



Full wwPDB X-ray Structure Validation Report

Mar 31, 2014 – 06:04 PM BST

PDB ID : 3PYS
Title : Crystal structure of a complex containing domain 3 of CrPV IGR IRES RNA bound to the 70S ribosome. This file contains the 30S subunit of the first 70S ribosome.
Authors : Zhu, J.; Korostelev, A.; Costantino, D.; Noller, H.F.; Kieft, J.S.
Deposited on : 2010-12-13
Resolution : 3.40 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

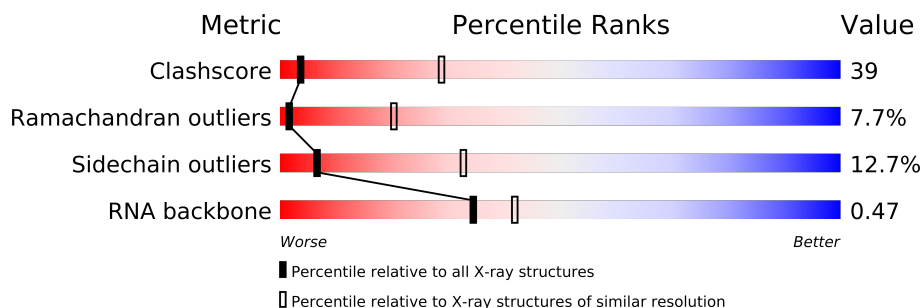
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : **NOT EXECUTED**
Percentile statistics : 21963
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23004

1 Overall quality at a glance

The reported resolution of this entry is 3.40 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1214 (3.50-3.30)
Ramachandran outliers	78287	1177 (3.50-3.30)
Sidechain outliers	78261	1177 (3.50-3.30)
RNA backbone	1838	1002 (4.02-2.76)

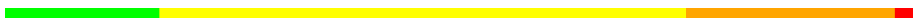
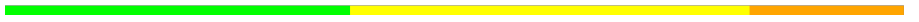
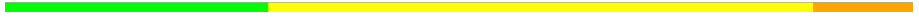

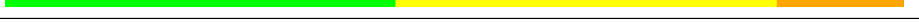


The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1506	
2	B	234	
3	C	206	
4	D	208	
5	E	151	
6	F	101	
7	G	155	
8	H	138	
9	I	127	
10	J	98	
11	K	119	
12	L	124	
13	M	116	
14	N	60	
15	O	88	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
16	P	83	
17	Q	99	
18	R	70	
19	S	78	
20	T	99	
21	U	24	
22	V	43	

2 Entry composition

There are 23 unique types of molecules in this entry. The entry contains 52199 atoms, of which 0 are hydrogen and 0 are deuterium.

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 ribosomal RNA 16S.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1506	Total	C	N	O	P	0	0	0
			32372	14409	5999	10459	1505			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	234	Total	C	N	O	S	0	0	0
			1901	1213	341	342	5			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	206	Total	C	N	O	S	0	0	0
			1613	1016	314	282	1			

- Molecule 4 is a protein called 30S ribosomal protein S4.

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

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	151	Total	C	N	O	S	0	0	0
			1156	729	218	205	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

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

- Molecule 7 is a protein called 30S ribosomal protein S7.

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

- Molecule 8 is a protein called 30S ribosomal protein S8.

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

- Molecule 9 is a protein called 30S ribosomal protein S9.

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

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	98	Total	C	N	O	S	0	0	0
			795	499	156	139	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

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

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	124	Total	C	N	O	S	0	0	0
			971	611	195	164	1			

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	116	Total	C	N	O	S	0	0	0
			929	574	191	162	2			

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

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

- Molecule 15 is a protein called 30S ribosomal protein S15.

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

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	P	83	Total	C	N	O	S	0	0	0
			701	443	139	118	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Q	99	Total	C	N	O	S	0	0	0
			824	528	152	142	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	R	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S	78	Total	C	N	O	S	0	0	0
			630	403	114	111	2			

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

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

- Molecule 21 is a protein called domain 3 of CrPV IGR IRES RNA.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	U	24	Total	C	N	O	0	0	0
			209	128	50	31			

- Molecule 22 is a RNA chain called RNA (34-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	V	34	Total	C	N	O	P	0	0	0
			719	323	125	238	33			

- Molecule 23 is ZINC ION (three-letter code: ZN) (formula: Zn).

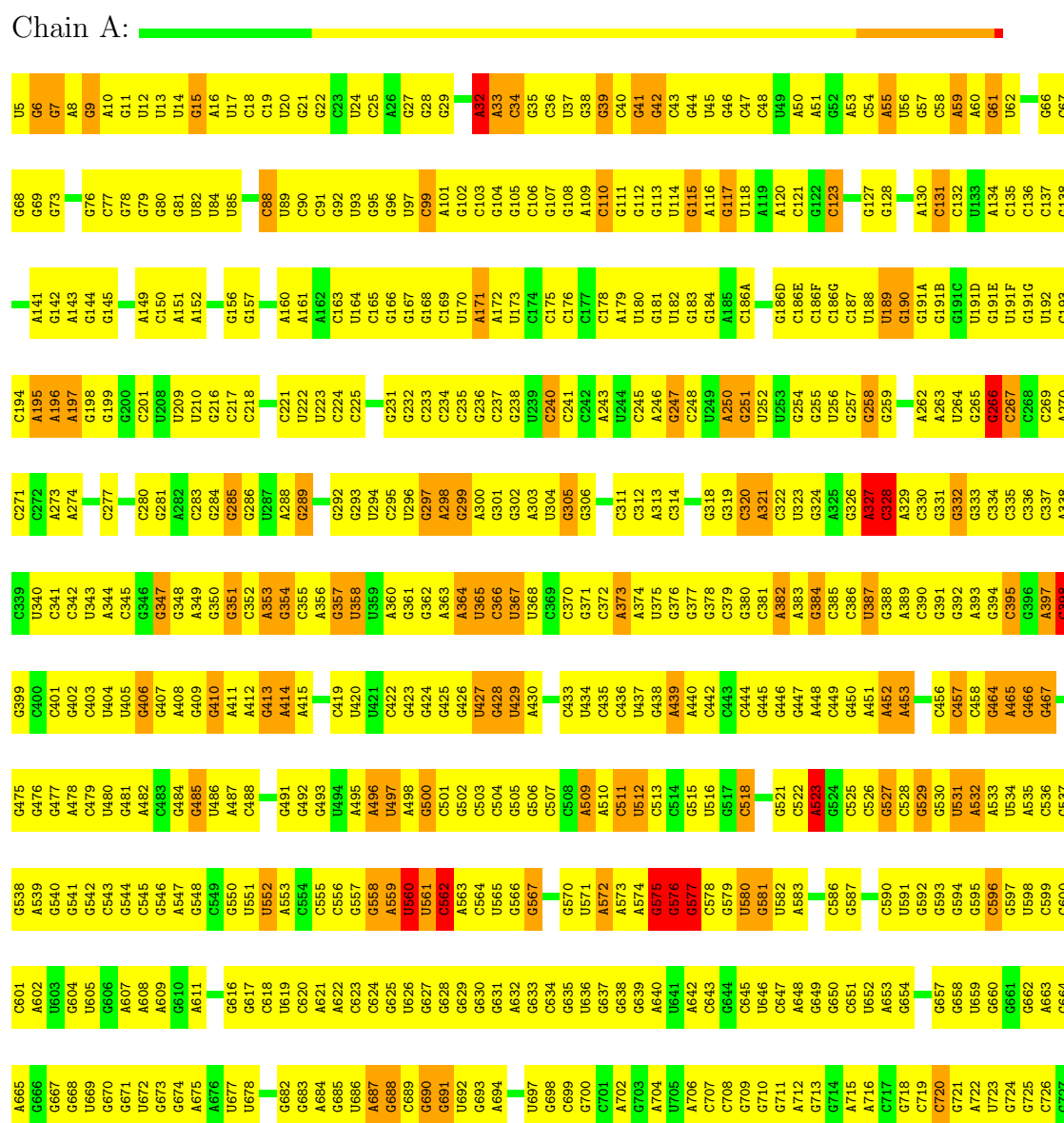
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
23	D	1	Total	Zn	0	0
			1	1		
23	N	1	Total	Zn	0	0
			1	1		

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

Note EDS was not executed.

- Molecule 1: ribosomal RNA 16S



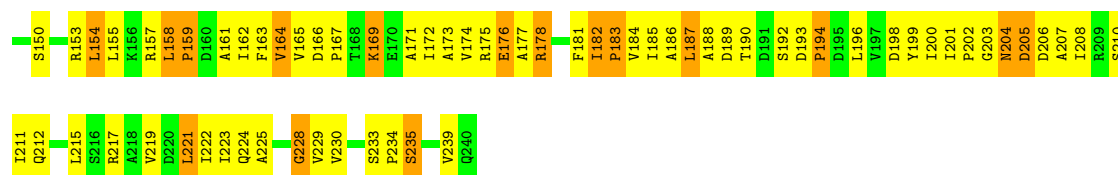
G1453	G1386	G1326	U1287	U1194	G1129	A1067	A994	G933	U863	A792	A728
G1454	G1387	G1327	G1258	G1195	G1130	G1068		G934	A864	A793	A729
G1455	G1388	G1328	G1259	G1196	G1131	G1069	U997	A935	A865	A794	G730
G1459	G1389	A1329	G1197	G1198		U1070	G998A	G936			
A1460	U1390	A1261	U1135	U1136	U1135	G1071		A937	G868	G797	G731
G1461	U1391	G1262	G1262	U1199	U1136	G1072		A938	G869	G798	A733
	G1392	G1263	G1263	G1200	G1137	G1073		G939	U870	G799	G735
G1464	U1393	A1333		A1201	G1138	G1074	G1003	G940	A873	G800	G736
G1465	A1394	G1334	G1270	G1202	G1139	G1075	A1004	G941	U801	A802	A737
G1466	G1395	G1335	G1271	G1203	G1140	G1076	A1005	G942	G874	G803	A738
G1467	A1396	G1336	G1272	G1141	G1141	G1077	G1006	U943	G875	G804	G739
A1468	G1397	G1337	G1273	U1206	G1142			G944	G876	U804	C738
G1469	A1398	G1338	G1273	G1206	G1143			G945	G877	G805	U740
G1470	A1399	G1339	U1277	G1207	G1144	A1080	G1009	A946	G878	G806	G741
G1471	C1400	A1340	G1278	G1208	G1145	G1081	G1010	G947	G879	A807	G742
U1472	C1401	U1341	A1279	G1209	A1146	U1083	G1011	G948	C880		U743
	C1402	C1342	A1280	G1210	C1147	G1084		A949	G881		
	C1403	G1343	U1281	U1211	C1148	U1085	A1014	U950	G882	G810	
G1479		G1344	C1282	U1212	C1149	U1086	A1015	U951	G883	C811	G744
G1480	C1407	U1345	G1283	A1213	U1150	G1087	A1016	U952	C884		
U1481		C1346	C1284	C1214	A1151	G1088	G1017	G953	U884	A814	C748
A1483	G1410	G1347	A1285		A1152	G1089		G954	A892	A815	C749
C1411	U1348	A1349	A1286	G1217	C1153	U1090	G1022	U955	G903	A816	G750
U1485	C1412	A1349	A1287	C1218	G1154	U1091	G1023	G956	C904	C817	G752
G1486	A1413	A1350	A1288	U1219	G1155		G1024	U956	U905	G818	A753
G1487	U1414	U1351	A1289	U1220	G1156	G1094	U1025	G957	G906	A819	C754
G1488	G1415	C1352	G1290	G1221	A1157	U1095		A958	C896	U820	G755
G1489		G1353	G1291	G1222	U1158	C1096	C102A	A959	C897	G821	G756
C1490	A1418		U1292	G1223	C1159	U1097	G1031	U960	G898	C822	G757
G1491	G1419	G1356	G1293	G1224	G1160	C1098		G961	A901		G758
A1492	C1420	A1357	G1294	A1225	C1161	G1099	A103A	G962	C826	C826	A759
A1493		G1358	G1295	C1226	C1162	G1100		G963	U827	U827	G760
G1494	G1423	G1359	C1296	A1227	C1163	A1101	C1037	A964	G903	A828	G761
	C1424	A1360	C1297	C1228	G1164	A1102	C1038	A965	C904	G829	G762
U1425	G1361	G1362	G1298	A1229	G1165	C1103	C1039	G966	U905	G830	G763
C1426	C136A	A1299	A1298	C1230	G1166	G1104	U1040	C967	G906	U831	G764
	G136B	G1300	G1299	G1231	A1167	G1105	A1041	A968	A907	C832	G765
U1427	C136B	A1301	G1300	G1232	C1167	A1106	G1042	A969	A908	U833	A766
A1428	A1433	U1302	U1301	G1233	A1169	C1043	U1043	C970	A909	U834	A7

- Molecule 2: 30S ribosomal protein S2

Chain B:

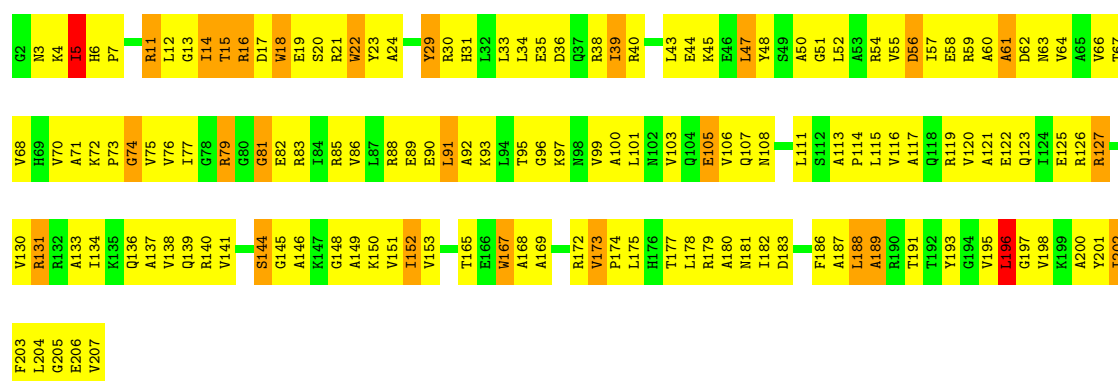


K75	K76	A77	I80	V81	R82	M83	E86	R87	A88	P91	Y92	V93	N94	Q95	R96	W97	L98	G99	G100	M101	T103	I104	N105	K106	T107	I108	S109	Q110	R111	L115	E116	L117	L118	F122	E126	I127	E128	E129	R130	Q135	L138	K139	H140	E141	L142	E143	R144	L145	I146	T147			
K77	K78	E79	L10	L11	G14	V15	H16	F17	G18	H19	E20	K21	K22	R23	R24	N25	P26	K27	F28	A29	R30	Y31	I32	E35	R36	N37	G38	I39	H40	I41	I42	D43	L44	T47	L61	E52	R53	T54	F55	R56	D60	L61	A62	M63	R64	G65	I68	L69	F70	W71	G72	T73	V74



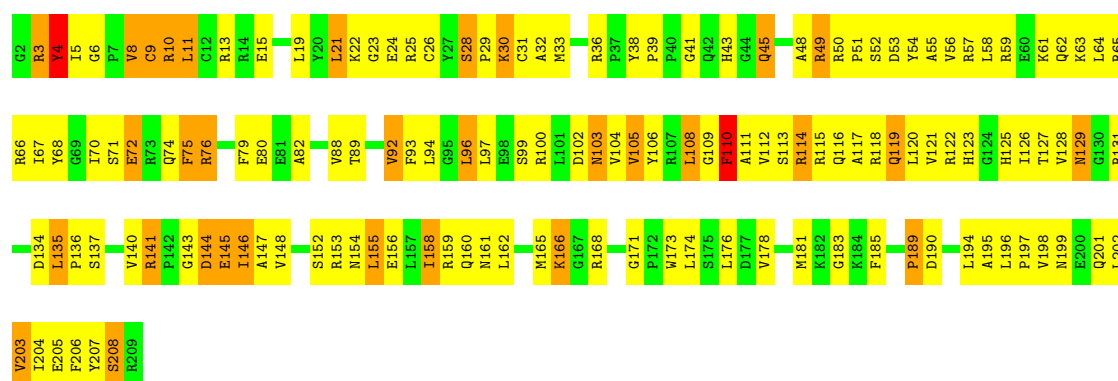
• Molecule 3: 30S ribosomal protein S3

Chain C:



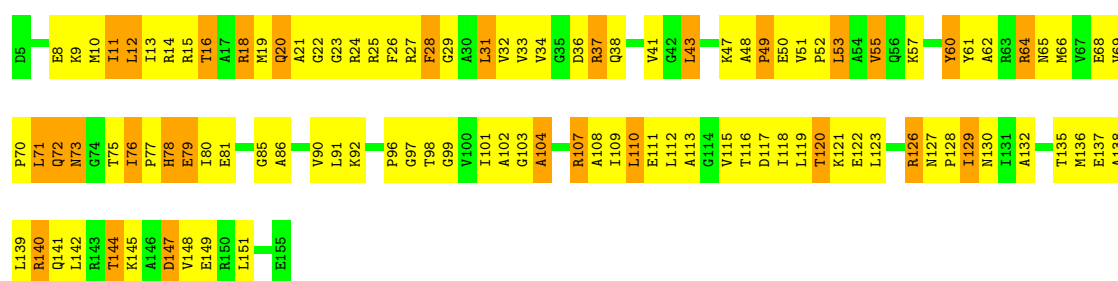
• Molecule 4: 30S ribosomal protein S4

Chain D:



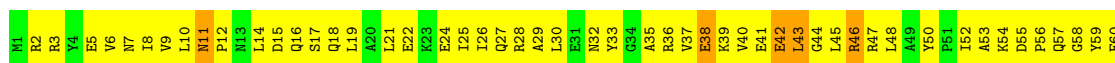
• Molecule 5: 30S ribosomal protein S5

Chain E:



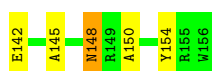
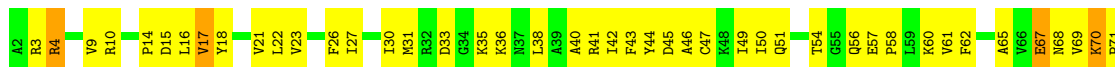
• Molecule 6: 30S ribosomal protein S6

Chain F:



• Molecule 7: 30S ribosomal protein S7

Chain G:



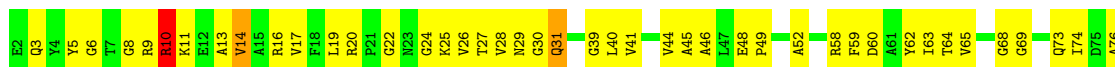
• Molecule 8: 30S ribosomal protein S8

Chain H:



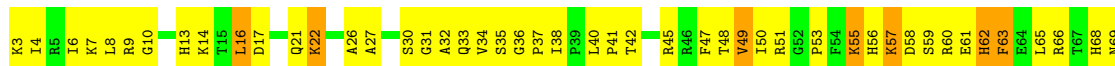
• Molecule 9: 30S ribosomal protein S9

Chain I:



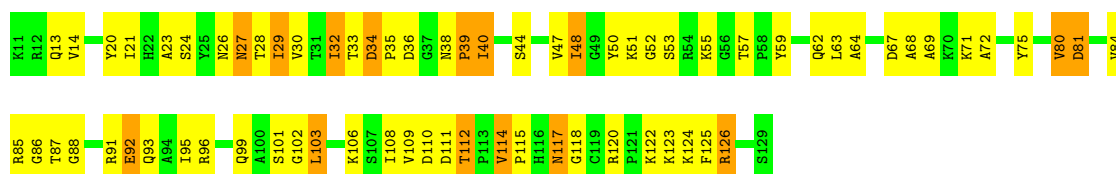
• Molecule 10: 30S ribosomal protein S10

Chain J:



• Molecule 11: 30S ribosomal protein S11

Chain K:



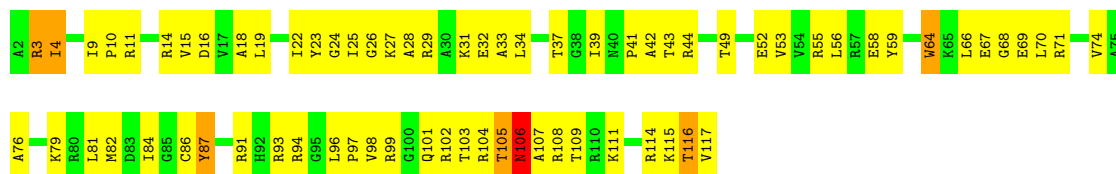
• Molecule 12: 30S ribosomal protein S12

Chain L:



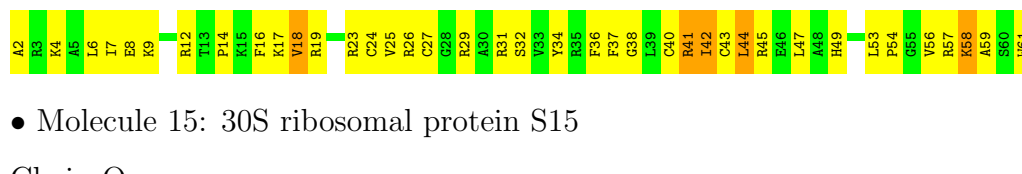
• Molecule 13: 30S ribosomal protein S13

Chain M:



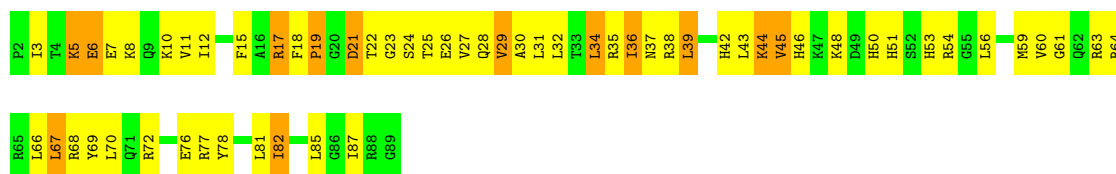
• Molecule 14: 30S ribosomal protein S14 type Z

Chain N:



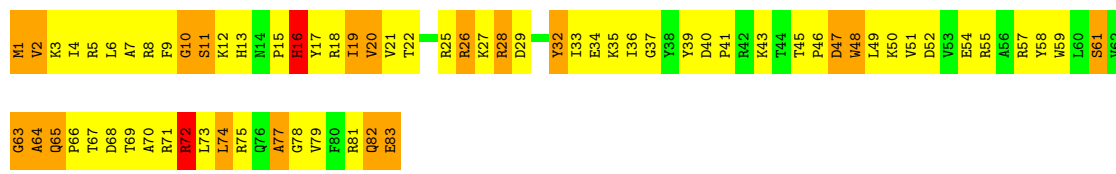
• Molecule 15: 30S ribosomal protein S15

Chain O:



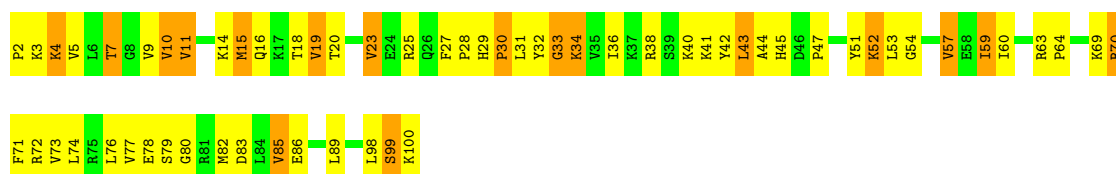
• Molecule 16: 30S ribosomal protein S16

Chain P:



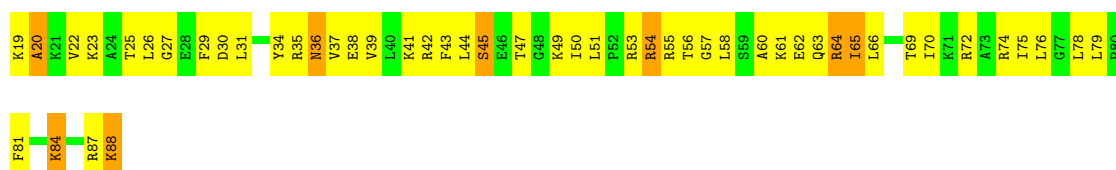
• Molecule 17: 30S ribosomal protein S17

Chain Q:



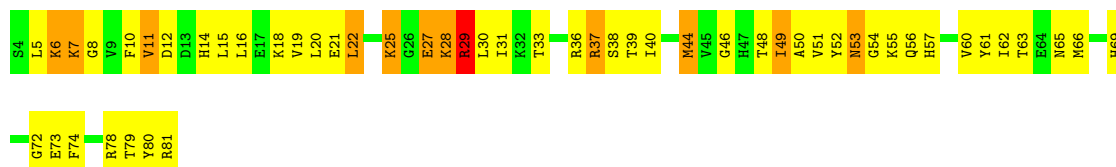
- Molecule 18: 30S ribosomal protein S18

Chain R:



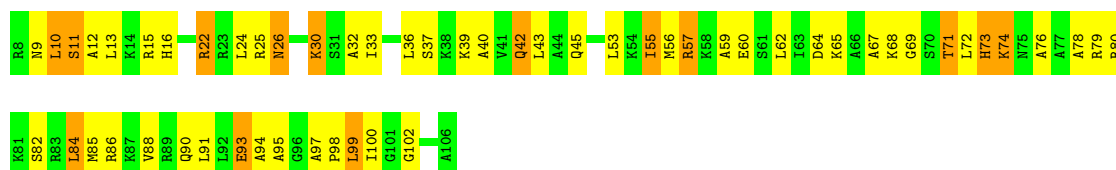
- Molecule 19: 30S ribosomal protein S19

Chain S:



- Molecule 20: 30S ribosomal protein Thx

Chain T:



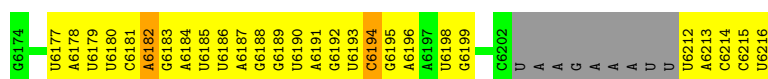
- Molecule 21: domain 3 of CrPV IGR IRES RNA

Chain U:



- Molecule 22: RNA (34-MER)

Chain V:



4 Data and refinement statistics

EDS was not executed - this section will therefore be incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.69Å 451.66Å 614.25Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.52 – 3.40	Depositor
% Data completeness (in resolution range)	97.5 (49.52-3.40)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.28 (at 3.40Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.6.1.357)	Depositor
R, R_{free}	0.228 , 0.266	Depositor
Wilson B-factor (Å ²)	86.0	Xtriage
Anisotropy	0.391	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	Xtriage
Outliers	0 of 775950 reflections	Xtriage
Total number of atoms	52199	wwPDB-VP
Average B, all atoms (Å ²)	145.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.68% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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	0.63	4/36238 (0.0%)	1.02	99/56561 (0.2%)
2	B	0.31	0/1936	0.51	0/2609
3	C	0.31	0/1637	0.47	0/2205
4	D	0.41	0/1733	0.59	0/2318
5	E	0.41	0/1172	0.61	0/1576
6	F	0.33	0/856	0.57	0/1154
7	G	0.27	0/1276	0.46	0/1709
8	H	0.39	0/1136	0.61	0/1527
9	I	0.29	0/1029	0.45	0/1378
10	J	0.28	0/808	0.48	0/1085
11	K	0.39	0/900	0.59	0/1213
12	L	0.47	0/987	0.70	1/1320 (0.1%)
13	M	0.25	0/939	0.44	0/1258
14	N	0.31	0/501	0.50	0/664
15	O	0.39	0/745	0.57	0/992
16	P	0.42	0/717	0.62	0/963
17	Q	0.43	0/837	0.60	0/1117
18	R	0.38	0/579	0.61	0/768
19	S	0.25	0/643	0.43	0/865
20	T	0.38	0/764	0.57	0/1006
21	U	0.23	0/213	0.43	0/277
22	V	0.43	0/802	0.68	0/1245
All	All	0.55	4/56448 (0.0%)	0.89	100/83810 (0.1%)

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	901	A	N9-C4	-6.12	1.34	1.37
1	A	1523	G	N3-C4	-5.52	1.31	1.35
1	A	909	A	N9-C4	-5.38	1.34	1.37
1	A	32	A	N3-C4	-5.21	1.31	1.34

All (100) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	299	G	C5-C6-N1	-8.82	107.09	111.50
1	A	123	C	C6-N1-C2	8.28	123.61	120.30
1	A	1512	U	C5-C6-N1	-8.02	118.69	122.70
1	A	896	C	C6-N1-C2	7.72	123.39	120.30
1	A	903	G	C8-N9-C4	7.57	109.43	106.40
1	A	34	C	C6-N1-C2	7.54	123.32	120.30
1	A	901	A	C2-N3-C4	-7.54	106.83	110.60
1	A	868	C	C6-N1-C2	-7.42	117.33	120.30
1	A	1053	G	C8-N9-C1'	7.40	136.62	127.00
1	A	1053	G	C4-N9-C1'	-7.29	117.03	126.50
1	A	297	G	C8-N9-C4	7.13	109.25	106.40
1	A	43	C	C6-N1-C2	7.09	123.14	120.30
1	A	756	C	C6-N1-C2	7.07	123.13	120.30
1	A	576	G	N1-C6-O6	7.04	124.13	119.90
1	A	357	G	N1-C6-O6	6.75	123.95	119.90
1	A	822	C	C6-N1-C2	6.70	122.98	120.30
1	A	285	G	C8-N9-C4	6.68	109.07	106.40
1	A	576	G	C6-C5-N7	-6.63	126.42	130.40
1	A	328	C	C6-N1-C2	6.59	122.94	120.30
1	A	691	G	N3-C4-N9	6.59	129.96	126.00
1	A	264	U	N3-C2-O2	-6.57	117.60	122.20
1	A	529	G	N1-C6-O6	6.49	123.79	119.90
1	A	815	A	N1-C6-N6	-6.49	114.71	118.60
1	A	1523	G	N1-C6-O6	6.48	123.79	119.90
1	A	398	C	C6-N1-C2	6.44	122.88	120.30
1	A	903	G	N7-C8-N9	-6.40	109.90	113.10
1	A	896	C	C5-C6-N1	-6.40	117.80	121.00
1	A	299	G	C5-C6-O6	6.36	132.42	128.60
1	A	357	G	C5-C6-N1	-6.34	108.33	111.50
1	A	297	G	N7-C8-N9	-6.27	109.97	113.10
1	A	691	G	N9-C4-C5	-6.26	102.90	105.40
1	A	815	A	N9-C4-C5	6.23	108.29	105.80
1	A	1415	G	N1-C6-O6	6.21	123.63	119.90
1	A	918	A	N1-C6-N6	-6.14	114.91	118.60
1	A	876	G	C8-N9-C4	6.05	108.82	106.40
1	A	918	A	N9-C4-C5	5.95	108.18	105.80
1	A	299	G	C4-C5-N7	-5.93	108.43	110.80
1	A	810	C	C5-C6-N1	-5.89	118.05	121.00
1	A	904	C	C5-C6-N1	-5.87	118.06	121.00
1	A	1522	U	N1-C2-N3	5.86	118.41	114.90
1	A	811	C	C6-N1-C2	5.83	122.63	120.30
1	A	1486	G	N1-C6-O6	5.82	123.39	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1512	U	N1-C2-N3	5.80	118.38	114.90
1	A	1200	C	C6-N1-C2	5.79	122.62	120.30
1	A	1472	U	N3-C4-O4	-5.77	115.36	119.40
1	A	754	C	N3-C2-O2	-5.76	117.87	121.90
1	A	904	C	C2-N3-C4	-5.71	117.04	119.90
1	A	529	G	C5-C6-O6	-5.70	125.18	128.60
1	A	1523	G	N3-C2-N2	-5.69	115.92	119.90
1	A	879	C	C6-N1-C2	5.67	122.57	120.30
1	A	117	G	N1-C6-O6	5.66	123.29	119.90
1	A	576	G	C4-N9-C1'	5.61	133.80	126.50
1	A	756	C	C5-C6-N1	-5.61	118.19	121.00
1	A	523	A	N1-C6-N6	5.57	121.94	118.60
1	A	552	U	C5-C6-N1	-5.57	119.92	122.70
1	A	768	A	N1-C2-N3	5.55	132.08	129.30
1	A	1522	U	C5-C4-O4	5.54	129.22	125.90
1	A	576	G	C8-N9-C1'	-5.52	119.83	127.00
1	A	691	G	C5-C6-O6	-5.51	125.29	128.60
1	A	720	C	C2-N1-C1'	5.48	124.83	118.80
12	L	9	LEU	CA-CB-CG	-5.47	102.72	115.30
1	A	55	A	C8-N9-C4	-5.47	103.61	105.80
1	A	1484	C	C6-N1-C2	5.46	122.48	120.30
1	A	1432	G	C5-C6-N1	-5.44	108.78	111.50
1	A	45	U	C6-N1-C2	5.44	124.27	121.00
1	A	1414	U	C6-N1-C2	5.44	124.27	121.00
1	A	327	A	C8-N9-C4	-5.43	103.63	105.80
1	A	1527	C	C6-N1-C2	5.41	122.47	120.30
1	A	577	G	C8-N9-C4	5.40	108.56	106.40
1	A	766	A	N1-C6-N6	5.40	121.84	118.60
1	A	562	C	N3-C4-C5	5.36	124.05	121.90
1	A	266	G	N3-C4-C5	5.36	131.28	128.60
1	A	1480	G	C5-C6-O6	-5.35	125.39	128.60
1	A	1192	C	C5-C6-N1	5.31	123.65	121.00
1	A	1053	G	N3-C4-C5	5.30	131.25	128.60
1	A	1053	G	N3-C4-N9	-5.23	122.86	126.00
1	A	770	C	N3-C4-C5	5.23	123.99	121.90
1	A	904	C	N3-C2-O2	-5.21	118.25	121.90
1	A	1524	C	C6-N1-C2	5.20	122.38	120.30
1	A	576	G	C5-C6-N1	-5.18	108.91	111.50
1	A	778	G	C4-N9-C1'	5.18	133.23	126.50
1	A	395	C	C6-N1-C2	5.17	122.37	120.30
1	A	1508	G	C8-N9-C4	5.17	108.47	106.40
1	A	815	A	C5-C6-N6	5.17	127.83	123.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	264	U	N1-C2-N3	5.15	117.99	114.90
1	A	1415	G	C5-C6-N1	-5.14	108.93	111.50
1	A	922	G	N1-C6-O6	5.13	122.98	119.90
1	A	758	G	N1-C6-O6	5.12	122.97	119.90
1	A	1053	G	N1-C2-N3	-5.11	120.83	123.90
1	A	895	G	C8-N9-C4	5.10	108.44	106.40
1	A	560	U	C2-N1-C1'	5.07	123.78	117.70
1	A	901	A	C5-N7-C8	-5.06	101.37	103.90
1	A	1529	G	C4-N9-C1'	5.06	133.07	126.50
1	A	819	A	N1-C6-N6	5.05	121.63	118.60
1	A	1512	U	C4-C5-C6	5.05	122.73	119.70
1	A	1530	G	N1-C6-O6	5.04	122.93	119.90
1	A	810	C	C4-C5-C6	5.04	119.92	117.40
1	A	1097	C	C6-N1-C2	-5.03	118.29	120.30
1	A	575	G	N1-C6-O6	-5.03	116.88	119.90
1	A	917	G	C4-N9-C1'	5.01	133.01	126.50

There are no chirality outliers.

There are no planarity outliers.

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	32372	0	16339	1673	0
2	B	1901	0	1951	173	0
3	C	1613	0	1677	180	0
4	D	1703	0	1764	190	0
5	E	1156	0	1213	141	0
6	F	843	0	857	96	0
7	G	1257	0	1296	95	0
8	H	1116	0	1177	133	0
9	I	1011	0	1043	100	0
10	J	795	0	840	93	0
11	K	885	0	904	76	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	L	971	0	1057	126	0
13	M	929	0	987	83	0
14	N	492	0	530	49	0
15	O	734	0	771	62	0
16	P	701	0	720	96	0
17	Q	824	0	893	66	0
18	R	574	0	644	70	0
19	S	630	0	652	70	0
20	T	762	0	859	64	0
21	U	209	0	221	16	0
22	V	719	0	366	58	0
23	D	1	0	0	0	0
23	N	1	0	0	0	0
All	All	52199	0	36761	3410	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 39.

