



Full wwPDB X-ray Structure Validation Report

Feb 28, 2014 – 06:21 PM GMT

PDB ID : 4KBU
Title : 70S ribosome translocation intermediate GDPNP-II containing elongation factor EFG/GDPNP, mRNA, and tRNA bound in the pe*/E state. This entry contains 50S ribosomal subunit A. The full asymmetric unit also contains PDB entries 4KBT (30S subunit A), 4KBV (30S subunit B), and 4KBW (50S subunit B).
Authors : Zhou, J.; Lancaster, L.; Donohue, J.P.; Noller, H.F.
Deposited on : 2013-04-23
Resolution : 3.86 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>

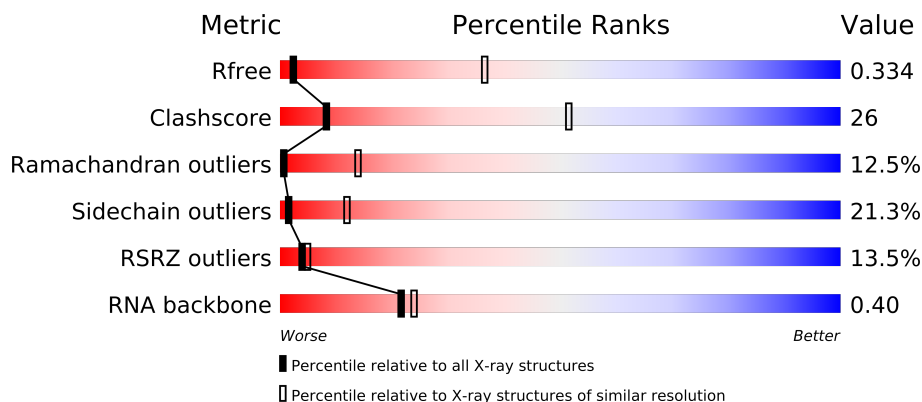
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 3.86 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1013 (4.30-3.42)
Clashscore	79885	1145 (4.22-3.50)
Ramachandran outliers	78287	1091 (4.22-3.50)
Sidechain outliers	78261	1081 (4.22-3.50)
RSRZ outliers	66119	1014 (4.30-3.42)
RNA backbone	1838	1010 (4.84-2.80)

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.

Mol	Chain	Length	Quality of chain
1	C	228	
2	D	275	
3	E	205	
4	F	208	
5	G	181	
6	H	167	
7	J	170	
8	K	140	
9	O	122	
10	P	146	
11	Q	141	
12	R	117	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
13	S	99	
14	T	138	
15	U	117	
16	V	101	
17	W	113	
18	X	93	
19	Y	107	
20	Z	185	
21	0	84	
22	1	93	
23	4	35	
24	N	138	
25	2	71	
26	3	60	
27	5	59	
28	6	50	
29	7	49	
30	8	64	
31	9	37	
32	e	103	
33	f	31	
33	g	31	
34	h	30	
35	B	119	
36	A	2879	

2 Entry composition

There are 36 unique types of molecules in this entry. The entry contains 95124 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 protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	C	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	20	VAL	ILE	CONFLICT	UNP Q72GV9
C	28	ARG	HIS	CONFLICT	UNP Q72GV9

- Molecule 2 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	D	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 3 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	E	205	Total	C	N	O	S	0	0	0
			1569	991	300	272	6			

- Molecule 4 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	F	208	Total	C	N	O	S	0	0	0
			1628	1037	304	284	3			

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	2	LYS	-	INSERTION	UNP Q72I05
F	3	GLU	-	INSERTION	UNP Q72I05

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
F	4	VAL	-	INSERTION	UNP Q72I05
F	5	ALA	-	INSERTION	UNP Q72I05
F	6	VAL	-	INSERTION	UNP Q72I05

- Molecule 5 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	G	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	5	VAL	LEU	CONFLICT	UNP Q72I16

- Molecule 6 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	H	167	Total	C	N	O	S	0	0	0
			1274	806	238	229	1			

- Molecule 7 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	J	170	Total	C	N	O		0	0	0
			851	510	170	171				

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	K	140	Total	C	N	O	S	0	0	0
			1035	659	183	188	5			

- Molecule 9 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	O	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
O	69	ILE	VAL	CONFLICT	UNP Q72I14

- Molecule 10 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	P	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 11 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	Q	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Q	32	TYR	PHE	CONFLICT	UNP Q72I11

- Molecule 12 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
12	R	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 13 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
13	S	99	Total	C	N	O	0	0	0
			775	488	155	132			

- Molecule 14 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	T	138	Total	C	N	O	S	0	0	0
			1147	713	235	198	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
T	123	GLN	LYS	CONFLICT	UNP Q72JU9
T	135	ALA	VAL	CONFLICT	UNP Q72JU9

- Molecule 15 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	U	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 16 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	V	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 17 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	W	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

- Molecule 18 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	X	93	Total	C	N	O	S	0	0	0
			734	477	132	125				

- Molecule 19 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	Y	107	Total	C	N	O	S	0	0	0
			818	524	155	134	5			

- Molecule 20 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	Z	185	Total	C	N	O	S	0	0	0
			1473	939	262	270	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
0	11	ARG	LYS	CONFLICT	UNP Q72HR3

- Molecule 22 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	1	93	Total	C	N	O	S	0	0	0
			732	460	145	126	1			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1	81	LYS	ARG	CONFLICT	UNP Q72G84

- Molecule 23 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	4	35	Total	C	N	O	S	0	0	0
			271	174	44	50	3			

- Molecule 24 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	N	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 25 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	3	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
5	29	THR	ILE	CONFLICT	UNP P62652

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 32 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	e	102	Total	C	N	O		0	0	0
			686	430	119	137				

- Molecule 33 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	f	31	Total	C	N	O		0	0	0
			156	93	31	32				
33	g	31	Total	C	N	O		0	0	0
			156	93	31	32				

- Molecule 34 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
34	h	30	Total	C	N	O	0	0	0
			151	90	30	31			

- Molecule 35 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	B	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 36 is a RNA chain called 23S ribosomal RNA.

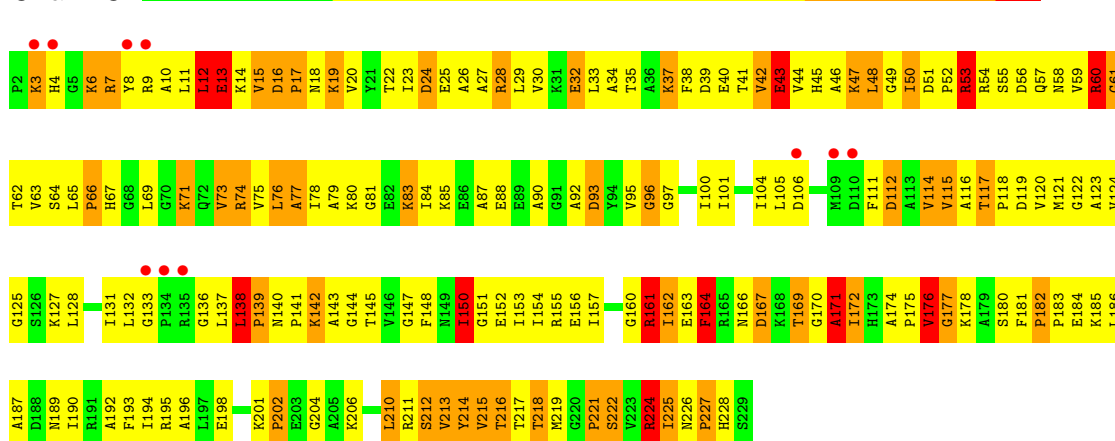
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	A	2879	Total	C	N	O	P	0	0	0
			61997	27594	11582	19943	2878			

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.

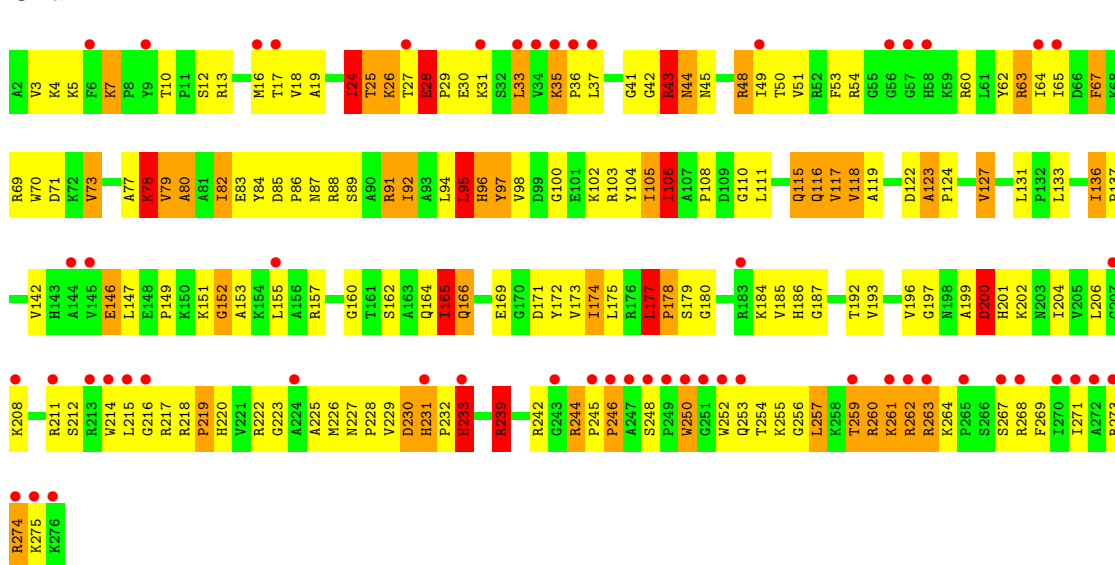
• Molecule 1: 50S ribosomal protein L1

Chain C:



• Molecule 2: 50S ribosomal protein L2

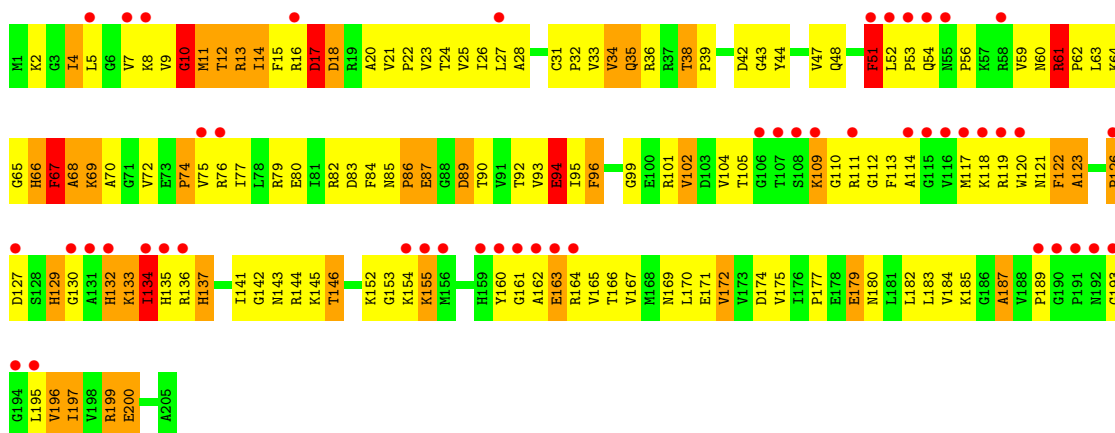
Chain D:



• Molecule 3: 50S ribosomal protein L3

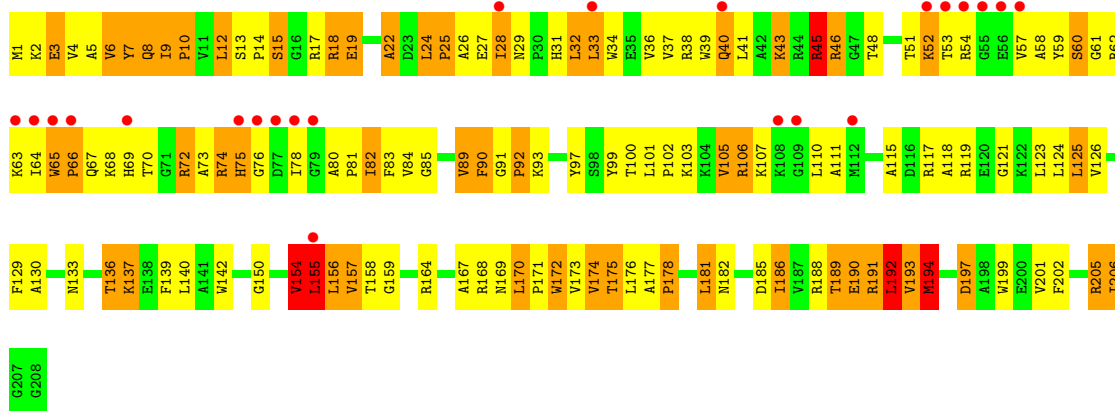
Chain E:





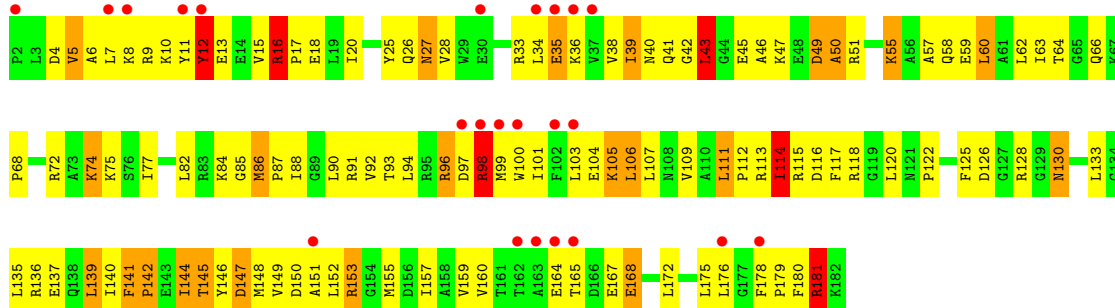
• Molecule 4: 50S ribosomal protein L4

Chain F:



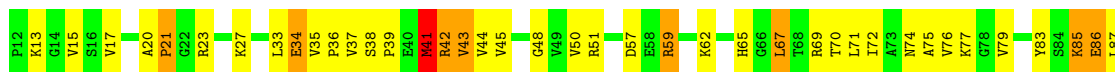
• Molecule 5: 50S ribosomal protein L5

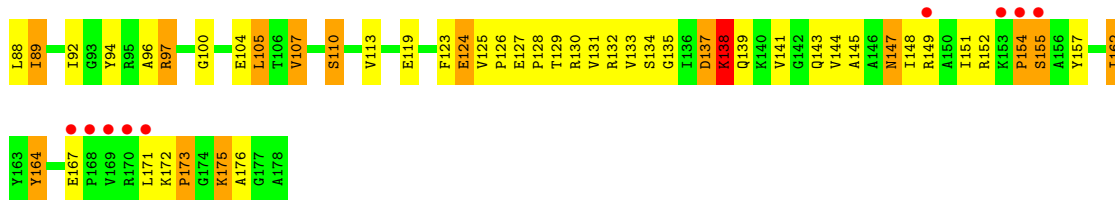
Chain G:



• Molecule 6: 50S ribosomal protein L6

Chain H:



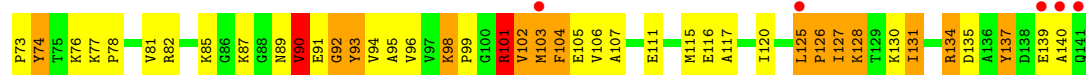


- Molecule 7: 50S ribosomal protein L10

Chain J:

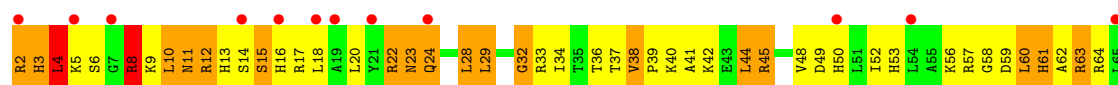
- Molecule 8: 50S ribosomal protein L11

Chain K:



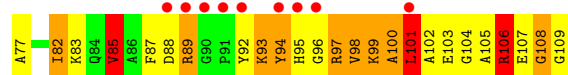
• Molecule 12: 50S ribosomal protein L17

Chain R:



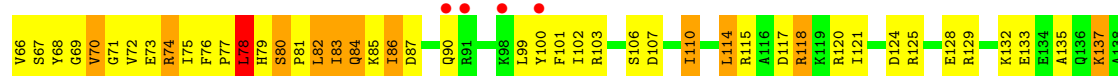
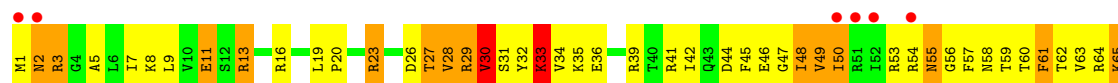
• Molecule 13: 50S ribosomal protein L18

Chain S:



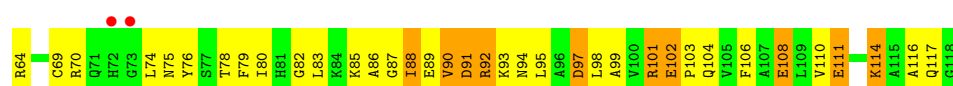
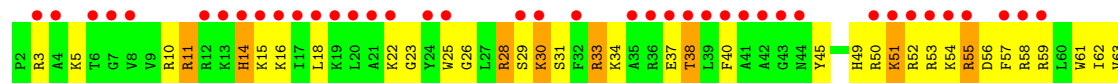
• Molecule 14: 50S ribosomal protein L19

Chain T:



• Molecule 15: 50S ribosomal protein L20

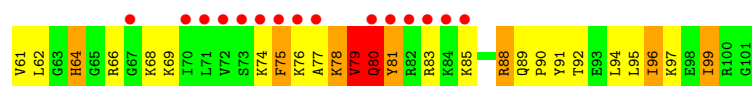
Chain U:



• Molecule 16: 50S ribosomal protein L21

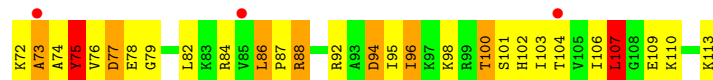
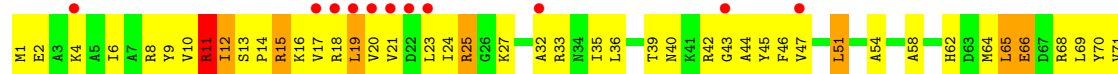
Chain V:





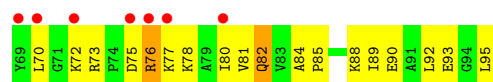
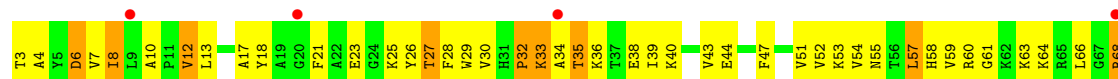
• Molecule 17: 50S ribosomal protein L22

Chain W:



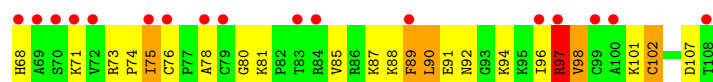
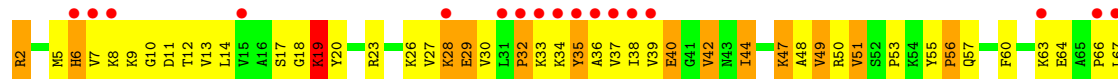
• Molecule 18: 50S ribosomal protein L23

Chain X:



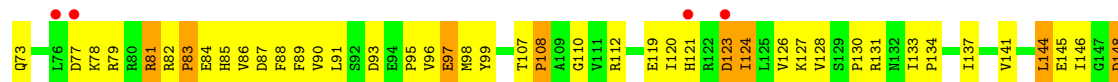
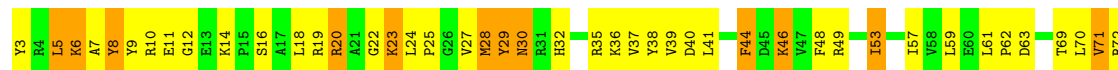
• Molecule 19: 50S ribosomal protein L24

Chain Y:



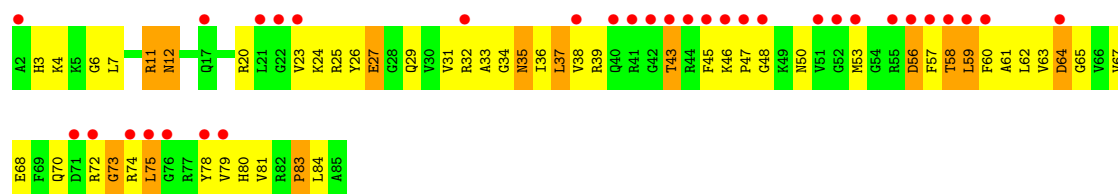
• Molecule 20: 50S ribosomal protein L25

Chain Z:



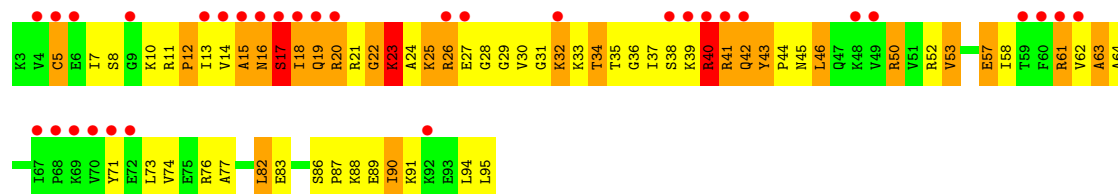
• Molecule 21: 50S ribosomal protein L27

Chain 0:



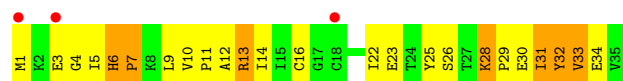
- Molecule 22: 50S ribosomal protein L28

Chain 1:



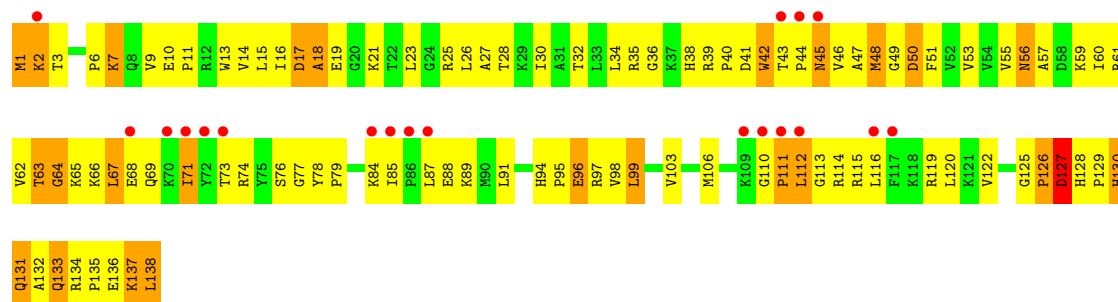
- Molecule 23: 50S ribosomal protein L31

Chain 4:



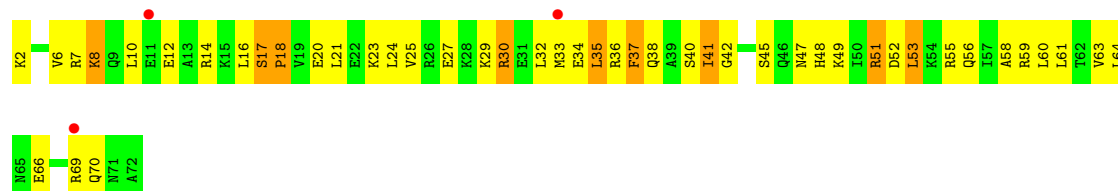
- Molecule 24: 50S ribosomal protein L13

Chain N:



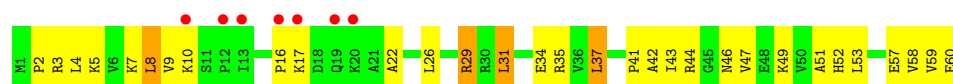
- Molecule 25: 50S ribosomal protein L29

Chain 2:



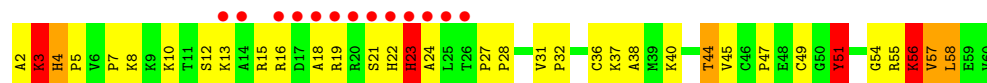
- Molecule 26: 50S ribosomal protein L30

Chain 3:



- Molecule 27: 50S ribosomal protein L32

Chain 5:



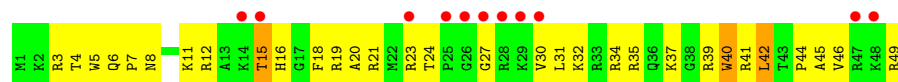
- Molecule 28: 50S ribosomal protein L33

Chain 6:



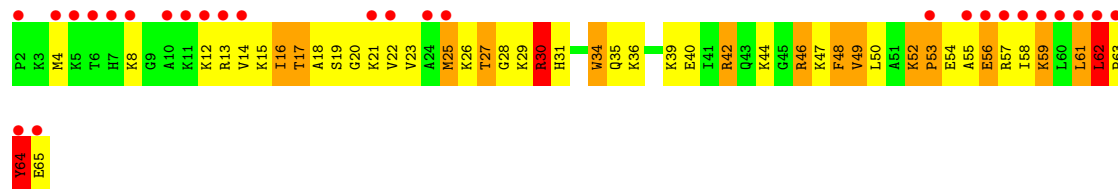
- Molecule 29: 50S ribosomal protein L34

Chain 7:



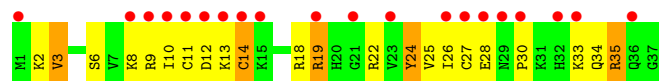
- Molecule 30: 50S ribosomal protein L35

Chain 8:



- Molecule 31: 50S ribosomal protein L36

Chain 9:



- Molecule 32: 50S ribosomal protein L7/L12

Chain e:



- Molecule 33: 50S ribosomal protein L7/L12

Chain f:

There are no outlier residues recorded for this chain.

- Molecule 33: 50S ribosomal protein L7/L12

Chain g: 

There are no outlier residues recorded for this chain.

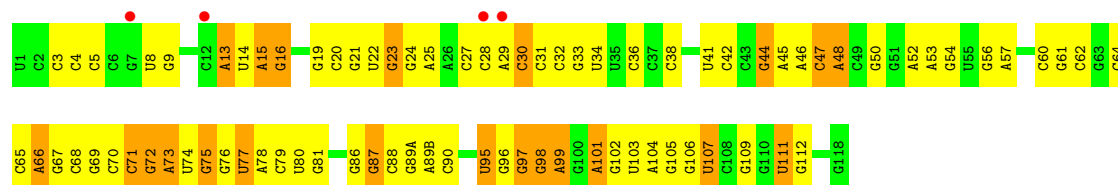
- Molecule 34: 50S ribosomal protein L7/L12

Chain h: 

There are no outlier residues recorded for this chain.

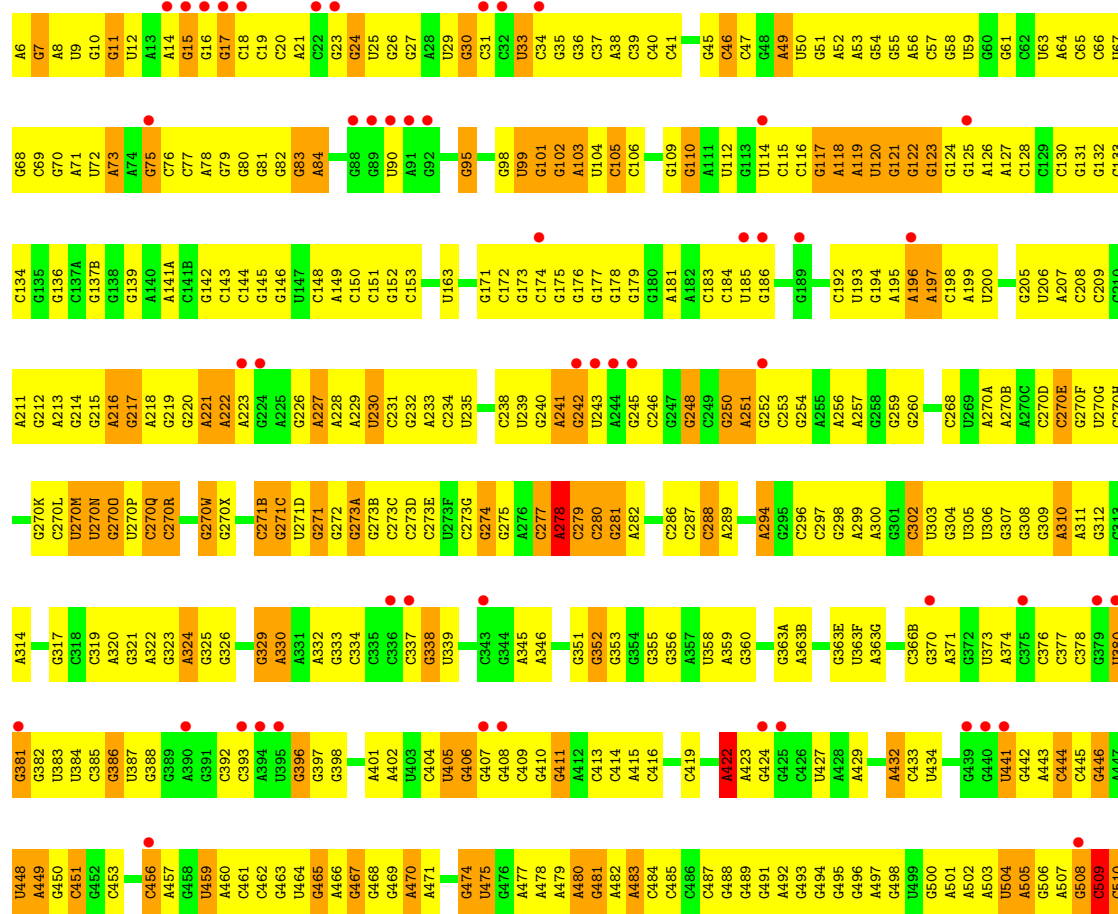
- Molecule 35: 5S ribosomal RNA

Chain B: 

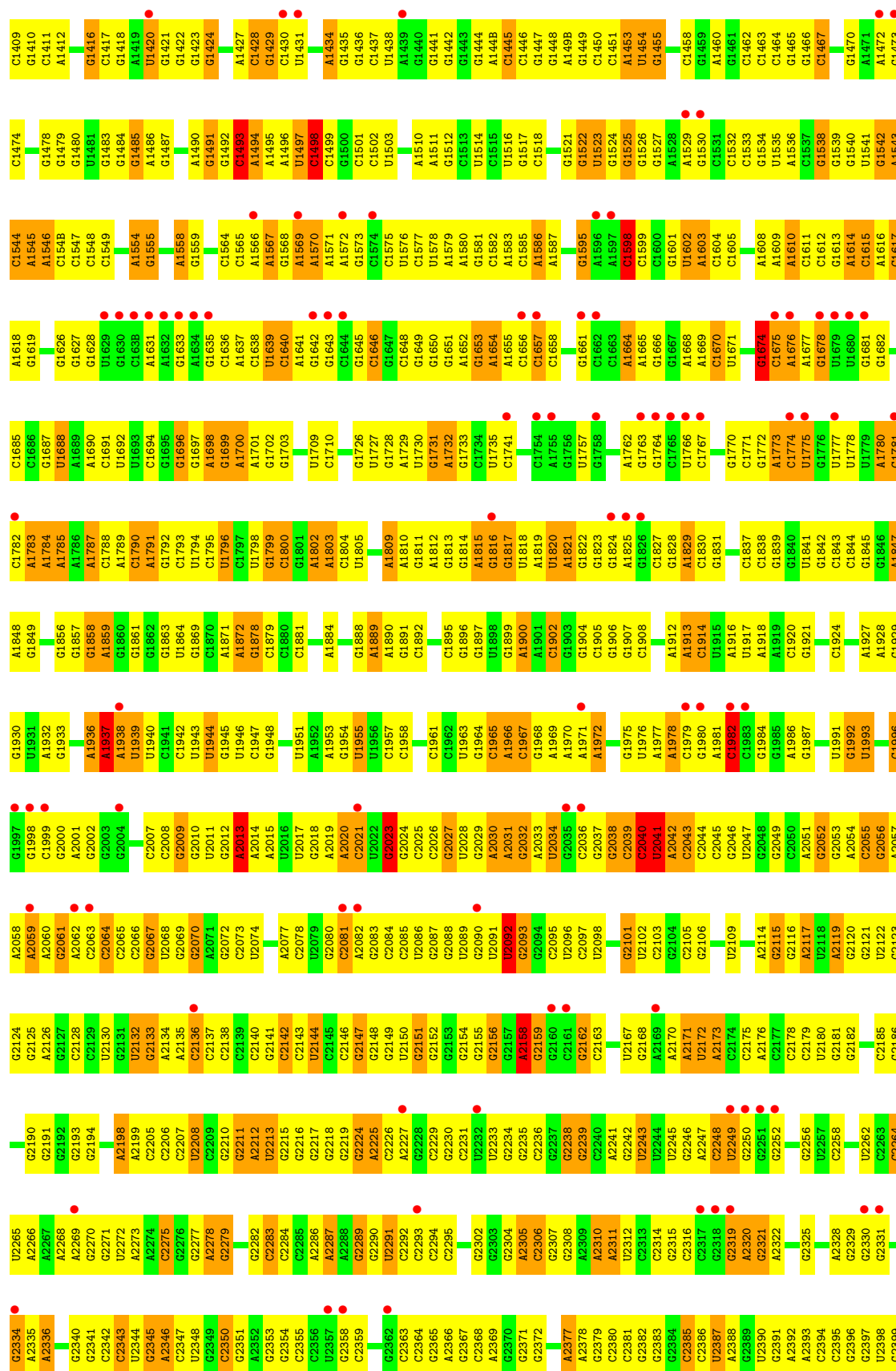


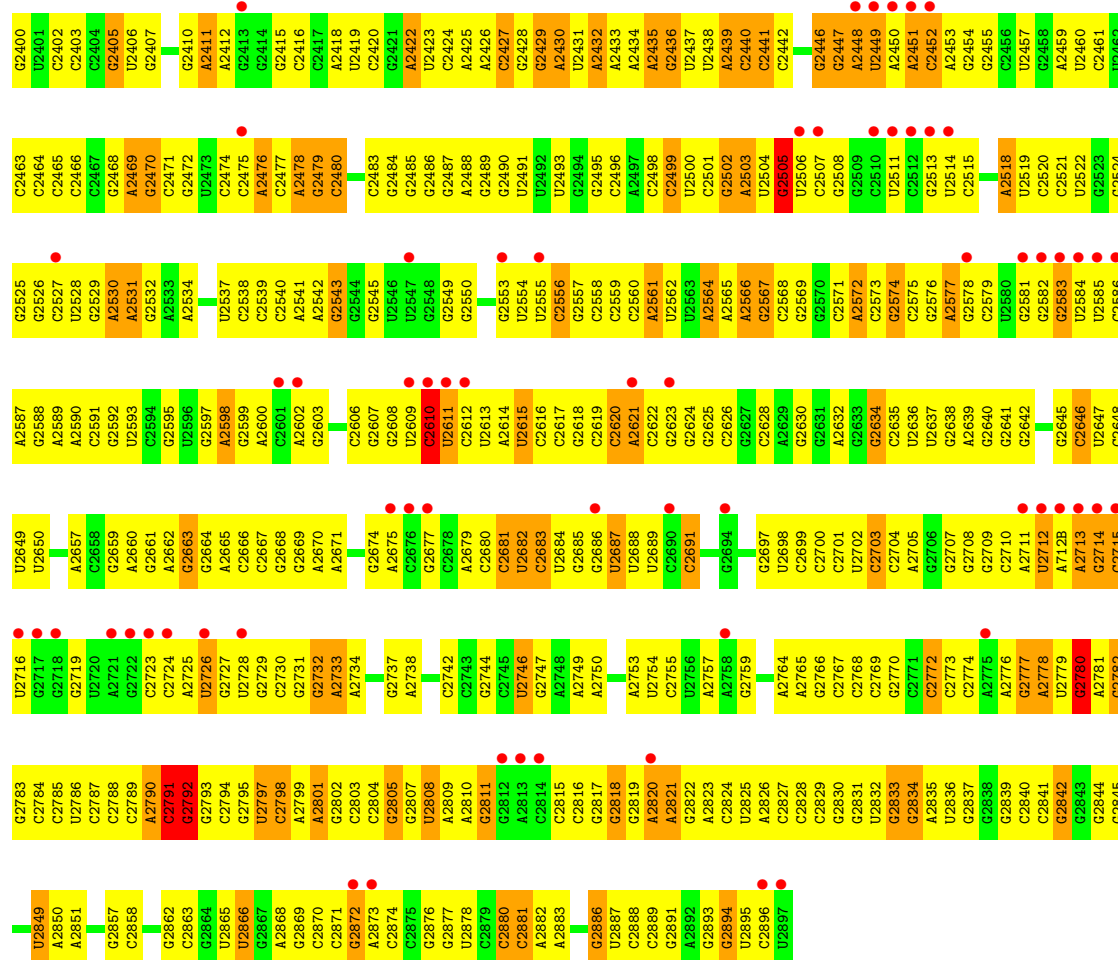
- Molecule 36: 23S ribosomal RNA

Chain A: 









4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	302.39Å 683.92Å 356.70Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.86 182.04 – 3.87	Depositor EDS
% Data completeness (in resolution range)	(Not available) (40.00-3.86) 64.4 (182.04-3.87)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.34	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.11 (at 3.89Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.264 , 0.317 0.334 , 0.334	Depositor DCC
R_{free} test set	21649 reflections (5.01%)	DCC
Wilson B-factor (Å ²)	76.3	Xtriage
Anisotropy	0.322	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 459.4	EDS
Estimated twinning fraction	0.320 for h,-k,-l	Xtriage
L-test for twinning	$\langle L \rangle = 0.24$, $\langle L^2 \rangle = 0.09$	Xtriage
Outliers	0 of 432130 reflections	Xtriage
F_o, F_c correlation	0.59	EDS
Total number of atoms	95124	wwPDB-VP
Average B, all atoms (Å ²)	85.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.42% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	C	0.52	0/1774	0.84	3/2391 (0.1%)
2	D	0.34	0/2195	0.65	2/2955 (0.1%)
3	E	0.37	0/1602	0.68	2/2160 (0.1%)
4	F	0.47	1/1663 (0.1%)	0.87	6/2249 (0.3%)
5	G	0.42	1/1499 (0.1%)	1.33	5/2016 (0.2%)
6	H	0.30	0/1298	0.56	0/1751
8	K	0.28	0/1054	0.55	0/1427
9	O	0.29	0/943	0.58	0/1269
10	P	0.32	0/1131	0.68	0/1504
11	Q	0.33	0/1143	0.60	0/1527
12	R	0.31	0/974	0.63	0/1302
13	S	0.36	0/783	0.69	0/1041
14	T	0.34	0/1161	0.67	0/1549
15	U	0.38	0/982	0.59	0/1306
16	V	0.38	0/790	0.73	0/1057
17	W	0.35	0/911	0.66	2/1220 (0.2%)
18	X	0.31	0/748	0.57	0/1004
19	Y	0.32	0/831	0.61	0/1108
20	Z	0.30	0/1505	0.60	0/2042
21	0	0.27	0/671	0.54	0/892
22	1	0.48	0/739	0.77	2/981 (0.2%)
23	4	0.40	0/276	0.62	0/372
24	N	0.34	0/1131	0.66	0/1525
25	2	0.36	0/600	0.62	0/793
26	3	0.29	0/482	0.53	0/646
27	5	0.33	0/473	0.65	0/639
28	6	0.32	0/440	0.67	0/586
29	7	0.31	0/438	0.56	0/575
30	8	0.33	0/525	0.66	0/691
31	9	0.43	0/310	0.69	0/407
32	e	0.33	0/538	0.56	0/715
35	B	0.39	0/2853	1.12	15/4451 (0.3%)
36	A	0.39	0/69437	1.09	229/108401 (0.2%)
All	All	0.38	2/101900 (0.0%)	1.01	266/152552 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	C	0	5
2	D	0	2
4	F	0	1
5	G	0	2
7	J	0	1
13	S	0	3
17	W	0	1
22	1	0	2
All	All	0	17

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	G	114	ILE	C-N	10.70	1.58	1.34
4	F	157	VAL	CB-CG1	-5.60	1.41	1.52

All (266) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	G	114	ILE	O-C-N	-51.93	39.62	122.70
36	A	1006	C	C6-N1-C2	-15.70	114.02	120.30
36	A	1006	C	N3-C2-O2	-13.26	112.62	121.90
36	A	2505	G	N1-C6-O6	12.54	127.43	119.90
36	A	1006	C	N1-C2-O2	10.83	125.40	118.90
36	A	2505	G	C5-C6-O6	-10.28	122.43	128.60
36	A	2040	C	C2-N1-C1'	9.12	128.83	118.80
36	A	1135	C	C2-N1-C1'	9.12	128.83	118.80
36	A	1137	G	C6-N1-C2	-8.89	119.77	125.10
36	A	1137	G	O4'-C1'-N9	8.68	115.14	108.20
4	F	155	LEU	N-CA-C	-8.61	87.76	111.00
36	A	1493	C	N1-C2-O2	8.60	124.06	118.90
36	A	1135	C	C6-N1-C1'	-8.54	110.56	120.80
36	A	1048	A	N1-C6-N6	8.42	123.65	118.60
35	B	101	A	C6-N1-C2	-8.24	113.65	118.60
36	A	1493	C	C2-N1-C1'	8.21	127.83	118.80
36	A	645	C	C2-N1-C1'	8.18	127.79	118.80
36	A	1313	U	C2-N1-C1'	8.09	127.40	117.70
36	A	645	C	N1-C2-O2	8.07	123.74	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	A	30	G	N3-C4-N9	8.05	130.83	126.00
36	A	271(B)	C	C2-N1-C1'	7.84	127.43	118.80
36	A	1137	G	N3-C4-C5	-7.72	124.74	128.60
36	A	2009	G	N3-C4-N9	-7.56	121.46	126.00
36	A	1006	C	C2-N1-C1'	7.50	127.05	118.80
36	A	1774	C	C6-N1-C2	-7.50	117.30	120.30
36	A	271(B)	C	N1-C2-O2	7.47	123.38	118.90
36	A	1006	C	C5-C6-N1	7.43	124.72	121.00
36	A	1420	U	C2-N1-C1'	7.40	126.58	117.70
36	A	673	C	C5-C4-N4	-7.40	115.02	120.20
36	A	1327	C	C2-N1-C1'	7.38	126.92	118.80
36	A	860	U	C2-N1-C1'	7.30	126.46	117.70
36	A	95	G	N3-C4-N9	-7.25	121.65	126.00
36	A	103	A	N1-C6-N6	7.22	122.93	118.60
36	A	103	A	N9-C4-C5	-7.15	102.94	105.80
36	A	1048	A	C4-C5-C6	7.13	120.56	117.00
36	A	2780	G	O4'-C1'-N9	7.09	113.87	108.20
36	A	1107	G	N3-C4-N9	-7.05	121.77	126.00
35	B	75	G	C6-N1-C2	-7.01	120.89	125.10
36	A	673	C	C2-N3-C4	-7.00	116.40	119.90
36	A	2794	C	C2-N1-C1'	6.89	126.38	118.80
35	B	95	U	C5-C4-O4	6.87	130.02	125.90
3	E	61	ARG	C-N-CD	6.86	142.80	128.40
36	A	2794	C	N1-C2-O2	6.83	123.00	118.90
36	A	1525	G	N3-C4-N9	-6.83	121.90	126.00
36	A	2585	U	C2-N1-C1'	6.80	125.86	117.70
36	A	1774	C	C2-N1-C1'	6.78	126.26	118.80
36	A	807	U	C2-N3-C4	-6.77	122.94	127.00
36	A	997	G	O5'-P-OP1	-6.75	99.63	105.70
36	A	1140	C	C6-N1-C2	-6.74	117.61	120.30
35	B	101	A	C5-C6-N1	6.73	121.06	117.70
36	A	1138	G	O4'-C1'-N9	6.73	113.58	108.20
4	F	192	LEU	CA-CB-CG	6.72	130.76	115.30
36	A	1598	C	C2-N1-C1'	6.72	126.19	118.80
36	A	527	C	C6-N1-C2	-6.64	117.64	120.30
36	A	2792	G	N9-C4-C5	6.62	108.05	105.40
36	A	1226	A	N1-C6-N6	6.62	122.57	118.60
36	A	2343	C	C2-N1-C1'	6.60	126.06	118.80
35	B	101	A	C5-C6-N6	-6.59	118.43	123.70
36	A	1048	A	C6-C5-N7	-6.58	127.69	132.30
36	A	2040	C	C6-N1-C1'	-6.58	112.90	120.80
36	A	2009	G	N3-C2-N2	-6.57	115.30	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	A	1314	C	C2-N1-C1'	6.55	126.01	118.80
36	A	2040	C	N1-C2-O2	6.52	122.81	118.90
36	A	2040	C	N3-C2-O2	-6.45	117.39	121.90
36	A	1493	C	C5-C6-N1	6.44	124.22	121.00
36	A	1493	C	C6-N1-C2	-6.42	117.73	120.30
36	A	1226	A	C4-C5-C6	6.42	120.21	117.00
35	B	75	G	N3-C4-C5	-6.37	125.42	128.60
36	A	1048	A	C4-N9-C1'	6.36	137.74	126.30
36	A	2040	C	OP1-P-OP2	-6.35	110.07	119.60
36	A	645	C	N3-C2-O2	-6.33	117.47	121.90
36	A	621	A	N1-C6-N6	-6.33	114.80	118.60
36	A	1493	C	N3-C2-O2	-6.32	117.48	121.90
36	A	1314	C	C5-C6-N1	6.31	124.16	121.00
36	A	509	C	C6-N1-C2	-6.30	117.78	120.30
36	A	1389	G	N3-C4-N9	6.30	129.78	126.00
36	A	860	U	N3-C2-O2	-6.28	117.81	122.20
5	G	139	LEU	CA-CB-CG	6.27	129.71	115.30
36	A	1675	C	C2-N1-C1'	6.23	125.66	118.80
36	A	647	G	N3-C4-N9	6.23	129.74	126.00
36	A	673	C	N3-C4-C5	6.22	124.39	121.90
36	A	1048	A	C8-N9-C1'	-6.20	116.55	127.70
35	B	75	G	N3-C4-N9	6.19	129.71	126.00
36	A	1139	G	N3-C4-N9	-6.17	122.30	126.00
36	A	121	G	N3-C4-N9	6.14	129.68	126.00
17	W	107	LEU	CA-CB-CG	6.13	129.41	115.30
36	A	2023	G	N3-C4-N9	-6.11	122.33	126.00
36	A	103	A	N3-C4-N9	6.10	132.28	127.40
5	G	98	ARG	NE-CZ-NH1	6.10	123.35	120.30
36	A	2119	A	C5-C6-N6	6.09	128.57	123.70
36	A	1982	C	C2-N1-C1'	6.08	125.49	118.80
36	A	2802	G	N9-C4-C5	-6.08	102.97	105.40
36	A	2801	A	N1-C6-N6	6.08	122.25	118.60
36	A	83	G	C2-N3-C4	-6.07	108.86	111.90
4	F	193	VAL	CB-CA-C	6.07	122.93	111.40
36	A	1137	G	N1-C2-N3	6.06	127.54	123.90
36	A	2092	U	P-O3'-C3'	6.05	126.96	119.70
2	D	95	LEU	CA-CB-CG	6.04	129.20	115.30
36	A	2248	C	C2-N1-C1'	-5.98	112.22	118.80
36	A	103	A	C8-N9-C1'	-5.97	116.96	127.70
36	A	121	G	C6-C5-N7	-5.97	126.82	130.40
36	A	2343	C	N1-C2-O2	5.96	122.48	118.90
36	A	2802	G	N3-C4-N9	5.94	129.56	126.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	A	529	A	C4-C5-C6	-5.93	114.03	117.00
36	A	907	U	O4'-C1'-N1	5.88	112.91	108.20
36	A	2181	G	N3-C4-N9	-5.85	122.49	126.00
36	A	1135	C	N1-C2-O2	5.84	122.41	118.90
36	A	2802	G	C4-C5-N7	5.83	113.13	110.80
35	B	75	G	C5-C6-N1	5.83	114.41	111.50
36	A	1327	C	C6-N1-C2	-5.83	117.97	120.30
36	A	2792	G	O4'-C1'-N9	5.82	112.85	108.20
36	A	2343	C	C6-N1-C1'	-5.81	113.83	120.80
36	A	2794	C	C6-N1-C1'	-5.80	113.84	120.80
36	A	737	C	C2-N1-C1'	5.79	125.16	118.80
36	A	974(B)	C	C2-N1-C1'	5.79	125.16	118.80
36	A	30	G	N3-C4-C5	-5.78	125.71	128.60
36	A	1048	A	N3-C4-N9	5.78	132.02	127.40
36	A	2505	G	C4-C5-N7	5.77	113.11	110.80
36	A	2289	G	C6-C5-N7	-5.77	126.94	130.40
36	A	271(B)	C	C6-N1-C1'	-5.76	113.89	120.80
36	A	2714	G	N3-C4-N9	5.75	129.45	126.00
36	A	1982	C	N1-C2-O2	5.75	122.35	118.90
36	A	565	C	C2-N3-C4	-5.75	117.03	119.90
36	A	529	A	N1-C6-N6	-5.74	115.16	118.60
36	A	45	G	N3-C4-N9	-5.74	122.56	126.00
36	A	1774	C	N3-C2-O2	-5.73	117.89	121.90
36	A	2009	G	N9-C4-C5	5.73	107.69	105.40
36	A	2792	G	C8-N9-C4	-5.73	104.11	106.40
36	A	1385	G	N3-C4-N9	-5.71	122.57	126.00
36	A	24	G	N3-C4-N9	-5.71	122.58	126.00
36	A	2023	G	N3-C2-N2	-5.70	115.91	119.90
4	F	156	LEU	N-CA-C	-5.70	95.61	111.00
36	A	1078	U	C2-N1-C1'	5.70	124.53	117.70
36	A	1110	G	C2-N3-C4	-5.68	109.06	111.90
36	A	1872	A	N1-C6-N6	5.68	122.01	118.60
36	A	2101	G	N9-C4-C5	5.67	107.67	105.40
36	A	860	U	N1-C2-O2	5.66	126.76	122.80
36	A	24	G	C8-N9-C1'	5.65	134.35	127.00
36	A	95	G	N3-C4-C5	5.64	131.42	128.60
36	A	1226	A	C6-C5-N7	-5.63	128.36	132.30
36	A	645	C	C6-N1-C1'	-5.61	114.07	120.80
36	A	278	A	P-O3'-C3'	5.59	126.41	119.70
36	A	2248	C	C6-N1-C1'	5.57	127.48	120.80
36	A	2101	G	C4-C5-N7	-5.55	108.58	110.80
36	A	251	A	N3-C4-C5	-5.54	122.92	126.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	A	509	C	C5-C6-N1	5.54	123.77	121.00
36	A	1998	G	N3-C4-N9	5.54	129.33	126.00
36	A	1774	C	N1-C2-O2	5.54	122.22	118.90
36	A	1090	U	O4'-C1'-N1	5.54	112.63	108.20
36	A	1937	A	P-O3'-C3'	5.51	126.32	119.70
2	D	177	LEU	CA-CB-CG	5.51	127.97	115.30
36	A	2023	G	N1-C2-N2	5.50	121.15	116.20
3	E	10	GLY	N-CA-C	5.50	126.84	113.10
36	A	1083	U	O4'-C1'-N1	5.48	112.58	108.20
36	A	510	C	N1-C2-O2	5.48	122.19	118.90
36	A	2119	A	N1-C6-N6	-5.47	115.31	118.60
36	A	894	C	C2-N1-C1'	-5.47	112.78	118.80
36	A	251	A	C6-N1-C2	-5.47	115.32	118.60
36	A	645	C	C6-N1-C2	-5.46	118.11	120.30
36	A	30	G	C8-N9-C1'	-5.46	119.91	127.00
35	B	95	U	C2-N1-C1'	-5.45	111.16	117.70
36	A	1022	G	P-O3'-C3'	5.45	126.23	119.70
5	G	114	ILE	C-N-CA	5.44	135.31	121.70
36	A	2802	G	N3-C2-N2	5.44	123.71	119.90
35	B	23	G	N3-C4-N9	5.44	129.26	126.00
36	A	1420	U	C6-N1-C1'	-5.44	113.58	121.20
36	A	882	G	N9-C4-C5	5.44	107.58	105.40
22	1	17	SER	N-CA-C	-5.44	96.32	111.00
35	B	95	U	O4'-C1'-N1	5.43	112.55	108.20
36	A	1674	G	C6-C5-N7	-5.43	127.14	130.40
36	A	1306	C	O4'-C1'-N1	5.43	112.54	108.20
36	A	737	C	C6-N1-C2	-5.41	118.14	120.30
36	A	270(W)	G	N3-C4-N9	-5.41	122.75	126.00
36	A	882	G	C5-C6-O6	5.40	131.84	128.60
36	A	1420	U	C5-C6-N1	5.39	125.40	122.70
36	A	1313	U	C6-N1-C1'	-5.39	113.65	121.20
36	A	2791	C	C6-N1-C2	-5.39	118.14	120.30
36	A	893	C	C5-C4-N4	5.37	123.96	120.20
36	A	271(C)	G	P-O3'-C3'	5.37	126.14	119.70
36	A	1420	U	N1-C2-O2	5.37	126.56	122.80
35	B	95	U	C6-N1-C1'	5.37	128.71	121.20
36	A	95	G	N3-C2-N2	-5.36	116.15	119.90
36	A	270(E)	C	C6-N1-C1'	5.36	127.23	120.80
36	A	2791	C	C2-N1-C1'	5.36	124.70	118.80
36	A	1138	G	C4-N9-C1'	-5.36	119.53	126.50
35	B	101	A	N3-C4-N9	5.34	131.68	127.40
36	A	1398	C	N1-C2-O2	5.34	122.11	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	A	1157	G	N3-C4-N9	5.34	129.21	126.00
36	A	2321	G	C8-N9-C4	-5.34	104.27	106.40
36	A	1676	A	C5-C6-N1	5.33	120.36	117.70
36	A	1570	A	N1-C6-N6	5.32	121.79	118.60
36	A	504	U	N1-C2-O2	5.32	126.52	122.80
36	A	2610	C	C4-C5-C6	-5.31	114.74	117.40
36	A	1493	C	C6-N1-C1'	-5.30	114.44	120.80
36	A	422	A	C8-N9-C4	-5.30	103.68	105.80
36	A	1327	C	C5-C6-N1	5.29	123.64	121.00
36	A	1139	G	N3-C4-C5	5.28	131.24	128.60
36	A	2634	G	N3-C4-N9	-5.25	122.85	126.00
36	A	894	C	C6-N1-C1'	5.25	127.09	120.80
17	W	51	LEU	CA-CB-CG	5.24	127.36	115.30
36	A	1107	G	N3-C2-N2	-5.24	116.23	119.90
4	F	191	ARG	N-CA-C	5.23	125.13	111.00
22	1	40	ARG	N-CA-C	5.23	125.11	111.00
36	A	883	G	N9-C4-C5	5.22	107.49	105.40
36	A	1048	A	N9-C4-C5	-5.21	103.71	105.80
36	A	974(B)	C	C5-C6-N1	5.21	123.61	121.00
36	A	1726	G	N3-C4-N9	-5.21	122.87	126.00
36	A	2585	U	N1-C2-O2	5.21	126.44	122.80
36	A	2505	G	N3-C4-C5	5.20	131.20	128.60
36	A	1774	C	C5-C6-N1	5.20	123.60	121.00
36	A	576	U	C5-C4-O4	-5.19	122.79	125.90
36	A	1311	G	N9-C4-C5	-5.19	103.32	105.40
36	A	2151	G	N3-C4-N9	-5.18	122.89	126.00
36	A	1019	U	C2-N3-C4	5.17	130.10	127.00
36	A	1139	G	C4-N9-C1'	-5.17	119.78	126.50
36	A	1525	G	N9-C4-C5	5.16	107.47	105.40
36	A	270(X)	G	N3-C4-N9	-5.16	122.91	126.00
36	A	1213	A	N1-C6-N6	5.16	121.69	118.60
36	A	24	G	C4-N9-C1'	-5.16	119.80	126.50
36	A	2040	C	C6-N1-C2	-5.16	118.24	120.30
36	A	75	G	C6-N1-C2	5.15	128.19	125.10
36	A	1598	C	C5-C6-N1	5.15	123.58	121.00
36	A	895	U	C2-N3-C4	5.14	130.09	127.00
35	B	50	G	N3-C4-N9	-5.14	122.91	126.00
36	A	893	C	C6-N1-C1'	5.14	126.97	120.80
36	A	895	U	C5-C6-N1	5.13	125.26	122.70
1	C	12	LEU	CA-CB-CG	5.12	127.09	115.30
1	C	225	ILE	CB-CA-C	-5.12	101.36	111.60
36	A	103	A	C4-N9-C1'	5.12	135.51	126.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	G	43	LEU	CA-CB-CG	5.11	127.06	115.30
36	A	2794	C	C5-C6-N1	5.11	123.55	121.00
36	A	1872	A	C4-C5-C6	5.10	119.55	117.00
4	F	174	VAL	N-CA-C	-5.10	97.24	111.00
36	A	1498	C	C6-N1-C2	-5.09	118.26	120.30
36	A	2429	G	O4'-C1'-N9	5.09	112.27	108.20
36	A	2681	C	C2-N1-C1'	5.09	124.40	118.80
36	A	527	C	N3-C2-O2	-5.09	118.34	121.90
36	A	645	C	C5-C6-N1	5.09	123.55	121.00
36	A	251	A	N3-C4-N9	5.08	131.47	127.40
36	A	1639	U	C2-N1-C1'	5.08	123.79	117.70
36	A	294	A	N1-C6-N6	5.08	121.64	118.60
36	A	529	A	C5-C6-N1	5.07	120.23	117.70
36	A	1675	C	C6-N1-C1'	-5.07	114.72	120.80
36	A	2013	A	N1-C6-N6	-5.07	115.56	118.60
1	C	164	PHE	N-CA-CB	5.07	119.72	110.60
36	A	2808	U	N1-C2-O2	5.07	126.34	122.80
36	A	2158	A	P-O3'-C3'	5.06	125.77	119.70
36	A	509	C	N1-C2-O2	5.05	121.93	118.90
36	A	2041	U	C5-C6-N1	5.04	125.22	122.70
36	A	974(B)	C	C6-N1-C2	-5.04	118.28	120.30
36	A	270(X)	G	N9-C4-C5	5.04	107.41	105.40
36	A	30	G	C4-N9-C1'	5.03	133.04	126.50
36	A	271(B)	C	N3-C2-O2	-5.03	118.38	121.90
36	A	2248	C	N1-C2-O2	-5.03	115.89	118.90
36	A	95	G	C4-N9-C1'	-5.02	119.97	126.50
36	A	894	C	N3-C4-C5	-5.02	119.89	121.90
36	A	809	G	N3-C4-N9	5.02	129.01	126.00
36	A	1674	G	C2-N3-C4	-5.02	109.39	111.90
36	A	828	U	C2-N1-C1'	5.02	123.72	117.70
36	A	103	A	C4-C5-C6	5.01	119.51	117.00
36	A	1424	G	N3-C2-N2	-5.01	116.39	119.90
36	A	271(B)	C	C5-C6-N1	5.01	123.50	121.00
35	B	101	A	N3-C4-C5	-5.01	123.30	126.80
36	A	1025	G	C5-C6-O6	-5.00	125.60	128.60
36	A	2792	G	N3-C2-N2	-5.00	116.40	119.90
36	A	2792	G	N1-C2-N2	5.00	120.70	116.20

There are no chirality outliers.

