



Full wwPDB X-ray Structure Validation Report

Nov 6, 2023 – 08:47 PM EST

PDB ID : 6NDK
Title : Structure of ASLSufA6 A37.5 bound to the 70S A site
Authors : Nguyen, H.T.; Hoffer, E.D.; Dunham, C.M.
Deposited on : 2018-12-13
Resolution : 3.64 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the  symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtrriage (Phenix) : 1.13
EDS : **FAILED**
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

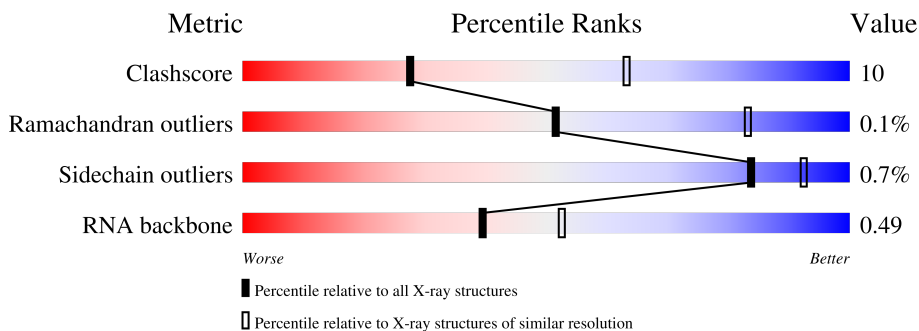
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.64 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1439 (3.78-3.50)
Ramachandran outliers	138981	1391 (3.78-3.50)
Sidechain outliers	138945	1391 (3.78-3.50)
RNA backbone	3102	1019 (4.26-3.00)

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

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	QA	1521	38% 45% 14% ..
1	XA	1521	43% 43% 12% ..
2	QB	256	56% 34% . 8%
2	XB	256	61% 29% . 8%
3	QC	239	50% 32% . 14%
3	XC	239	67% 17% . 14%









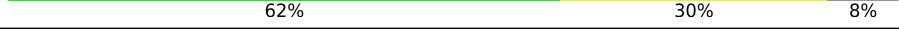

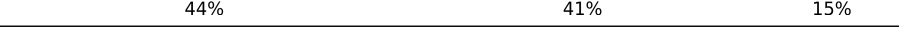
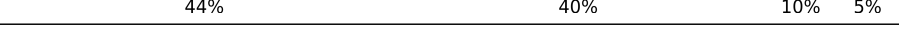

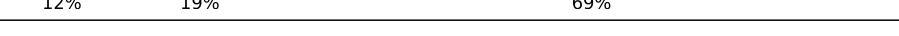


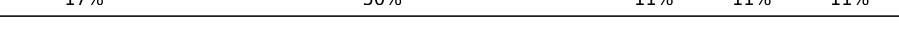

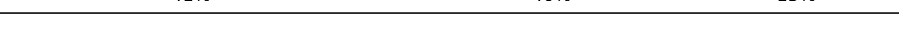






Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	QD	209	56% 37% 6%
4	XD	209	70% 27%
5	QE	162	60% 30% 9%
5	XE	162	68% 20% 9%
6	QF	101	73% 25%
6	XF	101	76% 23%
7	QG	156	63% 33%
7	XG	156	72% 25%
8	QH	138	59% 38%
8	XH	138	68% 30%
9	QI	128	53% 41% 5%
9	XI	128	62% 35%
10	QJ	105	53% 39% 6%
10	XJ	105	64% 28% 9%
11	QK	129	57% 28% 12%
11	XK	129	59% 26% 12%
12	QL	132	65% 23% 8%
12	XL	132	65% 25% 8%
13	QM	126	52% 36% 8%
13	XM	126	67% 21% 10%
14	QN	61	49% 46%
14	XN	61	67% 30%
15	QO	89	83% 12%
15	XO	89	83% 15%
16	QP	88	58% 34% 7%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
16	XP	88	 60% 32% 7%
17	QQ	105	 67% 24% 6%
17	XQ	105	 65% 29% 6%
18	QR	88	 56% 22% 23%
18	XR	88	 61% 15% 23%
19	QS	93	 61% 26% 11%
19	XS	93	 57% 30% 11%
20	QT	106	 64% 24% 9%
20	XT	106	 62% 30% 8%
21	QU	27	 41% 37% 7% 15%
21	XU	27	 44% 41% 15%
22	QV	77	 44% 40% 10% 5%
22	XV	77	 40% 48% 10% 2%
23	QX	26	 12% 19% 69%
23	XX	26	 12% 15% 12% 1% 58%
24	QY	18	 33% 11% 33% 22%
24	XY	18	 17% 50% 11% 11% 11%
25	RA	2915	 41% 43% 13% 2% 2%
25	YA	2915	 41% 40% 15% 2% 2%
26	RB	122	 44% 45% 9% 2%
26	YB	122	 58% 29% 10% 3% 2%
27	RD	276	 74% 25% 1%
27	YD	276	 76% 23% 1%
28	RE	206	 68% 28% 4% 2%
28	YE	206	 66% 31% 3% 2%









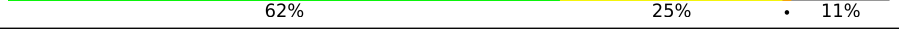

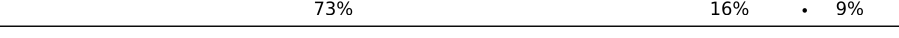
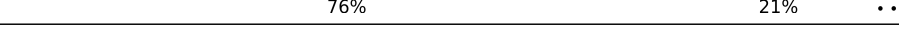

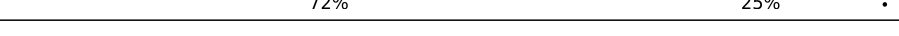


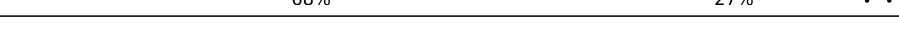

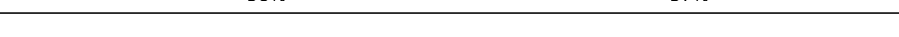






Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	RF	210	69% 23% . .
29	YF	210	60% 31% . .
30	RG	182	57% 37% 5% .
30	YG	182	71% 26% . . .
31	RH	180	61% 36% . .
31	YH	180	71% 24% . .
32	RI	148	55% 39% . . .
32	YI	148	75% 22% . .
33	RN	140	74% 26% .
33	YN	140	84% 16%
34	RO	122	66% 33% .
34	YO	122	79% 20% .
35	RP	150	64% 29% 7% .
35	YP	150	66% 30% . .
36	RQ	141	67% 33%
36	YQ	141	79% 21%
37	RR	118	74% 24% .
37	YR	118	82% 17% .
38	RS	112	68% 28% . .
38	YS	112	68% 29% . .
39	RT	146	64% 25% . 10%
39	YT	146	63% 26% . 10%
40	RU	118	67% 31% . .
40	YU	118	78% 20% .
41	RV	101	70% 28% . .


Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
41	YV	101	 72% 26% ..
42	RW	113	 77% 22% .
42	YW	113	 79% 19% ..
43	RX	96	 72% 25% ..
43	YX	96	 86% 12% .
44	RY	110	 75% 19% . .
44	YY	110	 68% 27% . .
45	RZ	206	 70% 24% . 5%
45	YZ	206	 62% 25% . 11%
46	R0	85	 67% 22% . 9%
46	Y0	85	 73% 16% . 9%
47	R1	98	 76% 21% ..
47	Y1	98	 77% 22% .
48	R2	72	 72% 25% .
48	Y2	72	 82% 15% .
49	R3	60	 68% 28% ..
49	Y3	60	 68% 27% ..
50	R4	71	 58% 38% ..
50	Y4	71	 58% 37% . .
51	R5	60	 80% 18% .
51	Y5	60	 80% 17% .
52	R6	54	 70% 28% .
52	Y6	54	 65% 31% ..
53	R7	49	 59% 37% ..
53	Y7	49	 76% 20% ..

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
54	R8	65	
54	Y8	65	
55	R9	37	
55	Y9	37	
56	ZA	3	
56	ZB	3	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	QN	101	-	-	X	-
57	MG	RB	203	-	-	X	-
57	MG	RD	303	-	-	X	-
58	SF4	QD	303	-	-	X	-
58	SF4	XD	302	-	-	X	-

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 291822 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	QA	1500	Total 32246	C 14358	N 5975	O 10413	P 1500	0	0	0
1	XA	1504	Total 32331	C 14396	N 5990	O 10441	P 1504	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	QB	235	Total 1907	C 1217	N 342	O 343	S 5	0	0	0
2	XB	236	Total 1915	C 1223	N 343	O 344	S 5	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	QC	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0
3	XC	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	QE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			
5	XE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	QF	100	Total	C	N	O	S	0	0	0
			837	528	154	152	3			
6	XF	100	Total	C	N	O	S	0	0	0
			837	528	154	152	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	QH	137	Total	C	N	O	S	0	0	0
			1108	700	214	192	2			
8	XH	137	Total	C	N	O	S	0	0	0
			1108	700	214	192	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	QI	127	Total	C	N	O	0	0	0
			1010	639	197	174			
9	XI	126	Total	C	N	O	0	0	0
			998	633	193	172			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	QJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	XJ	96	Total	C	N	O	S	0	0	0
			777	487	153	136	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	QK	114	Total	C	N	O	S	0	0	0
			844	525	158	158	3			
11	XK	114	Total	C	N	O	S	0	0	0
			844	525	158	158	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	QL	122	Total	C	N	O	S	0	0	0
			958	604	193	159	2			
12	XL	122	Total	C	N	O	S	0	0	0
			958	604	193	159	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QM	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
13	XM	114	Total	C	N	O	S	0	0	0
			916	566	189	159	2			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	QP	82	Total	C	N	O	S	0	0	0
			691	438	138	114	1			
16	XP	82	Total	C	N	O	S	0	0	0
			691	438	138	114	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	QQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	XQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	QR	68	Total	C	N	O	0	0	0
			555	355	108	92			
18	XR	68	Total	C	N	O	0	0	0
			555	355	108	92			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	XS	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	QT	96	Total	C	N	O	S	0	0	0
			743	458	159	124	2			
20	XT	98	Total	C	N	O	S	0	0	0
			759	469	162	126	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	QU	23	Total	C	N	O	0	0	0
			199	122	48	29			
21	XU	23	Total	C	N	O	0	0	0
			199	122	48	29			

- Molecule 22 is a RNA chain called P-site tRNAfMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			
22	XV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	8	Total	C	N	O	P	0	0	0
			167	75	28	56	8			
23	XX	11	Total	C	N	O	P	0	0	0
			233	105	43	74	11			

- Molecule 24 is a RNA chain called A-site ASLSufA6 A37.5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	QY	14	Total	C	N	O	P	0	0	0
			301	134	55	98	14			
24	XY	16	Total	C	N	O	P	0	0	0
			341	153	63	110	15			

- Molecule 25 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	RA	2870	Total	C	N	O	P	0	0	0
			61819	27519	11565	19867	2868			
25	YA	2870	Total	C	N	O	P	0	0	0
			61822	27520	11565	19869	2868			

- Molecule 26 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	RB	120	Total	C	N	O	P	0	0	0
			2572	1145	476	832	119			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
26	YB	120	2573	1146	476	832	119	0	0	0

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	RD	275	2144	1353	428	360	3	0	0	0
27	YD	275	2145	1353	428	361	3	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	RE	204	1563	988	299	270	6	0	0	0
28	YE	204	1563	988	299	270	6	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	RF	202	1585	1011	297	275	2	0	0	0
29	YF	202	1585	1011	297	275	2	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	RG	181	1474	942	268	260	4	0	0	0
30	YG	181	1474	942	268	260	4	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	RH	174	1336	848	251	236	1	0	0	0
31	YH	173	1330	845	250	234	1	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	RI	146	1136	726	201	208	1	0	0	0
32	YI	146	1136	726	201	208	1	0	0	0

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	RN	140	1121	722	208	187	4	0	0	0
33	YN	140	1121	722	208	187	4	0	0	0

- Molecule 34 is a protein called 50S ribosomal protein L14.

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

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	RP	149	1139	709	231	196	3	0	0	0
35	YP	149	1139	709	231	196	3	0	0	0

- Molecule 36 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
36	RQ	141	1122	715	212	188	7	0	0	0
36	YQ	141	1122	715	212	188	7	0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	RR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
37	YR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	RS	110	Total	C	N	O	S	0	0	0
			877	553	175	149				
38	YS	110	Total	C	N	O	S	0	0	0
			877	553	175	149				

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	RT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			
39	YT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			

- Molecule 40 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	RU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
40	YU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 41 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	RV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
41	YV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 42 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	RW	112	Total	C	N	O	S	0	0	0
			890	560	175	153	2			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
42	YW	112	Total 890	C 560	N 175	O 153	S 2	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
43	RX	95	Total 750	C 488	N 135	O 126	S 1	0	0	0
43	YX	95	Total 750	C 488	N 135	O 126	S 1	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	RY	107	Total 818	C 525	N 155	O 132	S 6	0	0	0
44	YY	107	Total 818	C 525	N 155	O 132	S 6	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	RZ	196	Total 1552	C 988	N 273	O 288	S 3	0	0	0
45	YZ	183	Total 1461	C 933	N 260	O 265	S 3	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
46	R0	77	Total 611	C 378	N 129	O 103	S 1	0	0	0
46	Y0	77	Total 611	C 378	N 129	O 103	S 1	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	R1	97	Total 763	C 481	N 150	O 131	S 1	0	0	0
47	Y1	97	Total 763	C 481	N 150	O 131	S 1	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
48	R2	70	Total 592	C 368	N 119	O 103	S 2	0	0	0
48	Y2	70	Total 592	C 368	N 119	O 103	S 2	0	0	0

- Molecule 49 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
49	R3	59	Total 469	C 298	N 90	O 81	0	0	0
49	Y3	59	Total 468	C 298	N 90	O 80	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
50	R4	69	Total 565	C 356	N 103	O 101	S 5	0	0	0
50	Y4	69	Total 565	C 356	N 103	O 101	S 5	0	0	0

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
51	R5	59	Total 459	C 288	N 90	O 76	S 5	0	0	0
51	Y5	58	Total 451	C 283	N 89	O 74	S 5	0	0	0

- Molecule 52 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
52	R6	53	Total 453	C 281	N 91	O 77	S 4	0	0	0
52	Y6	53	Total 453	C 281	N 91	O 77	S 4	0	0	0

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	R7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
53	Y7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	R8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
54	Y8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 55 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	R9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
55	Y9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 56 is a RNA chain called tRNA acceptor end mimic.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	ZA	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
56	ZB	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

- Molecule 57 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	124	Total	Mg	0	0
			124	124		
57	QC	1	Total	Mg	0	0
			1	1		
57	QD	2	Total	Mg	0	0
			2	2		
57	QE	2	Total	Mg	0	0
			2	2		
57	QL	2	Total	Mg	0	0
			2	2		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	QM	2	Total Mg 2 2	0	0
57	QN	2	Total Mg 2 2	0	0
57	QO	1	Total Mg 1 1	0	0
57	QV	3	Total Mg 3 3	0	0
57	RA	414	Total Mg 414 414	0	0
57	RB	8	Total Mg 8 8	0	0
57	RD	5	Total Mg 5 5	0	0
57	RE	5	Total Mg 5 5	0	0
57	RF	5	Total Mg 5 5	0	0
57	RN	2	Total Mg 2 2	0	0
57	RO	1	Total Mg 1 1	0	0
57	RP	2	Total Mg 2 2	0	0
57	RQ	1	Total Mg 1 1	0	0
57	RR	1	Total Mg 1 1	0	0
57	RV	1	Total Mg 1 1	0	0
57	RW	1	Total Mg 1 1	0	0
57	RX	1	Total Mg 1 1	0	0
57	RZ	1	Total Mg 1 1	0	0
57	R0	2	Total Mg 2 2	0	0
57	R1	1	Total Mg 1 1	0	0
57	R3	1	Total Mg 1 1	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	R5	1	Total Mg 1 1	0	0
57	R6	1	Total Mg 1 1	0	0
57	R7	1	Total Mg 1 1	0	0
57	R8	1	Total Mg 1 1	0	0
57	R9	1	Total Mg 1 1	0	0
57	XA	128	Total Mg 128 128	0	0
57	XD	1	Total Mg 1 1	0	0
57	XJ	1	Total Mg 1 1	0	0
57	XK	2	Total Mg 2 2	0	0
57	XN	1	Total Mg 1 1	0	0
57	XV	1	Total Mg 1 1	0	0
57	XX	1	Total Mg 1 1	0	0
57	YA	544	Total Mg 544 544	0	0
57	YB	8	Total Mg 8 8	0	0
57	YD	8	Total Mg 8 8	0	0
57	YE	7	Total Mg 7 7	0	0
57	YF	1	Total Mg 1 1	0	0
57	YG	1	Total Mg 1 1	0	0
57	YP	3	Total Mg 3 3	0	0
57	YQ	2	Total Mg 2 2	0	0
57	YR	1	Total Mg 1 1	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	YT	1	Total Mg 1 1	0	0
57	YU	1	Total Mg 1 1	0	0
57	YV	1	Total Mg 1 1	0	0
57	YW	1	Total Mg 1 1	0	0
57	YX	1	Total Mg 1 1	0	0
57	Y0	1	Total Mg 1 1	0	0
57	Y1	3	Total Mg 3 3	0	0
57	Y3	1	Total Mg 1 1	0	0
57	Y5	1	Total Mg 1 1	0	0
57	Y6	1	Total Mg 1 1	0	0
57	Y7	1	Total Mg 1 1	0	0
57	Y8	1	Total Mg 1 1	0	0
57	Y9	1	Total Mg 1 1	0	0

- Molecule 58 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	QD	1	Total	Fe S	0	0
			8	4 4		
58	XD	1	Total	Fe S	0	0
			8	4 4		

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	QN	1	Total	Zn	0	0
			1	1		
59	R4	1	Total	Zn	0	0
			1	1		
59	R9	1	Total	Zn	0	0
			1	1		
59	XN	1	Total	Zn	0	0
			1	1		
59	Y4	1	Total	Zn	0	0
			1	1		

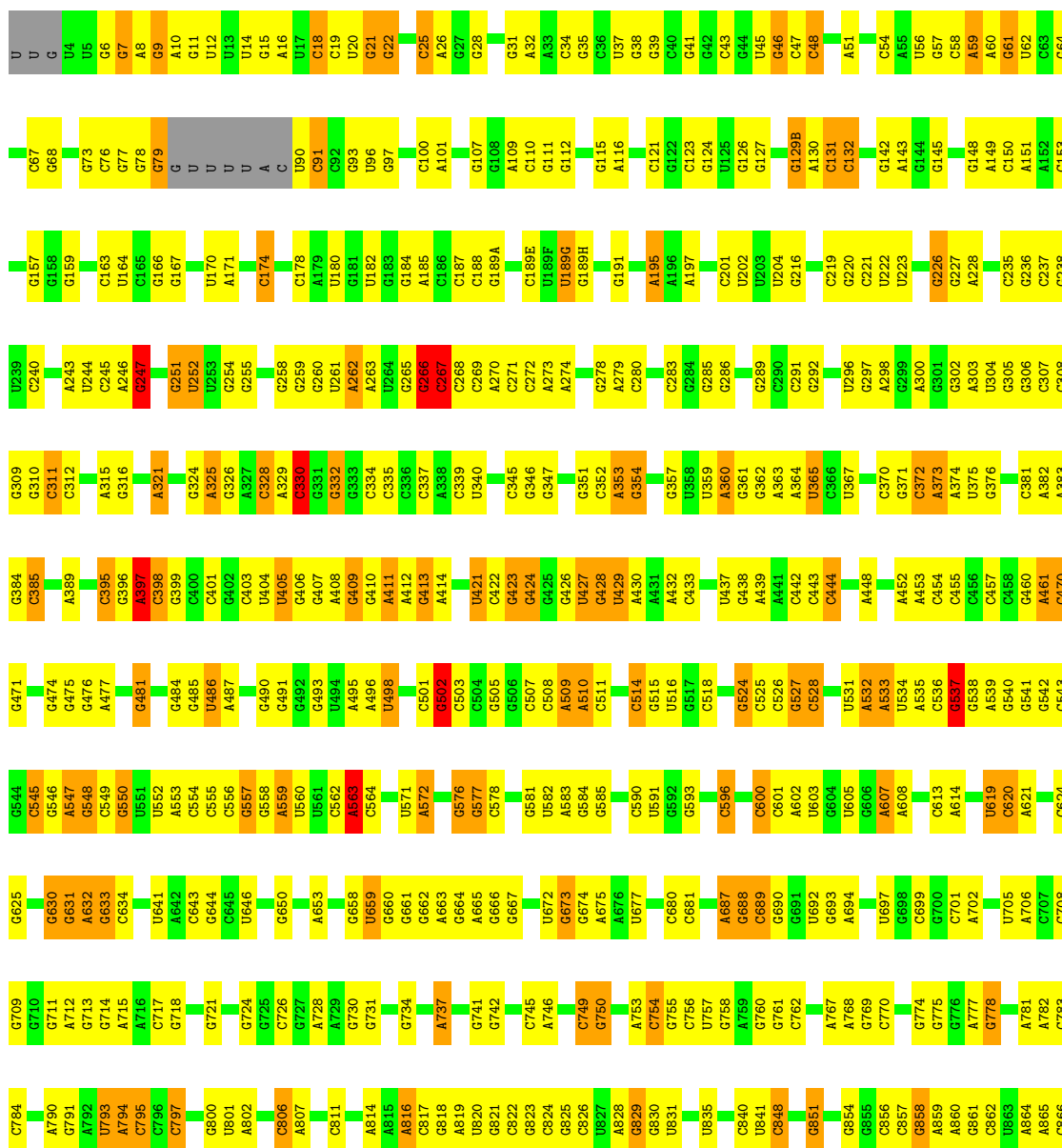
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

Note EDS failed to run properly.

- Molecule 1: 16S rRNA

Chain QA: 

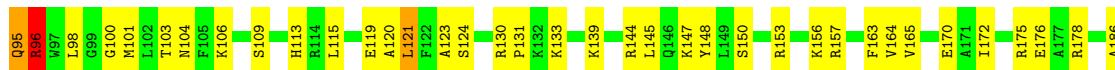


A1287	A1288	A1289	A1363A	A1363B	A1363C	A1364	A1365	A1366	A1367	A1368	A1369	A1370	A1371	A1372	A1373	A1447	A1448	A1452	A1456	A1457	A1458	A1459	A1464	A1469	A1470	A1475	A1476	A1488	A1489	A1491	A1492	A1493	A1494	A1497	A1498	A1499	A1500	A1501	A1502	A1503	A1504	A1505	A1506	A1507	U1510	G1511	A1512	A1513	C1514																		
C1218	U1219	G1220	G1221	G1222	G1223	G1224	A1225	G1226	C1227	C1228	C1229	C1230	C1231	A1236	A1237	A1238	A1239	U1240	G1241	C1244	A1245	C1246	U1247	A1248	G1255	A1256	G1257	G1258	C1259	A1260	A1261	C1262	C1263	C1264	G1265	C1266	A1268	A1269	C1270	G1271	G1272	A1273	A1274	A1275	U1276	A1277	A1278	A1279	A1280	C1282	A1285	A1286															
U1126	G1127	C1128	C1129	A1130	U1136	G1137	G1138	G1139	C1140	C1141	C1142	G1143	C1147	U1148	A1152	C1158	U1159	G1160	C1161	G1164	A1170	G1178	A1179	A1183	G1184	G1185	G1186	G1188	A1190	A1191	C1192	U1196	G1197	C1200	A1201	G1202	C1203	A1204	G1207	G1208	G1209	C1208	C1210	U1211	U1212	A1213	G1214	G1215																			
C1054	A1055	G1058	A1059	C1060	G1061	U1062	U1065	C1066	A1067	G1068	C1069	U1070	C1071	G1072	U1073	G1074	C1075	U1078	A1080	G1081	U1085	U1086	A1092	A1093	G1094	U1095	C1096	C1097	C1098	G1099	C1100	A1101	A1102	C1103	G1104	G1108	C1109	C1112	C1113	C1114	C1115	C1116	C1117	C1118	C1119	G1120	U1121	U1122	A1123	A1124	U1125																
G902	G903	G906	A907	A908	A909	G910	G911	G912	A913	A914	A918	A919	A920	U921	G922	A923	C924	G925	G926	G927	G928	C931	C932	G933	C934	A935	C936	A946	G947	A948	U950	C951	U952	G953	G954	U955	U960	U961	G966	A968	A969	C970	G971	C972	G973	A974	A975	A976	A977	A978	C980	C981															
C811	C812	U813	A814	C817	G818	A819	U820	G821	C822	A823	C824	A828	G829	U833	G834	U835	G836	C840	U841	C848	G851	G852	A853	G854	G855	A859	A860	G861	C862	U863	A864	A865	C866	C868	G869	A870	U871	A872	A873	A874	A875	C877	G878	C883	U884	U889	A891	C893	A900	A901																	
A653	G661	G662	A663	G664	A665	G666	G673	A674	A675	A676	A677	U678	G679	C680	G683	A687	G688	G689	U692	G693	U696	G698	A699	A702	C707	G711	A712	G713	G714	A715	A716	G717	G718	A721	G721	A722	U723	G724	G725	A728	U729	A730	G731	G734	G735	G736																					
A486	A487	C488	G489	A490	A495	A496	U498	C501	A501	C502	C503	C504	G505	A509	A510	G511	U512	C513	C514	A515	U516	C517	C518	C519	A520	G521	G524	C525	C526	G527	C528	A532	A533	A534	A535	A539	G540	C543	G544	C545	A448	A449	A452	A453	C454	G545	C546	A547	U552	A553	C554	C555	C398	C399	C390	C391	G392	G396	A397	C398	G399	C400	C401	A482	A483	G484	G485
U404	U405	G406	G407	G408	A409	G410	A411	G413	G416	C417	U421	C422	G423	G424	G425	G426	U427	G428	U429	A430	A431	A432	C433	U434	C435	C436	U437	C438	A372	A373	A374	U375	G376	G377	G378	C379	G380	C381	A382	A383	G384	C385	C386	U387	G388	A389	C390	G391	G392	G396	A397	C398	G399	C400	C401	A482	A483	G484	G485								
A338	C339	C342	U343	A344	C345	C346	G347	G348	A349	G350	G351	C352	A353	C354	C355	A356	G357	U358	U359	A360	G361	U365	C366	U367	U368	G371	C372	A373	A374	U375	G376	G377	G378	C379	G380	C381	A382	A383	G384	C385	C386	U387	G388	A389	C390	G391	G392	G396	A397	C398	G399	C400	C401	A482	A483	G484	G485										



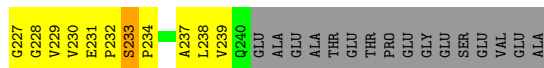
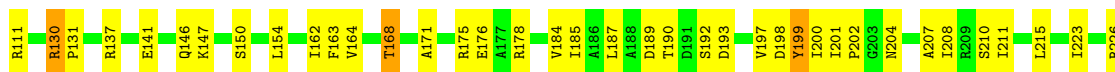
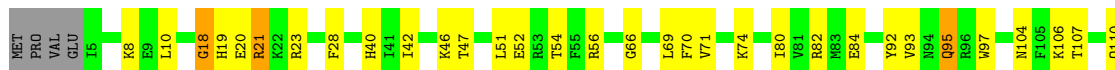
- Molecule 2: 30S ribosomal protein S2

Chain QB: 56% 34% 8%



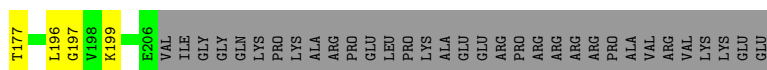
- Molecule 2: 30S ribosomal protein S2

Chain XB: 61% 29% 8%



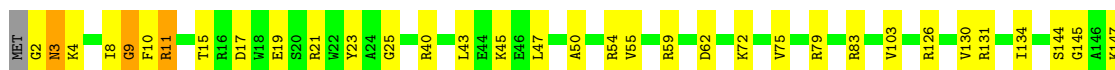
- Molecule 3: 30S ribosomal protein S3

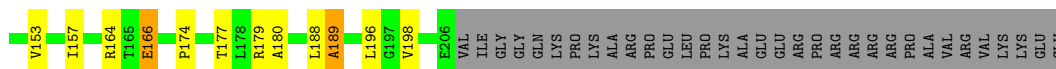
Chain QC: 50% 32% 14%



- Molecule 3: 30S ribosomal protein S3

Chain XC: 67% 17% 14%

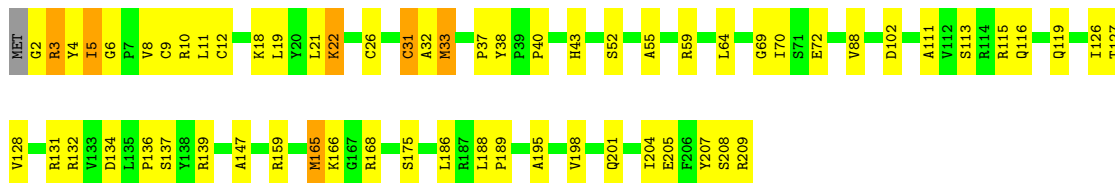




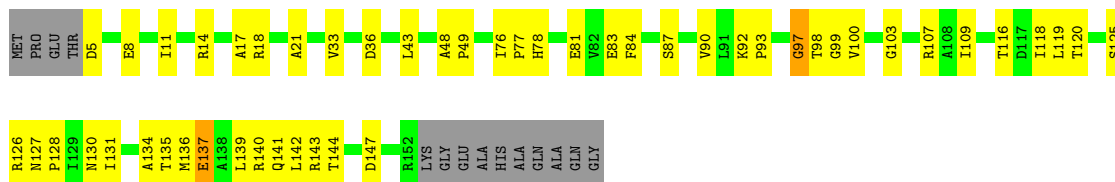
• Molecule 4: 30S ribosomal protein S4



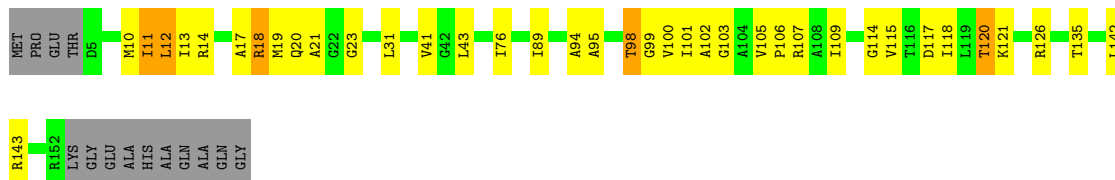
• Molecule 4: 30S ribosomal protein S4



• Molecule 5: 30S ribosomal protein S5



• Molecule 5: 30S ribosomal protein S5




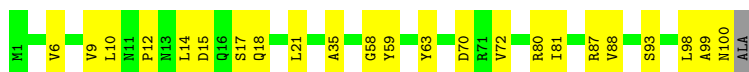
• Molecule 6: 30S ribosomal protein S6

Chain QF:  73% 25% ..



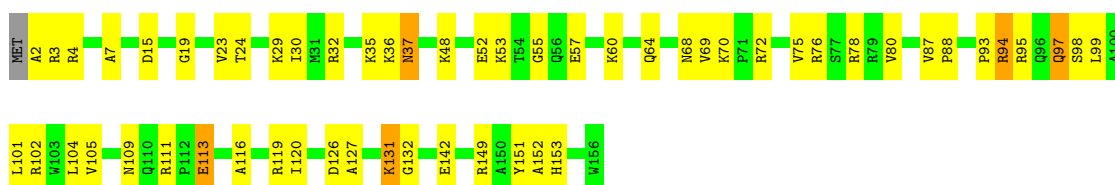
- Molecule 6: 30S ribosomal protein S6

Chain XF:  76% 23% ..



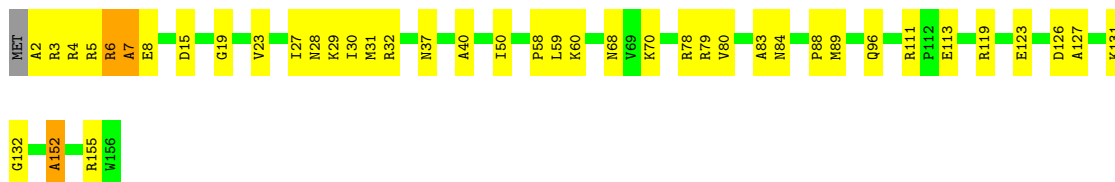
- Molecule 7: 30S ribosomal protein S7

Chain QG:  63% 33% ..



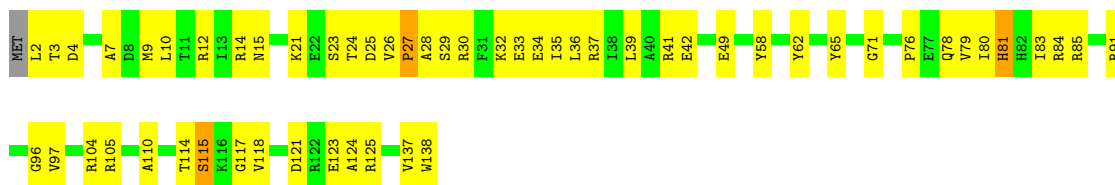
- Molecule 7: 30S ribosomal protein S7

Chain XG:  72% 25% ..



- Molecule 8: 30S ribosomal protein S8

Chain QH:  59% 38% ..



- Molecule 8: 30S ribosomal protein S8

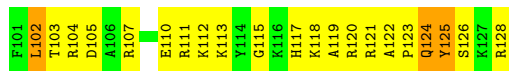
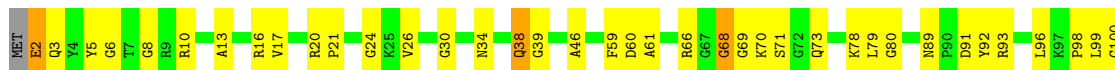
Chain XH:  68% 30% ..





- Molecule 9: 30S ribosomal protein S9

Chain QI: 53% 41% 5%



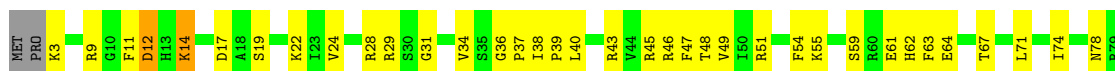
- Molecule 9: 30S ribosomal protein S9

Chain XI: 62% 35% ...



- Molecule 10: 30S ribosomal protein S10

Chain QJ: 53% 39% 6%



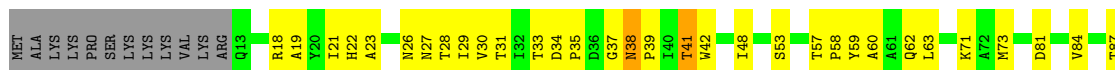
- Molecule 10: 30S ribosomal protein S10

Chain XJ: 64% 28% 9%



- Molecule 11: 30S ribosomal protein S11

Chain QK: 57% 28% 12%





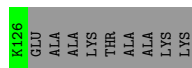
- Molecule 11: 30S ribosomal protein S11

Chain XK: 59% 26% 12%



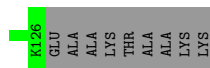
- Molecule 12: 30S ribosomal protein S12

Chain QL: 65% 23% 8%



- Molecule 12: 30S ribosomal protein S12

Chain XL: 65% 25% 8%



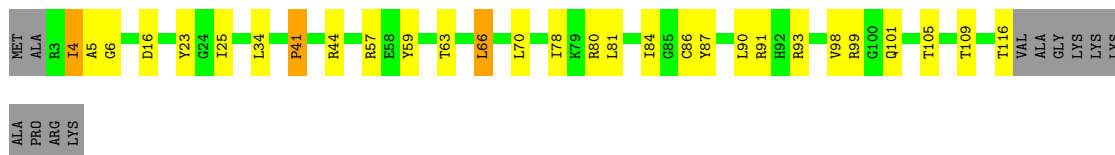
- Molecule 13: 30S ribosomal protein S13

Chain QM: 52% 36% 8%



- Molecule 13: 30S ribosomal protein S13

Chain XM: 67% 21% 10%



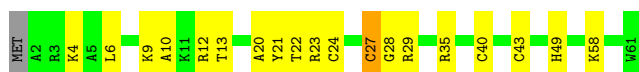
- Molecule 14: 30S ribosomal protein S14 type Z

Chain QN: 49% 46%



- Molecule 14: 30S ribosomal protein S14 type Z

Chain XN: 67% 30%



- Molecule 15: 30S ribosomal protein S15

Chain QO: 83% 12%



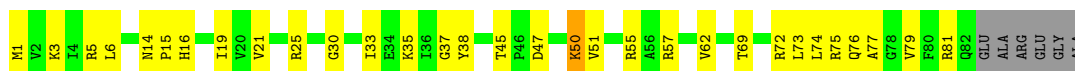
- Molecule 15: 30S ribosomal protein S15

Chain XO: 83% 15%



- Molecule 16: 30S ribosomal protein S16

Chain QP: 58% 34% 7%



- Molecule 16: 30S ribosomal protein S16

Chain XP: 60% 32% 7%



- Molecule 17: 30S ribosomal protein S17

Chain QQ:  67% 24% 6%



- Molecule 17: 30S ribosomal protein S17

Chain XQ:  65% 29% 6%



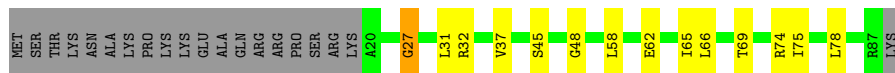
- Molecule 18: 30S ribosomal protein S18

Chain QR:  56% 22% 23%



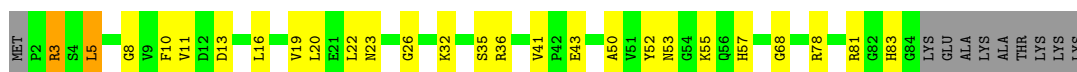
- Molecule 18: 30S ribosomal protein S18

Chain XR:  61% 15% 23%



- Molecule 19: 30S ribosomal protein S19

Chain QS:  61% 26% 11%



- Molecule 19: 30S ribosomal protein S19

Chain XS:  57% 30% 11%



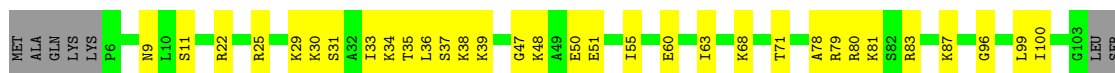
- Molecule 20: 30S ribosomal protein S20

Chain QT:  64% 24% 9%



- Molecule 20: 30S ribosomal protein S20

Chain XT:  62% 30% 8%



ALA

- Molecule 21: 30S ribosomal protein Thx

Chain QU:  41% 37% 7% 15%



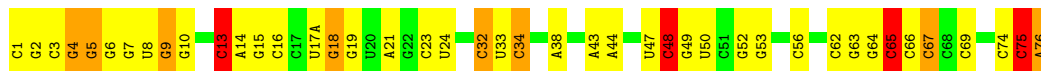
- Molecule 21: 30S ribosomal protein Thx

Chain XU:  44% 41% 15%



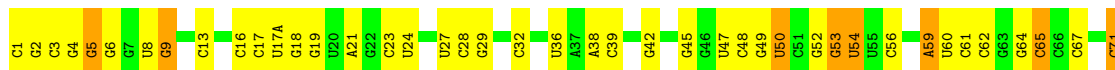
- Molecule 22: P-site tRNAfMet

Chain QV:  44% 40% 10% 5%



- Molecule 22: P-site tRNAfMet

Chain XV:  40% 48% 10% 2%



A72, A73, C74, C75, A76

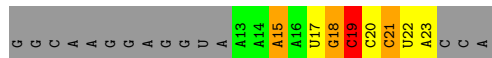
- Molecule 23: mRNA

Chain QX:  12% 19% 69%

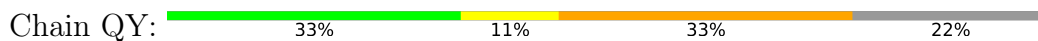


- Molecule 23: mRNA

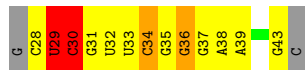
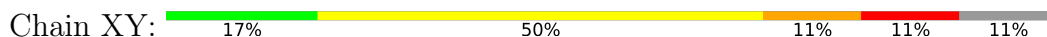
Chain XX:  12% 15% 12% 58%



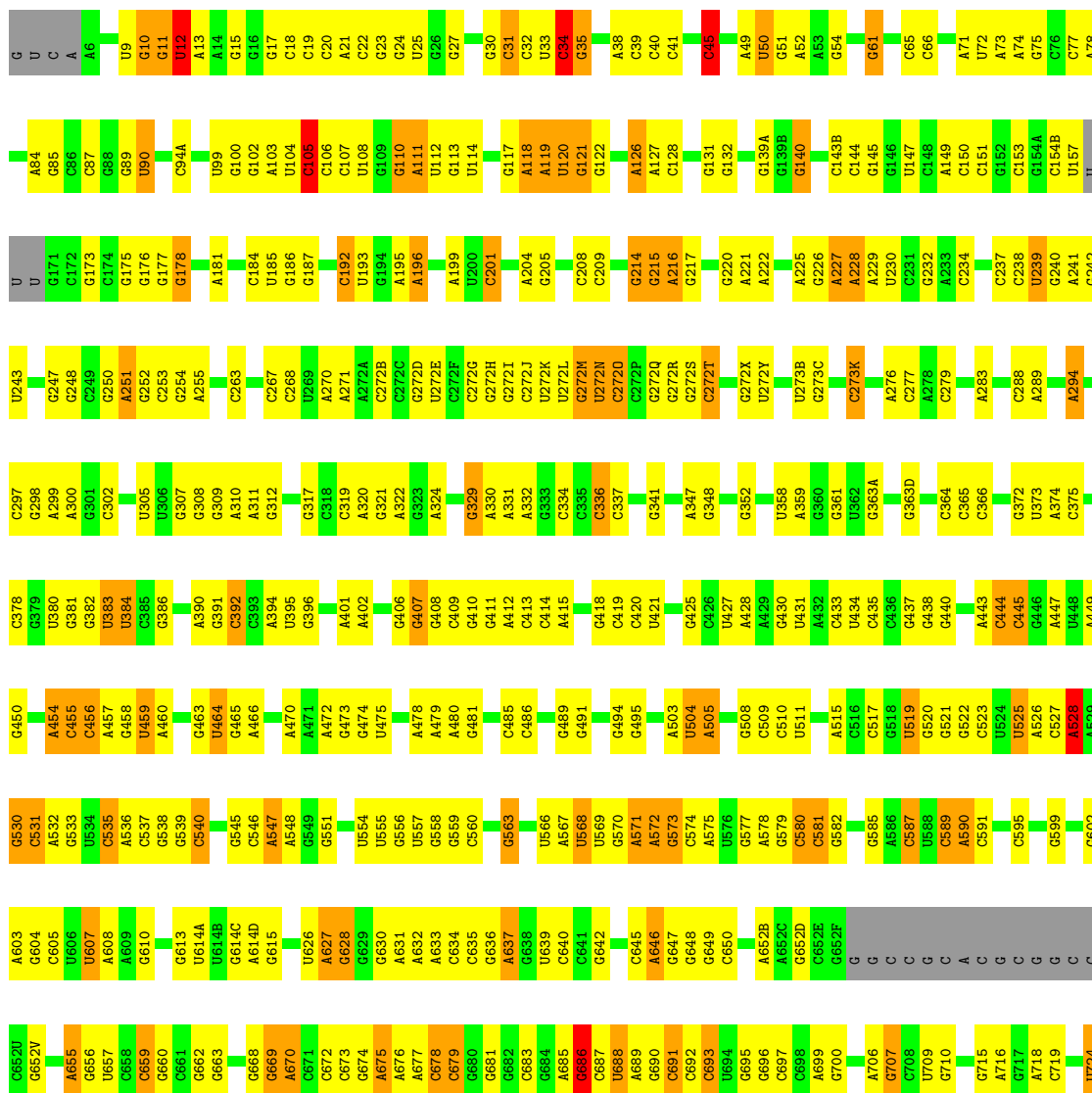
● Molecule 24: A-site ASLSufA6 A37.5



● Molecule 24: A-site ASLSufA6 A37.5



● Molecule 25: 23S rRNA

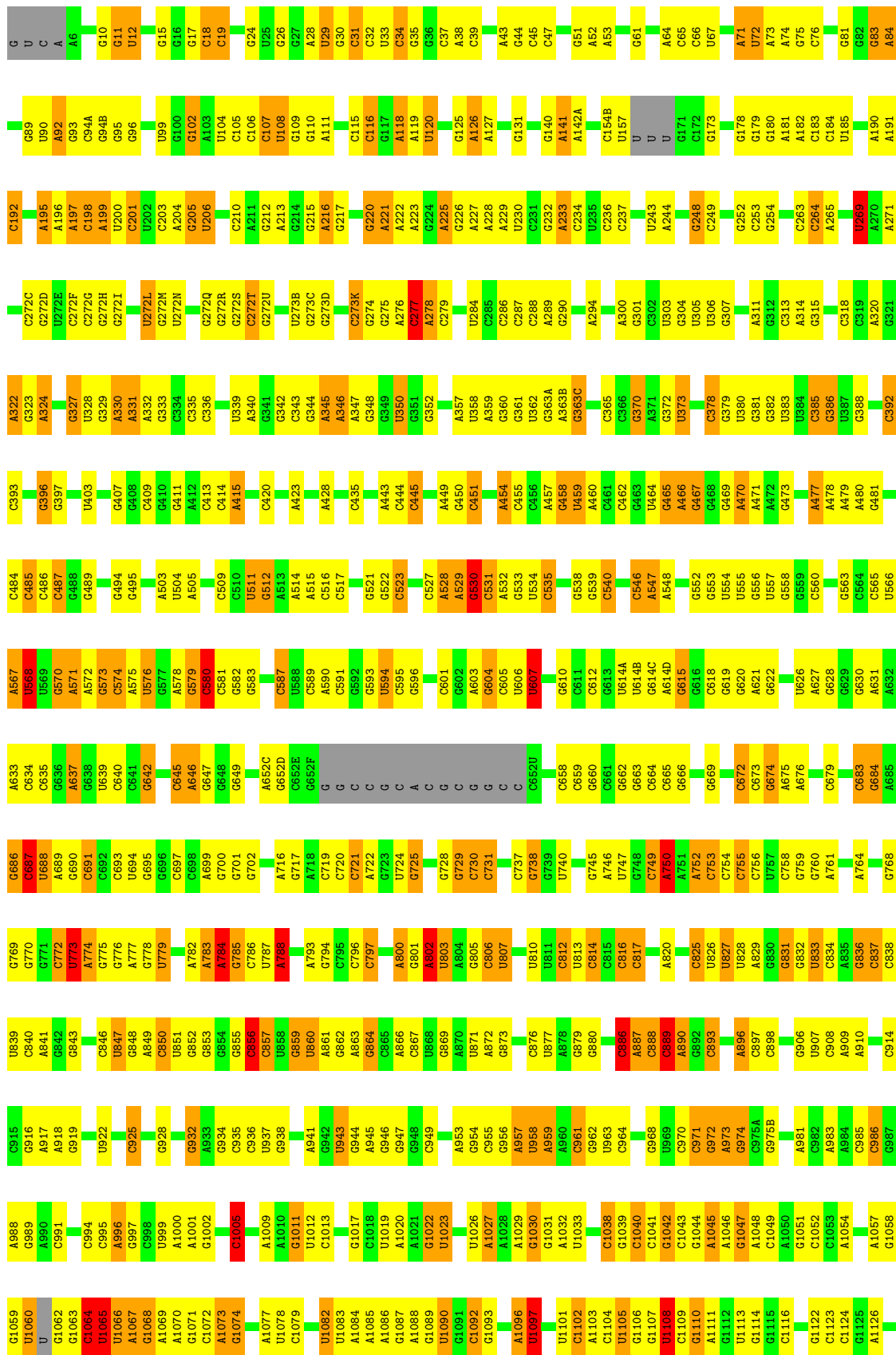
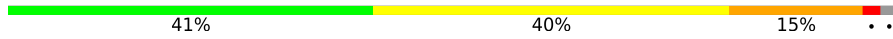


G1813	A1698	A1614	G1455	C1370	A1220	A1143	C1079	U1012	A941	G864	C797	G725
G1814	G1699	C1615	G1458	G1371	C1221A	C1146	U1082	C1013	G942	C865	G798	G729
G1815	A1700	A1616	G1459	C1375	C1221B	C1147	U1083	G1017	U943	A866	G799	C730
G1816	A1701	A1542	C1376	U1300	C1222	A1148	A1084	C1018	A945	C867	A800	C731
G1817	G1702	C1543	C1377	A1301	G1223	G1149	A1085	U1019	G946	U868	G801	C732
U1820	G1706	A1462	A1378	A1302	C1224	C1150	A1086	A1020	C947	A870	A802	G733
A1821	U1629	C1463	A1378	G1303	G1225	G1151	G1087	A1021	G948	U871	G805	A734
G1824	G1630	C1464	G1380	C1304	A1226	C1152	A1088	G1022	A735	C806	A735	A735
A1825	C1631A	G1466	G1380	C1306	G1227	C1153	U1089	G1023	G952	U807	A736	C736
C1826	A1632	C1467	A1384	G1309	G1231	A1155	G1091	G1024	G881	G808	G739	G739
A1829	G1633	A1471	G1385	G1309	G1232	A1156	C1092	U1025	C884	G809	U810	G742
C1830	C1638	C1474	G1389	U1312	C1233	G1157	G1093	U1026	A887	U811	U811	G743
G1831	A1639	G1475	U1390	U1313	U1234	C1158	U1094	G1030	A888	C812	C812	G744
C1832	C1640	A1476	U1391	U1314	G1236	C1159	A1095	U1036	A889	U812	U812	G745
G1833	A1641	A1477	U1394	C1315	U1237	G1160	A1096	G1031	C890	G818	G818	U746
U1834	C1646	G1480	A1395	U1316	U1240	G1164	U1097	A1032	G962	A819	A819	U747
G1835	G1647	U1481	U1396	A1317	A1241	C1165	A1098	U1033	U963	A820	A820	C748
C1836	C1648	G1482	U1397	C1318	A1242	U1166	G1099	G1034	C893	A821	A821	C749
C1837	G1651	U1481	C1398	U1323	G1243	C1167	C1100	U1035	C894	A822	A822	A750
C1838	A1652	G1484	U1405	C1327	A1247	G1171	C1102	G1037	U969	G825	G825	A751
G1839	G1653	G1485	U1406	G1328	U1248	A	C1103	U1038	C970	C897	A824	A752
U1842	A1654	G1485	U1406	U1329	U1249	G	C1104	G1039	C971	C898	A826	C755
A1847	C1657	U1490	U1409	U1330	G1250	U	C1105	C1040	C972	A899	U826	C756
A1848	G1658	U1491	G1409	C1333	G1251	G	C1106	G1041	A897	A900	U827	G757
G1849	A1665	G1492	G1410	U1334	C1252	A	C1107	G1042	G978	C908	G833	G766
G1850	C1666	U1493	C1411	G1335	U1253	U	C1108	C1043	G979	A909	C834	C766
A1853	G1667	G1494	C1411	U1336	A1254	C	C1109	U1044	A981	A910	A835	U767
A1854	A1669	U1495	G1415	U1340	U1255	G	C1110	G1045	C982	A911	G836	G768
A1855	C1670	U1496	G1416	U1335	G1256	G	C1111	A1046	A983	C912	G837	G769
G1856	U1671	U1497	G1417	A1336	U1256	C	C1112	U1046	A984	C914	C838	G770
A1857	A1672	U1497	G1418	U1337	G1257	C	C1113	A1054	A884	C915	U839	U774
G1858	C1672	U1497	G1418	U1337	C1257	C	C1114	U1057	A985	C915	C840	A774
A1859	U1673	U1500	U1419	G1338	A1262	G	C1115	G1060	G987	A917	A841	G775
A1860	C1674	A1508	U1420	U1339	U1263	G	C1116	U1062	A988	A918	U846	G776
A1861	A1675	A1509A	G1421	G1339	G1264	G	C1117	U1063	A989	A919	C846	A781
U1864	C1676	A1509B	G1422	U1341	A1265	G	C1118	G1064	A990	U922	A849	A782
A1877	A1677	A1509C	G1426	U1342	A1266	G	C1119	U1065	C982	C923	C850	A783
A1878	G1678	U1509C	U1427	A1342	U1267	G	C1120	U1066	A983	C924	U851	A784
A1879	U1678	C1510	A1428	A1342	U1267	G	C1121	A1067	A984	A926	G853	G785
A1880	C1678	C1511	G1429	A1345	A1269	G	C1122	G1068	A986	A927	C854	C786
U1884	A1676	C1515	G1430	U1352	A1270	G	C1123	U1069	C987	G928	U787	U787
A1879	C1677	C1516	G1435	A1354	C1271	U	C1124	A1070	A988	U930	A788	C856
A1877	G1678	G1525	G1436	A1354	A1272	C	C1125	G1062	A989	C928	C857	A789
A1879	G1682	G1525	C1437	G1355	U1273	C	C1126	C1063	C991	U922	U858	U858
C1882	C1685	A1528A	G1441	G1356	A1274	G	C1127	U1066	C992	C925	U851	A783
G1883	A1686	A1528B	G1442	U1357	A1278	G	C1128	U1066	C993	A926	G853	G785
C1886	C1687	G1529	G1442	A1358	U1278	G	C1129	G1067	C995	G927	C854	C786
C1886	U1687	C1530	A1445A	A1360	A1286	A	C1130	U1068	A996	G928	C854	C786
A1886	A1688	C1531	C1445B	G1361	A1287	U	C1131	A1069	C997	G928	U787	U787
A1889	C1689	C1532	C1446	C1362	U1288	U	C1132	G1071	C998	U930	A788	C856
A1890	C1607	G1533	C1446	C1363	C1289	U	C1133	U1071	C999	G931	C857	A789
U1890	U1692	U	G1450A	G1364	G1364	G	C1134	C1072	A1000	G932	U858	U858
G1891	U1688	A	C1450B	A1365	U1292	G	C1135	A1073	A1001	A933	G859	G859
C1896	G1696	C1536	C1451	A1366	C1293	G	C1136	G1074	C1005	G894	U860	U860
A1894	G1697	G1538	A1452	A1367	U1294	C	C1137	A1077	C1005	C936	A861	A861
			A1452	G1368	C1295	C	C1138	U1077	C1005	C936	A862	C796
			U1453	G1369	G1296	C	C1139	G1074	C1005	C936	A862	C796
							C1140					
							U1141					
							U1142A					
							A1142B					

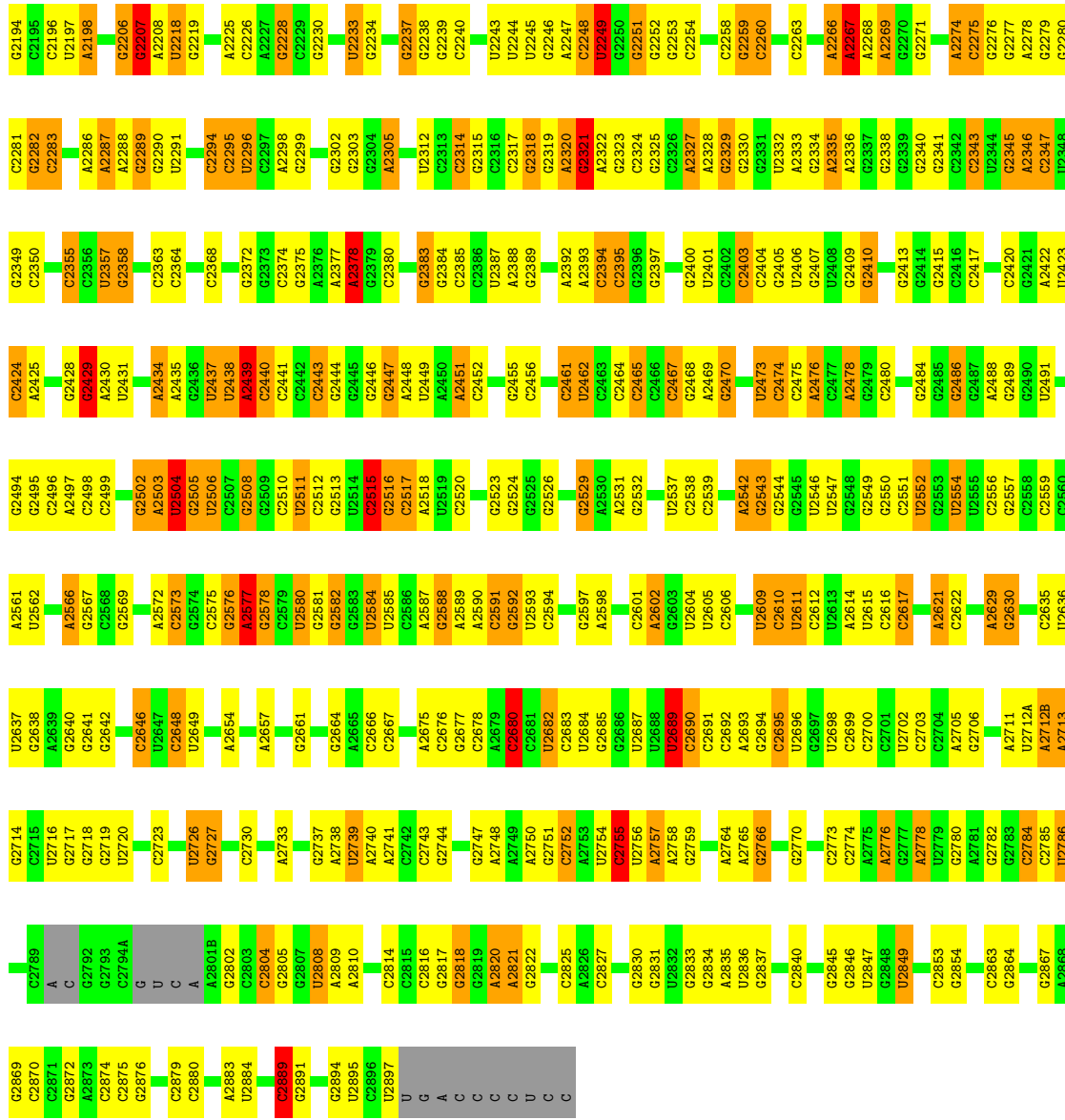
G2894	G1889	A1971	G2048	A2119	G2184	A2268	A2335	G2415	G2495	G2574	U2653	G2732	G2811
U2897	A1900	A1972	G2049	G2120	C2185	A2269	A2386	G2421	C2496	C2575	A2654	A2733	C2816
	C1901	G1973	C2050	U2122	G2187	G2270	G2340	A2422	C2498	A2576	G2655	G2737	G2817
	A1902	G1974	A2051	G2188	G2187	G2271	G2341	A2423	C2499	A2577	U2656	A2738	G2818
	G1903	G1975	G2052	U2189	U2189	G2272	C2342	U2424	C2501	G2578	A2660	A2739	A2820
	C1905	G1980	C2055	G2125	C2195	A2273	C2343	A2425	G2502	U2580	G2661	U2739	A2821
	G1906	A1981	G2056	A2126	C2196	A2274	C2344	A2426	A2503	G2581	A2662	A2740	A2822
		A1982	A2057	G2127	U2197	G2275	U2344	G2427	U2504	G2582	G2663	A2741	C2823
		G1983	A2058	C2128	U2198	A2276	G2345	G2428	U2505	G2583	G2664	C2742	A2824
		C1984	A2059	U2129	U2199	G2277	C2346	G2429	U2506	U2584	C2665	C2743	C2825
		G1984	A2060	G2131	C2200	G2280	C2347	A2430	U2507	U2585	C2666	G2744	C2826
		C1988	A2062	U2132	C2201	C2281	A2347	U2431	U2511	U2586	C2667	G2745	C2827
		G1989	C2063	G2133	C2202	C2282	C2348	U2432	C2512	A2587	A2668	G2746	C2828
		C1990	C2064	A2134	C2203	C2283	A2349	A2434	G2513	G2588	A2669	A2747	C2829
		U1911	C2065	A2135	C2204	C2284	G2350	A2435	U2514	A2589	C2670	A2748	A2830
		A1912	C2066	G2136	C2205	A2285	G2351	A2439	U2515	A2590	C2671	A2749	U2831
		C1913	G2067	U2137	C2206	A2286	G2352	A2440	A2516	C2591	A2672	A2750	U2832
		A1914	U2068	G2138	C2207	A2287	G2353	C2441	U2517	G2592	C2680	G2751	G2833
		U1915	G2069	C2139	C2208	A2288	C2354	C2442	U2518	U2593	G2681	C2752	G2834
		A1916	C1996	G2140	C2209	A2289	A2361	G2443	G2526	C2594	U2882	A2753	G2835
		U1917	U1991	U2141	C2210	G2290	G2362	C2444	U2527	C2595	C2683	A2754	C2840
		A1918	G1992	C2142	C2211	U2291	C2363	C2445	U2528	C2596	U2684	U2755	G2841
		C1919	U1993	G2143	C2212	C2292	C2364	G2446	U2529	U2596	U2685	A2756	G2842
		A1919	G1994	U2144	C2213	C2293	C2365	A2447	A2530	G2597	G2686	A2757	G2843
		C1920	U1995	C2145	C2214	C2294	G2370	U2448	A2531	A2602	U2687	A2758	U2844
		G1921	G2072	G2146	C2224	C2295	G2371	A2450	A2532	A2603	U2688		G2845
		U1922	U2075	G2147	C2225	U2296	C2374	A2451	U2533	U2605	C2689	G2763	U2846
		C1925	G1997	G2148	C2226	A2297	C2375	A2452	C2537	U2606	C2690	A2764	G2847
		A1926	G1998	C2149	C2227	A2298	A2377	G2455	C2538	U2607	C2691	A2765	G2848
		U1927	C1999	U2149	C2228	A2299	A2378	U2456	C2539	U2608	C2692	A2766	A2850
		A1928	G2000	G2150	C2229	G2300	G2379	U2457	U2542	U2611	U2696	G2767	A2851
		U1929	A2001	C2151	C2230	G2301	A2380	G2458	G2543	C2612	U2697	C2774	G2852
		G1930	G2002	G2152	C2231	G2302	G2381	U2459	G2544	C2613	U2698	A2775	G2853
		A1931	G2003	C2153	U2292	G2303	G2382	G2465	G2545	C2614	C2699	A2776	C2854
		C1934	G2004	G2154	C2293	G2304	G2383	C2466	U2546	U2615	C2700	A2777	G2855
		A1935	A2005	G2155	C2294	G2305	G2384	C2467	G2547	U2616	U2701	C2778	C2856
		G1936	C2006	C2156	C2295	G2306	C2385	G2468	G2548	C2617	U2702	A2778	G2857
		A1937	G2009	G2157	C2296	G2307	C2386	A2469	G2549	C2618	U2703		U2865
		U1938	G2010	U2158	C2297	G2308	C2387	A2470	G2550	C2619	C2704	G2782	U2866
		A1939	G2011	G2159	C2298	G2309	C2388	G2471	U2551	C2620	C2705	G2783	U2867
		U1940	U2087	C2160	C2299	G2310	C2389	G2472	U2552	A2621	A2706	C2784	A2868
		C1941	G2088	G2161	C2300	C2311	C2390	U2473	G2553	C2622	G2709	C2785	G2872
		A1942	U2091	C2162	C2301	C2312	U2391	A2474	G2554	G2623	C2710	G2786	C2874
		U1943	U2092	C2163	C2302	C2313	G2392	G2475	U2555	G2624	C2711	C2787	G2875
		C1947	G2093	G2164	C2303	C2314	G2393	A2476	C2556	U2630	U2712A	G2788	A2876
		A1952	C2094	C2165	C2304	C2315	G2394	G2477	C2557	G2631	A2712B	C2789	C2877
		A1953	U2096	G2166	C2305	C2316	C2395	A2478	G2558	G2632	A2713	A	C2878
		G1954	G2100	C2167	C2306	C2317	U2399	G2479	C2559	A2632	G2714	C	G2879
		U1955	G2103	G2167	C2307	C2318	G2402	G2480	U2560	G2633	G2715	G	G2880
		A1956	G2104	C2168	C2308	C2319	C2403	G2481	A2561	U2634	U2716	U	C2881
		C1957	C2032	U2169	C2309	G2320	C2404	G2482	U2562	G2635	G2717	G	A2882
		A1958	A2033	C2170	C2310	G2321	C2405	G2483	A2563	G2636	C	U	A2883
		G1959	G2036	C2171	C2311	U2322	G2406	G2484	A2564	U2636	A	A	U2884
		C1962	G2037	C2172	C2312	A2323	U2406	G2485	A2565	G2645	U2720		C2885
		U1963	U2109	C2173	C2313	G2324	U2407	G2486	A2566	G2646	G2723		U2886
		G1964	G2110	C2174	C2314	G2325	C2408	G2487	U2567	U2647	C2724		G2887
		A1965	C2111	C2175	C2315	G2326	C2409	G2488	C2568	U2648	A2725		A2888
		C1966	G2112	C2176	C2316	G2327	U2410	G2489	A2569	U2649	U2726		G2889
		U1967	G2115	C2177	C2317	G2328	G2411	A2488	A2570		A2808		U2890
		A1968	G2116	C2178	C2318	G2329	A2412	A2489	A2571		U2727		A2891
		G1969	G2117	U2180	C2319	G2330	A2413	A2490	A2572		G2727		G2893
		A1970	U2118	C2183	A2267	G2331	A2414	G2494	C2573				

• Molecule 25: 23S rRNA

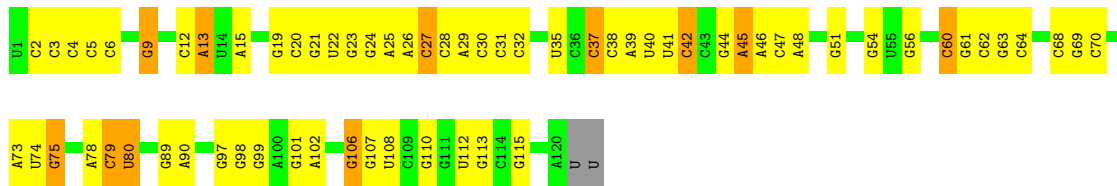
Chain YA:



U2118	A2051	G1907	G1817	G1742	G1644	A1571	C1498	A1419	U1341	G1271	G1202	A1129
A2119	G2052	U1911	U1818	G1748	G1645	A1572	C1499	U1420	A1342	A1272	G1203	U1130
A2126	A2053	A1912	A1819	G1749	G1646	G1573	G1500	G1421	G1343	U1273	A1204	G1131
G2127	A2054	A1913	U1820	A1749	G1647	G1574	C1501	G1422	G1344	A1274	U1205	A1132
G2128	G2055	A1914	A1822	G1752	G1648	U1575	C1505	G1423	C1345	A1275	G1206	U1133
G2129	G2056	U1915	G1823	G1753	G1649	U1576	U1506	G1424	U1352	A1276	G1136	G1135
U2130	A2059	A1916	G1826	C1754	G1651	U1577	A1507	G1425	U1352	G1280	A1210	G1137
G2131	A2060	U1917	G1827	A1755	G1656	U1578	A1508	G1426	A1353	U1281	U1211	G1138
G2132	G2061	A1918	C1827	G1756	C1656	A1580	A1509	A1427	A1354	G1281	G1212	G1139
G2133	A1978	A1919	G1828	G1757	C1657	G1581	A1509A	G1428	G1355	U1282	G1215	G1140
G2134	A2062	A1920	A1829	A1760	C1658	G1582	A1509B	G1429	G1356	A1286	G1216	U1141
G2135	C2063	G1921	C1830	C1761	U1659	A1583	A1509C	C1430	U1357	A1287	C1217	U1142A
G2137	C2064	G1922	G1831	A1762	C1660	C1584	C1510	U1431	A1358	U1288	U1217	A1142B
G2138	C2065	U1923	G1832	A1763	G1661	A1586	C1511	C1432	A1359	U1288	C1218	A1143
G2139	C2066	C1924	U1833	G1764	G1662	A1587	U1512	U1433	A1360	C1291	C1221A	G1144
G2140	G2067	C1925	U1833	G1764	A1664	A1587	C1513	A1434	G1363	U1292	G1223	C1145
G2141	U2068	U1926	U1833	C1765	A1665	C1588	U1514	G1435	G1364	C1293	G1223	G1150
G2141	G2069	A1927	C1836	G1769	G1666	A1665	G1515	G1436	A1365	U1294	C1224	
G2141	G2070	G1928	G1839	G1770	G1667	G1594	U1518	C1437	A1366	G1295	G1225	
G2144	A2071	G1929	G1842	C1771	A1668	G1595	G1526	U1438	A1367	G1296	G1227	
G2145	G2072	U1930	G1843	G1772	C1669	G1596	G1526	A1439	A1368	C1297	G1227	
G2146	C2073	C1934	C1843	A1773	C1670	A1596	G1526	G1440	G1375	C1299	G1231	
G2147	U2074	G1935	C1844	C1774	U1671	A1597	C1531	A1445A	C1375	G1299	G1231	
G2148	A2075	A1936	C1844	C1774	G1672	U1597	C1532	C1446	C1376	U1300	G1232	
G2148	U2076	G1936	C1844	C1774	G1673	C1599	C1533	G1447	C1377	A1302	C1233	
A2077	C2007	A1937	A1847	U1778	U1673	C1599	U	G1447	A1378	A1302	U1234	
G2080	G2008	A1938	A1948	U1779	C1674	A1603	A	G1450A	A1379	C1306	U1235	
C2081	G2009	U1939	A1780	U1780	C1675	C1604	C1536	U1451	G1380	A1307	G1236	
A2082	G2010	U1940	C1852	C1781	G1678	C1605	G1537	U1452	G1380	A1308	G1239	
A2082	U2011	C1941	A1853	A1783	G1678	C1606	G1538	U1453	A1384	G1309	U1240	
G2085	G2012	C1942	G1857	A1784	U1681	C1607	U1539	U1455	G1385	G1310	A1241	
U2086	A2014	U1944	G1858	A1785	G1682	A1608	G1543	U1455	G1386	G1311	A1242	
A2015	A2015	G1945	U1864	A1786	C1683	A1609	A	G1459	G1387	U1312	G1243	
U2016	U2016	U1946	U1865	A1787	C1684	A1610	C1544	U1462	C1387	U1313	A1246	
U2017	G1947	C1947	C1866	G1788	G1687	C1612	C1544	C1463	C1388	C1314	A1247	
G2093	U1948	G1948	A1876	A1789	A1690	G1613	A1545	C1464	U1394	C1315	G1250	
G2094	G1949	G1949	A1877	A1790	C1691	G1614	C1546	G1465	A1395	U1316	C1251	
C2095	U1950	G1950	A1878	A1791	U1692	A1615	C1547	G1466	U1396	C1318	G1180	
U2096	G1951	U1951	C1879	G1792	U1693	A1616	C1548	C1467	U1397	C1321	A1181	
C2097	A1952	A1952	C1882	C1795	C1694	G1619	C1549	C1467	C1398	A1321	A1182	
U2099	G1955	U1955	C1882	C1795	G1695	G1622	C1550	G1470	A1322	A1322	A1183	
G2100	U1956	U1956	A1889	U1798	G1696	A1583	A1583	A1471	G1400	G1325	G1184	
G2102	C1957	C1957	G1799	G1799	G1697	A1554	A1554	A1472	G1401	U1326	C1185	
C2103	C1958	C1958	C1800	C1800	A1698	C1625	C1625	G1473	G1402	U1327	G1186	
G2104	C1958	C1958	G1801	G1801	G1699	G1626	C1557	C1476	C1407	C1327	G1187	
C2105	A1961	A1961	A1802	A1802	A1700	U1629	A1558	C1476	U1406	U1329	U1188	
G2106	C1962	C1962	A1803	A1803	A1701	U1629	A1559	G1482	C1407	C1330	G1261	
C2107	U1963	U1963	C1804	C1804	G1702	G1633	G1560	G1482	C1408	A1331	C1262	
C2108	G1964	G1964	U1898	U1898	C1712	A1634	G1561	A1490	C1409	A1332	G1192	
U2109	C1965	C1965	G1899	G1899	C1712	A1634	A1662	A1490	C1409	G1332	U1263	
G2110	A1966	A1966	A1809	A1809	G1719	G1635	G1563	G1410	C1410	C1333	G1264	
U2041	C1967	C1967	A1810	A1810	U1719	C1636	G1564	G1492	C1411	G1334	A1265	
A2042	U2041	U2041	G1813	G1813	G1721	C1638	C1565	A1493	A1412	A1335	G1267	
C2044	A2042	A2042	G1814	G1814	A1722	A1639	A1566	A1495	G1416	A1337	A1268	
A2117	C2044	C2044	U1739	U1739	C1640	A1640	A1569	A1496	C1417	G1340	C1270	
A2117	A2117	A2117	G1906	G1906	A1641	A1641	A1570	U1497	G1418	U1340	C1201	

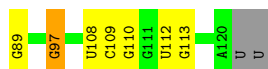


• Molecule 26: 5S rRNA



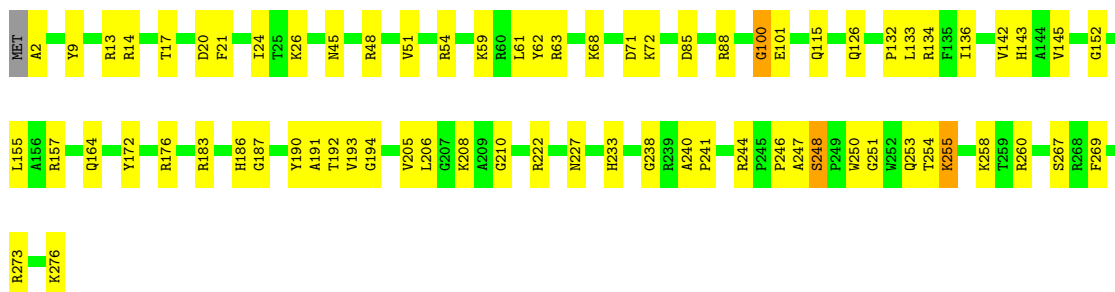
• Molecule 26: 5S rRNA





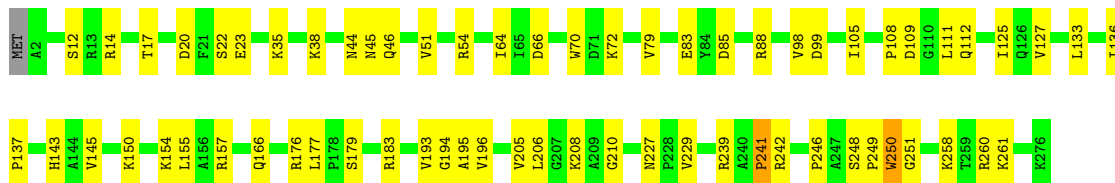
- Molecule 27: 50S ribosomal protein L2

Chain RD: 74% 25%



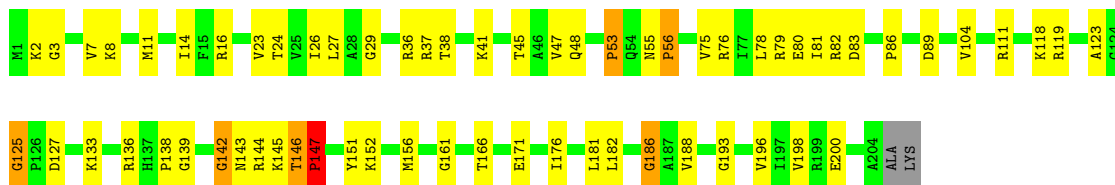
- Molecule 27: 50S ribosomal protein L2

Chain YD: 76% 23%



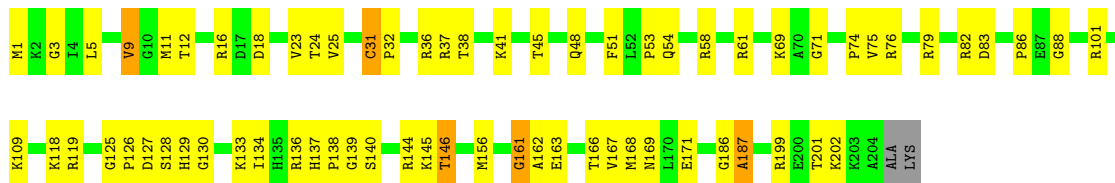
- Molecule 28: 50S ribosomal protein L3

Chain RE: 68% 28%



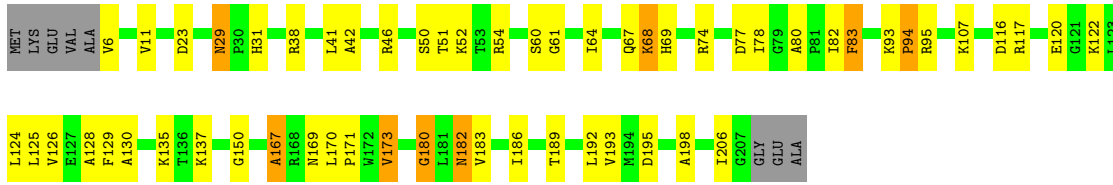
- Molecule 28: 50S ribosomal protein L3

Chain YE: 66% 31%



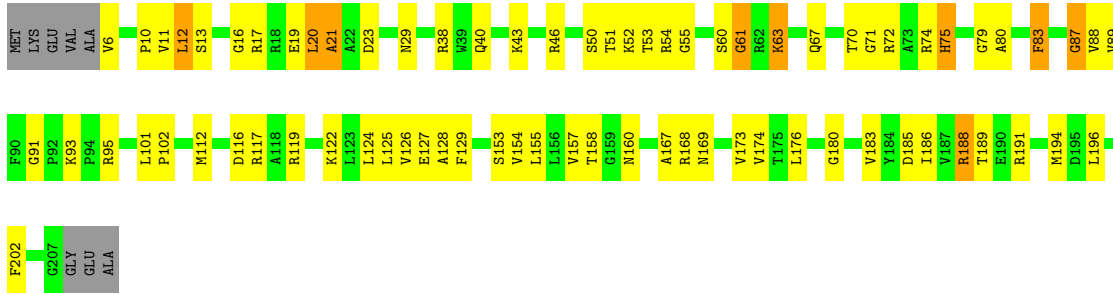
- Molecule 29: 50S ribosomal protein L4

Chain RF: 69% 23%



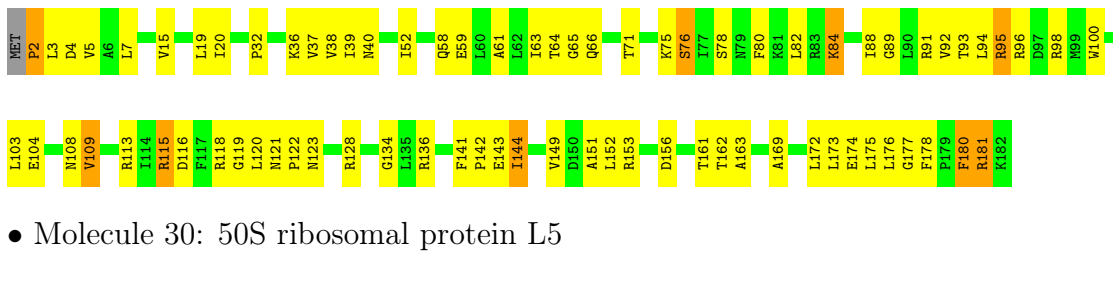
- Molecule 29: 50S ribosomal protein L4

Chain YF: 60% 31%



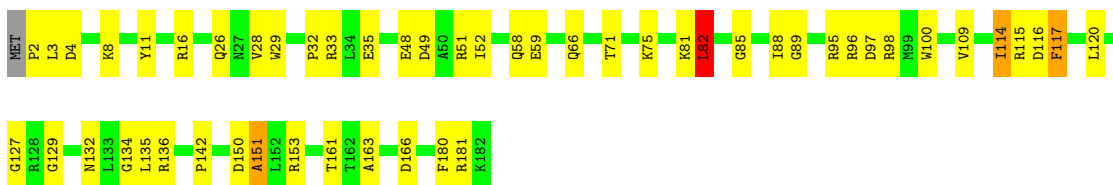
- Molecule 30: 50S ribosomal protein L5

Chain RG: 57% 37% 5%



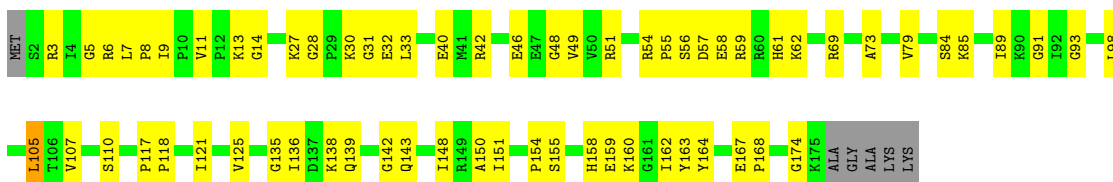
- Molecule 30: 50S ribosomal protein L5

Chain YG: 71% 26%



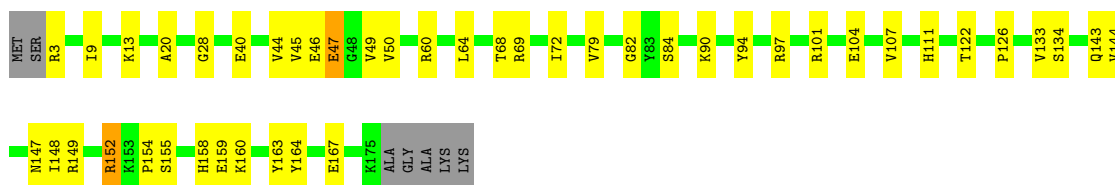
- Molecule 31: 50S ribosomal protein L6

Chain RH: 61% 36%



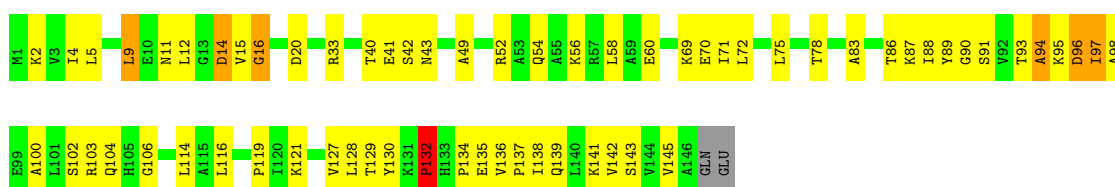
- Molecule 31: 50S ribosomal protein L6

Chain YH:  71% 24% ..