All (3410) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1123:A:H4'	10:J:36:GLY:HA3	1.30	1.14
10:J:48:THR:HA	10:J:62:HIS:HB3	1.32	1.11
2:B:185:ILE:HG22	2:B:199:TYR:HB2	1.29	1.09
1:A:82:U:H2'	1:A:85:U:H5	1.18	1.09
1:A:979:C:H3'	1:A:980:C:H5''	1.34	1.09
22:V:6194:C:H2'	22:V:6195:G:H8	1.14	1.08
7:G:113:GLU:HB2	7:G:119:ARG:HG2	1.33	1.08
1:A:365:U:H5''	1:A:366:C:OP1	1.52	1.07
2:B:111:ARG:HH11	2:B:111:ARG:HG2	1.11	1.07
5:E:101:ILE:HD11	5:E:119:LEU:HD23	1.31	1.06
1:A:955:U:H1'	1:A:1227:A:H61	1.18	1.06
9:I:13:ALA:HB2	9:I:68:GLY:HA3	1.44	0.98
1:A:673:G:H2'	1:A:674:G:C8	1.98	0.98
3:C:20:SER:HB2	3:C:40:ARG:HH12	1.27	0.98
4:D:49:ARG:NH2	4:D:50:ARG:HB2	1.79	0.97
16:P:4:ILE:HG12	16:P:21:VAL:HG12	1.43	0.97
3:C:182:ILE:HG12	3:C:203:PHE:HA	1.45	0.96
4:D:104:VAL:HG11	4:D:146:ILE:HD13	1.45	0.96
12:L:26:LEU:HG	12:L:32:ARG:HH11	1.28	0.96
4:D:9:CYS:HB3	4:D:32:ALA:HB2	1.47	0.96
1:A:1320:C:H42	19:S:36:ARG:HG3	1.28	0.96
1:A:691:G:C6	11:K:52:GLY:HA2	2.02	0.95

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:M:52:GLU:HA	13:M:55:ARG:HB3	1.46	0.94
20:T:26:ASN:HB2	20:T:71:THR:HG23	1.47	0.94
16:P:28:ARG:HG2	16:P:28:ARG:HH11	1.30	0.94
1:A:1097:C:H2'	1:A:1098:C:H6	1.32	0.94
4:D:22:LYS:HB2	4:D:26:CYS:SG	2.07	0.94
1:A:1435:G:H2'	1:A:1436:U:C6	2.02	0.94
1:A:1253:G:H1	1:A:1284:C:H42	1.14	0.94
4:D:65:ARG:HG3	4:D:75:PHE:CD1	2.03	0.93
22:V:6213:A:H2'	22:V:6214:C:C6	2.04	0.93
2:B:174:VAL:O	2:B:178:ARG:HB2	1.69	0.93
1:A:38:G:N2	1:A:397:A:H5'	1.84	0.92
4:D:108:LEU:HD21	4:D:183:GLY:HA3	1.52	0.92
8:H:121:ASP:O	8:H:125:ARG:HB2	1.70	0.92
16:P:19:ILE:HG22	16:P:36:ILE:HG13	1.51	0.92
1:A:91:C:H2'	1:A:92:G:H8	1.34	0.92
3:C:172:ARG:O	3:C:173:VAL:HG23	1.69	0.91
1:A:392:G:H2'	1:A:393:A:H8	1.34	0.91
3:C:33:LEU:HD21	14:N:53:LEU:HD22	1.52	0.91
2:B:71:VAL:HG23	2:B:164:VAL:HG13	1.52	0.91
22:V:6194:C:H2'	22:V:6195:G:C8	2.05	0.90
6:F:86:ARG:O	6:F:87:ARG:HB2	1.70	0.90
1:A:38:G:H22	1:A:397:A:H5'	1.36	0.90
5:E:43:LEU:HD22	5:E:136:MET:HG3	1.53	0.90
4:D:15:GLU:HG2	4:D:63:LYS:HG3	1.52	0.89
3:C:134:ILE:HG23	3:C:151:VAL:HB	1.53	0.89
20:T:57:ARG:NH1	20:T:102:GLY:HA2	1.87	0.89
1:A:199:G:H1	1:A:218:C:H42	1.17	0.89
12:L:69:ILE:HG23	12:L:99:ILE:HG21	1.53	0.89
5:E:51:VAL:HB	5:E:52:PRO:HD3	1.53	0.89
11:K:57:THR:HG22	11:K:59:TYR:H	1.36	0.89
1:A:386:C:H2'	1:A:387:U:H5''	1.54	0.89
8:H:91:ARG:CG	8:H:91:ARG:HH11	1.85	0.89
1:A:955:U:H1'	1:A:1227:A:N6	1.87	0.88
8:H:92:ARG:HB3	8:H:94:TYR:HE2	1.39	0.88
1:A:1070:U:H2'	1:A:1071:C:H6	1.38	0.88
2:B:111:ARG:NH1	2:B:111:ARG:HG2	1.85	0.88
7:G:107:ALA:HB2	7:G:134:ALA:HB2	1.54	0.88
2:B:187:LEU:HD11	2:B:205:ASP:HB3	1.54	0.88
6:F:7:ASN:HD21	18:R:34:TYR:HE1	1.21	0.88
1:A:265:G:H2'	1:A:266:G:H5''	1.53	0.88
3:C:14:ILE:HG23	3:C:15:THR:H	1.37	0.88
1:A:1201:A:H1'	1:A:1202:G:OP2	1.73	0.87

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:3:GLN:HG2	9:I:20:ARG:HG2	1.55	0.87
1:A:448:A:O2'	1:A:449:C:H5'	1.74	0.87
2:B:187:LEU:HA	2:B:201:ILE:HB	1.55	0.87
4:D:153:ARG:HH11	4:D:181:MET:HE3	1.38	0.87
10:J:32:ALA:HB3	10:J:76:ASN:HB2	1.55	0.87
1:A:1347:G:C8	9:I:107:ARG:HB3	2.09	0.86
8:H:20:TYR:HA	8:H:65:TYR:CE2	2.10	0.86
4:D:108:LEU:HB3	4:D:110:PHE:CE2	2.10	0.86
11:K:24:SER:HB3	11:K:27:ASN:O	1.72	0.86
11:K:59:TYR:CE1	11:K:63:LEU:HD21	2.10	0.86
4:D:128:VAL:HG12	4:D:129:ASN:OD1	1.75	0.86
5:E:122:GLU:O	5:E:123:LEU:HD23	1.76	0.86
3:C:92:ALA:HB2	3:C:99:VAL:HG13	1.56	0.86
20:T:26:ASN:HD22	20:T:26:ASN:H	1.21	0.85
1:A:1295:G:H21	1:A:1302:U:H3	1.21	0.85
1:A:971:G:C8	1:A:1365:G:H4'	2.11	0.85
19:S:63:THR:HG22	19:S:66:MET:HG2	1.55	0.85
3:C:88:ARG:HB3	3:C:99:VAL:HG21	1.56	0.85
4:D:119:GLN:HG3	4:D:123:HIS:CD2	2.11	0.85
2:B:26:PRO:HG2	2:B:27:LYS:HD3	1.57	0.85
13:M:10:PRO:HB2	13:M:18:ALA:HB1	1.57	0.85
1:A:1124:G:H5'	10:J:35:SER:HB2	1.59	0.85
3:C:66:VAL:HB	3:C:101:LEU:HD23	1.59	0.84
1:A:57:G:H2'	1:A:58:C:H6	1.42	0.84
12:L:26:LEU:HG	12:L:32:ARG:NH1	1.91	0.84
12:L:52:ARG:HH11	12:L:52:ARG:CG	1.90	0.84
5:E:126:ARG:CG	5:E:126:ARG:HH11	1.89	0.84
5:E:78:HIS:HD2	8:H:104:ARG:HG2	1.42	0.84
1:A:250:A:H4'	1:A:251:G:O5'	1.76	0.84
3:C:195:VAL:HG12	3:C:196:LEU:H	1.43	0.84
6:F:35:ALA:HB1	6:F:65:VAL:HG21	1.59	0.84
12:L:68:TYR:O	12:L:99:ILE:HG22	1.77	0.84
1:A:965:A:C2	1:A:969:A:C2	2.66	0.84
2:B:87:ARG:HG3	2:B:233:SER:HB3	1.60	0.84
1:A:1329:A:H5''	13:M:26:GLY:H	1.41	0.83
2:B:138:LEU:HD12	2:B:141:GLU:HG3	1.58	0.83
1:A:82:U:H2'	1:A:85:U:C5	2.10	0.83
1:A:57:G:H2'	1:A:58:C:C6	2.14	0.83
4:D:92:VAL:HG12	4:D:96:LEU:HD23	1.61	0.83
19:S:19:VAL:HG21	19:S:44:MET:HG3	1.60	0.83
1:A:320:C:H5''	1:A:321:A:OP2	1.77	0.83
22:V:6213:A:H2'	22:V:6214:C:H6	1.43	0.82