All (17) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
22	1	16	ASN	Peptide
22	1	17	SER	Peptide
1	C	161	ARG	Peptide
1	C	171	ALA	Peptide
1	C	210	LEU	Peptide
1	C	211	ARG	Peptide
1	C	213	VAL	Peptide
2	D	164	GLN	Peptide
2	D	78	LYS	Peptide
4	F	154	VAL	Peptide
5	G	111	LEU	Mainchain
5	G	114	ILE	Mainchain
7	J	83	UNK	Peptide
13	S	14	VAL	Peptide
13	S	46	VAL	Peptide
13	S	98	VAL	Peptide
17	W	75	TYR	Peptide

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	C	1742	0	1798	177	0
2	D	2145	0	2234	170	0
3	E	1569	0	1634	145	0
4	F	1628	0	1680	174	0
5	G	1474	0	1535	88	0
6	H	1274	0	1342	63	0
7	J	851	0	199	35	0
8	K	1035	0	1082	48	0
9	O	933	0	996	64	0
10	P	1114	0	1187	85	0
11	Q	1122	0	1179	67	0
12	R	960	0	1021	84	0
13	S	775	0	835	66	0
14	T	1147	0	1207	99	0
15	U	964	0	1022	86	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	V	779	0	852	63	0
17	W	900	0	964	57	0
18	X	734	0	789	41	0
19	Y	818	0	908	45	0
20	Z	1473	0	1497	66	0
21	0	662	0	688	44	0
22	1	732	0	808	76	0
23	4	271	0	284	17	0
24	N	1104	0	1180	201	0
25	2	598	0	653	34	0
26	3	477	0	529	20	0
27	5	459	0	477	32	0
28	6	433	0	461	37	0
29	7	430	0	480	38	0
30	8	517	0	582	46	0
31	9	307	0	336	21	0
32	e	686	0	620	0	0
33	f	156	0	37	0	0
33	g	156	0	39	0	0
34	h	151	0	39	0	0
35	B	2551	0	1295	93	0
36	A	61997	0	31250	2233	0
All	All	95124	0	63719	4122	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 26.

All (4122) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:U:64:ARG:CD	24:N:41:ASP:HA	1.32	1.57
15:U:64:ARG:HD2	24:N:41:ASP:CA	1.37	1.49
36:A:2681:C:N4	36:A:2725:A:H62	1.23	1.31
36:A:1311:G:N2	36:A:1603:A:H62	1.27	1.28
24:N:78:TYR:CD2	36:A:2642:G:C5'	2.17	1.27
36:A:1311:G:H21	36:A:1603:A:N6	1.28	1.27
36:A:289:A:N6	36:A:351:G:H21	1.41	1.16
36:A:2681:C:C5	36:A:2725:A:N6	2.14	1.16
36:A:289:A:H62	36:A:351:G:N2	1.44	1.15
24:N:78:TYR:CD2	36:A:2642:G:H5''	1.81	1.15
36:A:1354:A:N6	36:A:1377:G:H21	1.43	1.14
36:A:2681:C:H41	36:A:2725:A:N6	1.41	1.14
36:A:1354:A:H62	36:A:1377:G:N2	1.43	1.14

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:N:78:TYR:CE2	36:A:2642:G:H4'	1.81	1.13
36:A:2699:C:N4	36:A:2708:G:H1	1.47	1.13
1:C:44:VAL:HB	1:C:174:ALA:HB3	1.31	1.10
36:A:882:G:N2	36:A:894:C:N3	2.00	1.10
24:N:39:ARG:HH21	24:N:41:ASP:HB2	1.13	1.09
36:A:529:A:N6	36:A:2041:U:H3	1.50	1.08
36:A:2747:G:N2	36:A:2757:A:H62	1.48	1.08
24:N:78:TYR:CD2	36:A:2642:G:H4'	1.89	1.07
36:A:1492:G:H1	36:A:1498:C:N4	1.52	1.07
24:N:76:SER:HB3	36:A:2641:G:H5''	1.11	1.07
24:N:66:LYS:NZ	36:A:1140:C:OP2	1.87	1.06
36:A:529:A:N6	36:A:2041:U:N3	2.02	1.06
36:A:1320:C:N4	36:A:1331:A:H62	1.52	1.05
24:N:131:GLN:HG3	36:A:7:G:O2'	1.55	1.05
24:N:65:LYS:NZ	36:A:1021:A:H5'	1.71	1.04
36:A:2747:G:H21	36:A:2757:A:N6	1.54	1.03
36:A:226:G:H21	36:A:228:A:H62	1.06	1.03
36:A:1320:C:H42	36:A:1331:A:N6	1.57	1.01
4:F:123:LEU:HB2	4:F:192:LEU:HD22	1.41	1.01
36:A:2681:C:N4	36:A:2725:A:N6	2.01	1.00
36:A:585:G:N2	36:A:1254:A:H62	1.58	0.99
14:T:49:VAL:HA	14:T:63:VAL:HA	1.42	0.99
35:B:87:G:H21	35:B:89(B):A:H62	1.03	0.99
36:A:2109:U:H3	36:A:2180:U:H3	1.04	0.99
36:A:1003:G:H1	36:A:1152:C:H42	1.00	0.99
36:A:2464:C:H42	36:A:2486:G:H1	1.03	0.99
36:A:2681:C:C4	36:A:2725:A:N6	2.31	0.99
36:A:306:U:H3	36:A:310:A:H62	1.11	0.98
36:A:2505:G:O6	36:A:2610:C:O2	1.79	0.98
36:A:1324:G:H1	36:A:1330:C:H42	1.00	0.98
36:A:2330:G:H1	36:A:2385:C:H42	1.08	0.97
24:N:65:LYS:NZ	36:A:1021:A:C5'	2.27	0.97
36:A:1025:G:O6	36:A:1139:G:N2	1.98	0.97
36:A:585:G:H21	36:A:1254:A:N6	1.60	0.97
11:Q:120:ILE:HG12	36:A:2468:G:H5'	1.45	0.97
1:C:164:PHE:HA	1:C:172:ILE:HG13	1.47	0.97
36:A:1664:A:H61	36:A:1996:C:N4	1.62	0.96
24:N:78:TYR:CG	36:A:2642:G:C5'	2.48	0.96
36:A:2405:G:H21	36:A:2412:A:H62	1.07	0.96
24:N:78:TYR:HB2	36:A:2642:G:OP1	1.63	0.96
24:N:131:GLN:CG	36:A:7:G:O2'	2.13	0.96
24:N:133:GLN:HG2	24:N:135:PRO:HD3	1.45	0.96

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2505:G:N1	36:A:2610:C:C2	2.32	0.96
36:A:1664:A:N6	36:A:1996:C:H42	1.65	0.95
24:N:73:THR:HG22	24:N:84:LYS:HB3	1.49	0.95
4:F:154:VAL:HG23	4:F:173:VAL:HG22	1.47	0.95
36:A:2248:C:O2	36:A:2256:G:N1	1.99	0.95
15:U:64:ARG:NE	24:N:41:ASP:HA	1.82	0.94
36:A:2205:C:H42	36:A:2219:G:H1	1.04	0.94
24:N:78:TYR:CD2	36:A:2642:G:C4'	2.50	0.94
35:B:77:U:H3	35:B:99:A:H62	1.08	0.94
36:A:1324:G:H1	36:A:1330:C:N4	1.66	0.94
36:A:2505:G:C6	36:A:2610:C:O2	2.20	0.94
36:A:53:A:H62	36:A:117:G:H21	1.16	0.94
5:G:98:ARG:HG2	5:G:98:ARG:HH11	1.33	0.93
36:A:459:U:H3	36:A:470:A:H62	1.17	0.93
36:A:2681:C:H5	36:A:2725:A:H61	1.01	0.92
36:A:1315:C:H42	36:A:1337:G:H1	1.09	0.92
30:8:53:PRO:HA	30:8:56:GLU:HB2	1.51	0.92
24:N:78:TYR:CG	36:A:2642:G:H5''	2.05	0.91
24:N:39:ARG:NH2	24:N:41:ASP:HB2	1.85	0.91
36:A:1492:G:N2	36:A:1498:C:N3	2.16	0.91
36:A:226:G:N2	36:A:228:A:H62	1.68	0.91
24:N:91:LEU:HA	24:N:95:PRO:HB3	1.50	0.91
20:Z:151:HIS:HB3	20:Z:170:THR:HA	1.51	0.91
36:A:83:G:N2	36:A:103:A:N7	2.18	0.91
36:A:1685:C:H42	36:A:1703:G:H1	1.01	0.91
36:A:847:U:HO2'	36:A:848:G:H8	0.97	0.91
24:N:15:LEU:HG	24:N:134:ARG:HE	1.33	0.91
4:F:170:LEU:HG	4:F:173:VAL:HB	1.50	0.91
24:N:15:LEU:HB2	24:N:134:ARG:HG2	1.53	0.90
36:A:2459:A:N6	36:A:2493:U:H3	1.69	0.90
36:A:2749:A:H62	36:A:2753:A:H61	1.19	0.90
36:A:1173:G:H21	36:A:1177:A:H62	1.20	0.90
36:A:843:G:H1	36:A:935:C:H42	1.20	0.90
4:F:154:VAL:HG12	4:F:156:LEU:HA	1.52	0.90
36:A:882:G:N2	36:A:894:C:C2	2.40	0.90
36:A:2125:G:H21	36:A:2173:A:H62	0.92	0.89
7:J:52:UNK:HA	7:J:81:UNK:HA	1.54	0.89
36:A:1479:G:H1	36:A:1514:U:H3	1.16	0.89
13:S:40:ILE:HA	13:S:47:THR:HA	1.55	0.89
10:P:49:ARG:HB3	30:8:59:LYS:HE2	1.52	0.89
36:A:882:G:H1	36:A:894:C:H42	1.16	0.89
27:5:36:CYS:SG	27:5:37:LYS:N	2.45	0.89

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1076:C:H2'	36:A:1077:A:H4'	1.55	0.88
24:N:78:TYR:CG	36:A:2642:G:H5'	2.08	0.88
36:A:529:A:N7	36:A:2041:U:O4	2.07	0.88
4:F:154:VAL:H	4:F:173:VAL:HA	1.37	0.88
11:Q:19:GLY:HA2	11:Q:98:LYS:HG2	1.54	0.88
24:N:78:TYR:CD2	36:A:2642:G:H5'	2.06	0.88
36:A:572:A:H61	36:A:2029:G:H1'	1.38	0.88
36:A:1025:G:H1	36:A:1139:G:H1	1.21	0.87
4:F:5:ALA:HB1	4:F:123:LEU:HD21	1.56	0.87
36:A:2125:G:N2	36:A:2173:A:H62	1.71	0.87
3:E:174:ASP:HB3	3:E:183:LEU:HB2	1.54	0.87
36:A:2699:C:N3	36:A:2708:G:N2	2.23	0.87
36:A:2505:G:N1	36:A:2610:C:N3	2.22	0.87
36:A:2459:A:H61	36:A:2493:U:H3	0.93	0.87
36:A:136:G:H1	36:A:143:C:H42	1.16	0.87
27:5:3:LYS:HG2	27:5:5:PRO:HD2	1.58	0.86
10:P:115:LEU:HA	10:P:134:ALA:HB2	1.54	0.86
36:A:2681:C:H41	36:A:2725:A:H62	0.90	0.86
24:N:62:VAL:HG22	24:N:66:LYS:HG3	1.55	0.86
36:A:1685:C:N4	36:A:1703:G:H1	1.74	0.86
4:F:89:VAL:HG21	36:A:586:A:H5'	1.57	0.86
36:A:2699:C:H42	36:A:2708:G:H1	0.89	0.86
36:A:1003:G:N2	36:A:1152:C:N3	2.24	0.85
36:A:947:G:H1	36:A:970:C:H42	1.25	0.85
10:P:61:ARG:HH11	30:8:13:ARG:HD2	1.42	0.85
36:A:1416:G:H1	36:A:1582:C:H42	1.23	0.85
15:U:64:ARG:HD2	24:N:41:ASP:N	1.74	0.85
36:A:882:G:C2	36:A:894:C:N3	2.44	0.85
36:A:1345:C:H42	36:A:1601:G:H1	1.25	0.85
15:U:64:ARG:NH2	24:N:42:TRP:O	2.10	0.85
36:A:698:C:O2'	36:A:734:A:N6	2.10	0.85
36:A:119:A:H4'	36:A:120:U:H5'	1.59	0.85
36:A:2205:C:N4	36:A:2219:G:H1	1.76	0.84
36:A:2447:G:O6	36:A:2451:A:N6	2.10	0.84
7:J:54:UNK:HA	7:J:79:UNK:HA	1.58	0.84
24:N:25:ARG:NH2	36:A:1140:C:O3'	2.10	0.84
36:A:529:A:H62	36:A:2041:U:H3	0.88	0.84
36:A:1317:A:H61	36:A:1335:U:H3	1.21	0.84
36:A:1032:A:N1	36:A:1122:G:O6	2.11	0.83
24:N:78:TYR:CE2	36:A:2642:G:C4'	2.61	0.83
4:F:124:LEU:HD21	4:F:126:VAL:HG23	1.59	0.83
17:W:66:GLU:HA	17:W:69:LEU:HB2	1.58	0.83

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:1:13:ILE:HG13	22:1:17:SER:HB2	1.60	0.83
36:A:1135:C:N4	36:A:1137:G:H3'	1.94	0.83
36:A:528:A:H61	36:A:2042:A:H3'	1.44	0.83
36:A:2125:G:H21	36:A:2173:A:N6	1.75	0.83
1:C:51:ASP:O	1:C:53:ARG:N	2.11	0.83
36:A:16:G:H1	36:A:524:U:H3	0.85	0.83
36:A:1090:U:H2'	36:A:1091:G:C8	2.13	0.83
24:N:65:LYS:HZ2	36:A:1021:A:C5'	1.92	0.83
36:A:1003:G:H1	36:A:1152:C:N4	1.76	0.83
36:A:1005:C:H42	36:A:1138:G:H1	1.28	0.82
36:A:692:C:H42	36:A:770:G:H1	1.23	0.82
24:N:131:GLN:HG3	36:A:7:G:HO2'	1.44	0.82
36:A:2464:C:N4	36:A:2486:G:H1	1.78	0.82
36:A:2526:G:H1	36:A:2537:U:H3	1.28	0.82
1:C:214:TYR:HD2	1:C:222:SER:HB2	1.44	0.82
4:F:154:VAL:HB	4:F:173:VAL:HG13	1.62	0.82
36:A:1201:C:H42	36:A:1244:G:H1	1.25	0.82
3:E:13:ARG:HA	3:E:21:VAL:O	1.77	0.81
24:N:76:SER:HB3	36:A:2641:G:C5'	2.04	0.81
36:A:2400:G:H1	36:A:2416:C:H42	1.27	0.81
8:K:115:LEU:HD12	8:K:123:ALA:HB1	1.60	0.81
24:N:125:GLY:HA3	24:N:126:PRO:O	1.80	0.81
36:A:270(N):U:H4'	36:A:270(O):G:H5'	1.63	0.81
28:6:42:TRP:HA	36:A:2348:U:H4'	1.63	0.81
36:A:685:A:OP1	36:A:686:G:N2	2.12	0.81
35:B:87:G:N2	35:B:89(B):A:H62	1.79	0.81
36:A:2248:C:N3	36:A:2256:G:O6	2.13	0.81
36:A:15:G:H1	36:A:525:U:H3	1.28	0.81
24:N:42:TRP:HA	24:N:48:MET:HE1	1.61	0.81
4:F:125:LEU:HB3	4:F:194:MET:HB2	1.63	0.81
36:A:2205:C:N3	36:A:2219:G:N2	2.26	0.81
4:F:197:ASP:OD2	4:F:197:ASP:N	2.14	0.81
2:D:261:LYS:HE3	36:A:2227:A:H5''	1.62	0.81
5:G:103:LEU:HA	5:G:106:LEU:HB3	1.61	0.81
24:N:76:SER:CB	36:A:2641:G:H5''	2.04	0.81
27:5:45:VAL:HG13	27:5:51:TYR:H	1.45	0.81
36:A:1858:G:H1'	36:A:1884:A:N6	1.95	0.81
2:D:180:GLY:HA3	2:D:275:LYS:HB3	1.62	0.81
36:A:2393:A:H62	36:A:2422:A:H61	1.25	0.80
35:B:21:G:H1	35:B:62:C:H42	1.29	0.80
36:A:1479:G:N2	36:A:1514:U:O2	2.11	0.80
3:E:111:ARG:HA	12:R:2:ARG:HG3	1.62	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:63:ARG:H	2:D:87:ASN:HD21	1.27	0.80
24:N:65:LYS:HZ1	36:A:1021:A:C5'	1.95	0.80
36:A:2734:A:H62	36:A:2770:G:H21	1.27	0.80
22:1:18:ILE:HG12	22:1:20:ARG:H	1.43	0.80
36:A:503:A:H4'	36:A:504:U:H5''	1.63	0.80
3:E:65:GLY:HA2	3:E:70:ALA:HA	1.64	0.80
24:N:111:PRO:HA	24:N:114:ARG:NH1	1.97	0.80
16:V:24:LYS:HA	16:V:92:THR:HG23	1.62	0.80
36:A:1278:A:H2'	36:A:1279:G:C8	2.17	0.80
36:A:392:C:H5''	36:A:409:C:H5''	1.62	0.80
36:A:1676:A:H2'	36:A:1677:A:C8	2.16	0.80
6:H:85:LYS:HE3	6:H:145:ALA:HB2	1.64	0.80
24:N:39:ARG:HH21	24:N:41:ASP:CB	1.93	0.80
36:A:1315:C:N4	36:A:1337:G:H1	1.80	0.79
15:U:85:LYS:HG3	15:U:117:GLN:HG2	1.64	0.79
36:A:642:G:N2	36:A:645:C:OP2	2.16	0.79
5:G:66:GLN:HG2	23:4:1:MET:HG2	1.64	0.79
36:A:576:U:H5''	36:A:2502:G:H2'	1.64	0.79
36:A:2679:A:H61	36:A:2728:U:H3	1.30	0.79
24:N:112:LEU:HD23	24:N:113:GLY:N	1.96	0.79
36:A:1007:C:H5''	36:A:1008:C:H2'	1.62	0.79
2:D:54:ARG:HH22	36:A:1822:G:H5''	1.48	0.79
4:F:117:ARG:HB2	4:F:186:ILE:HD11	1.62	0.79
36:A:882:G:H1	36:A:894:C:N4	1.80	0.79
2:D:177:LEU:HD23	2:D:178:PRO:HD2	1.63	0.79
1:C:26:ALA:O	1:C:30:VAL:HB	1.82	0.79
15:U:64:ARG:CD	24:N:41:ASP:CA	2.18	0.79
36:A:2330:G:H1	36:A:2385:C:N4	1.81	0.79
17:W:82:LEU:HB2	17:W:98:LYS:HB2	1.65	0.79
36:A:1487:G:H1	36:A:1502:C:H42	1.31	0.78
22:1:50:ARG:NH2	36:A:2206:C:OP2	2.14	0.78
3:E:61:ARG:HD2	36:A:2811:G:H5'	1.65	0.78
24:N:65:LYS:HZ1	36:A:1021:A:H5'	1.46	0.78
36:A:1230:C:H2'	36:A:1231:G:H8	1.49	0.78
19:Y:97:ARG:NH2	36:A:300:A:OP2	2.17	0.78
36:A:2105:C:H2'	36:A:2106:G:C8	2.18	0.78
36:A:1024:G:H3'	36:A:1025:G:H5''	1.66	0.78
1:C:120:VAL:O	1:C:124:VAL:N	2.11	0.78
24:N:55:VAL:HB	24:N:126:PRO:HB3	1.65	0.78
15:U:62:ILE:HD11	15:U:93:LYS:HD2	1.66	0.78
36:A:2151:G:H2'	36:A:2152:G:H8	1.48	0.78
36:A:1628:G:H1	36:A:1638:C:H42	1.32	0.78

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:B:87:G:H21	35:B:89(B):A:N6	1.82	0.78
36:A:2405:G:N2	36:A:2412:A:H62	1.82	0.78
14:T:117:ASP:HB3	14:T:120:ARG:HG2	1.66	0.78
36:A:2675:A:H61	36:A:2732:G:H1	1.32	0.77
24:N:120:LEU:HD21	24:N:122:VAL:HG23	1.64	0.77
35:B:80:U:O2'	36:A:918:A:N3	2.17	0.77
36:A:2503:A:O2'	36:A:2505:G:OP2	2.02	0.77
9:O:28:SER:HB2	36:A:2566:A:H61	1.49	0.77
3:E:105:THR:HB	3:E:197:ILE:HG23	1.64	0.77
1:C:65:LEU:O	1:C:67:HIS:N	2.18	0.77
36:A:712:G:H1	36:A:719:C:H42	1.32	0.77
36:A:529:A:N6	36:A:2041:U:C2	2.51	0.77
27:5:12:SER:HB2	36:A:2020:A:H5'	1.65	0.77
8:K:89:HIS:HA	36:A:1064:C:H4'	1.67	0.77
20:Z:82:ARG:HG2	20:Z:83:PRO:HD2	1.66	0.77
18:X:12:VAL:O	18:X:29:TRP:NE1	2.18	0.77
2:D:244:ARG:HG2	2:D:245:PRO:HA	1.65	0.77
36:A:289:A:H62	36:A:351:G:H21	0.77	0.76
22:1:23:LYS:HE2	22:1:33:LYS:HD3	1.67	0.76
5:G:27:ASN:HD21	35:B:56:G:H5''	1.49	0.76
36:A:2793:G:N1	36:A:2803:C:O2	2.17	0.76
36:A:1636:C:H2'	36:A:1637:A:H8	1.51	0.76
36:A:2047:U:O2'	36:A:2823:A:N1	2.19	0.76
36:A:1248:G:H3'	36:A:1249:U:H5''	1.65	0.76
36:A:2207:C:H42	36:A:2217:G:H1	1.33	0.76
36:A:1138:G:O2'	36:A:1139:G:O4'	2.04	0.76
36:A:2031:A:H2'	36:A:2454:G:H21	1.51	0.76
36:A:2778:A:N3	36:A:2780:G:N2	2.34	0.76
36:A:2472:G:H21	36:A:2478:A:H62	1.29	0.76
24:N:15:LEU:HD12	24:N:136:GLU:HG3	1.68	0.76
36:A:2043:C:OP2	36:A:2777:G:O2'	2.04	0.76
36:A:581:C:H2'	36:A:582:G:C8	2.20	0.76
24:N:19:GLU:HA	24:N:59:LYS:O	1.86	0.76
36:A:938:G:H2'	36:A:939:G:C8	2.20	0.76
15:U:49:HIS:CD2	36:A:559:G:H22	2.03	0.76
36:A:1416:G:N2	36:A:1582:C:N3	2.34	0.75
36:A:2525:G:H2'	36:A:2526:G:H8	1.52	0.75
3:E:117:MET:HA	3:E:122:PHE:H	1.49	0.75
35:B:44:G:H4'	35:B:45:A:H5''	1.67	0.75
22:1:19:GLN:HB3	22:1:40:ARG:HD3	1.66	0.75
24:N:65:LYS:HZ2	36:A:1021:A:H5''	1.50	0.75
36:A:1664:A:H61	36:A:1996:C:H42	0.82	0.75

