYR	5.4
1	A	1416	G	5.3
7	F	80	ARG	5.2
3	B	206	ASP	5.2
21	T	57	ARG	5.2
3	B	88	ALA	5.2
3	B	190	THR	5.1
4	C	139	GLN	5.1
5	D	36	ARG	5.1
6	E	7	GLU	5.1
16	O	83	GLU	5.1
8	G	62	PHE	5.1
4	C	56	ASP	5.0
13	L	120	TYR	5.0
18	Q	88	TYR	5.0
21	T	101	GLY	5.0
1	A	1013	G	4.9
1	A	1017	G	4.9
6	E	83	GLU	4.9
8	G	146	GLU	4.9
1	A	1126	U	4.9
13	L	61	THR	4.9
3	B	23	ARG	4.9
1	A	1493	A	4.9
3	B	166	ASP	4.9
10	I	91	ASP	4.9
3	B	128	GLU	4.8
8	G	32	ARG	4.8
13	L	114	LYS	4.8
5	D	107	ARG	4.8
11	J	33	GLN	4.8
5	D	30	LYS	4.8
12	K	51	LYS	4.8
3	B	96	ARG	4.8
8	G	5	ARG	4.8
6	E	85	GLY	4.8
5	D	129	ASN	4.7
18	Q	13	ASP	4.7
14	M	101	GLN	4.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	M	46	LYS	4.6
8	G	73	MET	4.6
10	I	70	LYS	4.6
21	T	100	ILE	4.6
21	T	46	GLU	4.6
21	T	9	ASN	4.6
10	I	66	ARG	4.5
12	K	54	ARG	4.5
22	V	2	GLY	4.5
12	K	89	ALA	4.5
4	C	35	GLU	4.5
10	I	35	GLU	4.5
11	J	84	GLN	4.5
4	C	167	TRP	4.5
10	I	126	SER	4.5
4	C	17	ASP	4.4
5	D	163	GLU	4.4
18	Q	68	ARG	4.4
4	C	13	GLY	4.4
8	G	156	TRP	4.4
10	I	71	SER	4.4
1	A	74	C	4.4
4	C	30	ARG	4.4
5	D	187	ARG	4.4
7	F	31	GLU	4.4
5	D	6	GLY	4.4
1	A	1498	U	4.4
5	D	34	GLU	4.4
5	D	4	TYR	4.4
5	D	21	LEU	4.3
4	C	181	ASN	4.3
22	V	25	LYS	4.3
3	B	17	PHE	4.3
8	G	84	ASN	4.3
6	E	104	ALA	4.3
11	J	35	SER	4.3
1	A	64	G	4.3
1	A	1125	U	4.3
10	I	57	GLY	4.3
3	B	129	GLU	4.3
17	P	12	LYS	4.2
1	A	1442	G	4.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	532	A	4.2
21	T	20	LEU	4.2
8	G	143	ARG	4.2
21	T	99	LEU	4.2
3	B	160	ASP	4.2
13	L	49	ASN	4.2
18	Q	100	LYS	4.2
8	G	26	PHE	4.1
20	S	74	PHE	4.1
3	B	192	SER	4.1
17	P	83	GLU	4.1
15	N	37	PHE	4.1
1	A	631	G	4.1
20	S	37	ARG	4.1
1	A	1397	C	4.1
5	D	193	ASP	4.1
10	I	12	GLU	4.1
1	A	1124	G	4.1
6	E	22	GLY	4.1
11	J	93	GLY	4.1
1	A	1036	G	4.0
8	G	123	GLU	4.0
1	A	1278	U	4.0
3	B	35	GLU	4.0
1	A	993	G	4.0
1	A	1224	G	4.0
14	M	3	ARG	4.0
9	H	73	ASP	4.0
8	G	57	GLU	4.0
9	H	37	ARG	4.0
14	M	99	ARG	4.0
3	B	204	ASN	4.0
20	S	2	PRO	3.9
4	C	179	ARG	3.9
5	D	27	TYR	3.9
12	K	36	ASP	3.9
12	K	49	GLY	3.9
1	A	1492	A	3.9
11	J	6	ILE	3.9