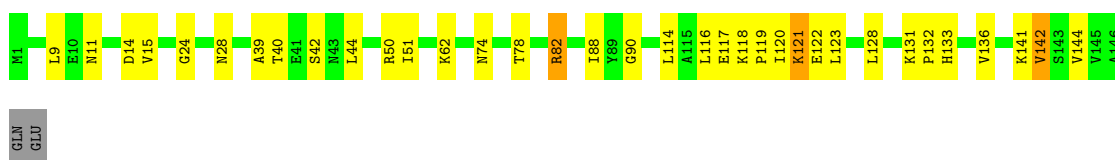
- Molecule 32: 50S ribosomal protein L9

Chain RI:  55% 39% ..



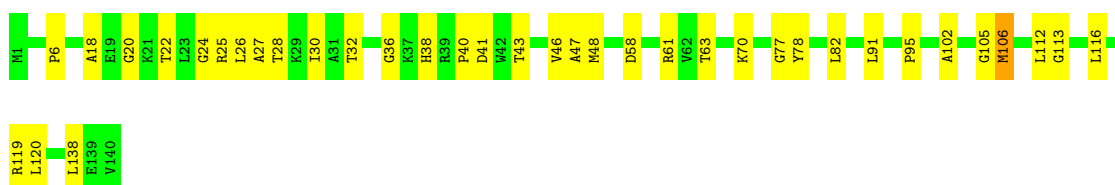
- Molecule 32: 50S ribosomal protein L9

Chain YI:  75% 22% ..




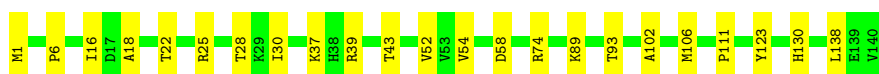
- Molecule 33: 50S ribosomal protein L13

Chain RN:  74% 26%



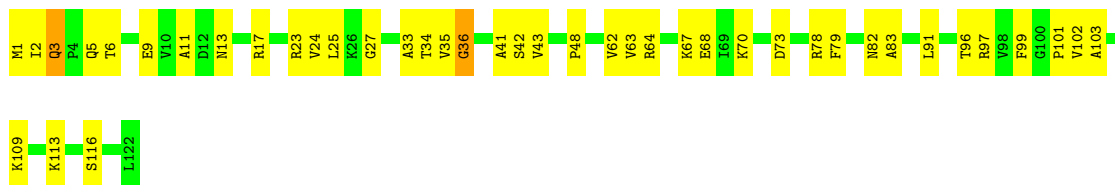
- Molecule 33: 50S ribosomal protein L13

Chain YN:  84% 16%



- Molecule 34: 50S ribosomal protein L14

Chain RO:  66% 33%



- Molecule 34: 50S ribosomal protein L14

Chain YO: 79% 20%



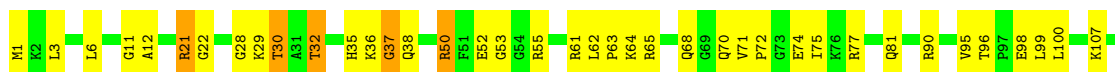
- Molecule 35: 50S ribosomal protein L15

Chain RP: 64% 29% 7%



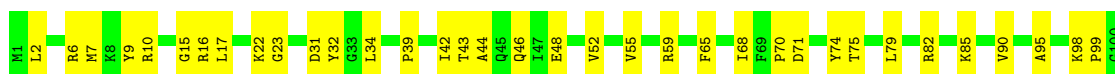
- Molecule 35: 50S ribosomal protein L15

Chain YP: 66% 30%



- Molecule 36: 50S ribosomal protein L16

Chain RQ: 67% 33%

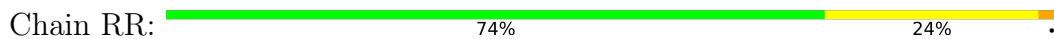


- Molecule 36: 50S ribosomal protein L16

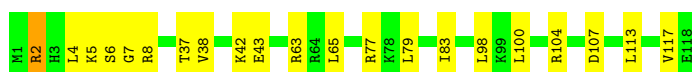
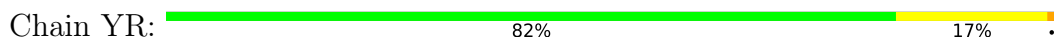
Chain YQ: 79% 21%



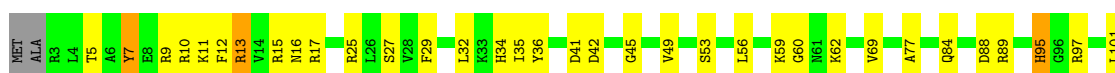
• Molecule 37: 50S ribosomal protein L17



• Molecule 37: 50S ribosomal protein L17



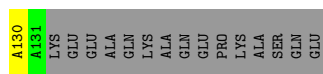
• Molecule 38: 50S ribosomal protein L18



• Molecule 38: 50S ribosomal protein L18



• Molecule 39: 50S ribosomal protein L19



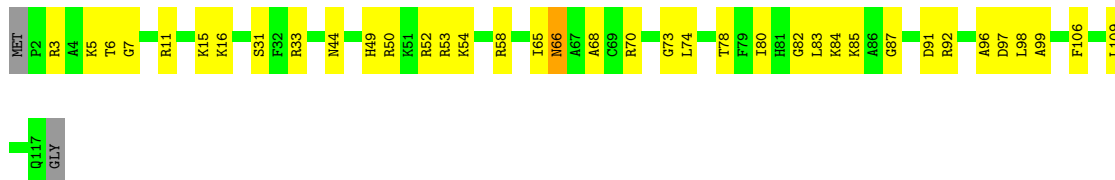
• Molecule 39: 50S ribosomal protein L19





- Molecule 40: 50S ribosomal protein L20

Chain RU: 67% 31% ..



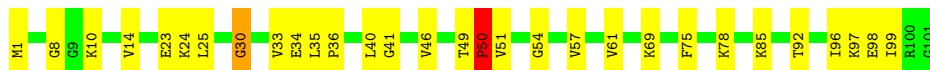
- Molecule 40: 50S ribosomal protein L20

Chain YU: 78% 20% .



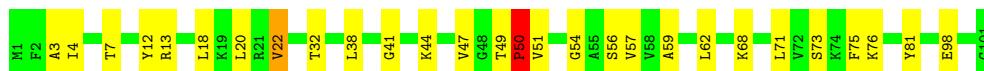
- Molecule 41: 50S ribosomal protein L21

Chain RV: 70% 28% ..



- Molecule 41: 50S ribosomal protein L21

Chain YV: 72% 26% ..



- Molecule 42: 50S ribosomal protein L22

Chain RW: 77% 22% .



- Molecule 42: 50S ribosomal protein L22

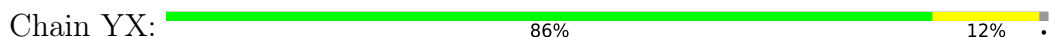
Chain YW: 79% 19% ..



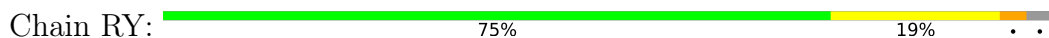
• Molecule 43: 50S ribosomal protein L23



• Molecule 43: 50S ribosomal protein L23



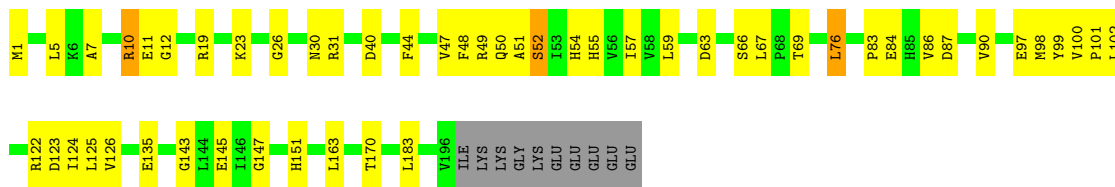
• Molecule 44: 50S ribosomal protein L24



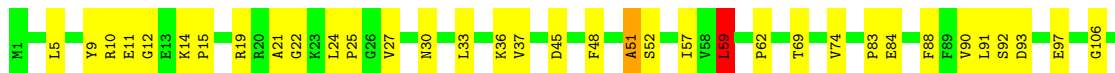
• Molecule 44: 50S ribosomal protein L24



• Molecule 45: 50S ribosomal protein L25



• Molecule 45: 50S ribosomal protein L25

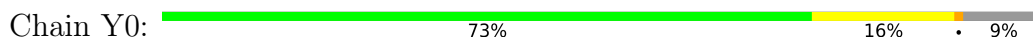




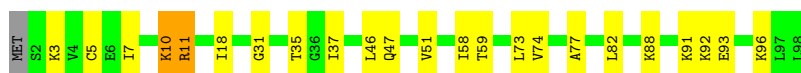
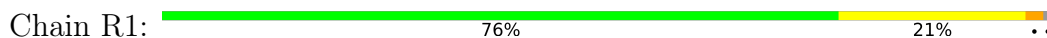
- Molecule 46: 50S ribosomal protein L27



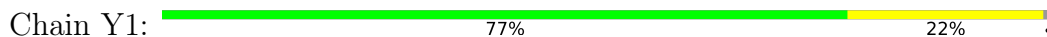
- Molecule 46: 50S ribosomal protein L27



- Molecule 47: 50S ribosomal protein L28



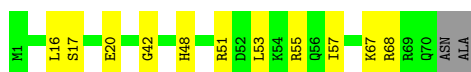
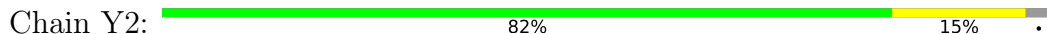
- Molecule 47: 50S ribosomal protein L28



- Molecule 48: 50S ribosomal protein L29

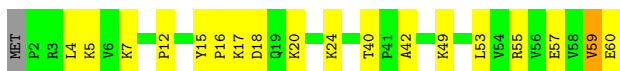


- Molecule 48: 50S ribosomal protein L29



- Molecule 49: 50S ribosomal protein L30

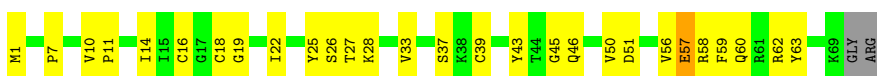




- Molecule 49: 50S ribosomal protein L30



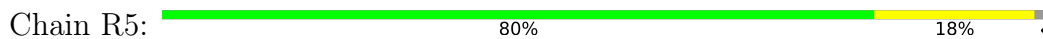
- Molecule 50: 50S ribosomal protein L31



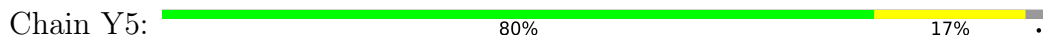
- Molecule 50: 50S ribosomal protein L31



- Molecule 51: 50S ribosomal protein L32



- Molecule 51: 50S ribosomal protein L32



- Molecule 52: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L33

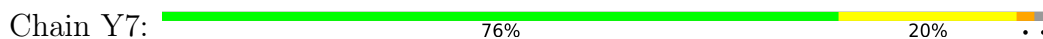




- Molecule 53: 50S ribosomal protein L34



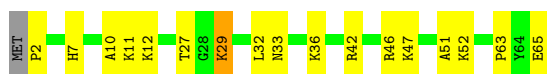
- Molecule 53: 50S ribosomal protein L34



- Molecule 54: 50S ribosomal protein L35



- Molecule 54: 50S ribosomal protein L35



- Molecule 55: 50S ribosomal protein L36



- Molecule 55: 50S ribosomal protein L36



- Molecule 56: tRNA acceptor end mimic





- Molecule 56: tRNA acceptor end mimic



4 Data and refinement statistics

EDS failed to run properly - this section is therefore incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.91Å 445.91Å 617.31Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.17 – 3.64	Depositor
% Data completeness (in resolution range)	93.4 (49.17-3.64)	Depositor
R_{merge}	0.24	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.37 (at 3.67Å)	Xtriage
Refinement program	PHENIX 1.14_3260	Depositor
R, R_{free}	0.208 , 0.250	Depositor
Wilson B-factor (Å ²)	123.8	Xtriage
Anisotropy	0.381	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.37$, $\langle L^2 \rangle = 0.20$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	291822	wwPDB-VP
Average B, all atoms (Å ²)	150.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.02% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: OMG, UR3, OMC, 5MU, 5MC, 2MG, 4OC, OMU, MG, MA6, M2G, ZN, PSU, SF4, 0TD, PPU, 2MA, G7M

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	QA	0.92	1/35795 (0.0%)	1.25	264/55864 (0.5%)
1	XA	1.03	8/35890 (0.0%)	1.25	234/56012 (0.4%)
2	QB	0.36	0/1942	0.64	0/2619
2	XB	0.39	0/1950	0.59	0/2630
3	QC	0.36	0/1629	0.60	1/2195 (0.0%)
3	XC	0.42	0/1629	0.59	0/2195
4	QD	0.47	0/1733	0.66	0/2318
4	XD	0.48	0/1733	0.61	0/2318
5	QE	0.40	0/1149	0.61	0/1548
5	XE	0.47	0/1149	0.59	0/1548
6	QF	0.40	0/850	0.56	0/1147
6	XF	0.49	0/850	0.60	1/1147 (0.1%)
7	QG	0.36	0/1276	0.55	0/1709
7	XG	0.43	0/1276	0.56	0/1709
8	QH	0.43	0/1128	0.59	0/1517
8	XH	0.44	0/1128	0.59	0/1517
9	QI	0.38	0/1029	0.62	0/1379
9	XI	0.42	0/1017	0.64	0/1365
10	QJ	0.37	0/814	0.61	0/1095
10	XJ	0.40	0/790	0.52	0/1063
11	QK	0.42	0/859	0.54	0/1162
11	XK	0.41	0/859	0.52	0/1162
12	QL	0.49	0/963	0.65	0/1287
12	XL	0.52	0/963	0.60	0/1287
13	QM	0.41	0/938	0.64	0/1258
13	XM	0.45	0/926	0.61	0/1241
14	QN	0.40	0/501	0.59	0/664
14	XN	0.48	0/501	0.60	0/664
15	QO	0.38	0/745	0.55	0/992
15	XO	0.45	0/745	0.62	0/992
16	QP	0.50	0/707	0.56	0/951

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
16	XP	0.43	0/707	0.57	0/951
17	QQ	0.45	0/836	0.58	0/1117
17	XQ	0.45	0/836	0.56	0/1117
18	QR	0.38	0/560	0.58	0/746
18	XR	0.45	0/560	0.60	0/746
19	QS	0.33	0/680	0.57	0/915
19	XS	0.44	0/680	0.58	0/915
20	QT	0.43	0/745	0.57	0/981
20	XT	0.34	0/762	0.57	0/1003
21	QU	0.37	0/203	0.54	0/266
21	XU	0.41	0/203	0.47	0/266
22	QV	0.90	1/1836 (0.1%)	1.28	31/2859 (1.1%)
22	XV	1.16	1/1836 (0.1%)	1.40	25/2859 (0.9%)
23	QX	0.71	0/185	1.34	1/285 (0.4%)
23	XX	0.89	0/260	1.69	8/402 (2.0%)
24	QY	0.69	0/336	1.25	3/522 (0.6%)
24	XY	0.71	0/381	1.39	7/593 (1.2%)
25	RA	1.20	15/68971 (0.0%)	1.33	622/107656 (0.6%)
25	YA	1.36	49/68976 (0.1%)	1.43	918/107668 (0.9%)
26	RB	0.78	0/2876	1.27	26/4486 (0.6%)
26	YB	1.09	0/2878	1.27	18/4490 (0.4%)
27	RD	0.60	0/2194	0.59	0/2955
27	YD	0.67	0/2195	0.62	0/2955
28	RE	0.57	0/1596	0.59	0/2153
28	YE	0.61	0/1596	0.65	0/2153
29	RF	0.60	1/1620 (0.1%)	0.61	0/2194
29	YF	0.65	0/1620	0.64	1/2194 (0.0%)
30	RG	0.40	0/1499	0.69	0/2016
30	YG	0.53	0/1499	0.67	1/2016 (0.0%)
31	RH	0.38	0/1362	0.58	0/1841
31	YH	0.55	0/1356	0.58	0/1833
32	RI	0.42	0/1151	0.68	1/1558 (0.1%)
32	YI	0.44	0/1151	0.67	0/1558
33	RN	0.51	0/1148	0.55	0/1547
33	YN	0.58	0/1148	0.54	0/1547
34	RO	0.56	0/943	0.67	1/1269 (0.1%)
34	YO	0.64	0/943	0.67	2/1269 (0.2%)
35	RP	0.50	0/1156	0.60	0/1537
35	YP	0.56	0/1156	0.62	0/1537
36	RQ	0.50	0/1143	0.58	0/1527
36	YQ	0.59	0/1143	0.59	0/1527
37	RR	0.56	0/982	0.66	0/1312
37	YR	0.54	0/982	0.62	0/1312

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	RS	0.39	0/887	0.63	1/1180 (0.1%)
38	YS	0.49	0/887	0.62	0/1180
39	RT	0.52	0/1105	0.57	0/1477
39	YT	0.58	0/1105	0.58	0/1477
40	RU	0.52	0/977	0.52	0/1301
40	YU	0.61	0/977	0.54	0/1301
41	RV	0.48	0/790	0.64	0/1057
41	YV	0.59	0/790	0.67	0/1057
42	RW	0.60	0/901	0.55	0/1209
42	YW	0.62	0/901	0.54	0/1209
43	RX	0.54	0/764	0.57	1/1025 (0.1%)
43	YX	0.63	0/764	0.59	0/1025
44	RY	0.49	0/831	0.59	0/1108
44	YY	0.57	0/831	0.61	0/1108
45	RZ	0.42	0/1585	0.61	1/2153 (0.0%)
45	YZ	0.50	0/1493	0.65	1/2026 (0.0%)
46	R0	0.47	0/619	0.55	0/825
46	Y0	0.59	0/619	0.57	0/825
47	R1	0.52	0/770	0.58	0/1022
47	Y1	0.59	1/770 (0.1%)	0.60	0/1022
48	R2	0.40	0/594	0.52	0/785
48	Y2	0.47	0/594	0.51	0/785
49	R3	0.52	0/474	0.61	0/635
49	Y3	0.52	0/473	0.62	0/635
50	R4	0.36	0/578	0.60	0/776
50	Y4	0.42	0/578	0.63	1/776 (0.1%)
51	R5	0.58	0/473	0.61	0/639
51	Y5	0.57	0/465	0.57	0/629
52	R6	0.32	0/460	0.56	0/613
52	Y6	0.33	0/460	0.64	0/613
53	R7	0.58	0/426	0.59	0/561
53	Y7	0.62	0/426	0.63	0/561
54	R8	0.52	0/525	0.58	0/691
54	Y8	0.59	0/525	0.65	0/691
55	R9	0.29	0/310	0.56	0/407
55	Y9	0.38	0/310	0.59	0/407
56	ZA	0.64	0/40	1.52	4/60 (6.7%)
56	ZB	1.26	0/40	1.60	0/60
All	All	1.02	77/314471 (0.0%)	1.18	2174/470119 (0.5%)

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

sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	XA	0	1
2	QB	0	30
2	XB	0	23
3	QC	0	24
3	XC	0	16
4	QD	0	18
4	XD	0	8
5	QE	0	13
5	XE	0	15
6	QF	0	6
6	XF	0	5
7	QG	0	10
7	XG	0	10
8	QH	0	14
8	XH	0	6
9	QI	0	22
9	XI	0	9
10	QJ	0	10
10	XJ	0	8
11	QK	0	6
11	XK	0	11
12	QL	0	13
12	XL	0	10
13	QM	0	12
13	XM	0	7
14	QN	0	5
14	XN	0	6
15	QO	0	4
15	XO	0	3
16	QP	0	10
16	XP	0	4
17	QQ	0	7
17	XQ	0	5
18	QR	0	3
18	XR	0	1
19	QS	0	10
19	XS	0	8
20	QT	0	6
20	XT	0	4
21	QU	0	3
21	XU	0	2
25	YA	0	1

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
27	RD	0	17
27	YD	0	9
28	RE	0	14
28	YE	0	16
29	RF	0	15
29	YF	0	19
30	RG	0	29
30	YG	0	19
31	RH	0	20
31	YH	0	5
32	RI	0	26
32	YI	0	19
33	RN	0	7
33	YN	0	5
34	RO	0	5
34	YO	0	1
35	RP	0	23
35	YP	0	18
36	RQ	0	4
36	YQ	0	4
37	RR	0	5
37	YR	0	5
38	RS	0	5
38	YS	0	5
39	RT	0	5
39	YT	0	5
40	RU	0	6
40	YU	0	1
41	RV	0	8
41	YV	0	9
42	RW	0	2
42	YW	0	5
43	RX	0	4
43	YX	0	3
44	RY	0	6
44	YY	0	6
45	RZ	0	13
45	YZ	0	22
46	R0	0	5
46	Y0	0	3
47	R1	0	5
47	Y1	0	4

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
48	R2	0	3
48	Y2	0	1
49	R3	0	2
49	Y3	0	4
50	R4	0	10
50	Y4	0	11
51	R5	0	2
51	Y5	0	3
52	R6	0	5
52	Y6	0	5
53	R7	0	4
53	Y7	0	2
54	R8	0	1
54	Y8	0	4
55	R9	0	4
55	Y9	0	1
All	All	0	858

All (77) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	XA	88	A	C3'-C2'	11.98	1.66	1.52
22	XV	1	C	OP3-P	-9.54	1.49	1.61
22	QV	1	C	OP3-P	-9.31	1.50	1.61
1	XA	88	A	C1'-N9	7.29	1.59	1.48
1	XA	88	A	C4'-O4'	7.00	1.54	1.45
25	YA	2415	G	N3-C4	-6.91	1.30	1.35
25	YA	1378	A	N9-C4	-6.74	1.33	1.37
25	YA	2415	G	C2-N3	-6.74	1.27	1.32
1	XA	359	U	P-O5'	6.34	1.66	1.59
1	XA	358	U	C3'-O3'	6.27	1.50	1.42
25	YA	2060	A	N9-C4	-6.02	1.34	1.37
1	XA	358	U	C5'-C4'	-6.00	1.44	1.51
25	YA	971	C	N1-C6	-5.96	1.33	1.37
25	YA	2542	A	N9-C4	-5.91	1.34	1.37
25	YA	471	A	N9-C4	-5.84	1.34	1.37
25	YA	2486	G	N3-C4	-5.83	1.31	1.35
25	YA	750	A	N7-C5	-5.80	1.35	1.39
25	YA	1787	A	N7-C5	-5.75	1.35	1.39
25	YA	2403	C	C2-O2	-5.74	1.19	1.24
25	RA	2589	A	N9-C4	-5.72	1.34	1.37
25	RA	960	A	N7-C5	-5.68	1.35	1.39

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	YA	567	A	N9-C4	-5.66	1.34	1.37
25	YA	466	A	N7-C5	-5.65	1.35	1.39
25	RA	2030	A	N9-C4	-5.62	1.34	1.37
1	XA	900	A	N9-C4	-5.60	1.34	1.37
25	YA	1981	A	N9-C4	-5.56	1.34	1.37
25	RA	751	A	N9-C4	-5.55	1.34	1.37
25	RA	685	A	N9-C4	-5.52	1.34	1.37
25	YA	959	A	N9-C4	-5.50	1.34	1.37
25	YA	2020	A	N9-C4	-5.50	1.34	1.37
25	RA	528	A	N7-C5	-5.47	1.35	1.39
25	YA	1281	G	C2'-C1'	-5.46	1.47	1.53
25	RA	2031	A	N9-C4	-5.46	1.34	1.37
25	RA	2621	A	N9-C4	-5.41	1.34	1.37
29	RF	23	ASP	C-N	-5.41	1.21	1.34
25	YA	1325	G	N9-C4	-5.38	1.33	1.38
25	YA	1698	A	N9-C4	-5.35	1.34	1.37
25	YA	1819	A	N9-C4	-5.33	1.34	1.37
25	RA	111	A	N9-C4	-5.32	1.34	1.37
25	YA	2614	A	N9-C4	-5.31	1.34	1.37
25	YA	1247	A	N9-C4	-5.30	1.34	1.37
25	YA	1608	A	N9-C4	-5.30	1.34	1.37
25	RA	782	A	N9-C4	-5.27	1.34	1.37
25	YA	1913	A	N9-C4	-5.26	1.34	1.37
25	YA	2051	A	C5-C6	-5.26	1.36	1.41
25	RA	577	G	N7-C5	-5.25	1.36	1.39
25	YA	676	A	N9-C4	-5.24	1.34	1.37
25	RA	2542	A	N9-C4	-5.24	1.34	1.37
25	YA	126	A	N9-C4	-5.23	1.34	1.37
1	XA	359	U	C5'-C4'	5.21	1.57	1.51
25	YA	2063	C	C4-C5	-5.20	1.38	1.43
25	YA	2486	G	N9-C4	-5.19	1.33	1.38
25	YA	1286	A	N9-C4	-5.19	1.34	1.37
25	YA	2439	A	N9-C4	-5.17	1.34	1.37
25	YA	1342	A	N9-C4	-5.17	1.34	1.37
25	YA	1251	C	N1-C6	-5.15	1.34	1.37
25	YA	2015	A	N7-C5	-5.14	1.36	1.39
25	RA	390	A	N9-C4	-5.13	1.34	1.37
25	YA	1609	A	N9-C4	-5.12	1.34	1.37
25	YA	1817	G	N7-C5	-5.12	1.36	1.39
25	YA	116	C	N1-C6	-5.12	1.34	1.37
25	YA	84	A	N9-C4	-5.12	1.34	1.37
25	YA	1544	A	N9-C4	-5.12	1.34	1.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	YA	1938	A	N9-C4	-5.11	1.34	1.37
25	YA	800	A	N7-C5	-5.11	1.36	1.39
1	QA	325	A	N9-C4	-5.10	1.34	1.37
25	YA	783	A	N7-C5	-5.07	1.36	1.39
47	Y1	42	GLN	C-N	-5.07	1.22	1.34
25	RA	2015	A	N7-C5	-5.05	1.36	1.39
25	YA	1830	C	C4-C5	-5.05	1.39	1.43
25	YA	1027	A	N9-C4	-5.05	1.34	1.37
25	YA	1638	C	N1-C6	-5.04	1.34	1.37
25	YA	2577	A	N3-C4	-5.04	1.31	1.34
25	YA	800	A	N9-C4	-5.02	1.34	1.37
25	RA	686	G	N7-C5	-5.02	1.36	1.39
25	YA	195	A	N9-C4	-5.02	1.34	1.37
25	YA	1754	C	N1-C6	-5.01	1.34	1.37