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:1:88:LYS:NZ	36:A:1361:G:OP1	2.19	0.75
36:A:575:A:OP2	36:A:2499:C:O2'	2.05	0.75
3:E:143:ASN:ND2	3:E:146:THR:O	2.20	0.75
36:A:1230:C:H2'	36:A:1231:G:C8	2.20	0.75
36:A:1101:U:H2'	36:A:1102:C:C6	2.21	0.75
36:A:2092:U:O2'	36:A:2093:G:OP2	2.04	0.75
3:E:146:THR:O	36:A:2571:C:O2'	2.05	0.74
13:S:17:ARG:HA	13:S:20:ARG:HB2	1.66	0.74
36:A:136:G:N2	36:A:143:C:N3	2.34	0.74
36:A:2734:A:H62	36:A:2770:G:N2	1.85	0.74
36:A:1771:C:H42	36:A:1980:G:H1	1.33	0.74
36:A:355:G:H2'	36:A:356:G:H8	1.52	0.74
22:1:46:LEU:HD23	22:1:61:ARG:HH12	1.53	0.74
17:W:4:LYS:NZ	36:A:495:G:OP1	2.19	0.74
11:Q:73:PRO:HB3	11:Q:90:VAL:HG12	1.69	0.74
36:A:979:G:H2'	36:A:982:C:H42	1.53	0.74
19:Y:73:ARG:NH2	36:A:302:C:OP2	2.18	0.74
4:F:156:LEU:HD12	4:F:193:VAL:HB	1.70	0.74
36:A:413:C:H42	36:A:2410:G:H1	1.32	0.74
13:S:100:ALA:O	13:S:102:ALA:N	2.20	0.74
4:F:176:LEU:HG	4:F:177:ALA:H	1.53	0.74
36:A:585:G:H21	36:A:1254:A:H62	0.80	0.74
1:C:75:VAL:HG21	1:C:154:ILE:HG12	1.67	0.74
36:A:732:C:H3'	36:A:761:A:H61	1.51	0.74
4:F:175:THR:OG1	4:F:175:THR:O	1.99	0.74
1:C:115:VAL:HA	1:C:145:THR:HA	1.70	0.74
36:A:874:G:H2'	36:A:875:G:C8	2.22	0.74
36:A:355:G:H2'	36:A:356:G:C8	2.22	0.74
36:A:2086:U:H2'	36:A:2087:G:C8	2.22	0.74
21:0:34:GLY:H	21:0:61:ALA:HB3	1.53	0.74
21:0:34:GLY:HA3	36:A:2353:G:H1'	1.69	0.74
4:F:125:LEU:HB3	4:F:194:MET:CB	2.18	0.74
36:A:956:G:N2	36:A:960:A:OP2	2.21	0.74
1:C:114:VAL:O	1:C:116:ALA:N	2.21	0.73
36:A:1782:C:H42	36:A:2586:C:H42	1.32	0.73
36:A:659:C:H2'	36:A:660:G:C8	2.23	0.73
15:U:63:VAL:HG11	24:N:42:TRP:CD1	2.23	0.73
29:7:12:ARG:NH2	36:A:465:G:OP1	2.22	0.73
36:A:1018:C:H2'	36:A:1019:U:H6	1.52	0.73
3:E:5:LEU:HD23	3:E:197:ILE:HB	1.71	0.73
36:A:2078:C:H42	36:A:2242:G:H1	1.34	0.73
10:P:7:ARG:HG2	36:A:1203:G:H4'	1.70	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1685:C:N3	36:A:1703:G:N2	2.32	0.73
24:N:45:ASN:H	24:N:45:ASN:HD22	1.35	0.73
19:Y:76:CYS:HB3	19:Y:96:ILE:HG13	1.71	0.73
36:A:581:C:H2'	36:A:582:G:H8	1.51	0.73
36:A:1359:A:H62	36:A:1372:U:H3	1.34	0.73
36:A:2037:G:H2'	36:A:2038:G:C8	2.23	0.73
36:A:576:U:H2'	36:A:577:G:C8	2.22	0.73
10:P:62:LEU:HD22	30:8:27:THR:HG22	1.70	0.73
10:P:52:GLU:HG3	10:P:54:GLY:H	1.54	0.73
3:E:189:PRO:HA	36:A:2680:C:H5'	1.69	0.73
36:A:813:U:HO2'	36:A:1225:G:HO2'	1.36	0.73
24:N:15:LEU:HG	24:N:134:ARG:NE	2.03	0.73
36:A:883:G:N1	36:A:893:C:O2	2.22	0.73
35:B:24:G:O2'	35:B:27:C:N4	2.22	0.73
36:A:1904:G:N2	36:A:1928:A:N3	2.34	0.73
11:Q:14:ARG:HB3	11:Q:41:TRP:HZ2	1.54	0.73
4:F:24:LEU:HB3	4:F:25:PRO:HD2	1.71	0.72
1:C:83:LYS:HG3	1:C:117:THR:HG21	1.71	0.72
36:A:1369:G:H1'	36:A:1809:A:H61	1.54	0.72
36:A:2778:A:H1'	36:A:2780:G:H21	1.53	0.72
36:A:1674:G:H1'	36:A:1676:A:H62	1.54	0.72
8:K:91:PRO:HG3	36:A:1062:G:H21	1.52	0.72
14:T:77:PRO:O	14:T:79:HIS:N	2.20	0.72
2:D:108:PRO:HA	2:D:197:GLY:H	1.53	0.72
36:A:2487:G:H2'	36:A:2488:A:H8	1.53	0.72
5:G:46:ALA:HB1	5:G:50:ALA:HA	1.72	0.72
4:F:154:VAL:CG2	4:F:173:VAL:HG22	2.19	0.72
1:C:11:LEU:HD23	1:C:14:LYS:HD2	1.69	0.72
3:E:126:PRO:HB3	3:E:130:GLY:HA3	1.71	0.72
36:A:53:A:H62	36:A:117:G:N2	1.86	0.72
36:A:2304:G:H1	36:A:2312:U:H3	1.36	0.72
36:A:595:C:H2'	36:A:596:G:C8	2.24	0.72
3:E:10:GLY:HA3	14:T:8:LYS:HE3	1.71	0.72
36:A:839:U:H2'	36:A:840:C:C6	2.24	0.72
36:A:1120:G:H2'	36:A:1121:C:C6	2.25	0.72
12:R:40:LYS:O	12:R:44:LEU:HB2	1.89	0.72
36:A:1658:C:H42	36:A:2002:G:H1	1.36	0.72
35:B:24:G:N2	35:B:28:C:O2	2.22	0.72
36:A:1462:C:H4'	36:A:2703:C:H5'	1.72	0.72
16:V:20:LEU:HG	16:V:21:ARG:HG3	1.72	0.72
3:E:144:ARG:HG3	36:A:2572:A:H2'	1.71	0.72
1:C:84:ILE:HD11	1:C:97:GLY:H	1.55	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1516:U:H2'	36:A:1517:G:C8	2.24	0.72
1:C:44:VAL:HG13	1:C:213:VAL:O	1.88	0.71
36:A:136:G:H1	36:A:143:C:N4	1.87	0.71
36:A:448:U:O4	36:A:582:G:N2	2.23	0.71
1:C:132:LEU:HB3	1:C:137:LEU:HB2	1.71	0.71
36:A:2505:G:H22	36:A:2610:C:N4	1.88	0.71
36:A:371:A:H61	36:A:401:A:H3'	1.56	0.71
13:S:74:ALA:HB2	13:S:104:GLY:HA2	1.71	0.71
24:N:35:ARG:HB3	24:N:42:TRP:HZ3	1.54	0.71
36:A:16:G:N2	36:A:524:U:O2	2.19	0.71
16:V:17:GLY:HA2	16:V:96:ILE:HB	1.73	0.71
20:Z:28:MET:N	20:Z:28:MET:SD	2.63	0.71
36:A:2098:U:H3	36:A:2191:G:H1	1.37	0.71
36:A:2489:G:N2	36:A:2491:U:O4	2.21	0.71
36:A:2647:U:H2'	36:A:2648:C:C6	2.25	0.71
3:E:36:ARG:HG3	3:E:47:VAL:HG22	1.71	0.71
36:A:2405:G:H21	36:A:2412:A:N6	1.88	0.71
36:A:459:U:O4	36:A:470:A:N7	2.24	0.71
36:A:1139:G:O2'	36:A:1140:C:O4'	2.08	0.71
7:J:112:UNK:O	7:J:114:UNK:N	2.24	0.71
36:A:2086:U:H2'	36:A:2087:G:H8	1.54	0.71
36:A:1525:G:H2'	36:A:1526:G:C8	2.25	0.71
36:A:142:G:H2'	36:A:143:C:H6	1.56	0.71
1:C:101:ILE:HD13	1:C:124:VAL:HG13	1.73	0.71
2:D:244:ARG:NH2	36:A:1841:U:O2	2.23	0.71
36:A:2586:C:H2'	36:A:2587:A:C8	2.26	0.71
36:A:462:C:H42	36:A:467:G:H1	1.38	0.71
35:B:77:U:O4	35:B:99:A:N7	2.24	0.70
36:A:1710:C:HO2'	36:A:2858:C:H42	1.36	0.70
36:A:1028:A:H2'	36:A:1029:A:C8	2.26	0.70
24:N:16:ILE:CD1	24:N:137:LYS:HB2	2.21	0.70
36:A:2393:A:H62	36:A:2422:A:N6	1.89	0.70
12:R:2:ARG:HB2	12:R:5:LYS:HE2	1.72	0.70
15:U:28:ARG:NH1	15:U:38:THR:OG1	2.24	0.70
36:A:2314:C:H2'	36:A:2315:G:C8	2.26	0.70
36:A:1538:G:H2'	36:A:1539:G:C8	2.27	0.70
24:N:15:LEU:HB2	24:N:134:ARG:CG	2.21	0.70
36:A:142:G:H2'	36:A:143:C:C6	2.26	0.70
14:T:118:ARG:HD2	14:T:118:ARG:H	1.56	0.70
22:1:11:ARG:HB2	22:1:12:PRO:HD2	1.72	0.70
36:A:226:G:H21	36:A:228:A:N6	1.86	0.70
22:1:86:SER:HB2	22:1:89:GLU:HB2	1.73	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:R:12:ARG:HB3	12:R:16:HIS:HB3	1.73	0.70
36:A:613:U:H4'	36:A:616:A:C6	2.26	0.70
5:G:36:LYS:HG2	5:G:160:VAL:HB	1.73	0.70
36:A:964:C:O2'	36:A:2273:A:N3	2.22	0.70
21:O:12:ASN:HD22	36:A:2278:A:H8	1.39	0.70
36:A:743:G:H1	36:A:754:C:H42	1.40	0.70
10:P:56:SER:O	10:P:58:THR:N	2.24	0.70
36:A:2514:U:H2'	36:A:2515:C:C6	2.27	0.70
24:N:68:GLU:HG2	24:N:88:GLU:OE1	1.92	0.70
4:F:167:ALA:HB1	4:F:175:THR:HB	1.73	0.70
7:J:23:UNK:O	7:J:85:UNK:N	2.25	0.70
36:A:1636:C:H2'	36:A:1637:A:C8	2.26	0.70
36:A:858:U:H3	36:A:919:G:H1	1.36	0.70
9:O:85:VAL:HG11	9:O:114:ILE:HD12	1.72	0.70
8:K:30:HIS:CG	8:K:59:ILE:HB	2.27	0.70
1:C:138:LEU:HD22	1:C:139:PRO:HD2	1.72	0.70
36:A:6:A:H2'	36:A:7:G:H8	1.57	0.69
36:A:2459:A:N1	36:A:2493:U:O2	2.25	0.69
4:F:105:VAL:HG22	36:A:600:G:H1'	1.74	0.69
14:T:65:LYS:HE3	14:T:66:VAL:H	1.57	0.69
36:A:2134:A:N3	36:A:2159:G:O2'	2.23	0.69
24:N:112:LEU:HA	24:N:115:ARG:HB2	1.73	0.69
36:A:1183:G:H2'	36:A:1184:G:C8	2.28	0.69
4:F:75:HIS:HA	36:A:674:G:H4'	1.73	0.69
24:N:67:LEU:O	24:N:88:GLU:HB2	1.93	0.69
35:B:9:G:H1	35:B:111:U:H3	1.39	0.69
36:A:382:G:H1	36:A:392:C:H42	1.41	0.69
36:A:1062:G:H2'	36:A:1063:G:C8	2.27	0.69
36:A:2685:G:H1	36:A:2724:C:H42	1.40	0.69
2:D:84:TYR:HA	2:D:91:ARG:HD2	1.74	0.69
24:N:111:PRO:HD2	36:A:558:G:P	2.32	0.69
1:C:73:VAL:HG22	1:C:75:VAL:H	1.56	0.69
36:A:890:A:H2'	36:A:892:G:C8	2.27	0.69
4:F:13:SER:O	4:F:15:SER:N	2.25	0.69
1:C:216:THR:HG21	36:A:2176:A:H4'	1.74	0.69
21:O:47:PRO:HG3	21:O:59:LEU:HD22	1.74	0.69
36:A:852:G:H2'	36:A:853:G:C8	2.28	0.69
13:S:42:ASP:OD1	13:S:42:ASP:N	2.26	0.69
4:F:164:ARG:HD3	4:F:177:ALA:HB2	1.75	0.69
7:J:49:UNK:H	7:J:82:UNK:HA	1.58	0.69
36:A:1032:A:H2	36:A:1122:G:H1	1.41	0.69
36:A:699:A:H62	36:A:733:G:H21	1.40	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:B:81:G:H1'	36:A:919:G:H4'	1.73	0.69
6:H:143:GLN:OE1	36:A:2744:G:N2	2.25	0.69
36:A:819:A:H62	36:A:1188:U:H3	1.39	0.69
36:A:2784:C:H2'	36:A:2785:C:C6	2.28	0.69
36:A:1306:C:H2'	36:A:1307:A:C8	2.28	0.69
4:F:2:LYS:O	4:F:4:VAL:N	2.25	0.69
24:N:16:ILE:HD13	24:N:137:LYS:HB2	1.75	0.69
5:G:43:LEU:HB2	5:G:88:ILE:HG23	1.75	0.69
36:A:1080:C:H2'	36:A:1081:U:C6	2.28	0.69
36:A:1324:G:N2	36:A:1330:C:N3	2.36	0.69
36:A:1645:G:H5''	36:A:1646:C:H5'	1.75	0.69
18:X:53:LYS:HB3	18:X:82:GLN:HB3	1.75	0.69
36:A:2610:C:H4'	36:A:2611:U:H5'	1.74	0.68
13:S:25:ARG:HB3	13:S:40:ILE:HG23	1.75	0.68
1:C:84:ILE:HA	1:C:95:VAL:HG11	1.75	0.68
14:T:47:GLY:HA2	14:T:65:LYS:HB2	1.75	0.68
19:Y:48:ALA:O	36:A:483:A:O2'	2.11	0.68
36:A:2726:U:HO2'	36:A:2727:G:H8	1.41	0.68
4:F:102:PRO:HB3	36:A:606:U:H5''	1.76	0.68
11:Q:82:ARG:HA	36:A:2495:G:H5''	1.75	0.68
36:A:131:G:H1	36:A:148:C:H42	1.41	0.68
8:K:13:PRO:HB3	8:K:52:ILE:HG12	1.74	0.68
18:X:10:ALA:HB3	18:X:29:TRP:HB2	1.75	0.68
14:T:30:VAL:HG23	14:T:44:ASP:HA	1.73	0.68
36:A:2290:G:H1	36:A:2342:C:H42	1.41	0.68
2:D:35:LYS:O	2:D:37:LEU:N	2.25	0.68
36:A:987:G:O2'	36:A:1000:A:N3	2.25	0.68
5:G:128:ARG:HB2	5:G:130:ASN:HD21	1.58	0.68
36:A:1530:G:O6	36:A:1541:U:O2	2.10	0.68
36:A:690:G:H2'	36:A:691:C:O4'	1.92	0.68
2:D:5:LYS:HB3	2:D:17:THR:HG22	1.73	0.68
3:E:136:ARG:HB3	36:A:1656:C:H5''	1.74	0.68
36:A:24:G:N1	36:A:516:C:O2	2.23	0.68
29:7:34:ARG:HD3	29:7:39:ARG:HD2	1.75	0.68
36:A:1135:C:N4	36:A:1138:G:H8	1.92	0.68
24:N:65:LYS:NZ	36:A:1021:A:H5''	2.03	0.68
1:C:61:GLY:HA3	1:C:164:PHE:CG	2.28	0.68
24:N:15:LEU:CG	24:N:134:ARG:HE	2.05	0.68
1:C:139:PRO:HA	1:C:145:THR:HB	1.75	0.68
4:F:29:ASN:HB3	4:F:32:LEU:HB2	1.76	0.68
2:D:165:ILE:HG13	2:D:175:LEU:HG	1.76	0.68
36:A:1019:U:C2	36:A:1020:A:N7	2.61	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:T:64:ARG:HA	14:T:73:GLU:HG2	1.76	0.68
36:A:1416:G:H1	36:A:1582:C:N4	1.91	0.68
4:F:137:LYS:NZ	36:A:319:C:OP2	2.25	0.68
36:A:975:G:H1'	36:A:990:A:C2	2.29	0.68
36:A:1434:A:H61	36:A:1558:A:N6	1.92	0.68
24:N:18:ALA:O	24:N:21:LYS:HB2	1.93	0.68
13:S:85:VAL:H	13:S:106:ARG:HG2	1.59	0.68
14:T:42:ILE:HG21	14:T:83:ILE:HG12	1.76	0.68
17:W:68:ARG:HB3	17:W:110:LYS:HB2	1.76	0.68
24:N:25:ARG:HH21	36:A:1141:U:P	2.16	0.68
36:A:819:A:N7	36:A:1188:U:O4	2.27	0.68
36:A:1355:G:H2'	36:A:1356:G:C8	2.29	0.68
36:A:278:A:H2'	36:A:279:C:C6	2.28	0.68
36:A:2862:G:H2'	36:A:2863:C:C6	2.28	0.68
36:A:855:G:H1	36:A:922:U:H3	1.40	0.68
12:R:101:ALA:HB2	27:5:44:THR:HG21	1.75	0.68
3:E:134:ILE:H	3:E:134:ILE:HD13	1.59	0.68
36:A:1287:A:H2	36:A:1649:G:H4'	1.59	0.67
1:C:213:VAL:HG11	1:C:225:ILE:CD1	2.25	0.67
36:A:2749:A:H62	36:A:2753:A:N6	1.90	0.67
36:A:843:G:H1	36:A:935:C:N4	1.91	0.67
35:B:24:G:C6	35:B:56:G:N3	2.63	0.67
36:A:137(B):G:O6	36:A:139:G:O2'	2.11	0.67
6:H:172:LYS:HB2	6:H:176:ALA:HB2	1.76	0.67
15:U:64:ARG:HH21	24:N:41:ASP:C	1.98	0.67
3:E:166:THR:HB	36:A:2772:C:H5''	1.76	0.67
24:N:30:ILE:HG22	24:N:34:LEU:CD2	2.24	0.67
4:F:194:MET:HE1	4:F:199:TRP:HD1	1.58	0.67
29:7:30:VAL:O	29:7:34:ARG:NH1	2.27	0.67
26:3:43:ILE:HA	26:3:46:ASN:HD22	1.60	0.67
36:A:814:C:H42	36:A:1193:G:H1	1.41	0.67
36:A:572:A:N6	36:A:2029:G:H1'	2.08	0.67
24:N:55:VAL:HB	24:N:126:PRO:CB	2.24	0.67
36:A:504:U:H4'	36:A:505:A:H5'	1.76	0.67
16:V:39:LEU:HA	16:V:47:VAL:HG11	1.76	0.67
2:D:78:LYS:HA	2:D:116:GLN:HA	1.75	0.67
17:W:72:LYS:H	17:W:107:LEU:HA	1.59	0.67
36:A:2734:A:N6	36:A:2770:G:H21	1.92	0.67
24:N:17:ASP:O	24:N:18:ALA:HB2	1.95	0.67
6:H:175:LYS:HE2	6:H:176:ALA:H	1.59	0.67
36:A:837:C:H42	36:A:942:G:H1	1.41	0.67
16:V:15:GLU:HB3	16:V:16:PRO:HD2	1.77	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2681:C:H5	36:A:2725:A:N6	1.61	0.67
36:A:1135:C:H42	36:A:1138:G:H8	1.43	0.67
14:T:82:LEU:O	14:T:84:GLN:N	2.27	0.67
36:A:1270:C:H5''	36:A:1271:G:H5''	1.77	0.67
35:B:9:G:N2	35:B:111:U:O2	2.26	0.67
25:2:52:ASP:OD1	25:2:56:GLN:NE2	2.26	0.67
24:N:35:ARG:HB3	24:N:42:TRP:CZ3	2.30	0.67
36:A:2023:G:H8	36:A:2023:G:P	2.18	0.67
14:T:50:ILE:HG23	14:T:99:LEU:H	1.60	0.67
24:N:14:VAL:HG11	24:N:137:LYS:HG3	1.75	0.67
7:J:25:UNK:HA	7:J:80:UNK:HA	1.77	0.67
36:A:2397:G:H2'	36:A:2398:U:C6	2.30	0.67
12:R:6:SER:O	12:R:8:ARG:NH2	2.28	0.67
20:Z:8:TYR:HB2	20:Z:38:TYR:CE1	2.29	0.67
36:A:278:A:O2'	36:A:279:C:O5'	2.13	0.67
36:A:1869:G:O2'	36:A:1871:A:N6	2.26	0.67
31:9:6:SER:HB3	36:A:2466:C:H5''	1.77	0.67
36:A:1478:G:H2'	36:A:1479:G:H8	1.60	0.67
36:A:2632:A:N1	36:A:2786:U:O4	2.27	0.67
36:A:2788:C:H2'	36:A:2789:C:O4'	1.95	0.67
5:G:126:ASP:OD1	36:A:2302:G:N2	2.28	0.67
8:K:30:HIS:HA	8:K:59:ILE:HD12	1.76	0.67
36:A:871:U:H2'	36:A:872:A:C8	2.30	0.67
36:A:56:A:N1	36:A:114:U:O4	2.27	0.67
36:A:732:C:H3'	36:A:761:A:N6	2.10	0.66
13:S:53:SER:HA	13:S:65:VAL:HG11	1.75	0.66
36:A:1577:C:H2'	36:A:1578:U:C6	2.30	0.66
4:F:74:ARG:NH2	36:A:674:G:N3	2.43	0.66
12:R:33:ARG:HA	12:R:114:VAL:O	1.95	0.66
36:A:482:A:OP2	36:A:507:A:N6	2.22	0.66
36:A:1007:C:H3'	36:A:1008:C:H2'	1.77	0.66
24:N:137:LYS:HZ3	24:N:138:LEU:HD23	1.59	0.66
28:6:24:GLU:OE2	36:A:2286:A:N6	2.28	0.66
2:D:106:ILE:HD12	2:D:196:VAL:HG12	1.77	0.66
36:A:2487:G:H2'	36:A:2488:A:C8	2.30	0.66
29:7:34:ARG:HD2	29:7:42:LEU:HD22	1.76	0.66
3:E:133:LYS:O	3:E:135:HIS:N	2.24	0.66
36:A:1429:G:H2'	36:A:1430:C:C6	2.30	0.66
6:H:23:ARG:HA	6:H:36:PRO:HA	1.76	0.66
4:F:118:ALA:HA	4:F:123:LEU:HD22	1.77	0.66
36:A:1173:G:N2	36:A:1177:A:H62	1.93	0.66
36:A:2088:G:H1	36:A:2231:C:H42	1.43	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:E:12:THR:O	3:E:22:PRO:HA	1.94	0.66
7:J:64:UNK:O	7:J:68:UNK:N	2.27	0.66
1:C:64:SER:HA	1:C:160:GLY:O	1.96	0.66
35:B:60:C:H2'	35:B:61:G:C8	2.31	0.66
36:A:1174:A:H3'	36:A:1175:U:H4'	1.78	0.66
36:A:852:G:H2'	36:A:853:G:H8	1.61	0.66
36:A:819:A:H2'	36:A:820:A:H8	1.60	0.66
2:D:33:LEU:HD11	36:A:1423:G:H5''	1.78	0.66
23:4:14:ILE:HG13	23:4:22:ILE:HB	1.78	0.66
36:A:1546:A:H2'	36:A:154(B):C:O4'	1.96	0.66
36:A:947:G:H1	36:A:970:C:N4	1.94	0.66
16:V:10:LYS:HD3	36:A:994:C:H1'	1.77	0.66
11:Q:7:MET:SD	11:Q:93:TYR:OH	2.54	0.66
15:U:37:GLU:HA	15:U:40:PHE:HD1	1.60	0.66
22:1:91:LYS:HA	22:1:94:LEU:HD22	1.78	0.66
13:S:42:ASP:O	13:S:44:LYS:N	2.28	0.66
36:A:1136:G:C4	36:A:1137:G:C8	2.84	0.66
36:A:2538:C:H2'	36:A:2539:C:C6	2.31	0.66
24:N:71:ILE:H	24:N:71:ILE:HD12	1.60	0.66
36:A:324:A:H62	36:A:338:G:H21	1.43	0.66
36:A:1005:C:N4	36:A:1138:G:H1	1.94	0.66
16:V:35:LEU:HD23	16:V:57:VAL:HG22	1.77	0.66
9:O:34:THR:OG1	9:O:35:VAL:N	2.27	0.66
7:J:165:UNK:O	7:J:167:UNK:N	2.29	0.66
36:A:1299:G:H1'	36:A:1641:A:N6	2.11	0.65
36:A:846:C:H4'	36:A:847:U:H5'	1.78	0.65
36:A:969:U:H2'	36:A:970:C:C6	2.31	0.65
36:A:1201:C:N4	36:A:1244:G:H1	1.93	0.65
36:A:557:U:H2'	36:A:558:G:C8	2.32	0.65
14:T:29:ARG:HG2	14:T:30:VAL:HB	1.78	0.65
17:W:11:ARG:HB3	17:W:12:ILE:HD12	1.78	0.65
3:E:15:PHE:HD1	14:T:80:SER:HB2	1.60	0.65
10:P:6:LEU:HG	10:P:8:PRO:HD2	1.78	0.65
17:W:45:TYR:OH	36:A:489:G:O6	2.14	0.65
36:A:1035:U:H2'	36:A:1036:G:C8	2.31	0.65
2:D:5:LYS:HA	2:D:17:THR:HA	1.78	0.65
36:A:1149:G:H2'	36:A:1150:C:C6	2.31	0.65
36:A:1986:A:H2'	36:A:1987:G:C8	2.30	0.65
36:A:273(G):C:H3'	36:A:274:G:H5''	1.78	0.65
36:A:740:U:H2'	36:A:741:G:C8	2.31	0.65
36:A:2055:C:N4	36:A:2500:U:O4'	2.29	0.65
3:E:53:PRO:HA	3:E:74:PRO:HA	1.79	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1525:G:H2'	36:A:1526:G:H8	1.61	0.65
36:A:2559:C:H2'	36:A:2560:C:C6	2.32	0.65
36:A:1728:G:N2	36:A:1731:G:O2'	2.29	0.65
24:N:131:GLN:HG2	36:A:7:G:O2'	1.94	0.65
36:A:52:A:H62	36:A:119:A:H62	1.44	0.65
36:A:2314:C:H2'	36:A:2315:G:H8	1.61	0.65
36:A:1129:A:N6	36:A:2490:G:H5''	2.11	0.65
12:R:64:ARG:O	12:R:68:ARG:N	2.30	0.65
5:G:106:LEU:HD23	5:G:107:LEU:HG	1.77	0.65
14:T:60:THR:HG22	14:T:77:PRO:HA	1.79	0.65
2:D:80:ALA:HB3	2:D:94:LEU:HD22	1.79	0.65
20:Z:22:GLY:HA2	20:Z:41:LEU:HG	1.79	0.65
4:F:8:GLN:HE22	4:F:125:LEU:HD21	1.62	0.65
22:1:20:ARG:HH12	22:1:24:ALA:HB2	1.61	0.65
17:W:75:TYR:O	17:W:104:THR:N	2.30	0.65
36:A:1010:A:O2'	36:A:1152:C:O2'	2.15	0.65
36:A:692:C:N4	36:A:770:G:H1	1.94	0.65
30:8:23:VAL:HG13	30:8:48:PHE:HA	1.78	0.65
36:A:622:G:H2'	36:A:623:G:C8	2.32	0.65
4:F:176:LEU:HG	4:F:177:ALA:N	2.09	0.65
36:A:572:A:C2	36:A:2029:G:N2	2.63	0.65
2:D:260:ARG:NH1	36:A:1799:G:OP1	2.30	0.65
36:A:2235:G:H2'	36:A:2236:C:C6	2.31	0.65
11:Q:70:PRO:HA	11:Q:95:ALA:HB2	1.79	0.65
5:G:126:ASP:HB2	5:G:130:ASN:HD22	1.62	0.65
15:U:98:LEU:HD22	15:U:101:ARG:HH12	1.61	0.65
10:P:114:ILE:HG12	10:P:130:PHE:HD1	1.62	0.65
17:W:77:ASP:O	17:W:102:HIS:N	2.29	0.65
36:A:551:G:H2'	36:A:552:G:O4'	1.97	0.65
13:S:45:GLY:O	35:B:112:G:N2	2.30	0.65
36:A:280:C:H42	36:A:360:G:H1	1.45	0.65
36:A:2819:G:H1	36:A:2827:C:H42	1.45	0.65
36:A:2070:G:H1	36:A:2441:C:H42	1.45	0.65
3:E:133:LYS:HB2	3:E:134:ILE:HD13	1.78	0.65
16:V:62:LEU:HG	16:V:95:LEU:HB2	1.79	0.64
3:E:36:ARG:NH1	3:E:85:ASN:OD1	2.30	0.64
16:V:3:ALA:O	16:V:14:VAL:N	2.30	0.64
16:V:47:VAL:HG12	16:V:52:VAL:HB	1.78	0.64
36:A:1303:G:O2'	36:A:1642:G:O2'	2.13	0.64
4:F:154:VAL:O	4:F:156:LEU:N	2.30	0.64
6:H:172:LYS:HB3	6:H:175:LYS:HB3	1.80	0.64
4:F:169:ASN:HB2	36:A:322:A:P	2.37	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:R:67:LEU:HA	12:R:70:LEU:HB2	1.77	0.64
15:U:26:GLY:O	15:U:29:SER:OG	2.12	0.64
36:A:1375:C:H2'	36:A:1376:C:C6	2.31	0.64
4:F:111:ALA:HA	4:F:202:PHE:HZ	1.63	0.64
36:A:77:C:H2'	36:A:78:A:C8	2.33	0.64
35:B:73:A:N7	35:B:103:U:O4	2.30	0.64
36:A:1030:G:H2'	36:A:1031:G:H8	1.63	0.64
24:N:126:PRO:O	24:N:127:ASP:HB2	1.98	0.64
22:1:16:ASN:HB3	36:A:381:G:H5'	1.79	0.64
1:C:33:LEU:HB3	1:C:221:PRO:HD2	1.79	0.64
36:A:1312:U:O4	36:A:1340:U:O4	2.15	0.64
9:O:68:GLU:HB3	9:O:78:ARG:HB2	1.80	0.64
17:W:84:ARG:HB2	17:W:96:ILE:HG23	1.80	0.64
1:C:41:THR:O	1:C:43:GLU:N	2.30	0.64
24:N:111:PRO:HD2	36:A:558:G:OP1	1.97	0.64
6:H:20:ALA:HB1	6:H:21:PRO:HD2	1.80	0.64
36:A:1030:G:H2'	36:A:1031:G:C8	2.33	0.64
2:D:63:ARG:NH1	2:D:87:ASN:OD1	2.30	0.64
30:8:52:LYS:HE3	36:A:834:C:H4'	1.79	0.64
20:Z:14:LYS:NZ	35:B:95:U:OP2	2.29	0.64
2:D:228:PRO:HG3	36:A:2598:A:H4'	1.80	0.64
24:N:55:VAL:HG23	24:N:56:ASN:OD1	1.97	0.64
2:D:244:ARG:HG2	2:D:246:PRO:HD3	1.78	0.64
2:D:165:ILE:HA	2:D:175:LEU:HA	1.78	0.64
2:D:133:LEU:N	2:D:187:GLY:O	2.31	0.64
11:Q:54:MET:HG2	11:Q:58:PHE:CE2	2.33	0.64
36:A:956:G:H2'	36:A:957:A:H2'	1.80	0.64
36:A:131:G:H2'	36:A:132:G:H8	1.63	0.64
35:B:73:A:H62	35:B:103:U:H3	1.42	0.64
36:A:2876:G:H2'	36:A:2877:G:H8	1.61	0.64
1:C:140:ASN:O	1:C:142:LYS:N	2.31	0.64
36:A:270(E):C:H2'	36:A:270(F):G:C8	2.33	0.64
2:D:202:LYS:HB3	36:A:1820:U:H1'	1.79	0.64
36:A:1317:A:N6	36:A:1335:U:H3	1.94	0.64
17:W:69:LEU:HD22	17:W:107:LEU:HD23	1.80	0.64
22:1:14:VAL:HG13	22:1:41:ARG:HD2	1.80	0.64
36:A:659:C:H2'	36:A:660:G:H8	1.62	0.64
36:A:77:C:H2'	36:A:78:A:H8	1.62	0.64
36:A:1969:A:O2'	36:A:1972:A:N3	2.31	0.64
14:T:100:TYR:HB3	14:T:103:ARG:HH21	1.63	0.64
24:N:120:LEU:HD23	24:N:120:LEU:O	1.98	0.64
36:A:2783:G:H2'	36:A:2784:C:C6	2.32	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:0:72:ARG:O	21:0:74:ARG:N	2.31	0.64
36:A:992:C:H2'	36:A:993:G:H8	1.63	0.64
36:A:195:A:H2'	36:A:198:C:H41	1.63	0.64
36:A:1604:C:H2'	36:A:1605:C:C6	2.33	0.63
36:A:576:U:H2'	36:A:577:G:H8	1.63	0.63
2:D:218:ARG:NH2	36:A:691:C:OP1	2.30	0.63
19:Y:47:LYS:HB2	36:A:482:A:H4'	1.81	0.63
36:A:481:G:H4'	36:A:481:G:OP1	1.94	0.63
10:P:45:LEU:HG	10:P:46:LYS:H	1.63	0.63
5:G:77:ILE:HG23	36:A:2310:A:H2	1.63	0.63
3:E:92:THR:H	3:E:95:ILE:HD11	1.63	0.63
36:A:733:G:OP2	36:A:761:A:N6	2.31	0.63
36:A:819:A:H3'	36:A:973:A:H61	1.64	0.63
19:Y:28:LYS:HA	19:Y:39:VAL:HA	1.80	0.63
1:C:7:ARG:HH22	36:A:2128:C:H5''	1.63	0.63
1:C:28:ARG:HG3	1:C:183:PRO:HB3	1.80	0.63
1:C:213:VAL:HG11	1:C:225:ILE:HD13	1.81	0.63
36:A:200:U:O4	36:A:250:G:N1	2.31	0.63
3:E:12:THR:HG23	14:T:8:LYS:HE2	1.80	0.63
35:B:21:G:H1	35:B:62:C:N4	1.97	0.63
36:A:2675:A:N6	36:A:2732:G:H1	1.96	0.63
36:A:24:G:H2'	36:A:25:U:C6	2.33	0.63
16:V:96:ILE:HG22	16:V:97:LYS:H	1.63	0.63
4:F:5:ALA:HB3	4:F:8:GLN:H	1.63	0.63
36:A:1007:C:H5''	36:A:1008:C:C2'	2.27	0.63
14:T:132:LYS:HA	14:T:135:ALA:HB3	1.79	0.63
4:F:45:ARG:NH2	36:A:444:C:OP1	2.31	0.63
4:F:101:LEU:HD12	4:F:102:PRO:HD2	1.79	0.63
36:A:131:G:H2'	36:A:132:G:C8	2.34	0.63
36:A:1070:A:H5'	36:A:1072:C:OP2	1.97	0.63
24:N:45:ASN:HD22	24:N:45:ASN:N	1.95	0.63
24:N:78:TYR:CB	36:A:2642:G:H5''	2.28	0.63
36:A:6:A:H2'	36:A:7:G:C8	2.34	0.63
35:B:80:U:O2	36:A:918:A:O2'	2.17	0.63
16:V:96:ILE:HG22	16:V:97:LYS:N	2.14	0.63
28:6:39:TYR:OH	36:A:2346:A:H3'	1.99	0.63
8:K:90:LYS:HB3	8:K:93:ARG:HB2	1.80	0.63
9:O:9:GLU:HA	9:O:18:LYS:HA	1.79	0.63
18:X:54:VAL:HG12	18:X:81:VAL:HG12	1.81	0.63
30:8:17:THR:O	30:8:19:SER:N	2.29	0.63
36:A:648:G:H2'	36:A:649:G:H8	1.63	0.63
36:A:401:A:H2'	36:A:402:A:C8	2.34	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:O:24:LYS:N	21:O:37:LEU:O	2.19	0.62
16:V:3:ALA:HB3	16:V:14:VAL:HB	1.81	0.62
1:C:63:VAL:N	1:C:161:ARG:O	2.32	0.62
36:A:2679:A:N6	36:A:2728:U:H3	1.97	0.62
36:A:1486:A:H2'	36:A:1487:G:C8	2.34	0.62
36:A:1771:C:H2'	36:A:1772:G:H8	1.64	0.62
36:A:1467:C:C6	36:A:154(B):C:H2'	2.33	0.62
5:G:18:GLU:HG2	5:G:175:LEU:HD21	1.79	0.62
5:G:42:GLY:O	36:A:2306:C:N4	2.28	0.62
36:A:2210:G:N2	36:A:2211:G:O3'	2.32	0.62
15:U:64:ARG:HD2	24:N:41:ASP:HA	0.72	0.62
12:R:12:ARG:NH2	36:A:1276:A:O2'	2.29	0.62
36:A:1183:G:H2'	36:A:1184:G:H8	1.62	0.62
2:D:218:ARG:NH1	36:A:691:C:H5'	2.13	0.62
14:T:128:GLU:HG2	14:T:129:ARG:HG2	1.81	0.62
24:N:7:LYS:HZ3	24:N:7:LYS:N	1.97	0.62
36:A:2681:C:H4'	36:A:2682:U:H5'	1.81	0.62
1:C:39:ASP:HB3	1:C:178:LYS:HD2	1.82	0.62
11:Q:46:GLN:HG2	11:Q:126:PRO:HD3	1.82	0.62
22:1:22:GLY:O	22:1:37:ILE:N	2.32	0.62
3:E:28:ALA:HB3	3:E:93:VAL:HG22	1.80	0.62
36:A:1272:A:O2'	36:A:1273:U:OP1	2.18	0.62
36:A:2715:C:H2'	36:A:2716:U:C6	2.34	0.62
24:N:56:ASN:H	24:N:126:PRO:HA	1.64	0.62
36:A:1487:G:H1	36:A:1502:C:N4	1.97	0.62
36:A:858:U:O4	36:A:919:G:O6	2.16	0.62
36:A:2171:A:O2'	36:A:2172:U:O5'	2.17	0.62
35:B:69:G:H2'	35:B:70:C:O4'	1.99	0.62
36:A:2212:A:H1'	36:A:2215:G:C6	2.35	0.62
5:G:114:ILE:O	5:G:116:ASP:N	2.24	0.62
6:H:74:ASN:ND2	36:A:2747:G:OP1	2.33	0.62
36:A:573:G:H22	36:A:2030:A:H2'	1.65	0.62
2:D:218:ARG:HH12	36:A:691:C:H5'	1.63	0.62
36:A:1429:G:H2'	36:A:1430:C:H6	1.65	0.62
36:A:694:U:H2'	36:A:695:G:C8	2.34	0.62
10:P:121:LYS:HG3	10:P:123:LEU:HD22	1.81	0.62
5:G:120:LEU:HB2	5:G:180:PHE:HA	1.80	0.62
36:A:1918:A:O2'	36:A:1920:C:N4	2.32	0.62
24:N:30:ILE:HG22	24:N:34:LEU:HD21	1.82	0.62
14:T:50:ILE:HG12	14:T:99:LEU:HB2	1.81	0.62
36:A:2245:U:H5''	36:A:2246:G:H5'	1.81	0.62
36:A:1174:A:C8	36:A:1175:U:H1'	2.35	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:101:ILE:HG12	1:C:127:LYS:HD2	1.80	0.62
36:A:516:C:H2'	36:A:517:C:C6	2.35	0.62
31:9:24:TYR:OH	36:A:2742:C:OP2	2.09	0.62
36:A:578:A:OP1	36:A:1255:U:O2'	2.18	0.62
36:A:1814:G:H3'	36:A:1815:A:H2'	1.81	0.62
36:A:1197:G:N2	36:A:1249:U:O2	2.30	0.62
36:A:1357:U:H2'	36:A:1358:G:O4'	2.00	0.62
36:A:56:A:H2'	36:A:57:C:C6	2.35	0.62
36:A:1423:G:H2'	36:A:1424:G:H8	1.64	0.62
36:A:1297:C:H42	36:A:1643:G:H1	1.48	0.62
36:A:1295:C:H2'	36:A:1296:G:C8	2.35	0.62
1:C:15:VAL:HG13	1:C:221:PRO:HB3	1.82	0.62
36:A:2648:C:H2'	36:A:2649:U:C6	2.35	0.62
36:A:550:G:O2'	36:A:1220:A:N3	2.31	0.62
25:2:21:LEU:HA	25:2:24:LEU:HD12	1.81	0.62
36:A:1511:A:H2'	36:A:1512:G:H8	1.65	0.62
36:A:1478:G:H2'	36:A:1479:G:C8	2.35	0.62
36:A:2712:U:OP1	36:A:2714:G:O2'	2.18	0.62
5:G:128:ARG:CZ	36:A:2315:G:H21	2.13	0.62
36:A:1338:G:H2'	36:A:1339:G:O4'	2.00	0.62
22:1:34:THR:HG23	22:1:35:THR:HG23	1.82	0.62
4:F:170:LEU:HB3	4:F:173:VAL:O	1.99	0.61
36:A:2330:G:N2	36:A:2385:C:N3	2.39	0.61
36:A:1345:C:N4	36:A:1601:G:H1	1.94	0.61
12:R:24:GLN:HB2	12:R:44:LEU:HD11	1.82	0.61
36:A:2515:C:H42	36:A:2569:G:H1	1.48	0.61
11:Q:52:VAL:O	11:Q:56:ARG:HB2	1.99	0.61
36:A:1022:G:O2'	36:A:1023:U:OP2	2.16	0.61
36:A:765:G:H2'	36:A:766:C:C6	2.35	0.61
36:A:2398:U:H2'	36:A:2399:G:H8	1.64	0.61
10:P:96:THR:HA	10:P:126:VAL:HB	1.80	0.61
20:Z:27:VAL:HG11	35:B:75:G:H1'	1.80	0.61
36:A:1069:A:O2'	36:A:1073:A:N6	2.32	0.61
36:A:537:C:H2'	36:A:539:G:C8	2.34	0.61
36:A:2667:C:H2'	36:A:2668:G:C8	2.35	0.61
36:A:926:A:H2'	36:A:928:G:C8	2.35	0.61
10:P:13:ASN:O	10:P:14:LYS:HB2	2.00	0.61
36:A:2641:G:H1	36:A:2773:C:H42	1.48	0.61
4:F:154:VAL:O	4:F:174:VAL:O	2.18	0.61
12:R:4:LEU:HB2	36:A:1653:G:H3'	1.82	0.61
36:A:2818:G:H2'	36:A:2819:G:H8	1.65	0.61
14:T:61:PHE:CE2	14:T:76:PHE:HB2	2.35	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1613:G:H3'	36:A:1614:A:H5'	1.83	0.61
36:A:680:G:H1	36:A:797:C:H42	1.48	0.61
36:A:2708:G:H2'	36:A:2709:G:C8	2.35	0.61
13:S:27:SER:HA	13:S:88:ASP:HB3	1.83	0.61
36:A:628:G:H2'	36:A:629:G:C8	2.35	0.61
1:C:79:ALA:O	1:C:84:ILE:HG13	1.99	0.61
36:A:1045:A:N3	36:A:1047:G:N2	2.48	0.61
36:A:783:A:H4'	36:A:2588:G:H4'	1.82	0.61
3:E:11:MET:HA	3:E:23:VAL:O	2.00	0.61
36:A:2136:C:N3	36:A:2155:G:O6	2.34	0.61
8:K:74:ALA:HA	8:K:77:LEU:HB2	1.80	0.61
24:N:13:TRP:O	24:N:135:PRO:HD2	2.00	0.61
36:A:1335:U:H2'	36:A:1336:A:C8	2.35	0.61
1:C:214:TYR:CD2	1:C:222:SER:HB2	2.31	0.61
4:F:117:ARG:HE	4:F:186:ILE:HD11	1.65	0.61
11:Q:87:LYS:NZ	36:A:956:G:OP2	2.32	0.61
36:A:1223:G:N2	36:A:1226:A:OP2	2.26	0.61
36:A:270(E):C:H2'	36:A:270(F):G:H8	1.65	0.61
36:A:777:A:H2'	36:A:778:G:C8	2.36	0.61
36:A:1403:C:H2'	36:A:1404:C:C6	2.35	0.61
36:A:268:C:H42	36:A:424:G:H1	1.48	0.61
4:F:159:GLY:O	4:F:164:ARG:NH2	2.34	0.61
36:A:2400:G:H1	36:A:2416:C:N4	1.96	0.61
2:D:146:GLU:HA	2:D:153:ALA:HA	1.82	0.61
36:A:537:C:H2'	36:A:539:G:H8	1.65	0.61
17:W:20:VAL:HG21	17:W:43:GLY:HA3	1.83	0.61
36:A:1008:C:H1'	36:A:1009:A:N7	2.15	0.61
3:E:187:ALA:HB2	36:A:2729:G:H1'	1.83	0.61
36:A:991:C:H6	36:A:1185:C:HO2'	1.49	0.61
36:A:422:A:H2'	36:A:423:A:C8	2.36	0.61
1:C:46:ALA:HA	1:C:212:SER:O	2.01	0.61
21:O:4:LYS:HD2	21:O:7:LEU:HD11	1.80	0.61
5:G:168:GLU:O	5:G:172:LEU:HG	2.01	0.61
36:A:2841:C:H2'	36:A:2842:G:C8	2.36	0.61
36:A:1913:A:O2'	36:A:1914:C:OP2	2.18	0.61
36:A:40:C:H2'	36:A:41:C:C6	2.36	0.61
15:U:92:ARG:O	15:U:95:LEU:N	2.33	0.61
36:A:2053:G:H1	36:A:2616:C:H42	1.48	0.61
1:C:164:PHE:HZ	1:C:196:ALA:HB1	1.66	0.61
36:A:1614:A:H5'	36:A:1617:C:H42	1.65	0.61
36:A:1576:U:H2'	36:A:1577:C:C6	2.36	0.61
10:P:125:VAL:O	10:P:145:PRO:HG3	2.00	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:536:A:H2'	36:A:537:C:C6	2.36	0.61
36:A:1830:C:H2'	36:A:1831:G:H8	1.66	0.61
24:N:57:ALA:O	24:N:60:ILE:HG13	2.01	0.61
4:F:8:GLN:HB2	4:F:22:ALA:HB2	1.82	0.61
28:6:20:ASN:ND2	28:6:43:CYS:SG	2.73	0.61
11:Q:56:ARG:NE	36:A:2469:A:O2'	2.34	0.61
36:A:712(B):A:H3'	36:A:2713:A:H5'	1.81	0.61
24:N:9:VAL:HG11	24:N:39:ARG:HH12	1.65	0.60
4:F:154:VAL:N	4:F:173:VAL:HA	2.12	0.60
16:V:4:ILE:HG13	16:V:13:ARG:HA	1.82	0.60
10:P:23:PRO:HD2	10:P:33:ARG:HG3	1.82	0.60
8:K:106:GLU:HA	8:K:109:LYS:HD3	1.82	0.60
15:U:3:ARG:N	36:A:445:C:OP1	2.34	0.60
27:5:3:LYS:HZ1	36:A:2015:A:H2	1.46	0.60
7:J:54:UNK:O	36:A:1106:G:O2'	2.13	0.60
36:A:696:G:H1	36:A:766:C:H42	1.49	0.60
36:A:1101:U:H2'	36:A:1102:C:H6	1.66	0.60
36:A:1435:G:H2'	36:A:1436:G:C8	2.36	0.60
17:W:33:ARG:HA	17:W:36:LEU:HD12	1.83	0.60
10:P:75:ILE:HG22	10:P:77:ARG:HB3	1.82	0.60
36:A:8:A:N1	36:A:2895:U:O4	2.34	0.60
24:N:38:HIS:ND1	24:N:39:ARG:N	2.49	0.60
3:E:99:GLY:N	3:E:172:VAL:O	2.29	0.60
36:A:2345:G:O6	36:A:2371:G:N2	2.29	0.60
28:6:37:ARG:NE	36:A:2344:U:O2'	2.35	0.60
24:N:89:LYS:NZ	24:N:89:LYS:HB3	2.17	0.60
21:0:70:GLN:HB3	21:0:78:TYR:HB2	1.84	0.60
36:A:2865:U:H3'	36:A:2866:U:O2	2.01	0.60
36:A:597:U:H2'	36:A:598:G:C8	2.35	0.60
36:A:628:G:H2'	36:A:629:G:H8	1.65	0.60
36:A:242:G:H1'	36:A:243:U:H5	1.65	0.60
36:A:432:A:H2'	36:A:433:C:C6	2.36	0.60
36:A:1389:G:H2'	36:A:1390:U:O4'	2.02	0.60
36:A:2749:A:N6	36:A:2753:A:H61	1.95	0.60
36:A:1416:G:H2'	36:A:1417:C:C6	2.36	0.60
36:A:2818:G:H2'	36:A:2819:G:C8	2.36	0.60
36:A:1821:A:H2'	36:A:1822:G:C8	2.36	0.60
14:T:67:SER:O	14:T:69:GLY:N	2.34	0.60
36:A:1940:U:OP1	36:A:1965:C:N4	2.33	0.60
23:4:31:ILE:HG22	23:4:32:TYR:H	1.65	0.60
24:N:120:LEU:HD23	24:N:120:LEU:C	2.21	0.60
13:S:97:ARG:O	13:S:99:LYS:N	2.34	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2398:U:H2'	36:A:2399:G:C8	2.37	0.60
36:A:824:A:N1	36:A:833:U:O4	2.35	0.60
36:A:130:C:H4'	36:A:1349:A:H1'	1.84	0.60
3:E:175:VAL:HG22	3:E:177:PRO:HD3	1.83	0.60
13:S:39:ILE:HD13	13:S:73:LEU:HD11	1.83	0.60
36:A:2286:A:N3	36:A:2286:A:H5'	2.15	0.60
16:V:69:LYS:HA	16:V:88:ARG:HG2	1.84	0.60
29:7:34:ARG:NE	29:7:42:LEU:HD13	2.16	0.60
35:B:75:G:H2'	35:B:76:G:O4'	2.02	0.60
2:D:24:ILE:HG23	2:D:25:THR:H	1.67	0.60
2:D:27:THR:HG23	2:D:83:GLU:HB3	1.83	0.60
36:A:822:U:H2'	36:A:823:G:C8	2.36	0.60
36:A:1018:C:H2'	36:A:1019:U:C6	2.36	0.60
24:N:128:HIS:NE2	24:N:134:ARG:HD2	2.16	0.60
36:A:2046:G:H1	36:A:2622:C:H42	1.49	0.60
36:A:2778:A:H1'	36:A:2780:G:N2	2.17	0.60
30:8:16:ILE:HB	30:8:22:VAL:HA	1.84	0.60
36:A:1804:C:H42	36:A:1813:G:H1	1.50	0.60
36:A:192:C:O2'	36:A:802:A:N3	2.34	0.60
36:A:722:A:H2'	36:A:723:G:O4'	2.01	0.60
36:A:2868:A:H2'	36:A:2869:G:C8	2.37	0.60
36:A:306:U:O4	36:A:310:A:N7	2.34	0.60
29:7:11:LYS:O	29:7:15:THR:OG1	2.10	0.60
15:U:52:ARG:NH1	36:A:559:G:O2'	2.35	0.60
36:A:1464:C:H2'	36:A:1465:G:C8	2.37	0.60
2:D:79:VAL:HA	2:D:95:LEU:HA	1.82	0.60
9:O:87:ILE:HD13	9:O:91:LEU:HD23	1.83	0.60
13:S:47:THR:O	13:S:48:LEU:HB2	2.02	0.60
36:A:998:C:H42	36:A:1157:G:H1	1.48	0.60
25:2:48:HIS:O	25:2:51:ARG:HG3	2.02	0.60
5:G:114:ILE:C	5:G:116:ASP:H	2.04	0.60
36:A:842:G:H2'	36:A:843:G:C8	2.36	0.59
36:A:883:G:C2	36:A:893:C:O2	2.55	0.59
4:F:12:LEU:HD22	4:F:17:ARG:HB3	1.84	0.59
2:D:230:ASP:O	2:D:231:HIS:HB2	2.01	0.59
26:3:5:LYS:HA	26:3:35:ARG:O	2.02	0.59
36:A:545:G:H1'	36:A:548:A:H61	1.67	0.59
36:A:287:C:H2'	36:A:288:C:C6	2.38	0.59
7:J:58:UNK:HA	36:A:1107:G:P	2.42	0.59
1:C:54:ARG:O	1:C:56:ASP:N	2.30	0.59
36:A:635:C:H2'	36:A:636:G:O4'	2.03	0.59
36:A:443:A:OP2	36:A:615:G:N2	2.35	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:661:C:H2'	36:A:662:G:C8	2.37	0.59
8:K:6:ALA:H	8:K:59:ILE:HG23	1.67	0.59
2:D:165:ILE:O	2:D:166:GLN:HB2	2.01	0.59
36:A:786:C:H5''	36:A:1780:A:C8	2.37	0.59
13:S:15:ARG:HB3	13:S:18:ILE:HB	1.84	0.59
4:F:191:ARG:O	4:F:193:VAL:HG23	2.02	0.59
36:A:105:C:H2'	36:A:106:C:C6	2.37	0.59
36:A:1674:G:H1'	36:A:1676:A:N6	2.17	0.59
14:T:23:ARG:HB2	14:T:120:ARG:HH22	1.67	0.59
36:A:2250:G:O2'	36:A:2496:C:OP1	2.19	0.59
36:A:2311:A:H5''	36:A:2312:U:C5	2.38	0.59
36:A:385:C:O2'	36:A:388:G:N2	2.35	0.59
36:A:2834:G:H1'	36:A:2883:A:N6	2.17	0.59
36:A:212:G:H2'	36:A:213:A:C8	2.37	0.59
36:A:1444:G:H2'	36:A:1445:C:C5	2.37	0.59
36:A:273(C):C:H2'	36:A:273(D):C:C6	2.37	0.59
36:A:828:U:H4'	36:A:831:G:N1	2.17	0.59
36:A:2328:A:H2'	36:A:2329:G:C8	2.36	0.59
24:N:111:PRO:HA	24:N:114:ARG:CZ	2.33	0.59
36:A:1710:C:HO2'	36:A:2858:C:N4	2.00	0.59
21:O:39:ARG:HH21	36:A:2355:C:H1'	1.67	0.59
20:Z:93:ASP:HA	20:Z:130:PRO:HB2	1.84	0.59
15:U:51:LYS:HB3	15:U:55:ARG:HH21	1.65	0.59
36:A:193:U:H2'	36:A:194:G:C8	2.37	0.59
3:E:64:LYS:HB3	3:E:67:PHE:HB3	1.85	0.59
2:D:146:GLU:OE2	2:D:151:LYS:N	2.36	0.59
13:S:92:TYR:CE2	13:S:94:TYR:HB2	2.37	0.59
36:A:2078:C:N3	36:A:2242:G:N2	2.47	0.59
22:1:11:ARG:NH2	36:A:1365:A:O2'	2.36	0.59
36:A:780:G:H21	36:A:783:A:H62	1.50	0.59
10:P:23:PRO:HB3	10:P:29:LYS:HB3	1.84	0.59
36:A:184:C:H2'	36:A:185:U:C6	2.37	0.59
36:A:216:A:H2'	36:A:217:G:O4'	2.01	0.59
6:H:144:VAL:HA	6:H:147:ASN:ND2	2.17	0.59
4:F:167:ALA:HA	4:F:170:LEU:HD23	1.85	0.59
36:A:1090:U:H2'	36:A:1091:G:H8	1.66	0.59
36:A:392:C:H2'	36:A:393:C:H6	1.67	0.59
1:C:25:GLU:O	1:C:29:LEU:HB2	2.03	0.59
36:A:2471:C:H2'	36:A:2472:G:C8	2.37	0.59
31:9:14:CYS:SG	31:9:27:CYS:HB2	2.42	0.59
36:A:1791:A:N6	36:A:1828:G:O2'	2.35	0.59
24:N:46:VAL:O	24:N:47:ALA:HB3	2.02	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:23:ILE:HG22	1:C:187:ALA:HA	1.83	0.59
36:A:1947:C:H2'	36:A:1948:G:H8	1.67	0.59
1:C:181:PHE:HB3	1:C:185:LYS:HB3	1.85	0.59
36:A:2023:G:N1	36:A:2040:C:O2	2.32	0.59
36:A:105:C:H2'	36:A:106:C:H6	1.66	0.59
27:5:45:VAL:HG22	27:5:51:TYR:HB2	1.85	0.59
2:D:54:ARG:HH21	2:D:217:ARG:HH22	1.48	0.59
8:K:91:PRO:HG3	36:A:1062:G:N2	2.18	0.59
2:D:160:GLY:H	2:D:196:VAL:HG23	1.67	0.59
36:A:1830:C:H42	36:A:1975:G:H1	1.50	0.59
36:A:46:C:H2'	36:A:47:C:C6	2.37	0.59
9:O:98:VAL:HG23	9:O:119:PRO:HD3	1.85	0.59
24:N:99:LEU:O	24:N:103:VAL:HG23	2.02	0.59
35:B:24:G:C2	35:B:56:G:N2	2.71	0.59
15:U:92:ARG:HB3	15:U:95:LEU:HB2	1.83	0.59
36:A:531:C:OP1	36:A:561:G:N2	2.34	0.59
36:A:270(K):G:H2'	36:A:270(L):C:H6	1.68	0.59
4:F:164:ARG:O	4:F:168:ARG:N	2.36	0.59
36:A:1654:A:H2'	36:A:1655:A:H8	1.68	0.59
1:C:29:LEU:O	1:C:33:LEU:HG	2.02	0.59
14:T:66:VAL:HG22	14:T:71:GLY:HA2	1.83	0.59
3:E:15:PHE:CD1	14:T:80:SER:HB2	2.37	0.59
36:A:212:G:H2'	36:A:213:A:H8	1.66	0.59
36:A:2386:C:H2'	36:A:2387:U:C6	2.38	0.59
24:N:14:VAL:CG1	24:N:137:LYS:HG3	2.33	0.59
36:A:392:C:H2'	36:A:393:C:C6	2.38	0.59
20:Z:9:TYR:HA	20:Z:37:VAL:HG12	1.84	0.59
21:O:11:ARG:HH12	36:A:2278:A:H3'	1.68	0.59
31:9:14:CYS:HA	31:9:26:ILE:O	2.03	0.59
2:D:219:PRO:HB3	36:A:1789:A:O2'	2.03	0.59
19:Y:32:PRO:HD2	19:Y:34:LYS:H	1.67	0.59
36:A:602:G:N2	36:A:655:A:N7	2.51	0.59
36:A:2142:C:H2'	36:A:2143:C:C6	2.37	0.59
1:C:63:VAL:HG12	1:C:162:ILE:HB	1.84	0.58
4:F:185:ASP:O	4:F:189:THR:OG1	2.20	0.58
14:T:49:VAL:O	14:T:64:ARG:HB3	2.02	0.58
1:C:8:TYR:HA	1:C:11:LEU:HB2	1.85	0.58
1:C:79:ALA:HB1	1:C:83:LYS:HB2	1.85	0.58
4:F:38:ARG:NH2	36:A:660:G:O3'	2.35	0.58
13:S:74:ALA:HA	13:S:105:ALA:HB2	1.85	0.58
22:1:44:PRO:HB3	36:A:396:G:H4'	1.84	0.58
36:A:784:A:N6	36:A:2072:G:O2'	2.35	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:1:5:CYS:HB2	22:1:63:ALA:HB2	1.83	0.58
36:A:222:A:N6	36:A:232:G:H1'	2.18	0.58
20:Z:96:VAL:HG22	20:Z:97:GLU:H	1.68	0.58
36:A:259:G:H2'	36:A:260:G:H8	1.68	0.58
22:1:29:GLY:O	36:A:2396:G:O2'	2.21	0.58
24:N:36:GLY:O	24:N:42:TRP:HB2	2.03	0.58
1:C:42:VAL:HG21	1:C:176:VAL:HG23	1.84	0.58
22:1:13:ILE:HG13	22:1:17:SER:CB	2.32	0.58
1:C:132:LEU:HB2	1:C:138:LEU:HG	1.84	0.58
36:A:1540:G:C2	36:A:1541:U:H1'	2.38	0.58
4:F:29:ASN:O	4:F:33:LEU:HD22	2.03	0.58
28:6:23:THR:HB	30:8:34:TRP:HA	1.85	0.58
8:K:17:ALA:HB2	8:K:38:VAL:HG11	1.84	0.58
4:F:34:TRP:HB2	10:P:10:PRO:HB2	1.84	0.58
36:A:1010:A:N3	36:A:1153:C:H1'	2.18	0.58
36:A:2246:G:H2'	36:A:2247:A:O4'	2.04	0.58
36:A:1677:A:H2'	36:A:1678:G:C8	2.39	0.58
1:C:132:LEU:HD22	1:C:137:LEU:HD12	1.84	0.58
9:O:8:LEU:HD21	9:O:21:CYS:HB2	1.86	0.58
36:A:647:G:H2'	36:A:648:G:O4'	2.02	0.58
36:A:2114:A:N3	36:A:2167:U:O2'	2.36	0.58
6:H:86:GLU:HB2	6:H:132:ARG:HA	1.85	0.58
36:A:17:G:H2'	36:A:18:C:C6	2.38	0.58
18:X:90:GLU:HA	18:X:93:GLU:HB2	1.84	0.58
28:6:18:ARG:O	28:6:19:ARG:HB2	2.03	0.58
35:B:24:G:C2	35:B:56:G:C2	2.91	0.58
36:A:922:U:H2'	36:A:923:C:C6	2.38	0.58
20:Z:23:LYS:HB3	20:Z:38:TYR:CD1	2.38	0.58
6:H:59:ARG:HB2	36:A:1036:G:OP1	2.02	0.58
36:A:230:U:H2'	36:A:231:C:C6	2.38	0.58
36:A:2828:C:H2'	36:A:2829:C:H6	1.66	0.58
5:G:55:LYS:NZ	5:G:55:LYS:O	2.29	0.58
36:A:572:A:H2	36:A:2029:G:H21	1.47	0.58
19:Y:96:ILE:HG22	19:Y:97:ARG:H	1.67	0.58
36:A:681:G:H2'	36:A:682:G:H8	1.69	0.58
18:X:68:ARG:NH1	36:A:456:C:O2'	2.28	0.58
36:A:1186:G:H2'	36:A:1187:G:O4'	2.03	0.58
9:O:66:LYS:HG3	36:A:1665:A:H5''	1.85	0.58
26:3:42:ALA:O	36:A:851:U:O2'	2.21	0.58
36:A:723:G:H2'	36:A:724:U:C6	2.38	0.58
36:A:724:U:H2'	36:A:725:G:O4'	2.02	0.58
36:A:1409:C:H2'	36:A:1410:G:H8	1.68	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1221:C:H2'	36:A:122(A):C:C6	2.38	0.58
36:A:862:G:H2'	36:A:863:A:O4'	2.03	0.58
36:A:1628:G:H1	36:A:1638:C:N4	1.99	0.58
36:A:1321:A:H2'	36:A:1322:A:O4'	2.04	0.58
36:A:2013:A:H2'	36:A:2014:A:C8	2.39	0.58
22:1:18:ILE:HG12	22:1:20:ARG:N	2.16	0.58
36:A:1434:A:H2'	36:A:1435:G:C8	2.38	0.58
36:A:680:G:H2'	36:A:681:G:C8	2.38	0.58
36:A:1055:G:N2	36:A:1085:A:N3	2.51	0.58
19:Y:6:HIS:HB3	19:Y:35:TYR:HE1	1.69	0.58
36:A:1638:C:H5''	36:A:2710:C:O2'	2.04	0.58
36:A:2468:G:OP2	36:A:2476:A:N6	2.36	0.58
36:A:2411:A:H2'	36:A:2412:A:C8	2.39	0.58
36:A:134:C:H42	36:A:145:G:H1	1.49	0.58
1:C:121:MET:O	1:C:125:GLY:N	2.37	0.58
18:X:29:TRP:HA	18:X:78:LYS:HA	1.86	0.58
36:A:2078:C:N4	36:A:2242:G:H1	2.00	0.58
36:A:1447:G:H1	36:A:1464:C:H42	1.50	0.58
15:U:15:LYS:NZ	36:A:1217:C:OP1	2.36	0.58
35:B:32:C:O2'	35:B:52:A:N6	2.37	0.58
36:A:2052:G:H2'	36:A:2053:G:H8	1.69	0.58
17:W:12:ILE:HD11	17:W:42:ARG:HH12	1.67	0.58
36:A:1149:G:H2'	36:A:1150:C:H6	1.69	0.58
1:C:60:ARG:HG2	1:C:142:LYS:HD3	1.86	0.58
18:X:36:LYS:HG2	18:X:54:VAL:HB	1.86	0.58
2:D:50:THR:HA	36:A:1805:U:O2'	2.04	0.58
36:A:2426:A:H3'	36:A:2427:C:H5'	1.84	0.58
36:A:1770:G:H1	36:A:1982:C:H42	1.50	0.58
36:A:1698:A:H1'	36:A:1699:G:H3'	1.86	0.58
36:A:358:U:H2'	36:A:359:A:C8	2.38	0.58
14:T:34:VAL:HG13	14:T:39:ARG:HA	1.85	0.58
4:F:63:LYS:HE3	4:F:67:GLN:HE22	1.69	0.58
36:A:1025:G:O6	36:A:1139:G:C2	2.57	0.58
36:A:574:C:O4'	36:A:2055:C:H5''	2.04	0.58
24:N:15:LEU:HD13	24:N:16:ILE:N	2.17	0.58
2:D:54:ARG:NH2	36:A:1822:G:H5''	2.18	0.58
36:A:2085:C:H2'	36:A:2086:U:C6	2.39	0.58
36:A:1287:A:H2'	36:A:1288:U:H5'	1.86	0.58
36:A:2083:G:H2'	36:A:2084:C:C6	2.39	0.58
30:8:35:GLN:OE1	36:A:2284:C:N4	2.37	0.58
2:D:118:VAL:HG22	2:D:119:ALA:H	1.69	0.58
36:A:713:G:H2'	36:A:714:U:C6	2.39	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1353:A:H2'	36:A:1354:A:C8	2.39	0.57
36:A:305:U:H2'	36:A:306:U:C6	2.39	0.57
7:J:111:UNK:O	7:J:116:UNK:HA	2.04	0.57
36:A:2645:G:H3'	36:A:2646:C:H5'	1.86	0.57
36:A:1542:G:O2'	36:A:1543:A:OP2	2.19	0.57
4:F:32:LEU:HD11	36:A:600:G:H5'	1.86	0.57
15:U:37:GLU:HA	15:U:40:PHE:CD1	2.39	0.57
35:B:72:G:H1'	35:B:104:A:H61	1.67	0.57
5:G:16:ARG:O	5:G:20:ILE:HG13	2.04	0.57
36:A:1166:C:H2'	36:A:1167:U:C6	2.39	0.57
11:Q:39:PRO:HA	11:Q:98:LYS:HA	1.86	0.57
3:E:51:PHE:C	3:E:74:PRO:HB3	2.24	0.57
36:A:826:U:H3	36:A:831:G:H1	1.50	0.57
36:A:1947:C:H2'	36:A:1948:G:C8	2.39	0.57
7:J:39:UNK:O	7:J:43:UNK:N	2.37	0.57
6:H:96:ALA:HB3	6:H:128:PRO:HA	1.86	0.57
14:T:27:THR:O	14:T:87:ASP:HB2	2.05	0.57
4:F:5:ALA:HB2	4:F:118:ALA:HB1	1.86	0.57
24:N:73:THR:CG2	24:N:84:LYS:HB3	2.30	0.57
5:G:137:GLU:HB2	5:G:140:ILE:HG23	1.86	0.57
24:N:74:ARG:HH12	24:N:85:ILE:HD11	1.67	0.57
36:A:2009:G:H2'	36:A:2010:G:H8	1.67	0.57
14:T:49:VAL:HG22	14:T:50:ILE:H	1.68	0.57
1:C:218:THR:O	36:A:2175:C:O2'	2.23	0.57
3:E:74:PRO:HB2	3:E:76:ARG:H	1.69	0.57
36:A:2595:G:H21	36:A:2598:A:H62	1.52	0.57
36:A:1162:G:H2'	36:A:1163:G:H8	1.69	0.57
36:A:602:G:H4'	36:A:604:G:H4'	1.87	0.57
36:A:1571:A:H2'	36:A:1572:A:C8	2.38	0.57
36:A:2747:G:H21	36:A:2757:A:H62	0.70	0.57
36:A:1771:C:H2'	36:A:1772:G:C8	2.39	0.57
14:T:16:ARG:HB3	14:T:19:LEU:HG	1.87	0.57
36:A:1658:C:N4	36:A:2002:G:H1	2.02	0.57
12:R:97:VAL:HG22	12:R:114:VAL:HA	1.87	0.57
36:A:541:C:H42	36:A:552:G:H1	1.51	0.57
36:A:2089:U:H2'	36:A:2090:G:C8	2.40	0.57
14:T:62:THR:HA	14:T:75:ILE:HG12	1.87	0.57
2:D:256:GLY:O	36:A:1843:C:O2'	2.19	0.57
13:S:17:ARG:NH2	35:B:8:U:OP1	2.37	0.57
3:E:111:ARG:HB2	3:E:160:TYR:O	2.05	0.57
24:N:45:ASN:H	24:N:45:ASN:ND2	2.02	0.57
5:G:43:LEU:HD13	36:A:2305:A:H61	1.69	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:W:77:ASP:OD2	36:A:23:G:N2	2.37	0.57
36:A:122:G:H2'	36:A:123:G:O4'	2.05	0.57
36:A:2698:U:H2'	36:A:2699:C:C6	2.39	0.57
4:F:164:ARG:HA	4:F:167:ALA:HB3	1.86	0.57
3:E:145:LYS:HD2	36:A:2053:G:H5''	1.85	0.57
22:1:22:GLY:O	22:1:23:LYS:HB2	2.04	0.57
1:C:77:ALA:HB3	1:C:95:VAL:HG13	1.86	0.57
36:A:712:G:H1	36:A:719:C:N4	2.02	0.57
35:B:79:C:O2'	36:A:917:A:N1	2.35	0.57
11:Q:49:ALA:HB2	36:A:2484:G:H5'	1.86	0.57
12:R:36:THR:OG1	12:R:37:THR:N	2.36	0.57
36:A:1341:U:H5'	36:A:1602:U:C4	2.40	0.57
36:A:2589:A:H2'	36:A:2590:A:H8	1.70	0.57
4:F:117:ARG:NH2	4:F:186:ILE:O	2.37	0.57
36:A:401:A:H2'	36:A:402:A:H8	1.67	0.57
36:A:991:C:O4'	36:A:1185:C:O2'	2.22	0.57
17:W:11:ARG:CZ	17:W:12:ILE:H	2.18	0.57
36:A:649:G:H2'	36:A:650:C:C6	2.40	0.57
36:A:1511:A:H2'	36:A:1512:G:C8	2.40	0.57
15:U:92:ARG:HD3	15:U:95:LEU:HG	1.87	0.57
35:B:72:G:H1'	35:B:104:A:N6	2.20	0.57
5:G:68:PRO:HB3	5:G:92:VAL:HB	1.87	0.57
36:A:2102:U:H2'	36:A:2103:C:C6	2.40	0.57
36:A:2663:G:H3'	36:A:2664:G:C8	2.40	0.57
36:A:1281:G:H1	36:A:1289:C:H42	1.53	0.57
4:F:125:LEU:HA	4:F:194:MET:O	2.05	0.57
35:B:78:A:H2'	35:B:79:C:O4'	2.03	0.57
36:A:1196:C:O2'	36:A:1227:G:O2'	2.12	0.57
36:A:1687:G:H1	36:A:1700:A:P	2.27	0.57
36:A:2378:A:O5'	36:A:2378:A:H8	1.87	0.57
13:S:34:HIS:CE1	13:S:54:LEU:HB3	2.39	0.57
35:B:15:A:H5'	35:B:16:G:C8	2.40	0.57
36:A:325:G:H2'	36:A:326:G:C8	2.39	0.57
1:C:186:LEU:O	1:C:190:ILE:HG12	2.05	0.57
36:A:1782:C:H42	36:A:2586:C:N4	2.03	0.56
20:Z:28:MET:SD	20:Z:37:VAL:HG22	2.45	0.56
36:A:1047:G:N3	36:A:1110:G:N1	2.53	0.56
36:A:975:G:O6	36:A:989:G:N2	2.38	0.56
36:A:834:C:H1'	36:A:2358:G:N3	2.19	0.56
36:A:17:G:H2'	36:A:18:C:H6	1.70	0.56
24:N:94:HIS:HB2	24:N:96:GLU:OE2	2.05	0.56
15:U:64:ARG:NH2	24:N:41:ASP:C	2.58	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1019:U:O2'	36:A:1021:A:N1	2.34	0.56
4:F:154:VAL:HG13	4:F:191:ARG:HB2	1.86	0.56
24:N:137:LYS:HZ3	24:N:137:LYS:HA	1.70	0.56
7:J:25:UNK:N	7:J:112:UNK:N	2.54	0.56
13:S:73:LEU:HA	13:S:76:LYS:HD2	1.86	0.56
27:5:22:HIS:NE2	36:A:2045:C:O2	2.37	0.56
36:A:1899:G:H21	36:A:1902:C:N4	2.03	0.56
16:V:18:LEU:HG	16:V:19:LYS:H	1.69	0.56
36:A:2397:G:H2'	36:A:2398:U:H6	1.70	0.56
12:R:41:ALA:HB1	12:R:97:VAL:HG11	1.87	0.56
17:W:32:ALA:O	17:W:36:LEU:HG	2.05	0.56
36:A:475:U:H4'	36:A:510:C:H5'	1.87	0.56
36:A:352:G:O2'	36:A:353:G:N7	2.38	0.56
17:W:79:GLY:N	17:W:100:THR:O	2.35	0.56
36:A:1108:U:H2'	36:A:1109:C:O4'	2.06	0.56
3:E:25:VAL:HG22	3:E:183:LEU:HG	1.86	0.56
24:N:78:TYR:HD2	36:A:2642:G:H5''	1.62	0.56
36:A:2772:C:H2'	36:A:2773:C:C6	2.41	0.56
36:A:1139:G:H4'	36:A:1143:A:N1	2.20	0.56
36:A:1320:C:H42	36:A:1331:A:H62	0.73	0.56
24:N:128:HIS:HE2	24:N:134:ARG:HD2	1.69	0.56
7:J:25:UNK:C	7:J:111:UNK:HA	2.35	0.56
36:A:1278:A:H2'	36:A:1279:G:H8	1.67	0.56
1:C:30:VAL:HG13	1:C:217:THR:HG23	1.87	0.56
3:E:62:PRO:O	3:E:64:LYS:N	2.37	0.56
36:A:2472:G:N2	36:A:2478:A:H62	2.00	0.56
21:0:32:ARG:HH22	36:A:2353:G:H5''	1.70	0.56
36:A:2646:C:H2'	36:A:2647:U:O4'	2.04	0.56
36:A:1529:A:H62	36:A:1542:G:H21	1.53	0.56
36:A:1529:A:H62	36:A:1542:G:N2	2.03	0.56
8:K:56:GLU:O	8:K:67:PHE:HA	2.05	0.56
15:U:40:PHE:HB3	16:V:75:PHE:CE1	2.40	0.56
36:A:1986:A:H2'	36:A:1987:G:H8	1.68	0.56
36:A:541:C:H2'	36:A:542:C:C6	2.40	0.56
21:0:64:ASP:OD1	21:0:64:ASP:N	2.38	0.56
36:A:1878:G:H2'	36:A:1879:C:C6	2.39	0.56
11:Q:17:LEU:HD13	11:Q:40:ALA:HA	1.86	0.56
36:A:363(E):G:H2'	36:A:363(F):U:O4'	2.05	0.56
12:R:96:ARG:NH1	12:R:115:GLU:OE1	2.38	0.56
2:D:18:VAL:HG22	2:D:19:ALA:H	1.70	0.56
20:Z:123:ASP:OD1	20:Z:123:ASP:N	2.39	0.56
36:A:2623:G:H2'	36:A:2624:G:H8	1.70	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:O:14:THR:HG21	9:O:86:ILE:HG21	1.87	0.56
36:A:2133:G:O2'	36:A:2158:A:N6	2.38	0.56
3:E:24:THR:O	3:E:183:LEU:HA	2.05	0.56
36:A:1999:C:H2'	36:A:2000:G:O4'	2.05	0.56
36:A:938:G:H2'	36:A:939:G:H8	1.68	0.56
12:R:39:PRO:HD2	36:A:1651:G:OP1	2.05	0.56
24:N:74:ARG:HH12	24:N:85:ILE:CD1	2.18	0.56
36:A:903:C:H2'	36:A:904:C:H6	1.69	0.56
36:A:223:A:H1'	36:A:407:G:H21	1.70	0.56
36:A:246:C:O2'	36:A:386:G:N7	2.38	0.56
36:A:2039:C:C2	36:A:2040:C:C5	2.93	0.56
3:E:143:ASN:ND2	3:E:144:ARG:H	2.03	0.56
10:P:48:PRO:O	10:P:50:ARG:N	2.30	0.56
36:A:2077:A:H2'	36:A:2078:C:C6	2.40	0.56
36:A:2783:G:H2'	36:A:2784:C:H6	1.70	0.56
36:A:1409:C:H2'	36:A:1410:G:C8	2.40	0.56
35:B:33:G:N2	35:B:36:C:H42	2.04	0.56
36:A:1889:A:H2'	36:A:1890:A:H8	1.71	0.56
30:8:55:ALA:HA	30:8:58:ILE:HD12	1.88	0.56
16:V:28:GLU:HB2	16:V:31:ALA:HB2	1.87	0.56
36:A:1437:C:HO2'	36:A:1518:C:HO2'	1.45	0.56
5:G:117:PHE:HZ	5:G:179:PRO:HB2	1.71	0.56
36:A:1943:U:H4'	36:A:1944:U:H2'	1.87	0.56
36:A:1019:U:H2'	36:A:1020:A:H8	1.69	0.56
4:F:155:LEU:HA	4:F:176:LEU:HB3	1.88	0.56
4:F:125:LEU:CB	4:F:194:MET:HB2	2.33	0.56
36:A:2411:A:H2'	36:A:2412:A:H8	1.71	0.56
29:7:21:ARG:HH22	36:A:684:G:P	2.28	0.56
14:T:16:ARG:HG3	14:T:79:HIS:O	2.05	0.56
4:F:101:LEU:O	4:F:106:ARG:NH2	2.31	0.56
3:E:16:ARG:O	3:E:18:ASP:N	2.34	0.56
17:W:8:ARG:O	17:W:10:VAL:HG23	2.05	0.56
12:R:48:VAL:O	12:R:52:ILE:HG12	2.05	0.56
36:A:794:G:H2'	36:A:795:C:H6	1.71	0.56
4:F:157:VAL:HA	4:F:176:LEU:O	2.06	0.56
28:6:8:LYS:HE3	28:6:25:LYS:HE2	1.88	0.56
29:7:4:THR:OG1	36:A:788:A:N3	2.39	0.56
25:2:56:GLN:O	25:2:60:LEU:HG	2.06	0.56
36:A:2668:G:H2'	36:A:2669:G:O4'	2.05	0.56
36:A:2023:G:O2'	36:A:2618:G:H5''	2.05	0.56
36:A:1058:G:H2'	36:A:1059:G:C8	2.41	0.56
30:8:27:THR:HB	36:A:2393:A:H5'	1.87	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:960:A:O5'	36:A:960:A:H8	1.88	0.56
2:D:69:ARG:NH2	2:D:105:ILE:HG13	2.20	0.56
4:F:28:ILE:O	4:F:29:ASN:ND2	2.39	0.56
28:6:12:GLU:HG2	36:A:2419:U:H4'	1.86	0.56
36:A:550:G:H2'	36:A:551:G:H8	1.71	0.56
35:B:102:G:C2	35:B:103:U:C5	2.94	0.56
35:B:13:A:N1	35:B:69:G:O2'	2.37	0.56
36:A:822:U:C5	36:A:944:G:H1'	2.40	0.56
1:C:66:PRO:HD2	1:C:192:ALA:HB1	1.88	0.56
12:R:73:VAL:O	12:R:76:VAL:HG12	2.06	0.56
36:A:1324:G:H3'	36:A:1325:G:C5'	2.34	0.56
1:C:58:ASN:HA	1:C:166:ASN:OD1	2.05	0.56
36:A:692:C:N3	36:A:770:G:N2	2.46	0.56
36:A:1802:A:C8	36:A:1815:A:N6	2.73	0.56
1:C:78:ILE:O	1:C:120:VAL:HG11	2.05	0.56
36:A:465:G:HO2'	36:A:683:C:HO2'	1.53	0.56
36:A:1203:G:H2'	36:A:1204:A:C2	2.41	0.56
22:1:12:PRO:HA	22:1:44:PRO:HD3	1.88	0.56
36:A:2101:G:H2'	36:A:2102:U:C6	2.41	0.56
36:A:794:G:H2'	36:A:795:C:C6	2.41	0.56
36:A:589:C:H2'	36:A:590:A:H8	1.70	0.56
36:A:589:C:H2'	36:A:590:A:C8	2.41	0.56
36:A:2096:U:H2'	36:A:2097:C:C6	2.40	0.56
2:D:211:ARG:O	2:D:215:LEU:HG	2.06	0.56
18:X:3:THR:N	18:X:6:ASP:OD1	2.39	0.56
36:A:474:G:OP2	36:A:508:G:N2	2.34	0.56
36:A:1639:U:H2'	36:A:1640:C:H5''	1.88	0.56
24:N:99:LEU:O	24:N:99:LEU:HD13	2.06	0.56
27:5:5:PRO:HA	36:A:2577:A:H2	1.71	0.56
36:A:2286:A:H4'	36:A:2287:A:O4'	2.04	0.56
5:G:107:LEU:HA	5:G:111:LEU:HD12	1.88	0.56
36:A:2679:A:N1	36:A:2728:U:O2	2.39	0.56
36:A:1462:C:H2'	36:A:1463:C:H5'	1.87	0.56
36:A:2648:C:H2'	36:A:2649:U:H6	1.71	0.56
22:1:25:LYS:O	22:1:32:LYS:HB3	2.06	0.56
17:W:18:ARG:CZ	36:A:518:G:H4'	2.36	0.56
36:A:1523:U:H2'	36:A:1524:G:H8	1.71	0.56
36:A:2581:G:N3	36:A:2581:G:H2'	2.21	0.56
6:H:41:MET:SD	6:H:42:ARG:N	2.79	0.56
36:A:1114:G:H2'	36:A:1115:G:C8	2.40	0.56
36:A:2521:C:O2'	36:A:2564:A:N3	2.34	0.55
6:H:59:ARG:HA	6:H:62:LYS:HE3	1.87	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:Q:54:MET:HE1	11:Q:64:ILE:HG12	1.88	0.55
6:H:144:VAL:O	6:H:148:ILE:HG12	2.05	0.55
3:E:16:ARG:HD2	3:E:17:ASP:HB3	1.88	0.55
5:G:145:THR:OG1	5:G:146:TYR:N	2.38	0.55
12:R:34:ILE:O	12:R:113:LEU:HA	2.06	0.55
36:A:1638:C:H2'	36:A:1639:U:O4'	2.07	0.55
36:A:2525:G:H2'	36:A:2526:G:C8	2.38	0.55
36:A:1674:G:H4'	36:A:1675:C:H5	1.71	0.55
36:A:1063:G:H2'	36:A:1064:C:O4'	2.06	0.55
16:V:69:LYS:NZ	36:A:1225:G:OP1	2.39	0.55
36:A:1129:A:H62	36:A:2490:G:H5''	1.71	0.55
36:A:1312:U:H5'	36:A:1313:U:C5	2.41	0.55
31:9:19:ARG:NH1	31:9:24:TYR:HB2	2.21	0.55
7:J:59:UNK:O	7:J:63:UNK:N	2.39	0.55
2:D:60:ARG:NH1	2:D:86:PRO:O	2.40	0.55
36:A:1346:G:H2'	36:A:1347:G:C8	2.41	0.55
1:C:16:ASP:O	1:C:18:ASN:N	2.39	0.55
36:A:2686:G:H2'	36:A:2687:U:O4'	2.06	0.55
6:H:45:VAL:HG22	6:H:50:VAL:HG22	1.88	0.55
36:A:2026:C:H2'	36:A:2027:G:O4'	2.05	0.55
36:A:1138:G:O2'	36:A:1139:G:O5'	2.24	0.55
4:F:25:PRO:HD3	4:F:115:ALA:O	2.07	0.55
36:A:81:G:H1	36:A:105:C:H42	1.54	0.55
36:A:14:A:N1	36:A:2044:C:H1'	2.21	0.55
3:E:119:ARG:HG3	3:E:160:TYR:HB2	1.88	0.55
1:C:150:ILE:O	1:C:154:ILE:HG13	2.06	0.55
36:A:2784:C:H2'	36:A:2785:C:H6	1.72	0.55
25:2:20:GLU:O	25:2:23:LYS:N	2.39	0.55
22:1:25:LYS:HG2	22:1:34:THR:HA	1.86	0.55
36:A:211:A:H2'	36:A:212:G:C8	2.41	0.55
36:A:560:C:H2'	36:A:561:G:H8	1.71	0.55
5:G:133:LEU:HD11	5:G:157:ILE:HD12	1.87	0.55
9:O:107:ARG:NH2	14:T:35:LYS:O	2.39	0.55
15:U:87:GLY:O	15:U:89:GLU:N	2.40	0.55
36:A:2555:U:H2'	36:A:2556:C:H5'	1.88	0.55
10:P:26:GLY:HA2	10:P:30:THR:HG21	1.87	0.55
20:Z:40:ASP:O	20:Z:44:PHE:HB3	2.06	0.55
1:C:213:VAL:HG11	1:C:225:ILE:HG12	1.89	0.55
36:A:1003:G:H21	36:A:1010:A:H2	1.54	0.55
3:E:66:HIS:NE2	36:A:2786:U:OP1	2.37	0.55
1:C:78:ILE:HG13	1:C:124:VAL:HG11	1.88	0.55
1:C:84:ILE:HD11	1:C:97:GLY:N	2.22	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1102:C:H2'	36:A:1103:A:C8	2.40	0.55
36:A:2439:A:H1'	36:A:2587:A:H5'	1.88	0.55
36:A:2146:C:H4'	36:A:2147:G:C8	2.42	0.55
11:Q:71:ASP:N	11:Q:71:ASP:OD1	2.40	0.55
36:A:954:G:H2'	36:A:955:C:C6	2.42	0.55
36:A:2037:G:C6	36:A:2038:G:O6	2.58	0.55
36:A:2446:G:N7	36:A:2501:C:O2'	2.34	0.55
17:W:54:ALA:HB1	17:W:107:LEU:HD11	1.88	0.55
36:A:443:A:H1'	36:A:1201:C:H1'	1.89	0.55
1:C:112:ASP:HA	1:C:137:LEU:HD22	1.86	0.55
36:A:1782:C:N4	36:A:2586:C:H42	2.02	0.55
36:A:2649:U:H2'	36:A:2650:U:C6	2.42	0.55
11:Q:64:ILE:HG13	11:Q:106:VAL:HG12	1.88	0.55
9:O:64:ARG:HB2	9:O:83:ALA:HB3	1.89	0.55
5:G:149:VAL:HG23	5:G:153:ARG:HD2	1.89	0.55
36:A:2271:G:H2'	36:A:2272:U:C6	2.42	0.55
6:H:157:TYR:CD1	6:H:171:LEU:HB3	2.41	0.55
1:C:93:ASP:OD1	1:C:93:ASP:N	2.39	0.55
36:A:2453:A:H4'	36:A:2572:A:H1'	1.88	0.55
3:E:62:PRO:HB3	36:A:2787:C:H5'	1.88	0.55
36:A:1771:C:N4	36:A:1980:G:H1	2.03	0.55
2:D:78:LYS:HD3	2:D:98:VAL:HG22	1.88	0.55
36:A:992:C:H42	36:A:1162:G:H1	1.53	0.55
31:9:14:CYS:SG	31:9:25:VAL:HG12	2.47	0.55
14:T:35:LYS:HG3	14:T:41:ARG:HH11	1.70	0.55
1:C:153:ILE:HA	1:C:156:GLU:HB2	1.87	0.55
36:A:565:C:H42	36:A:576:U:H3	1.53	0.55
36:A:1028:A:OP2	36:A:1126:A:N6	2.34	0.55
1:C:61:GLY:HA3	1:C:164:PHE:CD1	2.42	0.55
36:A:1652:A:H3'	36:A:1653:G:C8	2.42	0.55
6:H:85:LYS:HD2	6:H:141:VAL:HG12	1.88	0.55
36:A:1195:G:H2'	36:A:1196:C:H6	1.71	0.55
36:A:1271:G:H22	36:A:1615:C:H42	1.55	0.55
10:P:23:PRO:O	10:P:33:ARG:HA	2.07	0.55
10:P:110:TYR:HD2	10:P:111:ARG:HD2	1.71	0.55
1:C:19:LYS:HE3	1:C:20:VAL:H	1.72	0.55
15:U:5:LYS:NZ	36:A:29:U:OP1	2.39	0.55
36:A:1838:C:H4'	36:A:1839:G:H5'	1.89	0.55
23:4:10:VAL:HG22	23:4:11:PRO:HD2	1.88	0.55
23:4:11:PRO:HA	23:4:25:TYR:HA	1.88	0.55
14:T:58:ASN:HB3	36:A:2683:C:H5'	1.88	0.55
24:N:36:GLY:C	24:N:42:TRP:HB2	2.27	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:R:68:ARG:HE	36:A:2707:G:H5''	1.71	0.55
14:T:102:ILE:HB	14:T:110:ILE:HD11	1.87	0.55
35:B:8:U:H2'	35:B:9:G:C8	2.41	0.55
17:W:71:VAL:HA	17:W:107:LEU:HB3	1.89	0.55
8:K:115:LEU:O	36:A:1058:G:O2'	2.24	0.55
13:S:97:ARG:O	13:S:100:ALA:N	2.27	0.55
36:A:822:U:H5	36:A:944:G:HO2'	1.54	0.55
35:B:29:A:H2'	35:B:30:C:O4'	2.06	0.55
16:V:38:LEU:HD13	16:V:55:ALA:HB1	1.88	0.55
18:X:40:LYS:HG2	18:X:51:VAL:HB	1.87	0.55
36:A:2121:G:H2'	36:A:2122:U:C6	2.42	0.55
8:K:12:LEU:HD11	8:K:23:VAL:HG22	1.88	0.55
1:C:176:VAL:HG11	1:C:189:ASN:ND2	2.21	0.55
36:A:1200:C:H2'	36:A:1201:C:H6	1.71	0.55
2:D:263:ARG:NH1	36:A:2227:A:OP1	2.39	0.55
30:8:48:PHE:O	30:8:49:VAL:HG22	2.07	0.55
36:A:2143:C:C2	36:A:2144:U:H1'	2.42	0.55
4:F:63:LYS:HE3	4:F:67:GLN:NE2	2.22	0.55
3:E:112:GLY:N	36:A:2822:G:OP1	2.39	0.55
36:A:36:G:H4'	36:A:451:C:C2	2.42	0.55
36:A:1492:G:H1	36:A:1498:C:H42	0.73	0.55
1:C:78:ILE:HG21	1:C:124:VAL:HG21	1.90	0.55
2:D:262:ARG:HH22	36:A:2085:C:H4'	1.72	0.55
36:A:2439:A:H2'	36:A:2439:A:N3	2.21	0.55
14:T:74:ARG:HD2	14:T:76:PHE:CE2	2.42	0.55
36:A:1184:G:H2'	36:A:1185:C:H5'	1.87	0.55
29:7:8:ASN:ND2	36:A:1309:G:OP1	2.40	0.55
2:D:70:TRP:HA	2:D:73:VAL:HG23	1.89	0.55
36:A:1453:A:H3'	36:A:1454:U:H2'	1.88	0.55
14:T:26:ASP:HA	14:T:48:ILE:HG23	1.90	0.55
20:Z:5:LEU:HB2	20:Z:57:ILE:HD11	1.89	0.55
36:A:2238:G:H4'	36:A:2239:G:N7	2.22	0.55
12:R:17:ARG:NH2	36:A:2002:G:OP1	2.38	0.54
20:Z:24:LEU:HD12	20:Z:41:LEU:HD23	1.88	0.54
15:U:90:VAL:C	15:U:92:ARG:H	2.09	0.54
2:D:222:ARG:NH1	36:A:1827:C:O5'	2.40	0.54
36:A:2828:C:H2'	36:A:2829:C:C6	2.42	0.54
15:U:58:ARG:HA	15:U:61:TRP:CE3	2.41	0.54
22:1:76:ARG:HH22	22:1:95:LEU:HD13	1.72	0.54
19:Y:20:TYR:HB3	19:Y:23:ARG:HG3	1.88	0.54
36:A:413:C:N4	36:A:2410:G:H1	2.02	0.54
36:A:1084:A:H2	36:A:1105:U:H1'	1.71	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:H:137:ASP:O	6:H:141:VAL:HG23	2.07	0.54
13:S:95:HIS:NE2	35:B:48:A:H4'	2.21	0.54
30:8:62:LEU:HD13	36:A:242:G:H5'	1.88	0.54
36:A:2836:U:H2'	36:A:2837:G:C8	2.42	0.54
36:A:271:G:H2'	36:A:272:G:C8	2.43	0.54
24:N:98:VAL:HG23	24:N:99:LEU:N	2.23	0.54
4:F:155:LEU:HA	4:F:176:LEU:CB	2.37	0.54
36:A:1009:A:H2'	36:A:1010:A:C8	2.42	0.54
24:N:91:LEU:CA	24:N:95:PRO:HB3	2.30	0.54
36:A:2792:G:N1	36:A:2804:C:O2	2.39	0.54
36:A:681:G:H2'	36:A:682:G:C8	2.42	0.54
9:O:1:MET:N	36:A:1665:A:O2'	2.28	0.54
15:U:82:GLY:O	15:U:86:ALA:N	2.35	0.54
36:A:1324:G:H3'	36:A:1325:G:H4'	1.88	0.54
36:A:2092:U:HO2'	36:A:2093:G:P	2.29	0.54
36:A:1416:G:N2	36:A:1582:C:C2	2.75	0.54
1:C:30:VAL:CG1	1:C:217:THR:HG23	2.37	0.54
36:A:196:A:H3'	36:A:197:A:H5''	1.89	0.54
35:B:74:U:H2'	35:B:75:G:H8	1.71	0.54
17:W:18:ARG:HG2	17:W:76:VAL:HG11	1.90	0.54
36:A:2294:C:H2'	36:A:2295:C:C6	2.42	0.54
36:A:363(A):G:H2'	36:A:363(B):A:H8	1.72	0.54
36:A:949:C:H2'	36:A:950:G:H8	1.72	0.54
36:A:594:U:H2'	36:A:595:C:C6	2.43	0.54
35:B:13:A:H4'	35:B:15:A:N7	2.23	0.54
36:A:1829:A:H3'	36:A:1830:C:C6	2.43	0.54
36:A:822:U:H2'	36:A:823:G:H8	1.72	0.54
17:W:76:VAL:HA	17:W:103:ILE:HA	1.88	0.54
24:N:49:GLY:O	24:N:119:ARG:NH1	2.39	0.54
36:A:1845:G:H1	36:A:1895:C:H42	1.55	0.54
3:E:172:VAL:HB	3:E:184:VAL:HG13	1.88	0.54
2:D:177:LEU:O	2:D:179:SER:N	2.40	0.54
36:A:2587:A:H62	36:A:2608:G:H21	1.56	0.54
30:8:34:TRP:HB3	36:A:2420:C:OP1	2.08	0.54
24:N:46:VAL:HG13	24:N:47:ALA:N	2.23	0.54
36:A:282:A:N7	36:A:358:U:O2	2.40	0.54
35:B:105:G:H2'	35:B:106:G:C8	2.43	0.54
2:D:239:ARG:NE	36:A:2590:A:H5''	2.23	0.54
36:A:2822:G:O2'	36:A:2824:C:OP2	2.21	0.54
36:A:903:C:H2'	36:A:904:C:C6	2.42	0.54
11:Q:21:THR:HG21	11:Q:25:ASP:HB3	1.89	0.54
28:6:9:LEU:HD23	28:6:54:ILE:HG22	1.88	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:47:LYS:HB2	1:C:169:THR:HB	1.89	0.54
4:F:68:LYS:O	4:F:70:THR:N	2.39	0.54
3:E:171:GLU:HB3	3:E:185:LYS:HG2	1.90	0.54
24:N:60:ILE:HD13	24:N:99:LEU:HD23	1.89	0.54
4:F:192:LEU:HD23	4:F:194:MET:HG3	1.89	0.54
22:1:13:ILE:HG23	22:1:42:GLN:O	2.08	0.54
36:A:462:C:N4	36:A:463:G:O6	2.41	0.54
36:A:1356:G:H2'	36:A:1357:U:O4'	2.07	0.54
36:A:1789:A:H2'	36:A:1790:C:O4'	2.07	0.54
21:0:36:ILE:HG13	36:A:2354:G:O2'	2.07	0.54
7:J:23:UNK:O	7:J:84:UNK:C	2.56	0.54
36:A:998:C:H2'	36:A:999:U:O4'	2.07	0.54
36:A:2358:G:H2'	36:A:2359:C:O4'	2.07	0.54
18:X:21:PHE:CE2	18:X:26:TYR:HA	2.43	0.54
7:J:4:UNK:O	7:J:6:UNK:N	2.41	0.54
36:A:2620:C:H2'	36:A:2621:A:C8	2.43	0.54
24:N:30:ILE:CD1	24:N:99:LEU:HD11	2.38	0.54
4:F:111:ALA:HB2	4:F:206:ILE:HD11	1.89	0.54
36:A:2575:C:H2'	36:A:2578:G:O6	2.08	0.54
10:P:50:ARG:HD3	30:8:59:LYS:HD2	1.90	0.54
36:A:637:A:N7	36:A:652:U:O2'	2.41	0.54
22:1:42:GLN:NE2	36:A:2231:C:O3'	2.41	0.54
36:A:2207:C:N4	36:A:2217:G:H1	2.04	0.54
36:A:962:G:O2'	36:A:2496:C:H4'	2.08	0.54
36:A:1203:G:N1	36:A:1241:A:OP2	2.31	0.54
36:A:1464:C:H2'	36:A:1465:G:H8	1.73	0.54
36:A:131:G:H1	36:A:148:C:N4	2.06	0.54
36:A:238:C:O2'	36:A:608:A:N3	2.41	0.54
36:A:1295:C:H2'	36:A:1296:G:H8	1.73	0.54
2:D:239:ARG:HE	36:A:2590:A:H5''	1.73	0.54
36:A:2638:G:N1	36:A:2776:A:OP2	2.24	0.54
36:A:307:G:H21	36:A:330:A:N6	2.06	0.54
36:A:178:G:H2'	36:A:179:G:O4'	2.08	0.54
36:A:206:U:H2'	36:A:207:A:H8	1.73	0.54
3:E:4:ILE:HD13	3:E:5:LEU:N	2.22	0.54
4:F:8:GLN:O	4:F:8:GLN:NE2	2.41	0.54
1:C:214:TYR:OH	1:C:224:ARG:NH1	2.40	0.54
1:C:30:VAL:HG22	1:C:33:LEU:HD12	1.90	0.54
3:E:67:PHE:CZ	3:E:69:LYS:HB3	2.43	0.54
36:A:496:G:H2'	36:A:497:A:O4'	2.08	0.54
15:U:83:LEU:HA	15:U:86:ALA:HB3	1.89	0.54
3:E:82:ARG:NH2	36:A:2637:U:OP1	2.38	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:521:G:H2'	36:A:522:G:C8	2.43	0.54
36:A:49:A:H4'	36:A:50:U:H5''	1.89	0.54
14:T:59:THR:HG23	14:T:78:LEU:HD23	1.90	0.54
4:F:9:ILE:HG21	4:F:124:LEU:HA	1.90	0.53
7:J:24:UNK:HA	7:J:84:UNK:C	2.39	0.53
36:A:2372:G:H1	36:A:2381:C:H42	1.55	0.53
2:D:54:ARG:HD3	2:D:216:GLY:O	2.08	0.53
36:A:937:U:H2'	36:A:938:G:C8	2.43	0.53
36:A:494:G:H2'	36:A:495:G:C8	2.43	0.53
36:A:1327:C:H3'	36:A:1328:G:C8	2.42	0.53
36:A:1864:U:H2'	36:A:1869:G:C8	2.43	0.53
15:U:15:LYS:O	15:U:18:LEU:HB2	2.08	0.53
4:F:63:LYS:HG3	4:F:76:GLY:HA3	1.90	0.53
36:A:325:G:H2'	36:A:326:G:H8	1.72	0.53
36:A:2506:U:H5	36:A:2583:G:H22	1.57	0.53
9:O:2:ILE:HB	9:O:33:ALA:HB3	1.89	0.53
24:N:126:PRO:O	24:N:127:ASP:CB	2.56	0.53
3:E:114:ALA:HB1	3:E:118:LYS:HD3	1.89	0.53
1:C:11:LEU:HA	1:C:14:LYS:HG2	1.90	0.53
36:A:1637:A:H4'	36:A:2711:A:O2'	2.08	0.53
36:A:874:G:H2'	36:A:875:G:H8	1.71	0.53
29:7:12:ARG:HH21	29:7:44:PRO:HG3	1.73	0.53
36:A:1047:G:O3'	36:A:1048:A:H8	1.91	0.53
2:D:37:LEU:HB3	2:D:62:TYR:HD1	1.73	0.53
15:U:25:TRP:HD1	15:U:26:GLY:H	1.56	0.53
36:A:2283:C:H2'	36:A:2284:C:H5'	1.89	0.53
36:A:2738:A:H61	36:A:2766:G:H1	1.56	0.53
3:E:94:GLU:HG3	3:E:177:PRO:HB3	1.90	0.53
2:D:269:PHE:HE2	36:A:2219:G:H5''	1.72	0.53
1:C:43:GLU:OE2	36:A:2123:G:N2	2.37	0.53
29:7:11:LYS:HE2	36:A:686:G:C4	2.43	0.53
12:R:96:ARG:HG3	36:A:2882:A:H5'	1.90	0.53
5:G:105:LYS:HB3	5:G:142:PRO:HG3	1.90	0.53
25:2:63:VAL:O	25:2:66:GLU:HG2	2.07	0.53
36:A:715:G:H2'	36:A:716:A:C8	2.44	0.53
36:A:33:U:O4	36:A:446:G:O2'	2.25	0.53