12	K	22	HIS	3.9
3	B	7	VAL	3.9
6	E	68	GLU	3.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
8	G	129	GLU	3.9
17	P	34	GLU	3.9
12	K	67	ASP	3.9
22	V	9	ARG	3.9
22	V	22	ARG	3.9
10	I	30	GLY	3.9
7	F	3	ARG	3.8
4	C	207	VAL	3.8
5	D	24	GLU	3.8
9	H	123	GLU	3.8
13	L	72	GLY	3.8
1	A	1478	C	3.8
1	A	1415	G	3.8
15	N	61	TRP	3.8
16	O	30	ALA	3.8
14	M	71	ARG	3.8
12	K	93	GLN	3.8
3	B	205	ASP	3.8
3	B	134	GLU	3.8
5	D	81	GLU	3.8
10	I	128	ARG	3.8
14	M	55	ARG	3.8
4	C	122	GLU	3.8
1	A	1392	G	3.7
3	B	137	ARG	3.7
11	J	100	THR	3.7
1	A	1297	C	3.7
5	D	209	ARG	3.7
16	O	73	GLU	3.7
6	E	153	LYS	3.7
18	Q	52	LYS	3.7
8	G	106	GLN	3.7
4	C	52	LEU	3.7
10	I	64	THR	3.6
6	E	64	ARG	3.6
9	H	25	ASP	3.6
13	L	13	LYS	3.6
1	A	1003(A)	G	3.6
3	B	82	ARG	3.6
5	D	168	ARG	3.6
9	H	15	ASN	3.6
21	T	8	ARG	3.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
6	E	111	GLU	3.6
11	J	57	LYS	3.6
7	F	77	ARG	3.6
5	D	26	CYS	3.6
2	1	5	G	3.6
8	G	85	TYR	3.6
13	L	47	LYS	3.6
10	I	7	THR	3.6
20	S	33	THR	3.6
1	A	413	G	3.5
1	A	1139	G	3.5
4	C	168	ALA	3.5
8	G	68	ASN	3.5
10	I	62	TYR	3.5
11	J	29	ARG	3.5
3	B	40	HIS	3.5
11	J	72	VAL	3.5
21	T	28	ALA	3.5
1	A	362	G	3.5
10	I	75	ASP	3.5
4	C	178	LEU	3.5
4	C	21	ARG	3.5
1	A	458	C	3.5
21	T	103	GLY	3.5
2	1	4	A	3.5
3	B	11	LEU	3.5
4	C	119	ARG	3.5
11	J	85	LEU	3.4
4	C	54	ARG	3.4
5	D	7	PRO	3.4
1	A	1412	C	3.4
14	M	13	LYS	3.4
10	I	36	TYR	3.4
3	B	12	GLU	3.4
1	A	964	A	3.4
10	I	24	GLY	3.4
6	E	38	GLN	3.4
10	I	20	ARG	3.4
10	I	29	ASN	3.4
13	L	117	ARG	3.4
16	O	17	ARG	3.4
17	P	29	ASP	3.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
20	S	68	GLY	3.4
19	R	16	PRO	3.4
4	C	110	ASN	3.3
5	D	80	GLU	3.3
4	C	29	TYR	3.3
8	G	154	TYR	3.3
3	B	214	ILE	3.3
21	T	17	ARG	3.3
9	H	2	LEU	3.3
7	F	63	TYR	3.3
7	F	97	PHE	3.3
18	Q	24	GLU	3.3
1	A	965	A	3.3
7	F	2	ARG	3.3
10	I	14	VAL	3.3
10	I	6	GLY	3.3
4	C	127	ARG	3.3
13	L	122	THR	3.3
1	A	1281	U	3.3
1	A	1018	C	3.3
20	S	17	GLU	3.3
5	D	131	ARG	3.2
12	K	43	SER	3.2
7	F	37	VAL	3.2
8	G	128	ALA	3.2
4	C	59	ARG	3.2
6	E	37	ARG	3.2
8	G	79	ARG	3.2