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1238:A:N7	1:A:1303:C:H1'	1.94	0.82
1:A:818:G:O2'	1:A:819:A:H5'	1.80	0.82
1:A:1152:A:H2'	1:A:1153:C:H6	1.44	0.82
1:A:737:A:H2'	1:A:738:C:C6	2.14	0.82
1:A:987:G:H1	1:A:1218:C:H42	1.28	0.82
1:A:475:G:H2'	1:A:476:G:H8	1.45	0.82
1:A:877:C:H5''	8:H:88:LYS:HD3	1.61	0.82
1:A:1294:G:H2'	1:A:1295:G:C8	2.15	0.81
8:H:112:LEU:HA	8:H:134:ILE:HG12	1.62	0.81
17:Q:53:LEU:HD11	17:Q:85:VAL:HG21	1.62	0.81
15:O:18:PHE:CE1	15:O:21:ASP:HB2	2.15	0.81
5:E:76:ILE:HG12	5:E:77:PRO:HD2	1.61	0.81
1:A:721:G:H4'	1:A:722:A:O4'	1.81	0.81
2:B:111:ARG:HH11	2:B:111:ARG:CG	1.93	0.81
11:K:108:ILE:HG21	18:R:88:LYS:HG2	1.62	0.81
5:E:31:LEU:HD21	5:E:43:LEU:HD12	1.63	0.81
5:E:57:LYS:O	5:E:61:TYR:HD2	1.63	0.81
16:P:39:TYR:CD1	16:P:73:LEU:HD13	2.16	0.81
8:H:92:ARG:HB3	8:H:94:TYR:CE2	2.15	0.81
1:A:1281:U:H4'	1:A:1282:C:OP2	1.81	0.81
1:A:781:A:C3'	1:A:782:A:H5'	2.11	0.80
1:A:957:U:H4'	19:S:79:THR:HB	1.62	0.80
1:A:392:G:H2'	1:A:393:A:C8	2.16	0.80
7:G:115:ARG:O	7:G:118:VAL:HG22	1.80	0.80
2:B:187:LEU:CD1	2:B:205:ASP:HB3	2.11	0.80
4:D:25:ARG:HG2	4:D:30:LYS:HG3	1.63	0.80
1:A:1064:G:H21	1:A:1190:G:H2'	1.45	0.80
8:H:12:ARG:HH12	8:H:26:VAL:HA	1.43	0.80
6:F:91:VAL:HG12	6:F:92:LYS:O	1.81	0.80
1:A:737:A:H2'	1:A:738:C:H6	1.46	0.80
1:A:175:C:H2'	1:A:176:C:H6	1.46	0.80
1:A:324:G:N2	1:A:327:A:C8	2.50	0.80
3:C:173:VAL:O	3:C:173:VAL:HG12	1.81	0.80
1:A:1191:A:H5''	3:C:4:LYS:NZ	1.96	0.80
2:B:167:PRO:O	2:B:171:ALA:HB2	1.81	0.80
1:A:59:A:H1'	1:A:354:G:N2	1.96	0.80
2:B:77:ALA:HB2	2:B:211:ILE:HD13	1.64	0.80
18:R:54:ARG:H	18:R:54:ARG:HD2	1.45	0.80
1:A:625:G:C4	1:A:626:U:C5	2.70	0.80
8:H:83:ILE:HG13	8:H:137:VAL:HG22	1.63	0.80
1:A:1117:G:H21	1:A:1180:A:H1'	1.45	0.80
5:E:126:ARG:HG2	5:E:126:ARG:HH11	1.47	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1154:G:H2'	1:A:1155:G:H8	1.46	0.80
2:B:101:MET:HA	2:B:108:ILE:HG13	1.63	0.79
3:C:152:ILE:HD11	3:C:167:TRP:CD1	2.17	0.79
8:H:20:TYR:HA	8:H:65:TYR:HE2	1.47	0.79
1:A:828:A:H5''	1:A:859:A:C2	2.17	0.79
1:A:556:C:O2	1:A:556:C:H2'	1.83	0.79
19:S:6:LYS:HG2	19:S:7:LYS:HD3	1.63	0.79
1:A:1329:A:H5''	13:M:26:GLY:N	1.97	0.79
3:C:43:LEU:HD22	3:C:47:LEU:HD22	1.63	0.79
1:A:950:U:OP2	13:M:102:ARG:HG3	1.81	0.79
1:A:91:C:H2'	1:A:92:G:C8	2.18	0.79
1:A:832:C:H42	1:A:854:G:H1	1.31	0.79
1:A:1070:U:H2'	1:A:1071:C:C6	2.18	0.79
4:D:126:ILE:HG22	4:D:127:THR:H	1.48	0.79
6:F:98:LEU:HD13	6:F:101:ALA:HB2	1.64	0.79
15:O:56:LEU:O	15:O:60:VAL:HG23	1.83	0.79
5:E:78:HIS:CD2	8:H:104:ARG:HG2	2.19	0.78
1:A:476:G:H2'	1:A:477:G:H8	1.48	0.78
4:D:100:ARG:NH1	4:D:137:SER:HA	1.99	0.78
3:C:59:ARG:HG2	3:C:64:VAL:HG22	1.65	0.78
1:A:99:C:O2'	1:A:101:A:H5''	1.84	0.78
18:R:58:LEU:HD23	18:R:62:GLU:HB3	1.63	0.78
13:M:67:GLU:HG3	13:M:68:GLY:H	1.48	0.78
20:T:45:GLN:HB2	20:T:91:LEU:HD13	1.64	0.78
13:M:91:ARG:HH11	19:S:81:ARG:HH22	1.31	0.78
1:A:688:G:H2'	1:A:689:C:H6	1.48	0.78
5:E:50:GLU:OE2	5:E:51:VAL:HG23	1.83	0.78
1:A:475:G:H2'	1:A:476:G:C8	2.18	0.78
1:A:601:C:H2'	1:A:602:A:C8	2.19	0.78
1:A:495:A:H4'	1:A:496:A:OP1	1.83	0.78
10:J:51:ARG:HB2	10:J:60:ARG:HA	1.66	0.78
3:C:195:VAL:HG12	3:C:196:LEU:N	1.99	0.78
1:A:1129:C:H1'	1:A:1130:A:OP2	1.84	0.78
4:D:3:ARG:HD3	4:D:5:ILE:HD11	1.64	0.77
3:C:105:GLU:HG2	3:C:106:VAL:H	1.49	0.77
1:A:509:A:H5'	4:D:54:TYR:HD2	1.49	0.77
4:D:204:ILE:HG21	5:E:98:THR:O	1.84	0.77
2:B:97:TRP:HZ2	2:B:102:LEU:HD13	1.48	0.77
1:A:1154:G:H2'	1:A:1155:G:C8	2.19	0.77
2:B:8:LYS:HA	2:B:217:ARG:HH12	1.49	0.77
10:J:75:ILE:HG13	10:J:76:ASN:H	1.49	0.77
10:J:48:THR:HG22	10:J:62:HIS:ND1	2.00	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:108:LEU:HB3	4:D:110:PHE:HE2	1.47	0.77
1:A:790:A:H5'	22:V:6192:G:H4'	1.67	0.77
13:M:23:TYR:CZ	13:M:71:ARG:HD3	2.20	0.77
1:A:1010:G:H2'	1:A:1011:G:C8	2.20	0.77
1:A:370:C:O2'	1:A:371:G:H5'	1.85	0.77
1:A:1073:U:H2'	1:A:1074:G:H8	1.50	0.77
8:H:58:TYR:O	8:H:59:LEU:HD23	1.85	0.76
1:A:625:G:H2'	1:A:626:U:H6	1.47	0.76
1:A:735:C:H2'	1:A:736:C:H6	1.50	0.76
1:A:106:C:O2'	1:A:107:G:H5'	1.85	0.76
4:D:100:ARG:HH21	4:D:118:ARG:HH12	1.32	0.76
1:A:262:A:H2'	1:A:263:A:C8	2.20	0.76
1:A:266:G:H5'	1:A:267:C:C5	2.21	0.76
2:B:63:MET:HG2	2:B:225:ALA:HB1	1.67	0.76
13:M:27:LYS:HE2	13:M:31:LYS:HE3	1.66	0.76
22:V:6182:A:C2	22:V:6183:G:C4	2.74	0.76
6:F:26:ILE:O	6:F:30:LEU:HD12	1.85	0.76
11:K:34:ASP:N	11:K:40:ILE:HD11	2.00	0.76
1:A:624:C:H4'	16:P:11:SER:H	1.51	0.76
1:A:555:C:H2'	1:A:556:C:H6	1.51	0.76
10:J:74:ILE:H	10:J:74:ILE:HD13	1.49	0.76
4:D:110:PHE:H	4:D:110:PHE:HD2	1.34	0.76
3:C:138:VAL:HG23	3:C:151:VAL:HG23	1.68	0.76
18:R:26:LEU:HD11	18:R:42:ARG:HD2	1.67	0.76
20:T:26:ASN:ND2	20:T:26:ASN:H	1.83	0.75
2:B:72:GLY:O	2:B:94:ASN:HA	1.86	0.75
2:B:178:ARG:HH22	2:B:196:LEU:HA	1.51	0.75
15:O:30:ALA:HA	15:O:85:LEU:HD11	1.67	0.75
1:A:712:A:O2'	1:A:713:G:H5'	1.87	0.75
22:V:6177:U:H2'	22:V:6178:A:C8	2.20	0.75
8:H:12:ARG:NH1	8:H:26:VAL:HA	2.01	0.75
11:K:21:ILE:HA	11:K:30:VAL:HG12	1.69	0.75
5:E:77:PRO:HD2	5:E:142:LEU:HD22	1.69	0.75
1:A:1152:A:H2'	1:A:1153:C:C6	2.21	0.75
1:A:913:A:H1'	1:A:914:A:OP2	1.87	0.75
3:C:18:TRP:CD1	14:N:54:PRO:HA	2.21	0.74
12:L:110:LYS:O	12:L:111:ASP:HB2	1.86	0.74
1:A:691:G:O6	11:K:52:GLY:HA2	1.87	0.74
3:C:43:LEU:O	3:C:47:LEU:HB3	1.88	0.74
1:A:337:C:H2'	1:A:338:A:H8	1.52	0.74
20:T:72:LEU:HD23	20:T:73:HIS:N	2.02	0.74
2:B:127:ILE:HD13	2:B:127:ILE:N	2.02	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:39:G:C2	1:A:40:C:C6	2.75	0.74
7:G:131:LYS:HE3	7:G:136:LYS:NZ	2.03	0.74
1:A:979:C:H3'	1:A:980:C:C5'	2.16	0.74
12:L:32:ARG:O	12:L:84:ILE:HD12	1.87	0.74
1:A:1347:G:N2	1:A:1373:G:H2'	2.03	0.74
4:D:117:ALA:O	4:D:121:VAL:HG23	1.86	0.74
1:A:841:U:O2'	1:A:842:C:H5''	1.86	0.74
1:A:170:U:O2'	1:A:171:A:H5'	1.88	0.74
1:A:828:A:H2'	1:A:829:G:O4'	1.88	0.74
2:B:54:THR:HG21	2:B:201:ILE:HD11	1.67	0.74
13:M:9:ILE:HG22	13:M:11:ARG:HG3	1.69	0.74
10:J:4:ILE:HD12	10:J:100:THR:HG22	1.70	0.73
4:D:9:CYS:CB	4:D:32:ALA:HB2	2.17	0.73
18:R:26:LEU:HD21	18:R:42:ARG:HH11	1.52	0.73
9:I:19:LEU:HG	9:I:60:ASP:O	1.87	0.73
17:Q:31:LEU:HD23	17:Q:32:TYR:CZ	2.22	0.73
22:V:6192:G:H2'	22:V:6193:U:C6	2.23	0.73
6:F:87:ARG:HG3	6:F:87:ARG:HH11	1.53	0.73
12:L:45:LYS:HG3	12:L:91:ASP:O	1.87	0.73
20:T:57:ARG:HH11	20:T:102:GLY:HA2	1.53	0.73
1:A:17:U:H1'	1:A:1080:A:N3	2.04	0.73
1:A:136(A):C:C2'	1:A:136(B):C:H5''	2.17	0.73
5:E:50:GLU:HG3	5:E:52:PRO:HD2	1.69	0.73
1:A:971:G:H1'	1:A:1365:G:O2'	1.87	0.73
1:A:973:G:H3'	1:A:974:A:H5''	1.69	0.73
1:A:457:C:O2	1:A:457:C:H2'	1.87	0.73
2:B:173:ALA:O	2:B:176:GLU:HB2	1.89	0.73
6:F:26:ILE:HG22	6:F:30:LEU:HD11	1.71	0.73
1:A:659:U:O2'	1:A:660:G:H5'	1.88	0.73
1:A:1259:C:H1'	1:A:1283:G:H21	1.52	0.73
1:A:1014:A:H5'	19:S:14:HIS:CD2	2.24	0.73
4:D:134:ASP:O	4:D:136:PRO:HD3	1.87	0.73
21:U:18:TYR:HD2	21:U:22:ARG:HG2	1.53	0.73
1:A:556:C:C2'	1:A:557:G:H5'	2.19	0.72
8:H:51:VAL:HG21	8:H:60:ARG:HG3	1.70	0.72
1:A:216:G:H2'	1:A:217:C:C6	2.24	0.72
1:A:1234:C:H1'	1:A:1364:U:O2	1.88	0.72
1:A:1097:C:H2'	1:A:1098:C:C6	2.21	0.72
1:A:706:A:O4'	11:K:29:ILE:HD11	1.87	0.72
6:F:78:GLU:O	6:F:81:ILE:HG13	1.89	0.72
1:A:376:G:OP2	16:P:67:THR:HG21	1.90	0.72
1:A:950:U:O4	13:M:105:THR:HG21	1.89	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:18:TRP:HB3	3:C:20:SER:O	1.89	0.72
21:U:6:ARG:HG3	21:U:15:ARG:NH1	2.05	0.72
12:L:52:ARG:HH11	12:L:52:ARG:HG3	1.51	0.72
1:A:1220:G:H2'	1:A:1221:G:H8	1.53	0.72
1:A:93:U:H2'	1:A:95:G:C8	2.24	0.72
9:I:19:LEU:HD21	9:I:59:PHE:HB3	1.69	0.72
2:B:70:PHE:O	2:B:92:TYR:HA	1.90	0.72
1:A:91:C:O2'	1:A:92:G:H5'	1.90	0.72
16:P:74:LEU:O	16:P:79:VAL:HG23	1.89	0.72
1:A:1136:U:H5''	1:A:1137:C:OP2	1.90	0.71
17:Q:15:MET:HB3	17:Q:18:THR:HB	1.72	0.71
20:T:13:LEU:HD12	20:T:13:LEU:H	1.54	0.71
1:A:430:A:OP1	4:D:9:CYS:HB2	1.90	0.71
1:A:1191:A:H5''	3:C:4:LYS:HZ2	1.52	0.71
1:A:690:G:H2'	1:A:691:G:C8	2.24	0.71
1:A:1289:A:OP1	21:U:10:ARG:HD3	1.90	0.71
4:D:28:SER:HB3	4:D:29:PRO:HD2	1.72	0.71
20:T:26:ASN:N	20:T:26:ASN:HD22	1.88	0.71
9:I:113:LYS:HG2	9:I:119:ALA:HA	1.73	0.71
2:B:162:ILE:O	2:B:185:ILE:HG12	1.91	0.71
1:A:1117:G:O3'	9:I:104:ARG:HG3	1.89	0.71
1:A:556:C:H2'	1:A:557:G:H5'	1.71	0.71
1:A:1053:G:C3'	1:A:1054:C:H5'	2.20	0.71
1:A:1281:U:H5'	1:A:1282:C:H5	1.54	0.71
1:A:1530:G:H4'	1:A:1530:G:OP1	1.91	0.71
1:A:820:U:H4'	1:A:821:G:OP2	1.89	0.71
1:A:1129:C:H4'	1:A:1130:A:O5'	1.91	0.71
1:A:376:G:O2'	1:A:377:G:H5'	1.90	0.71
1:A:386:C:C2'	1:A:387:U:H5''	2.20	0.71
8:H:91:ARG:HG3	8:H:91:ARG:HH11	1.55	0.71
1:A:266:G:H5'	1:A:267:C:H5	1.54	0.71
12:L:86:GLY:HA2	12:L:97:TYR:HA	1.72	0.71
17:Q:40:LYS:HD2	17:Q:42:TYR:CE1	2.26	0.71
1:A:735:C:O2'	1:A:736:C:H5'	1.91	0.71
16:P:8:ARG:O	16:P:9:PHE:CD2	2.44	0.71
1:A:914:A:H2'	1:A:915:A:H5'	1.73	0.71
3:C:20:SER:HB2	3:C:40:ARG:NH1	2.04	0.71
2:B:27:LYS:HG3	2:B:194:PRO:HD2	1.72	0.71
17:Q:19:VAL:HG23	17:Q:44:ALA:HB3	1.72	0.71
3:C:58:GLU:O	3:C:59:ARG:HG3	1.91	0.70
1:A:16:A:O2'	1:A:17:U:H5'	1.91	0.70
2:B:167:PRO:HG2	2:B:192:SER:OG	1.91	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1053:G:H3'	1:A:1054:C:H5'	1.72	0.70
22:V:6182:A:N1	22:V:6195:G:C2	2.59	0.70
16:P:22:THR:HG22	16:P:32:TYR:HB3	1.73	0.70
4:D:3:ARG:HD2	4:D:3:ARG:N	2.06	0.70
6:F:79:LEU:HB2	6:F:88:VAL:HG21	1.72	0.70
8:H:86:ILE:HB	8:H:133:LEU:HD22	1.73	0.70
1:A:1066:C:H2'	1:A:1066:C:O2	1.89	0.70
1:A:255:G:H2'	1:A:256:U:H6	1.57	0.70
6:F:3:ARG:HG3	6:F:66:GLU:HG2	1.72	0.70
12:L:26:LEU:HB3	12:L:29:ALA:HB3	1.74	0.70
1:A:1064:G:H1'	1:A:1065:U:OP2	1.90	0.70
11:K:57:THR:HG22	11:K:59:TYR:N	2.07	0.70
1:A:38:G:C2	1:A:397:A:C2	2.80	0.70
1:A:393:A:C2	1:A:394:G:C8	2.80	0.70
8:H:58:TYR:C	8:H:59:LEU:HD23	2.12	0.70
1:A:1157:A:H4'	1:A:1158:C:O5'	1.92	0.70
1:A:579:G:H2'	1:A:580:U:H6	1.55	0.70
1:A:940:C:C2	1:A:941:G:C8	2.79	0.70
8:H:5:PRO:O	8:H:8:ASP:HB3	1.91	0.70
9:I:97:LYS:HD3	9:I:102:LEU:HD12	1.72	0.70
4:D:51:PRO:HB3	4:D:55:ALA:HB3	1.73	0.70
2:B:126:GLU:C	2:B:127:ILE:HD13	2.12	0.70
11:K:23:ALA:HA	11:K:28:THR:OG1	1.92	0.70
16:P:43:LYS:HG2	16:P:48:TRP:CD2	2.27	0.70
5:E:57:LYS:O	5:E:61:TYR:CD2	2.45	0.70
3:C:206:GLU:HG2	3:C:207:VAL:HG23	1.73	0.70
1:A:1295:G:N2	1:A:1302:U:H3	1.90	0.70
1:A:66:G:H4'	1:A:173:U:C5	2.26	0.70
1:A:914:A:C2'	1:A:915:A:H5'	2.22	0.70
8:H:97:VAL:HG13	8:H:98:LYS:H	1.57	0.70
1:A:1022:G:H2'	1:A:1023:G:H8	1.57	0.70
3:C:91:LEU:HD22	3:C:99:VAL:HG12	1.74	0.69
1:A:15:G:H4'	5:E:24:ARG:HH12	1.56	0.69
1:A:1346:A:N1	1:A:1374:A:H5''	2.06	0.69
9:I:22:GLY:HA3	9:I:60:ASP:OD2	1.92	0.69
1:A:1292:U:H2'	1:A:1293:G:H8	1.57	0.69
1:A:963:G:H2'	1:A:964:A:H8	1.58	0.69
8:H:51:VAL:HG21	8:H:60:ARG:CG	2.22	0.69
1:A:650:G:O2'	1:A:651:C:H5'	1.91	0.69
1:A:819:A:H4'	1:A:820:U:OP2	1.92	0.69
1:A:862:C:C2'	1:A:863:U:H5'	2.23	0.69
1:A:979:C:H5''	1:A:980:C:OP2	1.93	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:55:LYS:HD2	10:J:55:LYS:O	1.93	0.69
13:M:107:ALA:O	13:M:111:LYS:HG3	1.92	0.69
12:L:44:PRO:HG3	12:L:52:ARG:CD	2.23	0.69
19:S:19:VAL:O	19:S:22:LEU:HB2	1.93	0.69
1:A:600:C:H2'	1:A:601:C:C6	2.28	0.69
1:A:1356:G:H2'	1:A:1357:A:C8	2.28	0.69
8:H:97:VAL:HG13	8:H:98:LYS:N	2.08	0.69
13:M:76:ALA:HA	13:M:79:LYS:HE2	1.73	0.69
8:H:77:GLU:HG3	8:H:78:GLN:N	2.08	0.69
1:A:482:A:H2'	1:A:482:A:N3	2.08	0.69
16:P:28:ARG:CG	16:P:28:ARG:HH11	2.05	0.69
1:A:1081:G:OP1	5:E:18:ARG:HG2	1.93	0.69
1:A:833:U:H2'	1:A:834:C:H6	1.58	0.69
11:K:44:SER:OG	11:K:47:VAL:HG23	1.92	0.69
6:F:33:TYR:CE1	6:F:75:LEU:HA	2.28	0.68
2:B:22:LYS:HA	2:B:22:LYS:HZ2	1.57	0.68
13:M:96:LEU:HB3	13:M:97:PRO:HD2	1.75	0.68
1:A:332:G:OP2	20:T:10:LEU:HD23	1.93	0.68
1:A:729:A:H2'	1:A:730:G:H8	1.58	0.68
13:M:25:ILE:HD11	13:M:66:LEU:HD13	1.75	0.68
10:J:40:LEU:HB2	10:J:69:ASN:HB3	1.75	0.68
1:A:498:A:H4'	1:A:500:G:OP1	1.93	0.68
5:E:101:ILE:O	5:E:120:THR:HG23	1.92	0.68
3:C:153:VAL:HG12	3:C:198:VAL:HG22	1.75	0.68
3:C:89:GLU:O	3:C:93:LYS:HB2	1.92	0.68
2:B:185:ILE:CG2	2:B:199:TYR:HB2	2.17	0.68
1:A:674:G:H2'	1:A:675:A:H8	1.58	0.68
10:J:45:ARG:HB3	10:J:47:PHE:CZ	2.29	0.68
13:M:33:ALA:HB1	13:M:56:LEU:HD21	1.74	0.68
1:A:833:U:H2'	1:A:834:C:C6	2.28	0.68
1:A:919:A:O2'	1:A:920:U:H5'	1.93	0.68
10:J:96:ILE:HD13	10:J:96:ILE:H	1.59	0.68
3:C:113:ALA:HB3	3:C:114:PRO:HD3	1.75	0.68
20:T:71:THR:HG22	20:T:72:LEU:H	1.59	0.68
1:A:909:A:H2'	1:A:910:C:O4'	1.94	0.68
3:C:23:TYR:CD2	3:C:24:ALA:N	2.62	0.68
1:A:629:G:H2'	1:A:630:G:C8	2.29	0.68
1:A:106:C:C2'	1:A:107:G:H5'	2.24	0.68
5:E:96:PRO:HA	5:E:117:ASP:CG	2.13	0.68
10:J:48:THR:CA	10:J:62:HIS:HB3	2.18	0.68
1:A:987:G:H1	1:A:1218:C:N4	1.90	0.68
1:A:625:G:H4'	16:P:16:HIS:CD2	2.29	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:976:G:N2	1:A:136(A):C:H2'	2.08	0.68
18:R:66:LEU:O	18:R:70:ILE:HG13	1.94	0.68
1:A:1016:A:H2'	1:A:1017:G:O4'	1.94	0.68
1:A:108:G:H5'	1:A:109:A:H5''	1.75	0.68
2:B:115:LEU:HD12	2:B:118:LEU:HD12	1.74	0.68
10:J:48:THR:HA	10:J:62:HIS:CB	2.18	0.68
8:H:97:VAL:O	8:H:100:ILE:HG13	1.94	0.68
22:V:6189:G:O2'	22:V:6190:U:H5'	1.94	0.67
1:A:105:G:H2'	1:A:106:C:H6	1.59	0.67
1:A:1194:U:H2'	1:A:1195:C:C6	2.28	0.67
1:A:521:G:O2'	1:A:522:C:H5'	1.94	0.67
1:A:24:U:H2'	1:A:25:C:H6	1.57	0.67
21:U:6:ARG:HG3	21:U:15:ARG:HH12	1.58	0.67
13:M:10:PRO:HG3	13:M:22:ILE:HD11	1.76	0.67
1:A:1051:C:H42	1:A:1207:G:H1	1.43	0.67
12:L:6:ILE:HD12	12:L:6:ILE:H	1.59	0.67
3:C:76:VAL:HG21	3:C:103:VAL:HG11	1.75	0.67
1:A:89:U:H2'	1:A:90:C:C6	2.28	0.67
22:V:6177:U:H2'	22:V:6178:A:H8	1.60	0.67
10:J:92:THR:HG23	10:J:93:GLY:H	1.59	0.67
15:O:69:TYR:HD1	15:O:72:ARG:HH21	1.40	0.67
4:D:36:ARG:HG2	4:D:38:TYR:OH	1.94	0.67
5:E:51:VAL:O	5:E:55:VAL:HG23	1.94	0.67
8:H:21:LYS:O	8:H:63:LEU:HD12	1.95	0.67
1:A:692:U:O2'	1:A:694:A:N7	2.22	0.67
9:I:17:VAL:HG13	9:I:63:ILE:HD11	1.77	0.67
1:A:625:G:H2'	1:A:626:U:C6	2.29	0.67
3:C:175:LEU:O	3:C:175:LEU:HD23	1.94	0.67
8:H:64:LYS:HB3	8:H:79:VAL:HG11	1.76	0.67
22:V:6182:A:C2	22:V:6195:G:C2	2.83	0.67
1:A:438:G:H4'	4:D:123:HIS:ND1	2.09	0.67
1:A:397:A:N3	1:A:397:A:H3'	2.09	0.67
1:A:1368:G:O2'	1:A:1369:C:H5'	1.93	0.67
4:D:71:SER:HB2	4:D:74:GLN:HB2	1.76	0.67
6:F:67:MET:HB2	6:F:68:PRO:HD2	1.76	0.67
2:B:69:LEU:HD13	2:B:91:PRO:HB2	1.77	0.67
4:D:119:GLN:HG3	4:D:123:HIS:HD2	1.57	0.67
5:E:33:VAL:HG11	5:E:109:ILE:HA	1.77	0.67
1:A:511:C:H1'	4:D:43:HIS:NE2	2.10	0.67
1:A:1468:A:H2'	1:A:1469:G:O4'	1.94	0.67
1:A:411:A:N7	1:A:429:U:H5	1.93	0.67
20:T:90:GLN:O	20:T:93:GLU:HB3	1.95	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1512:U:H3	1:A:1523:G:H1	1.43	0.67
7:G:142:GLU:O	7:G:145:ALA:HB3	1.94	0.67
11:K:21:ILE:HD12	11:K:21:ILE:N	2.10	0.67
3:C:13:GLY:CA	14:N:57:ARG:HE	2.07	0.67
4:D:94:LEU:HA	4:D:97:LEU:HD12	1.76	0.67
3:C:195:VAL:CG1	3:C:196:LEU:H	2.07	0.67
1:A:24:U:H2'	1:A:25:C:C6	2.30	0.67
3:C:40:ARG:O	3:C:44:GLU:HG2	1.94	0.66
1:A:1073:U:H2'	1:A:1074:G:C8	2.30	0.66
9:I:113:LYS:H	9:I:119:ALA:HA	1.60	0.66
6:F:63:TYR:N	6:F:63:TYR:HD2	1.92	0.66
1:A:105:G:H2'	1:A:106:C:C6	2.30	0.66
12:L:6:ILE:O	12:L:10:VAL:HG23	1.95	0.66
15:O:15:PHE:O	15:O:27:VAL:HG22	1.95	0.66
8:H:7:ALA:HB2	8:H:85:ARG:HD3	1.76	0.66
22:V:6188:G:N2	22:V:6216:U:C2	2.63	0.66
16:P:20:VAL:HG21	16:P:32:TYR:CD1	2.30	0.66
8:H:91:ARG:HH11	8:H:91:ARG:HG2	1.59	0.66
13:M:99:ARG:HB2	13:M:101:GLN:NE2	2.10	0.66
1:A:1426:C:H2'	1:A:1427:U:C6	2.30	0.66
1:A:1111:A:H8	1:A:1111:A:O5'	1.79	0.66
1:A:1229:A:H2'	1:A:1230:C:C6	2.30	0.66
16:P:17:TYR:CD1	16:P:17:TYR:N	2.63	0.66
11:K:32:ILE:HD12	11:K:72:ALA:HB2	1.78	0.66
1:A:710:G:OP1	6:F:54:LYS:HE2	1.94	0.66
1:A:707:C:H2'	1:A:708:C:H6	1.60	0.66
17:Q:18:THR:HG23	17:Q:69:LYS:HE3	1.77	0.66
1:A:1410:G:O2'	1:A:1411:C:H5'	1.95	0.66
1:A:433:C:H2'	1:A:434:U:H6	1.61	0.66
1:A:1252:A:H61	1:A:1285:A:H61	1.44	0.66
12:L:44:PRO:HG3	12:L:52:ARG:HE	1.61	0.66
1:A:738:C:H2'	1:A:739:C:C6	2.30	0.66
1:A:1010:G:H2'	1:A:1011:G:H8	1.59	0.66
8:H:39:LEU:HB3	8:H:45:ILE:HG23	1.78	0.66
1:A:1226:C:N4	13:M:104:ARG:HD2	2.10	0.66
1:A:255:G:C4	1:A:256:U:C5	2.84	0.66
1:A:57:G:C5	1:A:58:C:C4	2.84	0.66
1:A:976:G:C8	1:A:1358:U:H2'	2.31	0.66
16:P:19:ILE:HB	16:P:37:GLY:O	1.96	0.66
13:M:39:ILE:HD11	13:M:52:GLU:HG2	1.76	0.66
6:F:15:ASP:OD1	6:F:17:SER:HB2	1.95	0.66
3:C:35:GLU:HA	3:C:38:ARG:HG2	1.76	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:6182:A:C6	22:V:6183:G:C5	2.84	0.66
1:A:668:G:H1'	15:O:46:HIS:HD2	1.60	0.66
16:P:17:TYR:HD1	16:P:17:TYR:H	1.42	0.66
16:P:72:ARG:O	16:P:73:LEU:HD23	1.96	0.66
12:L:74:HIS:HD2	12:L:76:LEU:H	1.41	0.66
1:A:1513:A:H2'	1:A:1514:C:C6	2.30	0.66
10:J:63:PHE:HD1	14:N:58:LYS:HA	1.60	0.66
17:Q:45:HIS:CD2	17:Q:47:PRO:HD3	2.31	0.66
1:A:1126:U:H2'	1:A:1127:G:C8	2.31	0.66
1:A:300:A:H8	1:A:300:A:O5'	1.79	0.66
1:A:1483:A:H5''	1:A:1484:C:OP2	1.96	0.66
2:B:97:TRP:CH2	2:B:176:GLU:HG3	2.31	0.66
6:F:8:ILE:HD11	6:F:79:LEU:HD13	1.78	0.66
1:A:579:G:C5	1:A:580:U:C5	2.84	0.66
2:B:118:LEU:HD13	2:B:142:LEU:HB2	1.77	0.66
3:C:150:LYS:HB3	3:C:201:TYR:HB2	1.76	0.66
1:A:1306:A:H1'	1:A:1332:A:C2	2.31	0.66
1:A:1446:A:H4'	1:A:1446:A:OP1	1.96	0.66
1:A:551:U:H5'	12:L:118:LYS:NZ	2.10	0.65
5:E:43:LEU:HD22	5:E:136:MET:CG	2.24	0.65
9:I:28:VAL:HG22	9:I:63:ILE:HB	1.78	0.65
4:D:126:ILE:HG22	4:D:127:THR:N	2.10	0.65
1:A:1298:C:H4'	1:A:1299:A:N9	2.11	0.65
16:P:4:ILE:HB	16:P:66:PRO:HB3	1.76	0.65
3:C:130:VAL:HG11	3:C:153:VAL:HG21	1.78	0.65
2:B:97:TRP:HH2	2:B:176:GLU:HG3	1.61	0.65
3:C:15:THR:HG21	3:C:181:ASN:HA	1.78	0.65
4:D:155:LEU:HD23	4:D:156:GLU:H	1.61	0.65
19:S:6:LYS:CG	19:S:7:LYS:HD3	2.26	0.65
1:A:1448:C:H2'	1:A:1449:C:H6	1.59	0.65
1:A:1095:U:H2'	1:A:1096:C:C6	2.31	0.65
1:A:707:C:H2'	1:A:708:C:C6	2.32	0.65
8:H:64:LYS:HG2	8:H:79:VAL:HG21	1.78	0.65
12:L:37:THR:O	12:L:78:GLU:HG2	1.96	0.65
22:V:6182:A:H2'	22:V:6183:G:O4'	1.97	0.65
1:A:552:U:O2'	1:A:553:A:H5'	1.96	0.65
1:A:691:G:N1	11:K:52:GLY:HA2	2.12	0.65
1:A:1301:U:H3'	1:A:1302:U:H5''	1.77	0.65
15:O:37:ASN:HD22	15:O:37:ASN:H	1.45	0.65
1:A:323:U:O3'	20:T:22:ARG:HG2	1.96	0.65
19:S:49:ILE:H	19:S:49:ILE:HD12	1.61	0.65
7:G:27:ILE:HD11	7:G:43:PHE:HD2	1.61	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:135:GLN:O	2:B:139:LYS:HG2	1.96	0.65
2:B:80:ILE:HD12	2:B:211:ILE:HB	1.78	0.65
1:A:754:C:H6	15:O:69:TYR:CE2	2.14	0.65
1:A:350:G:O2'	1:A:351:G:H5'	1.97	0.65
12:L:5:THR:HG23	12:L:8:GLN:HG3	1.78	0.65
8:H:119:LEU:HB2	8:H:124:ALA:HB2	1.77	0.65
1:A:377:G:OP1	16:P:3:LYS:HD2	1.97	0.65
14:N:44:LEU:O	14:N:44:LEU:HD12	1.96	0.65
1:A:386:C:H2'	1:A:387:U:C5'	2.27	0.65
1:A:457:C:H42	1:A:475:G:H1	1.45	0.65
9:I:97:LYS:HB3	9:I:98:PRO:HD3	1.78	0.65
1:A:1448:C:H2'	1:A:1449:C:C6	2.32	0.65
6:F:44:GLY:HA2	6:F:59:TYR:CZ	2.32	0.65
1:A:968:A:H8	1:A:968:A:OP1	1.80	0.65
3:C:134:ILE:HG21	3:C:168:ALA:HB3	1.79	0.64
1:A:334:C:H2'	1:A:335:C:H6	1.63	0.64
1:A:1180:A:H5'	9:I:103:THR:HG23	1.78	0.64
1:A:579:G:C4	1:A:580:U:C5	2.84	0.64
19:S:5:LEU:HD12	19:S:8:GLY:O	1.97	0.64
1:A:222:U:H2'	1:A:223:U:H6	1.62	0.64
4:D:21:LEU:HD12	4:D:21:LEU:H	1.61	0.64
1:A:781:A:C2'	1:A:782:A:H5'	2.28	0.64
10:J:45:ARG:HH12	14:N:36:PHE:HD2	1.45	0.64
1:A:444:C:O2'	1:A:445:G:H5'	1.96	0.64
1:A:186(D):G:C6	1:A:191(E):G:N1	2.65	0.64
5:E:140:ARG:O	5:E:140:ARG:HG2	1.96	0.64
12:L:85:ARG:HB2	12:L:100:VAL:HG23	1.80	0.64
12:L:103:VAL:O	12:L:106:ALA:HB3	1.96	0.64
12:L:44:PRO:HG3	12:L:52:ARG:NE	2.12	0.64
1:A:411:A:C5	1:A:429:U:C5	2.86	0.64
8:H:77:GLU:HG3	8:H:78:GLN:H	1.61	0.64
4:D:173:TRP:CD1	4:D:174:LEU:HG	2.33	0.64
1:A:950:U:H4'	1:A:971:G:N2	2.12	0.64
16:P:28:ARG:NH1	16:P:29:ASP:OD1	2.30	0.64
1:A:1111:A:C2	3:C:177:THR:HG23	2.33	0.64
1:A:937:A:H1'	1:A:1379:G:N2	2.12	0.64
1:A:1411:C:O2'	1:A:1412:C:H5'	1.97	0.64
2:B:97:TRP:HZ2	2:B:102:LEU:CD1	2.11	0.64
1:A:862:C:H2'	1:A:863:U:H5'	1.80	0.64
1:A:922:G:C6	1:A:923:A:C6	2.85	0.64
7:G:50:ILE:HD12	7:G:61:VAL:HG11	1.80	0.64
2:B:158:LEU:H	2:B:158:LEU:HD12	1.63	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:382:A:H2'	1:A:383:A:C8	2.33	0.64
5:E:102:ALA:HB2	5:E:120:THR:CG2	2.28	0.64
6:F:53:ALA:HB3	6:F:86:ARG:NH1	2.13	0.64
3:C:152:ILE:HD11	3:C:167:TRP:HD1	1.60	0.64
19:S:63:THR:N	19:S:66:MET:HE3	2.13	0.64
6:F:26:ILE:HG22	6:F:30:LEU:CD1	2.28	0.64
1:A:632:A:C8	1:A:633:G:C8	2.85	0.64
1:A:160:A:H2'	1:A:161:A:O4'	1.98	0.64
2:B:162:ILE:O	2:B:162:ILE:HD12	1.97	0.63
1:A:688:G:H2'	1:A:689:C:C6	2.33	0.63
8:H:89:PRO:HA	8:H:92:ARG:NH1	2.11	0.63
2:B:173:ALA:HA	2:B:176:GLU:HG3	1.80	0.63
10:J:42:THR:HG23	10:J:68:HIS:HA	1.79	0.63
1:A:735:C:H2'	1:A:736:C:C6	2.32	0.63
1:A:976:G:H21	1:A:136(A):C:H2'	1.62	0.63
3:C:77:ILE:C	3:C:83:ARG:HB3	2.18	0.63
22:V:6198:U:H2'	22:V:6199:G:H8	1.63	0.63
2:B:163:PHE:HD1	2:B:185:ILE:HG13	1.63	0.63
1:A:1352:C:C2	1:A:1371:G:C2	2.86	0.63
8:H:20:TYR:HD1	8:H:65:TYR:CD2	2.16	0.63
2:B:162:ILE:HD11	2:B:184:VAL:HG13	1.79	0.63
4:D:64:LEU:O	4:D:64:LEU:HD12	1.99	0.63
6:F:37:VAL:HG12	6:F:38:GLU:O	1.98	0.63
1:A:677:U:H3	1:A:713:G:H22	1.45	0.63
4:D:99:SER:O	4:D:140:VAL:HG23	1.99	0.63
16:P:20:VAL:HG23	16:P:34:GLU:O	1.98	0.63
9:I:17:VAL:HA	9:I:63:ILE:HG13	1.81	0.63
1:A:10:A:H2'	1:A:11:G:H8	1.63	0.63
10:J:4:ILE:HB	10:J:74:ILE:HD11	1.78	0.63
6:F:14:LEU:HD23	6:F:15:ASP:O	1.98	0.63
1:A:1123:A:H4'	10:J:36:GLY:CA	2.17	0.63
1:A:1053:G:C4	1:A:1199:U:C5	2.87	0.63
18:R:70:ILE:O	18:R:74:ARG:HG3	1.99	0.63
12:L:6:ILE:CD1	12:L:6:ILE:H	2.11	0.63
1:A:186(D):G:C4	1:A:191(E):G:N2	2.66	0.63
1:A:1151:A:O2'	1:A:1152:A:H8	1.81	0.63
1:A:511:C:H1'	4:D:43:HIS:HE2	1.63	0.63
15:O:76:GLU:HA	15:O:76:GLU:OE2	1.98	0.63
10:J:7:LYS:O	10:J:8:LEU:HD12	1.98	0.63
1:A:805:C:H2'	1:A:806:C:H6	1.64	0.63
1:A:643:C:H5'	8:H:31:PHE:CE1	2.33	0.63
1:A:364:A:C2	1:A:365:U:O4	2.51	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:G:9:VAL:HG22	7:G:94:ARG:HH11	1.62	0.63
7:G:138:LYS:HE2	7:G:142:GLU:OE2	1.98	0.63
6:F:18:GLN:HA	6:F:21:LEU:HD23	1.80	0.63
2:B:106:LYS:HE2	2:B:110:GLN:NE2	2.14	0.63
10:J:45:ARG:NH1	14:N:36:PHE:CD2	2.67	0.63
2:B:30:ARG:HG3	2:B:31:TYR:CD2	2.33	0.63
3:C:91:LEU:HB3	3:C:99:VAL:HG11	1.79	0.62
1:A:1152:A:OP1	10:J:68:HIS:CD2	2.52	0.62
3:C:195:VAL:O	3:C:196:LEU:HB2	1.98	0.62
1:A:1328:C:OP1	13:M:28:ALA:HB2	1.99	0.62
2:B:215:LEU:O	2:B:219:VAL:HG23	1.99	0.62
6:F:63:TYR:N	6:F:63:TYR:CD2	2.63	0.62
1:A:505:G:H2'	1:A:506:G:H8	1.64	0.62
3:C:126:ARG:O	3:C:127:ARG:HB2	1.99	0.62
15:O:7:GLU:O	15:O:11:VAL:HG23	1.99	0.62
1:A:1201:A:C1'	1:A:1202:G:OP2	2.47	0.62
1:A:648:A:H2'	1:A:649:G:H8	1.63	0.62
1:A:1430:C:H2'	1:A:1431:C:H6	1.64	0.62
1:A:963:G:H2'	1:A:964:A:C8	2.34	0.62
5:E:41:VAL:HG11	5:E:113:ALA:CB	2.28	0.62
1:A:1083:U:C5	1:A:1084:G:C5	2.87	0.62
1:A:1124:G:H4'	10:J:38:ILE:HD11	1.80	0.62
1:A:1179:A:H4'	9:I:103:THR:HA	1.81	0.62
2:B:11:LEU:HD12	2:B:217:ARG:NH2	2.13	0.62
2:B:63:MET:CG	2:B:225:ALA:HB1	2.30	0.62
1:A:920:U:H2'	1:A:921:U:H6	1.64	0.62
1:A:349:A:O2'	1:A:350:G:H5'	1.99	0.62
1:A:505:G:C6	1:A:535:A:C2	2.87	0.62
1:A:1430:C:H2'	1:A:1431:C:C6	2.35	0.62
5:E:145:LYS:HE3	5:E:149:GLU:OE1	1.99	0.62
1:A:376:G:OP1	16:P:5:ARG:HB2	1.99	0.62
3:C:11:ARG:HH21	3:C:180:ALA:HB3	1.64	0.62
3:C:173:VAL:N	3:C:174:PRO:HD3	2.15	0.62
1:A:300:A:H1'	1:A:565:U:O2	1.99	0.62
9:I:69:GLY:O	9:I:73:GLN:HG3	1.99	0.62
2:B:95:GLN:HG3	2:B:147:LYS:O	2.00	0.62
1:A:405:U:H5''	1:A:406:G:O4'	2.00	0.62
4:D:100:ARG:HH21	4:D:118:ARG:NH1	1.95	0.62
1:A:193:C:H2'	1:A:194:C:C6	2.34	0.62
12:L:23:VAL:HG13	12:L:97:TYR:CE2	2.35	0.62
1:A:1311:G:H1	1:A:1326:C:H42	1.45	0.62
6:F:74:ASP:HB3	6:F:77:ARG:HH22	1.64	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1040:U:H2'	1:A:1041:A:C8	2.34	0.62
12:L:41:THR:HA	12:L:52:ARG:O	1.99	0.62
8:H:86:ILE:HG21	8:H:133:LEU:HD13	1.82	0.62
11:K:95:ILE:HG21	11:K:108:ILE:HD13	1.81	0.62
1:A:102:G:H2'	1:A:103:C:C6	2.35	0.62
22:V:6191:A:H2'	22:V:6192:G:C8	2.34	0.62
16:P:20:VAL:HG21	16:P:32:TYR:CG	2.35	0.62
4:D:93:PHE:O	4:D:97:LEU:HG	1.99	0.62
1:A:1347:G:H22	1:A:1373:G:H2'	1.64	0.62
1:A:1443:G:H3'	1:A:1446:A:H5''	1.80	0.62
7:G:47:CYS:O	7:G:50:ILE:HB	1.99	0.62
1:A:152:A:H62	1:A:169:C:N4	1.97	0.62
14:N:26:ARG:NH1	14:N:47:LEU:HD21	2.15	0.62
9:I:10:ARG:HD3	9:I:11:LYS:HG3	1.81	0.62
1:A:736:C:H2'	1:A:737:A:C8	2.35	0.62
1:A:920:U:H2'	1:A:921:U:C6	2.35	0.62
5:E:147:ASP:O	5:E:151:LEU:HG	1.99	0.62
1:A:1516:G:H2'	1:A:1518:A:OP2	2.00	0.62
1:A:1391:U:H2'	1:A:1392:G:C8	2.35	0.62
1:A:406:G:N2	1:A:437:U:C2	2.68	0.61
13:M:33:ALA:HA	13:M:59:TYR:HE2	1.64	0.61
20:T:71:THR:HG22	20:T:72:LEU:N	2.15	0.61
5:E:31:LEU:HD21	5:E:43:LEU:CD1	2.29	0.61
3:C:134:ILE:CG2	3:C:168:ALA:HB3	2.30	0.61
1:A:193:C:O4'	20:T:60:GLU:OE2	2.17	0.61
11:K:59:TYR:CZ	11:K:63:LEU:HD11	2.35	0.61
2:B:25:ASN:HB3	2:B:26:PRO:HD2	1.82	0.61
17:Q:7:THR:O	17:Q:23:VAL:HG13	2.00	0.61
1:A:781:A:H2'	1:A:782:A:H5'	1.82	0.61
8:H:48:TYR:HA	8:H:60:ARG:O	2.00	0.61
18:R:19:LYS:O	18:R:20:ALA:HB2	1.99	0.61
1:A:114:U:H2'	1:A:115:G:C8	2.35	0.61
1:A:1223:C:P	1:A:1224:G:H2'	2.40	0.61
1:A:950:U:H2'	1:A:951:G:H8	1.66	0.61
1:A:373:A:O2'	1:A:374:A:H5'	1.99	0.61
1:A:625:G:C5	1:A:626:U:C5	2.88	0.61
21:U:18:TYR:HD2	21:U:22:ARG:CG	2.13	0.61
7:G:69:VAL:O	7:G:71:PRO:HD3	1.99	0.61
7:G:99:LEU:HB3	7:G:103:TRP:CZ3	2.34	0.61
13:M:34:LEU:HD13	13:M:41:PRO:HG3	1.81	0.61
1:A:1257:U:OP2	1:A:1257:U:O4'	2.18	0.61
2:B:82:ARG:HA	2:B:92:TYR:CE1	2.36	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:501:C:OP1	12:L:116:ARG:NH2	2.33	0.61
1:A:1083:U:H5	1:A:1084:G:C6	2.19	0.61
2:B:24:TRP:C	2:B:25:ASN:HD22	2.03	0.61
1:A:1130:A:H5'	1:A:1131:G:OP2	1.99	0.61
17:Q:5:VAL:HG22	17:Q:60:ILE:HG13	1.81	0.61
18:R:47:THR:OG1	18:R:49:LYS:HG2	2.00	0.61
1:A:222:U:H2'	1:A:223:U:C6	2.35	0.61
1:A:1057:G:H2'	1:A:1058:G:O4'	2.01	0.61
22:V:6192:G:C2	22:V:6193:U:C2	2.89	0.61
1:A:365:U:C5'	1:A:366:C:OP1	2.40	0.61
1:A:476:G:H2'	1:A:477:G:C8	2.34	0.61
18:R:54:ARG:N	18:R:54:ARG:HD2	2.14	0.61
1:A:624:C:O3'	16:P:10:GLY:HA2	2.00	0.61
22:V:6195:G:N2	22:V:6196:A:C4	2.68	0.61
19:S:63:THR:HG23	19:S:65:ASN:H	1.65	0.61
1:A:623:C:C4	1:A:624:C:C5	2.89	0.61
11:K:21:ILE:HB	11:K:84:VAL:HG12	1.82	0.61
6:F:12:PRO:HG2	6:F:55:ASP:OD2	2.00	0.61
1:A:775:G:C2'	1:A:776:G:H5'	2.31	0.61
3:C:17:ASP:HB3	3:C:21:ARG:NH2	2.15	0.61
1:A:175:C:H2'	1:A:176:C:C6	2.34	0.61
5:E:151:LEU:HD13	8:H:77:GLU:HG2	1.81	0.61
1:A:638:G:O2'	1:A:639:G:H5'	2.01	0.61
21:U:24:ARG:HG3	21:U:25:LYS:H	1.65	0.61
3:C:34:LEU:HG	14:N:25:VAL:HG11	1.83	0.61
10:J:63:PHE:HA	14:N:59:ALA:H	1.65	0.61
10:J:75:ILE:HG13	10:J:76:ASN:N	2.15	0.61
2:B:24:TRP:CE3	2:B:25:ASN:O	2.54	0.61
7:G:86:GLN:HB2	7:G:148:ASN:HD22	1.65	0.61
4:D:3:ARG:HH21	4:D:118:ARG:HD3	1.64	0.61
6:F:90:VAL:HG12	6:F:91:VAL:N	2.16	0.61
1:A:622:A:C8	1:A:623:C:C5	2.89	0.61
1:A:540:G:H2'	1:A:541:G:O4'	2.01	0.61
19:S:53:ASN:HD21	19:S:55:LYS:HB3	1.66	0.61
2:B:32:ILE:HD11	2:B:190:THR:CG2	2.31	0.61
14:N:25:VAL:HG23	14:N:38:GLY:O	2.00	0.61
6:F:96:PRO:HB3	18:R:30:ASP:CG	2.21	0.61
1:A:965:A:H2	1:A:969:A:C2	2.15	0.60
1:A:799:G:H2'	1:A:800:G:O5'	2.00	0.60
19:S:6:LYS:HD2	19:S:6:LYS:H	1.64	0.60
1:A:102:G:H2'	1:A:103:C:H6	1.66	0.60
1:A:599:C:H2'	1:A:600:C:C6	2.36	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:622:A:C8	1:A:623:C:C6	2.89	0.60
5:E:68:GLU:HG3	5:E:68:GLU:O	2.01	0.60
1:A:960:U:C5	1:A:1225:A:H1'	2.36	0.60
1:A:501:C:H2'	1:A:502:G:H8	1.67	0.60
4:D:63:LYS:HD2	4:D:198:VAL:HG22	1.83	0.60
17:Q:10:VAL:HG11	17:Q:52:LYS:O	2.00	0.60
1:A:40:C:H2'	1:A:41:G:O4'	2.01	0.60
1:A:868:C:H2'	1:A:869:G:O4'	2.01	0.60
6:F:87:ARG:NH1	6:F:87:ARG:HG3	2.15	0.60
1:A:1083:U:H5	1:A:1084:G:C5	2.19	0.60
7:G:71:PRO:HG3	7:G:103:TRP:HZ3	1.64	0.60
7:G:26:PHE:CE2	7:G:30:ILE:HD11	2.36	0.60
1:A:1320:C:H2'	1:A:1321:C:O4'	2.01	0.60
4:D:49:ARG:NE	4:D:50:ARG:H	1.98	0.60
1:A:411:A:C4	1:A:413:G:O4'	2.54	0.60
2:B:31:TYR:O	2:B:32:ILE:HD12	2.01	0.60
3:C:191:THR:HB	3:C:193:TYR:CE2	2.36	0.60
1:A:715:A:O2'	1:A:716:A:H5'	2.01	0.60
3:C:107:GLN:H	3:C:107:GLN:CD	2.04	0.60
2:B:177:ALA:HB1	2:B:182:ILE:HB	1.82	0.60
1:A:1084:G:OP1	1:A:1086:U:C2	2.54	0.60
1:A:500:G:N2	1:A:546:G:H1'	2.17	0.60
4:D:62:GLN:O	4:D:66:ARG:HG3	2.01	0.60
10:J:45:ARG:NH1	14:N:36:PHE:HD2	1.98	0.60
3:C:134:ILE:CG2	3:C:151:VAL:HB	2.30	0.60
11:K:92:GLU:HA	11:K:95:ILE:HG13	1.82	0.60
1:A:509:A:H5'	4:D:54:TYR:CD2	2.33	0.60
1:A:522:C:C2'	1:A:523:A:H5'	2.30	0.60
5:E:10:MET:CB	5:E:32:VAL:HG22	2.31	0.60
20:T:56:MET:O	20:T:59:ALA:HB3	2.02	0.60
1:A:1279:A:H5''	1:A:1280:A:OP1	2.02	0.60
16:P:7:ALA:O	16:P:9:PHE:HD2	1.85	0.60
2:B:8:LYS:HA	2:B:217:ARG:NH1	2.16	0.60
1:A:1443:G:H3'	1:A:1446:A:C5'	2.32	0.60
5:E:51:VAL:HB	5:E:52:PRO:CD	2.25	0.60
1:A:44:G:OP2	16:P:12:LYS:HB2	2.01	0.60
1:A:190:G:H4'	1:A:191(A):G:OP2	2.01	0.60
1:A:1372:U:H2'	1:A:1373:G:O4'	1.99	0.60
3:C:105:GLU:HG2	3:C:106:VAL:N	2.16	0.60
20:T:42:GLN:HG3	20:T:43:LEU:HD23	1.84	0.60
5:E:41:VAL:HG11	5:E:113:ALA:HB2	1.82	0.60
2:B:187:LEU:HD11	2:B:204:ASN:O	2.02	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:F:62:TRP:O	6:F:62:TRP:CE3	2.55	0.60
15:O:30:ALA:CA	15:O:85:LEU:HD11	2.32	0.60
7:G:27:ILE:HD11	7:G:43:PHE:CD2	2.37	0.60
6:F:16:GLN:CD	6:F:16:GLN:H	2.04	0.60
1:A:1238:A:C8	1:A:1303:C:H1'	2.37	0.59
1:A:781:A:H4'	1:A:1522:U:O2'	2.02	0.59
12:L:33:ARG:O	12:L:60:THR:HG23	2.02	0.59
2:B:61:LEU:HD21	2:B:161:ALA:HB3	1.84	0.59
1:A:1076:C:C2	1:A:1082:G:N2	2.71	0.59
1:A:1348:U:H4'	9:I:120:ARG:HD2	1.83	0.59
1:A:623:C:H6	1:A:623:C:O5'	1.84	0.59
5:E:36:ASP:O	5:E:37:ARG:HB2	2.02	0.59
10:J:6:ILE:HG22	10:J:98:ILE:HG23	1.84	0.59
1:A:1423:G:H2'	1:A:1424:C:H6	1.67	0.59
9:I:79:LEU:HD23	9:I:101:PHE:O	2.02	0.59
1:A:20:U:C2'	1:A:21:G:H5'	2.31	0.59
7:G:74:GLU:O	7:G:88:PRO:HA	2.02	0.59
1:A:376:G:C4	1:A:389:A:C2	2.89	0.59
5:E:109:ILE:HG22	5:E:110:LEU:HD23	1.84	0.59
5:E:10:MET:HB2	5:E:32:VAL:HG22	1.82	0.59
15:O:81:LEU:O	15:O:85:LEU:HB2	2.01	0.59
2:B:32:ILE:HD11	2:B:190:THR:HG21	1.82	0.59
8:H:50:ARG:HG2	8:H:50:ARG:HH11	1.68	0.59
16:P:55:ARG:NH1	16:P:55:ARG:HB3	2.18	0.59
16:P:55:ARG:O	16:P:58:TYR:HB3	2.01	0.59
1:A:391:G:C6	1:A:392:G:C5	2.91	0.59
5:E:43:LEU:CD1	5:E:132:ALA:HB1	2.33	0.59
1:A:1333:A:C8	1:A:1334:G:C8	2.90	0.59
5:E:15:ARG:O	5:E:15:ARG:HG2	2.01	0.59
5:E:43:LEU:HD11	5:E:132:ALA:HB1	1.83	0.59
8:H:87:SER:HA	8:H:93:VAL:HG23	1.83	0.59
1:A:555:C:H2'	1:A:556:C:C6	2.35	0.59
1:A:1442:G:N7	1:A:1446:A:C2	2.71	0.59
1:A:1095:U:H2'	1:A:1096:C:H6	1.67	0.59
1:A:113:G:O2'	1:A:114:U:H5'	2.02	0.59
1:A:1394:A:H4'	1:A:1395:C:OP2	2.01	0.59
1:A:186(A):C:H5'	20:T:78:ALA:HB1	1.82	0.59
1:A:1253:G:H1	1:A:1284:C:N4	1.94	0.59
1:A:265:G:C2'	1:A:266:G:H5''	2.28	0.59
17:Q:83:ASP:O	17:Q:86:GLU:HB2	2.03	0.59
1:A:630:G:O2'	1:A:631:G:H5'	2.03	0.59
1:A:1239:A:H4'	1:A:1240:U:C5'	2.33	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1326:C:O2	1:A:1326:C:H2'	2.03	0.59
1:A:667:G:H4'	15:O:51:HIS:ND1	2.17	0.59
1:A:428:G:O4'	1:A:430:A:C8	2.56	0.59
7:G:131:LYS:HE3	7:G:136:LYS:HZ2	1.67	0.59
1:A:136(A):C:H2'	1:A:136(B):C:H5''	1.83	0.59
13:M:29:ARG:HB3	13:M:64:TRP:CZ2	2.38	0.59
1:A:1225:A:H2'	1:A:1225:A:N3	2.16	0.59
3:C:57:ILE:CD1	3:C:66:VAL:HG22	2.32	0.59
5:E:12:LEU:C	5:E:12:LEU:HD22	2.23	0.59
1:A:318:G:N2	1:A:319:G:C4	2.71	0.59
17:Q:59:ILE:HG23	17:Q:71:PHE:CD1	2.38	0.59
11:K:48:ILE:HD11	11:K:64:ALA:HA	1.83	0.59
1:A:1159:U:H4'	1:A:1160:G:OP1	2.02	0.59
9:I:52:ALA:HB1	9:I:95:LYS:NZ	2.18	0.59
1:A:224:C:H2'	1:A:225:C:C6	2.38	0.59
1:A:1234:C:O2'	1:A:1235:U:H5'	2.03	0.59
1:A:362:G:O2'	12:L:32:ARG:NH2	2.36	0.59
1:A:685:G:C2	1:A:686:U:C4	2.91	0.59
1:A:1281:U:C5'	1:A:1282:C:H5	2.15	0.59
6:F:91:VAL:HG13	18:R:72:ARG:NH2	2.17	0.59
10:J:62:HIS:O	14:N:59:ALA:HB3	2.03	0.58
12:L:26:LEU:HD12	12:L:29:ALA:HB2	1.84	0.58
20:T:26:ASN:O	20:T:30:LYS:HB2	2.03	0.58
1:A:1349:A:P	9:I:118:LYS:NZ	2.76	0.58
1:A:749:C:OP2	1:A:750:G:OP2	2.21	0.58
8:H:114:THR:HG22	8:H:130:GLY:O	2.02	0.58
6:F:47:ARG:HG2	6:F:47:ARG:HH11	1.67	0.58
16:P:54:GLU:O	16:P:57:ARG:HB2	2.03	0.58
11:K:109:VAL:CG1	18:R:84:LYS:HB2	2.33	0.58
1:A:663:A:O2'	1:A:664:G:H5'	2.03	0.58
12:L:116:ARG:O	12:L:118:LYS:N	2.36	0.58
1:A:191(G):G:H2'	1:A:192:U:H6	1.68	0.58
1:A:1292:U:H2'	1:A:1293:G:C8	2.38	0.58
2:B:20:GLU:HB2	2:B:190:THR:OG1	2.02	0.58
1:A:979:C:H42	14:N:18:VAL:HG12	1.67	0.58
1:A:404:U:H2'	1:A:405:U:H6	1.67	0.58
3:C:47:LEU:HD23	3:C:52:LEU:HD13	1.85	0.58
1:A:921:U:O2	5:E:19:MET:HB2	2.04	0.58
18:R:63:GLN:O	18:R:66:LEU:HB3	2.04	0.58
1:A:1426:C:H2'	1:A:1427:U:H6	1.67	0.58
1:A:1418:A:C2	1:A:1483:A:C2	2.92	0.58
19:S:16:LEU:O	19:S:20:LEU:HG	2.04	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1464:G:O2'	1:A:1465:C:H5'	2.03	0.58
1:A:42:G:OP2	1:A:42:G:H8	1.86	0.58
1:A:946:A:H2'	1:A:947:G:H8	1.68	0.58
22:V:6189:G:H2'	22:V:6190:U:H6	1.69	0.58
12:L:116:ARG:NH2	12:L:123:LYS:HB2	2.18	0.58
8:H:123:GLU:O	8:H:127:LEU:HB2	2.04	0.58
1:A:1080:A:H5''	1:A:1081:G:OP2	2.03	0.58
19:S:63:THR:HG22	19:S:66:MET:CG	2.32	0.58
7:G:136:LYS:O	7:G:140:ASP:HB2	2.04	0.58
17:Q:4:LYS:HG3	17:Q:5:VAL:N	2.18	0.58
1:A:109:A:N6	1:A:326:G:C5	2.72	0.58
1:A:521:G:O6	1:A:529:G:C2	2.57	0.58
12:L:63:TYR:O	12:L:64:GLU:HB2	2.01	0.58
5:E:79:GLU:CD	5:E:79:GLU:H	2.06	0.58
4:D:67:ILE:HG22	4:D:68:TYR:CD1	2.38	0.58
1:A:232:G:H1'	1:A:262:A:N1	2.19	0.58
2:B:223:ILE:C	2:B:225:ALA:H	2.06	0.58
1:A:1411:C:H2'	1:A:1412:C:H6	1.68	0.58
1:A:1057:G:C2	1:A:1204:A:C2	2.92	0.58
1:A:991:U:O2'	1:A:993:G:C8	2.56	0.58
12:L:22:LYS:O	12:L:96:ARG:HD2	2.04	0.58
1:A:1349:A:OP2	9:I:118:LYS:NZ	2.36	0.58
8:H:86:ILE:CB	8:H:133:LEU:HD22	2.32	0.58
18:R:66:LEU:HG	18:R:70:ILE:HD11	1.85	0.58
1:A:1298:C:H4'	1:A:1299:A:C8	2.38	0.58
14:N:12:ARG:HG2	14:N:14:PRO:HD3	1.86	0.58
1:A:273:A:N6	1:A:274:A:N6	2.52	0.58
1:A:465:A:N7	1:A:467:G:C6	2.72	0.58
7:G:70:LYS:HE2	7:G:96:GLN:NE2	2.19	0.58
5:E:48:ALA:O	5:E:50:GLU:N	2.37	0.58
2:B:207:ALA:O	2:B:211:ILE:HG13	2.04	0.58
1:A:1151:A:O2'	1:A:1152:A:C8	2.55	0.58
8:H:111:ILE:O	8:H:112:LEU:HB3	2.04	0.58
1:A:723:U:H5''	1:A:724:G:OP2	2.04	0.58
1:A:626:U:H2'	1:A:627:G:C8	2.37	0.58
1:A:590:C:H2'	1:A:591:U:H6	1.68	0.58
14:N:36:PHE:CD1	14:N:36:PHE:O	2.57	0.58
4:D:57:ARG:HB3	4:D:206:PHE:HB2	1.85	0.58
9:I:114:TYR:HD1	10:J:60:ARG:CG	2.17	0.58
1:A:878:G:H5'	8:H:89:PRO:HG2	1.86	0.58
1:A:1351:U:O2'	1:A:1352:C:H5'	2.04	0.58
1:A:630:G:C2'	1:A:631:G:H5'	2.33	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:36:ASP:HB2	11:K:38:ASN:OD1	2.04	0.58
1:A:649:G:H2'	1:A:650:G:H8	1.67	0.58
1:A:542:G:O2'	1:A:543:C:H5'	2.03	0.58
15:O:36:ILE:HG22	15:O:37:ASN:N	2.18	0.58
1:A:458:C:H2'	1:A:464:G:O4'	2.03	0.58
4:D:103:ASN:OD1	4:D:114:ARG:NH2	2.36	0.58
1:A:178:C:O2'	1:A:179:A:H5'	2.03	0.58
2:B:22:LYS:H	2:B:22:LYS:HZ3	1.49	0.58
1:A:342:C:C2'	1:A:343:U:H5'	2.34	0.58
1:A:37:U:H2'	1:A:38:G:H8	1.69	0.58
4:D:30:LYS:C	4:D:32:ALA:H	2.06	0.58
1:A:59:A:H5''	1:A:60:A:H5''	1.86	0.58
1:A:1288:A:C6	1:A:1289:A:C6	2.92	0.58
1:A:816:A:OP2	1:A:1527:C:H4'	2.04	0.58
1:A:1316:G:N2	1:A:1319:A:OP2	2.37	0.58
13:M:106:ASN:O	13:M:107:ALA:HB3	2.04	0.57
4:D:161:ASN:O	4:D:165:MET:HB2	2.03	0.57
20:T:76:ALA:O	20:T:80:ARG:HG2	2.04	0.57
1:A:750:G:C2	1:A:751:U:C6	2.92	0.57
1:A:782:A:H2'	1:A:783:C:H5'	1.86	0.57
17:Q:33:GLY:O	17:Q:34:LYS:C	2.42	0.57
1:A:506:G:C5	1:A:507:C:C5	2.92	0.57
1:A:563:A:N7	1:A:567:G:H1'	2.18	0.57
1:A:123:C:OP1	1:A:312:C:H5'	2.04	0.57
22:V:6191:A:H2'	22:V:6192:G:O4'	2.04	0.57
1:A:377:G:O2'	1:A:378:G:H5'	2.04	0.57
1:A:265:G:H5'	17:Q:64:PRO:O	2.03	0.57
1:A:1353:G:H1	1:A:1369:C:H42	1.50	0.57
9:I:9:ARG:HG3	9:I:14:VAL:HG13	1.86	0.57
1:A:1130:A:N1	1:A:1146:A:N1	2.52	0.57
20:T:13:LEU:H	20:T:13:LEU:CD1	2.18	0.57
1:A:1051:C:N4	1:A:1207:G:H1	2.02	0.57
1:A:836:G:C6	1:A:851:G:C6	2.91	0.57
16:P:67:THR:HG22	16:P:68:ASP:H	1.68	0.57
20:T:56:MET:HG3	20:T:88:VAL:HG21	1.85	0.57
1:A:1065:U:C5	1:A:1190:G:H1'	2.40	0.57
5:E:144:THR:O	5:E:148:VAL:HG23	2.05	0.57
7:G:71:PRO:HG3	7:G:103:TRP:CZ3	2.39	0.57
1:A:179:A:H2'	1:A:180:U:C6	2.39	0.57
1:A:1360:A:H8	1:A:1360:A:OP1	1.87	0.57
1:A:375:U:C4	1:A:376:G:N7	2.72	0.57
1:A:397:A:N7	1:A:548:G:C8	2.73	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:172:ARG:HB3	3:C:174:PRO:HD3	1.87	0.57
1:A:1366:C:H2'	1:A:1367:C:C6	2.40	0.57
8:H:63:LEU:HB2	8:H:65:TYR:CE1	2.39	0.57
1:A:53:A:N1	1:A:54:C:C2	2.72	0.57
1:A:104:G:C2	1:A:105:G:C8	2.92	0.57
21:U:22:ARG:HD2	21:U:23:PRO:HD2	1.87	0.57
3:C:150:LYS:HG3	3:C:169:ALA:HB2	1.86	0.57
1:A:684:A:H2'	1:A:685:G:C8	2.38	0.57
1:A:1387:G:H2'	1:A:1388:C:C6	2.40	0.57
1:A:110:C:H2'	1:A:111:G:O4'	2.03	0.57
15:O:39:LEU:CD1	15:O:56:LEU:HB2	2.35	0.57
8:H:97:VAL:C	8:H:99:GLU:H	2.08	0.57
18:R:45:SER:H	18:R:51:LEU:HD11	1.68	0.57
15:O:5:LYS:HD3	15:O:6:GLU:H	1.69	0.57
9:I:99:LEU:HD13	9:I:99:LEU:O	2.04	0.57
1:A:1159:U:C6	1:A:1182:G:C2	2.92	0.57
1:A:304:U:H2'	1:A:305:G:C8	2.40	0.57
1:A:1220:G:H2'	1:A:1221:G:C8	2.37	0.57
3:C:57:ILE:HD13	3:C:66:VAL:HG22	1.87	0.57
5:E:11:ILE:HB	5:E:31:LEU:HB3	1.86	0.57
1:A:53:A:C2	1:A:54:C:H1'	2.39	0.57
19:S:6:LYS:HD3	19:S:7:LYS:HD3	1.87	0.57
13:M:15:VAL:O	13:M:19:LEU:HD23	2.04	0.57
5:E:53:LEU:H	5:E:53:LEU:HD23	1.68	0.57
3:C:16:ARG:HB2	3:C:16:ARG:NH1	2.20	0.57
12:L:116:ARG:O	12:L:117:SER:C	2.43	0.57
1:A:1435:G:H2'	1:A:1436:U:C5	2.39	0.57
4:D:105:VAL:HG13	4:D:110:PHE:HB2	1.87	0.57
1:A:865:A:C2	1:A:918:A:H4'	2.39	0.57
3:C:22:TRP:HE3	3:C:23:TYR:O	1.88	0.57
22:V:6198:U:H2'	22:V:6199:G:C8	2.40	0.57
7:G:120:ILE:HG22	7:G:124:LEU:HD12	1.87	0.57
1:A:1386:G:O2'	1:A:1387:G:H5'	2.05	0.57
10:J:49:VAL:HG21	14:N:41:ARG:HB3	1.87	0.57
3:C:130:VAL:CG1	3:C:153:VAL:HG21	2.35	0.57
1:A:1068:G:N3	1:A:1191:A:C2	2.72	0.57
1:A:1368:G:OP2	9:I:112:LYS:HD3	2.05	0.57
9:I:28:VAL:HG13	9:I:63:ILE:O	2.05	0.57
1:A:527:G:C2'	1:A:528:C:H5'	2.34	0.57
12:L:78:GLU:O	12:L:79:HIS:CD2	2.58	0.57
22:V:6181:C:O2'	22:V:6182:A:H8	1.88	0.57
1:A:409:G:H2'	1:A:410:G:O5'	2.05	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:632:A:N7	1:A:633:G:C5	2.72	0.57
1:A:535:A:H4'	1:A:536:C:OP2	2.05	0.57
1:A:562:C:N4	1:A:884:U:C6	2.73	0.57
3:C:120:VAL:HG21	3:C:137:ALA:HB2	1.87	0.57
1:A:355:C:C4	1:A:356:A:N7	2.73	0.57
1:A:636:U:C5'	17:Q:2:PRO:HG3	2.35	0.57
3:C:173:VAL:CG1	3:C:173:VAL:O	2.53	0.57
2:B:219:VAL:HA	2:B:222:ILE:HG12	1.86	0.57
1:A:136(A):C:O2'	1:A:136(B):C:H5''	2.05	0.57
16:P:43:LYS:HA	16:P:48:TRP:HB3	1.87	0.57
8:H:80:ILE:HD12	8:H:80:ILE:H	1.70	0.57
2:B:37:ASN:O	2:B:39:ILE:HD12	2.05	0.57
16:P:34:GLU:HG2	16:P:35:LYS:N	2.19	0.56
11:K:59:TYR:CE2	11:K:63:LEU:HD11	2.40	0.56
1:A:66:G:C2	1:A:67:C:C6	2.93	0.56
13:M:27:LYS:CE	13:M:31:LYS:HE3	2.33	0.56
18:R:26:LEU:HD21	18:R:42:ARG:NH1	2.17	0.56
1:A:1288:A:N6	1:A:1289:A:C6	2.73	0.56
1:A:814:A:N7	1:A:816:A:C4	2.73	0.56
2:B:15:VAL:C	2:B:16:HIS:CG	2.78	0.56
1:A:1226:C:H2'	13:M:103:THR:HB	1.87	0.56
9:I:114:TYR:HD1	10:J:60:ARG:HG3	1.69	0.56
1:A:376:G:N3	1:A:389:A:C2	2.73	0.56
3:C:180:ALA:HB1	3:C:182:ILE:HG13	1.87	0.56
4:D:111:ALA:HB1	4:D:116:GLN:HG2	1.87	0.56
12:L:26:LEU:HD13	12:L:27:LYS:N	2.20	0.56
5:E:64:ARG:HG3	5:E:65:ASN:N	2.20	0.56
4:D:64:LEU:HD23	4:D:203:VAL:HG21	1.87	0.56
12:L:69:ILE:HG23	12:L:99:ILE:CG2	2.31	0.56
3:C:131:ARG:HE	5:E:50:GLU:HG2	1.71	0.56
1:A:173:U:C6	1:A:197:A:C2	2.93	0.56
4:D:79:PHE:CG	4:D:207:TYR:HD1	2.23	0.56
11:K:84:VAL:HG23	11:K:110:ASP:OD1	2.05	0.56
1:A:942:G:N2	1:A:943:U:C2	2.73	0.56
1:A:863:U:H2'	1:A:865:A:OP2	2.05	0.56
1:A:542:G:P	4:D:10:ARG:HH21	2.28	0.56
1:A:683:G:C6	1:A:684:A:C5	2.93	0.56
1:A:478:A:H2'	1:A:479:C:H6	1.70	0.56
1:A:294:U:H2'	1:A:295:C:H6	1.71	0.56
1:A:497:U:O2	1:A:497:U:H2'	2.06	0.56
1:A:1047:G:C2'	1:A:1048:G:H5'	2.34	0.56
5:E:90:VAL:O	5:E:120:THR:HA	2.05	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:P:19:ILE:HG22	16:P:19:ILE:O	2.05	0.56
12:L:116:ARG:O	12:L:119:TYR:N	2.37	0.56
1:A:1309:G:H22	1:A:1329:A:H1'	1.70	0.56
2:B:127:ILE:HG22	2:B:135:GLN:HE21	1.70	0.56
1:A:1040:U:H2'	1:A:1041:A:H8	1.71	0.56
12:L:75:ASN:OD1	12:L:107:ALA:HB3	2.06	0.56
9:I:24:GLY:O	9:I:26:VAL:HG23	2.05	0.56
1:A:137:C:O4'	16:P:63:GLY:HA3	2.05	0.56
6:F:60:PHE:C	6:F:61:LEU:HD12	2.26	0.56
6:F:90:VAL:CG1	6:F:91:VAL:N	2.68	0.56
1:A:1118:C:P	9:I:104:ARG:HG3	2.45	0.56
1:A:652:U:O4	1:A:752:G:O2'	2.15	0.56
5:E:70:PRO:HB3	5:E:144:THR:HG22	1.87	0.56
3:C:35:GLU:HA	3:C:38:ARG:CG	2.36	0.56
1:A:55:A:C4	1:A:56:U:C6	2.93	0.56
3:C:33:LEU:HD21	14:N:53:LEU:CD2	2.32	0.56
1:A:15:G:C4	1:A:16:A:C8	2.93	0.56
1:A:57:G:C8	1:A:58:C:C5	2.93	0.56
1:A:781:A:O2'	1:A:1522:U:O2	2.23	0.56
1:A:913:A:C1'	1:A:914:A:OP2	2.54	0.56
13:M:66:LEU:O	13:M:69:GLU:HG2	2.05	0.56
3:C:77:ILE:O	3:C:83:ARG:HB3	2.06	0.56
6:F:14:LEU:HD21	6:F:18:GLN:HB2	1.87	0.56
9:I:46:ALA:O	9:I:49:PRO:HD2	2.05	0.56
1:A:1167:A:N7	1:A:1169:A:C6	2.74	0.56
1:A:46:G:O2'	1:A:365:U:H1'	2.06	0.56
1:A:411:A:N7	1:A:429:U:C5	2.74	0.56
5:E:32:VAL:O	5:E:43:LEU:HA	2.06	0.56
9:I:112:LYS:HA	9:I:119:ALA:HB2	1.88	0.56
1:A:832:C:N4	1:A:854:G:H1	2.01	0.56
1:A:618:C:N3	1:A:622:A:N6	2.53	0.56
10:J:34:VAL:HG13	10:J:74:ILE:HG22	1.88	0.56
4:D:70:ILE:HG12	4:D:71:SER:N	2.20	0.56
1:A:300:A:C8	1:A:300:A:H3'	2.41	0.56
15:O:78:TYR:O	15:O:82:ILE:HG22	2.05	0.56
20:T:64:ASP:O	20:T:67:ALA:HB3	2.06	0.56
22:V:6182:A:N1	22:V:6183:G:C5	2.74	0.56
9:I:10:ARG:CZ	9:I:11:LYS:HE3	2.35	0.56
1:A:456:C:H42	1:A:476:G:H1	1.54	0.56
3:C:47:LEU:HD21	3:C:68:VAL:HG11	1.87	0.56
1:A:262:A:C6	1:A:263:A:C6	2.94	0.56
1:A:729:A:H2'	1:A:730:G:C8	2.40	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:149:ALA:HA	3:C:201:TYR:O	2.06	0.56
1:A:300:A:H2'	1:A:301:G:H5'	1.88	0.56
1:A:1239:A:H4'	1:A:1240:U:H5'	1.88	0.56
1:A:342:C:O2'	1:A:343:U:H5'	2.05	0.56
1:A:439:A:H2'	1:A:440:A:H5'	1.88	0.56
1:A:270:A:C6	1:A:271:C:C4	2.94	0.56
1:A:1043:C:H2'	1:A:1044:A:H8	1.70	0.56
10:J:33:GLN:HB2	10:J:75:ILE:HD11	1.88	0.56
1:A:1231:G:H2'	1:A:1232:U:H6	1.71	0.56
1:A:42:G:C8	1:A:42:G:OP2	2.58	0.56
17:Q:99:SER:O	17:Q:100:LYS:HD3	2.05	0.56
1:A:951:G:H1'	1:A:970:C:O2'	2.05	0.56
4:D:9:CYS:SG	4:D:31:CYS:C	2.85	0.56
1:A:254:G:H2'	1:A:255:G:H8	1.70	0.56
6:F:61:LEU:HB3	6:F:63:TYR:HE2	1.71	0.56
1:A:456:C:N4	1:A:476:G:H1	2.03	0.56
19:S:6:LYS:CD	19:S:7:LYS:HD3	2.36	0.56
1:A:1128:C:H42	1:A:1143:G:H1	1.53	0.56
1:A:638:G:C2'	1:A:639:G:H5'	2.36	0.56
12:L:19:LYS:HD3	12:L:19:LYS:H	1.71	0.56
1:A:974:A:H8	1:A:974:A:OP1	1.88	0.55
1:A:397:A:N6	1:A:548:G:C5	2.74	0.55
11:K:63:LEU:N	11:K:63:LEU:HD23	2.20	0.55
1:A:1075:C:OP1	2:B:103:THR:HG21	2.06	0.55
1:A:632:A:H2'	1:A:633:G:H5'	1.89	0.55
1:A:712:A:N6	1:A:713:G:C6	2.74	0.55
17:Q:40:LYS:HD2	17:Q:42:TYR:CZ	2.40	0.55
19:S:28:LYS:HB3	19:S:29:ARG:NH1	2.21	0.55
1:A:1057:G:H4'	3:C:197:GLY:H	1.71	0.55
9:I:39:GLY:O	9:I:40:LEU:HD23	2.06	0.55
1:A:491:G:H2'	1:A:492:G:H8	1.72	0.55
20:T:26:ASN:HB2	20:T:71:THR:CG2	2.31	0.55
12:L:53:LYS:HB3	12:L:69:ILE:HG13	1.89	0.55
1:A:1349:A:H2'	1:A:1350:A:O4'	2.05	0.55
1:A:781:A:H3'	1:A:782:A:H5'	1.86	0.55
8:H:11:THR:HA	8:H:14:ARG:NH1	2.20	0.55
1:A:601:C:H2'	1:A:602:A:H8	1.70	0.55
5:E:98:THR:HG22	5:E:99:GLY:N	2.21	0.55
1:A:590:C:H2'	1:A:591:U:C6	2.41	0.55
1:A:851:G:O2'	1:A:852:G:H5'	2.06	0.55
1:A:1005:A:H2'	1:A:1006:C:H5'	1.88	0.55
3:C:13:GLY:HA2	14:N:57:ARG:HE	1.71	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:960:U:H5	1:A:1225:A:H1'	1.71	0.55
4:D:111:ALA:HB1	4:D:116:GLN:OE1	2.06	0.55
4:D:3:ARG:HG2	4:D:5:ILE:HD13	1.88	0.55
1:A:266:G:C5'	1:A:267:C:H5	2.19	0.55
1:A:626:U:H2'	1:A:627:G:H8	1.71	0.55
6:F:98:LEU:CD1	6:F:101:ALA:HB2	2.36	0.55
1:A:1399:C:C4	1:A:1502:A:N1	2.75	0.55
20:T:97:ALA:O	20:T:99:LEU:N	2.37	0.55
11:K:67:ASP:OD1	11:K:71:LYS:HE3	2.07	0.55
1:A:671:G:H2'	1:A:672:U:H6	1.71	0.55
1:A:62:U:O2'	1:A:379:C:H1'	2.06	0.55
4:D:104:VAL:C	4:D:106:TYR:H	2.09	0.55
4:D:105:VAL:HG12	4:D:105:VAL:O	2.05	0.55
1:A:1072:G:H2'	1:A:1073:U:C6	2.41	0.55
1:A:255:G:H2'	1:A:256:U:C6	2.40	0.55
1:A:256:U:H2'	1:A:257:G:C8	2.41	0.55
1:A:1179:A:H2'	1:A:1180:A:O4'	2.07	0.55
19:S:6:LYS:HD2	19:S:6:LYS:N	2.22	0.55
3:C:70:VAL:HG12	3:C:71:ALA:N	2.21	0.55
8:H:31:PHE:O	8:H:35:ILE:HG12	2.07	0.55
1:A:44:G:N3	1:A:399:G:C2	2.75	0.55
1:A:247:G:OP2	17:Q:100:LYS:N	2.38	0.55
12:L:46:LYS:HB3	12:L:47:PRO:HD3	1.89	0.55
18:R:53:ARG:C	18:R:55:ARG:H	2.09	0.55
3:C:188:LEU:O	3:C:189:ALA:HB2	2.07	0.55
2:B:52:GLU:O	2:B:56:ARG:HG3	2.05	0.55
22:V:6182:A:N1	22:V:6183:G:C4	2.74	0.55
3:C:182:ILE:HG23	3:C:202:ILE:C	2.27	0.55
4:D:111:ALA:HA	4:D:161:ASN:ND2	2.21	0.55
1:A:592:G:C2	1:A:593:G:N7	2.74	0.55
3:C:55:VAL:O	3:C:55:VAL:HG22	2.06	0.55
1:A:1225:A:H5''	1:A:1226:C:OP2	2.07	0.55
22:V:6192:G:H2'	22:V:6193:U:O4'	2.07	0.55
1:A:1228:C:N4	1:A:1229:A:H62	2.04	0.55
1:A:853:G:C2'	1:A:854:G:H5'	2.36	0.55
1:A:712:A:C2'	1:A:713:G:H5'	2.37	0.55
8:H:80:ILE:HD12	8:H:80:ILE:N	2.21	0.55
1:A:191(D):U:H2'	1:A:191(E):G:C8	2.42	0.55
9:I:95:LYS:HD3	9:I:96:LEU:N	2.22	0.55
5:E:11:ILE:CB	5:E:31:LEU:HD13	2.37	0.55
1:A:447:G:H2'	1:A:485:G:N2	2.21	0.55
1:A:659:U:C2	1:A:660:G:C8	2.94	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1145:C:H4'	1:A:1146:A:H8	1.71	0.55
1:A:1112:C:C5	3:C:178:LEU:HD23	2.41	0.55
8:H:50:ARG:HG2	8:H:50:ARG:NH1	2.21	0.55
13:M:91:ARG:HH11	19:S:81:ARG:NH2	2.02	0.55
7:G:115:ARG:HB2	7:G:118:VAL:CG1	2.36	0.55
1:A:1435:G:H2'	1:A:1436:U:H6	1.67	0.55
1:A:1286:A:N7	21:U:22:ARG:NH2	2.53	0.55
1:A:728:A:H2'	1:A:729:A:C8	2.42	0.55
7:G:138:LYS:O	7:G:142:GLU:HG3	2.06	0.55
1:A:503:C:H2'	1:A:504:C:H6	1.72	0.55
11:K:125:PHE:CD1	11:K:125:PHE:N	2.70	0.55
1:A:1480:G:C5	1:A:1481:U:C5	2.95	0.55
1:A:324:G:N1	1:A:327:A:OP2	2.40	0.55
5:E:11:ILE:HG12	5:E:33:VAL:HG23	1.89	0.55
17:Q:63:ARG:HG2	17:Q:64:PRO:HD2	1.89	0.55
12:L:74:HIS:HB2	12:L:76:LEU:CD2	2.36	0.55
19:S:31:ILE:HG23	19:S:49:ILE:HA	1.88	0.55
19:S:53:ASN:ND2	19:S:55:LYS:HB3	2.22	0.55
14:N:17:LYS:C	14:N:19:ARG:H	2.10	0.55
1:A:118:U:O4	1:A:288:A:H2'	2.07	0.55
2:B:163:PHE:CD1	2:B:185:ILE:HG13	2.41	0.55
3:C:18:TRP:HD1	14:N:54:PRO:HA	1.72	0.55
1:A:92:G:C6	1:A:93:U:C2	2.95	0.55
1:A:187:C:O2	1:A:191(A):G:C6	2.60	0.55
1:A:1375:A:C2	1:A:1376:U:C2	2.95	0.55
20:T:13:LEU:N	20:T:13:LEU:HD12	2.21	0.55
12:L:78:GLU:O	12:L:79:HIS:CG	2.60	0.55
1:A:927:G:C2	1:A:1391:U:O2	2.60	0.55
1:A:636:U:H5'	17:Q:2:PRO:HG3	1.88	0.55
18:R:36:ASN:HB2	18:R:39:VAL:HG23	1.87	0.55
3:C:182:ILE:HG12	3:C:203:PHE:CA	2.29	0.54
1:A:1309:G:C6	1:A:1329:A:C2	2.95	0.54
1:A:748:C:H4'	1:A:749:C:O5'	2.07	0.54
9:I:25:LYS:O	9:I:60:ASP:HA	2.07	0.54
1:A:648:A:H2'	1:A:649:G:C8	2.41	0.54
1:A:1333:A:H2'	1:A:1334:G:O4'	2.07	0.54
3:C:186:PHE:CZ	3:C:188:LEU:HD13	2.43	0.54
3:C:139:GLN:HA	3:C:139:GLN:OE1	2.07	0.54
1:A:962:C:H42	1:A:973:G:H1	1.53	0.54
12:L:31:PHE:HD2	12:L:85:ARG:HA	1.72	0.54
3:C:130:VAL:O	3:C:134:ILE:HG13	2.07	0.54
1:A:724:G:C2	1:A:725:G:C8	2.95	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:99:C:C2	1:A:101:A:C8	2.95	0.54
17:Q:40:LYS:HG2	17:Q:41:LYS:N	2.23	0.54
1:A:579:G:C4	1:A:580:U:C6	2.95	0.54
1:A:1423:G:H2'	1:A:1424:C:C6	2.42	0.54
11:K:124:LYS:HD2	11:K:125:PHE:HE1	1.73	0.54
3:C:13:GLY:HA3	14:N:57:ARG:HE	1.70	0.54
5:E:139:LEU:HA	5:E:142:LEU:HD12	1.89	0.54
1:A:1068:G:N7	1:A:1094:G:C8	2.75	0.54
2:B:24:TRP:CZ3	2:B:29:ALA:HB2	2.42	0.54
1:A:564:C:C2	17:Q:31:LEU:HD11	2.42	0.54
8:H:119:LEU:HD23	8:H:119:LEU:N	2.22	0.54
1:A:20:U:O2'	1:A:21:G:H5'	2.07	0.54
1:A:1387:G:H2'	1:A:1388:C:H6	1.71	0.54
2:B:235:SER:O	2:B:239:VAL:HG23	2.07	0.54
1:A:258:G:H2'	1:A:259:G:H8	1.72	0.54
1:A:1381:U:O2'	1:A:1382:C:H5'	2.07	0.54
16:P:22:THR:HG22	16:P:32:TYR:CB	2.37	0.54
12:L:31:PHE:HB3	12:L:84:ILE:O	2.06	0.54
3:C:36:ASP:OD2	3:C:57:ILE:HG21	2.07	0.54
1:A:17:U:H2'	1:A:18:C:C6	2.42	0.54
1:A:1366:C:C4	1:A:1367:C:C4	2.95	0.54
1:A:859:A:H2'	1:A:860:A:O4'	2.07	0.54
4:D:79:PHE:CZ	4:D:204:ILE:HA	2.43	0.54
2:B:22:LYS:HA	2:B:22:LYS:NZ	2.22	0.54
1:A:285:G:O2'	1:A:286:G:H5'	2.08	0.54
3:C:12:LEU:O	3:C:12:LEU:HD13	2.06	0.54
16:P:21:VAL:HG23	16:P:33:ILE:HB	1.90	0.54
4:D:9:CYS:SG	4:D:31:CYS:O	2.66	0.54
1:A:392:G:C4	1:A:393:A:C8	2.95	0.54
5:E:10:MET:HG3	5:E:13:ILE:HD11	1.90	0.54
18:R:56:THR:HB	18:R:58:LEU:CD1	2.38	0.54
1:A:1357:A:C6	1:A:1358:U:N3	2.75	0.54
1:A:518:C:C5	1:A:530:G:C4	2.96	0.54
6:F:12:PRO:HG3	6:F:57:GLN:O	2.08	0.54
1:A:1262:C:OP2	21:U:25:LYS:HD3	2.08	0.54
1:A:356:A:O2'	1:A:357:G:H5'	2.08	0.54
2:B:154:LEU:HD13	2:B:155:LEU:N	2.23	0.54
2:B:70:PHE:O	2:B:71:VAL:HG13	2.07	0.54
1:A:386:C:C3'	1:A:387:U:H5''	2.37	0.54
11:K:20:TYR:O	11:K:30:VAL:HA	2.08	0.54
12:L:23:VAL:O	12:L:23:VAL:HG12	2.06	0.54
3:C:86:VAL:O	3:C:90:GLU:HG2	2.07	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:150:LYS:O	3:C:200:ALA:HA	2.07	0.54
7:G:40:ALA:O	7:G:44:TYR:HD1	1.90	0.54
14:N:43:CYS:SG	14:N:44:LEU:N	2.81	0.54
3:C:111:LEU:HD23	3:C:146:ALA:HB2	1.89	0.54
1:A:1389:C:H2'	1:A:1390:U:O4'	2.08	0.54
1:A:1305:G:OP2	1:A:1305:G:C8	2.61	0.54
2:B:181:PHE:O	2:B:183:PRO:HD3	2.07	0.54
7:G:113:GLU:CB	7:G:119:ARG:HG2	2.23	0.54
1:A:328:C:H4'	1:A:329:A:H5'	1.88	0.54
1:A:10:A:H2'	1:A:11:G:C8	2.42	0.54
1:A:11:G:C5	1:A:12:U:C5	2.95	0.54
1:A:1292:U:C2	1:A:1293:G:C8	2.96	0.54
4:D:4:TYR:HE1	4:D:11:LEU:HD11	1.72	0.54
1:A:1429:C:H2'	1:A:1430:C:C6	2.43	0.54
1:A:716:A:N3	11:K:118:GLY:HA2	2.23	0.54
9:I:85:LEU:O	9:I:89:ASN:HB2	2.07	0.54
9:I:83:ARG:HA	9:I:86:VAL:HG12	1.88	0.54
10:J:63:PHE:HB3	14:N:57:ARG:O	2.08	0.54
22:V:6213:A:C6	22:V:6214:C:N4	2.76	0.54
1:A:191(F):U:H2'	1:A:191(G):G:H8	1.72	0.54
4:D:129:ASN:N	4:D:129:ASN:OD1	2.41	0.54
12:L:52:ARG:CG	12:L:52:ARG:NH1	2.61	0.54
1:A:832:C:N4	1:A:855:G:C6	2.76	0.54
1:A:546:G:P	4:D:72:GLU:HB2	2.47	0.54
3:C:175:LEU:HD11	3:C:201:TYR:HE2	1.72	0.54
15:O:24:SER:O	15:O:28:GLN:HG3	2.07	0.54
19:S:53:ASN:HD22	19:S:55:LYS:H	1.54	0.54
7:G:26:PHE:HB2	7:G:62:PHE:HZ	1.73	0.54
1:A:145:G:C2	1:A:178:C:N3	2.76	0.54
1:A:15:G:H2'	1:A:16:A:H8	1.71	0.54
10:J:13:HIS:CE1	10:J:14:LYS:HG3	2.43	0.54
1:A:616:G:H1'	1:A:625:G:N2	2.23	0.54
20:T:11:SER:HA	20:T:13:LEU:HD13	1.89	0.54
1:A:1089:G:C5	1:A:1090:U:C5	2.96	0.54
1:A:1428:A:H2'	1:A:1429:C:O4'	2.08	0.54
5:E:79:GLU:HB3	5:E:92:LYS:HA	1.89	0.54
1:A:926:G:C6	1:A:1505:G:C5	2.96	0.54
13:M:14:ARG:HG2	13:M:44:ARG:NH1	2.21	0.54
3:C:81:GLY:O	3:C:85:ARG:HD3	2.08	0.54
7:G:49:ILE:HG22	7:G:49:ILE:O	2.08	0.54
2:B:183:PRO:HA	2:B:198:ASP:OD1	2.08	0.54
1:A:17:U:O4'	1:A:1080:A:H1'	2.07	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:31:HIS:O	3:C:35:GLU:HG2	2.08	0.54
1:A:1513:A:H2'	1:A:1514:C:H6	1.71	0.54
7:G:69:VAL:HG12	7:G:69:VAL:O	2.08	0.54
10:J:6:ILE:O	10:J:71:LEU:HD12	2.08	0.54
1:A:419:C:O2	1:A:425:G:C2	2.61	0.54
7:G:38:LEU:O	7:G:42:ILE:HG13	2.08	0.54
11:K:86:GLY:C	11:K:88:GLY:H	2.11	0.54
1:A:698:G:C6	1:A:699:C:C4	2.96	0.54
3:C:116:VAL:HG21	3:C:202:ILE:HD11	1.90	0.53
2:B:97:TRP:CZ2	2:B:102:LEU:HD13	2.37	0.53
1:A:1346:A:H5''	9:I:120:ARG:HH12	1.74	0.53
1:A:1118:C:C5'	9:I:104:ARG:HG3	2.38	0.53
1:A:101:A:C4	1:A:102:G:C8	2.96	0.53
1:A:620:C:H2'	1:A:621:A:O4'	2.07	0.53
1:A:1207:G:H2'	1:A:1208:C:H6	1.72	0.53
7:G:40:ALA:O	7:G:44:TYR:CD1	2.60	0.53
1:A:160:A:H4'	1:A:344:A:C6	2.42	0.53
2:B:74:LYS:CB	2:B:74:LYS:HZ2	2.20	0.53
1:A:408:A:H2'	1:A:409:G:H8	1.73	0.53
12:L:26:LEU:HB3	12:L:29:ALA:CB	2.38	0.53
1:A:1202:G:H4'	14:N:29:ARG:CD	2.38	0.53
19:S:40:ILE:HD13	19:S:62:ILE:HD11	1.89	0.53
5:E:126:ARG:CG	5:E:126:ARG:NH1	2.60	0.53
12:L:24:PRO:HD2	12:L:97:TYR:OH	2.08	0.53
1:A:938:A:C6	1:A:939:G:C5	2.96	0.53
16:P:43:LYS:HG2	16:P:48:TRP:CG	2.43	0.53
16:P:67:THR:HG22	16:P:68:ASP:N	2.22	0.53
1:A:362:G:O3'	12:L:32:ARG:NH2	2.42	0.53
1:A:413:G:H21	1:A:428:G:H1'	1.74	0.53
5:E:41:VAL:CG1	5:E:113:ALA:HA	2.37	0.53
3:C:151:VAL:O	3:C:152:ILE:HG13	2.09	0.53
17:Q:53:LEU:HD12	17:Q:54:GLY:H	1.74	0.53
1:A:841:U:C2'	1:A:842:C:H5''	2.38	0.53
3:C:119:ARG:O	3:C:123:GLN:HG3	2.07	0.53
1:A:741:G:H2'	1:A:742:G:O4'	2.08	0.53
1:A:1296:C:C5	1:A:1297:C:H5	2.27	0.53
2:B:97:TRP:HH2	2:B:176:GLU:CG	2.20	0.53
1:A:545:C:O2'	1:A:546:G:O5'	2.26	0.53
6:F:9:VAL:HA	6:F:59:TYR:O	2.08	0.53
1:A:506:G:C6	1:A:507:C:C4	2.97	0.53
17:Q:7:THR:HA	17:Q:57:VAL:O	2.08	0.53
1:A:515:G:C2	1:A:537:G:C2	2.97	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:102:GLY:O	11:K:103:LEU:HD13	2.08	0.53
1:A:1221:G:H1'	19:S:54:GLY:HA3	1.88	0.53
8:H:19:VAL:HG23	8:H:21:LYS:HG2	1.91	0.53
1:A:1503:A:OP1	1:A:1531:A:O2'	2.26	0.53
11:K:34:ASP:HB2	11:K:35:PRO:CD	2.39	0.53
20:T:82:SER:O	20:T:86:ARG:HB2	2.08	0.53
1:A:1167:A:N7	1:A:1169:A:C5	2.76	0.53
15:O:61:GLY:O	15:O:64:ARG:HB3	2.08	0.53
12:L:125:LYS:HE2	12:L:127:ALA:H	1.73	0.53
13:M:96:LEU:HD22	13:M:103:THR:HG21	1.89	0.53
1:A:327:A:C2	1:A:329:A:C4	2.96	0.53
1:A:586:C:H1'	1:A:878:G:O2'	2.09	0.53
9:I:17:VAL:HG21	9:I:80:GLY:HA3	1.89	0.53
13:M:84:ILE:CG2	19:S:74:PHE:HE1	2.21	0.53
6:F:63:TYR:O	6:F:65:VAL:HG12	2.09	0.53
6:F:8:ILE:HG22	6:F:10:LEU:HD12	1.90	0.53
8:H:28:ALA:HA	8:H:59:LEU:HD21	1.88	0.53
2:B:72:GLY:HA3	2:B:165:VAL:CG1	2.38	0.53
1:A:337:C:H2'	1:A:338:A:C8	2.38	0.53
2:B:17:PHE:CD1	2:B:44:LEU:HD21	2.44	0.53
7:G:80:VAL:HG23	7:G:83:ALA:HB3	1.90	0.53
2:B:96:ARG:HD2	2:B:96:ARG:H	1.73	0.53
2:B:69:LEU:HD12	2:B:70:PHE:N	2.24	0.53
1:A:92:G:C2'	1:A:93:U:H5'	2.38	0.53
1:A:1369:C:H2'	1:A:1370:G:O4'	2.09	0.53
1:A:57:G:C5	1:A:58:C:C5	2.97	0.53
12:L:40:ARG:HG2	12:L:41:THR:N	2.24	0.53
1:A:738:C:H2'	1:A:739:C:H6	1.70	0.53
1:A:841:U:H3'	1:A:841:U:O2	2.09	0.53
13:M:3:ARG:HG2	13:M:9:ILE:CD1	2.38	0.53
3:C:186:PHE:HZ	3:C:188:LEU:HD13	1.72	0.53
11:K:123:LYS:O	11:K:126:ARG:HB2	2.09	0.53
1:A:1364:U:O2'	1:A:1365:G:H5'	2.08	0.53
3:C:182:ILE:HG23	3:C:202:ILE:O	2.09	0.53
5:E:11:ILE:HG22	5:E:12:LEU:N	2.24	0.53
1:A:1070:U:C2	1:A:1071:C:C5	2.97	0.53
2:B:173:ALA:O	2:B:176:GLU:N	2.42	0.53
1:A:1346:A:C8	7:G:10:ARG:NH2	2.77	0.53
18:R:22:VAL:HG11	18:R:42:ARG:O	2.08	0.53
1:A:677:U:H2'	1:A:678:U:C6	2.43	0.53
1:A:433:C:H2'	1:A:434:U:C6	2.43	0.53
9:I:99:LEU:HD12	9:I:101:PHE:CE2	2.44	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:664:G:P	18:R:64:ARG:HH21	2.32	0.53
7:G:115:ARG:HB2	7:G:118:VAL:HG11	1.90	0.53
5:E:102:ALA:HB2	5:E:120:THR:HG23	1.90	0.53
1:A:327:A:C4	1:A:329:A:C8	2.96	0.53
5:E:75:THR:HG23	5:E:76:ILE:N	2.24	0.53
2:B:80:ILE:HD11	2:B:208:ILE:CG2	2.39	0.53
1:A:682:G:C6	1:A:709:G:C6	2.96	0.53
1:A:518:C:O2	1:A:529:G:C6	2.62	0.53
1:A:560:U:H5'	1:A:566:G:N2	2.24	0.53
1:A:180:U:H2'	1:A:181:G:H5'	1.89	0.53
1:A:1037:C:H2'	1:A:1038:C:H6	1.73	0.53
1:A:1228:C:N4	1:A:1229:A:N6	2.57	0.53
15:O:8:LYS:O	15:O:12:ILE:HG13	2.09	0.53
12:L:74:HIS:HD2	12:L:76:LEU:N	2.07	0.53
15:O:44:LYS:HZ3	15:O:44:LYS:HB2	1.74	0.53
4:D:152:SER:O	4:D:155:LEU:HB2	2.09	0.52
8:H:63:LEU:HB2	8:H:65:TYR:HE1	1.74	0.52
6:F:62:TRP:CG	18:R:35:ARG:NH1	2.77	0.52
1:A:1117:G:N2	1:A:1180:A:H1'	2.21	0.52
1:A:579:G:H2'	1:A:580:U:C6	2.42	0.52
1:A:1378:C:H5	1:A:1379:G:N9	2.07	0.52
1:A:1328:C:H5''	13:M:28:ALA:CB	2.39	0.52
1:A:775:G:O2'	1:A:776:G:H5'	2.09	0.52
15:O:44:LYS:NZ	15:O:44:LYS:HB2	2.23	0.52
4:D:23:GLY:CA	4:D:112:VAL:HG22	2.39	0.52
1:A:1187:G:H2'	1:A:1188:A:H8	1.74	0.52
14:N:2:ALA:HB1	14:N:6:LEU:HD12	1.92	0.52
12:L:92:LEU:HB2	12:L:95:VAL:HG21	1.90	0.52
1:A:977:A:N3	1:A:977:A:H5''	2.24	0.52
1:A:8:A:N7	4:D:208:SER:OG	2.42	0.52
4:D:100:ARG:NH2	4:D:118:ARG:HH12	2.06	0.52
1:A:38:G:H22	1:A:397:A:C5'	2.16	0.52
1:A:1076:C:C2	1:A:1082:G:C2	2.97	0.52
1:A:1347:G:H8	9:I:107:ARG:HB3	1.70	0.52
20:T:10:LEU:C	20:T:10:LEU:HD12	2.30	0.52
1:A:197:A:C5	1:A:221:C:H4'	2.43	0.52
19:S:5:LEU:HG	19:S:10:PHE:HB3	1.91	0.52
13:M:14:ARG:HB3	13:M:16:ASP:OD2	2.09	0.52
1:A:380:G:C2	1:A:384:G:C6	2.96	0.52
22:V:6191:A:H2'	22:V:6192:G:H8	1.73	0.52
4:D:3:ARG:HD2	4:D:3:ARG:H	1.73	0.52
1:A:1252:A:O2'	1:A:1253:G:H5'	2.10	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:11:ILE:HB	5:E:31:LEU:HD13	1.92	0.52
12:L:49:SER:O	12:L:50:ALA:HB2	2.07	0.52
2:B:83:MET:O	2:B:87:ARG:HB2	2.09	0.52
1:A:1237:C:OP1	1:A:1238:A:H1'	2.10	0.52
1:A:527:G:O2'	1:A:528:C:H5'	2.09	0.52
7:G:86:GLN:HB2	7:G:148:ASN:ND2	2.23	0.52
5:E:69:VAL:HG12	5:E:71:LEU:HG	1.92	0.52
1:A:761:G:H2'	1:A:762:C:H6	1.75	0.52
2:B:182:ILE:O	2:B:182:ILE:HG22	2.08	0.52
1:A:674:G:H2'	1:A:675:A:C8	2.43	0.52
1:A:1107:C:C4	1:A:1108:G:C8	2.97	0.52
1:A:1346:A:H61	1:A:1374:A:H3'	1.74	0.52
15:O:29:VAL:HG12	15:O:85:LEU:CD1	2.39	0.52
7:G:67:GLU:OE1	7:G:70:LYS:HD2	2.09	0.52
8:H:109:ILE:HG12	8:H:110:ALA:N	2.24	0.52
2:B:174:VAL:O	2:B:178:ARG:CB	2.50	0.52
20:T:53:LEU:HD13	20:T:102:GLY:HA3	1.91	0.52
11:K:59:TYR:O	11:K:63:LEU:HG	2.09	0.52
1:A:1351:U:H4'	7:G:33:ASP:OD2	2.09	0.52
1:A:617:G:H5'	16:P:45:THR:HG22	1.92	0.52
1:A:1128:C:O2	1:A:1130:A:N6	2.43	0.52
11:K:34:ASP:H	11:K:40:ILE:HD11	1.74	0.52
1:A:712:A:C6	1:A:713:G:C6	2.98	0.52
1:A:1411:C:H2'	1:A:1412:C:C6	2.44	0.52
6:F:97:PHE:CD2	18:R:31:LEU:HD21	2.45	0.52
11:K:85:ARG:HA	11:K:112:THR:OG1	2.09	0.52
8:H:54:ASP:O	8:H:56:LYS:HG3	2.10	0.52
12:L:100:VAL:O	12:L:100:VAL:HG12	2.09	0.52
1:A:551:U:H5'	12:L:118:LYS:HZ2	1.73	0.52
1:A:1084:G:C5	1:A:1085:U:C4	2.98	0.52
2:B:205:ASP:C	2:B:207:ALA:H	2.12	0.52
6:F:22:GLU:OE1	6:F:84:ASN:HB2	2.10	0.52
1:A:658:G:C5	1:A:659:U:C5	2.98	0.52
2:B:8:LYS:HG2	2:B:217:ARG:NH1	2.24	0.52
1:A:1112:C:C4	3:C:178:LEU:HD23	2.45	0.52
7:G:47:CYS:O	7:G:58:PRO:HG3	2.10	0.52
4:D:51:PRO:HB3	4:D:55:ALA:CB	2.40	0.52
6:F:88:VAL:HG12	6:F:89:MET:N	2.25	0.52
1:A:332:G:O2'	1:A:333:G:H5'	2.10	0.52
1:A:353:A:C2'	1:A:354:G:OP2	2.57	0.52
1:A:1052:U:H2'	1:A:1055:A:OP1	2.09	0.52
1:A:1233:G:OP2	9:I:124:GLN:HB2	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:522:C:H2'	1:A:523:A:H5'	1.90	0.52
1:A:334:C:O2'	1:A:335:C:H5'	2.10	0.52
1:A:224:C:C2	1:A:225:C:C5	2.98	0.52
1:A:356:A:H2'	1:A:357:G:H8	1.73	0.52
7:G:80:VAL:CG2	7:G:83:ALA:HB3	2.40	0.52
1:A:1246:C:H2'	1:A:1247:U:C6	2.45	0.52
22:V:6189:G:C6	22:V:6190:U:C4	2.98	0.52
2:B:102:LEU:HD12	2:B:102:LEU:N	2.24	0.52
1:A:68:G:C6	1:A:69:G:N7	2.78	0.52
1:A:862:C:H2'	1:A:863:U:C5'	2.40	0.52
1:A:109:A:N7	1:A:326:G:C4	2.78	0.52
1:A:137:C:O2'	1:A:138:G:H5'	2.10	0.52
3:C:121:ALA:HB1	3:C:188:LEU:O	2.10	0.52
17:Q:11:VAL:O	17:Q:11:VAL:HG13	2.10	0.52
6:F:86:ARG:O	6:F:87:ARG:CB	2.50	0.52
1:A:673:G:H5''	6:F:87:ARG:NH1	2.24	0.52
1:A:318:G:O2'	1:A:319:G:H5'	2.09	0.52
9:I:103:THR:HG22	9:I:105:ASP:H	1.75	0.52
1:A:1022:G:H2'	1:A:1023:G:C8	2.43	0.52
12:L:6:ILE:N	12:L:6:ILE:HD12	2.25	0.52
1:A:1508:G:H2'	1:A:1509:C:O4'	2.09	0.52
1:A:414:A:H2'	1:A:415:A:H8	1.75	0.52
1:A:689:C:OP1	11:K:27:ASN:ND2	2.43	0.52
1:A:1068:G:H8	1:A:1068:G:OP2	1.92	0.52
5:E:18:ARG:HH21	5:E:25:ARG:CB	2.23	0.52
1:A:1151:A:HO2'	1:A:1152:A:H8	1.51	0.52
1:A:11:G:C6	1:A:12:U:C4	2.98	0.52
1:A:600:C:H2'	1:A:601:C:H6	1.73	0.52
1:A:105:G:C4	1:A:106:C:C5	2.98	0.52
1:A:939:G:H2'	1:A:940:C:C6	2.44	0.52
1:A:754:C:O5'	15:O:72:ARG:NH2	2.43	0.52
12:L:61:SER:C	12:L:63:TYR:H	2.12	0.52
1:A:801:U:H2'	1:A:802:A:C8	2.45	0.52
1:A:407:G:H4'	4:D:116:GLN:HA	1.92	0.51
4:D:21:LEU:HD12	4:D:22:LYS:H	1.75	0.51
1:A:1353:G:OP2	1:A:1353:G:H8	1.92	0.51
9:I:10:ARG:CD	9:I:11:LYS:HG3	2.39	0.51
18:R:76:LEU:N	18:R:76:LEU:HD22	2.24	0.51
3:C:23:TYR:HB2	10:J:93:GLY:O	2.10	0.51
3:C:76:VAL:HG23	3:C:77:ILE:HG13	1.92	0.51
1:A:1112:C:H42	3:C:177:THR:HA	1.75	0.51
9:I:86:VAL:HG23	9:I:93:ARG:HB2	1.90	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:575:G:OP1	1:A:575:G:H4'	2.11	0.51
1:A:1061:G:O4'	10:J:56:HIS:CE1	2.63	0.51
1:A:376:G:O2'	1:A:377:G:C5'	2.59	0.51
3:C:182:ILE:HD11	3:C:203:PHE:CD1	2.45	0.51
4:D:109:GLY:C	4:D:111:ALA:H	2.13	0.51
4:D:144:ASP:O	4:D:146:ILE:HG13	2.10	0.51
12:L:31:PHE:CB	12:L:83:LEU:HD11	2.40	0.51
20:T:57:ARG:HH12	20:T:102:GLY:HA2	1.71	0.51
1:A:1101:A:N3	1:A:1102:A:H1'	2.25	0.51
10:J:13:HIS:HB3	10:J:68:HIS:NE2	2.24	0.51
8:H:20:TYR:HD1	8:H:65:TYR:CE2	2.28	0.51
12:L:52:ARG:HG2	12:L:52:ARG:HH11	1.71	0.51
19:S:25:LYS:HB3	19:S:27:GLU:OE1	2.10	0.51
1:A:1298:C:N4	7:G:114:ARG:HD3	2.25	0.51
7:G:70:LYS:CG	7:G:96:GLN:HB3	2.39	0.51
2:B:17:PHE:CB	2:B:44:LEU:HD21	2.39	0.51
16:P:18:ARG:HD3	16:P:35:LYS:HE3	1.91	0.51
12:L:26:LEU:O	12:L:28:GLY:N	2.43	0.51
2:B:175:ARG:O	2:B:178:ARG:HB3	2.10	0.51
5:E:111:GLU:C	5:E:113:ALA:H	2.13	0.51
5:E:14:ARG:NH1	5:E:129:ILE:HD11	2.25	0.51
8:H:91:ARG:NH1	8:H:91:ARG:HG3	2.24	0.51
1:A:1349:A:C2	1:A:1350:A:H1'	2.46	0.51
1:A:9:G:H2'	1:A:10:A:H8	1.75	0.51
20:T:10:LEU:O	20:T:12:ALA:N	2.37	0.51
1:A:1270:C:O2'	1:A:1314:C:H5'	2.10	0.51
1:A:19:C:H5''	5:E:86:ALA:HB1	1.91	0.51
2:B:75:LYS:C	2:B:75:LYS:HD3	2.31	0.51
1:A:402:G:H8	1:A:402:G:O5'	1.93	0.51
5:E:139:LEU:O	5:E:141:GLN:N	2.43	0.51
3:C:14:ILE:HG12	3:C:15:THR:N	2.26	0.51
3:C:14:ILE:HG23	3:C:15:THR:N	2.17	0.51
1:A:197:A:N7	1:A:221:C:H4'	2.25	0.51
12:L:21:SER:O	12:L:23:VAL:N	2.43	0.51
2:B:32:ILE:HG12	2:B:40:HIS:HD2	1.75	0.51
1:A:512:U:O2'	1:A:513:C:H5'	2.10	0.51
15:O:50:HIS:O	15:O:53:HIS:HB3	2.11	0.51
18:R:84:LYS:HB3	18:R:84:LYS:NZ	2.25	0.51
1:A:797:C:OP1	11:K:124:LYS:HE2	2.09	0.51
1:A:1525:G:OP1	11:K:120:ARG:NH2	2.43	0.51
5:E:28:PHE:CD1	5:E:28:PHE:N	2.78	0.51
1:A:1176:A:H2'	1:A:1177:G:C8	2.46	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:966:G:H2'	1:A:967:C:C6	2.45	0.51
1:A:1224:G:H4'	13:M:102:ARG:HH22	1.76	0.51
1:A:552:U:C2'	1:A:553:A:H5'	2.41	0.51
4:D:21:LEU:CD1	4:D:21:LEU:H	2.22	0.51
1:A:199:G:H1	1:A:218:C:N4	1.98	0.51
8:H:9:MET:O	8:H:12:ARG:HB2	2.11	0.51
1:A:1147:C:H6	1:A:1147:C:O5'	1.93	0.51
5:E:36:ASP:OD2	5:E:38:GLN:HB3	2.10	0.51
2:B:163:PHE:HA	2:B:185:ILE:O	2.11	0.51
3:C:29:TYR:HD1	3:C:29:TYR:O	1.93	0.51
5:E:34:VAL:O	5:E:41:VAL:HA	2.11	0.51
1:A:599:C:H2'	1:A:600:C:H6	1.76	0.51
1:A:1054:C:H3'	1:A:1054:C:O2	2.10	0.51
1:A:592:G:N1	1:A:648:A:C6	2.79	0.51
1:A:444:C:H2'	1:A:445:G:H8	1.76	0.51
1:A:562:C:C4	1:A:884:U:C5	2.98	0.51
12:L:82:VAL:HG13	12:L:83:LEU:N	2.24	0.51
3:C:91:LEU:CD1	3:C:101:LEU:HD21	2.41	0.51
4:D:155:LEU:HD23	4:D:156:GLU:OE2	2.11	0.51
4:D:127:THR:OG1	4:D:128:VAL:N	2.43	0.51
1:A:1014:A:H4'	19:S:14:HIS:CE1	2.46	0.51
17:Q:54:GLY:HA3	17:Q:82:MET:SD	2.51	0.51
3:C:68:VAL:HG12	3:C:70:VAL:HG23	1.93	0.51
3:C:76:VAL:CG2	3:C:77:ILE:HG13	2.40	0.51
1:A:754:C:C6	15:O:69:TYR:CE2	2.99	0.51
1:A:294:U:C2	1:A:295:C:C5	2.98	0.51
1:A:1504:G:OP1	1:A:1507:A:H4'	2.11	0.51
1:A:671:G:H2'	1:A:672:U:C6	2.46	0.51
1:A:95:G:H2'	1:A:96:G:O4'	2.11	0.51
5:E:10:MET:HA	5:E:32:VAL:HA	1.92	0.51
1:A:487:A:H2'	1:A:488:C:O4'	2.10	0.51
11:K:29:ILE:HB	11:K:44:SER:HB3	1.93	0.51
1:A:513:C:C2	1:A:539:A:C2	2.98	0.51
1:A:238:G:P	17:Q:25:ARG:HH22	2.33	0.51
22:V:6191:A:O2'	22:V:6192:G:H5'	2.10	0.51
1:A:692:U:H5	11:K:26:ASN:ND2	2.09	0.51
1:A:92:G:H2'	1:A:93:U:H5'	1.92	0.51
5:E:61:TYR:HA	5:E:64:ARG:HB3	1.93	0.51
1:A:1103:C:C2	1:A:1104:G:C8	2.98	0.51
1:A:353:A:H2'	1:A:354:G:OP2	2.11	0.51
1:A:629:G:C2	1:A:630:G:O6	2.64	0.51
2:B:98:LEU:HB2	2:B:101:MET:CG	2.40	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:171:A:H2'	1:A:172:A:C8	2.45	0.51
17:Q:29:HIS:CE1	17:Q:32:TYR:CD1	2.99	0.51
6:F:33:TYR:HE1	6:F:75:LEU:HA	1.75	0.51
15:O:7:GLU:HG3	15:O:10:LYS:HD3	1.93	0.51
1:A:539:A:C6	1:A:540:G:C6	2.99	0.51
20:T:39:LYS:O	20:T:43:LEU:HG	2.11	0.51
1:A:1038:C:H2'	1:A:1039:C:C6	2.46	0.51
20:T:84:LEU:HD13	20:T:85:MET:N	2.26	0.51
22:V:6194:C:C2'	22:V:6195:G:H8	2.05	0.51
20:T:72:LEU:HD21	20:T:76:ALA:C	2.31	0.51
1:A:632:A:H8	1:A:633:G:C8	2.29	0.51
19:S:31:ILE:CG2	19:S:49:ILE:HA	2.40	0.51
9:I:27:THR:O	9:I:62:TYR:HA	2.11	0.51
22:V:6191:A:N1	22:V:6213:A:C6	2.80	0.50
22:V:6188:G:N2	22:V:6216:U:N3	2.59	0.50
5:E:33:VAL:HG13	5:E:109:ILE:HD13	1.93	0.50
1:A:1149:C:O2'	1:A:1280:A:N1	2.43	0.50
1:A:874:G:C5	1:A:875:C:C5	3.00	0.50
1:A:632:A:N7	1:A:633:G:C4	2.79	0.50
12:L:74:HIS:CD2	12:L:76:LEU:H	2.26	0.50
1:A:1501:C:C5	1:A:1504:G:C5	2.98	0.50
10:J:65:LEU:HD13	14:N:56:VAL:HG22	1.93	0.50
1:A:156:G:C2	1:A:166:G:C2	2.99	0.50
15:O:3:ILE:HA	15:O:38:ARG:NH2	2.27	0.50
1:A:785:G:N2	1:A:798:G:C4	2.79	0.50
1:A:878:G:H1'	8:H:3:THR:HG21	1.92	0.50
1:A:488:C:H6	1:A:488:C:O5'	1.94	0.50
1:A:1149:C:OP1	9:I:14:VAL:HG21	2.12	0.50
4:D:79:PHE:O	4:D:82:ALA:HB3	2.12	0.50
1:A:1009:G:O2'	1:A:1010:G:H5'	2.11	0.50
1:A:934:C:C2	1:A:1344:C:C5	3.00	0.50
1:A:1318:A:O2'	19:S:37:ARG:HB2	2.10	0.50
22:V:6181:C:C2	22:V:6182:A:C8	3.00	0.50
1:A:363:A:C6	1:A:364:A:C6	2.99	0.50
1:A:501:C:H2'	1:A:502:G:C8	2.47	0.50
1:A:1347:G:C6	9:I:107:ARG:NH2	2.75	0.50
8:H:87:SER:HB2	8:H:93:VAL:HB	1.92	0.50
6:F:90:VAL:O	6:F:91:VAL:HG23	2.10	0.50
1:A:1055:A:N7	1:A:1200:C:N4	2.57	0.50
4:D:13:ARG:HD2	4:D:38:TYR:O	2.12	0.50
7:G:61:VAL:O	7:G:65:ALA:HB2	2.11	0.50
3:C:191:THR:HB	3:C:193:TYR:CD2	2.46	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1167:A:H62	1:A:1169:A:N6	2.09	0.50
1:A:826:C:H2'	8:H:15:ASN:HD22	1.76	0.50
1:A:1226:C:O2'	13:M:111:LYS:NZ	2.45	0.50
1:A:1352:C:H2'	1:A:1353:G:C8	2.46	0.50
1:A:817:C:H4'	1:A:818:G:OP1	2.10	0.50
4:D:82:ALA:HB1	4:D:89:THR:HG23	1.93	0.50
2:B:73:THR:HG22	2:B:94:ASN:O	2.11	0.50
1:A:1053:G:H3'	1:A:1054:C:C5'	2.41	0.50
3:C:23:TYR:CG	3:C:24:ALA:N	2.80	0.50
1:A:1378:C:H3'	1:A:1379:G:H5''	1.93	0.50
1:A:562:C:H1'	12:L:14:ARG:HB3	1.93	0.50
7:G:79:ARG:HA	7:G:83:ALA:O	2.12	0.50
1:A:619:U:N3	4:D:135:LEU:HD11	2.26	0.50
1:A:1171:G:H2'	1:A:1172:C:C6	2.47	0.50
10:J:30:SER:HB2	10:J:80:LYS:CG	2.42	0.50
2:B:68:ILE:CG2	2:B:70:PHE:CE1	2.94	0.50
2:B:91:PRO:HG3	2:B:154:LEU:HD21	1.92	0.50
9:I:114:TYR:CD2	9:I:114:TYR:N	2.80	0.50
22:V:6189:G:H2'	22:V:6190:U:C6	2.46	0.50
16:P:58:TYR:O	16:P:61:SER:HB3	2.12	0.50
1:A:408:A:C4	1:A:409:G:C8	3.00	0.50
1:A:191(G):G:C4	1:A:192:U:C5	2.99	0.50
1:A:1366:C:H2'	1:A:1367:C:H6	1.75	0.50
1:A:799:G:C2'	1:A:800:G:O5'	2.59	0.50
1:A:173:U:C2	1:A:197:A:C2	2.99	0.50
11:K:21:ILE:HG13	11:K:30:VAL:HG12	1.94	0.50
1:A:938:A:N6	1:A:939:G:C6	2.79	0.50
6:F:18:GLN:O	6:F:21:LEU:HB2	2.11	0.50
1:A:44:G:C2	1:A:399:G:C2	2.99	0.50
2:B:53:ARG:HA	2:B:56:ARG:HD2	1.92	0.50
11:K:120:ARG:NH1	11:K:126:ARG:HE	2.08	0.50
2:B:61:LEU:HG	2:B:68:ILE:HD11	1.94	0.50
1:A:376:G:H1	1:A:387:U:H3	1.59	0.50
3:C:113:ALA:HB2	3:C:202:ILE:HG13	1.93	0.50
20:T:26:ASN:ND2	20:T:26:ASN:N	2.49	0.50
1:A:76:G:O2'	1:A:77:C:H5'	2.11	0.50
1:A:79:G:H2'	1:A:80:G:C8	2.46	0.50
5:E:9:LYS:HB3	5:E:112:LEU:HD11	1.94	0.50
5:E:48:ALA:C	5:E:50:GLU:H	2.14	0.50
1:A:1071:C:H5''	5:E:49:PRO:HG2	1.92	0.50
1:A:1072:G:C6	1:A:1104:G:C2	2.99	0.50
6:F:22:GLU:O	6:F:26:ILE:HG13	2.11	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:735:C:H1'	18:R:75:ILE:HD11	1.93	0.50
1:A:457:C:O2	1:A:457:C:C2'	2.58	0.50
15:O:39:LEU:HD13	15:O:56:LEU:HB2	1.92	0.50
1:A:173:U:N1	1:A:197:A:C2	2.79	0.50
1:A:1357:A:N7	1:A:1358:U:C4	2.79	0.50
1:A:522:C:N4	1:A:528:C:H42	2.09	0.50
17:Q:45:HIS:HB3	17:Q:72:ARG:HG2	1.93	0.50
17:Q:45:HIS:O	17:Q:73:VAL:HG23	2.12	0.50
8:H:50:ARG:H	8:H:50:ARG:CD	2.24	0.50
1:A:765:G:H5''	1:A:766:A:OP1	2.11	0.50
1:A:933:G:N7	7:G:3:ARG:NH2	2.60	0.50
16:P:25:ARG:O	16:P:26:ARG:C	2.50	0.50
1:A:376:G:C5	1:A:389:A:N1	2.79	0.50
4:D:141:ARG:O	4:D:144:ASP:OD2	2.29	0.50
5:E:41:VAL:HG12	5:E:112:LEU:O	2.11	0.50
10:J:33:GLN:O	10:J:75:ILE:HG12	2.11	0.50
1:A:1371:G:OP1	9:I:11:LYS:HB3	2.10	0.50
9:I:14:VAL:O	9:I:65:VAL:HG23	2.11	0.50
18:R:56:THR:HB	18:R:58:LEU:HD12	1.93	0.50
1:A:1254:C:OP1	10:J:45:ARG:HD3	2.12	0.50
2:B:200:ILE:HG22	2:B:202:PRO:HD3	1.92	0.50
1:A:1386:G:C2	1:A:1387:G:C8	2.99	0.50
1:A:1004:A:N3	1:A:1004:A:H3'	2.26	0.50
4:D:110:PHE:N	4:D:110:PHE:CD2	2.75	0.50
1:A:392:G:N3	1:A:393:A:C8	2.80	0.50
1:A:191(G):G:H2'	1:A:192:U:C6	2.46	0.50
6:F:8:ILE:HD12	6:F:26:ILE:HD13	1.94	0.50
19:S:21:GLU:HG3	19:S:22:LEU:HD23	1.93	0.50
1:A:457:C:N4	1:A:475:G:H1	2.09	0.50
16:P:39:TYR:CE1	16:P:73:LEU:HD13	2.47	0.50
9:I:104:ARG:O	9:I:105:ASP:HB3	2.11	0.50
11:K:34:ASP:HB2	11:K:35:PRO:HD2	1.92	0.50
17:Q:60:ILE:O	17:Q:71:PHE:HA	2.12	0.50
13:M:99:ARG:HB2	13:M:101:GLN:HE21	1.77	0.50
2:B:31:TYR:O	2:B:42:ILE:HD12	2.12	0.50
1:A:1424:C:H2'	1:A:1425:U:O4'	2.12	0.50
18:R:53:ARG:HH21	18:R:60:ALA:N	2.09	0.50
1:A:503:C:C2	1:A:504:C:C5	3.00	0.50
10:J:17:ASP:O	10:J:21:GLN:HB2	2.11	0.50
1:A:767:A:H2'	1:A:768:A:O4'	2.11	0.50
10:J:58:ASP:O	10:J:60:ARG:N	2.45	0.50
16:P:32:TYR:HD2	16:P:32:TYR:O	1.95	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:414:A:H2'	1:A:415:A:C8	2.47	0.50
17:Q:54:GLY:HA3	17:Q:82:MET:HE1	1.94	0.50
11:K:40:ILE:HD13	11:K:40:ILE:N	2.27	0.50
1:A:498:A:H4'	1:A:500:G:H5'	1.93	0.50
5:E:96:PRO:HA	5:E:117:ASP:OD2	2.11	0.50
1:A:538:G:N2	1:A:539:A:H1'	2.27	0.50
3:C:72:LYS:HG2	3:C:74:GLY:H	1.76	0.50
1:A:983:A:H5'	1:A:984:C:OP2	2.12	0.50
10:J:31:GLY:HA3	10:J:81:THR:CG2	2.42	0.50
4:D:49:ARG:CZ	4:D:50:ARG:H	2.24	0.49
1:A:1083:U:C5	1:A:1084:G:C6	3.00	0.49
1:A:657:G:C2	1:A:658:G:C8	3.01	0.49
1:A:750:G:C6	1:A:751:U:C5	3.00	0.49
8:H:25:ASP:C	8:H:26:VAL:HG12	2.32	0.49
1:A:1118:C:H5''	9:I:104:ARG:CG	2.42	0.49
1:A:1446:A:O2'	1:A:1447:G:H8	1.95	0.49
1:A:927:G:C2	1:A:1391:U:C2	3.00	0.49
5:E:103:GLY:O	5:E:104:ALA:C	2.50	0.49
22:V:6185:U:C5	22:V:6186:U:C5	3.00	0.49
1:A:450:G:H4'	16:P:41:PRO:HB2	1.94	0.49
1:A:1290:G:H2'	1:A:1290:G:N3	2.27	0.49
1:A:946:A:H2'	1:A:947:G:C8	2.47	0.49
3:C:33:LEU:O	3:C:36:ASP:HB3	2.13	0.49
3:C:130:VAL:HA	3:C:133:ALA:HB3	1.94	0.49
2:B:187:LEU:HD22	2:B:188:ALA:N	2.27	0.49
1:A:556:C:C2'	1:A:556:C:O2	2.55	0.49
18:R:56:THR:O	18:R:58:LEU:HD12	2.12	0.49
1:A:216:G:H2'	1:A:217:C:H6	1.76	0.49
12:L:10:VAL:HG11	17:Q:36:ILE:HG21	1.94	0.49
3:C:73:PRO:HA	3:C:76:VAL:HG13	1.94	0.49
5:E:36:ASP:O	5:E:37:ARG:CB	2.60	0.49
1:A:356:A:H2'	1:A:357:G:O5'	2.12	0.49
1:A:794:A:H4'	1:A:1521:G:O2'	2.12	0.49
1:A:1438:G:C5	1:A:1439:C:C5	3.00	0.49
2:B:70:PHE:CD2	2:B:163:PHE:HB3	2.48	0.49
22:V:6189:G:C5	22:V:6190:U:C5	3.00	0.49
4:D:49:ARG:O	4:D:51:PRO:HD3	2.13	0.49
4:D:28:SER:HB3	4:D:29:PRO:CD	2.41	0.49
1:A:16:A:O2'	5:E:16:THR:HB	2.12	0.49
1:A:782:A:O3'	1:A:1515:C:H4'	2.12	0.49
8:H:10:LEU:HB3	8:H:83:ILE:HD13	1.93	0.49
1:A:68:G:N1	1:A:69:G:C5	2.80	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:5:THR:O	12:L:8:GLN:HB2	2.12	0.49
1:A:1058:G:C6	1:A:1059:C:N3	2.81	0.49
1:A:685:G:N2	1:A:686:U:C4	2.81	0.49
1:A:836:G:OP1	18:R:61:LYS:HE2	2.12	0.49
1:A:595:G:H1'	1:A:596:C:H5	1.77	0.49
1:A:243:A:C2	1:A:246:A:C8	3.00	0.49
1:A:958:A:C6	1:A:959:A:C6	3.00	0.49
1:A:830:G:C2	1:A:831:U:C2	3.01	0.49
1:A:1321:C:C5	1:A:1322:C:C2	3.01	0.49
1:A:1320:C:N3	19:S:72:GLY:HA3	2.26	0.49
1:A:46:G:H8	1:A:46:G:O5'	1.95	0.49
16:P:21:VAL:HG23	16:P:21:VAL:O	2.12	0.49
1:A:437:U:C4	1:A:438:G:C6	3.00	0.49
4:D:31:CYS:SG	4:D:31:CYS:O	2.71	0.49
8:H:88:LYS:HB3	8:H:89:PRO:HD2	1.93	0.49
16:P:71:ARG:C	16:P:73:LEU:H	2.15	0.49
8:H:25:ASP:HA	8:H:59:LEU:O	2.11	0.49
1:A:105:G:C6	1:A:106:C:C4	3.00	0.49
8:H:17:THR:HG21	8:H:80:ILE:HD13	1.94	0.49
1:A:932:C:OP1	7:G:4:ARG:HG2	2.12	0.49
1:A:1234:C:C2'	1:A:1235:U:H5'	2.42	0.49
7:G:113:GLU:O	7:G:119:ARG:HD3	2.12	0.49
1:A:408:A:H2'	1:A:409:G:C8	2.48	0.49
4:D:21:LEU:HD12	4:D:21:LEU:N	2.26	0.49
4:D:75:PHE:CZ	4:D:93:PHE:HZ	2.29	0.49
1:A:1148:U:C2	9:I:16:ARG:NH2	2.81	0.49
1:A:1329:A:C2	1:A:1330:U:C2	3.00	0.49
12:L:46:LYS:CB	12:L:47:PRO:HD3	2.43	0.49
20:T:69:GLY:O	20:T:73:HIS:ND1	2.45	0.49
4:D:105:VAL:CG1	4:D:105:VAL:O	2.59	0.49
3:C:66:VAL:HB	3:C:101:LEU:CD2	2.39	0.49
12:L:70:PRO:O	12:L:101:ARG:NH1	2.44	0.49
13:M:84:ILE:HG23	19:S:74:PHE:HE1	1.77	0.49
16:P:39:TYR:CD2	16:P:40:ASP:N	2.81	0.49
1:A:611:A:H61	1:A:629:G:H1	1.61	0.49
1:A:832:C:N4	1:A:855:G:O6	2.46	0.49
1:A:173:U:C2	1:A:197:A:N1	2.81	0.49
1:A:197:A:N6	1:A:221:C:C5'	2.76	0.49
1:A:1128:C:O2'	1:A:1130:A:C4	2.65	0.49
1:A:236:G:H5''	17:Q:42:TYR:OH	2.11	0.49
1:A:754:C:C2'	1:A:755:G:OP1	2.61	0.49
6:F:44:GLY:HA2	6:F:59:TYR:CE2	2.48	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1311:G:N2	1:A:1327:C:C2	2.81	0.49
8:H:42:GLU:HG3	8:H:109:ILE:HD12	1.92	0.49
3:C:79:ARG:O	3:C:82:GLU:HG3	2.13	0.49
16:P:47:ASP:O	16:P:49:LEU:N	2.45	0.49
1:A:1123:A:H1'	10:J:37:PRO:O	2.12	0.49
2:B:184:VAL:O	2:B:198:ASP:HB2	2.13	0.49
1:A:947:G:O3'	13:M:109:THR:OG1	2.28	0.49
22:V:6192:G:C5	22:V:6193:U:C4	3.00	0.49
3:C:182:ILE:HD11	3:C:203:PHE:HD1	1.77	0.49
1:A:256:U:C2	1:A:257:G:C8	3.00	0.49
3:C:195:VAL:CG1	3:C:196:LEU:N	2.65	0.49
1:A:321:A:O2'	1:A:322:C:H5'	2.11	0.49
1:A:987:G:H2'	1:A:988:G:H8	1.78	0.49
11:K:32:ILE:O	11:K:40:ILE:HG12	2.13	0.49
1:A:127:G:C2	1:A:128:G:C8	3.00	0.49
1:A:1089:G:C6	1:A:1090:U:C4	3.01	0.49
1:A:639:G:H2'	1:A:640:A:H8	1.77	0.49
7:G:70:LYS:HG3	7:G:96:GLN:HB3	1.94	0.49
1:A:801:U:H2'	1:A:802:A:H8	1.77	0.49
20:T:32:ALA:O	20:T:36:LEU:HD23	2.13	0.49
6:F:82:ARG:HB2	6:F:85:VAL:CG2	2.43	0.49
22:V:6190:U:C4	22:V:6191:A:N7	2.81	0.49
22:V:6190:U:O4	22:V:6191:A:N6	2.45	0.49
1:A:1260:C:H4'	1:A:1284:C:H5'	1.94	0.49
1:A:1064:G:C1'	1:A:1065:U:OP2	2.61	0.49
1:A:73:G:H8	1:A:73:G:O5'	1.95	0.49
18:R:44:LEU:HD11	18:R:70:ILE:HG21	1.95	0.49
4:D:13:ARG:CD	4:D:38:TYR:O	2.61	0.49
1:A:1090:U:H2'	1:A:1091:U:C6	2.48	0.49
1:A:1327:C:O2'	1:A:1328:C:H5'	2.12	0.49
6:F:12:PRO:HD3	6:F:58:GLY:HA2	1.95	0.49
1:A:44:G:N2	1:A:399:G:C4	2.80	0.49
1:A:1480:G:C4	1:A:1481:U:C6	3.00	0.49
16:P:49:LEU:HG	16:P:50:LYS:N	2.28	0.49
6:F:82:ARG:HB2	6:F:85:VAL:HG23	1.94	0.49
10:J:50:ILE:CG2	14:N:41:ARG:HH21	2.26	0.49
7:G:113:GLU:HB3	7:G:118:VAL:CG2	2.42	0.49
1:A:754:C:P	15:O:72:ARG:HH22	2.36	0.49
1:A:1465:C:H2'	1:A:1466:C:O4'	2.13	0.49
1:A:1315:U:H2'	1:A:1316:G:O4'	2.12	0.49
1:A:1047:G:O2'	1:A:1048:G:H5'	2.13	0.49
13:M:14:ARG:NH1	13:M:42:ALA:HA	2.27	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:420:U:O2	1:A:424:G:N1	2.46	0.49
12:L:92:LEU:HB2	12:L:95:VAL:CG2	2.43	0.49
1:A:525:C:OP1	12:L:90:LYS:HG2	2.12	0.49
13:M:49:THR:O	13:M:53:VAL:HG23	2.12	0.49
9:I:114:TYR:N	9:I:114:TYR:HD2	2.10	0.49
13:M:91:ARG:NH1	19:S:81:ARG:NH2	2.61	0.49
1:A:672:U:O2'	1:A:673:G:H5'	2.13	0.49
1:A:413:G:H22	1:A:429:U:P	2.36	0.49
1:A:689:C:H2'	1:A:690:G:O4'	2.11	0.49
3:C:172:ARG:HE	3:C:174:PRO:CG	2.26	0.49
14:N:37:PHE:CE1	14:N:53:LEU:HD13	2.48	0.49
3:C:134:ILE:HG23	3:C:151:VAL:CB	2.35	0.49
4:D:162:LEU:HD11	4:D:181:MET:HG2	1.95	0.49
1:A:1369:C:OP1	9:I:111:ARG:HG3	2.12	0.49
1:A:632:A:C2'	1:A:633:G:H5'	2.42	0.49
20:T:13:LEU:O	20:T:16:HIS:N	2.46	0.49
1:A:941:G:C6	1:A:1343:G:C6	3.00	0.49
13:M:79:LYS:HA	13:M:82:MET:HB3	1.95	0.49
8:H:38:ILE:HD11	8:H:118:VAL:O	2.13	0.49
1:A:506:G:C4	1:A:507:C:C5	3.00	0.49
1:A:926:G:C6	1:A:1505:G:C6	3.01	0.49
1:A:958:A:N6	1:A:959:A:N6	2.61	0.49
19:S:33:THR:HG23	19:S:51:VAL:HA	1.94	0.49
1:A:6:G:O2'	1:A:7:G:H5'	2.13	0.49
3:C:179:ARG:O	3:C:179:ARG:HG3	2.13	0.49
5:E:101:ILE:HG12	5:E:118:ILE:O	2.13	0.48
3:C:114:PRO:HD3	3:C:183:ASP:OD1	2.13	0.48
1:A:394:G:C4	1:A:395:C:C5	3.01	0.48
1:A:1190:G:OP1	3:C:4:LYS:HA	2.13	0.48
2:B:211:ILE:HG22	2:B:215:LEU:HD23	1.94	0.48
1:A:187:C:H2'	1:A:188:U:O4'	2.13	0.48
12:L:44:PRO:HG3	12:L:52:ARG:HD3	1.95	0.48
12:L:52:ARG:HG3	12:L:52:ARG:NH1	2.24	0.48
6:F:46:ARG:HH12	18:R:37:VAL:HG21	1.78	0.48
2:B:141:GLU:O	2:B:145:LEU:HD23	2.13	0.48
16:P:45:THR:HB	16:P:46:PRO:HD2	1.94	0.48
1:A:862:C:O2'	1:A:863:U:H5'	2.12	0.48
1:A:928:G:C2	1:A:1390:U:O2	2.66	0.48
1:A:149:A:H2'	1:A:150:C:C6	2.47	0.48
1:A:780:A:C2	1:A:803:G:N1	2.81	0.48
4:D:143:GLY:H	4:D:185:PHE:HB3	1.78	0.48
22:V:6189:G:N2	22:V:6215:C:C2	2.81	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:19:GLU:HG3	3:C:54:ARG:HD2	1.93	0.48
1:A:32:A:H2'	1:A:33:A:C8	2.48	0.48
12:L:116:ARG:HH21	12:L:123:LYS:HB2	1.77	0.48
1:A:552:U:H4'	12:L:85:ARG:HG2	1.95	0.48
20:T:69:GLY:O	20:T:73:HIS:CE1	2.67	0.48
1:A:1074:G:C2	1:A:1075:C:C2	3.01	0.48
12:L:51:LEU:HD12	12:L:51:LEU:N	2.28	0.48
1:A:1014:A:C2	1:A:1219:U:H1'	2.48	0.48
13:M:32:GLU:CD	13:M:64:TRP:CH2	2.86	0.48
9:I:26:VAL:O	9:I:26:VAL:HG12	2.12	0.48
1:A:1296:C:C6	1:A:1297:C:H5	2.30	0.48
1:A:1038:C:C2	1:A:1039:C:C5	3.01	0.48
1:A:134:A:N6	16:P:25:ARG:HH12	2.09	0.48
1:A:406:G:H2'	1:A:407:G:H8	1.78	0.48
18:R:56:THR:O	18:R:58:LEU:N	2.46	0.48
10:J:34:VAL:CG1	10:J:74:ILE:HG22	2.43	0.48
1:A:976:G:H5''	1:A:1358:U:O2'	2.14	0.48
3:C:175:LEU:CD1	3:C:201:TYR:CE2	2.96	0.48
1:A:152:A:H62	1:A:169:C:H42	1.61	0.48
1:A:1502:A:C8	1:A:1505:G:N2	2.82	0.48
2:B:68:ILE:HG22	2:B:70:PHE:CE1	2.48	0.48
13:M:108:ARG:HA	13:M:111:LYS:HB2	1.93	0.48
1:A:691:G:H2'	1:A:692:U:C6	2.49	0.48
20:T:12:ALA:O	20:T:15:ARG:HB2	2.13	0.48
17:Q:69:LYS:C	17:Q:70:ARG:HD2	2.34	0.48
1:A:1051:C:C4	1:A:1052:U:C4	3.02	0.48
12:L:6:ILE:O	12:L:10:VAL:CG2	2.59	0.48
1:A:1504:G:H4'	1:A:1505:G:C4	2.48	0.48
1:A:772:U:C2'	1:A:773:G:H5'	2.44	0.48
22:V:6192:G:C6	22:V:6193:U:C4	3.01	0.48
4:D:109:GLY:O	4:D:111:ALA:N	2.46	0.48
5:E:139:LEU:C	5:E:141:GLN:H	2.17	0.48
1:A:878:G:C1'	8:H:3:THR:HG21	2.43	0.48
1:A:66:G:H5'	1:A:173:U:O4	2.13	0.48
1:A:401:C:H3'	1:A:401:C:C6	2.48	0.48
1:A:236:G:H1'	17:Q:4:LYS:HE3	1.95	0.48
1:A:1298:C:C5	7:G:114:ARG:NH1	2.80	0.48
1:A:1088:G:C5	1:A:1089:G:N7	2.82	0.48
1:A:444:C:H2'	1:A:445:G:C8	2.49	0.48
7:G:30:ILE:HD13	7:G:105:VAL:HG13	1.94	0.48
16:P:12:LYS:O	16:P:13:HIS:HB2	2.11	0.48
1:A:356:A:H2'	1:A:357:G:C8	2.48	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:515:G:N2	1:A:537:G:C4	2.82	0.48
1:A:760:G:H2'	1:A:761:G:H5'	1.96	0.48
1:A:779:C:H2'	1:A:780:A:O4'	2.13	0.48
1:A:597:G:C8	1:A:598:U:C5	3.02	0.48
3:C:6:HIS:HD2	3:C:7:PRO:HD2	1.78	0.48
8:H:120:THR:H	8:H:123:GLU:HB2	1.78	0.48
1:A:76:G:C6	1:A:95:G:N1	2.82	0.48
5:E:91:LEU:HD22	5:E:110:LEU:HD11	1.95	0.48
1:A:175:C:H4'	20:T:25:ARG:NH1	2.29	0.48
8:H:97:VAL:CG1	8:H:98:LYS:H	2.24	0.48
18:R:45:SER:H	18:R:51:LEU:CD1	2.26	0.48
18:R:66:LEU:CG	18:R:70:ILE:HD11	2.44	0.48
1:A:294:U:H2'	1:A:295:C:C6	2.49	0.48
1:A:142:G:N2	1:A:143:A:C4	2.81	0.48
21:U:14:TRP:HE3	21:U:15:ARG:HG2	1.78	0.48
22:V:6182:A:C2	22:V:6195:G:N2	2.82	0.48
1:A:76:G:C6	1:A:77:C:N4	2.82	0.48
1:A:9:G:H5''	5:E:122:GLU:OE1	2.13	0.48
1:A:1294:G:H2'	1:A:1295:G:H8	1.74	0.48
8:H:36:LEU:HA	8:H:39:LEU:HD23	1.95	0.48
1:A:1379:G:O2'	1:A:1380:U:H5'	2.13	0.48
1:A:178:C:C2'	1:A:179:A:H5'	2.44	0.48
1:A:972:C:H4'	10:J:57:LYS:HG3	1.96	0.48
1:A:977:A:HO2'	1:A:978:A:H5''	1.78	0.48
1:A:954:G:H2'	1:A:955:U:C6	2.48	0.48
1:A:391:G:C6	1:A:392:G:N7	2.81	0.48
2:B:167:PRO:HG3	2:B:188:ALA:HB2	1.94	0.48
1:A:1152:A:C4	1:A:1153:C:C5	3.02	0.48
6:F:35:ALA:O	6:F:37:VAL:N	2.47	0.48
18:R:38:GLU:OE2	18:R:38:GLU:HA	2.13	0.48
1:A:29:G:C2	1:A:555:C:N3	2.82	0.48
1:A:1195:C:H5''	1:A:1196:U:OP2	2.14	0.48
1:A:109:A:C6	1:A:326:G:C6	3.02	0.48
2:B:76:GLN:H	2:B:76:GLN:NE2	2.12	0.48
17:Q:11:VAL:N	17:Q:20:THR:O	2.45	0.48
4:D:199:ASN:ND2	4:D:202:LEU:HG	2.28	0.48
5:E:20:GLN:O	5:E:23:GLY:O	2.31	0.48
3:C:19:GLU:HG2	3:C:40:ARG:NH2	2.28	0.48
1:A:15:G:H4'	5:E:24:ARG:NH1	2.27	0.48
1:A:1366:C:C4	1:A:1367:C:N4	2.82	0.48
18:R:37:VAL:HG12	18:R:78:LEU:HB3	1.95	0.48
1:A:1529:G:H4'	1:A:1530:G:OP2	2.12	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:79:PHE:CE1	4:D:204:ILE:HA	2.48	0.48
11:K:34:ASP:CB	11:K:35:PRO:CD	2.92	0.48
1:A:1056:U:H2'	1:A:1056:U:O2	2.14	0.48
1:A:934:C:C5	1:A:1345:U:C6	3.02	0.48
1:A:939:G:N1	1:A:940:C:N4	2.62	0.48
1:A:730:G:C5	1:A:731:G:H1'	2.49	0.48
13:M:24:GLY:O	13:M:25:ILE:HD13	2.13	0.48
7:G:17:VAL:HG21	7:G:44:TYR:CE2	2.48	0.48
7:G:69:VAL:HG22	7:G:135:VAL:HG22	1.96	0.48
1:A:357:G:C2	1:A:358:U:C5	3.02	0.48
1:A:380:G:N1	1:A:384:G:C6	2.82	0.48
8:H:54:ASP:C	8:H:56:LYS:H	2.17	0.48
1:A:525:C:O2'	1:A:526:C:H5'	2.14	0.48
1:A:1244:C:H2'	1:A:1245:A:C8	2.49	0.48
14:N:45:ARG:O	14:N:49:HIS:CD2	2.67	0.48
1:A:1401:G:C2	1:A:1402:C:H1'	2.49	0.48
1:A:986:A:C6	1:A:1220:G:N1	2.82	0.48
4:D:106:TYR:O	4:D:109:GLY:N	2.44	0.48
1:A:33:A:H2'	1:A:34:C:C6	2.49	0.48
1:A:669:U:C2	1:A:670:G:C8	3.02	0.48
4:D:121:VAL:O	4:D:134:ASP:HA	2.14	0.48
1:A:545:C:OP2	4:D:62:GLN:NE2	2.47	0.48
1:A:1412:C:H2'	1:A:1413:A:H8	1.79	0.48
19:S:30:LEU:HD23	19:S:31:ILE:N	2.28	0.48
1:A:382:A:C2	1:A:383:A:C4	3.02	0.48
1:A:1360:A:C6	1:A:1361:G:C2	3.01	0.48
5:E:53:LEU:N	5:E:53:LEU:HD23	2.28	0.48
12:L:54:VAL:HG12	12:L:55:ALA:H	1.77	0.48
1:A:850:U:O5'	1:A:850:U:H6	1.97	0.48
8:H:127:LEU:O	8:H:127:LEU:HD13	2.14	0.47
3:C:173:VAL:H	3:C:174:PRO:HD3	1.77	0.47
1:A:16:A:C2	1:A:17:U:C6	3.02	0.47
1:A:1346:A:C2	1:A:1348:U:O4	2.67	0.47
1:A:9:G:H2'	1:A:10:A:C8	2.49	0.47
1:A:9:G:O2'	1:A:10:A:H5'	2.13	0.47
12:L:44:PRO:HD2	12:L:49:SER:HA	1.96	0.47
1:A:1180:A:OP1	9:I:103:THR:OG1	2.27	0.47
8:H:36:LEU:HA	8:H:39:LEU:HB2	1.95	0.47
1:A:559:A:H4'	1:A:560:U:H3'	1.96	0.47
12:L:37:THR:OG1	12:L:38:VAL:N	2.47	0.47
6:F:47:ARG:HH12	6:F:56:PRO:HB2	1.79	0.47
1:A:1182:G:H4'	1:A:1183:A:H5''	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:380:G:C2	1:A:384:G:N1	2.82	0.47
1:A:1339:A:H2'	1:A:1340:A:O4'	2.13	0.47
1:A:892:A:C2	1:A:907:A:C4	3.02	0.47
21:U:12:LYS:HB3	21:U:17:THR:O	2.14	0.47
1:A:1060:C:H5''	10:J:51:ARG:HG2	1.97	0.47
1:A:386:C:H2'	1:A:387:U:O4'	2.13	0.47
4:D:68:TYR:CE2	4:D:97:LEU:HB3	2.49	0.47
4:D:64:LEU:HB2	4:D:198:VAL:HG11	1.95	0.47
4:D:61:LYS:HA	4:D:203:VAL:HG22	1.96	0.47
1:A:1372:U:C5	1:A:1373:G:C4	3.02	0.47
9:I:111:ARG:HG3	14:N:61:TRP:HE1	1.79	0.47
1:A:818:G:N3	1:A:820:U:C6	2.82	0.47
1:A:564:C:C4	17:Q:31:LEU:HD11	2.48	0.47
17:Q:59:ILE:CG2	17:Q:71:PHE:CD1	2.97	0.47
7:G:46:ALA:O	7:G:50:ILE:HG12	2.14	0.47
1:A:445:G:H2'	1:A:446:G:H8	1.79	0.47
7:G:70:LYS:HE2	7:G:96:GLN:CD	2.34	0.47
1:A:635:G:C5	1:A:636:U:C5	3.02	0.47
1:A:1399:C:C4	1:A:1502:A:C2	3.03	0.47
1:A:288:A:O2'	1:A:289:G:H5'	2.14	0.47
1:A:531:U:O3'	1:A:532:A:H4'	2.14	0.47
15:O:48:LYS:HA	15:O:48:LYS:HE2	1.96	0.47
1:A:960:U:C6	1:A:1225:A:C8	3.01	0.47
22:V:6213:A:C4	22:V:6214:C:C5	3.02	0.47
1:A:402:G:C6	1:A:403:C:C5	3.02	0.47
1:A:687:A:N3	1:A:688:G:H1'	2.30	0.47
1:A:1105:A:C2	1:A:1106:G:C8	3.01	0.47
2:B:80:ILE:HD11	2:B:208:ILE:HG22	1.95	0.47
8:H:112:LEU:HA	8:H:134:ILE:H	1.79	0.47
2:B:72:GLY:HA3	2:B:165:VAL:HG11	1.95	0.47
8:H:49:GLU:HG3	8:H:51:VAL:HG23	1.96	0.47
10:J:9:ARG:HG2	10:J:69:ASN:OD1	2.14	0.47
5:E:140:ARG:CG	5:E:140:ARG:O	2.62	0.47
1:A:381:C:H2'	1:A:382:A:C8	2.49	0.47
1:A:577:G:H1'	1:A:816:A:C4	2.49	0.47
1:A:574:A:H1'	1:A:883:C:O4'	2.15	0.47
2:B:17:PHE:HB2	2:B:44:LEU:HD21	1.96	0.47
1:A:575:G:C5	1:A:881:G:C2	3.02	0.47
1:A:451:A:N7	1:A:481:G:C6	2.82	0.47
7:G:77:SER:HA	7:G:85:TYR:O	2.14	0.47
1:A:879:C:O2'	1:A:880:C:H5'	2.15	0.47
1:A:407:G:C2	1:A:436:C:C2	3.02	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:K:27:ASN:HA	11:K:55:LYS:O	2.15	0.47
1:A:88:C:H2'	1:A:89:U:O4'	2.15	0.47
5:E:76:ILE:HG12	5:E:142:LEU:HD22	1.96	0.47
9:I:28:VAL:HG13	9:I:63:ILE:HG22	1.96	0.47
1:A:1291:G:C6	1:A:1292:U:C4	3.02	0.47
1:A:783:C:H2'	1:A:784:C:H6	1.80	0.47
1:A:54:C:N4	1:A:353:A:OP2	2.45	0.47
1:A:627:G:O2'	1:A:628:G:H5'	2.15	0.47
18:R:22:VAL:O	18:R:22:VAL:HG12	2.14	0.47
8:H:97:VAL:CG1	8:H:98:LYS:N	2.76	0.47
10:J:40:LEU:HB2	10:J:69:ASN:CB	2.42	0.47
1:A:814:A:C8	1:A:816:A:C8	3.03	0.47
5:E:53:LEU:H	5:E:53:LEU:CD2	2.27	0.47
5:E:72:GLN:O	5:E:73:ASN:CB	2.61	0.47
1:A:376:G:C2'	1:A:377:G:O5'	2.62	0.47
4:D:109:GLY:C	4:D:111:ALA:N	2.67	0.47
1:A:90:C:N3	1:A:91:C:C4	2.82	0.47
1:A:878:G:C5'	8:H:89:PRO:HG2	2.44	0.47
6:F:26:ILE:C	6:F:30:LEU:HD12	2.35	0.47
6:F:5:GLU:OE1	6:F:62:TRP:HZ2	1.96	0.47
3:C:23:TYR:CD1	10:J:10:GLY:HA2	2.49	0.47
1:A:565:U:C6	1:A:566:G:C8	3.03	0.47
18:R:36:ASN:HB2	18:R:39:VAL:CG2	2.45	0.47
1:A:240:C:H2'	1:A:241:C:C6	2.49	0.47
4:D:23:GLY:HA3	4:D:112:VAL:CG2	2.45	0.47
1:A:743:U:O2'	1:A:744:C:H5'	2.13	0.47
1:A:1223:C:P	19:S:78:ARG:HH21	2.37	0.47
1:A:977:A:H2'	1:A:978:A:C5'	2.45	0.47
2:B:193:ASP:O	2:B:196:LEU:HG	2.15	0.47
1:A:130:A:C8	17:Q:63:ARG:HG3	2.50	0.47
1:A:448:A:H2'	1:A:449:C:H6	1.78	0.47
1:A:1531:A:O5'	1:A:1531:A:H8	1.96	0.47
1:A:618:C:N4	1:A:621:A:N7	2.63	0.47
15:O:29:VAL:O	15:O:30:ALA:C	2.51	0.47
12:L:21:SER:C	12:L:23:VAL:H	2.16	0.47
8:H:118:VAL:O	8:H:118:VAL:HG12	2.14	0.47
8:H:50:ARG:CD	8:H:50:ARG:N	2.77	0.47
1:A:464:G:O6	1:A:466:G:H5'	2.14	0.47
1:A:1169:A:N6	1:A:1170:A:N1	2.62	0.47
7:G:31:MET:CG	7:G:35:LYS:H	2.27	0.47
12:L:54:VAL:HG12	12:L:55:ALA:N	2.29	0.47
1:A:757:U:O2'	1:A:879:C:H1'	2.15	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:88:VAL:HG13	5:E:97:GLY:CA	2.44	0.47
4:D:166:LYS:O	4:D:166:LYS:HD2	2.14	0.47
1:A:365:U:O2	1:A:365:U:O4'	2.30	0.47
1:A:953:G:C6	1:A:1229:A:C6	3.02	0.47
1:A:376:G:C2	1:A:377:G:C8	3.03	0.47
1:A:376:G:P	16:P:67:THR:HG21	2.54	0.47
3:C:148:GLY:HA3	3:C:203:PHE:HB3	1.97	0.47
1:A:409:G:C2'	1:A:410:G:O5'	2.62	0.47
1:A:428:G:C8	1:A:430:A:C4	3.02	0.47
1:A:78:G:N1	1:A:92:G:C6	2.83	0.47
1:A:1107:C:N3	1:A:1108:G:C8	2.83	0.47
3:C:15:THR:HG21	3:C:181:ASN:CA	2.44	0.47
14:N:27:CYS:SG	14:N:29:ARG:HB2	2.54	0.47
1:A:722:A:H2'	1:A:724:G:C8	2.49	0.47
1:A:841:U:H4'	1:A:842:C:C5	2.49	0.47
1:A:1194:U:H4'	5:E:22:GLY:O	2.13	0.47
1:A:236:G:OP1	17:Q:40:LYS:NZ	2.48	0.47
4:D:38:TYR:CZ	4:D:45:GLN:NE2	2.80	0.47
1:A:560:U:C5'	1:A:566:G:N2	2.77	0.47
1:A:1126:U:H2'	1:A:1127:G:H8	1.74	0.47
7:G:50:ILE:HB	7:G:58:PRO:HG3	1.96	0.47
8:H:119:LEU:HD12	8:H:124:ALA:HA	1.96	0.47
1:A:993:G:N3	1:A:993:G:H2'	2.30	0.47
1:A:575:G:C5	1:A:881:G:N2	2.83	0.47
1:A:165:C:H2'	1:A:166:G:O4'	2.14	0.47
1:A:1438:G:O2'	1:A:1439:C:H5'	2.14	0.47
1:A:1403:C:O5'	1:A:1403:C:H6	1.98	0.47
4:D:176:LEU:HG	4:D:178:VAL:HG22	1.96	0.47
9:I:8:GLY:HA3	9:I:76:ALA:O	2.13	0.47
1:A:1272:G:H2'	1:A:1273:G:C8	2.50	0.47
1:A:385:C:H6	1:A:385:C:H3'	1.78	0.47
1:A:945:G:C6	1:A:1337:G:C6	3.03	0.47
1:A:979:C:C5	1:A:980:C:C6	3.03	0.47
1:A:1308:U:OP1	13:M:97:PRO:HA	2.15	0.47
1:A:403:C:O2'	1:A:404:U:H5'	2.14	0.47
1:A:408:A:C2	1:A:409:G:C4	3.03	0.47
1:A:35:G:O2'	12:L:117:SER:O	2.28	0.47
4:D:63:LYS:HD2	4:D:198:VAL:CG2	2.44	0.47
7:G:9:VAL:HG12	7:G:10:ARG:H	1.79	0.47
1:A:749:C:H2'	1:A:749:C:O2	2.14	0.47
1:A:101:A:C6	1:A:102:G:C5	3.02	0.47
8:H:51:VAL:HG21	8:H:60:ARG:HG2	1.94	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1056:U:H5	1:A:1200:C:N4	2.13	0.47
3:C:175:LEU:CD1	3:C:201:TYR:HE2	2.27	0.47
1:A:562:C:N3	1:A:884:U:C5	2.83	0.47
1:A:479:C:C2	1:A:480:U:C6	3.03	0.47
12:L:19:LYS:HD3	12:L:19:LYS:N	2.30	0.47
1:A:744:C:C6	1:A:744:C:H3'	2.49	0.47
1:A:1400:C:O5'	1:A:1400:C:H6	1.98	0.47
1:A:373:A:C2	1:A:482:A:N6	2.82	0.47
2:B:100:GLY:O	2:B:104:ASN:N	2.47	0.47
10:J:33:GLN:HB2	10:J:75:ILE:CD1	2.45	0.47
1:A:1292:U:N3	1:A:1293:G:N7	2.63	0.47
2:B:27:LYS:CG	2:B:194:PRO:HD2	2.41	0.47
1:A:1530:G:H2'	1:A:1531:A:C8	2.50	0.47
15:O:18:PHE:O	15:O:19:PRO:O	2.32	0.47
6:F:50:TYR:CE1	18:R:74:ARG:O	2.68	0.47
1:A:1261:A:N7	1:A:1262:C:C5	2.83	0.47
1:A:247:G:C5	1:A:248:C:C5	3.03	0.47
3:C:125:GLU:OE2	3:C:189:ALA:HA	2.14	0.47
1:A:837:G:H1	1:A:849:C:H42	1.63	0.47
16:P:1:MET:HG2	16:P:2:VAL:O	2.14	0.47
1:A:84:U:H5''	1:A:85:U:OP2	2.15	0.47
10:J:55:LYS:O	10:J:56:HIS:CG	2.68	0.47
1:A:376:G:C4	1:A:389:A:N1	2.83	0.47
1:A:1076:C:C2'	1:A:1077:G:H5'	2.45	0.47
1:A:1080:A:C5'	1:A:1081:G:OP2	2.63	0.47
1:A:1192:C:OP2	3:C:4:LYS:NZ	2.36	0.47
6:F:30:LEU:HD11	6:F:63:TYR:CE1	2.50	0.47
6:F:50:TYR:HE1	18:R:74:ARG:O	1.97	0.47
9:I:48:GLU:N	9:I:49:PRO:CD	2.78	0.47
11:K:111:ASP:O	11:K:112:THR:C	2.53	0.47
1:A:1493:A:H4'	1:A:1494:G:OP2	2.15	0.47
10:J:48:THR:CG2	10:J:62:HIS:ND1	2.75	0.46
1:A:1072:G:O6	1:A:1104:G:C6	2.68	0.46
18:R:37:VAL:HG23	18:R:38:GLU:N	2.30	0.46
8:H:11:THR:O	8:H:12:ARG:C	2.52	0.46
1:A:1116:C:N3	1:A:1117:G:C8	2.83	0.46
1:A:855:G:C6	1:A:856:C:C4	3.03	0.46
4:D:102:ASP:OD2	4:D:136:PRO:HB3	2.15	0.46
1:A:236:G:C6	1:A:237:C:C4	3.03	0.46
1:A:1090:U:H2'	1:A:1091:U:H6	1.80	0.46
14:N:26:ARG:HD2	14:N:47:LEU:HD11	1.96	0.46
1:A:114:U:H2'	1:A:115:G:H8	1.76	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1059:C:O2	10:J:53:PRO:HG2	2.15	0.46
1:A:464:G:C6	1:A:466:G:H5'	2.50	0.46
1:A:654:G:H1'	1:A:753:A:N1	2.31	0.46
8:H:107:LEU:N	8:H:107:LEU:HD23	2.30	0.46
20:T:24:LEU:H	20:T:24:LEU:HD22	1.80	0.46
1:A:398:C:H6	1:A:398:C:O5'	1.98	0.46
3:C:182:ILE:CG1	3:C:203:PHE:HD1	2.27	0.46
1:A:394:G:C2	1:A:395:C:C5	3.03	0.46
1:A:1070:U:O2	1:A:1106:G:C2	2.68	0.46
1:A:556:C:H2'	1:A:557:G:C5'	2.44	0.46
1:A:102:G:C4	1:A:103:C:C5	3.02	0.46
1:A:1143:G:H8	1:A:1143:G:O5'	1.99	0.46
1:A:624:C:H4'	16:P:10:GLY:HA2	1.97	0.46
9:I:58:ARG:O	9:I:58:ARG:HG2	2.15	0.46
1:A:1288:A:C6	1:A:1289:A:C5	3.03	0.46
2:B:106:LYS:HE2	2:B:110:GLN:HE21	1.76	0.46
3:C:30:ARG:O	3:C:34:LEU:HB2	2.15	0.46
10:J:98:ILE:O	10:J:99:LYS:HD3	2.15	0.46
1:A:1160:G:C6	1:A:1181:G:O6	2.68	0.46
2:B:15:VAL:H	2:B:16:HIS:CE1	2.33	0.46
3:C:108:ASN:HB3	3:C:111:LEU:HD12	1.97	0.46
1:A:419:C:C2'	1:A:420:U:H5'	2.45	0.46
6:F:28:ARG:O	6:F:32:ASN:N	2.48	0.46
1:A:645:C:H2'	1:A:646:U:O4'	2.14	0.46
22:V:6182:A:C6	22:V:6195:G:N1	2.84	0.46
1:A:37:U:H2'	1:A:38:G:C8	2.49	0.46
1:A:692:U:O4	11:K:52:GLY:C	2.54	0.46
1:A:1252:A:H61	1:A:1285:A:N6	2.11	0.46
1:A:1353:G:H1	1:A:1369:C:N4	2.13	0.46
2:B:83:MET:CE	2:B:234:PRO:HG2	2.45	0.46
1:A:557:G:H2'	1:A:558:G:O4'	2.14	0.46
7:G:15:ASP:OD1	7:G:18:TYR:HD1	1.98	0.46
2:B:158:LEU:N	2:B:158:LEU:HD12	2.30	0.46
8:H:68:ARG:HG2	8:H:69:ARG:H	1.81	0.46
1:A:789:U:O5'	1:A:789:U:H6	1.97	0.46
1:A:373:A:C8	1:A:482:A:C8	3.03	0.46
12:L:25:ALA:O	12:L:26:LEU:HB2	2.15	0.46
13:M:56:LEU:O	13:M:59:TYR:HB3	2.16	0.46
13:M:10:PRO:CG	13:M:22:ILE:HD11	2.45	0.46
1:A:819:A:N6	1:A:1529:G:C5	2.83	0.46
13:M:71:ARG:O	13:M:74:VAL:HB	2.15	0.46
11:K:13:GLN:HG3	11:K:75:TYR:O	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1412:C:H2'	1:A:1413:A:C8	2.51	0.46
6:F:97:PHE:HD2	18:R:31:LEU:HD21	1.80	0.46
1:A:142:G:C2	1:A:143:A:C5	3.03	0.46
1:A:946:A:H61	1:A:1235:U:H3	1.63	0.46
16:P:5:ARG:CB	16:P:67:THR:OG1	2.63	0.46
1:A:1238:A:N3	1:A:1238:A:H2'	2.30	0.46
9:I:58:ARG:NH2	9:I:59:PHE:HE1	2.14	0.46
1:A:186(D):G:N1	1:A:186(E):C:C4	2.84	0.46
1:A:117:G:H2'	1:A:118:U:O4'	2.16	0.46
4:D:135:LEU:HD13	4:D:135:LEU:N	2.30	0.46
1:A:1244:C:H2'	1:A:1245:A:H8	1.80	0.46
1:A:757:U:H2'	1:A:758:G:O4'	2.15	0.46
5:E:72:GLN:O	5:E:73:ASN:HB3	2.16	0.46
1:A:645:C:C2'	1:A:646:U:H5'	2.45	0.46
6:F:41:GLU:O	6:F:43:LEU:N	2.49	0.46
2:B:91:PRO:CB	2:B:154:LEU:HD11	2.46	0.46
2:B:91:PRO:HB3	2:B:154:LEU:HD11	1.98	0.46
1:A:198:G:O2'	1:A:199:G:H5'	2.16	0.46
1:A:1279:A:O2'	1:A:1282:C:N4	2.48	0.46
19:S:60:VAL:HG21	19:S:74:PHE:HB3	1.97	0.46
1:A:670:G:N2	1:A:736:C:O2	2.47	0.46
8:H:137:VAL:HG12	8:H:138:TRP:N	2.31	0.46
10:J:34:VAL:HG22	10:J:74:ILE:HG22	1.97	0.46
1:A:41:G:O6	1:A:401:C:N3	2.49	0.46
1:A:976:G:C8	1:A:1358:U:C2'	2.97	0.46
1:A:1286:A:C8	1:A:1288:A:OP1	2.69	0.46
1:A:300:A:C8	1:A:300:A:C3'	2.98	0.46
1:A:160:A:N7	1:A:161:A:C5	2.84	0.46
1:A:1508:G:H2'	1:A:1509:C:C6	2.51	0.46
12:L:88:ARG:NH1	12:L:90:LYS:HD3	2.31	0.46
19:S:52:TYR:CE1	19:S:56:GLN:HA	2.51	0.46
10:J:56:HIS:O	10:J:58:ASP:N	2.46	0.46
10:J:58:ASP:C	10:J:60:ARG:N	2.68	0.46
1:A:974:A:OP2	14:N:41:ARG:NH1	2.49	0.46
1:A:671:G:C4	1:A:672:U:C6	3.03	0.46
20:T:73:HIS:CD2	20:T:74:LYS:H	2.34	0.46
12:L:53:LYS:N	12:L:53:LYS:HD2	2.31	0.46
11:K:59:TYR:O	11:K:62:GLN:HB3	2.16	0.46
1:A:1372:U:C5	1:A:1373:G:C5	3.03	0.46
19:S:40:ILE:CD1	19:S:62:ILE:HD11	2.46	0.46
1:A:1330:U:O4	1:A:1331:G:C2	2.69	0.46
1:A:104:G:C2	1:A:105:G:N7	2.84	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1054:C:H6	1:A:1196:U:O2	1.99	0.46
1:A:1054:C:O2'	1:A:1055:A:H5''	2.15	0.46
4:D:8:VAL:O	4:D:10:ARG:N	2.48	0.46
1:A:1298:C:H4'	1:A:1299:A:C4	2.50	0.46
1:A:643:C:H5'	8:H:31:PHE:CD1	2.51	0.46
1:A:1501:C:C5	1:A:1504:G:C4	3.04	0.46
1:A:697:U:H2'	1:A:698:G:H5'	1.98	0.46
1:A:450:G:C8	1:A:481:G:C6	3.04	0.46
16:P:5:ARG:HB2	16:P:67:THR:HG1	1.80	0.46
4:D:3:ARG:O	4:D:5:ILE:N	2.49	0.46
1:A:392:G:C4	1:A:393:A:N7	2.84	0.46
9:I:58:ARG:NH2	9:I:59:PHE:CE1	2.83	0.46
1:A:593:G:C2	1:A:594:G:C4	3.03	0.46
13:M:70:LEU:C	13:M:70:LEU:HD23	2.36	0.46
1:A:109:A:N6	1:A:326:G:C6	2.83	0.46
20:T:86:ARG:O	20:T:90:GLN:HG3	2.16	0.46
19:S:11:VAL:HG23	19:S:38:SER:HB2	1.97	0.46
14:N:4:LYS:O	14:N:7:ILE:HG13	2.16	0.46
4:D:88:VAL:HG13	5:E:97:GLY:HA3	1.96	0.46
15:O:17:ARG:NH1	15:O:77:ARG:HH12	2.13	0.46
1:A:195:A:C5	1:A:196:A:N1	2.84	0.46
5:E:60:TYR:C	5:E:60:TYR:CD1	2.88	0.46
1:A:1461:G:O5'	1:A:1461:G:H8	1.98	0.46
4:D:190:ASP:O	4:D:194:LEU:HD23	2.15	0.46
16:P:3:LYS:O	16:P:21:VAL:HA	2.16	0.46
20:T:22:ARG:O	20:T:26:ASN:ND2	2.49	0.46
5:E:13:ILE:HA	5:E:29:GLY:O	2.15	0.46
1:A:194:C:O2'	20:T:68:LYS:HD3	2.15	0.46
1:A:1150:U:H5''	1:A:1151:A:OP2	2.15	0.46
1:A:1347:G:C2	1:A:1373:G:C5	3.04	0.46
19:S:61:TYR:CG	19:S:62:ILE:N	2.82	0.46
19:S:66:MET:HB3	19:S:74:PHE:CZ	2.51	0.46
15:O:39:LEU:HA	15:O:39:LEU:HD23	1.80	0.46
13:M:3:ARG:HA	13:M:9:ILE:HG12	1.97	0.46
4:D:4:TYR:OH	4:D:66:ARG:HG2	2.15	0.46
1:A:434:U:H2'	1:A:435:C:C6	2.50	0.46
1:A:1441:G:O5'	1:A:1441:G:H8	1.99	0.46
19:S:29:ARG:HD2	19:S:30:LEU:N	2.30	0.46
1:A:1311:G:H1	1:A:1326:C:N4	2.13	0.46
1:A:638:G:C6	1:A:639:G:N7	2.83	0.46
18:R:53:ARG:O	18:R:55:ARG:N	2.49	0.46
4:D:76:ARG:NH2	4:D:80:GLU:OE1	2.49	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:O:25:THR:OG1	15:O:26:GLU:N	2.49	0.46
7:G:106:GLN:O	7:G:110:GLN:HG3	2.16	0.46
1:A:950:U:O2'	1:A:951:G:H5'	2.15	0.46
21:U:14:TRP:CE3	21:U:15:ARG:HG2	2.50	0.46
22:V:6191:A:C2	22:V:6192:G:C4	3.04	0.46
7:G:115:ARG:O	7:G:119:ARG:HG3	2.16	0.46
4:D:119:GLN:O	4:D:123:HIS:CD2	2.69	0.46
4:D:108:LEU:HB3	4:D:110:PHE:CD2	2.49	0.46
19:S:40:ILE:HG13	19:S:69:HIS:O	2.16	0.46
18:R:35:ARG:O	18:R:37:VAL:N	2.45	0.46
1:A:1309:G:N2	1:A:1329:A:H1'	2.30	0.46
2:B:63:MET:C	2:B:65:GLY:H	2.19	0.46
11:K:32:ILE:HD11	11:K:68:ALA:HB1	1.97	0.46
1:A:649:G:N3	1:A:650:G:C8	2.83	0.46
20:T:93:GLU:O	20:T:93:GLU:HG2	2.15	0.46
1:A:1511:G:H2'	1:A:1512:U:O4'	2.16	0.46
1:A:433:C:C6	1:A:434:U:H5	2.34	0.46
19:S:18:LYS:HG2	19:S:31:ILE:HD13	1.98	0.46
5:E:38:GLN:HG2	5:E:38:GLN:O	2.15	0.46
12:L:89:VAL:O	12:L:90:LYS:C	2.52	0.46
1:A:360:A:H2'	1:A:361:G:C8	2.51	0.46
15:O:42:HIS:CD2	15:O:43:LEU:HD23	2.51	0.46
1:A:1221:G:OP1	1:A:1321:C:N3	2.49	0.45
1:A:390:C:O3'	16:P:28:ARG:NH2	2.47	0.45
4:D:110:PHE:HE1	4:D:148:VAL:HG23	1.81	0.45
3:C:91:LEU:HD12	3:C:101:LEU:HD21	1.99	0.45
12:L:68:TYR:HB3	12:L:98:HIS:CD2	2.52	0.45
1:A:130:A:OP2	1:A:189:U:C2	2.69	0.45
1:A:319:G:H2'	1:A:320:C:O4'	2.16	0.45
1:A:175:C:H4'	20:T:25:ARG:HH11	1.81	0.45
1:A:707:C:O2'	1:A:708:C:H5'	2.16	0.45
18:R:44:LEU:HA	18:R:49:LYS:O	2.15	0.45
1:A:1183:A:H5''	1:A:1184:G:OP2	2.15	0.45
9:I:45:ALA:O	9:I:48:GLU:HB2	2.16	0.45
1:A:1296:C:C5	1:A:1297:C:C5	3.04	0.45
1:A:826:C:C5'	1:A:827:U:OP2	2.65	0.45
1:A:932:C:H2'	1:A:933:G:H8	1.81	0.45
1:A:451:A:C8	1:A:481:G:C6	3.04	0.45
1:A:1031:G:H2'	1:A:103(A):A:O4'	2.16	0.45
1:A:1489:G:C6	1:A:1490:C:N4	2.85	0.45
1:A:81:G:C5	1:A:82:U:C4	3.05	0.45
13:M:94:ARG:NH2	19:S:80:TYR:HE2	2.15	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:492:G:C4	1:A:493:G:C8	3.05	0.45
3:C:172:ARG:HE	3:C:174:PRO:HG2	1.81	0.45
3:C:181:ASN:HB3	3:C:205:GLY:HA3	1.98	0.45
4:D:152:SER:O	4:D:153:ARG:C	2.54	0.45
1:A:783:C:N4	1:A:799:G:H1	2.14	0.45
1:A:875:C:O2'	8:H:14:ARG:NH1	2.45	0.45
1:A:302:G:N3	1:A:556:C:H4'	2.32	0.45
16:P:10:GLY:O	16:P:11:SER:O	2.35	0.45
1:A:543:C:C2	1:A:544:G:C8	3.05	0.45
4:D:4:TYR:CE1	4:D:11:LEU:HD11	2.50	0.45
17:Q:51:TYR:CD1	17:Q:73:VAL:HG11	2.51	0.45
10:J:6:ILE:HG22	10:J:98:ILE:HG12	1.98	0.45
1:A:1182:G:H4'	1:A:1183:A:C5'	2.45	0.45
20:T:84:LEU:HD13	20:T:84:LEU:C	2.36	0.45
16:P:47:ASP:C	16:P:49:LEU:H	2.19	0.45
16:P:50:LYS:HD3	16:P:51:VAL:N	2.32	0.45
1:A:646:U:C4	1:A:647:C:N4	2.84	0.45
1:A:292:G:C5	1:A:293:G:H1'	2.52	0.45
1:A:961:U:OP2	1:A:1223:C:C1'	2.64	0.45
1:A:376:G:C2	1:A:389:A:C2	3.03	0.45
1:A:35:G:C6	1:A:36:C:N4	2.84	0.45
5:E:80:ILE:HD12	5:E:138:ALA:HB1	1.99	0.45
4:D:61:LYS:HA	4:D:203:VAL:CG2	2.46	0.45
8:H:92:ARG:CB	8:H:94:TYR:HE2	2.21	0.45
1:A:15:G:H2'	1:A:16:A:C8	2.51	0.45
1:A:1347:G:H22	1:A:1373:G:C2'	2.27	0.45
1:A:1376:U:O2'	1:A:1377:A:H5'	2.16	0.45
8:H:25:ASP:N	8:H:25:ASP:OD1	2.49	0.45
1:A:922:G:H5''	1:A:923:A:OP2	2.16	0.45
7:G:50:ILE:O	7:G:54:THR:O	2.34	0.45
1:A:1378:C:H5	1:A:1379:G:C8	2.35	0.45
1:A:123:C:H5''	1:A:311:C:O2'	2.16	0.45
1:A:247:G:C4	1:A:248:C:C5	3.04	0.45
3:C:111:LEU:HD11	3:C:144:SER:OG	2.15	0.45
1:A:662:G:C2	1:A:744:C:O2	2.70	0.45
1:A:608:A:C4	1:A:609:A:C8	3.03	0.45
2:B:157:ARG:O	2:B:159:PRO:HD3	2.15	0.45
1:A:969:A:C2'	1:A:970:C:H5'	2.46	0.45
16:P:4:ILE:HA	16:P:20:VAL:O	2.17	0.45
1:A:404:U:C2	1:A:405:U:C5	3.05	0.45
4:D:111:ALA:HB1	4:D:116:GLN:CG	2.47	0.45
1:A:1067:A:N3	1:A:1068:G:H1'	2.31	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:158:ILE:HG22	4:D:159:ARG:N	2.29	0.45
1:A:1367:C:C2	1:A:1368:G:C8	3.04	0.45
1:A:1374:A:C4	1:A:1375:A:C8	3.05	0.45
6:F:5:GLU:OE1	6:F:62:TRP:CZ2	2.70	0.45
1:A:1237:C:C5	1:A:1336:C:N3	2.85	0.45
18:R:88:LYS:HG3	18:R:88:LYS:OXT	2.15	0.45
16:P:8:ARG:O	16:P:9:PHE:HD2	1.95	0.45
1:A:1118:C:O4'	1:A:1179:A:C4	2.69	0.45
17:Q:29:HIS:HA	17:Q:30:PRO:HD2	1.64	0.45
1:A:939:G:C2	1:A:940:C:C4	3.04	0.45
11:K:101:SER:OG	11:K:102:GLY:N	2.48	0.45
1:A:1038:C:H2'	1:A:1039:C:H6	1.81	0.45
10:J:26:ALA:HB1	10:J:84:GLN:HG2	1.99	0.45
1:A:1455:G:H2'	1:A:1459:C:C6	2.50	0.45
1:A:1407:C:H6	1:A:1407:C:O5'	1.99	0.45
2:B:221:LEU:HD22	2:B:221:LEU:HA	1.86	0.45
6:F:42:GLU:HG2	6:F:42:GLU:O	2.16	0.45
10:J:49:VAL:HG23	14:N:34:TYR:OH	2.16	0.45
14:N:32:SER:HB3	14:N:41:ARG:HG2	1.99	0.45
1:A:376:G:O3'	16:P:5:ARG:HD2	2.16	0.45
1:A:404:U:H2'	1:A:405:U:C6	2.48	0.45
4:D:106:TYR:C	4:D:109:GLY:H	2.20	0.45
1:A:36:C:N4	1:A:37:U:C4	2.85	0.45
1:A:327:A:C6	1:A:329:A:C5	3.04	0.45
1:A:328:C:H4'	1:A:329:A:C5'	2.46	0.45
5:E:65:ASN:O	5:E:66:MET:HG3	2.17	0.45
1:A:191(G):G:C5	1:A:192:U:C5	3.04	0.45
1:A:15:G:N3	1:A:16:A:C8	2.85	0.45
9:I:16:ARG:HB2	9:I:64:THR:HB	1.99	0.45
1:A:321:A:C2	1:A:333:G:C2	3.05	0.45
8:H:86:ILE:HG22	8:H:93:VAL:HG21	1.98	0.45
1:A:657:G:O2'	1:A:658:G:H5'	2.16	0.45
1:A:527:G:H2'	1:A:528:C:H5'	1.99	0.45
8:H:64:LYS:CG	8:H:79:VAL:HG21	2.45	0.45
1:A:1413:A:C6	1:A:1414:U:C4	3.04	0.45
7:G:16:LEU:O	7:G:17:VAL:HG23	2.17	0.45
7:G:54:THR:C	7:G:56:GLN:H	2.20	0.45
16:P:13:HIS:C	16:P:15:PRO:HD3	2.37	0.45
7:G:35:LYS:O	7:G:38:LEU:N	2.49	0.45
7:G:80:VAL:C	7:G:82:GLY:H	2.19	0.45
4:D:201:GLN:O	4:D:205:GLU:HG3	2.16	0.45
13:M:81:LEU:HD22	13:M:86:CYS:SG	2.56	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:946:A:OP2	13:M:114:ARG:NH2	2.49	0.45
1:A:978:A:H5'	1:A:979:C:OP2	2.17	0.45
13:M:105:THR:O	13:M:106:ASN:O	2.35	0.45
13:M:91:ARG:NH1	19:S:81:ARG:HH22	2.06	0.45
1:A:373:A:C2	1:A:374:A:C8	3.04	0.45
1:A:687:A:H1'	1:A:688:G:OP2	2.15	0.45
5:E:78:HIS:HE1	5:E:142:LEU:HA	1.80	0.45
1:A:1074:G:N3	1:A:1102:A:C2	2.84	0.45
16:P:72:ARG:HD3	16:P:73:LEU:HD21	1.99	0.45
4:D:72:GLU:O	4:D:72:GLU:OE1	2.34	0.45
1:A:719:C:O2'	18:R:49:LYS:HB3	2.17	0.45
7:G:27:ILE:HD12	7:G:40:ALA:HA	1.99	0.45
1:A:1379:G:C6	1:A:1380:U:O4	2.69	0.45
2:B:47:THR:HA	2:B:202:PRO:HG2	1.99	0.45
1:A:505:G:O2'	1:A:506:G:H5'	2.17	0.45
11:K:81:ASP:OD1	11:K:106:LYS:HB3	2.16	0.45
2:B:9:GLU:CD	2:B:9:GLU:C	2.75	0.45
1:A:946:A:C6	1:A:1236:A:C2	3.04	0.45
10:J:49:VAL:CG2	14:N:41:ARG:HB3	2.46	0.45
1:A:375:U:C2'	1:A:376:G:H5'	2.47	0.45
12:L:100:VAL:CG1	12:L:103:VAL:HG23	2.46	0.45
1:A:37:U:P	12:L:122:LYS:HG3	2.57	0.45
1:A:393:A:N3	1:A:394:G:C8	2.85	0.45
1:A:586:C:O2'	1:A:878:G:H4'	2.17	0.45
3:C:205:GLY:O	3:C:206:GLU:HB2	2.17	0.45
1:A:1148:U:H2'	1:A:1149:C:O4'	2.17	0.45
9:I:118:LYS:C	9:I:120:ARG:H	2.20	0.45
1:A:737:A:C4	1:A:738:C:C5	3.05	0.45
1:A:631:G:N2	1:A:632:A:C2	2.84	0.45
4:D:52:SER:C	4:D:54:TYR:N	2.70	0.45
8:H:51:VAL:CG1	8:H:52:ASP:N	2.79	0.45
1:A:706:A:H2'	1:A:707:C:H5'	1.99	0.45
18:R:43:PHE:C	18:R:44:LEU:HD12	2.37	0.45
15:O:27:VAL:O	15:O:28:GLN:C	2.53	0.45
15:O:5:LYS:N	15:O:5:LYS:HD3	2.30	0.45
1:A:927:G:N1	1:A:1391:U:C2	2.85	0.45
7:G:68:ASN:O	7:G:135:VAL:HG13	2.17	0.45
1:A:639:G:O2'	1:A:640:A:H5'	2.16	0.45
1:A:1161:C:H2'	1:A:1162:C:C6	2.52	0.45
10:J:22:LYS:NZ	10:J:88:LEU:HG	2.32	0.45
1:A:1452:C:H1'	1:A:1453:G:N2	2.31	0.45
8:H:29:SER:OG	8:H:32:LYS:HG3	2.17	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:857:C:H2'	1:A:858:G:O4'	2.17	0.45
1:A:948:C:OP1	13:M:107:ALA:HA	2.17	0.45
5:E:81:GLU:HG2	5:E:90:VAL:HG22	1.98	0.45
4:D:119:GLN:O	4:D:123:HIS:HD2	2.00	0.45
4:D:29:PRO:O	4:D:30:LYS:CB	2.64	0.45
1:A:1149:C:H2'	1:A:1150:U:C6	2.52	0.45
9:I:9:ARG:O	9:I:10:ARG:HB2	2.17	0.45
1:A:9:G:OP2	5:E:121:LYS:HG3	2.17	0.45
1:A:750:G:O2'	15:O:21:ASP:HA	2.16	0.45
1:A:1135:U:H4'	1:A:1136:U:C5	2.52	0.45
1:A:236:G:C5	1:A:237:C:C5	3.04	0.45
1:A:1316:G:H2'	1:A:1317:C:H5''	1.99	0.45
4:D:23:GLY:HA3	4:D:112:VAL:HG22	1.98	0.45
1:A:932:C:H2'	1:A:933:G:C8	2.52	0.45
1:A:1186:G:H4'	9:I:110:GLU:OE2	2.16	0.45
15:O:32:LEU:O	15:O:35:ARG:N	2.50	0.45
22:V:6214:C:H2'	22:V:6215:C:C6	2.52	0.45
1:A:8:A:H5'	5:E:120:THR:O	2.17	0.45
1:A:436:C:H2'	1:A:437:U:H6	1.81	0.45
1:A:413:G:H4'	1:A:414:A:H5''	1.98	0.45
4:D:75:PHE:CZ	4:D:93:PHE:CZ	3.05	0.45
1:A:391:G:C5	1:A:392:G:C8	3.05	0.45
1:A:1074:G:H1'	2:B:104:ASN:HD22	1.82	0.45
9:I:28:VAL:HG22	9:I:63:ILE:H	1.82	0.45
4:D:126:ILE:CG2	4:D:127:THR:H	2.22	0.45
5:E:126:ARG:HG2	5:E:126:ARG:NH1	2.24	0.45
6:F:63:TYR:H	6:F:63:TYR:HD2	1.59	0.45
1:A:625:G:O2'	1:A:626:U:H5'	2.17	0.45
3:C:59:ARG:HG2	3:C:63:ASN:O	2.17	0.45
1:A:976:G:H8	1:A:1358:U:C2'	2.30	0.45
8:H:114:THR:OG1	8:H:119:LEU:HG	2.17	0.45
1:A:806:C:O2	1:A:807:A:C8	2.69	0.45
1:A:1327:C:H2'	1:A:1328:C:C6	2.51	0.45
1:A:356:A:H1'	1:A:368:U:O2'	2.17	0.45
1:A:166:G:O2'	1:A:167:G:H5'	2.17	0.45
19:S:33:THR:CG2	19:S:51:VAL:HA	2.47	0.45
1:A:1241:G:C2	1:A:1242:C:C4	3.04	0.45
9:I:5:TYR:CG	9:I:6:GLY:N	2.85	0.45
1:A:642:A:N3	8:H:113:SER:OG	2.32	0.45
7:G:41:ARG:O	7:G:45:ASP:N	2.40	0.45
5:E:26:PHE:CD1	5:E:26:PHE:N	2.84	0.45
1:A:973:G:OP1	10:J:57:LYS:NZ	2.50	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:31:CYS:O	4:D:32:ALA:HB3	2.17	0.45
13:M:37:THR:OG1	13:M:56:LEU:HD23	2.17	0.45
5:E:136:MET:O	5:E:139:LEU:N	2.50	0.45
14:N:24:CYS:SG	14:N:27:CYS:SG	3.15	0.45
1:A:1301:U:H3'	1:A:1302:U:C5'	2.46	0.45
4:D:92:VAL:O	4:D:96:LEU:HB2	2.17	0.45
17:Q:85:VAL:O	17:Q:89:LEU:HG	2.17	0.45
1:A:913:A:C2'	1:A:914:A:OP2	2.64	0.45
1:A:224:C:H2'	1:A:225:C:H6	1.81	0.45
12:L:58:ARG:HA	12:L:64:GLU:HG2	1.99	0.45
1:A:577:G:H1'	1:A:816:A:N3	2.32	0.45
1:A:497:U:O2	1:A:497:U:C2'	2.65	0.45
8:H:68:ARG:HG2	8:H:69:ARG:N	2.32	0.45
1:A:378:G:C6	1:A:379:C:N4	2.84	0.44
1:A:501:C:H3'	1:A:501:C:H6	1.82	0.44
12:L:82:VAL:CG1	12:L:83:LEU:N	2.80	0.44
16:P:28:ARG:CG	16:P:28:ARG:NH1	2.71	0.44
1:A:1104:G:C2	1:A:1105:A:C5	3.05	0.44
1:A:1369:C:C2'	1:A:1370:G:O4'	2.66	0.44
19:S:39:THR:HG22	19:S:40:ILE:N	2.32	0.44
1:A:556:C:O2'	1:A:557:G:H5'	2.17	0.44
3:C:59:ARG:HH21	3:C:97:LYS:HE2	1.81	0.44
1:A:66:G:C4'	1:A:173:U:C5	2.99	0.44
1:A:236:G:H2'	1:A:237:C:O4'	2.17	0.44
8:H:36:LEU:C	8:H:38:ILE:N	2.69	0.44
12:L:5:THR:O	12:L:9:LEU:HD12	2.18	0.44
3:C:191:THR:C	3:C:193:TYR:H	2.21	0.44
1:A:994:A:O5'	1:A:994:A:H8	2.00	0.44
1:A:563:A:C8	1:A:567:G:H1'	2.51	0.44
2:B:228:GLY:O	2:B:230:VAL:N	2.50	0.44
7:G:36:LYS:HB2	7:G:36:LYS:NZ	2.32	0.44
2:B:189:ASP:N	2:B:189:ASP:OD1	2.50	0.44
2:B:164:VAL:O	2:B:186:ALA:HB1	2.17	0.44
1:A:1226:C:H42	13:M:104:ARG:HD2	1.82	0.44
1:A:1067:A:N3	1:A:1068:G:C1'	2.80	0.44
1:A:1076:C:H2'	1:A:1077:G:H5'	1.99	0.44
1:A:1064:G:N2	1:A:1190:G:H2'	2.22	0.44
1:A:186(G):C:H2'	1:A:187:C:O4'	2.16	0.44
8:H:10:LEU:HD23	8:H:10:LEU:N	2.32	0.44
1:A:832:C:O2'	1:A:833:U:P	2.74	0.44
3:C:59:ARG:CG	3:C:64:VAL:HG22	2.43	0.44
1:A:128:G:O2'	17:Q:3:LYS:HE2	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:649:G:C4	1:A:650:G:C8	3.05	0.44
1:A:512:U:H3	1:A:539:A:H61	1.65	0.44
8:H:50:ARG:H	8:H:50:ARG:HD3	1.81	0.44
1:A:1160:G:O2'	1:A:1161:C:H5'	2.16	0.44
15:O:67:LEU:HD23	15:O:78:TYR:HE1	1.83	0.44
15:O:3:ILE:HG21	15:O:34:LEU:HD23	1.99	0.44
20:T:94:ALA:O	20:T:95:ALA:HB3	2.17	0.44
1:A:407:G:N2	1:A:436:C:C2	2.86	0.44
1:A:1072:G:C6	1:A:1104:G:N1	2.85	0.44
1:A:1251:A:H1'	1:A:1369:C:O2'	2.17	0.44
4:D:128:VAL:HA	4:D:145:GLU:O	2.17	0.44
1:A:1238:A:C5	1:A:1303:C:H1'	2.53	0.44
1:A:949:A:C2	1:A:1233:G:N3	2.85	0.44
12:L:46:LYS:HD3	12:L:47:PRO:HG3	1.99	0.44
1:A:575:G:C8	1:A:881:G:N2	2.86	0.44
13:M:86:CYS:HA	19:S:73:GLU:O	2.17	0.44
9:I:5:TYR:O	9:I:84:ALA:HA	2.18	0.44
6:F:64:GLN:HB2	6:F:64:GLN:HE21	1.60	0.44
1:A:978:A:O2'	1:A:1322:C:N3	2.48	0.44
4:D:104:VAL:C	4:D:106:TYR:N	2.70	0.44
1:A:430:A:OP1	4:D:9:CYS:N	2.44	0.44
4:D:19:LEU:O	4:D:31:CYS:SG	2.75	0.44
1:A:1346:A:C2	1:A:1348:U:C4	3.06	0.44
1:A:1292:U:C2	1:A:1293:G:N7	2.86	0.44
1:A:1331:G:H4'	1:A:1331:G:OP1	2.17	0.44
17:Q:85:VAL:O	17:Q:86:GLU:C	2.54	0.44
1:A:401:C:C6	1:A:401:C:C3'	3.00	0.44
1:A:1053:G:C3'	1:A:1054:C:C5'	2.92	0.44
8:H:13:ILE:O	8:H:17:THR:HG23	2.17	0.44
8:H:36:LEU:O	8:H:39:LEU:N	2.50	0.44
1:A:1181:G:N2	1:A:1182:G:N2	2.65	0.44
1:A:577:G:C5	1:A:578:C:C5	3.05	0.44
3:C:186:PHE:CD1	3:C:187:ALA:N	2.85	0.44
1:A:515:G:C2	1:A:537:G:N3	2.86	0.44
1:A:762:C:C2	1:A:763:G:C8	3.06	0.44
10:J:89:ASP:C	10:J:91:PRO:HD3	2.38	0.44
5:E:137:GLU:OE2	5:E:137:GLU:O	2.35	0.44
1:A:131:C:H2'	1:A:132:C:C6	2.53	0.44
1:A:952:U:O2'	1:A:953:G:H5'	2.18	0.44
1:A:1367:C:N3	1:A:1368:G:N7	2.66	0.44
3:C:58:GLU:O	3:C:64:VAL:HA	2.17	0.44
20:T:91:LEU:HD23	20:T:91:LEU:HA	1.67	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:939:G:H1	1:A:1344:C:H42	1.66	0.44
1:A:921:U:H5''	1:A:922:G:OP2	2.18	0.44
1:A:340:U:H2'	1:A:341:C:C6	2.52	0.44
1:A:381:C:C2	1:A:382:A:C8	3.05	0.44
1:A:538:G:OP2	12:L:114:LYS:HB2	2.17	0.44
1:A:380:G:N2	1:A:384:G:C5	2.86	0.44
1:A:1004:A:H2	1:A:1024:G:N3	2.15	0.44
1:A:744:C:C6	1:A:744:C:C3'	3.01	0.44
8:H:69:ARG:HD3	8:H:69:ARG:HA	1.79	0.44
3:C:61:ALA:O	3:C:62:ASP:HB2	2.18	0.44
13:M:116:THR:O	13:M:117:VAL:O	2.36	0.44
5:E:101:ILE:HD11	5:E:119:LEU:CD2	2.23	0.44
1:A:411:A:N6	1:A:413:G:N3	2.66	0.44
1:A:689:C:O2	1:A:689:C:H2'	2.16	0.44
1:A:266:G:C5'	1:A:267:C:C5	2.94	0.44
1:A:68:G:C6	1:A:69:G:C5	3.06	0.44
11:K:21:ILE:HG13	11:K:30:VAL:CG1	2.46	0.44
2:B:20:GLU:HA	2:B:20:GLU:OE1	2.17	0.44
2:B:35:GLU:HG3	2:B:40:HIS:HA	2.00	0.44
1:A:740:U:O2'	1:A:741:G:H5'	2.18	0.44
1:A:744:C:H6	1:A:744:C:O5'	2.01	0.44
15:O:35:ARG:C	15:O:59:MET:HE1	2.38	0.44
1:A:961:U:OP2	1:A:1223:C:H1'	2.17	0.44
1:A:397:A:N6	1:A:548:G:N7	2.66	0.44
1:A:429:U:OP1	4:D:9:CYS:O	2.35	0.44
1:A:367:U:C6	1:A:394:G:C2	3.06	0.44
12:L:44:PRO:CD	12:L:50:ALA:H	2.31	0.44
1:A:708:C:O2'	1:A:709:G:H5'	2.17	0.44
1:A:235:C:H2'	1:A:236:G:H8	1.83	0.44
1:A:942:G:H21	9:I:124:GLN:NE2	2.16	0.44
1:A:650:G:C2	1:A:651:C:C6	3.06	0.44
18:R:74:ARG:H	18:R:74:ARG:HG3	1.49	0.44
7:G:17:VAL:HG12	7:G:18:TYR:CD1	2.52	0.44
1:A:186(E):C:H2'	1:A:186(F):C:C6	2.53	0.44
1:A:936:C:H2'	1:A:937:A:O4'	2.18	0.44
1:A:634:C:H2'	1:A:635:G:H8	1.82	0.44
2:B:17:PHE:CG	2:B:44:LEU:HD21	2.52	0.44
7:G:78:ARG:HG2	7:G:79:ARG:N	2.33	0.44
1:A:451:A:C5	1:A:481:G:C5	3.05	0.44
1:A:1141:C:H2'	1:A:1142:G:H8	1.83	0.44
18:R:23:LYS:C	18:R:25:THR:H	2.20	0.44
7:G:111:ARG:CZ	7:G:122:HIS:HB3	2.48	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:V:6212:U:O2	22:V:6212:U:H2'	2.17	0.44
1:A:960:U:C5	1:A:1225:A:C8	3.06	0.44
1:A:977:A:C2'	1:A:978:A:H5''	2.48	0.44
13:M:91:ARG:NH2	13:M:96:LEU:HB3	2.33	0.44
22:V:6193:U:C5	22:V:6194:C:C5	3.06	0.44
16:P:34:GLU:OE1	16:P:55:ARG:NH1	2.51	0.44
1:A:406:G:OP1	4:D:5:ILE:HG21	2.18	0.44
5:E:129:ILE:O	5:E:132:ALA:HB3	2.18	0.44
12:L:69:ILE:HA	12:L:70:PRO:HD3	1.69	0.44
1:A:1064:G:O4'	1:A:1066:C:C6	2.70	0.44
1:A:130:A:H5''	1:A:190:G:O2'	2.18	0.44
1:A:1201:A:C2'	1:A:1202:G:OP2	2.66	0.44
12:L:43:THR:HA	12:L:44:PRO:HD3	1.72	0.44
1:A:67:C:O2'	1:A:171:A:H1'	2.18	0.44
10:J:27:ALA:HB1	10:J:34:VAL:HG21	2.00	0.44
1:A:356:A:C2'	1:A:357:G:O5'	2.65	0.44
2:B:17:PHE:CE1	2:B:44:LEU:HD11	2.52	0.44
1:A:452:A:C4	1:A:453:A:C8	3.05	0.44
1:A:803:G:H2'	1:A:804:U:O4'	2.17	0.44
2:B:61:LEU:HG	2:B:68:ILE:CG1	2.47	0.44
12:L:44:PRO:CG	12:L:52:ARG:HE	2.29	0.44
18:R:54:ARG:H	18:R:54:ARG:CD	2.24	0.44
4:D:79:PHE:CD2	4:D:79:PHE:C	2.91	0.44
1:A:104:G:N3	1:A:105:G:C8	2.86	0.44
1:A:592:G:H2'	1:A:593:G:H8	1.82	0.44
1:A:450:G:H2'	1:A:451:A:OP1	2.17	0.44
1:A:1060:C:O2	1:A:1198:G:C2	2.71	0.43
13:M:87:TYR:O	13:M:91:ARG:HG2	2.18	0.43
14:N:31:ARG:O	14:N:32:SER:HB2	2.18	0.43
16:P:20:VAL:CG2	16:P:21:VAL:N	2.81	0.43
1:A:1145:C:H4'	1:A:1146:A:C8	2.51	0.43
2:B:72:GLY:HA2	2:B:165:VAL:HG22	2.00	0.43
1:A:925:G:C2	1:A:1392:G:C2	3.06	0.43
20:T:42:GLN:HG3	20:T:43:LEU:N	2.33	0.43
1:A:1386:G:C2	1:A:1387:G:N7	2.86	0.43
1:A:636:U:O2'	1:A:637:G:H5'	2.18	0.43
5:E:104:ALA:O	5:E:107:ARG:HB3	2.17	0.43
1:A:1340:A:C5	1:A:1341:U:C6	3.06	0.43
1:A:551:U:O2'	12:L:85:ARG:HD2	2.17	0.43
1:A:324:G:C2	1:A:327:A:C8	3.07	0.43
1:A:1064:G:H21	1:A:1190:G:C2'	2.24	0.43
1:A:448:A:H2'	1:A:449:C:C6	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:J:3:LYS:N	10:J:75:ILE:HA	2.33	0.43
1:A:1369:C:H2'	1:A:1370:G:C8	2.53	0.43
1:A:1347:G:N7	9:I:107:ARG:HB3	2.31	0.43
1:A:625:G:C6	1:A:626:U:C4	3.06	0.43
3:C:70:VAL:CG1	3:C:71:ALA:N	2.81	0.43
1:A:69:G:H1	1:A:99:C:H42	1.66	0.43
1:A:233:C:C2'	1:A:234:C:H5'	2.48	0.43
1:A:39:G:N1	1:A:40:C:C5	2.86	0.43
6:F:78:GLU:HA	6:F:81:ILE:HD11	2.00	0.43
3:C:73:PRO:O	3:C:76:VAL:HG22	2.18	0.43
12:L:78:GLU:O	12:L:78:GLU:CD	2.57	0.43
1:A:160:A:H4'	1:A:344:A:N1	2.33	0.43
1:A:639:G:H2'	1:A:640:A:C8	2.53	0.43
12:L:64:GLU:OE1	12:L:64:GLU:C	2.57	0.43
1:A:1386:G:N3	1:A:1387:G:C8	2.86	0.43
3:C:137:ALA:O	3:C:141:VAL:HG23	2.18	0.43
1:A:983:A:N3	1:A:983:A:H3'	2.34	0.43
6:F:99:ALA:HB3	18:R:29:PHE:CE1	2.53	0.43
16:P:75:ARG:C	16:P:77:ALA:H	2.21	0.43
1:A:964:A:N3	1:A:969:A:O2'	2.48	0.43
1:A:1060:C:O2'	10:J:56:HIS:CD2	2.71	0.43
22:V:6194:C:C2	22:V:6195:G:C8	3.07	0.43
15:O:45:VAL:HG22	15:O:46:HIS:ND1	2.33	0.43
8:H:26:VAL:O	8:H:27:PRO:C	2.55	0.43
1:A:939:G:H2'	1:A:940:C:H6	1.83	0.43
2:B:22:LYS:N	2:B:22:LYS:HZ3	2.14	0.43
1:A:754:C:H3'	1:A:754:C:O2	2.17	0.43
8:H:40:ALA:O	8:H:41:ARG:C	2.56	0.43
7:G:44:TYR:O	7:G:47:CYS:HB2	2.19	0.43
1:A:349:A:C2'	1:A:350:G:H5'	2.47	0.43
1:A:506:G:C6	1:A:507:C:N4	2.86	0.43
1:A:294:U:N3	1:A:295:C:C5	2.86	0.43
11:K:124:LYS:HE3	11:K:124:LYS:HB2	1.75	0.43
2:B:96:ARG:N	2:B:96:ARG:HD2	2.33	0.43
1:A:1037:C:H2'	1:A:1038:C:C6	2.51	0.43
1:A:167:G:C2'	1:A:168:G:H5'	2.48	0.43
10:J:61:GLU:OE2	14:N:45:ARG:NH1	2.51	0.43
9:I:41:VAL:O	9:I:44:VAL:HG22	2.18	0.43
2:B:21:ARG:O	2:B:21:ARG:HG3	2.18	0.43
20:T:55:ILE:HD12	20:T:55:ILE:HA	1.84	0.43
7:G:108:ALA:O	7:G:119:ARG:HD2	2.18	0.43
1:A:673:G:C4	1:A:734:G:C2	3.07	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:409:G:OP1	4:D:24:GLU:N	2.51	0.43
1:A:692:U:H2'	1:A:694:A:OP2	2.17	0.43
1:A:1368:G:C2	1:A:1369:C:C6	3.06	0.43
9:I:118:LYS:O	9:I:119:ALA:HB3	2.17	0.43
9:I:29:ASN:ND2	9:I:65:VAL:O	2.51	0.43
10:J:13:HIS:CB	10:J:68:HIS:NE2	2.81	0.43
1:A:232:G:H2'	1:A:233:C:O4'	2.18	0.43
11:K:21:ILE:HD13	11:K:84:VAL:HG12	2.00	0.43
1:A:570:G:H2'	1:A:571:U:C6	2.54	0.43
1:A:382:A:O2'	1:A:383:A:H5'	2.19	0.43
16:P:52:ASP:OD1	16:P:54:GLU:HB2	2.17	0.43
1:A:1504:G:H4'	1:A:1505:G:O4'	2.18	0.43
1:A:826:C:H5''	1:A:827:U:OP2	2.18	0.43
1:A:1384:C:H2'	1:A:1385:G:H8	1.83	0.43
6:F:82:ARG:HD2	6:F:82:ARG:HA	1.80	0.43
1:A:1415:G:C6	1:A:1486:G:C6	3.06	0.43
1:A:582:U:OP1	15:O:68:ARG:NH2	2.51	0.43
1:A:792:A:H4'	1:A:793:U:O5'	2.17	0.43
17:Q:14:LYS:HD2	17:Q:14:LYS:H	1.84	0.43
1:A:1225:A:C5'	1:A:1226:C:OP2	2.66	0.43
9:I:114:TYR:HE1	10:J:60:ARG:O	2.00	0.43
1:A:375:U:H4'	16:P:17:TYR:CE2	2.53	0.43
4:D:30:LYS:C	4:D:32:ALA:N	2.70	0.43
1:A:76:G:C6	1:A:77:C:C4	3.07	0.43
1:A:394:G:C2	1:A:395:C:C6	3.07	0.43
5:E:33:VAL:HG12	5:E:34:VAL:N	2.33	0.43
1:A:1084:G:C6	1:A:1085:U:O4	2.71	0.43
19:S:46:GLY:HA2	19:S:61:TYR:OH	2.18	0.43
16:P:71:ARG:O	16:P:73:LEU:N	2.52	0.43
1:A:624:C:H4'	16:P:11:SER:N	2.28	0.43
1:A:939:G:C6	1:A:940:C:N4	2.86	0.43
1:A:922:G:H3'	1:A:923:A:H8	1.84	0.43
1:A:1442:G:C8	1:A:1446:A:C2	3.07	0.43
1:A:1088:G:C4	1:A:1089:G:C8	3.06	0.43
1:A:883:C:C2'	1:A:884:U:H5'	2.48	0.43
1:A:269:C:H2'	1:A:270:A:C8	2.53	0.43
4:D:53:ASP:OD2	5:E:107:ARG:HD2	2.18	0.43
16:P:50:LYS:O	16:P:51:VAL:HG23	2.18	0.43
20:T:37:SER:O	20:T:40:ALA:HB3	2.18	0.43
16:P:82:GLN:HE21	16:P:82:GLN:HB3	1.57	0.43
22:V:6195:G:N2	22:V:6196:A:N3	2.66	0.43
3:C:19:GLU:HA	3:C:54:ARG:NH2	2.32	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:373:A:C4	1:A:482:A:N7	2.86	0.43
1:A:32:A:C2	1:A:33:A:C4	3.06	0.43
1:A:1102:A:C5	1:A:1103:C:C5	3.07	0.43
1:A:1105:A:N3	1:A:1106:G:C8	2.87	0.43
1:A:1293:G:O2'	1:A:1294:G:H5'	2.18	0.43
16:P:39:TYR:HE1	16:P:73:LEU:HD22	1.83	0.43
18:R:26:LEU:CD1	18:R:42:ARG:HD2	2.44	0.43
13:M:3:ARG:HG2	13:M:9:ILE:HD13	2.00	0.43
10:J:45:ARG:HB3	10:J:47:PHE:CE1	2.53	0.43
1:A:522:C:N4	1:A:528:C:N4	2.65	0.43
17:Q:27:PHE:O	17:Q:36:ILE:N	2.48	0.43
3:C:83:ARG:O	3:C:86:VAL:HG22	2.19	0.43
20:T:82:SER:O	20:T:86:ARG:CB	2.65	0.43
8:H:40:ALA:HB2	8:H:45:ILE:HD11	1.99	0.43
12:L:77:GLN:O	12:L:79:HIS:N	2.47	0.43
12:L:5:THR:CG2	12:L:8:GLN:HG3	2.46	0.43
6:F:77:ARG:CZ	6:F:77:ARG:HB3	2.48	0.43
7:G:103:TRP:O	7:G:104:LEU:C	2.57	0.43
11:K:48:ILE:HD13	11:K:48:ILE:N	2.33	0.43
1:A:1479:C:H2'	1:A:1480:G:H8	1.83	0.43
1:A:1403:C:H1'	1:A:1500:A:N1	2.34	0.43
1:A:758:G:H4'	1:A:880:C:H4'	2.00	0.43
15:O:17:ARG:NH1	15:O:77:ARG:NH1	2.67	0.43
1:A:604:G:C2'	1:A:605:U:H5'	2.48	0.43
1:A:1217:C:H5''	14:N:9:LYS:HZ1	1.84	0.43
10:J:48:THR:HG22	10:J:62:HIS:CG	2.54	0.43
10:J:50:ILE:HA	10:J:60:ARG:HB3	2.01	0.43
5:E:102:ALA:HB2	5:E:120:THR:HG21	1.98	0.43
1:A:35:G:C2	1:A:550:G:C2	3.05	0.43
12:L:30:PRO:HD2	12:L:31:PHE:H	1.83	0.43
1:A:91:C:C2	1:A:92:G:N7	2.86	0.43
1:A:1106:G:C2	1:A:1107:C:C5	3.06	0.43
4:D:159:ARG:HA	4:D:162:LEU:HB2	2.00	0.43
1:A:1349:A:OP1	9:I:120:ARG:HB2	2.19	0.43
1:A:659:U:C2'	1:A:660:G:H5'	2.49	0.43
1:A:59:A:H5''	1:A:60:A:C5'	2.48	0.43
1:A:28:G:C6	1:A:29:G:C5	3.07	0.43
3:C:68:VAL:HG12	3:C:70:VAL:CG2	2.49	0.43
1:A:570:G:C6	1:A:873:A:C2	3.07	0.43
1:A:918:A:H2'	1:A:919:A:C8	2.53	0.43
17:Q:27:PHE:HB2	17:Q:28:PRO:CD	2.49	0.43
3:C:35:GLU:O	3:C:39:ILE:HG13	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:638:G:C2	1:A:639:G:C8	3.07	0.43
6:F:16:GLN:HA	6:F:19:LEU:HB3	2.01	0.43
1:A:764:C:H2'	1:A:765:G:O4'	2.18	0.43
6:F:29:ALA:HA	6:F:32:ASN:OD1	2.18	0.43
10:J:78:ASN:O	10:J:82:ILE:HG12	2.18	0.43
1:A:986:A:C4	1:A:1220:G:N2	2.87	0.43
11:K:114:VAL:HA	11:K:115:PRO:HD2	1.73	0.43
1:A:395:C:H2'	1:A:395:C:O2	2.18	0.43
1:A:57:G:C6	1:A:58:C:C4	3.06	0.43
6:F:45:LEU:O	6:F:46:ARG:HG2	2.19	0.43
1:A:1014:A:H5'	19:S:14:HIS:CG	2.52	0.43
1:A:987:G:H2'	1:A:988:G:C8	2.54	0.43
1:A:59:A:H3'	1:A:331:G:H22	1.83	0.43
1:A:626:U:O2	1:A:627:G:C8	2.71	0.43
1:A:913:A:O2'	1:A:914:A:OP2	2.36	0.43
1:A:128:G:H4'	17:Q:3:LYS:HG2	2.00	0.43
10:J:10:GLY:HA3	10:J:16:LEU:HD21	2.00	0.43
17:Q:27:PHE:CE2	17:Q:36:ILE:HG13	2.54	0.43
1:A:638:G:H2'	1:A:639:G:H5'	2.01	0.43
7:G:30:ILE:HD12	7:G:120:ILE:HD11	2.01	0.43
1:A:791:G:C6	1:A:792:A:N7	2.87	0.43
19:S:50:ALA:HB1	19:S:57:HIS:HB3	2.00	0.43
16:P:18:ARG:O	16:P:19:ILE:O	2.37	0.43
1:A:492:G:C6	1:A:493:G:C5	3.06	0.43
1:A:393:A:C4	1:A:394:G:C8	3.07	0.43
20:T:57:ARG:C	20:T:59:ALA:N	2.72	0.43
6:F:60:PHE:CE2	18:R:78:LEU:HD21	2.54	0.43
16:P:71:ARG:C	16:P:73:LEU:N	2.71	0.43
1:A:1430:C:C2	1:A:1471:G:C2	3.06	0.43
6:F:55:ASP:OD1	6:F:56:PRO:HD2	2.19	0.43
1:A:991:U:O2'	1:A:993:G:H8	2.01	0.43
7:G:78:ARG:HH11	7:G:154:TYR:HB3	1.84	0.43
1:A:164:U:H2'	1:A:165:C:C6	2.54	0.43
1:A:892:A:C6	1:A:893:C:C4	3.06	0.43
1:A:583:A:N6	1:A:758:G:H1'	2.34	0.43
1:A:1364:U:H5'	21:U:14:TRP:CZ2	2.54	0.43
6:F:52:ILE:CD1	6:F:87:ARG:HH21	2.31	0.43
1:A:409:G:H5'	4:D:24:GLU:HB3	2.00	0.43
1:A:438:G:O2'	1:A:493:G:C2	2.65	0.43
1:A:36:C:H4'	12:L:121:THR:O	2.19	0.43
13:M:37:THR:OG1	13:M:39:ILE:HG12	2.19	0.43
3:C:57:ILE:HD11	3:C:66:VAL:HG22	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:194:C:H5''	20:T:65:LYS:HG2	2.01	0.43
1:A:448:A:OP2	1:A:485:G:N2	2.49	0.43
1:A:57:G:N7	1:A:58:C:C5	2.87	0.43
17:Q:10:VAL:CG1	17:Q:53:LEU:HA	2.48	0.43
1:A:1119:C:H2'	1:A:1120:G:C8	2.54	0.43
1:A:509:A:C6	1:A:510:A:N1	2.86	0.43
1:A:1357:A:N6	1:A:1358:U:H3	2.17	0.43
8:H:49:GLU:O	8:H:51:VAL:N	2.45	0.43
17:Q:70:ARG:N	17:Q:70:ARG:HD2	2.34	0.43
1:A:909:A:H3'	1:A:910:C:H6	1.83	0.43
1:A:1511:G:C6	1:A:1512:U:C4	3.07	0.43
1:A:1089:G:H1	1:A:1096:C:H42	1.67	0.43
2:B:144:ARG:O	2:B:147:LYS:HB3	2.19	0.43
3:C:17:ASP:HB3	3:C:21:ARG:HH22	1.84	0.43
1:A:20:U:H2'	1:A:21:G:H5'	2.00	0.43
1:A:1162:C:O2'	1:A:1163:C:H5'	2.19	0.43
5:E:79:GLU:CG	5:E:92:LYS:HG3	2.49	0.43
1:A:440:A:C8	1:A:442:C:C5	3.07	0.43
7:G:49:ILE:O	7:G:49:ILE:CG2	2.66	0.43
15:O:3:ILE:HG21	15:O:34:LEU:CD2	2.49	0.43
18:R:65:ILE:O	18:R:69:THR:HG23	2.19	0.43
1:A:1320:C:N4	19:S:36:ARG:HG3	2.12	0.42
1:A:78:G:H2'	1:A:79:G:C8	2.54	0.42
1:A:191(F):U:H2'	1:A:191(G):G:C8	2.54	0.42
15:O:12:ILE:HG21	15:O:22:THR:HG22	2.00	0.42
1:A:1129:C:C1'	1:A:1130:A:OP2	2.62	0.42
1:A:976:G:H8	1:A:1358:U:H2'	1.83	0.42
1:A:922:G:C6	1:A:923:A:N6	2.86	0.42
1:A:542:G:H5'	4:D:41:GLY:HA3	2.00	0.42
18:R:44:LEU:HG	18:R:50:ILE:HD13	2.01	0.42
3:C:73:PRO:C	3:C:75:VAL:H	2.22	0.42
10:J:6:ILE:HG12	10:J:72:VAL:O	2.19	0.42
9:I:95:LYS:HD3	9:I:95:LYS:C	2.39	0.42
2:B:17:PHE:CD1	2:B:44:LEU:HD11	2.54	0.42
10:J:30:SER:HB2	10:J:80:LYS:HG2	2.01	0.42
5:E:107:ARG:HG2	5:E:108:ALA:N	2.34	0.42
1:A:581:G:O2'	1:A:582:U:H5'	2.19	0.42
1:A:347:G:N2	1:A:348:G:H1'	2.34	0.42
1:A:906:G:O5'	1:A:906:G:H8	2.01	0.42
7:G:60:LYS:HA	7:G:60:LYS:HD2	1.78	0.42
4:D:106:TYR:HE1	4:D:113:SER:HA	1.83	0.42
11:K:26:ASN:O	11:K:27:ASN:HB2	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:D:153:ARG:HD3	4:D:181:MET:HE3	2.00	0.42
1:A:1329:A:N7	21:U:7:ARG:NH2	2.63	0.42
1:A:318:G:C2	1:A:319:G:C5	3.08	0.42
1:A:1237:C:C5	1:A:1336:C:C4	3.07	0.42
1:A:616:G:N3	1:A:625:G:C2	2.88	0.42
1:A:197:A:N6	1:A:221:C:H5'	2.35	0.42
1:A:710:G:C4	1:A:711:G:C8	3.07	0.42
21:U:22:ARG:HA	21:U:23:PRO:HD3	1.83	0.42
12:L:7:ASN:HA	12:L:10:VAL:HG23	2.00	0.42
7:G:51:GLN:HA	7:G:54:THR:O	2.18	0.42
5:E:36:ASP:CG	5:E:37:ARG:N	2.73	0.42
1:A:1184:G:C5	1:A:1185:G:N7	2.87	0.42
1:A:1464:G:C2'	1:A:1465:C:H5'	2.48	0.42
1:A:619:U:H2'	4:D:135:LEU:CD2	2.49	0.42
11:K:99:GLN:HA	11:K:99:GLN:OE1	2.20	0.42
1:A:191(G):G:O2'	20:T:102:GLY:O	2.37	0.42
1:A:1077:G:C2	1:A:1081:G:C5	3.08	0.42
7:G:9:VAL:HG12	7:G:10:ARG:N	2.33	0.42
19:S:63:THR:HG23	19:S:65:ASN:N	2.33	0.42
13:M:4:ILE:HG12	13:M:10:PRO:HD2	2.00	0.42
1:A:668:G:H2'	1:A:669:U:H6	1.82	0.42
1:A:555:C:C2	1:A:556:C:C5	3.07	0.42
1:A:1314:C:H5	19:S:6:LYS:NZ	2.17	0.42
1:A:101:A:H2'	1:A:102:G:H8	1.85	0.42
17:Q:31:LEU:O	17:Q:31:LEU:HG	2.19	0.42
1:A:1441:G:H5''	1:A:1442:G:O5'	2.20	0.42
1:A:21:G:C2	1:A:22:G:C6	3.07	0.42
19:S:11:VAL:HG22	19:S:12:ASP:N	2.33	0.42
1:A:179:A:C5	1:A:180:U:C4	3.07	0.42
1:A:55:A:C5	1:A:56:U:C5	3.06	0.42
7:G:31:MET:HG3	7:G:35:LYS:H	1.85	0.42
1:A:134:A:N1	16:P:25:ARG:NH1	2.67	0.42
1:A:1217:C:H5''	14:N:9:LYS:NZ	2.34	0.42
22:V:6179:U:H2'	22:V:6180:U:C6	2.55	0.42
2:B:60:ASP:O	2:B:64:ARG:CG	2.68	0.42
13:M:98:VAL:O	13:M:98:VAL:HG12	2.20	0.42
7:G:75:VAL:O	7:G:75:VAL:HG23	2.19	0.42
1:A:135:C:H2'	1:A:136:C:H5'	2.01	0.42
1:A:363:A:N6	1:A:364:A:C6	2.87	0.42
1:A:1085:U:C6	1:A:1094:G:N1	2.88	0.42
10:J:32:ALA:HB3	10:J:76:ASN:CB	2.38	0.42
1:A:725:G:C4	1:A:726:C:C5	3.07	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:S:7:LYS:HB2	19:S:7:LYS:HE3	1.84	0.42
1:A:711:G:N2	1:A:712:A:C4	2.87	0.42
17:Q:32:TYR:O	17:Q:34:LYS:N	2.49	0.42
1:A:1342:C:O3'	9:I:125:TYR:HB3	2.19	0.42
13:M:24:GLY:HA2	13:M:70:LEU:HD13	2.01	0.42
18:R:74:ARG:HB2	18:R:81:PHE:CZ	2.55	0.42
7:G:27:ILE:CD1	7:G:43:PHE:CD2	3.03	0.42
1:A:1328:C:H5''	13:M:28:ALA:HB3	2.01	0.42
1:A:505:G:N3	1:A:506:G:C8	2.88	0.42
6:F:12:PRO:HB3	6:F:58:GLY:N	2.34	0.42
7:G:148:ASN:C	7:G:150:ALA:N	2.72	0.42
1:A:179:A:C6	1:A:180:U:C4	3.08	0.42
1:A:1048:G:OP1	14:N:4:LYS:HB2	2.19	0.42
9:I:81:ILE:O	9:I:85:LEU:HG	2.19	0.42
1:A:778:G:O2'	11:K:120:ARG:O	2.30	0.42
10:J:30:SER:HB2	10:J:80:LYS:HG3	2.00	0.42
1:A:1402:C:C5	1:A:1403:C:C4	3.07	0.42
1:A:1272:G:H2'	1:A:1273:G:H8	1.84	0.42
1:A:604:G:N7	1:A:605:U:C5	2.87	0.42
16:P:64:ALA:O	16:P:65:GLN:C	2.58	0.42
11:K:50:TYR:O	11:K:51:LYS:HG3	2.19	0.42
17:Q:76:LEU:HD12	17:Q:77:VAL:H	1.84	0.42
1:A:1001:G:H2'	1:A:1002:G:O4'	2.18	0.42
2:B:169:LYS:C	2:B:169:LYS:HE2	2.39	0.42
3:C:18:TRP:O	3:C:19:GLU:C	2.57	0.42
5:E:78:HIS:N	5:E:78:HIS:ND1	2.68	0.42
4:D:196:LEU:C	4:D:198:VAL:H	2.22	0.42
1:A:57:G:H2'	1:A:58:C:O4'	2.20	0.42
4:D:79:PHE:CD1	4:D:207:TYR:HD1	2.38	0.42
1:A:711:G:N2	1:A:712:A:N3	2.67	0.42
9:I:125:TYR:CD1	9:I:126:SER:N	2.87	0.42
1:A:651:C:O2'	1:A:652:U:H5'	2.20	0.42
13:M:24:GLY:CA	13:M:70:LEU:HD13	2.49	0.42
1:A:909:A:H3'	1:A:910:C:C6	2.55	0.42
1:A:538:G:O2'	1:A:539:A:H5'	2.19	0.42
1:A:1210:C:H4'	1:A:1214:C:C5	2.54	0.42
1:A:619:U:C2	4:D:135:LEU:HD21	2.54	0.42
15:O:70:LEU:HD11	15:O:77:ARG:HG3	2.02	0.42
1:A:1015:A:O5'	1:A:1015:A:H8	2.03	0.42
1:A:969:A:OP1	10:J:55:LYS:NZ	2.52	0.42
1:A:375:U:H2'	1:A:376:G:H5'	2.01	0.42
4:D:100:ARG:NH2	4:D:118:ARG:NH1	2.63	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:L:118:LYS:C	12:L:119:TYR:CD1	2.93	0.42
16:P:28:ARG:HG2	16:P:28:ARG:NH1	2.11	0.42
4:D:108:LEU:O	4:D:110:PHE:CD2	2.72	0.42
1:A:1104:G:N3	1:A:1105:A:C8	2.87	0.42
7:G:126:ASP:HB3	7:G:131:LYS:O	2.18	0.42
1:A:587:G:C2	1:A:755:G:C5	3.07	0.42
1:A:565:U:C5	1:A:566:G:C5	3.08	0.42
1:A:160:A:H1'	1:A:344:A:N7	2.35	0.42
1:A:180:U:C2'	1:A:181:G:H5'	2.49	0.42
1:A:303:A:H2'	1:A:304:U:O4'	2.19	0.42
14:N:7:ILE:HD12	14:N:8:GLU:N	2.34	0.42
1:A:439:A:C8	1:A:440:A:C8	3.08	0.42
1:A:761:G:C5	1:A:762:C:C5	3.08	0.42
1:A:149:A:H2'	1:A:150:C:H6	1.84	0.42
4:D:199:ASN:HD22	4:D:202:LEU:HG	1.83	0.42
1:A:407:G:H2'	1:A:408:A:H8	1.84	0.42
4:D:29:PRO:O	4:D:30:LYS:HB3	2.19	0.42
5:E:135:THR:O	5:E:138:ALA:HB3	2.19	0.42
5:E:41:VAL:O	5:E:66:MET:HA	2.20	0.42
1:A:1062:U:H2'	1:A:1063:C:C6	2.54	0.42
11:K:38:ASN:HA	11:K:39:PRO:HD2	1.77	0.42
17:Q:29:HIS:CE1	17:Q:32:TYR:HD1	2.37	0.42
13:M:79:LYS:HB2	13:M:79:LYS:HE3	1.79	0.42
12:L:74:HIS:HB2	12:L:76:LEU:HD23	2.01	0.42
17:Q:51:TYR:CE1	17:Q:73:VAL:HG11	2.55	0.42
8:H:31:PHE:CE2	8:H:35:ILE:HD11	2.55	0.42
1:A:1048:G:C2	1:A:1210:C:N3	2.87	0.42
2:B:212:GLN:HG3	2:B:235:SER:HB2	2.01	0.42
2:B:74:LYS:HD3	2:B:76:GLN:OE1	2.20	0.42
4:D:104:VAL:CG1	4:D:146:ILE:HG21	2.50	0.42
12:L:123:LYS:HA	12:L:124:PRO:HD3	1.93	0.42
3:C:29:TYR:HE1	3:C:33:LEU:HD22	1.85	0.42
1:A:15:G:C5	1:A:16:A:N7	2.88	0.42
11:K:92:GLU:CD	11:K:93:GLN:N	2.73	0.42
17:Q:59:ILE:HG23	17:Q:71:PHE:HD1	1.82	0.42
6:F:50:TYR:O	6:F:50:TYR:CD2	2.73	0.42
1:A:433:C:C5	1:A:434:U:H5	2.38	0.42
1:A:565:U:C4	1:A:566:G:C5	3.08	0.42
1:A:685:G:O2'	1:A:686:U:H5'	2.20	0.42
1:A:312:C:H2'	1:A:313:A:C8	2.55	0.42
1:A:1386:G:H2'	1:A:1387:G:H8	1.85	0.42
1:A:504:C:H2'	1:A:504:C:O2	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:759:A:H2'	1:A:760:G:H5'	2.02	0.42
1:A:1384:C:C2	1:A:1385:G:C8	3.07	0.42
1:A:245:C:O2	1:A:283:C:N3	2.53	0.42
16:P:81:ARG:HD3	16:P:83:GLU:OE1	2.20	0.42
1:A:946:A:N1	1:A:1236:A:C2	2.87	0.42
1:A:1320:C:O2	19:S:72:GLY:C	2.57	0.42
10:J:58:ASP:C	10:J:60:ARG:H	2.23	0.42
22:V:6192:G:H2'	22:V:6193:U:H6	1.82	0.42
3:C:182:ILE:HA	3:C:202:ILE:O	2.20	0.42
1:A:1072:G:C5	1:A:1073:U:C4	3.07	0.42
1:A:10:A:O2'	1:A:11:G:H5'	2.20	0.42
1:A:821:G:C6	1:A:822:C:N4	2.88	0.42
1:A:1378:C:C5	1:A:1379:G:N9	2.87	0.42
1:A:465:A:O2'	1:A:466:G:H5''	2.20	0.42
1:A:358:U:O2	1:A:358:U:H2'	2.20	0.42
9:I:86:VAL:CG2	9:I:93:ARG:HB2	2.50	0.42
1:A:827:U:H2'	1:A:870:U:O4	2.19	0.42
1:A:5:U:O2'	1:A:6:G:C4	2.73	0.42
1:A:897:C:H5''	1:A:898:G:OP2	2.20	0.42
19:S:52:TYR:HA	19:S:56:GLN:O	2.20	0.42
4:D:189:PRO:CB	4:D:194:LEU:HD21	2.50	0.42
13:M:106:ASN:HB2	13:M:107:ALA:H	1.56	0.42
22:V:6188:G:O2'	22:V:6189:G:H5'	2.20	0.42
1:A:376:G:H2'	1:A:377:G:O5'	2.19	0.42
20:T:73:HIS:O	20:T:74:LYS:C	2.59	0.42
2:B:204:ASN:CG	2:B:205:ASP:H	2.23	0.42
1:A:1369:C:O2'	1:A:1370:G:O4'	2.36	0.42
1:A:1371:G:N1	1:A:1372:U:N3	2.68	0.42
9:I:117:HIS:C	9:I:118:LYS:HG3	2.40	0.42
9:I:16:ARG:O	9:I:63:ILE:HG23	2.20	0.42
5:E:126:ARG:HG3	5:E:126:ARG:HH11	1.75	0.42
1:A:658:G:H5''	15:O:31:LEU:HD21	2.00	0.42
8:H:25:ASP:O	8:H:26:VAL:HG12	2.20	0.42
16:P:9:PHE:HB2	16:P:16:HIS:O	2.20	0.42
13:M:23:TYR:CE1	13:M:71:ARG:HD3	2.53	0.42
18:R:70:ILE:HG23	18:R:79:LEU:CD1	2.49	0.42
8:H:39:LEU:HA	8:H:39:LEU:HD13	1.72	0.42
8:H:119:LEU:H	8:H:119:LEU:HG	1.55	0.42
8:H:119:LEU:CD1	8:H:124:ALA:HA	2.50	0.42
1:A:445:G:C5	1:A:446:G:N7	2.88	0.42
2:B:143:GLU:O	2:B:147:LYS:HB2	2.19	0.42
1:A:763:G:C4	1:A:764:C:C5	3.07	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:165:C:O2'	1:A:166:G:H5'	2.20	0.42
1:A:450:G:N7	1:A:481:G:C6	2.88	0.42
2:B:154:LEU:HD22	2:B:154:LEU:C	2.39	0.41
1:A:1229:A:H2'	1:A:1230:C:H6	1.82	0.41
1:A:953:G:O6	1:A:1228:C:N4	2.53	0.41
1:A:1067:A:N3	1:A:1068:G:N9	2.68	0.41
9:I:111:ARG:O	9:I:113:LYS:HE3	2.20	0.41
1:A:1151:A:OP1	10:J:41:PRO:HA	2.19	0.41
1:A:67:C:H2'	1:A:68:G:C8	2.55	0.41
6:F:3:ARG:CG	6:F:66:GLU:HG2	2.47	0.41
1:A:542:G:H2'	1:A:543:C:H6	1.85	0.41
4:D:8:VAL:HG11	4:D:115:ARG:NH1	2.34	0.41
12:L:7:ASN:O	12:L:11:ARG:HG3	2.20	0.41
3:C:122:GLU:OE2	3:C:126:ARG:NH2	2.53	0.41
18:R:84:LYS:H	18:R:84:LYS:HG2	1.33	0.41
5:E:79:GLU:CD	5:E:79:GLU:N	2.73	0.41
1:A:313:A:H2'	1:A:314:C:C6	2.55	0.41
14:N:4:LYS:HD2	14:N:7:ILE:HD11	2.03	0.41
2:B:74:LYS:HB2	2:B:74:LYS:HZ2	1.83	0.41
20:T:32:ALA:O	20:T:33:ILE:C	2.58	0.41
8:H:103:VAL:HB	8:H:108:GLY:C	2.40	0.41
9:I:30:GLY:O	9:I:31:GLN:O	2.37	0.41
16:P:58:TYR:HE2	16:P:59:TRP:CZ3	2.39	0.41
5:E:75:THR:HG23	5:E:76:ILE:H	1.85	0.41
1:A:1107:C:N4	1:A:1108:G:N7	2.68	0.41
2:B:203:GLY:O	2:B:204:ASN:O	2.38	0.41
1:A:1350:A:C6	1:A:1351:U:N3	2.88	0.41
12:L:50:ALA:O	12:L:51:LEU:C	2.57	0.41
6:F:61:LEU:N	6:F:61:LEU:HD12	2.35	0.41
15:O:18:PHE:O	15:O:21:ASP:HB3	2.20	0.41
1:A:956:U:O2'	1:A:957:U:H5'	2.21	0.41
1:A:833:U:C2	1:A:834:C:C5	3.08	0.41
1:A:99:C:O2'	1:A:101:A:H8	2.03	0.41
1:A:1145:C:H1'	1:A:1147:C:N4	2.35	0.41
11:K:38:ASN:O	11:K:40:ILE:HD13	2.20	0.41
10:J:16:LEU:HD21	10:J:94:VAL:HG13	2.02	0.41
18:R:44:LEU:O	18:R:45:SER:O	2.38	0.41
1:A:769:G:H4'	1:A:1513:A:H4'	2.01	0.41
7:G:57:GLU:O	7:G:61:VAL:HG23	2.20	0.41
2:B:31:TYR:HE1	2:B:200:ILE:HG21	1.85	0.41
2:B:28:PHE:O	2:B:32:ILE:HD13	2.20	0.41
12:L:61:SER:O	12:L:63:TYR:N	2.52	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:46:ALA:HB2	9:I:74:ILE:HG22	2.02	0.41
5:E:27:ARG:C	5:E:28:PHE:CD1	2.94	0.41
1:A:451:A:H61	1:A:481:G:C5'	2.33	0.41
11:K:87:THR:HA	11:K:91:ARG:HH21	1.84	0.41
22:V:6193:U:C4	22:V:6194:C:C4	3.07	0.41
1:A:376:G:N3	1:A:377:G:C8	2.88	0.41
16:P:68:ASP:C	16:P:70:ALA:H	2.22	0.41
1:A:510:A:H5''	1:A:511:C:OP2	2.21	0.41
8:H:97:VAL:C	8:H:99:GLU:N	2.73	0.41
1:A:542:G:P	4:D:10:ARG:NH2	2.93	0.41
1:A:1410:G:H2'	1:A:1411:C:H6	1.84	0.41
7:G:46:ALA:HB2	7:G:117:ALA:O	2.19	0.41
1:A:1428:A:H2'	1:A:1429:C:C6	2.55	0.41
1:A:112:G:C2	1:A:113:G:C8	3.08	0.41
6:F:11:ASN:HA	6:F:12:PRO:HD2	1.94	0.41
7:G:148:ASN:C	7:G:150:ALA:H	2.24	0.41
5:E:36:ASP:OD2	5:E:38:GLN:N	2.53	0.41
11:K:103:LEU:HD12	11:K:103:LEU:HA	1.79	0.41
7:G:21:VAL:HG23	7:G:22:LEU:N	2.35	0.41
17:Q:16:GLN:HB3	17:Q:16:GLN:HE21	1.76	0.41
1:A:1122:U:H2'	1:A:1123:A:C8	2.56	0.41
1:A:977:A:H2'	1:A:978:A:H5''	2.02	0.41
1:A:986:A:C2	1:A:1220:G:C2	3.08	0.41
1:A:374:A:C6	1:A:375:U:C4	3.08	0.41
1:A:386:C:H2'	1:A:387:U:C4'	2.51	0.41
4:D:108:LEU:CB	4:D:110:PHE:HE2	2.23	0.41
5:E:76:ILE:CG1	5:E:77:PRO:HD2	2.41	0.41
7:G:107:ALA:CB	7:G:134:ALA:HB2	2.38	0.41
1:A:1202:G:H4'	14:N:29:ARG:HD3	2.03	0.41
9:I:112:LYS:HE3	9:I:116:LYS:O	2.21	0.41
9:I:28:VAL:CG2	9:I:63:ILE:HB	2.46	0.41
8:H:21:LYS:O	8:H:65:TYR:OH	2.29	0.41
1:A:277:C:OP1	17:Q:41:LYS:HE3	2.20	0.41
4:D:6:GLY:O	4:D:8:VAL:HG12	2.20	0.41
10:J:16:LEU:O	10:J:70:ARG:HD2	2.19	0.41
10:J:16:LEU:HD22	10:J:94:VAL:HG22	2.03	0.41
1:A:1089:G:C6	1:A:1090:U:C5	3.09	0.41
1:A:334:C:C2'	1:A:335:C:H5'	2.51	0.41
1:A:993:G:H4'	1:A:994:A:OP2	2.19	0.41
13:M:15:VAL:HG13	13:M:43:THR:O	2.20	0.41
1:A:269:C:H2'	1:A:270:A:H8	1.84	0.41
1:A:1505:G:H4'	1:A:1506:U:H5''	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:H:107:LEU:HD23	8:H:107:LEU:H	1.84	0.41
1:A:1433:A:N1	1:A:1434:A:C2	2.89	0.41
1:A:1227:A:OP1	13:M:94:ARG:NH2	2.54	0.41
11:K:115:PRO:C	11:K:117:ASN:H	2.22	0.41
16:P:32:TYR:C	16:P:32:TYR:CD2	2.94	0.41
16:P:4:ILE:HB	16:P:66:PRO:CB	2.47	0.41
1:A:32:A:C6	1:A:33:A:C6	3.08	0.41
1:A:688:G:C4	1:A:689:C:C5	3.09	0.41
1:A:1252:A:H2'	1:A:1253:G:O4'	2.21	0.41
5:E:110:LEU:O	5:E:115:VAL:HG23	2.20	0.41
1:A:1104:G:C2	1:A:1105:A:C4	3.09	0.41
1:A:1366:C:N4	1:A:1367:C:N4	2.68	0.41
4:D:126:ILE:CG2	4:D:127:THR:N	2.79	0.41
6:F:89:MET:CE	18:R:76:LEU:HD21	2.51	0.41
19:S:22:LEU:HD13	19:S:27:GLU:CB	2.51	0.41
8:H:112:LEU:HB3	8:H:133:LEU:HA	2.02	0.41
1:A:725:G:H2'	1:A:726:C:H6	1.85	0.41
1:A:27:G:H2'	1:A:28:G:O4'	2.20	0.41
1:A:853:G:C4	1:A:854:G:C8	3.08	0.41
10:J:34:VAL:CG2	10:J:74:ILE:HG22	2.50	0.41
7:G:131:LYS:HE3	7:G:136:LYS:HZ1	1.80	0.41
1:A:1206:G:C6	1:A:1207:G:C5	3.09	0.41
4:D:6:GLY:O	4:D:8:VAL:CG1	2.69	0.41
14:N:40:CYS:O	14:N:44:LEU:HB3	2.20	0.41
1:A:937:A:C2	1:A:1379:G:C6	3.08	0.41
8:H:50:ARG:HH11	8:H:50:ARG:CG	2.33	0.41
1:A:1466:C:H2'	1:A:1467:G:O4'	2.21	0.41
1:A:515:G:H2'	1:A:516:U:O4'	2.20	0.41
4:D:23:GLY:HA3	4:D:112:VAL:CG1	2.50	0.41
1:A:763:G:H2'	1:A:764:C:H6	1.84	0.41
1:A:1186:G:H4'	9:I:110:GLU:CD	2.41	0.41
2:B:61:LEU:O	2:B:61:LEU:HD12	2.20	0.41
4:D:49:ARG:HA	4:D:49:ARG:HD2	1.76	0.41
4:D:31:CYS:C	4:D:33:MET:H	2.23	0.41
5:E:80:ILE:HD11	5:E:91:LEU:HD12	2.02	0.41
1:A:1084:G:H5'	1:A:1102:A:OP2	2.20	0.41
1:A:17:U:N3	1:A:18:C:C4	2.88	0.41
16:P:39:TYR:C	16:P:39:TYR:CD2	2.94	0.41
1:A:69:G:H2'	1:A:73:G:C8	2.54	0.41
1:A:1056:U:C5	1:A:1200:C:C4	3.09	0.41
1:A:949:A:OP1	13:M:101:GLN:HB3	2.21	0.41
8:H:97:VAL:O	8:H:99:GLU:N	2.52	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1022:G:C4	1:A:1023:G:N7	2.88	0.41
1:A:186(F):C:H42	1:A:191(B):G:H1	1.67	0.41
1:A:774:G:N2	1:A:806:C:C6	2.89	0.41
1:A:925:G:C4	1:A:1392:G:N2	2.88	0.41
15:O:50:HIS:O	15:O:51:HIS:C	2.58	0.41
19:S:12:ASP:O	19:S:16:LEU:HD13	2.20	0.41
1:A:270:A:C5	1:A:271:C:C5	3.09	0.41
1:A:760:G:H2'	1:A:761:G:C5'	2.50	0.41
1:A:838:G:H8	1:A:838:G:O5'	2.04	0.41
1:A:141:A:C5	1:A:142:G:N7	2.88	0.41
1:A:283:C:H2'	1:A:284:G:O4'	2.20	0.41
6:F:25:ILE:HD13	6:F:25:ILE:HA	1.80	0.41
6:F:83:ASP:OD1	6:F:83:ASP:N	2.54	0.41
1:A:977:A:H8	1:A:1223:C:C4	2.38	0.41
22:V:6191:A:C6	22:V:6192:G:C5	3.08	0.41
3:C:18:TRP:HE3	3:C:18:TRP:H	1.69	0.41
1:A:437:U:O4	1:A:438:G:C6	2.74	0.41
12:L:26:LEU:HD22	12:L:27:LYS:H	1.85	0.41
1:A:427:U:O4	1:A:428:G:N1	2.54	0.41
11:K:52:GLY:H	11:K:55:LYS:HE2	1.85	0.41
5:E:11:ILE:N	5:E:31:LEU:O	2.51	0.41
1:A:192:U:O2'	1:A:193:C:H5'	2.21	0.41
1:A:1104:G:N1	1:A:1105:A:C5	2.88	0.41
1:A:1070:U:OP1	5:E:25:ARG:NH1	2.53	0.41
14:N:23:ARG:HG3	14:N:24:CYS:N	2.36	0.41
4:D:159:ARG:O	4:D:162:LEU:N	2.54	0.41
1:A:751:U:H2'	1:A:751:U:O2	2.21	0.41
1:A:781:A:C3'	1:A:782:A:C5'	2.91	0.41
1:A:616:G:C2	1:A:617:G:N7	2.89	0.41
1:A:627:G:H2'	1:A:628:G:H8	1.85	0.41
11:K:40:ILE:HG22	11:K:75:TYR:CD2	2.55	0.41
1:A:976:G:H8	1:A:1358:U:O2'	2.04	0.41
1:A:1446:A:O2'	1:A:1447:G:C8	2.74	0.41
15:O:37:ASN:HD22	15:O:37:ASN:N	2.14	0.41
19:S:29:ARG:HB2	19:S:48:THR:H	1.86	0.41
1:A:924:C:H2'	1:A:925:G:C8	2.56	0.41
1:A:604:G:C5	1:A:605:U:C5	3.08	0.41
1:A:997:U:C4	1:A:998(A):G:N7	2.89	0.41
2:B:159:PRO:HB3	2:B:161:ALA:O	2.21	0.41
1:A:324:G:P	20:T:22:ARG:HG2	2.61	0.41
4:D:110:PHE:CE1	4:D:148:VAL:HG23	2.56	0.41
1:A:367:U:C5	1:A:394:G:N1	2.89	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:E:76:ILE:HG23	5:E:78:HIS:H	1.86	0.41
1:A:1063:C:C5	1:A:1064:G:C4	3.09	0.41
1:A:1071:C:O2	1:A:1072:G:C8	2.73	0.41
1:A:738:C:C2	1:A:739:C:C5	3.09	0.41
1:A:658:G:N1	1:A:749:C:C4	2.88	0.41
16:P:72:ARG:O	16:P:72:ARG:HG2	2.20	0.41
3:C:50:ALA:HB1	3:C:70:VAL:HG11	2.03	0.41
3:C:58:GLU:C	3:C:59:ARG:HG3	2.41	0.41
1:A:69:G:C6	1:A:101:A:N6	2.88	0.41
2:B:165:VAL:HG23	2:B:166:ASP:N	2.35	0.41
12:L:7:ASN:CA	12:L:10:VAL:HG23	2.51	0.41
8:H:64:LYS:CB	8:H:79:VAL:HG21	2.51	0.41
1:A:560:U:O5'	1:A:566:G:N2	2.54	0.41
15:O:6:GLU:HG2	15:O:7:GLU:N	2.35	0.41
6:F:47:ARG:CG	6:F:47:ARG:HH11	2.32	0.41
3:C:120:VAL:HG21	3:C:137:ALA:CB	2.50	0.41
15:O:67:LEU:HD23	15:O:78:TYR:CE1	2.55	0.41
3:C:186:PHE:CG	3:C:187:ALA:N	2.88	0.41
1:A:296:U:H2'	1:A:297:G:C8	2.56	0.41
1:A:572:A:H5''	1:A:917:G:H4'	2.03	0.41
2:B:172:ILE:H	2:B:172:ILE:HG13	1.57	0.41
2:B:61:LEU:HG	2:B:68:ILE:HG13	2.02	0.41
1:A:950:U:H4'	1:A:971:G:H22	1.81	0.41
1:A:962:C:N4	1:A:973:G:H1	2.19	0.41
1:A:482:A:C2'	1:A:482:A:N3	2.81	0.41
1:A:61:G:H2'	1:A:62:U:O4'	2.20	0.41
1:A:438:G:C4'	4:D:123:HIS:ND1	2.82	0.41
3:C:4:LYS:O	3:C:5:ILE:C	2.58	0.41
2:B:86:GLU:C	2:B:88:ALA:H	2.25	0.41
2:B:88:ALA:HB2	2:B:219:VAL:HG13	2.02	0.41
1:A:818:G:N3	1:A:820:U:C5	2.89	0.41
1:A:628:G:O2'	1:A:629:G:H5'	2.20	0.41
1:A:1270:C:H2'	1:A:1271:G:O4'	2.21	0.41
13:M:67:GLU:HG3	13:M:68:GLY:N	2.27	0.41
4:D:82:ALA:CB	4:D:89:THR:HG23	2.50	0.41
1:A:106:C:H2'	1:A:107:G:H5'	2.00	0.41
1:A:216:G:C6	1:A:217:C:N4	2.89	0.41
16:P:43:LYS:HA	16:P:48:TRP:CB	2.51	0.41
1:A:918:A:C2	1:A:919:A:C4	3.09	0.41
13:M:79:LYS:O	13:M:82:MET:HB3	2.20	0.41
5:E:144:THR:HG23	5:E:147:ASP:OD1	2.21	0.41
4:D:8:VAL:O	4:D:11:LEU:HG	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:720:C:H5'	18:R:50:ILE:O	2.21	0.41
1:A:522:C:O2'	1:A:523:A:H5'	2.21	0.41
8:H:64:LYS:HB3	8:H:79:VAL:HG21	2.02	0.41
4:D:70:ILE:HG12	4:D:71:SER:H	1.84	0.41
8:H:39:LEU:C	8:H:45:ILE:HG12	2.41	0.41
12:L:74:HIS:CD2	12:L:76:LEU:HB2	2.56	0.41
1:A:1109:C:H2'	1:A:1110:A:O4'	2.21	0.41
1:A:145:G:N2	1:A:178:C:N3	2.69	0.41
3:C:16:ARG:HH11	3:C:16:ARG:HB2	1.83	0.41
2:B:37:ASN:HA	2:B:37:ASN:HD22	1.67	0.41
1:A:1165:C:C2'	1:A:1166:G:H5'	2.51	0.41
1:A:157:G:C2	1:A:165:C:N3	2.89	0.41
1:A:619:U:O2	4:D:135:LEU:HD22	2.20	0.41
1:A:385:C:C6	1:A:385:C:H3'	2.54	0.41
18:R:65:ILE:HG12	18:R:65:ILE:H	1.52	0.41
2:B:51:LEU:HB3	2:B:55:PHE:CE2	2.56	0.41
17:Q:43:LEU:HA	17:Q:43:LEU:HD12	1.54	0.41
6:F:100:ASN:HD22	6:F:100:ASN:C	2.24	0.41
6:F:24:GLU:O	6:F:27:GLN:HB2	2.21	0.41
1:A:930:C:C4	1:A:931:C:C5	3.08	0.41
1:A:102(A):C:O5'	1:A:102(A):C:H6	2.04	0.41
1:A:1114:C:O5'	1:A:1114:C:H6	2.03	0.41
22:V:6183:G:C6	22:V:6184:A:C5	3.09	0.41
4:D:55:ALA:O	4:D:58:LEU:HB3	2.21	0.41
5:E:14:ARG:CZ	5:E:129:ILE:HD11	2.50	0.41
1:A:1085:U:O4'	1:A:1094:G:C2	2.74	0.41
1:A:255:G:O6	1:A:266:G:O6	2.39	0.41
1:A:1281:U:H3'	1:A:1282:C:C6	2.56	0.41
1:A:1371:G:C6	1:A:1372:U:C4	3.08	0.41
19:S:62:ILE:C	19:S:66:MET:HE3	2.41	0.41
11:K:69:ALA:O	11:K:72:ALA:HB3	2.21	0.41
1:A:1342:C:O2'	1:A:1343:G:H5'	2.21	0.41
3:C:22:TRP:HZ3	3:C:24:ALA:HB2	1.85	0.41
4:D:13:ARG:O	4:D:39:PRO:HA	2.21	0.41
8:H:36:LEU:C	8:H:38:ILE:H	2.23	0.41
1:A:559:A:H4'	1:A:560:U:C3'	2.51	0.41
1:A:1095:U:H5'	1:A:1109:C:O2	2.21	0.41
1:A:638:G:H2'	1:A:639:G:C5'	2.50	0.41
1:A:1262:C:C2	1:A:1263:C:C5	3.09	0.41
1:A:20:U:H2'	1:A:21:G:O4'	2.21	0.41
18:R:53:ARG:C	18:R:55:ARG:N	2.73	0.41
1:A:576:G:N2	1:A:759:A:OP1	2.53	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:838:G:N2	1:A:849:C:C4	2.89	0.41
1:A:897:C:H42	1:A:902:G:H1	1.69	0.41
4:D:120:LEU:O	4:D:125:HIS:HB2	2.21	0.41
1:A:298:A:H2'	1:A:299:G:O4'	2.21	0.41
17:Q:98:LEU:HD23	17:Q:98:LEU:HA	1.70	0.41
2:B:182:ILE:O	2:B:183:PRO:C	2.59	0.40
2:B:184:VAL:H	2:B:198:ASP:HB2	1.86	0.40
1:A:551:U:H5'	12:L:118:LYS:HZ3	1.86	0.40
1:A:429:U:H1'	1:A:430:A:H5''	2.03	0.40
20:T:30:LYS:HA	20:T:30:LYS:HD3	1.93	0.40
4:D:195:ALA:C	4:D:196:LEU:HD12	2.41	0.40
12:L:44:PRO:HB3	12:L:91:ASP:OD1	2.21	0.40
1:A:828:A:C5'	1:A:859:A:C2	2.96	0.40
7:G:23:VAL:CG1	7:G:43:PHE:HE2	2.34	0.40
19:S:12:ASP:HB2	19:S:15:LEU:HD23	2.03	0.40
12:L:125:LYS:HA	12:L:125:LYS:HD2	1.84	0.40
1:A:892:A:O2'	1:A:1415:G:H4'	2.21	0.40
3:C:136:GLN:O	3:C:140:ARG:N	2.54	0.40
2:B:122:PHE:CD2	2:B:122:PHE:O	2.74	0.40
8:H:74:PRO:O	8:H:76:PRO:HD3	2.21	0.40
1:A:690:G:C5	1:A:691:G:C6	3.09	0.40
13:M:56:LEU:O	13:M:56:LEU:HD13	2.21	0.40
1:A:1098:C:H2'	1:A:1099:G:O4'	2.21	0.40
2:B:100:GLY:N	2:B:176:GLU:OE2	2.41	0.40
1:A:1151:A:O2'	1:A:1152:A:O4'	2.39	0.40
1:A:1292:U:H6	1:A:1292:U:O5'	2.04	0.40
6:F:91:VAL:HG13	18:R:72:ARG:HH21	1.87	0.40
1:A:1118:C:H5''	9:I:104:ARG:HG2	2.04	0.40
1:A:102:G:C5	1:A:103:C:C5	3.09	0.40
17:Q:3:LYS:O	17:Q:5:VAL:HG23	2.21	0.40
8:H:17:THR:O	8:H:78:GLN:NE2	2.54	0.40
1:A:540:G:C6	1:A:541:G:C5	3.09	0.40
19:S:53:ASN:C	19:S:55:LYS:H	2.24	0.40
1:A:562:C:H1'	12:L:14:ARG:HD2	2.02	0.40
2:B:52:GLU:HG2	2:B:56:ARG:HE	1.86	0.40
2:B:74:LYS:HB2	2:B:74:LYS:NZ	2.36	0.40
1:A:450:G:H5''	16:P:41:PRO:O	2.22	0.40
1:A:451:A:H1'	1:A:452:A:N7	2.37	0.40
1:A:245:C:C2	1:A:284:G:C2	3.09	0.40
1:A:700:G:H4'	1:A:704:A:H1'	2.04	0.40
12:L:36:CYS:SG	12:L:80:SER:HB2	2.61	0.40
3:C:48:TYR:O	3:C:51:GLY:N	2.51	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:I:127:LYS:O	9:I:128:ARG:O	2.38	0.40
1:A:953:G:C6	1:A:954:G:C4	3.10	0.40
16:P:6:LEU:HB3	16:P:17:TYR:HD2	1.85	0.40
12:L:100:VAL:HG12	12:L:103:VAL:HG23	2.03	0.40
8:H:120:THR:O	8:H:121:ASP:C	2.60	0.40
1:A:92:G:H2'	1:A:93:U:O4'	2.22	0.40
3:C:172:ARG:O	3:C:173:VAL:CG2	2.56	0.40
3:C:33:LEU:O	3:C:33:LEU:HD12	2.21	0.40
5:E:12:LEU:HD22	5:E:12:LEU:O	2.22	0.40
5:E:77:PRO:CD	5:E:142:LEU:HD22	2.45	0.40
1:A:184:G:N2	1:A:194:C:C2	2.90	0.40
5:E:51:VAL:O	5:E:52:PRO:C	2.57	0.40
1:A:1066:C:H3'	1:A:1067:A:C8	2.56	0.40
1:A:448:A:C2	1:A:487:A:C2	3.08	0.40
15:O:45:VAL:HG22	15:O:46:HIS:N	2.36	0.40
8:H:111:ILE:O	8:H:112:LEU:CB	2.70	0.40
1:A:658:G:C4	1:A:659:U:C5	3.10	0.40
1:A:658:G:O2'	1:A:659:U:H5'	2.22	0.40
1:A:781:A:H3'	1:A:782:A:C5'	2.50	0.40
1:A:59:A:C2	1:A:354:G:C4	3.10	0.40
1:A:53:A:C2	1:A:54:C:C1'	3.04	0.40
1:A:630:G:H2'	1:A:631:G:O4'	2.22	0.40
15:O:85:LEU:HD23	15:O:85:LEU:HA	1.83	0.40
1:A:731:G:C6	1:A:732:C:C4	3.09	0.40
1:A:754:C:H1'	15:O:69:TYR:CG	2.56	0.40
1:A:560:U:H4'	1:A:561:U:O5'	2.21	0.40
1:A:565:U:C4	1:A:566:G:C6	3.09	0.40
1:A:538:G:O3'	12:L:113:LYS:HG3	2.22	0.40
20:T:78:ALA:O	20:T:79:ARG:C	2.60	0.40
2:B:16:HIS:HB3	2:B:210:SER:HA	2.03	0.40
1:A:425:G:C6	1:A:426:G:C5	3.10	0.40
5:E:127:ASN:HB3	5:E:130:ASN:HB2	2.04	0.40
8:H:2:LEU:HA	8:H:2:LEU:HD23	1.88	0.40
16:P:32:TYR:C	16:P:32:TYR:HD2	2.25	0.40
4:D:146:ILE:HG22	4:D:146:ILE:O	2.21	0.40
1:A:690:G:C6	1:A:691:G:N1	2.89	0.40
13:M:33:ALA:HB1	13:M:56:LEU:CD2	2.47	0.40
4:D:156:GLU:O	4:D:160:GLN:HG3	2.21	0.40
1:A:724:G:N3	1:A:725:G:C8	2.89	0.40
11:K:93:GLN:HA	11:K:96:ARG:HB2	2.04	0.40
1:A:853:G:H2'	1:A:854:G:H5'	2.03	0.40
15:O:81:LEU:HD12	15:O:81:LEU:O	2.20	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:336:C:H2'	1:A:337:C:C6	2.56	0.40
1:A:650:G:C2'	1:A:651:C:H5'	2.51	0.40
1:A:728:A:C6	15:O:54:ARG:HD2	2.57	0.40
1:A:186(D):G:C6	1:A:186(E):C:C4	3.09	0.40
1:A:505:G:OP2	1:A:534:U:H2'	2.21	0.40
7:G:95:ARG:CZ	7:G:99:LEU:HD11	2.50	0.40
6:F:96:PRO:HB3	18:R:30:ASP:OD2	2.21	0.40
3:C:146:ALA:HA	3:C:204:LEU:HD23	2.04	0.40
3:C:56:ASP:HB3	3:C:67:THR:HB	2.04	0.40
1:A:979:C:P	1:A:981:U:O4	2.80	0.40
9:I:128:ARG:CZ	22:V:6184:A:OP2	2.69	0.40
1:A:675:A:O2'	11:K:114:VAL:O	2.38	0.40
1:A:407:G:N3	1:A:408:A:C8	2.90	0.40
4:D:108:LEU:HD23	4:D:110:PHE:CE2	2.56	0.40
6:F:62:TRP:CD1	18:R:35:ARG:NH1	2.89	0.40
1:A:658:G:O4'	15:O:22:THR:HB	2.22	0.40
1:A:914:A:OP2	1:A:914:A:O4'	2.39	0.40
1:A:39:G:N2	1:A:40:C:N1	2.69	0.40
21:U:9:ARG:HG3	21:U:10:ARG:N	2.37	0.40
1:A:941:G:C2	1:A:942:G:C8	3.09	0.40
1:A:1232:U:H5''	9:I:124:GLN:O	2.21	0.40
1:A:806:C:O2'	1:A:807:A:H5'	2.21	0.40
1:A:1166:G:N2	1:A:1170:A:OP2	2.54	0.40
1:A:1501:C:C6	1:A:1504:G:N7	2.90	0.40
1:A:1399:C:N3	1:A:1502:A:N1	2.69	0.40
17:Q:14:LYS:H	17:Q:14:LYS:CD	2.34	0.40
1:A:929:G:C6	1:A:930:C:C4	3.10	0.40
1:A:1419:G:C6	1:A:1420:C:C4	3.09	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
2	B	232/234 (99%)	172 (74%)	40 (17%)	20 (9%)	1 17