2:D:136:ILE:HD13	2:D:137:PRO:HD2	1.90	0.53
3:E:143:ASN:ND2	36:A:2571:C:O2'	2.41	0.53
36:A:2524:G:H2'	36:A:2525:G:C8	2.43	0.53
36:A:2371:G:H2'	36:A:2372:G:C8	2.44	0.53
16:V:75:PHE:HB2	16:V:81:TYR:O	2.08	0.53
1:C:177:GLY:HA2	1:C:186:LEU:HD21	1.91	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:X:72:LYS:HD2	18:X:72:LYS:H	1.74	0.53
36:A:2367:G:H2'	36:A:2368:C:H6	1.73	0.53
36:A:2479:G:H2'	36:A:2480:C:O4'	2.07	0.53
4:F:52:LYS:NZ	36:A:38:A:H5'	2.23	0.53
36:A:1674:G:H21	36:A:1677:A:H61	1.55	0.53
2:D:157:ARG:HH21	36:A:1818:U:H6	1.56	0.53
12:R:101:ALA:C	12:R:103:ARG:H	2.11	0.53
2:D:79:VAL:O	2:D:96:HIS:HB2	2.07	0.53
36:A:1423:G:H2'	36:A:1424:G:C8	2.42	0.53
10:P:127:ALA:HB3	10:P:130:PHE:CE1	2.44	0.53
36:A:2258:C:O2'	36:A:2427:C:OP2	2.27	0.53
12:R:68:ARG:O	36:A:2708:G:H5'	2.09	0.53
36:A:2023:G:H4'	36:A:2617:C:O3'	2.09	0.53
9:O:67:LYS:NZ	36:A:1664:A:H2'	2.23	0.53
36:A:2728:U:H2'	36:A:2729:G:C8	2.44	0.53
1:C:104:ILE:HG21	1:C:132:LEU:HD11	1.91	0.53
1:C:104:ILE:HG23	1:C:111:PHE:HZ	1.73	0.53
1:C:81:GLY:O	1:C:84:ILE:HB	2.08	0.53
18:X:12:VAL:HG12	18:X:17:ALA:HB1	1.89	0.53
35:B:44:G:H5'	35:B:45:A:H8	1.73	0.53
36:A:733:G:P	36:A:761:A:H61	2.32	0.53
16:V:95:LEU:O	16:V:96:ILE:O	2.27	0.53
8:K:57:ILE:HG13	8:K:67:PHE:HB3	1.91	0.53
14:T:47:GLY:CA	14:T:65:LYS:HB2	2.39	0.53
36:A:837:C:N4	36:A:942:G:H1	2.06	0.53
12:R:53:HIS:CD2	36:A:2840:C:H5''	2.43	0.53
36:A:101:G:H2'	36:A:101:G:N3	2.23	0.53
36:A:1796:U:H3	36:A:1823:G:H1	1.56	0.53
1:C:201:LYS:HD3	1:C:202:PRO:HD2	1.91	0.53
36:A:1581:G:H2'	36:A:1582:C:C6	2.43	0.53
36:A:2230:G:H2'	36:A:2231:C:H6	1.74	0.53
24:N:17:ASP:O	24:N:18:ALA:CB	2.57	0.53
20:Z:28:MET:HB3	20:Z:88:PHE:HB2	1.90	0.53
15:U:34:LYS:NZ	36:A:2018:G:H21	2.07	0.53
16:V:76:LYS:NZ	36:A:974(A):G:H4'	2.23	0.53
36:A:8:A:C2	36:A:9:U:C2	2.97	0.53
36:A:1281:G:H2'	36:A:1282:U:O4'	2.08	0.53
1:C:74:ARG:O	1:C:76:LEU:N	2.35	0.53
36:A:1472:A:H62	36:A:1521:G:H21	1.55	0.53
8:K:101:TRP:CD1	8:K:140:GLY:HA2	2.43	0.53
36:A:624:C:O2'	36:A:657:U:H4'	2.09	0.53
12:R:62:ALA:HB3	12:R:80:PHE:HZ	1.72	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:F:129:PHE:HE2	4:F:158:THR:HG1	1.57	0.53
36:A:1005:C:H2'	36:A:1006:C:O4'	2.08	0.53
24:N:30:ILE:HG22	24:N:34:LEU:HD23	1.90	0.53
36:A:2029:G:O6	36:A:2032:G:H3'	2.08	0.53
36:A:684:G:H5'	36:A:685:A:OP2	2.09	0.53
10:P:62:LEU:HB3	36:A:2393:A:H5''	1.90	0.53
12:R:20:LEU:O	12:R:24:GLN:HG2	2.09	0.53
20:Z:9:TYR:HD2	20:Z:37:VAL:HG12	1.74	0.53
36:A:860:U:H5	36:A:2268:A:C8	2.27	0.53
16:V:47:VAL:HB	16:V:50:PRO:O	2.08	0.53
36:A:828:U:H5'	36:A:831:G:N2	2.23	0.53
2:D:206:LEU:HB2	36:A:1791:A:H4'	1.91	0.53
1:C:219:MET:SD	36:A:2124:G:N2	2.78	0.53
28:6:48:VAL:O	28:6:49:HIS:HB2	2.07	0.53
4:F:24:LEU:HD13	4:F:119:ARG:HE	1.72	0.53
36:A:698:C:H42	36:A:763:G:H1	1.57	0.53
24:N:120:LEU:CD2	24:N:122:VAL:HG23	2.38	0.53
13:S:89:ARG:HB3	13:S:92:TYR:HB3	1.91	0.53
29:7:30:VAL:O	29:7:34:ARG:HG2	2.09	0.53
3:E:15:PHE:CE1	14:T:81:PRO:HD3	2.44	0.53
36:A:992:C:H2'	36:A:993:G:C8	2.43	0.53
36:A:828:U:H2'	36:A:829:A:C5	2.44	0.53
36:A:193:U:H2'	36:A:194:G:H8	1.73	0.53
36:A:2809:A:H2'	36:A:2810:A:C8	2.44	0.53
22:1:26:ARG:HH11	22:1:26:ARG:HA	1.73	0.53
3:E:141:ILE:HG12	36:A:2051:A:H4'	1.90	0.53
36:A:573:G:H1	36:A:2030:A:H3'	1.74	0.53
36:A:2330:G:H2'	36:A:2331:G:C8	2.44	0.53
24:N:115:ARG:HG2	24:N:115:ARG:HH11	1.73	0.53
36:A:883:G:H2'	36:A:884:C:C6	2.43	0.53
14:T:20:PRO:HG3	14:T:86:ILE:HG12	1.91	0.53
36:A:2876:G:H2'	36:A:2877:G:C8	2.44	0.53
17:W:39:THR:HB	17:W:44:ALA:HB2	1.91	0.53
36:A:1221:C:H2'	36:A:122(A):C:H6	1.72	0.53
36:A:2623:G:H2'	36:A:2624:G:C8	2.44	0.53
36:A:1523:U:H2'	36:A:1524:G:C8	2.43	0.53
36:A:38:A:H2'	36:A:39:C:C6	2.44	0.53
28:6:6:ARG:H	28:6:6:ARG:HD2	1.74	0.53
28:6:14:THR:O	28:6:50:ARG:HG2	2.09	0.53
36:A:1564:C:H2'	36:A:1565:C:C6	2.44	0.53
36:A:2137:C:H2'	36:A:2138:C:C6	2.44	0.53
36:A:2709:G:H2'	36:A:2710:C:O4'	2.08	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:213:VAL:HG11	1:C:225:ILE:CG1	2.39	0.52
11:Q:37:LEU:HD12	11:Q:128:LYS:HB2	1.90	0.52
36:A:1320:C:O2'	36:A:1321:A:OP2	2.23	0.52
36:A:2538:C:H2'	36:A:2539:C:H6	1.73	0.52
28:6:43:CYS:O	28:6:44:ARG:HB2	2.09	0.52
36:A:2345:G:N3	36:A:2381:C:H2'	2.23	0.52
9:O:27:GLY:O	9:O:29:ASN:N	2.37	0.52
4:F:74:ARG:HE	36:A:674:G:H1'	1.74	0.52
36:A:2465:C:H2'	36:A:2466:C:C6	2.45	0.52
36:A:65:C:H2'	36:A:66:C:H6	1.75	0.52
36:A:521:G:H2'	36:A:522:G:H8	1.74	0.52
36:A:2074:U:O2'	36:A:2597:G:N3	2.33	0.52
36:A:150:C:H2'	36:A:151:C:C6	2.44	0.52
36:A:2064:C:H2'	36:A:2065:C:C6	2.45	0.52
12:R:90:ARG:NH1	36:A:2880:C:O2'	2.41	0.52
3:E:184:VAL:HG12	3:E:185:LYS:H	1.74	0.52
16:V:40:LEU:HA	16:V:45:THR:HB	1.92	0.52
36:A:2340:G:H2'	36:A:2341:G:H8	1.73	0.52
36:A:2688:U:H5	36:A:2719:G:C4	2.26	0.52
5:G:5:VAL:HG23	5:G:8:LYS:HB2	1.92	0.52
36:A:1131:G:O2'	36:A:1132:A:OP2	2.24	0.52
36:A:1023:U:O2'	36:A:1123:C:OP2	2.23	0.52
36:A:2178:C:H2'	36:A:2179:C:C6	2.44	0.52
24:N:137:LYS:NZ	24:N:138:LEU:HD23	2.24	0.52
36:A:2173:A:OP2	36:A:2173:A:H8	1.93	0.52
13:S:40:ILE:HA	13:S:47:THR:CA	2.35	0.52
10:P:66:GLY:HA2	36:A:2415:G:H4'	1.91	0.52
36:A:1999:C:H5''	36:A:2723:C:O2'	2.09	0.52
16:V:24:LYS:HE3	16:V:64:HIS:HD2	1.74	0.52
2:D:242:ARG:NH1	36:A:1902:C:OP1	2.41	0.52
12:R:39:PRO:HA	12:R:42:LYS:HG3	1.92	0.52
36:A:1445:C:H2'	36:A:1446:C:H6	1.74	0.52
24:N:11:PRO:HB2	24:N:51:PHE:HE1	1.74	0.52
25:2:7:ARG:HA	25:2:10:LEU:HD12	1.92	0.52
36:A:19:C:H2'	36:A:20:C:C6	2.45	0.52
18:X:61:GLY:HA3	18:X:73:ARG:HB2	1.90	0.52
36:A:730:C:OP1	36:A:1775:U:H1'	2.10	0.52
36:A:1498:C:H2'	36:A:1499:C:C6	2.44	0.52
24:N:26:LEU:HD23	24:N:99:LEU:HD21	1.92	0.52
19:Y:2:ARG:HG2	36:A:106:C:H1'	1.92	0.52
21:0:11:ARG:HH22	36:A:2278:A:H5'	1.75	0.52
21:0:11:ARG:NH2	36:A:2279:G:OP2	2.42	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:165:ILE:HG23	2:D:166:GLN:H	1.74	0.52
12:R:53:HIS:ND1	12:R:94:TYR:OH	2.36	0.52
36:A:2881:C:H2'	36:A:2882:A:C8	2.45	0.52
36:A:271:G:H2'	36:A:272:G:H8	1.73	0.52
21:O:25:ARG:NH2	36:A:2354:G:O2'	2.42	0.52
36:A:591:C:H42	36:A:666:G:H1	1.57	0.52
36:A:1638:C:H4'	36:A:2710:C:O2	2.09	0.52
24:N:30:ILE:O	24:N:34:LEU:HD23	2.09	0.52
36:A:577:G:O2'	36:A:1254:A:OP1	2.19	0.52
36:A:2229:C:H2'	36:A:2230:G:H8	1.75	0.52
29:7:16:HIS:HE1	36:A:684:G:H5'	1.75	0.52
36:A:2893:G:H5''	36:A:2894:G:O4'	2.10	0.52
2:D:233:HIS:HE2	2:D:246:PRO:HA	1.73	0.52
13:S:26:LEU:HD21	13:S:101:LEU:HD13	1.92	0.52
36:A:2234:G:H2'	36:A:2235:G:O4'	2.09	0.52
36:A:956:G:H1'	36:A:960:A:N6	2.25	0.52
21:O:62:LEU:HG	36:A:2366:A:H4'	1.91	0.52
20:Z:144:LEU:HD12	20:Z:174:VAL:HG23	1.92	0.52
31:9:22:ARG:NH2	31:9:35:ARG:HH22	2.06	0.52
2:D:10:THR:HG23	2:D:13:ARG:HB3	1.92	0.52
13:S:61:ASN:OD1	13:S:62:LYS:N	2.43	0.52
7:J:79:UNK:O	7:J:81:UNK:N	2.43	0.52
36:A:1091:G:H2'	36:A:1092:C:H6	1.75	0.52
36:A:2645:G:H3'	36:A:2646:C:C5'	2.39	0.52
5:G:128:ARG:NH1	36:A:2316:C:H1'	2.25	0.52
2:D:96:HIS:HA	2:D:102:LYS:HG3	1.91	0.52
30:8:4:MET:O	30:8:62:LEU:HD11	2.10	0.52
36:A:1346:G:H2'	36:A:1347:G:H8	1.75	0.52
1:C:74:ARG:O	1:C:92:ALA:HA	2.09	0.52
36:A:1534:G:H3'	36:A:1535:U:H5''	1.92	0.52
2:D:13:ARG:HA	2:D:16:MET:HB2	1.91	0.52
36:A:175:G:H2'	36:A:176:G:O4'	2.10	0.52
24:N:78:TYR:CB	36:A:2642:G:OP1	2.49	0.52
36:A:2708:G:H8	36:A:2708:G:O5'	1.93	0.52
36:A:528:A:N6	36:A:2042:A:C8	2.77	0.52
1:C:33:LEU:HD13	1:C:221:PRO:HB2	1.92	0.52
36:A:994:C:O2'	36:A:995:C:H3'	2.09	0.52
36:A:1819:A:H4'	36:A:1820:U:H5'	1.91	0.52
13:S:14:VAL:HA	36:A:2334:G:H4'	1.91	0.52
13:S:15:ARG:HG2	36:A:2334:G:N2	2.25	0.52
36:A:2074:U:H2'	36:A:2597:G:H21	1.74	0.52
36:A:2340:G:H2'	36:A:2341:G:C8	2.45	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:63:VAL:HG21	1:C:195:ARG:HH12	1.73	0.52
36:A:2230:G:H2'	36:A:2231:C:C6	2.45	0.52
30:8:42:ARG:NH2	36:A:2382:G:H21	2.08	0.52
36:A:2787:C:H2'	36:A:2788:C:C6	2.44	0.52
5:G:25:TYR:O	5:G:27:ASN:N	2.43	0.52
13:S:89:ARG:NH2	35:B:48:A:OP1	2.42	0.52
13:S:99:LYS:HG2	13:S:100:ALA:N	2.24	0.52
10:P:23:PRO:HB3	10:P:29:LYS:CB	2.39	0.52
12:R:61:HIS:HE1	36:A:2850:A:C2	2.28	0.52
36:A:1041:C:H2'	36:A:1042:G:O4'	2.10	0.52
36:A:1114:G:H2'	36:A:1115:G:H8	1.73	0.52
36:A:2065:C:H2'	36:A:2066:C:H6	1.74	0.52
26:3:7:LYS:HD3	26:3:34:GLU:HG3	1.92	0.52
20:Z:18:LEU:HB3	20:Z:25:PRO:HD3	1.92	0.52
36:A:1936:A:OP2	36:A:1961:C:N4	2.42	0.52
36:A:2055:C:H41	36:A:2499:C:H2'	1.75	0.52
2:D:269:PHE:CE2	36:A:2219:G:H5''	2.44	0.52
36:A:947:G:H2'	36:A:948:G:H8	1.74	0.52
22:1:18:ILE:CG2	36:A:380:U:H4'	2.40	0.52
1:C:120:VAL:HA	1:C:123:ALA:HB3	1.92	0.52
1:C:73:VAL:HG22	1:C:75:VAL:N	2.24	0.52
14:T:84:GLN:HG2	14:T:86:ILE:HG13	1.92	0.52
31:9:30:PRO:HB2	36:A:2527:C:H5''	1.91	0.52
36:A:966:G:H2'	36:A:967:C:C6	2.45	0.52
36:A:2038:G:H2'	36:A:2039:C:O4'	2.10	0.52
24:N:129:PRO:O	24:N:131:GLN:N	2.43	0.52
27:5:4:HIS:ND1	27:5:4:HIS:N	2.58	0.52
36:A:686:G:H21	36:A:788:A:H61	1.56	0.52
3:E:114:ALA:HA	36:A:1655:A:H4'	1.90	0.52
16:V:19:LYS:HG3	16:V:20:LEU:H	1.75	0.52
36:A:1541:U:H3'	36:A:1542:G:O3'	2.09	0.52
9:O:85:VAL:HG21	9:O:114:ILE:HG21	1.91	0.52
5:G:135:LEU:O	36:A:2305:A:H1'	2.09	0.52
1:C:60:ARG:HG3	1:C:62:THR:CG2	2.39	0.52
25:2:25:VAL:HG11	25:2:61:LEU:HG	1.92	0.52
36:A:545:G:H1'	36:A:548:A:N6	2.25	0.52
36:A:1569:A:H2'	36:A:1570:A:C8	2.44	0.52
11:Q:26:TYR:O	11:Q:102:VAL:HG21	2.10	0.52
2:D:12:SER:HB2	2:D:208:LYS:HB3	1.90	0.52
36:A:2379:G:H2'	36:A:2380:C:C6	2.45	0.52
36:A:2041:U:H2'	36:A:2042:A:O4'	2.10	0.51
12:R:5:LYS:HE3	36:A:2820:A:H4'	1.93	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:273:ARG:HH22	36:A:1798:U:P	2.33	0.51
13:S:66:ALA:HB1	13:S:99:LYS:HD2	1.92	0.51
36:A:2085:C:H2'	36:A:2086:U:H6	1.75	0.51
21:0:34:GLY:N	21:0:61:ALA:HB3	2.23	0.51
29:7:42:LEU:HD21	36:A:466:A:H5''	1.92	0.51
36:A:1312:U:H5'	36:A:1313:U:C6	2.45	0.51
1:C:24:ASP:O	1:C:28:ARG:NE	2.39	0.51
5:G:39:ILE:HG13	5:G:92:VAL:HG13	1.90	0.51
24:N:11:PRO:HB2	24:N:51:PHE:CE1	2.45	0.51
30:8:61:LEU:O	30:8:64:TYR:N	2.37	0.51
10:P:25:SER:HB2	36:A:812:C:H3'	1.92	0.51
17:W:25:ARG:NH2	17:W:74:ALA:H	2.08	0.51
8:K:132:ARG:HH12	8:K:138:VAL:HG23	1.75	0.51
36:A:576:U:H4'	36:A:2502:G:C5	2.44	0.51
36:A:15:G:O6	36:A:525:U:O4	2.28	0.51
36:A:1654:A:H2'	36:A:1655:A:C8	2.45	0.51
22:1:15:ALA:H	22:1:41:ARG:HG2	1.76	0.51
36:A:2732:G:H3'	36:A:2733:A:O4'	2.10	0.51
36:A:2625:G:H2'	36:A:2626:C:O4'	2.10	0.51
18:X:36:LYS:HD2	36:A:1598:C:H5'	1.92	0.51
35:B:14:U:H1'	35:B:107:U:H1'	1.91	0.51
11:Q:56:ARG:HH11	20:Z:180:VAL:HG11	1.75	0.51
2:D:45:ASN:HB2	36:A:1812:A:O2'	2.09	0.51
18:X:66:LEU:HD13	36:A:64:A:H1'	1.92	0.51
36:A:1473:G:H2'	36:A:1474:C:H6	1.74	0.51
36:A:907:U:H2'	36:A:908:C:C6	2.45	0.51
1:C:48:LEU:HD13	1:C:50:ILE:HG12	1.92	0.51
36:A:1626:G:H5''	36:A:1627:G:H5'	1.92	0.51
36:A:306:U:H3	36:A:310:A:N6	1.93	0.51
10:P:61:ARG:NH1	30:8:13:ARG:HD2	2.20	0.51
28:6:8:LYS:HD3	28:6:27:LYS:HG2	1.92	0.51
2:D:157:ARG:HE	36:A:1818:U:H6	1.58	0.51
10:P:27:HIS:HD2	36:A:813:U:H3'	1.74	0.51
5:G:91:ARG:NH1	36:A:2314:C:OP1	2.44	0.51
16:V:78:LYS:O	16:V:80:GLN:N	2.44	0.51
36:A:2561:A:H2'	36:A:2562:U:O4'	2.11	0.51
15:U:3:ARG:HD3	36:A:445:C:H5''	1.93	0.51
13:S:15:ARG:HG2	36:A:2334:G:H21	1.74	0.51
25:2:33:MET:HA	25:2:36:ARG:HE	1.74	0.51
12:R:22:ARG:HG2	12:R:69:ASP:O	2.10	0.51
5:G:122:PRO:HA	5:G:125:PHE:HE1	1.76	0.51
31:9:9:ARG:NH2	36:A:1033:U:OP1	2.44	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:E:10:GLY:O	3:E:25:VAL:N	2.44	0.51
36:A:1628:G:N2	36:A:1638:C:N3	2.49	0.51
1:C:101:ILE:HD11	1:C:127:LYS:HB2	1.91	0.51
36:A:371:A:N6	36:A:401:A:H3'	2.23	0.51
12:R:53:HIS:O	12:R:56:LYS:HB3	2.10	0.51
36:A:273(D):C:H2'	36:A:273(E):C:H6	1.75	0.51
36:A:1406:U:H2'	36:A:1407:C:C6	2.45	0.51
36:A:756:C:H2'	36:A:757:U:O4'	2.10	0.51
36:A:572:A:N1	36:A:2029:G:N3	2.59	0.51
36:A:2410:G:H2'	36:A:2411:A:C8	2.45	0.51
24:N:138:LEU:HD23	24:N:138:LEU:N	2.26	0.51
7:J:25:UNK:HA	7:J:79:UNK:C	2.40	0.51
1:C:115:VAL:HB	1:C:150:ILE:HG13	1.92	0.51
36:A:750:A:OP1	36:A:1615:C:N4	2.42	0.51
30:8:23:VAL:HG12	30:8:46:ARG:HH12	1.75	0.51
2:D:171:ASP:HB3	2:D:186:HIS:CE1	2.46	0.51
15:U:50:ARG:HH21	36:A:993:G:H5''	1.76	0.51
19:Y:10:GLY:HA2	19:Y:28:LYS:HE2	1.91	0.51
36:A:1073:A:H2'	36:A:1074:G:O4'	2.11	0.51
36:A:218:A:H2'	36:A:219:G:O4'	2.11	0.51
35:B:31:C:H2'	35:B:32:C:C6	2.46	0.51
16:V:99:ILE:H	16:V:99:ILE:HD13	1.75	0.51
14:T:121:ILE:O	14:T:124:ASP:N	2.43	0.51
36:A:1385:G:O2'	36:A:1386:C:OP2	2.26	0.51
26:3:4:LEU:HB2	26:3:37:LEU:HD12	1.93	0.51
36:A:1795:C:H42	36:A:1824:G:H1	1.59	0.51
36:A:487:C:H2'	36:A:488:G:O4'	2.10	0.51
36:A:1005:C:H2'	36:A:1006:C:C6	2.46	0.51
24:N:103:VAL:O	24:N:106:MET:N	2.36	0.51
36:A:442:G:H5''	36:A:615:G:N2	2.26	0.51
36:A:2545:G:H21	36:A:2565:A:H2	1.59	0.51
4:F:103:LYS:O	4:F:106:ARG:HD2	2.11	0.51
12:R:28:LEU:HG	12:R:114:VAL:HG11	1.92	0.51
30:8:52:LYS:HZ1	36:A:834:C:HO2'	1.51	0.51
36:A:2667:C:H2'	36:A:2668:G:H8	1.75	0.51
9:O:25:LEU:HB3	9:O:38:VAL:HG23	1.92	0.51
4:F:181:LEU:HD23	4:F:205:ARG:HD3	1.92	0.51
36:A:2415:G:H2'	36:A:2416:C:H6	1.75	0.51
36:A:2105:C:H2'	36:A:2106:G:H8	1.72	0.51
14:T:33:LYS:HG2	14:T:74:ARG:HH22	1.75	0.51
36:A:2307:G:H1'	36:A:2311:A:C5	2.45	0.51
12:R:32:GLY:HA3	12:R:116:LEU:HG	1.92	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:F:52:LYS:HZ1	36:A:38:A:H5'	1.76	0.51
36:A:1661:G:N2	36:A:2688:U:OP1	2.37	0.51
36:A:1978:A:H2'	36:A:1979:C:O4'	2.10	0.51
21:0:48:GLY:HA3	21:0:80:HIS:CE1	2.46	0.51
36:A:2024:G:C6	36:A:2040:C:C4	2.99	0.51
36:A:2411:A:H8	36:A:2411:A:O5'	1.93	0.51
35:B:77:U:H3	35:B:99:A:N6	1.92	0.51
12:R:2:ARG:HG2	36:A:2821:A:OP2	2.11	0.51
36:A:1675:C:C2	36:A:1676:A:C8	2.98	0.51
2:D:54:ARG:HH21	2:D:217:ARG:NH2	2.08	0.51
36:A:2151:G:H2'	36:A:2152:G:C8	2.39	0.51
12:R:42:LYS:O	12:R:45:ARG:NE	2.44	0.51
10:P:46:LYS:HD2	10:P:46:LYS:H	1.76	0.51
35:B:32:C:H2'	35:B:33:G:H8	1.75	0.51
3:E:141:ILE:HG13	3:E:142:GLY:N	2.25	0.51
12:R:92:GLY:HA3	36:A:2880:C:H1'	1.91	0.51
36:A:240:G:O2'	36:A:257:A:N6	2.44	0.51
36:A:586:A:H5''	36:A:587:C:OP1	2.10	0.51
36:A:2226:C:H2'	36:A:2227:A:O4'	2.10	0.51
6:H:176:ALA:O	36:A:2530:A:H5'	2.11	0.51
2:D:172:TYR:HA	2:D:186:HIS:HA	1.92	0.51
36:A:183:C:O2'	36:A:432:A:O2'	2.29	0.51
36:A:2869:G:H2'	36:A:2870:C:O4'	2.11	0.51
15:U:76:TYR:OH	15:U:80:ILE:HD11	2.10	0.51
25:2:35:LEU:HD12	25:2:53:LEU:HD23	1.91	0.51
36:A:2815:C:H2'	36:A:2816:C:O4'	2.11	0.51
3:E:79:ARG:HH12	8:K:3:LYS:HD2	100.55	0.51
1:C:194:ILE:HD11	1:C:225:ILE:HD11	1.91	0.51
36:A:2393:A:N6	36:A:2422:A:H61	2.03	0.51
24:N:111:PRO:HD2	36:A:558:G:OP2	2.11	0.51
2:D:151:LYS:HE3	36:A:2208:U:H1'	1.93	0.51
13:S:70:GLY:HA3	13:S:99:LYS:HG3	1.92	0.51
15:U:28:ARG:NH1	15:U:34:LYS:O	2.44	0.51
12:R:49:ASP:OD1	12:R:94:TYR:N	2.44	0.51
25:2:21:LEU:O	25:2:25:VAL:HG23	2.10	0.51
35:B:74:U:H2'	35:B:75:G:C8	2.46	0.51
36:A:184:C:H4'	36:A:217:G:H21	1.75	0.51
15:U:51:LYS:HG2	36:A:1156:A:C8	2.46	0.51
5:G:13:GLU:O	5:G:17:PRO:HD2	2.11	0.51
36:A:1165:U:H2'	36:A:1166:C:C6	2.46	0.51
36:A:665:C:H2'	36:A:666:G:C8	2.46	0.51
36:A:708:C:H2'	36:A:709:U:C6	2.46	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2135:A:N6	36:A:2156:G:O2'	2.37	0.51
3:E:102:VAL:HG12	3:E:200:GLU:HA	1.92	0.50
36:A:1497:U:H5'	36:A:1498:C:C5	2.46	0.50
36:A:2448:A:H5'	36:A:2449:U:H2'	1.93	0.50
5:G:109:VAL:C	5:G:112:PRO:HD2	2.30	0.50
22:1:37:ILE:HG12	36:A:200:U:H4'	1.92	0.50
2:D:106:ILE:O	2:D:108:PRO:HD3	2.11	0.50
8:K:27:LEU:HD21	8:K:57:ILE:HD13	1.92	0.50
12:R:101:ALA:O	12:R:103:ARG:N	2.41	0.50
12:R:45:ARG:HB3	12:R:97:VAL:HG23	1.94	0.50
36:A:1916:A:H2'	36:A:1917:U:H6	1.76	0.50
36:A:248:G:N3	36:A:2431:U:H4'	2.26	0.50
36:A:30:G:H2'	36:A:31:C:C6	2.46	0.50
36:A:37:C:H2'	36:A:38:A:C8	2.45	0.50
25:2:10:LEU:HD22	25:2:14:ARG:HH22	1.77	0.50
15:U:23:GLY:HA2	36:A:19:C:H5'	1.92	0.50
36:A:752:A:O2'	36:A:1781:C:H5'	2.11	0.50
6:H:33:LEU:HD11	6:H:75:ALA:HB1	1.92	0.50
1:C:65:LEU:HD22	1:C:176:VAL:HG13	1.93	0.50
24:N:65:LYS:NZ	36:A:1021:A:OP2	2.39	0.50
7:J:54:UNK:CA	7:J:79:UNK:HA	2.35	0.50
5:G:111:LEU:N	5:G:112:PRO:CD	2.74	0.50
36:A:820:A:N3	36:A:943:U:H4'	2.25	0.50
36:A:1466:G:O3'	36:A:154(B):C:O2'	2.28	0.50
14:T:3:ARG:NE	36:A:2876:G:O2'	2.44	0.50
36:A:2379:G:H2'	36:A:2380:C:H6	1.76	0.50
20:Z:69:THR:HG22	20:Z:90:VAL:HA	1.94	0.50
6:H:138:LYS:HG3	36:A:2746:U:H4'	1.93	0.50
27:5:10:LYS:HB2	36:A:2017:U:O2	2.11	0.50
2:D:264:LYS:HB3	2:D:267:SER:HB2	1.93	0.50
21:0:23:VAL:HA	21:0:38:VAL:HA	1.92	0.50
36:A:671:C:H2'	36:A:672:C:H6	1.76	0.50
36:A:1299:G:N2	36:A:1640:C:H5'	2.26	0.50
36:A:1131:G:N2	36:A:1132:A:N3	2.58	0.50
4:F:155:LEU:O	4:F:191:ARG:O	2.29	0.50
36:A:2109:U:O4	36:A:2180:U:O4	2.29	0.50
11:Q:43:THR:O	11:Q:47:ILE:HG13	2.11	0.50
19:Y:8:LYS:HB3	19:Y:28:LYS:HZ1	1.76	0.50
15:U:90:VAL:HG11	16:V:11:GLN:HE22	1.76	0.50
22:1:30:VAL:HG12	36:A:2396:G:H1'	1.93	0.50
36:A:950:G:H2'	36:A:951:C:C6	2.46	0.50
36:A:55:G:O2'	36:A:127:A:N1	2.42	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2061:G:O2'	36:A:2063:C:N4	2.28	0.50
35:B:89(A):G:H2'	35:B:89(B):A:C8	2.46	0.50
36:A:2472:G:H21	36:A:2478:A:N6	2.04	0.50
1:C:27:ALA:HB1	1:C:183:PRO:O	2.11	0.50
36:A:46:C:OP2	36:A:215:G:H5''	2.11	0.50
36:A:273(D):C:H2'	36:A:273(E):C:C6	2.46	0.50
35:B:34:U:H1'	35:B:36:C:H41	1.76	0.50
29:7:40:TRP:N	29:7:40:TRP:CD1	2.78	0.50
22:1:52:ARG:HA	22:1:57:GLU:HA	1.92	0.50
36:A:308:G:N2	36:A:329:G:O2'	2.43	0.50
36:A:1735:U:H2'	36:A:1741:C:H6	1.77	0.50
36:A:1292:U:H2'	36:A:1293:C:C6	2.46	0.50
36:A:2773:C:H2'	36:A:2774:C:H6	1.76	0.50
36:A:1441:G:H2'	36:A:1442:G:C8	2.47	0.50
36:A:84:A:N6	36:A:102:G:O2'	2.39	0.50
7:J:25:UNK:CA	7:J:80:UNK:HA	2.41	0.50
15:U:49:HIS:HA	15:U:52:ARG:HB3	1.94	0.50
9:O:29:ASN:HB2	36:A:2675:A:H4'	1.93	0.50
22:1:90:ILE:O	22:1:94:LEU:HD13	2.11	0.50
36:A:1782:C:O2	36:A:2608:G:O2'	2.19	0.50
36:A:1081:U:H2'	36:A:1082:U:C6	2.46	0.50
17:W:21:VAL:O	17:W:24:ILE:HG12	2.12	0.50
36:A:1727:U:C4	36:A:1728:G:C6	2.99	0.50
10:P:21:ARG:HH21	10:P:29:LYS:HD3	1.76	0.50
30:8:16:ILE:HB	30:8:22:VAL:HG22	1.93	0.50
18:X:57:LEU:HD12	36:A:1341:U:O4'	2.12	0.50
36:A:1437:C:H2'	36:A:1438:U:C6	2.46	0.50
36:A:1942:C:OP2	36:A:1943:U:O2'	2.24	0.50
4:F:1:MET:HB2	4:F:3:GLU:HG2	1.92	0.50
15:U:64:ARG:HD3	24:N:42:TRP:N	2.26	0.50
36:A:2697:G:H2'	36:A:2698:U:O4'	2.11	0.50
22:1:45:ASN:CB	36:A:397:G:H5''	2.42	0.50
36:A:1184:G:C2'	36:A:1185:C:H5'	2.42	0.50
36:A:1195:G:H2'	36:A:1196:C:C6	2.46	0.50
2:D:98:VAL:O	36:A:1501:C:O2'	2.28	0.50
36:A:2171:A:O2'	36:A:2172:U:O4'	2.30	0.50
2:D:25:THR:HB	2:D:26:LYS:HD2	1.94	0.50
35:B:32:C:H2'	35:B:33:G:C8	2.47	0.50
9:O:107:ARG:HH22	14:T:36:GLU:CD	2.15	0.50
16:V:38:LEU:HD11	16:V:99:ILE:HB	1.94	0.50
36:A:492:A:H2'	36:A:493:G:O4'	2.11	0.50
12:R:81:ASP:N	12:R:81:ASP:OD1	2.44	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:366(B):C:N4	36:A:404:C:OP2	2.39	0.50
36:A:414:C:H2'	36:A:415:A:H8	1.77	0.50
6:H:139:GLN:OE1	36:A:2759:G:N2	2.44	0.50
36:A:2572:A:H5'	36:A:2574:G:H4'	1.93	0.50
36:A:718:A:H2'	36:A:719:C:O4'	2.12	0.50
36:A:1288:U:H3	36:A:1326:U:H3	1.58	0.50
36:A:1872:A:O5'	36:A:1872:A:H8	1.95	0.50
23:4:16:CYS:HB3	23:4:34:GLU:O	2.11	0.50
36:A:1804:C:H2'	36:A:1805:U:O4'	2.12	0.50
36:A:2319:G:OP2	36:A:2319:G:H8	1.95	0.50
6:H:147:ASN:O	6:H:151:ILE:HG13	2.12	0.50
36:A:675:A:H3'	36:A:676:A:H2	1.77	0.50
20:Z:30:ASN:HA	20:Z:89:PHE:CE2	2.47	0.50
36:A:1051:G:H2'	36:A:1052:C:H6	1.77	0.50
36:A:1053:C:H2'	36:A:1054:A:O4'	2.12	0.50
36:A:152:G:H2'	36:A:153:C:C6	2.46	0.50
36:A:610:C:H2'	36:A:611:C:C6	2.47	0.50
20:Z:182:LYS:HA	20:Z:185:GLU:HB3	1.93	0.50
15:U:10:ARG:NH2	36:A:1251:C:OP2	2.44	0.50
18:X:27:THR:HB	18:X:80:ILE:HG22	1.94	0.50
36:A:2887:U:H2'	36:A:2888:C:C6	2.47	0.50
13:S:39:ILE:CD1	13:S:73:LEU:HD11	2.42	0.50
3:E:110:GLY:H	36:A:2821:A:H5''	1.76	0.50
36:A:2233:U:H2'	36:A:2234:G:C8	2.46	0.50
36:A:2593:U:H3	36:A:2600:A:H61	1.59	0.50
2:D:105:ILE:HD13	2:D:106:ILE:HG12	1.93	0.50
36:A:1530:G:C6	36:A:1541:U:O2	2.65	0.50
26:3:29:ARG:HH21	36:A:1183:G:H4'	1.75	0.50
36:A:1086:A:H3'	36:A:1086:A:N3	2.27	0.50
2:D:218:ARG:HH22	36:A:691:C:P	2.35	0.50
5:G:55:LYS:HZ1	5:G:59:GLU:HB3	1.77	0.50
35:B:30:C:H2'	35:B:31:C:O4'	2.12	0.50
1:C:19:LYS:HE3	1:C:20:VAL:N	2.26	0.50
5:G:49:ASP:OD1	5:G:49:ASP:N	2.45	0.50
19:Y:87:LYS:O	19:Y:89:PHE:N	2.44	0.50
31:9:11:CYS:O	31:9:13:LYS:N	2.37	0.50
36:A:1260:G:H2'	36:A:1261:C:C6	2.47	0.50
36:A:1856:G:H2'	36:A:1857:G:O4'	2.12	0.50
36:A:1138:G:O2'	36:A:1139:G:P	2.69	0.50
36:A:1077:A:N3	36:A:1077:A:H2'	2.27	0.50
36:A:397:G:H2'	36:A:398:G:C8	2.46	0.50
2:D:201:HIS:NE2	36:A:1821:A:OP1	2.44	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:497:A:H2'	36:A:498:G:H8	1.76	0.50
36:A:1871:A:H2'	36:A:1872:A:C8	2.47	0.50
36:A:259:G:H2'	36:A:260:G:C8	2.47	0.50
17:W:16:LYS:O	17:W:19:LEU:HB2	2.11	0.50
36:A:879:G:H2'	36:A:880:G:C8	2.47	0.50
6:H:83:TYR:HA	6:H:135:GLY:O	2.12	0.50
36:A:1095:A:N1	36:A:1096:A:N6	2.60	0.50
36:A:1655:A:C2	36:A:2049:G:H5''	2.47	0.49
22:1:18:ILE:HG12	22:1:19:GLN:H	1.76	0.49
36:A:761:A:H8	36:A:761:A:O5'	1.95	0.49
8:K:9:LYS:HA	8:K:56:GLU:HA	1.94	0.49
36:A:649:G:H2'	36:A:650:C:H6	1.77	0.49
31:9:25:VAL:HG21	31:9:34:GLN:HB2	1.92	0.49
36:A:2657:A:H62	36:A:2664:G:H21	1.59	0.49
36:A:1945:G:C4	36:A:1946:U:C5	3.00	0.49
25:2:27:GLU:O	25:2:30:ARG:HG3	2.12	0.49
2:D:44:ASN:HB2	2:D:49:ILE:HA	1.94	0.49
6:H:149:ARG:NH1	6:H:164:TYR:H	2.10	0.49
19:Y:51:VAL:HB	19:Y:55:TYR:HD2	1.76	0.49
22:1:19:GLN:O	22:1:21:ARG:N	2.40	0.49
4:F:65:TRP:HH2	4:F:75:HIS:CD2	2.30	0.49
36:A:278:A:HO2'	36:A:279:C:C5'	2.25	0.49
35:B:60:C:H2'	35:B:61:G:H8	1.77	0.49
30:8:52:LYS:HE2	36:A:2359:C:H1'	1.94	0.49
8:K:38:VAL:O	8:K:42:ASN:HB2	2.12	0.49
8:K:103:GLN:O	8:K:107:ILE:HG12	2.11	0.49
18:X:59:VAL:HG22	18:X:76:ARG:O	2.11	0.49
24:N:78:TYR:HE2	36:A:2642:G:H4'	1.65	0.49
1:C:65:LEU:HG	1:C:162:ILE:HG13	1.93	0.49
36:A:117:G:H5'	36:A:126:A:N3	2.27	0.49
22:1:45:ASN:OD1	22:1:46:LEU:N	2.46	0.49
3:E:93:VAL:C	3:E:95:ILE:H	2.14	0.49
12:R:12:ARG:HE	12:R:16:HIS:CD2	2.30	0.49
4:F:80:ALA:HB3	4:F:83:PHE:HE1	1.78	0.49
36:A:2484:G:H2'	36:A:2485:G:C8	2.47	0.49
2:D:172:TYR:HD1	2:D:184:LYS:HB3	1.78	0.49
3:E:11:MET:HA	3:E:23:VAL:C	2.33	0.49
12:R:107:ASP:HA	36:A:2009:G:O2'	2.13	0.49
36:A:1889:A:H2'	36:A:1890:A:C8	2.47	0.49
4:F:51:THR:H	4:F:92:PRO:HB2	1.77	0.49
36:A:410:G:OP1	36:A:411:G:H5'	2.11	0.49
14:T:49:VAL:O	14:T:50:ILE:HG13	2.13	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:E:143:ASN:HD21	36:A:2571:C:C2'	2.25	0.49
10:P:50:ARG:HB3	30:8:59:LYS:NZ	2.27	0.49
3:E:119:ARG:HD3	3:E:120:TRP:NE1	2.27	0.49
16:V:64:HIS:CG	16:V:92:THR:HG22	2.47	0.49
3:E:187:ALA:O	36:A:2679:A:O2'	2.24	0.49
4:F:51:THR:O	4:F:52:LYS:HB2	2.12	0.49
6:H:33:LEU:HD22	6:H:79:VAL:HG13	1.94	0.49
36:A:2364:C:H2'	36:A:2365:G:O4'	2.12	0.49
36:A:2772:C:H2'	36:A:2773:C:H6	1.78	0.49
36:A:571:A:O2'	36:A:573:G:OP2	2.31	0.49
36:A:16:G:O6	36:A:524:U:O4	2.29	0.49
24:N:112:LEU:HA	24:N:115:ARG:CB	2.42	0.49
35:B:44:G:H21	35:B:47:C:N4	2.11	0.49
22:1:88:LYS:HA	22:1:91:LYS:HB3	1.95	0.49
8:K:27:LEU:HD21	8:K:57:ILE:HB	1.94	0.49
36:A:2289:G:H2'	36:A:2290:G:O4'	2.13	0.49
36:A:1434:A:H61	36:A:1558:A:H62	1.60	0.49
36:A:1287:A:C2	36:A:1649:G:H4'	2.45	0.49
25:2:48:HIS:CG	36:A:95:G:HO2'	2.29	0.49
10:P:83:VAL:HG12	10:P:114:ILE:HA	1.95	0.49
9:O:19:ILE:HG22	9:O:43:VAL:HA	1.95	0.49
17:W:32:ALA:HA	17:W:35:ILE:HD12	1.93	0.49
36:A:1682:G:P	36:A:1699:G:H22	2.35	0.49
36:A:2810:A:H62	36:A:2891:G:H21	1.59	0.49
5:G:100:TRP:O	5:G:104:GLU:HB2	2.13	0.49
36:A:1135:C:H3'	36:A:1137:G:OP2	2.12	0.49
1:C:214:TYR:HD1	1:C:214:TYR:H	1.61	0.49
36:A:2819:G:H2'	36:A:2821:A:N7	2.28	0.49
35:B:24:G:N1	35:B:56:G:C2	2.81	0.49
35:B:24:G:N7	35:B:56:G:O2'	2.44	0.49
36:A:462:C:N4	36:A:467:G:H1	2.06	0.49
22:1:43:TYR:CG	22:1:44:PRO:HD2	2.47	0.49
2:D:78:LYS:N	2:D:116:GLN:HG2	2.28	0.49
36:A:1615:C:O2	36:A:1617:C:H5''	2.13	0.49
36:A:824:A:H1'	36:A:2358:G:N7	2.28	0.49
5:G:146:TYR:O	5:G:148:MET:N	2.45	0.49
36:A:610:C:H2'	36:A:611:C:H6	1.78	0.49
5:G:74:LYS:HB2	5:G:75:LYS:HE3	1.95	0.49
36:A:2670:A:H2'	36:A:2671:A:C8	2.48	0.49
21:0:26:TYR:HB3	21:0:27:GLU:OE2	2.13	0.49
4:F:174:VAL:HG12	4:F:189:THR:HG21	1.94	0.49
4:F:10:PRO:CB	4:F:19:GLU:HA	2.43	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2054:A:H5''	36:A:2055:C:H4'	1.94	0.49
36:A:544:C:H2'	36:A:545:G:H5'	1.95	0.49
36:A:1292:U:H2'	36:A:1293:C:H6	1.76	0.49
26:3:9:VAL:HG23	26:3:10:LYS:HG3	1.95	0.49
29:7:32:LYS:O	29:7:35:ARG:HB2	2.13	0.49
36:A:1019:U:N3	36:A:1020:A:N7	2.61	0.49
36:A:1028:A:N3	36:A:2486:G:O2'	2.42	0.49
29:7:16:HIS:ND1	36:A:684:G:OP1	2.36	0.49
10:P:60:MET:O	30:8:27:THR:HG21	2.12	0.49
36:A:1102:C:H2'	36:A:1103:A:H8	1.77	0.49
29:7:31:LEU:HA	29:7:34:ARG:CG	2.42	0.49
29:7:37:LYS:HB2	29:7:39:ARG:HH21	1.78	0.49
2:D:218:ARG:HD2	2:D:218:ARG:N	2.27	0.49
36:A:238:C:H2'	36:A:239:U:C6	2.47	0.49
36:A:451:C:C2	36:A:453:C:C5	3.01	0.49
24:N:51:PHE:CE2	24:N:119:ARG:HD2	2.48	0.49
25:2:59:ARG:HG2	36:A:76:C:O3'	2.12	0.49
36:A:1290:C:H2'	36:A:1291:C:H6	1.77	0.49
4:F:191:ARG:HB3	4:F:193:VAL:CG2	2.43	0.49
36:A:459:U:H3	36:A:470:A:N6	1.97	0.49
13:S:24:LEU:HB3	13:S:85:VAL:HG12	1.95	0.49
16:V:62:LEU:CG	16:V:95:LEU:HB2	2.41	0.49
36:A:1083:U:N3	36:A:1086:A:OP2	2.45	0.49
36:A:277:C:H5''	36:A:278:A:C8	2.48	0.49
36:A:1829:A:H2'	36:A:1830:C:O4'	2.13	0.49
36:A:897:C:H2'	36:A:898:C:C6	2.48	0.49
35:B:98:G:HO2'	35:B:99:A:P	2.35	0.49
13:S:71:ARG:O	13:S:74:ALA:HB3	2.13	0.49
36:A:1080:C:H2'	36:A:1081:U:H6	1.76	0.49
36:A:1082:U:H2'	36:A:1083:U:H5'	1.94	0.49
36:A:2726:U:O2'	36:A:2727:G:H8	1.93	0.49
2:D:166:GLN:N	2:D:174:ILE:O	2.46	0.49
18:X:60:ARG:HD2	36:A:1312:U:C5	2.48	0.49
1:C:27:ALA:HB3	1:C:28:ARG:HH21	1.77	0.49
36:A:150:C:H2'	36:A:151:C:H6	1.77	0.49
36:A:671:C:H2'	36:A:672:C:C6	2.48	0.49
9:O:62:VAL:HG12	9:O:84:ALA:HB2	1.95	0.49
5:G:139:LEU:HD13	5:G:144:ILE:O	2.13	0.49
36:A:2119:A:C2	36:A:2170:A:H2'	2.47	0.49
4:F:10:PRO:HB3	4:F:19:GLU:HA	1.93	0.48
18:X:35:THR:HG21	36:A:142:G:H4'	1.94	0.48
10:P:115:LEU:HB2	36:A:637:A:OP2	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:9:33:LYS:NZ	36:A:2526:G:O2'	2.35	0.48
36:A:558:G:H2'	36:A:559:G:C8	2.48	0.48
36:A:514:A:H2'	36:A:515:A:C8	2.48	0.48
24:N:21:LYS:O	24:N:61:ARG:N	2.42	0.48
36:A:2461:C:H42	36:A:2489:G:H1	1.59	0.48
36:A:2685:G:H1	36:A:2724:C:N4	2.08	0.48
3:E:133:LYS:O	36:A:1657:C:H5''	2.13	0.48
3:E:134:ILE:HG13	36:A:2579:C:H4'	1.95	0.48
36:A:1430:C:H2'	36:A:1431:U:C6	2.48	0.48
17:W:24:ILE:HD11	17:W:47:VAL:HG11	1.95	0.48
36:A:607:U:O2	36:A:621:A:N7	2.46	0.48
24:N:7:LYS:CA	24:N:7:LYS:HZ3	2.26	0.48
36:A:547:A:H3'	36:A:548:A:C8	2.48	0.48
20:Z:89:PHE:CE2	35:B:104:A:H4'	2.48	0.48
28:6:15:GLU:OE2	28:6:17:LYS:HD3	2.13	0.48
36:A:2886:G:H2'	36:A:2887:U:C6	2.48	0.48
24:N:76:SER:OG	36:A:2642:G:OP1	2.31	0.48
24:N:76:SER:O	24:N:78:TYR:N	2.46	0.48
11:Q:43:THR:HA	11:Q:94:VAL:HG12	1.94	0.48
5:G:50:ALA:HB1	5:G:51:ARG:HE	1.77	0.48
36:A:1526:G:H2'	36:A:1527:G:O4'	2.13	0.48
36:A:2635:C:H42	36:A:2783:G:H1	1.61	0.48
36:A:1467:C:H6	36:A:154(B):C:H2'	1.79	0.48
26:3:5:LYS:O	26:3:57:GLU:HB3	2.14	0.48
36:A:1790:C:OP2	36:A:1828:G:N1	2.46	0.48
35:B:71:C:H2'	35:B:72:G:H5'	1.95	0.48
29:7:8:ASN:HA	36:A:1309:G:H5''	1.95	0.48
14:T:55:ASN:H	14:T:59:THR:HB	1.78	0.48
21:0:23:VAL:HG12	21:0:38:VAL:HG13	1.95	0.48
36:A:1491:G:OP1	36:A:1494:A:N6	2.46	0.48
10:P:84:ASN:HA	10:P:115:LEU:O	2.13	0.48
35:B:21:G:N2	35:B:62:C:N3	2.46	0.48
36:A:1675:C:H3'	36:A:1676:A:H8	1.78	0.48
36:A:959:A:N3	36:A:2457:U:O2'	2.45	0.48
36:A:2439:A:H2	36:A:2600:A:H5''	1.79	0.48
12:R:63:ARG:O	12:R:67:LEU:HB2	2.13	0.48
35:B:73:A:N6	35:B:103:U:H3	2.10	0.48
30:8:17:THR:C	30:8:19:SER:H	2.15	0.48
36:A:1297:C:N4	36:A:1643:G:H1	2.11	0.48
22:1:25:LYS:HD3	36:A:388:G:OP1	2.13	0.48
36:A:234:C:H2'	36:A:235:U:C6	2.48	0.48
12:R:107:ASP:HA	36:A:2009:G:H1'	1.94	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:5:16:ARG:NH1	36:A:518:G:OP2	2.46	0.48
36:A:2270:G:C2	36:A:2271:G:H1'	2.48	0.48
36:A:2543:G:H5''	36:A:2767:C:OP1	2.13	0.48
7:J:113:UNK:C	7:J:115:UNK:H	2.25	0.48
1:C:85:LYS:HA	1:C:88:GLU:HB2	1.95	0.48
36:A:2832:U:H5''	36:A:2833:G:H2'	1.94	0.48
5:G:45:GLU:OE2	5:G:47:LYS:NZ	2.45	0.48
3:E:87:GLU:OE1	3:E:89:ASP:HB2	2.14	0.48
4:F:9:ILE:CG2	4:F:125:LEU:H	2.27	0.48
36:A:2031:A:H2'	36:A:2454:G:N2	2.23	0.48
36:A:2218:G:H2'	36:A:2219:G:H8	1.79	0.48
1:C:41:THR:C	1:C:43:GLU:H	2.17	0.48
36:A:2345:G:H8	36:A:2345:G:H5'	1.77	0.48
3:E:110:GLY:HA2	3:E:162:ALA:N	2.28	0.48
36:A:500:G:H21	36:A:505:A:H62	1.61	0.48
36:A:382:G:H1	36:A:392:C:N4	2.10	0.48
2:D:51:VAL:CG2	2:D:54:ARG:HB2	2.43	0.48
36:A:2674:G:H2'	36:A:2675:A:H8	1.77	0.48
5:G:128:ARG:HH11	36:A:2316:C:H1'	1.78	0.48
36:A:743:G:H1	36:A:754:C:N4	2.09	0.48
12:R:39:PRO:HG2	36:A:1651:G:H5'	1.95	0.48
11:Q:54:MET:HG2	11:Q:58:PHE:CZ	2.48	0.48
17:W:1:MET:HG3	17:W:2:GLU:H	1.78	0.48
36:A:2659:G:H2'	36:A:2661:G:OP2	2.13	0.48
36:A:1024:G:OP2	36:A:1025:G:H3'	2.13	0.48
24:N:28:THR:HA	24:N:106:MET:CE	2.44	0.48
24:N:15:LEU:HD22	24:N:53:VAL:O	2.14	0.48
1:C:43:GLU:HG3	1:C:218:THR:HA	1.96	0.48
36:A:686:G:N2	36:A:788:A:H61	2.12	0.48
36:A:2639:A:H2'	36:A:2640:G:O4'	2.14	0.48
4:F:80:ALA:HB3	4:F:83:PHE:CE1	2.48	0.48
2:D:165:ILE:CG2	2:D:166:GLN:N	2.77	0.48
23:4:14:ILE:HG22	23:4:16:CYS:SG	2.53	0.48
8:K:77:LEU:HD12	8:K:111:LYS:HD2	1.96	0.48
36:A:358:U:H2'	36:A:359:A:H8	1.78	0.48
36:A:1521:G:H2'	36:A:1522:G:H8	1.79	0.48
36:A:2889:C:H2'	36:A:2891:G:O4'	2.14	0.48
2:D:208:LYS:NZ	36:A:729:G:O5'	2.44	0.48
20:Z:29:TYR:CD2	20:Z:29:TYR:N	2.82	0.48
19:Y:90:LEU:HG	19:Y:91:GLU:H	1.79	0.48
3:E:123:ALA:HB3	36:A:2511:U:H5''	1.95	0.48
21:0:50:ASN:HD22	21:0:63:VAL:HG11	1.78	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:U:69:CYS:SG	15:U:79:PHE:HB2	2.53	0.48
3:E:152:LYS:HA	36:A:2619:C:O3'	2.13	0.48
36:A:2179:C:H2'	36:A:2180:U:H6	1.79	0.48
20:Z:151:HIS:HB2	20:Z:168:GLU:O	2.13	0.48
36:A:143:C:H2'	36:A:144:C:C6	2.49	0.48
12:R:2:ARG:CB	12:R:5:LYS:HE2	2.41	0.48
2:D:63:ARG:NH2	36:A:1568:G:OP1	2.47	0.48
36:A:317:G:H1	36:A:334:C:H42	1.61	0.48
18:X:25:LYS:HA	18:X:82:GLN:HA	1.95	0.48
4:F:137:LYS:HA	4:F:140:LEU:HB3	1.94	0.48
36:A:1975:G:H2'	36:A:1976:U:C6	2.48	0.48
2:D:44:ASN:ND2	2:D:48:ARG:O	2.47	0.48
2:D:200:ASP:O	2:D:204:ILE:HG13	2.13	0.48
36:A:2039:C:C2	36:A:2040:C:H5	2.31	0.48
36:A:2178:C:H2'	36:A:2179:C:H6	1.78	0.48
1:C:56:ASP:O	1:C:58:ASN:N	2.47	0.48
36:A:1175:U:H2'	36:A:1176:G:N7	2.29	0.48
8:K:90:LYS:HG3	8:K:91:PRO:HD2	1.96	0.48
36:A:1463:C:H2'	36:A:1464:C:C6	2.49	0.48
16:V:33:VAL:HG13	16:V:59:ALA:O	2.13	0.48
36:A:2342:C:H2'	36:A:2343:C:O4'	2.14	0.48
25:2:49:LYS:HA	25:2:52:ASP:HB3	1.96	0.48
36:A:2398:U:O4	36:A:2418:A:N1	2.46	0.48
36:A:2466:C:H42	36:A:2484:G:H1	1.60	0.48
10:P:126:VAL:HA	10:P:145:PRO:HG2	1.96	0.48
15:U:18:LEU:HD22	15:U:22:LYS:HE2	1.96	0.48
36:A:2660:A:H2'	36:A:2661:G:O4'	2.14	0.48
7:J:31:UNK:O	7:J:33:UNK:N	2.47	0.48
8:K:32:ALA:O	8:K:34:ILE:HG13	2.14	0.48
36:A:1213:A:N6	36:A:1236:G:H1'	2.27	0.48
4:F:31:HIS:NE2	36:A:599:G:H4'	2.29	0.48
19:Y:68:HIS:HB3	19:Y:71:LYS:HG3	1.95	0.48
27:5:3:LYS:HG2	27:5:4:HIS:H	1.78	0.48
24:N:56:ASN:HB3	24:N:125:GLY:C	2.34	0.48
36:A:1105:U:H2'	36:A:1106:G:H8	1.79	0.48
22:1:45:ASN:HB2	36:A:397:G:H5''	1.96	0.48
36:A:710:G:H2'	36:A:711:G:C8	2.49	0.48
36:A:1100:C:H2'	36:A:1101:U:O4'	2.14	0.48
36:A:550:G:H2'	36:A:551:G:C8	2.48	0.48
36:A:2009:G:H2'	36:A:2010:G:C8	2.48	0.48
2:D:254:THR:HG21	36:A:1824:G:N3	2.28	0.48
19:Y:67:LEU:HG	19:Y:71:LYS:HD2	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:687:C:H42	36:A:787:U:H4'	1.79	0.48
22:1:53:VAL:HG21	22:1:74:VAL:HG22	1.94	0.48
36:A:1234:U:H2'	36:A:1235:G:C8	2.49	0.48
24:N:63:THR:O	24:N:64:GLY:O	2.32	0.48
2:D:111:LEU:HD22	2:D:115:GLN:HE22	1.78	0.48
12:R:68:ARG:HH21	36:A:2707:G:H5''	1.78	0.48
36:A:226:G:N2	36:A:228:A:N6	2.50	0.48
36:A:1003:G:H2'	36:A:1004:C:C6	2.49	0.48
36:A:947:G:H2'	36:A:948:G:C8	2.48	0.48
36:A:947:G:N2	36:A:970:C:N3	2.54	0.48
16:V:66:ARG:HG2	16:V:88:ARG:HD2	1.95	0.48
36:A:859:G:H5'	36:A:2268:A:O2'	2.14	0.48
16:V:78:LYS:HG3	16:V:79:VAL:H	1.79	0.48
36:A:1435:G:H2'	36:A:1436:G:H8	1.79	0.48
24:N:89:LYS:HB3	24:N:89:LYS:HZ2	1.79	0.48
35:B:104:A:H2'	35:B:105:G:O4'	2.14	0.48
36:A:1570:A:O5'	36:A:1570:A:H8	1.97	0.48
14:T:53:ARG:HH11	14:T:53:ARG:HB3	1.79	0.48
36:A:2522:U:H3	36:A:2543:G:H1	1.61	0.48
35:B:3:C:H2'	35:B:4:C:H6	1.79	0.48
10:P:42:SER:OG	10:P:42:SER:O	2.25	0.48
14:T:13:ARG:NE	14:T:13:ARG:HA	2.29	0.48
5:G:9:ARG:HA	5:G:12:TYR:HD1	1.79	0.48
10:P:135:LEU:HD13	10:P:138:LEU:HD23	1.95	0.48
36:A:1958:C:H5'	36:A:1984:G:H22	1.78	0.48
3:E:144:ARG:HG2	36:A:2575:C:H5'	1.95	0.48
28:6:18:ARG:N	28:6:18:ARG:HD2	2.28	0.48
24:N:111:PRO:CD	36:A:558:G:OP1	2.62	0.48
3:E:66:HIS:O	3:E:68:ALA:N	2.46	0.48
36:A:1231:G:H2'	36:A:1232:G:H8	1.78	0.48
1:C:115:VAL:N	1:C:145:THR:HG22	2.29	0.48
35:B:44:G:H21	35:B:47:C:H42	1.61	0.48
13:S:74:ALA:HA	13:S:105:ALA:N	2.28	0.48
36:A:2782:G:H3'	36:A:2783:G:H8	1.79	0.48
20:Z:6:LYS:HG2	20:Z:8:TYR:CZ	2.49	0.48
36:A:1068:G:O6	36:A:1069:A:N6	2.47	0.48
2:D:24:ILE:HD12	2:D:82:ILE:HB	1.96	0.48
12:R:61:HIS:HE1	36:A:2850:A:H2	1.62	0.48
14:T:55:ASN:N	14:T:59:THR:HB	2.29	0.48
36:A:99:U:OP1	36:A:101:G:H3'	2.13	0.48
6:H:149:ARG:HH11	6:H:164:TYR:HD2	1.62	0.48
3:E:169:ASN:HB3	36:A:2730:C:H4'	1.96	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:T:99:LEU:HA	14:T:101:PHE:CE1	2.49	0.47
3:E:145:LYS:NZ	36:A:2054:A:OP1	2.45	0.47
36:A:80:G:H2'	36:A:81:G:O4'	2.13	0.47
36:A:2088:G:H1	36:A:2231:C:N4	2.08	0.47
15:U:49:HIS:NE2	36:A:534:U:O2	2.47	0.47
2:D:273:ARG:HG2	2:D:274:ARG:H	1.79	0.47
36:A:2343:C:H2'	36:A:2344:U:H5'	1.96	0.47
36:A:1863:G:H2'	36:A:1864:U:O4'	2.14	0.47
36:A:57:C:H42	36:A:70:G:H1	1.62	0.47
36:A:273(G):C:H3'	36:A:274:G:C5'	2.44	0.47
36:A:834:C:H2'	36:A:835:A:H8	1.79	0.47
10:P:46:LYS:HG2	10:P:51:PHE:CE1	2.48	0.47
8:K:109:LYS:HA	8:K:120:LEU:HD21	1.95	0.47
36:A:65:C:H2'	36:A:66:C:C6	2.48	0.47
36:A:121:G:H2'	36:A:122:G:C8	2.49	0.47
36:A:2589:A:H2'	36:A:2590:A:C8	2.47	0.47
5:G:139:LEU:HA	5:G:144:ILE:HG23	1.96	0.47
20:Z:119:GLU:CD	20:Z:119:GLU:H	2.16	0.47
6:H:152:ARG:HB3	6:H:162:ILE:HD11	1.95	0.47
36:A:2567:G:H2'	36:A:2568:C:C6	2.49	0.47
36:A:1907:G:H2'	36:A:1908:C:O4'	2.14	0.47
36:A:1135:C:H41	36:A:1138:G:P	2.36	0.47
11:Q:38:GLU:HB2	11:Q:127:ILE:HG21	1.96	0.47
4:F:9:ILE:HG12	4:F:124:LEU:HD12	1.96	0.47
24:N:15:LEU:HD21	24:N:55:VAL:HG13	1.95	0.47
36:A:2749:A:H3'	36:A:2750:A:H2'	1.95	0.47
7:J:83:UNK:C	7:J:85:UNK:N	2.77	0.47
13:S:47:THR:HG22	13:S:48:LEU:H	1.79	0.47
36:A:627:A:H61	36:A:637:A:H5''	1.80	0.47
36:A:1034:G:H1	36:A:1121:C:H42	1.62	0.47
26:3:31:LEU:HB2	36:A:1157:G:O2'	2.13	0.47
36:A:2559:C:H2'	36:A:2560:C:H6	1.78	0.47
36:A:183:C:H2'	36:A:184:C:H5'	1.96	0.47
36:A:64:A:H2'	36:A:65:C:H6	1.79	0.47
5:G:101:ILE:HG21	23:4:26:SER:HA	1.95	0.47
5:G:141:PHE:HD2	5:G:142:PRO:HD2	1.79	0.47
36:A:880:G:H2'	36:A:881:G:H8	1.79	0.47
36:A:1774:C:H2'	36:A:1774:C:O2	2.13	0.47
29:7:5:TRP:HD1	36:A:1612:C:O3'	1.97	0.47
1:C:210:LEU:HD22	1:C:227:PRO:HB3	1.96	0.47
12:R:72:ASP:OD1	12:R:75:LEU:HD23	2.15	0.47
36:A:667:U:H2'	36:A:668:G:O4'	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:E:177:PRO:C	3:E:179:GLU:H	2.17	0.47
36:A:2092:U:C2	36:A:2225:A:H2	2.33	0.47
7:J:82:UNK:O	7:J:84:UNK:N	2.47	0.47
36:A:2769:C:H2'	36:A:2770:G:H8	1.78	0.47
1:C:29:LEU:O	1:C:32:GLU:HG3	2.13	0.47
36:A:1542:G:H4'	36:A:1543:A:O4'	2.14	0.47
25:2:48:HIS:CD2	25:2:49:LYS:HG2	2.49	0.47
10:P:41:ARG:CZ	10:P:45:LEU:HD22	2.43	0.47
9:O:18:LYS:HB2	9:O:45:GLU:HB3	1.96	0.47
36:A:383:U:H2'	36:A:385:C:H5	1.80	0.47
15:U:97:ASP:C	15:U:99:ALA:H	2.16	0.47
36:A:36:G:H4'	36:A:451:C:N3	2.29	0.47
36:A:174:C:H2'	36:A:175:G:O4'	2.14	0.47
36:A:54:G:H1	36:A:116:C:H42	1.62	0.47
3:E:94:GLU:CD	3:E:94:GLU:H	2.17	0.47
36:A:1023:U:H2'	36:A:1024:G:H5'	1.95	0.47
36:A:980:A:C1'	36:A:1136:G:H1'	2.45	0.47
4:F:125:LEU:HB3	4:F:194:MET:HB3	1.96	0.47
36:A:2053:G:H1	36:A:2616:C:N4	2.11	0.47
36:A:573:G:N1	36:A:2031:A:OP2	2.48	0.47
13:S:20:ARG:HD3	13:S:88:ASP:HA	1.96	0.47
36:A:1088:A:H2'	36:A:1088:A:N3	2.28	0.47
28:6:39:TYR:CE2	36:A:2345:G:H5''	2.49	0.47
36:A:1802:A:O2'	36:A:1803:A:O5'	2.30	0.47
3:E:64:LYS:HA	3:E:67:PHE:H	1.80	0.47
1:C:73:VAL:HG11	1:C:157:ILE:HG22	1.96	0.47
36:A:1359:A:N7	36:A:1372:U:O4	2.48	0.47
25:2:16:LEU:O	25:2:20:GLU:HB3	2.14	0.47
22:1:31:GLY:HA3	22:1:34:THR:HB	1.95	0.47
10:P:21:ARG:O	10:P:23:PRO:HD3	2.15	0.47
36:A:231:C:H2'	36:A:232:G:O4'	2.14	0.47
36:A:373:U:H2'	36:A:374:A:C8	2.50	0.47
1:C:76:LEU:HA	1:C:93:ASP:O	2.14	0.47
10:P:138:LEU:HD22	10:P:144:GLU:HB2	1.96	0.47
20:Z:53:ILE:HD11	20:Z:99:TYR:CD1	2.49	0.47
3:E:94:GLU:CG	3:E:177:PRO:HB3	2.44	0.47
1:C:176:VAL:O	1:C:178:LYS:N	2.48	0.47
36:A:1131:G:O6	36:A:2040:C:H1'	2.13	0.47
36:A:734:A:O2'	36:A:1635:G:H5'	2.15	0.47
36:A:2819:G:H1	36:A:2827:C:N4	2.11	0.47
36:A:745:G:H21	36:A:750:A:H61	1.62	0.47
36:A:70:G:H5''	36:A:112:U:H3	1.80	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1074:G:H2'	36:A:1075:C:C5	2.50	0.47
15:U:90:VAL:HG21	16:V:11:GLN:CD	2.35	0.47
23:4:12:ALA:HB1	23:4:31:ILE:HD12	1.96	0.47
36:A:1472:A:H3'	36:A:1473:G:C8	2.50	0.47
36:A:1290:C:H2'	36:A:1291:C:C6	2.49	0.47
2:D:200:ASP:OD1	2:D:200:ASP:N	2.38	0.47
3:E:104:VAL:O	3:E:167:VAL:HG12	2.14	0.47
2:D:173:VAL:HG22	2:D:185:VAL:O	2.14	0.47
20:Z:11:GLU:HB2	20:Z:12:GLY:H	1.56	0.47
36:A:1170:G:H2'	36:A:1171:G:H8	1.78	0.47
26:3:3:ARG:HB2	26:3:59:VAL:O	2.14	0.47
36:A:2591:C:H2'	36:A:2592:G:C8	2.49	0.47
36:A:2795:G:H3'	36:A:2797:U:H5''	1.96	0.47
24:N:39:ARG:HG2	24:N:40:PRO:HD2	1.96	0.47
3:E:10:GLY:O	3:E:24:THR:HA	2.15	0.47
36:A:1603:A:H5'	36:A:1604:C:OP2	2.15	0.47
11:Q:98:LYS:HB3	20:Z:79:ARG:HH12	1.79	0.47
36:A:1240:U:HO2'	36:A:1241:A:P	2.38	0.47
26:3:46:ASN:ND2	36:A:851:U:H1'	2.30	0.47
23:4:13:ARG:O	23:4:14:ILE:HG12	2.14	0.47
36:A:2212:A:H4'	36:A:2213:U:C5	2.49	0.47
36:A:218:A:C2	36:A:235:U:H4'	2.49	0.47
35:B:53:A:H2'	35:B:54:G:O4'	2.14	0.47
36:A:675:A:H3'	36:A:676:A:C2	2.50	0.47
15:U:114:LYS:HB3	15:U:114:LYS:HE3	1.63	0.47
36:A:2193:G:H2'	36:A:2194:G:C8	2.50	0.47
36:A:2291:U:H2'	36:A:2292:C:C6	2.50	0.47
12:R:88:ARG:NH2	12:R:89:ASP:OD1	2.47	0.47
24:N:34:LEU:HD12	24:N:116:LEU:O	2.15	0.47
36:A:2615:U:H2'	36:A:2616:C:H6	1.78	0.47
36:A:2505:G:C2	36:A:2610:C:N3	2.83	0.47
24:N:134:ARG:HG2	24:N:134:ARG:O	2.14	0.47
36:A:1176:G:H2'	36:A:1177:A:O4'	2.15	0.47
36:A:765:G:H2'	36:A:766:C:H6	1.80	0.47
28:6:19:ARG:HB3	28:6:20:ASN:H	1.52	0.47
15:U:49:HIS:O	15:U:53:ARG:HB2	2.15	0.47
1:C:132:LEU:HD12	1:C:138:LEU:HD23	1.96	0.47
35:B:24:G:N1	35:B:56:G:N2	2.63	0.47
35:B:45:A:H5'	35:B:46:A:OP2	2.15	0.47
36:A:2599:G:H2'	36:A:2600:A:C8	2.50	0.47
36:A:1045:A:OP1	36:A:1046:A:O2'	2.23	0.47
15:U:34:LYS:HZ1	36:A:2018:G:H21	1.62	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:K:37:PHE:O	8:K:41:PHE:HB3	2.15	0.47
21:O:37:LEU:HG	21:O:59:LEU:O	2.14	0.47
2:D:78:LYS:CD	2:D:98:VAL:HG22	2.45	0.47
36:A:1614:A:H5'	36:A:1617:C:N4	2.27	0.47
36:A:2418:A:H2'	36:A:2419:U:O4'	2.14	0.47
2:D:172:TYR:CD1	2:D:184:LYS:HB3	2.50	0.47
14:T:7:ILE:HG22	14:T:11:GLU:OE1	2.15	0.47
36:A:197:A:H3'	36:A:198:C:H6	1.79	0.47
5:G:42:GLY:C	36:A:2306:C:H42	2.15	0.47
36:A:67:U:C2	36:A:68:G:C8	3.02	0.47
11:Q:21:THR:HG23	11:Q:101:ARG:HD3	1.96	0.47
36:A:206:U:H2'	36:A:207:A:C8	2.49	0.47
6:H:83:TYR:CD1	6:H:134:SER:HA	2.50	0.47
36:A:2141:G:O6	36:A:2150:U:O2	2.32	0.47
36:A:2080:G:H2'	36:A:2081:C:C6	2.50	0.47
11:Q:18:LYS:HD3	35:B:90:C:H5'	1.97	0.47
8:K:82:ALA:HB1	8:K:97:GLY:O	2.15	0.47
13:S:38:GLN:HG2	13:S:50:SER:HA	1.96	0.47
36:A:2040:C:H4'	36:A:2041:U:OP1	2.14	0.47
36:A:2219:G:H2'	36:A:2224:G:O4'	2.14	0.47
13:S:25:ARG:HH12	35:B:9:G:H5'	1.80	0.47
36:A:711:G:H2'	36:A:712:G:O4'	2.14	0.47
36:A:579:G:H4'	36:A:2018:G:H5''	1.96	0.47
16:V:40:LEU:HD13	16:V:47:VAL:HG22	1.97	0.47
16:V:4:ILE:HD13	16:V:40:LEU:HD23	1.96	0.47
36:A:648:G:H2'	36:A:649:G:C8	2.47	0.47
11:Q:85:LYS:HE2	21:O:7:LEU:HD13	1.95	0.47
36:A:640:C:H2'	36:A:641:C:C6	2.50	0.47
5:G:38:VAL:HG22	5:G:93:THR:HA	1.97	0.47
36:A:1669:A:H61	36:A:1993:U:H3	1.63	0.47
36:A:109:G:H2'	36:A:110:G:O4'	2.14	0.47
14:T:99:LEU:HA	14:T:101:PHE:HE1	1.80	0.47
36:A:376:C:H42	36:A:398:G:H1	1.63	0.47
2:D:54:ARG:HA	2:D:216:GLY:O	2.15	0.47
36:A:2439:A:C8	36:A:2586:C:H4'	2.50	0.47
14:T:76:PHE:HA	14:T:77:PRO:HD3	1.71	0.47
36:A:370:G:H4'	36:A:371:A:OP2	2.14	0.47
36:A:858:U:O2	36:A:2268:A:H2'	2.15	0.47
36:A:1355:G:H2'	36:A:1356:G:H8	1.79	0.47
2:D:96:HIS:NE2	36:A:1501:C:H5'	2.30	0.47
12:R:42:LYS:O	12:R:45:ARG:HG3	2.14	0.47
9:O:34:THR:H	9:O:37:ASP:CG	2.17	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:H:57:ASP:O	6:H:62:LYS:HE2	2.15	0.47
2:D:223:GLY:O	2:D:225:ALA:N	2.48	0.47
36:A:2469:A:H2'	36:A:2470:G:H5'	1.97	0.47
36:A:2895:U:H2'	36:A:2896:C:O4'	2.15	0.47
36:A:1611:C:H2'	36:A:1612:C:C6	2.50	0.47
36:A:1896:G:H2'	36:A:1897:G:H8	1.79	0.47
24:N:132:ALA:O	24:N:133:GLN:C	2.53	0.47
36:A:2451:A:N7	36:A:2452:C:C5	2.83	0.47
36:A:81:G:H2'	36:A:82:G:O4'	2.15	0.47
36:A:946:G:H1	36:A:971:C:H42	1.62	0.47
36:A:1579:A:H2'	36:A:1580:A:O4'	2.14	0.47
29:7:6:GLN:O	36:A:686:G:H8	1.97	0.47
36:A:1654:A:N1	36:A:2049:G:H5'	2.29	0.47
2:D:212:SER:HB3	2:D:217:ARG:HB2	1.97	0.47
1:C:33:LEU:HD22	1:C:221:PRO:HG2	1.97	0.47
29:7:34:ARG:CD	29:7:42:LEU:HD22	2.44	0.47
18:X:25:LYS:HG2	18:X:82:GLN:HB2	1.96	0.47
36:A:689:A:H2'	36:A:690:G:C8	2.50	0.47
36:A:2527:C:H2'	36:A:2528:U:C6	2.50	0.47
36:A:1575:C:H2'	36:A:1576:U:O4'	2.15	0.47
12:R:45:ARG:HB3	12:R:97:VAL:CG2	2.45	0.47
14:T:27:THR:C	14:T:87:ASP:HB2	2.36	0.47
36:A:2377:A:H2'	36:A:2378:A:C8	2.50	0.47
36:A:2095:C:H2'	36:A:2096:U:O4'	2.15	0.47
1:C:118:PRO:HD3	1:C:147:GLY:N	2.30	0.47
36:A:449:A:H2'	36:A:450:G:O4'	2.15	0.47
36:A:1394:U:H5''	36:A:1604:C:OP1	2.14	0.46
36:A:2248:C:N3	36:A:2256:G:C6	2.82	0.46
7:J:114:UNK:C	7:J:124:UNK:HA	2.45	0.46
35:B:8:U:H2'	35:B:9:G:H8	1.80	0.46
36:A:638:G:H2'	36:A:639:U:O4'	2.15	0.46
28:6:40:CYS:HA	28:6:41:PRO:HD2	1.83	0.46
36:A:2793:G:O6	36:A:2803:C:N3	2.48	0.46
13:S:92:TYR:OH	36:A:2293:C:OP1	2.15	0.46
36:A:1709:U:H2'	36:A:1710:C:C6	2.50	0.46
14:T:128:GLU:O	14:T:129:ARG:NE	2.40	0.46
9:O:8:LEU:HD23	9:O:19:ILE:HD11	1.97	0.46
10:P:69:GLY:HA3	36:A:245:G:OP1	2.15	0.46
36:A:828:U:H5'	36:A:831:G:C2	2.50	0.46
36:A:830:G:H4'	36:A:831:G:OP2	2.15	0.46
22:1:5:CYS:SG	22:1:8:SER:N	2.70	0.46
15:U:15:LYS:NZ	36:A:513:A:O2'	2.48	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1682:G:OP2	36:A:1699:G:N2	2.47	0.46
6:H:41:MET:SD	6:H:43:VAL:HG13	2.55	0.46
36:A:491:G:H2'	36:A:492:A:O4'	2.15	0.46
36:A:1095:A:H8	36:A:1095:A:P	2.38	0.46
36:A:2873:A:O2'	36:A:2874:C:H5'	2.15	0.46
36:A:845:G:H8	36:A:847:U:O4	1.97	0.46
36:A:697:C:H2'	36:A:698:C:C6	2.50	0.46
29:7:7:PRO:HA	36:A:686:G:N7	2.31	0.46
36:A:2216:G:H2'	36:A:2217:G:O4'	2.15	0.46
36:A:2513:G:H2'	36:A:2514:U:O4'	2.15	0.46
3:E:134:ILE:HG22	3:E:137:HIS:HB2	1.95	0.46
20:Z:23:LYS:HD3	20:Z:38:TYR:CE1	2.50	0.46
19:Y:28:LYS:HE3	19:Y:30:VAL:HG23	1.96	0.46
1:C:87:ALA:HB1	1:C:92:ALA:HB3	1.97	0.46
9:O:23:ARG:HG3	9:O:24:VAL:H	1.80	0.46
25:2:6:VAL:HG22	25:2:59:ARG:HH12	1.80	0.46
14:T:133:GLU:O	14:T:137:LYS:N	2.36	0.46
24:N:9:VAL:HG11	24:N:39:ARG:NH1	2.29	0.46
6:H:74:ASN:O	6:H:77:LYS:HG2	2.14	0.46
36:A:1136:G:C5	36:A:1137:G:N7	2.83	0.46
11:Q:125:LEU:O	11:Q:127:ILE:N	2.33	0.46
4:F:157:VAL:CG1	4:F:194:MET:HG2	2.46	0.46
36:A:572:A:C4	36:A:573:G:C8	3.03	0.46
10:P:62:LEU:HD21	30:8:25:MET:HG3	1.97	0.46
1:C:14:LYS:HB3	1:C:14:LYS:HE2	1.82	0.46
2:D:157:ARG:NH2	36:A:1817:G:H3'	2.30	0.46
14:T:65:LYS:HG3	14:T:66:VAL:N	2.31	0.46
36:A:2841:C:H2'	36:A:2842:G:H8	1.80	0.46
36:A:185:U:H4'	36:A:218:A:H4'	1.98	0.46
36:A:273(C):C:H2'	36:A:273(D):C:H6	1.80	0.46
24:N:10:GLU:OE2	24:N:11:PRO:HD2	2.15	0.46
36:A:2058:A:OP2	36:A:2059:A:N6	2.48	0.46
36:A:1050:A:H2'	36:A:1051:G:C8	2.50	0.46
21:O:73:GLY:C	21:O:75:LEU:H	2.19	0.46
36:A:799:G:H3'	36:A:800:A:H2'	1.98	0.46
11:Q:60:ARG:HA	20:Z:179:ASP:HB3	1.97	0.46
29:7:49:ARG:NH1	36:A:1311:G:O6	2.48	0.46
24:N:78:TYR:CE2	36:A:2642:G:C5'	2.86	0.46
36:A:2698:U:H2'	36:A:2699:C:C5	2.51	0.46
36:A:945:A:O2'	36:A:946:G:H4'	2.15	0.46
36:A:1120:G:H2'	36:A:1121:C:H6	1.74	0.46
36:A:1121:C:H2'	36:A:1122:G:O4'	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1201:C:N3	36:A:1244:G:N2	2.50	0.46
36:A:614:U:H4'	36:A:615:G:H5''	1.96	0.46
36:A:684:G:H21	36:A:788:A:P	2.38	0.46
2:D:54:ARG:NH1	36:A:1815:A:OP1	2.48	0.46
13:S:70:GLY:HA2	13:S:101:LEU:HD23	1.96	0.46
36:A:270(A):A:H1'	36:A:370:G:N2	2.29	0.46
36:A:861:A:H2'	36:A:862:G:O4'	2.16	0.46
5:G:100:TRP:HA	5:G:100:TRP:CE3	2.51	0.46
36:A:2531:A:H3'	36:A:2532:G:C8	2.50	0.46
36:A:1891:G:H2'	36:A:1892:C:C6	2.50	0.46
11:Q:4:PRO:HD3	11:Q:69:PHE:CE2	2.51	0.46
10:P:65:ARG:HD3	30:8:12:LYS:O	2.16	0.46
4:F:154:VAL:HG13	4:F:191:ARG:CB	2.46	0.46
36:A:2030:A:H4'	36:A:2031:A:C8	2.51	0.46
36:A:2054:A:H62	36:A:2577:A:H61	1.62	0.46
36:A:2329:G:H2'	36:A:2330:G:O4'	2.16	0.46
36:A:2205:C:C2	36:A:2219:G:N2	2.77	0.46
36:A:847:U:O2'	36:A:848:G:H8	1.79	0.46
12:R:2:ARG:NH2	36:A:2723:C:H5''	2.30	0.46
1:C:34:ALA:HB2	1:C:217:THR:HG21	1.98	0.46
36:A:1487:G:N2	36:A:1502:C:N3	2.57	0.46
36:A:962:G:H2'	36:A:963:U:O4'	2.16	0.46
3:E:134:ILE:H	3:E:134:ILE:CD1	2.20	0.46
36:A:215:G:H4'	36:A:216:A:H4'	1.96	0.46
36:A:1444:G:H2'	36:A:1445:C:H5	1.79	0.46
36:A:248:G:C4	36:A:2431:U:H4'	2.50	0.46
28:6:5:VAL:HG12	36:A:2284:C:OP1	2.15	0.46
36:A:2825:U:H2'	36:A:2826:A:O4'	2.15	0.46
9:O:101:PRO:HA	9:O:120:GLU:O	2.15	0.46
4:F:107:LYS:HA	4:F:107:LYS:HD3	1.71	0.46
21:0:83:PRO:HB2	21:0:84:LEU:H	1.59	0.46
9:O:12:ASP:N	9:O:12:ASP:OD2	2.49	0.46
27:5:23:HIS:HB3	27:5:24:ALA:H	1.47	0.46
17:W:94:ASP:N	17:W:94:ASP:OD2	2.47	0.46
36:A:460:A:H3'	36:A:461:C:H6	1.79	0.46
23:4:3:GLU:HB3	23:4:4:GLY:H	1.60	0.46
11:Q:128:LYS:HD2	36:A:1030:G:OP2	2.15	0.46
36:A:1330:C:H2'	36:A:1331:A:C8	2.51	0.46
36:A:577:G:H2'	36:A:578:A:O4'	2.15	0.46
36:A:840:C:H2'	36:A:841:A:C8	2.51	0.46
7:J:24:UNK:HA	7:J:84:UNK:O	2.16	0.46
10:P:59:LEU:HA	10:P:61:ARG:NE	2.31	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2807:G:N1	36:A:2893:G:C6	2.83	0.46
3:E:67:PHE:CG	3:E:68:ALA:N	2.83	0.46
14:T:32:TYR:CD2	14:T:82:LEU:HA	2.50	0.46
16:V:19:LYS:HB2	16:V:96:ILE:HG13	1.96	0.46
29:7:31:LEU:HA	29:7:34:ARG:HG2	1.97	0.46
15:U:28:ARG:C	15:U:30:LYS:H	2.19	0.46
4:F:80:ALA:HB1	4:F:81:PRO:HD2	1.98	0.46
36:A:1272:A:H2'	36:A:1646:C:N3	2.31	0.46
36:A:1326:U:O2	36:A:1327:C:H1'	2.15	0.46
36:A:2483:C:H2'	36:A:2484:G:H5'	1.97	0.46
36:A:797:C:H2'	36:A:798:G:C8	2.51	0.46
36:A:1913:A:H4'	36:A:1914:C:O5'	2.15	0.46
36:A:1837:C:H1'	36:A:1927:A:C2	2.51	0.46
36:A:1473:G:H2'	36:A:1474:C:C6	2.50	0.46
30:8:61:LEU:HD23	36:A:593:G:H4'	1.97	0.46
36:A:329:G:H8	36:A:329:G:OP2	1.99	0.46
29:7:19:ARG:HD3	29:7:23:ARG:NH2	2.30	0.46
4:F:157:VAL:O	4:F:194:MET:N	2.49	0.46
4:F:170:LEU:HA	4:F:171:PRO:HD2	1.70	0.46
4:F:7:TYR:C	4:F:9:ILE:H	2.19	0.46
36:A:1581:G:H2'	36:A:1582:C:H6	1.80	0.46
22:1:17:SER:OG	22:1:42:GLN:N	2.49	0.46
1:C:83:LYS:HD2	1:C:148:PHE:CE1	2.50	0.46
36:A:1203:G:H5'	36:A:1204:A:OP2	2.15	0.46
36:A:883:G:N1	36:A:893:C:C2	2.77	0.46
36:A:2307:G:O5'	36:A:2307:G:H8	1.98	0.46
29:7:27:GLY:O	29:7:31:LEU:HG	2.16	0.46
4:F:33:LEU:O	4:F:37:VAL:HG23	2.16	0.46
14:T:45:PHE:CE1	14:T:65:LYS:HG2	2.51	0.46
36:A:850:C:H2'	36:A:851:U:C6	2.51	0.46
36:A:2290:G:H1	36:A:2342:C:N4	2.09	0.46
36:A:280:C:N4	36:A:360:G:H1	2.12	0.46
35:B:96:G:H2'	35:B:97:G:O4'	2.15	0.46
36:A:536:A:H2'	36:A:537:C:H6	1.81	0.46
36:A:2834:G:H1'	36:A:2883:A:H61	1.80	0.46
36:A:1042:G:O6	36:A:1113:U:O2	2.34	0.46
20:Z:44:PHE:O	20:Z:48:PHE:HB2	2.16	0.46
36:A:1521:G:H2'	36:A:1522:G:C8	2.51	0.46
29:7:3:ARG:HB2	36:A:1612:C:O2'	2.15	0.46
36:A:2162:G:H2'	36:A:2163:C:O4'	2.15	0.46
5:G:96:ARG:O	5:G:99:MET:HG2	2.16	0.46
4:F:36:VAL:O	4:F:39:TRP:HB3	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:N:30:ILE:CG2	24:N:34:LEU:HD21	2.44	0.46
24:N:65:LYS:O	24:N:66:LYS:C	2.54	0.46
24:N:98:VAL:CG2	24:N:99:LEU:N	2.78	0.46
36:A:1323:U:C4	36:A:1324:G:C6	3.04	0.46
4:F:172:TRP:CD2	4:F:173:VAL:HG23	2.51	0.46
24:N:56:ASN:HB3	24:N:126:PRO:N	2.30	0.46
36:A:696:G:H2'	36:A:697:C:C6	2.51	0.46
36:A:1091:G:H2'	36:A:1092:C:C6	2.50	0.46
2:D:262:ARG:H	2:D:262:ARG:HD3	1.80	0.46
2:D:262:ARG:N	2:D:262:ARG:HD3	2.30	0.46
26:3:46:ASN:HD21	36:A:851:U:H1'	1.80	0.46
36:A:2840:C:N3	36:A:2877:G:O6	2.49	0.46
10:P:88:LEU:HD11	10:P:123:LEU:HD21	1.97	0.46
17:W:35:ILE:HA	27:5:28:PRO:HG3	1.98	0.46
36:A:1341:U:H5''	36:A:1397:U:O2	2.15	0.46
20:Z:144:LEU:HD11	20:Z:148:ASP:O	2.15	0.46
36:A:227:A:H61	36:A:410:G:H21	1.62	0.46
36:A:2591:C:H2'	36:A:2592:G:H8	1.80	0.46
15:U:111:GLU:HA	15:U:114:LYS:HD2	1.98	0.46
36:A:1111:A:O3'	36:A:1112:G:H4'	2.15	0.46
36:A:1138:G:HO2'	36:A:1139:G:C1'	2.28	0.46
4:F:191:ARG:O	4:F:193:VAL:N	2.49	0.46
4:F:194:MET:HE1	4:F:199:TRP:CD1	2.45	0.46
27:5:4:HIS:HE1	36:A:2611:U:H2'	1.81	0.46
3:E:63:LEU:CB	3:E:65:GLY:H	2.29	0.46
36:A:699:A:H62	36:A:733:G:N2	2.10	0.46
2:D:227:ASN:HB2	2:D:228:PRO:HD2	1.97	0.46
18:X:43:VAL:HG13	18:X:47:PHE:HD1	1.81	0.46
36:A:209:C:H4'	36:A:681:G:H4'	1.97	0.46
19:Y:6:HIS:HB2	19:Y:7:VAL:H	1.55	0.46
1:C:177:GLY:HA2	1:C:186:LEU:CD2	2.46	0.46
36:A:2623:G:O5'	36:A:2826:A:H1'	2.16	0.46
36:A:223:A:H61	36:A:374:A:H4'	1.81	0.46
36:A:1824:G:H2'	36:A:1825:A:C8	2.50	0.46
36:A:2056:G:H2'	36:A:2057:A:C8	2.51	0.46
36:A:2886:G:H2'	36:A:2887:U:H6	1.80	0.46
36:A:817:C:H2'	36:A:818:G:C8	2.51	0.46
36:A:460:A:H3'	36:A:461:C:C6	2.51	0.46
36:A:1448:G:H2'	36:A:149(B):A:H8	1.81	0.46
30:8:29:LYS:HB2	30:8:44:LYS:HG2	1.97	0.46
3:E:38:THR:N	3:E:42:ASP:OD2	2.49	0.46
36:A:1370:C:H2'	36:A:1371:G:O4'	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1554:A:O2'	36:A:1555:G:O5'	2.31	0.46
3:E:4:ILE:HD13	3:E:5:LEU:H	1.80	0.46
6:H:74:ASN:O	6:H:77:LYS:N	2.49	0.46
4:F:110:LEU:HD21	4:F:182:ASN:HA	1.98	0.46
4:F:154:VAL:HG13	4:F:191:ARG:CA	2.45	0.46
4:F:177:ALA:HB1	4:F:178:PRO:CD	2.45	0.46
14:T:64:ARG:HH12	14:T:103:ARG:HA	1.80	0.46
36:A:1027:A:H2'	36:A:1028:A:C8	2.50	0.46
36:A:848:G:H2'	36:A:849:A:C8	2.51	0.46
22:1:13:ILE:O	22:1:42:GLN:O	2.34	0.46
36:A:2769:C:H2'	36:A:2770:G:C8	2.51	0.46
6:H:85:LYS:HD2	6:H:141:VAL:CG1	2.45	0.46
2:D:51:VAL:HG21	2:D:54:ARG:HB2	1.98	0.46
2:D:88:ARG:HH21	36:A:1817:G:P	2.39	0.46
36:A:2440:C:H2'	36:A:2441:C:H4'	1.98	0.46
16:V:19:LYS:HB2	16:V:96:ILE:HD11	1.98	0.46
15:U:28:ARG:HA	15:U:31:SER:HB3	1.97	0.46
36:A:1649:G:H2'	36:A:1650:G:H8	1.81	0.46
36:A:1783:A:HO2'	36:A:2607:G:HO2'	1.61	0.46
23:4:32:TYR:HD1	23:4:32:TYR:O	1.99	0.46
36:A:1572:A:C4	36:A:1573:G:C8	3.04	0.46
36:A:1344:G:O2'	36:A:1385:G:H2'	2.16	0.46
20:Z:10:ARG:N	20:Z:36:LYS:O	2.37	0.46
36:A:528:A:N1	36:A:2042:A:H2'	2.30	0.45
24:N:27:ALA:HB1	24:N:103:VAL:HG22	1.97	0.45
4:F:171:PRO:HA	36:A:1205:U:N3	2.31	0.45
4:F:7:TYR:CZ	4:F:9:ILE:HA	2.52	0.45
35:B:98:G:O2'	35:B:99:A:O5'	2.25	0.45
36:A:1803:A:H62	36:A:1814:G:H21	1.64	0.45
36:A:2019:A:C5	36:A:2020:A:C8	3.04	0.45
13:S:26:LEU:HD22	13:S:87:PHE:HA	1.97	0.45
13:S:77:ALA:HB3	13:S:105:ALA:HB1	1.98	0.45
2:D:43:ARG:NE	36:A:691:C:O2'	2.43	0.45
2:D:45:ASN:HB3	36:A:1813:G:H1'	1.99	0.45
13:S:13:ARG:O	13:S:15:ARG:N	2.49	0.45
36:A:630:G:N2	36:A:632:A:H3'	2.31	0.45
12:R:18:LEU:O	12:R:22:ARG:HD3	2.16	0.45
10:P:105:LEU:HG	36:A:626:U:N3	2.31	0.45
36:A:1955:U:H3	36:A:2557:G:N2	2.14	0.45
4:F:130:ALA:HB3	4:F:142:TRP:HD1	1.79	0.45
9:O:10:VAL:HG22	9:O:17:ARG:HA	1.98	0.45
36:A:1586:A:H3'	36:A:1587:A:H8	1.81	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:E:14:ILE:O	3:E:21:VAL:HG22	2.16	0.45
36:A:1376:C:H2'	36:A:1377:G:O4'	2.16	0.45
36:A:529:A:C2	36:A:2023:G:C8	3.04	0.45
4:F:9:ILE:HG23	4:F:10:PRO:N	2.30	0.45
36:A:310:A:O2'	36:A:311:A:H2'	2.16	0.45
36:A:250:G:C6	36:A:251:A:C2	3.04	0.45
36:A:1821:A:C6	36:A:1822:G:C6	3.04	0.45
36:A:2808:U:C2	36:A:2893:G:O6	2.69	0.45
36:A:2515:C:N4	36:A:2569:G:H1	2.13	0.45
36:A:483:A:N7	36:A:497:A:H2	2.13	0.45
2:D:53:PHE:O	2:D:218:ARG:N	2.48	0.45
36:A:277:C:H3'	36:A:278:A:H8	1.82	0.45
6:H:173:PRO:C	6:H:175:LYS:H	2.20	0.45
36:A:1773:A:C5	36:A:1829:A:H1'	2.51	0.45
36:A:121:G:H2'	36:A:122:G:H8	1.81	0.45
36:A:1454:U:O2'	36:A:1455:G:N7	2.49	0.45
28:6:36:LEU:HA	28:6:50:ARG:HA	1.98	0.45
36:A:1344:G:H21	36:A:1385:G:H5''	1.82	0.45
9:O:24:VAL:HG12	9:O:38:VAL:O	2.17	0.45
36:A:668:G:O6	36:A:670:A:O2'	2.33	0.45
30:8:26:LYS:HG2	30:8:47:LYS:HG3	1.98	0.45
8:K:60:TYR:O	8:K:62:ASP:N	2.49	0.45
12:R:15:SER:HB2	36:A:1275:A:H62	1.81	0.45
11:Q:89:ASN:O	11:Q:91:GLU:N	2.47	0.45
14:T:5:ALA:O	14:T:9:LEU:HG	2.16	0.45
3:E:172:VAL:HG23	3:E:183:LEU:O	2.16	0.45
1:C:42:VAL:HG12	1:C:44:VAL:N	2.30	0.45
36:A:898:C:C2	36:A:899:A:C8	3.04	0.45
22:1:18:ILE:HA	22:1:41:ARG:N	2.31	0.45
6:H:85:LYS:HE3	6:H:145:ALA:CB	2.43	0.45
36:A:1056:G:C2'	36:A:1103:A:H61	2.29	0.45
36:A:595:C:H2'	36:A:596:G:H8	1.79	0.45
36:A:132:G:H2'	36:A:133:C:C6	2.52	0.45
36:A:1819:A:C4'	36:A:1820:U:H5'	2.46	0.45
25:2:12:GLU:O	25:2:16:LEU:HD11	2.17	0.45
36:A:214:G:HO2'	36:A:216:A:HO2'	1.64	0.45
19:Y:42:VAL:HG21	19:Y:67:LEU:HD13	1.98	0.45
35:B:4:C:H2'	35:B:5:C:C6	2.51	0.45
36:A:1493:C:O2	36:A:1493:C:H2'	2.16	0.45
36:A:2540:C:H2'	36:A:2541:A:O4'	2.16	0.45
17:W:58:ALA:HA	17:W:62:HIS:HB2	1.98	0.45
17:W:73:ALA:O	17:W:106:ILE:N	2.44	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:530:G:N3	36:A:2021:C:H1'	2.31	0.45
9:O:13:ASN:HD21	9:O:96:THR:HG22	1.80	0.45
1:C:10:ALA:O	1:C:13:GLU:N	2.49	0.45
3:E:166:THR:HG23	3:E:199:ARG:HE	1.81	0.45
36:A:470:A:H2'	36:A:471:A:O4'	2.17	0.45
36:A:821:A:N6	36:A:972:G:H1'	2.32	0.45
1:C:3:LYS:HG3	1:C:4:HIS:ND1	2.31	0.45
36:A:684:G:O2'	36:A:788:A:N7	2.48	0.45
36:A:1567:A:H4'	36:A:1568:G:O4'	2.16	0.45
22:1:23:LYS:HB3	22:1:23:LYS:HE3	1.77	0.45
2:D:244:ARG:HG3	36:A:1902:C:O4'	2.16	0.45
36:A:2478:A:C2	36:A:2529:G:H2'	2.52	0.45
36:A:2475:C:H42	36:A:2529:G:N2	2.13	0.45
36:A:2521:C:O4'	36:A:2565:A:H1'	2.16	0.45
8:K:40:ALA:HB3	8:K:67:PHE:HZ	1.81	0.45
3:E:80:GLU:N	36:A:2636:U:OP1	2.49	0.45
16:V:5:VAL:HG12	16:V:14:VAL:HG22	1.96	0.45
36:A:1035:U:H2'	36:A:1036:G:H8	1.77	0.45
36:A:621:A:N3	36:A:621:A:H2'	2.32	0.45
9:O:79:PHE:CE2	9:O:101:PRO:HG2	2.51	0.45
5:G:101:ILE:HG12	23:4:25:TYR:O	2.15	0.45
36:A:624:C:N4	36:A:625:G:O6	2.50	0.45
8:K:3:LYS:HD3	8:K:29:GLN:HA	1.97	0.45
4:F:53:THR:HG23	4:F:93:LYS:HZ1	1.82	0.45
15:U:70:ARG:HG3	15:U:75:ASN:HA	1.97	0.45
20:Z:7:ALA:O	20:Z:61:LEU:HA	2.17	0.45
36:A:1019:U:H2'	36:A:1020:A:C8	2.51	0.45
4:F:110:LEU:HD12	4:F:205:ARG:HG2	1.99	0.45
4:F:117:ARG:HE	4:F:186:ILE:CD1	2.29	0.45
19:Y:97:ARG:HH11	19:Y:97:ARG:HA	1.81	0.45
24:N:120:LEU:HD21	24:N:122:VAL:CG2	2.39	0.45
35:B:44:G:H5'	35:B:45:A:C8	2.50	0.45
36:A:133:C:H42	36:A:146:G:H1	1.63	0.45
36:A:1613:G:C2	36:A:1619:G:C5	3.05	0.45
17:W:92:ARG:O	36:A:1614:A:N6	2.48	0.45
17:W:92:ARG:C	36:A:1614:A:H61	2.20	0.45
12:R:9:LYS:HE2	12:R:39:PRO:HB3	1.97	0.45
2:D:211:ARG:HA	2:D:214:TRP:CE3	2.51	0.45
36:A:2065:C:H2'	36:A:2066:C:C6	2.51	0.45
9:O:13:ASN:O	9:O:15:GLY:N	2.40	0.45
2:D:7:LYS:HE2	36:A:706:A:H5'	1.98	0.45
20:Z:137:ILE:HG12	20:Z:156:LYS:HE3	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:5:56:LYS:HG3	27:5:58:LEU:HD11	1.98	0.45
36:A:1441:G:H4'	36:A:1628:G:OP1	2.16	0.45
36:A:2446:G:O2'	36:A:2448:A:H5''	2.16	0.45
36:A:2387:U:O5'	36:A:2387:U:H6	1.99	0.45
30:8:50:LEU:O	30:8:53:PRO:HD2	2.15	0.45
36:A:134:C:N4	36:A:145:G:H1	2.15	0.45
36:A:1199:U:H2'	36:A:1200:C:O4'	2.16	0.45
4:F:46:ARG:N	36:A:443:A:OP1	2.46	0.45
4:F:48:THR:OG1	36:A:442:G:H1'	2.16	0.45
13:S:95:HIS:O	13:S:97:ARG:N	2.49	0.45
36:A:960:A:H2'	36:A:962:G:O4'	2.17	0.45
36:A:2439:A:O2'	36:A:2440:C:OP2	2.32	0.45
11:Q:41:TRP:HB3	11:Q:94:VAL:HG21	1.98	0.45
36:A:2647:U:H2'	36:A:2648:C:H6	1.74	0.45
36:A:1001:A:H2'	36:A:1002:G:O4'	2.17	0.45
36:A:542:C:H2'	36:A:543:C:C6	2.52	0.45
12:R:66:VAL:HG12	12:R:70:LEU:HD12	1.99	0.45
13:S:11:LYS:HD2	13:S:13:ARG:HE	1.82	0.45
36:A:2831:G:H1'	36:A:2883:A:H2'	1.99	0.45
36:A:831:G:O5'	36:A:831:G:H8	1.99	0.45
36:A:531:C:H5''	36:A:532:A:C2	2.52	0.45
36:A:2090:G:H2'	36:A:2091:U:O4'	2.17	0.45
36:A:407:G:H2'	36:A:408:G:C8	2.52	0.45
36:A:954:G:H2'	36:A:955:C:H6	1.81	0.45
20:Z:3:TYR:O	20:Z:57:ILE:HD12	2.17	0.45
36:A:37:C:H2'	36:A:38:A:H8	1.81	0.45
5:G:122:PRO:HD3	5:G:181:ARG:HB2	1.97	0.45
11:Q:76:LYS:HB3	11:Q:91:GLU:OE1	2.16	0.45
17:W:14:PRO:CG	17:W:78:GLU:HB2	2.47	0.45