1	A	1030(B)	C	3.2
5	D	118	ARG	3.2
6	E	137	GLU	3.2
11	J	80	LYS	3.2
12	K	124	LYS	3.2
1	A	1131	G	3.2
10	I	65	VAL	3.2
8	G	56	GLN	3.2
10	I	73	GLN	3.2
17	P	52	ASP	3.2
8	G	134	ALA	3.2
18	Q	104	LYS	3.2
1	A	83	U	3.2
17	P	76	GLN	3.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	B	220	ASP	3.2
6	E	150	ARG	3.2
8	G	111	ARG	3.2
15	N	35	ARG	3.2
2	2	8	A	3.2
3	B	29	ALA	3.2
15	N	2	ALA	3.2
13	L	29	GLY	3.2
6	E	20	GLN	3.2
5	D	22	LYS	3.1
12	K	70	LYS	3.1
10	I	83	ARG	3.1
3	B	146	GLN	3.1
16	O	48	LYS	3.1
3	B	89	GLY	3.1
15	N	8	GLU	3.1
4	C	99	VAL	3.1
8	G	28	ASN	3.1
10	I	9	ARG	3.1
10	I	92	TYR	3.1
21	T	106	ALA	3.1
1	A	40	C	3.1
14	M	32	GLU	3.1
14	M	98	VAL	3.1
22	V	6	ARG	3.1
7	F	13	ASN	3.1
3	B	168	THR	3.1
8	G	81	GLY	3.1
21	T	48	LYS	3.1
1	A	1134	G	3.1
1	A	1491	G	3.1
20	S	61	TYR	3.1
5	D	45	GLN	3.1
8	G	80	VAL	3.1
22	V	14	TRP	3.1
3	B	156	LYS	3.1
7	F	69	GLU	3.1
8	G	8	GLU	3.1
17	P	81	ARG	3.0
6	E	45	PHE	3.0
8	G	35	LYS	3.0
22	V	19	GLY	3.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
4	C	89	GLU	3.0
18	Q	102	GLY	3.0
8	G	149	ARG	3.0
4	C	31	HIS	3.0
14	M	68	GLY	3.0
14	M	100	GLY	3.0
1	A	1417	G	3.0
6	E	72	GLN	3.0
3	B	127	ILE	3.0
1	A	1446	A	3.0
13	L	89	ARG	3.0
1	A	48	C	3.0
1	A	1477	C	3.0
1	A	82	U	3.0
8	G	4	ARG	2.9
14	M	94	ARG	2.9
12	K	59	TYR	2.9
5	D	167	GLY	2.9
10	I	121	ARG	2.9
8	G	66	VAL	2.9
11	J	36	GLY	2.9
16	O	15	PHE	2.9
10	I	42	ARG	2.9
21	T	80	ARG	2.9
5	D	89	THR	2.9
6	E	65	ASN	2.9
3	B	86	GLU	2.9
5	D	72	GLU	2.9
3	B	228	GLY	2.9
16	O	23	GLY	2.9
16	O	89	GLY	2.9
3	B	133	LYS	2.9
7	F	39	LYS	2.9
3	B	94	ASN	2.9
4	C	144	SER	2.9
7	F	65	VAL	2.9
11	J	66	ARG	2.9
17	P	28	ARG	2.9
18	Q	101	ARG	2.9
2	1	6	A	2.9
7	F	43	LEU	2.9
1	A	841	U	2.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
17	P	82	GLN	2.8
21	T	98	PRO	2.8
14	M	106	ASN	2.8
11	J	75	ILE	2.8
1	A	1236	A	2.8
12	K	111	ASP	2.8
14	M	120	LYS	2.8
9	H	9	MET	2.8
10	I	106	ALA	2.8
6	E	107	ARG	2.8
8	G	115	ARG	2.8
16	O	64	ARG	2.8
1	A	977	A	2.8
3	B	28	PHE	2.8
10	I	8	GLY	2.8
14	M	85	GLY	2.8
5	D	38	TYR	2.8