All (2174) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	88	A	O4'-C1'-C2'	16.46	122.42	107.60
1	XA	359	U	C2-N1-C1'	15.95	136.84	117.70
25	YA	2415	G	N3-C2-N2	-15.63	108.96	119.90
23	XX	19	C	N1-C2-O2	13.47	126.98	118.90
1	XA	358	U	N1-C1'-C2'	-12.81	97.35	114.00
25	YA	1827	C	O5'-P-OP2	-12.80	94.18	105.70
1	XA	747	C	N3-C2-O2	-12.32	113.27	121.90
1	XA	359	U	C6-N1-C1'	-12.32	103.96	121.20
25	RA	2584	U	C2-N1-C1'	12.12	132.24	117.70
25	RA	1102	C	N3-C2-O2	-11.93	113.55	121.90
25	YA	2584	U	C2-N1-C1'	11.77	131.82	117.70
1	XA	747	C	N1-C2-O2	11.52	125.81	118.90
25	RA	912	C	C6-N1-C2	-11.45	115.72	120.30
25	RA	2221	G	C4-N9-C1'	11.42	141.34	126.50
25	RA	912	C	C2-N1-C1'	11.40	131.34	118.80
22	QV	32	C	N1-C2-O2	11.39	125.73	118.90
25	YA	385	C	C2-N1-C1'	11.38	131.32	118.80
25	YA	1281	G	N9-C1'-C2'	-11.27	99.35	114.00
25	YA	1314	C	C2-N1-C1'	11.25	131.17	118.80
1	QA	979	C	C6-N1-C2	-11.15	115.84	120.30
25	RA	2221	G	C8-N9-C1'	-10.84	112.91	127.00
25	YA	1314	C	C6-N1-C2	-10.77	115.99	120.30
25	RA	2880	C	N3-C2-O2	-10.77	114.36	121.90
25	YA	385	C	N1-C2-O2	10.75	125.35	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	754	C	C2-N1-C1'	10.73	130.60	118.80
25	RA	1102	C	N1-C2-O2	10.58	125.25	118.90
25	YA	445	C	C6-N1-C2	-10.58	116.07	120.30
25	RA	2880	C	N1-C2-O2	10.55	125.23	118.90
25	RA	1092	C	N1-C2-O2	10.48	125.19	118.90
25	RA	912	C	N3-C2-O2	-10.43	114.60	121.90
25	RA	2063	C	C6-N1-C2	-10.40	116.14	120.30
25	RA	1102	C	C6-N1-C2	-10.37	116.15	120.30
25	YA	2573	C	C2-N1-C1'	10.35	130.19	118.80
23	XX	19	C	N3-C2-O2	-10.33	114.67	121.90
23	XX	19	C	C2-N1-C1'	10.31	130.14	118.80
25	RA	1313	U	C2-N1-C1'	10.26	130.01	117.70
25	RA	912	C	N1-C2-O2	10.22	125.03	118.90
25	YA	2575	C	C2-N1-C1'	-10.18	107.60	118.80
25	YA	1332	G	O5'-P-OP2	-10.09	96.62	105.70
25	YA	2465	C	N3-C2-O2	-10.08	114.84	121.90
25	RA	1142(A)	U	N1-C2-O2	10.07	129.85	122.80
25	YA	867	C	N1-C2-O2	9.92	124.85	118.90
1	XA	979	C	C6-N1-C2	-9.91	116.34	120.30
22	XV	75	C	C6-N1-C1'	9.90	132.68	120.80
25	YA	2063	C	C2-N1-C1'	9.88	129.67	118.80
1	QA	330	C	N1-C2-O2	9.80	124.78	118.90
25	RA	856	C	C6-N1-C2	-9.80	116.38	120.30
25	YA	2573	C	C6-N1-C1'	-9.63	109.25	120.80
1	XA	330	C	N1-C2-O2	9.53	124.62	118.90
25	RA	1779	U	C2-N1-C1'	9.51	129.11	117.70
24	QY	34	C	N1-C2-O2	9.46	124.58	118.90
25	YA	2063	C	C6-N1-C2	-9.43	116.53	120.30
25	YA	2465	C	C6-N1-C2	-9.39	116.54	120.30
25	YA	466	A	C8-N9-C4	-9.28	102.09	105.80
26	RB	37	C	N3-C2-O2	-9.26	115.42	121.90
25	YA	2403	C	C6-N1-C1'	9.26	131.91	120.80
25	YA	2051	A	N9-C4-C5	-9.25	102.10	105.80
25	YA	1604	C	C6-N1-C1'	9.22	131.87	120.80
25	YA	1179	C	N1-C2-O2	9.21	124.42	118.90
22	QV	32	C	N3-C2-O2	-9.18	115.47	121.90
1	QA	1066	C	N1-C2-O2	9.17	124.40	118.90
25	YA	445	C	C6-N1-C1'	9.13	131.76	120.80
25	RA	2498	C	C2-N1-C1'	-9.12	108.77	118.80
25	RA	2063	C	C5-C6-N1	9.11	125.55	121.00
25	YA	2666	C	N1-C2-O2	9.10	124.36	118.90
25	YA	2473	U	N1-C2-O2	9.08	129.16	122.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	824	C	C6-N1-C2	-9.06	116.68	120.30
25	RA	1142(A)	U	N3-C2-O2	-9.03	115.88	122.20
25	YA	2295	C	C6-N1-C2	-9.03	116.69	120.30
25	YA	203	C	O5'-P-OP2	9.03	121.53	110.70
25	YA	2584	U	C6-N1-C1'	-9.00	108.60	121.20
25	YA	385	C	N3-C2-O2	-9.00	115.60	121.90
25	YA	2587	A	O5'-P-OP1	-8.99	97.61	105.70
1	XA	435	C	C5-C6-N1	8.98	125.49	121.00
1	QA	979	C	N3-C2-O2	-8.97	115.62	121.90
1	XA	435	C	C6-N1-C2	-8.88	116.75	120.30
25	RA	984	A	C8-N9-C4	-8.86	102.25	105.80
22	XV	75	C	C2-N1-C1'	-8.85	109.06	118.80
25	RA	2318	G	C4-N9-C1'	8.83	137.98	126.50
25	YA	2575	C	C6-N1-C1'	8.82	131.39	120.80
25	YA	2179	C	C6-N1-C2	-8.79	116.78	120.30
25	YA	2063	C	N1-C2-O2	8.79	124.17	118.90
25	YA	786	C	C2-N1-C1'	-8.78	109.14	118.80
25	RA	2465	C	C6-N1-C2	-8.77	116.79	120.30
25	YA	192	C	C6-N1-C2	-8.77	116.79	120.30
25	RA	2153	G	N3-C4-N9	8.76	131.25	126.00
25	RA	2063	C	N1-C2-O2	8.75	124.15	118.90
1	XA	1522	U	C6-N1-C1'	8.75	133.45	121.20
25	RA	2220	G	N9-C1'-C2'	-8.75	102.38	112.00
25	YA	2473	U	N3-C2-O2	-8.74	116.08	122.20
25	YA	755	C	C6-N1-C2	-8.71	116.81	120.30
25	RA	1774	C	N3-C2-O2	-8.71	115.80	121.90
25	YA	2179	C	N1-C2-O2	8.71	124.12	118.90
25	YA	786	C	C6-N1-C1'	8.68	131.21	120.80
25	YA	385	C	C6-N1-C1'	-8.65	110.42	120.80
25	RA	2498	C	C6-N1-C1'	8.64	131.16	120.80
25	RA	2880	C	C6-N1-C2	-8.63	116.85	120.30
25	YA	2363	C	C6-N1-C1'	8.63	131.16	120.80
25	YA	269	U	N3-C2-O2	-8.61	116.17	122.20
25	RA	1313	U	N3-C2-O2	-8.61	116.17	122.20
25	RA	2666	C	N1-C2-O2	8.60	124.06	118.90
25	YA	2499	C	C2-N1-C1'	-8.59	109.36	118.80
25	YA	806	C	C6-N1-C2	-8.59	116.87	120.30
25	RA	1411	C	N1-C2-O2	8.58	124.05	118.90
25	RA	2321	G	N3-C4-C5	-8.58	124.31	128.60
1	QA	689	C	C5-C6-N1	8.55	125.28	121.00
25	YA	2318	G	C4-N9-C1'	8.55	137.61	126.50
25	RA	1956	U	N3-C2-O2	-8.54	116.22	122.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1604	C	C2-N1-C1'	-8.54	109.41	118.80
25	YA	2051	A	C2-N3-C4	-8.53	106.33	110.60
25	YA	466	A	N7-C8-N9	8.52	118.06	113.80
34	YO	91	LEU	CA-CB-CG	8.50	134.85	115.30
25	RA	1065	U	N1-C2-O2	8.49	128.75	122.80
25	YA	2415	G	N9-C4-C5	8.48	108.79	105.40
25	YA	1779	U	C2-N1-C1'	8.48	127.88	117.70
25	YA	964	C	C6-N1-C1'	8.46	130.96	120.80
25	RA	1467	C	N1-C2-O2	8.46	123.98	118.90
1	QA	980	C	N1-C2-O2	8.43	123.96	118.90
25	RA	1314	C	C6-N1-C2	-8.41	116.94	120.30
25	YA	580	C	C5-C6-N1	8.40	125.20	121.00
25	YA	2043	C	C5-C6-N1	8.40	125.20	121.00
25	YA	2814	C	N1-C2-O2	8.40	123.94	118.90
25	RA	614(A)	U	N3-C2-O2	-8.39	116.33	122.20
25	YA	788	A	O5'-P-OP2	8.38	120.76	110.70
1	QA	525	C	C6-N1-C2	-8.37	116.95	120.30
25	YA	269	U	N1-C2-O2	8.37	128.66	122.80
25	YA	2666	C	N3-C2-O2	-8.37	116.04	121.90
25	YA	2096	U	N1-C2-O2	8.36	128.65	122.80
1	XA	135	C	N1-C2-O2	8.34	123.90	118.90
25	RA	2096	U	N1-C2-O2	8.33	128.63	122.80
25	RA	2584	U	C6-N1-C1'	-8.33	109.53	121.20
25	YA	2439	A	O4'-C1'-N9	-8.33	101.54	108.20
1	XA	367	U	N1-C1'-C2'	-8.32	102.85	112.00
1	XA	88	A	C1'-O4'-C4'	-8.31	103.25	109.90
25	YA	1052	C	C6-N1-C2	-8.31	116.98	120.30
1	QA	1496	C	N1-C2-O2	8.30	123.88	118.90
25	YA	2440	C	C6-N1-C1'	8.30	130.76	120.80
25	RA	614(A)	U	C2-N1-C1'	8.29	127.65	117.70
25	RA	595	C	N1-C2-O2	8.28	123.87	118.90
25	YA	1844	C	C6-N1-C2	-8.28	116.99	120.30
25	YA	1179	C	N3-C2-O2	-8.27	116.11	121.90
25	YA	570	G	C8-N9-C4	-8.26	103.09	106.40
25	RA	1005	C	C6-N1-C2	-8.26	117.00	120.30
26	RB	37	C	C6-N1-C2	-8.26	117.00	120.30
34	RO	91	LEU	CA-CB-CG	8.25	134.28	115.30
25	RA	12	U	C5-C6-N1	8.25	126.82	122.70
25	YA	2474	C	N1-C2-O2	8.25	123.85	118.90
25	YA	856	C	C6-N1-C2	-8.24	117.00	120.30
1	XA	1522	U	C2-N1-C1'	-8.24	107.81	117.70
1	QA	754	C	N3-C2-O2	-8.23	116.14	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	RB	60	C	C5-C6-N1	8.22	125.11	121.00
24	QY	34	C	N3-C2-O2	-8.22	116.15	121.90
1	XA	623	C	C5-C6-N1	8.20	125.10	121.00
26	RB	37	C	N1-C2-O2	8.17	123.80	118.90
25	YA	2363	C	C2-N1-C1'	-8.15	109.83	118.80
25	YA	614(A)	U	C2-N1-C1'	8.14	127.47	117.70
25	YA	2499	C	C6-N1-C1'	8.14	130.57	120.80
1	QA	936	C	N1-C2-O2	8.13	123.78	118.90
26	YB	36	C	N1-C2-O2	8.11	123.77	118.90
25	RA	1671	U	C6-N1-C1'	8.10	132.54	121.20
25	YA	2474	C	N3-C2-O2	-8.10	116.23	121.90
25	YA	697	C	C6-N1-C2	-8.09	117.06	120.30
25	YA	1005	C	N1-C2-O2	8.09	123.75	118.90
25	RA	1611	C	C2-N1-C1'	-8.09	109.91	118.80
25	YA	2591	C	O5'-P-OP1	-8.08	98.42	105.70
24	XY	29	U	N3-C2-O2	-8.07	116.55	122.20
1	XA	307	C	N1-C2-O2	8.07	123.74	118.90
25	YA	867	C	N3-C2-O2	-8.07	116.25	121.90
25	YA	2874	C	N1-C2-O2	8.06	123.73	118.90
25	YA	2403	C	N3-C2-O2	-8.05	116.27	121.90
1	XA	1383	C	N1-C2-O2	8.04	123.73	118.90
25	RA	2318	G	C8-N9-C1'	-8.03	116.56	127.00
25	RA	2746	U	N1-C2-O2	8.00	128.40	122.80
1	QA	980	C	N3-C2-O2	-7.99	116.31	121.90
25	YA	2680	C	C2-N1-C1'	7.99	127.59	118.80
25	YA	2096	U	N3-C2-O2	-7.99	116.61	122.20
25	RA	2573	C	N1-C2-O2	7.98	123.69	118.90
1	QA	754	C	C6-N1-C1'	-7.98	111.22	120.80
25	RA	1065	U	N3-C2-O2	-7.98	116.61	122.20
25	RA	1462	C	N1-C2-O2	7.96	123.68	118.90
25	RA	884	C	N1-C2-O2	7.95	123.67	118.90
25	RA	2153	G	C6-C5-N7	-7.93	125.64	130.40
25	YA	2403	C	C6-N1-C2	-7.92	117.13	120.30
25	YA	2095	C	N1-C2-O2	7.92	123.65	118.90
25	YA	2438	U	C5-C6-N1	7.91	126.66	122.70
25	YA	1313	U	C2-N1-C1'	7.90	127.18	117.70
25	YA	1678	G	C4-N9-C1'	7.90	136.77	126.50
25	RA	1835	G	N3-C4-N9	7.90	130.74	126.00
25	YA	1467	C	N1-C2-O2	7.90	123.64	118.90
25	YA	2179	C	C2-N1-C1'	7.89	127.48	118.80
1	XA	88	A	O4'-C1'-N9	-7.88	101.89	108.20
24	XY	29	U	N1-C2-O2	7.88	128.32	122.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1313	U	N1-C2-O2	7.88	128.31	122.80
25	RA	752	A	O5'-P-OP1	-7.86	98.63	105.70
25	RA	2129	C	N1-C2-O2	7.86	123.61	118.90
1	XA	623	C	C6-N1-C2	-7.83	117.17	120.30
25	YA	2814	C	N3-C2-O2	-7.82	116.42	121.90
1	QA	936	C	N3-C2-O2	-7.82	116.43	121.90
25	YA	2228	G	O5'-P-OP1	-7.81	98.67	105.70
25	YA	2063	C	N3-C2-O2	-7.79	116.45	121.90
1	QA	1036	G	N3-C4-N9	7.78	130.67	126.00
25	YA	777	A	O5'-P-OP2	-7.78	98.70	105.70
22	XV	1	C	N3-C2-O2	-7.75	116.47	121.90
1	XA	1516	G	C8-N9-C1'	7.75	137.07	127.00
25	RA	2220	G	P-O3'-C3'	7.74	128.99	119.70
25	YA	2043	C	C6-N1-C2	-7.74	117.21	120.30
1	QA	754	C	N1-C2-O2	7.73	123.54	118.90
26	YB	7	G	C4-N9-C1'	7.72	136.53	126.50
1	QA	1344	C	C6-N1-C2	-7.70	117.22	120.30
25	YA	580	C	C6-N1-C2	-7.69	117.22	120.30
25	RA	1370	C	N1-C2-O2	7.69	123.51	118.90
1	XA	979	C	N3-C2-O2	-7.69	116.52	121.90
25	YA	869	G	N3-C2-N2	-7.68	114.52	119.90
25	YA	2063	C	C5-C6-N1	7.68	124.84	121.00
25	YA	2755	C	C5-C6-N1	7.67	124.84	121.00
25	YA	459	U	N1-C2-O2	7.67	128.17	122.80
1	XA	110	C	N1-C2-O2	7.67	123.50	118.90
25	YA	1345	C	C6-N1-C1'	7.67	130.00	120.80
25	RA	1092	C	N3-C2-O2	-7.66	116.54	121.90
1	QA	267	C	O5'-P-OP1	-7.66	98.81	105.70
25	YA	1281	G	P-O3'-C3'	7.66	128.89	119.70
1	QA	961	U	N3-C2-O2	-7.66	116.84	122.20
25	YA	2394	C	N1-C2-O2	7.63	123.48	118.90
25	RA	2723	C	C6-N1-C1'	7.62	129.94	120.80
25	YA	1498	C	N1-C2-O2	7.62	123.47	118.90
26	RB	42	C	N1-C2-O2	7.61	123.47	118.90
25	YA	2248	C	C6-N1-C2	-7.61	117.26	120.30
25	YA	2621	A	O5'-P-OP2	-7.59	98.87	105.70
25	YA	1345	C	C2-N1-C1'	-7.59	110.45	118.80
25	RA	614(A)	U	N1-C2-O2	7.58	128.11	122.80
23	XX	19	C	C6-N1-C1'	-7.58	111.71	120.80
25	RA	1611	C	C6-N1-C1'	7.58	129.89	120.80
1	QA	307	C	N1-C2-O2	7.57	123.44	118.90
25	RA	1327	C	C6-N1-C1'	7.57	129.88	120.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	847	U	N3-C2-O2	-7.57	116.91	122.20
25	YA	105	C	C6-N1-C2	-7.55	117.28	120.30
1	XA	936	C	N1-C2-O2	7.55	123.43	118.90
25	YA	2053	G	C5-N7-C8	-7.54	100.53	104.30
45	YZ	59	LEU	CA-CB-CG	7.52	132.60	115.30
1	QA	444	C	N3-C2-O2	-7.52	116.64	121.90
25	YA	2321	G	N3-C4-C5	-7.50	124.85	128.60
25	RA	2321	G	C8-N9-C4	-7.50	103.40	106.40
25	RA	1605	C	C6-N1-C2	-7.49	117.30	120.30
1	QA	866	C	C6-N1-C2	-7.49	117.30	120.30
25	RA	1807	G	O5'-P-OP1	-7.49	98.96	105.70
25	YA	1827	C	C6-N1-C2	-7.49	117.31	120.30
1	QA	221	C	N1-C2-O2	7.48	123.39	118.90
25	RA	806	C	C6-N1-C2	-7.47	117.31	120.30
25	RA	1678	G	C4-N9-C1'	7.47	136.22	126.50
25	YA	2295	C	C5-C6-N1	7.47	124.74	121.00
25	RA	2746	U	N3-C2-O2	-7.47	116.97	122.20
25	YA	731	C	N1-C2-O2	7.46	123.38	118.90
25	RA	2143	C	N1-C2-O2	7.46	123.38	118.90
25	RA	2063	C	N3-C2-O2	-7.46	116.68	121.90
26	YB	7	G	C8-N9-C1'	-7.46	117.31	127.00
25	YA	867	C	C2-N1-C1'	7.45	127.00	118.80
25	YA	1967	C	N1-C2-O2	7.44	123.36	118.90
25	RA	1793	C	C6-N1-C2	-7.43	117.33	120.30
1	QA	397	A	C2-N3-C4	7.43	114.31	110.60
25	YA	2346	A	N9-C4-C5	7.43	108.77	105.80
25	RA	1411	C	C6-N1-C2	-7.42	117.33	120.30
1	XA	359	U	P-O5'-C5'	7.41	132.75	120.90
1	QA	1066	C	N3-C2-O2	-7.40	116.72	121.90
25	YA	1566	A	O5'-P-OP2	-7.40	99.04	105.70
25	RA	2153	G	C4-N9-C1'	7.40	136.12	126.50
1	XA	135	C	N3-C2-O2	-7.40	116.72	121.90
1	XA	442	C	C2-N1-C1'	7.40	126.94	118.80
25	YA	810	U	O5'-P-OP1	-7.40	99.04	105.70
22	QV	50	U	N3-C2-O2	-7.40	117.02	122.20
25	YA	1905	C	O5'-P-OP2	-7.39	99.05	105.70
25	RA	1065	U	C2-N1-C1'	7.38	126.56	117.70
25	RA	1411	C	N3-C2-O2	-7.38	116.73	121.90
25	RA	1327	C	C2-N1-C1'	-7.38	110.68	118.80
25	YA	277	C	C6-N1-C1'	-7.37	111.96	120.80
1	XA	110	C	N3-C2-O2	-7.37	116.74	121.90
25	RA	607	U	N3-C2-O2	-7.36	117.05	122.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	607	U	N3-C2-O2	-7.36	117.05	122.20
25	YA	1402	C	C6-N1-C2	-7.36	117.36	120.30
25	RA	65	C	N1-C2-O2	7.36	123.32	118.90
25	YA	183	C	N1-C2-O2	7.36	123.32	118.90
25	YA	1640	C	N1-C2-O2	7.36	123.31	118.90
25	YA	2095	C	N3-C2-O2	-7.36	116.75	121.90
1	XA	367	U	C2-N1-C1'	7.35	126.52	117.70
25	YA	2739	U	C2-N1-C1'	7.34	126.51	117.70
25	YA	1430	C	C6-N1-C2	-7.34	117.36	120.30
1	QA	689	C	C6-N1-C2	-7.33	117.37	120.30
1	QA	979	C	N1-C2-O2	7.33	123.30	118.90
25	RA	12	U	C6-N1-C2	-7.33	116.60	121.00
25	YA	2415	G	C8-N9-C1'	7.33	136.52	127.00
25	YA	2666	C	C6-N1-C2	-7.32	117.37	120.30
25	RA	1993	U	O5'-P-OP1	-7.32	99.12	105.70
25	YA	864	G	OP1-P-OP2	-7.32	108.63	119.60
25	RA	2594	C	C6-N1-C2	-7.31	117.38	120.30
22	QV	67	C	C2-N1-C1'	7.30	126.83	118.80
25	YA	731	C	N3-C2-O2	-7.30	116.79	121.90
25	YA	2275	C	O4'-C1'-N1	-7.30	102.36	108.20
25	RA	2501	C	C6-N1-C2	-7.30	117.38	120.30
25	YA	964	C	C2-N1-C1'	-7.30	110.77	118.80
1	XA	442	C	N1-C2-O2	7.29	123.28	118.90
25	YA	451	C	O5'-P-OP2	-7.29	99.14	105.70
1	XA	34	C	C2-N1-C1'	-7.28	110.79	118.80
25	RA	964	C	C6-N1-C1'	7.28	129.53	120.80
25	YA	2403	C	C2-N1-C1'	-7.27	110.80	118.80
1	XA	589	C	C6-N1-C2	-7.27	117.39	120.30
25	YA	1325	G	N3-C4-C5	7.27	132.23	128.60
25	RA	2096	U	N3-C2-O2	-7.27	117.11	122.20
1	XA	367	U	OP1-P-O3'	7.25	121.16	105.20
25	RA	1102	C	C2-N1-C1'	7.24	126.77	118.80
25	YA	1790	C	C2-N1-C1'	-7.24	110.83	118.80
25	YA	738	G	O5'-P-OP2	-7.24	99.18	105.70
25	RA	1049	C	N1-C2-O2	7.24	123.24	118.90
1	QA	180	U	N3-C2-O2	-7.23	117.14	122.20
25	RA	783	A	C4-N9-C1'	7.23	139.32	126.30
1	QA	267	C	C2-N1-C1'	7.23	126.76	118.80
1	QA	526	C	C6-N1-C2	-7.22	117.41	120.30
25	RA	2497	A	O5'-P-OP1	-7.21	99.21	105.70
25	YA	687	C	N1-C2-O2	7.21	123.23	118.90
25	YA	752	A	P-O3'-C3'	7.21	128.35	119.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1976	U	C2-N1-C1'	-7.21	109.05	117.70
1	QA	1054	C	N1-C2-O2	7.20	123.22	118.90
1	XA	1516	G	C4-N9-C1'	-7.18	117.16	126.50
1	XA	18	C	C6-N1-C2	-7.18	117.43	120.30
25	RA	1934	C	N1-C2-O2	7.18	123.21	118.90
25	YA	2037	G	O5'-P-OP2	-7.18	99.24	105.70
25	YA	1445(B)	C	C6-N1-C2	-7.17	117.43	120.30
22	XV	1	C	N1-C2-O2	7.17	123.20	118.90
25	YA	1511	C	C5-C6-N1	7.17	124.58	121.00
22	QV	50	U	N1-C2-O2	7.16	127.81	122.80
25	YA	1052	C	C2-N1-C1'	7.16	126.68	118.80
1	QA	409	G	C8-N9-C1'	7.16	136.31	127.00
25	YA	847	U	C2-N1-C1'	7.15	126.28	117.70
1	XA	1224	G	O5'-P-OP1	-7.15	99.27	105.70
25	YA	1790	C	C6-N1-C1'	7.15	129.38	120.80
25	YA	2584	U	N3-C2-O2	-7.15	117.20	122.20
25	RA	847	U	C2-N1-C1'	7.14	126.27	117.70
25	YA	2580	U	O5'-P-OP2	7.14	119.27	110.70
25	YA	2051	A	C4-C5-N7	7.14	114.27	110.70
25	YA	1139	G	O5'-P-OP1	-7.14	99.27	105.70
25	YA	1497	U	N3-C2-O2	-7.13	117.20	122.20
25	YA	2814	C	C2-N1-C1'	7.13	126.65	118.80
1	XA	1086	U	N1-C2-O2	7.13	127.79	122.80
25	YA	1253	A	N1-C6-N6	7.13	122.88	118.60
25	YA	2680	C	C6-N1-C1'	-7.13	112.24	120.80
25	RA	1493	C	N1-C2-O2	7.12	123.17	118.90
25	RA	2700	C	N1-C2-O2	7.12	123.17	118.90
1	XA	330	C	N3-C2-O2	-7.12	116.92	121.90
1	XA	979	C	N1-C2-O2	7.12	123.17	118.90
22	XV	32	C	N1-C2-O2	7.12	123.17	118.90
25	YA	691	C	C6-N1-C2	-7.12	117.45	120.30
1	XA	1403	C	C2-N1-C1'	-7.12	110.97	118.80
25	YA	783	A	C2-N3-C4	7.12	114.16	110.60
25	YA	2682	U	N3-C2-O2	-7.12	117.22	122.20
1	XA	1403	C	C6-N1-C1'	7.11	129.33	120.80
25	YA	576	U	C2-N1-C1'	-7.11	109.17	117.70
25	YA	523	C	C5-C6-N1	7.10	124.55	121.00
1	XA	1004	A	O4'-C1'-N9	7.10	113.88	108.20
1	QA	1395	C	C6-N1-C2	-7.10	117.46	120.30
25	YA	2447	G	C8-N9-C1'	-7.09	117.78	127.00
25	YA	1276	A	OP1-P-OP2	-7.09	108.96	119.60
25	YA	2622	C	C6-N1-C1'	7.09	129.31	120.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	RB	70	C	N1-C2-O2	7.09	123.15	118.90
25	RA	1774	C	N1-C2-O2	7.09	123.15	118.90
25	RA	2808	U	N3-C2-O2	-7.08	117.24	122.20
25	RA	2443	C	C6-N1-C2	-7.08	117.47	120.30
25	YA	2440	C	C2-N1-C1'	-7.08	111.01	118.80
25	YA	2539	C	C5-C6-N1	7.08	124.54	121.00
25	RA	1462	C	N3-C2-O2	-7.08	116.95	121.90
25	YA	753	C	C6-N1-C2	-7.07	117.47	120.30
1	QA	1086	U	N1-C2-O2	7.07	127.75	122.80
1	XA	1003	G	N3-C4-C5	-7.06	125.07	128.60
25	RA	1295	C	C6-N1-C1'	7.06	129.27	120.80
25	RA	1671	U	C2-N1-C1'	-7.06	109.23	117.70
25	RA	1467	C	N3-C2-O2	-7.05	116.96	121.90
1	XA	1381	U	N3-C2-O2	-7.05	117.26	122.20
25	YA	556	G	C8-N9-C1'	-7.05	117.84	127.00
25	RA	201	C	C6-N1-C2	-7.05	117.48	120.30
25	YA	1314	C	C6-N1-C1'	-7.05	112.34	120.80
25	YA	943	U	O5'-P-OP1	-7.04	99.36	105.70
25	YA	269	U	C2-N1-C1'	7.04	126.14	117.70
25	RA	1135	C	N1-C2-O2	7.03	123.12	118.90
25	YA	1852	C	C6-N1-C1'	7.03	129.24	120.80
25	YA	2539	C	C6-N1-C2	-7.03	117.49	120.30
1	XA	749	C	C6-N1-C2	-7.03	117.49	120.30
25	YA	889	C	O4'-C1'-N1	7.03	113.82	108.20
25	RA	1678	G	C8-N9-C1'	-7.02	117.87	127.00
25	RA	912	C	N3-C4-C5	-7.02	119.09	121.90
25	YA	1982	C	C2-N1-C1'	7.02	126.52	118.80
22	QV	32	C	C6-N1-C2	-7.02	117.49	120.30
1	XA	1019	C	N3-C2-O2	-7.01	116.99	121.90
1	XA	1383	C	N3-C2-O2	-7.01	116.99	121.90
1	QA	993	G	C4-N9-C1'	7.01	135.61	126.50
25	RA	1188	U	C2-N1-C1'	-7.00	109.30	117.70
25	YA	1282	U	C2-N1-C1'	7.00	126.11	117.70
25	YA	2539	C	N1-C2-O2	7.00	123.10	118.90
25	YA	1779	U	N1-C2-O2	7.00	127.70	122.80
25	RA	893	C	N1-C2-O2	7.00	123.10	118.90
25	YA	2438	U	C6-N1-C2	-6.99	116.81	121.00
1	XA	810	C	C6-N1-C2	-6.98	117.51	120.30
25	RA	1804	C	C6-N1-C2	-6.98	117.51	120.30
25	YA	1467	C	N3-C2-O2	-6.98	117.02	121.90
25	YA	1979	C	C6-N1-C2	-6.98	117.51	120.30
25	YA	1771	C	C6-N1-C2	-6.97	117.51	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1633	G	C8-N9-C4	-6.97	103.61	106.40
25	RA	2318	G	N3-C4-N9	6.97	130.18	126.00
25	RA	2153	G	N3-C4-C5	-6.96	125.12	128.60
25	YA	810	U	C2-N1-C1'	-6.96	109.35	117.70
25	YA	1678	G	C8-N9-C1'	-6.96	117.95	127.00
25	RA	1835	G	N3-C4-C5	-6.95	125.12	128.60
25	RA	1314	C	C5-C6-N1	6.95	124.47	121.00
26	RB	60	C	C6-N1-C2	-6.95	117.52	120.30
1	QA	409	G	C4-N9-C1'	-6.94	117.48	126.50
25	YA	2096	U	C2-N1-C1'	6.93	126.02	117.70
25	YA	2447	G	C4-N9-C1'	6.93	135.51	126.50
26	YB	7	G	C6-C5-N7	-6.93	126.24	130.40
1	XA	738	C	C5-C6-N1	6.92	124.46	121.00
22	QV	65	C	N1-C2-O2	6.92	123.05	118.90
25	YA	2346	A	N1-C6-N6	-6.91	114.45	118.60
25	YA	1976	U	C6-N1-C1'	6.91	130.88	121.20
25	YA	2403	C	N1-C2-N3	6.91	124.04	119.20
1	QA	1378	C	N1-C2-O2	6.91	123.04	118.90
25	YA	1498	C	N3-C2-O2	-6.90	117.07	121.90
25	YA	2785	C	C6-N1-C2	-6.90	117.54	120.30
25	RA	2720	U	N3-C2-O2	-6.90	117.37	122.20
1	XA	1158	C	N1-C2-O2	6.90	123.04	118.90
25	YA	2073	C	C6-N1-C1'	6.90	129.08	120.80
25	YA	1261	C	C6-N1-C1'	6.90	129.07	120.80
25	RA	1295	C	C2-N1-C1'	-6.89	111.22	118.80
25	RA	781	A	OP1-P-OP2	6.89	129.94	119.60
25	RA	1233	C	C6-N1-C2	-6.89	117.54	120.30
25	RA	2221	G	O4'-C1'-N9	-6.89	102.69	108.20
25	YA	2439	A	OP1-P-O3'	6.88	120.35	105.20
25	YA	2814	C	C6-N1-C2	-6.88	117.55	120.30
1	XA	1086	U	N3-C2-O2	-6.88	117.38	122.20
25	YA	1836	C	O5'-P-OP2	-6.88	99.51	105.70
25	YA	628	G	C4-N9-C1'	-6.88	117.56	126.50
25	YA	1493	C	N1-C2-O2	6.87	123.02	118.90
25	RA	2153	G	N7-C8-N9	6.87	116.53	113.10
25	YA	459	U	N3-C2-O2	-6.87	117.39	122.20
25	YA	694	U	C2-N1-C1'	-6.86	109.47	117.70
25	YA	2318	G	C8-N9-C1'	-6.86	118.08	127.00
25	YA	1430	C	C5-C6-N1	6.85	124.42	121.00
25	YA	1446	C	N1-C2-O2	6.85	123.01	118.90
26	RB	79	C	N3-C2-O2	-6.85	117.11	121.90
25	YA	753	C	C5-C6-N1	6.84	124.42	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1113	C	C6-N1-C2	-6.84	117.57	120.30
1	QA	221	C	N3-C2-O2	-6.83	117.12	121.90
25	YA	2179	C	N3-C2-O2	-6.83	117.12	121.90
22	QV	1	C	N1-C2-O2	6.83	123.00	118.90
25	RA	1271	G	C4-N9-C1'	-6.83	117.62	126.50
25	RA	2442	C	C6-N1-C1'	6.83	129.00	120.80
25	YA	1765	C	O5'-P-OP2	-6.83	99.55	105.70
25	YA	2870	C	C6-N1-C2	-6.83	117.57	120.30
25	RA	2579	C	C6-N1-C2	-6.82	117.57	120.30
25	RA	1257	C	C6-N1-C2	-6.82	117.57	120.30
25	YA	731	C	C6-N1-C2	-6.82	117.57	120.30
25	YA	2161	C	N1-C2-O2	6.82	122.99	118.90
25	YA	1967	C	C6-N1-C2	-6.82	117.57	120.30
25	YA	1791	A	O5'-P-OP1	-6.81	99.57	105.70
25	YA	1314	C	O5'-P-OP1	-6.81	99.57	105.70
25	RA	2143	C	N3-C2-O2	-6.80	117.14	121.90
25	YA	2179	C	C5-C6-N1	6.80	124.40	121.00
25	RA	435	C	N1-C2-O2	6.80	122.98	118.90
1	QA	455	C	N1-C2-O2	6.80	122.98	118.90
25	YA	2226	C	N1-C2-O2	6.80	122.98	118.90
25	YA	1828	G	N9-C4-C5	6.80	108.12	105.40
25	YA	1658	C	C6-N1-C2	-6.79	117.58	120.30
25	YA	642	G	C4-N9-C1'	-6.79	117.67	126.50
25	YA	2486	G	N1-C2-N3	6.79	127.97	123.90
1	XA	330	C	C6-N1-C2	-6.79	117.58	120.30
25	YA	2515	C	N1-C2-O2	6.79	122.97	118.90
1	QA	311	C	N1-C2-O2	6.79	122.97	118.90
32	RI	9	LEU	CA-CB-CG	6.77	130.88	115.30
25	RA	2808	U	N1-C2-O2	6.77	127.54	122.80
25	RA	964	C	C2-N1-C1'	-6.77	111.35	118.80
25	YA	1267	U	N1-C2-O2	6.77	127.54	122.80
25	RA	776	G	N3-C4-C5	-6.77	125.22	128.60
25	YA	1844	C	C5-C6-N1	6.77	124.38	121.00
25	RA	912	C	C6-N1-C1'	-6.76	112.69	120.80
1	QA	1529	G	C4-N9-C1'	6.76	135.29	126.50
25	RA	1142(A)	U	C2-N1-C1'	6.76	125.81	117.70
25	YA	2434	A	O5'-P-OP1	-6.76	99.62	105.70
25	YA	1314	C	C5-C6-N1	6.75	124.38	121.00
25	RA	984	A	N7-C8-N9	6.75	117.18	113.80
24	XY	34	C	C6-N1-C2	-6.75	117.60	120.30
25	RA	767	U	C2-N1-C1'	-6.75	109.60	117.70
25	RA	105	C	N3-C2-O2	-6.75	117.18	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2755	C	N1-C2-O2	6.75	122.95	118.90
25	YA	1893	C	N1-C2-O2	6.75	122.95	118.90
25	RA	456	C	C6-N1-C2	6.74	123.00	120.30
25	RA	2189	U	N3-C2-O2	-6.74	117.48	122.20
25	YA	1721	G	C4-N9-C1'	6.73	135.25	126.50
25	YA	1956	U	N3-C2-O2	-6.73	117.49	122.20
25	YA	2464	C	C2-N1-C1'	-6.73	111.39	118.80
25	RA	2318	G	N3-C4-C5	-6.73	125.24	128.60
1	QA	1383	C	C5-C6-N1	6.72	124.36	121.00
25	RA	1902	C	C6-N1-C1'	6.72	128.87	120.80
25	YA	731	C	N3-C4-N4	6.72	122.70	118.00
25	YA	1661	G	C8-N9-C1'	6.71	135.73	127.00
1	QA	717	C	N1-C2-O2	6.71	122.93	118.90
25	YA	2682	U	N1-C2-O2	6.71	127.49	122.80
1	XA	1381	U	N1-C2-O2	6.70	127.49	122.80
1	QA	525	C	C5-C6-N1	6.70	124.35	121.00
1	QA	673	G	C4-C5-N7	6.70	113.48	110.80
25	YA	1612	C	C5-C6-N1	6.70	124.35	121.00
25	RA	776	G	N3-C4-N9	6.70	130.02	126.00
25	RA	928	G	C8-N9-C4	-6.69	103.73	106.40
1	XA	1019	C	C6-N1-C2	-6.69	117.63	120.30
25	RA	2584	U	N3-C2-O2	-6.68	117.52	122.20
25	YA	2163	C	N1-C2-O2	6.68	122.91	118.90
25	RA	1040	C	C2-N1-C1'	-6.68	111.45	118.80
43	RX	13	LEU	CA-CB-CG	6.68	130.66	115.30
25	RA	1064	C	C6-N1-C2	-6.68	117.63	120.30
1	XA	1066	C	N1-C2-O2	6.68	122.91	118.90
1	XA	1203	C	N1-C2-O2	6.68	122.91	118.90
25	RA	2745	C	N1-C2-O2	6.67	122.90	118.90
25	YA	642	G	C8-N9-C1'	6.67	135.67	127.00
25	YA	2056	G	C4-C5-N7	6.67	113.47	110.80
22	QV	13	C	C6-N1-C1'	6.67	128.80	120.80
1	XA	1382	C	N1-C2-O2	6.67	122.90	118.90
25	RA	2465	C	C5-C6-N1	6.66	124.33	121.00
25	YA	2689	U	N3-C2-O2	-6.66	117.54	122.20
25	RA	1899	G	N3-C4-C5	-6.66	125.27	128.60
25	YA	2506	U	C5-C6-N1	6.66	126.03	122.70
25	RA	837	C	C6-N1-C2	-6.65	117.64	120.30
1	XA	673	G	N3-C4-N9	6.65	129.99	126.00
25	YA	749	C	N1-C2-O2	6.65	122.89	118.90
25	YA	1191	G	O5'-P-OP1	-6.65	99.71	105.70
25	RA	2825	C	C6-N1-C2	-6.65	117.64	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1661	G	C4-N9-C1'	-6.65	117.86	126.50
1	XA	824	C	C5-C6-N1	6.64	124.32	121.00
25	YA	2056	G	C6-C5-N7	-6.64	126.41	130.40
25	RA	2096	U	C5-C6-N1	6.64	126.02	122.70
1	QA	1054	C	C2-N1-C1'	6.64	126.11	118.80
25	YA	393	C	C6-N1-C2	-6.64	117.64	120.30
25	RA	1049	C	N3-C2-O2	-6.64	117.25	121.90
25	YA	1658	C	C5-C6-N1	6.64	124.32	121.00
25	RA	2689	U	P-O3'-C3'	6.64	127.67	119.70
25	YA	774	A	C4-N9-C1'	6.64	138.25	126.30
25	RA	201	C	N3-C2-O2	-6.63	117.25	121.90
25	RA	595	C	N3-C2-O2	-6.63	117.26	121.90
1	XA	999	C	N1-C2-O2	6.63	122.88	118.90
1	XA	674	G	C8-N9-C4	-6.62	103.75	106.40
25	RA	1314	C	C2-N1-C1'	6.62	126.08	118.80
25	YA	2683	C	N1-C2-O2	6.61	122.87	118.90
25	RA	1064	C	C5-C6-N1	6.61	124.31	121.00
25	YA	2007	C	C2-N1-C1'	6.61	126.07	118.80
25	RA	2144	U	N1-C2-O2	6.61	127.42	122.80
22	XV	27	U	N3-C2-O2	-6.61	117.58	122.20
25	YA	2874	C	C2-N1-C1'	6.61	126.07	118.80
25	YA	284	U	N3-C2-O2	-6.60	117.58	122.20
25	YA	797	C	C5-C6-N1	6.60	124.30	121.00
25	RA	856	C	C5-C6-N1	6.60	124.30	121.00
25	YA	556	G	C4-N9-C1'	6.60	135.08	126.50
1	XA	936	C	N3-C2-O2	-6.60	117.28	121.90
1	QA	91	C	N3-C2-O2	-6.60	117.28	121.90
25	YA	825	C	C6-N1-C1'	6.59	128.72	120.80
25	YA	837	C	C6-N1-C2	-6.59	117.66	120.30
1	QA	330	C	N3-C2-O2	-6.59	117.29	121.90
25	RA	1658	C	C5-C6-N1	6.58	124.29	121.00
25	YA	11	G	N3-C4-N9	6.58	129.95	126.00
25	RA	273(K)	C	C6-N1-C2	-6.58	117.67	120.30
25	YA	893	C	N1-C2-O2	6.58	122.85	118.90
25	YA	570	G	N9-C4-C5	6.57	108.03	105.40
1	QA	552	U	N3-C2-O2	-6.57	117.60	122.20
1	QA	1496	C	N3-C2-O2	-6.57	117.30	121.90
25	YA	1159	U	N3-C2-O2	-6.57	117.60	122.20
25	YA	576	U	C6-N1-C1'	6.57	130.39	121.20
25	YA	683	C	C5-C6-N1	6.57	124.28	121.00
25	RA	2666	C	C5-C6-N1	6.57	124.28	121.00
25	YA	2755	C	C6-N1-C2	-6.57	117.67	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	392	C	C2-N1-C1'	6.56	126.02	118.80
26	RB	70	C	C6-N1-C2	-6.56	117.67	120.30
1	XA	307	C	N3-C2-O2	-6.56	117.31	121.90
25	RA	1313	U	C6-N1-C1'	-6.55	112.02	121.20
1	QA	442	C	C6-N1-C2	-6.55	117.68	120.30
25	YA	1267	U	N3-C2-O2	-6.55	117.61	122.20
25	YA	683	C	C6-N1-C1'	6.55	128.66	120.80
25	YA	1464	C	C6-N1-C2	-6.55	117.68	120.30
25	RA	1370	C	N3-C2-O2	-6.54	117.32	121.90
25	RA	1956	U	N1-C2-O2	6.54	127.38	122.80
25	RA	2816	C	N1-C2-O2	6.54	122.82	118.90
25	YA	1190	G	C5-C6-N1	6.54	114.77	111.50
25	YA	2296	U	O5'-P-OP2	-6.54	99.82	105.70
25	RA	45	C	N3-C2-O2	-6.53	117.33	121.90
25	YA	1159	U	N1-C2-O2	6.53	127.37	122.80
1	XA	1224	G	O5'-P-OP2	6.53	118.53	110.70
25	YA	847	U	N1-C2-O2	6.53	127.37	122.80
26	RB	27	C	C6-N1-C2	-6.52	117.69	120.30
25	YA	198	C	N1-C2-O2	6.52	122.81	118.90
26	RB	3	C	N1-C2-O2	6.52	122.81	118.90
25	YA	729	G	C4-N9-C1'	6.52	134.97	126.50
1	QA	705	U	N3-C2-O2	-6.52	117.64	122.20
1	QA	1109	C	N3-C2-O2	-6.52	117.34	121.90
1	XA	674	G	N7-C8-N9	6.52	116.36	113.10
25	YA	1629	U	C6-N1-C1'	6.52	130.32	121.20
25	RA	607	U	C2-N1-C1'	6.51	125.52	117.70
25	YA	2164	C	N1-C2-O2	6.51	122.81	118.90
25	RA	2065	C	C5-C6-N1	6.51	124.26	121.00
25	YA	1694	C	O5'-P-OP2	-6.51	99.84	105.70
25	YA	2695	C	O5'-P-OP2	-6.51	99.84	105.70
25	RA	2816	C	N3-C2-O2	-6.51	117.34	121.90
1	QA	91	C	N1-C2-O2	6.50	122.80	118.90
22	XV	65	C	N1-C2-O2	6.50	122.80	118.90
1	QA	1113	C	C5-C6-N1	6.50	124.25	121.00
25	RA	1658	C	C6-N1-C2	-6.50	117.70	120.30
25	YA	183	C	N3-C2-O2	-6.50	117.35	121.90
25	YA	2249	U	O5'-P-OP1	-6.50	99.85	105.70
25	YA	1644	C	N3-C2-O2	-6.49	117.36	121.90
25	YA	691	C	C5-C6-N1	6.49	124.25	121.00
25	YA	1771	C	C5-C6-N1	6.49	124.24	121.00
25	YA	1188	U	N1-C2-O2	6.49	127.34	122.80
25	RA	1899	G	N3-C4-N9	6.48	129.89	126.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2254	C	N1-C2-O2	6.48	122.79	118.90
25	RA	1178	C	N1-C2-O2	6.48	122.79	118.90
25	YA	2006	C	C6-N1-C2	-6.48	117.71	120.30
25	YA	1833	U	N3-C2-O2	-6.47	117.67	122.20
1	QA	1442(A)	G	N3-C4-N9	6.47	129.88	126.00
25	RA	767	U	C6-N1-C1'	6.47	130.26	121.20
25	RA	871	U	C2-N1-C1'	-6.47	109.93	117.70
25	YA	1978	A	O5'-P-OP1	-6.47	99.87	105.70
25	YA	2357	U	C6-N1-C1'	6.47	130.26	121.20
25	YA	1619	G	C4-C5-N7	6.47	113.39	110.80
25	RA	1934	C	C6-N1-C2	-6.47	117.71	120.30
25	YA	806	C	C5-C6-N1	6.46	124.23	121.00
25	YA	2037	G	O5'-P-OP1	6.46	118.45	110.70
1	QA	596	C	C6-N1-C2	-6.46	117.72	120.30
1	XA	596	C	N1-C2-O2	6.46	122.78	118.90
25	YA	392	C	C2-N1-C1'	6.46	125.90	118.80
25	YA	1695	G	C4-N9-C1'	6.46	134.90	126.50
25	YA	755	C	C5-C6-N1	6.46	124.23	121.00
25	RA	982	C	C6-N1-C1'	6.45	128.54	120.80
25	RA	1779	U	C6-N1-C1'	-6.45	112.17	121.20
25	RA	2723	C	C2-N1-C1'	-6.45	111.70	118.80
25	YA	1446	C	N3-C2-O2	-6.45	117.38	121.90
25	RA	273(K)	C	N1-C2-O2	6.45	122.77	118.90
25	YA	204	A	OP1-P-OP2	6.45	129.28	119.60
25	RA	2617	C	N1-C2-O2	6.45	122.77	118.90
25	YA	445	C	N3-C2-O2	-6.44	117.39	121.90
25	RA	1837	C	C6-N1-C2	-6.44	117.72	120.30
25	YA	817	C	C6-N1-C2	-6.44	117.72	120.30
25	RA	2144	U	N3-C2-O2	-6.44	117.69	122.20
26	RB	42	C	N3-C2-O2	-6.43	117.40	121.90
25	RA	2232	U	C2-N1-C1'	-6.43	109.98	117.70
25	RA	2189	U	N1-C2-O2	6.43	127.30	122.80
22	QV	67	C	N1-C2-O2	6.43	122.76	118.90
25	YA	1967	C	N3-C2-O2	-6.43	117.40	121.90
25	YA	2357	U	C2-N1-C1'	-6.43	109.99	117.70
25	RA	2260	C	C6-N1-C2	-6.42	117.73	120.30
25	YA	277	C	C2-N1-C1'	6.42	125.87	118.80
25	YA	2573	C	N1-C2-O2	6.42	122.75	118.90
25	RA	2752	C	N1-C2-O2	6.42	122.75	118.90
25	RA	2161	C	N1-C2-O2	6.42	122.75	118.90
1	XA	1121	U	C5-C6-N1	6.42	125.91	122.70
1	QA	1109	C	N1-C2-O2	6.42	122.75	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2415	G	C8-N9-C4	-6.42	103.83	106.40
25	RA	1271	G	C8-N9-C1'	6.41	135.34	127.00
25	YA	749	C	C5-C6-N1	6.41	124.21	121.00
25	YA	263	C	C2-N1-C1'	-6.41	111.75	118.80
1	QA	1514	C	C5-C6-N1	6.41	124.20	121.00
25	RA	2226	C	C6-N1-C2	-6.41	117.74	120.30
1	XA	1158	C	N3-C2-O2	-6.41	117.42	121.90
25	YA	1261	C	C2-N1-C1'	-6.41	111.75	118.80
25	RA	731	C	N1-C2-O2	6.40	122.74	118.90
25	YA	1531	C	N1-C2-O2	6.40	122.74	118.90
1	XA	783	C	C2-N1-C1'	6.40	125.83	118.80
25	YA	1589	C	C6-N1-C2	-6.40	117.74	120.30
25	YA	2161	C	N3-C2-O2	-6.40	117.42	121.90
25	YA	2415	G	N1-C2-N2	6.40	121.96	116.20
25	RA	105	C	N1-C2-O2	6.39	122.74	118.90
25	YA	272(F)	C	C6-N1-C2	-6.39	117.74	120.30
25	RA	825	C	C6-N1-C2	-6.39	117.74	120.30
1	XA	1442(A)	G	N3-C4-N9	6.39	129.83	126.00
25	YA	339	U	C2-N1-C1'	-6.39	110.03	117.70
25	YA	1407	C	C5-C6-N1	6.39	124.19	121.00
1	XA	34	C	C6-N1-C1'	6.39	128.46	120.80
25	RA	2501	C	C5-C6-N1	6.38	124.19	121.00
25	YA	2039	C	C6-N1-C2	-6.38	117.75	120.30
25	YA	2248	C	C5-C6-N1	6.38	124.19	121.00
25	RA	220	G	C8-N9-C4	-6.38	103.85	106.40
25	YA	1905	C	N1-C2-O2	6.38	122.73	118.90
25	YA	1092	C	C5-C6-N1	6.38	124.19	121.00
25	RA	2295	C	C6-N1-C2	-6.38	117.75	120.30
25	YA	834	C	C6-N1-C2	-6.38	117.75	120.30
25	YA	253	C	C6-N1-C1'	6.38	128.45	120.80
25	YA	31	C	C6-N1-C2	-6.37	117.75	120.30
25	YA	66	C	N1-C2-O2	6.37	122.72	118.90
25	RA	2147	G	C8-N9-C4	-6.36	103.86	106.40
25	YA	1779	U	N3-C2-O2	-6.36	117.75	122.20
25	YA	2066	C	C5-C6-N1	6.36	124.18	121.00
1	QA	307	C	N3-C2-O2	-6.36	117.45	121.90
25	YA	99	U	N1-C2-O2	6.35	127.25	122.80
1	QA	939	G	C6-N1-C2	-6.35	121.29	125.10
25	YA	570	G	C5-C6-O6	6.35	132.41	128.60
1	QA	1192	C	C6-N1-C2	-6.35	117.76	120.30
1	XA	1442(A)	G	N3-C4-C5	-6.35	125.42	128.60
25	YA	1644	C	C6-N1-C2	-6.34	117.76	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2231	C	C6-N1-C1'	6.34	128.41	120.80
25	RA	2700	C	C5-C6-N1	6.34	124.17	121.00
25	YA	568	U	C6-N1-C2	-6.33	117.20	121.00
1	QA	1066	C	C6-N1-C2	-6.33	117.77	120.30
25	RA	113	G	C4-N9-C1'	-6.33	118.27	126.50
25	YA	195	A	C4-C5-C6	-6.33	113.83	117.00
25	YA	1221(A)	C	C6-N1-C2	-6.33	117.77	120.30
26	YB	28	C	C6-N1-C2	-6.33	117.77	120.30
1	QA	1249	C	C6-N1-C2	-6.33	117.77	120.30
22	XV	1	C	C6-N1-C2	-6.33	117.77	120.30
25	RA	806	C	C5-C6-N1	6.33	124.16	121.00
25	YA	415	A	O5'-P-OP1	-6.33	100.01	105.70
1	QA	960	U	C2-N1-C1'	6.32	125.29	117.70
25	RA	2014	A	C8-N9-C1'	6.32	139.08	127.70
25	YA	2467	C	C2-N1-C1'	-6.32	111.84	118.80
25	YA	1256	G	N3-C4-N9	6.32	129.79	126.00
1	QA	1078	U	N3-C2-O2	-6.32	117.78	122.20
1	QA	1260	C	C6-N1-C2	-6.32	117.77	120.30
1	XA	367	U	C6-N1-C1'	-6.32	112.35	121.20
25	YA	2319	G	C4-C5-N7	6.32	113.33	110.80
25	RA	2514	U	C2-N1-C1'	-6.32	110.12	117.70
25	RA	2381	C	C6-N1-C1'	6.31	128.38	120.80
25	YA	1949	G	O5'-P-OP2	-6.31	100.02	105.70
1	QA	1145	C	C2-N1-C1'	6.31	125.74	118.80
1	QA	1348	U	N3-C2-O2	-6.31	117.78	122.20
25	RA	66	C	N1-C2-O2	6.30	122.68	118.90
25	YA	2056	G	C4-N9-C1'	6.30	134.70	126.50
25	YA	435	C	N1-C2-O2	6.30	122.68	118.90
1	XA	555	C	C6-N1-C2	-6.30	117.78	120.30
25	YA	1934	C	C2-N1-C1'	-6.30	111.87	118.80
25	RA	2689	U	N3-C2-O2	-6.30	117.79	122.20
25	YA	1779	U	C6-N1-C1'	-6.30	112.38	121.20
25	RA	589	C	C6-N1-C1'	6.29	128.35	120.80
25	RA	808	G	O5'-P-OP1	-6.29	100.03	105.70
25	YA	1462	C	N1-C2-O2	6.29	122.68	118.90
25	YA	1640	C	N3-C2-O2	-6.29	117.50	121.90
1	QA	283	C	N1-C2-O2	6.29	122.67	118.90
1	QA	1036	G	N3-C4-C5	-6.29	125.46	128.60
1	QA	189(E)	C	N1-C2-O2	6.29	122.67	118.90
25	YA	120	U	C5-C4-O4	-6.29	122.13	125.90
25	RA	1092	C	C5-C6-N1	6.28	124.14	121.00
22	XV	39	C	C6-N1-C2	-6.28	117.79	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1293	C	C6-N1-C1'	6.28	128.33	120.80
1	QA	442	C	N1-C2-O2	6.27	122.66	118.90
25	RA	783	A	C2-N3-C4	6.27	113.73	110.60
25	YA	200	U	N3-C2-O2	-6.27	117.81	122.20
25	YA	335	C	C6-N1-C2	-6.27	117.79	120.30
25	YA	2073	C	C2-N1-C1'	-6.27	111.90	118.80
1	QA	180	U	C6-N1-C2	-6.27	117.24	121.00
1	QA	1393	U	C2-N1-C1'	-6.27	110.18	117.70
25	RA	924	C	N1-C2-O2	6.26	122.66	118.90
25	RA	2442	C	C2-N1-C1'	-6.26	111.91	118.80
25	YA	662	G	C8-N9-C1'	6.26	135.14	127.00
25	YA	972	G	N3-C4-C5	-6.26	125.47	128.60
25	RA	2220	G	C3'-C2'-C1'	-6.26	96.49	101.50
1	QA	266	G	P-O3'-C3'	6.26	127.21	119.70
25	YA	2622	C	C2-N1-C1'	-6.26	111.92	118.80
26	YB	60	C	C6-N1-C2	-6.26	117.80	120.30
22	QV	67	C	C5-C6-N1	6.25	124.13	121.00
25	RA	857	C	C6-N1-C2	-6.25	117.80	120.30
1	QA	405	U	N1-C2-O2	6.25	127.17	122.80
1	QA	1161	C	N1-C2-O2	6.25	122.65	118.90
1	XA	999	C	C6-N1-C2	-6.25	117.80	120.30
25	YA	2752	C	N1-C2-O2	6.25	122.65	118.90
1	QA	528	C	C6-N1-C2	-6.24	117.80	120.30
25	RA	2303	G	C8-N9-C1'	6.24	135.11	127.00
25	YA	2233	U	C2-N1-C1'	-6.24	110.21	117.70
25	YA	1782	C	C6-N1-C2	-6.24	117.81	120.30
25	RA	113	G	C8-N9-C1'	6.24	135.11	127.00
25	YA	1005	C	N3-C2-O2	-6.24	117.53	121.90
1	QA	1226	C	C2-N1-C1'	6.23	125.66	118.80
25	YA	1049	C	O5'-P-OP1	-6.23	100.09	105.70
25	YA	1672	C	C5-C6-N1	6.23	124.12	121.00
1	QA	365	U	C2-N1-C1'	6.23	125.18	117.70
25	RA	2573	C	C2-N1-C1'	6.23	125.65	118.80
25	YA	2237	G	O5'-P-OP2	-6.23	100.10	105.70
25	YA	1531	C	C2-N1-C1'	6.22	125.65	118.80
25	YA	2588	G	C4-C5-N7	6.22	113.29	110.80
1	QA	673	G	N9-C4-C5	-6.22	102.91	105.40
1	XA	924	C	C6-N1-C2	-6.22	117.81	120.30
25	YA	2581	G	C4-N9-C1'	6.22	134.59	126.50
1	XA	189(E)	C	N1-C2-O2	6.22	122.63	118.90
25	YA	243	U	N3-C2-O2	-6.21	117.85	122.20
1	QA	630	G	N3-C4-N9	6.21	129.73	126.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1996	C	C2-N1-C1'	-6.21	111.97	118.80
25	RA	642	G	C8-N9-C1'	6.21	135.07	127.00
1	XA	1395	C	N1-C2-O2	6.21	122.62	118.90
25	YA	487	C	N1-C2-O2	6.21	122.62	118.90
25	RA	384	U	N3-C2-O2	-6.20	117.86	122.20
25	RA	1835	G	C6-C5-N7	-6.20	126.68	130.40
25	RA	178	G	C4-N9-C1'	-6.20	118.44	126.50
25	RA	2456	C	C6-N1-C2	-6.20	117.82	120.30
25	YA	2415	G	N3-C4-N9	-6.20	122.28	126.00
25	YA	2713	A	C2-N3-C4	6.20	113.70	110.60
25	YA	2889	C	N1-C2-O2	6.20	122.62	118.90
25	YA	1804	C	C6-N1-C2	-6.19	117.82	120.30
1	QA	221	C	C6-N1-C2	-6.19	117.82	120.30
25	YA	1670	C	N1-C2-O2	6.19	122.61	118.90
25	YA	2616	C	N1-C2-O2	6.19	122.61	118.90
25	RA	1142(A)	U	C5-C6-N1	6.19	125.79	122.70
1	QA	1205	U	C5-C6-N1	6.19	125.79	122.70
1	QA	939	G	N3-C4-C5	-6.18	125.51	128.60
1	QA	961	U	N1-C2-O2	6.18	127.13	122.80
25	RA	2825	C	N3-C2-O2	-6.18	117.57	121.90
25	YA	628	G	C8-N9-C1'	6.18	135.03	127.00
25	RA	2514	U	C6-N1-C1'	6.18	129.85	121.20
25	YA	2582	G	C4-N9-C1'	6.18	134.53	126.50
1	QA	311	C	N3-C2-O2	-6.17	117.58	121.90
1	XA	449	C	C6-N1-C2	-6.17	117.83	120.30
1	XA	739	C	C6-N1-C2	-6.17	117.83	120.30
25	YA	1934	C	O5'-P-OP1	-6.17	100.15	105.70
1	QA	1242	C	C5-C6-N1	6.17	124.08	121.00
1	QA	1383	C	N1-C2-O2	6.17	122.60	118.90
25	YA	2456	C	C6-N1-C2	-6.17	117.83	120.30
25	RA	1157	G	N3-C4-N9	6.16	129.70	126.00
25	YA	2076	U	N1-C2-O2	6.16	127.11	122.80
25	YA	1640	C	C6-N1-C2	-6.16	117.84	120.30
25	YA	1893	C	N3-C2-O2	-6.16	117.59	121.90
25	YA	540	C	C6-N1-C2	-6.16	117.84	120.30
25	RA	2720	U	N1-C2-O2	6.16	127.11	122.80
25	RA	1621	U	C6-N1-C1'	6.16	129.82	121.20
25	RA	688	U	C2-N1-C1'	-6.15	110.32	117.70
25	RA	1886	C	N1-C2-O2	6.15	122.59	118.90
1	XA	365	U	N1-C2-O2	6.15	127.11	122.80
25	YA	1325	G	N3-C4-N9	-6.15	122.31	126.00
25	YA	1899	G	N3-C4-C5	-6.15	125.52	128.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	783	A	C8-N9-C1'	-6.15	116.63	127.70
25	YA	803	U	C6-N1-C1'	6.15	129.81	121.20
25	YA	373	U	N3-C2-O2	-6.15	117.90	122.20
25	RA	2232	U	C6-N1-C1'	6.14	129.80	121.20
25	RA	2709	G	OP2-P-O3'	6.14	118.70	105.20
25	RA	1902	C	C2-N1-C1'	-6.14	112.05	118.80
1	XA	455	C	N1-C2-O2	6.14	122.58	118.90
25	YA	949	C	C6-N1-C2	-6.14	117.84	120.30
25	YA	1671	U	N3-C4-O4	6.14	123.69	119.40
25	YA	1810	A	C8-N9-C4	-6.14	103.34	105.80
25	RA	577	G	C6-C5-N7	-6.13	126.72	130.40
25	YA	2258	C	C2-N1-C1'	6.13	125.55	118.80
25	YA	1660	C	N1-C2-O2	6.13	122.58	118.90
25	YA	2456	C	C5-C6-N1	6.13	124.07	121.00
1	QA	337	C	C6-N1-C2	-6.13	117.85	120.30
25	YA	1956	U	N1-C2-O2	6.13	127.09	122.80
25	RA	2161	C	N3-C2-O2	-6.13	117.61	121.90
25	YA	2486	G	C2-N3-C4	-6.12	108.84	111.90
1	XA	217	C	N1-C2-O2	6.12	122.57	118.90
25	YA	2517	C	C2-N1-C1'	6.12	125.53	118.80
25	RA	2466	C	C6-N1-C2	-6.12	117.85	120.30
25	YA	2248	C	N1-C2-O2	6.12	122.57	118.90
25	RA	2744	G	N3-C4-N9	6.12	129.67	126.00
25	YA	607	U	N1-C2-O2	6.11	127.08	122.80
25	RA	1030	G	C5-C6-O6	-6.11	124.94	128.60
25	RA	65	C	N3-C2-O2	-6.11	117.63	121.90
25	RA	2700	C	C6-N1-C2	-6.11	117.86	120.30
25	YA	2667	C	N1-C2-O2	6.11	122.56	118.90
1	XA	1267	C	C6-N1-C2	-6.10	117.86	120.30
25	RA	1267	U	N3-C2-O2	-6.10	117.93	122.20
25	YA	1102	C	C5-C6-N1	6.10	124.05	121.00
25	YA	1795	C	C6-N1-C2	-6.10	117.86	120.30
25	YA	568	U	N3-C4-C5	-6.10	110.94	114.60
25	YA	2178	C	N1-C2-O2	6.10	122.56	118.90
25	RA	45	C	N1-C2-O2	6.10	122.56	118.90
25	RA	2153	G	C8-N9-C1'	-6.10	119.07	127.00
25	YA	687	C	N3-C2-O2	-6.10	117.63	121.90
26	YB	36	C	N3-C2-O2	-6.10	117.63	121.90
25	YA	1899	G	N3-C4-N9	6.09	129.66	126.00
25	YA	772	C	C6-N1-C1'	6.09	128.11	120.80
25	YA	2321	G	C8-N9-C4	-6.09	103.96	106.40
25	RA	1000	A	N7-C8-N9	6.09	116.84	113.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	479	A	O4'-C1'-N9	6.09	113.07	108.20
25	RA	1005	C	C5-C6-N1	6.09	124.04	121.00
25	RA	2449	U	O5'-P-OP2	-6.09	100.22	105.70
25	RA	2381	C	C2-N1-C1'	-6.08	112.11	118.80
25	YA	192	C	N3-C2-O2	-6.08	117.64	121.90
25	YA	263	C	C6-N1-C1'	6.08	128.10	120.80
25	YA	1407	C	C6-N1-C2	-6.08	117.87	120.30
25	YA	2053	G	N7-C8-N9	6.08	116.14	113.10
25	YA	2506	U	C2-N1-C1'	6.08	124.99	117.70
25	YA	1692	U	C2-N1-C1'	-6.07	110.41	117.70
25	YA	1879	C	C6-N1-C2	-6.07	117.87	120.30
1	QA	1369	C	N1-C2-O2	6.07	122.54	118.90
25	RA	208	C	C2-N1-C1'	6.07	125.48	118.80
25	YA	273(K)	C	C6-N1-C2	-6.07	117.87	120.30
25	YA	385	C	C6-N1-C2	-6.07	117.87	120.30
25	YA	1002	G	C4-N9-C1'	-6.07	118.61	126.50
25	YA	1644	C	N1-C2-O2	6.07	122.54	118.90
25	YA	2508	G	O5'-P-OP1	-6.07	100.23	105.70
25	YA	1619	G	N9-C4-C5	-6.07	102.97	105.40
1	QA	1383	C	C6-N1-C2	-6.07	117.87	120.30
25	YA	2039	C	C5-C6-N1	6.07	124.03	121.00
1	XA	186	C	C6-N1-C2	-6.06	117.88	120.30
1	QA	749	C	N1-C2-O2	6.06	122.54	118.90
1	QA	993	G	N3-C4-N9	6.06	129.64	126.00
25	YA	694	U	C6-N1-C1'	6.06	129.69	121.20
25	RA	2014	A	C4-N9-C1'	-6.06	115.39	126.30
25	RA	2205	C	C2-N1-C1'	-6.06	112.14	118.80
25	YA	2071	A	O5'-P-OP2	-6.06	100.25	105.70
25	RA	1547	C	C2-N1-C1'	6.05	125.46	118.80
25	YA	1774	C	C6-N1-C2	-6.05	117.88	120.30
1	QA	1078	U	N1-C2-O2	6.05	127.04	122.80
25	YA	511	U	O5'-P-OP1	-6.05	100.25	105.70
1	XA	219	C	C6-N1-C2	-6.05	117.88	120.30
1	QA	620	C	N1-C2-O2	6.05	122.53	118.90
1	QA	1303	C	C6-N1-C2	-6.05	117.88	120.30
25	YA	107	C	O5'-P-OP1	6.05	117.96	110.70
25	RA	2829	C	N1-C2-O2	6.05	122.53	118.90
1	QA	687	A	P-O3'-C3'	6.04	126.95	119.70
1	QA	1393	U	C6-N1-C1'	6.04	129.66	121.20
25	RA	1605	C	C5-C6-N1	6.04	124.02	121.00
1	XA	979	C	C5-C6-N1	6.04	124.02	121.00
25	RA	749	C	N1-C2-O2	6.04	122.52	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1782	C	C6-N1-C2	-6.04	117.89	120.30
25	RA	2095	C	C6-N1-C2	-6.04	117.88	120.30
22	QV	65	C	C5-C6-N1	6.04	124.02	121.00
25	RA	907	U	N3-C2-O2	-6.04	117.97	122.20
25	YA	1005	C	C5-C6-N1	6.04	124.02	121.00
26	RB	68	C	C6-N1-C2	-6.03	117.89	120.30
25	YA	486	C	C6-N1-C2	-6.03	117.89	120.30
25	YA	1675	C	N1-C2-O2	6.03	122.52	118.90
25	YA	445	C	C2-N1-C1'	-6.03	112.17	118.80
1	QA	1066	C	C5-C6-N1	6.03	124.02	121.00
1	QA	1103	C	N1-C2-O2	6.03	122.52	118.90
1	XA	1369	C	N1-C2-O2	6.03	122.52	118.90
25	YA	1005	C	C6-N1-C2	-6.03	117.89	120.30
1	QA	940	C	C6-N1-C1'	6.03	128.03	120.80
25	RA	1493	C	N3-C2-O2	-6.03	117.68	121.90
25	YA	2592	G	O5'-P-OP2	-6.03	100.28	105.70
25	RA	595	C	C6-N1-C2	-6.02	117.89	120.30
25	YA	1356	G	O5'-P-OP2	6.02	117.92	110.70
25	YA	1589	C	C5-C6-N1	6.02	124.01	121.00
1	QA	1066	C	C2-N1-C1'	6.02	125.42	118.80
22	QV	75	C	C6-N1-C1'	6.02	128.02	120.80
29	YF	20	LEU	CA-CB-CG	6.02	129.14	115.30
22	QV	1	C	N3-C2-O2	-6.02	117.69	121.90
1	QA	1226	C	C6-N1-C1'	-6.01	113.58	120.80
25	RA	2579	C	N1-C2-O2	6.01	122.51	118.90
1	QA	405	U	N3-C2-O2	-6.01	117.99	122.20
22	XV	17	C	C2-N1-C1'	6.01	125.41	118.80
25	YA	1065	U	P-O3'-C3'	6.01	126.91	119.70
25	YA	2095	C	C6-N1-C2	-6.01	117.90	120.30
25	RA	2352	A	O5'-P-OP2	6.01	117.91	110.70
25	RA	2646	C	C6-N1-C2	-6.00	117.90	120.30
25	YA	516	C	N1-C2-O2	6.00	122.50	118.90
25	YA	1256	G	C6-C5-N7	-6.00	126.80	130.40
1	QA	749	C	C6-N1-C2	-6.00	117.90	120.30
25	YA	1967	C	C5-C6-N1	6.00	124.00	121.00
25	YA	2474	C	C6-N1-C2	-6.00	117.90	120.30
1	XA	620	C	N1-C2-O2	5.99	122.49	118.90
25	RA	758	C	N3-C2-O2	-5.99	117.71	121.90
25	RA	2594	C	C5-C6-N1	5.99	123.99	121.00
23	XX	19	C	C6-N1-C2	-5.98	117.91	120.30
25	YA	794	G	N3-C4-N9	5.98	129.59	126.00
25	YA	614(A)	U	C6-N1-C1'	-5.98	112.83	121.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1330	C	C6-N1-C2	-5.98	117.91	120.30
25	YA	1893	C	C2-N1-C1'	5.98	125.38	118.80
1	QA	180	U	N1-C2-O2	5.97	126.98	122.80
1	QA	563	A	C4-N9-C1'	5.97	137.05	126.30
25	YA	1934	C	C6-N1-C1'	5.97	127.97	120.80
25	YA	1958	C	C6-N1-C2	-5.97	117.91	120.30
25	RA	1430	C	C6-N1-C2	-5.97	117.91	120.30
25	YA	810	U	C6-N1-C1'	5.97	129.56	121.20
25	YA	1108	U	N1-C2-O2	5.96	126.98	122.80
24	QY	34	C	C6-N1-C2	-5.96	117.92	120.30
25	RA	1437	C	C6-N1-C2	-5.96	117.92	120.30
1	XA	88	A	C3'-C2'-C1'	-5.96	96.73	101.50
25	YA	672	C	C6-N1-C2	-5.96	117.92	120.30
1	XA	1264	C	C5-C6-N1	5.96	123.98	121.00
25	RA	1345	C	C6-N1-C2	-5.95	117.92	120.30
25	RA	1550	C	C6-N1-C2	-5.95	117.92	120.30
1	QA	848	C	C6-N1-C2	-5.95	117.92	120.30
1	XA	18	C	C5-C6-N1	5.95	123.97	121.00
1	XA	1505	G	C8-N9-C1'	5.95	134.73	127.00
25	YA	99	U	N3-C2-O2	-5.95	118.03	122.20
25	YA	1500	G	O5'-P-OP2	-5.95	100.35	105.70
1	QA	174	C	C5-C6-N1	5.94	123.97	121.00
25	YA	210	C	C6-N1-C1'	5.94	127.93	120.80
25	RA	1557	C	N1-C2-O2	5.94	122.47	118.90
1	XA	1147	C	N3-C2-O2	-5.94	117.74	121.90
1	XA	330	C	C5-C6-N1	5.94	123.97	121.00
1	XA	1028	C	C5-C6-N1	5.94	123.97	121.00
25	YA	725	G	C8-N9-C4	-5.94	104.03	106.40
25	YA	1333	C	C2-N1-C1'	5.94	125.33	118.80
1	XA	989	C	C6-N1-C2	-5.93	117.93	120.30
25	YA	797	C	C2-N1-C1'	5.93	125.33	118.80
25	YA	1253	A	C4-C5-N7	5.93	113.67	110.70
25	YA	1476	C	C6-N1-C2	-5.93	117.93	120.30
25	YA	2689	U	N1-C2-O2	5.93	126.95	122.80
25	RA	546	C	N1-C2-O2	5.93	122.46	118.90
25	RA	2076	U	C2-N1-C1'	5.93	124.81	117.70
25	RA	1191	G	O5'-P-OP2	-5.92	100.37	105.70
25	YA	1314	C	N3-C2-O2	-5.92	117.75	121.90
25	YA	1787	A	O5'-P-OP2	5.92	117.81	110.70
26	YB	60	C	C5-C6-N1	5.92	123.96	121.00
1	QA	1267	C	N1-C2-O2	5.92	122.45	118.90
25	YA	1293	C	C2-N1-C1'	-5.92	112.29	118.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	993	G	C8-N9-C1'	-5.92	119.31	127.00
1	QA	1378	C	N3-C2-O2	-5.92	117.76	121.90
25	RA	2828	C	N1-C2-O2	5.92	122.45	118.90
1	XA	563	A	C4-N9-C1'	5.92	136.95	126.30
1	XA	1147	C	N1-C2-O2	5.92	122.45	118.90
25	YA	2226	C	N3-C2-O2	-5.92	117.76	121.90
23	XX	19	C	C5-C6-N1	5.91	123.96	121.00
25	YA	560	C	N1-C2-O2	5.91	122.45	118.90
1	QA	1032	G	N3-C4-N9	-5.91	122.45	126.00
25	RA	1437	C	C5-C6-N1	5.91	123.96	121.00
25	YA	2559	C	C6-N1-C2	-5.91	117.94	120.30
25	YA	2295	C	N1-C2-O2	5.91	122.44	118.90
25	RA	1188	U	C6-N1-C1'	5.91	129.47	121.20
25	RA	2666	C	N3-C2-O2	-5.91	117.77	121.90
25	RA	2015	A	N7-C8-N9	5.90	116.75	113.80
25	RA	54	G	C4-N9-C1'	-5.89	118.84	126.50
25	RA	2084	C	C6-N1-C2	-5.89	117.94	120.30
25	RA	392	C	N1-C2-O2	5.89	122.43	118.90
25	RA	2441	C	N1-C2-O2	5.89	122.43	118.90
25	YA	1658	C	C2-N1-C1'	5.89	125.28	118.80
25	YA	2368	C	C6-N1-C2	-5.89	117.94	120.30
25	RA	510	C	C6-N1-C2	-5.89	117.94	120.30
25	RA	2551	C	N1-C2-O2	5.89	122.43	118.90
25	RA	2560	C	C6-N1-C2	-5.89	117.94	120.30
25	RA	2224	G	C8-N9-C1'	5.88	134.65	127.00
26	YB	42	C	N1-C2-O2	5.88	122.43	118.90
25	YA	530	G	O4'-C1'-N9	-5.88	103.50	108.20
1	XA	358	U	P-O3'-C3'	5.88	126.75	119.70
1	XA	1436	U	C5-C6-N1	5.88	125.64	122.70
25	YA	925	C	N1-C2-O2	5.88	122.43	118.90
25	RA	912	C	O4'-C1'-N1	5.87	112.90	108.20
25	RA	2404	C	C6-N1-C2	-5.87	117.95	120.30
25	YA	1905	C	N3-C2-O2	-5.87	117.79	121.90
1	QA	526	C	C5-C6-N1	5.87	123.94	121.00
25	YA	812	C	C2-N1-C1'	5.87	125.26	118.80
25	YA	1721	G	C8-N9-C1'	-5.87	119.37	127.00
25	YA	2321	G	N3-C2-N2	-5.87	115.79	119.90
25	RA	1430	C	C5-C6-N1	5.87	123.94	121.00
25	RA	2224	G	C4-N9-C1'	-5.87	118.87	126.50
25	YA	1833	U	C6-N1-C2	-5.87	117.48	121.00
1	QA	385	C	C6-N1-C2	-5.87	117.95	120.30
25	YA	2395	C	N1-C2-O2	5.87	122.42	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1116	C	N1-C2-O2	5.86	122.42	118.90
25	RA	1941	C	N1-C2-O2	5.86	122.42	118.90
1	QA	502	G	OP1-P-O3'	5.86	118.09	105.20
25	RA	1934	C	C5-C6-N1	5.86	123.93	121.00
25	RA	2473	U	N3-C2-O2	-5.86	118.10	122.20
25	YA	1142(B)	A	C4-N9-C1'	5.86	136.84	126.30
25	YA	1687	G	N1-C2-N2	-5.86	110.93	116.20
25	YA	1781	C	C6-N1-C2	5.86	122.64	120.30
25	YA	2394	C	N3-C2-O2	-5.86	117.80	121.90
25	RA	2506	U	N1-C2-O2	5.85	126.89	122.80
1	XA	1382	C	C6-N1-C2	-5.85	117.96	120.30
25	YA	1353	A	O4'-C1'-N9	-5.85	103.52	108.20
25	YA	1687	G	C6-C5-N7	-5.85	126.89	130.40
25	YA	1577	C	N1-C2-O2	5.84	122.41	118.90
25	RA	2512	C	N1-C2-O2	5.84	122.41	118.90
25	RA	85	G	O5'-P-OP1	-5.84	100.45	105.70
1	XA	187	C	C6-N1-C2	-5.84	117.97	120.30
25	YA	560	C	N3-C2-O2	-5.84	117.81	121.90
25	YA	2063	C	C6-N1-C1'	-5.84	113.80	120.80
1	XA	1066	C	N3-C2-O2	-5.83	117.82	121.90
25	YA	210	C	C2-N1-C1'	-5.83	112.39	118.80
25	YA	1669	A	C4-N9-C1'	5.83	136.80	126.30
1	XA	999	C	N3-C2-O2	-5.83	117.82	121.90
22	QV	67	C	C6-N1-C2	-5.83	117.97	120.30
25	YA	1200	C	C6-N1-C2	-5.83	117.97	120.30
25	RA	1947	C	C6-N1-C1'	5.83	127.79	120.80
25	RA	2039	C	N1-C2-O2	5.83	122.39	118.90
1	XA	188	C	N1-C2-O2	5.83	122.39	118.90
25	YA	67	U	N3-C2-O2	-5.83	118.12	122.20
25	YA	964	C	C6-N1-C2	-5.82	117.97	120.30
1	QA	267	C	C6-N1-C1'	-5.82	113.81	120.80
1	QA	381	C	N1-C2-O2	5.82	122.39	118.90
25	RA	595	C	C5-C6-N1	5.82	123.91	121.00
24	XY	30	C	C6-N1-C2	-5.82	117.97	120.30
25	YA	1314	C	N1-C2-O2	5.82	122.39	118.90
25	RA	2667	C	N1-C2-O2	5.82	122.39	118.90
25	RA	2785	C	C6-N1-C2	-5.82	117.97	120.30
25	YA	467	G	O5'-P-OP2	-5.82	100.47	105.70
25	YA	807	U	OP2-P-O3'	5.82	117.99	105.20
25	YA	1190	G	N1-C6-O6	-5.82	116.41	119.90
25	RA	1899	G	C4-N9-C1'	5.81	134.06	126.50
25	RA	2144	U	C2-N1-C1'	5.81	124.68	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	856	C	C5-C6-N1	5.81	123.91	121.00
25	RA	272(B)	C	C5-C6-N1	5.81	123.91	121.00
1	XA	1109	C	N1-C2-O2	5.81	122.39	118.90
25	YA	1041	C	C6-N1-C2	-5.81	117.98	120.30
1	XA	697	U	N3-C2-O2	-5.81	118.13	122.20
25	RA	1574	C	C5-C6-N1	5.81	123.90	121.00
1	XA	893	C	N1-C2-O2	5.81	122.39	118.90
25	RA	2573	C	N3-C2-O2	-5.80	117.84	121.90
1	QA	697	U	N3-C2-O2	-5.80	118.14	122.20
26	RB	68	C	C5-C6-N1	5.80	123.90	121.00
1	XA	797	C	C6-N1-C1'	5.80	127.76	120.80
25	YA	1612	C	C6-N1-C2	-5.80	117.98	120.30
25	RA	1830	C	N1-C2-O2	5.80	122.38	118.90
25	YA	683	C	C2-N1-C1'	-5.80	112.42	118.80
1	QA	268	C	N1-C2-O2	5.80	122.38	118.90
26	RB	79	C	N1-C2-O2	5.79	122.38	118.90
25	YA	1882	C	C6-N1-C2	-5.79	117.98	120.30
25	YA	2318	G	N3-C4-C5	-5.79	125.70	128.60
25	YA	972	G	N3-C4-N9	5.79	129.48	126.00
25	YA	1257	C	C6-N1-C2	-5.79	117.98	120.30
25	RA	2247	A	N7-C8-N9	5.79	116.70	113.80
25	YA	1446	C	C6-N1-C2	-5.79	117.98	120.30
25	YA	1619	G	N3-C4-N9	5.79	129.47	126.00
1	XA	738	C	C6-N1-C2	-5.79	117.98	120.30
25	RA	66	C	N3-C2-O2	-5.79	117.85	121.90
25	RA	2271	G	C4-N9-C1'	5.79	134.03	126.50
25	RA	1041	C	N3-C2-O2	-5.79	117.85	121.90
25	RA	2487	G	C4-N9-C1'	-5.79	118.98	126.50
25	YA	204	A	O5'-P-OP1	-5.79	100.49	105.70
1	XA	135	C	C6-N1-C2	-5.78	117.99	120.30
25	YA	2648	C	C5-C6-N1	5.78	123.89	121.00
1	QA	308	C	C2-N1-C1'	5.78	125.16	118.80
25	RA	413	C	C6-N1-C2	-5.78	117.99	120.30
25	YA	1598	C	C6-N1-C2	-5.78	117.99	120.30
1	QA	1198	G	C8-N9-C1'	5.78	134.51	127.00
1	QA	54	C	C6-N1-C2	-5.78	117.99	120.30
25	RA	1879	C	C6-N1-C2	-5.78	117.99	120.30
1	XA	1067	A	P-O3'-C3'	5.78	126.63	119.70
25	YA	2320	A	C2-N3-C4	5.78	113.49	110.60
25	YA	1988	C	O5'-P-OP1	-5.78	100.50	105.70
25	RA	2504	U	C6-N1-C2	-5.77	117.54	121.00
1	QA	91	C	C6-N1-C2	-5.77	117.99	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1695	G	C8-N9-C1'	-5.77	119.50	127.00
25	RA	961	C	O5'-P-OP2	-5.76	100.51	105.70
25	RA	1253	A	C5-N7-C8	-5.76	101.02	103.90
25	YA	837	C	C5-C6-N1	5.76	123.88	121.00
25	YA	2438	U	C6-N1-C1'	5.76	129.27	121.20
25	RA	957	A	N1-C6-N6	5.76	122.06	118.60
25	RA	2321	G	C6-N1-C2	-5.76	121.64	125.10
25	RA	2321	G	P-O3'-C3'	5.76	126.61	119.70
1	XA	65	U	P-O3'-C3'	5.76	126.61	119.70
1	QA	972	C	C2-N3-C4	-5.76	117.02	119.90
56	ZA	2	C	C2-N1-C1'	-5.76	112.47	118.80
1	XA	1200	C	C6-N1-C2	5.76	122.60	120.30
25	YA	999	U	N3-C2-O2	-5.75	118.17	122.20
1	QA	950	U	C5-C6-N1	5.75	125.58	122.70
25	RA	1257	C	O5'-P-OP2	-5.75	100.52	105.70
25	RA	1640	C	N1-C2-O2	5.75	122.35	118.90
1	QA	421	U	N3-C2-O2	-5.75	118.17	122.20
25	YA	1852	C	C2-N1-C1'	-5.75	112.47	118.80
25	YA	1635	G	C6-C5-N7	-5.75	126.95	130.40
1	QA	514	C	C6-N1-C2	-5.75	118.00	120.30
22	QV	56	C	N1-C2-O2	5.75	122.35	118.90
25	RA	528	A	C4-N9-C1'	5.75	136.65	126.30
25	YA	568	U	C6-N1-C1'	5.75	129.25	121.20
1	QA	749	C	N3-C2-O2	-5.75	117.88	121.90
25	YA	2051	A	C8-N9-C4	5.75	108.10	105.80
25	YA	76	C	N1-C2-O2	5.75	122.35	118.90
25	RA	1040	C	C6-N1-C1'	5.74	127.69	120.80
25	YA	1660	C	N3-C2-O2	-5.74	117.88	121.90
25	YA	2700	C	C2-N1-C1'	5.74	125.12	118.80
1	QA	7	G	C4-N9-C1'	5.74	133.97	126.50
1	XA	1038	C	N1-C2-O2	5.74	122.34	118.90
1	QA	1097	C	C6-N1-C2	-5.74	118.00	120.30
25	YA	2407	G	C6-C5-N7	-5.74	126.96	130.40
25	YA	2648	C	C6-N1-C2	-5.74	118.00	120.30
25	YA	29	U	C5-C6-N1	5.74	125.57	122.70
25	RA	1250	G	C4-N9-C1'	5.74	133.96	126.50
25	RA	1765	C	C6-N1-C2	-5.74	118.01	120.30
25	YA	2465	C	N1-C2-N3	5.73	123.21	119.20
25	YA	2056	G	C8-N9-C1'	-5.73	119.55	127.00
25	YA	2076	U	N3-C2-O2	-5.73	118.19	122.20
25	YA	2470	G	N3-C2-N2	-5.73	115.89	119.90
25	RA	692	C	C6-N1-C2	-5.73	118.01	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	189(E)	C	C6-N1-C2	-5.73	118.01	120.30
25	RA	1041	C	N1-C2-O2	5.73	122.33	118.90
1	XA	365	U	O4'-C1'-N1	5.72	112.78	108.20
25	YA	450	G	C5-C6-N1	-5.72	108.64	111.50
25	YA	2766	G	C4-N9-C1'	5.72	133.94	126.50
25	RA	1464	C	C2-N3-C4	-5.72	117.04	119.90
25	YA	1982	C	N1-C2-O2	5.72	122.33	118.90
25	RA	535	C	C6-N1-C1'	5.72	127.66	120.80
1	XA	1125	U	N1-C2-O2	5.72	126.80	122.80
22	XV	27	U	N1-C2-O2	5.72	126.80	122.80
1	QA	1529	G	C8-N9-C1'	-5.72	119.57	127.00
1	XA	675	A	N7-C8-N9	5.71	116.66	113.80
25	YA	1752	C	C6-N1-C2	-5.71	118.01	120.30
25	YA	2486	G	C8-N9-C1'	5.71	134.43	127.00
25	YA	862	G	N3-C4-C5	-5.71	125.74	128.60
25	YA	1822	G	C8-N9-C1'	5.71	134.43	127.00
25	YA	2321	G	C6-N1-C2	-5.71	121.67	125.10
25	YA	1531	C	C6-N1-C2	-5.71	118.02	120.30
25	RA	1782	C	C5-C6-N1	5.71	123.85	121.00
1	XA	365	U	N3-C2-O2	-5.71	118.21	122.20
25	YA	662	G	C4-N9-C1'	-5.71	119.08	126.50
25	RA	587	C	C2-N1-C1'	5.70	125.07	118.80
25	RA	2473	U	N1-C2-O2	5.70	126.79	122.80
25	RA	2064	C	C6-N1-C2	-5.70	118.02	120.30
25	YA	1669	A	C2-N3-C4	5.70	113.45	110.60
1	QA	1514	C	C6-N1-C2	-5.70	118.02	120.30
25	YA	1947	C	C6-N1-C2	-5.70	118.02	120.30
25	YA	2756	U	O4'-C1'-N1	5.70	112.76	108.20
1	QA	717	C	C2-N1-C1'	5.70	125.07	118.80
1	QA	898	G	O5'-P-OP1	-5.70	100.58	105.70
22	XV	6	G	C6-C5-N7	-5.70	126.98	130.40
25	YA	838	C	C6-N1-C1'	5.70	127.64	120.80
25	YA	1409	C	C6-N1-C2	-5.70	118.02	120.30
1	QA	153	C	C6-N1-C2	-5.69	118.02	120.30
25	RA	1267	U	N1-C2-O2	5.69	126.78	122.80
25	RA	1532	C	N1-C2-O2	5.69	122.32	118.90
25	RA	433	C	C6-N1-C1'	5.69	127.63	120.80
25	YA	672	C	C6-N1-C1'	5.69	127.63	120.80
25	YA	1116	C	C5-C6-N1	5.69	123.84	121.00
25	YA	1306	C	N1-C2-O2	5.69	122.31	118.90
25	RA	1597	A	O4'-C1'-N9	5.69	112.75	108.20
25	YA	1038	C	C6-N1-C2	-5.69	118.03	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	174	C	C6-N1-C2	-5.68	118.03	120.30
25	RA	535	C	C2-N1-C1'	-5.68	112.55	118.80
25	YA	1951	U	C6-N1-C1'	5.68	129.16	121.20
25	YA	2321	G	P-O3'-C3'	5.68	126.52	119.70
25	YA	2827	C	N1-C2-O2	5.68	122.31	118.90
25	RA	2752	C	N3-C2-O2	-5.68	117.92	121.90
1	XA	358	U	C5'-C4'-O4'	5.68	115.92	109.10
25	YA	1712	C	C6-N1-C2	-5.68	118.03	120.30
25	YA	2275	C	N1-C2-O2	5.68	122.31	118.90
25	RA	2579	C	N3-C2-O2	-5.68	117.92	121.90
25	RA	2483	C	N1-C2-O2	5.68	122.31	118.90
25	YA	2443	C	OP1-P-O3'	5.68	117.69	105.20
1	QA	25	C	N1-C2-O2	5.68	122.31	118.90
1	QA	1019	C	N1-C2-O2	5.68	122.31	118.90
25	RA	733	G	C8-N9-C1'	5.68	134.38	127.00
25	YA	794	G	C5-C6-O6	-5.68	125.19	128.60
25	YA	972	G	O4'-C1'-N9	-5.68	103.66	108.20
25	RA	1547	C	N1-C2-O2	5.67	122.31	118.90
1	XA	1362	C	C6-N1-C2	-5.67	118.03	120.30
25	YA	2506	U	N1-C2-O2	5.67	126.77	122.80
1	QA	444	C	C6-N1-C1'	5.67	127.61	120.80
25	RA	655	A	N7-C8-N9	5.67	116.64	113.80
25	YA	838	C	N3-C2-O2	-5.67	117.93	121.90
1	QA	689	C	N3-C4-N4	5.67	121.97	118.00
22	XV	32	C	N3-C2-O2	-5.67	117.93	121.90
25	RA	850	C	C5-C6-N1	5.67	123.83	121.00
25	RA	273(K)	C	C5-C6-N1	5.67	123.83	121.00
25	RA	2039	C	C5-C6-N1	5.67	123.83	121.00
1	XA	1030(A)	C	N1-C2-O2	5.67	122.30	118.90
25	YA	154(B)	C	C6-N1-C2	-5.67	118.03	120.30
25	YA	2551	C	C6-N1-C2	-5.66	118.03	120.30
25	RA	692	C	C5-C6-N1	5.66	123.83	121.00
25	RA	1178	C	N3-C2-O2	-5.66	117.94	121.90
25	YA	1431	U	C2-N1-C1'	5.66	124.49	117.70
25	YA	277	C	N1-C1'-C2'	5.65	121.35	114.00
25	YA	1981	A	C5-N7-C8	-5.65	101.07	103.90
25	YA	1064	C	C6-N1-C2	-5.65	118.04	120.30
25	RA	1771	C	OP2-P-O3'	5.65	117.63	105.20
1	QA	699	C	C6-N1-C2	-5.65	118.04	120.30
25	YA	774	A	C8-N9-C1'	-5.65	117.53	127.70
25	YA	2505	G	OP2-P-O3'	5.65	117.62	105.20
25	YA	183	C	C6-N1-C2	-5.65	118.04	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	105	C	C6-N1-C2	-5.64	118.04	120.30
25	RA	1021	A	C2-N3-C4	5.64	113.42	110.60
25	RA	957	A	C4-C5-N7	5.64	113.52	110.70
25	YA	2874	C	C5-C6-N1	5.64	123.82	121.00
25	YA	465	G	C8-N9-C4	-5.64	104.14	106.40
25	YA	523	C	C6-N1-C2	-5.64	118.04	120.30
25	YA	2582	G	C8-N9-C1'	-5.64	119.67	127.00
25	RA	1621	U	C2-N1-C1'	-5.64	110.94	117.70
1	QA	630	G	N3-C4-C5	-5.64	125.78	128.60
25	RA	1157	G	C4-C5-N7	5.64	113.06	110.80
25	YA	339	U	C6-N1-C1'	5.64	129.09	121.20
25	YA	2174	C	N1-C2-O2	5.63	122.28	118.90
1	QA	537	G	C6-C5-N7	-5.63	127.02	130.40
24	XY	34	C	C5-C6-N1	5.63	123.82	121.00
25	YA	816	C	C6-N1-C1'	5.63	127.56	120.80
25	YA	1926	U	C2-N1-C1'	-5.63	110.94	117.70
25	RA	1000	A	C8-N9-C4	-5.63	103.55	105.80
1	QA	1224	G	N3-C4-N9	-5.63	122.62	126.00
25	YA	825	C	C2-N1-C1'	-5.63	112.61	118.80
25	YA	2739	U	N3-C2-O2	-5.63	118.26	122.20
25	RA	1831	G	C6-C5-N7	-5.63	127.02	130.40
25	YA	2617	C	N1-C2-O2	5.63	122.28	118.90
25	RA	2156	G	N3-C4-N9	5.62	129.37	126.00
1	XA	863	U	C2-N1-C1'	-5.62	110.95	117.70
25	RA	960	A	C8-N9-C4	-5.62	103.55	105.80
25	YA	1164	G	C8-N9-C4	-5.62	104.15	106.40
25	YA	1333	C	C6-N1-C2	-5.62	118.05	120.30
25	RA	774	A	O5'-P-OP2	-5.62	100.64	105.70
1	XA	713	G	C8-N9-C4	-5.62	104.15	106.40
1	XA	555	C	C5-C6-N1	5.62	123.81	121.00
25	YA	1462	C	N3-C2-O2	-5.62	117.97	121.90
25	RA	2066	C	C6-N1-C2	-5.61	118.05	120.30
1	QA	1348	U	N1-C2-O2	5.61	126.73	122.80
25	YA	2437	U	C6-N1-C1'	5.61	129.06	121.20
22	QV	32	C	C5-C6-N1	5.61	123.81	121.00
25	YA	243	U	N1-C2-O2	5.61	126.73	122.80
1	XA	1060	C	C2-N1-C1'	-5.61	112.63	118.80
25	YA	2218	U	N1-C2-O2	5.61	126.72	122.80
25	RA	267	C	N3-C2-O2	-5.61	117.98	121.90
25	RA	2009	G	C4-N9-C1'	-5.61	119.21	126.50
25	YA	264	C	N1-C2-O2	5.61	122.26	118.90
25	YA	324	A	N9-C1'-C2'	-5.60	105.84	112.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1514	C	C6-N1-C2	-5.60	118.06	120.30
1	QA	308	C	N1-C2-O2	5.60	122.26	118.90
22	QV	65	C	C6-N1-C2	-5.59	118.06	120.30
25	RA	525	U	C2-N1-C1'	-5.59	110.99	117.70
25	RA	733	G	C4-C5-N7	5.59	113.04	110.80
25	YA	1052	C	C5-C6-N1	5.59	123.80	121.00
1	QA	1263	C	N1-C2-O2	5.59	122.26	118.90
25	YA	2610	C	C6-N1-C2	5.59	122.54	120.30
30	YG	82	LEU	CA-CB-CG	5.59	128.16	115.30
25	RA	1100	C	N3-C2-O2	-5.59	117.99	121.90
25	YA	1041	C	C5-C6-N1	5.59	123.80	121.00
25	RA	982	C	C2-N1-C1'	-5.59	112.65	118.80
25	RA	475	U	C5-C6-N1	5.59	125.49	122.70
25	YA	981	A	O5'-P-OP2	-5.59	100.67	105.70
25	RA	589	C	C6-N1-C2	-5.58	118.07	120.30
25	RA	2724	C	N3-C2-O2	-5.58	117.99	121.90
25	YA	1253	A	C5-N7-C8	-5.58	101.11	103.90
25	YA	1405	U	O5'-P-OP2	-5.58	100.67	105.70
25	YA	2056	G	N3-C4-N9	5.58	129.35	126.00
25	RA	1333	C	N3-C2-O2	-5.58	117.99	121.90
25	RA	1665	A	N1-C6-N6	-5.58	115.25	118.60
25	RA	2107	C	N1-C2-O2	5.58	122.25	118.90
1	XA	749	C	C5-C6-N1	5.58	123.79	121.00
25	YA	2009	G	C6-C5-N7	-5.58	127.05	130.40
25	YA	2511	U	C2-N1-C1'	-5.58	111.01	117.70
25	YA	234	C	N1-C2-O2	5.58	122.25	118.90
25	YA	2283	C	N1-C2-O2	5.57	122.24	118.90
1	XA	1003	G	C8-N9-C4	-5.57	104.17	106.40
25	YA	1253	A	C5-C6-N6	-5.57	119.24	123.70
1	QA	1260	C	N1-C2-O2	5.57	122.24	118.90
25	YA	485	C	C6-N1-C2	-5.57	118.07	120.30
25	YA	2254	C	N1-C2-O2	5.57	122.24	118.90
25	RA	1992	G	O4'-C1'-N9	-5.57	103.75	108.20
25	YA	2076	U	C2-N1-C1'	5.57	124.38	117.70
1	XA	980	C	N1-C2-O2	5.57	122.24	118.90
25	YA	737	C	N1-C2-O2	5.57	122.24	118.90
25	YA	1852	C	C6-N1-C2	-5.57	118.07	120.30
25	YA	2075	U	C5-C4-O4	-5.57	122.56	125.90
26	YB	7	G	N3-C4-N9	5.57	129.34	126.00
1	QA	1109	C	C6-N1-C2	-5.57	118.07	120.30
25	YA	2420	C	C6-N1-C2	-5.57	118.07	120.30
1	QA	397	A	N3-C4-C5	-5.56	122.91	126.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1262	C	N1-C2-O2	5.56	122.24	118.90
25	YA	104	U	N3-C2-O2	-5.56	118.31	122.20
1	QA	7	G	C8-N9-C1'	-5.56	119.77	127.00
25	RA	786	C	C6-N1-C1'	5.56	127.48	120.80
25	RA	1092	C	C6-N1-C2	-5.56	118.08	120.30
25	YA	2720	U	N3-C4-O4	5.56	123.29	119.40
1	XA	221	C	C6-N1-C2	-5.56	118.08	120.30
25	YA	807	U	N3-C2-O2	-5.56	118.31	122.20
25	YA	1629	U	C2-N1-C1'	-5.56	111.03	117.70
25	RA	871	U	C6-N1-C1'	5.56	128.98	121.20
25	RA	1531	C	C6-N1-C2	-5.56	118.08	120.30
25	RA	2575	C	C2-N1-C1'	-5.56	112.69	118.80
25	YA	1052	C	N1-C2-O2	5.56	122.23	118.90
1	QA	132	C	C6-N1-C2	-5.55	118.08	120.30
25	YA	105	C	N3-C2-O2	-5.55	118.01	121.90
22	QV	34	C	C2-N1-C1'	5.55	124.91	118.80
25	RA	774	A	C4-N9-C1'	5.55	136.29	126.30
25	RA	2065	C	C6-N1-C2	-5.55	118.08	120.30
25	RA	2121	G	N3-C4-C5	-5.55	125.82	128.60
25	RA	2303	G	C4-N9-C1'	-5.55	119.28	126.50
26	RB	27	C	N1-C2-O2	5.55	122.23	118.90
22	XV	17	C	N1-C2-O2	5.55	122.23	118.90
25	YA	1256	G	C4-N9-C1'	5.55	133.72	126.50
25	YA	1982	C	C6-N1-C1'	-5.55	114.14	120.80
25	YA	1097	U	N1-C2-O2	5.55	126.68	122.80
25	YA	1968	G	OP1-P-O3'	5.55	117.41	105.20
1	XA	1260	C	N1-C2-O2	5.55	122.23	118.90
25	YA	197	A	OP1-P-OP2	5.55	127.92	119.60
25	YA	1981	A	C8-N9-C4	-5.55	103.58	105.80
1	QA	977	A	C8-N9-C4	-5.54	103.58	105.80
22	QV	13	C	C2-N1-C1'	-5.54	112.70	118.80
25	RA	2746	U	C5-C6-N1	5.54	125.47	122.70
25	YA	1218	C	C5-C6-N1	5.54	123.77	121.00
25	YA	2387	U	C6-N1-C1'	5.54	128.96	121.20
1	QA	1353	G	N1-C6-O6	-5.54	116.58	119.90
1	XA	1412	C	C6-N1-C2	-5.54	118.08	120.30
1	QA	1218	C	N3-C2-O2	-5.54	118.02	121.90
22	QV	24	U	N3-C2-O2	-5.54	118.32	122.20
25	RA	999	U	N3-C2-O2	-5.54	118.32	122.20
25	YA	1692	U	C6-N1-C1'	5.54	128.95	121.20
25	RA	479	A	O4'-C1'-N9	5.54	112.63	108.20
1	QA	1303	C	N1-C2-O2	5.53	122.22	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1894	C	N3-C2-O2	-5.53	118.03	121.90
1	XA	1003	G	N3-C4-N9	5.53	129.32	126.00
25	YA	1131	G	O4'-C1'-N9	-5.53	103.77	108.20
25	RA	998	C	N1-C2-O2	5.53	122.22	118.90
1	XA	1066	C	O5'-P-OP1	-5.53	100.72	105.70
25	YA	1646	C	C2-N1-C1'	5.53	124.88	118.80
56	ZA	1	C	C2-N1-C1'	5.53	124.88	118.80
26	RB	79	C	C6-N1-C2	-5.53	118.09	120.30
1	XA	374	A	N7-C8-N9	5.53	116.56	113.80
25	YA	1153	C	N1-C2-O2	5.53	122.22	118.90
25	RA	2226	C	C5-C6-N1	5.52	123.76	121.00
25	YA	1690	A	N1-C6-N6	-5.52	115.29	118.60
25	YA	2263	C	N3-C4-C5	5.52	124.11	121.90
25	YA	2486	G	C4-N9-C1'	-5.52	119.32	126.50
1	QA	697	U	N1-C2-O2	5.52	126.66	122.80
25	YA	2378	A	O5'-P-OP1	-5.52	100.73	105.70
25	YA	2584	U	N1-C2-O2	5.52	126.67	122.80
1	QA	754	C	C6-N1-C2	-5.52	118.09	120.30
22	QV	65	C	N3-C2-O2	-5.52	118.04	121.90
25	RA	2329	G	C6-C5-N7	-5.52	127.09	130.40
25	RA	642	G	C4-N9-C1'	-5.52	119.33	126.50
25	RA	2188	C	C6-N1-C2	-5.52	118.09	120.30
25	RA	2429	G	O5'-P-OP2	-5.52	100.73	105.70
25	RA	2739	U	N3-C2-O2	-5.52	118.34	122.20
25	RA	445	C	C6-N1-C1'	5.52	127.42	120.80
25	YA	594	U	C6-N1-C1'	5.52	128.92	121.20
25	YA	1257	C	C6-N1-C1'	5.52	127.42	120.80
25	RA	440	G	O5'-P-OP1	-5.51	100.74	105.70
25	RA	2015	A	C5-N7-C8	-5.51	101.14	103.90
25	RA	2855	C	C6-N1-C2	-5.51	118.09	120.30
1	XA	1003	G	C4-N9-C1'	5.51	133.67	126.50
1	XA	1357	A	N7-C8-N9	5.51	116.56	113.80
25	YA	1426	G	O4'-C1'-N9	-5.51	103.79	108.20
1	QA	421	U	N1-C2-O2	5.51	126.66	122.80
25	YA	327	G	C8-N9-C1'	5.51	134.17	127.00
25	RA	2009	G	C8-N9-C1'	5.51	134.16	127.00
25	YA	1828	G	C4-C5-N7	-5.51	108.60	110.80
25	YA	1218	C	N1-C2-O2	5.51	122.20	118.90
25	RA	2829	C	N3-C2-O2	-5.51	118.05	121.90
25	YA	2164	C	C5-C6-N1	5.51	123.75	121.00
25	YA	1142(B)	A	C8-N9-C1'	-5.50	117.79	127.70
1	XA	1411	C	C6-N1-C2	-5.50	118.10	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1325	G	C2-N3-C4	-5.50	109.15	111.90
1	QA	330	C	C5-C6-N1	5.50	123.75	121.00
1	QA	1032	G	N3-C2-N2	-5.50	116.05	119.90
25	RA	31	C	C5-C6-N1	5.50	123.75	121.00
25	RA	1256	G	N3-C4-N9	5.50	129.30	126.00
25	YA	2044	C	C6-N1-C2	-5.50	118.10	120.30
25	YA	2683	C	N3-C2-O2	-5.50	118.05	121.90
1	QA	1075	C	N1-C2-O2	5.50	122.20	118.90
1	QA	1397	C	N1-C2-O2	5.50	122.20	118.90
25	RA	581	C	C6-N1-C2	-5.50	118.10	120.30
25	YA	2081	C	C6-N1-C2	-5.50	118.10	120.30
25	YA	2611	U	O5'-P-OP1	-5.50	100.75	105.70
25	RA	2645	G	P-O3'-C3'	5.50	126.30	119.70
45	RZ	183	LEU	CA-CB-CG	5.50	127.94	115.30
25	YA	2036	C	C6-N1-C2	-5.50	118.10	120.30
25	RA	2825	C	N1-C2-O2	5.49	122.19	118.90
25	YA	1550	C	C6-N1-C2	-5.49	118.10	120.30
1	QA	442	C	N3-C2-O2	-5.49	118.06	121.90
1	XA	503	C	C6-N1-C2	-5.49	118.10	120.30
25	YA	104	U	N1-C2-O2	5.49	126.64	122.80
25	RA	2666	C	C6-N1-C2	-5.49	118.11	120.30
25	RA	614(A)	U	C6-N1-C1'	-5.48	113.52	121.20
25	RA	691	C	C6-N1-C2	-5.48	118.11	120.30
25	YA	1295	C	C6-N1-C1'	5.48	127.38	120.80
25	YA	2440	C	O5'-P-OP1	-5.48	100.77	105.70
25	YA	2511	U	C6-N1-C1'	5.48	128.88	121.20
25	RA	2248	C	N1-C2-O2	5.48	122.19	118.90
25	RA	2504	U	C5-C6-N1	5.48	125.44	122.70
25	YA	867	C	C6-N1-C1'	-5.48	114.22	120.80
25	RA	2636	U	N1-C2-O2	5.48	126.63	122.80
25	YA	2646	C	N1-C2-O2	5.48	122.19	118.90
1	QA	1067	A	P-O3'-C3'	5.48	126.27	119.70
1	XA	1028	C	C6-N1-C2	-5.47	118.11	120.30
25	YA	1804	C	C6-N1-C1'	5.47	127.37	120.80
25	RA	2441	C	N3-C2-O2	-5.47	118.07	121.90
1	XA	699	C	C6-N1-C2	-5.47	118.11	120.30
25	YA	1501	C	C6-N1-C2	-5.47	118.11	120.30
26	YB	79	C	C6-N1-C2	-5.47	118.11	120.30
25	RA	201	C	N1-C2-O2	5.47	122.18	118.90
25	RA	272(B)	C	C6-N1-C2	-5.47	118.11	120.30
25	YA	2346	A	C6-C5-N7	5.47	136.13	132.30
1	QA	481	G	C4-N9-C1'	5.47	133.61	126.50

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	756	C	N1-C2-O2	5.47	122.18	118.90
1	XA	1505	G	C4-N9-C1'	-5.47	119.39	126.50
25	RA	2501	C	N1-C2-O2	5.47	122.18	118.90
25	YA	1437	C	C6-N1-C2	-5.47	118.11	120.30
25	RA	178	G	C8-N9-C1'	5.46	134.10	127.00
25	RA	1166	C	C6-N1-C2	-5.46	118.11	120.30
25	YA	772	C	C2-N1-C1'	-5.46	112.79	118.80
25	YA	1145	C	C6-N1-C2	-5.46	118.11	120.30
1	QA	673	G	C5-C6-O6	-5.46	125.32	128.60
25	YA	2163	C	C6-N1-C2	-5.46	118.11	120.30
25	YA	2415	G	C4-N9-C1'	-5.46	119.40	126.50
25	RA	2745	C	N3-C2-O2	-5.46	118.08	121.90
1	XA	1260	C	C6-N1-C2	-5.46	118.11	120.30
25	YA	2026	C	C5-C6-N1	5.46	123.73	121.00
25	YA	2506	U	N3-C2-O2	-5.46	118.38	122.20
25	RA	27	G	O5'-P-OP2	-5.46	100.79	105.70
25	YA	2597	G	OP1-P-OP2	-5.46	111.41	119.60
1	QA	174	C	C2-N1-C1'	5.46	124.80	118.80
1	QA	1260	C	N3-C2-O2	-5.46	118.08	121.90
25	RA	427	U	N3-C2-O2	-5.46	118.38	122.20
1	XA	354	G	C6-C5-N7	-5.46	127.12	130.40
1	XA	528	C	C6-N1-C2	-5.46	118.12	120.30
1	XA	767	A	OP2-P-O3'	5.46	117.21	105.20
25	YA	272(T)	C	N3-C2-O2	-5.46	118.08	121.90
26	YB	42	C	C5-C6-N1	5.46	123.73	121.00
25	RA	1516	C	C5-C6-N1	5.46	123.73	121.00
1	XA	23	C	C5-C6-N1	5.46	123.73	121.00
25	YA	243	U	C2-N1-C1'	5.46	124.25	117.70
25	YA	2874	C	N3-C2-O2	-5.46	118.08	121.90
1	XA	1118	C	C2-N1-C1'	-5.45	112.80	118.80
25	RA	1914	C	C6-N1-C2	-5.45	118.12	120.30
1	XA	188	C	N3-C2-O2	-5.45	118.08	121.90
25	YA	277	C	OP1-P-O3'	5.45	117.19	105.20
25	YA	1101	U	N3-C2-O2	-5.45	118.38	122.20
25	YA	2233	U	C6-N1-C1'	5.45	128.83	121.20
25	YA	1672	C	C4-C5-C6	-5.45	114.68	117.40
25	RA	678	C	O5'-P-OP2	-5.45	100.80	105.70
25	RA	2487	G	C8-N9-C1'	5.45	134.08	127.00
1	QA	806	C	C6-N1-C1'	5.44	127.33	120.80
25	YA	1447	G	C8-N9-C1'	5.44	134.07	127.00
1	QA	524	G	C4-N9-C1'	5.44	133.57	126.50
25	YA	1531	C	C5-C6-N1	5.44	123.72	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1359	C	C5-C6-N1	5.44	123.72	121.00
1	XA	60	A	P-O3'-C3'	5.44	126.22	119.70
1	XA	336	C	C6-N1-C1'	5.43	127.32	120.80
1	XA	365	U	C2-N1-C1'	5.43	124.22	117.70
25	RA	87	C	C6-N1-C2	-5.43	118.13	120.30
25	RA	2451	A	C8-N9-C1'	5.43	137.48	127.70
25	YA	1619	G	C6-C5-N7	-5.43	127.14	130.40
25	RA	776	G	C4-N9-C1'	5.43	133.56	126.50
25	RA	1256	G	N3-C4-C5	-5.43	125.89	128.60
22	XV	65	C	C5-C6-N1	5.43	123.72	121.00
1	XA	1382	C	N3-C2-O2	-5.43	118.10	121.90
1	QA	1103	C	N3-C2-O2	-5.43	118.10	121.90
25	YA	1687	G	C8-N9-C4	-5.43	104.23	106.40
1	QA	153	C	N1-C2-O2	5.42	122.16	118.90
1	XA	1358	U	O4'-C1'-N1	5.42	112.54	108.20
25	YA	200	U	N1-C2-O2	5.42	126.60	122.80
25	YA	1954	G	C4-N9-C1'	5.42	133.55	126.50
26	YB	2	C	N1-C2-O2	5.42	122.16	118.90
25	RA	1629	U	C6-N1-C1'	5.42	128.79	121.20
26	RB	2	C	N1-C2-O2	5.42	122.15	118.90
25	RA	1631(A)	C	N1-C2-O2	5.42	122.15	118.90
25	RA	2162	G	N3-C4-N9	5.42	129.25	126.00
25	YA	2451	A	OP1-P-OP2	5.42	127.73	119.60
25	RA	1087	G	N3-C4-N9	-5.42	122.75	126.00
25	YA	1313	U	N3-C2-O2	-5.42	118.41	122.20
25	RA	1375	C	C6-N1-C2	-5.41	118.14	120.30
1	XA	1503	A	OP1-P-O3'	5.41	117.11	105.20
25	YA	1498	C	C6-N1-C2	-5.41	118.14	120.30
25	YA	2319	G	O4'-C1'-N9	5.41	112.53	108.20
25	YA	462	C	C6-N1-C2	-5.41	118.14	120.30
25	YA	2889	C	C6-N1-C2	-5.41	118.14	120.30
25	RA	1632	A	C5-N7-C8	-5.41	101.20	103.90
25	RA	1005	C	N3-C2-O2	-5.41	118.12	121.90
25	RA	1779	U	N3-C2-O2	-5.41	118.42	122.20
25	YA	2007	C	C6-N1-C1'	-5.41	114.31	120.80
25	RA	2458	G	N3-C4-C5	-5.40	125.90	128.60
25	YA	1687	G	N7-C8-N9	5.40	115.80	113.10
25	YA	2825	C	C6-N1-C2	-5.40	118.14	120.30
25	RA	2559	C	N1-C2-O2	5.40	122.14	118.90
25	YA	1526	G	C6-C5-N7	-5.40	127.16	130.40
25	YA	2581	G	C8-N9-C1'	-5.40	119.98	127.00
26	YB	2	C	C6-N1-C2	-5.40	118.14	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1517	G	C2-N3-C4	-5.40	109.20	111.90
25	RA	1778	U	O5'-P-OP1	-5.40	100.84	105.70
25	YA	721	C	C2-N1-C1'	5.39	124.73	118.80
25	YA	2506	U	OP1-P-O3'	5.39	117.07	105.20
25	YA	2314	C	C6-N1-C1'	5.39	127.27	120.80
1	QA	795	C	C6-N1-C1'	5.39	127.27	120.80
25	YA	108	U	C6-N1-C1'	5.39	128.75	121.20
1	QA	528	C	N1-C2-O2	5.39	122.13	118.90
25	RA	1178	C	C6-N1-C2	-5.39	118.14	120.30
25	YA	127	A	C8-N9-C4	-5.39	103.64	105.80
25	YA	702	G	N3-C2-N2	-5.39	116.13	119.90
25	YA	850	C	C6-N1-C2	-5.39	118.14	120.30
25	YA	1040	C	N1-C2-O2	5.39	122.13	118.90
25	YA	1619	G	C5-C6-O6	-5.39	125.37	128.60
25	RA	1574	C	C6-N1-C2	-5.38	118.15	120.30
25	RA	2066	C	N3-C2-O2	-5.38	118.13	121.90
22	XV	6	G	C4-C5-N7	5.38	112.95	110.80
25	YA	1979	C	N3-C2-O2	-5.38	118.13	121.90
25	RA	2015	A	C8-N9-C4	-5.38	103.65	105.80
23	XX	19	C	O5'-P-OP1	-5.38	100.86	105.70
25	RA	724	U	N3-C2-O2	-5.38	118.43	122.20
25	RA	2636	U	N3-C2-O2	-5.38	118.43	122.20
1	QA	797	C	N3-C2-O2	-5.38	118.14	121.90
25	RA	154(B)	C	N1-C2-O2	5.38	122.13	118.90
25	RA	2281	C	C5-C6-N1	5.38	123.69	121.00
1	XA	111	G	C6-C5-N7	-5.38	127.17	130.40
1	XA	111	G	N7-C8-N9	5.37	115.79	113.10
25	YA	2302	G	N3-C2-N2	-5.37	116.14	119.90
1	QA	537	G	N3-C4-N9	5.37	129.22	126.00
23	QX	21	C	C6-N1-C2	-5.37	118.15	120.30
25	RA	587	C	C6-N1-C1'	-5.37	114.35	120.80
25	RA	2002	G	N1-C6-O6	5.37	123.12	119.90
1	XA	504	C	C2-N1-C1'	5.37	124.71	118.80
1	XA	883	C	C6-N1-C1'	5.37	127.25	120.80
26	RB	70	C	N3-C2-O2	-5.37	118.14	121.90
25	YA	971	C	C2-N1-C1'	5.37	124.71	118.80
25	YA	1375	C	C6-N1-C2	-5.37	118.15	120.30
25	YA	2646	C	O5'-P-OP2	-5.37	100.87	105.70
56	ZA	2	C	C6-N1-C1'	5.37	127.24	120.80
25	RA	1250	G	C8-N9-C1'	-5.37	120.02	127.00
1	XA	1344	C	C6-N1-C2	-5.37	118.15	120.30
1	QA	219	C	C6-N1-C2	-5.36	118.16	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	923	A	C4-N9-C1'	5.36	135.95	126.30
25	RA	1990	C	N1-C2-O2	5.36	122.12	118.90
25	RA	2321	G	C2-N3-C4	5.36	114.58	111.90
25	YA	2355	C	N1-C2-O2	5.36	122.12	118.90
25	YA	2429	G	O5'-P-OP2	-5.36	100.87	105.70
25	RA	234	C	N1-C2-O2	5.36	122.12	118.90
25	RA	1135	C	N3-C2-O2	-5.36	118.15	121.90
25	RA	2086	U	C6-N1-C1'	5.36	128.70	121.20
25	YA	2825	C	N3-C2-O2	-5.36	118.15	121.90
34	YO	104	ARG	NE-CZ-NH1	-5.36	117.62	120.30
25	RA	999	U	N1-C2-O2	5.36	126.55	122.80
25	RA	915	C	N1-C2-O2	5.36	122.11	118.90
25	YA	753	C	N1-C2-O2	5.36	122.11	118.90
25	RA	755	C	C6-N1-C2	-5.36	118.16	120.30
25	YA	2164	C	C6-N1-C2	-5.35	118.16	120.30
25	RA	378	C	C6-N1-C2	-5.35	118.16	120.30
1	XA	673	G	N3-C4-C5	-5.35	125.92	128.60
25	YA	828	U	C2-N1-C1'	-5.35	111.28	117.70
25	YA	2178	C	C6-N1-C2	-5.35	118.16	120.30
26	YB	42	C	C6-N1-C2	-5.35	118.16	120.30
25	RA	580	C	C6-N1-C2	-5.35	118.16	120.30
1	XA	679	C	C5-C6-N1	5.35	123.67	121.00
23	XX	21	C	C6-N1-C1'	5.35	127.22	120.80
25	YA	2295	C	C2-N1-C1'	5.35	124.69	118.80
1	XA	483	C	N1-C2-O2	5.35	122.11	118.90
25	YA	2808	U	N3-C2-O2	-5.35	118.46	122.20
25	YA	2782	G	C6-C5-N7	-5.35	127.19	130.40
25	YA	2822	G	OP2-P-O3'	5.35	116.96	105.20
1	QA	1363(A)	C	N3-C2-O2	-5.34	118.16	121.90
1	XA	679	C	C6-N1-C2	-5.34	118.16	120.30
25	YA	2321	G	C2-N3-C4	5.34	114.57	111.90
26	YB	30	C	C6-N1-C2	-5.34	118.16	120.30
1	QA	1285	A	P-O3'-C3'	5.34	126.11	119.70
25	YA	2355	C	N3-C2-O2	-5.34	118.16	121.90
1	XA	891	U	N3-C2-O2	-5.34	118.46	122.20
25	YA	2294	C	OP2-P-O3'	5.34	116.95	105.20
25	YA	2825	C	N1-C2-O2	5.34	122.10	118.90
25	RA	1994	C	OP1-P-OP2	-5.34	111.59	119.60
25	YA	253	C	C6-N1-C2	-5.34	118.17	120.30
26	RB	60	C	N1-C2-O2	5.34	122.10	118.90
25	YA	2355	C	C2-N1-C1'	5.34	124.67	118.80
25	RA	192	C	N3-C2-O2	-5.33	118.17	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2129	C	N3-C2-O2	-5.33	118.17	121.90
25	RA	2294	C	C6-N1-C2	-5.33	118.17	120.30
25	YA	1234	U	N3-C2-O2	-5.33	118.47	122.20
25	YA	1804	C	C5-C6-N1	5.33	123.67	121.00
25	RA	2002	G	N7-C8-N9	5.33	115.77	113.10
1	XA	596	C	N3-C2-O2	-5.33	118.17	121.90
1	XA	643	C	N1-C2-O2	5.33	122.10	118.90
25	YA	688	U	C6-N1-C1'	5.33	128.67	121.20
25	YA	2870	C	C5-C6-N1	5.33	123.67	121.00
25	YA	1105	U	N3-C2-O2	-5.33	118.47	122.20
25	RA	590	A	N7-C8-N9	5.33	116.46	113.80
25	YA	2480	C	C6-N1-C2	-5.33	118.17	120.30
25	RA	2615	U	C5-C6-N1	5.33	125.36	122.70
25	YA	2051	A	N3-C4-C5	5.33	130.53	126.80
25	YA	2139	C	C5-C6-N1	5.33	123.66	121.00
1	QA	563	A	N7-C8-N9	5.32	116.46	113.80
1	QA	912	C	C6-N1-C2	-5.32	118.17	120.30
25	RA	739	G	O5'-P-OP2	-5.32	100.91	105.70
25	YA	754	C	C6-N1-C2	-5.32	118.17	120.30
25	RA	2231	C	C6-N1-C2	-5.32	118.17	120.30
1	XA	358	U	O4'-C4'-C3'	-5.32	98.68	104.00
1	QA	43	C	N1-C2-O2	5.32	122.09	118.90
25	RA	525	U	C6-N1-C1'	5.32	128.65	121.20
25	RA	825	C	C6-N1-C1'	5.32	127.18	120.80
25	RA	1914	C	N1-C2-O2	5.32	122.09	118.90
25	RA	2466	C	N1-C2-O2	5.32	122.09	118.90
25	YA	697	C	C5-C6-N1	5.32	123.66	121.00
25	YA	1476	C	C5-C6-N1	5.32	123.66	121.00
25	RA	1975	G	C8-N9-C1'	-5.32	120.09	127.00
25	YA	1437	C	C5-C6-N1	5.31	123.66	121.00
1	XA	19	C	C6-N1-C2	-5.31	118.17	120.30
25	YA	758	C	C6-N1-C2	-5.31	118.17	120.30
25	YA	2582	G	OP2-P-O3'	5.31	116.88	105.20
1	QA	1030(C)	C	N1-C2-O2	5.31	122.09	118.90
25	RA	669	G	N3-C4-N9	5.31	129.19	126.00
25	YA	1256	G	C8-N9-C1'	-5.31	120.10	127.00
25	YA	1566	A	OP1-P-OP2	5.31	127.56	119.60
25	YA	2053	G	C4-C5-N7	5.31	112.92	110.80
25	RA	1688	U	C6-N1-C1'	5.31	128.63	121.20
25	YA	2318	G	C8-N9-C4	-5.31	104.28	106.40
25	YA	2464	C	C6-N1-C2	5.31	122.42	120.30
1	QA	247	G	C4-N9-C1'	-5.31	119.60	126.50