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	C	204/206 (99%)	136 (67%)	43 (21%)	25 (12%)	1	8
4	D	206/208 (99%)	152 (74%)	38 (18%)	16 (8%)	1	20
5	E	149/151 (99%)	103 (69%)	34 (23%)	12 (8%)	1	19
6	F	99/101 (98%)	71 (72%)	17 (17%)	11 (11%)	1	10
7	G	153/155 (99%)	121 (79%)	27 (18%)	5 (3%)	6	50
8	H	136/138 (99%)	97 (71%)	29 (21%)	10 (7%)	2	22
9	I	125/127 (98%)	91 (73%)	31 (25%)	3 (2%)	9	58
10	J	96/98 (98%)	72 (75%)	20 (21%)	4 (4%)	4	41
11	K	117/119 (98%)	83 (71%)	29 (25%)	5 (4%)	4	40
12	L	122/124 (98%)	78 (64%)	28 (23%)	16 (13%)	0	7
13	M	114/116 (98%)	93 (82%)	17 (15%)	4 (4%)	6	48
14	N	58/60 (97%)	46 (79%)	9 (16%)	3 (5%)	3	32
15	O	86/88 (98%)	62 (72%)	17 (20%)	7 (8%)	1	19
16	P	81/83 (98%)	46 (57%)	24 (30%)	11 (14%)	0	6
17	Q	97/99 (98%)	74 (76%)	16 (16%)	7 (7%)	2	23
18	R	68/70 (97%)	40 (59%)	19 (28%)	9 (13%)	0	7
19	S	76/78 (97%)	51 (67%)	21 (28%)	4 (5%)	3	32
20	T	97/99 (98%)	67 (69%)	23 (24%)	7 (7%)	2	23
21	U	22/24 (92%)	13 (59%)	8 (36%)	1 (4%)	4	38
All	All	2338/2378 (98%)	1668 (71%)	490 (21%)	180 (8%)	1	20