5	D	122	ARG	2.8
22	V	24	ARG	2.8
11	J	30	SER	2.8
3	B	126	GLU	2.8
5	D	41	GLY	2.8
10	I	94	ALA	2.8
21	T	42	GLN	2.8
18	Q	99	SER	2.8
12	K	92	GLU	2.8
18	Q	48	GLU	2.8
8	G	89	MET	2.7
13	L	106	ASP	2.7
5	D	20	TYR	2.7
7	F	59	TYR	2.7
10	I	93	ARG	2.7
3	B	10	LEU	2.7
4	C	190	ARG	2.7
5	D	182	LYS	2.7
10	I	113	LYS	2.7
4	C	37	GLN	2.7
16	O	9	GLN	2.7
16	O	85	LEU	2.7
16	O	24	SER	2.7
1	A	1490	C	2.7
18	Q	11	VAL	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
7	F	64	GLN	2.7
3	B	152	PHE	2.7
4	C	112	SER	2.7
20	S	55	LYS	2.7
1	A	969	A	2.7
2	1	3	A	2.7
5	D	125	HIS	2.7
12	K	14	VAL	2.7
16	O	79	ARG	2.7
11	J	7	LYS	2.7
3	B	79	ASP	2.7
3	B	195	ASP	2.7
1	A	1054	C	2.6
11	J	32	ALA	2.6
1	A	181	G	2.6
6	E	5	ASP	2.6
6	E	84	PHE	2.6
10	I	58	ARG	2.6
13	L	97	ARG	2.6
10	I	3	GLN	2.6
1	A	533	A	2.6
1	A	1016	A	2.6
1	A	1183	A	2.6
2	2	9	A	2.6
12	K	41	THR	2.6
4	C	151	VAL	2.6
10	I	15	ALA	2.6
5	D	137	SER	2.6
7	F	47	ARG	2.6
9	H	122	ARG	2.6
15	N	36	PHE	2.6
16	O	26	GLU	2.6
1	A	1504	G	2.6
18	Q	105	ALA	2.6
19	R	84	LYS	2.6
17	P	11	SER	2.6
13	L	32	PHE	2.6
19	R	33	ASP	2.6
20	S	27	GLU	2.6
1	A	204	U	2.6
12	K	12	ARG	2.6
20	S	6	LYS	2.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
21	T	86	ARG	2.6
1	A	96	G	2.6
1	A	1489	G	2.6
20	S	35	SER	2.6
20	S	38	SER	2.6
4	C	63	ASN	2.6
12	K	26	ASN	2.6
9	H	41	ARG	2.6
14	M	36	LYS	2.6
15	N	57	ARG	2.6
21	T	38	LYS	2.6
17	P	1	MET	2.5
1	A	1414	U	2.5
4	C	2	GLY	2.5
16	O	20	GLY	2.5
17	P	73	LEU	2.5
1	A	1475	G	2.5
5	D	86	LYS	2.5
7	F	82	ARG	2.5
8	G	138	LYS	2.5
15	N	41	ARG	2.5
1	A	792	A	2.5
20	S	77	THR	2.5
5	D	9	CYS	2.5
12	K	53	SER	2.5
1	A	84	U	2.5
1	A	992	U	2.5
7	F	57	GLN	2.5
8	G	55	GLY	2.5
6	E	63	ARG	2.5
9	H	50	ARG	2.5
20	S	78	ARG	2.5
6	E	8	GLU	2.5
10	I	13	ALA	2.5
6	E	98	THR	2.5
10	I	88	TYR	2.5
12	K	25	TYR	2.5
6	E	40	ARG	2.5
9	H	18	ARG	2.5
18	Q	80	GLY	2.5
21	T	75	ASN	2.5
4	C	142	MET	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	B	24	TRP	2.5
5	D	50	ARG	2.5
7	F	36	ARG	2.5
16	O	84	LYS	2.5
1	A	97	G	2.5
1	A	1117	G	2.5
3	B	188	ALA	2.5
5	D	205	GLU	2.5