6:H:88:LEU:HG	6:H:130:ARG:HG3	1.98	0.45
12:R:23:ASN:HD21	36:A:1277:G:H1'	1.81	0.45
22:1:77:ALA:HB1	22:1:82:LEU:HD21	1.98	0.45
11:Q:130:LYS:HD3	11:Q:131:ILE:N	2.31	0.45
4:F:24:LEU:HB3	4:F:25:PRO:CD	2.45	0.45
7:J:25:UNK:O	7:J:27:UNK:N	2.49	0.45
20:Z:77:ASP:O	20:Z:79:ARG:N	2.50	0.45
36:A:2045:C:H2'	36:A:2046:G:O4'	2.17	0.45
36:A:1653:G:H4'	36:A:1654:A:O5'	2.16	0.45
3:E:111:ARG:HG2	12:R:2:ARG:NH2	2.32	0.45
1:C:114:VAL:HG23	1:C:137:LEU:HB3	1.99	0.45
36:A:1516:U:H2'	36:A:1517:G:H8	1.75	0.45
22:1:43:TYR:CD2	22:1:44:PRO:HD2	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:3:8:LEU:HD22	26:3:31:LEU:HA	1.98	0.45
14:T:1:MET:HG3	14:T:2:ASN:H	1.81	0.45
36:A:1162:G:H2'	36:A:1163:G:C8	2.52	0.45
36:A:2506:U:OP2	36:A:2576:G:N2	2.48	0.45
36:A:1347:G:H1	36:A:1599:C:H42	1.65	0.45
15:U:61:TRP:CG	15:U:94:ASN:HA	2.52	0.45
36:A:1290:C:C2	36:A:1291:C:C5	3.05	0.45
6:H:87:LEU:HB3	6:H:162:ILE:HG22	1.97	0.45
20:Z:128:VAL:HG21	20:Z:134:PRO:HD3	1.97	0.45
18:X:8:ILE:HG23	18:X:30:VAL:HG12	1.97	0.45
4:F:72:ARG:NH1	36:A:1256:G:O5'	2.49	0.45
9:O:3:GLN:HG2	36:A:1666:G:O2'	2.16	0.45
36:A:1025:G:C5	36:A:1135:C:H1'	2.52	0.45
4:F:191:ARG:HB3	4:F:193:VAL:HG23	1.98	0.45
27:5:3:LYS:NZ	36:A:2015:A:H2	2.15	0.45
36:A:572:A:H2	36:A:2029:G:N2	2.09	0.45
36:A:2789:C:O3'	36:A:2790:A:H4'	2.17	0.45
3:E:67:PHE:CE1	3:E:69:LYS:HB3	2.52	0.45
1:C:84:ILE:HG23	1:C:95:VAL:HB	1.97	0.45
13:S:102:ALA:HB1	13:S:108:GLY:C	2.37	0.45
36:A:2086:U:H3	36:A:2233:U:H3	1.65	0.45
16:V:35:LEU:HB2	16:V:57:VAL:HG22	1.98	0.45
35:B:95:U:H2'	35:B:96:G:C8	2.52	0.45
14:T:129:ARG:HE	14:T:129:ARG:HA	1.82	0.45
36:A:1965:C:H3'	36:A:1966:A:H8	1.82	0.45
36:A:363(G):A:H8	36:A:363(G):A:O5'	2.00	0.45
36:A:2096:U:H2'	36:A:2097:C:C5	2.51	0.45
36:A:1308:A:H2'	36:A:1309:G:O4'	2.17	0.45
36:A:2737:G:H2'	36:A:2738:A:H8	1.81	0.45
10:P:85:LEU:HG	10:P:85:LEU:H	1.63	0.45
8:K:98:ARG:HG3	8:K:98:ARG:H	1.62	0.45
36:A:1020:A:H61	36:A:1142:U:H5'	1.82	0.45
24:N:129:PRO:O	24:N:130:HIS:C	2.54	0.45
36:A:2093:G:H1'	36:A:2198:A:H2	1.82	0.45
24:N:128:HIS:CE1	24:N:134:ARG:CZ	3.00	0.45
36:A:1175:U:H2'	36:A:1176:G:C8	2.52	0.45
7:J:23:UNK:HA	7:J:111:UNK:O	2.17	0.45
36:A:2392:A:H2'	36:A:2393:A:O4'	2.17	0.45
3:E:69:LYS:O	3:E:69:LYS:HG2	2.16	0.45
1:C:90:ALA:HB1	1:C:154:ILE:HG21	1.98	0.45
36:A:859:G:N1	36:A:917:A:OP2	2.40	0.45
14:T:28:VAL:N	14:T:47:GLY:O	2.48	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:G:135:LEU:HD22	5:G:140:ILE:HD11	1.98	0.45
6:H:175:LYS:HE2	6:H:176:ALA:N	2.29	0.45
11:Q:7:MET:HB2	11:Q:8:LYS:H	1.59	0.45
10:P:81:GLN:HB3	10:P:112:LEU:HA	1.99	0.45
36:A:1920:C:H2'	36:A:1921:G:O4'	2.17	0.45
36:A:797:C:H2'	36:A:798:G:H8	1.82	0.45
5:G:58:GLN:O	5:G:62:LEU:HD13	2.16	0.45
5:G:16:ARG:HB2	5:G:17:PRO:HD3	1.99	0.45
28:6:47:THR:OG1	28:6:48:VAL:HG22	2.16	0.45
10:P:57:THR:O	10:P:57:THR:OG1	2.26	0.45
11:Q:3:MET:SD	11:Q:3:MET:N	2.90	0.45
15:U:106:PHE:O	15:U:110:VAL:HG23	2.17	0.45
36:A:1937:A:N7	36:A:1939:U:H2'	2.32	0.45
3:E:13:ARG:HA	3:E:21:VAL:C	2.36	0.45
36:A:1136:G:H2'	36:A:1137:G:O4'	2.17	0.45
24:N:25:ARG:O	24:N:28:THR:HB	2.17	0.45
31:9:2:LYS:HG2	31:9:33:LYS:O	2.17	0.45
28:6:41:PRO:HD2	28:6:45:LYS:O	2.17	0.45
12:R:5:LYS:CD	36:A:2820:A:H4'	2.47	0.45
36:A:506:G:H4'	36:A:509:C:O2	2.17	0.45
19:Y:96:ILE:O	19:Y:98:VAL:N	2.50	0.45
18:X:12:VAL:CG1	18:X:17:ALA:HB1	2.47	0.45
36:A:466:A:H8	36:A:466:A:O5'	1.99	0.45
36:A:2528:U:H2'	36:A:2530:A:OP1	2.16	0.45
25:2:25:VAL:O	25:2:29:LYS:HB2	2.17	0.45
22:1:25:LYS:HB3	36:A:388:G:P	2.57	0.45
15:U:83:LEU:HG	15:U:88:ILE:HD12	1.99	0.45
36:A:949:C:H2'	36:A:950:G:C8	2.50	0.45
1:C:47:LYS:HD3	1:C:169:THR:HG22	1.99	0.45
9:O:69:ILE:HD12	9:O:69:ILE:HA	1.75	0.45
36:A:220:G:H22	36:A:427:U:H2'	1.81	0.45
3:E:105:THR:O	3:E:196:VAL:HA	2.17	0.44
36:A:2041:U:H2'	36:A:2042:A:C1'	2.48	0.44
1:C:166:ASN:HB2	1:C:170:GLY:HA2	1.99	0.44
24:N:15:LEU:C	24:N:15:LEU:HD13	2.37	0.44
36:A:1479:G:H2'	36:A:1480:G:H8	1.82	0.44
36:A:628:G:H1'	36:A:637:A:N1	2.31	0.44
36:A:1417:C:H2'	36:A:1418:G:O4'	2.17	0.44
2:D:108:PRO:HA	2:D:197:GLY:N	2.25	0.44
14:T:65:LYS:HE3	14:T:66:VAL:N	2.29	0.44
17:W:68:ARG:HB3	17:W:110:LYS:H	1.82	0.44
12:R:33:ARG:NH2	12:R:116:LEU:HB2	2.31	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:F:45:ARG:NH1	36:A:444:C:OP2	2.50	0.44
36:A:268:C:N4	36:A:424:G:H1	2.15	0.44
17:W:35:ILE:O	17:W:39:THR:OG1	2.35	0.44
2:D:248:SER:O	2:D:250:TRP:N	2.45	0.44
5:G:5:VAL:HG21	5:G:100:TRP:HB3	1.98	0.44
13:S:23:ARG:HD3	13:S:23:ARG:HA	1.33	0.44
36:A:141(A):A:N6	36:A:1595:G:O2'	2.50	0.44
36:A:124:G:N2	36:A:128:C:N3	2.65	0.44
12:R:68:ARG:NE	36:A:2707:G:O3'	2.50	0.44
1:C:213:VAL:HG21	1:C:225:ILE:HD11	1.99	0.44
36:A:2037:G:H2'	36:A:2038:G:N7	2.31	0.44
4:F:170:LEU:HD13	4:F:171:PRO:HD2	1.99	0.44
36:A:1077:A:C2	36:A:1088:A:H2'	2.52	0.44
17:W:70:TYR:O	17:W:107:LEU:HB2	2.18	0.44
19:Y:75:ILE:HD13	19:Y:76:CYS:H	1.82	0.44
1:C:90:ALA:HA	1:C:155:ARG:NH2	2.33	0.44
36:A:2475:C:H42	36:A:2529:G:H22	1.65	0.44
36:A:859:G:H22	36:A:917:A:H5''	1.82	0.44
4:F:27:GLU:HB3	4:F:28:ILE:H	1.63	0.44
31:9:30:PRO:CG	36:A:2527:C:H5''	2.48	0.44
5:G:114:ILE:C	5:G:116:ASP:N	2.66	0.44
36:A:1510:A:H2'	36:A:1511:A:N9	2.32	0.44
36:A:270(L):C:H2'	36:A:270(M):U:H5''	1.99	0.44
36:A:2829:C:H2'	36:A:2830:G:C8	2.51	0.44
36:A:67:U:H2'	36:A:68:G:H8	1.82	0.44
36:A:775:G:C4	36:A:794:G:C8	3.05	0.44
36:A:2836:U:H2'	36:A:2837:G:H8	1.81	0.44
36:A:2795:G:H3'	36:A:2797:U:C5'	2.46	0.44
36:A:1669:A:O3'	36:A:2549:G:H5'	2.17	0.44
6:H:94:TYR:HA	6:H:107:VAL:HA	1.99	0.44
4:F:59:TYR:CD2	4:F:59:TYR:N	2.84	0.44
36:A:1932:A:H3'	36:A:1933:G:H8	1.82	0.44
36:A:1681:G:N3	36:A:1762:A:H2'	2.32	0.44
11:Q:125:LEU:HG	11:Q:126:PRO:HD2	1.98	0.44
36:A:684:G:N2	36:A:788:A:OP1	2.47	0.44
22:1:18:ILE:HG13	22:1:40:ARG:H	1.82	0.44
36:A:504:U:H5'	36:A:506:G:OP2	2.18	0.44
1:C:133:GLY:CA	1:C:138:LEU:HB2	2.47	0.44
36:A:515:A:H2'	36:A:516:C:H5'	1.99	0.44
36:A:1542:G:H4'	36:A:1543:A:O5'	2.17	0.44
8:K:9:LYS:HB3	8:K:56:GLU:HG3	1.98	0.44
17:W:87:PRO:HB3	36:A:1614:A:N7	2.32	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:8:54:GLU:OE2	30:8:57:ARG:NE	2.51	0.44
35:B:14:U:H5''	35:B:70:C:O2'	2.17	0.44
36:A:1783:A:O2'	36:A:2607:G:O2'	2.32	0.44
36:A:827:U:HO2'	36:A:2430:A:H2	1.64	0.44
36:A:2147:G:H2'	36:A:2148:G:O4'	2.18	0.44
35:B:105:G:H2'	35:B:106:G:H8	1.81	0.44
36:A:632:A:H2'	36:A:633:A:C8	2.52	0.44
36:A:1794:U:H2'	36:A:1795:C:C6	2.52	0.44
4:F:57:VAL:O	4:F:59:TYR:N	2.45	0.44
2:D:30:GLU:HB2	2:D:104:TYR:OH	2.17	0.44
11:Q:30:GLY:HA2	11:Q:107:ALA:HB2	1.99	0.44
18:X:84:ALA:HA	18:X:85:PRO:HD2	1.83	0.44
36:A:1011:G:O2'	36:A:1013:C:H5''	2.17	0.44
29:7:20:ALA:O	29:7:24:THR:HG22	2.17	0.44
3:E:101:ARG:HA	3:E:170:LEU:O	2.17	0.44
36:A:1205:U:H4'	36:A:1206:G:OP2	2.17	0.44
36:A:2092:U:OP1	36:A:2199:A:O2'	2.29	0.44
24:N:53:VAL:HG11	24:N:128:HIS:CB	2.47	0.44
36:A:52:A:C5	36:A:118:A:C2	3.06	0.44
28:6:24:GLU:HB3	28:6:25:LYS:H	1.62	0.44
36:A:1674:G:H21	36:A:1677:A:N6	2.15	0.44
36:A:710:G:H2'	36:A:711:G:O4'	2.18	0.44
36:A:2711:A:H3'	36:A:2712:U:H5'	1.98	0.44
5:G:43:LEU:CD1	36:A:2305:A:H61	2.31	0.44
36:A:299:A:N1	36:A:322:A:O2'	2.44	0.44
10:P:21:ARG:NH2	36:A:1192:G:OP2	2.50	0.44
23:4:28:LYS:HA	23:4:29:PRO:HD3	1.85	0.44
14:T:56:GLY:H	14:T:59:THR:HB	1.82	0.44
30:8:39:LYS:NZ	36:A:2365:G:N7	2.59	0.44
20:Z:16:SER:O	20:Z:20:ARG:HG2	2.16	0.44
4:F:10:PRO:HB2	4:F:18:ARG:O	2.17	0.44
36:A:2615:U:H2'	36:A:2616:C:C6	2.50	0.44
36:A:2206:C:H42	36:A:2218:G:H1	1.64	0.44
2:D:155:LEU:HD23	36:A:1799:G:N2	2.33	0.44
36:A:979:G:H2'	36:A:982:C:N4	2.27	0.44
16:V:79:VAL:O	36:A:1188:U:H4'	2.18	0.44
36:A:1326:U:H2'	36:A:1327:C:O4'	2.18	0.44
7:J:32:UNK:O	36:A:1055:G:H4'	2.17	0.44
15:U:15:LYS:HG2	15:U:18:LEU:HD12	1.99	0.44
19:Y:37:VAL:O	19:Y:67:LEU:N	2.50	0.44
20:Z:46:LYS:HB3	20:Z:46:LYS:HE2	1.81	0.44
36:A:270(G):U:H2'	36:A:270(H):C:C6	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1128:A:C5	36:A:2518:A:N6	2.85	0.44
35:B:19:G:H2'	35:B:20:C:C6	2.53	0.44
3:E:174:ASP:OD2	3:E:175:VAL:N	2.51	0.44
17:W:84:ARG:NH2	36:A:1322:A:H4'	2.32	0.44
1:C:170:GLY:O	1:C:172:ILE:N	2.47	0.44
36:A:2199:A:H3'	36:A:2205:C:C6	2.52	0.44
36:A:441:U:H2'	36:A:442:G:C8	2.53	0.44
12:R:5:LYS:HD2	36:A:2820:A:H4'	1.99	0.44
3:E:74:PRO:HB2	3:E:75:VAL:H	1.32	0.44
1:C:132:LEU:O	1:C:137:LEU:N	2.46	0.44
2:D:88:ARG:NE	36:A:1817:G:OP2	2.51	0.44
22:1:44:PRO:CB	36:A:396:G:H4'	2.48	0.44
36:A:612:G:H2'	36:A:613:U:O4'	2.18	0.44
2:D:35:LYS:HB3	2:D:35:LYS:HE3	1.52	0.44
36:A:1732:A:H2'	36:A:1733:G:O4'	2.18	0.44
36:A:2606:C:H2'	36:A:2607:G:O4'	2.17	0.44
36:A:2319:G:H21	36:A:2320:A:H61	1.64	0.44
14:T:48:ILE:HD12	14:T:48:ILE:H	1.82	0.44
36:A:2366:A:H3'	36:A:2367:G:H8	1.83	0.44
36:A:2368:C:H2'	36:A:2369:A:C8	2.53	0.44
36:A:1470:G:H2'	36:A:1521:G:N1	2.33	0.44
2:D:13:ARG:HD2	36:A:729:G:OP2	2.18	0.44
36:A:2592:G:C6	36:A:2603:G:C6	3.06	0.44
14:T:54:ARG:HH11	14:T:54:ARG:HB3	1.81	0.44
10:P:101:VAL:HG12	10:P:106:LEU:HB3	2.00	0.44
36:A:1214:A:H3'	36:A:1215:G:H8	1.83	0.44
36:A:2844:G:H2'	36:A:2845:G:C8	2.53	0.44
27:5:18:ALA:HA	27:5:21:SER:HB3	1.97	0.44
36:A:1544:C:O2'	36:A:1545:A:O5'	2.31	0.44
36:A:270(Q):C:O2'	36:A:270(R):C:C6	2.70	0.44
19:Y:94:LYS:O	19:Y:102:CYS:HA	2.18	0.44
36:A:1670:C:H2'	36:A:1671:U:O4'	2.18	0.44
24:N:35:ARG:NH2	24:N:42:TRP:HH2	2.16	0.44
24:N:76:SER:CB	36:A:2641:G:O3'	2.66	0.44
35:B:89(A):G:N7	35:B:89(B):A:C6	2.85	0.44
24:N:95:PRO:C	24:N:97:ARG:N	2.70	0.44
36:A:83:G:C6	36:A:102:G:H2'	2.52	0.44
7:J:111:UNK:C	7:J:116:UNK:HA	2.48	0.44
36:A:2525:G:H1	36:A:2538:C:H42	1.66	0.44
36:A:1200:C:H2'	36:A:1201:C:C6	2.52	0.44
36:A:494:G:H2'	36:A:495:G:H8	1.80	0.44
14:T:32:TYR:HA	14:T:42:ILE:HB	2.00	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:V:19:LYS:HB2	16:V:96:ILE:CG1	2.48	0.44
22:1:12:PRO:HA	22:1:44:PRO:HG3	2.00	0.44
2:D:91:ARG:HH11	2:D:91:ARG:HG2	1.82	0.44
36:A:814:C:N4	36:A:1193:G:H1	2.10	0.44
16:V:85:LYS:NZ	36:A:815:C:OP1	2.39	0.44
19:Y:26:LYS:HD2	19:Y:40:GLU:HG3	2.00	0.44
19:Y:39:VAL:O	19:Y:40:GLU:HG2	2.18	0.44
18:X:36:LYS:HA	18:X:39:ILE:HD12	2.00	0.44
36:A:384:U:H2'	36:A:385:C:C6	2.53	0.44
2:D:45:ASN:HA	36:A:1813:G:H4'	2.00	0.44
2:D:222:ARG:HG2	36:A:1789:A:OP1	2.17	0.44
24:N:46:VAL:HG13	24:N:47:ALA:H	1.83	0.44
36:A:1770:G:H1	36:A:1982:C:N4	2.14	0.44
8:K:62:ASP:OD2	8:K:62:ASP:N	2.46	0.44
12:R:15:SER:HB2	36:A:1275:A:N6	2.32	0.44
27:5:40:LYS:O	27:5:40:LYS:HG3	2.16	0.44
36:A:405:U:H3'	36:A:406:G:H5'	1.99	0.44
7:J:129:UNK:O	7:J:131:UNK:N	2.51	0.44
12:R:117:VAL:O	12:R:118:GLU:HB2	2.17	0.44
36:A:1484:G:H2'	36:A:1485:G:O4'	2.17	0.44
36:A:882:G:N1	36:A:894:C:N4	2.54	0.44
36:A:2038:G:C5	36:A:2039:C:C6	3.06	0.44
36:A:2038:G:C6	36:A:2039:C:C2	3.06	0.44
36:A:1137:G:C6	36:A:1138:G:C5	3.06	0.44
36:A:2447:G:HO2'	36:A:2500:U:H5	1.65	0.44
7:J:54:UNK:HA	7:J:78:UNK:O	2.17	0.44
36:A:1058:G:H2'	36:A:1059:G:H8	1.81	0.44
22:1:16:ASN:C	22:1:18:ILE:HB	2.37	0.44
1:C:100:ILE:O	1:C:104:ILE:HG13	2.17	0.44
1:C:151:GLY:O	1:C:154:ILE:HB	2.18	0.44
2:D:245:PRO:HA	2:D:246:PRO:HD3	1.91	0.44
35:B:56:G:H4'	35:B:57:A:C8	2.52	0.44
36:A:1799:G:O4'	36:A:1800:C:H5	2.01	0.44
36:A:859:G:N2	36:A:917:A:H5''	2.33	0.44
8:K:30:HIS:CD2	8:K:59:ILE:HB	2.52	0.44
36:A:280:C:H2'	36:A:281:G:H5'	2.00	0.44
11:Q:54:MET:HE2	11:Q:54:MET:HB3	1.80	0.44
36:A:783:A:H2'	36:A:784:A:H4'	1.99	0.44
36:A:241:A:C8	36:A:243:U:H1'	2.53	0.44
36:A:531:C:H3'	36:A:561:G:H21	1.83	0.44
36:A:1785:A:H4'	36:A:1982:C:O2'	2.18	0.44
36:A:2663:G:H2'	36:A:2664:G:O4'	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:S:34:HIS:NE2	13:S:54:LEU:HB3	2.33	0.44
3:E:82:ARG:HH22	36:A:2638:G:P	2.40	0.44
5:G:4:ASP:HA	5:G:8:LYS:HD3	1.98	0.44
5:G:9:ARG:HA	5:G:12:TYR:CD1	2.53	0.44
36:A:2557:G:H2'	36:A:2558:C:C6	2.52	0.44
8:K:16:LYS:HB3	8:K:16:LYS:HE3	1.72	0.44
36:A:1766:U:H2'	36:A:1767:C:C6	2.52	0.44
36:A:2025:C:H2'	36:A:2026:C:C6	2.53	0.44
36:A:2505:G:C6	36:A:2610:C:C2	2.91	0.44
36:A:2262:U:H4'	36:A:2328:A:H2	1.83	0.44
36:A:1105:U:H2'	36:A:1106:G:C8	2.53	0.44
36:A:635:C:O2	36:A:639:U:H4'	2.18	0.44
29:7:7:PRO:HA	36:A:686:G:C8	2.53	0.44
1:C:12:LEU:C	1:C:14:LYS:H	2.21	0.44
1:C:143:ALA:O	1:C:145:THR:HG23	2.17	0.44
1:C:79:ALA:O	1:C:81:GLY:N	2.50	0.44
36:A:2438:U:H5''	36:A:2600:A:H5'	1.99	0.44
36:A:889:C:O2'	36:A:890:A:OP2	2.30	0.44
4:F:40:GLN:HB3	4:F:43:LYS:NZ	2.33	0.44
36:A:1312:U:O2	36:A:1314:C:N4	2.51	0.44
5:G:15:VAL:HA	5:G:175:LEU:HD13	1.99	0.44
36:A:385:C:HO2'	36:A:388:G:H1	1.65	0.44
11:Q:56:ARG:NH2	36:A:2469:A:O3'	2.51	0.44
36:A:215:G:C4'	36:A:216:A:H4'	2.48	0.44
2:D:24:ILE:HD11	2:D:83:GLU:N	2.33	0.44
36:A:826:U:C2'	36:A:827:U:H5'	2.48	0.44
36:A:826:U:C4	36:A:828:U:H1'	2.53	0.44
9:O:107:ARG:CZ	14:T:36:GLU:HA	2.47	0.44
36:A:99:U:OP1	36:A:99:U:H4'	2.18	0.44
36:A:2363:C:H2'	36:A:2364:C:C6	2.53	0.44
36:A:1669:A:H5''	36:A:2550:G:OP1	2.17	0.44
21:0:65:GLY:HA3	21:0:81:VAL:HG13	2.00	0.44
21:0:65:GLY:HA2	21:0:83:PRO:HA	1.99	0.44
17:W:109:GLU:N	17:W:109:GLU:OE1	2.42	0.44
36:A:1793:C:O2'	36:A:1900:A:N6	2.50	0.44
6:H:110:SER:HB2	36:A:2666:C:H41	1.83	0.44
36:A:864:G:H1'	36:A:914:C:H42	1.83	0.44
15:U:56:ASP:O	15:U:59:ARG:HB2	2.17	0.44
28:6:27:LYS:HE2	28:6:29:ASN:HB3	1.99	0.43
6:H:85:LYS:HD3	6:H:133:VAL:HB	1.99	0.43
36:A:300:A:H2'	36:A:334:C:H1'	1.99	0.43
1:C:78:ILE:HD11	1:C:104:ILE:HD11	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:5:13:LYS:NZ	36:A:517:C:OP2	2.50	0.43
36:A:792:G:H2'	36:A:2440:C:O2	2.17	0.43
36:A:889:C:O2'	36:A:890:A:O4'	2.36	0.43
36:A:463:G:H21	36:A:466:A:H62	1.66	0.43
36:A:616:A:H4'	36:A:617:G:OP1	2.17	0.43
21:0:53:MET:HA	21:0:58:THR:O	2.17	0.43
36:A:1000:A:H2'	36:A:1001:A:C8	2.53	0.43
16:V:5:VAL:HG23	16:V:37:VAL:O	2.18	0.43
1:C:27:ALA:HB1	1:C:183:PRO:HA	2.00	0.43
9:O:9:GLU:HB3	9:O:18:LYS:HG2	2.00	0.43
6:H:148:ILE:HA	6:H:151:ILE:HD12	2.00	0.43
36:A:1688:U:H2'	36:A:1698:A:N6	2.32	0.43
9:O:104:ARG:O	9:O:107:ARG:HB3	2.18	0.43
26:3:4:LEU:HD22	26:3:58:VAL:HG22	1.98	0.43
21:0:56:ASP:OD2	36:A:2364:C:H4'	2.18	0.43
25:2:8:LYS:HZ2	25:2:8:LYS:HB3	1.83	0.43
26:3:41:PRO:O	26:3:44:ARG:HB2	2.18	0.43
23:4:6:HIS:HA	23:4:7:PRO:HD3	1.69	0.43
4:F:167:ALA:HA	4:F:170:LEU:HB2	2.00	0.43
9:O:77:ILE:HA	14:T:73:GLU:O	2.18	0.43
27:5:5:PRO:HB2	36:A:2614:A:O4'	2.17	0.43
15:U:49:HIS:CG	36:A:534:U:O2'	2.71	0.43
36:A:2790:A:N3	36:A:2791:C:H5''	2.33	0.43
3:E:51:PHE:N	3:E:74:PRO:HG3	2.33	0.43
3:E:92:THR:N	3:E:95:ILE:HD11	2.31	0.43
1:C:128:LEU:HB2	1:C:138:LEU:HD21	1.98	0.43
2:D:273:ARG:HH21	36:A:1799:G:P	2.41	0.43
13:S:92:TYR:HE2	13:S:94:TYR:HB2	1.80	0.43
14:T:28:VAL:HG12	14:T:29:ARG:N	2.33	0.43
10:P:38:GLN:HB3	36:A:943:U:OP2	2.18	0.43
35:B:16:G:N2	35:B:69:G:H1'	2.34	0.43
5:G:59:GLU:HA	5:G:62:LEU:HD22	2.00	0.43
36:A:2576:G:H8	36:A:2581:G:N7	2.16	0.43
14:T:55:ASN:HB3	14:T:59:THR:N	2.33	0.43
36:A:220:G:H2'	36:A:427:U:O4	2.18	0.43
9:O:112:MET:SD	9:O:112:MET:N	2.72	0.43
10:P:76:LYS:HE3	10:P:76:LYS:HB3	1.74	0.43
36:A:2435:A:C2	36:A:2436:G:H1'	2.53	0.43
10:P:39:LYS:HB3	10:P:40:SER:H	1.70	0.43
36:A:1178:C:H2'	36:A:1179:C:C6	2.53	0.43
4:F:155:LEU:O	4:F:191:ARG:C	2.56	0.43
13:S:39:ILE:HB	13:S:49:VAL:HB	1.99	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1077:A:H3'	36:A:1078:U:O4'	2.18	0.43
36:A:948:G:N2	36:A:985:C:OP2	2.52	0.43
1:C:4:HIS:CD2	36:A:2175:C:H5''	2.54	0.43
30:8:28:GLY:HA2	36:A:2392:A:H5''	1.98	0.43
36:A:2070:G:H1	36:A:2441:C:N4	2.14	0.43
14:T:19:LEU:HA	14:T:20:PRO:HD3	1.89	0.43
16:V:35:LEU:HB2	16:V:57:VAL:HG13	2.00	0.43
16:V:33:VAL:HG12	16:V:61:VAL:HG12	2.01	0.43
4:F:81:PRO:O	4:F:83:PHE:N	2.51	0.43
25:2:17:SER:O	25:2:20:GLU:N	2.49	0.43
15:U:97:ASP:C	15:U:99:ALA:N	2.72	0.43
36:A:1830:C:N4	36:A:1975:G:H1	2.15	0.43
9:O:6:THR:HG22	9:O:7:TYR:O	2.18	0.43
36:A:1214:A:H3'	36:A:1215:G:C8	2.54	0.43
36:A:468:G:H3'	36:A:469:G:C8	2.53	0.43
36:A:1391:U:N3	36:A:1394:U:H5	2.16	0.43
36:A:895:U:C4	36:A:897:C:N4	2.87	0.43
36:A:1030:G:H1	36:A:1124:C:H42	1.65	0.43
4:F:115:ALA:O	4:F:118:ALA:HB3	2.18	0.43
36:A:576:U:H4'	36:A:2502:G:C8	2.53	0.43
36:A:2386:C:H2'	36:A:2387:U:C5	2.54	0.43
1:C:164:PHE:HD2	1:C:164:PHE:H	1.64	0.43
22:1:45:ASN:ND2	36:A:2230:G:H1'	2.33	0.43
36:A:1677:A:H2'	36:A:1678:G:H8	1.82	0.43
36:A:1814:G:H2'	36:A:1815:A:C8	2.53	0.43
36:A:2792:G:N3	36:A:2792:G:H2'	2.34	0.43
1:C:96:GLY:HA3	1:C:100:ILE:HG12	2.00	0.43
4:F:100:THR:O	36:A:659:C:H4'	2.18	0.43
36:A:2242:G:H2'	36:A:2243:U:C6	2.53	0.43
2:D:53:PHE:HE1	2:D:220:HIS:CD2	2.36	0.43
36:A:324:A:H62	36:A:338:G:N2	2.12	0.43
14:T:3:ARG:O	14:T:7:ILE:HG12	2.19	0.43
18:X:39:ILE:O	18:X:43:VAL:HG23	2.18	0.43
36:A:1917:U:H2'	36:A:1918:A:O4'	2.19	0.43
22:1:35:THR:HG21	36:A:2432:A:N7	2.33	0.43
36:A:630:G:O4'	36:A:640:C:H4'	2.18	0.43
36:A:657:U:C4	36:A:658:C:N4	2.86	0.43
36:A:176:G:H3'	36:A:177:G:C2	2.54	0.43
20:Z:81:ARG:HE	20:Z:81:ARG:HB2	1.70	0.43
25:2:37:PHE:HA	25:2:37:PHE:HD1	1.75	0.43
36:A:1696:G:H2'	36:A:1697:G:O4'	2.19	0.43
36:A:2264:C:H3'	36:A:2265:U:C6	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2012:G:H8	36:A:2012:G:O5'	2.02	0.43
15:U:64:ARG:HH21	24:N:42:TRP:N	2.16	0.43
14:T:64:ARG:NH1	14:T:103:ARG:HA	2.32	0.43
3:E:143:ASN:O	36:A:2052:G:H4'	2.19	0.43
10:P:18:ARG:HG3	36:A:1246:A:OP2	2.18	0.43
3:E:120:TRP:CZ2	3:E:155:LYS:HA	2.53	0.43
24:N:45:ASN:HB2	36:A:557:U:O2'	2.17	0.43
1:C:30:VAL:CG2	1:C:33:LEU:HD12	2.49	0.43
3:E:93:VAL:O	3:E:95:ILE:N	2.43	0.43
13:S:102:ALA:HA	13:S:106:ARG:CB	2.49	0.43
22:1:89:GLU:N	22:1:89:GLU:OE2	2.35	0.43
10:P:52:GLU:HG3	10:P:53:GLY:N	2.34	0.43
36:A:2001:A:H2'	36:A:2002:G:C8	2.54	0.43
36:A:2018:G:H8	36:A:2018:G:O5'	2.02	0.43
36:A:858:U:C4	36:A:919:G:O6	2.72	0.43
4:F:15:SER:O	4:F:17:ARG:HG2	2.19	0.43
36:A:990:A:H5"	36:A:1157:G:OP1	2.19	0.43
36:A:71:A:OP1	36:A:112:U:H2'	2.19	0.43
9:O:35:VAL:HG22	9:O:106:LEU:HD11	2.00	0.43
6:H:148:ILE:O	6:H:151:ILE:HB	2.18	0.43
24:N:43:THR:HB	24:N:46:VAL:HG11	1.99	0.43
5:G:55:LYS:HA	5:G:58:GLN:HG3	2.01	0.43
19:Y:35:TYR:HA	19:Y:35:TYR:HD1	1.75	0.43
1:C:182:PRO:O	1:C:186:LEU:HG	2.17	0.43
20:Z:48:PHE:HZ	20:Z:71:VAL:HG11	1.83	0.43
15:U:80:ILE:O	15:U:83:LEU:N	2.52	0.43
36:A:1735:U:H2'	36:A:1741:C:C6	2.52	0.43
30:8:63:PRO:O	30:8:65:GLU:N	2.51	0.43
2:D:123:ALA:HA	2:D:124:PRO:HD2	1.93	0.43
36:A:27:G:N2	36:A:512:G:H1'	2.34	0.43
8:K:117:THR:HG21	8:K:122:ALA:HB3	2.00	0.43
8:K:84:LEU:HD22	8:K:96:VAL:HB	2.00	0.43
36:A:297:C:H2'	36:A:298:G:C8	2.53	0.43
36:A:2040:C:C5	36:A:2040:C:OP2	2.71	0.43
36:A:226:G:C2	36:A:228:A:N6	2.85	0.43
4:F:111:ALA:HB2	4:F:206:ILE:CD1	2.47	0.43
36:A:628:G:C6	36:A:629:G:C6	3.07	0.43
36:A:1815:A:H4'	36:A:1816:G:O5'	2.17	0.43
36:A:2019:A:H2'	36:A:2020:A:O4'	2.18	0.43
36:A:2639:A:H1'	36:A:2778:A:C2	2.54	0.43
24:N:19:GLU:HB3	24:N:59:LYS:HE3	1.99	0.43
2:D:92:ILE:HB	2:D:105:ILE:O	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:V:58:VAL:O	16:V:97:LYS:HB2	2.18	0.43
36:A:1047:G:H1'	36:A:1110:G:H22	1.83	0.43
29:7:34:ARG:HB3	29:7:39:ARG:HE	1.83	0.43
12:R:11:ASN:O	12:R:12:ARG:HB2	2.19	0.43
26:3:43:ILE:O	26:3:47:VAL:HG23	2.18	0.43
2:D:79:VAL:HG12	2:D:80:ALA:N	2.34	0.43
2:D:95:LEU:HD12	2:D:103:ARG:O	2.19	0.43
36:A:607:U:H2'	36:A:608:A:H8	1.82	0.43
11:Q:54:MET:HG2	11:Q:58:PHE:HE2	1.79	0.43
36:A:197:A:H2	36:A:2434:A:H62	1.66	0.43
36:A:2211:G:H2'	36:A:2211:G:N3	2.34	0.43
36:A:1074:G:H8	36:A:1074:G:OP2	2.01	0.43
5:G:16:ARG:H	5:G:16:ARG:HG2	1.66	0.43
3:E:82:ARG:NH2	36:A:2638:G:OP2	2.47	0.43
36:A:657:U:H2'	36:A:658:C:C6	2.54	0.43
36:A:127:A:O5'	36:A:127:A:H8	2.01	0.43
36:A:2059:A:O2'	36:A:2061:G:OP1	2.33	0.43
35:B:3:C:O5'	35:B:3:C:H6	2.01	0.43
17:W:88:ARG:HB2	17:W:94:ASP:OD2	2.17	0.43
6:H:97:ARG:HB3	6:H:97:ARG:HE	1.45	0.43
17:W:23:LEU:HD21	27:5:27:PRO:HA	2.00	0.43
36:A:930:U:H4'	36:A:931:G:O4'	2.18	0.43
3:E:172:VAL:HA	3:E:184:VAL:HA	2.01	0.43
1:C:185:LYS:HB2	1:C:185:LYS:HE3	1.57	0.43
36:A:1025:G:N1	36:A:1139:G:N1	2.46	0.43
24:N:66:LYS:O	24:N:67:LEU:C	2.56	0.43
4:F:110:LEU:HB3	4:F:202:PHE:CE1	2.54	0.43
36:A:565:C:H2'	36:A:566:U:O4'	2.19	0.43
36:A:2248:C:C2	36:A:2256:G:N1	2.75	0.43
24:N:97:ARG:HG2	24:N:97:ARG:HH11	1.84	0.43
20:Z:151:HIS:HA	20:Z:171:ILE:HG23	1.99	0.43
10:P:66:GLY:HA3	36:A:631:A:N3	2.34	0.43
22:1:20:ARG:HH22	22:1:24:ALA:HA	1.84	0.43
9:O:29:ASN:OD1	36:A:2674:G:O2'	2.32	0.43
36:A:526:A:C6	36:A:2626:C:H4'	2.53	0.43
10:P:16:ARG:HA	36:A:660:G:N2	2.34	0.43
3:E:109:LYS:HE3	36:A:2680:C:OP1	2.19	0.43
3:E:35:GLN:HG2	3:E:36:ARG:N	2.34	0.43
2:D:79:VAL:CG1	2:D:80:ALA:N	2.81	0.43
9:O:63:VAL:HB	9:O:106:LEU:HD21	2.01	0.43
36:A:834:C:H2'	36:A:835:A:C8	2.53	0.43
36:A:679:C:H2'	36:A:680:G:C8	2.52	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:780:G:H2'	36:A:782:A:C5	2.54	0.43
36:A:66:C:C4	36:A:67:U:C5	3.06	0.43
29:7:40:TRP:HD1	29:7:40:TRP:H	1.66	0.43
9:O:12:ASP:HA	9:O:97:ARG:O	2.19	0.43
6:H:72:ILE:O	6:H:76:VAL:HG23	2.18	0.43
3:E:31:CYS:C	3:E:90:THR:HG23	2.39	0.43
25:2:40:SER:C	25:2:42:GLY:H	2.21	0.43
20:Z:110:GLY:HA3	20:Z:146:ILE:H	1.82	0.43
11:Q:38:GLU:OE2	11:Q:128:LYS:HG2	2.19	0.43
36:A:576:U:H4'	36:A:2502:G:C4	2.54	0.43
7:J:54:UNK:N	7:J:79:UNK:HA	2.34	0.43
1:C:206:LYS:NZ	36:A:1884:A:O2'	2.48	0.43
14:T:83:ILE:HD12	14:T:84:GLN:HB3	1.99	0.43
26:3:47:VAL:O	26:3:51:ALA:N	2.52	0.43
36:A:1615:C:C2	36:A:1617:C:H5''	2.54	0.43
36:A:904:C:H2'	36:A:905:U:O4'	2.18	0.43
36:A:1690:A:H2'	36:A:1691:C:O4'	2.19	0.43
4:F:54:ARG:HG2	4:F:54:ARG:H	1.53	0.43
15:U:104:GLN:O	15:U:108:GLU:HB2	2.18	0.43
36:A:1951:U:H2'	36:A:1953:A:OP2	2.19	0.43
1:C:37:LYS:HB2	1:C:38:PHE:CD1	2.54	0.43
1:C:185:LYS:O	1:C:189:ASN:HB2	2.18	0.43
4:F:24:LEU:O	4:F:26:ALA:N	2.52	0.43
36:A:570:G:H2'	36:A:2030:A:N6	2.33	0.43
36:A:840:C:H2'	36:A:841:A:H8	1.84	0.43
36:A:1105:U:C2	36:A:1106:G:C8	3.06	0.43
36:A:14:A:H5''	36:A:15:G:OP2	2.19	0.43
6:H:85:LYS:HZ2	6:H:133:VAL:HG11	1.84	0.43
3:E:93:VAL:HG21	3:E:180:ASN:HA	2.00	0.43
21:O:31:VAL:HB	21:O:61:ALA:HB2	2.00	0.43
16:V:35:LEU:HD21	16:V:59:ALA:HB2	2.01	0.43
2:D:78:LYS:O	2:D:79:VAL:O	2.37	0.43
2:D:223:GLY:HA3	2:D:231:HIS:CD2	2.54	0.43
36:A:2430:A:H5'	36:A:2431:U:OP2	2.19	0.43
36:A:1113:U:H2'	36:A:1114:G:C8	2.54	0.43
25:2:38:GLN:HA	25:2:41:ILE:HG12	2.01	0.43
12:R:100:LEU:HB3	12:R:111:LEU:HB2	2.00	0.43
36:A:2641:G:H2'	36:A:2642:G:H8	1.83	0.43
36:A:2699:C:N4	36:A:2708:G:N1	2.27	0.43
36:A:2025:C:C4	36:A:2026:C:C4	3.07	0.43
4:F:168:ARG:HH22	36:A:321:G:H21	1.65	0.43
36:A:2385:C:H2'	36:A:2386:C:C6	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2247:A:H2'	36:A:2248:C:H5'	2.00	0.43
24:N:134:ARG:CG	24:N:134:ARG:O	2.67	0.43
36:A:1637:A:O2'	36:A:2711:A:H1'	2.19	0.43
36:A:937:U:H2'	36:A:938:G:H8	1.84	0.43
36:A:2439:A:N7	36:A:2586:C:H4'	2.33	0.43
36:A:1532:C:H2'	36:A:1533:C:O4'	2.19	0.43
36:A:688:U:H2'	36:A:689:A:C8	2.54	0.43
36:A:338:G:H2'	36:A:338:G:N3	2.34	0.43
9:O:8:LEU:O	9:O:19:ILE:HG12	2.19	0.43
36:A:1403:C:H2'	36:A:1404:C:H6	1.82	0.43
36:A:548:A:H8	36:A:548:A:O5'	2.02	0.43
20:Z:30:ASN:O	20:Z:32:HIS:N	2.41	0.43
36:A:1115:G:H2'	36:A:1116:C:C6	2.54	0.43
1:C:20:VAL:CG1	1:C:226:ASN:HB2	2.49	0.43
11:Q:20:ALA:C	11:Q:22:LYS:H	2.22	0.43
16:V:83:ARG:HA	16:V:83:ARG:HD3	1.87	0.43
36:A:1778:U:C4	36:A:1784:A:C8	3.07	0.43
22:1:7:ILE:HD13	22:1:62:VAL:HA	2.01	0.43
26:3:22:ALA:O	26:3:26:LEU:HG	2.18	0.43
27:5:31:VAL:HB	27:5:32:PRO:HD2	2.01	0.43
13:S:48:LEU:HB3	13:S:49:VAL:HG23	2.01	0.42
24:N:45:ASN:N	24:N:45:ASN:ND2	2.64	0.42
3:E:84:PHE:CE1	3:E:86:PRO:HD3	2.53	0.42
1:C:78:ILE:HA	1:C:95:VAL:O	2.18	0.42
35:B:80:U:H1'	36:A:918:A:H1'	2.01	0.42
2:D:106:ILE:CD1	2:D:196:VAL:HG12	2.47	0.42
36:A:2419:U:H2'	36:A:2420:C:C5	2.54	0.42
12:R:37:THR:OG1	36:A:1651:G:OP1	2.16	0.42
9:O:19:ILE:HG22	9:O:43:VAL:HG13	2.01	0.42
15:U:90:VAL:HG23	15:U:91:ASP:N	2.33	0.42
6:H:86:GLU:HB2	6:H:131:VAL:O	2.19	0.42
25:2:2:LYS:O	25:2:6:VAL:HG23	2.19	0.42
4:F:85:GLY:HA2	36:A:449:A:OP1	2.19	0.42
20:Z:179:ASP:OD2	20:Z:181:GLU:HB2	2.18	0.42
36:A:2162:G:N2	36:A:2163:C:H1'	2.34	0.42
4:F:72:ARG:NH1	36:A:1256:G:O3'	2.52	0.42
4:F:57:VAL:C	4:F:59:TYR:H	2.22	0.42
36:A:2249:U:C4	36:A:2252:G:H5''	2.54	0.42
36:A:1144:G:H2'	36:A:1145:C:H6	1.83	0.42
4:F:136:THR:HG21	36:A:320:A:C4	2.54	0.42
3:E:21:VAL:HA	3:E:22:PRO:HD2	1.74	0.42
36:A:1391:U:H3	36:A:1394:U:H5	1.67	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:2024:G:OP2	36:A:2034:U:H5'	2.19	0.42
6:H:67:LEU:HD11	36:A:2757:A:H61	1.85	0.42
4:F:192:LEU:HD21	4:F:194:MET:HE2	2.01	0.42
9:O:77:ILE:HD11	14:T:72:VAL:HG22	2.01	0.42
36:A:14:A:H2	36:A:2044:C:O2	2.02	0.42
36:A:1655:A:H3'	36:A:1656:C:C6	2.55	0.42
3:E:63:LEU:HB3	3:E:65:GLY:H	1.83	0.42
13:S:106:ARG:C	13:S:108:GLY:H	2.22	0.42
13:S:24:LEU:HA	13:S:24:LEU:HD13	1.87	0.42
36:A:660:G:C5	36:A:661:C:C6	3.07	0.42
36:A:1303:G:H2'	36:A:1304:C:O4'	2.19	0.42
22:1:30:VAL:HA	36:A:2396:G:O2'	2.19	0.42
10:P:110:TYR:HB3	10:P:111:ARG:H	1.45	0.42
36:A:633:A:C5	36:A:634:C:H1'	2.54	0.42
11:Q:27:VAL:HG11	11:Q:134:ARG:HG3	2.00	0.42
36:A:1967:C:H2'	36:A:1968:G:O4'	2.18	0.42
3:E:8:LYS:HA	3:E:26:ILE:HG22	2.00	0.42
36:A:1991:U:O2'	36:A:1992:G:H5'	2.18	0.42
24:N:1:MET:O	24:N:2:LYS:HB2	2.18	0.42
35:B:88:C:H2'	35:B:89(A):G:O4'	2.18	0.42
5:G:97:ASP:HB2	5:G:98:ARG:CZ	2.49	0.42
11:Q:99:PRO:HD2	20:Z:79:ARG:NH1	2.35	0.42
36:A:696:G:H1	36:A:766:C:N4	2.15	0.42
36:A:443:A:H1'	36:A:1201:C:C1'	2.48	0.42
28:6:45:LYS:HB3	36:A:2371:G:H4'	2.01	0.42
2:D:85:ASP:OD2	2:D:87:ASN:HB2	2.19	0.42
14:T:83:ILE:HD12	14:T:84:GLN:N	2.34	0.42
2:D:41:GLY:O	2:D:43:ARG:N	2.42	0.42
10:P:112:LEU:HD12	10:P:127:ALA:HB2	2.01	0.42
1:C:28:ARG:HG3	1:C:183:PRO:CB	2.49	0.42
17:W:35:ILE:HG23	27:5:28:PRO:HG3	2.01	0.42
13:S:15:ARG:O	13:S:18:ILE:HB	2.19	0.42
10:P:24:GLY:HA2	10:P:30:THR:HA	2.00	0.42
1:C:20:VAL:HG11	1:C:226:ASN:HB2	2.01	0.42
1:C:201:LYS:HA	1:C:202:PRO:HD3	1.79	0.42
28:6:15:GLU:HG3	28:6:49:HIS:HD1	1.84	0.42
4:F:1:MET:CB	4:F:3:GLU:HG2	2.49	0.42
6:H:89:ILE:HA	6:H:162:ILE:HA	2.00	0.42
18:X:32:PRO:O	18:X:34:ALA:N	2.52	0.42
15:U:64:ARG:CD	24:N:41:ASP:C	2.83	0.42
36:A:1627:G:H2'	36:A:1628:G:C8	2.55	0.42
36:A:2757:A:H2'	36:A:2757:A:N3	2.33	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:N:28:THR:HA	24:N:106:MET:HE2	2.02	0.42
36:A:2044:C:H2'	36:A:2045:C:O4'	2.19	0.42
22:1:73:LEU:HD21	22:1:94:LEU:HD23	2.01	0.42
36:A:873:G:H2'	36:A:874:G:O4'	2.20	0.42
36:A:1463:C:H2'	36:A:1464:C:H6	1.83	0.42
36:A:1422:G:H2'	36:A:1423:G:C8	2.54	0.42
30:8:52:LYS:C	30:8:54:GLU:H	2.22	0.42
25:2:17:SER:HA	25:2:18:PRO:HD2	1.65	0.42
36:A:245:G:H21	36:A:384:U:H4'	1.84	0.42
36:A:2865:U:H5''	36:A:2866:U:OP2	2.19	0.42
36:A:2319:G:N2	36:A:2320:A:H61	2.17	0.42
24:N:43:THR:O	24:N:46:VAL:HG12	2.19	0.42
36:A:1981:A:H5''	36:A:1982:C:OP2	2.19	0.42
5:G:7:LEU:HD11	5:G:104:GLU:HA	2.00	0.42
19:Y:89:PHE:HD1	19:Y:89:PHE:HA	1.70	0.42
20:Z:10:ARG:HG2	20:Z:11:GLU:H	1.83	0.42
3:E:129:HIS:HE1	36:A:1993:U:O2'	2.02	0.42
36:A:271(B):C:O2	36:A:271(B):C:H2'	2.18	0.42
36:A:2704:C:H2'	36:A:2705:A:O4'	2.19	0.42
1:C:6:LYS:HB3	36:A:2132:U:O4	2.19	0.42
36:A:1060:U:H4'	36:A:1061:U:H2'	2.02	0.42
8:K:124:ALA:HB3	8:K:125:ARG:NH1	2.34	0.42
36:A:2027:G:C2	36:A:2037:G:C2	3.07	0.42
27:5:4:HIS:H	27:5:5:PRO:HD2	1.84	0.42
36:A:572:A:N1	36:A:2029:G:C2	2.88	0.42
36:A:970:C:H2'	36:A:971:C:O4'	2.19	0.42
36:A:2525:G:O2'	36:A:2526:G:H5'	2.19	0.42
1:C:43:GLU:O	1:C:214:TYR:O	2.37	0.42
28:6:39:TYR:OH	36:A:2345:G:H4'	2.19	0.42
6:H:85:LYS:NZ	6:H:133:VAL:HG11	2.34	0.42
1:C:8:TYR:O	1:C:12:LEU:HB2	2.19	0.42
1:C:8:TYR:CD1	1:C:11:LEU:HB2	2.55	0.42
36:A:2805:G:C6	36:A:2807:G:C6	3.08	0.42
3:E:7:VAL:HG12	3:E:27:LEU:HB3	2.00	0.42
36:A:25:U:H3'	36:A:26:G:C8	2.55	0.42
36:A:2441:C:H2'	36:A:2442:C:H6	1.85	0.42
36:A:1539:G:C6	36:A:1540:G:C5	3.08	0.42
21:0:24:LYS:HZ1	21:0:39:ARG:HG3	1.85	0.42
36:A:2484:G:H2'	36:A:2485:G:H8	1.84	0.42
12:R:28:LEU:HD13	12:R:29:LEU:HD13	2.02	0.42
23:4:33:VAL:HG12	23:4:34:GLU:HG3	2.01	0.42
36:A:542:C:H2'	36:A:543:C:H6	1.85	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1348:G:H2'	36:A:1349:A:H5''	2.01	0.42
13:S:13:ARG:C	13:S:15:ARG:N	2.72	0.42
5:G:55:LYS:O	5:G:58:GLN:HG3	2.18	0.42
4:F:67:GLN:NE2	36:A:675:A:H4'	2.34	0.42
36:A:1943:U:C4	36:A:1945:G:H1'	2.54	0.42
36:A:794:G:C4	36:A:795:C:C5	3.07	0.42
4:F:90:PHE:CD2	36:A:588:U:H1'	2.53	0.42
2:D:70:TRP:HH2	2:D:152:GLY:H	1.67	0.42
21:O:25:ARG:HH21	21:O:35:ASN:HB3	1.84	0.42
22:1:26:ARG:HD2	22:1:26:ARG:HA	1.55	0.42
3:E:79:ARG:NH2	8:K:61:ALA:O	103.59	0.42
36:A:1051:G:H2'	36:A:1052:C:C6	2.54	0.42
21:O:60:PHE:CZ	36:A:2365:G:H4'	2.55	0.42
5:G:139:LEU:HD12	5:G:139:LEU:O	2.20	0.42
36:A:1957:C:H2'	36:A:1958:C:C6	2.54	0.42
30:8:40:GLU:O	30:8:44:LYS:HB2	2.19	0.42
11:Q:30:GLY:N	11:Q:105:GLU:OE2	2.52	0.42
36:A:1178:C:H2'	36:A:1179:C:H6	1.84	0.42
36:A:929:G:H5''	36:A:930:U:OP2	2.19	0.42
18:X:32:PRO:HA	18:X:77:LYS:HB2	2.00	0.42
3:E:39:PRO:HA	3:E:43:GLY:H	1.85	0.42
36:A:1609:A:HO2'	36:A:1610:A:P	2.42	0.42
3:E:2:LYS:NZ	3:E:96:PHE:HA	2.35	0.42
10:P:90:ARG:HD2	10:P:91:PHE:HD2	1.83	0.42
8:K:76:TYR:O	8:K:80:LYS:HB3	2.20	0.42
24:N:36:GLY:H	24:N:42:TRP:HE3	1.67	0.42
36:A:2618:G:H2'	36:A:2619:C:O4'	2.19	0.42
36:A:1006:C:C2	36:A:1138:G:N2	2.88	0.42
4:F:5:ALA:HB3	4:F:8:GLN:N	2.32	0.42
14:T:106:SER:HA	14:T:110:ILE:HG13	2.01	0.42
10:P:115:LEU:HD21	36:A:636:G:C5	2.54	0.42
10:P:55:ARG:HG2	10:P:56:SER:O	2.19	0.42
1:C:40:GLU:HB2	1:C:217:THR:HB	2.02	0.42
22:1:86:SER:O	22:1:90:ILE:HB	2.20	0.42
16:V:59:ALA:HB1	16:V:96:ILE:HA	2.00	0.42
2:D:165:ILE:HG23	2:D:166:GLN:N	2.34	0.42
25:2:52:ASP:O	25:2:55:ARG:HB2	2.20	0.42
36:A:2560:C:O2'	36:A:2561:A:H5'	2.20	0.42
2:D:199:ALA:HB1	36:A:1820:U:H3	1.84	0.42
1:C:7:ARG:HB3	1:C:7:ARG:CZ	2.48	0.42
14:T:132:LYS:HD3	14:T:132:LYS:O	2.18	0.42
24:N:6:PRO:C	24:N:7:LYS:HZ3	2.22	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:T:53:ARG:NH1	14:T:53:ARG:HB3	2.35	0.42
20:Z:53:ILE:HD11	20:Z:99:TYR:HB2	2.02	0.42
21:0:65:GLY:HA2	21:0:83:PRO:CA	2.49	0.42
29:7:19:ARG:O	29:7:23:ARG:N	2.52	0.42
27:5:56:LYS:HA	27:5:56:LYS:HD2	1.81	0.42
9:O:70:LYS:HB3	9:O:70:LYS:HE3	1.75	0.42
36:A:1859:A:O5'	36:A:1859:A:H8	2.03	0.42
6:H:124:GLU:O	6:H:126:PRO:HD3	2.20	0.42
36:A:2007:C:H2'	36:A:2008:C:H6	1.84	0.42
21:0:29:GLN:O	21:0:67:VAL:HG23	2.19	0.42
27:5:2:ALA:HB3	36:A:747:U:C2	2.55	0.42
3:E:12:THR:HA	36:A:2682:U:H1'	2.02	0.42
3:E:102:VAL:HB	3:E:199:ARG:O	2.20	0.42
4:F:173:VAL:C	4:F:174:VAL:O	2.51	0.42
4:F:189:THR:HB	4:F:190:GLU:H	1.38	0.42
36:A:2218:G:H2'	36:A:2219:G:C8	2.54	0.42
36:A:1199:U:O4	36:A:1246:A:N1	2.52	0.42
24:N:112:LEU:HD23	24:N:113:GLY:H	1.79	0.42
2:D:162:SER:O	2:D:178:PRO:HD3	2.19	0.42
36:A:956:G:HO2'	36:A:959:A:H62	1.65	0.42
16:V:60:GLU:HB2	16:V:97:LYS:HE2	2.00	0.42
36:A:2460:U:H2'	36:A:2461:C:O4'	2.19	0.42
3:E:80:GLU:OE2	36:A:2635:C:O2'	2.30	0.42
36:A:921:G:H2'	36:A:922:U:C6	2.55	0.42
14:T:1:MET:HG3	14:T:2:ASN:N	2.34	0.42
36:A:286:C:H2'	36:A:287:C:C6	2.54	0.42
19:Y:32:PRO:HD3	19:Y:36:ALA:HB3	2.01	0.42
36:A:588:U:H2'	36:A:589:C:O4'	2.19	0.42
19:Y:19:LYS:HD3	19:Y:19:LYS:HA	1.83	0.42
18:X:64:LYS:HD2	18:X:73:ARG:HH21	1.85	0.42
20:Z:108:PRO:HB3	20:Z:144:LEU:H	1.85	0.42
31:9:22:ARG:HH21	31:9:35:ARG:HH22	1.66	0.42
6:H:97:ARG:NH2	6:H:104:GLU:OE1	2.51	0.42
20:Z:121:HIS:HB3	20:Z:124:ILE:HG22	2.01	0.42
36:A:2747:G:O6	36:A:2754:U:H2'	2.20	0.42
2:D:149:PRO:HG2	36:A:2218:G:H4'	2.01	0.42
36:A:81:G:C6	36:A:82:G:C2	3.08	0.42
36:A:144:C:H2'	36:A:145:G:C8	2.54	0.42
28:6:10:LEU:HA	28:6:25:LYS:HA	2.01	0.42
36:A:1655:A:C2	36:A:1656:C:H1'	2.54	0.42
22:1:22:GLY:HA2	22:1:38:SER:N	2.34	0.42
10:P:16:ARG:HA	36:A:660:G:H21	1.85	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:V:59:ALA:CB	16:V:96:ILE:HA	2.49	0.42
4:F:37:VAL:O	4:F:41:LEU:HG	2.19	0.42
4:F:75:HIS:CD2	4:F:83:PHE:HE2	2.38	0.42
36:A:1270:C:C5'	36:A:1271:G:H5''	2.48	0.42
36:A:749:C:O2'	36:A:1617:C:O3'	2.38	0.42
12:R:38:VAL:HG23	12:R:110:PRO:O	2.20	0.42
36:A:2432:A:N3	36:A:2432:A:H2'	2.34	0.42
36:A:1073:A:C8	36:A:1074:G:C8	3.07	0.42
15:U:95:LEU:HA	15:U:97:ASP:OD1	2.19	0.42
30:8:16:ILE:HD11	30:8:20:GLY:HA2	2.02	0.42
36:A:655:A:H2'	36:A:656:G:O4'	2.20	0.42
36:A:2663:G:H3'	36:A:2664:G:H8	1.82	0.42
5:G:146:TYR:C	5:G:148:MET:H	2.22	0.42
30:8:26:LYS:N	30:8:47:LYS:HB2	2.34	0.42
20:Z:19:ARG:HD2	20:Z:84:GLU:HG2	2.02	0.42
19:Y:85:VAL:HA	19:Y:94:LYS:HA	2.01	0.42
36:A:2700:C:H2'	36:A:2701:C:C6	2.55	0.42
10:P:71:VAL:H	10:P:72:PRO:CD	2.33	0.42
36:A:909:A:H2'	36:A:912:C:H5	1.84	0.42
36:A:377:C:H2'	36:A:378:C:C6	2.54	0.42
3:E:132:HIS:HB2	36:A:744:G:OP1	2.20	0.42
24:N:131:GLN:NE2	24:N:132:ALA:CB	2.83	0.42
14:T:64:ARG:NH1	14:T:102:ILE:HG13	2.35	0.42
36:A:2031:A:N3	36:A:2455:G:H1'	2.35	0.42
36:A:2447:G:H4'	36:A:2448:A:O5'	2.20	0.42
36:A:1174:A:H3'	36:A:1175:U:C4'	2.47	0.42
3:E:34:VAL:HG23	3:E:67:PHE:CG	2.55	0.42
1:C:152:GLU:O	1:C:155:ARG:HB2	2.20	0.42
36:A:1529:A:C8	36:A:1530:G:C8	3.08	0.42
13:S:44:LYS:HB3	13:S:46:VAL:HG23	2.02	0.42
3:E:134:ILE:HG22	3:E:137:HIS:CB	2.50	0.42
10:P:130:PHE:CZ	10:P:145:PRO:HD2	2.54	0.42
12:R:67:LEU:HD13	12:R:70:LEU:HB2	2.02	0.42
36:A:208:C:H2'	36:A:209:C:H6	1.85	0.42
36:A:218:A:H2	36:A:235:U:H4'	1.83	0.42
36:A:221:A:H4'	36:A:222:A:O5'	2.20	0.42
5:G:141:PHE:HA	5:G:142:PRO:HD2	1.70	0.42
5:G:6:ALA:HB3	5:G:104:GLU:OE1	2.20	0.42
36:A:2661:G:C6	36:A:2662:A:C2	3.08	0.42
36:A:2730:C:H2'	36:A:2731:G:C8	2.55	0.42
36:A:1609:A:O2'	36:A:1610:A:O5'	2.35	0.42
18:X:92:LEU:HA	18:X:92:LEU:HD13	1.92	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:77:ALA:HA	2:D:97:TYR:HA	2.01	0.42
27:5:47:PRO:O	27:5:57:VAL:HA	2.20	0.42
5:G:118:ARG:NH1	36:A:888:C:H4'	2.35	0.42
15:U:64:ARG:CZ	24:N:41:ASP:HA	2.46	0.42
36:A:83:G:O2'	36:A:84:A:OP2	2.30	0.42
36:A:821:A:H2'	36:A:946:G:O4'	2.19	0.42
36:A:2287:A:N1	36:A:2346:A:H2	2.16	0.42
22:1:18:ILE:HG13	22:1:40:ARG:N	2.35	0.42
35:B:47:C:H2'	35:B:48:A:O4'	2.20	0.42
17:W:6:ILE:HG23	36:A:494:G:H4'	2.02	0.42
12:R:103:ARG:HB3	12:R:109:ALA:N	2.34	0.42
2:D:227:ASN:HD21	2:D:230:ASP:HB2	1.85	0.42
30:8:8:LYS:HE3	36:A:245:G:O6	2.20	0.42
22:1:35:THR:HG21	36:A:2432:A:C8	2.54	0.42
36:A:1074:G:H2'	36:A:1075:C:C6	2.55	0.42
36:A:2849:U:H1'	36:A:2866:U:C6	2.55	0.42
4:F:63:LYS:HA	4:F:76:GLY:HA3	2.00	0.42
36:A:1428:C:C5	36:A:1569:A:H5''	2.55	0.42
36:A:408:G:H1	36:A:419:C:H42	1.68	0.42
36:A:2073:C:H2'	36:A:2074:U:H6	1.85	0.42
17:W:16:LYS:HA	17:W:19:LEU:HD22	2.02	0.42
36:A:816:C:H2'	36:A:817:C:O4'	2.19	0.42
36:A:1360:A:H62	36:A:1371:G:H21	1.68	0.42
36:A:1847:A:H4'	36:A:1848:A:OP2	2.20	0.42
6:H:105:LEU:HG	6:H:113:VAL:HB	2.02	0.42
9:O:103:ALA:HA	9:O:122:LEU:OXT	2.20	0.42
20:Z:70:LEU:HB2	20:Z:91:LEU:HD21	2.00	0.42
2:D:28:GLU:OE1	2:D:29:PRO:HD3	2.20	0.42
6:H:65:HIS:CE1	6:H:69:ARG:HD3	2.55	0.42
3:E:143:ASN:HD21	36:A:2571:C:H2'	1.85	0.41
36:A:2229:C:H2'	36:A:2230:G:C8	2.53	0.41
29:7:11:LYS:HE2	36:A:686:G:N3	2.35	0.41
22:1:15:ALA:HA	22:1:40:ARG:O	2.20	0.41
24:N:111:PRO:HA	24:N:114:ARG:HH12	1.79	0.41
15:U:85:LYS:HG3	15:U:117:GLN:CG	2.43	0.41
36:A:2789:C:N3	36:A:2894:G:N2	2.68	0.41
35:B:24:G:C5	35:B:56:G:C4	3.08	0.41
36:A:485:C:H42	36:A:495:G:H1	1.67	0.41
17:W:4:LYS:HD3	17:W:6:ILE:HB	2.01	0.41
19:Y:26:LYS:H	19:Y:39:VAL:HG12	1.85	0.41
25:2:20:GLU:O	25:2:21:LEU:C	2.59	0.41
21:0:46:LYS:HD3	21:0:78:TYR:CZ	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:169:THR:C	1:C:171:ALA:H	2.22	0.41
13:S:33:LYS:O	13:S:62:LYS:HE2	2.20	0.41
9:O:39:ILE:HG21	9:O:62:VAL:HG13	2.01	0.41
24:N:63:THR:HB	24:N:64:GLY:H	1.55	0.41
17:W:86:LEU:O	17:W:94:ASP:N	2.53	0.41
10:P:101:VAL:HG23	10:P:102:ARG:HG3	2.02	0.41
36:A:1691:C:H2'	36:A:1692:U:O4'	2.20	0.41
3:E:26:ILE:HG13	3:E:182:LEU:HB3	2.00	0.41
24:N:1:MET:HB2	24:N:2:LYS:H	1.64	0.41
5:G:86:MET:N	5:G:86:MET:SD	2.93	0.41
9:O:40:VAL:HG13	9:O:59:LYS:HG3	2.01	0.41
36:A:886:C:H2'	36:A:887:A:C4'	2.50	0.41
28:6:34:LEU:HD23	28:6:51:GLU:HB3	2.02	0.41
36:A:2115:G:H1	36:A:2117:A:H3'	1.84	0.41
24:N:38:HIS:CG	24:N:39:ARG:N	2.88	0.41
36:A:2773:C:H2'	36:A:2774:C:C6	2.55	0.41
36:A:1299:G:H1'	36:A:1641:A:H61	1.84	0.41
36:A:2041:U:C5	36:A:2041:U:OP2	2.73	0.41
36:A:980:A:H1'	36:A:1136:G:H1'	2.01	0.41
4:F:182:ASN:OD1	4:F:185:ASP:N	2.38	0.41
36:A:1003:G:O2'	36:A:1010:A:N6	2.52	0.41
1:C:172:ILE:HG22	1:C:193:PHE:HZ	1.85	0.41
36:A:82:G:N1	36:A:103:A:OP2	2.52	0.41
28:6:44:ARG:HB3	28:6:45:LYS:H	1.58	0.41
29:7:21:ARG:NH2	36:A:684:G:OP1	2.53	0.41
22:1:18:ILE:HG21	36:A:380:U:H4'	2.02	0.41
3:E:61:ARG:HB3	3:E:62:PRO:HD3	2.03	0.41
36:A:1841:U:H2'	36:A:1842:G:C8	2.55	0.41
29:7:30:VAL:HG13	29:7:34:ARG:HH11	1.84	0.41
36:A:860:U:C5	36:A:2268:A:C8	3.07	0.41
2:D:250:TRP:CZ2	36:A:1805:U:H4'	2.55	0.41
26:3:35:ARG:HA	26:3:35:ARG:HD2	1.86	0.41
36:A:286:C:H2'	36:A:287:C:H6	1.85	0.41
2:D:264:LYS:HB3	2:D:267:SER:CB	2.49	0.41
36:A:2057:A:H2'	36:A:2058:A:H8	1.85	0.41
25:2:58:ALA:HA	36:A:72:U:O4'	2.21	0.41
2:D:31:LYS:HA	2:D:31:LYS:HD2	1.96	0.41
36:A:312:G:H2'	36:A:312:G:N3	2.35	0.41
19:Y:11:ASP:O	19:Y:27:VAL:HA	2.20	0.41
36:A:1362:C:H2'	36:A:1363:C:O4'	2.20	0.41
19:Y:44:ILE:HD12	36:A:480:A:O4'	2.19	0.41
36:A:2620:C:H2'	36:A:2621:A:H8	1.84	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:N:69:GLN:NE2	36:A:1022:G:H5''	2.35	0.41
4:F:171:PRO:HG2	4:F:172:TRP:HD1	1.85	0.41
36:A:2262:U:H4'	36:A:2328:A:C2	2.56	0.41
36:A:2405:G:OP2	36:A:2405:G:H8	2.02	0.41
36:A:1077:A:C2	36:A:1078:U:H4'	2.55	0.41
3:E:27:LEU:O	3:E:51:PHE:HZ	2.03	0.41
1:C:115:VAL:H	1:C:145:THR:HG22	1.85	0.41
14:T:42:ILE:HG21	14:T:83:ILE:HG21	2.02	0.41
36:A:1540:G:H3'	36:A:1541:U:H6	1.85	0.41
36:A:1613:G:H3'	36:A:1617:C:H42	1.85	0.41
10:P:95:VAL:HG23	10:P:125:VAL:HA	2.01	0.41
14:T:2:ASN:HB3	14:T:3:ARG:H	1.59	0.41
9:O:43:VAL:HG12	9:O:45:GLU:H	1.85	0.41
10:P:21:ARG:C	10:P:23:PRO:HD3	2.41	0.41
36:A:2319:G:N2	36:A:2334:G:OP2	2.53	0.41
36:A:828:U:H2'	36:A:829:A:C4	2.55	0.41
36:A:1788:C:H2'	36:A:1789:A:C8	2.55	0.41
36:A:2082:A:H2'	36:A:2083:G:O4'	2.21	0.41
36:A:2581:G:H4'	36:A:2582:G:C8	2.55	0.41
19:Y:19:LYS:HG3	19:Y:20:TYR:CD1	2.55	0.41
36:A:1472:A:H3'	36:A:1473:G:H8	1.85	0.41
15:U:104:GLN:CD	15:U:104:GLN:H	2.23	0.41
21:O:45:PHE:HB3	21:O:79:VAL:HG23	2.03	0.41
9:O:46:ALA:H	9:O:54:GLU:HG3	1.84	0.41
36:A:868:U:H2'	36:A:869:G:O4'	2.20	0.41
24:N:66:LYS:O	24:N:68:GLU:N	2.54	0.41
4:F:156:LEU:O	4:F:157:VAL:C	2.56	0.41
36:A:571:A:N7	36:A:575:A:N6	2.68	0.41
22:1:18:ILE:HA	22:1:41:ARG:H	1.84	0.41
3:E:27:LEU:HG	3:E:180:ASN:O	2.20	0.41
3:E:34:VAL:O	3:E:48:GLN:HB2	2.20	0.41
1:C:120:VAL:O	1:C:121:MET:C	2.56	0.41
24:N:19:GLU:C	24:N:21:LYS:H	2.24	0.41
14:T:47:GLY:HA2	14:T:65:LYS:NZ	2.35	0.41
12:R:97:VAL:HG12	12:R:112:ALA:HB1	2.02	0.41
6:H:23:ARG:HB2	6:H:34:GLU:OE1	2.20	0.41
17:W:12:ILE:CD1	17:W:42:ARG:HH12	2.33	0.41
3:E:15:PHE:HD2	3:E:20:ALA:HA	1.84	0.41
36:A:621:A:C2	36:A:622:G:H1'	2.56	0.41
1:C:142:LYS:C	1:C:144:GLY:H	2.23	0.41
4:F:45:ARG:HD3	4:F:97:TYR:CZ	2.54	0.41
36:A:862:G:C2	36:A:863:A:H1'	2.54	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1570:A:H2'	36:A:1571:A:C8	2.56	0.41
36:A:1945:G:H2'	36:A:1946:U:C6	2.56	0.41
10:P:24:GLY:O	36:A:811:U:H2'	2.20	0.41
28:6:15:GLU:HG2	28:6:48:VAL:HG23	2.02	0.41
17:W:25:ARG:HH11	17:W:25:ARG:HB2	1.85	0.41
12:R:14:SER:O	12:R:18:LEU:HG	2.20	0.41
29:7:23:ARG:NH2	36:A:125:G:OP2	2.47	0.41
20:Z:61:LEU:HB2	20:Z:63:ASP:OD1	2.20	0.41
20:Z:156:LYS:NZ	20:Z:158:PRO:HG3	2.36	0.41
36:A:866:A:N3	36:A:866:A:H2'	2.35	0.41
16:V:8:GLY:O	16:V:23:GLU:HG3	2.21	0.41
36:A:2185:C:C2	36:A:2186:G:C8	3.08	0.41
36:A:252:G:H2'	36:A:253:C:H6	1.85	0.41
19:Y:56:PRO:HB2	19:Y:57:GLN:H	1.61	0.41
6:H:38:SER:HA	6:H:39:PRO:HD3	1.71	0.41
35:B:65:C:H2'	35:B:66:A:H5'	2.01	0.41
24:N:62:VAL:CG2	24:N:66:LYS:HG3	2.39	0.41
4:F:170:LEU:HG	4:F:173:VAL:CB	2.34	0.41
4:F:154:VAL:HA	4:F:191:ARG:H	1.85	0.41
1:C:164:PHE:HZ	1:C:196:ALA:CB	2.30	0.41
18:X:35:THR:HG23	18:X:38:GLU:HB2	2.02	0.41
24:N:112:LEU:HD23	24:N:112:LEU:C	2.41	0.41
3:E:54:GLN:HB3	3:E:75:VAL:HB	2.02	0.41
13:S:95:HIS:O	13:S:97:ARG:HD3	2.21	0.41
11:Q:42:ILE:CD1	11:Q:95:ALA:HB3	2.50	0.41
36:A:462:C:N4	36:A:463:G:C6	2.88	0.41
9:O:111:PHE:O	9:O:114:ILE:HG12	2.20	0.41
36:A:943:U:OP2	36:A:943:U:H6	2.03	0.41
16:V:4:ILE:HA	16:V:14:VAL:HG23	2.02	0.41
17:W:12:ILE:HG21	17:W:17:VAL:HG13	2.02	0.41
15:U:25:TRP:CD1	15:U:26:GLY:N	2.86	0.41
19:Y:28:LYS:HB3	19:Y:28:LYS:HE2	1.76	0.41
36:A:214:G:H2'	36:A:215:G:C8	2.54	0.41
24:N:43:THR:CG2	24:N:44:PRO:HD2	2.50	0.41
36:A:30:G:H2'	36:A:31:C:H6	1.84	0.41
36:A:2817:G:O2'	36:A:2836:U:O2	2.25	0.41
19:Y:51:VAL:HB	19:Y:55:TYR:CD2	2.55	0.41
25:2:59:ARG:HA	36:A:76:C:O2'	2.20	0.41
19:Y:91:GLU:HB3	19:Y:92:ASN:H	1.76	0.41
22:1:71:TYR:O	22:1:74:VAL:HB	2.20	0.41
36:A:501:A:H2'	36:A:502:A:C8	2.56	0.41
36:A:2335:A:O2'	36:A:2336:A:H5''	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:1211:U:O2'	36:A:1212:G:OP1	2.36	0.41
36:A:303:U:H2'	36:A:304:G:O4'	2.21	0.41
8:K:53:VAL:HA	8:K:54:PRO:HD3	1.83	0.41
2:D:127:VAL:HA	2:D:193:VAL:HG13	2.03	0.41
36:A:1861:G:H1	36:A:1881:C:H42	1.68	0.41
12:R:59:ASP:OD1	12:R:60:LEU:N	2.54	0.41
36:A:1449:G:H2'	36:A:1450:C:O4'	2.20	0.41
36:A:273(A):G:C2	36:A:273(B):G:C8	3.08	0.41
5:G:57:ALA:O	5:G:60:LEU:HB3	2.20	0.41
36:A:894:C:H2'	36:A:895:U:C5	2.56	0.41
36:A:1130:U:C2	36:A:2025:C:H5''	2.56	0.41
24:N:26:LEU:HD23	24:N:99:LEU:CD2	2.51	0.41
4:F:154:VAL:HG12	4:F:156:LEU:CA	2.36	0.41
10:P:58:THR:O	10:P:61:ARG:HG3	2.20	0.41
36:A:1580:A:H5''	36:A:1581:G:OP2	2.20	0.41
15:U:45:TYR:O	15:U:49:HIS:HB2	2.21	0.41
15:U:93:LYS:NZ	36:A:997:G:H5''	2.36	0.41
2:D:244:ARG:HH22	36:A:1841:U:H1'	1.86	0.41
2:D:147:LEU:HB2	2:D:155:LEU:HD11	2.03	0.41
36:A:526:A:O2'	36:A:2043:C:O2	2.37	0.41
11:Q:47:ILE:HD12	11:Q:70:PRO:HG3	2.02	0.41
16:V:19:LYS:HB3	16:V:94:LEU:O	2.21	0.41
36:A:2564:A:C2	36:A:2647:U:H4'	2.56	0.41
36:A:579:G:H2'	36:A:580:C:C6	2.56	0.41
21:O:24:LYS:NZ	36:A:2355:C:O2'	2.52	0.41
5:G:41:GLN:HG2	5:G:155:MET:HA	2.02	0.41
28:6:23:THR:HG21	36:A:2419:U:H5''	2.02	0.41
3:E:15:PHE:CD1	14:T:81:PRO:HD3	2.56	0.41
36:A:2839:G:H2'	36:A:2840:C:H6	1.84	0.41
25:2:61:LEU:HA	25:2:61:LEU:HD23	1.87	0.41
20:Z:95:PRO:HA	20:Z:130:PRO:HD3	2.03	0.41
14:T:75:ILE:HD12	36:A:2684:U:H5''	2.03	0.41
14:T:53:ARG:HD3	36:A:2684:U:OP2	2.20	0.41
36:A:2824:C:H2'	36:A:2825:U:O4'	2.21	0.41
9:O:64:ARG:NH2	9:O:101:PRO:HD2	2.36	0.41
11:Q:26:TYR:HB2	11:Q:27:VAL:H	1.66	0.41
36:A:2366:A:H2'	36:A:2367:G:O4'	2.21	0.41
13:S:31:SER:O	13:S:33:LYS:N	2.52	0.41
2:D:111:LEU:HD21	2:D:117:VAL:HG11	2.02	0.41
4:F:39:TRP:HB2	4:F:99:TYR:OH	2.20	0.41
36:A:915:C:H2'	36:A:916:G:O4'	2.20	0.41
36:A:841:A:H2'	36:A:842:G:C8	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:A:627:A:H61	36:A:637:A:C5'	2.33	0.41
28:6:19:ARG:HD3	36:A:2400:G:H4'	2.02	0.41
30:8:27:THR:OG1	30:8:28:GLY:N	2.51	0.41
22:1:39:LYS:NZ	22:1:40:ARG:O	2.53	0.41
36:A:533:G:H2'	36:A:534:U:O4'	2.20	0.41
3:E:52:LEU:HA	3:E:53:PRO:HD3	1.75	0.41
1:C:78:ILE:H	1:C:116:ALA:HA	1.86	0.41
9:O:30:ALA:HB2	36:A:2674:G:O2'	2.20	0.41
2:D:157:ARG:NH2	36:A:1818:U:H6	2.19	0.41
36:A:515:A:H1'	36:A:581:C:H1'	2.02	0.41
12:R:13:HIS:HB2	12:R:16:HIS:HB2	2.03	0.41
31:9:30:PRO:O	36:A:2527:C:H4'	2.20	0.41
31:9:30:PRO:HD2	36:A:2528:U:OP1	2.21	0.41
12:R:99:LYS:HA	12:R:112:ALA:HA	2.03	0.41
36:A:1731:G:O2'	36:A:1732:A:N7	2.41	0.41
17:W:101:SER:O	17:W:102:HIS:ND1	2.53	0.41
18:X:47:PHE:CD2	18:X:89:ILE:HG23	2.55	0.41
36:A:778:G:C5	36:A:779:U:C4	3.09	0.41
36:A:779:U:H2'	36:A:780:G:O4'	2.20	0.41
36:A:1042:G:C6	36:A:1114:G:C6	3.09	0.41
2:D:208:LYS:HD2	36:A:729:G:C8	2.56	0.41
36:A:308:G:H2'	36:A:309:G:C8	2.56	0.41
21:0:65:GLY:HA2	21:0:83:PRO:HB3	2.02	0.41
36:A:1848:A:H2'	36:A:1849:G:O4'	2.20	0.41
36:A:864:G:H1'	36:A:914:C:N4	2.35	0.41
36:A:253:C:H2'	36:A:254:G:O4'	2.20	0.41
17:W:64:MET:O	17:W:65:LEU:HB2	2.20	0.41
16:V:89:GLN:HA	16:V:90:PRO:HD3	1.75	0.41
9:O:47:ILE:HA	9:O:48:PRO:HD2	1.61	0.41
36:A:781:A:H2'	36:A:1777:U:O2'	2.21	0.41
36:A:2691:C:H5'	36:A:2872:G:H5''	2.03	0.41
2:D:253:GLN:HB2	2:D:257:LEU:HD12	2.02	0.41
1:C:213:VAL:O	1:C:213:VAL:CG1	2.68	0.41
36:A:1496:A:H2'	36:A:1498:C:H5	1.86	0.41
24:N:13:TRP:CD1	24:N:13:TRP:N	2.88	0.41
4:F:154:VAL:O	4:F:155:LEU:C	2.51	0.41
36:A:2179:C:H2'	36:A:2180:U:C6	2.55	0.41
36:A:2574:G:C2	36:A:2575:C:C2	3.09	0.41
36:A:843:G:N2	36:A:935:C:N3	2.56	0.41
36:A:2046:G:H1	36:A:2622:C:N4	2.15	0.41
36:A:2422:A:HO2'	36:A:2424:C:H5	1.65	0.41
15:U:85:LYS:HB3	15:U:116:ALA:HB1	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:262:ARG:NH1	36:A:2085:C:H5''	2.36	0.41
11:Q:14:ARG:HB3	11:Q:41:TRP:CZ2	2.43	0.41
8:K:37:PHE:HA	8:K:67:PHE:CZ	2.55	0.41
2:D:227:ASN:OD1	2:D:229:VAL:N	2.49	0.41
36:A:1700:A:H3'	36:A:1701:A:H8	1.85	0.41
36:A:1437:C:H2'	36:A:1438:U:H6	1.85	0.41
36:A:775:G:C5	36:A:794:G:C8	3.08	0.41
36:A:1839:G:C8	36:A:1927:A:H1'	2.56	0.41
18:X:44:GLU:HG3	18:X:51:VAL:HG23	2.03	0.41
4:F:139:PHE:HA	4:F:142:TRP:HB3	2.02	0.41
36:A:1937:A:O2'	36:A:1938:A:P	2.79	0.41
36:A:1681:G:OP2	36:A:1681:G:H8	2.04	0.41
11:Q:31:ASP:HB2	11:Q:107:ALA:HA	2.03	0.41
11:Q:137:TYR:CD1	11:Q:137:TYR:N	2.89	0.41
36:A:59:U:H4'	36:A:73:A:N7	2.36	0.41
3:E:153:GLY:H	36:A:2620:C:P	2.44	0.41
6:H:70:THR:HG21	36:A:2747:G:O3'	2.21	0.41
24:N:27:ALA:HA	24:N:30:ILE:HD12	2.03	0.41
36:A:1123:C:H2'	36:A:1124:C:H6	1.85	0.41
11:Q:36:ALA:O	11:Q:37:LEU:HD23	2.20	0.41
35:B:89(B):A:H8	35:B:89(B):A:O5'	2.03	0.41
36:A:2015:A:P	36:A:2015:A:H8	2.44	0.41
36:A:2453:A:H4'	36:A:2572:A:C1'	2.51	0.41
36:A:842:G:H1	36:A:936:C:H42	1.69	0.41
36:A:1087:G:O2'	36:A:1088:A:H4'	2.20	0.41
36:A:970:C:H1'	36:A:984:A:O2'	2.21	0.41
36:A:821:A:H3'	36:A:946:G:C8	2.56	0.41
36:A:1032:A:N1	36:A:1122:G:C6	2.85	0.41
5:G:107:LEU:HD11	5:G:178:PHE:CE1	2.56	0.41
36:A:1858:G:H1'	36:A:1884:A:H61	1.81	0.41
36:A:1802:A:O2'	36:A:1803:A:C8	2.73	0.41
1:C:14:LYS:HG3	1:C:33:LEU:HD22	2.02	0.41
3:E:32:PRO:HD2	3:E:51:PHE:N	2.36	0.41
2:D:151:LYS:CE	36:A:2217:G:H21	2.34	0.41
36:A:2437:U:H2'	36:A:2438:U:C6	2.56	0.41
36:A:1447:G:H1	36:A:1464:C:N4	2.17	0.41
8:K:27:LEU:O	8:K:30:HIS:HB3	2.21	0.41
4:F:37:VAL:HA	4:F:40:GLN:CD	2.41	0.41
4:F:64:ILE:HG23	4:F:65:TRP:H	1.86	0.41
2:D:91:ARG:HA	2:D:91:ARG:HD3	1.67	0.41
16:V:6:LYS:HB3	16:V:37:VAL:HG11	2.03	0.41
16:V:15:GLU:CB	16:V:16:PRO:HD2	2.46	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:W:17:VAL:O	17:W:21:VAL:HG23	2.20	0.41
10:P:95:VAL:HG12	10:P:100:LEU:HD21	2.02	0.41
10:P:12:ALA:O	10:P:13:ASN:HB3	2.21	0.41
36:A:680:G:H1	36:A:797:C:N4	2.15	0.41
36:A:1783:A:H2	36:A:2588:G:H1'	1.86	0.41
36:A:1783:A:C2	36:A:2588:G:H1'	2.55	0.41
36:A:1792:G:O2'	36:A:1830:C:OP1	2.22	0.41
8:K:106:GLU:O	8:K:110:GLN:HG2	2.20	0.41
36:A:2870:C:H2'	36:A:2871:C:O4'	2.21	0.41
4:F:66:PRO:HB2	4:F:67:GLN:H	1.57	0.41
36:A:1428:C:O2'	36:A:1569:A:OP2	2.33	0.41
36:A:363(F):U:H5''	36:A:363(G):A:OP2	2.21	0.41
4:F:90:PHE:HB2	4:F:91:GLY:H	1.65	0.41
9:O:64:ARG:HA	9:O:79:PHE:CG	2.56	0.41
11:Q:101:ARG:O	11:Q:103:MET:N	2.54	0.41
18:X:18:TYR:O	18:X:21:PHE:HB2	2.21	0.41
22:1:26:ARG:HG3	22:1:27:GLU:H	1.86	0.41
31:9:3:VAL:H	31:9:35:ARG:HB2	1.86	0.41
2:D:255:LYS:NZ	36:A:1824:G:H21	2.19	0.41
36:A:1051:G:C4	36:A:1052:C:C6	3.09	0.41
15:U:10:ARG:O	15:U:14:HIS:HB2	2.20	0.41
36:A:1170:G:H2'	36:A:1171:G:C8	2.56	0.41
20:Z:61:LEU:HA	20:Z:62:PRO:HD3	1.89	0.41
18:X:8:ILE:HA	18:X:30:VAL:HG12	2.01	0.41
20:Z:128:VAL:HG21	20:Z:134:PRO:CD	2.51	0.41
20:Z:16:SER:HA	20:Z:19:ARG:HE	1.85	0.41
8:K:79:ARG:HG2	8:K:84:LEU:HB2	2.03	0.41
36:A:69:C:O2	36:A:73:A:O2'	2.28	0.41
3:E:161:GLY:O	3:E:163:GLU:HG2	2.21	0.41
16:V:43:GLU:H	16:V:43:GLU:HG2	1.48	0.41
21:0:43:THR:OG1	21:0:43:THR:O	2.36	0.41
36:A:1411:C:H2'	36:A:1412:A:H8	1.86	0.41
10:P:113:LYS:HE2	10:P:131:SER:HB2	2.02	0.41
6:H:154:PRO:HB2	6:H:155:SER:H	1.55	0.41
27:5:19:ARG:NH1	36:A:1264:G:OP1	2.54	0.41
36:A:2798:C:H5''	36:A:2799:A:OP2	2.20	0.41
36:A:1787:A:H2'	36:A:1787:A:N3	2.35	0.41
36:A:1267:U:H2'	36:A:1267:U:O2	2.20	0.41
36:A:1810:A:H8	36:A:1810:A:O5'	2.03	0.41
15:U:33:ARG:H	15:U:33:ARG:HG2	1.79	0.41
15:U:102:GLU:HA	15:U:103:PRO:HD2	1.75	0.41
36:A:2350:C:H2'	36:A:2351:G:O4'	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:8:21:LYS:HD3	36:A:651:G:OP1	2.21	0.41
4:F:6:VAL:HG13	4:F:121:GLY:O	2.21	0.41
36:A:1394:U:H4'	36:A:1603:A:O3'	2.21	0.41
36:A:1135:C:N4	36:A:1138:G:OP2	2.51	0.41
13:S:28:VAL:HG22	13:S:88:ASP:O	2.21	0.41
10:P:59:LEU:HG	10:P:61:ARG:NH1	2.36	0.41
31:9:2:LYS:HB3	31:9:2:LYS:HE3	1.76	0.41
5:G:111:LEU:N	5:G:112:PRO:HD3	2.36	0.41
3:E:120:TRP:O	3:E:121:ASN:HB2	2.21	0.41
6:H:137:ASP:C	6:H:141:VAL:HG23	2.42	0.41
36:A:2792:G:C2	36:A:2805:G:N1	2.88	0.41
2:D:146:GLU:O	2:D:147:LEU:HB3	2.21	0.41
13:S:92:TYR:C	13:S:94:TYR:H	2.23	0.41
31:9:30:PRO:CB	36:A:2527:C:H5''	2.51	0.41
12:R:38:VAL:O	12:R:41:ALA:HB3	2.21	0.41
11:Q:58:PHE:CE2	11:Q:117:ALA:HB1	2.55	0.41
14:T:129:ARG:NE	14:T:129:ARG:HA	2.36	0.41
11:Q:81:VAL:HG12	21:0:4:LYS:HG2	2.03	0.41
36:A:2850:A:N6	36:A:2868:A:O2'	2.54	0.41
15:U:11:ARG:HD3	15:U:15:LYS:HZ1	1.86	0.41
9:O:64:ARG:CZ	9:O:101:PRO:HD2	2.51	0.41
36:A:29:U:H2'	36:A:30:G:C8	2.56	0.41
15:U:76:TYR:CZ	15:U:80:ILE:HD11	2.56	0.41
36:A:2064:C:H2'	36:A:2065:C:C5	2.55	0.41
36:A:20:C:C2	36:A:21:A:C8	3.09	0.41
15:U:75:ASN:O	15:U:78:THR:OG1	2.39	0.41
36:A:1690:A:N6	36:A:1697:G:O2'	2.54	0.41
18:X:33:LYS:HE3	18:X:33:LYS:HB3	1.95	0.41
5:G:40:ASN:HA	5:G:90:LEU:O	2.21	0.41
35:B:22:U:H2'	35:B:23:G:C8	2.56	0.41
36:A:838:C:C2	36:A:941:A:C6	3.09	0.41
36:A:2641:G:H1	36:A:2773:C:N4	2.15	0.40
24:N:78:TYR:HA	24:N:79:PRO:HD3	1.85	0.40
1:C:42:VAL:CG1	1:C:44:VAL:HG23	2.51	0.40
36:A:2619:C:H2'	36:A:2620:C:C6	2.56	0.40
4:F:10:PRO:HG3	4:F:19:GLU:HA	2.03	0.40
36:A:577:G:O2'	36:A:1254:A:H5''	2.21	0.40
36:A:2199:A:H3'	36:A:2205:C:H6	1.86	0.40
36:A:1899:G:H21	36:A:1902:C:H41	1.69	0.40
2:D:69:ARG:HH22	2:D:105:ILE:HG13	1.85	0.40
16:V:33:VAL:HG13	16:V:59:ALA:C	2.41	0.40
36:A:1532:C:C2	36:A:1540:G:N2	2.89	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:0:53:MET:HG3	21:0:59:LEU:HD23	2.02	0.40
36:A:1273:U:H3'	36:A:1273:U:OP1	2.21	0.40
36:A:974(A):G:C6	36:A:989:G:C5	3.09	0.40
36:A:2598:A:H8	36:A:2598:A:O5'	2.04	0.40
30:8:17:THR:HB	36:A:650:C:O2'	2.20	0.40
36:A:539:G:C2	36:A:556:G:C4	3.09	0.40
36:A:826:U:H2'	36:A:827:U:H5'	2.03	0.40
36:A:976:C:H4'	36:A:1156:A:N6	2.35	0.40
6:H:125:VAL:HG22	6:H:131:VAL:HG13	2.03	0.40
36:A:223:A:H1'	36:A:407:G:N2	2.35	0.40
9:O:64:ARG:NH1	9:O:100:GLY:HA3	2.36	0.40
36:A:630:G:H22	36:A:632:A:H3'	1.86	0.40
36:A:38:A:H2'	36:A:39:C:H6	1.84	0.40
20:Z:61:LEU:C	20:Z:63:ASP:H	2.25	0.40
11:Q:31:ASP:HB3	11:Q:32:TYR:CD1	2.56	0.40
36:A:1179:C:H2'	36:A:1180:C:H6	1.86	0.40
30:8:30:ARG:HD3	30:8:30:ARG:HA	1.89	0.40
36:A:1548:C:H2'	36:A:1549:C:O4'	2.20	0.40
36:A:2321:G:N2	36:A:2322:A:O4'	2.54	0.40
1:C:213:VAL:CG1	1:C:225:ILE:HG12	2.50	0.40
22:1:21:ARG:O	22:1:23:LYS:N	2.45	0.40
36:A:1800:C:C2	36:A:1818:U:N3	2.89	0.40
14:T:33:LYS:HG2	14:T:74:ARG:NH2	2.35	0.40
2:D:91:ARG:NH1	2:D:91:ARG:HG2	2.35	0.40
5:G:135:LEU:HG	5:G:155:MET:HG2	2.04	0.40
36:A:1223:G:C6	36:A:1227:G:C6	3.10	0.40
36:A:1271:G:N2	36:A:1615:C:H42	2.17	0.40
36:A:2839:G:O6	36:A:2878:U:O2	2.38	0.40
5:G:77:ILE:HD12	36:A:2310:A:N3	2.36	0.40
36:A:679:C:H2'	36:A:680:G:H8	1.87	0.40
36:A:773:U:H2'	36:A:778:G:O2'	2.22	0.40
36:A:1829:A:H3'	36:A:1830:C:H6	1.83	0.40
28:6:5:VAL:N	36:A:2283:C:O3'	2.54	0.40
10:P:30:THR:HG22	10:P:31:ALA:N	2.35	0.40
19:Y:19:LYS:HB3	19:Y:20:TYR:H	1.65	0.40
36:A:2817:G:H21	36:A:2836:U:H4'	1.87	0.40
1:C:47:LYS:CD	1:C:169:THR:HG22	2.51	0.40
36:A:907:U:H2'	36:A:908:C:C5	2.56	0.40
11:Q:22:LYS:HD3	36:A:908:C:P	2.61	0.40
36:A:240:G:H1'	36:A:257:A:N6	2.37	0.40
25:2:32:LEU:HD12	25:2:53:LEU:HG	2.04	0.40
9:O:17:ARG:HA	9:O:17:ARG:HD2	1.84	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:P:39:LYS:HA	10:P:39:LYS:HD2	1.60	0.40
19:Y:11:ASP:CG	19:Y:12:THR:H	2.24	0.40
36:A:477:A:H2'	36:A:478:A:C8	2.56	0.40
36:A:1028:A:H2'	36:A:1029:A:H8	1.78	0.40
36:A:2014:A:H2'	36:A:2015:A:C5	2.57	0.40
36:A:1479:G:H2'	36:A:1480:G:C8	2.56	0.40
10:P:18:ARG:HA	10:P:18:ARG:HD2	1.80	0.40
3:E:110:GLY:N	36:A:2821:A:OP1	2.54	0.40
24:N:115:ARG:HG2	24:N:115:ARG:NH1	2.36	0.40
35:B:38:C:H42	35:B:44:G:H1	1.69	0.40
35:B:45:A:C2	35:B:46:A:H1'	2.57	0.40
11:Q:77:LYS:HB3	36:A:957:A:OP1	2.21	0.40
14:T:20:PRO:HB2	14:T:85:LYS:NZ	2.36	0.40
12:R:20:LEU:HD12	12:R:20:LEU:HA	1.81	0.40
36:A:814:C:H2'	36:A:815:C:H6	1.85	0.40
28:6:12:GLU:HG3	28:6:23:THR:HG22	2.02	0.40
2:D:186:HIS:ND1	2:D:187:GLY:N	2.70	0.40
18:X:36:LYS:CG	18:X:54:VAL:HB	2.51	0.40
36:A:1109:C:H6	36:A:1109:C:O5'	2.03	0.40
9:O:58:VAL:HG21	9:O:86:ILE:HD11	2.03	0.40
1:C:16:ASP:HA	1:C:17:PRO:HD2	1.92	0.40
24:N:51:PHE:CZ	24:N:119:ARG:HD2	2.56	0.40
20:Z:107:THR:HA	20:Z:108:PRO:HD2	1.96	0.40
36:A:706:A:H3'	36:A:707:G:H8	1.86	0.40
12:R:86:ARG:HB3	12:R:118:GLU:OE2	2.21	0.40
36:A:1144:G:C4	36:A:1145:C:C5	3.08	0.40
36:A:2275:C:H6	36:A:2275:C:H2'	1.60	0.40
36:A:11:G:N2	36:A:2628:C:OP1	2.50	0.40
36:A:2067:G:H4'	36:A:2068:U:OP2	2.20	0.40
24:N:76:SER:OG	36:A:2642:G:P	2.79	0.40
36:A:2031:A:N7	36:A:2498:C:H1'	2.35	0.40
24:N:95:PRO:C	24:N:97:ARG:H	2.24	0.40
36:A:1653:G:H8	36:A:1653:G:OP2	2.04	0.40
36:A:851:U:H2'	36:A:852:G:C8	2.57	0.40
19:Y:47:LYS:CB	36:A:482:A:H4'	2.51	0.40
36:A:337:C:C2	36:A:338:G:H1'	2.57	0.40
14:T:129:ARG:HD3	14:T:132:LYS:HB2	2.03	0.40
14:T:128:GLU:C	14:T:129:ARG:HE	2.24	0.40
10:P:89:ALA:HA	10:P:121:LYS:HE3	2.03	0.40
15:U:90:VAL:C	15:U:92:ARG:N	2.74	0.40
36:A:1830:C:C2	36:A:1831:G:N7	2.90	0.40
36:A:725:G:C6	36:A:726:G:C2	3.10	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:U:51:LYS:O	15:U:54:LYS:HB3	2.21	0.40
36:A:1844:C:H2'	36:A:1845:G:C8	2.56	0.40
18:X:64:LYS:HB3	18:X:64:LYS:HE2	1.68	0.40
1:C:48:LEU:CD1	1:C:50:ILE:HG12	2.51	0.40
4:F:60:SER:N	36:A:469:G:OP1	2.54	0.40
36:A:2011:U:H2'	36:A:2012:G:O4'	2.21	0.40
36:A:296:C:H2'	36:A:297:C:O4'	2.22	0.40
1:C:163:GLU:HG3	1:C:163:GLU:O	2.20	0.40
11:Q:68:ILE:HD11	11:Q:104:PHE:HD2	1.85	0.40
11:Q:74:TYR:HB2	11:Q:92:GLY:N	2.36	0.40
36:A:289:A:N6	36:A:351:G:N2	2.22	0.40
24:N:27:ALA:CB	24:N:103:VAL:HG22	2.52	0.40
4:F:4:VAL:H	4:F:24:LEU:HG	1.87	0.40
27:5:3:LYS:HG3	36:A:2613:U:OP2	2.21	0.40
36:A:946:G:H1	36:A:971:C:N4	2.19	0.40
6:H:123:PHE:HD1	6:H:133:VAL:HG22	1.87	0.40
1:C:78:ILE:HG22	1:C:97:GLY:O	2.22	0.40
5:G:72:ARG:C	36:A:2312:U:H5''	2.42	0.40
26:3:46:ASN:O	26:3:49:LYS:HB3	2.21	0.40
10:P:6:LEU:HB3	10:P:9:ASN:HB2	2.03	0.40
36:A:78:A:H2'	36:A:79:G:H8	1.87	0.40
23:4:12:ALA:HB2	23:4:28:LYS:O	2.21	0.40
31:9:25:VAL:CG2	31:9:34:GLN:HB2	2.51	0.40
36:A:1688:U:O2'	36:A:1700:A:N7	2.50	0.40
11:Q:25:ASP:HA	11:Q:102:VAL:H	1.86	0.40
9:O:6:THR:HG23	36:A:1666:G:O3'	2.21	0.40
4:F:57:VAL:HG12	4:F:59:TYR:CD2	2.56	0.40
27:5:18:ALA:C	27:5:21:SER:H	2.23	0.40
14:T:114:LEU:HA	14:T:114:LEU:HD23	1.83	0.40
2:D:67:PHE:HD2	2:D:67:PHE:HA	1.71	0.40
36:A:172:C:H2'	36:A:173:G:O4'	2.21	0.40
11:Q:67:ARG:NH2	36:A:906:G:O2'	2.54	0.40
20:Z:183:LEU:O	20:Z:186:GLU:HB3	2.21	0.40
13:S:107:GLU:O	13:S:109:GLY:N	2.48	0.40
19:Y:63:LYS:HB2	19:Y:64:GLU:H	1.62	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	
1	C	226/228 (99%)	109 (48%)	65 (29%)	52 (23%)	0	2
2	D	273/275 (99%)	177 (65%)	66 (24%)	30 (11%)	1	17
3	E	203/205 (99%)	123 (61%)	50 (25%)	30 (15%)	0	9
4	F	206/208 (99%)	130 (63%)	47 (23%)	29 (14%)	0	10
5	G	179/181 (99%)	116 (65%)	45 (25%)	18 (10%)	1	20
6	H	165/167 (99%)	115 (70%)	35 (21%)	15 (9%)	1	25
8	K	138/140 (99%)	97 (70%)	28 (20%)	13 (9%)	1	23
9	O	120/122 (98%)	88 (73%)	25 (21%)	7 (6%)	3	39
10	P	144/146 (99%)	82 (57%)	41 (28%)	21 (15%)	0	9
11	Q	139/141 (99%)	93 (67%)	32 (23%)	14 (10%)	1	20
12	R	115/117 (98%)	72 (63%)	28 (24%)	15 (13%)	0	13
13	S	97/99 (98%)	54 (56%)	22 (23%)	21 (22%)	0	3
14	T	136/138 (99%)	84 (62%)	33 (24%)	19 (14%)	0	10
15	U	115/117 (98%)	89 (77%)	21 (18%)	5 (4%)	4	48
16	V	99/101 (98%)	59 (60%)	22 (22%)	18 (18%)	0	5
17	W	111/113 (98%)	88 (79%)	16 (14%)	7 (6%)	2	37
18	X	91/93 (98%)	71 (78%)	12 (13%)	8 (9%)	1	25
19	Y	105/107 (98%)	48 (46%)	33 (31%)	24 (23%)	0	2
20	Z	183/185 (99%)	126 (69%)	42 (23%)	15 (8%)	1	27
21	0	82/84 (98%)	59 (72%)	15 (18%)	8 (10%)	1	21
22	1	91/93 (98%)	55 (60%)	19 (21%)	17 (19%)	0	4
23	4	33/35 (94%)	17 (52%)	13 (39%)	3 (9%)	1	25
24	N	136/138 (99%)	95 (70%)	25 (18%)	16 (12%)	1	15
25	2	69/71 (97%)	52 (75%)	13 (19%)	4 (6%)	3	39
26	3	58/60 (97%)	48 (83%)	7 (12%)	3 (5%)	3	42
27	5	57/59 (97%)	37 (65%)	10 (18%)	10 (18%)	0	5