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	120	U	N3-C4-O4	5.31	123.11	119.40
25	RA	1835	G	C4-N9-C1'	5.30	133.40	126.50
25	RA	1992	G	P-O3'-C3'	5.30	126.06	119.70
1	XA	818	G	O4'-C1'-N9	5.30	112.44	108.20
25	YA	794	G	C6-C5-N7	-5.30	127.22	130.40
1	XA	970	C	C6-N1-C1'	5.30	127.16	120.80
1	QA	910	C	N1-C2-O2	5.30	122.08	118.90
25	RA	459	U	N1-C2-O2	5.30	126.51	122.80
25	RA	1087	G	N9-C4-C5	5.30	107.52	105.40
25	YA	2321	G	N3-C4-N9	5.30	129.18	126.00
25	RA	1544	A	C5-C6-N6	-5.30	119.46	123.70
25	YA	1899	G	C4-N9-C1'	5.30	133.38	126.50
25	YA	487	C	N3-C2-O2	-5.29	118.19	121.90
1	QA	189(E)	C	N3-C2-O2	-5.29	118.20	121.90
25	RA	577	G	C4-C5-N7	5.29	112.92	110.80
1	XA	186	C	N3-C2-O2	-5.29	118.20	121.90
1	XA	906	G	C8-N9-C4	-5.29	104.28	106.40
1	QA	455	C	C5-C6-N1	5.29	123.64	121.00
25	RA	1314	C	N3-C4-N4	5.29	121.70	118.00
25	YA	1447	G	O5'-P-OP2	-5.29	100.94	105.70
25	RA	1842	G	C8-N9-C4	-5.28	104.29	106.40
25	RA	2766	G	N3-C4-N9	5.28	129.17	126.00
25	YA	871	U	C2-N1-C1'	-5.28	111.36	117.70
25	YA	1793	C	C6-N1-C2	-5.28	118.19	120.30
25	YA	2598	A	O5'-P-OP1	5.28	117.04	110.70
25	YA	1588	C	C6-N1-C2	-5.28	118.19	120.30
1	QA	514	C	C5-C6-N1	5.28	123.64	121.00
25	YA	925	C	N3-C2-O2	-5.28	118.20	121.90
25	YA	2063	C	O4'-C1'-N1	-5.28	103.98	108.20
25	YA	2103	C	C6-N1-C2	-5.28	118.19	120.30
25	YA	1116	C	C6-N1-C2	-5.28	118.19	120.30
25	YA	1789	A	C8-N9-C1'	5.28	137.20	127.70
1	QA	353	A	OP2-P-O3'	5.28	116.81	105.20
1	QA	600	C	N1-C2-O2	5.28	122.06	118.90
22	QV	34	C	N1-C2-O2	5.28	122.06	118.90
22	QV	66	C	N1-C2-O2	5.28	122.06	118.90
25	RA	2036	C	C2-N1-C1'	5.28	124.60	118.80
25	YA	2343	C	N3-C2-O2	-5.28	118.21	121.90
25	YA	1135	C	N1-C2-O2	5.27	122.06	118.90
1	QA	548	G	C4-N9-C1'	5.27	133.35	126.50
1	QA	1065	U	P-O3'-C3'	5.27	126.03	119.70
26	YB	7	G	C4-C5-N7	5.27	112.91	110.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	284	U	N1-C2-O2	5.27	126.49	122.80
1	QA	1203	C	N1-C2-O2	5.27	122.06	118.90
1	XA	811	C	N3-C2-O2	-5.27	118.21	121.90
25	YA	729	G	C8-N9-C1'	-5.27	120.15	127.00
25	YA	1678	G	N3-C4-C5	-5.27	125.97	128.60
25	YA	1926	U	C6-N1-C1'	5.27	128.58	121.20
25	RA	268	C	N1-C2-O2	5.27	122.06	118.90
25	RA	2874	C	C2-N1-C1'	-5.27	113.01	118.80
1	QA	524	G	C8-N9-C1'	-5.26	120.16	127.00
25	YA	350	U	N3-C2-O2	-5.26	118.51	122.20
25	YA	1969	A	OP1-P-OP2	-5.26	111.70	119.60
1	XA	563	A	C8-N9-C1'	-5.26	118.23	127.70
25	YA	1511	C	C6-N1-C2	-5.26	118.20	120.30
1	QA	18	C	C6-N1-C2	-5.26	118.20	120.30
1	QA	283	C	C5-C6-N1	5.26	123.63	121.00
1	XA	374	A	C8-N9-C4	-5.26	103.70	105.80
25	RA	1313	U	C6-N1-C2	-5.26	117.84	121.00
25	RA	1687	G	C6-C5-N7	-5.26	127.25	130.40
1	XA	931	C	C6-N1-C2	-5.26	118.20	120.30
25	RA	459	U	N3-C2-O2	-5.26	118.52	122.20
26	RB	70	C	C5-C6-N1	5.26	123.63	121.00
1	XA	442	C	N3-C2-O2	-5.26	118.22	121.90
1	XA	810	C	C5-C6-N1	5.26	123.63	121.00
1	QA	1201	A	P-O3'-C3'	5.25	126.01	119.70
1	XA	435	C	N3-C4-N4	5.25	121.68	118.00
25	YA	1787	A	O4'-C1'-N9	-5.25	104.00	108.20
25	RA	279	C	N3-C2-O2	-5.25	118.22	121.90
25	YA	47	C	C6-N1-C2	-5.25	118.20	120.30
25	YA	1306	C	C5-C6-N1	5.25	123.63	121.00
25	RA	209	C	C6-N1-C2	-5.25	118.20	120.30
25	RA	1458	C	C6-N1-C2	5.25	122.40	120.30
25	RA	2465	C	N1-C2-O2	5.25	122.05	118.90
25	RA	2586	C	C6-N1-C2	-5.25	118.20	120.30
1	XA	747	C	C6-N1-C2	-5.25	118.20	120.30
25	YA	2576	G	N3-C4-N9	5.25	129.15	126.00
25	YA	2591	C	C5-C6-N1	5.25	123.62	121.00
1	QA	1208	C	N1-C2-O2	5.25	122.05	118.90
25	YA	1376	C	N1-C2-O2	5.25	122.05	118.90
25	RA	1445(B)	C	C6-N1-C2	-5.25	118.20	120.30
1	XA	189(E)	C	N3-C2-O2	-5.25	118.23	121.90
25	YA	65	C	N1-C2-O2	5.25	122.05	118.90
25	YA	838	C	C6-N1-C2	-5.25	118.20	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1011	G	C8-N9-C1'	-5.25	120.18	127.00
25	YA	1657	C	N1-C2-O2	5.25	122.05	118.90
25	YA	2440	C	C6-N1-C2	-5.25	118.20	120.30
25	RA	475	U	C2-N1-C1'	5.24	123.99	117.70
1	XA	1267	C	C5-C6-N1	5.24	123.62	121.00
25	YA	1309	G	O5'-P-OP2	-5.24	100.98	105.70
1	QA	673	G	N3-C4-N9	5.24	129.15	126.00
25	RA	688	U	C6-N1-C1'	5.24	128.53	121.20
25	RA	1586	A	O5'-P-OP1	-5.24	100.98	105.70
25	YA	947	G	OP1-P-O3'	-5.24	93.67	105.20
25	YA	1190	G	O5'-P-OP2	-5.24	100.98	105.70
25	YA	1893	C	C6-N1-C2	-5.24	118.20	120.30
25	YA	1996	C	C6-N1-C1'	5.24	127.08	120.80
1	QA	1237	C	C5-C6-N1	5.24	123.62	121.00
1	QA	1359	C	C6-N1-C2	-5.24	118.20	120.30
25	RA	1100	C	N1-C2-O2	5.24	122.04	118.90
1	QA	180	U	C2-N1-C1'	5.24	123.98	117.70
25	YA	570	G	C4-C5-N7	-5.24	108.71	110.80
25	YA	2318	G	N3-C4-N9	5.24	129.14	126.00
25	YA	958	U	N3-C2-O2	-5.23	118.54	122.20
1	QA	14	U	C6-N1-C1'	5.23	128.53	121.20
25	RA	2579	C	C5-C6-N1	5.23	123.62	121.00
38	RS	56	LEU	CA-CB-CG	5.23	127.34	115.30
1	XA	483	C	N3-C4-C5	5.23	123.99	121.90
25	YA	2056	G	O4'-C1'-N9	-5.23	104.01	108.20
25	YA	2282	G	C6-N1-C2	-5.23	121.96	125.10
1	QA	545	C	C6-N1-C2	-5.23	118.21	120.30
25	RA	1817	G	OP2-P-O3'	5.23	116.71	105.20
25	RA	2667	C	N3-C2-O2	-5.23	118.24	121.90
24	XY	30	C	C5-C6-N1	5.23	123.61	121.00
1	XA	1459	C	N1-C2-O2	5.23	122.04	118.90
25	YA	192	C	N1-C2-N3	5.23	122.86	119.20
25	YA	248	G	C8-N9-C4	-5.23	104.31	106.40
25	YA	2874	C	C6-N1-C2	-5.23	118.21	120.30
25	RA	1814	G	C4-N9-C1'	5.23	133.29	126.50
1	QA	226	G	N3-C4-N9	5.23	129.14	126.00
25	RA	1514	U	C2-N1-C1'	-5.23	111.43	117.70
25	YA	1476	C	N1-C2-O2	5.23	122.03	118.90
1	QA	1198	G	C4-N9-C1'	-5.22	119.71	126.50
25	YA	1646	C	C6-N1-C1'	-5.22	114.53	120.80
25	YA	2289	G	O4'-C1'-N9	-5.22	104.02	108.20
1	QA	705	U	N1-C2-O2	5.22	126.45	122.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	957	A	C5-C6-N6	-5.22	119.52	123.70
25	RA	1198	U	N3-C2-O2	-5.22	118.54	122.20
1	XA	307	C	C6-N1-C2	-5.22	118.21	120.30
1	QA	984	C	C6-N1-C1'	5.22	127.06	120.80
25	RA	897	C	C2-N1-C1'	5.22	124.54	118.80
25	RA	1804	C	C5-C6-N1	5.22	123.61	121.00
25	RA	1947	C	C2-N1-C1'	-5.22	113.06	118.80
25	RA	2064	C	C6-N1-C1'	5.22	127.06	120.80
1	QA	634	C	N3-C2-O2	-5.22	118.25	121.90
22	XV	74	C	O5'-P-OP2	-5.22	101.00	105.70
25	YA	1827	C	C5-C6-N1	5.22	123.61	121.00
25	RA	528	A	C8-N9-C1'	-5.22	118.31	127.70
25	RA	54	G	C8-N9-C1'	5.21	133.78	127.00
1	XA	689	C	C5-C6-N1	5.21	123.61	121.00
1	QA	963	G	C6-N1-C2	-5.21	121.97	125.10
22	QV	13	C	C5-C6-N1	5.21	123.61	121.00
25	RA	2697	G	C8-N9-C1'	5.21	133.78	127.00
1	QA	357	G	N3-C2-N2	-5.21	116.25	119.90
25	YA	1945	G	C8-N9-C1'	-5.21	120.23	127.00
1	QA	526	C	N3-C4-N4	5.21	121.65	118.00
25	RA	1289	C	N1-C2-O2	5.21	122.03	118.90
25	RA	2267	A	C2-N3-C4	5.21	113.20	110.60
1	XA	1513	A	C5-C6-N1	5.21	120.30	117.70
22	XV	6	G	N3-C4-N9	5.21	129.12	126.00
25	YA	2840	C	C2-N1-C1'	5.21	124.53	118.80
1	QA	673	G	C6-C5-N7	-5.20	127.28	130.40
25	YA	2689	U	C2-N1-C1'	5.20	123.94	117.70
25	RA	837	C	C5-C6-N1	5.20	123.60	121.00
1	XA	114	U	C2-N1-C1'	5.20	123.94	117.70
25	YA	2163	C	C5-C6-N1	5.20	123.60	121.00
22	QV	48	C	C6-N1-C2	5.20	122.38	120.30
25	RA	1701	A	O5'-P-OP1	-5.20	101.02	105.70
25	RA	1806	C	C6-N1-C1'	5.20	127.04	120.80
22	XV	75	C	C6-N1-C2	-5.20	118.22	120.30
1	QA	883	C	N1-C2-O2	5.20	122.02	118.90
1	XA	673	G	C6-C5-N7	-5.20	127.28	130.40
22	XV	56	C	C6-N1-C2	-5.20	118.22	120.30
25	YA	413	C	C6-N1-C2	-5.20	118.22	120.30
25	YA	871	U	C6-N1-C1'	5.20	128.48	121.20
25	YA	1951	U	O5'-P-OP2	-5.20	101.02	105.70
1	QA	1276	G	C6-C5-N7	-5.20	127.28	130.40
25	RA	797	C	C6-N1-C2	-5.20	118.22	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1648	C	O5'-P-OP1	5.20	116.93	110.70
25	YA	1670	C	C6-N1-C1'	5.20	127.03	120.80
22	XV	50	U	N1-C2-O2	5.19	126.44	122.80
25	RA	2144	U	C5-C6-N1	5.19	125.30	122.70
1	XA	1147	C	C6-N1-C2	-5.19	118.22	120.30
25	YA	454	A	O5'-P-OP2	-5.19	101.03	105.70
25	YA	2338	G	O5'-P-OP2	-5.19	101.03	105.70
25	YA	2178	C	N3-C2-O2	-5.19	118.27	121.90
1	QA	397	A	N3-C4-N9	5.19	131.55	127.40
25	YA	1097	U	C2-N1-C1'	5.19	123.93	117.70
26	YB	2	C	C5-C6-N1	5.19	123.59	121.00
25	RA	2506	U	N3-C2-O2	-5.19	118.57	122.20
1	XA	833	U	N3-C2-O2	-5.19	118.57	122.20
25	RA	1833	U	N3-C2-O2	-5.19	118.57	122.20
25	YA	1097	U	N3-C2-O2	-5.19	118.57	122.20
25	RA	1364	G	O5'-P-OP1	5.18	116.92	110.70
25	RA	2086	U	C2-N1-C1'	-5.18	111.48	117.70
25	YA	2163	C	N3-C2-O2	-5.18	118.27	121.90
25	RA	659	C	C6-N1-C1'	5.18	127.02	120.80
25	RA	1323	U	C5-C6-N1	5.18	125.29	122.70
25	RA	1411	C	C2-N1-C1'	5.18	124.50	118.80
25	YA	2467	C	C6-N1-C1'	5.18	127.02	120.80
1	QA	1054	C	C6-N1-C1'	-5.18	114.58	120.80
26	RB	27	C	C5-C6-N1	5.18	123.59	121.00
25	YA	253	C	C5-C6-N1	5.18	123.59	121.00
25	YA	234	C	N3-C2-O2	-5.18	118.28	121.90
50	Y4	9	LEU	CA-CB-CG	5.18	127.20	115.30
25	RA	2061	G	C8-N9-C1'	-5.17	120.27	127.00
22	XV	50	U	N3-C2-O2	-5.17	118.58	122.20
25	RA	1157	G	N9-C4-C5	-5.17	103.33	105.40
25	RA	2260	C	C5-C6-N1	5.17	123.59	121.00
25	YA	1829	A	N7-C8-N9	5.17	116.39	113.80
25	RA	850	C	C6-N1-C2	-5.17	118.23	120.30
1	XA	336	C	C2-N1-C1'	-5.17	113.11	118.80
25	YA	828	U	C6-N1-C1'	5.17	128.44	121.20
25	YA	949	C	N3-C4-N4	5.17	121.62	118.00
25	YA	1420	U	P-O3'-C3'	5.17	125.90	119.70
25	YA	2126	A	P-O3'-C3'	5.17	125.90	119.70
25	YA	2667	C	N3-C2-O2	-5.17	118.28	121.90
22	QV	69	C	N1-C2-O2	5.16	122.00	118.90
25	RA	1420	U	P-O3'-C3'	5.16	125.89	119.70
25	RA	1539	G	N3-C4-N9	5.16	129.10	126.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	XY	29	U	C2-N1-C1'	5.16	123.90	117.70
25	YA	1957	C	N1-C2-O2	5.16	122.00	118.90
25	YA	2085	C	C6-N1-C1'	5.16	127.00	120.80
25	YA	2248	C	N3-C2-O2	-5.16	118.28	121.90
1	QA	977	A	N7-C8-N9	5.16	116.38	113.80
1	QA	9	G	O5'-P-OP2	-5.16	101.06	105.70
25	RA	1557	C	N3-C2-O2	-5.16	118.29	121.90
25	RA	2254	C	N3-C2-O2	-5.16	118.29	121.90
25	YA	1493	C	N3-C2-O2	-5.16	118.29	121.90
25	RA	2295	C	C5-C6-N1	5.16	123.58	121.00
25	YA	2550	G	C6-C5-N7	-5.16	127.31	130.40
1	QA	525	C	C2-N1-C1'	5.16	124.47	118.80
1	QA	1459	C	N3-C2-O2	-5.16	118.29	121.90
25	RA	707	G	C4-N9-C1'	5.16	133.20	126.50
25	YA	67	U	C6-N1-C2	-5.16	117.91	121.00
25	YA	1337	G	C8-N9-C1'	5.16	133.70	127.00
25	YA	1398	C	N1-C2-O2	5.16	121.99	118.90
25	RA	1934	C	N3-C2-O2	-5.15	118.29	121.90
6	XF	21	LEU	CA-CB-CG	5.15	127.15	115.30
25	YA	2249	U	O5'-P-OP2	5.15	116.88	110.70
25	RA	1257	C	C5-C6-N1	5.15	123.58	121.00
1	QA	1284	C	N1-C2-O2	5.15	121.99	118.90
25	RA	540	C	C6-N1-C2	-5.15	118.24	120.30
1	XA	745	C	C6-N1-C2	-5.15	118.24	120.30
25	YA	2030	A	O5'-P-OP2	-5.15	101.06	105.70
25	YA	2064	C	C6-N1-C2	-5.15	118.24	120.30
25	YA	435	C	N3-C2-O2	-5.15	118.30	121.90
25	YA	1276	A	O5'-P-OP1	5.15	116.88	110.70
25	YA	1387	C	C6-N1-C2	-5.15	118.24	120.30
25	YA	1672	C	C6-N1-C1'	5.15	126.98	120.80
25	YA	1892	C	C6-N1-C2	-5.15	118.24	120.30
25	RA	928	G	N7-C8-N9	5.15	115.67	113.10
25	RA	2744	G	C6-C5-N7	-5.15	127.31	130.40
25	RA	2752	C	C6-N1-C2	-5.14	118.24	120.30
1	XA	970	C	C6-N1-C2	-5.14	118.24	120.30
26	RB	80	U	N3-C2-O2	-5.14	118.60	122.20
25	YA	2329	G	C6-C5-N7	-5.14	127.31	130.40
22	QV	34	C	C5-C6-N1	5.14	123.57	121.00
25	RA	2129	C	C5-C6-N1	5.14	123.57	121.00
25	YA	18	C	C6-N1-C2	-5.14	118.24	120.30
1	QA	993	G	C6-C5-N7	-5.14	127.32	130.40
25	YA	1132	A	C8-N9-C1'	5.14	136.95	127.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	455	C	C6-N1-C2	-5.14	118.25	120.30
25	RA	435	C	N3-C2-O2	-5.14	118.31	121.90
1	XA	367	U	OP2-P-O3'	-5.14	93.90	105.20
1	XA	442	C	C5-C6-N1	5.14	123.57	121.00
25	RA	956	G	C4-N9-C1'	5.13	133.17	126.50
1	XA	1260	C	N3-C2-O2	-5.13	118.31	121.90
25	RA	384	U	N1-C2-O2	5.13	126.39	122.80
1	QA	600	C	N3-C2-O2	-5.13	118.31	121.90
1	QA	737	A	C8-N9-C4	-5.13	103.75	105.80
1	QA	1237	C	C6-N1-C2	-5.13	118.25	120.30
25	RA	1788	C	OP1-P-O3'	5.13	116.49	105.20
25	YA	1882	C	C5-C6-N1	5.13	123.57	121.00
25	RA	272(T)	C	N3-C2-O2	-5.13	118.31	121.90
25	YA	2282	G	C5-C6-N1	5.13	114.06	111.50
25	YA	2363	C	N3-C2-O2	-5.13	118.31	121.90
25	YA	2739	U	C6-N1-C1'	-5.13	114.02	121.20
1	QA	54	C	N3-C2-O2	-5.13	118.31	121.90
25	YA	2086	U	C2-N1-C1'	-5.13	111.55	117.70
25	RA	2295	C	N1-C2-O2	5.13	121.98	118.90
25	YA	2504	U	C5-C6-N1	5.13	125.26	122.70
25	YA	2678	C	C6-N1-C2	-5.13	118.25	120.30
25	RA	1827	C	N1-C2-O2	5.12	121.97	118.90
1	QA	357	G	C6-N1-C2	-5.12	122.03	125.10
25	RA	1692	U	C2-N1-C1'	-5.12	111.55	117.70
22	XV	6	G	N9-C4-C5	-5.12	103.35	105.40
26	RB	45	A	N7-C8-N9	5.12	116.36	113.80
25	YA	784	A	O5'-P-OP2	-5.12	101.09	105.70
25	YA	2786	U	C6-N1-C2	-5.12	117.93	121.00
25	YA	2889	C	C5-C6-N1	5.12	123.56	121.00
1	QA	252	U	C2-N1-C1'	5.12	123.84	117.70
1	QA	395	C	N1-C2-O2	5.12	121.97	118.90
1	QA	979	C	C5-C6-N1	5.12	123.56	121.00
1	XA	132	C	N1-C2-O2	5.12	121.97	118.90
25	YA	1092	C	C6-N1-C2	-5.12	118.25	120.30
25	YA	1062	G	N3-C4-N9	5.12	129.07	126.00
25	YA	1894	C	C6-N1-C2	-5.12	118.25	120.30
25	YA	2009	G	C5-C6-O6	-5.12	125.53	128.60
25	YA	2275	C	C2-N1-C1'	5.12	124.43	118.80
25	RA	2544	G	C6-C5-N7	-5.12	127.33	130.40
22	XV	5	G	C4-N9-C1'	5.12	133.15	126.50
25	YA	2591	C	C6-N1-C2	-5.12	118.25	120.30
25	YA	11	G	N3-C4-C5	-5.12	126.04	128.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1187	G	O5'-P-OP1	5.12	116.84	110.70
1	XA	675	A	C8-N9-C4	-5.11	103.75	105.80
25	YA	687	C	C6-N1-C2	-5.11	118.25	120.30
25	YA	1188	U	C5-C6-N1	5.11	125.26	122.70
25	YA	2062	A	OP2-P-O3'	5.11	116.45	105.20
25	YA	2277	G	C6-N1-C2	-5.11	122.03	125.10
25	RA	1640	C	N3-C2-O2	-5.11	118.32	121.90
25	RA	2689	U	N1-C2-O2	5.11	126.38	122.80
25	YA	1052	C	N3-C2-O2	-5.11	118.32	121.90
1	XA	1225	A	C8-N9-C4	-5.11	103.75	105.80
25	YA	1399	C	C6-N1-C2	-5.11	118.26	120.30
25	YA	1945	G	C4-N9-C1'	5.11	133.14	126.50
25	YA	2576	G	O5'-P-OP2	-5.11	101.10	105.70
1	QA	939	G	C5-C6-N1	5.11	114.05	111.50
25	YA	206	U	N1-C2-O2	5.11	126.38	122.80
25	YA	886	C	N1-C2-O2	5.11	121.97	118.90
25	YA	2461	C	N1-C2-O2	5.11	121.97	118.90
1	XA	743	U	C2-N1-C1'	-5.11	111.57	117.70
25	YA	248	G	OP1-P-O3'	5.11	116.43	105.20
25	YA	378	C	C6-N1-C2	-5.11	118.26	120.30
25	YA	1030	G	C8-N9-C1'	5.11	133.64	127.00
25	YA	1140	C	N1-C2-O2	5.11	121.96	118.90
25	RA	1323	U	N3-C4-O4	5.10	122.97	119.40
25	YA	2075	U	N3-C4-O4	5.10	122.97	119.40
25	YA	2091	U	C2-N1-C1'	-5.10	111.58	117.70
25	YA	2784	C	N3-C2-O2	-5.10	118.33	121.90
25	RA	774	A	C2-N3-C4	5.10	113.15	110.60
25	YA	105	C	C5-C6-N1	5.10	123.55	121.00
25	YA	773	U	O5'-P-OP2	-5.10	101.11	105.70
1	XA	442	C	C6-N1-C2	-5.10	118.26	120.30
1	QA	933	G	C6-C5-N7	-5.10	127.34	130.40
22	XV	71	C	C6-N1-C2	-5.10	118.26	120.30
25	RA	1318	C	C6-N1-C2	-5.10	118.26	120.30
25	RA	1632	A	C4-C5-N7	5.10	113.25	110.70
1	QA	180	U	C5-C6-N1	5.09	125.25	122.70
1	QA	498	U	N3-C2-O2	-5.09	118.63	122.20
25	RA	569	U	O5'-P-OP2	-5.09	101.11	105.70
25	RA	1926	U	C2-N1-C1'	-5.09	111.59	117.70
25	YA	1011	G	C4-N9-C1'	5.09	133.12	126.50
22	QV	56	C	N3-C2-O2	-5.09	118.33	121.90
25	YA	1828	G	C8-N9-C1'	5.09	133.62	127.00
25	RA	1333	C	N1-C2-O2	5.09	121.95	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2043	C	N1-C2-O2	5.09	121.95	118.90
25	YA	392	C	C5-C6-N1	5.09	123.55	121.00
25	YA	2601	C	C5-C6-N1	5.09	123.55	121.00
25	RA	957	A	N9-C4-C5	-5.09	103.76	105.80
25	RA	1481	U	C2-N1-C1'	-5.09	111.59	117.70
25	RA	2649	U	C5-C6-N1	5.09	125.24	122.70
25	YA	315	G	N3-C4-C5	-5.09	126.06	128.60
25	YA	333	G	C6-C5-N7	-5.09	127.35	130.40
25	YA	838	C	N1-C2-O2	5.09	121.95	118.90
25	YA	1330	C	N1-C2-O2	5.09	121.95	118.90
22	QV	75	C	C2-N1-C1'	-5.09	113.21	118.80
25	YA	535	C	C6-N1-C1'	5.09	126.90	120.80
25	YA	2587	A	C8-N9-C4	-5.09	103.77	105.80
25	RA	1743	C	C6-N1-C2	-5.08	118.27	120.30
25	YA	1633	G	N7-C8-N9	5.08	115.64	113.10
25	RA	445	C	C6-N1-C2	-5.08	118.27	120.30
25	RA	2441	C	OP1-P-OP2	-5.08	111.97	119.60
1	XA	589	C	C5-C6-N1	5.08	123.54	121.00
1	XA	989	C	N3-C2-O2	-5.08	118.34	121.90
1	XA	1264	C	C6-N1-C2	-5.08	118.27	120.30
25	YA	816	C	C2-N1-C1'	-5.08	113.21	118.80
25	YA	1440	G	C4-N9-C1'	-5.08	119.89	126.50
1	XA	911	U	C6-N1-C1'	5.08	128.31	121.20
25	YA	445	C	C5-C6-N1	5.08	123.54	121.00
25	YA	556	G	C6-C5-N7	-5.08	127.35	130.40
25	YA	1201	C	C6-N1-C2	-5.08	118.27	120.30
25	YA	1691	C	C6-N1-C2	-5.08	118.27	120.30
26	RB	23	G	N3-C2-N2	-5.08	116.34	119.90
25	YA	1943	U	OP1-P-O3'	5.08	116.37	105.20
25	YA	2515	C	N3-C2-O2	-5.08	118.34	121.90
1	QA	481	G	C8-N9-C1'	-5.08	120.40	127.00
1	XA	697	U	N1-C2-O2	5.08	126.35	122.80
25	RA	1104	C	N1-C2-O2	5.08	121.95	118.90
25	RA	1669	A	OP1-P-O3'	5.08	116.37	105.20
1	XA	436	C	C6-N1-C2	-5.08	118.27	120.30
1	XA	437	U	N3-C2-O2	-5.08	118.65	122.20
25	YA	2387	U	C2-N1-C1'	-5.08	111.61	117.70
1	QA	354	G	C6-C5-N7	-5.07	127.36	130.40
25	RA	510	C	O5'-P-OP2	-5.07	101.13	105.70
1	XA	748	C	P-O3'-C3'	5.07	125.79	119.70
1	XA	979	C	C2-N1-C1'	5.07	124.38	118.80
25	YA	587	C	O4'-C1'-N1	-5.07	104.14	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	404	U	N3-C2-O2	-5.07	118.65	122.20
1	QA	433	C	N3-C2-O2	-5.07	118.35	121.90
25	RA	2139	C	N1-C2-O2	5.07	121.94	118.90
25	YA	1132	A	O4'-C1'-N9	-5.07	104.14	108.20
1	QA	950	U	C6-N1-C2	-5.07	117.96	121.00
25	RA	1988	C	N1-C2-O2	5.07	121.94	118.90
25	RA	2857	G	C8-N9-C1'	5.07	133.59	127.00
25	YA	1784	A	C4-N9-C1'	5.07	135.42	126.30
25	RA	114	U	C5-C6-N1	5.07	125.23	122.70
1	QA	266	G	N3-C4-C5	-5.07	126.07	128.60
25	RA	2889	C	N1-C2-O2	5.07	121.94	118.90
1	XA	267	C	C6-N1-C2	-5.07	118.27	120.30
25	YA	761	A	C5-N7-C8	-5.07	101.37	103.90
25	YA	986	C	C6-N1-C2	-5.07	118.27	120.30
25	YA	1459	G	N3-C4-C5	-5.07	126.07	128.60
25	YA	2068	U	N1-C2-O2	5.07	126.35	122.80
25	RA	650	C	C6-N1-C2	-5.06	118.27	120.30
25	RA	1975	G	C4-N9-C1'	5.06	133.08	126.50
25	YA	1102	C	C6-N1-C2	-5.06	118.28	120.30
25	RA	884	C	N3-C2-O2	-5.06	118.36	121.90
25	YA	749	C	C6-N1-C2	-5.06	118.28	120.30
25	YA	1772	G	C8-N9-C1'	5.06	133.58	127.00
25	YA	1992	G	O4'-C1'-N9	-5.06	104.15	108.20
25	YA	2840	C	N1-C2-O2	5.06	121.94	118.90
25	RA	871	U	O4'-C1'-N1	5.06	112.25	108.20
25	RA	1481	U	C6-N1-C1'	5.06	128.28	121.20
25	RA	2556	C	C6-N1-C2	-5.06	118.28	120.30
1	XA	809	G	N3-C2-N2	-5.06	116.36	119.90
25	YA	2343	C	N1-C2-O2	5.06	121.94	118.90
1	QA	1397	C	C2-N1-C1'	5.06	124.36	118.80
25	YA	1638	C	N3-C2-O2	-5.06	118.36	121.90
25	YA	2462	U	C2-N1-C1'	-5.06	111.63	117.70
25	RA	2697	G	C4-N9-C1'	-5.05	119.93	126.50
1	XA	1118	C	C6-N1-C1'	5.05	126.86	120.80
25	YA	336	C	C6-N1-C2	-5.05	118.28	120.30
25	RA	2885	C	N1-C2-O2	5.05	121.93	118.90
1	XA	643	C	N3-C2-O2	-5.05	118.36	121.90
25	RA	669	G	N3-C4-C5	-5.05	126.08	128.60
1	XA	754	C	C2-N1-C1'	5.05	124.36	118.80
25	YA	684	G	O5'-P-OP2	-5.05	101.15	105.70
1	QA	557	G	N3-C4-N9	5.05	129.03	126.00
25	RA	485	C	C6-N1-C1'	5.05	126.86	120.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1446	C	N1-C2-O2	5.05	121.93	118.90
25	RA	1678	G	N3-C4-N9	5.05	129.03	126.00
25	YA	523	C	N1-C2-O2	5.05	121.93	118.90
25	YA	1101	U	N1-C2-O2	5.05	126.33	122.80
1	XA	442	C	C6-N1-C1'	-5.05	114.74	120.80
1	QA	633	G	C4-N9-C1'	5.05	133.06	126.50
25	RA	336	C	N1-C2-O2	5.05	121.93	118.90
26	RB	27	C	C2-N1-C1'	5.05	124.35	118.80
25	RA	2857	G	O5'-P-OP2	-5.04	101.16	105.70
25	YA	1501	C	N1-C2-O2	5.04	121.93	118.90
25	RA	312	G	C8-N9-C1'	-5.04	120.44	127.00
1	XA	347	G	C6-C5-N7	-5.04	127.37	130.40
1	QA	442	C	C5-C6-N1	5.04	123.52	121.00
25	RA	34	C	N1-C2-O2	5.04	121.92	118.90
25	RA	693	C	C6-N1-C2	-5.04	118.28	120.30
25	RA	1102	C	C5-C6-N1	5.04	123.52	121.00
25	RA	2766	G	N3-C4-C5	-5.04	126.08	128.60
1	XA	778	G	OP2-P-O3'	5.04	116.29	105.20
1	QA	1030(C)	C	C6-N1-C2	-5.04	118.28	120.30
25	RA	2126	A	P-O3'-C3'	5.04	125.75	119.70
25	YA	272(F)	C	C6-N1-C1'	5.04	126.85	120.80
1	QA	940	C	C6-N1-C2	-5.04	118.28	120.30
3	QC	101	LEU	CA-CB-CG	5.04	126.89	115.30
25	RA	1788	C	C6-N1-C2	-5.04	118.28	120.30
25	YA	1293	C	C5-C6-N1	5.04	123.52	121.00
25	RA	1333	C	C6-N1-C2	-5.04	118.29	120.30
25	RA	2247	A	C8-N9-C4	-5.04	103.78	105.80
25	YA	254	G	C8-N9-C4	-5.04	104.39	106.40
25	YA	2808	U	N1-C2-O2	5.04	126.33	122.80
22	QV	34	C	C6-N1-C2	-5.03	118.29	120.30
25	RA	546	C	N3-C2-O2	-5.03	118.38	121.90
25	RA	2271	G	C6-C5-N7	-5.03	127.38	130.40
25	YA	1253	A	O4'-C1'-N9	-5.03	104.17	108.20
25	YA	2259	G	OP2-P-O3'	5.03	116.27	105.20
25	YA	2260	C	C5-C6-N1	5.03	123.52	121.00
25	YA	2260	C	N1-C2-O2	5.03	121.92	118.90
1	XA	575	G	N3-C4-N9	-5.03	122.98	126.00
25	RA	361	G	C6-N1-C2	-5.03	122.08	125.10
25	RA	2128	C	N1-C2-O2	5.03	121.92	118.90
25	YA	220	G	C8-N9-C4	-5.03	104.39	106.40
25	YA	686	G	OP1-P-OP2	5.03	127.15	119.60
25	YA	1190	G	C8-N9-C1'	5.03	133.54	127.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	ZA	1	C	C6-N1-C1'	-5.03	114.76	120.80
25	RA	2506	U	C2-N1-C1'	5.03	123.73	117.70
25	YA	2086	U	C6-N1-C1'	5.03	128.24	121.20
1	QA	18	C	C5-C6-N1	5.03	123.51	121.00
1	QA	337	C	C5-C6-N1	5.03	123.51	121.00
25	RA	1233	C	N3-C2-O2	-5.03	118.38	121.90
25	YA	836	G	C8-N9-C4	-5.03	104.39	106.40
1	QA	1030(C)	C	N3-C2-O2	-5.03	118.38	121.90
25	RA	784	A	OP1-P-O3'	5.03	116.26	105.20
25	RA	2153	G	N3-C2-N2	5.03	123.42	119.90
1	XA	1510	U	N3-C2-O2	-5.03	118.68	122.20
25	YA	1633	G	OP2-P-O3'	5.03	116.26	105.20
1	QA	1197	G	O5'-P-OP1	-5.02	101.18	105.70
25	YA	272(G)	C	C6-N1-C2	-5.02	118.29	120.30
25	YA	1822	G	C4-N9-C1'	-5.02	119.97	126.50
1	QA	1086	U	N3-C2-O2	-5.02	118.68	122.20
25	RA	2153	G	C4-C5-C6	5.02	121.81	118.80
25	RA	2874	C	C6-N1-C1'	5.02	126.83	120.80
1	XA	993	G	N3-C4-C5	-5.02	126.09	128.60
25	YA	783	A	N3-C4-N9	5.02	131.42	127.40
25	YA	833	U	C5-C6-N1	5.02	125.21	122.70
25	YA	2267	A	N1-C2-N3	-5.02	126.79	129.30
1	XA	1263	C	N1-C2-O2	5.02	121.91	118.90
1	XA	911	U	C2-N1-C1'	-5.02	111.68	117.70
25	YA	413	C	C5-C6-N1	5.02	123.51	121.00
25	YA	2443	C	N1-C2-O2	5.02	121.91	118.90
1	QA	1369	C	N3-C2-O2	-5.02	118.39	121.90
25	RA	679	C	C6-N1-C2	-5.02	118.29	120.30
25	YA	1829	A	C8-N9-C4	-5.02	103.79	105.80
25	RA	2205	C	C6-N1-C1'	5.02	126.82	120.80
25	RA	2546	U	C2-N1-C1'	-5.02	111.68	117.70
25	YA	802	A	OP2-P-O3'	5.02	116.23	105.20
1	XA	356	A	C5-C6-N1	5.01	120.21	117.70
25	YA	1038	C	C5-C6-N1	5.01	123.51	121.00
25	YA	2099	U	N3-C2-O2	-5.01	118.69	122.20
1	QA	737	A	N7-C8-N9	5.01	116.31	113.80
1	XA	1109	C	N3-C2-O2	-5.01	118.39	121.90
25	RA	1241	A	OP1-P-OP2	-5.01	112.08	119.60
25	RA	1653	G	C4-N9-C1'	5.01	133.01	126.50
25	RA	1108	U	C5-C6-N1	5.01	125.20	122.70
25	YA	814	C	C2-N1-C1'	5.01	124.31	118.80
25	YA	1828	G	C8-N9-C4	-5.01	104.40	106.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2318	G	N7-C8-N9	5.01	115.61	113.10
25	YA	1603	A	OP1-P-OP2	-5.00	112.09	119.60
25	YA	2207	G	C6-C5-N7	-5.00	127.40	130.40
1	QA	985	C	C6-N1-C2	-5.00	118.30	120.30
25	RA	1222	C	C6-N1-C2	-5.00	118.30	120.30
25	YA	1082	U	C6-N1-C2	-5.00	118.00	121.00
1	XA	505	G	N3-C4-N9	5.00	129.00	126.00
1	XA	1078	U	N3-C2-O2	-5.00	118.70	122.20

There are no chirality outliers.

All (858) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	QB	101	MET	Peptide
2	QB	104	ASN	Peptide
2	QB	121	LEU	Peptide
2	QB	124	SER	Peptide
2	QB	13	ALA	Peptide
2	QB	15	VAL	Peptide
2	QB	156	LYS	Peptide
2	QB	157	ARG	Peptide
2	QB	17	PHE	Peptide
2	QB	186	ALA	Peptide
2	QB	19	HIS	Peptide
2	QB	192	SER	Peptide
2	QB	200	ILE	Peptide
2	QB	206	ASP	Peptide
2	QB	207	ALA	Peptide
2	QB	21	ARG	Peptide
2	QB	227	GLY	Peptide
2	QB	230	VAL	Peptide
2	QB	232	PRO	Peptide
2	QB	233	SER	Peptide
2	QB	234	PRO	Peptide
2	QB	239	VAL	Peptide
2	QB	24	TRP	Peptide
2	QB	28	PHE	Peptide
2	QB	34	ALA	Peptide
2	QB	35	GLU	Peptide
2	QB	38	GLY	Peptide
2	QB	71	VAL	Peptide
2	QB	95	GLN	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
2	QB	96	ARG	Peptide
3	QC	107	GLN	Peptide
3	QC	11	ARG	Peptide
3	QC	124	ILE	Peptide
3	QC	126	ARG	Peptide
3	QC	144	SER	Peptide
3	QC	147	LYS	Peptide
3	QC	166	GLU	Peptide
3	QC	2	GLY	Peptide
3	QC	25	GLY	Peptide
3	QC	3	ASN	Peptide
3	QC	41	GLY	Peptide
3	QC	44	GLU	Peptide
3	QC	48	TYR	Peptide
3	QC	51	GLY	Peptide
3	QC	59	ARG	Peptide
3	QC	6	HIS	Peptide
3	QC	61	ALA	Peptide
3	QC	62	ASP	Peptide
3	QC	75	VAL	Peptide
3	QC	78	GLY	Peptide
3	QC	79	ARG	Peptide
3	QC	83	ARG	Peptide
3	QC	86	VAL	Peptide
3	QC	94	LEU	Peptide
4	QD	153	ARG	Peptide
4	QD	154	ASN	Peptide
4	QD	165	MET	Peptide
4	QD	171	GLY	Peptide
4	QD	175	SER	Peptide
4	QD	205	GLU	Peptide
4	QD	49	ARG	Peptide
4	QD	50	ARG	Peptide
4	QD	6	GLY	Peptide
4	QD	66	ARG	Peptide
4	QD	69	GLY	Peptide
4	QD	81	GLU	Peptide
4	QD	82	ALA	Peptide
4	QD	83	SER	Peptide
4	QD	84	LYS	Peptide
4	QD	87	GLY	Peptide
4	QD	88	VAL	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
4	QD	90	GLY	Peptide
5	QE	103	GLY	Peptide
5	QE	11	ILE	Peptide
5	QE	116	THR	Peptide
5	QE	126	ARG	Peptide
5	QE	137	GLU	Peptide
5	QE	17	ALA	Peptide
5	QE	36	ASP	Peptide
5	QE	48	ALA	Peptide
5	QE	49	PRO	Peptide
5	QE	8	GLU	Peptide
5	QE	83	GLU	Peptide
5	QE	93	PRO	Peptide
5	QE	97	GLY	Peptide
6	QF	36	ARG	Peptide
6	QF	71	ARG	Peptide
6	QF	86	ARG	Peptide
6	QF	87	ARG	Peptide
6	QF	98	LEU	Peptide
6	QF	99	ALA	Peptide
7	QG	113	GLU	Peptide
7	QG	131	LYS	Peptide
7	QG	132	GLY	Peptide
7	QG	151	TYR	Peptide
7	QG	2	ALA	Peptide
7	QG	37	ASN	Peptide
7	QG	55	GLY	Peptide
7	QG	7	ALA	Peptide
7	QG	97	GLN	Peptide
7	QG	99	LEU	Peptide
8	QH	115	SER	Peptide
8	QH	118	VAL	Peptide
8	QH	124	ALA	Peptide
8	QH	137	VAL	Peptide
8	QH	2	LEU	Peptide
8	QH	27	PRO	Peptide
8	QH	28	ALA	Peptide
8	QH	42	GLU	Peptide
8	QH	71	GLY	Peptide
8	QH	76	PRO	Peptide
8	QH	78	GLN	Peptide
8	QH	81	HIS	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
8	QH	91	ARG	Peptide
8	QH	96	GLY	Peptide
9	QI	102	LEU	Peptide
9	QI	110	GLU	Peptide
9	QI	118	LYS	Peptide
9	QI	119	ALA	Peptide
9	QI	123	PRO	Peptide
9	QI	124	GLN	Peptide
9	QI	125	TYR	Peptide
9	QI	126	SER	Peptide
9	QI	16	ARG	Peptide
9	QI	2	GLU	Peptide
9	QI	24	GLY	Peptide
9	QI	30	GLY	Peptide
9	QI	38	GLN	Peptide
9	QI	39	GLY	Peptide
9	QI	68	GLY	Peptide
9	QI	69	GLY	Peptide
9	QI	89	ASN	Peptide
9	QI	91	ASP	Peptide
9	QI	92	TYR	Peptide
9	QI	93	ARG	Peptide
9	QI	98	PRO	Peptide
9	QI	99	LEU	Peptide
10	QJ	100	THR	Peptide
10	QJ	12	ASP	Peptide
10	QJ	14	LYS	Peptide
10	QJ	31	GLY	Peptide
10	QJ	39	PRO	Peptide
10	QJ	85	LEU	Peptide
10	QJ	90	LEU	Peptide
10	QJ	91	PRO	Peptide
10	QJ	92	THR	Peptide
10	QJ	96	ILE	Peptide
11	QK	101	SER	Peptide
11	QK	103	LEU	Peptide
11	QK	104	GLN	Peptide
11	QK	116	HIS	Peptide
11	QK	38	ASN	Peptide
11	QK	87	THR	Peptide
12	QL	104	VAL	Peptide
12	QL	105	TYR	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
12	QL	106	ASP	Peptide
12	QL	107	ALA	Peptide
12	QL	125	PRO	Peptide
12	QL	15	ARG	Peptide
12	QL	46	LYS	Peptide
12	QL	57	LYS	Peptide
12	QL	72	GLY	Peptide
12	QL	82	VAL	Peptide
12	QL	91	LYS	Peptide
12	QL	92	0TD	Peptide
12	QL	99	HIS	Peptide
13	QM	105	THR	Peptide
13	QM	107	ALA	Peptide
13	QM	112	GLY	Peptide
13	QM	3	ARG	Peptide
13	QM	4	ILE	Peptide
13	QM	47	ASP	Peptide
13	QM	6	GLY	Peptide
13	QM	63	THR	Peptide
13	QM	66	LEU	Peptide
13	QM	83	ASP	Peptide
13	QM	97	PRO	Peptide
13	QM	98	VAL	Peptide
14	QN	28	GLY	Peptide
14	QN	54	PRO	Peptide
14	QN	55	GLY	Peptide
14	QN	60	SER	Peptide
14	QN	7	ILE	Peptide
15	QO	10	LYS	Peptide
15	QO	18	PHE	Peptide
15	QO	21	ASP	Peptide
15	QO	86	GLY	Peptide
16	QP	15	PRO	Peptide
16	QP	19	ILE	Peptide
16	QP	25	ARG	Peptide
16	QP	30	GLY	Peptide
16	QP	50	LYS	Peptide
16	QP	51	VAL	Peptide
16	QP	62	VAL	Peptide
16	QP	69	THR	Peptide
16	QP	77	ALA	Peptide
16	QP	81	ARG	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
17	QQ	2	PRO	Peptide
17	QQ	37	LYS	Peptide
17	QQ	43	LEU	Peptide
17	QQ	48	GLU	Peptide
17	QQ	52	LYS	Peptide
17	QQ	66	SER	Peptide
17	QQ	8	GLY	Peptide
18	QR	21	LYS	Peptide
18	QR	22	VAL	Peptide
18	QR	80	PRO	Peptide
19	QS	10	PHE	Peptide
19	QS	23	ASN	Peptide
19	QS	3	ARG	Peptide
19	QS	35	SER	Peptide
19	QS	5	LEU	Peptide
19	QS	53	ASN	Peptide
19	QS	55	LYS	Peptide
19	QS	68	GLY	Peptide
19	QS	81	ARG	Peptide
19	QS	83	HIS	Peptide
20	QT	100	ILE	Peptide
20	QT	101	GLY	Peptide
20	QT	48	LYS	Peptide
20	QT	8	ARG	Peptide
20	QT	9	ASN	Peptide
20	QT	97	ALA	Peptide
21	QU	19	GLY	Peptide
21	QU	2	GLY	Peptide
21	QU	23	PRO	Peptide
46	R0	18	ALA	Peptide
46	R0	31	VAL	Peptide
46	R0	72	ARG	Peptide
46	R0	83	PRO	Peptide
46	R0	9	SER	Peptide
47	R1	10	LYS	Peptide
47	R1	11	ARG	Peptide
47	R1	31	GLY	Peptide
47	R1	7	ILE	Peptide
47	R1	82	LEU	Peptide
48	R2	15	LYS	Peptide
48	R2	57	ILE	Peptide
48	R2	69	ARG	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
49	R3	53	LEU	Peptide
49	R3	59	VAL	Peptide
50	R4	28	LYS	Peptide
50	R4	43	TYR	Peptide
50	R4	45	GLY	Peptide
50	R4	46	GLN	Peptide
50	R4	51	ASP	Peptide
50	R4	57	GLU	Peptide
50	R4	59	PHE	Peptide
50	R4	60	GLN	Peptide
50	R4	62	ARG	Peptide
50	R4	63	TYR	Peptide
51	R5	24	ALA	Peptide
51	R5	5	PRO	Peptide
52	R6	11	LEU	Peptide
52	R6	25	LYS	Peptide
52	R6	35	GLU	Peptide
52	R6	43	CYS	Peptide
52	R6	52	VAL	Peptide
53	R7	25	PRO	Peptide
53	R7	3	ARG	Peptide
53	R7	38	GLY	Peptide
53	R7	46	VAL	Peptide
54	R8	51	ALA	Peptide
55	R9	1	MET	Peptide
55	R9	10	ILE	Peptide
55	R9	21	GLY	Peptide
55	R9	4	ARG	Peptide
27	RD	100	GLY	Peptide
27	RD	115	GLN	Peptide
27	RD	126	GLN	Peptide
27	RD	152	GLY	Peptide
27	RD	191	ALA	Peptide
27	RD	192	THR	Peptide
27	RD	2	ALA	Peptide
27	RD	227	ASN	Peptide
27	RD	233	HIS	Peptide
27	RD	238	GLY	Peptide
27	RD	240	ALA	Peptide
27	RD	246	PRO	Peptide
27	RD	248	SER	Peptide
27	RD	255	LYS	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
27	RD	26	LYS	Peptide
27	RD	71	ASP	Peptide
27	RD	9	TYR	Peptide
28	RE	123	ALA	Peptide
28	RE	125	GLY	Peptide
28	RE	139	GLY	Peptide
28	RE	14	ILE	Peptide
28	RE	142	GLY	Peptide
28	RE	146	THR	Peptide
28	RE	147	PRO	Peptide
28	RE	161	GLY	Peptide
28	RE	186	GLY	Peptide
28	RE	23	VAL	Peptide
28	RE	29	GLY	Peptide
28	RE	53	PRO	Peptide
28	RE	56	PRO	Peptide
28	RE	76	ARG	Peptide
29	RF	126	VAL	Peptide
29	RF	128	ALA	Peptide
29	RF	129	PHE	Peptide
29	RF	130	ALA	Peptide
29	RF	150	GLY	Peptide
29	RF	167	ALA	Peptide
29	RF	173	VAL	Peptide
29	RF	180	GLY	Peptide
29	RF	182	ASN	Peptide
29	RF	29	ASN	Peptide
29	RF	6	VAL	Peptide
29	RF	68	LYS	Peptide
29	RF	80	ALA	Peptide
29	RF	83	PHE	Peptide
29	RF	94	PRO	Peptide
30	RG	109	VAL	Peptide
30	RG	115	ARG	Peptide
30	RG	116	ASP	Peptide
30	RG	118	ARG	Peptide
30	RG	136	ARG	Peptide
30	RG	141	PHE	Peptide
30	RG	143	GLU	Peptide
30	RG	144	ILE	Peptide
30	RG	149	VAL	Peptide
30	RG	151	ALA	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
30	RG	152	LEU	Peptide
30	RG	162	THR	Peptide
30	RG	176	LEU	Peptide
30	RG	180	PHE	Peptide
30	RG	181	ARG	Peptide
30	RG	2	PRO	Peptide
30	RG	39	ILE	Peptide
30	RG	4	ASP	Peptide
30	RG	40	ASN	Peptide
30	RG	52	ILE	Peptide
30	RG	58	GLN	Peptide
30	RG	75	LYS	Peptide
30	RG	76	SER	Peptide
30	RG	78	SER	Peptide
30	RG	80	PHE	Peptide
30	RG	82	LEU	Peptide
30	RG	84	LYS	Peptide
30	RG	88	ILE	Peptide
30	RG	95	ARG	Peptide
31	RH	105	LEU	Peptide
31	RH	117	PRO	Peptide
31	RH	13	LYS	Peptide
31	RH	135	GLY	Peptide
31	RH	14	GLY	Peptide
31	RH	150	ALA	Peptide
31	RH	154	PRO	Peptide
31	RH	159	GLU	Peptide
31	RH	164	TYR	Peptide
31	RH	167	GLU	Peptide
31	RH	168	PRO	Peptide
31	RH	174	GLY	Peptide
31	RH	30	LYS	Peptide
31	RH	33	LEU	Peptide
31	RH	55	PRO	Peptide
31	RH	7	LEU	Peptide
31	RH	8	PRO	Peptide
31	RH	84	SER	Peptide
31	RH	91	GLY	Peptide
31	RH	93	GLY	Peptide
32	RI	103	ARG	Peptide
32	RI	104	GLN	Peptide
32	RI	11	ASN	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
32	RI	116	LEU	Peptide
32	RI	119	PRO	Peptide
32	RI	12	LEU	Peptide
32	RI	121	LYS	Peptide
32	RI	130	TYR	Peptide
32	RI	132	PRO	Peptide
32	RI	135	GLU	Peptide
32	RI	136	VAL	Peptide
32	RI	14	ASP	Peptide
32	RI	142	VAL	Peptide
32	RI	143	SER	Peptide
32	RI	145	VAL	Peptide
32	RI	15	VAL	Peptide
32	RI	16	GLY	Peptide
32	RI	41	GLU	Peptide
32	RI	42	SER	Peptide
32	RI	5	LEU	Peptide
32	RI	83	ALA	Peptide
32	RI	86	THR	Peptide
32	RI	9	LEU	Peptide
32	RI	94	ALA	Peptide
32	RI	96	ASP	Peptide
32	RI	97	ILE	Peptide
33	RN	138	LEU	Peptide
33	RN	18	ALA	Peptide
33	RN	22	THR	Peptide
33	RN	26	LEU	Peptide
33	RN	41	ASP	Peptide
33	RN	46	VAL	Peptide
33	RN	6	PRO	Peptide
34	RO	109	LYS	Peptide
34	RO	27	GLY	Peptide
34	RO	3	GLN	Peptide
34	RO	36	GLY	Peptide
34	RO	41	ALA	Peptide
35	RP	100	LEU	Peptide
35	RP	117	GLU	Peptide
35	RP	118	GLY	Peptide
35	RP	120	ALA	Peptide
35	RP	121	LYS	Peptide
35	RP	133	SER	Peptide
35	RP	134	ALA	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
35	RP	18	ARG	Peptide
35	RP	21	ARG	Peptide
35	RP	22	GLY	Peptide
35	RP	28	GLY	Peptide
35	RP	30	THR	Peptide
35	RP	35	HIS	Peptide
35	RP	37	GLY	Peptide
35	RP	42	SER	Peptide
35	RP	43	GLY	Peptide
35	RP	44	GLY	Peptide
35	RP	54	GLY	Peptide
35	RP	6	LEU	Peptide
35	RP	72	PRO	Peptide
35	RP	76	LYS	Peptide
35	RP	92	GLU	Peptide
35	RP	93	GLY	Peptide
36	RQ	108	GLY	Peptide
36	RQ	15	GLY	Peptide
36	RQ	59	ARG	Peptide
36	RQ	98	LYS	Peptide
37	RR	13	HIS	Peptide
37	RR	2	ARG	Peptide
37	RR	6	SER	Peptide
37	RR	7	GLY	Peptide
37	RR	70	LEU	Peptide
38	RS	5	THR	Peptide
38	RS	60	GLY	Peptide
38	RS	7	TYR	Peptide
38	RS	84	GLN	Peptide
38	RS	95	HIS	Peptide
39	RT	111	ARG	Peptide
39	RT	130	ALA	Peptide
39	RT	27	THR	Peptide
39	RT	35	LYS	Peptide
39	RT	36	GLU	Peptide
40	RU	66	ASN	Peptide
40	RU	73	GLY	Peptide
40	RU	83	LEU	Peptide
40	RU	87	GLY	Peptide
40	RU	97	ASP	Peptide
40	RU	98	LEU	Peptide
41	RV	30	GLY	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
41	RV	33	VAL	Peptide
41	RV	34	GLU	Peptide
41	RV	41	GLY	Peptide
41	RV	49	THR	Peptide
41	RV	50	PRO	Peptide
41	RV	54	GLY	Peptide
41	RV	98	GLU	Peptide
42	RW	111	HIS	Peptide
42	RW	3	ALA	Peptide
43	RX	28	PHE	Peptide
43	RX	3	THR	Peptide
43	RX	86	GLY	Peptide
43	RX	94	GLY	Peptide
44	RY	101	LYS	Peptide
44	RY	106	LEU	Peptide
44	RY	3	VAL	Peptide
44	RY	39	VAL	Peptide
44	RY	52	SER	Peptide
44	RY	83	THR	Peptide
45	RZ	1	MET	Peptide
45	RZ	10	ARG	Peptide
45	RZ	11	GLU	Peptide
45	RZ	12	GLY	Peptide
45	RZ	135	GLU	Peptide
45	RZ	143	GLY	Peptide
45	RZ	145	GLU	Peptide
45	RZ	147	GLY	Peptide
45	RZ	47	VAL	Peptide
45	RZ	50	GLN	Peptide
45	RZ	51	ALA	Peptide
45	RZ	52	SER	Peptide
45	RZ	76	LEU	Peptide
1	XA	88	A	Sidechain
2	XB	130	ARG	Peptide
2	XB	154	LEU	Peptide
2	XB	168	THR	Peptide
2	XB	18	GLY	Peptide
2	XB	19	HIS	Peptide
2	XB	190	THR	Peptide
2	XB	199	TYR	Peptide
2	XB	21	ARG	Peptide
2	XB	211	ILE	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
2	XB	226	ARG	Peptide
2	XB	227	GLY	Peptide
2	XB	23	ARG	Peptide
2	XB	230	VAL	Peptide
2	XB	232	PRO	Peptide
2	XB	233	SER	Peptide
2	XB	234	PRO	Peptide
2	XB	237	ALA	Peptide
2	XB	238	LEU	Peptide
2	XB	239	VAL	Peptide
2	XB	28	PHE	Peptide
2	XB	66	GLY	Peptide
2	XB	74	LYS	Peptide
2	XB	95	GLN	Peptide
3	XC	103	VAL	Peptide
3	XC	11	ARG	Peptide
3	XC	126	ARG	Peptide
3	XC	144	SER	Peptide
3	XC	145	GLY	Peptide
3	XC	147	LYS	Peptide
3	XC	15	THR	Peptide
3	XC	166	GLU	Peptide
3	XC	189	ALA	Peptide
3	XC	2	GLY	Peptide
3	XC	23	TYR	Peptide
3	XC	25	GLY	Peptide
3	XC	3	ASN	Peptide
3	XC	59	ARG	Peptide
3	XC	62	ASP	Peptide
3	XC	9	GLY	Peptide
4	XD	126	ILE	Peptide
4	XD	128	VAL	Peptide
4	XD	165	MET	Peptide
4	XD	3	ARG	Peptide
4	XD	4	TYR	Peptide
4	XD	5	ILE	Peptide
4	XD	69	GLY	Peptide
4	XD	88	VAL	Peptide
5	XE	10	MET	Peptide
5	XE	101	ILE	Peptide
5	XE	11	ILE	Peptide
5	XE	114	GLY	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
5	XE	12	LEU	Peptide
5	XE	120	THR	Peptide
5	XE	121	LYS	Peptide
5	XE	13	ILE	Peptide
5	XE	17	ALA	Peptide
5	XE	18	ARG	Peptide
5	XE	19	MET	Peptide
5	XE	21	ALA	Peptide
5	XE	23	GLY	Peptide
5	XE	95	ALA	Peptide
5	XE	98	THR	Peptide
6	XF	35	ALA	Peptide
6	XF	70	ASP	Peptide
6	XF	93	SER	Peptide
6	XF	98	LEU	Peptide
6	XF	99	ALA	Peptide
7	XG	132	GLY	Peptide
7	XG	152	ALA	Peptide
7	XG	31	MET	Peptide
7	XG	6	ARG	Peptide
7	XG	7	ALA	Peptide
7	XG	79	ARG	Peptide
7	XG	8	GLU	Peptide
7	XG	83	ALA	Peptide
7	XG	84	ASN	Peptide
7	XG	89	MET	Peptide
8	XH	101	PRO	Peptide
8	XH	103	VAL	Peptide
8	XH	137	VAL	Peptide
8	XH	25	ASP	Peptide
8	XH	27	PRO	Peptide
8	XH	48	TYR	Peptide
9	XI	16	ARG	Peptide
9	XI	24	GLY	Peptide
9	XI	42	ARG	Peptide
9	XI	52	ALA	Peptide
9	XI	6	GLY	Peptide
9	XI	69	GLY	Peptide
9	XI	89	ASN	Peptide
9	XI	9	ARG	Peptide
9	XI	92	TYR	Peptide
10	XJ	31	GLY	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
10	XJ	32	ALA	Peptide
10	XJ	41	PRO	Peptide
10	XJ	53	PRO	Peptide
10	XJ	54	PHE	Peptide
10	XJ	55	LYS	Peptide
10	XJ	91	PRO	Peptide
10	XJ	93	GLY	Peptide
11	XK	104	GLN	Peptide
11	XK	106	LYS	Peptide
11	XK	107	SER	Peptide
11	XK	117	ASN	Peptide
11	XK	125	PHE	Peptide
11	XK	47	VAL	Peptide
11	XK	80	VAL	Peptide
11	XK	84	VAL	Peptide
11	XK	85	ARG	Peptide
11	XK	86	GLY	Peptide
11	XK	90	GLY	Peptide
12	XL	104	VAL	Peptide
12	XL	13	LYS	Peptide
12	XL	15	ARG	Peptide
12	XL	34	ARG	Peptide
12	XL	74	GLY	Peptide
12	XL	80	HIS	Peptide
12	XL	86	ARG	Peptide
12	XL	87	GLY	Peptide
12	XL	91	LYS	Peptide
12	XL	99	HIS	Peptide
13	XM	105	THR	Peptide
13	XM	25	ILE	Peptide
13	XM	4	ILE	Peptide
13	XM	41	PRO	Peptide
13	XM	5	ALA	Peptide
13	XM	6	GLY	Peptide
13	XM	66	LEU	Peptide
14	XN	13	THR	Peptide
14	XN	20	ALA	Peptide
14	XN	21	TYR	Peptide
14	XN	22	THR	Peptide
14	XN	27	CYS	Peptide
14	XN	28	GLY	Peptide
15	XO	20	GLY	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
15	XO	22	THR	Peptide
15	XO	88	ARG	Peptide
16	XP	15	PRO	Peptide
16	XP	36	ILE	Peptide
16	XP	52	ASP	Peptide
16	XP	62	VAL	Peptide
17	XQ	19	VAL	Peptide
17	XQ	32	TYR	Peptide
17	XQ	39	SER	Peptide
17	XQ	76	LEU	Peptide
17	XQ	8	GLY	Peptide
18	XR	27	GLY	Peptide
19	XS	25	LYS	Peptide
19	XS	26	GLY	Peptide
19	XS	27	GLU	Peptide
19	XS	28	LYS	Peptide
19	XS	29	ARG	Peptide
19	XS	65	ASN	Peptide
19	XS	66	MET	Peptide
19	XS	8	GLY	Peptide
20	XT	100	ILE	Peptide
20	XT	47	GLY	Peptide
20	XT	48	LYS	Peptide
20	XT	96	GLY	Peptide
21	XU	18	TYR	Peptide
21	XU	2	GLY	Peptide
46	Y0	8	GLY	Peptide
46	Y0	80	HIS	Peptide
46	Y0	83	PRO	Peptide
47	Y1	31	GLY	Peptide
47	Y1	48	LYS	Peptide
47	Y1	7	ILE	Peptide
47	Y1	82	LEU	Peptide
48	Y2	42	GLY	Peptide
49	Y3	10	LYS	Peptide
49	Y3	53	LEU	Peptide
49	Y3	56	VAL	Peptide
49	Y3	59	VAL	Peptide
50	Y4	11	PRO	Peptide
50	Y4	41	PRO	Peptide
50	Y4	46	GLN	Peptide
50	Y4	48	ARG	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
50	Y4	50	VAL	Peptide
50	Y4	52	THR	Peptide
50	Y4	54	GLY	Peptide
50	Y4	55	ARG	Peptide
50	Y4	57	GLU	Peptide
50	Y4	61	ARG	Peptide
50	Y4	62	ARG	Peptide
51	Y5	22	HIS	Peptide
51	Y5	24	ALA	Peptide
51	Y5	37	LYS	Peptide
52	Y6	16	CYS	Peptide
52	Y6	2	ALA	Peptide
52	Y6	39	TYR	Peptide
52	Y6	43	CYS	Peptide
52	Y6	5	VAL	Peptide
53	Y7	47	ARG	Peptide
53	Y7	6	GLN	Peptide
54	Y8	10	ALA	Peptide
54	Y8	27	THR	Peptide
54	Y8	29	LYS	Peptide
54	Y8	51	ALA	Peptide
55	Y9	5	ALA	Peptide
25	YA	277	C	Sidechain
27	YD	112	GLN	Peptide
27	YD	227	ASN	Peptide
27	YD	241	PRO	Peptide
27	YD	246	PRO	Peptide
27	YD	249	PRO	Peptide
27	YD	250	TRP	Peptide
27	YD	251	GLY	Peptide
27	YD	83	GLU	Peptide
27	YD	98	VAL	Peptide
28	YE	1	MET	Peptide
28	YE	125	GLY	Peptide
28	YE	130	GLY	Peptide
28	YE	139	GLY	Peptide
28	YE	146	THR	Peptide
28	YE	161	GLY	Peptide
28	YE	162	ALA	Peptide
28	YE	167	VAL	Peptide
28	YE	18	ASP	Peptide
28	YE	186	GLY	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
28	YE	187	ALA	Peptide
28	YE	23	VAL	Peptide
28	YE	31	CYS	Peptide
28	YE	32	PRO	Peptide
28	YE	71	GLY	Peptide
28	YE	74	PRO	Peptide
29	YF	12	LEU	Peptide
29	YF	128	ALA	Peptide
29	YF	129	PHE	Peptide
29	YF	153	SER	Peptide
29	YF	167	ALA	Peptide
29	YF	176	LEU	Peptide
29	YF	188	ARG	Peptide
29	YF	20	LEU	Peptide
29	YF	21	ALA	Peptide
29	YF	61	GLY	Peptide
29	YF	63	LYS	Peptide
29	YF	75	HIS	Peptide
29	YF	80	ALA	Peptide
29	YF	83	PHE	Peptide
29	YF	87	GLY	Peptide
29	YF	88	VAL	Peptide
29	YF	89	VAL	Peptide
29	YF	91	GLY	Peptide
29	YF	93	LYS	Peptide
30	YG	109	VAL	Peptide
30	YG	114	ILE	Peptide
30	YG	115	ARG	Peptide
30	YG	116	ASP	Peptide
30	YG	117	PHE	Peptide
30	YG	127	GLY	Peptide
30	YG	135	LEU	Peptide
30	YG	136	ARG	Peptide
30	YG	151	ALA	Peptide
30	YG	181	ARG	Peptide
30	YG	2	PRO	Peptide
30	YG	3	LEU	Peptide
30	YG	35	GLU	Peptide
30	YG	4	ASP	Peptide
30	YG	48	GLU	Peptide
30	YG	52	ILE	Peptide
30	YG	82	LEU	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
30	YG	85	GLY	Peptide
30	YG	95	ARG	Peptide
31	YH	111	HIS	Peptide
31	YH	152	ARG	Peptide
31	YH	20	ALA	Peptide
31	YH	3	ARG	Peptide
31	YH	82	GLY	Peptide
32	YI	11	ASN	Peptide
32	YI	114	LEU	Peptide
32	YI	116	LEU	Peptide
32	YI	117	GLU	Peptide
32	YI	118	LYS	Peptide
32	YI	119	PRO	Peptide
32	YI	121	LYS	Peptide
32	YI	122	GLU	Peptide
32	YI	128	LEU	Peptide
32	YI	131	LYS	Peptide
32	YI	132	PRO	Peptide
32	YI	136	VAL	Peptide
32	YI	14	ASP	Peptide
32	YI	142	VAL	Peptide
32	YI	144	VAL	Peptide
32	YI	15	VAL	Peptide
32	YI	82	ARG	Peptide
32	YI	9	LEU	Peptide
32	YI	90	GLY	Peptide
33	YN	138	LEU	Peptide
33	YN	18	ALA	Peptide
33	YN	22	THR	Peptide
33	YN	39	ARG	Peptide
33	YN	6	PRO	Peptide
34	YO	39	ILE	Peptide
35	YP	1	MET	Peptide
35	YP	107	LYS	Peptide
35	YP	11	GLY	Peptide
35	YP	118	GLY	Peptide
35	YP	12	ALA	Peptide
35	YP	141	ALA	Peptide
35	YP	146	VAL	Peptide
35	YP	147	LEU	Peptide
35	YP	21	ARG	Peptide
35	YP	22	GLY	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
35	YP	28	GLY	Peptide
35	YP	30	THR	Peptide
35	YP	35	HIS	Peptide
35	YP	37	GLY	Peptide
35	YP	50	ARG	Peptide
35	YP	6	LEU	Peptide
35	YP	70	GLN	Peptide
35	YP	98	GLU	Peptide
36	YQ	108	GLY	Peptide
36	YQ	19	GLY	Peptide
36	YQ	20	ALA	Peptide
36	YQ	28	ALA	Peptide
37	YR	117	VAL	Peptide
37	YR	2	ARG	Peptide
37	YR	4	LEU	Peptide
37	YR	6	SER	Peptide
37	YR	7	GLY	Peptide
38	YS	111	GLU	Peptide
38	YS	19	LYS	Peptide
38	YS	20	ARG	Peptide
38	YS	81	GLY	Peptide
38	YS	86	ALA	Peptide
39	YT	127	ALA	Peptide
39	YT	17	THR	Peptide
39	YT	27	THR	Peptide
39	YT	54	ARG	Peptide
39	YT	55	ASN	Peptide
40	YU	8	VAL	Peptide
41	YV	18	LEU	Peptide
41	YV	41	GLY	Peptide
41	YV	47	VAL	Peptide
41	YV	49	THR	Peptide
41	YV	50	PRO	Peptide
41	YV	54	GLY	Peptide
41	YV	62	LEU	Peptide
41	YV	71	LEU	Peptide
41	YV	98	GLU	Peptide
42	YW	111	HIS	Peptide
42	YW	2	GLU	Peptide
42	YW	78	GLU	Peptide
42	YW	79	GLY	Peptide
42	YW	99	ARG	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
43	YX	68	ARG	Peptide
43	YX	70	LEU	Peptide
43	YX	94	GLY	Peptide
44	YY	10	GLY	Peptide
44	YY	100	ALA	Peptide
44	YY	106	LEU	Peptide
44	YY	39	VAL	Peptide
44	YY	52	SER	Peptide
44	YY	93	GLY	Peptide
45	YZ	106	GLY	Peptide
45	YZ	11	GLU	Peptide
45	YZ	110	GLY	Peptide
45	YZ	112	ARG	Peptide
45	YZ	12	GLY	Peptide
45	YZ	140	ASP	Peptide
45	YZ	142	SER	Peptide
45	YZ	143	GLY	Peptide
45	YZ	153	SER	Peptide
45	YZ	154	ASP	Peptide
45	YZ	166	SER	Peptide
45	YZ	167	PRO	Peptide
45	YZ	181	GLU	Peptide
45	YZ	182	LYS	Peptide
45	YZ	21	ALA	Peptide
45	YZ	22	GLY	Peptide
45	YZ	51	ALA	Peptide
45	YZ	52	SER	Peptide
45	YZ	62	PRO	Peptide
45	YZ	91	LEU	Peptide
45	YZ	92	SER	Peptide
45	YZ	93	ASP	Peptide

5.2 Too-close contacts [\(i\)](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32246	0	16294	685	0
1	XA	32331	0	16338	595	14

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	QB	1907	0	1958	42	0
2	XB	1915	0	1969	45	0
3	QC	1605	0	1668	48	0
3	XC	1605	0	1668	20	1
4	QD	1703	0	1762	81	0
4	XD	1703	0	1763	52	6
5	QE	1133	0	1190	32	0
5	XE	1133	0	1191	23	0
6	QF	837	0	852	11	1
6	XF	837	0	852	15	0
7	QG	1257	0	1296	34	0
7	XG	1257	0	1296	26	0
8	QH	1108	0	1165	33	0
8	XH	1108	0	1165	27	0
9	QI	1010	0	1037	36	0
9	XI	998	0	1024	29	0
10	QJ	801	0	849	29	0
10	XJ	777	0	815	16	0
11	QK	844	0	855	29	1
11	XK	844	0	855	22	0
12	QL	958	0	1047	23	0
12	XL	958	0	1047	19	0
13	QM	928	0	987	37	0
13	XM	916	0	973	20	0
14	QN	492	0	530	30	0
14	XN	492	0	528	11	0
15	QO	734	0	771	9	0
15	XO	734	0	771	10	0
16	QP	691	0	714	17	0
16	XP	691	0	714	19	0
17	QQ	823	0	891	24	0
17	XQ	823	0	891	20	0
18	QR	555	0	618	11	0
18	XR	555	0	618	8	0
19	QS	665	0	686	13	0
19	XS	665	0	686	20	0
20	QT	743	0	840	22	0
20	XT	759	0	861	24	0
21	QU	199	0	208	10	0
21	XU	199	0	208	8	0
22	QV	1644	0	835	29	0
22	XV	1644	0	836	26	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	QX	167	0	86	2	0
23	XX	233	0	120	4	0
24	QY	301	0	152	5	0
24	XY	341	0	175	8	0
25	RA	61819	0	31179	950	3
25	YA	61822	0	31176	961	3
26	RB	2572	0	1305	44	0
26	YB	2573	0	1306	28	0
27	RD	2144	0	2233	57	3
27	YD	2145	0	2234	53	0
28	RE	1563	0	1629	44	0
28	YE	1563	0	1628	44	0
29	RF	1585	0	1632	35	0
29	YF	1585	0	1632	43	0
30	RG	1474	0	1535	40	0
30	YG	1474	0	1535	29	0
31	RH	1336	0	1418	30	0
31	YH	1330	0	1413	28	13
32	RI	1136	0	1223	26	14
32	YI	1136	0	1223	13	0
33	RN	1121	0	1195	25	0
33	YN	1121	0	1195	16	0
34	RO	933	0	996	32	0
34	YO	933	0	996	22	0
35	RP	1139	0	1222	35	0
35	YP	1139	0	1222	36	0
36	RQ	1122	0	1179	33	0
36	YQ	1122	0	1179	20	0
37	RR	968	0	1033	22	0
37	YR	968	0	1033	17	0
38	RS	877	0	938	26	0
38	YS	877	0	938	28	0
39	RT	1091	0	1151	25	0
39	YT	1091	0	1151	32	0
40	RU	959	0	1019	28	0
40	YU	959	0	1019	25	0
41	RV	779	0	852	16	0
41	YV	779	0	852	13	6
42	RW	890	0	951	17	1
42	YW	890	0	951	17	0
43	RX	750	0	814	16	0
43	YX	750	0	814	7	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	RY	818	0	913	13	0
44	YY	818	0	911	15	14
45	RZ	1552	0	1573	31	0
45	YZ	1461	0	1493	24	0
46	R0	611	0	631	13	0
46	Y0	611	0	631	12	0
47	R1	763	0	848	15	0
47	Y1	763	0	848	11	0
48	R2	592	0	654	10	0
48	Y2	592	0	654	6	1
49	R3	469	0	518	12	0
49	Y3	468	0	518	15	0
50	R4	565	0	556	14	0
50	Y4	565	0	557	13	0
51	R5	459	0	480	8	0
51	Y5	451	0	471	6	3
52	R6	453	0	477	6	0
52	Y6	453	0	477	8	0
53	R7	418	0	467	12	0
53	Y7	418	0	467	8	0
54	R8	517	0	582	15	0
54	Y8	517	0	582	12	0
55	R9	307	0	335	10	0
55	Y9	307	0	338	8	0
56	ZA	74	0	51	13	0
56	ZB	74	0	51	5	0
57	QA	124	0	0	0	0
57	QC	1	0	0	0	0
57	QD	2	0	0	0	0
57	QE	2	0	0	0	0
57	QL	2	0	0	0	0
57	QM	2	0	0	0	0
57	QN	2	0	0	2	0
57	QO	1	0	0	0	0
57	QV	3	0	0	0	0
57	R0	2	0	0	0	0
57	R1	1	0	0	0	0
57	R3	1	0	0	0	0
57	R5	1	0	0	0	0
57	R6	1	0	0	0	0
57	R7	1	0	0	0	0
57	R8	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	R9	1	0	0	0	0
57	RA	414	0	0	2	0
57	RB	8	0	0	2	0
57	RD	5	0	0	2	0
57	RE	5	0	0	2	0
57	RF	5	0	0	0	0
57	RN	2	0	0	0	0
57	RO	1	0	0	0	0
57	RP	2	0	0	0	0
57	RQ	1	0	0	0	0
57	RR	1	0	0	0	0
57	RV	1	0	0	0	0
57	RW	1	0	0	0	0
57	RX	1	0	0	0	0
57	RZ	1	0	0	0	0
57	XA	128	0	0	0	0
57	XD	1	0	0	0	0
57	XJ	1	0	0	0	0
57	XK	2	0	0	0	0
57	XN	1	0	0	0	0
57	XV	1	0	0	0	0
57	XX	1	0	0	0	0
57	Y0	1	0	0	0	0
57	Y1	3	0	0	0	0
57	Y3	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y6	1	0	0	0	0
57	Y7	1	0	0	0	0
57	Y8	1	0	0	0	0
57	Y9	1	0	0	0	0
57	YA	544	0	0	1	0
57	YB	8	0	0	0	0
57	YD	8	0	0	0	0
57	YE	7	0	0	1	0
57	YF	1	0	0	0	0
57	YG	1	0	0	0	0
57	YP	3	0	0	0	0
57	YQ	2	0	0	0	0
57	YR	1	0	0	0	0
57	YT	1	0	0	0	0
57	YU	1	0	0	0	0
57	YV	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	YW	1	0	0	0	0
57	YX	1	0	0	0	0
58	QD	8	0	0	6	0
58	XD	8	0	0	4	0
59	QN	1	0	0	1	0
59	R4	1	0	0	0	0
59	R9	1	0	0	0	0
59	XN	1	0	0	0	0
59	Y4	1	0	0	0	0
All	All	291822	0	197739	4729	42

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (4729) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:152:LYS:HG3	33:RN:77:GLY:O	1.40	1.18
49:Y3:10:LYS:NZ	49:Y3:15:TYR:OH	1.81	1.13
25:YA:2228:G:OP1	27:YD:261:LYS:NZ	1.83	1.12
1:QA:982:U:H3	1:QA:1223:C:N4	1.52	1.08
1:QA:1055:A:H62	1:QA:1200:C:N4	1.56	1.04
28:RE:152:LYS:CG	33:RN:77:GLY:O	2.09	1.00
1:QA:1055:A:N6	1:QA:1200:C:H42	1.59	1.00
50:R4:18:CYS:HB3	50:R4:39:CYS:SG	2.02	0.99
26:YB:8:U:H3	26:YB:113:G:H1	1.07	0.99
22:QV:8:U:H3	22:QV:14:A:H62	0.99	0.99
1:QA:835:U:H3	1:QA:851:G:H1	1.10	0.97
1:XA:766:A:H62	1:XA:813:U:H3	1.12	0.97
1:QA:410:G:N2	1:QA:432:A:H62	1.62	0.96
25:RA:242:G:N2	25:RA:255:A:OP2	1.97	0.96
1:QA:372:C:N4	1:QA:389:A:H62	1.63	0.96
1:XA:1055:A:H62	1:XA:1200:C:H42	1.09	0.96
1:QA:410:G:H21	1:QA:432:A:H62	1.08	0.95
26:RB:51:G:H21	57:RB:203:MG:MG	0.72	0.95
1:QA:157:G:H1	1:QA:164:U:H3	1.13	0.94
27:RD:134:ARG:HG3	27:RD:187:GLY:HA3	1.46	0.94
1:QA:339:C:OP2	34:RO:97:ARG:NH2	2.03	0.92
25:RA:1255:U:H5''	25:RA:1256:G:H5''	1.48	0.92
25:RA:2526:G:H1	25:RA:2537:U:H3	0.96	0.92
1:QA:539:A:OP2	12:QL:115:LYS:NZ	2.03	0.92