11	J	54	PHE	2.5
1	A	164	U	2.5
16	O	77	ARG	2.5
22	V	21	TYR	2.5
3	B	13	ALA	2.4
5	D	12	CYS	2.4
7	F	74	ASP	2.4
4	C	175	LEU	2.4
10	I	125	TYR	2.4
4	C	154	SER	2.4
4	C	27	LYS	2.4
9	H	102	ARG	2.4
1	A	781	A	2.4
1	A	978	A	2.4
3	B	198	ASP	2.4
6	E	147	ASP	2.4
22	V	23	PRO	2.4
9	H	93	VAL	2.4
1	A	531	U	2.4
4	C	28	GLN	2.4
5	D	5	ILE	2.4
9	H	34	GLU	2.4
18	Q	49	GLU	2.4
11	J	40	LEU	2.4
11	J	90	LEU	2.4
21	T	72	LEU	2.4
5	D	190	ASP	2.4
14	M	45	VAL	2.4
1	A	1015	A	2.4
10	I	104	ARG	2.4
14	M	80	ARG	2.4
14	M	114	ARG	2.4
1	A	1257	U	2.4
1	A	1479	C	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	B	117	GLU	2.4
7	F	17	SER	2.4
1	A	494	G	2.4
1	A	1258	G	2.4
3	B	43	ASP	2.4
20	S	14	HIS	2.4
21	T	12	ALA	2.4
13	L	57	LYS	2.4
14	M	88	ARG	2.4
3	B	95	GLN	2.4
9	H	127	LEU	2.4
20	S	71	LEU	2.4
1	A	1201	A	2.4
8	G	90	GLU	2.4
19	R	17	SER	2.4
14	M	10	PRO	2.4
14	M	54	VAL	2.4
5	D	59	ARG	2.3
5	D	115	ARG	2.3
9	H	86	ILE	2.3
3	B	48	MET	2.3
3	B	101	MET	2.3
1	A	351	G	2.3
14	M	67	GLU	2.3
1	A	203	U	2.3
8	G	148	ASN	2.3
11	J	78	ASN	2.3
1	A	63	C	2.3
10	I	19	LEU	2.3
8	G	110	GLN	2.3
3	B	20	GLU	2.3
5	D	98	GLU	2.3
7	F	78	GLU	2.3
11	J	24	VAL	2.3
4	C	126	ARG	2.3
20	S	10	PHE	2.3
10	I	31	GLN	2.3
4	C	166	GLU	2.3
8	G	77	SER	2.3
19	R	31	LEU	2.3
1	A	1266	G	2.3
22	V	18	TYR	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
4	C	62	ASP	2.3
5	D	169	LYS	2.3
1	A	1413	A	2.3
5	D	73	ARG	2.3
9	H	61	VAL	2.3
1	A	1212	U	2.3
3	B	39	ILE	2.3
7	F	52	ILE	2.3
11	J	53	PRO	2.3
11	J	91	PRO	2.3
12	K	29	ILE	2.3
1	A	163	C	2.3
8	G	101	LEU	2.3
18	Q	98	LEU	2.3
8	G	44	TYR	2.3
12	K	122	LYS	2.3
3	B	30	ARG	2.3
5	D	201	GLN	2.3
12	K	18	ARG	2.3
18	Q	92	ARG	2.3
3	B	193	ASP	2.3
1	A	331	G	2.2
1	A	1024	G	2.2
10	I	102	LEU	2.2
16	O	22	THR	2.2
4	C	49	SER	2.2
14	M	115	LYS	2.2
18	Q	67	LYS	2.2
16	O	68	ARG	2.2
8	G	96	GLN	2.2
8	G	126	ASP	2.2
11	J	74	ILE	2.2
11	J	96	ILE	2.2
5	D	16	GLY	2.2
14	M	123	ALA	2.2
1	A	1542	U	2.2
11	J	43	ARG	2.2
20	S	81	ARG	2.2
2	2	10	A	2.2
4	C	104	GLN	2.2
3	B	25	ASN	2.2