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	6	48/50 (96%)	26 (54%)	11 (23%)	11 (23%)	0	2
29	7	47/49 (96%)	32 (68%)	11 (23%)	4 (8%)	1	26
30	8	62/64 (97%)	38 (61%)	18 (29%)	6 (10%)	1	21
31	9	35/37 (95%)	16 (46%)	14 (40%)	5 (14%)	0	10
32	e	70/103 (68%)	38 (54%)	25 (36%)	7 (10%)	1	20
All	All	3633/3726 (98%)	2334 (64%)	844 (23%)	455 (12%)	1	14

All (455) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	17	PRO
1	C	52	PRO
1	C	57	GLN
1	C	66	PRO
1	C	80	LYS
1	C	96	GLY
1	C	114	VAL
1	C	115	VAL
1	C	141	PRO
1	C	162	ILE
1	C	182	PRO
1	C	221	PRO
1	C	222	SER
1	C	227	PRO
2	D	36	PRO
2	D	79	VAL
2	D	89	SER
2	D	152	GLY
2	D	165	ILE
2	D	231	HIS
2	D	274	ARG
3	E	10	GLY
3	E	12	THR
3	E	56	PRO
3	E	60	ASN
3	E	61	ARG
3	E	66	HIS
3	E	67	PHE
3	E	74	PRO
3	E	133	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	E	134	ILE
4	F	3	GLU
4	F	10	PRO
4	F	15	SER
4	F	22	ALA
4	F	69	HIS
4	F	82	ILE
4	F	192	LEU
5	G	12	TYR
5	G	26	GLN
5	G	43	LEU
5	G	96	ARG
5	G	115	ARG
6	H	21	PRO
6	H	41	MET
6	H	107	VAL
6	H	164	TYR
8	K	61	ALA
9	O	29	ASN
9	O	48	PRO
10	P	13	ASN
10	P	39	LYS
10	P	51	PHE
10	P	57	THR
10	P	65	ARG
10	P	71	VAL
10	P	106	LEU
11	Q	20	ALA
11	Q	90	VAL
12	R	3	HIS
12	R	12	ARG
13	S	13	ARG
13	S	14	VAL
13	S	43	GLU
13	S	48	LEU
13	S	98	VAL
13	S	100	ALA
13	S	101	LEU
14	T	28	VAL
14	T	30	VAL
14	T	49	VAL
14	T	50	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
14	T	68	TYR
14	T	78	LEU
14	T	83	ILE
16	V	16	PRO
16	V	29	PRO
16	V	46	VAL
16	V	50	PRO
16	V	77	ALA
16	V	78	LYS
16	V	79	VAL
16	V	96	ILE
17	W	73	ALA
17	W	77	ASP
18	X	13	LEU
18	X	32	PRO
19	Y	19	LYS
19	Y	32	PRO
19	Y	40	GLU
19	Y	51	VAL
19	Y	56	PRO
19	Y	97	ARG
19	Y	107	ASP
20	Z	71	VAL
20	Z	72	ARG
21	0	56	ASP
21	0	73	GLY
22	1	20	ARG
24	N	17	ASP
24	N	18	ALA
24	N	50	ASP
24	N	56	ASN
24	N	63	THR
24	N	64	GLY
24	N	130	HIS
24	N	133	GLN
26	3	52	HIS
27	5	23	HIS
27	5	38	ALA
28	6	8	LYS
28	6	13	CYS
28	6	19	ARG
28	6	27	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
28	6	44	ARG
29	7	18	PHE
30	8	49	VAL
30	8	62	LEU
31	9	8	LYS
31	9	10	ILE
31	9	18	ARG
32	e	78	LEU
32	e	81	ILE
1	C	3	LYS
1	C	35	THR
1	C	42	VAL
1	C	43	GLU
1	C	50	ILE
1	C	53	ARG
1	C	55	SER
1	C	59	VAL
1	C	60	ARG
1	C	61	GLY
1	C	138	LEU
1	C	142	LYS
1	C	164	PHE
1	C	175	PRO
1	C	176	VAL
1	C	177	GLY
1	C	184	GLU
1	C	218	THR
1	C	228	HIS
2	D	3	VAL
2	D	43	ARG
2	D	118	VAL
2	D	123	ALA
2	D	127	VAL
2	D	166	GLN
2	D	178	PRO
2	D	219	PRO
2	D	239	ARG
3	E	13	ARG
3	E	51	PHE
3	E	68	ALA
3	E	72	VAL
3	E	77	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	E	86	PRO
3	E	94	GLU
3	E	126	PRO
3	E	179	GLU
3	E	187	ALA
4	F	7	TYR
4	F	14	PRO
4	F	73	ALA
4	F	84	VAL
4	F	90	PHE
4	F	92	PRO
4	F	133	ASN
4	F	181	LEU
4	F	194	MET
4	F	206	ILE
5	G	27	ASN
5	G	50	ALA
5	G	87	PRO
5	G	147	ASP
5	G	181	ARG
6	H	13	LYS
6	H	100	GLY
6	H	138	LYS
6	H	154	PRO
6	H	173	PRO
8	K	85	GLU
8	K	91	PRO
8	K	114	ASP
8	K	115	LEU
9	O	5	GLN
10	P	14	LYS
10	P	31	ALA
10	P	104	GLY
10	P	145	PRO
11	Q	78	PRO
11	Q	92	GLY
11	Q	102	VAL
11	Q	126	PRO
11	Q	127	ILE
11	Q	140	ALA
12	R	11	ASN
12	R	93	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	R	108	GLY
13	S	22	GLY
13	S	32	LEU
13	S	96	GLY
14	T	33	LYS
14	T	48	ILE
15	U	88	ILE
16	V	8	GLY
16	V	68	LYS
17	W	11	ARG
19	Y	28	LYS
19	Y	42	VAL
19	Y	53	PRO
19	Y	78	ALA
20	Z	73	GLN
20	Z	78	LYS
20	Z	120	ILE
21	0	35	ASN
21	0	75	LEU
21	0	83	PRO
22	1	18	ILE
22	1	34	THR
22	1	36	GLY
22	1	53	VAL
22	1	64	ALA
23	4	33	VAL
24	N	2	LYS
25	2	41	ILE
26	3	2	PRO
27	5	3	LYS
27	5	8	LYS
27	5	54	GLY
30	8	18	ALA
31	9	12	ASP
32	e	62	VAL
32	e	79	ARG
32	e	120	ALA
1	C	69	LEU
1	C	77	ALA
1	C	119	ASP
2	D	48	ARG
2	D	100	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	D	110	GLY
2	D	200	ASP
2	D	260	ARG
3	E	18	ASP
3	E	123	ALA
3	E	193	GLY
4	F	52	LYS
4	F	58	ALA
4	F	66	PRO
4	F	105	VAL
5	G	82	LEU
5	G	84	LYS
6	H	92	ILE
6	H	137	ASP
8	K	15	GLY
8	K	89	HIS
9	O	28	SER
9	O	91	LEU
10	P	17	LYS
10	P	28	GLY
10	P	148	LEU
11	Q	2	LEU
11	Q	101	ARG
11	Q	111	GLU
11	Q	134	ARG
13	S	47	THR
13	S	94	TYR
14	T	2	ASN
14	T	3	ARG
14	T	29	ARG
14	T	70	VAL
14	T	137	LYS
15	U	30	LYS
16	V	27	ALA
16	V	42	GLY
16	V	44	LYS
17	W	12	ILE
18	X	4	ALA
18	X	12	VAL
18	X	33	LYS
19	Y	17	SER
19	Y	18	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
19	Y	29	GLU
19	Y	60	PHE
19	Y	80	GLY
20	Z	53	ILE
20	Z	108	PRO
20	Z	152	ALA
20	Z	166	SER
20	Z	168	GLU
20	Z	169	GLU
21	0	33	ALA
22	1	10	LYS
22	1	15	ALA
22	1	19	GLN
22	1	23	LYS
22	1	28	GLY
22	1	40	ARG
22	1	87	PRO
23	4	7	PRO
24	N	67	LEU
24	N	127	ASP
26	3	16	PRO
29	7	45	ALA
30	8	30	ARG
30	8	64	TYR
32	e	114	LYS
1	C	167	ASP
1	C	202	PRO
1	C	212	SER
2	D	24	ILE
2	D	28	GLU
2	D	80	ALA
3	E	17	ASP
3	E	33	VAL
3	E	34	VAL
3	E	69	LYS
4	F	45	ARG
4	F	60	SER
4	F	178	PRO
5	G	16	ARG
5	G	35	GLU
5	G	142	PRO
6	H	124	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	H	155	SER
8	K	30	HIS
8	K	109	LYS
9	O	13	ASN
10	P	9	ASN
10	P	43	GLY
11	Q	54	MET
12	R	8	ARG
12	R	10	LEU
12	R	57	ARG
12	R	102	GLU
13	S	24	LEU
13	S	66	ALA
13	S	67	ARG
13	S	83	LYS
13	S	93	LYS
13	S	106	ARG
14	T	80	SER
14	T	86	ILE
14	T	107	ASP
15	U	90	VAL
15	U	92	ARG
16	V	53	GLU
16	V	80	GLN
17	W	75	TYR
19	Y	35	TYR
19	Y	81	LYS
19	Y	88	LYS
19	Y	101	LYS
20	Z	23	LYS
20	Z	30	ASN
22	1	25	LYS
24	N	23	LEU
25	2	18	PRO
27	5	51	TYR
27	5	56	LYS
28	6	31	PRO
28	6	49	HIS
29	7	15	THR
30	8	53	PRO
1	C	71	LYS
1	C	136	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	139	PRO
1	C	180	SER
1	C	224	ARG
2	D	233	HIS
2	D	259	THR
3	E	122	PHE
4	F	25	PRO
6	H	59	ARG
8	K	51	ALA
8	K	90	LYS
8	K	122	ALA
9	O	34	THR
10	P	12	ALA
10	P	38	GLN
10	P	49	ARG
12	R	4	LEU
12	R	32	GLY
12	R	38	VAL
12	R	61	HIS
13	S	82	ILE
14	T	55	ASN
15	U	102	GLU
16	V	48	GLY
16	V	81	TYR
17	W	15	ARG
17	W	65	LEU
18	X	23	GLU
20	Z	83	PRO
21	0	6	GLY
21	0	11	ARG
22	1	22	GLY
22	1	63	ALA
24	N	3	THR
25	2	17	SER
25	2	70	GLN
28	6	6	ARG
28	6	20	ASN
1	C	13	GLU
1	C	22	THR
1	C	122	GLY
1	C	171	ALA
1	C	204	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	E	155	LYS
4	F	78	ILE
5	G	151	ALA
6	H	48	GLY
12	R	63	ARG
13	S	85	VAL
13	S	108	GLY
14	T	31	SER
22	1	12	PRO
24	N	110	GLY
27	5	49	CYS
28	6	26	ASN
31	9	3	VAL
32	e	82	THR
1	C	215	VAL
2	D	42	GLY
3	E	14	ILE
8	K	72	PRO
11	Q	27	VAL
12	R	58	GLY
20	Z	39	VAL
24	N	77	GLY
27	5	7	PRO
29	7	46	VAL
2	D	106	ILE
2	D	232	PRO
4	F	24	LEU
16	V	41	GLY
19	Y	74	PRO
5	G	28	VAL
5	G	85	GLY
19	Y	49	VAL
19	Y	66	PRO
28	6	48	VAL
1	C	49	GLY
1	C	150	ILE
2	D	246	PRO
4	F	61	GLY
4	F	150	GLY
10	P	97	PRO
18	X	7	VAL
18	X	52	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
23	4	5	ILE
27	5	57	VAL
19	Y	98	VAL
24	N	126	PRO
10	P	48	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	180/180 (100%)	138 (77%)	42 (23%)	1	9
2	D	217/217 (100%)	164 (76%)	53 (24%)	1	8
3	E	165/165 (100%)	131 (79%)	34 (21%)	2	13
4	F	165/165 (100%)	127 (77%)	38 (23%)	1	10
5	G	155/155 (100%)	118 (76%)	37 (24%)	1	9
6	H	136/136 (100%)	109 (80%)	27 (20%)	2	15
8	K	105/105 (100%)	94 (90%)	11 (10%)	10	49
9	O	100/100 (100%)	80 (80%)	20 (20%)	2	15
10	P	112/112 (100%)	80 (71%)	32 (29%)	0	5
11	Q	111/111 (100%)	81 (73%)	30 (27%)	1	7
12	R	100/100 (100%)	72 (72%)	28 (28%)	0	6
13	S	77/77 (100%)	55 (71%)	22 (29%)	0	5
14	T	120/120 (100%)	99 (82%)	21 (18%)	3	21
15	U	93/93 (100%)	77 (83%)	16 (17%)	3	22
16	V	82/82 (100%)	61 (74%)	21 (26%)	1	8
17	W	92/92 (100%)	73 (79%)	19 (21%)	2	13
18	X	75/75 (100%)	59 (79%)	16 (21%)	1	12
19	Y	88/88 (100%)	69 (78%)	19 (22%)	1	11
20	Z	162/162 (100%)	129 (80%)	33 (20%)	2	14
21	0	66/66 (100%)	55 (83%)	11 (17%)	3	25
22	1	78/78 (100%)	61 (78%)	17 (22%)	1	11