All (180) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	204	ASN
3	C	189	ALA
3	C	196	LEU
4	D	28	SER
4	D	30	LYS
5	E	37	ARG
5	E	140	ARG
6	F	6	VAL
6	F	36	ARG
6	F	39	LYS
6	F	42	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	F	87	ARG
10	J	92	THR
11	K	27	ASN
12	L	50	ALA
12	L	63	TYR
12	L	117	SER
13	M	106	ASN
15	O	29	VAL
16	P	11	SER
16	P	19	ILE
17	Q	79	SER
17	Q	99	SER
18	R	20	ALA
19	S	28	LYS
20	T	71	THR
20	T	99	LEU
2	B	14	GLY
2	B	19	HIS
2	B	24	TRP
2	B	129	GLU
2	B	176	GLU
2	B	205	ASP
2	B	229	VAL
3	C	14	ILE
3	C	22	TRP
3	C	56	ASP
3	C	100	ALA
3	C	144	SER
3	C	188	LEU
4	D	4	TYR
4	D	110	PHE
4	D	145	GLU
4	D	171	GLY
6	F	2	ARG
6	F	89	MET
7	G	4	ARG
8	H	2	LEU
8	H	133	LEU
9	I	31	GLN
10	J	59	SER
11	K	122	LYS
12	L	22	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	L	27	LYS
12	L	64	GLU
15	O	6	GLU
15	O	19	PRO
16	P	10	GLY
16	P	16	HIS
16	P	26	ARG
16	P	48	TRP
16	P	64	ALA
18	R	45	SER
18	R	54	ARG
18	R	57	GLY
19	S	11	VAL
20	T	11	SER
20	T	42	GLN
20	T	74	LYS
21	U	9	ARG
2	B	18	GLY
2	B	88	ALA
2	B	130	ARG
2	B	183	PRO
2	B	206	ASP
2	B	235	SER
3	C	15	THR
3	C	47	LEU
3	C	60	ALA
3	C	81	GLY
3	C	91	LEU
3	C	127	ARG
4	D	105	VAL
5	E	21	ALA
5	E	49	PRO
5	E	85	GLY
7	G	14	PRO
8	H	77	GLU
8	H	98	LYS
8	H	112	LEU
8	H	119	LEU
10	J	57	LYS
12	L	11	ARG
12	L	61	SER
12	L	78	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	L	88	ARG
13	M	4	ILE
15	O	21	ASP
16	P	77	ALA
17	Q	78	GLU
17	Q	80	GLY
20	T	84	LEU
2	B	150	SER
2	B	182	ILE
2	B	224	GLN
3	C	18	TRP
3	C	45	LYS
3	C	61	ALA
3	C	105	GLU
3	C	145	GLY
4	D	10	ARG
5	E	62	ALA
5	E	72	GLN
5	E	104	ALA
5	E	128	PRO
6	F	38	GLU
10	J	78	ASN
11	K	39	PRO
12	L	28	GLY
12	L	86	GLY
13	M	116	THR
14	N	18	VAL
15	O	23	GLY
17	Q	33	GLY
17	Q	34	LYS
18	R	41	LYS
19	S	25	LYS
4	D	75	PHE
4	D	146	ILE
4	D	147	ALA
4	D	168	ARG
5	E	11	ILE
5	E	107	ARG
8	H	37	ARG
8	H	68	ARG
9	I	10	ARG
9	I	127	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	K	80	VAL
12	L	79	HIS
13	M	3	ARG
14	N	58	LYS
16	P	72	ARG
17	Q	30	PRO
18	R	64	ARG
18	R	87	ARG
19	S	29	ARG
2	B	228	GLY
3	C	5	ILE
3	C	74	GLY
3	C	96	GLY
3	C	117	ALA
4	D	48	ALA
6	F	11	ASN
6	F	90	VAL
7	G	17	VAL
8	H	73	ASP
11	K	112	THR
12	L	94	GLY
16	P	63	GLY
16	P	78	GLY
18	R	36	ASN
20	T	98	PRO
3	C	173	VAL
4	D	189	PRO
7	G	82	GLY
12	L	62	GLY
14	N	42	ILE
18	R	27	GLY
15	O	36	ILE
15	O	87	ILE
2	B	159	PRO
2	B	194	PRO
4	D	197	PRO
6	F	40	VAL
3	C	39	ILE
4	D	56	VAL
5	E	129	ILE
8	H	103	VAL
12	L	17	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
7	G	70	LYS