4	C	98	ASN	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
12	K	38	ASN	2.2
9	H	6	ILE	2.2
14	M	16	ASP	2.2
22	V	10	ARG	2.2
1	A	315	A	2.2
1	A	475	G	2.2
1	A	1487	G	2.2
13	L	65	GLU	2.2
3	B	227	GLY	2.2
12	K	23	ALA	2.2
10	I	120	ARG	2.2
14	M	110	ARG	2.2
16	O	72	ARG	2.2
1	A	1030	C	2.2
1	A	1260	C	2.2
13	L	50	SER	2.2
21	T	45	GLN	2.2
15	N	46	GLU	2.2
21	T	102	GLY	2.2
3	B	87	ARG	2.2
5	D	10	ARG	2.2
21	T	64	ASP	2.2
1	A	195	A	2.2
1	A	410	G	2.2
10	I	4	TYR	2.1
14	M	87	TYR	2.1
14	M	4	ILE	2.1
5	D	120	LEU	2.1
10	I	79	LEU	2.1
14	M	8	GLU	2.1
14	M	73	GLU	2.1
5	D	172	PRO	2.1
14	M	31	LYS	2.1
3	B	36	ARG	2.1
8	G	76	ARG	2.1
20	S	75	ALA	2.1
5	D	145	GLU	2.1
14	M	58	GLU	2.1
7	F	84	ASN	2.1
11	J	17	ASP	2.1
19	R	86	VAL	2.1
11	J	14	LYS	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	M	19	LEU	2.1
18	Q	87	LYS	2.1
19	R	88	LYS	2.1
3	B	130	ARG	2.1
3	B	226	ARG	2.1
14	M	2	ALA	2.1
1	A	794	A	2.1
11	J	95	GLU	2.1
20	S	72	GLY	2.1
1	A	258	G	2.1
1	A	1424	C	2.1
13	L	84	LEU	2.1
5	D	13	ARG	2.1
9	H	69	ARG	2.1
21	T	89	ARG	2.1
15	N	5	ALA	2.1
1	A	1425	U	2.1
3	B	38	GLY	2.1
3	B	131	PRO	2.1
5	D	150	GLU	2.1
12	K	117	ASN	2.1
20	S	32	LYS	2.1
4	C	140	ARG	2.1
10	I	47	LEU	2.1
4	C	176	HIS	2.1
19	R	87	ARG	2.1
17	P	68	ASP	2.1
20	S	39	THR	2.1
1	A	47	C	2.1
1	A	1335	C	2.1
1	A	1022	G	2.1
1	A	1030(A)	G	2.1
1	A	1030(C)	G	2.1
5	D	116	GLN	2.1
10	I	38	GLN	2.1
4	C	19	GLU	2.1
1	A	421	U	2.0
1	A	1049	U	2.0
4	C	97	LYS	2.0
13	L	118	SER	2.0
8	G	22	LEU	2.0
10	I	111	ARG	2.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	M	93	ARG	2.0
16	O	49	ASP	2.0
3	B	141	GLU	2.0
4	C	90	GLU	2.0
1	A	1128	C	2.0
1	A	1543	C	2.0
1	A	576	G	2.0
1	A	945	G	2.0
3	B	196	LEU	2.0
4	C	79	ARG	2.0
21	T	91	LEU	2.0
4	C	152	ILE	2.0
4	C	80	GLY	2.0
8	G	132	GLY	2.0
12	K	52	GLY	2.0
11	J	3	LYS	2.0
20	S	56	GLN	2.0
14	M	35	GLU	2.0
1	A	1466	C	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
23	ZN	D	210	1/1	0.91	0.23	85,85,85,85	0
23	ZN	N	62	1/1	1.00	0.02	87,87,87,87	0

6.5 Other polymers [i](#)

There are no such residues in this entry.