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	4	31/31 (100%)	23 (74%)	8 (26%)	1	7
24	N	117/117 (100%)	100 (86%)	17 (14%)	5	32
25	2	66/66 (100%)	55 (83%)	11 (17%)	3	25
26	3	52/52 (100%)	45 (86%)	7 (14%)	6	36
27	5	51/51 (100%)	42 (82%)	9 (18%)	3	21
28	6	49/49 (100%)	36 (74%)	13 (26%)	1	7
29	7	42/42 (100%)	39 (93%)	3 (7%)	21	69
30	8	54/54 (100%)	35 (65%)	19 (35%)	0	2
31	9	34/34 (100%)	29 (85%)	5 (15%)	4	31
32	e	54/54 (100%)	47 (87%)	7 (13%)	6	38
All	All	3029/3029 (100%)	2383 (79%)	646 (21%)	1	12

All (646) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	6	LYS
1	C	7	ARG
1	C	9	ARG
1	C	12	LEU
1	C	13	GLU
1	C	15	VAL
1	C	16	ASP
1	C	19	LYS
1	C	24	ASP
1	C	28	ARG
1	C	32	GLU
1	C	37	LYS
1	C	43	GLU
1	C	45	HIS
1	C	47	LYS
1	C	48	LEU
1	C	53	ARG
1	C	60	ARG
1	C	71	LYS
1	C	73	VAL
1	C	74	ARG
1	C	76	LEU
1	C	83	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	93	ASP
1	C	105	LEU
1	C	106	ASP
1	C	112	ASP
1	C	117	THR
1	C	131	ILE
1	C	138	LEU
1	C	150	ILE
1	C	161	ARG
1	C	164	PHE
1	C	167	ASP
1	C	169	THR
1	C	172	ILE
1	C	176	VAL
1	C	198	GLU
1	C	214	TYR
1	C	215	VAL
1	C	216	THR
1	C	224	ARG
2	D	4	LYS
2	D	7	LYS
2	D	24	ILE
2	D	25	THR
2	D	26	LYS
2	D	28	GLU
2	D	33	LEU
2	D	35	LYS
2	D	43	ARG
2	D	44	ASN
2	D	63	ARG
2	D	64	ILE
2	D	65	ILE
2	D	67	PHE
2	D	71	ASP
2	D	73	VAL
2	D	78	LYS
2	D	82	ILE
2	D	91	ARG
2	D	92	ILE
2	D	95	LEU
2	D	96	HIS
2	D	97	TYR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	D	105	ILE
2	D	106	ILE
2	D	115	GLN
2	D	116	GLN
2	D	117	VAL
2	D	122	ASP
2	D	131	LEU
2	D	136	ILE
2	D	142	VAL
2	D	146	GLU
2	D	165	ILE
2	D	169	GLU
2	D	174	ILE
2	D	177	LEU
2	D	192	THR
2	D	200	ASP
2	D	226	MET
2	D	230	ASP
2	D	233	HIS
2	D	239	ARG
2	D	244	ARG
2	D	250	TRP
2	D	252	TRP
2	D	257	LEU
2	D	259	THR
2	D	261	LYS
2	D	262	ARG
2	D	263	ARG
2	D	268	ARG
2	D	271	ILE
3	E	4	ILE
3	E	9	VAL
3	E	11	MET
3	E	17	ASP
3	E	35	GLN
3	E	38	THR
3	E	44	TYR
3	E	51	PHE
3	E	59	VAL
3	E	67	PHE
3	E	83	ASP
3	E	87	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	E	89	ASP
3	E	94	GLU
3	E	96	PHE
3	E	102	VAL
3	E	109	LYS
3	E	113	PHE
3	E	127	ASP
3	E	129	HIS
3	E	132	HIS
3	E	134	ILE
3	E	137	HIS
3	E	146	THR
3	E	154	LYS
3	E	163	GLU
3	E	164	ARG
3	E	165	VAL
3	E	172	VAL
3	E	195	LEU
3	E	196	VAL
3	E	197	ILE
3	E	199	ARG
3	E	200	GLU
4	F	6	VAL
4	F	8	GLN
4	F	9	ILE
4	F	12	LEU
4	F	18	ARG
4	F	19	GLU
4	F	28	ILE
4	F	32	LEU
4	F	33	LEU
4	F	40	GLN
4	F	43	LYS
4	F	45	ARG
4	F	46	ARG
4	F	62	ARG
4	F	65	TRP
4	F	72	ARG
4	F	74	ARG
4	F	75	HIS
4	F	82	ILE
4	F	89	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	F	106	ARG
4	F	125	LEU
4	F	136	THR
4	F	137	LYS
4	F	154	VAL
4	F	155	LEU
4	F	170	LEU
4	F	172	TRP
4	F	175	THR
4	F	186	ILE
4	F	188	ARG
4	F	189	THR
4	F	190	GLU
4	F	192	LEU
4	F	194	MET
4	F	197	ASP
4	F	201	VAL
4	F	205	ARG
5	G	5	VAL
5	G	10	LYS
5	G	11	TYR
5	G	12	TYR
5	G	16	ARG
5	G	33	ARG
5	G	34	LEU
5	G	35	GLU
5	G	39	ILE
5	G	49	ASP
5	G	55	LYS
5	G	60	LEU
5	G	63	ILE
5	G	64	THR
5	G	74	LYS
5	G	86	MET
5	G	94	LEU
5	G	98	ARG
5	G	105	LYS
5	G	106	LEU
5	G	113	ARG
5	G	130	ASN
5	G	136	ARG
5	G	141	PHE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	G	144	ILE
5	G	145	THR
5	G	147	ASP
5	G	150	ASP
5	G	152	LEU
5	G	153	ARG
5	G	159	VAL
5	G	164	GLU
5	G	165	THR
5	G	167	GLU
5	G	168	GLU
5	G	176	LEU
5	G	181	ARG
6	H	15	VAL
6	H	17	VAL
6	H	27	LYS
6	H	34	GLU
6	H	35	VAL
6	H	37	VAL
6	H	41	MET
6	H	42	ARG
6	H	43	VAL
6	H	44	VAL
6	H	51	ARG
6	H	67	LEU
6	H	71	LEU
6	H	85	LYS
6	H	86	GLU
6	H	89	ILE
6	H	97	ARG
6	H	105	LEU
6	H	110	SER
6	H	119	GLU
6	H	127	GLU
6	H	129	THR
6	H	138	LYS
6	H	147	ASN
6	H	162	ILE
6	H	167	GLU
6	H	175	LYS
8	K	16	LYS
8	K	37	PHE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
8	K	41	PHE
8	K	59	ILE
8	K	62	ASP
8	K	78	ILE
8	K	90	LYS
8	K	95	LYS
8	K	99	ILE
8	K	112	MET
8	K	126	MET
9	O	3	GLN
9	O	9	GLU
9	O	24	VAL
9	O	34	THR
9	O	35	VAL
9	O	39	ILE
9	O	58	VAL
9	O	59	LYS
9	O	62	VAL
9	O	67	LYS
9	O	77	ILE
9	O	80	ASP
9	O	82	ASN
9	O	88	ASN
9	O	91	LEU
9	O	107	ARG
9	O	108	GLU
9	O	112	MET
9	O	114	ILE
9	O	117	LEU
10	P	7	ARG
10	P	9	ASN
10	P	15	ARG
10	P	16	ARG
10	P	18	ARG
10	P	27	HIS
10	P	32	THR
10	P	38	GLN
10	P	39	LYS
10	P	42	SER
10	P	46	LYS
10	P	55	ARG
10	P	57	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
10	P	60	MET
10	P	62	LEU
10	P	74	GLU
10	P	77	ARG
10	P	83	VAL
10	P	84	ASN
10	P	85	LEU
10	P	90	ARG
10	P	91	PHE
10	P	98	GLU
10	P	106	LEU
10	P	107	LYS
10	P	108	LYS
10	P	110	TYR
10	P	111	ARG
10	P	123	LEU
10	P	125	VAL
10	P	135	LEU
10	P	138	LEU
11	Q	1	MET
11	Q	3	MET
11	Q	7	MET
11	Q	8	LYS
11	Q	14	ARG
11	Q	17	LEU
11	Q	26	TYR
11	Q	31	ASP
11	Q	43	THR
11	Q	45	GLN
11	Q	46	GLN
11	Q	56	ARG
11	Q	66	ILE
11	Q	68	ILE
11	Q	74	TYR
11	Q	90	VAL
11	Q	93	TYR
11	Q	96	VAL
11	Q	98	LYS
11	Q	101	ARG
11	Q	103	MET
11	Q	104	PHE
11	Q	115	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	Q	116	GLU
11	Q	125	LEU
11	Q	128	LYS
11	Q	131	ILE
11	Q	135	ASP
11	Q	137	TYR
11	Q	139	GLU
12	R	2	ARG
12	R	3	HIS
12	R	4	LEU
12	R	8	ARG
12	R	10	LEU
12	R	15	SER
12	R	22	ARG
12	R	23	ASN
12	R	24	GLN
12	R	28	LEU
12	R	29	LEU
12	R	44	LEU
12	R	45	ARG
12	R	50	HIS
12	R	60	LEU
12	R	68	ARG
12	R	69	ASP
12	R	71	GLN
12	R	76	VAL
12	R	80	PHE
12	R	81	ASP
12	R	99	LYS
12	R	100	LEU
12	R	102	GLU
12	R	107	ASP
12	R	111	LEU
12	R	113	LEU
12	R	115	GLU
13	S	12	PHE
13	S	13	ARG
13	S	15	ARG
13	S	17	ARG
13	S	18	ILE
13	S	20	ARG
13	S	23	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
13	S	40	ILE
13	S	42	ASP
13	S	47	THR
13	S	53	SER
13	S	54	LEU
13	S	71	ARG
13	S	82	ILE
13	S	85	VAL
13	S	89	ARG
13	S	93	LYS
13	S	97	ARG
13	S	99	LYS
13	S	101	LEU
13	S	103	GLU
13	S	106	ARG
14	T	11	GLU
14	T	13	ARG
14	T	23	ARG
14	T	27	THR
14	T	30	VAL
14	T	33	LYS
14	T	46	GLU
14	T	57	PHE
14	T	61	PHE
14	T	65	LYS
14	T	70	VAL
14	T	74	ARG
14	T	78	LEU
14	T	82	LEU
14	T	84	GLN
14	T	90	GLN
14	T	110	ILE
14	T	114	LEU
14	T	115	ARG
14	T	118	ARG
14	T	125	ARG
15	U	11	ARG
15	U	14	HIS
15	U	16	LYS
15	U	28	ARG
15	U	33	ARG
15	U	38	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
15	U	51	LYS
15	U	55	ARG
15	U	57	PHE
15	U	74	LEU
15	U	91	ASP
15	U	97	ASP
15	U	101	ARG
15	U	108	GLU
15	U	111	GLU
15	U	114	LYS
16	V	7	THR
16	V	10	LYS
16	V	18	LEU
16	V	19	LYS
16	V	21	ARG
16	V	25	LEU
16	V	26	ASP
16	V	33	VAL
16	V	37	VAL
16	V	40	LEU
16	V	43	GLU
16	V	57	VAL
16	V	60	GLU
16	V	64	HIS
16	V	74	LYS
16	V	75	PHE
16	V	79	VAL
16	V	80	GLN
16	V	88	ARG
16	V	91	TYR
16	V	99	ILE
17	W	9	TYR
17	W	11	ARG
17	W	13	SER
17	W	15	ARG
17	W	19	LEU
17	W	25	ARG
17	W	27	LYS
17	W	40	ASN
17	W	46	PHE
17	W	51	LEU
17	W	66	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
17	W	86	LEU
17	W	88	ARG
17	W	94	ASP
17	W	95	ILE
17	W	96	ILE
17	W	100	THR
17	W	107	LEU
17	W	113	LYS
18	X	6	ASP
18	X	8	ILE
18	X	27	THR
18	X	28	PHE
18	X	35	THR
18	X	55	ASN
18	X	57	LEU
18	X	58	HIS
18	X	63	LYS
18	X	68	ARG
18	X	70	LEU
18	X	75	ASP
18	X	76	ARG
18	X	82	GLN
18	X	88	LYS
18	X	95	LEU
19	Y	2	ARG
19	Y	5	MET
19	Y	6	HIS
19	Y	9	LYS
19	Y	13	VAL
19	Y	14	LEU
19	Y	19	LYS
19	Y	29	GLU
19	Y	33	LYS
19	Y	38	ILE
19	Y	44	ILE
19	Y	47	LYS
19	Y	49	VAL
19	Y	50	ARG
19	Y	75	ILE
19	Y	89	PHE
19	Y	90	LEU
19	Y	97	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
19	Y	102	CYS
20	Z	5	LEU
20	Z	6	LYS
20	Z	8	TYR
20	Z	20	ARG
20	Z	28	MET
20	Z	29	TYR
20	Z	35	ARG
20	Z	44	PHE
20	Z	46	LYS
20	Z	49	ARG
20	Z	59	LEU
20	Z	81	ARG
20	Z	85	HIS
20	Z	86	VAL
20	Z	87	ASP
20	Z	97	GLU
20	Z	98	MET
20	Z	112	ARG
20	Z	123	ASP
20	Z	124	ILE
20	Z	126	VAL
20	Z	127	LYS
20	Z	131	ARG
20	Z	133	ILE
20	Z	141	VAL
20	Z	144	LEU
20	Z	145	GLU
20	Z	148	ASP
20	Z	150	LEU
20	Z	156	LYS
20	Z	162	GLU
20	Z	175	VAL
20	Z	181	GLU
21	0	3	HIS
21	0	12	ASN
21	0	20	ARG
21	0	27	GLU
21	0	37	LEU
21	0	43	THR
21	0	57	PHE
21	0	58	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	0	59	LEU
21	0	64	ASP
21	0	68	GLU
22	1	5	CYS
22	1	17	SER
22	1	23	LYS
22	1	26	ARG
22	1	32	LYS
22	1	40	ARG
22	1	41	ARG
22	1	42	GLN
22	1	43	TYR
22	1	46	LEU
22	1	50	ARG
22	1	57	GLU
22	1	58	ILE
22	1	61	ARG
22	1	82	LEU
22	1	83	GLU
22	1	90	ILE
23	4	6	HIS
23	4	9	LEU
23	4	13	ARG
23	4	23	GLU
23	4	28	LYS
23	4	30	GLU
23	4	31	ILE
23	4	32	TYR
24	N	1	MET
24	N	7	LYS
24	N	32	THR
24	N	42	TRP
24	N	45	ASN
24	N	48	MET
24	N	50	ASP
24	N	71	ILE
24	N	87	LEU
24	N	96	GLU
24	N	99	LEU
24	N	111	PRO
24	N	112	LEU
24	N	127	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
24	N	131	GLN
24	N	137	LYS
24	N	138	LEU
25	2	8	LYS
25	2	30	ARG
25	2	34	GLU
25	2	35	LEU
25	2	37	PHE
25	2	45	SER
25	2	47	ASN
25	2	51	ARG
25	2	53	LEU
25	2	64	LEU
25	2	69	ARG
26	3	8	LEU
26	3	17	LYS
26	3	29	ARG
26	3	31	LEU
26	3	37	LEU
26	3	53	LEU
26	3	60	GLU
27	5	3	LYS
27	5	4	HIS
27	5	15	ARG
27	5	23	HIS
27	5	44	THR
27	5	51	TYR
27	5	55	ARG
27	5	56	LYS
27	5	58	LEU
28	6	6	ARG
28	6	9	LEU
28	6	11	LEU
28	6	15	GLU
28	6	18	ARG
28	6	19	ARG
28	6	29	ASN
28	6	34	LEU
28	6	37	ARG
28	6	39	TYR
28	6	47	THR
28	6	48	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
28	6	49	HIS
29	7	40	TRP
29	7	41	ARG
29	7	42	LEU
30	8	14	VAL
30	8	15	LYS
30	8	16	ILE
30	8	17	THR
30	8	25	MET
30	8	27	THR
30	8	30	ARG
30	8	31	HIS
30	8	34	TRP
30	8	36	LYS
30	8	42	ARG
30	8	46	ARG
30	8	48	PHE
30	8	52	LYS
30	8	56	GLU
30	8	59	LYS
30	8	61	LEU
30	8	62	LEU
30	8	64	TYR
31	9	14	CYS
31	9	19	ARG
31	9	24	TYR
31	9	28	GLU
31	9	35	ARG
32	e	62	VAL
32	e	77	GLU
32	e	78	LEU
32	e	90	LYS
32	e	91	ASP
32	e	94	GLU
32	e	106	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