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	
2	B	202/202 (100%)	178 (88%)	24 (12%)	8	36
3	C	160/160 (100%)	146 (91%)	14 (9%)	14	55
4	D	180/180 (100%)	150 (83%)	30 (17%)	3	19
5	E	116/116 (100%)	92 (79%)	24 (21%)	2	8
6	F	90/90 (100%)	82 (91%)	8 (9%)	14	55
7	G	126/126 (100%)	121 (96%)	5 (4%)	42	84
8	H	119/119 (100%)	102 (86%)	17 (14%)	5	27
9	I	98/98 (100%)	88 (90%)	10 (10%)	11	46
10	J	88/88 (100%)	78 (89%)	10 (11%)	8	38
11	K	90/90 (100%)	75 (83%)	15 (17%)	3	19
12	L	104/104 (100%)	83 (80%)	21 (20%)	2	9
13	M	94/94 (100%)	87 (93%)	7 (7%)	20	65
14	N	49/49 (100%)	45 (92%)	4 (8%)	17	60
15	O	79/79 (100%)	69 (87%)	10 (13%)	6	33
16	P	72/72 (100%)	57 (79%)	15 (21%)	2	8
17	Q	94/94 (100%)	78 (83%)	16 (17%)	3	18
18	R	61/61 (100%)	58 (95%)	3 (5%)	35	79
19	S	69/69 (100%)	60 (87%)	9 (13%)	6	31
20	T	76/76 (100%)	65 (86%)	11 (14%)	5	26
21	U	19/19 (100%)	19 (100%)	0	100	100
All	All	1986/1986 (100%)	1733 (87%)	253 (13%)	6	33