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:950:U:H3	1:XA:1231:G:H1	1.06	0.92
1:QA:73:G:H1	1:QA:96:U:H3	1.02	0.91
1:QA:503:C:OP2	12:QL:116:SER:OG	1.89	0.91
1:QA:429:U:OP2	4:QD:13:ARG:NH1	2.02	0.91
1:XA:580:U:H3	1:XA:761:G:H1	1.12	0.91
1:QA:437:U:H3	1:QA:495:A:H62	1.17	0.91
1:XA:1055:A:H62	1:XA:1200:C:N4	1.69	0.91
26:RB:80:U:H3	26:RB:97:G:H1	1.14	0.90
1:XA:430:A:OP2	4:XD:22:LYS:NZ	2.05	0.89
50:Y4:12:ALA:HB3	50:Y4:24:THR:O	1.72	0.89
1:XA:452:A:H62	1:XA:480:U:H3	0.91	0.89
1:QA:372:C:H42	1:QA:389:A:N6	1.69	0.88
25:RA:2478:A:OP2	55:R9:2:LYS:NZ	2.06	0.88
1:XA:1414:U:H3	1:XA:1486:G:H1	1.20	0.88
25:YA:1972:A:OP1	27:YD:239:ARG:NH2	2.07	0.87
25:YA:2637:U:H3	25:YA:2776:A:H62	1.20	0.87
1:QA:1415:G:H1	1:QA:1485:U:H3	1.21	0.87
25:RA:2637:U:H3	25:RA:2776:A:H62	1.23	0.87
49:Y3:12:PRO:HA	49:Y3:15:TYR:HD1	1.38	0.86
25:YA:1972:A:P	27:YD:239:ARG:HH21	1.98	0.86
25:YA:2099:U:H3	25:YA:2190:G:H1	0.87	0.86
31:YH:47:GLU:OE1	31:YH:49:VAL:HG22	1.75	0.86
9:QI:20:ARG:O	9:QI:60:ASP:HB2	1.75	0.86
28:YE:127:ASP:OD2	57:YE:303:MG:MG	1.16	0.86
25:RA:969:U:H5'	49:R3:16:PRO:HA	1.58	0.85
1:QA:15:G:H1	1:QA:920:U:H3	1.19	0.85
1:XA:1240:U:OP1	7:XG:119:ARG:NH2	2.10	0.85
25:YA:269:U:H3	25:YA:370:G:H1	1.25	0.85
1:XA:452:A:N6	1:XA:480:U:H3	1.75	0.85
27:RD:14:ARG:NH1	57:RD:303:MG:MG	1.35	0.84
1:XA:927:G:H1	1:XA:1390:U:H3	1.22	0.84
1:XA:741:G:H5'	15:XO:39:LEU:HD21	1.60	0.84
1:QA:410:G:H21	1:QA:432:A:N6	1.75	0.84
25:YA:2809:A:OP2	25:YA:2891:G:N1	2.10	0.84
1:QA:372:C:H42	1:QA:389:A:H62	0.87	0.84
1:QA:959:A:HO2'	1:QA:984:C:HO2'	1.27	0.83
56:ZA:3:PPU:H5'	56:ZA:3:PPU:H8	1.60	0.83
27:RD:14:ARG:HH11	57:RD:303:MG:MG	0.84	0.83
25:RA:1815:A:OP2	27:RD:54:ARG:NH2	2.10	0.82
25:YA:578:A:OP1	25:YA:1255:U:O2'	1.96	0.82
4:XD:33:MET:O	4:XD:37:PRO:HB3	1.79	0.82