Mol	Chain	Res	Type
2	D	115	GLN
2	D	143	HIS
3	E	129	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	E	135	HIS
3	E	143	ASN
4	F	8	GLN
4	F	40	GLN
4	F	67	GLN
4	F	75	HIS
5	G	130	ASN
10	P	84	ASN
12	R	13	HIS
12	R	23	ASN
15	U	104	GLN
24	N	45	ASN
24	N	69	GLN
24	N	94	HIS
24	N	131	GLN
24	N	133	GLN
26	3	46	ASN
28	6	20	ASN
30	8	33	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
35	B	118/119 (99%)	26 (22%)	2 (1%)
36	A	2878/2879 (99%)	729 (25%)	26 (0%)
All	All	2996/2998 (99%)	755 (25%)	28 (0%)

All (755) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
35	B	13	A
35	B	15	A
35	B	16	G
35	B	25	A
35	B	30	C
35	B	41	U
35	B	42	C
35	B	44	G
35	B	47	C
35	B	48	A
35	B	64	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
35	B	67	G
35	B	68	C
35	B	71	C
35	B	72	G
35	B	73	A
35	B	77	U
35	B	86	G
35	B	87	G
35	B	97	G
35	B	98	G
35	B	99	A
35	B	101	A
35	B	107	U
35	B	109	G
35	B	111	U
36	A	7	G
36	A	10	G
36	A	11	G
36	A	12	U
36	A	15	G
36	A	17	G
36	A	33	U
36	A	34	C
36	A	35	G
36	A	46	C
36	A	49	A
36	A	51	G
36	A	58	G
36	A	61	G
36	A	63	U
36	A	73	A
36	A	75	G
36	A	84	A
36	A	90	U
36	A	98	G
36	A	99	U
36	A	101	G
36	A	102	G
36	A	104	U
36	A	105	C
36	A	110	G
36	A	115	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	117	G
36	A	118	A
36	A	119	A
36	A	120	U
36	A	122	G
36	A	123	G
36	A	149	A
36	A	163	U
36	A	171	G
36	A	181	A
36	A	186	G
36	A	196	A
36	A	197	A
36	A	199	A
36	A	205	G
36	A	216	A
36	A	217	G
36	A	221	A
36	A	222	A
36	A	227	A
36	A	229	A
36	A	230	U
36	A	233	A
36	A	241	A
36	A	242	G
36	A	248	G
36	A	250	G
36	A	256	A
36	A	270(B)	A
36	A	270(D)	C
36	A	270(M)	U
36	A	270(N)	U
36	A	270(O)	G
36	A	270(P)	U
36	A	270(Q)	C
36	A	270(R)	C
36	A	270(W)	G
36	A	271(D)	U
36	A	271	G
36	A	273(A)	G
36	A	274	G
36	A	275	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	277	C
36	A	278	A
36	A	279	C
36	A	280	C
36	A	281	G
36	A	288	C
36	A	294	A
36	A	302	C
36	A	310	A
36	A	314	A
36	A	323	G
36	A	324	A
36	A	329	G
36	A	330	A
36	A	332	A
36	A	333	G
36	A	338	G
36	A	339	U
36	A	345	A
36	A	346	A
36	A	352	G
36	A	380	U
36	A	381	G
36	A	386	G
36	A	387	U
36	A	396	G
36	A	405	U
36	A	406	G
36	A	411	G
36	A	416	C
36	A	422	A
36	A	429	A
36	A	432	A
36	A	434	U
36	A	441	U
36	A	444	C
36	A	446	G
36	A	448	U
36	A	449	A
36	A	451	C
36	A	456	C
36	A	457	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	459	U
36	A	464	U
36	A	465	G
36	A	467	G
36	A	470	A
36	A	475	U
36	A	480	A
36	A	481	G
36	A	483	A
36	A	484	C
36	A	505	A
36	A	508	G
36	A	509	C
36	A	512	G
36	A	513	A
36	A	516	C
36	A	527	C
36	A	529	A
36	A	530	G
36	A	531	C
36	A	532	A
36	A	533	G
36	A	549	G
36	A	556	G
36	A	559	G
36	A	563	G
36	A	572	A
36	A	573	G
36	A	574	C
36	A	575	A
36	A	578	A
36	A	583	G
36	A	585	G
36	A	586	A
36	A	588	U
36	A	599	G
36	A	603	A
36	A	615	G
36	A	616	A
36	A	617	G
36	A	620	G
36	A	627	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	628	G
36	A	634	C
36	A	637	A
36	A	644	A
36	A	645	C
36	A	646	A
36	A	649	G
36	A	652	U
36	A	654	U
36	A	656	G
36	A	657	U
36	A	667	U
36	A	671	C
36	A	679	C
36	A	683	C
36	A	685	A
36	A	686	G
36	A	691	C
36	A	695	G
36	A	715	G
36	A	716	A
36	A	717	G
36	A	723	G
36	A	724	U
36	A	726	G
36	A	730	C
36	A	735	A
36	A	736	C
36	A	737	C
36	A	738	G
36	A	748	G
36	A	753	C
36	A	757	U
36	A	768	G
36	A	775	G
36	A	776	G
36	A	779	U
36	A	780	G
36	A	781	A
36	A	782	A
36	A	784	A
36	A	785	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	788	A
36	A	789	A
36	A	792	G
36	A	800	A
36	A	805	G
36	A	806	C
36	A	812	C
36	A	817	C
36	A	819	A
36	A	825	C
36	A	826	U
36	A	827	U
36	A	828	U
36	A	829	A
36	A	831	G
36	A	836	G
36	A	843	G
36	A	846	C
36	A	847	U
36	A	852	G
36	A	859	G
36	A	860	U
36	A	883	G
36	A	887	A
36	A	888	C
36	A	890	A
36	A	896	A
36	A	897	C
36	A	899	A
36	A	906	G
36	A	910	A
36	A	914	C
36	A	917	A
36	A	919	G
36	A	929	G
36	A	931	G
36	A	932	G
36	A	941	A
36	A	943	U
36	A	945	A
36	A	946	G
36	A	947	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	959	A
36	A	961	C
36	A	969	U
36	A	971	C
36	A	972	G
36	A	974(A)	G
36	A	974(B)	C
36	A	980	A
36	A	983	A
36	A	989	G
36	A	990	A
36	A	996	A
36	A	997	G
36	A	1005	C
36	A	1007	C
36	A	1008	C
36	A	1009	A
36	A	1012	U
36	A	1013	C
36	A	1022	G
36	A	1023	U
36	A	1024	G
36	A	1025	G
36	A	1026	U
36	A	1033	U
36	A	1039	G
36	A	1041	C
36	A	1042	G
36	A	1046	A
36	A	1047	G
36	A	1048	A
36	A	1054	A
36	A	1070	A
36	A	1071	G
36	A	1072	C
36	A	1073	A
36	A	1075	C
36	A	1077	A
36	A	1078	U
36	A	1079	C
36	A	1085	A
36	A	1088	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	1090	U
36	A	1096	A
36	A	1106	G
36	A	1107	G
36	A	1112	G
36	A	1117	G
36	A	1130	U
36	A	1132	A
36	A	1133	U
36	A	1135	C
36	A	1136	G
36	A	1138	G
36	A	1139	G
36	A	1140	C
36	A	114(B)	A
36	A	1154	G
36	A	1155	A
36	A	1157	G
36	A	1175	U
36	A	1176	G
36	A	1186	G
36	A	1188	U
36	A	1199	U
36	A	1204	A
36	A	1206	G
36	A	1210	A
36	A	1212	G
36	A	1221	C
36	A	1240	U
36	A	1241	A
36	A	1242	A
36	A	1244	G
36	A	1248	G
36	A	1249	U
36	A	1253	A
36	A	1255	U
36	A	1256	G
36	A	1257	C
36	A	1262	A
36	A	1271	G
36	A	1272	A
36	A	1273	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	1274	A
36	A	1284	A
36	A	1286	A
36	A	1287	A
36	A	1288	U
36	A	1300	U
36	A	1301	A
36	A	1302	A
36	A	1311	G
36	A	1312	U
36	A	1314	C
36	A	1321	A
36	A	1324	G
36	A	1325	G
36	A	1326	U
36	A	1327	C
36	A	1329	U
36	A	1332	G
36	A	1333	C
36	A	1341	U
36	A	1342	A
36	A	1343	G
36	A	1344	G
36	A	1345	C
36	A	1346	G
36	A	1349	A
36	A	1352	U
36	A	1359	A
36	A	1360	A
36	A	1365	A
36	A	1380	G
36	A	1382	G
36	A	1384	A
36	A	1385	G
36	A	1396	U
36	A	1397	U
36	A	1416	G
36	A	1420	U
36	A	1421	G
36	A	1427	A
36	A	1428	C
36	A	1429	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	1434	A
36	A	144(B)	A
36	A	1445	C
36	A	1451	C
36	A	1453	A
36	A	1454	U
36	A	1455	G
36	A	1458	C
36	A	1460	A
36	A	1467	C
36	A	1483	G
36	A	1485	G
36	A	1490	A
36	A	1491	G
36	A	1493	C
36	A	1494	A
36	A	1495	A
36	A	1497	U
36	A	1498	C
36	A	1503	U
36	A	1522	G
36	A	1523	U
36	A	1536	A
36	A	1538	G
36	A	1542	G
36	A	1543	A
36	A	1544	C
36	A	1545	A
36	A	1546	A
36	A	1547	C
36	A	1554	A
36	A	1555	G
36	A	1558	A
36	A	1559	G
36	A	1566	A
36	A	1567	A
36	A	1569	A
36	A	1583	A
36	A	1585	C
36	A	1586	A
36	A	1595	G
36	A	1598	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	1602	U
36	A	1603	A
36	A	1608	A
36	A	1610	A
36	A	1614	A
36	A	1615	C
36	A	1616	A
36	A	1617	C
36	A	1618	A
36	A	1631	A
36	A	1633	G
36	A	1640	C
36	A	1646	C
36	A	1648	C
36	A	1653	G
36	A	1654	A
36	A	1657	C
36	A	1664	A
36	A	1668	A
36	A	1670	C
36	A	1674	G
36	A	1678	G
36	A	1688	U
36	A	1694	C
36	A	1696	G
36	A	1698	A
36	A	1699	G
36	A	1700	A
36	A	1702	G
36	A	1729	A
36	A	1730	U
36	A	1731	G
36	A	1732	A
36	A	1757	U
36	A	1763	G
36	A	1764	G
36	A	1773	A
36	A	1775	U
36	A	1780	A
36	A	1781	C
36	A	1783	A
36	A	1784	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	1785	A
36	A	1787	A
36	A	1790	C
36	A	1791	A
36	A	1796	U
36	A	1799	G
36	A	1800	C
36	A	1802	A
36	A	1803	A
36	A	1809	A
36	A	1811	G
36	A	1815	A
36	A	1816	G
36	A	1817	G
36	A	1820	U
36	A	1821	A
36	A	1829	A
36	A	1847	A
36	A	1859	A
36	A	1878	G
36	A	1888	G
36	A	1889	A
36	A	1900	A
36	A	1902	C
36	A	1905	C
36	A	1906	G
36	A	1912	A
36	A	1914	C
36	A	1924	C
36	A	1929	G
36	A	1930	G
36	A	1936	A
36	A	1937	A
36	A	1938	A
36	A	1939	U
36	A	1944	U
36	A	1954	G
36	A	1955	U
36	A	1963	U
36	A	1964	G
36	A	1965	C
36	A	1966	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	1967	C
36	A	1970	A
36	A	1971	A
36	A	1972	A
36	A	1977	A
36	A	1978	A
36	A	1982	C
36	A	1992	G
36	A	1993	U
36	A	1996	C
36	A	2013	A
36	A	2020	A
36	A	2021	C
36	A	2023	G
36	A	2027	G
36	A	2028	U
36	A	2030	A
36	A	2031	A
36	A	2032	G
36	A	2033	A
36	A	2034	U
36	A	2036	C
36	A	2038	G
36	A	2039	C
36	A	2040	C
36	A	2041	U
36	A	2042	A
36	A	2043	C
36	A	2052	G
36	A	2055	C
36	A	2056	G
36	A	2059	A
36	A	2060	A
36	A	2061	G
36	A	2062	A
36	A	2064	C
36	A	2067	G
36	A	2069	G
36	A	2070	G
36	A	2081	C
36	A	2092	U
36	A	2093	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	2115	G
36	A	2116	G
36	A	2117	A
36	A	2120	G
36	A	2126	A
36	A	2130	U
36	A	2132	U
36	A	2133	G
36	A	2136	C
36	A	2140	C
36	A	2142	C
36	A	2144	U
36	A	2147	G
36	A	2149	G
36	A	2154	G
36	A	2156	G
36	A	2159	G
36	A	2162	G
36	A	2168	G
36	A	2171	A
36	A	2172	U
36	A	2173	A
36	A	2182	G
36	A	2190	G
36	A	2198	A
36	A	2208	U
36	A	2211	G
36	A	2212	A
36	A	2213	U
36	A	2224	G
36	A	2225	A
36	A	2238	G
36	A	2239	G
36	A	2241	A
36	A	2243	U
36	A	2249	U
36	A	2264	C
36	A	2266	A
36	A	2269	A
36	A	2275	C
36	A	2277	G
36	A	2278	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	2279	G
36	A	2282	G
36	A	2283	C
36	A	2287	A
36	A	2291	U
36	A	2305	A
36	A	2306	C
36	A	2308	G
36	A	2310	A
36	A	2311	A
36	A	2319	G
36	A	2320	A
36	A	2325	G
36	A	2334	G
36	A	2336	A
36	A	2345	G
36	A	2346	A
36	A	2347	C
36	A	2350	C
36	A	2377	A
36	A	2383	G
36	A	2385	C
36	A	2387	U
36	A	2388	A
36	A	2390	U
36	A	2391	G
36	A	2394	C
36	A	2395	C
36	A	2402	C
36	A	2403	C
36	A	2405	G
36	A	2406	U
36	A	2407	G
36	A	2411	A
36	A	2422	A
36	A	2423	U
36	A	2425	A
36	A	2427	C
36	A	2428	G
36	A	2429	G
36	A	2430	A
36	A	2432	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	2433	A
36	A	2435	A
36	A	2436	G
36	A	2439	A
36	A	2440	C
36	A	2441	C
36	A	2446	G
36	A	2447	G
36	A	2448	A
36	A	2449	U
36	A	2450	A
36	A	2451	A
36	A	2452	C
36	A	2463	C
36	A	2469	A
36	A	2470	G
36	A	2474	C
36	A	2476	A
36	A	2477	C
36	A	2478	A
36	A	2479	G
36	A	2480	C
36	A	2499	C
36	A	2502	G
36	A	2503	A
36	A	2504	U
36	A	2505	G
36	A	2507	C
36	A	2508	G
36	A	2518	A
36	A	2519	U
36	A	2520	C
36	A	2530	A
36	A	2531	A
36	A	2534	A
36	A	2542	A
36	A	2543	G
36	A	2553	G
36	A	2554	U
36	A	2556	C
36	A	2561	A
36	A	2564	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	2566	A
36	A	2567	G
36	A	2572	A
36	A	2573	C
36	A	2574	G
36	A	2577	A
36	A	2583	G
36	A	2584	U
36	A	2598	A
36	A	2602	A
36	A	2609	U
36	A	2610	C
36	A	2611	U
36	A	2612	C
36	A	2615	U
36	A	2620	C
36	A	2621	A
36	A	2630	G
36	A	2634	G
36	A	2646	C
36	A	2663	G
36	A	2665	A
36	A	2677	G
36	A	2682	U
36	A	2683	C
36	A	2687	U
36	A	2689	U
36	A	2691	C
36	A	2702	U
36	A	2703	C
36	A	2712	U
36	A	2713	A
36	A	2715	C
36	A	2726	U
36	A	2732	G
36	A	2733	A
36	A	2746	U
36	A	2755	C
36	A	2764	A
36	A	2765	A
36	A	2768	C
36	A	2772	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	2777	G
36	A	2778	A
36	A	2779	U
36	A	2780	G
36	A	2781	A
36	A	2782	G
36	A	2790	A
36	A	2791	C
36	A	2792	G
36	A	2797	U
36	A	2798	C
36	A	2801	A
36	A	2805	G
36	A	2811	G
36	A	2818	G
36	A	2820	A
36	A	2821	A
36	A	2833	G
36	A	2834	G
36	A	2835	A
36	A	2842	G
36	A	2849	U
36	A	2851	A
36	A	2857	G
36	A	2866	U
36	A	2872	G
36	A	2880	C
36	A	2881	C
36	A	2886	G
36	A	2894	G

All (28) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
35	B	66	A
35	B	98	G
36	A	221	A
36	A	271(C)	G
36	A	278	A
36	A	474	G
36	A	479	A
36	A	616	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	A	735	A
36	A	830	G
36	A	1022	G
36	A	1139	G
36	A	1154	G
36	A	1185	C
36	A	1240	U
36	A	1542	G
36	A	1558	A
36	A	1783	A
36	A	1858	G
36	A	1913	A
36	A	1937	A
36	A	1992	G
36	A	2040	C
36	A	2092	U
36	A	2158	A
36	A	2171	A
36	A	2447	G
36	A	2791	C

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 ⓘ

There are no ligands in this entry.

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 i

6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	C	228/228 (100%)	-0.07	10 (4%) 33 26	77, 137, 202, 235	0
2	D	275/275 (100%)	0.83	55 (20%) 2 3	12, 58, 126, 156	0
3	E	205/205 (100%)	0.93	49 (23%) 1 2	16, 58, 123, 159	0
4	F	208/208 (100%)	0.50	23 (11%) 6 8	41, 78, 145, 195	0
5	G	181/181 (100%)	0.50	23 (12%) 4 5	24, 87, 153, 191	0
6	H	167/167 (100%)	-0.03	9 (5%) 25 20	7, 68, 133, 171	0
7	J	0/170	-	-	-	-
8	K	140/140 (100%)	0.20	10 (7%) 16 14	24, 91, 182, 225	0
9	O	122/122 (100%)	-0.16	0 100 100	24, 45, 123, 162	0
10	P	146/146 (100%)	0.74	32 (21%) 1 2	22, 76, 132, 175	0
11	Q	141/141 (100%)	0.20	7 (4%) 28 22	17, 63, 130, 200	0
12	R	117/117 (100%)	0.64	16 (13%) 4 5	15, 57, 119, 178	0
13	S	99/99 (100%)	1.46	36 (36%) 1 2	22, 104, 172, 208	0
14	T	138/138 (100%)	0.07	10 (7%) 15 14	22, 71, 133, 179	0
15	U	117/117 (100%)	1.32	42 (35%) 1 2	40, 57, 131, 184	0
16	V	101/101 (100%)	0.38	15 (14%) 3 4	13, 54, 114, 146	0
17	W	113/113 (100%)	0.74	14 (12%) 5 6	16, 55, 121, 147	0
18	X	93/93 (100%)	0.69	11 (11%) 5 7	18, 60, 114, 149	0
19	Y	107/107 (100%)	1.29	34 (31%) 1 2	8, 86, 151, 180	0
20	Z	185/185 (100%)	-0.10	5 (2%) 52 38	30, 76, 142, 176	0
21	0	84/84 (100%)	1.75	33 (39%) 1 1	18, 92, 159, 181	0
22	1	93/93 (100%)	1.80	33 (35%) 1 2	26, 91, 161, 204	0
23	4	35/35 (100%)	0.05	3 (8%) 11 11	49, 106, 171, 203	0
24	N	138/138 (100%)	0.51	19 (13%) 4 5	59, 83, 108, 111	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	2	71/71 (100%)	0.43	3 (4%) 35 26	38, 79, 143, 185	0
26	3	60/60 (100%)	0.35	7 (11%) 5 7	34, 62, 117, 150	0
27	5	59/59 (100%)	0.88	13 (22%) 1 2	26, 56, 131, 149	0
28	6	50/50 (100%)	-0.25	1 (2%) 62 45	63, 99, 159, 175	0
29	7	49/49 (100%)	1.11	11 (22%) 1 2	18, 47, 122, 156	0
30	8	64/64 (100%)	1.77	27 (42%) 1 1	29, 63, 152, 160	0
31	9	37/37 (100%)	3.18	20 (54%) 0 1	71, 109, 177, 183	0
32	e	72/103 (69%)	-0.53	0 100 100	40, 109, 188, 239	0
33	f	0/31	-	-	-	-
33	g	0/31	-	-	-	-
34	h	0/30	-	-	-	-
35	B	119/119 (100%)	-0.05	4 (3%) 43 32	27, 111, 173, 187	0
36	A	2879/2879 (100%)	0.41	326 (11%) 6 7	7, 78, 171, 308	0
All	All	6693/6986 (95%)	0.50	901 (13%) 4 5	7, 79, 162, 308	0

All (901) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
36	A	2585	U	16.1
21	0	43	THR	11.6
31	9	14	CYS	11.3
31	9	27	CYS	11.3
31	9	28	GLU	10.5
21	0	44	ARG	10.2
22	1	40	ARG	10.0
31	9	13	LYS	9.9
36	A	2602	A	9.9
22	1	14	VAL	9.8
36	A	2584	U	9.1
36	A	1980	G	8.6
36	A	2583	G	8.6
36	A	2897	U	8.5
22	1	15	ALA	8.4
10	P	50	ARG	8.3
31	9	9	ARG	8.3
36	A	2676	C	8.2
31	9	12	ASP	8.2
36	A	2334	G	8.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
10	P	51	PHE	7.9
36	A	196	A	7.7
36	A	380	U	7.6
22	1	39	LYS	7.6
36	A	2722	G	7.6
36	A	34	C	7.6
2	D	276	LYS	7.5
36	A	89	G	7.4
36	A	2717	G	7.4
22	1	17	SER	7.4
22	1	41	ARG	7.3
36	A	394	A	7.3
21	0	42	GLY	7.3
36	A	2062	A	7.2
36	A	1250	G	7.2
36	A	755	C	7.2
36	A	2723	C	7.1
30	8	65	GLU	7.1
21	0	52	GLY	7.1
11	Q	141	GLN	7.1
31	9	11	CYS	7.0
36	A	336	C	7.0
13	S	17	ARG	7.0
36	A	1217	C	7.0
36	A	2716	U	6.8
36	A	1420	U	6.6
2	D	35	LYS	6.5
10	P	46	LYS	6.4
36	A	766	C	6.4
36	A	2713	A	6.4
36	A	664	C	6.4
22	1	19	GLN	6.4
36	A	1675	C	6.3
36	A	764	A	6.3
16	V	74	LYS	6.3
36	A	2582	G	6.2
8	K	21	PRO	6.2
27	5	17	ASP	6.2
3	E	193	GLY	6.2
36	A	974(B)	C	6.2
36	A	1104	C	6.2
3	E	76	ARG	6.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
8	K	115	LEU	6.2
19	Y	36	ALA	6.1
21	O	40	GLN	6.1
36	A	91	A	6.1
13	S	30	ARG	6.1
36	A	2820	A	6.0
16	V	81	TYR	6.0
36	A	1634	A	5.9
15	U	14	HIS	5.9
3	E	118	LYS	5.9
36	A	90	U	5.9
8	K	12	LEU	5.9
13	S	32	LEU	5.9
36	A	1026	U	5.9
36	A	743	G	5.9
15	U	73	GLY	5.9
30	8	56	GLU	5.8
36	A	790	C	5.8
36	A	2715	C	5.8
4	F	63	LYS	5.8
15	U	39	LEU	5.8
24	N	84	LYS	5.7
27	5	16	ARG	5.7
4	F	112	MET	5.7
36	A	424	G	5.7
30	8	11	LYS	5.7
36	A	2506	U	5.6
22	1	18	ILE	5.6
5	G	100	TRP	5.6
19	Y	34	LYS	5.6
3	E	117	MET	5.6
27	5	25	LEU	5.5
13	S	33	LYS	5.5
1	C	135	ARG	5.5
19	Y	35	TYR	5.5
3	E	115	GLY	5.4
6	H	167	GLU	5.4
15	U	40	PHE	5.4
13	S	31	SER	5.4
36	A	756	C	5.3
13	S	88	ASP	5.3
15	U	54	LYS	5.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
13	S	89	ARG	5.3
3	E	190	GLY	5.3
12	R	69	ASP	5.3
14	T	1	MET	5.2
36	A	1754	C	5.2
35	B	29	A	5.2
21	O	51	VAL	5.2
4	F	78	ILE	5.2
24	N	109	LYS	5.2
36	A	1782	C	5.2
22	1	16	ASN	5.2
30	8	5	LYS	5.2
24	N	44	PRO	5.1
36	A	2675	A	5.1
15	U	17	ILE	5.1
36	A	561	G	5.1
21	O	59	LEU	5.1
8	K	11	GLN	5.0
13	S	15	ARG	5.0
27	5	24	ALA	5.0
10	P	21	ARG	5.0
15	U	18	LEU	5.0
30	8	64	TYR	5.0
36	A	767	U	5.0
1	C	134	PRO	5.0
22	1	13	ILE	5.0
36	A	1763	G	5.0
36	A	2714	G	5.0
27	5	21	SER	4.9
12	R	54	LEU	4.9
36	A	974(A)	G	4.8
36	A	1216	G	4.8
36	A	2813	A	4.8
8	K	13	PRO	4.8
36	A	1566	A	4.8
36	A	2690	C	4.8
30	8	13	ARG	4.8
24	N	72	TYR	4.8
36	A	989	G	4.8
16	V	83	ARG	4.8
22	1	5	CYS	4.8
36	A	92	G	4.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	1643	G	4.7
17	W	19	LEU	4.7
16	V	82	ARG	4.7
36	A	1642	G	4.7
22	1	38	SER	4.7
36	A	975	G	4.7
36	A	2319	G	4.7
12	R	2	ARG	4.7
26	3	20	LYS	4.7
36	A	805	G	4.7
13	S	16	ASN	4.7
36	A	125	G	4.7
10	P	48	PRO	4.7
36	A	1781	C	4.7
4	F	55	GLY	4.7
36	A	1816	G	4.6
36	A	243	U	4.6
31	9	10	ILE	4.6
17	W	23	LEU	4.6
14	T	2	ASN	4.6
36	A	1679	U	4.6
10	P	27	HIS	4.6
24	N	85	ILE	4.6
36	A	835	A	4.6
24	N	73	THR	4.6
30	8	6	THR	4.6
15	U	38	THR	4.5
36	A	88	G	4.5
36	A	823	G	4.5
36	A	2812	G	4.5
36	A	2724	C	4.5
27	5	23	HIS	4.5
36	A	825	C	4.5
15	U	41	ALA	4.5
2	D	274	ARG	4.5
3	E	52	LEU	4.4
18	X	69	TYR	4.4
21	0	78	TYR	4.4
31	9	29	ASN	4.4
3	E	114	ALA	4.4
36	A	244	A	4.4
36	A	163(B)	C	4.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	2609	U	4.4
30	8	10	ALA	4.4
15	U	6	THR	4.4
22	1	48	LYS	4.4
29	7	48	LYS	4.4
36	A	1597	A	4.4
35	B	12	C	4.4
3	E	163	GLU	4.4
21	0	23	VAL	4.4
2	D	64	ILE	4.4
36	A	1632	A	4.4
18	X	76	ARG	4.4
30	8	25	MET	4.4
36	A	1662	C	4.4
22	1	67	ILE	4.4
36	A	1998	G	4.4
13	S	29	PHE	4.4
3	E	195	LEU	4.4
19	Y	33	LYS	4.4
2	D	275	LYS	4.3
27	5	18	ALA	4.3
13	S	34	HIS	4.3
6	H	154	PRO	4.3
2	D	249	PRO	4.3
36	A	1676	A	4.3
19	Y	32	PRO	4.3
5	G	99	MET	4.3
3	E	132	HIS	4.3
4	F	53	THR	4.3
5	G	164	GLU	4.3
36	A	742	G	4.3
36	A	562	U	4.3
36	A	2610	C	4.3
3	E	136	ARG	4.3
5	G	98	ARG	4.3
21	0	46	LYS	4.3
27	5	20	ARG	4.3
10	P	49	ARG	4.3
24	N	71	ILE	4.2
3	E	108	SER	4.2
22	1	6	GLU	4.2
36	A	2712	U	4.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	1775	U	4.2
36	A	2249	U	4.2
4	F	77	ASP	4.2
17	W	18	ARG	4.2
15	U	43	GLY	4.2
36	A	2318	G	4.2
5	G	162	THR	4.2
12	R	5	LYS	4.2
36	A	2721	A	4.2
4	F	65	TRP	4.2
3	E	107	THR	4.2
36	A	393	C	4.2
36	A	381	G	4.1
16	V	75	PHE	4.1
2	D	213	ARG	4.1
8	K	20	ALA	4.1
4	F	56	GLU	4.1
36	A	1407	C	4.1
36	A	1657	C	4.1
36	A	2063	C	4.1
36	A	824	A	4.1
30	8	59	LYS	4.0
36	A	456	C	4.0
3	E	191	PRO	4.0
3	E	7	VAL	4.0
25	2	33	MET	4.0
36	A	1631	A	4.0
2	D	251	GLY	4.0
3	E	119	ARG	4.0
36	A	2413	G	4.0
13	S	14	VAL	4.0
13	S	92	TYR	4.0
29	7	27	GLY	4.0
5	G	11	TYR	4.0
36	A	1971	A	4.0
3	E	54	GLN	3.9
24	N	45	ASN	3.9
2	D	34	VAL	3.9
16	V	80	GLN	3.9
13	S	27	SER	3.9
6	H	149	ARG	3.9
3	E	135	HIS	3.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	665	C	3.9
13	S	13	ARG	3.9
13	S	18	ILE	3.9
36	A	2357	U	3.8
36	A	379	G	3.8
22	1	20	ARG	3.8
10	P	26	GLY	3.8
36	A	508	G	3.8
2	D	250	TRP	3.8
4	F	66	PRO	3.8
29	7	26	GLY	3.8
36	A	2331	G	3.8
1	C	4	HIS	3.8
15	U	4	ALA	3.8
36	A	2814	C	3.8
3	E	55	ASN	3.8
36	A	531	C	3.8
22	1	71	TYR	3.8
19	Y	69	ALA	3.8
36	A	2718	G	3.7
19	Y	79	CYS	3.7
2	D	183	ARG	3.7
20	Z	121	HIS	3.7
36	A	2251	G	3.7
36	A	691	C	3.7
3	E	126	PRO	3.7
36	A	2611	U	3.7
5	G	8	LYS	3.7
17	W	20	VAL	3.7
21	0	47	PRO	3.7
6	H	169	VAL	3.7
36	A	833	U	3.7
2	D	252	TRP	3.7
10	P	57	THR	3.7
13	S	21	THR	3.7
30	8	4	MET	3.7
2	D	9	TYR	3.7
2	D	245	PRO	3.7
36	A	2160	G	3.7
10	P	47	ASP	3.7
14	T	52	ILE	3.7
17	W	21	VAL	3.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	2035	G	3.7
3	E	156	MET	3.6
4	F	57	VAL	3.6
22	1	61	ARG	3.6
8	K	9	LYS	3.6
1	C	133	GLY	3.6
36	A	976	C	3.6
16	V	76	LYS	3.6
36	A	2036	C	3.6
3	E	189	PRO	3.6
36	A	518	G	3.6
19	Y	100	ALA	3.6
36	A	765	G	3.6
19	Y	96	ILE	3.6
36	A	1135	C	3.6
36	A	1249	U	3.6
36	A	186	G	3.6
4	F	76	GLY	3.6
21	0	53	MET	3.6
24	N	2	LYS	3.6
22	1	68	PRO	3.6
3	E	127	ASP	3.6
19	Y	76	CYS	3.6
10	P	75	ILE	3.6
15	U	25	TRP	3.5
36	A	2601	C	3.5
19	Y	31	LEU	3.5
36	A	242	G	3.5
3	E	161	GLY	3.5
36	A	2081	C	3.5
36	A	2317	C	3.5
3	E	162	ALA	3.5
36	A	780	G	3.5
5	G	12	TYR	3.5
36	A	1774	C	3.5
11	Q	140	ALA	3.5
13	S	65	VAL	3.5
3	E	116	VAL	3.5
6	H	171	LEU	3.5
15	U	21	ALA	3.5
36	A	1439	A	3.5
36	A	2269	A	3.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
27	5	22	HIS	3.5
30	8	24	ALA	3.5
36	A	2586	C	3.5
2	D	231	HIS	3.5
36	A	2450	A	3.5
5	G	165	THR	3.5
36	A	560	C	3.5
23	4	18	CYS	3.5
36	A	2512	C	3.5
23	4	1	MET	3.4
5	G	97	ASP	3.4
36	A	1205	U	3.4
36	A	1218	C	3.4
36	A	1406	U	3.4
22	1	69	LYS	3.4
30	8	53	PRO	3.4
36	A	2581	G	3.4
36	A	1574	C	3.4
3	E	194	GLY	3.4
36	A	1633	G	3.4
16	V	85	LYS	3.4
2	D	33	LEU	3.4
16	V	73	SER	3.4
36	A	1380	G	3.4
36	A	2513	G	3.4
10	P	30	THR	3.4
10	P	78	PRO	3.4
3	E	131	ALA	3.4
6	H	153	LYS	3.4
36	A	1596	A	3.4
2	D	247	ALA	3.3
19	Y	72	VAL	3.3
36	A	2711	A	3.3
36	A	913	U	3.3
21	0	41	ARG	3.3
29	7	29	LYS	3.3
36	A	988	A	3.3
21	0	71	ASP	3.3
36	A	75	G	3.3
36	A	812	C	3.3
2	D	272	ALA	3.3
31	9	32	HIS	3.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	1405	U	3.3
30	8	63	PRO	3.3
10	P	45	LEU	3.3
11	Q	139	GLU	3.3
36	A	1680	U	3.3
3	E	120	TRP	3.3
36	A	737	C	3.3
16	V	72	VAL	3.3
13	S	91	PRO	3.3
36	A	2694	G	3.3
21	0	60	PHE	3.3
36	A	674	G	3.3
36	A	752	A	3.3
12	R	70	LEU	3.3
36	A	700	G	3.3
27	5	26	THR	3.2
19	Y	84	ARG	3.2
30	8	7	HIS	3.2
36	A	1644	C	3.2
13	S	35	ILE	3.2
15	U	20	LEU	3.2
2	D	271	ILE	3.2
26	3	17	LYS	3.2
12	R	19	ALA	3.2
10	P	36	LYS	3.2
26	3	10	LYS	3.2
12	R	18	LEU	3.2
15	U	58	ARG	3.2
2	D	246	PRO	3.2
15	U	37	GLU	3.2
36	A	425	G	3.2
10	P	41	ARG	3.2
12	R	71	GLN	3.2
30	8	2	PRO	3.2
15	U	7	GLY	3.2
29	7	25	PRO	3.2
36	A	2514	U	3.2
31	9	8	LYS	3.2
15	U	59	ARG	3.2
36	A	942	G	3.2
5	G	35	GLU	3.2
2	D	261	LYS	3.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	D	233	HIS	3.2
4	F	79	GLY	3.1
2	D	267	SER	3.1
27	5	14	ALA	3.1
4	F	28	ILE	3.1
22	1	4	VAL	3.1
22	1	70	VAL	3.1
4	F	155	LEU	3.1
16	V	84	LYS	3.1
15	U	55	ARG	3.1
36	A	1982	C	3.1
21	0	22	GLY	3.1
36	A	2686	G	3.1
30	8	14	VAL	3.1
21	0	17	GLN	3.1
19	Y	97	ARG	3.1
2	D	145	VAL	3.1
36	A	1033	U	3.1
4	F	54	ARG	3.1
26	3	19	GLN	3.1
31	9	30	PRO	3.1
19	Y	28	LYS	3.1
36	A	532	A	3.1
36	A	1001	A	3.1
17	W	85	VAL	3.1
2	D	268	ARG	3.1
36	A	1681	G	3.1
17	W	22	ASP	3.1
36	A	535	C	3.1
2	D	144	ALA	3.1
16	V	71	LEU	3.1
21	0	75	LEU	3.1
19	Y	70	SER	3.1
36	A	2726	U	3.1
21	0	45	PHE	3.1
2	D	16	MET	3.0
2	D	57	GLY	3.0
36	A	2449	U	3.0
3	E	154	LYS	3.0
15	U	16	LYS	3.0
15	U	44	ASN	3.0
26	3	16	PRO	3.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	754	C	3.0
36	A	1656	C	3.0
36	A	2252	G	3.0
2	D	49	ILE	3.0
31	9	26	ILE	3.0
11	Q	18	LYS	3.0
15	U	15	LYS	3.0
3	E	155	LYS	3.0
13	S	11	LYS	3.0
36	A	2082	A	3.0
18	X	70	LEU	3.0
36	A	395	U	3.0
36	A	1379	A	3.0
3	E	75	VAL	3.0
36	A	2511	U	3.0
30	8	62	LEU	3.0
23	4	3	GLU	3.0
27	5	13	LYS	3.0
36	A	1133	U	3.0
13	S	54	LEU	3.0
30	8	60	LEU	3.0
36	A	1473	G	3.0
1	C	110	ASP	3.0
22	1	60	PHE	3.0
15	U	24	TYR	2.9
36	A	23	G	2.9
15	U	36	ARG	2.9
36	A	441	U	2.9
3	E	51	PHE	2.9
6	H	155	SER	2.9
36	A	1059	G	2.9
36	A	1381	G	2.9
16	V	67	GLY	2.9
30	8	22	VAL	2.9
21	0	55	ARG	2.9
36	A	252	G	2.9
36	A	676	A	2.9
13	S	90	GLY	2.9
22	1	42	GLN	2.9
17	W	43	GLY	2.9
30	8	55	ALA	2.9
10	P	40	SER	2.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
15	U	19	LYS	2.9
36	A	15	G	2.9
36	A	16	G	2.9
13	S	70	GLY	2.9
2	D	36	PRO	2.9
19	Y	6	HIS	2.9
36	A	1008	C	2.9
36	A	1215	G	2.9
36	A	2475	C	2.9
19	Y	37	VAL	2.9
15	U	57	PHE	2.9
36	A	1997	G	2.8
18	X	9	LEU	2.8
24	N	43	THR	2.8
10	P	61	ARG	2.8
22	1	72	GLU	2.8
36	A	223	A	2.8
36	A	744	G	2.8
36	A	1741	C	2.8
21	0	57	PHE	2.8
18	X	72	LYS	2.8
15	U	53	ARG	2.8
21	0	32	ARG	2.8
36	A	727	A	2.8
36	A	1431	U	2.8
36	A	836	G	2.8
10	P	39	LYS	2.8
36	A	1661	G	2.8
1	C	9	ARG	2.8
2	D	263	ARG	2.8
8	K	22	PRO	2.8
19	Y	15	VAL	2.8
36	A	692	C	2.8
10	P	22	GLY	2.8
16	V	70	ILE	2.8
3	E	111	ARG	2.8
36	A	781	A	2.8
36	A	712(B)	A	2.8
2	D	253	GLN	2.8
3	E	109	LYS	2.8
29	7	15	THR	2.8
36	A	1103	A	2.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	E	130	GLY	2.7
36	A	970	C	2.7
36	A	2293	C	2.7
3	E	16	ARG	2.7
15	U	42	ALA	2.7
2	D	248	SER	2.7
10	P	58	THR	2.7
15	U	22	LYS	2.7
35	B	28	C	2.7
36	A	971	C	2.7
36	A	759	G	2.7
1	C	109	MET	2.7
5	G	37	VAL	2.7
4	F	64	ILE	2.7
15	U	3	ARG	2.7
12	R	14	SER	2.7
13	S	95	HIS	2.7
36	A	666	G	2.7
36	A	1025	G	2.7
13	S	12	PHE	2.7
3	E	58	ARG	2.7
4	F	109	GLY	2.7
1	C	8	TYR	2.7
36	A	915	C	2.7
31	9	36	GLN	2.7
2	D	273	ARG	2.7
5	G	36	LYS	2.7
8	K	52	ILE	2.7
36	A	2330	G	2.7
25	2	11	GLU	2.7
2	D	216	GLY	2.7
36	A	1629	U	2.6
36	A	1766	U	2.6
19	Y	39	VAL	2.6
5	G	30	GLU	2.6
31	9	21	GLY	2.6
36	A	1938	A	2.6
2	D	265	PRO	2.6
3	E	160	TYR	2.6
27	5	19	ARG	2.6
15	U	72	HIS	2.6
15	U	32	PHE	2.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	528	A	2.6
36	A	1472	A	2.6
3	E	53	PRO	2.6
13	S	60	GLY	2.6
4	F	33	LEU	2.6
6	H	170	ARG	2.6
22	1	49	VAL	2.6
36	A	1132	A	2.6
13	S	20	ARG	2.6
29	7	23	ARG	2.6
36	A	2553	G	2.6
36	A	2677	G	2.6
36	A	834	C	2.6
36	A	1765	C	2.6
14	T	54	ARG	2.6
36	A	17	G	2.6
36	A	1051	G	2.6
36	A	2358	G	2.6
10	P	74	GLU	2.6
14	T	50	ILE	2.6
15	U	13	LYS	2.6
15	U	52	ARG	2.6
18	X	80	ILE	2.6
10	P	19	VAL	2.6
36	A	539	G	2.6
36	A	615	G	2.6
36	A	14	A	2.6
4	F	108	LYS	2.5
36	A	1678	G	2.5
12	R	21	TYR	2.5
29	7	28	ARG	2.5
24	N	110	GLY	2.5
19	Y	68	HIS	2.5
24	N	116	LEU	2.5
36	A	1979	C	2.5
20	Z	165	VAL	2.5
35	B	7	G	2.5
36	A	1032	A	2.5
36	A	2169	A	2.5
17	W	17	VAL	2.5
36	A	1572	A	2.5
36	A	1630	G	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	2451	A	2.5
17	W	47	VAL	2.5
4	F	69	HIS	2.5
11	Q	125	LEU	2.5
2	D	243	GLY	2.5
36	A	407	G	2.5
13	S	53	SER	2.5
30	8	61	LEU	2.5
36	A	2555	U	2.5
13	S	66	ALA	2.5
21	0	72	ARG	2.5
36	A	439	G	2.5
2	D	56	GLY	2.5
36	A	689	A	2.5
36	A	801	G	2.5
36	A	1826	G	2.5
36	A	2059	A	2.5
1	C	3	LYS	2.5
36	A	1983	C	2.5
6	H	168	PRO	2.5
18	X	77	LYS	2.5
10	P	72	PRO	2.5
31	9	23	VAL	2.5
36	A	189	G	2.5
36	A	806	C	2.5
36	A	2547	U	2.5
2	D	215	LEU	2.5
36	A	408	G	2.5
2	D	31	LYS	2.4
17	W	4	LYS	2.4
17	W	32	ALA	2.4
13	S	63	THR	2.4
36	A	1825	A	2.4
36	A	185	U	2.4
36	A	2758	A	2.4
18	X	68	ARG	2.4
21	0	74	ARG	2.4
36	A	337	C	2.4
36	A	2623	G	2.4
5	G	178	PHE	2.4
31	9	33	LYS	2.4
13	S	28	VAL	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
19	Y	78	ALA	2.4
2	D	208	LYS	2.4
36	A	18	C	2.4
36	A	663	G	2.4
10	P	25	SER	2.4
21	0	76	GLY	2.4
10	P	38	GLN	2.4
20	Z	123	ASP	2.4
13	S	36	TYR	2.4
15	U	50	ARG	2.4
24	N	112	LEU	2.4
36	A	2250	G	2.4
36	A	2872	G	2.4
30	8	58	ILE	2.4
2	D	207	GLY	2.4
36	A	1305	C	2.4
12	R	50	HIS	2.4
10	P	23	PRO	2.4
4	F	40	GLN	2.4
36	A	690	G	2.4
36	A	1002	G	2.4
22	1	59	THR	2.4
36	A	114	U	2.4
36	A	822	U	2.4
26	3	12	PRO	2.3
36	A	2136	C	2.3
5	G	163	ALA	2.3
19	Y	75	ILE	2.3
20	Z	77	ASP	2.3
29	7	30	VAL	2.3
8	K	54	PRO	2.3
22	1	27	GLU	2.3
36	A	2896	C	2.3
21	0	79	VAL	2.3
29	7	14	LYS	2.3
36	A	245	G	2.3
5	G	34	LEU	2.3
10	P	76	LYS	2.3
5	G	7	LEU	2.3
2	D	262	ARG	2.3
36	A	1251	C	2.3
36	A	1383	C	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	2161	C	2.3
30	8	12	LYS	2.3
36	A	1764	G	2.3
15	U	8	VAL	2.3
36	A	911	A	2.3
22	1	26	ARG	2.3
36	A	1366	A	2.3
13	S	94	TYR	2.3
15	U	51	LYS	2.3
36	A	2362	G	2.3
15	U	30	LYS	2.3
36	A	735	A	2.3
14	T	90	GLN	2.3
14	T	91	ARG	2.3
30	8	8	LYS	2.3
36	A	375	C	2.3
13	S	101	LEU	2.3
21	0	58	THR	2.3
4	F	52	LYS	2.3
2	D	37	LEU	2.3
5	G	151	ALA	2.3
10	P	52	GLU	2.3
21	0	38	VAL	2.3
36	A	2873	A	2.3
36	A	22	C	2.3
2	D	155	LEU	2.3
3	E	27	LEU	2.3
36	A	2621	A	2.3
36	A	2775	A	2.3
30	8	57	ARG	2.3
12	R	65	LEU	2.3
16	V	77	ALA	2.3
36	A	2612	C	2.3
14	T	100	TYR	2.3
36	A	2090	G	2.3
36	A	1569	A	2.3
2	D	211	ARG	2.3
3	E	159	HIS	2.3
36	A	2510	C	2.3
3	E	192	ASN	2.3
12	R	7	GLY	2.3
36	A	729	G	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	A	1367	A	2.2
11	Q	23	GLY	2.2
36	A	2527	C	2.2
13	S	96	GLY	2.2
21	O	48	GLY	2.2
36	A	1368	G	2.2
36	A	2578	G	2.2
2	D	17	THR	2.2
4	F	75	HIS	2.2
36	A	1755	A	2.2
26	3	13	ILE	2.2
3	E	5	LEU	2.2
36	A	961	C	2.2
24	N	117	PHE	2.2
11	Q	103	MET	2.2
19	Y	108	THR	2.2
36	A	2232	U	2.2
24	N	86	PRO	2.2
17	W	73	ALA	2.2
36	A	440	G	2.2
36	A	1758	G	2.2
2	D	65	ILE	2.2
36	A	1529	A	2.2
24	N	70	LYS	2.2
22	1	9	GLY	2.2
31	9	19	ARG	2.2
5	G	102	PHE	2.2
36	A	537	C	2.2
36	A	995	C	2.2
24	N	111	PRO	2.2
19	Y	8	LYS	2.2
19	Y	63	LYS	2.2
36	A	587	C	2.2
36	A	2452	C	2.2
24	N	68	GLU	2.2
36	A	1365	A	2.2
36	A	1635	G	2.2
19	Y	71	LYS	2.2
21	O	56	ASP	2.2
15	U	35	ALA	2.2
36	A	529	A	2.2
36	A	2728	U	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
20	Z	76	LEU	2.2
36	A	370	G	2.2
36	A	536	A	2.2
10	P	77	ARG	2.2
2	D	270	ILE	2.1
22	1	32	LYS	2.1
19	Y	83	THR	2.1
22	1	92	LYS	2.1
24	N	87	LEU	2.1
36	A	224	G	2.1
36	A	866	A	2.1
36	A	1530	G	2.1
36	A	1824	G	2.1
36	A	343	C	2.1
22	1	62	VAL	2.1
28	6	54	ILE	2.1
36	A	390	A	2.1
36	A	901	A	2.1
15	U	29	SER	2.1
36	A	2021	C	2.1
30	8	21	LYS	2.1
1	C	106	ASP	2.1
5	G	2	PRO	2.1
36	A	2227	A	2.1
2	D	224	ALA	2.1
18	X	34	ALA	2.1
36	A	32	C	2.1
15	U	12	ARG	2.1
3	E	134	ILE	2.1
2	D	6	PHE	2.1
19	Y	67	LEU	2.1
36	A	174	C	2.1
36	A	1999	C	2.1
3	E	106	GLY	2.1
14	T	98	LYS	2.1
2	D	58	HIS	2.1
19	Y	7	VAL	2.1
2	D	27	THR	2.1
36	A	1430	C	2.1
36	A	1767	C	2.1
36	A	2507	C	2.1
12	R	16	HIS	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
19	Y	38	ILE	2.1
5	G	176	LEU	2.1
36	A	572	A	2.1
2	D	259	THR	2.1
17	W	104	THR	2.1
3	E	8	LYS	2.1
12	R	84	ALA	2.1
19	Y	99	CYS	2.1
36	A	748	G	2.1
2	D	214	TRP	2.1
36	A	969	U	2.1
19	Y	66	PRO	2.1
36	A	2448	A	2.0
10	P	73	GLY	2.0
36	A	713	G	2.0
10	P	71	VAL	2.0
19	Y	89	PHE	2.0
31	9	15	LYS	2.0
36	A	31	C	2.0
36	A	511	U	2.0
36	A	1293	C	2.0
18	X	20	GLY	2.0
3	E	164	ARG	2.0
36	A	675	A	2.0
21	0	64	ASP	2.0
36	A	712	G	2.0
21	0	2	ALA	2.0
36	A	1257	C	2.0
31	9	1	MET	2.0
29	7	47	ARG	2.0
36	A	968	G	2.0
36	A	1350	C	2.0
36	A	1777	U	2.0
36	A	2004	G	2.0
36	A	653	C	2.0
25	2	69	ARG	2.0
18	X	75	ASP	2.0
5	G	103	LEU	2.0
12	R	24	GLN	2.0
14	T	51	ARG	2.0
21	0	21	LEU	2.0

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

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.