All (253) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	16	HIS
2	B	27	LYS
2	B	28	PHE
2	B	60	ASP
2	B	61	LEU
2	B	71	VAL
2	B	75	LYS
2	B	76	GLN
2	B	87	ARG
2	B	93	VAL
2	B	111	ARG
2	B	117	GLU
2	B	127	ILE
2	B	128	GLU
2	B	130	ARG
2	B	142	LEU
2	B	153	ARG
2	B	154	LEU
2	B	158	LEU
2	B	164	VAL
2	B	169	LYS
2	B	178	ARG
2	B	187	LEU
2	B	221	LEU
3	C	3	ASN
3	C	5	ILE
3	C	11	ARG
3	C	16	ARG
3	C	29	TYR
3	C	79	ARG
3	C	95	THR
3	C	115	LEU
3	C	131	ARG
3	C	152	ILE
3	C	165	THR
3	C	167	TRP
3	C	196	LEU
3	C	202	ILE
4	D	3	ARG
4	D	4	TYR
4	D	8	VAL
4	D	9	CYS
4	D	11	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	D	21	LEU
4	D	45	GLN
4	D	49	ARG
4	D	59	ARG
4	D	72	GLU
4	D	76	ARG
4	D	92	VAL
4	D	96	LEU
4	D	103	ASN
4	D	108	LEU
4	D	110	PHE
4	D	114	ARG
4	D	119	GLN
4	D	122	ARG
4	D	129	ASN
4	D	131	ARG
4	D	135	LEU
4	D	141	ARG
4	D	144	ASP
4	D	154	ASN
4	D	155	LEU
4	D	158	ILE
4	D	166	LYS
4	D	203	VAL
4	D	208	SER
5	E	8	GLU
5	E	12	LEU
5	E	16	THR
5	E	18	ARG
5	E	20	GLN
5	E	28	PHE
5	E	31	LEU
5	E	43	LEU
5	E	47	LYS
5	E	53	LEU
5	E	55	VAL
5	E	60	TYR
5	E	64	ARG
5	E	71	LEU
5	E	73	ASN
5	E	76	ILE
5	E	78	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	E	79	GLU
5	E	110	LEU
5	E	116	THR
5	E	120	THR
5	E	126	ARG
5	E	144	THR
5	E	147	ASP
6	F	43	LEU
6	F	46	ARG
6	F	48	LEU
6	F	63	TYR
6	F	69	GLU
6	F	72	VAL
6	F	89	MET
6	F	100	ASN
7	G	67	GLU
7	G	91	VAL
7	G	104	LEU
7	G	118	VAL
7	G	148	ASN
8	H	1	MET
8	H	8	ASP
8	H	25	ASP
8	H	26	VAL
8	H	39	LEU
8	H	50	ARG
8	H	52	ASP
8	H	54	ASP
8	H	73	ASP
8	H	80	ILE
8	H	91	ARG
8	H	104	ARG
8	H	107	LEU
8	H	111	ILE
8	H	119	LEU
8	H	127	LEU
8	H	136	GLU
9	I	10	ARG
9	I	14	VAL
9	I	88	TYR
9	I	95	LYS
9	I	99	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
9	I	104	ARG
9	I	109	VAL
9	I	114	TYR
9	I	121	ARG
9	I	124	GLN
10	J	16	LEU
10	J	22	LYS
10	J	49	VAL
10	J	55	LYS
10	J	62	HIS
10	J	63	PHE
10	J	66	ARG
10	J	74	ILE
10	J	92	THR
10	J	96	ILE
11	K	14	VAL
11	K	29	ILE
11	K	32	ILE
11	K	33	THR
11	K	34	ASP
11	K	40	ILE
11	K	48	ILE
11	K	53	SER
11	K	80	VAL
11	K	81	ASP
11	K	92	GLU
11	K	103	LEU
11	K	114	VAL
11	K	117	ASN
11	K	126	ARG
12	L	5	THR
12	L	6	ILE
12	L	9	LEU
12	L	10	VAL
12	L	19	LYS
12	L	31	PHE
12	L	35	VAL
12	L	40	ARG
12	L	41	THR
12	L	42	VAL
12	L	43	THR
12	L	52	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	L	59	LEU
12	L	61	SER
12	L	65	VAL
12	L	69	ILE
12	L	83	LEU
12	L	84	ILE
12	L	95	VAL
12	L	99	ILE
12	L	109	VAL
13	M	58	GLU
13	M	64	TRP
13	M	87	TYR
13	M	93	ARG
13	M	105	THR
13	M	106	ASN
13	M	115	LYS
14	N	16	PHE
14	N	41	ARG
14	N	42	ILE
14	N	44	LEU
15	O	5	LYS
15	O	17	ARG
15	O	34	LEU
15	O	39	LEU
15	O	44	LYS
15	O	45	VAL
15	O	63	ARG
15	O	66	LEU
15	O	67	LEU
15	O	82	ILE
16	P	1	MET
16	P	2	VAL
16	P	16	HIS
16	P	20	VAL
16	P	27	LYS
16	P	28	ARG
16	P	32	TYR
16	P	47	ASP
16	P	61	SER
16	P	65	GLN
16	P	69	THR
16	P	72	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
16	P	74	LEU
16	P	82	GLN
16	P	83	GLU
17	Q	4	LYS
17	Q	7	THR
17	Q	9	VAL
17	Q	10	VAL
17	Q	11	VAL
17	Q	15	MET
17	Q	19	VAL
17	Q	23	VAL
17	Q	38	ARG
17	Q	43	LEU
17	Q	52	LYS
17	Q	57	VAL
17	Q	59	ILE
17	Q	70	ARG
17	Q	74	LEU
17	Q	85	VAL
18	R	65	ILE
18	R	84	LYS
18	R	88	LYS
19	S	6	LYS
19	S	7	LYS
19	S	22	LEU
19	S	27	GLU
19	S	29	ARG
19	S	37	ARG
19	S	44	MET
19	S	49	ILE
19	S	53	ASN
20	T	9	ASN
20	T	10	LEU
20	T	22	ARG
20	T	26	ASN
20	T	30	LYS
20	T	55	ILE
20	T	57	ARG
20	T	62	LEU
20	T	73	HIS
20	T	93	GLU
20	T	100	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	37	ASN
2	B	40	HIS
2	B	110	GLN
2	B	135	GLN
2	B	212	GLN
3	C	28	GLN
3	C	31	HIS
3	C	69	HIS
3	C	136	GLN
3	C	170	GLN
3	C	176	HIS
4	D	42	GLN
4	D	62	GLN
6	F	100	ASN
7	G	13	GLN
7	G	96	GLN
8	H	82	HIS
9	I	23	ASN
9	I	73	GLN
9	I	117	HIS
9	I	124	GLN
10	J	56	HIS
10	J	78	ASN
11	K	26	ASN
12	L	48	ASN
12	L	74	HIS
12	L	79	HIS
13	M	101	GLN
15	O	37	ASN
15	O	46	HIS
16	P	82	GLN
19	S	14	HIS
19	S	53	ASN
19	S	57	HIS
19	S	65	ASN
20	T	18	GLN
20	T	26	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1505/1506 (99%)	293 (19%)	14 (0%)
22	V	32/43 (74%)	3 (9%)	0
All	All	1537/1549 (99%)	296 (19%)	14 (0%)