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2584:U:H5'	56:ZB:3:PPU:H103	1.61	0.82
1:XA:429:U:O3'	4:XD:22:LYS:NZ	2.13	0.81
22:QV:8:U:H3	22:QV:14:A:N6	1.77	0.81
25:RA:536:A:OP1	40:RU:53:ARG:NH1	2.13	0.81
1:QA:927:G:H1	1:QA:1390:U:H3	1.25	0.81
25:YA:1920:OMC:HM22	25:YA:1921:G:H5'	1.61	0.81
1:QA:130:A:H5'	17:QQ:63:ARG:HE	1.45	0.81
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.12	0.81
25:RA:1792:G:O2'	25:RA:1830:C:OP1	1.98	0.81
25:YA:277:C:O2'	25:YA:278:A:OP1	1.97	0.81
26:RB:51:G:N2	57:RB:203:MG:MG	1.39	0.81
45:RZ:99:TYR:HA	45:RZ:124:ILE:O	1.81	0.81
1:QA:1422:G:H5''	34:RO:48:PRO:HB3	1.61	0.80
25:YA:2096:U:H3	25:YA:2193:G:H1	1.25	0.80
25:YA:2323:G:H1	25:YA:2332:U:H3	1.29	0.80
25:YA:1800:C:OP2	27:YD:183:ARG:NH2	2.15	0.80
25:RA:587:C:OP2	35:RP:21:ARG:NH1	2.13	0.79
25:YA:18:C:O2'	25:YA:554:U:OP1	2.00	0.79
25:RA:2198:A:OP1	32:RI:33:ARG:NH2	2.16	0.79
25:YA:607:U:O2	25:YA:621:A:N6	2.16	0.79
1:XA:1003:G:H2'	1:XA:1004:A:H4'	1.62	0.79
1:XA:925:G:H1	1:XA:1391:U:H3	1.28	0.79
25:YA:2638:G:H21	25:YA:2778:A:H62	1.31	0.78
1:XA:1086:U:H3	1:XA:1099:G:H22	1.29	0.78
1:QA:1351:U:H3	1:QA:1371:G:H1	1.27	0.78
25:YA:568:U:O4	57:YA:3438:MG:MG	1.26	0.78
1:QA:429:U:O3'	4:QD:22:LYS:NZ	2.16	0.78
1:QA:1315:U:O2'	1:QA:1360:A:O2'	1.99	0.78
25:YA:2584:U:H4'	56:ZB:3:PPU:H92	1.63	0.78
47:Y1:65:SER:HG	47:Y1:66:HIS:HD1	1.31	0.78
25:RA:99:U:OP1	25:RA:100:G:O2'	2.01	0.77
25:RA:2134:A:N6	25:RA:2156:G:HO2'	1.81	0.77
25:YA:2572:A:OP2	28:YE:146:THR:OG1	2.00	0.77
22:QV:15:G:N2	22:QV:48:C:H42	1.82	0.77
25:YA:71:A:H4'	25:YA:72:U:H5''	1.64	0.77
1:QA:975:A:H4'	1:QA:976:G:H5''	1.66	0.77
1:XA:1055:A:N6	1:XA:1200:C:H42	1.82	0.77
25:RA:1999:C:OP1	28:RE:118:LYS:NZ	2.16	0.76
25:YA:2640:G:O3'	33:YN:74:ARG:NH2	2.17	0.76
25:RA:2816:C:O3'	37:RR:99:LYS:NZ	2.17	0.76
25:RA:1264:G:OP1	51:R5:19:ARG:NH1	2.19	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2104:G:H22	25:RA:2185:C:H42	1.34	0.76
1:XA:324:G:N2	1:XA:327:A:OP2	2.18	0.76
25:YA:1972:A:P	27:YD:239:ARG:NH2	2.59	0.76
28:RE:125:GLY:O	57:RE:302:MG:MG	1.26	0.76
1:QA:244:U:O4	1:QA:893:C:N4	2.18	0.76
25:RA:1021:A:O2'	25:RA:1123:C:OP1	2.02	0.76
25:RA:807:U:OP2	35:RP:41:ARG:NH2	2.17	0.76
25:YA:1216:G:OP1	40:YU:11:ARG:NH2	2.17	0.76
1:QA:1053:G:H4'	1:QA:1054:C:H3'	1.67	0.76
25:YA:1446:C:H42	25:YA:1465:G:H1	1.33	0.76
1:XA:430:A:P	4:XD:22:LYS:NZ	2.59	0.75
1:QA:981:U:H3'	1:QA:982:U:H2'	1.68	0.75
25:YA:1823:G:OP1	27:YD:54:ARG:NH1	2.19	0.75
1:QA:60:A:N6	1:QA:110:C:N4	2.35	0.75
25:RA:1638:C:O2	25:RA:2698:U:O2'	2.03	0.75
1:QA:60:A:H62	1:QA:110:C:N4	1.83	0.75
25:RA:1223:G:N2	25:RA:1226:A:OP2	2.16	0.75
25:YA:1816:G:OP2	27:YD:38:LYS:NZ	2.19	0.75
1:QA:672:U:H3	1:QA:734:G:H1	1.33	0.74
14:QN:4:LYS:NZ	57:QN:101:MG:MG	1.44	0.74
25:RA:309:G:N3	25:RA:329:G:O2'	2.20	0.74
25:YA:2291:U:O2'	25:YA:2374:C:O2	2.05	0.74
1:QA:558:G:OP2	1:QA:559:A:O2'	2.04	0.74
27:RD:134:ARG:HG3	27:RD:187:GLY:CA	2.18	0.74
22:QV:15:G:H22	22:QV:48:C:N4	1.86	0.74
25:RA:2553:G:N2	56:ZA:3:PPU:H2	2.02	0.74
25:RA:2577:A:OP2	51:R5:3:LYS:NZ	2.19	0.74
1:XA:430:A:P	4:XD:22:LYS:HZ1	2.11	0.74
4:QD:32:ALA:O	4:QD:35:ARG:N	2.17	0.74
25:RA:2134:A:N6	25:RA:2156:G:O2'	2.21	0.74
1:QA:514:C:H2'	1:QA:515:G:H8	1.53	0.73
25:RA:272(D):G:H1	25:RA:272(T):C:H42	1.36	0.73
25:YA:290:G:H1	25:YA:350:U:H3	1.35	0.73
25:RA:227:A:H61	25:RA:410:G:H21	1.35	0.73
25:RA:987:G:O2'	25:RA:1000:A:N3	2.21	0.73
25:YA:1059:G:H3'	25:YA:1060:U:H2'	1.71	0.73
4:XD:18:LYS:NZ	58:XD:302:SF4:S2	2.61	0.73
1:QA:429:U:O2'	4:QD:22:LYS:NZ	2.22	0.73
1:QA:9:G:O6	1:QA:558:G:O2'	2.05	0.73
1:QA:1399:C:N3	1:QA:1502:A:N1	2.37	0.73
25:RA:570:G:O6	57:RA:3097:MG:MG	1.31	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:606:U:H3	25:YA:622:G:H1	1.37	0.73
25:YA:1466:G:H2'	25:YA:1547:C:H41	1.53	0.73
28:RE:127:ASP:OD2	57:RE:303:MG:MG	1.31	0.72
1:QA:578:C:O2'	1:QA:728:A:N3	2.20	0.72
25:YA:1065:U:O2'	25:YA:1066:U:OP2	2.06	0.72
25:YA:1218:C:OP2	40:YU:15:LYS:NZ	2.22	0.72
1:QA:982:U:C4	1:QA:1223:C:N3	2.57	0.72
25:RA:2364:C:OP1	46:R0:55:ARG:NH1	2.22	0.72
1:XA:357:G:H5''	1:XA:367:U:H3'	1.71	0.72
1:XA:975:A:H4'	1:XA:976:G:H5''	1.71	0.72
25:YA:1607:C:N4	25:YA:1622:G:OP2	2.22	0.72
25:RA:2221:G:C8	25:RA:2221:G:O5'	2.43	0.72
25:YA:635:C:O2'	25:YA:639:U:OP1	2.08	0.72
1:XA:877:C:H2'	1:XA:878:G:H8	1.55	0.72
1:XA:406:G:O3'	4:XD:3:ARG:NH2	2.22	0.72
25:YA:2347:C:OP1	52:Y6:38:LYS:NZ	2.18	0.72
25:YA:2638:G:N2	25:YA:2778:A:H62	1.88	0.72
25:YA:2100:G:H1	25:YA:2189:U:H3	1.37	0.71
25:YA:2875:C:OP1	39:YT:3:ARG:NH1	2.23	0.71
25:RA:11:G:H2'	25:RA:12:U:H5''	1.71	0.71
25:RA:1514:U:H2'	25:RA:1515:G:H8	1.54	0.71
25:YA:1140:C:O3'	33:YN:25:ARG:NH1	2.22	0.71
1:QA:1040:U:H2'	1:QA:1041:A:H8	1.55	0.71
25:RA:2125:G:H21	25:RA:2173:A:H62	1.37	0.71
25:YA:2126:A:N6	25:YA:2162:G:O2'	2.22	0.71
25:RA:571:A:H5'	25:RA:2030:A:H62	1.55	0.71
1:XA:380:G:N2	1:XA:383:A:OP2	2.23	0.71
1:XA:544:G:OP1	4:XD:59:ARG:NH2	2.21	0.71
1:XA:618:C:H5'	1:XA:619:U:H5''	1.72	0.71
26:YB:49:C:OP2	38:YS:30:ARG:NH1	2.24	0.71
31:YH:47:GLU:OE1	31:YH:47:GLU:N	2.24	0.71
19:QS:11:VAL:HG12	19:QS:13:ASP:H	1.54	0.71
1:XA:339:C:OP2	34:YO:97:ARG:NH1	2.23	0.71
1:XA:437:U:H3	1:XA:495:A:H62	1.37	0.71
25:YA:2689:U:H4'	25:YA:2690:C:H5'	1.72	0.71
3:QC:14:ILE:HG22	3:QC:15:THR:HG23	1.73	0.71
25:RA:823:G:H2'	25:RA:824:A:C8	2.25	0.71
1:XA:107:G:OP1	1:XA:325:A:N6	2.23	0.71
25:YA:2134:A:H5''	25:YA:2156:G:H22	1.54	0.71
25:YA:83:G:N1	25:YA:102:G:O2'	2.24	0.71
1:QA:38:G:H22	1:QA:397:A:H5'	1.54	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:359:U:H3'	1:XA:360:A:H8	1.55	0.70
25:YA:2296:U:OP2	38:YS:9:ARG:NH2	2.24	0.70
1:XA:1285:A:H4'	1:XA:1286:A:H5'	1.72	0.70
1:QA:982:U:H3	1:QA:1223:C:H42	0.77	0.70
25:YA:918:A:N3	26:YB:80:U:O2'	2.24	0.70
1:QA:403:C:OP2	4:QD:74:GLN:NE2	2.24	0.70
1:QA:1254:C:OP1	10:QJ:45:ARG:NE	2.24	0.70
1:QA:1399:C:N4	1:QA:1502:A:C2	2.59	0.70
1:QA:501:C:H1'	1:QA:549:C:H1'	1.74	0.70
1:XA:358:U:C6	1:XA:358:U:H3'	2.26	0.70
1:XA:73:G:H1	1:XA:96:U:H3	1.40	0.70
25:YA:849:A:H5''	25:YA:850:C:OP2	1.92	0.70
25:YA:2059:A:H5''	25:YA:2060:A:OP2	1.92	0.70
1:QA:1203:C:OP1	14:QN:3:ARG:NE	2.25	0.70
4:QD:20:TYR:OH	6:XF:15:ASP:HA	1.92	0.70
25:RA:1084:A:N6	25:RA:1086:A:N7	2.40	0.70
4:XD:32:ALA:HB3	58:XD:302:SF4:S1	2.32	0.70
1:QA:427:U:OP1	4:QD:13:ARG:NH2	2.24	0.69
1:QA:547:A:OP1	4:QD:73:ARG:NH1	2.25	0.69
1:QA:908:A:H2'	1:QA:909:A:H8	1.58	0.69
25:RA:2122:U:H3	25:RA:2176:A:H61	1.39	0.69
25:YA:1514:U:H2'	25:YA:1515:G:H8	1.56	0.69
25:YA:2786:U:OP1	28:YE:69:LYS:NZ	2.22	0.69
1:XA:1375:A:OP1	7:XG:28:ASN:ND2	2.26	0.69
1:QA:131:C:O2'	1:QA:262:A:N3	2.22	0.69
25:YA:593:G:H4'	54:Y8:63:PRO:HB2	1.75	0.69
25:RA:270:A:OP2	25:RA:272(X):G:N1	2.25	0.69
1:XA:790:A:OP1	22:XV:38:A:O2'	2.11	0.69
1:XA:1326:C:OP1	21:XU:12:LYS:NZ	2.25	0.69
22:QV:15:G:N1	22:QV:48:C:N3	2.40	0.69
18:XR:58:LEU:HB3	18:XR:62:GLU:HG3	1.75	0.69
1:QA:673:G:H2'	1:QA:674:G:H8	1.56	0.69
1:QA:1055:A:H62	1:QA:1200:C:H42	0.78	0.69
1:XA:259:G:H5''	20:XT:83:ARG:HH12	1.58	0.69
4:QD:32:ALA:HB3	58:QD:303:SF4:S4	2.33	0.69
9:QI:128:ARG:NH2	22:QV:33:U:OP2	2.22	0.69
25:RA:243:U:OP2	54:R8:8:LYS:NZ	2.19	0.69
25:RA:1942:5MC:OP2	25:RA:1943:U:O2'	2.10	0.69
25:RA:2246:G:H2'	25:RA:2247:A:C8	2.28	0.68
1:XA:514:C:H2'	1:XA:515:G:H8	1.58	0.68
25:YA:2299:G:OP1	30:YG:75:LYS:NZ	2.26	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1086:U:H3	1:QA:1099:G:H22	1.39	0.68
25:YA:919:G:N2	25:YA:2269:A:OP2	2.24	0.68
25:YA:2404:C:O3'	35:YP:77:ARG:NH2	2.26	0.68
27:RD:134:ARG:HH11	27:RD:187:GLY:HA3	1.58	0.68
22:XV:2:G:O3'	46:Y0:8:GLY:N	2.27	0.68
1:XA:373:A:H2'	1:XA:374:A:H8	1.58	0.68
1:QA:1065:U:H5''	1:QA:1190:G:H22	1.59	0.68
1:QA:1344:C:H4'	9:QI:120:ARG:HB3	1.74	0.68
25:RA:1646:C:H5''	25:RA:1647:G:H5''	1.76	0.68
39:YT:65:LYS:HE3	39:YT:67:SER:HB2	1.76	0.68
25:YA:71:A:H5''	25:YA:73:A:C8	2.28	0.68
1:QA:959:A:H3'	1:QA:960:U:H5''	1.74	0.68
25:RA:2555:U:C2	56:ZA:1:C:C6	2.81	0.68
1:QA:631:G:H2'	1:QA:632:A:H8	1.59	0.68
25:YA:1473:G:H1	25:YA:1518:U:H3	1.40	0.68
25:RA:1093:G:N2	25:RA:1098:A:N7	2.42	0.68
25:YA:552:G:OP1	41:YV:68:LYS:NZ	2.26	0.68
1:QA:411:A:OP1	4:QD:30:LYS:NZ	2.23	0.67
5:QE:92:LYS:HB3	5:QE:119:LEU:HB2	1.76	0.67
25:RA:52:A:H62	25:RA:119:A:H62	1.42	0.67
1:XA:392:G:OP1	16:XP:8:ARG:NH2	2.27	0.67
9:QI:10:ARG:HH21	9:QI:107:ARG:HD3	1.59	0.67
1:XA:429:U:H3'	4:XD:9:CYS:SG	2.34	0.67
25:YA:1280:G:C2'	25:YA:1281:G:H5'	2.24	0.67
1:QA:60:A:N6	1:QA:110:C:H42	1.93	0.67
1:QA:1179:A:H4'	9:QI:103:THR:HA	1.76	0.67
25:RA:1693:U:O2'	27:RD:14:ARG:NH2	2.26	0.67
25:YA:489:G:N7	42:YW:49:LYS:NZ	2.40	0.67
25:YA:2105:C:H42	25:YA:2185:C:H42	1.40	0.67
1:QA:973:G:O2'	10:QJ:54:PHE:O	2.11	0.67
1:QA:1070:U:OP1	5:QE:18:ARG:NH2	2.26	0.67
22:XV:50:U:H3	22:XV:64:G:H1	1.41	0.67
25:YA:527:C:N4	25:YA:2043:C:OP2	2.26	0.67
25:YA:1165:U:H3	25:YA:1184:G:H1	1.41	0.67
1:QA:107:G:OP1	1:QA:325:A:N6	2.28	0.67
1:QA:673:G:H2'	1:QA:674:G:C8	2.29	0.67
1:QA:1073:U:H2'	1:QA:1074:G:H8	1.58	0.67
25:RA:570:G:OP1	25:RA:972:G:O2'	2.07	0.67
25:RA:1159:U:H2'	25:RA:1160:G:H8	1.58	0.67
26:RB:48:A:H4'	38:RS:95:HIS:HD2	1.59	0.67
1:XA:358:U:H2'	1:XA:359:U:C6	2.30	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:787:U:H5''	25:YA:788:A:H5'	1.77	0.67
25:YA:2303:G:N3	30:YG:132:ASN:ND2	2.42	0.67
1:QA:429:U:P	4:QD:13:ARG:NH1	2.67	0.67
25:RA:2328:A:H2'	25:RA:2329:G:H8	1.59	0.67
1:QA:1183:A:H3'	1:QA:1184:G:H5''	1.75	0.67
25:RA:589:C:H2'	25:RA:590:A:C8	2.30	0.67
25:RA:2133:G:O2'	25:RA:2158:A:N1	2.25	0.67
1:QA:593:G:H1	1:QA:646:U:H3	1.43	0.67
38:RS:34:HIS:HD1	38:RS:53:SER:HG	1.42	0.67
25:YA:889:C:O2'	25:YA:890:A:O5'	2.13	0.67
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.09	0.67
1:QA:245:C:H2'	1:QA:246:A:H5''	1.77	0.67
25:RA:1864:U:OP1	25:RA:2410:G:O2'	2.06	0.67
25:YA:2475:C:H42	25:YA:2529:G:H22	1.42	0.67
25:RA:1247:A:OP1	29:RF:95:ARG:NH2	2.28	0.66
25:YA:1687:G:N2	25:YA:1702:G:O6	2.28	0.66
38:YS:34:HIS:HD1	38:YS:53:SER:HG	1.41	0.66
25:RA:1278:A:OP1	37:RR:36:THR:OG1	2.06	0.66
25:RA:2198:A:H5'	32:RI:33:ARG:HH21	1.60	0.66
1:XA:1005:A:O2'	1:XA:1036:G:N2	2.28	0.66
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.60	0.66
25:YA:1005:C:O2'	33:YN:28:THR:HG21	1.95	0.66
1:QA:1151:A:O2'	1:QA:1152:A:O5'	2.13	0.66
1:XA:1286:A:H2'	1:XA:1287:A:H4'	1.75	0.66
25:YA:511:U:H4'	25:YA:1235:G:H4'	1.76	0.66
48:Y2:51:ARG:HG2	48:Y2:55:ARG:HE	1.60	0.66
8:QH:32:LYS:HA	8:QH:35:ILE:HD12	1.76	0.66
25:RA:2291:U:O2'	25:RA:2374:C:O2	2.13	0.66
25:YA:783:A:H2'	25:YA:784:A:H4'	1.77	0.66
1:QA:46:G:HO2'	1:QA:365:U:HO2'	1.34	0.66
1:QA:1347:G:N1	1:QA:1374:A:OP2	2.26	0.66
25:RA:228:A:OP1	35:RP:76:LYS:NZ	2.29	0.66
25:RA:1069:A:H5''	25:RA:1096:A:H5''	1.78	0.66
25:YA:2849:U:OP1	39:YT:95:ARG:NH2	2.29	0.66
25:RA:1952:A:N3	25:RA:2560:C:O2'	2.26	0.66
25:YA:2465:C:O2	25:YA:2486:G:N2	2.28	0.66
30:YG:150:ASP:OD1	30:YG:153:ARG:NH1	2.28	0.66
25:RA:1225:G:OP1	41:RV:69:LYS:NZ	2.24	0.66
25:YA:2206:G:H5''	25:YA:2207:G:C5	2.31	0.66
1:QA:1510:U:H3	1:QA:1525:G:H1	1.44	0.66
1:XA:359:U:C6	1:XA:359:U:O5'	2.49	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:674:G:H2'	1:XA:675:A:H8	1.60	0.66
25:YA:2577:A:H5'	51:Y5:3:LYS:HE2	1.76	0.66
1:QA:1073:U:H2'	1:QA:1074:G:C8	2.31	0.66
25:RA:2727:G:O3'	34:RO:70:LYS:NZ	2.28	0.66
1:XA:1053:G:H4'	1:XA:1054:C:H3'	1.78	0.66
25:YA:848:G:OP2	25:YA:928:G:N2	2.29	0.66
1:QA:806:C:H2'	1:QA:807:A:H8	1.61	0.65
1:XA:1518:MA6:O5'	1:XA:1518:MA6:H8	1.96	0.65
25:YA:857:C:H4'	46:Y0:23:VAL:HG21	1.78	0.65
25:YA:1352:U:O2'	25:YA:1570:A:N3	2.27	0.65
9:QI:121:ARG:NH1	9:QI:122:ALA:O	2.29	0.65
25:RA:860:U:H2'	25:RA:861:A:H8	1.61	0.65
25:YA:140:G:N2	25:YA:142(A):A:H62	1.94	0.65
25:YA:631:A:OP2	54:Y8:47:LYS:NZ	2.29	0.65
25:YA:829:A:N7	25:YA:2247:A:O2'	2.28	0.65
3:QC:77:ILE:HG13	3:QC:79:ARG:H	1.59	0.65
25:YA:2206:G:H3'	25:YA:2207:G:C8	2.31	0.65
26:YB:80:U:H3	26:YB:97:G:H1	1.44	0.65
25:RA:2450:A:H62	25:RA:2501:C:N4	1.95	0.65
1:XA:453:A:H4'	16:XP:72:ARG:HG3	1.77	0.65
1:XA:731:G:OP1	1:XA:766:A:H1'	1.97	0.65
1:QA:524:G:H5''	12:QL:91:LYS:HE2	1.78	0.65
1:QA:946:A:O2'	1:QA:1333:A:N3	2.30	0.65
25:RA:2371:G:O6	57:RA:3376:MG:MG	1.37	0.65
40:RU:74:LEU:HD13	40:RU:78:THR:HB	1.79	0.65
25:YA:956:G:H2'	25:YA:957:A:H2'	1.78	0.65
25:YA:2134:A:H5''	25:YA:2156:G:N2	2.11	0.65
28:YE:128:SER:OG	28:YE:129:HIS:N	2.29	0.65
25:RA:2680:C:OP2	28:RE:111:ARG:NH2	2.30	0.65
26:YB:37:C:O2	38:YS:95:HIS:NE2	2.27	0.65
25:RA:635:C:O2'	25:RA:639:U:OP1	2.15	0.65
1:XA:502:G:OP1	12:XL:118:SER:N	2.28	0.65
1:XA:1247:U:H3	1:XA:1290:G:H1	1.45	0.65
7:XG:5:ARG:HG2	7:XG:7:ALA:H	1.62	0.65
25:YA:24:G:O2'	42:YW:78:GLU:O	2.12	0.65
25:YA:278:A:H3'	25:YA:278:A:OP2	1.96	0.65
25:YA:1939:5MU:OP1	25:YA:2604:U:O2'	2.09	0.65
11:QK:48:ILE:HG12	11:QK:63:LEU:HD13	1.79	0.65
25:RA:1632:A:H8	25:RA:1632:A:O5'	1.80	0.65
25:YA:784:A:H62	27:YD:229:VAL:HG21	1.60	0.65
25:RA:2880:C:O2'	37:RR:90:ARG:NH1	2.30	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RR:2:ARG:NH1	37:RR:5:LYS:O	2.30	0.64
1:XA:377:G:OP1	16:XP:3:LYS:NZ	2.29	0.64
1:QA:572:A:H5''	1:QA:917:G:H4'	1.79	0.64
25:RA:910:A:N3	25:RA:2264:C:O2'	2.30	0.64
1:QA:315:A:HO2'	1:QA:330:C:HO2'	1.39	0.64
25:RA:1038:C:H42	25:RA:1117:G:H1	1.45	0.64
26:YB:30:C:H1'	26:YB:57:A:H61	1.62	0.64
40:YU:97:ASP:OD1	40:YU:101:ARG:NH1	2.30	0.64
41:YV:20:LEU:HD22	41:YV:22:VAL:HG22	1.79	0.64
1:XA:405:U:O4	4:XD:2:GLY:N	2.31	0.64
1:QA:195:A:H4'	20:QT:68:LYS:HZ1	1.62	0.64
1:QA:376:G:H5''	16:QP:5:ARG:HB2	1.80	0.64
12:QL:71:PRO:O	12:QL:102:ARG:NH1	2.30	0.64
25:RA:2547:U:O2	34:RO:23:ARG:NH1	2.30	0.64
6:XF:12:PRO:HD3	6:XF:58:GLY:HA2	1.80	0.64
25:YA:458:G:N2	25:YA:470:A:OP2	2.31	0.64
25:YA:2711:A:H5''	25:YA:2712(A):U:H5''	1.78	0.64
56:ZA:3:PPU:H8	56:ZA:3:PPU:C5'	2.27	0.64
1:QA:1003:G:H2'	1:QA:1004:A:H4'	1.79	0.64
1:QA:1255:G:OP2	10:QJ:45:ARG:NH2	2.30	0.64
25:RA:2452:C:H42	25:RA:2504:U:H3	1.45	0.64
25:YA:213:A:H8	25:YA:213:A:H5''	1.62	0.64
1:QA:346:G:OP1	39:RT:41:ARG:NH2	2.31	0.64
1:QA:360:A:H2'	1:QA:361:G:C8	2.33	0.64
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.62	0.64
27:RD:134:ARG:CG	27:RD:187:GLY:HA3	2.23	0.64
1:XA:334:C:HO2'	1:XA:1434:A:HO2'	1.41	0.64
22:XV:16:C:O2'	22:XV:61:C:OP1	2.15	0.64
1:QA:1227:A:H5'	13:QM:111:LYS:HD2	1.80	0.64
1:XA:1329:A:N7	21:XU:7:ARG:NH2	2.45	0.64
25:YA:1316:U:H2'	25:YA:1317:A:H8	1.61	0.64
25:RA:2746:U:H1'	31:RH:139:GLN:HB3	1.79	0.64
1:XA:357:G:O2'	1:XA:358:U:H5'	1.98	0.64
25:YA:1821:A:H2'	25:YA:1822:G:H8	1.61	0.64
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.33	0.64
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.31	0.64
25:RA:2394:C:H5''	35:RP:64:LYS:HE2	1.78	0.64
1:XA:358:U:H2'	1:XA:359:U:H6	1.62	0.64
25:YA:322:A:OP1	29:YF:168:ARG:NH1	2.31	0.64
25:YA:860:U:H2'	25:YA:861:A:H8	1.62	0.64
1:QA:677:U:H3	1:QA:713:G:H22	1.44	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:757:U:H1'	1:QA:879:C:H1'	1.79	0.63
38:RS:10:ARG:HA	38:RS:13:ARG:HG2	1.80	0.63
25:YA:554:U:O2'	25:YA:555:U:H5'	1.98	0.63
31:YH:47:GLU:OE1	31:YH:49:VAL:CG2	2.45	0.63
1:QA:60:A:H4'	1:QA:61:G:H5'	1.80	0.63
1:QA:67:C:O2'	1:QA:171:A:N3	2.28	0.63
30:RG:134:GLY:HA2	30:RG:156:ASP:HA	1.80	0.63
25:YA:2291:U:OP1	25:YA:2380:C:O2'	2.16	0.63
28:YE:45:THR:O	28:YE:82:ARG:NH1	2.31	0.63
1:QA:1320:C:N3	19:QS:36:ARG:NH2	2.46	0.63
25:RA:2075:U:H4'	25:RA:2596:U:H3	1.63	0.63
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.33	0.63
5:XE:12:LEU:HB3	5:XE:31:LEU:H	1.63	0.63
6:XF:87:ARG:NH1	18:XR:75:ILE:O	2.31	0.63
25:YA:1636:C:H2'	25:YA:1637:A:C8	2.34	0.63
25:YA:2099:U:O2	25:YA:2190:G:N2	2.27	0.63
25:YA:2641:G:P	33:YN:74:ARG:HH22	2.20	0.63
1:QA:1422:G:H2'	1:QA:1423:G:H8	1.63	0.63
1:XA:335:C:O2'	1:XA:1433:A:N3	2.31	0.63
1:XA:1203:C:H2'	1:XA:1204:A:H8	1.61	0.63
1:QA:474:G:H2'	1:QA:475:G:H8	1.62	0.63
25:RA:2741:A:O3'	55:R9:35:ARG:NH1	2.31	0.63
1:XA:1291:G:OP1	7:XG:37:ASN:ND2	2.31	0.63
1:XA:1296:C:OP1	13:XM:44:ARG:NH2	2.31	0.63
1:XA:1301:U:O2'	1:XA:1302:U:H5'	1.98	0.63
25:RA:1770:G:H1	25:RA:1982:C:H42	1.47	0.63
25:RA:2659:G:N2	25:RA:2662:A:OP2	2.32	0.63
1:XA:448:A:OP2	1:XA:485:G:N1	2.26	0.63
25:YA:1438:U:H3	25:YA:1553:A:H2	1.44	0.63
40:YU:97:ASP:O	40:YU:101:ARG:HB2	1.99	0.63
25:RA:700:G:H1	25:RA:732:C:H42	1.47	0.63
25:RA:1049:C:H1'	25:RA:1113:U:H4'	1.80	0.63
1:XA:292:G:H21	1:XA:608:A:H61	1.47	0.63
1:XA:1074:G:O2'	1:XA:1101:A:N1	2.31	0.63
1:XA:1098:C:H2'	1:XA:1099:G:H8	1.64	0.63
26:YB:27:C:H5''	38:YS:54:LEU:HD11	1.80	0.63
56:ZA:3:PPU:H93	56:ZA:3:PPU:N7	2.13	0.63
1:QA:401:C:O2'	1:QA:621:A:N3	2.32	0.63
11:QK:22:HIS:HB3	11:QK:29:ILE:HB	1.81	0.63
34:RO:2:ILE:HB	34:RO:33:ALA:HB3	1.81	0.63
25:YA:244:A:H4'	35:YP:74:GLU:HB2	1.80	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:249:C:O2	54:Y8:12:LYS:NZ	2.30	0.63
25:YA:1569:A:H2'	25:YA:1570:A:C8	2.34	0.63
1:QA:405:U:O4	4:QD:2:GLY:N	2.32	0.63
25:RA:1920:OMC:HM22	25:RA:1921:G:H5'	1.81	0.63
1:XA:1352:C:OP1	21:XU:3:LYS:NZ	2.27	0.63
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.81	0.63
31:YH:164:TYR:HB2	31:YH:167:GLU:HB2	1.80	0.63
1:QA:983:A:N1	1:QA:1222:G:N2	2.47	0.62
25:RA:24:G:O2'	42:RW:78:GLU:O	2.16	0.62
1:XA:258:G:OP1	20:XT:87:LYS:NZ	2.32	0.62
1:QA:1216:G:OP1	14:QN:2:ALA:N	2.32	0.62
7:QG:35:LYS:HE2	7:QG:37:ASN:H	1.64	0.62
25:RA:1361:G:H1	25:RA:1370:C:H42	1.47	0.62
1:XA:489:C:OP1	4:XD:131:ARG:NH2	2.32	0.62
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.31	0.62
38:YS:11:LYS:HG3	38:YS:91:PRO:HD3	1.81	0.62
1:QA:1367:C:OP1	9:QI:115:GLY:N	2.24	0.62
1:QA:1399:C:C4	1:QA:1502:A:N1	2.67	0.62
7:QG:75:VAL:HA	7:QG:88:PRO:HA	1.81	0.62
25:RA:139(A):G:N3	43:RX:41:ASN:ND2	2.47	0.62
25:RA:227:A:H61	25:RA:410:G:N2	1.96	0.62
25:RA:566:U:OP1	35:RP:29:LYS:NZ	2.23	0.62
25:RA:1203:G:N1	25:RA:1241:A:OP2	2.33	0.62
1:XA:410:G:H21	1:XA:432:A:H62	1.48	0.62
27:YD:166:GLN:HE22	27:YD:176:ARG:HH21	1.47	0.62
50:Y4:51:ASP:OD1	50:Y4:51:ASP:N	2.31	0.62
25:RA:2682:U:O2'	39:RT:58:ASN:OD1	2.17	0.62
25:YA:89:G:OP1	44:YY:33:LYS:NZ	2.30	0.62
25:YA:1833:U:O2'	25:YA:1969:A:N1	2.26	0.62
1:QA:265:G:N2	1:QA:267:C:H5'	2.14	0.62
1:QA:781:A:OP2	1:QA:800:G:N2	2.25	0.62
7:QG:72:ARG:NH2	7:QG:142:GLU:OE2	2.32	0.62
25:RA:857:C:OP2	46:R0:77:ARG:NH2	2.32	0.62
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.32	0.62
1:XA:870:U:H4'	1:XA:871:U:H5''	1.80	0.62
19:XS:28:LYS:HG3	19:XS:29:ARG:HG3	1.81	0.62
25:YA:273(K):C:H2'	25:YA:274:G:H8	1.64	0.62
25:YA:1821:A:H2'	25:YA:1822:G:C8	2.33	0.62
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.63	0.62
8:QH:81:HIS:ND1	8:QH:138:TRP:OXT	2.32	0.62
12:QL:53:ARG:NH2	12:QL:92:0TD:OD2	2.32	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:489:G:N7	42:RW:49:LYS:NZ	2.45	0.62
25:RA:511:U:H4'	25:RA:1235:G:H4'	1.82	0.62
40:RU:66:ASN:HD21	40:RU:70:ARG:HH21	1.47	0.62
1:XA:279:A:H4'	1:XA:280:C:H5'	1.82	0.62
9:XI:18:PHE:HB2	9:XI:62:TYR:O	2.00	0.62
25:YA:674:G:OP1	29:YF:54:ARG:NH2	2.32	0.62
1:XA:376:G:H1	1:XA:387:U:H3	1.48	0.62
1:XA:1101:A:N7	2:XB:175:ARG:NH2	2.47	0.62
4:XD:19:LEU:HB3	4:XD:21:LEU:HD21	1.80	0.62
45:YZ:10:ARG:NH2	45:YZ:37:VAL:O	2.32	0.62
1:QA:514:C:H2'	1:QA:515:G:C8	2.34	0.62
25:RA:495:G:N3	42:RW:61:ASN:ND2	2.47	0.62
25:RA:1593:G:H2'	25:RA:1594:G:C8	2.34	0.62
45:RZ:101:PRO:HA	45:RZ:122:ARG:O	2.00	0.62
1:XA:1129:C:O2	1:XA:1130:A:N6	2.33	0.62
33:YN:58:ASP:OD1	33:YN:58:ASP:N	2.33	0.62
25:RA:2422:A:O2'	25:RA:2423:U:OP2	2.16	0.62
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.32	0.62
34:RO:13:ASN:ND2	34:RO:96:THR:OG1	2.33	0.62
1:XA:261:U:OP2	20:XT:79:ARG:NH2	2.32	0.62
1:XA:728:A:H2'	1:XA:729:A:H8	1.64	0.62
12:XL:49:ASN:ND2	12:XL:92:OTD:SB	2.73	0.62
25:YA:2424:C:O2	25:YA:2429:G:O2'	2.18	0.62
1:QA:982:U:O4	1:QA:1223:C:N3	2.33	0.62
3:QC:42:LEU:HD23	3:QC:45:LYS:HD3	1.82	0.62
25:RA:535:C:H2'	25:RA:536:A:H8	1.65	0.62
32:RI:49:ALA:HA	32:RI:52:ARG:HG2	1.81	0.62
1:XA:1347:G:H5''	9:XI:107:ARG:HG2	1.80	0.62
34:YO:2:ILE:HB	34:YO:33:ALA:HB3	1.82	0.62
1:QA:908:A:H2'	1:QA:909:A:C8	2.35	0.61
25:RA:288:C:H2'	25:RA:289:A:H8	1.64	0.61
25:RA:819:A:OP2	25:RA:1187:G:N2	2.20	0.61
27:RD:133:LEU:HA	27:RD:136:ILE:HD12	1.81	0.61
1:XA:908:A:H2'	1:XA:909:A:H8	1.65	0.61
17:XQ:66:SER:O	17:XQ:70:ARG:NH1	2.33	0.61
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.32	0.61
1:QA:127:G:O2'	17:QQ:2:PRO:O	2.17	0.61
1:QA:501:C:H2'	1:QA:502:G:H8	1.65	0.61
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.65	0.61
2:QB:6:THR:O	2:QB:217:ARG:NH1	2.33	0.61
22:QV:8:U:O4	22:QV:14:A:N7	2.33	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2738:A:N1	25:RA:2766:G:O6	2.34	0.61
1:QA:429:U:C3'	4:QD:22:LYS:NZ	2.63	0.61
1:QA:976:G:H5'	1:QA:1358:U:O2'	2.00	0.61
25:RA:2091:U:O2'	25:RA:2092:U:OP1	2.18	0.61
5:XE:76:ILE:HG12	5:XE:118:ILE:HD11	1.82	0.61
25:YA:1281:G:C8	25:YA:1281:G:H3'	2.35	0.61
42:YW:14:PRO:HG2	42:YW:78:GLU:HG2	1.83	0.61
1:QA:501:C:H2'	1:QA:502:G:C8	2.36	0.61
25:RA:807:U:H2'	25:RA:808:G:H8	1.66	0.61
25:RA:1420:U:O2'	25:RA:1421:G:OP1	2.18	0.61
25:RA:1639:U:O2'	25:RA:2699:C:H4'	2.01	0.61
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.35	0.61
25:YA:1438:U:H2'	25:YA:1439:A:H8	1.64	0.61
25:RA:589:C:H2'	25:RA:590:A:H8	1.62	0.61
25:RA:833:U:O2	35:RP:55:ARG:NH2	2.33	0.61
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD23	1.82	0.61
1:XA:1318:A:OP1	19:XS:3:ARG:NH2	2.33	0.61
30:YG:98:ARG:NH1	50:Y4:1:MET:SD	2.73	0.61
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.36	0.61
2:XB:107:THR:HA	2:XB:110:GLN:HG3	1.83	0.61
25:YA:1250:G:OP2	35:YP:21:ARG:NH1	2.32	0.61
49:R3:17:LYS:HA	49:R3:20:LYS:HB2	1.81	0.61
1:XA:367:U:H4'	1:XA:368:U:OP2	1.98	0.61
7:XG:50:ILE:HD11	7:XG:58:PRO:HB3	1.83	0.61
21:XU:8:THR:HG23	21:XU:11:GLY:H	1.65	0.61
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.33	0.61
35:YP:96:THR:HG22	35:YP:99:LEU:HD23	1.82	0.61
1:QA:947:G:O3'	13:QM:109:THR:OG1	2.18	0.61
1:QA:1279:A:OP2	10:QJ:9:ARG:NH1	2.33	0.61
1:QA:1328:C:O2'	13:QM:29:ARG:NH2	2.33	0.61
2:QB:47:THR:HA	2:QB:202:PRO:HG2	1.81	0.61
25:RA:2809:A:OP2	25:RA:2891:G:N1	2.28	0.61
31:YH:149:ARG:NH2	31:YH:167:GLU:OE2	2.34	0.61
1:QA:1359:C:O2'	1:QA:1361:G:N7	2.32	0.61
1:QA:1496:C:H2'	1:QA:1497:G:C8	2.36	0.61
3:QC:64:VAL:N	3:QC:98:ASN:O	2.33	0.61
5:QE:33:VAL:HG21	5:QE:109:ILE:HA	1.82	0.61
16:QP:1:MET:SD	16:QP:1:MET:N	2.70	0.61
25:RA:1651:G:H1	25:RA:2006:C:H42	1.48	0.61
25:YA:806:C:OP2	35:YP:37:GLY:HA2	2.01	0.61
28:YE:9:VAL:HG13	28:YE:25:VAL:HG13	1.83	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:53:THR:HG23	29:YF:55:GLY:H	1.66	0.61
53:Y7:34:ARG:NH1	53:Y7:41:ARG:O	2.34	0.61
1:QA:1052:U:H3	1:QA:1206:G:H1	1.47	0.61
1:QA:1149:C:O2'	1:QA:1280:A:N1	2.34	0.61
1:QA:1268:A:N3	1:QA:1326:C:O2'	2.32	0.61
25:RA:329:G:OP1	44:RY:71:LYS:NZ	2.34	0.61
45:RZ:100:VAL:O	45:RZ:123:ASP:HA	1.99	0.61
1:XA:358:U:C6	1:XA:358:U:C3'	2.84	0.61
1:XA:1128:C:O2'	1:XA:1147:C:N3	2.33	0.61
25:YA:2747:G:H21	25:YA:2757:A:H62	1.47	0.61
26:YB:108:U:H2'	26:YB:109:C:H5''	1.83	0.61
1:QA:244:U:O4	1:QA:893:C:C4	2.54	0.60
1:QA:244:U:O4	1:QA:893:C:N3	2.33	0.60
25:RA:1190:G:H2'	25:RA:1191:G:H8	1.64	0.60
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.74	0.60
3:XC:3:ASN:HB2	3:XC:4:LYS:HG2	1.83	0.60
16:XP:20:VAL:HG12	16:XP:35:LYS:HA	1.83	0.60
25:YA:2281:C:O2'	25:YA:2282:G:H5'	2.00	0.60
29:YF:60:SER:OG	29:YF:61:GLY:N	2.34	0.60
1:QA:750:G:O2'	15:QO:21:ASP:OD1	2.18	0.60
1:QA:1434:A:H62	1:QA:1467:G:H21	1.48	0.60
7:QG:101:LEU:HA	7:QG:104:LEU:HD12	1.82	0.60
25:RA:707:G:H1	25:RA:724:U:H3	1.48	0.60
27:RD:208:LYS:HG3	27:RD:210:GLY:H	1.66	0.60
1:XA:452:A:N7	1:XA:480:U:O4	2.34	0.60
27:YD:133:LEU:HA	27:YD:136:ILE:HD12	1.82	0.60
33:YN:1:MET:HG2	40:YU:93:LYS:HD3	1.84	0.60
1:QA:976:G:N2	1:QA:1363(A):C:OP2	2.28	0.60
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.82	0.60
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.82	0.60
3:QC:63:ASN:HA	3:QC:98:ASN:HB3	1.83	0.60
25:RA:227:A:N6	25:RA:410:G:H21	1.99	0.60
25:RA:1593:G:H2'	25:RA:1594:G:H8	1.66	0.60
50:R4:26:SER:OG	50:R4:27:THR:N	2.35	0.60
1:XA:1375:A:O2'	7:XG:29:LYS:NZ	2.32	0.60
10:XJ:28:ARG:NH2	10:XJ:34:VAL:O	2.34	0.60
25:YA:1263:U:O2'	25:YA:1264:G:H5'	2.01	0.60
1:QA:427:U:P	4:QD:13:ARG:HH22	2.24	0.60
1:QA:790:A:OP1	22:QV:38:A:O2'	2.19	0.60
2:QB:82:ARG:NH1	2:QB:150:SER:OG	2.34	0.60
25:RA:848:G:H2'	25:RA:849:A:H8	1.66	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1592:C:H2'	25:RA:1593:G:H8	1.66	0.60
25:RA:2246:G:H2'	25:RA:2247:A:H8	1.65	0.60
1:XA:1402:4OC:HM22	1:XA:1403:C:H5'	1.84	0.60
25:RA:247:G:O2'	25:RA:250:G:O6	2.19	0.60
25:RA:1341:U:OP1	25:RA:1397:U:N3	2.32	0.60
25:RA:1607:C:N4	25:RA:1622:G:OP2	2.34	0.60
10:XJ:84:GLN:O	10:XJ:88:LEU:HB2	2.01	0.60
20:XT:50:GLU:HB2	20:XT:99:LEU:HD12	1.82	0.60
25:YA:806:C:O2	25:YA:2444:G:O2'	2.16	0.60
25:YA:814:C:O2'	25:YA:1224:C:N3	2.34	0.60
25:YA:1030:G:OP2	36:YQ:128:LYS:NZ	2.34	0.60
25:YA:2099:U:O4	25:YA:2190:G:O6	2.19	0.60
29:YF:70:THR:OG1	29:YF:71:GLY:N	2.34	0.60
13:QM:14:ARG:NH2	13:QM:16:ASP:OD2	2.32	0.60
21:QU:10:ARG:HA	21:QU:13:ILE:HD12	1.82	0.60
25:RA:574:C:N3	28:RE:145:LYS:NZ	2.41	0.60
25:RA:971:C:O2'	25:RA:983:A:N3	2.30	0.60
25:RA:1687:G:N2	25:RA:1702:G:O6	2.34	0.60
25:RA:1941:C:N4	25:RA:1965:C:O4'	2.35	0.60
1:XA:689:C:OP1	11:XK:27:ASN:ND2	2.34	0.60
25:YA:1693:U:O2'	27:YD:14:ARG:NH2	2.35	0.60
25:YA:2845:G:H2'	25:YA:2846:G:H8	1.67	0.60
41:YV:56:SER:OG	41:YV:57:VAL:N	2.34	0.60
2:QB:144:ARG:NH1	2:QB:148:TYR:OH	2.35	0.60
16:QP:21:VAL:HG22	16:QP:33:ILE:HD12	1.83	0.60
25:RA:1592:C:H2'	25:RA:1593:G:C8	2.36	0.60
25:RA:2223:G:OP1	27:RD:172:TYR:OH	2.13	0.60
1:XA:579:G:O3'	15:XO:54:ARG:NH2	2.34	0.60
2:XB:80:ILE:HG22	2:XB:215:LEU:HD23	1.84	0.60
25:YA:380:U:H2'	25:YA:381:G:H8	1.67	0.60
25:YA:1009:A:OP2	33:YN:37:LYS:NZ	2.34	0.60
25:YA:1754:C:P	39:YT:96:ARG:HH12	2.24	0.60
25:YA:2451:A:C2	56:ZB:3:PPU:HD2	2.37	0.60
37:YR:8:ARG:NH1	37:YR:43:GLU:OE2	2.35	0.60
25:RA:964:C:O2'	25:RA:2273:A:N3	2.29	0.60
45:RZ:48:PHE:O	45:RZ:52:SER:HB3	2.01	0.60
1:XA:673:G:O3'	6:XF:87:ARG:NH2	2.34	0.60
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.34	0.60
1:QA:1103:C:H5'	2:QB:98:LEU:HD11	1.83	0.60
4:QD:20:TYR:CE2	6:XF:15:ASP:HB3	2.36	0.60
4:QD:31:CYS:HA	58:QD:303:SF4:S1	2.41	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:152:LYS:HG3	33:RN:77:GLY:C	2.21	0.60
1:XA:1261:A:H62	1:XA:1274:G:H21	1.50	0.60
25:YA:392:C:H5''	25:YA:409:C:H5''	1.82	0.60
1:QA:297:G:N2	1:QA:300:A:OP2	2.35	0.60
11:QK:23:ALA:HA	11:QK:28:THR:HG23	1.83	0.60
25:RA:238:C:O2'	25:RA:608:A:N3	2.27	0.60
25:RA:1782:C:O2	25:RA:2608:G:O2'	2.14	0.60
1:XA:1026:G:N2	1:XA:1027:C:O2	2.35	0.60
1:XA:1442(A):G:O2'	1:XA:1442(B):G:O5'	2.17	0.60
25:YA:414:C:H2'	25:YA:415:A:H8	1.67	0.60
1:QA:1323:G:HO2'	1:QA:1362:C:HO2'	1.46	0.59
25:RA:1190:G:O2'	25:RA:1191:G:H5'	2.01	0.59
30:RG:173:LEU:O	30:RG:177:GLY:N	2.34	0.59
1:XA:192:U:O2'	20:XT:60:GLU:OE2	2.16	0.59
25:YA:1280:G:H2'	25:YA:1281:G:H5'	1.83	0.59
31:YH:107:VAL:O	31:YH:152:ARG:NH2	2.35	0.59
35:YP:29:LYS:HD3	35:YP:30:THR:HG23	1.83	0.59
37:RR:104:ARG:HG3	37:RR:111:LEU:HD21	1.84	0.59
1:XA:1329:A:H62	21:XU:7:ARG:HH22	1.48	0.59
2:XB:168:THR:HA	2:XB:171:ALA:HB2	1.83	0.59
22:XV:53:G:O2'	22:XV:54:U:O5'	2.18	0.59
25:YA:633:A:O2'	25:YA:2404:C:OP1	2.18	0.59
25:YA:1696:G:N2	25:YA:1977:A:O2'	2.32	0.59
38:YS:27:SER:HA	38:YS:88:ASP:HB3	1.84	0.59
25:RA:1467:C:H5	25:RA:1546:C:H2'	1.65	0.59
28:YE:11:MET:HG2	28:YE:24:THR:HG22	1.84	0.59
45:YZ:5:LEU:H	45:YZ:59:LEU:HA	1.66	0.59
1:QA:324:G:H5'	20:QT:22:ARG:HH21	1.67	0.59
1:QA:632:A:H3'	1:QA:633:G:H8	1.68	0.59
14:QN:47:LEU:HD12	14:QN:52:GLN:HB2	1.84	0.59
25:RA:1110:G:OP2	25:RA:1110:G:H2'	2.02	0.59
1:XA:372:C:H42	1:XA:389:A:H62	1.51	0.59
25:RA:1337:G:H2'	25:RA:1338:G:H8	1.68	0.59
4:XD:5:ILE:O	4:XD:115:ARG:NH1	2.35	0.59
19:XS:77:THR:HG23	19:XS:78:ARG:HG3	1.84	0.59
1:QA:79:G:H1	1:QA:90:U:H3	1.51	0.59
26:RB:107:G:H5'	45:RZ:31:ARG:NH1	2.18	0.59
29:RF:124:LEU:HB2	29:RF:193:VAL:HG12	1.85	0.59
32:RI:88:ILE:HG22	32:RI:90:GLY:H	1.67	0.59
1:XA:1271:G:H5'	1:XA:1314:C:H5'	1.85	0.59
13:XM:34:LEU:HD11	13:XM:41:PRO:HA	1.85	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:687:C:H42	25:YA:787:U:H4'	1.68	0.59
25:YA:2820:A:OP1	37:YR:2:ARG:NH2	2.36	0.59
1:QA:1304:G:OP1	21:QU:2:GLY:N	2.35	0.59
2:QB:54:THR:HG22	2:QB:199:TYR:HB3	1.84	0.59
32:RI:69:LYS:HG3	32:RI:70:GLU:HG2	1.85	0.59
1:XA:272:C:H2'	1:XA:273:A:H8	1.68	0.59
22:XV:3:C:O2'	22:XV:4:G:H5'	2.02	0.59
39:YT:16:ARG:NH2	39:YT:83:ILE:O	2.30	0.59
1:QA:559:A:H4'	1:QA:560:U:H3'	1.84	0.59
3:QC:81:GLY:O	3:QC:85:ARG:NH1	2.36	0.59
7:QG:68:ASN:ND2	7:QG:127:ALA:O	2.35	0.59
25:RA:826:U:H5''	25:RA:2429:G:OP2	2.03	0.59
25:RA:958:U:OP1	36:RQ:74:TYR:OH	2.10	0.59
25:RA:2031:A:N3	25:RA:2455:G:O2'	2.33	0.59
34:RO:63:VAL:HB	34:RO:102:VAL:HG13	1.83	0.59
1:XA:1079:G:O3'	5:XE:14:ARG:NH2	2.35	0.59
4:XD:21:LEU:HD23	58:XD:302:SF4:S3	2.43	0.59
25:YA:1216:G:P	40:YU:11:ARG:HH21	2.24	0.59
25:YA:2452:C:H42	25:YA:2504:U:H3	1.50	0.59
54:Y8:11:LYS:NZ	54:Y8:65:GLU:OE2	2.32	0.59
1:QA:151:A:H62	1:QA:170:U:H3	1.48	0.59
1:QA:359:U:H2'	1:QA:360:A:H8	1.67	0.59
25:RA:2081:C:H2'	25:RA:2082:A:H8	1.68	0.59
29:RF:60:SER:OG	29:RF:61:GLY:N	2.36	0.59
30:RG:104:GLU:O	30:RG:108:ASN:ND2	2.35	0.59
31:RH:51:ARG:HG3	31:RH:69:ARG:HH22	1.68	0.59
1:XA:426:G:OP1	4:XD:38:TYR:OH	2.17	0.59
1:XA:673:G:H2'	1:XA:674:G:C8	2.37	0.59
1:XA:1010:G:H2'	1:XA:1011:G:H8	1.66	0.59
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.37	0.59
4:XD:6:GLY:O	4:XD:8:VAL:HG12	2.03	0.59
25:YA:32:C:H2'	25:YA:33:U:C6	2.38	0.59
25:YA:856:C:O2'	25:YA:857:C:OP1	2.17	0.59
1:QA:1330:U:H4'	13:QM:23:TYR:CZ	2.37	0.59
50:R4:14:ILE:HB	50:R4:22:ILE:HB	1.84	0.59
4:XD:8:VAL:HA	4:XD:11:LEU:HD13	1.84	0.59
25:YA:301:G:OP2	44:YY:84:ARG:NH2	2.36	0.59
25:YA:1316:U:H2'	25:YA:1317:A:C8	2.38	0.59
25:YA:2468:G:O2'	25:YA:2469:A:OP2	2.20	0.59
25:YA:2737:G:H2'	25:YA:2738:A:C8	2.37	0.59
27:YD:108:PRO:HA	27:YD:196:VAL:HA	1.84	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Y9:16:VAL:HG12	55:Y9:25:VAL:HG22	1.85	0.59
1:QA:1069:C:O2'	1:QA:1192:C:O2	2.15	0.58
9:QI:128:ARG:NE	22:QV:32:C:OP2	2.36	0.58
45:RZ:151:HIS:HA	45:RZ:170:THR:HA	1.85	0.58
13:XM:78:ILE:HA	13:XM:81:LEU:HD12	1.85	0.58
1:QA:658:G:OP1	15:QO:31:LEU:HD11	2.03	0.58
1:QA:1079:G:O3'	5:QE:14:ARG:NH2	2.36	0.58
1:QA:1307:U:H2'	1:QA:1308:U:C6	2.38	0.58
25:RA:153:C:OP2	47:R1:92:LYS:NZ	2.35	0.58
29:RF:51:THR:OG1	29:RF:52:LYS:N	2.30	0.58
1:XA:337:C:H2'	1:XA:338:A:H8	1.69	0.58
1:XA:1236:A:H4'	1:XA:1304:G:H4'	1.84	0.58
1:QA:692:U:H3	11:QK:53:SER:HG	1.51	0.58
1:QA:1202:G:H4'	14:QN:29:ARG:HE	1.68	0.58
2:QB:109:SER:O	2:QB:113:HIS:ND1	2.35	0.58
3:QC:3:ASN:HB2	3:QC:4:LYS:HG3	1.83	0.58
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.37	0.58
25:RA:1035:U:H3	25:RA:1120:G:H1	1.51	0.58
1:XA:280:C:H42	17:XQ:39:SER:HB3	1.68	0.58
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.38	0.58
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.85	0.58
53:Y7:34:ARG:HG2	53:Y7:39:ARG:HG3	1.85	0.58
1:QA:454:C:OP1	16:QP:75:ARG:NH2	2.36	0.58
1:QA:918:A:H2'	1:QA:919:A:C8	2.39	0.58
3:QC:19:GLU:O	3:QC:40:ARG:NH2	2.36	0.58
45:RZ:126:VAL:HG12	45:RZ:163:LEU:HA	1.85	0.58
1:XA:67:C:H2'	1:XA:68:G:C8	2.39	0.58
1:XA:1437:C:H2'	1:XA:1438:G:H8	1.69	0.58
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.02	0.58
31:YH:47:GLU:H	31:YH:47:GLU:CD	2.07	0.58
44:YY:31:LEU:HB2	44:YY:36:ALA:HB3	1.84	0.58
1:QA:187:C:O2	20:QT:89:ARG:NH2	2.37	0.58
1:QA:1326:C:OP1	21:QU:17:THR:OG1	2.17	0.58
17:QQ:66:SER:H	17:QQ:69:LYS:HB3	1.68	0.58
1:XA:593:G:H1	1:XA:646:U:H3	1.50	0.58
25:YA:320:A:N3	29:YF:169:ASN:ND2	2.52	0.58
25:YA:1639:U:H2'	25:YA:1640:C:H5''	1.84	0.58
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.69	0.58
1:QA:631:G:H2'	1:QA:632:A:C8	2.38	0.58
1:QA:1397:C:O4'	23:QX:23:A:N6	2.36	0.58
13:QM:88:ARG:O	13:QM:92:HIS:ND1	2.34	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:4:G:O2'	22:QV:5:G:O5'	2.22	0.58
25:RA:699:A:N3	25:RA:1633:G:O2'	2.34	0.58
25:RA:2065:C:H1'	25:RA:2449:U:H3	1.67	0.58
25:RA:2345:G:O6	25:RA:2371:G:N2	2.34	0.58
1:XA:359:U:H3'	1:XA:360:A:C8	2.38	0.58
1:XA:1422:G:H5''	34:YO:48:PRO:HB3	1.86	0.58
41:YV:76:LYS:HB2	41:YV:81:TYR:HB3	1.84	0.58
44:YY:9:LYS:NZ	44:YY:28:LYS:O	2.34	0.58
4:QD:191:ARG:HH12	4:QD:195:ALA:HA	1.67	0.58
25:RA:1529:G:H1	25:RA:1540:U:H3	1.49	0.58
1:XA:390:C:H2'	1:XA:391:G:C8	2.39	0.58
25:YA:1196:C:HO2'	25:YA:1227:G:HO2'	1.42	0.58
1:QA:829:G:O6	1:QA:858:G:N2	2.36	0.58
1:QA:1059:C:O3'	14:QN:45:ARG:NH2	2.35	0.58
3:QC:18:TRP:HB3	3:QC:20:SER:H	1.69	0.58
12:QL:74:GLY:O	12:QL:102:ARG:NH2	2.33	0.58
25:RA:1790:C:H5''	25:RA:1791:A:OP1	2.03	0.58
25:RA:1856:G:H1	25:RA:1886:C:H42	1.50	0.58
25:RA:2355:C:H1'	46:R0:39:ARG:HE	1.68	0.58
25:RA:2511:U:O2'	28:RE:138:PRO:O	2.18	0.58
27:RD:134:ARG:NH1	27:RD:187:GLY:HA3	2.19	0.58
1:XA:461:A:O2'	1:XA:471:G:N7	2.31	0.58
1:XA:1071:C:H2'	1:XA:1072:G:H8	1.68	0.58
16:XP:18:ARG:NH1	16:XP:32:TYR:OH	2.37	0.58
25:YA:277:C:O3'	25:YA:278:A:C8	2.57	0.58
25:YA:1102:C:H2'	25:YA:1103:A:H8	1.69	0.58
25:YA:1818:U:OP2	27:YD:157:ARG:NE	2.27	0.58
25:YA:2446:G:H21	25:YA:2449:U:H3	1.52	0.58
1:QA:545:C:H5'	4:QD:72:GLU:HG3	1.85	0.58
13:QM:108:ARG:NH1	13:QM:112:GLY:O	2.37	0.58
5:QE:76:ILE:HG12	5:QE:118:ILE:HD11	1.86	0.58
25:RA:660:G:N2	35:RP:12:ALA:O	2.37	0.58
25:RA:848:G:H2'	25:RA:849:A:C8	2.38	0.58
26:RB:45:A:O4'	30:RG:95:ARG:NH1	2.36	0.58
29:YF:29:ASN:N	29:YF:112:MET:SD	2.76	0.58
41:YV:50:PRO:HB2	41:YV:51:VAL:HG22	1.85	0.58
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.85	0.57
25:RA:889:C:O2'	25:RA:890:A:O5'	2.22	0.57
25:RA:1378:A:OP1	53:R7:10:ARG:NH2	2.37	0.57
25:RA:2555:U:N3	56:ZA:1:C:C6	2.71	0.57
28:RE:53:PRO:HA	28:RE:75:VAL:HA	1.85	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:371:G:O2'	1:XA:373:A:N7	2.37	0.57
1:XA:514:C:H2'	1:XA:515:G:C8	2.38	0.57
5:XE:94:ALA:HB1	5:XE:98:THR:HG21	1.86	0.57
20:XT:22:ARG:HA	20:XT:25:ARG:HG2	1.86	0.57
25:YA:201:C:H4'	25:YA:386:G:C2	2.39	0.57
28:YE:119:ARG:NH1	28:YE:156:MET:O	2.37	0.57
1:QA:927:G:N2	1:QA:1390:U:O2	2.32	0.57
36:RQ:23:GLY:O	36:RQ:101:ARG:NH1	2.37	0.57
1:XA:373:A:H2'	1:XA:374:A:C8	2.38	0.57
25:YA:277:C:O3'	25:YA:278:A:H8	1.87	0.57
25:YA:1137:G:H2'	25:YA:1138:G:C8	2.39	0.57
25:YA:2156:G:N7	25:YA:2157:G:N2	2.51	0.57
25:YA:2641:G:H2'	25:YA:2642:G:H8	1.68	0.57
49:Y3:12:PRO:HA	49:Y3:15:TYR:CD1	2.28	0.57
1:QA:877:C:H2'	1:QA:878:G:H8	1.68	0.57
25:RA:320:A:O2'	25:RA:322:A:OP2	2.15	0.57
26:RB:37:C:O2	38:RS:95:HIS:NE2	2.35	0.57
20:XT:31:SER:O	20:XT:35:THR:OG1	2.22	0.57
25:YA:272(Q):G:H2'	25:YA:272(R):G:H8	1.69	0.57
25:YA:1086:A:O2'	25:YA:1103:A:N1	2.37	0.57
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.37	0.57
36:YQ:141:GLN:NE2	45:YZ:74:VAL:O	2.37	0.57
1:QA:8:A:N6	4:QD:205:GLU:O	2.37	0.57
25:RA:1991:U:H2'	25:RA:1992:G:H5''	1.86	0.57
25:RA:2882:A:OP1	37:RR:96:ARG:NE	2.37	0.57
1:XA:36:C:O2'	12:XL:117:ARG:NH2	2.36	0.57
1:XA:1073:U:O2	2:XB:104:ASN:ND2	2.35	0.57
2:XB:178:ARG:HB3	8:XH:72:PRO:HA	1.85	0.57
24:XY:38:A:H2'	24:XY:39:A:C8	2.38	0.57
25:YA:1388:G:H2'	25:YA:1389:G:H8	1.69	0.57
25:YA:1813:G:H21	27:YD:51:VAL:HG23	1.70	0.57
25:YA:2162:G:OP1	25:YA:2172:U:O2'	2.22	0.57
1:QA:429:U:P	4:QD:13:ARG:HH12	2.25	0.57
10:QJ:14:LYS:NZ	10:QJ:17:ASP:OD2	2.36	0.57
25:RA:478:A:N7	25:RA:480:A:N6	2.53	0.57
25:RA:521:G:H2'	25:RA:522:G:H8	1.68	0.57
25:RA:1697:G:H3'	25:RA:1698:A:H2'	1.87	0.57
25:RA:1802:A:H2'	25:RA:1803:A:C8	2.40	0.57
25:RA:2305:A:H5''	30:RG:134:GLY:HA3	1.85	0.57
25:RA:2317:C:N4	25:RA:2318:G:O6	2.37	0.57
43:RX:8:ILE:O	48:R2:36:ARG:NH2	2.33	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:60:LEU:HB3	12:XL:62:SER:H	1.70	0.57
25:YA:1816:G:O6	27:YD:35:LYS:NZ	2.38	0.57
25:YA:1853:A:N3	25:YA:2233:U:O2'	2.35	0.57
4:QD:64:LEU:HA	4:QD:67:ILE:HD12	1.86	0.57
5:QE:43:LEU:HD21	5:QE:109:ILE:HD12	1.87	0.57
25:RA:2818:G:H1	25:RA:2828:C:H42	1.51	0.57
30:RG:19:LEU:HD21	30:RG:32:PRO:HD2	1.87	0.57
1:XA:580:U:O4	1:XA:761:G:O6	2.22	0.57
25:YA:1761:C:H42	25:YA:1762:A:H62	1.53	0.57
25:YA:1853:A:H1'	25:YA:2234:G:H5'	1.86	0.57
28:YE:82:ARG:NH1	28:YE:83:ASP:OD1	2.37	0.57
49:Y3:3:ARG:HD3	49:Y3:60:GLU:HG2	1.84	0.57
1:QA:132:C:H5'	1:QA:262:A:H1'	1.85	0.57
7:QG:29:LYS:HB3	7:QG:105:VAL:HG11	1.86	0.57
25:RA:61:G:H1	25:RA:94(A):C:H42	1.53	0.57
25:RA:1294:U:O2	37:RR:23:ASN:ND2	2.37	0.57
25:RA:2220:G:C8	25:RA:2220:G:H3'	2.39	0.57
25:RA:2405:G:O2'	25:RA:2406:U:OP1	2.18	0.57
25:RA:2698:U:H3	25:RA:2709:G:H1	1.53	0.57
1:XA:927:G:N2	1:XA:1390:U:O2	2.32	0.57
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.40	0.57
11:XK:33:THR:HA	11:XK:39:PRO:HA	1.86	0.57
39:YT:73:GLU:OE1	39:YT:103:ARG:NE	2.37	0.57
9:QI:104:ARG:NH1	9:QI:105:ASP:O	2.38	0.57
25:RA:551:G:O2'	25:RA:1220:A:N3	2.30	0.57
25:RA:1528(B):A:H62	25:RA:1541:G:N2	2.03	0.57
28:RE:143:ASN:HD22	28:RE:147:PRO:HG3	1.70	0.57
1:XA:436:C:H2'	1:XA:437:U:H6	1.69	0.57
25:YA:639:U:H2'	25:YA:640:C:C6	2.40	0.57
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.36	0.57
25:YA:994:C:OP1	40:YU:53:ARG:NH2	2.37	0.57
29:YF:51:THR:OG1	29:YF:52:LYS:N	2.36	0.57
1:QA:28:G:OP1	4:QD:76:ARG:NH2	2.34	0.57
1:QA:246:A:N1	1:QA:278:G:O2'	2.36	0.57
25:RA:1389:G:H2'	25:RA:1390:U:C6	2.40	0.57
25:RA:1842:G:H2'	25:RA:1843:C:C6	2.39	0.57
25:RA:2221:G:H5''	25:RA:2222:G:OP2	2.05	0.57
1:XA:390:C:H2'	1:XA:391:G:H8	1.69	0.57
1:XA:781:A:H4'	1:XA:1522:U:O2'	2.04	0.57
1:XA:976:G:N2	1:XA:1363(A):C:OP2	2.29	0.57
10:XJ:61:GLU:OE1	14:YN:58:LYS:NZ	2.37	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:665:C:H2'	25:YA:666:G:H8	1.69	0.57
25:YA:2773:C:OP1	28:YE:166:THR:OG1	2.23	0.57
9:QI:46:ALA:HA	9:QI:78:LYS:HD3	1.86	0.57
13:QM:90:LEU:HA	13:QM:93:ARG:HE	1.69	0.57
25:RA:1385:G:O2'	25:RA:1396:U:O2	2.21	0.57
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.34	0.57
32:RI:129:THR:HA	32:RI:137:PRO:HA	1.87	0.57
35:RP:52:GLU:OE1	35:RP:55:ARG:NH1	2.38	0.57
25:YA:205:G:O2'	25:YA:206:U:OP2	2.23	0.57
25:YA:1790:C:H5''	25:YA:1791:A:OP1	2.05	0.57
29:YF:124:LEU:HD23	29:YF:191:ARG:HH12	1.69	0.57
40:YU:43:GLY:HA3	41:YV:73:SER:HB3	1.86	0.57
1:QA:1295:G:O2'	13:QM:14:ARG:NH1	2.38	0.56
5:QE:139:LEU:HA	5:QE:142:LEU:HD13	1.87	0.56
25:RA:1754:C:P	39:RT:96:ARG:HH12	2.27	0.56
38:RS:34:HIS:ND1	38:RS:53:SER:OG	2.34	0.56
53:R7:34:ARG:NH1	53:R7:41:ARG:O	2.38	0.56
5:XE:102:ALA:O	5:XE:107:ARG:NH1	2.38	0.56
25:YA:860:U:H2'	25:YA:861:A:C8	2.40	0.56
25:YA:1065:U:HO2'	25:YA:1066:U:P	2.27	0.56
1:QA:184:G:H2'	1:QA:185:A:H8	1.69	0.56
4:QD:191:ARG:NH1	4:QD:194:LEU:O	2.37	0.56
25:RA:10:G:O2'	25:RA:2801(B):A:N6	2.37	0.56
25:RA:1227:G:OP2	40:RU:16:LYS:NZ	2.38	0.56
2:XB:92:TYR:OH	2:XB:150:SER:OG	2.24	0.56
25:YA:615:G:OP2	29:YF:43:LYS:NZ	2.27	0.56
25:YA:2637:U:O4	25:YA:2776:A:N7	2.38	0.56
40:YU:44:ASN:ND2	41:YV:75:PHE:O	2.34	0.56
45:YZ:19:ARG:NH1	45:YZ:84:GLU:O	2.37	0.56
1:QA:384:G:H2'	1:QA:385:C:C6	2.40	0.56
1:QA:982:U:N3	1:QA:1223:C:N4	2.35	0.56
1:QA:1240:U:N3	7:QG:30:ILE:O	2.34	0.56
13:QM:67:GLU:OE1	13:QM:71:ARG:NH1	2.38	0.56
25:RA:1827:C:OP2	27:RD:222:ARG:NH1	2.38	0.56
25:RA:2080:G:OP1	47:R1:35:THR:HG21	2.06	0.56
25:RA:2572:A:OP2	28:RE:146:THR:OG1	2.20	0.56
27:RD:143:HIS:ND1	27:RD:194:GLY:O	2.37	0.56
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.70	0.56
1:XA:584:G:H1	1:XA:757:U:H3	1.52	0.56
1:XA:736:C:H2'	1:XA:737:A:H8	1.69	0.56
6:XF:81:ILE:HG21	27:YD:125:ILE:HD13	1.86	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:90:LEU:HD23	13:XM:93:ARG:HD2	1.86	0.56
25:YA:1137:G:H2'	25:YA:1138:G:H8	1.71	0.56
25:YA:1508:A:H4'	25:YA:1509(B):A:C4	2.40	0.56
27:YD:72:LYS:NZ	27:YD:99:ASP:OD2	2.34	0.56
25:RA:272(I):G:H1	25:RA:272(O):C:H42	1.54	0.56
25:RA:820:A:H2'	25:RA:821:A:C8	2.40	0.56
29:RF:195:ASP:HB2	29:RF:198:ALA:H	1.70	0.56
1:XA:1456:G:N1	20:XT:51:GLU:OE1	2.38	0.56
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.41	0.56
56:ZB:3:PPU:H93	56:ZB:3:PPU:N7	2.19	0.56
1:QA:1099:G:OP2	2:QB:144:ARG:NH1	2.30	0.56
11:QK:110:ASP:HB3	18:QR:85:LEU:HB2	1.87	0.56
13:QM:16:ASP:N	13:QM:16:ASP:OD1	2.38	0.56
25:RA:2591:C:H2'	25:RA:2592:G:C8	2.40	0.56
26:RB:19:G:H1	26:RB:64:C:H42	1.52	0.56
45:RZ:102:LEU:HD11	45:RZ:124:ILE:HG12	1.88	0.56
1:XA:1427:U:H2'	1:XA:1428:A:H8	1.69	0.56
25:YA:1299:G:H21	25:YA:1641:A:H62	1.52	0.56
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.69	0.56
8:QH:36:LEU:HD13	8:QH:39:LEU:HD13	1.86	0.56
25:RA:358:U:H2'	25:RA:359:A:H8	1.70	0.56
25:RA:628:G:H5''	54:R8:18:ALA:HB2	1.87	0.56
25:RA:1800:C:OP2	27:RD:183:ARG:NH2	2.38	0.56
1:XA:8:A:N6	4:XD:205:GLU:O	2.39	0.56
1:XA:235:C:H2'	1:XA:236:G:H8	1.71	0.56
1:XA:489:C:H5''	4:XD:131:ARG:HH12	1.70	0.56
1:XA:1178:G:P	9:XI:93:ARG:HH21	2.29	0.56
1:XA:1524:C:H2'	1:XA:1525:G:C8	2.40	0.56
3:XC:17:ASP:O	3:XC:54:ARG:NH2	2.38	0.56
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.88	0.56
25:YA:1639:U:C2'	25:YA:1640:C:H5''	2.35	0.56
29:YF:11:VAL:HG22	29:YF:125:LEU:HB2	1.88	0.56
55:Y9:25:VAL:HB	55:Y9:34:GLN:HB2	1.88	0.56
1:QA:922:G:H2'	1:QA:923:A:H8	1.71	0.56
1:QA:1336:C:H5'	1:QA:1337:G:C2	2.40	0.56
14:QN:22:THR:OG1	14:QN:33:VAL:HG23	2.05	0.56
25:RA:626:U:O4	35:RP:81:GLN:NE2	2.39	0.56
25:RA:869:G:H5'	36:RQ:6:ARG:HH22	1.70	0.56
25:RA:1041:C:H42	25:RA:1114:G:H1	1.54	0.56
25:RA:1301:A:H4'	25:RA:1302:A:OP1	2.06	0.56
27:RD:134:ARG:HH11	27:RD:187:GLY:CA	2.19	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:134:ARG:NH1	27:RD:187:GLY:CA	2.69	0.56
31:RH:89:ILE:HG22	31:RH:162:ILE:HG23	1.86	0.56
1:XA:344:A:H5'	1:XA:345:C:C5	2.41	0.56
1:XA:664:G:H22	1:XA:741:G:H1	1.54	0.56
29:YF:50:SER:OG	29:YF:51:THR:N	2.39	0.56
1:QA:1373:G:OP2	9:QI:71:SER:OG	2.22	0.56
25:RA:1153:C:OP1	40:RU:92:ARG:NH2	2.39	0.56
1:XA:737:A:H2'	1:XA:738:C:C6	2.40	0.56
1:XA:1095:U:OP1	1:XA:1108:G:N2	2.22	0.56
1:XA:1247:U:O4	1:XA:1290:G:O6	2.24	0.56
2:XB:192:SER:OG	2:XB:193:ASP:N	2.36	0.56
25:YA:330:A:O2'	25:YA:331:A:H8	1.89	0.56
25:YA:1573:G:H2'	25:YA:1574:C:H5'	1.88	0.56
1:QA:934:C:O2'	1:QA:1344:C:OP2	2.19	0.56
1:QA:1158:C:H5	1:QA:1181:G:H1	1.53	0.56
53:R7:24:THR:HG23	53:R7:27:GLY:H	1.70	0.56
1:XA:7:G:O2'	5:XE:120:THR:O	2.22	0.56
1:XA:1203:C:H2'	1:XA:1204:A:C8	2.41	0.56
1:XA:1320:C:H42	19:XS:36:ARG:HE	1.53	0.56
8:XH:111:ILE:HG22	8:XH:134:ILE:HD13	1.88	0.56
24:XY:37:G:O2'	25:YA:1913:A:N1	2.36	0.56
25:YA:851:U:OP1	49:Y3:49:LYS:NZ	2.27	0.56
40:YU:28:ARG:NH1	40:YU:38:THR:OG1	2.37	0.56
4:QD:166:LYS:HB2	4:QD:178:VAL:HG11	1.88	0.56
11:QK:33:THR:HA	11:QK:39:PRO:HA	1.88	0.56
25:RA:835:A:H2'	25:RA:836:G:H8	1.71	0.56
25:RA:1000:A:H2'	25:RA:1001:A:C8	2.41	0.56
36:RQ:75:THR:HA	36:RQ:90:VAL:HA	1.87	0.56
38:RS:25:ARG:NH1	38:RS:42:ASP:OD1	2.39	0.56
1:XA:62:U:O2'	1:XA:379:C:O2	2.24	0.56
1:XA:149:A:H61	1:XA:172:A:H62	1.52	0.56
25:YA:693:C:O2'	25:YA:1353:A:N3	2.38	0.56
25:YA:813:U:HO2'	25:YA:1225:G:HO2'	1.53	0.56
25:YA:855:G:O2'	46:Y0:27:GLU:OE2	2.20	0.56
25:YA:1453:U:H5'	37:YR:63:ARG:NE	2.20	0.56
25:YA:2266:A:H4'	25:YA:2267:A:N3	2.21	0.56
25:YA:2314:C:H2'	25:YA:2315:G:H8	1.71	0.56
38:YS:12:PHE:O	38:YS:16:ASN:ND2	2.38	0.56
1:QA:222:U:H2'	1:QA:223:U:C6	2.40	0.55
1:QA:1147:C:HO2'	9:QI:5:TYR:HH	1.54	0.55
1:QA:1422:G:H2'	1:QA:1423:G:C8	2.41	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:1:MET:N	6:QF:69:GLU:OE1	2.39	0.55
25:RA:870:A:H5'	36:RQ:6:ARG:HB3	1.88	0.55
25:RA:881:G:H22	25:RA:895:U:H3	1.53	0.55
25:RA:2086:U:H2'	25:RA:2087:G:H8	1.71	0.55
11:XK:45:GLY:HA2	11:XK:48:ILE:HD12	1.87	0.55
25:YA:604:G:OP2	35:YP:90:ARG:NH1	2.39	0.55
25:YA:1625:C:H2'	25:YA:1626:G:O4'	2.07	0.55
25:YA:2017:U:H5''	25:YA:2018:G:OP2	2.06	0.55
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.37	0.55
50:Y4:16:CYS:SG	50:Y4:17:GLY:N	2.79	0.55
1:QA:624:C:H2'	1:QA:625:G:H8	1.70	0.55
1:QA:745:C:H2'	1:QA:746:A:C8	2.41	0.55
1:QA:1427:U:H2'	1:QA:1428:A:C8	2.41	0.55
25:RA:2345:G:N3	25:RA:2381:C:H2'	2.21	0.55
25:RA:2744:G:N2	31:RH:143:GLN:OE1	2.32	0.55
39:RT:102:ILE:HA	39:RT:105:LEU:HD13	1.88	0.55
1:XA:1137:C:O2	1:XA:1138:G:N2	2.39	0.55
1:XA:1183:A:H3'	1:XA:1184:G:H5''	1.87	0.55
1:XA:1380:U:O4	7:XG:2:ALA:N	2.39	0.55
9:XI:21:PRO:HA	9:XI:59:PHE:HA	1.88	0.55
22:XV:23:C:H2'	22:XV:24:U:H6	1.72	0.55
25:YA:17:G:H4'	40:YU:25:TRP:HE1	1.69	0.55
27:YD:85:ASP:OD2	27:YD:88:ARG:NH1	2.39	0.55
37:YR:107:ASP:N	37:YR:107:ASP:OD1	2.36	0.55
1:QA:7:G:O2'	5:QE:120:THR:O	2.23	0.55
1:QA:34:C:H2'	1:QA:35:G:H8	1.72	0.55
1:QA:583:A:O2'	17:QQ:91:ARG:NH2	2.28	0.55
1:QA:826:C:O2	8:QH:15:ASN:ND2	2.39	0.55
4:QD:104:VAL:HA	4:QD:107:ARG:HB2	1.88	0.55
54:R8:22:VAL:HG13	54:R8:50:LEU:HB2	1.89	0.55
1:XA:399:G:H2'	1:XA:400:C:C6	2.42	0.55
27:YD:66:ASP:HB3	27:YD:105:ILE:HG22	1.88	0.55
1:QA:1235:U:O2'	1:QA:1305:G:OP1	2.15	0.55
22:QV:75:C:H42	25:RA:2251:OMG:HN1	1.55	0.55
25:RA:952:G:OP1	36:RQ:16:ARG:NH2	2.39	0.55
25:RA:1143:A:OP1	33:RN:25:ARG:NH2	2.35	0.55
25:RA:1270:C:H5''	25:RA:1271:G:H5'	1.88	0.55
25:RA:1316:U:H2'	25:RA:1317:A:H8	1.71	0.55
29:RF:116:ASP:OD2	29:RF:117:ARG:NH1	2.40	0.55
35:RP:85:LEU:HB2	35:RP:118:GLY:HA3	1.88	0.55
1:XA:923:A:O2'	1:XA:1399:C:OP2	2.23	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:3:ILE:HG21	15:XO:34:LEU:HD21	1.87	0.55
25:YA:637:A:OP2	35:YP:116:GLY:N	2.37	0.55
25:YA:658:C:O2'	25:YA:659:C:H5'	2.07	0.55
27:YD:44:ASN:ND2	27:YD:46:GLN:OE1	2.38	0.55
30:YG:29:TRP:O	30:YG:33:ARG:NH1	2.39	0.55
52:Y6:25:LYS:NZ	52:Y6:32:ASN:O	2.38	0.55
1:QA:187:C:OP1	20:QT:82:SER:OG	2.22	0.55
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.87	0.55
9:QI:96:LEU:O	9:QI:100:GLY:N	2.39	0.55
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.71	0.55
25:RA:535:C:H2'	25:RA:536:A:C8	2.41	0.55
25:RA:787:U:H5''	25:RA:788:A:H5'	1.87	0.55
39:RT:105:LEU:HD23	39:RT:109:GLU:HB3	1.88	0.55
45:RZ:19:ARG:NH1	45:RZ:84:GLU:O	2.37	0.55
1:XA:403:C:OP1	4:XD:137:SER:OG	2.24	0.55
1:XA:1525:G:OP1	11:XK:120:ARG:NH2	2.40	0.55
1:XA:1527:C:O2'	1:XA:1528:U:H5'	2.05	0.55
25:YA:1817:G:OP1	27:YD:88:ARG:NH2	2.39	0.55
25:YA:2115:G:N2	25:YA:2117:A:N7	2.54	0.55
1:QA:222:U:H2'	1:QA:223:U:H6	1.71	0.55
1:QA:279:A:N6	17:QQ:98:LEU:O	2.39	0.55
25:RA:1838:C:H4'	25:RA:1839:G:H5'	1.86	0.55
25:RA:2314:C:H2'	25:RA:2315:G:H8	1.71	0.55
25:RA:2450:A:N6	25:RA:2501:C:N4	2.54	0.55
25:RA:2506:U:O2	56:ZA:3:PPU:O2'	2.24	0.55
32:RI:94:ALA:HB1	32:RI:114:LEU:HD23	1.88	0.55
39:RT:66:VAL:HA	39:RT:71:GLY:HA2	1.89	0.55
1:XA:1098:C:H2'	1:XA:1099:G:C8	2.41	0.55
1:XA:1330:U:H4'	13:XM:23:TYR:CZ	2.41	0.55
25:YA:574:C:N3	28:YE:145:LYS:NZ	2.47	0.55
25:YA:2635:C:O2	28:YE:37:ARG:NH2	2.39	0.55
31:YH:94:TYR:OH	31:YH:152:ARG:NH2	2.39	0.55
1:QA:188:C:H2'	1:QA:189(A):G:H8	1.72	0.55
1:QA:938:A:H5'	7:QG:76:ARG:HH22	1.72	0.55
5:QE:140:ARG:O	5:QE:143:ARG:NH2	2.33	0.55
25:RA:700:G:O6	25:RA:733:G:N2	2.40	0.55
25:RA:991:C:OP2	25:RA:1186:G:H5'	2.07	0.55
25:RA:1889:A:H2'	25:RA:1890:A:C8	2.41	0.55
25:RA:2636:U:H3	25:RA:2782:G:H1	1.52	0.55
29:RF:117:ARG:NH2	29:RF:189:THR:O	2.38	0.55
40:RU:31:SER:OG	40:RU:33:ARG:N	2.39	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:5:CYS:HB3	47:R1:10:LYS:H	1.70	0.55
7:XG:113:GLU:O	7:XG:119:ARG:NH1	2.38	0.55
20:XT:78:ALA:HA	20:XT:81:LYS:HD3	1.88	0.55
25:YA:106:C:O2'	25:YA:294:A:O2'	2.25	0.55
25:YA:1593:G:H2'	25:YA:1594:G:C8	2.41	0.55
25:YA:1667:G:N2	25:YA:1992:G:OP2	2.39	0.55
25:YA:1697:G:OP2	25:YA:1698:A:O2'	2.22	0.55
25:YA:2818:G:O2'	25:YA:2836:U:O2'	2.21	0.55
2:QB:73:THR:O	2:QB:78:GLN:NE2	2.40	0.55
25:RA:2845:G:H2'	25:RA:2846:G:H8	1.72	0.55
1:XA:376:G:O3'	16:XP:5:ARG:NH1	2.39	0.55
4:XD:102:ASP:N	4:XD:102:ASP:OD1	2.37	0.55
13:XM:16:ASP:OD1	13:XM:16:ASP:N	2.37	0.55
25:YA:190:A:N3	25:YA:679:C:O2'	2.36	0.55
25:YA:466:A:N3	25:YA:683:C:H1'	2.21	0.55
25:YA:1239:G:H2'	25:YA:1240:U:O4'	2.06	0.55
25:YA:1819:A:H4'	25:YA:1820:U:H5''	1.89	0.55
29:YF:183:VAL:HA	29:YF:186:ILE:HD12	1.87	0.55
1:QA:933:G:O6	7:QG:3:ARG:NH2	2.39	0.55
2:QB:178:ARG:NH2	2:QB:196:LEU:O	2.40	0.55
19:QS:22:LEU:O	19:QS:26:GLY:N	2.37	0.55
32:RI:40:THR:HG23	32:RI:43:ASN:H	1.71	0.55
37:RR:102:GLU:OE2	42:RW:37:ARG:NH2	2.39	0.55
1:XA:1070:U:OP1	5:XE:18:ARG:NH2	2.36	0.55
8:XH:9:MET:HG3	8:XH:26:VAL:HG11	1.88	0.55
11:XK:24:SER:OG	11:XK:25:TYR:N	2.39	0.55
25:YA:859:G:O2'	25:YA:916:G:O6	2.25	0.55
25:YA:906:G:O2'	36:YQ:67:ARG:NH2	2.37	0.55
25:YA:1405:U:H2'	25:YA:1406:U:H6	1.72	0.55
26:YB:52:A:H61	38:YS:32:LEU:HB3	1.70	0.55
28:YE:101:ARG:NH1	28:YE:169:ASN:O	2.39	0.55
30:YG:151:ALA:O	30:YG:153:ARG:NH1	2.40	0.55
20:QT:57:ARG:HH12	20:QT:100:ILE:HD12	1.71	0.55
25:RA:52:A:OP2	25:RA:117:G:N1	2.28	0.55
25:RA:1651:G:H5'	37:RR:39:PRO:HG2	1.89	0.55
1:XA:376:G:H2'	1:XA:377:G:H8	1.72	0.55
1:XA:745:C:H2'	1:XA:746:A:H8	1.72	0.55
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.89	0.55
22:XV:23:C:H2'	22:XV:24:U:C6	2.41	0.55
31:YH:9:ILE:HD11	31:YH:69:ARG:HG2	1.89	0.55
1:QA:244:U:C4	1:QA:893:C:N3	2.75	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:69:VAL:HG21	7:QG:104:LEU:HD21	1.89	0.54
25:RA:49:A:H4'	25:RA:50:U:H5''	1.87	0.54
25:RA:517:C:OP1	51:R5:16:ARG:NH2	2.40	0.54
25:RA:958:U:O2	26:RB:90:A:O2'	2.22	0.54
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.42	0.54
4:XD:127:THR:HG23	4:XD:147:ALA:HB3	1.90	0.54
25:YA:2323:G:O6	25:YA:2332:U:O4	2.26	0.54
25:RA:1480:G:H1	25:RA:1511:C:H42	1.55	0.54
25:RA:1646:C:H5''	25:RA:1647:G:C5'	2.35	0.54
25:RA:2262:U:O2'	25:RA:2263:C:H5'	2.07	0.54
31:RH:118:PRO:HG2	31:RH:121:ILE:HG13	1.90	0.54
54:R8:33:ASN:HA	54:R8:36:LYS:HD2	1.89	0.54
1:XA:1458:G:OP1	20:XT:35:THR:OG1	2.24	0.54
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.89	0.54
19:XS:33:THR:HG1	19:XS:35:SER:HG	1.53	0.54
25:YA:140:G:H21	25:YA:142(A):A:H62	1.54	0.54
25:YA:1227:G:OP2	40:YU:16:LYS:NZ	2.37	0.54
25:YA:2303:G:H1'	30:YG:132:ASN:HD22	1.72	0.54
25:YA:2889:C:H3'	25:YA:2891:G:H8	1.71	0.54
30:YG:11:TYR:OH	30:YG:32:PRO:O	2.22	0.54
36:YQ:23:GLY:O	36:YQ:101:ARG:NH1	2.40	0.54
38:YS:34:HIS:ND1	38:YS:53:SER:OG	2.34	0.54
44:YY:43:ASN:ND2	44:YY:66:PRO:O	2.40	0.54
47:Y1:46:LEU:O	47:Y1:47:GLN:NE2	2.41	0.54
50:Y4:26:SER:OG	50:Y4:27:THR:N	2.39	0.54
56:ZA:3:PPU:C5'	56:ZA:3:PPU:C8	2.85	0.54
1:QA:148:G:H2'	1:QA:149:A:C8	2.42	0.54
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.31	0.54
25:RA:675:A:N3	25:RA:2443:C:O2'	2.35	0.54
25:RA:745:G:OP1	28:RE:133:LYS:NZ	2.39	0.54
25:RA:1141:U:OP2	33:RN:63:THR:OG1	2.17	0.54
25:RA:2543:G:H21	25:RA:2646:C:H5''	1.69	0.54
25:RA:2637:U:O4	25:RA:2776:A:N7	2.40	0.54
30:RG:15:VAL:HG13	30:RG:175:LEU:HB3	1.89	0.54
51:R5:41:PRO:O	51:R5:44:THR:OG1	2.25	0.54
1:XA:323:U:H4'	20:XT:22:ARG:HB2	1.88	0.54
1:XA:407:G:H2'	1:XA:408:A:H8	1.72	0.54
17:XQ:66:SER:OG	17:XQ:67:LYS:N	2.41	0.54
25:YA:2066:C:C2'	25:YA:2067:G:H5'	2.37	0.54
2:QB:82:ARG:NH1	2:QB:92:TYR:OH	2.40	0.54
25:RA:635:C:H2'	25:RA:636:G:C8	2.42	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2206:G:OP1	27:RD:68:LYS:NZ	2.40	0.54
1:XA:399:G:H2'	1:XA:400:C:H6	1.73	0.54
1:XA:501:C:H2'	1:XA:502:G:H8	1.72	0.54
4:XD:201:GLN:HA	4:XD:204:ILE:HD12	1.89	0.54
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.40	0.54
25:YA:2469:A:O2'	36:YQ:56:ARG:NH1	2.40	0.54
25:YA:2740:A:H2'	25:YA:2741:A:H8	1.73	0.54
28:YE:5:LEU:HD21	28:YE:79:ARG:HB2	1.88	0.54
47:Y1:71:TYR:HA	47:Y1:74:VAL:HG12	1.90	0.54
1:QA:427:U:P	4:QD:13:ARG:NH2	2.80	0.54
1:QA:922:G:H2'	1:QA:923:A:C8	2.42	0.54
1:QA:1525:G:H2'	1:QA:1526:G:H8	1.73	0.54
4:QD:175:SER:OG	4:QD:176:LEU:N	2.41	0.54
25:RA:144:C:H2'	25:RA:145:G:H8	1.72	0.54
25:RA:380:U:H5'	47:R1:18:ILE:HD13	1.89	0.54
25:RA:1231:G:H2'	25:RA:1232:G:C8	2.42	0.54
25:RA:1309:G:H4'	53:R7:7:PRO:HG2	1.90	0.54
25:RA:2561:A:H2	34:RO:23:ARG:HH11	1.55	0.54
1:XA:236:G:OP1	17:XQ:40:LYS:NZ	2.41	0.54
1:XA:280:C:N3	17:XQ:39:SER:N	2.49	0.54
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.16	0.54
9:XI:26:VAL:HG22	9:XI:61:ALA:HB3	1.90	0.54
25:YA:288:C:H2'	25:YA:289:A:H8	1.72	0.54
25:YA:396:G:O2'	47:Y1:43:TYR:O	2.26	0.54
25:YA:1011:G:OP2	40:YU:66:ASN:ND2	2.33	0.54
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.43	0.54
25:YA:1433:U:H3	25:YA:1560:G:H1	1.55	0.54
25:YA:2037:G:O2'	25:YA:2038:G:H5'	2.07	0.54
25:YA:2334:G:O6	46:Y0:74:ARG:NH2	2.40	0.54
25:YA:2470:G:O6	25:YA:2476:A:O2'	2.25	0.54
26:YB:8:U:O4	26:YB:113:G:O6	2.26	0.54
28:YE:12:THR:HG23	39:YT:58:ASN:HD21	1.71	0.54
32:YI:62:LYS:HD2	32:YI:133:HIS:HE1	1.72	0.54
46:Y0:50:ASN:HB2	46:Y0:81:VAL:HG13	1.90	0.54
1:QA:263:A:OP1	20:QT:79:ARG:NH1	2.40	0.54
1:QA:977:A:N6	1:QA:1224:G:OP1	2.39	0.54
3:QC:131:ARG:NH1	3:QC:166:GLU:OE1	2.41	0.54
12:QL:53:ARG:HG3	12:QL:93:LEU:HD11	1.90	0.54
25:RA:2684:U:O2'	34:RO:68:GLU:OE2	2.25	0.54
47:R1:59:THR:O	47:R1:91:LYS:NZ	2.37	0.54
49:R3:7:LYS:HB3	49:R3:55:ARG:HB3	1.88	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:121:ARG:NH1	9:XI:122:ALA:O	2.40	0.54
25:YA:467:G:N7	53:Y7:39:ARG:NH2	2.56	0.54
25:YA:631:A:OP1	35:YP:65:ARG:NH1	2.40	0.54
25:YA:974:G:O2'	25:YA:975(B):G:N7	2.28	0.54
25:YA:1029:A:OP1	36:YQ:128:LYS:NZ	2.37	0.54
1:QA:127:G:N2	17:QQ:61:GLU:OE1	2.40	0.54
1:QA:1179:A:H5'	9:QI:102:LEU:HG	1.90	0.54
24:QY:37:G:O2'	25:RA:1913:A:N1	2.41	0.54
25:RA:184:C:O3'	25:RA:217:G:N2	2.40	0.54
25:RA:1066:U:O2'	25:RA:1068:G:OP2	2.23	0.54
25:RA:1091:G:N2	25:RA:1100:C:O2	2.39	0.54
25:RA:1668:A:N3	25:RA:1670:C:N4	2.56	0.54
25:RA:2171:A:H4'	25:RA:2172:U:OP1	2.07	0.54
25:RA:2180:U:H2'	25:RA:2181:G:C8	2.42	0.54
26:RB:24:G:N3	26:RB:26:A:N6	2.56	0.54
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.89	0.54
35:RP:65:ARG:O	35:RP:68:GLN:NE2	2.40	0.54
1:XA:689:C:OP1	11:XK:44:SER:OG	2.23	0.54
1:XA:737:A:H2'	1:XA:738:C:H6	1.71	0.54
2:XB:95:GLN:HG3	2:XB:147:LYS:HD2	1.90	0.54
25:YA:922:U:O2'	46:Y0:29:GLN:OE1	2.23	0.54
25:YA:1721:G:N2	25:YA:1739:U:OP2	2.41	0.54
25:YA:2740:A:H2'	25:YA:2741:A:C8	2.42	0.54
38:YS:105:ALA:HB1	38:YS:110:LEU:HD23	1.90	0.54
55:Y9:2:LYS:HB3	55:Y9:4:ARG:HG3	1.90	0.54
4:QD:8:VAL:HG13	4:QD:22:LYS:HE3	1.89	0.54
26:RB:46:A:H2'	26:RB:47:C:C6	2.42	0.54
27:RD:248:SER:OG	27:RD:251:GLY:N	2.38	0.54
34:RO:64:ARG:HB3	34:RO:83:ALA:HB3	1.89	0.54
36:RQ:85:LYS:HE2	46:R0:8:GLY:HA3	1.90	0.54
1:XA:1227:A:OP1	19:XS:80:TYR:OH	2.16	0.54
22:XV:50:U:O4	22:XV:64:G:O6	2.26	0.54
25:YA:581:C:H2'	25:YA:582:G:H8	1.72	0.54
25:YA:2552:OMU:H2'	25:YA:2554:U:OP2	2.07	0.54
1:QA:237:C:O3'	17:QQ:25:ARG:NH1	2.41	0.54
1:QA:267:C:OP1	17:QQ:67:LYS:HD3	2.08	0.54
1:QA:970:C:N4	9:QI:128:ARG:OXT	2.41	0.54
8:QH:3:THR:OG1	8:QH:4:ASP:N	2.38	0.54
11:QK:21:ILE:HG22	11:QK:30:VAL:HG12	1.89	0.54
25:RA:336:C:O2'	25:RA:337:C:H5'	2.07	0.54
26:RB:80:U:O2	26:RB:97:G:N2	2.31	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:918:A:H2'	1:XA:919:A:C8	2.43	0.54
1:XA:926:G:H22	23:XX:15:A:H3'	1.71	0.54
2:XB:47:THR:HG23	2:XB:202:PRO:HG2	1.90	0.54
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.88	0.54
22:XV:75:C:OP1	25:YA:2602:A:H5''	2.08	0.54
28:YE:38:THR:HG1	28:YE:41:LYS:H	1.54	0.54
29:YF:157:VAL:HB	29:YF:194:MET:HG2	1.90	0.54
1:QA:795:C:O2'	1:QA:1506:U:O2	2.17	0.54
1:QA:926:G:N2	23:QX:16:A:OP1	2.41	0.54
4:QD:53:ASP:HB3	5:QE:107:ARG:HH22	1.71	0.54
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.08	0.54
12:QL:89:ARG:HB3	12:QL:91:LYS:HE3	1.90	0.54
25:RA:681:G:H1	25:RA:796:C:H42	1.56	0.54
1:XA:1255:G:N7	10:XJ:43:ARG:NH2	2.54	0.54
25:YA:274:G:H2'	25:YA:275:G:H8	1.73	0.54
25:YA:997:G:OP1	40:YU:92:ARG:HD3	2.07	0.54
25:YA:1394:U:O2	43:YX:16:LYS:NZ	2.39	0.54
25:YA:1406:U:H2'	25:YA:1407:C:C6	2.43	0.54
25:YA:2716:U:H2'	25:YA:2717:G:H8	1.73	0.54
1:QA:548:G:O5'	4:QD:73:ARG:NH2	2.42	0.53
1:QA:613:C:H2'	1:QA:614:A:H8	1.73	0.53
3:QC:44:GLU:HB3	3:QC:52:LEU:HD11	1.90	0.53
4:QD:81:GLU:OE2	4:QD:139:ARG:NH1	2.41	0.53
25:RA:1316:U:H2'	25:RA:1317:A:C8	2.43	0.53
28:RE:38:THR:HG1	28:RE:41:LYS:H	1.55	0.53
32:RI:14:ASP:N	32:RI:14:ASP:OD1	2.41	0.53
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.73	0.53
1:XA:1207:2MG:H2'	1:XA:1208:C:H6	1.71	0.53
1:XA:1525:G:H2'	1:XA:1526:G:H8	1.73	0.53
8:XH:103:VAL:HG12	8:XH:104:ARG:HB2	1.88	0.53
9:XI:17:VAL:HG21	9:XI:80:GLY:HA3	1.90	0.53
21:XU:17:THR:O	21:XU:22:ARG:NH1	2.39	0.53
25:YA:1265:A:H4'	25:YA:1266:G:OP1	2.07	0.53
25:YA:1308:A:H2'	25:YA:1309:G:O4'	2.09	0.53
1:QA:235:C:H2'	1:QA:236:G:H8	1.72	0.53
8:QH:4:ASP:OD2	8:QH:7:ALA:N	2.36	0.53
25:RA:13:A:O2'	25:RA:15:G:N7	2.40	0.53
25:RA:463:G:N2	25:RA:466:A:OP2	2.40	0.53
25:RA:613:G:O2'	25:RA:614(D):A:N6	2.41	0.53
25:RA:1794:U:H2'	25:RA:1795:C:H6	1.73	0.53
25:RA:1817:G:O5'	27:RD:157:ARG:NH2	2.41	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2648:C:H2'	25:RA:2649:U:C6	2.43	0.53
28:RE:2:LYS:HG2	28:RE:200:GLU:HB2	1.91	0.53
1:XA:501:C:H2'	1:XA:502:G:C8	2.43	0.53
1:XA:1229:A:OP1	13:XM:116:THR:OG1	2.18	0.53
2:XB:54:THR:HG22	2:XB:199:TYR:HB3	1.89	0.53
25:YA:443:A:H1'	25:YA:1201:C:O4'	2.09	0.53
25:YA:836:G:H2'	25:YA:837:C:C6	2.44	0.53
25:YA:1105:U:H2'	25:YA:1106:G:H8	1.74	0.53
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.73	0.53
25:YA:2115:G:H21	25:YA:2171:A:H61	1.56	0.53
25:YA:2784:C:O2	28:YE:37:ARG:NH1	2.37	0.53
1:QA:184:G:H2'	1:QA:185:A:C8	2.44	0.53
1:QA:430:A:P	4:QD:22:LYS:HZ1	2.30	0.53
1:QA:819:A:H5'	1:QA:820:U:H5	1.73	0.53
1:QA:1317:C:OP2	14:QN:17:LYS:NZ	2.39	0.53
1:QA:1500:A:H5''	1:QA:1508:G:H5''	1.89	0.53
25:RA:1031:G:O2'	55:R9:7:VAL:O	2.24	0.53
26:RB:42:C:H1'	30:RG:92:VAL:HG23	1.90	0.53
31:RH:105:LEU:HB3	31:RH:107:VAL:HG23	1.89	0.53
38:RS:35:ILE:HG23	38:RS:97:ARG:HH21	1.73	0.53
1:XA:68:G:H22	1:XA:101:A:H2	1.56	0.53
3:XC:131:ARG:NH1	3:XC:166:GLU:OE1	2.40	0.53
13:XM:98:VAL:HG13	13:XM:99:ARG:HG3	1.89	0.53
20:XT:30:LYS:HA	20:XT:33:ILE:HD12	1.89	0.53
26:YB:8:U:O2	26:YB:113:G:N2	2.36	0.53
1:QA:237:C:H2'	1:QA:238:G:H8	1.74	0.53
1:QA:1321:C:OP2	1:QA:1322:C:O2'	2.26	0.53
1:QA:1360:A:H8	1:QA:1360:A:OP1	1.91	0.53
25:RA:449:A:H2'	25:RA:450:G:H5'	1.91	0.53
25:RA:590:A:H2'	25:RA:591:C:C6	2.43	0.53
25:RA:856:C:O2'	25:RA:857:C:OP1	2.24	0.53
25:RA:1224:C:O2	41:RV:85:LYS:NZ	2.41	0.53
25:RA:2591:C:H2'	25:RA:2592:G:H8	1.73	0.53
25:RA:2746:U:H4'	31:RH:138:LYS:HD3	1.89	0.53
30:RG:61:ALA:O	30:RG:65:GLY:N	2.39	0.53