All (296) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	7	G
1	A	9	G
1	A	13	U
1	A	14	U
1	A	15	G
1	A	32	A
1	A	33	A
1	A	39	G
1	A	41	G
1	A	42	G
1	A	47	C
1	A	48	C
1	A	50	A
1	A	51	A
1	A	59	A
1	A	61	G
1	A	88	C
1	A	97	U
1	A	99	C
1	A	110	C
1	A	115	G
1	A	116	A
1	A	120	A
1	A	121	C
1	A	131	C
1	A	144	G
1	A	151	A
1	A	163	C
1	A	171	A
1	A	182	U
1	A	183	G
1	A	189	U
1	A	190	G
1	A	195	A
1	A	196	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	197	A
1	A	201	C
1	A	209	U
1	A	210	U
1	A	231	G
1	A	240	C
1	A	247	G
1	A	250	A
1	A	251	G
1	A	252	U
1	A	258	G
1	A	266	G
1	A	267	C
1	A	280	C
1	A	281	G
1	A	289	G
1	A	298	A
1	A	305	G
1	A	306	G
1	A	320	C
1	A	321	A
1	A	328	C
1	A	330	C
1	A	332	G
1	A	345	C
1	A	347	G
1	A	351	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	358	U
1	A	364	A
1	A	365	U
1	A	366	C
1	A	367	U
1	A	372	C
1	A	373	A
1	A	382	A
1	A	384	G
1	A	387	U
1	A	388	G
1	A	397	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	398	C
1	A	406	G
1	A	410	G
1	A	412	A
1	A	413	G
1	A	414	A
1	A	422	C
1	A	423	G
1	A	427	U
1	A	429	U
1	A	439	A
1	A	452	A
1	A	453	A
1	A	457	C
1	A	464	G
1	A	465	A
1	A	466	G
1	A	467	G
1	A	484	G
1	A	485	G
1	A	486	U
1	A	496	A
1	A	497	U
1	A	500	G
1	A	509	A
1	A	511	C
1	A	512	U
1	A	518	C
1	A	523	A
1	A	527	G
1	A	531	U
1	A	532	A
1	A	533	A
1	A	547	A
1	A	558	G
1	A	559	A
1	A	560	U
1	A	561	U
1	A	562	C
1	A	567	G
1	A	572	A
1	A	573	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	575	G
1	A	576	G
1	A	577	G
1	A	580	U
1	A	581	G
1	A	596	C
1	A	607	A
1	A	653	A
1	A	665	A
1	A	687	A
1	A	688	G
1	A	690	G
1	A	693	G
1	A	702	A
1	A	718	G
1	A	731	G
1	A	733	A
1	A	753	A
1	A	777	A
1	A	782	A
1	A	792	A
1	A	793	U
1	A	794	A
1	A	800	G
1	A	810	C
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	828	A
1	A	829	G
1	A	833	U
1	A	841	U
1	A	842	C
1	A	843	U
1	A	849	C
1	A	859	A
1	A	870	U
1	A	873	A
1	A	876	G
1	A	884	U
1	A	897	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	902	G
1	A	914	A
1	A	916	G
1	A	921	U
1	A	922	G
1	A	927	G
1	A	934	C
1	A	935	A
1	A	945	G
1	A	951	G
1	A	960	U
1	A	961	U
1	A	968	A
1	A	969	A
1	A	971	G
1	A	972	C
1	A	974	A
1	A	976	G
1	A	977	A
1	A	980	C
1	A	981	U
1	A	982	U
1	A	992	U
1	A	993	G
1	A	1004	A
1	A	1006	C
1	A	1009	G
1	A	1025	U
1	A	1045	C
1	A	1054	C
1	A	1055	A
1	A	1065	U
1	A	1067	A
1	A	1068	G
1	A	1080	A
1	A	1081	G
1	A	1094	G
1	A	1095	U
1	A	1101	A
1	A	1117	G
1	A	1118	C
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	1129	C
1	A	1130	A
1	A	1131	G
1	A	1136	U
1	A	1137	C
1	A	1139	G
1	A	1151	A
1	A	1152	A
1	A	1159	U
1	A	1160	G
1	A	1181	G
1	A	1183	A
1	A	1189	C
1	A	1193	G
1	A	1196	U
1	A	1197	G
1	A	1202	G
1	A	1212	U
1	A	1213	A
1	A	1214	C
1	A	1218	C
1	A	1224	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1228	C
1	A	1238	A
1	A	1240	U
1	A	1241	G
1	A	1245	A
1	A	1256	A
1	A	1257	U
1	A	1262	C
1	A	1270	C
1	A	1277	C
1	A	1280	A
1	A	1281	U
1	A	1287	A
1	A	1300	G
1	A	1301	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1302	U
1	A	1305	G
1	A	1317	C
1	A	1320	C
1	A	1322	C
1	A	1323	G
1	A	1326	C
1	A	1331	G
1	A	1335	C
1	A	1337	G
1	A	1346	A
1	A	1347	G
1	A	1353	G
1	A	136(B)	C
1	A	1363	A
1	A	1364	U
1	A	1366	C
1	A	1378	C
1	A	1379	G
1	A	1397	C
1	A	1401	G
1	A	1419	G
1	A	1440	C
1	A	1442	G
1	A	1443	G
1	A	1446	A
1	A	1447	G
1	A	1451	A
1	A	1452	C
1	A	1454	G
1	A	1469	G
1	A	1483	A
1	A	1487	G
1	A	1492	A
1	A	1494	G
1	A	1497	G
1	A	1502	A
1	A	1503	A
1	A	1504	G
1	A	1506	U
1	A	1514	C
1	A	1517	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1519	A
1	A	1520	G
1	A	1528	U
1	A	1529	G
1	A	1530	G
22	V	6182	A
22	V	6187	A
22	V	6194	C

All (14) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	251	G
1	A	327	A
1	A	364	A
1	A	428	G
1	A	560	U
1	A	687	A
1	A	793	U
1	A	913	A
1	A	1064	G
1	A	1067	A
1	A	1129	C
1	A	1201	A
1	A	1493	A
1	A	1529	G

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

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.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

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

EDS was not executed - this section will therefore be empty.

6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.