35:RP:62:LEU:O	54:R8:13:ARG:NH1	2.40	0.53
53:R7:13:ALA:HB2	53:R7:46:VAL:HG21	1.91	0.53
1:XA:740:U:O3'	15:XO:39:LEU:HD11	2.09	0.53
1:XA:1437:C:H2'	1:XA:1438:G:C8	2.44	0.53
25:YA:305:U:H2'	25:YA:306:U:C6	2.43	0.53
25:YA:690:G:H2'	25:YA:691:C:C6	2.44	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1593:G:H2'	25:YA:1594:G:H8	1.73	0.53
25:YA:1999:C:OP1	25:YA:2723:C:O2'	2.27	0.53
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.44	0.53
39:YT:54:ARG:HA	39:YT:59:THR:HG23	1.91	0.53
1:QA:816:A:OP2	1:QA:1526:G:O2'	2.27	0.53
6:QF:100:ASN:ND2	18:QR:26:LEU:O	2.41	0.53
25:RA:300:A:OP1	44:RY:86:ARG:NH2	2.41	0.53
25:RA:1273:U:H5'	25:RA:1274:A:OP1	2.09	0.53
25:RA:1791:A:H4'	27:RD:206:LEU:HB2	1.89	0.53
29:RF:29:ASN:OD1	29:RF:31:HIS:N	2.40	0.53
29:RF:54:ARG:NH2	29:RF:77:ASP:OD1	2.42	0.53
37:RR:37:THR:OG1	37:RR:38:VAL:N	2.40	0.53
7:XG:111:ARG:NH1	7:XG:113:GLU:OE2	2.41	0.53
25:YA:272(C):C:H42	25:YA:272(U):G:H1	1.56	0.53
1:QA:662:G:H2'	1:QA:663:A:C8	2.44	0.53
1:QA:1459:C:H2'	1:QA:1460:A:H8	1.74	0.53
1:QA:1519:MA6:H8	1:QA:1520:G:O4'	2.08	0.53
25:RA:1629:U:H2'	25:RA:1630:G:C8	2.44	0.53
25:RA:2493:U:H2'	25:RA:2494:G:O4'	2.09	0.53
33:RN:113:GLY:HA2	33:RN:116:LEU:HD12	1.88	0.53
1:XA:261:U:N3	1:XA:264:U:OP2	2.33	0.53
1:XA:1239:A:H4'	1:XA:1240:U:H5''	1.91	0.53
25:YA:1830:C:H2'	25:YA:1831:G:H8	1.74	0.53
33:YN:123:TYR:HH	33:YN:130:HIS:HE2	1.53	0.53
42:YW:25:ARG:NH2	42:YW:74:ALA:O	2.34	0.53
55:Y9:4:ARG:O	55:Y9:36:GLN:HA	2.09	0.53
1:QA:107:G:N7	20:QT:15:ARG:NH2	2.57	0.53
13:QM:86:CYS:SG	13:QM:89:GLY:N	2.77	0.53
24:QY:36:G:H2'	24:QY:37:G:H8	1.73	0.53
25:RA:676:A:H62	25:RA:802:A:H61	1.54	0.53
33:RN:28:THR:O	33:RN:32:THR:OG1	2.24	0.53
33:RN:47:ALA:O	33:RN:119:ARG:NH1	2.41	0.53
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.16	0.53
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.90	0.53
11:XK:34:ASP:OD1	11:XK:38:ASN:N	2.42	0.53
25:YA:2372:G:OP1	52:Y6:45:LYS:NZ	2.41	0.53
28:YE:53:PRO:HA	28:YE:75:VAL:HA	1.90	0.53
35:YP:95:VAL:HA	35:YP:99:LEU:HD21	1.90	0.53
3:QC:136:GLN:OE1	3:QC:140:ARG:NH2	2.42	0.53
4:QD:72:GLU:OE1	4:QD:207:TYR:OH	2.27	0.53
25:RA:530:G:H4'	25:RA:531:C:OP1	2.09	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1346:G:H1	25:RA:1600:C:H42	1.55	0.53
40:RU:50:ARG:O	40:RU:54:LYS:NZ	2.41	0.53
14:XN:24:CYS:SG	14:XN:27:CYS:CA	2.80	0.53
22:XV:53:G:H8	22:XV:53:G:OP2	1.92	0.53
25:YA:511:U:H2'	25:YA:512:G:H5'	1.91	0.53
25:YA:2294:C:H2'	25:YA:2295:C:H6	1.74	0.53
25:YA:2508:G:H1	25:YA:2580:U:H3	1.57	0.53
49:Y3:15:TYR:CE1	49:Y3:53:LEU:HD21	2.43	0.53
1:QA:1366:C:OP1	9:QI:117:HIS:NE2	2.41	0.53
25:RA:1216:G:OP1	40:RU:11:ARG:NH2	2.34	0.53
25:RA:2125:G:N2	25:RA:2173:A:H62	2.04	0.53
25:RA:2197:U:H1'	25:RA:2198:A:C8	2.44	0.53
26:RB:6:C:H42	26:RB:115:G:H1	1.57	0.53
30:RG:120:LEU:HB2	30:RG:180:PHE:HA	1.90	0.53
55:R9:22:ARG:HH22	55:R9:37:GLY:HA3	1.73	0.53
1:XA:486:U:H2'	1:XA:487:A:H8	1.73	0.53
1:XA:662:G:H2'	1:XA:663:A:C8	2.44	0.53
1:XA:1360:A:OP2	14:XN:35:ARG:NH2	2.42	0.53
25:YA:43:A:H2'	25:YA:44:G:C8	2.44	0.53
25:YA:807:U:OP1	35:YP:36:LYS:NZ	2.36	0.53
1:QA:404:U:OP1	4:QD:118:ARG:NH2	2.40	0.53
1:QA:667:G:O2'	15:QO:49:ASP:OD1	2.19	0.53
1:QA:1402:4OC:HM22	1:QA:1403:C:H5'	1.91	0.53
25:RA:706:A:N6	25:RA:725:G:O2'	2.41	0.53
25:RA:1859:A:N6	25:RA:1883:G:O2'	2.42	0.53
25:RA:1980:G:O2'	25:RA:1982:C:OP2	2.27	0.53
27:RD:45:ASN:OD1	27:RD:45:ASN:N	2.41	0.53
1:XA:974:A:H4'	1:XA:975:A:H5'	1.91	0.53
1:XA:1030(A):C:H42	1:XA:1031:G:H22	1.57	0.53
35:YP:52:GLU:OE1	35:YP:55:ARG:NH1	2.42	0.53
45:YZ:30:ASN:OD1	45:YZ:33:LEU:N	2.41	0.53
45:YZ:57:ILE:HG22	45:YZ:59:LEU:HG	1.91	0.53
1:QA:1079:G:H2'	1:QA:1080:A:C8	2.45	0.52
1:QA:1375:A:H4'	7:QG:29:LYS:NZ	2.24	0.52
25:RA:863:A:P	36:RQ:22:LYS:HG3	2.49	0.52
25:RA:1181:C:H2'	25:RA:1182:A:C8	2.44	0.52
26:RB:12:C:O2'	26:RB:13:A:OP2	2.23	0.52
28:RE:152:LYS:HG2	33:RN:77:GLY:O	2.03	0.52
1:XA:396:G:O2'	1:XA:398:C:OP1	2.16	0.52
1:XA:403:C:OP1	4:XD:136:PRO:HD2	2.09	0.52
25:YA:674:G:O2'	29:YF:74:ARG:HD3	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1190:G:H5''	35:YP:32:THR:HA	1.90	0.52
25:YA:2641:G:H2'	25:YA:2642:G:C8	2.45	0.52
1:QA:15:G:H2'	1:QA:16:A:C8	2.43	0.52
1:QA:673:G:H1'	18:QR:75:ILE:HD12	1.90	0.52
1:QA:940:C:H2'	1:QA:941:G:C8	2.44	0.52
1:QA:1323:G:H2'	1:QA:1324:A:C8	2.44	0.52
25:RA:972:G:H3'	25:RA:973:A:H2'	1.91	0.52
25:RA:1992:G:N2	25:RA:1996:C:O2	2.37	0.52
25:RA:2784:C:H2'	25:RA:2785:C:C6	2.44	0.52
26:RB:13:A:N1	26:RB:69:G:O2'	2.33	0.52
1:XA:804:U:H5''	1:XA:805:C:OP2	2.09	0.52
1:XA:1139:G:N2	1:XA:1143:G:O6	2.41	0.52
4:XD:165:MET:SD	4:XD:168:ARG:NH1	2.82	0.52
8:XH:121:ASP:OD1	8:XH:121:ASP:N	2.42	0.52
16:XP:5:ARG:O	16:XP:19:ILE:HA	2.09	0.52
25:YA:271:A:N3	25:YA:365:C:O2'	2.34	0.52
25:YA:380:U:H2'	25:YA:381:G:C8	2.44	0.52
25:YA:2246:G:H2'	25:YA:2247:A:C8	2.44	0.52
34:YO:104:ARG:HD3	34:YO:121:VAL:HG22	1.90	0.52
37:YR:79:LEU:HA	37:YR:83:ILE:HD12	1.92	0.52
1:QA:1269:A:OP1	21:QU:24:ARG:NH1	2.42	0.52
8:QH:121:ASP:HB2	8:QH:125:ARG:HH12	1.73	0.52
22:QV:15:G:O6	22:QV:48:C:O2	2.27	0.52
25:RA:297:C:H2'	25:RA:298:G:O4'	2.09	0.52
25:RA:1905:C:H5'	25:RA:1906:G:OP1	2.10	0.52
25:RA:2495:G:H5''	36:RQ:82:ARG:HG2	1.92	0.52
28:RE:143:ASN:ND2	28:RE:151:TYR:OH	2.42	0.52
31:RH:27:LYS:HD3	31:RH:32:GLU:HB3	1.91	0.52
32:RI:95:LYS:O	32:RI:98:ALA:N	2.36	0.52
43:RX:32:PRO:HA	43:RX:77:LYS:HD2	1.91	0.52
1:XA:372:C:N4	1:XA:389:A:H62	2.07	0.52
1:XA:642:A:N3	8:XH:113:SER:OG	2.40	0.52
1:XA:1060:C:H2'	1:XA:1061:G:H8	1.74	0.52
1:XA:1494:G:HO2'	25:YA:1912:A:HO2'	1.54	0.52
25:YA:221:A:N1	25:YA:265:A:O2'	2.41	0.52
25:YA:322:A:O4'	25:YA:340:A:H1'	2.10	0.52
25:YA:956:G:OP2	36:YQ:14:ARG:NH2	2.42	0.52
28:YE:36:ARG:NH2	28:YE:88:GLY:O	2.43	0.52
54:Y8:29:LYS:O	54:Y8:33:ASN:ND2	2.40	0.52
1:QA:321:A:H61	1:QA:332:G:H1	1.58	0.52
1:QA:461:A:O2'	1:QA:470:C:H5'	2.10	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1101:A:N6	2:QB:176:GLU:OE2	2.42	0.52
6:QF:82:ARG:HG3	6:QF:84:ASN:H	1.75	0.52
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.42	0.52
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.44	0.52
25:RA:2147:G:H2'	25:RA:2148:G:O4'	2.09	0.52
30:RG:71:THR:N	30:RG:89:GLY:O	2.42	0.52
44:RY:52:SER:HG	44:RY:55:TYR:H	1.57	0.52
14:YN:40:CYS:HB2	14:YN:43:CYS:H	1.74	0.52
25:YA:612:C:H42	25:YA:615:G:H1	1.56	0.52
25:YA:2305:A:H5''	30:YG:134:GLY:HA3	1.91	0.52
30:YG:49:ASP:OD1	30:YG:51:ARG:NE	2.42	0.52
39:YT:51:ARG:HB3	39:YT:62:THR:HB	1.90	0.52
1:QA:363:A:O2'	1:QA:364:A:H5'	2.08	0.52
1:QA:939:G:OP1	7:QG:102:ARG:NH1	2.43	0.52
1:QA:1432:G:OP1	39:RT:108:ARG:HG2	2.10	0.52
1:QA:1458:G:OP1	20:QT:35:THR:OG1	2.15	0.52
9:QI:70:LYS:HA	9:QI:73:GLN:HE21	1.75	0.52
25:YA:345:A:N3	25:YA:347:A:N6	2.57	0.52
25:YA:1500:G:H2'	25:YA:1501:C:H6	1.72	0.52
25:YA:1557:C:H5''	25:YA:1558:A:OP2	2.10	0.52
50:Y4:59:PHE:O	50:Y4:62:ARG:NE	2.42	0.52
1:QA:777:A:H2'	1:QA:778:G:H8	1.74	0.52
3:QC:136:GLN:O	3:QC:140:ARG:N	2.36	0.52
14:QN:22:THR:CB	14:QN:33:VAL:HG23	2.38	0.52
25:RA:655:A:H3'	25:RA:656:G:H8	1.75	0.52
25:RA:2183:C:H2'	25:RA:2184:G:H8	1.74	0.52
30:RG:98:ARG:NH1	50:R4:1:MET:SD	2.82	0.52
1:XA:1386:G:H2'	1:XA:1387:G:H8	1.75	0.52
15:XO:4:THR:HG23	15:XO:7:GLU:H	1.74	0.52
24:XY:38:A:H2'	24:XY:39:A:H8	1.75	0.52
25:YA:213:A:H5''	25:YA:213:A:C8	2.44	0.52
25:YA:1937:A:O2'	25:YA:1938:A:O5'	2.25	0.52
29:YF:13:SER:OG	29:YF:16:GLY:N	2.42	0.52
31:YH:90:LYS:NZ	31:YH:159:GLU:OE1	2.40	0.52
36:YQ:71:ASP:OD1	36:YQ:71:ASP:N	2.43	0.52
1:QA:884:U:H4'	1:QA:885:G:H5''	1.91	0.52
1:QA:985:C:H2'	1:QA:986:A:H8	1.73	0.52
1:QA:1368:G:H5''	9:QI:112:LYS:HB3	1.92	0.52
17:QQ:99:SER:OG	17:QQ:100:LYS:N	2.43	0.52
25:RA:443:A:H1'	25:RA:1201:C:O4'	2.09	0.52
25:RA:693:C:OP2	27:RD:59:LYS:NZ	2.43	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1435:G:N2	25:RA:1477:A:O2'	2.32	0.52
25:RA:1958:C:O2'	25:RA:1959:G:H5'	2.09	0.52
30:RG:76:SER:H	30:RG:84:LYS:HG3	1.75	0.52
32:RI:2:LYS:HG2	32:RI:20:ASP:HB3	1.90	0.52
1:XA:713:G:H2'	1:XA:714:G:C8	2.44	0.52
1:XA:946:A:H2'	1:XA:947:G:H8	1.75	0.52
4:XD:64:LEU:HD13	4:XD:198:VAL:HG11	1.92	0.52
7:XG:59:LEU:HD23	7:XG:60:LYS:HD2	1.90	0.52
22:XV:28:C:H2'	22:XV:29:G:H8	1.74	0.52
25:YA:223:A:O2'	25:YA:420:C:O2	2.24	0.52
25:YA:478:A:N7	25:YA:480:A:N6	2.58	0.52
25:YA:503:A:H4'	25:YA:504:U:H5''	1.92	0.52
1:QA:9:G:H2'	1:QA:10:A:H8	1.75	0.52
1:QA:806:C:H2'	1:QA:807:A:C8	2.43	0.52
5:QE:87:SER:OG	5:QE:125:SER:O	2.24	0.52
8:QH:33:GLU:O	8:QH:36:LEU:N	2.43	0.52
10:QJ:28:ARG:NH2	10:QJ:34:VAL:O	2.43	0.52
25:RA:1364:G:O2'	25:RA:1808:U:O4	2.27	0.52
25:RA:1537:G:H2'	25:RA:1538:G:H8	1.75	0.52
25:RA:1632:A:O5'	25:RA:1632:A:C8	2.61	0.52
25:RA:2291:U:OP1	25:RA:2380:C:O2'	2.28	0.52
25:RA:2347:C:O2	25:RA:2370:G:N2	2.40	0.52
25:RA:2361:A:OP2	54:R8:26:LYS:NZ	2.39	0.52
39:RT:18:ASP:OD1	39:RT:18:ASP:N	2.41	0.52
1:XA:25:C:H2'	1:XA:26:A:C8	2.45	0.52
1:XA:619:U:N3	4:XD:134:ASP:OD1	2.38	0.52
1:XA:728:A:H2'	1:XA:729:A:C8	2.45	0.52
3:XC:9:GLY:HA3	14:YN:49:HIS:HA	1.92	0.52
25:YA:639:U:H3	25:YA:649:G:H1	1.57	0.52
25:YA:1066:U:O2'	25:YA:1068:G:OP2	2.20	0.52
34:YO:80:ASP:OD2	39:YT:64:ARG:NH2	2.42	0.52
1:QA:410:G:H3'	4:QD:25:ARG:HH22	1.75	0.52
1:QA:1037:C:O2'	1:QA:1038:C:O4'	2.24	0.52
1:QA:1071:C:H2'	1:QA:1072:G:C8	2.43	0.52
25:RA:1967:C:H2'	25:RA:1968:G:O4'	2.09	0.52
1:XA:131:C:O2'	1:XA:262:A:N3	2.38	0.52
2:XB:69:LEU:HD11	2:XB:93:VAL:HG23	1.92	0.52
10:XJ:45:ARG:O	10:XJ:65:LEU:N	2.40	0.52
25:YA:615:G:OP1	29:YF:40:GLN:NE2	2.43	0.52
25:YA:773:U:O2	25:YA:778:G:O2'	2.27	0.52
25:YA:989:G:OP2	49:Y3:11:SER:OG	2.22	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1823:G:P	27:YD:54:ARG:HH22	2.32	0.52
30:YG:8:LYS:NZ	30:YG:97:ASP:OD1	2.40	0.52
1:QA:437:U:O4	1:QA:495:A:N7	2.42	0.52
1:QA:1276:G:N3	1:QA:1282:C:O2'	2.37	0.52
4:QD:82:ALA:O	4:QD:85:LYS:N	2.43	0.52
25:RA:2712(A):U:O2'	25:RA:2712(B):A:OP2	2.22	0.52
35:RP:60:MET:SD	54:R8:13:ARG:NH2	2.83	0.52
52:R6:8:LYS:HG3	52:R6:54:ILE:HD13	1.92	0.52
1:XA:421:U:OP2	1:XA:422:C:N4	2.42	0.52
25:YA:675:A:H4'	29:YF:67:GLN:OE1	2.09	0.52
25:YA:829:A:N7	25:YA:2248:C:H5'	2.25	0.52
25:YA:1286:A:H1'	25:YA:1288:U:OP2	2.10	0.52
25:YA:1326:U:O2'	25:YA:1327:C:H5'	2.09	0.52
25:YA:1425:G:O2'	25:YA:1426:G:H5'	2.10	0.52
29:YF:70:THR:OG1	29:YF:72:ARG:N	2.41	0.52
1:QA:19:C:OP2	5:QE:127:ASN:HB2	2.10	0.51
4:QD:53:ASP:O	4:QD:57:ARG:NH1	2.38	0.51
25:RA:581:C:H2'	25:RA:582:G:H8	1.75	0.51
25:RA:1853:A:H2'	25:RA:1854:A:C8	2.45	0.51
25:RA:1889:A:H2'	25:RA:1890:A:H8	1.75	0.51
32:RI:127:VAL:HA	32:RI:139:GLN:HA	1.92	0.51
53:R7:34:ARG:NH1	53:R7:42:LEU:O	2.43	0.51
1:XA:360:A:H2'	1:XA:361:G:C8	2.45	0.51
1:XA:1485:U:H2'	1:XA:1486:G:H8	1.74	0.51
25:YA:833:U:O2	35:YP:55:ARG:NH2	2.38	0.51
48:Y2:16:LEU:O	48:Y2:67:LYS:NZ	2.43	0.51
1:QA:429:U:O4'	1:QA:430:A:H8	1.94	0.51
1:QA:943:U:H1'	9:QI:124:GLN:HE22	1.76	0.51
1:QA:1393:U:HO2'	1:QA:1501:C:HO2'	1.43	0.51
14:QN:22:THR:O	14:QN:33:VAL:HG21	2.10	0.51
21:QU:12:LYS:HZ2	21:QU:19:GLY:HA3	1.76	0.51
25:RA:495:G:H4'	42:RW:4:LYS:HG3	1.90	0.51
25:RA:965:C:H2'	25:RA:966:G:H8	1.75	0.51
25:RA:974:G:O2'	25:RA:975(B):G:N7	2.36	0.51
25:RA:1139:G:OP2	33:RN:70:LYS:NZ	2.28	0.51
25:RA:1186:G:H2'	25:RA:1187:G:O4'	2.11	0.51
25:RA:1340:U:OP1	43:RX:16:LYS:NZ	2.33	0.51
25:RA:1664:A:H61	25:RA:1996:C:N4	2.08	0.51
25:RA:1901:A:OP2	27:RD:255:LYS:NZ	2.37	0.51
38:RS:27:SER:HA	38:RS:88:ASP:HB3	1.92	0.51
1:XA:407:G:H5''	4:XD:115:ARG:HB3	1.91	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:104:VAL:O	12:XL:107:ALA:N	2.43	0.51
25:YA:573:G:O2'	25:YA:574:C:H3'	2.10	0.51
25:YA:2115:G:N2	25:YA:2171:A:H61	2.08	0.51
27:YD:79:VAL:HG11	27:YD:111:LEU:HD21	1.91	0.51
33:YN:43:THR:OG1	40:YU:64:ARG:NH1	2.43	0.51
35:YP:124:LYS:HA	35:YP:144:GLU:HB3	1.91	0.51
19:QS:3:ARG:NH1	19:QS:8:GLY:O	2.43	0.51
25:RA:2431:U:N3	25:RA:2434:A:OP2	2.31	0.51
25:RA:2648:C:H2'	25:RA:2649:U:H6	1.75	0.51
26:RB:78:A:H62	26:RB:99:G:H21	1.57	0.51
39:RT:35:LYS:HA	39:RT:40:THR:HA	1.92	0.51
50:R4:56:VAL:HB	50:R4:58:ARG:HG3	1.93	0.51
1:XA:552:U:H2'	1:XA:553:A:H8	1.74	0.51
1:XA:974:A:H8	1:XA:974:A:OP1	1.94	0.51
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.75	0.51
8:XH:96:GLY:HA2	8:XH:130:GLY:HA3	1.93	0.51
25:YA:330:A:HO2'	25:YA:331:A:H8	1.57	0.51
25:YA:1782:C:H1'	25:YA:2609:U:H5''	1.93	0.51
25:YA:2206:G:H5''	25:YA:2207:G:N7	2.26	0.51
25:YA:2271:G:H5'	46:Y0:20:ARG:HG2	1.93	0.51
27:YD:127:VAL:HA	27:YD:193:VAL:HG23	1.92	0.51
49:Y3:10:LYS:CE	49:Y3:15:TYR:OH	2.57	0.51
1:QA:976:G:OP1	14:QN:32:SER:N	2.38	0.51
3:QC:78:GLY:O	3:QC:81:GLY:N	2.39	0.51
10:QJ:3:LYS:N	10:QJ:74:ILE:O	2.43	0.51
25:RA:45:C:OP2	25:RA:215:G:H5'	2.11	0.51
25:RA:307:G:N2	25:RA:310:A:OP2	2.42	0.51
25:RA:1390:U:O2'	25:RA:1391:U:H5'	2.10	0.51
25:RA:1569:A:H2'	25:RA:1570:A:C8	2.45	0.51
36:RQ:117:ALA:HA	36:RQ:120:ILE:HD12	1.91	0.51
1:XA:142:G:H1	1:XA:221:C:H42	1.58	0.51
2:XB:207:ALA:O	2:XB:210:SER:N	2.42	0.51
3:XC:19:GLU:O	3:XC:40:ARG:NH2	2.43	0.51
25:YA:17:G:H2'	25:YA:18:C:C6	2.45	0.51
25:YA:2816:C:H2'	25:YA:2817:G:H8	1.75	0.51
49:Y3:18:ASP:OD1	49:Y3:18:ASP:N	2.43	0.51
1:QA:1148:U:O2	9:QI:66:ARG:NH2	2.43	0.51
22:QV:15:G:N2	22:QV:48:C:N4	2.48	0.51
25:RA:678:C:O2'	25:RA:679:C:H5'	2.10	0.51
25:RA:688:U:O2	25:RA:786:C:O2'	2.27	0.51
25:RA:795:C:H2'	25:RA:796:C:C6	2.45	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:851:U:OP1	49:R3:49:LYS:HE3	2.11	0.51
25:RA:1458:C:H4'	25:RA:1459:G:O4'	2.10	0.51
25:RA:2296:U:OP2	38:RS:9:ARG:NH2	2.43	0.51
1:XA:50:A:H8	1:XA:50:A:OP1	1.92	0.51
10:XJ:97:GLU:HB3	10:XJ:99:LYS:HE2	1.92	0.51
12:XL:78:GLN:H	12:XL:81:SER:HG	1.56	0.51
22:XV:71:C:H2'	22:XV:72:A:H8	1.76	0.51
25:YA:216:A:H2'	25:YA:217:G:H8	1.75	0.51
25:YA:1395:A:O2'	25:YA:1396:U:H5''	2.09	0.51
25:YA:2355:C:OP1	46:Y0:25:ARG:NH2	2.39	0.51
25:YA:2804:C:H2'	25:YA:2805:G:C8	2.46	0.51
1:QA:835:U:O4	1:QA:851:G:O6	2.28	0.51
1:QA:1049:U:H4'	1:QA:1050:G:H5''	1.93	0.51
2:QB:80:ILE:HD13	2:QB:212:GLN:HE21	1.75	0.51
3:QC:56:ASP:HB2	3:QC:67:THR:HB	1.92	0.51
25:RA:1025:G:C8	25:RA:1135:C:H1'	2.45	0.51
25:RA:1190:G:H2'	25:RA:1191:G:C8	2.46	0.51
25:RA:1352:U:O2'	25:RA:1353:A:H5'	2.11	0.51
1:XA:1101:A:N6	2:XB:176:GLU:OE2	2.43	0.51
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.43	0.51
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.45	0.51
25:YA:1614:A:OP2	25:YA:1614:A:H8	1.92	0.51
25:YA:2392:A:OP2	25:YA:2422:A:N6	2.43	0.51
29:YF:6:VAL:N	29:YF:21:ALA:O	2.43	0.51
44:YY:44:ILE:HA	44:YY:63:LYS:O	2.11	0.51
1:QA:148:G:H2'	1:QA:149:A:H8	1.75	0.51
1:QA:556:C:H2'	1:QA:557:G:H8	1.76	0.51
1:QA:718:G:H5'	11:QK:117:ASN:OD1	2.11	0.51
1:QA:1224:G:C4	1:QA:1322:C:H5'	2.46	0.51
25:RA:33:U:H3	25:RA:447:A:H62	1.57	0.51
25:RA:455:C:N3	25:RA:472:A:H2'	2.25	0.51
25:RA:1231:G:H2'	25:RA:1232:G:H8	1.76	0.51
25:RA:1657:C:OP1	28:RE:136:ARG:N	2.44	0.51
25:RA:1666:G:H4'	34:RO:6:THR:HG23	1.92	0.51
25:RA:2784:C:H2'	25:RA:2785:C:H6	1.76	0.51
28:RE:7:VAL:HG12	28:RE:27:LEU:HB3	1.93	0.51
1:XA:1522:U:O2'	1:XA:1523:G:H5'	2.10	0.51
16:XP:28:ARG:NH1	16:XP:29:ASP:OD1	2.43	0.51
19:XS:64:GLU:OE2	50:Y4:58:ARG:NH2	2.44	0.51
25:YA:477:A:H8	25:YA:477:A:O5'	1.93	0.51
25:YA:863:A:O2'	25:YA:864:G:H5'	2.11	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1051:G:H5'	25:YA:2752:C:H1'	1.91	0.51
25:YA:1720:U:H3	25:YA:1742:G:H1	1.57	0.51
25:YA:2515:C:O2'	25:YA:2516:G:H5'	2.11	0.51
27:YD:143:HIS:ND1	27:YD:194:GLY:O	2.41	0.51
39:YT:18:ASP:OD1	39:YT:18:ASP:N	2.35	0.51
45:YZ:149:SER:OG	45:YZ:172:ALA:O	2.23	0.51
1:QA:973:G:H3'	1:QA:974:A:H5''	1.92	0.51
1:QA:1099:G:H5''	2:QB:96:ARG:HH12	1.76	0.51
3:QC:24:ALA:HB3	3:QC:29:TYR:HD1	1.74	0.51
4:QD:8:VAL:HG22	58:QD:303:SF4:S2	2.50	0.51
7:QG:105:VAL:O	7:QG:109:ASN:ND2	2.44	0.51
7:QG:113:GLU:HG2	7:QG:119:ARG:HG2	1.92	0.51
25:RA:1337:G:H2'	25:RA:1338:G:C8	2.44	0.51
25:RA:1615:C:O2'	25:RA:1616:A:H5''	2.11	0.51
25:RA:1796:U:H2'	25:RA:1797:C:H6	1.75	0.51
25:RA:2286:A:OP1	52:R6:29:ASN:ND2	2.35	0.51
28:RE:11:MET:HG2	28:RE:24:THR:HG23	1.92	0.51
28:RE:119:ARG:NH1	28:RE:156:MET:O	2.43	0.51
45:RZ:52:SER:O	45:RZ:54:HIS:ND1	2.42	0.51
1:XA:21:G:H2'	1:XA:22:G:H8	1.76	0.51
1:XA:357:G:C2'	1:XA:358:U:H5'	2.40	0.51
1:XA:371:G:H1'	1:XA:373:A:H62	1.76	0.51
1:XA:707:C:OP1	11:XK:85:ARG:NH1	2.42	0.51
1:XA:977:A:N6	1:XA:1224:G:OP1	2.43	0.51
10:XJ:45:ARG:HB3	10:XJ:65:LEU:HB3	1.92	0.51
24:XY:38:A:H5'	25:YA:1913:A:C6	2.46	0.51
25:YA:1048:A:OP2	25:YA:1110:G:N2	2.43	0.51
25:YA:1553:A:OP1	25:YA:1553:A:H4'	2.11	0.51
25:YA:1972:A:OP2	27:YD:239:ARG:NH2	2.43	0.51
28:YE:16:ARG:NH1	28:YE:171:GLU:OE2	2.34	0.51
44:YY:99:CYS:SG	44:YY:104:GLY:N	2.83	0.51
1:QA:1066:C:H2'	1:QA:1067:A:C8	2.46	0.51
1:QA:1111:A:N6	3:QC:176:HIS:O	2.44	0.51
1:QA:1288:A:O2'	21:QU:10:ARG:NH2	2.43	0.51
1:QA:1419:G:H1	1:QA:1481:U:H3	1.57	0.51
16:QP:45:THR:OG1	16:QP:47:ASP:OD1	2.28	0.51
25:RA:852:G:H2'	25:RA:853:G:H8	1.75	0.51
28:RE:26:ILE:O	28:RE:182:LEU:N	2.42	0.51
37:RR:59:ASP:N	37:RR:59:ASP:OD1	2.40	0.51
1:XA:1330:U:H2'	1:XA:1331:G:H5'	1.91	0.51
8:XH:33:GLU:OE2	8:XH:50:ARG:NH2	2.35	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:642:G:N2	25:YA:645:C:OP2	2.33	0.51
25:YA:1281:G:H2'	25:YA:1282:U:C6	2.45	0.51
25:YA:2657:A:O3'	31:YH:160:LYS:NZ	2.44	0.51
26:YB:56:G:H4'	26:YB:57:A:H5'	1.93	0.51
46:Y0:50:ASN:ND2	46:Y0:81:VAL:O	2.37	0.51
1:QA:974:A:H4'	1:QA:975:A:H5'	1.91	0.51
1:QA:1118:C:H1'	1:QA:1179:A:C6	2.46	0.51
8:QH:49:GLU:OE2	8:QH:62:TYR:OH	2.29	0.51
13:QM:71:ARG:HA	13:QM:74:VAL:HG12	1.92	0.51
25:RA:783:A:H4'	25:RA:2588:G:H4'	1.93	0.51
25:RA:821:A:O2'	25:RA:946:G:OP2	2.24	0.51
25:RA:1068:G:H5'	25:RA:1069:A:H2'	1.93	0.51
25:RA:1073:A:O2'	25:RA:1074:G:OP1	2.25	0.51
25:RA:1651:G:H2'	25:RA:1652:A:C8	2.46	0.51
25:RA:2361:A:OP1	54:R8:26:LYS:HD3	2.11	0.51
36:RQ:7:MET:HG3	36:RQ:9:TYR:H	1.76	0.51
1:XA:45:U:H2'	1:XA:46:G:H8	1.75	0.51
1:XA:908:A:H2'	1:XA:909:A:C8	2.44	0.51
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.10	0.51
1:XA:1368:G:H1'	10:XJ:46:ARG:HH22	1.76	0.51
16:XP:67:THR:HB	16:XP:70:ALA:H	1.76	0.51
25:YA:39:C:O2	29:YF:46:ARG:NH2	2.44	0.51
25:YA:126:A:H5'	53:Y7:19:ARG:HG3	1.93	0.51
25:YA:370:G:OP1	25:YA:403:U:N3	2.29	0.51
30:YG:71:THR:N	30:YG:89:GLY:O	2.36	0.51
31:YH:40:GLU:OE2	31:YH:60:ARG:NH1	2.43	0.51
34:YO:68:GLU:OE2	34:YO:78:ARG:NH1	2.44	0.51
1:QA:666:G:H5'	1:QA:726:C:H1'	1.92	0.50
1:QA:769:G:O2'	1:QA:770:C:H5'	2.11	0.50
1:QA:877:C:H2'	1:QA:878:G:C8	2.46	0.50
1:QA:1124:G:N2	1:QA:1125:U:O4	2.40	0.50
18:QR:74:ARG:HG3	18:QR:79:LEU:HB2	1.91	0.50
25:RA:627:A:N7	35:RP:84:ASN:ND2	2.47	0.50
25:RA:1794:U:H2'	25:RA:1795:C:C6	2.46	0.50
30:RG:119:GLY:HA3	30:RG:181:ARG:HG3	1.93	0.50
1:XA:662:G:H2'	1:XA:663:A:H8	1.75	0.50
1:XA:766:A:N7	1:XA:813:U:O4	2.45	0.50
1:XA:1372:U:H2'	1:XA:1373:G:O4'	2.10	0.50
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.93	0.50
5:XE:100:VAL:HG23	5:XE:118:ILE:HG22	1.92	0.50
7:XG:68:ASN:ND2	7:XG:127:ALA:O	2.42	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:22:HIS:HB3	11:XK:29:ILE:HG23	1.93	0.50
25:YA:672:C:H2'	25:YA:673:C:C6	2.46	0.50
25:YA:2115:G:N1	25:YA:2119:A:OP2	2.41	0.50
25:YA:2274:A:O2'	25:YA:2276:G:OP1	2.22	0.50
25:YA:2314:C:H2'	25:YA:2315:G:C8	2.45	0.50
49:Y3:8:LEU:HD13	49:Y3:23:LEU:HD11	1.93	0.50
1:QA:564:C:OP1	12:QL:15:ARG:NE	2.45	0.50
1:QA:1000:U:O4	1:QA:1001(A):A:N6	2.44	0.50
1:QA:1062:U:H2'	1:QA:1063:C:C6	2.47	0.50
4:QD:94:LEU:O	4:QD:98:GLU:N	2.42	0.50
8:QH:121:ASP:N	8:QH:121:ASP:OD1	2.43	0.50
25:RA:747:U:O2	25:RA:2014:A:H1'	2.11	0.50
25:RA:1186:G:H8	25:RA:1186:G:O5'	1.94	0.50
25:RA:1218:C:OP2	40:RU:15:LYS:NZ	2.43	0.50
25:RA:1797:C:OP1	27:RD:273:ARG:NH2	2.44	0.50
40:RU:6:THR:OG1	40:RU:7:GLY:N	2.44	0.50
1:XA:241:C:H42	1:XA:285:G:H1	1.59	0.50
1:XA:861:G:O6	1:XA:869:G:N2	2.44	0.50
2:XB:189:ASP:OD1	2:XB:189:ASP:N	2.44	0.50
7:XG:111:ARG:NH2	7:XG:126:ASP:OD2	2.41	0.50
18:XR:45:SER:OG	18:XR:48:GLY:N	2.44	0.50
25:YA:546:C:H3'	25:YA:547:A:C8	2.46	0.50
25:YA:1204:A:N6	25:YA:1241:A:OP2	2.42	0.50
25:YA:2461:C:H2'	25:YA:2462:U:C6	2.46	0.50
1:QA:166:G:H2'	1:QA:167:G:H8	1.77	0.50
1:QA:524:G:H5''	12:QL:91:LYS:CE	2.42	0.50
1:QA:1517:G:H21	25:RA:1919:A:H2'	1.76	0.50
2:QB:165:VAL:HG23	2:QB:187:LEU:HD23	1.93	0.50
4:QD:105:VAL:HG13	4:QD:110:PHE:HB2	1.92	0.50
5:QE:5:ASP:N	5:QE:5:ASP:OD1	2.44	0.50
7:QG:57:GLU:HB2	7:QG:60:LYS:HG2	1.93	0.50
25:RA:272(M):G:O2'	25:RA:272(N):U:O5'	2.22	0.50
25:RA:807:U:H2'	25:RA:808:G:C8	2.47	0.50
25:RA:2294:C:P	38:RS:89:ARG:HH12	2.35	0.50
25:RA:2584:U:C5'	56:ZA:3:PPU:H92	2.41	0.50
25:RA:2712(B):A:H5''	25:RA:2713:A:OP2	2.11	0.50
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.93	0.50
1:XA:160:A:N6	1:XA:346:G:O6	2.44	0.50
1:XA:714:G:H2'	1:XA:715:A:C8	2.46	0.50
1:XA:891:U:H2'	1:XA:892:A:H8	1.76	0.50
1:XA:1249:C:O2'	9:XI:73:GLN:NE2	2.40	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:82:MET:HA	17:XQ:85:VAL:HG22	1.92	0.50
25:YA:1335:U:OP2	43:YX:64:LYS:NZ	2.32	0.50
25:YA:1580:A:H5'	25:YA:1581:G:OP2	2.11	0.50
25:YA:1609:A:O2'	25:YA:1610:A:H5'	2.11	0.50
1:QA:6:G:H22	5:QE:98:THR:HG22	1.76	0.50
1:QA:21:G:N1	1:QA:22:G:O6	2.45	0.50
1:QA:237:C:H2'	1:QA:238:G:C8	2.47	0.50
1:QA:501:C:O2	1:QA:549:C:O2'	2.24	0.50
25:RA:568:U:N3	25:RA:571:A:OP2	2.31	0.50
25:RA:635:C:H2'	25:RA:636:G:H8	1.77	0.50
25:RA:1824:G:N3	27:RD:254:THR:OG1	2.44	0.50
25:RA:1921:G:H2'	25:RA:1922:G:H8	1.77	0.50
25:RA:2467:C:H4'	36:RQ:123:HIS:ND1	2.27	0.50
31:RH:6:ARG:O	31:RH:51:ARG:NH1	2.44	0.50
31:RH:58:GLU:HB3	31:RH:61:HIS:HD1	1.76	0.50
1:XA:410:G:N2	1:XA:432:A:H62	2.09	0.50
1:XA:950:U:H4'	1:XA:971:G:C2	2.47	0.50
1:XA:971:G:OP1	1:XA:972:C:H5''	2.12	0.50
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.11	0.50
16:XP:1:MET:SD	16:XP:1:MET:N	2.80	0.50
25:YA:2154:G:H2'	25:YA:2155:G:H8	1.77	0.50
1:QA:56:U:H2'	1:QA:57:G:C8	2.47	0.50
4:QD:22:LYS:N	4:QD:26:CYS:SG	2.85	0.50
25:RA:30:G:H2'	25:RA:31:C:C6	2.47	0.50
25:RA:795:C:H2'	25:RA:796:C:H6	1.76	0.50
25:RA:1409:C:H2'	25:RA:1410:G:H8	1.77	0.50
41:RV:14:VAL:HB	41:RV:96:ILE:HD13	1.93	0.50
1:XA:574:A:N3	1:XA:883:C:H1'	2.26	0.50
1:XA:813:U:H2'	1:XA:814:A:H8	1.77	0.50
2:XB:82:ARG:NH1	2:XB:92:TYR:OH	2.44	0.50
25:YA:1538:G:H2'	25:YA:1539:G:H8	1.77	0.50
25:YA:2723:C:OP2	28:YE:109:LYS:NZ	2.41	0.50
25:YA:2867:G:OP2	39:YT:119:LYS:NZ	2.29	0.50
1:QA:61:G:H2'	1:QA:62:U:C6	2.47	0.50
1:QA:1202:G:H2'	1:QA:1203:C:C6	2.47	0.50
22:QV:52:G:H1	22:QV:62:C:H42	1.60	0.50
25:RA:271:A:N3	25:RA:365:C:O2'	2.43	0.50
25:RA:272(G):C:H2'	25:RA:272(H):G:H8	1.77	0.50
25:RA:299:A:N3	25:RA:319:C:O2'	2.42	0.50
25:RA:473:G:O2'	25:RA:474:G:H5'	2.12	0.50
25:RA:659:C:H2'	25:RA:660:G:H8	1.75	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1509(B):A:H3'	25:RA:1509(C):A:H8	1.77	0.50
36:RQ:65:PHE:N	36:RQ:105:GLU:O	2.43	0.50
44:RY:6:HIS:O	44:RY:97:ARG:NH2	2.43	0.50
45:RZ:76:LEU:HA	45:RZ:83:PRO:HA	1.92	0.50
55:R9:25:VAL:HB	55:R9:34:GLN:HB2	1.93	0.50
1:XA:877:C:H2'	1:XA:878:G:C8	2.42	0.50
1:XA:1119:C:H2'	1:XA:1120:G:H8	1.75	0.50
7:XG:88:PRO:HG2	7:XG:152:ALA:HB2	1.94	0.50
25:YA:646:A:O2'	25:YA:647:G:H5'	2.11	0.50
25:YA:1794:U:H2'	25:YA:1795:C:C6	2.45	0.50
1:QA:269:C:H2'	1:QA:270:A:C8	2.47	0.50
1:QA:426:G:OP1	4:QD:36:ARG:NH1	2.45	0.50
1:QA:760:G:H22	17:QQ:94:ASN:HD22	1.59	0.50
13:QM:31:LYS:HA	13:QM:34:LEU:HD12	1.93	0.50
14:QN:22:THR:HB	14:QN:33:VAL:HG23	1.94	0.50
17:QQ:18:THR:OG1	17:QQ:69:LYS:NZ	2.35	0.50
25:RA:557:U:H2'	25:RA:558:G:C8	2.47	0.50
25:RA:637:A:OP1	35:RP:133:SER:OG	2.18	0.50
25:RA:1827:C:H2'	25:RA:1828:G:H5'	1.94	0.50
25:RA:2064:C:H2'	25:RA:2065:C:C6	2.47	0.50
1:XA:181:G:N2	1:XA:182:U:O4	2.37	0.50
1:XA:552:U:H4'	12:XL:87:GLY:HA3	1.94	0.50
1:XA:835:U:H3	1:XA:851:G:H1	1.60	0.50
2:XB:184:VAL:HG23	2:XB:198:ASP:H	1.76	0.50
3:XC:8:ILE:O	3:XC:11:ARG:N	2.45	0.50
4:XD:18:LYS:NZ	4:XD:31:CYS:SG	2.85	0.50
9:XI:117:HIS:HB3	9:XI:118:LYS:HE2	1.92	0.50
25:YA:93:G:H2'	25:YA:94(A):C:C6	2.47	0.50
25:YA:343:C:H2'	25:YA:344:G:H8	1.77	0.50
25:YA:646:A:H2'	25:YA:647:G:C8	2.47	0.50
25:YA:1164:G:H2'	25:YA:1165:U:C6	2.46	0.50
25:YA:1547:C:H2'	25:YA:1548:C:H6	1.77	0.50
25:YA:1826:G:H4'	27:YD:242:ARG:HE	1.77	0.50
25:YA:2152:G:H2'	25:YA:2153:G:C8	2.47	0.50
25:YA:2154:G:H2'	25:YA:2155:G:C8	2.46	0.50
26:YB:13:A:N1	26:YB:69:G:O2'	2.39	0.50
30:YG:16:ARG:HH21	30:YG:28:VAL:HB	1.76	0.50
8:QH:34:GLU:OE2	8:QH:37:ARG:NH1	2.42	0.50
25:RA:106:C:HO2'	25:RA:294:A:HO2'	1.60	0.50
25:RA:358:U:H2'	25:RA:359:A:C8	2.45	0.50
25:RA:822:U:H2'	25:RA:823:G:H8	1.77	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:832:G:P	35:RP:38:GLN:H	2.35	0.50
25:RA:1044:G:H21	25:RA:1111:A:H2	1.60	0.50
25:RA:2250:G:C8	25:RA:2496:C:H5''	2.47	0.50
25:RA:2495:G:H2'	25:RA:2496:C:H6	1.76	0.50
25:RA:2526:G:O6	25:RA:2537:U:O4	2.30	0.50
25:RA:2567:G:H2'	25:RA:2568:C:C6	2.46	0.50
43:RX:3:THR:OG1	43:RX:6:ASP:N	2.44	0.50
46:R0:9:SER:OG	46:R0:10:THR:N	2.40	0.50
1:XA:892:A:H2'	1:XA:893:C:H6	1.77	0.50
25:YA:1281:G:C8	25:YA:1281:G:C3'	2.95	0.50
25:YA:2144:U:HO2'	25:YA:2147:G:H1	1.57	0.50
29:YF:17:ARG:NE	29:YF:19:GLU:OE2	2.43	0.50
38:YS:40:ILE:HG12	38:YS:47:THR:HG23	1.93	0.50
1:QA:932:C:H2'	1:QA:933:G:H8	1.77	0.50
1:QA:1223:C:OP2	19:QS:78:ARG:NH2	2.45	0.50
4:QD:14:ARG:HD2	4:QD:39:PRO:HB3	1.94	0.50
5:QE:98:THR:OG1	5:QE:99:GLY:N	2.45	0.50
25:RA:674:G:O2'	29:RF:67:GLN:NE2	2.33	0.50
25:RA:956:G:H2'	25:RA:957:A:H2'	1.93	0.50
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.27	0.50
25:RA:2574:G:N2	28:RE:142:GLY:O	2.42	0.50
31:RH:79:VAL:HG12	31:RH:136:ILE:HD11	1.94	0.50
40:RU:49:HIS:HA	40:RU:52:ARG:HB3	1.93	0.50
45:RZ:69:THR:HA	45:RZ:90:VAL:HA	1.94	0.50
1:XA:261:U:H2'	1:XA:263:A:OP2	2.12	0.50
1:XA:954:G:H21	1:XA:1227:A:H62	1.60	0.50
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.12	0.50
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.47	0.50
25:YA:2845:G:H2'	25:YA:2846:G:C8	2.47	0.50
40:YU:106:PHE:HA	40:YU:109:LEU:HD12	1.93	0.50
45:YZ:137:ILE:HG23	45:YZ:156:LYS:HB3	1.94	0.50
1:QA:302:G:H2'	1:QA:303:A:C8	2.47	0.49
1:QA:360:A:H3'	1:QA:360:A:OP2	2.11	0.49
1:QA:1003:G:C2'	1:QA:1004:A:H4'	2.41	0.49
1:QA:1013:G:N2	1:QA:1016:A:OP2	2.33	0.49
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.45	0.49
10:QJ:11:PHE:HE1	10:QJ:67:THR:HG22	1.76	0.49
25:RA:503:A:H4'	25:RA:504:U:H5''	1.93	0.49
25:RA:557:U:H2'	25:RA:558:G:H8	1.77	0.49
25:RA:2087:G:H2'	25:RA:2088:G:H8	1.75	0.49
1:XA:314:C:H2'	1:XA:315:A:C8	2.47	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1456:G:O3'	20:XT:39:LYS:NZ	2.44	0.49
25:YA:746:A:O2'	25:YA:2611:U:O2'	2.30	0.49
25:YA:796:C:H2'	25:YA:797:C:C6	2.46	0.49
25:YA:1510:G:H2'	25:YA:1511:C:C6	2.47	0.49
25:YA:1801:G:OP2	27:YD:154:LYS:NZ	2.35	0.49
25:YA:2510:C:O2'	25:YA:2511:U:H5'	2.12	0.49
30:YG:150:ASP:OD1	30:YG:150:ASP:N	2.38	0.49
36:YQ:65:PHE:HB2	36:YQ:105:GLU:HB2	1.92	0.49
1:QA:130:A:H5'	17:QQ:63:ARG:NE	2.22	0.49
1:QA:460:G:N2	1:QA:471:G:OP2	2.44	0.49
1:QA:591:U:OP2	8:QH:30:ARG:NE	2.45	0.49
4:QD:21:LEU:HD13	58:QD:303:SF4:S2	2.52	0.49
20:QT:31:SER:O	20:QT:35:THR:OG1	2.30	0.49
25:RA:861:A:N3	26:RB:79:C:O2'	2.44	0.49
25:RA:2129:C:H5'	25:RA:2130:U:OP2	2.12	0.49
25:RA:2297:C:H2'	25:RA:2298:A:H8	1.76	0.49
35:RP:93:GLY:H	35:RP:123:LEU:HG	1.78	0.49
47:R1:73:LEU:O	47:R1:77:ALA:N	2.45	0.49
1:XA:1366:C:O2'	1:XA:1367:C:H5'	2.12	0.49
25:YA:626:U:O4	35:YP:81:GLN:NE2	2.44	0.49
25:YA:2010:G:OP1	42:YW:41:LYS:HD2	2.12	0.49
31:YH:90:LYS:HD3	31:YH:159:GLU:HG2	1.94	0.49
1:QA:1104:G:H2'	1:QA:1105:A:O4'	2.12	0.49
1:QA:1358:U:H5'	14:QN:34:TYR:HA	1.94	0.49
8:QH:79:VAL:HG13	8:QH:80:ILE:HD12	1.94	0.49
9:QI:26:VAL:HG12	9:QI:61:ALA:HB3	1.93	0.49
25:RA:494:G:O2'	25:RA:495:G:H5'	2.12	0.49
25:RA:1127:A:H1'	25:RA:2518:A:H5''	1.94	0.49
25:RA:2219:G:H2'	25:RA:2220:G:H8	1.78	0.49
25:RA:2313:C:OP1	30:RG:91:ARG:NH1	2.44	0.49
26:RB:28:C:H2'	26:RB:29:A:C8	2.46	0.49
30:RG:36:LYS:H	30:RG:96:ARG:HH22	1.59	0.49
30:RG:37:VAL:HB	30:RG:94:LEU:HB2	1.94	0.49
33:RN:27:ALA:HA	33:RN:30:ILE:HD12	1.94	0.49
36:RQ:135:ASP:OD2	45:RZ:49:ARG:NH2	2.45	0.49
1:XA:67:C:H2'	1:XA:68:G:H8	1.76	0.49
1:XA:1065:U:H5''	1:XA:1190:G:H22	1.76	0.49
1:XA:1095:U:P	1:XA:1108:G:H1	2.34	0.49
1:XA:1315:U:H2'	1:XA:1316:G:O4'	2.12	0.49
11:XK:61:ALA:HB1	11:XK:94:ALA:HB2	1.94	0.49
25:YA:11:G:H2'	25:YA:12:U:H5'	1.93	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:140:G:N3	25:YA:142(A):A:N6	2.58	0.49
25:YA:1636:C:H2'	25:YA:1637:A:H8	1.74	0.49
25:YA:1672:C:O2'	25:YA:1673:U:OP1	2.27	0.49
25:YA:1970:A:H4'	25:YA:1971:A:OP1	2.11	0.49
25:YA:2328:A:H2'	25:YA:2329:G:H8	1.76	0.49
25:YA:2467:C:O2'	25:YA:2468:G:H5'	2.12	0.49
31:YH:154:PRO:HB3	31:YH:163:TYR:CZ	2.47	0.49
1:QA:582:U:H2'	1:QA:583:A:C8	2.48	0.49
1:QA:1113:C:H4'	3:QC:14:ILE:HD11	1.94	0.49
25:RA:835:A:H2'	25:RA:836:G:C8	2.47	0.49
25:RA:1376:C:H2'	25:RA:1377:G:C8	2.47	0.49
25:RA:2503:2MA:O2'	25:RA:2505:G:OP2	2.21	0.49
25:RA:2593:U:H2'	25:RA:2594:C:C6	2.48	0.49
28:RE:78:LEU:O	28:RE:79:ARG:NH1	2.42	0.49
29:RF:167:ALA:HB1	29:RF:173:VAL:HG11	1.93	0.49
34:RO:24:VAL:HG12	34:RO:33:ALA:HB2	1.93	0.49
45:RZ:7:ALA:HB2	45:RZ:59:LEU:HD12	1.95	0.49
1:XA:102:G:O2'	1:XA:151:A:N3	2.41	0.49
1:XA:1469:G:H2'	1:XA:1470:G:H8	1.78	0.49
7:XG:40:ALA:HB3	9:XI:41:VAL:HG21	1.93	0.49
11:XK:28:THR:HG21	11:XK:90:GLY:HA3	1.95	0.49
19:XS:40:ILE:HG13	19:XS:71:LEU:HD22	1.95	0.49
20:XT:9:ASN:OD1	20:XT:11:SER:OG	2.24	0.49
25:YA:886:C:H5'	25:YA:887:A:OP2	2.11	0.49
25:YA:972:G:OP1	25:YA:974:G:H5''	2.13	0.49
25:YA:1223:G:N2	25:YA:1226:A:OP2	2.46	0.49
25:YA:1273:U:O2'	25:YA:1274:A:H5''	2.13	0.49
25:YA:1363:C:H2'	25:YA:1364:G:H8	1.78	0.49
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.12	0.49
25:YA:2107:C:O2'	25:YA:2108:C:O4'	2.30	0.49
25:YA:2478:A:OP2	55:Y9:2:LYS:NZ	2.34	0.49
25:YA:2754:U:H2'	25:YA:2755:C:H5'	1.95	0.49
26:YB:112:U:H2'	26:YB:113:G:H8	1.78	0.49
1:QA:553:A:H5''	12:QL:24:VAL:HG21	1.93	0.49
1:QA:674:G:H2'	1:QA:675:A:H8	1.77	0.49
1:QA:977:A:O2'	1:QA:981:U:N3	2.45	0.49
6:QF:25:ILE:HG21	6:QF:82:ARG:HH21	1.77	0.49
13:QM:45:VAL:HA	13:QM:48:LEU:HG	1.95	0.49
25:RA:907:U:O2'	36:RQ:101:ARG:NH2	2.45	0.49
32:RI:132:PRO:HD2	32:RI:134:PRO:HD2	1.93	0.49
50:R4:10:VAL:N	50:R4:26:SER:O	2.43	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:674:G:H2'	1:XA:675:A:C8	2.46	0.49
23:XX:19:C:H42	24:XY:36:G:H1	1.61	0.49
1:QA:856:C:H2'	1:QA:857:C:C6	2.47	0.49
1:QA:1320:C:H2'	1:QA:1321:C:O4'	2.13	0.49
1:QA:1456:G:O2'	20:QT:39:LYS:NZ	2.38	0.49
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.95	0.49
25:RA:486:C:O2'	42:RW:60:ASN:OD1	2.30	0.49
25:RA:734:A:O2'	25:RA:735:A:H5'	2.13	0.49
25:RA:806:C:O3'	25:RA:830:G:N2	2.45	0.49
25:RA:1429:G:H2'	25:RA:1430:C:C6	2.47	0.49
25:RA:1995:U:H3'	25:RA:1996:C:H2'	1.94	0.49
25:RA:2064:C:H2'	25:RA:2065:C:H6	1.77	0.49
25:RA:2555:U:C2	56:ZA:1:C:C5	3.00	0.49
26:RB:112:U:H2'	26:RB:113:G:H8	1.77	0.49
28:RE:16:ARG:NH2	28:RE:171:GLU:OE2	2.44	0.49
29:RF:120:GLU:HB3	29:RF:122:LYS:HD3	1.94	0.49
35:RP:47:ASP:OD2	35:RP:49:ARG:NH2	2.37	0.49
40:RU:106:PHE:HA	40:RU:109:LEU:HD12	1.94	0.49
48:R2:9:GLN:NE2	48:R2:56:GLN:OE1	2.39	0.49
52:R6:16:CYS:HB2	52:R6:18:ARG:HH11	1.77	0.49
1:XA:429:U:O4'	1:XA:430:A:H8	1.95	0.49
1:XA:434:U:H2'	1:XA:435:C:H6	1.78	0.49
1:XA:640:A:N3	8:XH:115:SER:OG	2.35	0.49
1:XA:1506:U:O2'	1:XA:1507:A:H5'	2.12	0.49
6:XF:10:LEU:HB2	6:XF:59:TYR:HB3	1.94	0.49
25:YA:313:C:H2'	25:YA:314:A:H8	1.77	0.49
25:YA:2544:G:H1'	25:YA:2646:C:H4'	1.93	0.49
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.78	0.49
25:YA:2737:G:H2'	25:YA:2738:A:H8	1.77	0.49
1:QA:262:A:H2'	1:QA:263:A:C8	2.47	0.49
1:QA:334:C:H2'	1:QA:335:C:C6	2.48	0.49
1:QA:783:C:H2'	1:QA:784:C:H6	1.77	0.49
1:QA:1373:G:H5''	7:QG:36:LYS:HE2	1.95	0.49
25:RA:648:G:H2'	25:RA:649:G:C8	2.47	0.49
25:RA:1262:A:OP2	42:RW:97:LYS:NZ	2.45	0.49
25:RA:2314:C:H2'	25:RA:2315:G:C8	2.47	0.49
28:RE:26:ILE:HD12	28:RE:196:VAL:HG11	1.94	0.49
34:RO:35:VAL:HG11	34:RO:103:ALA:HB3	1.95	0.49
1:XA:166:G:H2'	1:XA:167:G:H8	1.78	0.49
1:XA:1100:C:O2'	1:XA:1102:A:OP1	2.19	0.49
4:XD:8:VAL:HG23	4:XD:8:VAL:O	2.13	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.94	0.49
11:XK:44:SER:H	11:XK:47:VAL:HG12	1.78	0.49
25:YA:1102:C:H2'	25:YA:1103:A:C8	2.47	0.49
25:YA:1266:G:OP2	51:Y5:20:ARG:NE	2.37	0.49
25:YA:1291:C:H2'	25:YA:1292:U:H6	1.76	0.49
25:YA:1496:A:N3	25:YA:1577:C:O2'	2.42	0.49
25:YA:1496:A:O2'	25:YA:1497:U:O2	2.22	0.49
1:QA:302:G:H2'	1:QA:303:A:H8	1.77	0.49
1:QA:490:G:H2'	1:QA:491:G:C8	2.48	0.49
1:QA:1005:A:OP2	1:QA:1006:C:N4	2.46	0.49
1:QA:1280:A:P	10:QJ:43:ARG:HH21	2.36	0.49
1:QA:1321:C:O2	19:QS:36:ARG:NH2	2.46	0.49
1:QA:1415:G:O6	1:QA:1485:U:O4	2.30	0.49
4:QD:20:TYR:HA	58:QD:303:SF4:S3	2.52	0.49
19:QS:50:ALA:HB1	19:QS:57:HIS:HB2	1.95	0.49
25:RA:322:A:P	29:RF:169:ASN:HD21	2.36	0.49
25:RA:614(D):A:C4	29:RF:180:GLY:HA2	2.47	0.49
25:RA:918:A:H4'	26:RB:98:G:N3	2.28	0.49
1:XA:227:G:H2'	1:XA:228:A:C8	2.48	0.49
1:XA:271:C:H2'	1:XA:272:C:C6	2.48	0.49
1:XA:285:G:H2'	1:XA:286:G:H8	1.78	0.49
25:YA:306:U:H2'	25:YA:307:G:O4'	2.13	0.49
25:YA:445:C:O2'	25:YA:449:A:N3	2.38	0.49
25:YA:570:G:H22	25:YA:2498:C:H4'	1.78	0.49
25:YA:2327:A:N7	25:YA:2388:A:N6	2.61	0.49
28:YE:5:LEU:HB2	28:YE:51:PHE:CD2	2.47	0.49
28:YE:161:GLY:HA2	28:YE:163:GLU:HG2	1.94	0.49
53:Y7:5:TRP:O	53:Y7:6:GLN:NE2	2.46	0.49
1:QA:672:U:H2'	1:QA:673:G:H8	1.77	0.49
1:QA:1144:G:H21	1:QA:1146:A:H62	1.59	0.49
1:QA:1226:C:OP2	13:QM:91:ARG:NH2	2.46	0.49
1:QA:1309:G:C2'	1:QA:1310:G:H5'	2.43	0.49
6:QF:79:LEU:HB3	6:QF:88:VAL:HG21	1.93	0.49
25:RA:216:A:H2'	25:RA:217:G:H8	1.78	0.49
25:RA:383:U:H5''	25:RA:384:U:OP2	2.12	0.49
25:RA:1206:G:H1	25:RA:1240:U:H3	1.60	0.49
25:RA:1963:U:H4'	25:RA:1964:G:OP1	2.12	0.49
26:RB:62:C:H2'	26:RB:63:G:C8	2.48	0.49
28:RE:47:VAL:HG11	28:RE:86:PRO:HD2	1.95	0.49
30:RG:173:LEU:HB3	30:RG:178:PHE:HB2	1.92	0.49
43:RX:20:GLY:O	43:RX:25:LYS:N	2.45	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:45:U:H2'	1:XA:46:G:C8	2.48	0.49
1:XA:421:U:H5''	1:XA:422:C:H5	1.77	0.49
1:XA:555:C:H2'	1:XA:556:C:H6	1.78	0.49
13:XM:87:TYR:OH	13:XM:91:ARG:NH2	2.46	0.49
25:YA:572:A:H61	25:YA:2029:G:H21	1.61	0.49
25:YA:630:G:N2	25:YA:633:A:OP2	2.44	0.49
25:YA:932:G:OP2	49:Y3:29:ARG:NH2	2.46	0.49
25:YA:1340:U:OP1	43:YX:16:LYS:NZ	2.45	0.49
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.13	0.49
3:QC:153:VAL:O	3:QC:166:GLU:N	2.41	0.49
4:QD:18:LYS:HD2	4:QD:20:TYR:CZ	2.47	0.49
9:QI:2:GLU:OE1	9:QI:20:ARG:NH2	2.46	0.49
12:QL:75:HIS:HB2	12:QL:77:LEU:HG	1.95	0.49
25:RA:184:C:H2'	25:RA:185:U:C6	2.48	0.49
25:RA:521:G:H2'	25:RA:522:G:C8	2.47	0.49
25:RA:646:A:H2'	25:RA:647:G:C8	2.48	0.49
25:RA:1243:G:O2'	35:RP:7:ARG:NH2	2.46	0.49
25:RA:1957:C:O2'	25:RA:1984:G:N2	2.45	0.49
25:RA:2576:G:OP2	25:RA:2576:G:N2	2.42	0.49
25:RA:2849:U:O4	39:RT:23:ARG:NH1	2.43	0.49
26:RB:30:C:OP2	38:RS:32:LEU:HD11	2.13	0.49
40:RU:65:ILE:O	40:RU:68:ALA:N	2.46	0.49
44:RY:87:LYS:HG2	44:RY:95:LYS:HE3	1.95	0.49
45:RZ:97:GLU:HA	45:RZ:126:VAL:O	2.13	0.49
1:XA:127:G:O2'	17:XQ:2:PRO:O	2.31	0.49
1:XA:539:A:H2'	1:XA:540:G:C8	2.48	0.49
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.28	0.49
1:XA:1095:U:H2'	1:XA:1096:C:C6	2.48	0.49
25:YA:212:G:H2'	25:YA:213:A:O4'	2.13	0.49
25:YA:278:A:H3'	25:YA:278:A:P	2.53	0.49
25:YA:690:G:H2'	25:YA:691:C:H6	1.78	0.49
25:YA:2377:A:H2'	25:YA:2378:A:C8	2.47	0.49
38:YS:10:ARG:HG2	38:YS:91:PRO:HA	1.94	0.49
39:YT:29:ARG:NH2	39:YT:46:GLU:OE1	2.45	0.49
1:QA:254:G:O2'	17:QQ:16:GLN:O	2.31	0.48
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.93	0.48
1:QA:1256:A:OP1	3:QC:26:LYS:HD2	2.12	0.48
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.48	0.48
7:QG:87:VAL:HG23	7:QG:152:ALA:HA	1.94	0.48
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.94	0.48
25:RA:32:C:O2'	25:RA:33:U:H5'	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:590:A:OP1	29:RF:95:ARG:NH1	2.46	0.48
25:RA:863:A:H2'	25:RA:864:G:H8	1.78	0.48
25:RA:2017:U:H4'	51:R5:8:LYS:O	2.12	0.48
25:RA:2206:G:H5''	25:RA:2207:G:N7	2.28	0.48
25:RA:2315:G:H21	30:RG:128:ARG:HH11	1.61	0.48
29:RF:186:ILE:HD12	29:RF:192:LEU:HD21	1.94	0.48
33:RN:58:ASP:N	33:RN:58:ASP:OD1	2.44	0.48
1:XA:130:A:N3	1:XA:263:A:O2'	2.37	0.48
1:XA:533:A:O2'	1:XA:535:A:OP2	2.28	0.48
1:XA:578:C:O2'	1:XA:728:A:N3	2.36	0.48
3:XC:43:LEU:O	3:XC:47:LEU:HB2	2.13	0.48
5:XE:115:VAL:HG12	5:XE:117:ASP:H	1.78	0.48
18:XR:48:GLY:O	18:XR:74:ARG:NH2	2.45	0.48
25:YA:328:U:O2'	44:YY:71:LYS:NZ	2.45	0.48
25:YA:802:A:H5'	25:YA:803:U:OP2	2.13	0.48
25:YA:2031:A:N3	25:YA:2455:G:O2'	2.43	0.48
25:YA:2109:U:H2'	25:YA:2110:G:C8	2.48	0.48
25:YA:2137:C:N3	25:YA:2138:C:N4	2.60	0.48
25:YA:2317:C:H2'	25:YA:2318:G:H5'	1.95	0.48
25:YA:2757:A:O2'	25:YA:2758:A:H5'	2.12	0.48
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.61	0.48
31:YH:122:THR:O	31:YH:134:SER:OG	2.30	0.48
1:QA:768:A:N3	1:QA:1512:U:O2'	2.45	0.48
1:QA:1014:A:H2'	1:QA:1015:A:C8	2.47	0.48
1:QA:1325:C:OP1	21:QU:15:ARG:NE	2.46	0.48
11:QK:31:THR:HA	11:QK:42:TRP:HA	1.94	0.48
25:RA:1514:U:H2'	25:RA:1515:G:C8	2.43	0.48
26:RB:75:G:N2	45:RZ:87:ASP:OD1	2.45	0.48
31:RH:155:SER:OG	31:RH:158:HIS:O	2.31	0.48
35:RP:81:GLN:NE2	35:RP:105:LEU:O	2.44	0.48
1:XA:1457:G:H4'	20:XT:36:LEU:HD21	1.94	0.48
25:YA:1388:G:H2'	25:YA:1389:G:C8	2.48	0.48
25:YA:2065:C:H5''	25:YA:2252:G:H1'	1.93	0.48
25:YA:2096:U:O4	25:YA:2193:G:O6	2.31	0.48
1:QA:328:C:H4'	1:QA:329:A:H5'	1.95	0.48
1:QA:532:A:N6	1:QA:1206:G:O2'	2.46	0.48
1:QA:538:G:H2'	1:QA:539:A:H8	1.78	0.48
1:QA:1049:U:O4	14:QN:29:ARG:NH2	2.41	0.48
2:QB:71:VAL:HG11	2:QB:170:GLU:HG3	1.95	0.48
18:QR:53:ARG:HD2	18:QR:63:GLN:HG2	1.95	0.48
35:RP:37:GLY:N	35:RP:40:SER:OG	2.46	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:59:LEU:HD21	54:R8:10:ALA:HB2	1.95	0.48
40:RU:44:ASN:ND2	41:RV:75:PHE:O	2.32	0.48
40:RU:96:ALA:O	40:RU:99:ALA:N	2.44	0.48
45:RZ:5:LEU:O	45:RZ:59:LEU:HA	2.14	0.48
1:XA:376:G:H2'	1:XA:377:G:C8	2.47	0.48
1:XA:434:U:H2'	1:XA:435:C:C6	2.48	0.48
1:XA:902:G:H2'	1:XA:903:G:H8	1.78	0.48
1:XA:946:A:H2'	1:XA:947:G:C8	2.48	0.48
10:XJ:22:LYS:NZ	10:XJ:88:LEU:O	2.46	0.48
16:XP:34:GLU:OE2	16:XP:59:TRP:NE1	2.38	0.48
25:YA:225:A:H2'	25:YA:226:G:H5'	1.95	0.48
25:YA:1000:A:H2'	25:YA:1001:A:C8	2.49	0.48
25:YA:1800:C:OP1	27:YD:260:ARG:NH2	2.45	0.48
25:YA:2494:G:H2'	25:YA:2495:G:H8	1.77	0.48
25:YA:2546:U:H4'	25:YA:2566:A:H2	1.78	0.48
31:YH:9:ILE:HB	31:YH:50:VAL:HB	1.95	0.48
1:QA:272:C:H2'	1:QA:273:A:H8	1.78	0.48
1:QA:545:C:OP2	4:QD:65:ARG:NH2	2.47	0.48
1:QA:783:C:H2'	1:QA:784:C:C6	2.49	0.48
1:QA:1431:C:H2'	1:QA:1432:G:O4'	2.13	0.48
4:QD:19:LEU:HB2	4:QD:21:LEU:HD11	1.94	0.48
4:QD:202:LEU:O	4:QD:206:PHE:N	2.46	0.48
10:QJ:59:SER:O	10:QJ:59:SER:OG	2.29	0.48
13:QM:10:PRO:HB2	13:QM:13:LYS:HE2	1.95	0.48
25:RA:1364:G:N2	25:RA:1367:A:OP2	2.45	0.48
25:RA:2773:C:O2'	25:RA:2774:C:H5'	2.13	0.48
25:RA:2837:G:H2'	25:RA:2838:G:H8	1.78	0.48
36:RQ:39:PRO:HD3	36:RQ:99:PRO:HG3	1.95	0.48
1:XA:489:C:H2'	1:XA:490:G:H8	1.78	0.48
1:XA:543:C:OP2	4:XD:10:ARG:NH2	2.46	0.48
1:XA:864:A:O2'	1:XA:1078:U:O4	2.28	0.48
1:XA:1121:U:H2'	1:XA:1122:U:C6	2.49	0.48
7:XG:15:ASP:OD1	7:XG:19:GLY:N	2.47	0.48
8:XH:51:VAL:HG21	8:XH:60:ARG:HD3	1.96	0.48
13:XM:59:TYR:O	13:XM:63:THR:OG1	2.24	0.48
17:XQ:22:LEU:HA	17:XQ:41:LYS:HA	1.94	0.48
25:YA:90:U:H4'	25:YA:92:A:H5'	1.94	0.48
25:YA:382:G:O2'	25:YA:383:U:H5'	2.13	0.48
25:YA:565:C:O2'	25:YA:566:U:H5'	2.12	0.48
25:YA:1799:G:O6	27:YD:179:SER:N	2.43	0.48
25:YA:2066:C:H2'	25:YA:2067:G:H5'	1.94	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:130:A:OP2	17:QQ:63:ARG:NE	2.46	0.48
4:QD:18:LYS:HD2	4:QD:20:TYR:CE1	2.49	0.48
25:RA:1394:U:H4'	25:RA:1603:A:H4'	1.94	0.48
25:RA:2715:C:H2'	25:RA:2716:U:C6	2.49	0.48
28:RE:8:LYS:O	28:RE:193:GLY:N	2.43	0.48
30:RG:63:ILE:HG12	30:RG:144:ILE:HD11	1.95	0.48
30:RG:65:GLY:HA2	50:R4:7:PRO:HG2	1.95	0.48
1:XA:255:G:P	17:XQ:69:LYS:HZ3	2.36	0.48
1:XA:636:U:H5'	17:XQ:2:PRO:HG3	1.96	0.48
1:XA:1207:2MG:H2'	1:XA:1208:C:C6	2.48	0.48
1:XA:1289:A:H2'	1:XA:1290:G:H5'	1.96	0.48
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.95	0.48
22:XV:28:C:H2'	22:XV:29:G:C8	2.48	0.48
25:YA:514:A:H2'	25:YA:515:A:C8	2.48	0.48
25:YA:2692:C:H2'	25:YA:2693:A:H8	1.78	0.48
29:YF:63:LYS:NZ	29:YF:75:HIS:O	2.37	0.48
36:YQ:17:LEU:HD21	36:YQ:41:TRP:HE1	1.79	0.48
1:QA:932:C:H5''	7:QG:4:ARG:HD2	1.95	0.48
1:QA:1280:A:H5''	10:QJ:40:LEU:HD21	1.94	0.48
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.49	0.48
8:QH:114:THR:OG1	8:QH:117:GLY:O	2.28	0.48
13:QM:29:ARG:HB2	13:QM:64:TRP:CH2	2.48	0.48
16:QP:35:LYS:HD3	16:QP:37:GLY:H	1.77	0.48
25:RA:374:A:H2'	25:RA:375:C:H5'	1.94	0.48
25:RA:401:A:H2'	25:RA:402:A:C8	2.49	0.48
25:RA:718:A:H3'	25:RA:719:C:H6	1.79	0.48
25:RA:908:C:O2'	36:RQ:71:ASP:OD2	2.24	0.48
30:RG:2:PRO:HB2	30:RG:3:LEU:HD22	1.96	0.48
34:RO:68:GLU:OE1	34:RO:78:ARG:NH1	2.47	0.48
1:XA:197:A:O2'	1:XA:220:G:N2	2.46	0.48
1:XA:269:C:H2'	1:XA:270:A:H8	1.79	0.48
1:XA:398:C:H2'	1:XA:399:G:H8	1.78	0.48
4:XD:111:ALA:HB1	4:XD:116:GLN:HB3	1.94	0.48
25:YA:414:C:H2'	25:YA:415:A:C8	2.47	0.48
25:YA:689:A:N3	25:YA:779:U:O2'	2.40	0.48
25:YA:1374:G:O2'	25:YA:1375:C:H5'	2.14	0.48
25:YA:1844:C:O3'	27:YD:258:LYS:NZ	2.36	0.48
25:YA:2393:A:H5''	35:YP:63:PRO:HB3	1.96	0.48
25:YA:2692:C:H2'	25:YA:2693:A:C8	2.49	0.48
34:YO:73:ASP:OD1	34:YO:73:ASP:N	2.46	0.48
42:YW:86:LEU:HD22	42:YW:96:ILE:HD11	1.94	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:502:G:H4'	1:QA:550:G:H4'	1.94	0.48
1:QA:613:C:H2'	1:QA:614:A:C8	2.48	0.48
8:QH:21:LYS:O	8:QH:65:TYR:OH	2.29	0.48
10:QJ:19:SER:HA	10:QJ:22:LYS:HE3	1.96	0.48
25:RA:40:C:H2'	25:RA:41:C:H6	1.78	0.48
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.96	0.48
25:RA:1529:G:O2'	25:RA:1530:C:H5'	2.14	0.48
25:RA:2048:G:H2'	25:RA:2049:G:O4'	2.14	0.48
25:RA:2295:C:OP1	38:RS:10:ARG:NH2	2.47	0.48
25:RA:2340:G:H2'	25:RA:2341:G:H8	1.78	0.48
5:XE:98:THR:OG1	5:XE:99:GLY:N	2.46	0.48
25:YA:1042:G:H5'	25:YA:1043:C:OP2	2.14	0.48
25:YA:1138:G:O2'	33:YN:102:ALA:O	2.32	0.48
25:YA:2345:G:OP2	52:Y6:38:LYS:HD2	2.12	0.48
25:YA:2495:G:H2'	25:YA:2496:C:C6	2.49	0.48
1:QA:227:G:H2'	1:QA:228:A:C8	2.49	0.48
1:QA:541:G:H2'	1:QA:542:G:H8	1.79	0.48
1:QA:1119:C:H2'	1:QA:1120:G:C8	2.48	0.48
1:QA:1270:C:H2'	1:QA:1271:G:H8	1.79	0.48
8:QH:27:PRO:HA	8:QH:58:TYR:HA	1.94	0.48
14:QN:6:LEU:HB3	14:QN:23:ARG:HH22	1.79	0.48
25:RA:237:C:O2'	25:RA:238:C:H5'	2.14	0.48
25:RA:519:U:H2'	25:RA:520:G:H8	1.79	0.48
25:RA:922:U:H2'	25:RA:923:C:C6	2.48	0.48
25:RA:1769:G:H2'	25:RA:1770:G:H8	1.78	0.48
25:RA:1801:G:O6	25:RA:2201:C:O2'	2.26	0.48
25:RA:2162:G:HO2'	25:RA:2172:U:HO2'	1.55	0.48
1:XA:436:C:H2'	1:XA:437:U:C6	2.48	0.48
1:XA:1292:U:H2'	1:XA:1293:G:H8	1.77	0.48
1:XA:1305:G:N2	1:XA:1331:G:H1'	2.29	0.48
1:XA:1324:A:H2'	1:XA:1325:C:C6	2.48	0.48
1:XA:1412:C:H2'	1:XA:1413:A:H8	1.79	0.48
25:YA:140:G:N2	25:YA:142(A):A:N6	2.60	0.48
25:YA:876:C:H2'	25:YA:877:U:O4'	2.13	0.48
25:YA:988:A:H8	25:YA:988:A:O5'	1.97	0.48
25:YA:1298:C:H3'	25:YA:1299:G:H8	1.79	0.48
40:YU:44:ASN:OD1	41:YV:75:PHE:N	2.47	0.48
41:YV:7:THR:HG23	41:YV:22:VAL:HG11	1.96	0.48
25:RA:538:G:H2'	25:RA:539:G:H8	1.79	0.48
25:RA:1309:G:O2'	25:RA:1611:C:O2'	2.00	0.48
25:RA:2232:U:O2'	25:RA:2233:U:H5'	2.14	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:22:U:H3	26:RB:61:G:H22	1.61	0.48
26:RB:37:C:N3	26:RB:48:A:O2'	2.44	0.48
1:XA:448:A:P	1:XA:485:G:H22	2.36	0.48
1:XA:1121:U:H2'	1:XA:1122:U:H6	1.77	0.48
1:XA:1125:U:O2'	1:XA:1126:U:O5'	2.27	0.48
1:XA:1347:G:N7	9:XI:10:ARG:NH2	2.62	0.48
3:XC:75:VAL:O	3:XC:83:ARG:NH1	2.45	0.48
25:YA:26:G:OP1	42:YW:80:PRO:HB3	2.13	0.48
25:YA:363(B):A:H2'	25:YA:363(C):G:H8	1.78	0.48
45:YZ:163:LEU:HD22	45:YZ:167:PRO:HG3	1.95	0.48
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.96	0.48
1:QA:334:C:H2'	1:QA:335:C:H6	1.79	0.48
1:QA:409:G:P	4:QD:22:LYS:O	2.72	0.48
1:QA:490:G:OP2	4:QD:132:ARG:NH2	2.36	0.48
1:QA:775:G:OP2	27:RD:276:LYS:NZ	2.45	0.48
1:QA:777:A:H2'	1:QA:778:G:C8	2.48	0.48
1:QA:984:C:H2'	1:QA:985:C:H6	1.79	0.48
1:QA:1209:C:H2'	1:QA:1210:C:C6	2.49	0.48
25:RA:104:U:H2'	25:RA:105:C:H5'	1.96	0.48
25:RA:2377:A:H2'	25:RA:2378:A:C8	2.49	0.48
25:RA:2457:U:O2'	25:RA:2458:G:H5'	2.14	0.48
25:RA:2473:U:OP1	25:RA:2529:G:N2	2.46	0.48
55:R9:10:ILE:HG23	55:R9:11:CYS:HB2	1.96	0.48
1:XA:76:C:H2'	1:XA:77:G:H8	1.78	0.48
1:XA:1263:C:H2'	1:XA:1264:C:H6	1.79	0.48
1:XA:1324:A:H2'	1:XA:1325:C:H6	1.79	0.48
16:XP:61:SER:OG	16:XP:62:VAL:N	2.47	0.48
25:YA:52:A:H2'	25:YA:53:A:H8	1.78	0.48
25:YA:831:G:O2'	35:YP:38:GLN:OE1	2.31	0.48
25:YA:1561:G:H2'	25:YA:1562:A:H8	1.79	0.48
29:YF:6:VAL:HG23	29:YF:23:ASP:HA	1.96	0.48
29:YF:155:LEU:HD12	29:YF:174:VAL:HG23	1.96	0.48
35:YP:71:VAL:HG23	35:YP:72:PRO:HD3	1.94	0.48
39:YT:91:ARG:NE	39:YT:124:ASP:OD2	2.42	0.48
39:YT:92:GLY:O	39:YT:120:ARG:NH2	2.47	0.48
1:QA:110:C:H2'	1:QA:111:G:O4'	2.14	0.47
1:QA:195:A:H4'	20:QT:68:LYS:NZ	2.29	0.47
1:QA:730:G:O6	15:QO:51:HIS:NE2	2.41	0.47
1:QA:1098:C:H2'	1:QA:1099:G:C8	2.49	0.47
1:QA:1190:G:H5'	3:QC:176:HIS:CE1	2.48	0.47
1:QA:1386:G:H2'	1:QA:1387:G:H8	1.79	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:573:G:O2'	25:RA:574:C:H3'	2.14	0.47
25:RA:1030:G:O6	25:RA:1125:G:N2	2.47	0.47
25:RA:1356:G:H2'	25:RA:1357:U:C6	2.50	0.47
25:RA:2041:U:H2'	25:RA:2042:A:H8	1.79	0.47
31:RH:54:ARG:NE	31:RH:56:SER:O	2.46	0.47
36:RQ:43:THR:N	36:RQ:46:GLN:OE1	2.41	0.47
1:XA:933:G:O6	7:XG:3:ARG:NH2	2.47	0.47
1:XA:1179:A:H4'	9:XI:103:THR:HA	1.96	0.47
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.48	0.47
1:XA:1407:5MC:H2'	1:XA:1408:A:H8	1.79	0.47
11:XK:16:SER:HA	11:XK:79:SER:O	2.14	0.47
25:YA:110:G:O2'	25:YA:111:A:H5'	2.14	0.47
25:YA:839:U:O2'	25:YA:1191:G:N3	2.43	0.47
25:YA:1064:C:H3'	25:YA:1065:U:H5''	1.95	0.47
25:YA:1587:A:H2'	25:YA:1588:C:C6	2.49	0.47
25:YA:1791:A:H4'	27:YD:206:LEU:HB2	1.96	0.47
25:YA:1918:A:O2'	25:YA:1920:OMC:N4	2.46	0.47
25:YA:2397:G:OP1	47:Y1:25:LYS:HE2	2.14	0.47
25:YA:2405:G:H5'	35:YP:75:ILE:HD13	1.96	0.47
34:YO:104:ARG:NH2	39:YT:43:GLN:OE1	2.47	0.47
39:YT:16:ARG:HH11	39:YT:19:LEU:HD21	1.79	0.47
44:YY:52:SER:OG	44:YY:55:TYR:N	2.38	0.47
1:QA:1048:G:N2	1:QA:1214:C:O2'	2.46	0.47
1:QA:1160:G:H1	1:QA:1176:A:N6	2.12	0.47
4:QD:21:LEU:HD12	4:QD:21:LEU:N	2.29	0.47
25:RA:579:G:H2'	25:RA:580:C:C6	2.48	0.47
25:RA:969:U:H2'	25:RA:970:C:C6	2.48	0.47
25:RA:1297:C:OP1	25:RA:2710:C:H4'	2.15	0.47
25:RA:1591:G:H2'	25:RA:1592:C:C6	2.49	0.47
25:RA:2852:G:H2'	25:RA:2853:C:C6	2.49	0.47
28:RE:104:VAL:HG11	28:RE:188:VAL:HG13	1.96	0.47
34:RO:36:GLY:N	34:RO:62:VAL:O	2.44	0.47
39:RT:22:PHE:HA	39:RT:91:ARG:HH12	1.79	0.47
1:XA:22:G:H2'	1:XA:23:C:C6	2.49	0.47
1:XA:35:G:H2'	1:XA:36:C:C6	2.49	0.47
1:XA:382:A:H2'	1:XA:383:A:H8	1.79	0.47
1:XA:1221:G:O3'	19:XS:77:THR:OG1	2.22	0.47
1:XA:1231:G:O3'	9:XI:126:SER:OG	2.24	0.47
1:XA:1352:C:H2'	1:XA:1353:G:C8	2.49	0.47
25:YA:961:C:O2'	25:YA:2031:A:N6	2.45	0.47
25:YA:2394:C:O2'	25:YA:2395:C:H5'	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2593:U:H2'	25:YA:2594:C:C6	2.49	0.47
1:QA:453:A:OP1	16:QP:76:GLN:NE2	2.47	0.47
1:QA:889:A:OP1	1:QA:891:U:H1'	2.14	0.47
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.79	0.47
1:QA:1377:A:OP2	7:QG:94:ARG:NE	2.47	0.47
1:QA:1427:U:H2'	1:QA:1428:A:H8	1.79	0.47
2:QB:121:LEU:HB3	2:QB:130:ARG:HH22	1.79	0.47
4:QD:92:VAL:O	4:QD:96:LEU:N	2.36	0.47
7:QG:64:GLN:OE1	7:QG:68:ASN:ND2	2.45	0.47
9:QI:21:PRO:HA	9:QI:59:PHE:HA	1.95	0.47
25:RA:519:U:H2'	25:RA:520:G:C8	2.48	0.47
25:RA:1165:U:H3	25:RA:1184:G:H1	1.62	0.47
25:RA:1409:C:H2'	25:RA:1410:G:C8	2.49	0.47
25:RA:2451:A:C6	56:ZA:3:PPU:HE2	2.49	0.47
28:RE:24:THR:OG1	28:RE:186:GLY:O	2.30	0.47
32:RI:56:LYS:O	32:RI:60:GLU:N	2.46	0.47
42:RW:79:GLY:HA3	42:RW:100:THR:HG22	1.96	0.47
1:XA:189(C):C:H42	1:XA:189(J):G:H1	1.61	0.47
1:XA:474:G:H2'	1:XA:475:G:H8	1.80	0.47
25:YA:197:A:O2'	25:YA:2244:U:OP1	2.18	0.47
25:YA:360:G:H2'	25:YA:361:G:H8	1.79	0.47
25:YA:601:C:O2'	25:YA:605:C:OP1	2.30	0.47
25:YA:666:G:N2	54:Y8:2:PRO:O	2.47	0.47
25:YA:1142(B):A:O2'	25:YA:1143:A:H3'	2.14	0.47
25:YA:1466:G:H2'	25:YA:1547:C:N4	2.27	0.47
25:YA:2405:G:P	35:YP:77:ARG:HH21	2.38	0.47
25:YA:2804:C:H2'	25:YA:2805:G:H8	1.79	0.47
25:YA:2830:G:O3'	28:YE:58:ARG:NH2	2.47	0.47
28:YE:9:VAL:HG23	39:YT:3:ARG:HB3	1.97	0.47
36:YQ:32:TYR:OH	36:YQ:111:GLU:OE1	2.29	0.47
1:QA:191:G:O2'	20:QT:102:GLY:N	2.45	0.47
1:QA:582:U:H2'	1:QA:583:A:H8	1.79	0.47
1:QA:1526:G:H2'	1:QA:1527:C:C6	2.48	0.47
6:QF:48:LEU:HD22	6:QF:52:ILE:HD12	1.96	0.47
7:QG:94:ARG:NH1	7:QG:98:SER:OG	2.42	0.47
9:QI:111:ARG:HG3	9:QI:113:LYS:HD3	1.96	0.47
12:QL:6:THR:HG1	12:QL:9:GLN:H	1.58	0.47
25:RA:272(Q):G:H2'	25:RA:272(R):G:H8	1.79	0.47
25:RA:1528(A):A:H2'	25:RA:1528(B):A:C8	2.49	0.47
28:RE:36:ARG:NH1	28:RE:86:PRO:O	2.39	0.47
31:RH:40:GLU:O	31:RH:42:ARG:NH1	2.46	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:41:ARG:NH1	39:RT:42:ILE:O	2.48	0.47
44:RY:52:SER:OG	44:RY:54:LYS:N	2.47	0.47
45:RZ:10:ARG:HH21	45:RZ:26:GLY:H	1.62	0.47
45:RZ:23:LYS:NZ	45:RZ:40:ASP:OD1	2.37	0.47
1:XA:559:A:P	5:XE:126:ARG:HH22	2.38	0.47
1:XA:974:A:OP2	14:XN:29:ARG:NH2	2.47	0.47
1:XA:1010:G:H2'	1:XA:1011:G:C8	2.47	0.47
13:XM:93:ARG:NH1	25:YA:888:C:OP1	2.48	0.47
25:YA:783:A:O2'	25:YA:785:G:OP1	2.32	0.47
25:YA:1105:U:H2'	25:YA:1106:G:C8	2.50	0.47
25:YA:1405:U:H2'	25:YA:1406:U:C6	2.48	0.47
25:YA:1423:G:H2'	25:YA:1424:G:H8	1.80	0.47
25:YA:2526:G:O3'	55:Y9:33:LYS:NZ	2.46	0.47
26:YB:88:C:H2'	26:YB:89:G:C8	2.49	0.47
27:YD:35:LYS:HE3	27:YD:64:ILE:HD11	1.95	0.47
28:YE:134:ILE:HA	28:YE:137:HIS:HD2	1.79	0.47
43:YX:89:ILE:HG22	43:YX:92:LEU:H	1.79	0.47
1:QA:280:C:N3	17:QQ:39:SER:OG	2.36	0.47
2:QB:70:PHE:HD2	2:QB:163:PHE:HB3	1.79	0.47
3:QC:91:LEU:O	3:QC:95:THR:OG1	2.30	0.47
19:QS:19:VAL:HB	19:QS:20:LEU:HD22	1.97	0.47
25:RA:195:A:H4'	25:RA:251:A:O2'	2.15	0.47
25:RA:459:U:H2'	25:RA:460:A:H8	1.80	0.47
41:RV:8:GLY:O	41:RV:10:LYS:NZ	2.36	0.47
1:XA:297:G:H4'	1:XA:557:G:H4'	1.97	0.47
1:XA:378:G:O6	1:XA:386:C:N4	2.47	0.47
1:XA:1430:C:H2'	1:XA:1431:C:C6	2.50	0.47
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.50	0.47
2:XB:93:VAL:HG11	2:XB:97:TRP:HD1	1.79	0.47
4:XD:10:ARG:HB2	4:XD:40:PRO:HG3	1.96	0.47
25:YA:1798:U:O2'	25:YA:1802:A:N3	2.37	0.47
25:YA:2286:A:H4'	25:YA:2287:A:O4'	2.15	0.47
25:YA:2374:C:O2'	25:YA:2375:G:H5'	2.15	0.47
25:YA:2629:A:H1'	25:YA:2630:G:H5''	1.96	0.47
29:YF:122:LYS:HB3	29:YF:191:ARG:HG2	1.97	0.47
33:YN:30:ILE:HG23	33:YN:52:VAL:HG11	1.96	0.47
1:QA:932:C:H2'	1:QA:933:G:C8	2.49	0.47
1:QA:1226:C:H41	13:QM:104:ARG:HG2	1.79	0.47
5:QE:81:GLU:HG2	5:QE:90:VAL:HG13	1.96	0.47
8:QH:83:ILE:O	8:QH:84:ARG:NH1	2.40	0.47
25:RA:214:G:O2'	25:RA:215:G:OP2	2.28	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:259:G:OP1	20:XT:83:ARG:NH1	2.48	0.47
1:XA:269:C:H2'	1:XA:270:A:C8	2.49	0.47
1:XA:552:U:H2'	1:XA:553:A:C8	2.50	0.47
1:XA:1104:G:H4'	2:XB:111:ARG:CZ	2.44	0.47
18:XR:32:ARG:HA	18:XR:69:THR:HG21	1.95	0.47
25:YA:81:G:H21	44:YY:1:MET:HE2	1.79	0.47
25:YA:327:G:H2'	25:YA:328:U:C6	2.50	0.47
25:YA:1270:C:O2'	25:YA:1648:C:OP2	2.25	0.47
25:YA:1416:G:HO2'	25:YA:1417:C:H5	1.61	0.47
25:YA:1512:U:H2'	25:YA:1513:C:C6	2.49	0.47
25:YA:1538:G:H2'	25:YA:1539:G:C8	2.50	0.47
25:YA:2682:U:O2'	39:YT:58:ASN:OD1	2.32	0.47
30:YG:166:ASP:OD1	30:YG:166:ASP:N	2.45	0.47
1:QA:296:U:O2'	1:QA:556:C:O2	2.20	0.47
1:QA:410:G:N2	1:QA:432:A:N6	2.43	0.47
1:QA:437:U:H3	1:QA:495:A:N6	1.99	0.47
1:QA:474:G:H2'	1:QA:475:G:C8	2.47	0.47
1:QA:1083:U:H5''	1:QA:1084:G:C8	2.50	0.47
1:QA:1225:A:OP1	13:QM:103:THR:N	2.41	0.47
1:QA:1330:U:H4'	13:QM:23:TYR:CE2	2.48	0.47
1:QA:1499:A:H2'	1:QA:1500:A:H8	1.79	0.47
3:QC:11:ARG:NH2	3:QC:177:THR:O	2.46	0.47
8:QH:24:THR:OG1	8:QH:25:ASP:N	2.47	0.47
11:QK:34:ASP:OD1	11:QK:37:GLY:N	2.47	0.47
17:QQ:62:SER:OG	17:QQ:63:ARG:N	2.47	0.47
22:QV:76:A:H2'	25:RA:2602:A:N6	2.29	0.47
25:RA:392:C:H5''	25:RA:409:C:H5''	1.97	0.47
25:RA:687:C:H42	25:RA:787:U:H4'	1.79	0.47
25:RA:851:U:O2'	49:R3:42:ALA:O	2.28	0.47
25:RA:898:C:H2'	25:RA:899:A:O4'	2.14	0.47
25:RA:1082:U:O4	25:RA:1086:A:N6	2.48	0.47
25:RA:1441:G:H2'	25:RA:1442:G:H8	1.78	0.47
25:RA:1541:G:H3'	25:RA:1542:A:H2'	1.96	0.47
25:RA:1697:G:OP2	25:RA:1698:A:O2'	2.23	0.47
25:RA:1995:U:O2	34:RO:3:GLN:NE2	2.47	0.47
25:RA:2685:G:H5'	34:RO:68:GLU:OE2	2.14	0.47
25:RA:2740:A:H2'	25:RA:2741:A:C8	2.49	0.47
28:RE:26:ILE:HB	28:RE:182:LEU:HB3	1.96	0.47
41:RV:97:LYS:HD2	41:RV:97:LYS:HA	1.66	0.47
1:XA:392:G:H5'	16:XP:12:LYS:HG3	1.96	0.47
1:XA:1220:G:N2	19:XS:54:GLY:O	2.47	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1347:G:H22	1:XA:1374:A:P	2.38	0.47
1:XA:1404:5MC:H2'	1:XA:1405:G:C8	2.50	0.47
2:XB:192:SER:OG	2:XB:193:ASP:OD1	2.33	0.47
2:XB:197:VAL:O	8:XH:68:ARG:NH2	2.43	0.47
4:XD:208:SER:O	4:XD:208:SER:OG	2.26	0.47
7:XG:23:VAL:O	7:XG:27:ILE:HG12	2.15	0.47
25:YA:459:U:O2'	25:YA:460:A:H5'	2.14	0.47
25:YA:535:C:O3'	40:YU:53:ARG:NH1	2.48	0.47
25:YA:847:U:OP2	25:YA:928:G:O6	2.33	0.47
25:YA:872:A:O2'	25:YA:873:G:H5'	2.14	0.47
25:YA:985:C:O2'	25:YA:986:C:H5'	2.14	0.47
25:YA:1009:A:N3	25:YA:1153:C:O2'	2.43	0.47
25:YA:1096:A:H2'	25:YA:1097:U:H6	1.80	0.47
25:YA:1386:C:H2'	25:YA:1387:C:C6	2.49	0.47
25:YA:1394:U:H4'	25:YA:1603:A:H4'	1.97	0.47
25:YA:1842:G:O6	25:YA:1898:U:O4	2.33	0.47
25:YA:2486:G:H8	25:YA:2486:G:O5'	1.97	0.47
25:YA:2537:U:H2'	25:YA:2538:C:C6	2.49	0.47
25:YA:2695:C:H2'	25:YA:2696:U:C6	2.49	0.47
28:YE:144:ARG:HG2	28:YE:145:LYS:H	1.78	0.47
44:YY:10:GLY:H	44:YY:27:VAL:HB	1.79	0.47
1:QA:25:C:H2'	1:QA:26:A:C8	2.50	0.47
1:QA:34:C:H2'	1:QA:35:G:C8	2.49	0.47
1:QA:67:C:H2'	1:QA:68:G:C8	2.50	0.47
1:QA:271:C:H2'	1:QA:272:C:C6	2.50	0.47
1:QA:619:U:H5''	1:QA:620:C:OP2	2.15	0.47
1:QA:938:A:O2'	7:QG:95:ARG:NH1	2.38	0.47
1:QA:1054:C:H4'	1:QA:1055:A:O5'	2.14	0.47
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.48	0.47
1:QA:1355:G:H21	10:QJ:46:ARG:HH22	1.62	0.47
1:QA:1475:G:H4'	25:RA:1689:A:H4'	1.96	0.47
11:QK:18:ARG:HG3	11:QK:35:PRO:HA	1.97	0.47
11:QK:73:MET:HG2	11:QK:103:LEU:HD21	1.97	0.47
19:QS:41:VAL:HG23	19:QS:43:GLU:H	1.79	0.47
22:QV:18:G:H8	22:QV:18:G:OP1	1.97	0.47
29:RF:11:VAL:HG22	29:RF:125:LEU:HB2	1.97	0.47
29:RF:183:VAL:HA	29:RF:186:ILE:HG12	1.97	0.47
33:RN:43:THR:N	33:RN:48:MET:SD	2.83	0.47
39:RT:92:GLY:O	39:RT:120:ARG:NH2	2.48	0.47
1:XA:806:C:H2'	1:XA:807:A:H8	1.79	0.47
1:XA:1015:A:H2'	1:XA:1016:A:C8	2.50	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:198:ASP:HA	8:XH:68:ARG:HH22	1.80	0.47
3:XC:10:PHE:HD1	3:XC:11:ARG:HD3	1.80	0.47
9:XI:91:ASP:OD1	9:XI:91:ASP:N	2.47	0.47
22:XV:75:C:OP2	22:XV:75:C:H6	1.98	0.47
25:YA:1842:G:H1	25:YA:1898:U:H3	1.61	0.47
25:YA:2537:U:H2'	25:YA:2538:C:H6	1.79	0.47
35:YP:65:ARG:O	35:YP:68:GLN:NE2	2.48	0.47
43:YX:59:VAL:HB	43:YX:76:ARG:HB2	1.97	0.47
45:YZ:24:LEU:HA	45:YZ:25:PRO:HD3	1.78	0.47
1:QA:37:U:H2'	1:QA:38:G:C8	2.50	0.47
1:QA:56:U:O2'	32:YI:82:ARG:NH1	2.47	0.47
1:QA:658:G:H2'	1:QA:659:U:C6	2.50	0.47
1:QA:659:U:H2'	1:QA:660:G:C8	2.50	0.47
1:QA:713:G:OP1	27:RD:176:ARG:NH2	2.48	0.47
1:QA:1009:G:O6	1:QA:1020:U:O2	2.32	0.47
6:QF:82:ARG:HB3	6:QF:85:VAL:HG23	1.97	0.47
8:QH:7:ALA:HA	8:QH:10:LEU:HB2	1.97	0.47
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE3	1.97	0.47
14:QN:22:THR:C	14:QN:33:VAL:HG21	2.35	0.47
25:RA:1070:A:O2'	25:RA:1071:G:H5'	2.14	0.47
25:RA:1149:G:H2'	25:RA:1150:C:C6	2.50	0.47
25:RA:1657:C:H2'	25:RA:1658:C:H6	1.80	0.47
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.50	0.47
25:RA:2221:G:H3'	25:RA:2222:G:H8	1.80	0.47
29:RF:50:SER:OG	29:RF:51:THR:N	2.47	0.47
29:RF:180:GLY:O	29:RF:182:ASN:ND2	2.40	0.47
36:RQ:17:LEU:HD12	36:RQ:39:PRO:HB2	1.96	0.47
36:RQ:65:PHE:HB2	36:RQ:105:GLU:HB2	1.96	0.47
47:R1:46:LEU:O	47:R1:47:GLN:NE2	2.47	0.47
1:XA:276:G:O3'	17:XQ:68:ARG:NH1	2.47	0.47
1:XA:359:U:O5'	1:XA:359:U:H6	1.96	0.47
1:XA:1065:U:H5''	1:XA:1190:G:N2	2.30	0.47
1:XA:1480:G:H2'	1:XA:1481:U:O4'	2.15	0.47
2:XB:84:GLU:OE1	2:XB:233:SER:OG	2.31	0.47
7:XG:78:ARG:HE	7:XG:80:VAL:HG23	1.80	0.47
25:YA:595:C:H2'	25:YA:596:G:H8	1.80	0.47
25:YA:740:U:H5''	25:YA:1784:A:H3'	1.96	0.47
25:YA:827:U:O2	25:YA:2246:G:H4'	2.15	0.47
25:YA:955:C:OP1	36:YQ:87:LYS:NZ	2.43	0.47
25:YA:1089:G:N2	25:YA:1090:U:O4	2.48	0.47
25:YA:2542:A:H4'	25:YA:2543:G:H8	1.79	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.97	0.47
1:QA:57:G:H2'	1:QA:58:C:C6	2.50	0.47
1:QA:584:G:H2'	1:QA:585:G:H8	1.79	0.47
1:QA:925:G:H1	1:QA:1391:U:H3	1.63	0.47
1:QA:972:C:H1'	10:QJ:55:LYS:HE3	1.95	0.47
7:QG:15:ASP:HB3	7:QG:23:VAL:HB	1.97	0.47
15:QO:67:LEU:HD23	15:QO:78:TYR:HE1	1.80	0.47
20:QT:8:ARG:N	20:QT:9:ASN:OD1	2.48	0.47
22:QV:64:G:H4'	36:RQ:10:ARG:NH1	2.30	0.47
25:RA:972:G:OP2	25:RA:973:A:O2'	2.33	0.47
25:RA:1164:G:H2'	25:RA:1165:U:C6	2.50	0.47
25:RA:1269:A:O2'	25:RA:1270:C:H5'	2.15	0.47
1:XA:1067:A:H8	1:XA:1067:A:O5'	1.98	0.47
1:XA:1118:C:H2'	1:XA:1119:C:C6	2.50	0.47
17:XQ:58:GLU:OE2	17:XQ:75:ARG:NH2	2.48	0.47
22:XV:52:G:H1	22:XV:62:C:H42	1.63	0.47
25:YA:52:A:H2'	25:YA:53:A:C8	2.50	0.47
25:YA:286:C:H2'	25:YA:287:C:C6	2.50	0.47
25:YA:1123:C:O2'	25:YA:1124:C:H5'	2.15	0.47
25:YA:1547:C:H2'	25:YA:1548:C:C6	2.49	0.47
25:YA:2037:G:H2'	25:YA:2038:G:C8	2.49	0.47
25:YA:2133:G:N3	25:YA:2158:A:N6	2.63	0.47
25:YA:2495:G:H2'	25:YA:2496:C:H6	1.79	0.47
25:YA:2730:C:O2'	28:YE:168:MET:O	2.26	0.47
25:YA:2883:A:OP1	51:Y5:52:TYR:OH	2.26	0.47
36:YQ:26:TYR:O	36:YQ:67:ARG:NH1	2.46	0.47
39:YT:118:ARG:HA	39:YT:121:ILE:HD12	1.97	0.47
1:QA:20:U:H2'	1:QA:21:G:O4'	2.15	0.46
1:QA:370:C:H2'	1:QA:371:G:C8	2.50	0.46
1:QA:886:G:H1	1:QA:911:U:H3	1.64	0.46
19:QS:13:ASP:HA	19:QS:16:LEU:HB3	1.96	0.46
25:RA:15:G:H1	25:RA:525:U:H3	1.63	0.46
25:RA:20:C:H2'	25:RA:21:A:H8	1.80	0.46
25:RA:186:G:H2'	25:RA:187:G:H8	1.80	0.46
25:RA:1094:U:O2'	25:RA:1096:A:O5'	2.31	0.46
25:RA:2195:C:H2'	25:RA:2196:C:H6	1.79	0.46
25:RA:2718:G:O2'	25:RA:2847:U:OP1	2.26	0.46
29:RF:38:ARG:O	29:RF:42:ALA:N	2.45	0.46
1:XA:151:A:H62	1:XA:170:U:H3	1.63	0.46
1:XA:1074:G:H2'	1:XA:1075:C:C6	2.50	0.46
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.50	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1292:U:H2'	1:XA:1293:G:C8	2.49	0.46
1:XA:1504:G:OP1	1:XA:1507:A:H4'	2.15	0.46
14:YN:9:LYS:HG2	14:YN:12:ARG:HH21	1.80	0.46
25:YA:34:C:H5''	25:YA:35:G:OP2	2.15	0.46
25:YA:530:G:H4'	25:YA:531:C:OP1	2.14	0.46
25:YA:934:G:H2'	25:YA:935:C:C6	2.50	0.46
25:YA:985:C:H2'	25:YA:986:C:H6	1.80	0.46
25:YA:1322:A:H4'	42:YW:84:ARG:HH21	1.80	0.46
25:YA:1434:A:H61	25:YA:1558:A:H61	1.63	0.46
25:YA:2397:G:H5'	47:Y1:28:GLY:O	2.15	0.46
25:YA:2847:U:H3	25:YA:2869:G:H1	1.64	0.46
25:YA:2863:C:H2'	25:YA:2864:G:H8	1.80	0.46
1:QA:1226:C:H2'	13:QM:103:THR:HG22	1.97	0.46
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.97	0.46
4:QD:57:ARG:HE	4:QD:205:GLU:HG3	1.78	0.46
5:QE:144:THR:H	5:QE:147:ASP:HB2	1.79	0.46
11:QK:58:PRO:O	11:QK:62:GLN:N	2.44	0.46
25:RA:648:G:H2'	25:RA:649:G:H8	1.79	0.46
25:RA:818:G:O2'	25:RA:838:C:H4'	2.15	0.46
25:RA:2313:C:H5''	30:RG:91:ARG:HD3	1.98	0.46
25:RA:2331:G:H21	25:RA:2336:A:H2	1.63	0.46
26:RB:62:C:H2'	26:RB:63:G:H8	1.79	0.46
30:RG:100:TRP:O	30:RG:104:GLU:N	2.44	0.46
46:R0:15:ASP:OD1	46:R0:16:SER:N	2.48	0.46
1:XA:334:C:O2'	1:XA:1434:A:O2'	2.13	0.46
1:XA:1325:C:OP1	21:XU:15:ARG:NH1	2.48	0.46
5:XE:103:GLY:O	5:XE:107:ARG:HB3	2.15	0.46
25:YA:832:G:OP2	25:YA:944:G:N1	2.40	0.46
25:YA:1027:A:C2	25:YA:2488:A:H5'	2.51	0.46
25:YA:1579:A:H2'	25:YA:1580:A:C8	2.51	0.46
25:YA:2196:C:O2'	25:YA:2197:U:H5'	2.16	0.46
25:YA:2680:C:H1'	28:YE:187:ALA:HB1	1.96	0.46
26:YB:50:G:OP1	38:YS:63:THR:HG23	2.14	0.46
37:YR:2:ARG:O	37:YR:5:LYS:N	2.48	0.46
1:QA:262:A:H4'	20:QT:75:ASN:HB2	1.95	0.46
1:QA:822:C:H2'	1:QA:823:G:H8	1.80	0.46
1:QA:1328:C:HO2'	13:QM:29:ARG:HH21	1.63	0.46
1:QA:1410:G:H2'	1:QA:1411:C:H6	1.79	0.46
4:QD:108:LEU:HD23	4:QD:110:PHE:HE2	1.80	0.46
21:QU:8:THR:HG23	21:QU:11:GLY:H	1.79	0.46
25:RA:132:G:H1	25:RA:147:U:H3	1.63	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1138:G:O2'	33:RN:102:ALA:O	2.34	0.46
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.50	0.46
25:RA:2836:U:H2'	25:RA:2837:G:C8	2.51	0.46
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.97	0.46
42:RW:71:VAL:HA	42:RW:107:LEU:HD23	1.98	0.46
44:RY:48:ALA:HA	44:RY:60:PHE:HD2	1.81	0.46
51:R5:13:LYS:HG2	51:R5:16:ARG:HH21	1.79	0.46
1:XA:407:G:H2'	1:XA:408:A:C8	2.50	0.46
1:XA:1141:C:H2'	1:XA:1142:G:H8	1.80	0.46
25:YA:347:A:H2'	25:YA:348:G:H8	1.80	0.46
25:YA:934:G:H2'	25:YA:935:C:H6	1.80	0.46
25:YA:1321:A:H2'	25:YA:1322:A:H8	1.81	0.46
25:YA:1748:G:H2'	25:YA:1749:A:C8	2.51	0.46
25:YA:2689:U:OP2	25:YA:2719:G:N2	2.38	0.46
1:QA:1184:G:OP1	1:QA:1184:G:H3'	2.15	0.46
5:QE:92:LYS:HE3	8:QH:105:ARG:HH21	1.81	0.46
5:QE:128:PRO:HA	5:QE:131:ILE:HD11	1.98	0.46
8:QH:12:ARG:NH1	8:QH:25:ASP:O	2.48	0.46
22:QV:8:U:C2	22:QV:14:A:N6	2.81	0.46
25:RA:251:A:OP1	54:R8:7:HIS:NE2	2.36	0.46
25:RA:672:C:O2'	25:RA:673:C:H5'	2.15	0.46
25:RA:1361:G:O2'	25:RA:1362:C:H5'	2.15	0.46
25:RA:2157:G:H5''	25:RA:2158:A:H5'	1.96	0.46
25:RA:2703:C:H2'	25:RA:2704:C:H6	1.80	0.46
25:RA:2851:A:H2'	25:RA:2852:G:C8	2.50	0.46
27:RD:17:THR:HG1	27:RD:205:VAL:H	1.60	0.46
29:RF:68:LYS:HB3	29:RF:69:HIS:CG	2.50	0.46
42:RW:72:LYS:N	42:RW:106:ILE:O	2.45	0.46
44:RY:1:MET:HG2	44:RY:2:ARG:HB2	1.97	0.46
49:R3:18:ASP:OD1	49:R3:18:ASP:N	2.48	0.46
1:XA:556:C:H2'	1:XA:557:G:H8	1.81	0.46
1:XA:1305:G:H22	1:XA:1331:G:H1'	1.80	0.46
13:XM:80:ARG:HD2	50:Y4:58:ARG:HD3	1.96	0.46
25:YA:464:U:O2'	25:YA:465:G:H5'	2.16	0.46
25:YA:539:G:H2'	25:YA:540:C:C6	2.50	0.46
25:YA:572:A:H5''	25:YA:573:G:OP2	2.15	0.46
25:YA:2556:C:H2'	25:YA:2557:G:O4'	2.15	0.46
25:YA:2684:U:O2'	34:YO:68:GLU:OE1	2.32	0.46
47:Y1:86:SER:N	47:Y1:89:GLU:OE1	2.48	0.46
1:QA:126:G:OP1	1:QA:605:U:O2'	2.18	0.46
1:QA:885:G:H2'	1:QA:886:G:H8	1.80	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:127:THR:HA	4:QD:132:ARG:HA	1.97	0.46
15:QO:17:ARG:HB2	15:QO:18:PHE:HD2	1.81	0.46
24:QY:32:U:H5'	24:QY:33:U:OP2	2.14	0.46
25:RA:554:U:O2'	25:RA:555:U:H5'	2.16	0.46
25:RA:1405:U:H2'	25:RA:1406:U:H6	1.78	0.46
25:RA:1952:A:H2'	25:RA:1953:A:C8	2.50	0.46
25:RA:2553:G:C2	56:ZA:3:PPU:H2	2.50	0.46
25:RA:2558:C:H2'	25:RA:2559:C:C6	2.51	0.46
30:RG:108:ASN:HA	50:R4:37:SER:HB3	1.97	0.46
1:XA:818:G:O2'	1:XA:820:U:OP2	2.16	0.46
1:XA:954:G:H2'	1:XA:955:U:C6	2.50	0.46
8:XH:101:PRO:O	8:XH:125:ARG:NH2	2.39	0.46
25:YA:286:C:H2'	25:YA:287:C:H6	1.79	0.46
25:YA:517:C:OP1	51:Y5:16:ARG:NH2	2.49	0.46
25:YA:1657:C:OP1	28:YE:136:ARG:N	2.44	0.46
25:YA:1748:G:H2'	25:YA:1749:A:H8	1.80	0.46
25:YA:2117:A:H2'	25:YA:2118:U:H2'	1.96	0.46
25:YA:2168:G:N2	25:YA:2170:A:H3'	2.30	0.46
32:YI:39:ALA:HB1	32:YI:44:LEU:HD11	1.97	0.46
54:Y8:42:ARG:O	54:Y8:46:ARG:NH2	2.49	0.46
1:QA:269:C:H2'	1:QA:270:A:H8	1.80	0.46
1:QA:407:G:H2'	1:QA:408:A:H8	1.79	0.46
1:QA:741:G:H2'	1:QA:742:G:H8	1.81	0.46
1:QA:830:G:H2'	1:QA:831:U:O4'	2.15	0.46
5:QE:84:PHE:N	5:QE:87:SER:O	2.45	0.46
25:RA:226:G:H21	25:RA:228:A:H62	1.62	0.46
25:RA:443:A:H5''	25:RA:444:C:OP1	2.15	0.46
25:RA:988:A:H2'	25:RA:989:G:H5''	1.97	0.46
25:RA:2553:G:H1'	25:RA:2582:G:H21	1.80	0.46
25:RA:2846:G:H2'	25:RA:2847:U:C6	2.51	0.46
26:RB:60:C:H2'	26:RB:61:G:C8	2.51	0.46
28:RE:48:GLN:HA	28:RE:80:GLU:HA	1.98	0.46
34:RO:78:ARG:O	39:RT:73:GLU:N	2.40	0.46
1:XA:110:C:H3'	1:XA:111:G:H8	1.80	0.46
4:XD:72:GLU:OE1	4:XD:207:TYR:OH	2.30	0.46
12:XL:6:THR:OG1	12:XL:7:ILE:N	2.46	0.46
25:YA:108:U:H2'	25:YA:109:G:H8	1.80	0.46
25:YA:521:G:H2'	25:YA:522:G:H8	1.80	0.46
25:YA:1154:G:H8	25:YA:1154:G:O5'	1.99	0.46
25:YA:1266:G:O6	42:YW:13:SER:OG	2.28	0.46
25:YA:1505:C:H2'	25:YA:1506:C:C6	2.50	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2249:U:N3	25:YA:2253:G:OP2	2.38	0.46
25:YA:2849:U:O4	39:YT:23:ARG:NH1	2.37	0.46
38:YS:25:ARG:NH2	38:YS:88:ASP:OD2	2.49	0.46
1:QA:835:U:O2	1:QA:851:G:N2	2.43	0.46
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.98	0.46
25:RA:30:G:H2'	25:RA:31:C:H6	1.80	0.46
25:RA:143(B):C:H2'	25:RA:144:C:H6	1.80	0.46
25:RA:587:C:P	35:RP:21:ARG:HH22	2.37	0.46
25:RA:1651:G:H2'	25:RA:1652:A:H8	1.81	0.46
25:RA:2852:G:H2'	25:RA:2853:C:H6	1.81	0.46
25:RA:2853:C:H2'	25:RA:2854:G:H8	1.81	0.46
30:RG:169:ALA:O	30:RG:172:LEU:N	2.49	0.46
1:XA:301:G:H2'	1:XA:302:G:C8	2.50	0.46
1:XA:1004:A:OP1	1:XA:1024:G:N2	2.49	0.46
1:XA:1069:C:O2'	1:XA:1192:C:O2	2.33	0.46
1:XA:1269:A:N1	1:XA:1312:G:O2'	2.36	0.46
1:XA:1307:U:OP1	13:XM:101:GLN:NE2	2.37	0.46
1:XA:1530:G:HO2'	1:XA:1531:A:H8	1.60	0.46
2:XB:223:ILE:HB	2:XB:229:VAL:HG12	1.97	0.46
22:XV:36:U:H3	23:XX:17:U:H3	1.63	0.46
25:YA:852:G:H2'	25:YA:853:G:H8	1.81	0.46
25:YA:1452:A:O3'	37:YR:77:ARG:NH1	2.48	0.46
25:YA:2020:A:H4'	40:YU:25:TRP:HZ3	1.79	0.46
25:YA:2037:G:H2'	25:YA:2038:G:H8	1.81	0.46
25:YA:2638:G:H21	25:YA:2778:A:N6	2.06	0.46
32:YI:88:ILE:HD12	32:YI:121:LYS:HA	1.97	0.46
38:YS:25:ARG:HH21	38:YS:27:SER:HB2	1.81	0.46
1:QA:285:G:H2'	1:QA:286:G:H8	1.80	0.46
1:QA:413:G:H1'	1:QA:428:G:H21	1.80	0.46
1:QA:943:U:OP1	1:QA:1236:A:N6	2.49	0.46
1:QA:1228:C:OP1	13:QM:115:LYS:N	2.47	0.46
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.50	0.46
1:QA:1316:G:N1	1:QA:1319:A:OP2	2.43	0.46
1:QA:1459:C:H2'	1:QA:1460:A:C8	2.50	0.46
12:QL:38:THR:OG1	12:QL:39:VAL:N	2.49	0.46
20:QT:61:SER:O	20:QT:65:LYS:HB2	2.16	0.46
25:RA:1345:C:N4	25:RA:1346:G:O6	2.48	0.46
25:RA:1882:C:H2'	25:RA:1883:G:O4'	2.14	0.46
25:RA:2002:G:H8	25:RA:2002:G:O5'	1.98	0.46
25:RA:2776:A:H4'	25:RA:2777:G:O5'	2.15	0.46
28:RE:176:ILE:HB	28:RE:181:LEU:HB2	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:29:LYS:HD3	35:RP:30:THR:HG23	1.97	0.46
45:RZ:10:ARG:NH2	45:RZ:26:GLY:O	2.48	0.46
1:XA:556:C:H2'	1:XA:557:G:C8	2.50	0.46
1:XA:688:G:H2'	1:XA:689:C:C6	2.51	0.46
1:XA:1039:C:H2'	1:XA:1040:U:C6	2.50	0.46
25:YA:855:G:H2'	25:YA:856:C:C6	2.51	0.46
25:YA:995:C:OP2	40:YU:54:LYS:NZ	2.42	0.46
25:YA:1191:G:H2'	25:YA:1192:G:O4'	2.15	0.46
25:YA:1561:G:H2'	25:YA:1562:A:C8	2.50	0.46
25:YA:1983:C:H4'	25:YA:2606:C:H4'	1.98	0.46
25:YA:2119:A:H61	25:YA:2168:G:H21	1.64	0.46
25:YA:2334:G:H5'	38:YS:9:ARG:HG2	1.98	0.46
25:YA:2577:A:H5''	25:YA:2578:G:H5'	1.98	0.46
31:YH:28:GLY:HA3	31:YH:79:VAL:HB	1.96	0.46
33:YN:16:ILE:HB	33:YN:54:VAL:HG12	1.98	0.46
34:YO:78:ARG:NE	39:YT:73:GLU:OE2	2.41	0.46
54:Y8:32:LEU:O	54:Y8:36:LYS:NZ	2.40	0.46
1:QA:438:G:HO2'	1:QA:493:G:N2	2.14	0.46
1:QA:607:A:H2'	1:QA:608:A:O4'	2.16	0.46
1:QA:714:G:H2'	1:QA:715:A:C8	2.51	0.46
1:QA:1355:G:H21	10:QJ:46:ARG:NH2	2.14	0.46
8:QH:4:ASP:OD1	8:QH:85:ARG:NH1	2.49	0.46
25:RA:639:U:H2'	25:RA:640:C:C6	2.51	0.46
25:RA:836:G:H2'	25:RA:837:C:C6	2.50	0.46
25:RA:1380:G:H8	25:RA:1380:G:O5'	1.98	0.46
25:RA:1429:G:H2'	25:RA:1430:C:H6	1.80	0.46
25:RA:2472:G:N2	25:RA:2529:G:O6	2.49	0.46
25:RA:2593:U:H2'	25:RA:2594:C:H6	1.80	0.46
25:RA:2882:A:P	37:RR:96:ARG:HE	2.38	0.46
37:RR:103:ARG:NH1	37:RR:108:GLY:O	2.46	0.46
45:RZ:67:LEU:HD12	45:RZ:90:VAL:HG21	1.98	0.46
50:R4:11:PRO:HA	50:R4:25:TYR:HD1	1.81	0.46
1:XA:489:C:P	4:XD:131:ARG:HH22	2.38	0.46
1:XA:718:G:C8	11:XK:116:HIS:HB3	2.51	0.46
1:XA:859:A:OP2	1:XA:869:G:N2	2.48	0.46
1:XA:1264:C:H2'	1:XA:1265:G:H8	1.80	0.46
1:XA:1318:A:OP1	19:XS:7:LYS:NZ	2.32	0.46
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.79	0.46
25:YA:37:C:H2'	25:YA:38:A:H8	1.81	0.46
25:YA:2323:G:H2'	25:YA:2324:C:O4'	2.16	0.46
26:YB:40:U:H1'	26:YB:45:A:H61	1.81	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:123:LEU:HD23	32:YI:142:VAL:HG22	1.97	0.46
41:YV:32:THR:HA	41:YV:59:ALA:O	2.16	0.46
45:YZ:97:GLU:HA	45:YZ:126:VAL:O	2.16	0.46
1:QA:304:U:H2'	1:QA:305:G:C8	2.51	0.46
1:QA:373:A:H2'	1:QA:374:A:H8	1.81	0.46
1:QA:486:U:H2'	1:QA:487:A:H8	1.80	0.46
1:QA:664:G:H2'	1:QA:666:G:OP1	2.16	0.46
1:QA:688:G:H2'	1:QA:689:C:C6	2.51	0.46
1:QA:706:A:H2	11:QK:39:PRO:HG2	1.81	0.46
1:QA:1530:G:H2'	1:QA:1531:A:C8	2.51	0.46
3:QC:64:VAL:O	3:QC:100:ALA:N	2.40	0.46
5:QE:137:GLU:O	5:QE:141:GLN:NE2	2.49	0.46
18:QR:47:THR:HG23	18:QR:49:LYS:HG3	1.98	0.46
25:RA:605:C:O2	25:RA:657:U:O2'	2.28	0.46
25:RA:1591:G:H2'	25:RA:1592:C:H6	1.81	0.46
26:RB:21:G:H2'	26:RB:22:U:C6	2.51	0.46
26:RB:40:U:H1'	26:RB:45:A:H61	1.81	0.46
1:XA:142:G:H2'	1:XA:143:A:C8	2.51	0.46
1:XA:554:C:O2'	1:XA:555:C:H5'	2.16	0.46
1:XA:1240:U:N3	7:XG:30:ILE:O	2.42	0.46
2:XB:200:ILE:HG22	2:XB:202:PRO:HD3	1.97	0.46
25:YA:991:C:OP2	25:YA:1186:G:H5'	2.16	0.46
25:YA:1406:U:H2'	25:YA:1407:C:H6	1.80	0.46
25:YA:1446:C:O2	25:YA:1545:A:O2'	2.29	0.46
27:YD:22:SER:OG	27:YD:23:GLU:OE2	2.32	0.46
36:YQ:43:THR:N	36:YQ:46:GLN:OE1	2.42	0.46
1:QA:310:G:H2'	1:QA:311:C:H6	1.81	0.45
1:QA:543:C:OP2	4:QD:10:ARG:NH1	2.30	0.45
1:QA:559:A:H4'	1:QA:560:U:H5''	1.98	0.45
1:QA:688:G:H2'	1:QA:689:C:H6	1.81	0.45
1:QA:714:G:O2'	1:QA:777:A:N7	2.47	0.45
1:QA:811:C:O2'	1:QA:901:A:N1	2.49	0.45
2:QB:15:VAL:HG21	2:QB:209:ARG:HE	1.82	0.45
3:QC:32:LEU:HB3	3:QC:59:ARG:HH12	1.81	0.45
7:QG:48:LYS:HD3	7:QG:52:GLU:HG3	1.97	0.45
13:QM:91:ARG:HG3	13:QM:96:LEU:HB2	1.97	0.45
16:QP:57:ARG:NE	16:QP:79:VAL:O	2.47	0.45
25:RA:18:C:H2'	25:RA:19:C:C6	2.50	0.45
25:RA:38:A:H2'	25:RA:39:C:C6	2.50	0.45
25:RA:668:G:H2'	25:RA:670:A:H62	1.81	0.45
25:RA:709:U:H2'	25:RA:710:G:H8	1.81	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:767:U:H2'	25:RA:768:G:H8	1.79	0.45
25:RA:862:G:O6	25:RA:916:G:N2	2.49	0.45
25:RA:1183:G:H2'	25:RA:1184:G:H8	1.79	0.45
25:RA:2047:U:H2'	25:RA:2048:G:H8	1.81	0.45
25:RA:2183:C:H2'	25:RA:2184:G:C8	2.50	0.45
25:RA:2251:OMG:H1'	25:RA:2251:OMG:HM23	1.71	0.45
25:RA:2552:OMU:H2'	25:RA:2554:U:OP2	2.16	0.45
25:RA:2738:A:H2	25:RA:2766:G:H1	1.63	0.45
27:RD:247:ALA:HA	27:RD:253:GLN:HA	1.97	0.45
30:RG:113:ARG:HH12	30:RG:142:PRO:HA	1.80	0.45
47:R1:51:VAL:O	47:R1:58:ILE:N	2.47	0.45
1:XA:344:A:H5''	1:XA:345:C:H5	1.80	0.45
1:XA:401:C:O2'	1:XA:621:A:N3	2.38	0.45
1:XA:1409:C:H2'	1:XA:1410:G:H8	1.81	0.45
1:XA:1458:G:H2'	1:XA:1459:C:C6	2.51	0.45
1:XA:1475:G:H2'	1:XA:1476:G:H8	1.80	0.45
2:XB:46:LYS:HE3	2:XB:46:LYS:HB3	1.82	0.45
6:XF:17:SER:OG	6:XF:18:GLN:N	2.48	0.45
25:YA:378:C:H2'	25:YA:379:G:H5'	1.97	0.45
25:YA:724:U:H2'	25:YA:725:G:O4'	2.17	0.45
25:YA:729:G:C8	27:YD:208:LYS:HD2	2.51	0.45
25:YA:889:C:O2'	25:YA:890:A:O4'	2.33	0.45
25:YA:2193:G:H2'	25:YA:2194:G:H8	1.80	0.45
32:YI:24:GLY:O	32:YI:28:ASN:ND2	2.48	0.45
49:Y3:48:GLU:HA	49:Y3:51:ALA:HB2	1.97	0.45
1:QA:711:G:H2'	1:QA:712:A:H8	1.81	0.45
1:QA:761:G:H2'	1:QA:762:C:O4'	2.16	0.45
1:QA:1508:G:H2'	1:QA:1509:C:C6	2.51	0.45
1:QA:1525:G:H2'	1:QA:1526:G:C8	2.51	0.45
2:QB:87:ARG:HH12	2:QB:231:GLU:HB2	1.81	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.82	0.45
10:QJ:48:THR:HA	10:QJ:62:HIS:HA	1.98	0.45
16:QP:74:LEU:HD12	16:QP:79:VAL:HG21	1.99	0.45
25:RA:381:G:O2'	25:RA:382:G:H5'	2.16	0.45
25:RA:686:G:OP1	53:R7:11:LYS:NZ	2.48	0.45
25:RA:1675:C:H2'	25:RA:1676:A:O4'	2.16	0.45
25:RA:2002:G:OP2	37:RR:9:LYS:NZ	2.49	0.45
25:RA:2181:G:H2'	25:RA:2182:G:C8	2.51	0.45
39:RT:50:ILE:HA	39:RT:99:LEU:HD12	1.97	0.45
1:XA:133:U:O2'	1:XA:134:A:N7	2.44	0.45
1:XA:461:A:O2'	1:XA:470:C:H5'	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1047:G:OP1	14:YN:4:LYS:NZ	2.36	0.45
1:XA:1186:G:H4'	9:XI:110:GLU:OE2	2.17	0.45
1:XA:1512:U:H2'	1:XA:1513:A:H8	1.82	0.45
19:XS:39:THR:HA	19:XS:70:LYS:HA	1.98	0.45
25:YA:272(L):U:H5'	32:YI:50:ARG:HH12	1.81	0.45
25:YA:553:G:O2'	25:YA:554:U:H5'	2.16	0.45
25:YA:570:G:H2'	25:YA:2030:A:C6	2.51	0.45
25:YA:2110:G:OP1	25:YA:2118:U:N3	2.49	0.45
30:YG:114:ILE:HB	30:YG:117:PHE:HB2	1.98	0.45
31:YH:143:GLN:NE2	31:YH:147:ASN:OD1	2.49	0.45
1:QA:584:G:O6	1:QA:758:G:N2	2.50	0.45
1:QA:767:A:H2'	1:QA:768:A:H8	1.81	0.45
1:QA:959:A:N3	1:QA:985:C:H1'	2.32	0.45
22:QV:64:G:H2'	22:QV:65:C:C6	2.51	0.45
25:RA:1782:C:O5'	25:RA:1782:C:H6	1.99	0.45
25:RA:1996:C:H4'	25:RA:1997:G:OP1	2.15	0.45
25:RA:2481:G:HO2'	25:RA:2482:G:P	2.38	0.45
25:RA:2839:G:H2'	25:RA:2840:C:C6	2.51	0.45
54:R8:46:ARG:HH12	54:R8:47:LYS:HE2	1.82	0.45
1:XA:501:C:OP1	12:XL:117:ARG:NH1	2.50	0.45
1:XA:1114:C:H2'	1:XA:1115:C:H6	1.82	0.45
1:XA:1120:G:H2'	1:XA:1121:U:C6	2.51	0.45
1:XA:1170:A:H8	1:XA:1170:A:OP2	1.98	0.45
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.52	0.45
2:XB:20:GLU:O	2:XB:40:HIS:ND1	2.50	0.45
22:XV:75:C:OP2	22:XV:75:C:C6	2.70	0.45
25:YA:1130:U:O2'	25:YA:1131:G:H5'	2.17	0.45
25:YA:1344:G:H4'	25:YA:1384:A:C5	2.51	0.45
25:YA:2298:A:H2'	25:YA:2299:G:O4'	2.16	0.45
1:QA:934:C:N3	1:QA:937:A:N6	2.64	0.45
1:QA:1001(B):G:H2'	1:QA:1002:G:H8	1.82	0.45
1:QA:1228:C:H2'	1:QA:1229:A:H8	1.82	0.45
5:QE:78:HIS:HD1	8:QH:104:ARG:HD2	1.81	0.45
19:QS:32:LYS:HZ1	19:QS:52:TYR:HD1	1.64	0.45
25:RA:184:C:H2'	25:RA:185:U:H6	1.81	0.45
25:RA:184:C:O2'	25:RA:217:G:N3	2.42	0.45
25:RA:646:A:H2'	25:RA:647:G:H8	1.81	0.45
25:RA:1215:G:H1	25:RA:1234:U:H3	1.64	0.45
25:RA:1341:U:H5	25:RA:1395:A:H2	1.65	0.45
25:RA:1500:G:O2'	27:RD:100:GLY:O	2.33	0.45
25:RA:1768:U:H2'	25:RA:1769:G:H8	1.82	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2067:G:O2'	25:RA:2068:U:H5'	2.16	0.45
1:XA:388:G:H4'	1:XA:390:C:H41	1.81	0.45
1:XA:546:G:P	4:XD:72:GLU:HB3	2.56	0.45
1:XA:639:G:H2'	1:XA:640:A:H8	1.81	0.45
1:XA:1122:U:O4	1:XA:1123:A:N6	2.49	0.45
1:XA:1261:A:H62	1:XA:1274:G:N2	2.15	0.45
1:XA:1319:A:O2'	1:XA:1323:G:N7	2.44	0.45
1:XA:1410:G:H2'	1:XA:1411:C:H6	1.82	0.45
5:XE:142:LEU:O	5:XE:143:ARG:NH1	2.45	0.45
16:XP:35:LYS:HE2	16:XP:37:GLY:HA2	1.98	0.45
25:YA:216:A:H2'	25:YA:217:G:C8	2.51	0.45
25:YA:397:G:O2'	25:YA:2230:G:N2	2.49	0.45
25:YA:1291:C:H2'	25:YA:1292:U:C6	2.52	0.45
25:YA:1946:U:H2'	25:YA:1947:C:H6	1.82	0.45
25:YA:2635:C:O2'	28:YE:48:GLN:NE2	2.50	0.45
1:QA:247:G:P	17:QQ:99:SER:HG	2.37	0.45
1:QA:395:C:N4	1:QA:396:G:O6	2.49	0.45
1:QA:814:A:OP2	1:QA:816:A:N6	2.47	0.45
1:QA:946:A:H2'	1:QA:947:G:C8	2.52	0.45
1:QA:948:C:H2'	1:QA:949:A:H8	1.80	0.45
1:QA:1031:G:H2'	1:QA:1032:G:H8	1.81	0.45
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.52	0.45
1:QA:1255:G:O2'	1:QA:1258:G:N3	2.43	0.45
1:QA:1323:G:H2'	1:QA:1324:A:H8	1.80	0.45
2:QB:193:ASP:OD1	2:QB:193:ASP:N	2.49	0.45
25:RA:585:G:H21	25:RA:1254:A:H62	1.63	0.45
25:RA:1027:A:C2	25:RA:2488:A:H5'	2.52	0.45
25:RA:1337:G:OP2	43:RX:73:ARG:NH1	2.43	0.45
25:RA:2023:G:H5'	25:RA:2617:C:H4'	1.98	0.45
25:RA:2296:U:H2'	38:RS:9:ARG:HH12	1.81	0.45
25:RA:2472:G:H21	25:RA:2478:A:H62	1.62	0.45
26:RB:29:A:OP2	38:RS:32:LEU:HG	2.17	0.45
31:RH:9:ILE:HD12	31:RH:73:ALA:HB2	1.97	0.45
1:XA:301:G:H2'	1:XA:302:G:H8	1.81	0.45
1:XA:1323:G:H8	1:XA:1323:G:OP2	1.99	0.45
1:XA:1330:U:H4'	13:XM:23:TYR:CE2	2.52	0.45
1:XA:1469:G:H2'	1:XA:1470:G:C8	2.51	0.45
22:XV:52:G:H1	22:XV:62:C:N4	2.15	0.45
25:YA:357:A:H2'	25:YA:358:U:C6	2.52	0.45
25:YA:538:G:H2'	25:YA:539:G:H8	1.82	0.45
25:YA:576:U:H4'	25:YA:2502:G:C8	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:658:C:H2'	25:YA:659:C:H6	1.80	0.45
25:YA:659:C:H2'	25:YA:660:G:H8	1.81	0.45
25:YA:719:C:H2'	25:YA:720:C:H6	1.82	0.45
25:YA:863:A:H2'	25:YA:864:G:H8	1.81	0.45
25:YA:1656:C:H2'	25:YA:1657:C:H6	1.82	0.45
25:YA:1842:G:H2'	25:YA:1843:C:H6	1.82	0.45
25:YA:2289:G:H2'	25:YA:2290:G:H8	1.80	0.45
27:YD:20:ASP:N	27:YD:20:ASP:OD1	2.40	0.45
30:YG:82:LEU:HD12	30:YG:88:ILE:HG21	1.98	0.45
35:YP:50:ARG:HD3	54:Y8:7:HIS:CD2	2.51	0.45
36:YQ:16:ARG:HD2	36:YQ:16:ARG:HA	1.67	0.45
1:QA:1190:G:H5'	3:QC:176:HIS:HE1	1.82	0.45
2:QB:88:ALA:HA	2:QB:223:ILE:HD11	1.98	0.45
13:QM:54:VAL:HA	13:QM:57:ARG:HB2	1.98	0.45
14:QN:9:LYS:HA	14:QN:12:ARG:HG2	1.99	0.45
22:QV:13:C:H42	22:QV:23:C:H42	1.62	0.45
25:RA:1159:U:H2'	25:RA:1160:G:C8	2.47	0.45
25:RA:2615:U:H6	25:RA:2615:U:H5'	1.80	0.45
26:RB:9:G:OP2	38:RS:15:ARG:NH1	2.50	0.45
26:RB:106:G:O2'	45:RZ:31:ARG:NH1	2.50	0.45
45:RZ:59:LEU:O	45:RZ:66:SER:HA	2.17	0.45
49:R3:59:VAL:HG22	49:R3:60:GLU:HB3	1.97	0.45
1:XA:149:A:H2'	1:XA:150:C:C6	2.52	0.45
1:XA:190:U:H2'	1:XA:191:G:H8	1.82	0.45
1:XA:259:G:H5''	20:XT:83:ARG:NH1	2.28	0.45
1:XA:519:C:H2'	1:XA:520:A:O4'	2.17	0.45
1:XA:581:G:N2	1:XA:582:U:O4	2.49	0.45
1:XA:923:A:H2'	1:XA:924:C:C6	2.51	0.45
1:XA:1263:C:H2'	1:XA:1264:C:C6	2.51	0.45
2:XB:18:GLY:O	2:XB:204:ASN:ND2	2.50	0.45
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.16	0.45
6:XF:100:ASN:ND2	18:XR:27:GLY:O	2.43	0.45
17:XQ:15:MET:HB3	17:XQ:18:THR:HB	1.98	0.45
25:YA:43:A:H2'	25:YA:44:G:H8	1.80	0.45
25:YA:1785:A:O2'	25:YA:1786:A:H2'	2.17	0.45
25:YA:2243:U:H2'	25:YA:2244:U:C6	2.52	0.45
25:YA:2409:G:H2'	25:YA:2410:G:O4'	2.16	0.45
25:YA:2641:G:P	33:YN:74:ARG:HH12	2.40	0.45
25:YA:2680:C:O2'	28:YE:11:MET:SD	2.75	0.45
25:YA:2684:U:H2'	25:YA:2685:G:O4'	2.16	0.45
50:Y4:10:VAL:N	50:Y4:26:SER:O	2.36	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:13:CYS:SG	52:Y6:17:LYS:N	2.89	0.45
1:QA:25:C:N4	1:QA:558:G:H21	2.15	0.45
1:QA:692:U:OP2	11:QK:26:ASN:ND2	2.49	0.45
1:QA:1001(B):G:H2'	1:QA:1002:G:C8	2.51	0.45
25:RA:857:C:O2'	25:RA:858:U:H5'	2.17	0.45
25:RA:860:U:H2'	25:RA:861:A:C8	2.48	0.45
25:RA:1528(B):A:H62	25:RA:1541:G:H21	1.61	0.45
25:RA:1640:C:H2'	25:RA:1641:A:H8	1.81	0.45
25:RA:2220:G:C8	25:RA:2220:G:C3'	2.99	0.45
38:RS:41:ASP:O	38:RS:45:GLY:N	2.45	0.45
1:XA:131:C:H2'	1:XA:132:C:H6	1.82	0.45
1:XA:381:C:H2'	1:XA:382:A:O4'	2.16	0.45
1:XA:813:U:H2'	1:XA:814:A:C8	2.51	0.45
1:XA:1442(A):G:H2'	1:XA:1442(A):G:N3	2.32	0.45
15:XO:24:SER:OG	15:XO:25:THR:N	2.50	0.45
22:XV:59:A:H2'	22:XV:60:U:H5'	1.98	0.45
25:YA:1287:A:H5'	37:YR:104:ARG:HD3	1.99	0.45
25:YA:1315:C:H2'	25:YA:1316:U:C6	2.52	0.45
25:YA:1605:C:H2'	25:YA:1606:G:O4'	2.17	0.45
25:YA:1842:G:H2'	25:YA:1843:C:C6	2.51	0.45
25:YA:2675:A:H2'	25:YA:2676:C:H6	1.81	0.45
45:YZ:48:PHE:HA	45:YZ:51:ALA:HB3	1.99	0.45
1:QA:251:G:N1	1:QA:266:G:O6	2.50	0.45
1:QA:407:G:H2'	1:QA:408:A:C8	2.52	0.45
1:QA:407:G:OP1	4:QD:115:ARG:NH2	2.49	0.45
1:QA:476:G:H2'	1:QA:477:A:H8	1.81	0.45
1:QA:659:U:OP1	15:QO:9:GLN:NE2	2.49	0.45
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.82	0.45
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.51	0.45
17:QQ:83:ASP:N	17:QQ:83:ASP:OD1	2.47	0.45
25:RA:18:C:O2'	25:RA:554:U:OP1	2.34	0.45
25:RA:77:C:O3'	48:R2:14:ARG:NH2	2.49	0.45
25:RA:196:A:OP2	35:RP:46:LYS:NZ	2.49	0.45
25:RA:447:A:N1	25:RA:454:A:O2'	2.41	0.45
25:RA:829:A:N6	25:RA:2247:A:O2'	2.40	0.45
25:RA:848:G:OP2	25:RA:928:G:N2	2.46	0.45
27:RD:260:ARG:NH1	27:RD:267:SER:OG	2.40	0.45
28:RE:24:THR:HG21	28:RE:188:VAL:HB	1.98	0.45
28:RE:45:THR:OG1	28:RE:83:ASP:OD1	2.35	0.45
41:RV:23:GLU:O	41:RV:92:THR:OG1	2.29	0.45
45:RZ:54:HIS:CG	45:RZ:101:PRO:HG3	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:R0:24:LYS:O	46:R0:25:ARG:NH1	2.41	0.45
1:XA:977:A:H8	1:XA:1223:C:C4	2.35	0.45
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.31	0.45
1:XA:1287:A:H2	1:XA:1353:G:H1'	1.82	0.45
1:XA:1293:G:H2'	1:XA:1294:G:C8	2.51	0.45
4:XD:52:SER:OG	4:XD:55:ALA:N	2.42	0.45
8:XH:85:ARG:NH1	8:XH:87:SER:O	2.41	0.45
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.98	0.45
25:YA:96:G:H4'	48:Y2:48:HIS:CD2	2.52	0.45
25:YA:357:A:H2'	25:YA:358:U:H6	1.82	0.45
25:YA:385:C:O2'	25:YA:388:G:N2	2.49	0.45
25:YA:721:C:H2'	25:YA:722:A:C8	2.52	0.45
25:YA:1022:G:N2	25:YA:1023:U:O4	2.41	0.45
25:YA:1281:G:H2'	25:YA:1282:U:H6	1.82	0.45
25:YA:1423:G:OP1	25:YA:1492:G:O2'	2.33	0.45
25:YA:1827:C:C2'	25:YA:1828:G:H5'	2.46	0.45
25:YA:2113:U:H2'	25:YA:2114:A:C8	2.52	0.45
25:YA:2333:A:H4'	25:YA:2335:A:H5''	1.99	0.45
36:YQ:137:TYR:OH	45:YZ:45:ASP:OD1	2.34	0.45
42:YW:4:LYS:HB3	42:YW:106:ILE:HG12	1.98	0.45
45:YZ:163:LEU:HD13	45:YZ:167:PRO:HD3	1.99	0.45
1:QA:1135:U:O2'	1:QA:1138:G:N2	2.48	0.45
1:QA:1315:U:H2'	1:QA:1316:G:O4'	2.17	0.45
25:RA:24:G:H2'	25:RA:25:U:C6	2.52	0.45
25:RA:106:C:H1'	44:RY:1:MET:HE2	1.97	0.45
25:RA:111:A:H2'	25:RA:112:U:C6	2.52	0.45
25:RA:769:G:O2'	25:RA:770:G:H5'	2.17	0.45
25:RA:919:G:N2	25:RA:2269:A:OP2	2.50	0.45
25:RA:1154:G:P	40:RU:58:ARG:HE	2.39	0.45
25:RA:1248:G:C5	40:RU:3:ARG:HB2	2.52	0.45
25:RA:2047:U:H2'	25:RA:2048:G:C8	2.52	0.45
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.99	0.45
1:XA:72:C:H2'	1:XA:73:G:H8	1.81	0.45
1:XA:580:U:H2'	1:XA:581:G:O4'	2.17	0.45
1:XA:695:A:H2'	1:XA:696:A:C8	2.51	0.45
12:XL:77:LEU:HD21	12:XL:107:ALA:HA	1.98	0.45
18:XR:31:LEU:HD23	18:XR:65:ILE:HB	1.99	0.45
25:YA:989:G:OP1	25:YA:1157:G:O2'	2.33	0.45
25:YA:1051:G:H4'	25:YA:2752:C:H4'	1.99	0.45
25:YA:1215:G:H1	25:YA:1234:U:H3	1.65	0.45
25:YA:1321:A:H2'	25:YA:1322:A:C8	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1760:A:O2'	25:YA:1761:C:H5'	2.16	0.45
25:YA:2119:A:N6	25:YA:2168:G:H21	2.14	0.45
1:QA:584:G:H2'	1:QA:585:G:C8	2.51	0.45
1:QA:1038:C:H2'	1:QA:1039:C:H6	1.82	0.45
1:QA:1367:C:H4'	10:QJ:48:THR:HG21	1.98	0.45
17:QQ:81:ARG:HD2	17:QQ:81:ARG:HA	1.84	0.45
25:RA:107:C:H2'	25:RA:108:U:C6	2.51	0.45
25:RA:1181:C:H2'	25:RA:1182:A:H8	1.80	0.45
25:RA:1336:A:H2'	25:RA:1337:G:C8	2.52	0.45
25:RA:1772:G:H5''	25:RA:1773:A:OP2	2.16	0.45
25:RA:2022:U:O2'	25:RA:2617:C:H5'	2.16	0.45
28:RE:55:ASN:HA	28:RE:56:PRO:HD3	1.87	0.45
32:RI:72:LEU:O	32:RI:75:LEU:N	2.48	0.45
49:R3:15:TYR:O	49:R3:20:LYS:NZ	2.42	0.45
1:XA:192:U:H2'	1:XA:193:C:C6	2.52	0.45
1:XA:539:A:H2'	1:XA:540:G:H8	1.82	0.45
1:XA:736:C:H2'	1:XA:737:A:C8	2.50	0.45
1:XA:1047:G:HO2'	1:XA:1215:G:HO2'	1.64	0.45
1:XA:1525:G:P	11:XK:120:ARG:HH22	2.39	0.45
3:XC:40:ARG:HG2	3:XC:55:VAL:HG21	1.98	0.45
4:XD:8:VAL:C	4:XD:10:ARG:N	2.70	0.45
12:XL:70:ILE:HG13	12:XL:100:ILE:HD12	1.99	0.45
25:YA:658:C:H2'	25:YA:659:C:C6	2.52	0.45
25:YA:906:G:O3'	36:YQ:67:ARG:NH2	2.50	0.45
25:YA:1770:G:H2'	25:YA:1771:C:C6	2.51	0.45
25:YA:1818:U:H2'	27:YD:157:ARG:HB2	1.99	0.45
25:YA:1853:A:N6	25:YA:1889:A:N7	2.64	0.45
25:YA:2070:G:H2'	25:YA:2071:A:C8	2.52	0.45
25:YA:2119:A:H61	25:YA:2168:G:N2	2.15	0.45
25:YA:2578:G:N7	28:YE:140:SER:HB3	2.31	0.45
25:YA:2657:A:H62	25:YA:2664:G:H21	1.63	0.45
25:YA:2698:U:H2'	25:YA:2699:C:H6	1.81	0.45
30:YG:96:ARG:H	30:YG:96:ARG:HG2	1.46	0.45
1:QA:45:U:H2'	1:QA:46:G:H8	1.82	0.44
1:QA:324:G:OP1	20:QT:70:SER:OG	2.22	0.44
1:QA:982:U:N3	1:QA:1223:C:C4	2.84	0.44
1:QA:1387:G:H2'	1:QA:1388:C:C6	2.52	0.44
3:QC:154:SER:HA	3:QC:165:THR:HA	1.99	0.44
4:QD:190:ASP:OD1	4:QD:191:ARG:N	2.50	0.44
25:RA:852:G:H2'	25:RA:853:G:C8	2.52	0.44
25:RA:1137:G:N2	33:RN:105:GLY:O	2.39	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1165:U:H2'	25:RA:1166:C:H6	1.82	0.44
25:RA:1333:C:H2'	25:RA:1334:G:H8	1.82	0.44
25:RA:2495:G:H2'	25:RA:2496:C:C6	2.52	0.44
25:RA:2528:U:O2'	25:RA:2530:A:OP1	2.28	0.44
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.52	0.44
27:RD:72:LYS:HZ1	27:RD:101:GLU:HB3	1.82	0.44
31:RH:57:ASP:OD1	31:RH:57:ASP:N	2.47	0.44
1:XA:264:U:O2'	17:XQ:64:PRO:O	2.27	0.44
1:XA:356:A:N3	1:XA:368:U:O2'	2.32	0.44
1:XA:555:C:H2'	1:XA:556:C:C6	2.52	0.44
1:XA:712:A:H2'	1:XA:713:G:C8	2.52	0.44
1:XA:1250:A:N3	1:XA:1370:G:O2'	2.40	0.44
1:XA:1423:G:H2'	1:XA:1424:C:C6	2.52	0.44
2:XB:51:LEU:O	2:XB:54:THR:OG1	2.32	0.44
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.99	0.44
3:XC:45:LYS:HB3	3:XC:45:LYS:HE2	1.81	0.44
18:XR:37:VAL:HB	18:XR:78:LEU:HD23	1.98	0.44
25:YA:466:A:H1'	25:YA:683:C:O4'	2.17	0.44
25:YA:2245:U:H5''	25:YA:2246:G:H5'	1.99	0.44
25:YA:2502:G:H5''	25:YA:2503:2MA:H5''	1.99	0.44
36:YQ:39:PRO:HA	36:YQ:97:VAL:O	2.16	0.44
38:YS:40:ILE:HA	38:YS:47:THR:HA	1.99	0.44
39:YT:53:ARG:NH2	39:YT:58:ASN:O	2.50	0.44
39:YT:65:LYS:O	39:YT:71:GLY:HA2	2.17	0.44
43:YX:54:VAL:HG13	43:YX:81:VAL:HG12	1.99	0.44
45:YZ:154:ASP:H	45:YZ:155:LEU:HG	1.82	0.44
1:QA:558:G:H3'	1:QA:559:A:H2'	2.00	0.44
5:QE:84:PHE:HB2	5:QE:134:ALA:HB2	1.98	0.44
9:QI:6:GLY:O	9:QI:17:VAL:HB	2.18	0.44
15:QO:26:GLU:OE2	15:QO:77:ARG:NE	2.40	0.44
25:RA:139(A):G:H2'	25:RA:140:G:N7	2.32	0.44
25:RA:420:C:O2'	25:RA:421:U:O5'	2.35	0.44
25:RA:659:C:H2'	25:RA:660:G:C8	2.51	0.44
25:RA:1998:G:H4'	25:RA:2724:C:O2'	2.16	0.44
25:RA:2075:U:H4'	25:RA:2596:U:N3	2.31	0.44
25:RA:2526:G:H5'	25:RA:2742:C:O2'	2.16	0.44
25:RA:2853:C:H2'	25:RA:2854:G:C8	2.51	0.44
31:RH:160:LYS:H	31:RH:163:TYR:HH	1.58	0.44
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.98	0.44
1:XA:715:A:H2'	1:XA:716:A:C8	2.52	0.44
1:XA:1058:G:H2'	1:XA:1059:C:C6	2.51	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1068:G:N2	1:XA:1191:A:N3	2.59	0.44
1:XA:1250:A:H2'	1:XA:1251:A:C8	2.52	0.44
5:XE:118:ILE:HD12	5:XE:118:ILE:HA	1.89	0.44
8:XH:81:HIS:ND1	8:XH:138:TRP:OXT	2.50	0.44
19:XS:32:LYS:HA	19:XS:50:ALA:HB3	1.99	0.44
20:XT:33:ILE:O	20:XT:37:SER:OG	2.26	0.44
25:YA:197:A:H2	25:YA:2434:A:H62	1.65	0.44
25:YA:272(R):G:H2'	25:YA:272(S):G:H8	1.82	0.44
25:YA:274:G:H2'	25:YA:275:G:C8	2.50	0.44
25:YA:619:G:OP2	25:YA:620:G:N2	2.51	0.44
25:YA:2107:C:HO2'	25:YA:2108:C:H6	1.62	0.44
27:YD:109:ASP:N	27:YD:195:ALA:O	2.46	0.44
34:YO:61:VAL:HG12	34:YO:87:ILE:HD11	1.99	0.44
1:QA:9:G:H2'	1:QA:10:A:C8	2.52	0.44
1:QA:867:G:H2'	1:QA:868:C:H6	1.82	0.44
1:QA:1124:G:N7	1:QA:1145:C:O2'	2.50	0.44
1:QA:1347:G:O2'	1:QA:1348:U:OP2	2.36	0.44
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.32	0.44
1:QA:1372:U:H2'	1:QA:1373:G:O4'	2.16	0.44
10:QJ:48:THR:HG23	10:QJ:62:HIS:HB3	1.98	0.44
14:QN:4:LYS:HZ3	57:QN:101:MG:MG	1.20	0.44
17:QQ:57:VAL:HG23	17:QQ:59:ILE:HD11	1.99	0.44
22:QV:43:A:H2'	22:QV:44:A:C8	2.51	0.44
25:RA:39:C:H2'	25:RA:40:C:H6	1.82	0.44
25:RA:729:G:O2'	25:RA:763:G:H4'	2.18	0.44
25:RA:2355:C:H4'	46:R0:24:LYS:HG3	2.00	0.44
26:RB:12:C:O2	46:R0:74:ARG:NE	2.42	0.44
32:RI:93:THR:O	32:RI:96:ASP:N	2.47	0.44
1:XA:189(F):U:O2'	1:XA:189(G):U:H5'	2.17	0.44
1:XA:911:U:H2'	1:XA:912:C:C6	2.51	0.44
25:YA:833:U:O4'	35:YP:52:GLU:HA	2.17	0.44
25:YA:1565:C:O3'	25:YA:1566:A:H8	2.01	0.44
25:YA:2515:C:C2'	25:YA:2516:G:H5'	2.48	0.44
27:YD:72:LYS:HE3	27:YD:72:LYS:HB3	1.83	0.44
39:YT:26:ASP:OD1	39:YT:120:ARG:NH2	2.38	0.44
45:YZ:51:ALA:HB1	45:YZ:57:ILE:HD11	2.00	0.44
1:QA:45:U:H2'	1:QA:46:G:C8	2.52	0.44
1:QA:791:G:N2	1:QA:1497:G:O3'	2.50	0.44
1:QA:793:U:O2	1:QA:1516:G:H4'	2.17	0.44
2:QB:100:GLY:O	2:QB:103:THR:N	2.49	0.44
4:QD:100:ARG:NH2	4:QD:136:PRO:O	2.50	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:127:ASN:OD1	5:QE:130:ASN:ND2	2.45	0.44
14:QN:43:CYS:HB2	59:QN:102:ZN:ZN	1.48	0.44
22:QV:3:C:C2'	22:QV:4:G:H5'	2.47	0.44
25:RA:347:A:H2'	25:RA:348:G:H8	1.83	0.44
25:RA:373:U:H2'	25:RA:374:A:H8	1.83	0.44
25:RA:418:G:O2'	25:RA:419:C:H5'	2.18	0.44
25:RA:1255:U:H5''	25:RA:1256:G:C5'	2.35	0.44
25:RA:1467:C:C5	25:RA:1546:C:H2'	2.48	0.44
25:RA:1537:G:H2'	25:RA:1538:G:C8	2.51	0.44
25:RA:1853:A:H2'	25:RA:1854:A:H8	1.81	0.44
25:RA:2865:U:OP2	25:RA:2866:U:O2'	2.21	0.44
34:RO:34:THR:OG1	34:RO:35:VAL:N	2.51	0.44
37:RR:28:LEU:O	37:RR:32:GLY:N	2.43	0.44
1:XA:218:C:H2'	1:XA:219:C:C6	2.52	0.44
1:XA:1294:G:H2'	1:XA:1295:G:C8	2.52	0.44
1:XA:1396:A:H4'	1:XA:1397:C:H5''	1.98	0.44
3:XC:157:ILE:HG22	3:XC:164:ARG:HH21	1.81	0.44
25:YA:358:U:H2'	25:YA:359:A:H8	1.82	0.44
25:YA:1525:G:H2'	25:YA:1526:G:H8	1.82	0.44
25:YA:1719:G:O2'	25:YA:1720:U:H5'	2.17	0.44
25:YA:1864:U:H2'	25:YA:1865:G:C8	2.53	0.44
25:YA:1946:U:O2'	25:YA:1947:C:H5'	2.16	0.44
25:YA:2393:A:H5'	35:YP:61:ARG:O	2.17	0.44
25:YA:2676:C:H2'	25:YA:2677:G:H8	1.82	0.44
48:Y2:51:ARG:HD3	48:Y2:55:ARG:HH11	1.82	0.44
1:QA:713:G:H2'	1:QA:714:G:C8	2.53	0.44
1:QA:868:C:H2'	1:QA:869:G:O4'	2.17	0.44
1:QA:1098:C:H2'	1:QA:1099:G:H8	1.83	0.44
1:QA:1263:C:H2'	1:QA:1264:C:H6	1.83	0.44
1:QA:1410:G:H2'	1:QA:1411:C:C6	2.52	0.44
12:QL:28:LYS:HA	12:QL:28:LYS:HD2	1.79	0.44
16:QP:47:ASP:OD1	16:QP:47:ASP:N	2.40	0.44
18:QR:30:ASP:HB3	18:QR:33:ASP:HB2	1.98	0.44
25:RA:127:A:H5''	25:RA:128:C:C6	2.52	0.44
25:RA:177:G:H3'	25:RA:178:G:H8	1.83	0.44
25:RA:696:G:O2'	25:RA:697:C:H5'	2.17	0.44
25:RA:1817:G:OP1	27:RD:88:ARG:NH2	2.51	0.44
25:RA:1925:C:H42	25:RA:1929:G:H22	1.66	0.44
25:RA:2584:U:H5''	56:ZA:3:PPU:H92	2.00	0.44
25:RA:2845:G:H2'	25:RA:2846:G:C8	2.51	0.44
32:RI:40:THR:O	32:RI:43:ASN:N	2.49	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:134:ALA:O	35:RP:138:LEU:N	2.46	0.44
47:R1:93:GLU:HA	47:R1:96:LYS:HD2	1.98	0.44
1:XA:291:C:O2'	1:XA:292:G:H5'	2.18	0.44
1:XA:1014:A:H8	1:XA:1014:A:OP1	1.99	0.44
1:XA:1014:A:H8	1:XA:1014:A:P	2.41	0.44
25:YA:17:G:H4'	40:YU:25:TRP:NE1	2.33	0.44
25:YA:184:C:H2'	25:YA:185:U:H6	1.83	0.44
25:YA:191:A:O2'	25:YA:192:C:O4'	2.17	0.44
25:YA:236:C:H2'	25:YA:237:C:H6	1.82	0.44
25:YA:896:A:H5''	45:YZ:146:ILE:HB	1.99	0.44
25:YA:1906:G:H2'	25:YA:1907:G:H8	1.83	0.44
25:YA:2140:C:H2'	25:YA:2141:G:C8	2.53	0.44
25:YA:2266:A:H4'	25:YA:2267:A:C4	2.52	0.44
25:YA:2364:C:OP1	46:Y0:55:ARG:NH1	2.50	0.44
25:YA:2757:A:H5'	55:Y9:18:ARG:HH12	1.83	0.44
25:YA:2853:C:H2'	25:YA:2854:G:H8	1.83	0.44
26:YB:7:G:H3'	26:YB:8:U:H5''	1.99	0.44
34:YO:12:ASP:OD1	34:YO:14:THR:OG1	2.26	0.44
1:QA:375:U:O2'	16:QP:6:LEU:O	2.34	0.44
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.99	0.44
3:QC:73:PRO:O	3:QC:76:VAL:N	2.47	0.44
25:RA:252:G:O2'	25:RA:253:C:H5'	2.18	0.44
25:RA:1365:A:O2'	47:R1:11:ARG:NH2	2.33	0.44
25:RA:2377:A:H2'	25:RA:2378:A:H8	1.82	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HB2	1.99	0.44
37:RR:52:ILE:O	37:RR:55:ALA:N	2.49	0.44
38:RS:12:PHE:HA	38:RS:15:ARG:HG2	1.99	0.44
1:XA:582:U:H2'	1:XA:583:A:H8	1.81	0.44
13:XM:66:LEU:O	13:XM:70:LEU:N	2.48	0.44
25:YA:269:U:O2	25:YA:370:G:N2	2.38	0.44
25:YA:637:A:OP1	35:YP:133:SER:OG	2.26	0.44
25:YA:759:G:H2'	25:YA:760:G:C8	2.52	0.44
25:YA:908:C:O2'	25:YA:909:A:H5'	2.17	0.44
25:YA:1107:G:H2'	25:YA:1108:U:H6	1.82	0.44
25:YA:1257:C:H4'	29:YF:83:PHE:CD1	2.52	0.44
25:YA:1651:G:OP1	37:YR:37:THR:HG21	2.17	0.44
44:YY:36:ALA:HB1	44:YY:66:PRO:HB3	2.00	0.44
50:Y4:15:ILE:HG23	50:Y4:32:TYR:HA	2.00	0.44
1:QA:398:C:H2'	1:QA:399:G:H8	1.83	0.44
1:QA:546:G:OP1	4:QD:73:ARG:N	2.50	0.44
1:QA:661:G:H2'	1:QA:662:G:H8	1.83	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:966:M2G:HM12	22:QV:34:C:H5'	1.99	0.44
1:QA:1057:G:H2'	1:QA:1058:G:O4'	2.18	0.44
1:QA:1523:G:H2'	1:QA:1524:C:C6	2.53	0.44
5:QE:131:ILE:O	5:QE:135:THR:OG1	2.22	0.44
9:QI:128:ARG:HH22	22:QV:33:U:P	2.40	0.44
24:QY:36:G:H2'	24:QY:37:G:C8	2.51	0.44
25:RA:407:G:H2'	25:RA:408:G:C8	2.53	0.44
25:RA:729:G:H5'	25:RA:730:C:H5''	1.99	0.44
25:RA:902:C:H2'	25:RA:903:C:H6	1.82	0.44
25:RA:922:U:H2'	25:RA:923:C:H6	1.82	0.44
25:RA:1030:G:N2	55:R9:5:ALA:O	2.51	0.44
25:RA:1090:U:H3'	25:RA:1091:G:H8	1.83	0.44
25:RA:1092:C:H6	25:RA:1092:C:P	2.41	0.44
25:RA:2704:C:H2'	25:RA:2705:A:O4'	2.18	0.44
26:RB:38:C:H2'	26:RB:39:A:H8	1.81	0.44
27:RD:61:LEU:O	27:RD:63:ARG:NH1	2.45	0.44
32:RI:71:ILE:HG23	32:RI:72:LEU:HD12	2.00	0.44
43:RX:11:PRO:HA	43:RX:28:PHE:HA	2.00	0.44
1:XA:129(B):G:N3	1:XA:189(G):U:H5''	2.32	0.44
1:XA:272:C:H2'	1:XA:273:A:C8	2.50	0.44
1:XA:416:G:H2'	1:XA:417:C:C6	2.53	0.44
1:XA:631:G:H2'	1:XA:632:A:C8	2.53	0.44
1:XA:1264:C:H2'	1:XA:1265:G:C8	2.53	0.44
6:XF:80:ARG:NH1	6:XF:88:VAL:O	2.51	0.44
7:XG:70:LYS:HG2	7:XG:96:GLN:HB3	1.99	0.44
22:XV:64:G:H2'	22:XV:65:C:C6	2.53	0.44
25:YA:1491:G:H2'	25:YA:1492:G:H8	1.82	0.44
25:YA:2071:A:H2'	25:YA:2072:G:H8	1.81	0.44
30:YG:129:GLY:HA2	30:YG:166:ASP:HA	2.00	0.44
40:YU:17:ILE:HG13	40:YU:32:PHE:HE1	1.81	0.44
1:QA:77:G:H2'	1:QA:78:G:H5'	2.00	0.44
1:QA:254:G:H2'	1:QA:255:G:H8	1.83	0.44
1:QA:1096:C:H2'	1:QA:1097:C:H6	1.82	0.44
1:QA:1143:G:H2'	1:QA:1144:G:H8	1.82	0.44
20:QT:38:LYS:HA	20:QT:41:ILE:HG12	2.00	0.44
22:QV:74:C:O2'	22:QV:75:C:O5'	2.36	0.44
25:RA:599:G:P	35:RP:9:ASN:HD22	2.40	0.44
25:RA:729:G:OP2	27:RD:208:LYS:NZ	2.51	0.44
25:RA:817:C:O2'	25:RA:839:U:OP1	2.20	0.44
25:RA:1036:G:OP1	31:RH:59:ARG:HB2	2.18	0.44
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1556:C:H2'	25:RA:1557:C:C6	2.53	0.44
25:RA:1682:G:H1	25:RA:1706:U:H3	1.66	0.44
27:RD:62:TYR:HE1	27:RD:88:ARG:HH22	1.65	0.44
30:RG:5:VAL:HG12	30:RG:7:LEU:H	1.82	0.44
34:RO:11:ALA:O	34:RO:99:PHE:N	2.47	0.44
35:RP:36:LYS:HA	35:RP:40:SER:OG	2.18	0.44
54:R8:33:ASN:OD1	54:R8:36:LYS:NZ	2.34	0.44
1:XA:968:A:C8	1:XA:1062:U:H4'	2.53	0.44
1:XA:1269:A:H3'	1:XA:1270:C:O4'	2.17	0.44
1:XA:1314:C:H2'	1:XA:1315:U:H6	1.83	0.44
11:XK:101:SER:OG	11:XK:102:GLY:N	2.50	0.44
17:XQ:28:PRO:HA	17:XQ:35:VAL:HA	1.99	0.44
25:YA:300:A:OP2	44:YY:84:ARG:NH1	2.49	0.44
25:YA:451:C:H41	25:YA:454:A:H5'	1.81	0.44
25:YA:484:C:H2'	25:YA:485:C:H6	1.83	0.44
25:YA:594:U:H2'	25:YA:595:C:C6	2.53	0.44
25:YA:1153:C:OP1	40:YU:92:ARG:NH2	2.51	0.44
25:YA:1769:G:H2'	25:YA:1770:G:H8	1.82	0.44
25:YA:2246:G:H2'	25:YA:2247:A:H8	1.82	0.44
28:YE:36:ARG:NH1	28:YE:86:PRO:O	2.40	0.44
28:YE:201:THR:OG1	28:YE:202:LYS:N	2.51	0.44
30:YG:59:GLU:OE1	30:YG:153:ARG:NH2	2.50	0.44
1:QA:6:G:O2'	1:QA:7:G:H5''	2.18	0.44
1:QA:37:U:H2'	1:QA:38:G:H8	1.83	0.44
1:QA:724:G:OP1	1:QA:854:G:O2'	2.33	0.44
1:QA:977:A:H3'	1:QA:977:A:N3	2.33	0.44
1:QA:1507:A:H2'	1:QA:1508:G:C8	2.53	0.44
2:QB:71:VAL:HG12	2:QB:164:VAL:HA	1.99	0.44
4:QD:105:VAL:HG21	4:QD:126:ILE:HD13	2.00	0.44
25:RA:40:C:H2'	25:RA:41:C:C6	2.52	0.44
25:RA:689:A:H2'	25:RA:690:G:H8	1.83	0.44
25:RA:709:U:H2'	25:RA:710:G:C8	2.53	0.44
25:RA:926:A:H2'	25:RA:927:G:H8	1.81	0.44
36:RQ:68:ILE:HD13	36:RQ:103:MET:HG2	1.99	0.44
49:R3:4:LEU:HD23	49:R3:4:LEU:HA	1.83	0.44
1:XA:17:U:H2'	1:XA:18:C:H6	1.83	0.44
1:XA:96:U:H2'	1:XA:97:G:C8	2.53	0.44
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.82	0.44
1:XA:1464:G:OP1	39:YT:108:ARG:NH2	2.47	0.44
3:XC:153:VAL:HG13	3:XC:198:VAL:HG12	2.00	0.44
6:XF:15:ASP:N	6:XF:15:ASP:OD1	2.50	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:XY:28:C:O2'	24:XY:29:U:O5'	2.35	0.44
25:YA:614(D):A:C4	29:YF:180:GLY:HA3	2.53	0.44
25:YA:1310:G:H2'	25:YA:1311:G:H5'	1.99	0.44
25:YA:1363:C:H2'	25:YA:1364:G:C8	2.53	0.44
30:YG:120:LEU:HB2	30:YG:180:PHE:HD1	1.82	0.44
34:YO:102:VAL:HG23	34:YO:121:VAL:HG23	2.00	0.44
1:QA:533:A:O2'	1:QA:535:A:OP2	2.33	0.43
1:QA:590:C:N4	1:QA:650:G:O6	2.51	0.43
1:QA:675:A:H1'	11:QK:116:HIS:CD2	2.53	0.43
1:QA:1129:C:O2'	1:QA:1139:G:O6	2.26	0.43
4:QD:102:ASP:OD1	4:QD:102:ASP:N	2.49	0.43
11:QK:57:THR:HG23	11:QK:60:ALA:H	1.83	0.43
25:RA:39:C:O2	29:RF:46:ARG:NH2	2.49	0.43
25:RA:2196:C:O2'	25:RA:2197:U:H5'	2.18	0.43
25:RA:2882:A:P	37:RR:96:ARG:HH21	2.40	0.43
30:RG:20:ILE:H	30:RG:20:ILE:HG13	1.63	0.43
34:RO:42:SER:OG	34:RO:43:VAL:N	2.51	0.43
54:R8:37:SER:OG	54:R8:40:GLU:N	2.43	0.43
1:XA:34:C:H2'	1:XA:35:G:C8	2.53	0.43
1:XA:867:G:O2'	1:XA:873:A:N6	2.51	0.43
14:XN:6:LEU:HD13	14:XN:6:LEU:HA	1.86	0.43
25:YA:205:G:O2'	25:YA:206:U:P	2.76	0.43
25:YA:1666:G:H4'	34:YO:6:THR:HG23	2.00	0.43
25:YA:2010:G:H5''	42:YW:42:ARG:HB2	1.99	0.43
25:YA:2189:U:H2'	25:YA:2190:G:H8	1.82	0.43
25:YA:2489:G:N2	25:YA:2491:U:O4	2.44	0.43
26:YB:9:G:N1	26:YB:112:U:N3	2.61	0.43
26:YB:43:C:O4'	30:YG:66:GLN:NE2	2.51	0.43
31:YH:44:VAL:O	31:YH:50:VAL:HG13	2.18	0.43
52:Y6:38:LYS:HB2	52:Y6:49:HIS:CE1	2.53	0.43
1:QA:112:G:H4'	1:QA:389:A:H4'	2.00	0.43
1:QA:443:C:H2'	1:QA:444:C:C6	2.53	0.43
1:QA:672:U:O2	1:QA:734:G:N2	2.41	0.43
1:QA:1268:A:H2'	1:QA:1269:A:C8	2.53	0.43
1:QA:1441:G:H5''	1:QA:1442(A):G:H5'	1.99	0.43
5:QE:136:MET:HG3	5:QE:140:ARG:HH12	1.82	0.43
7:QG:126:ASP:O	7:QG:131:LYS:N	2.51	0.43
8:QH:9:MET:HE3	8:QH:32:LYS:HE3	1.99	0.43
10:QJ:49:VAL:HG21	14:QN:44:LEU:HD22	2.01	0.43
16:QP:14:ASN:HD21	16:QP:16:HIS:CE1	2.34	0.43
25:RA:678:C:H2'	25:RA:679:C:H6	1.82	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:868:U:H2'	25:RA:869:G:C8	2.53	0.43
25:RA:1011:G:OP2	40:RU:66:ASN:ND2	2.51	0.43
25:RA:1102:C:H2'	25:RA:1103:A:C8	2.53	0.43
25:RA:1568:G:H5''	27:RD:61:LEU:HG	1.99	0.43
25:RA:2294:C:H2'	25:RA:2295:C:H6	1.83	0.43
25:RA:2354:G:H21	46:R0:36:ILE:HD11	1.83	0.43
25:RA:2410:G:H3'	25:RA:2411:A:H8	1.82	0.43
25:RA:2480:C:H2'	25:RA:2481:G:H5'	2.00	0.43
25:RA:2745:C:H4'	31:RH:142:GLY:O	2.18	0.43
45:RZ:26:GLY:HA2	45:RZ:86:VAL:O	2.18	0.43
52:R6:16:CYS:HB2	52:R6:18:ARG:HD2	2.01	0.43
1:XA:21:G:H2'	1:XA:22:G:C8	2.52	0.43
1:XA:338:A:H61	1:XA:351:G:H1	1.65	0.43
1:XA:822:C:O2'	1:XA:823:G:H5'	2.17	0.43
2:XB:106:LYS:H	2:XB:106:LYS:HG2	1.65	0.43
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.18	0.43
6:XF:6:VAL:HB	6:XF:63:TYR:HB2	1.99	0.43
8:XH:98:LYS:HE2	8:XH:98:LYS:HB2	1.89	0.43
9:XI:77:ILE:O	9:XI:81:ILE:HG12	2.18	0.43
19:XS:18:LYS:HA	19:XS:18:LYS:HD2	1.65	0.43
24:XY:28:C:HO2'	24:XY:29:U:C5'	2.30	0.43
25:YA:225:A:C2'	25:YA:226:G:H5'	2.48	0.43
25:YA:272(H):G:H2'	25:YA:272(I):G:C8	2.53	0.43
25:YA:1379:A:H4'	25:YA:1380:G:OP2	2.18	0.43
25:YA:1657:C:H2'	25:YA:1658:C:H6	1.82	0.43
25:YA:2014:A:O2'	42:YW:92:ARG:NH1	2.46	0.43
31:YH:155:SER:OG	31:YH:158:HIS:N	2.51	0.43
38:YS:39:ILE:HD11	38:YS:73:LEU:HD21	1.99	0.43
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.18	0.43
42:YW:71:VAL:HA	42:YW:107:LEU:HD23	1.99	0.43
45:YZ:69:THR:HG22	45:YZ:90:VAL:HA	1.98	0.43
1:QA:31:G:N2	1:QA:48:C:O5'	2.52	0.43
1:QA:460:G:N1	1:QA:471:G:OP2	2.43	0.43
1:QA:990:C:N4	1:QA:1216:G:O6	2.52	0.43
1:QA:1294:G:H2'	1:QA:1295:G:C8	2.53	0.43
4:QD:21:LEU:N	4:QD:26:CYS:SG	2.91	0.43
5:QE:77:PRO:HD2	5:QE:142:LEU:HD23	1.99	0.43
25:RA:272(E):U:H3	25:RA:272(S):G:H1	1.65	0.43
25:RA:414:C:H2'	25:RA:415:A:H8	1.83	0.43
25:RA:2258:C:O2'	25:RA:2427:C:OP2	2.32	0.43
25:RA:2637:U:H5''	28:RE:82:ARG:NH1	2.33	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2773:C:OP1	28:RE:166:THR:OG1	2.36	0.43
25:RA:2817:G:H21	25:RA:2836:U:H1'	1.82	0.43
26:RB:101:G:H2'	26:RB:102:A:C8	2.54	0.43
37:RR:100:LEU:HD12	37:RR:101:ALA:H	1.83	0.43
44:RY:13:VAL:HG12	44:RY:74:PRO:HA	1.99	0.43
44:RY:39:VAL:HG13	44:RY:42:VAL:HB	1.99	0.43
1:XA:243:A:N6	1:XA:281:G:O2'	2.52	0.43
1:XA:337:C:H2'	1:XA:338:A:C8	2.51	0.43
3:XC:174:PRO:HB2	3:XC:177:THR:HG23	2.00	0.43
23:XX:18:G:H4'	23:XX:19:C:OP1	2.18	0.43
25:YA:18:C:H2'	25:YA:19:C:C6	2.52	0.43
25:YA:675:A:N3	25:YA:2443:C:O2'	2.43	0.43
25:YA:729:G:H5'	25:YA:730:C:H5''	1.99	0.43
25:YA:996:A:O3'	40:YU:91:ASP:HB2	2.18	0.43
25:YA:2113:U:H2'	25:YA:2114:A:H8	1.84	0.43
25:YA:2303:G:H1'	30:YG:132:ASN:ND2	2.34	0.43
25:YA:2743:C:OP2	25:YA:2755:C:N4	2.50	0.43
26:YB:55:U:H2'	26:YB:56:G:C8	2.53	0.43
31:YH:101:ARG:H	31:YH:101:ARG:HG2	1.60	0.43
34:YO:29:ASN:OD1	34:YO:29:ASN:N	2.50	0.43
37:YR:37:THR:OG1	37:YR:38:VAL:N	2.49	0.43
1:QA:298:A:H8	1:QA:298:A:OP1	2.01	0.43
1:QA:536:C:H2'	1:QA:537:G:C8	2.53	0.43
1:QA:1351:U:O2	1:QA:1371:G:N2	2.43	0.43
25:RA:110:G:H2'	25:RA:111:A:H8	1.83	0.43
25:RA:126:A:OP1	53:R7:18:PHE:N	2.45	0.43
25:RA:239:U:H2'	25:RA:240:G:O4'	2.18	0.43
25:RA:241:A:H5'	25:RA:243:U:O4'	2.18	0.43
25:RA:437:G:H2'	25:RA:438:G:C8	2.53	0.43
25:RA:742:G:H2'	25:RA:743:G:C8	2.54	0.43
25:RA:840:C:H2'	25:RA:841:A:H8	1.83	0.43
25:RA:931:G:O3'	49:R3:24:LYS:NZ	2.52	0.43
25:RA:1557:C:H5''	25:RA:1558:A:OP2	2.18	0.43
25:RA:1956:U:H1'	25:RA:2552:OMU:OP1	2.18	0.43
25:RA:2660:A:P	25:RA:2660:A:H8	2.41	0.43
25:RA:2801(B):A:H5'	25:RA:2802:G:C8	2.53	0.43
31:RH:148:ILE:HA	31:RH:151:ILE:HD12	2.00	0.43
32:RI:54:GLN:O	32:RI:58:LEU:N	2.39	0.43
34:RO:9:GLU:N	34:RO:82:ASN:O	2.43	0.43
42:RW:47:VAL:HA	42:RW:50:VAL:HG12	2.00	0.43
45:RZ:57:ILE:O	45:RZ:69:THR:OG1	2.27	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:56:VAL:HG12	50:R4:57:GLU:H	1.82	0.43
52:R6:37:ARG:HA	52:R6:48:VAL:HA	2.01	0.43
1:XA:725:G:OP1	1:XA:853:G:N2	2.35	0.43
1:XA:1517:G:N3	25:YA:1919:A:O2'	2.37	0.43
11:XK:38:ASN:HA	11:XK:39:PRO:HD3	1.86	0.43
25:YA:673:C:OP1	29:YF:54:ARG:NH1	2.46	0.43
25:YA:816:C:H2'	25:YA:817:C:H6	1.83	0.43
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.49	0.43
25:YA:1032:A:H2	25:YA:1122:G:H22	1.67	0.43
25:YA:1202:C:H42	25:YA:1243:G:H1	1.67	0.43
25:YA:1299:G:N2	25:YA:1641:A:H62	2.16	0.43
25:YA:1999:C:OP1	28:YE:118:LYS:NZ	2.51	0.43
25:YA:2393:A:H4'	35:YP:62:LEU:O	2.18	0.43
29:YF:158:THR:HG23	29:YF:160:ASN:H	1.83	0.43
45:YZ:24:LEU:HD11	45:YZ:83:PRO:HB2	2.01	0.43
1:QA:273:A:O2'	1:QA:274:A:H5'	2.19	0.43
1:QA:404:U:P	4:QD:118:ARG:HH12	2.41	0.43
1:QA:672:U:H2'	1:QA:673:G:C8	2.53	0.43
1:QA:824:C:H2'	1:QA:825:G:C8	2.54	0.43
1:QA:1059:C:OP2	3:QC:199:LYS:NZ	2.49	0.43
1:QA:1202:G:H2'	1:QA:1203:C:H6	1.84	0.43
1:QA:1270:C:H4'	1:QA:1313:U:O2'	2.18	0.43
2:QB:9:GLU:HA	2:QB:12:GLU:HG2	1.99	0.43
4:QD:8:VAL:CG1	4:QD:22:LYS:HE3	2.48	0.43
4:QD:89:THR:OG1	5:QE:97:GLY:O	2.36	0.43
8:QH:23:SER:OG	8:QH:24:THR:N	2.52	0.43
11:QK:27:ASN:OD1	11:QK:28:THR:N	2.50	0.43
16:QP:1:MET:HG2	16:QP:3:LYS:HG3	2.01	0.43
25:RA:18:C:H2'	25:RA:19:C:H6	1.83	0.43
25:RA:120:U:H4'	25:RA:122:G:OP2	2.18	0.43
25:RA:839:U:H2'	25:RA:840:C:H6	1.84	0.43
25:RA:947:G:H2'	25:RA:948:G:C8	2.53	0.43
25:RA:2543:G:O4'	25:RA:2766:G:H5'	2.18	0.43
27:RD:132:PRO:HA	27:RD:190:TYR:HA	1.99	0.43
36:RQ:2:LEU:N	36:RQ:48:GLU:OE2	2.48	0.43
41:RV:35:LEU:HB3	41:RV:57:VAL:HG13	2.01	0.43
48:R2:38:GLN:O	48:R2:43:GLN:N	2.51	0.43
54:R8:52:LYS:HA	54:R8:52:LYS:HD3	1.79	0.43
1:XA:1499:A:H2'	1:XA:1500:A:H8	1.82	0.43
1:XA:1510:U:H2'	1:XA:1511:G:H8	1.84	0.43
13:XM:84:ILE:HG13	13:XM:86:CYS:H	1.84	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:252:G:OP1	35:YP:50:ARG:NH1	2.48	0.43
25:YA:729:G:C6	27:YD:208:LYS:HB2	2.54	0.43
25:YA:852:G:O2'	25:YA:853:G:H5'	2.18	0.43
25:YA:1314:C:OP1	25:YA:1332:G:H5''	2.19	0.43
25:YA:1961:C:H2'	25:YA:1962:5MC:H5'	1.99	0.43
25:YA:2590:A:H2'	25:YA:2591:C:H6	1.83	0.43
44:YY:96:ILE:HD12	44:YY:96:ILE:HA	1.89	0.43
1:QA:100:C:H2'	1:QA:101:A:C8	2.54	0.43
1:QA:266:G:H2'	1:QA:266:G:N3	2.33	0.43
5:QE:100:VAL:HG23	5:QE:118:ILE:HG22	1.99	0.43
6:QF:23:LYS:HA	6:QF:26:ILE:HD12	1.99	0.43
7:QG:153:HIS:NE2	11:QK:57:THR:OG1	2.43	0.43
9:QI:17:VAL:HG21	9:QI:80:GLY:HA3	2.01	0.43
14:QN:32:SER:O	14:QN:32:SER:OG	2.33	0.43
17:QQ:48:GLU:HB2	17:QQ:50:LYS:HB3	2.00	0.43
25:RA:503:A:H4'	25:RA:505:A:H5''	2.01	0.43
25:RA:578:A:OP1	25:RA:1255:U:O2'	2.29	0.43
25:RA:1266:G:O2'	25:RA:2012:G:O6	2.30	0.43
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.53	0.43
25:RA:1826:G:H2'	25:RA:1827:C:H6	1.83	0.43
25:RA:2087:G:H2'	25:RA:2088:G:C8	2.54	0.43
25:RA:2222:G:H5''	27:RD:186:HIS:CD2	2.54	0.43
25:RA:2588:G:H2'	25:RA:2589:A:C8	2.53	0.43
27:RD:20:ASP:OD1	27:RD:20:ASP:N	2.50	0.43
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	2.00	0.43
31:RH:9:ILE:HG12	31:RH:69:ARG:HH11	1.83	0.43
38:RS:7:TYR:O	38:RS:11:LYS:N	2.47	0.43
38:RS:62:LYS:HD2	38:RS:62:LYS:HA	1.65	0.43
41:RV:50:PRO:HB2	41:RV:51:VAL:HG23	1.99	0.43
1:XA:60:A:H4'	1:XA:61:G:O5'	2.19	0.43
1:XA:189(C):C:H2'	1:XA:189(D):C:H6	1.83	0.43
1:XA:582:U:H2'	1:XA:583:A:C8	2.53	0.43
1:XA:586:C:O3'	8:XH:89:PRO:HB3	2.18	0.43
1:XA:1523:G:H2'	1:XA:1524:C:C6	2.54	0.43
1:XA:1524:C:H2'	1:XA:1525:G:H8	1.84	0.43
11:XK:20:TYR:O	11:XK:30:VAL:HA	2.17	0.43
17:XQ:21:VAL:O	17:XQ:42:TYR:N	2.39	0.43
21:XU:19:GLY:N	21:XU:22:ARG:O	2.38	0.43
25:YA:180:G:N2	25:YA:215:G:O6	2.48	0.43
25:YA:659:C:H2'	25:YA:660:G:C8	2.54	0.43
25:YA:938:G:OP1	54:Y8:52:LYS:HD2	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1411:C:H2'	25:YA:1412:A:C8	2.53	0.43
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.53	0.43
29:YF:154:VAL:O	29:YF:173:VAL:HA	2.18	0.43
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.84	0.43
35:YP:32:THR:O	35:YP:32:THR:OG1	2.35	0.43
1:QA:571:U:H5''	1:QA:819:A:C6	2.53	0.43
1:QA:986:A:N3	19:QS:52:TYR:OH	2.49	0.43
1:QA:1134:G:O6	1:QA:1141:C:N4	2.50	0.43
12:QL:90:VAL:HG12	12:QL:93:LEU:H	1.83	0.43
25:RA:1019:U:OP1	25:RA:1035:U:O2'	2.20	0.43
25:RA:1107:G:H2'	25:RA:1108:U:C6	2.53	0.43
25:RA:1148:A:O2'	25:RA:1149:G:H5'	2.18	0.43
25:RA:1668:A:OP1	34:RO:5:GLN:NE2	2.45	0.43
25:RA:1827:C:C2'	25:RA:1828:G:H5'	2.49	0.43
25:RA:1844:C:O3'	27:RD:258:LYS:NZ	2.35	0.43
25:RA:2291:U:H1'	25:RA:2374:C:H1'	2.00	0.43
25:RA:2579:C:H2'	25:RA:2580:U:O4'	2.18	0.43
26:RB:38:C:H2'	26:RB:39:A:C8	2.54	0.43
29:RF:64:ILE:HG21	29:RF:78:ILE:HG23	2.01	0.43
48:R2:2:LYS:HE2	48:R2:2:LYS:HB2	1.90	0.43
1:XA:34:C:H2'	1:XA:35:G:H8	1.84	0.43
1:XA:603:U:H3	1:XA:635:G:H1	1.66	0.43
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	2.00	0.43
1:XA:1439:C:OP1	20:XT:38:LYS:NZ	2.26	0.43
1:XA:1458:G:H2'	1:XA:1459:C:H6	1.84	0.43
6:XF:14:LEU:HA	6:XF:14:LEU:HD23	1.82	0.43
22:XV:64:G:H2'	22:XV:65:C:H6	1.82	0.43
25:YA:28:A:H2'	25:YA:29:U:C6	2.54	0.43
25:YA:249:C:O2'	35:YP:64:LYS:NZ	2.42	0.43
25:YA:465:G:H21	25:YA:684:G:H1'	1.84	0.43
25:YA:755:C:H2'	25:YA:756:C:C6	2.53	0.43
25:YA:1366:A:H2'	25:YA:1367:A:O4'	2.19	0.43
25:YA:2108:C:H2'	25:YA:2109:U:H6	1.84	0.43
25:YA:2349:G:OP2	54:Y8:42:ARG:NE	2.41	0.43
25:YA:2357:U:H2'	25:YA:2358:G:H5''	2.01	0.43
25:YA:2511:U:O2'	28:YE:138:PRO:O	2.23	0.43
28:YE:54:GLN:HB3	28:YE:76:ARG:HG2	1.99	0.43
36:YQ:44:ALA:HB2	36:YQ:70:PRO:HG3	2.00	0.43
38:YS:110:LEU:HD13	38:YS:110:LEU:HA	1.91	0.43
1:QA:538:G:H2'	1:QA:539:A:C8	2.53	0.43
1:QA:554:C:H2'	1:QA:555:C:C6	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:643:C:H2'	1:QA:644:G:H8	1.84	0.43
1:QA:861:G:O2'	1:QA:874:G:O2'	2.23	0.43
1:QA:1202:G:H5''	14:QN:29:ARG:NH2	2.34	0.43
1:QA:1229:A:H2'	1:QA:1230:C:C6	2.54	0.43
4:QD:8:VAL:HA	4:QD:11:LEU:HD13	2.00	0.43
11:QK:19:ALA:N	11:QK:81:ASP:O	2.45	0.43
14:QN:7:ILE:HG21	14:QN:28:GLY:HA2	2.00	0.43
25:RA:102:G:H1	44:RY:94:LYS:NZ	2.17	0.43
25:RA:787:U:OP1	25:RA:1780:A:N6	2.52	0.43
26:RB:107:G:H5'	45:RZ:31:ARG:HH12	1.84	0.43
29:RF:50:SER:HB2	29:RF:94:PRO:HD3	2.00	0.43
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.83	0.43
32:RI:102:SER:O	32:RI:106:GLY:N	2.52	0.43
37:RR:6:SER:O	37:RR:6:SER:OG	2.37	0.43
1:XA:313:A:H2'	1:XA:314:C:C6	2.54	0.43
2:XB:52:GLU:HB3	2:XB:56:ARG:HH21	1.84	0.43
2:XB:223:ILE:O	2:XB:228:GLY:N	2.52	0.43
25:YA:272(Q):G:H2'	25:YA:272(R):G:C8	2.52	0.43
25:YA:528:A:OP2	33:YN:111:PRO:HB3	2.19	0.43
25:YA:534:U:H2'	25:YA:535:C:C6	2.54	0.43
25:YA:589:C:H2'	25:YA:590:A:C8	2.53	0.43
25:YA:970:C:H2'	25:YA:971:C:C6	2.53	0.43
25:YA:1019:U:H2'	25:YA:1020:A:C8	2.53	0.43
25:YA:1136:G:H2'	25:YA:1137:G:H8	1.84	0.43
25:YA:1364:G:N7	47:Y1:3:LYS:HD2	2.33	0.43
25:YA:1754:C:P	39:YT:96:ARG:HH22	2.42	0.43
25:YA:2144:U:O2'	25:YA:2147:G:N1	2.43	0.43
26:YB:11:C:OP2	26:YB:12:C:N4	2.29	0.43
42:YW:86:LEU:HB2	42:YW:96:ILE:HG13	2.01	0.43
1:QA:659:U:H2'	1:QA:660:G:H8	1.84	0.43
1:QA:892:A:H2'	1:QA:893:C:H6	1.83	0.43
1:QA:1014:A:P	1:QA:1014:A:H8	2.41	0.43
3:QC:153:VAL:HG12	3:QC:196:LEU:HD22	2.01	0.43
4:QD:63:LYS:NZ	4:QD:197:PRO:O	2.41	0.43
7:QG:111:ARG:HB2	7:QG:119:ARG:HD2	2.01	0.43
25:RA:742:G:H2'	25:RA:743:G:H8	1.84	0.43
25:RA:942:G:H1'	25:RA:1189:A:C2	2.53	0.43
25:RA:1084:A:H8	25:RA:1085:A:H4'	1.84	0.43
25:RA:2063:C:H2'	25:RA:2064:C:H5'	2.01	0.43
26:RB:20:C:H2'	26:RB:21:G:C8	2.53	0.43
27:RD:21:PHE:HB3	27:RD:24:ILE:HG12	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:38:VAL:HG13	30:RG:93:THR:HG22	2.01	0.43
36:RQ:42:ILE:HD11	36:RQ:127:ILE:HD11	2.00	0.43
42:RW:29:LEU:HG	42:RW:33:ARG:HD2	2.01	0.43
1:XA:610:G:H2'	1:XA:611:A:H8	1.83	0.43
1:XA:749:C:H2'	1:XA:750:G:H8	1.83	0.43
1:XA:969:A:H2'	1:XA:970:C:O4'	2.18	0.43
1:XA:1499:A:C1'	1:XA:1520:G:H5'	2.47	0.43
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.54	0.43
12:XL:93:LEU:HA	12:XL:94:PRO:HD3	1.79	0.43
25:YA:93:G:H2'	25:YA:94(A):C:H6	1.83	0.43
25:YA:115:C:O2'	25:YA:116:C:H5'	2.19	0.43
25:YA:140:G:C2	25:YA:142(A):A:N6	2.84	0.43
25:YA:557:U:H2'	25:YA:558:G:C8	2.54	0.43
25:YA:730:C:O2'	25:YA:731:C:H5'	2.19	0.43
25:YA:772:C:O2'	25:YA:773:U:H5'	2.18	0.43
25:YA:1358:G:O2'	25:YA:1359:A:H5''	2.18	0.43
25:YA:1645:G:H5''	25:YA:1646:C:O4'	2.18	0.43
25:YA:1963:U:H4'	25:YA:1964:G:OP1	2.19	0.43
25:YA:2317:C:C2'	25:YA:2318:G:H5'	2.49	0.43
1:QA:1154:G:H2'	1:QA:1155:G:H8	1.83	0.43
7:QG:93:PRO:O	7:QG:97:GLN:NE2	2.51	0.43
10:QJ:47:PHE:O	10:QJ:63:PHE:N	2.47	0.43
12:QL:33:ARG:HA	12:QL:33:ARG:HD2	1.81	0.43
20:QT:15:ARG:HD3	20:QT:15:ARG:HA	1.88	0.43
20:QT:51:GLU:HA	20:QT:54:LYS:HG2	2.01	0.43
25:RA:602:G:N2	25:RA:655:A:OP2	2.46	0.43
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.54	0.43
25:RA:2292:C:OP1	38:RS:17:ARG:NH1	2.52	0.43
25:RA:2539:C:H4'	55:R9:35:ARG:NH2	2.34	0.43
25:RA:2620:C:H2'	25:RA:2621:A:O4'	2.19	0.43
28:RE:89:ASP:OD1	28:RE:89:ASP:N	2.41	0.43
30:RG:100:TRP:HA	30:RG:103:LEU:HB2	2.01	0.43
31:RH:46:GLU:HB3	31:RH:49:VAL:HG13	2.00	0.43
25:YA:272(S):G:O2'	25:YA:272(T):C:H5'	2.19	0.43
25:YA:1386:C:H2'	25:YA:1387:C:H6	1.84	0.43
25:YA:1647:G:H3'	25:YA:1647:G:P	2.59	0.43
25:YA:1778:U:H2'	25:YA:1784:A:H62	1.84	0.43
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.53	0.43
25:YA:2259:G:O2'	25:YA:2260:C:H5'	2.18	0.43
25:YA:2378:A:H4'	38:YS:23:ARG:CZ	2.49	0.43
25:YA:2705:A:H2'	25:YA:2706:G:O4'	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2836:U:H2'	25:YA:2837:G:C8	2.54	0.43
34:YO:75:SER:OG	34:YO:76:ALA:N	2.51	0.43
35:YP:120:ALA:HB2	35:YP:137:LYS:HG3	2.00	0.43
45:YZ:123:ASP:OD1	45:YZ:123:ASP:N	2.51	0.43
47:Y1:52:ARG:HE	47:Y1:52:ARG:HB2	1.59	0.43
1:QA:73:G:H2'	1:QA:76:C:H6	1.84	0.42
1:QA:310:G:H2'	1:QA:311:C:C6	2.54	0.42
1:QA:562:C:H4'	1:QA:563:A:H5'	2.01	0.42
1:QA:782:A:O3'	1:QA:1515:C:H4'	2.19	0.42
1:QA:860:A:H2'	1:QA:861:G:O4'	2.18	0.42
1:QA:1250:A:H2'	1:QA:1251:A:C8	2.54	0.42
1:QA:1409:C:H2'	1:QA:1410:G:H8	1.84	0.42
1:QA:1445:C:O2'	1:QA:1447:A:N6	2.41	0.42
4:QD:139:ARG:HH21	4:QD:141:ARG:HH22	1.67	0.42
7:QG:53:LYS:HA	7:QG:53:LYS:HD2	1.93	0.42
20:QT:50:GLU:HG3	20:QT:100:ILE:HD13	2.00	0.42
25:RA:150:C:H2'	25:RA:151:C:H6	1.83	0.42
25:RA:175:G:O2'	25:RA:176:G:H5'	2.19	0.42
25:RA:444:C:H2'	25:RA:445:C:C6	2.54	0.42
25:RA:536:A:H2'	25:RA:537:C:C6	2.54	0.42
25:RA:558:G:H2'	25:RA:559:G:H8	1.84	0.42
25:RA:1342:A:H5'	43:RX:55:ASN:ND2	2.34	0.42
25:RA:2692:C:H1'	25:RA:2847:U:H1'	2.00	0.42
25:RA:2784:C:O2'	28:RE:37:ARG:NH1	2.52	0.42
38:RS:59:LYS:HD3	38:RS:59:LYS:HA	1.86	0.42
42:RW:11:ARG:HA	42:RW:11:ARG:HD2	1.90	0.42
46:R0:32:ARG:N	46:R0:35:ASN:OD1	2.44	0.42
48:R2:2:LYS:NZ	48:R2:5:GLU:OE1	2.46	0.42
50:R4:16:CYS:HB3	50:R4:19:GLY:H	1.83	0.42
1:XA:738:C:O2'	1:XA:739:C:H5'	2.19	0.42
1:XA:1148:U:H4'	9:XI:14:VAL:HG21	2.01	0.42
1:XA:1291:G:O2'	9:XI:38:GLN:OE1	2.37	0.42
22:XV:13:C:O2'	25:YA:1924:C:H4'	2.18	0.42
25:YA:578:A:H2'	25:YA:579:G:H5''	2.01	0.42
25:YA:1298:C:H3'	25:YA:1299:G:C8	2.53	0.42
25:YA:1399:C:OP1	43:YX:25:LYS:NZ	2.33	0.42
25:YA:1669:A:O3'	25:YA:2549:G:H5'	2.20	0.42
25:YA:2712(A):U:H1'	25:YA:2712(B):A:C8	2.54	0.42
29:YF:12:LEU:HB2	29:YF:126:VAL:HG12	2.01	0.42
37:YR:65:LEU:HD23	37:YR:65:LEU:HA	1.86	0.42
45:YZ:27:VAL:O	45:YZ:88:PHE:HB2	2.18	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:73:G:H2'	1:QA:76:C:C6	2.54	0.42
1:QA:291:C:O2'	1:QA:292:G:H5'	2.18	0.42
1:QA:689:C:H2'	1:QA:690:G:O4'	2.19	0.42
1:QA:1352:C:H2'	1:QA:1353:G:C8	2.54	0.42
1:QA:1393:U:O2'	1:QA:1501:C:O2'	2.20	0.42
9:QI:20:ARG:HA	9:QI:21:PRO:HD3	1.85	0.42
22:QV:62:C:H2'	22:QV:63:G:H8	1.84	0.42
25:RA:77:C:P	48:R2:59:ARG:HH11	2.42	0.42
25:RA:686:G:O5'	53:R7:11:LYS:NZ	2.45	0.42
25:RA:1366:A:H2'	25:RA:1367:A:O4'	2.19	0.42
25:RA:1878:G:H2'	25:RA:1879:C:C6	2.55	0.42
25:RA:1890:A:H3'	25:RA:1891:G:H8	1.84	0.42
25:RA:2115:G:N1	25:RA:2119:A:OP2	2.44	0.42
25:RA:2839:G:H2'	25:RA:2840:C:H6	1.83	0.42
27:RD:85:ASP:OD2	27:RD:88:ARG:NH1	2.51	0.42
32:RI:4:ILE:HD11	32:RI:16:GLY:HA2	2.01	0.42
35:RP:50:ARG:HG3	54:R8:61:LEU:HD21	2.02	0.42
36:RQ:42:ILE:O	36:RQ:95:ALA:N	2.47	0.42
41:RV:1:MET:HB3	41:RV:99:ILE:HD12	2.00	0.42
53:R7:22:MET:HA	53:R7:28:ARG:HG2	2.00	0.42
53:R7:30:VAL:HG22	53:R7:33:ARG:HH21	1.84	0.42
1:XA:286:G:H2'	1:XA:287:U:C6	2.54	0.42
1:XA:777:A:H2'	1:XA:778:G:H8	1.85	0.42
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.54	0.42
4:XD:21:LEU:O	4:XD:113:SER:HB2	2.19	0.42
5:XE:11:ILE:HD12	5:XE:105:VAL:HG13	2.01	0.42
7:XG:6:ARG:H	7:XG:6:ARG:HG3	1.69	0.42
25:YA:595:C:H2'	25:YA:596:G:C8	2.54	0.42
25:YA:1197:G:O2'	25:YA:1198:U:H5'	2.19	0.42
25:YA:1843:C:O2'	25:YA:1844:C:H5'	2.20	0.42
25:YA:2197:U:H1'	25:YA:2198:A:C8	2.53	0.42
25:YA:2251:OMG:H1'	25:YA:2251:OMG:HM23	1.76	0.42
25:YA:2400:G:N2	25:YA:2417:C:N3	2.67	0.42
33:YN:89:LYS:O	33:YN:93:THR:OG1	2.30	0.42
38:YS:25:ARG:HA	38:YS:86:ALA:O	2.19	0.42
1:QA:129(B):G:N2	1:QA:189(G):U:H5''	2.34	0.42
1:QA:260:G:H2'	1:QA:261:U:C6	2.54	0.42
1:QA:315:A:O2'	1:QA:330:C:O2'	2.20	0.42
1:QA:370:C:H2'	1:QA:371:G:H8	1.83	0.42
1:QA:1130:A:O2'	9:QI:3:GLN:OE1	2.36	0.42
3:QC:43:LEU:O	3:QC:46:GLU:N	2.52	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:55:VAL:HG12	3:QC:68:VAL:HG22	2.01	0.42
5:QE:139:LEU:HD23	5:QE:142:LEU:HD13	2.01	0.42
7:QG:78:ARG:HG2	7:QG:80:VAL:HG13	2.01	0.42
10:QJ:46:ARG:HA	10:QJ:64:GLU:HA	2.01	0.42
13:QM:47:ASP:N	13:QM:47:ASP:OD1	2.51	0.42
25:RA:947:G:H2'	25:RA:948:G:H8	1.84	0.42
25:RA:1203:G:H1	25:RA:1241:A:P	2.41	0.42
25:RA:1252:G:H21	40:RU:33:ARG:HH21	1.67	0.42
25:RA:1380:G:O5'	25:RA:1380:G:C8	2.72	0.42
25:RA:1843:C:H2'	25:RA:1844:C:C6	2.54	0.42
25:RA:2299:G:H2'	25:RA:2300:G:H8	1.85	0.42
25:RA:2750:A:OP2	31:RH:62:LYS:NZ	2.50	0.42
25:RA:2881:C:H2'	25:RA:2882:A:H8	1.84	0.42
28:RE:104:VAL:HG22	28:RE:198:VAL:HG22	2.02	0.42
47:R1:3:LYS:HD2	47:R1:3:LYS:HA	1.79	0.42
1:XA:785:G:O2'	1:XA:786:G:H5'	2.19	0.42
1:XA:986:A:N3	19:XS:52:TYR:OH	2.46	0.42
1:XA:1357:A:H61	1:XA:1365:G:H1	1.68	0.42
12:XL:21:LYS:HA	12:XL:21:LYS:HD2	1.89	0.42
22:XV:71:C:H2'	22:XV:72:A:C8	2.55	0.42
25:YA:116:C:O2'	25:YA:126:A:H1'	2.19	0.42
25:YA:568:U:O4	25:YA:973:A:OP2	2.38	0.42
25:YA:582:G:H2'	25:YA:583:G:C8	2.54	0.42
25:YA:1060:U:H4'	25:YA:1070:A:N6	2.35	0.42
25:YA:1231:G:H2'	25:YA:1232:G:H8	1.83	0.42
25:YA:2012:G:O3'	42:YW:96:ILE:HG23	2.19	0.42
25:YA:2400:G:H2'	25:YA:2401:U:C6	2.54	0.42
25:YA:2547:U:O2	34:YO:23:ARG:NH2	2.51	0.42
27:YD:17:THR:OG1	27:YD:205:VAL:N	2.51	0.42
32:YI:74:ASN:OD1	32:YI:74:ASN:N	2.47	0.42
1:QA:59:A:H2	1:QA:330:C:H42	1.66	0.42
1:QA:227:G:H2'	1:QA:228:A:H8	1.83	0.42
1:QA:576:G:H3'	1:QA:577:G:H5''	2.01	0.42
1:QA:741:G:H2'	1:QA:742:G:C8	2.54	0.42
1:QA:1097:C:O2'	1:QA:1169:A:N3	2.45	0.42
1:QA:1288:A:H2'	1:QA:1289:A:C8	2.53	0.42
1:QA:1317:C:N4	14:QN:19:ARG:HH21	2.16	0.42
2:QB:8:LYS:HD2	2:QB:8:LYS:HA	1.92	0.42
2:QB:106:LYS:HE3	2:QB:106:LYS:HB3	1.88	0.42
2:QB:119:GLU:OE2	2:QB:153:ARG:NH2	2.50	0.42
3:QC:94:LEU:HB3	3:QC:95:THR:HG23	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:84:LYS:HD3	4:QD:84:LYS:HA	1.88	0.42
10:QJ:38:ILE:HG13	10:QJ:71:LEU:HB3	2.02	0.42
13:QM:97:PRO:HG3	13:QM:110:ARG:HB3	2.01	0.42
25:RA:177:G:H3'	25:RA:178:G:C8	2.55	0.42
25:RA:776:G:N2	25:RA:2241:A:OP1	2.49	0.42
25:RA:792:G:H21	25:RA:2072:G:H2'	1.84	0.42
25:RA:799:G:C8	25:RA:800:A:H2'	2.54	0.42
25:RA:1153:C:H2'	25:RA:1154:G:O4'	2.19	0.42
25:RA:1269:A:H2'	25:RA:1270:C:C6	2.55	0.42
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.55	0.42
25:RA:1390:U:O4	25:RA:1395:A:N7	2.52	0.42
25:RA:1806:C:H2'	25:RA:1807:G:C8	2.55	0.42
33:RN:43:THR:OG1	33:RN:48:MET:SD	2.70	0.42
33:RN:47:ALA:HB2	33:RN:112:LEU:HD11	2.01	0.42
37:RR:73:VAL:HA	37:RR:76:VAL:HG22	2.00	0.42
1:XA:673:G:H2'	1:XA:674:G:H8	1.83	0.42
1:XA:677:U:H2'	1:XA:678:U:H6	1.85	0.42
1:XA:688:G:H2'	1:XA:689:C:H6	1.83	0.42
1:XA:985:C:H2'	1:XA:986:A:C8	2.55	0.42
1:XA:1223:C:P	19:XS:78:ARG:HH12	2.41	0.42
1:XA:1309:G:OP2	13:XM:99:ARG:NH2	2.52	0.42
1:XA:1410:G:H2'	1:XA:1411:C:C6	2.54	0.42
4:XD:18:LYS:HG3	4:XD:33:MET:HB2	2.01	0.42
8:XH:100:ILE:HD12	8:XH:125:ARG:HG3	2.01	0.42
9:XI:9:ARG:HB3	9:XI:104:ARG:HH21	1.83	0.42
10:XJ:47:PHE:N	10:XJ:63:PHE:O	2.46	0.42
25:YA:487:C:H1'	42:YW:53:SER:HA	2.01	0.42
25:YA:529:A:H62	25:YA:2041:U:H3	1.67	0.42
25:YA:2726:U:O2'	25:YA:2727:G:O5'	2.33	0.42
25:YA:2884:U:C4	51:Y5:52:TYR:HE1	2.37	0.42
26:YB:9:G:OP1	38:YS:25:ARG:NH1	2.40	0.42
26:YB:70:C:H2'	26:YB:71:C:H6	1.84	0.42
31:YH:64:LEU:HD23	31:YH:64:LEU:HA	1.85	0.42
48:Y2:53:LEU:O	48:Y2:57:ILE:HG13	2.19	0.42
1:QA:426:G:OP1	4:QD:38:TYR:OH	2.32	0.42
1:QA:438:G:O2'	1:QA:493:G:N2	2.53	0.42
1:QA:641:U:O4'	8:QH:115:SER:OG	2.35	0.42
1:QA:708:C:H2'	1:QA:709:G:H8	1.84	0.42
2:QB:172:ILE:HA	2:QB:175:ARG:HB2	2.01	0.42
2:QB:187:LEU:HA	2:QB:201:ILE:HB	2.01	0.42
12:QL:77:LEU:HD21	12:QL:107:ALA:HB1	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:111:LYS:HA	12:QL:111:LYS:HD3	1.79	0.42
25:RA:12:U:O4	25:RA:526:A:N7	2.52	0.42
25:RA:30:G:P	40:RU:5:LYS:HZ1	2.41	0.42
25:RA:121:G:H4'	25:RA:149:A:H5'	2.01	0.42
25:RA:935:C:H2'	25:RA:936:C:H6	1.84	0.42
25:RA:1416:G:O2'	25:RA:1417:C:OP2	2.36	0.42
25:RA:2001:A:H4'	25:RA:2689:U:C6	2.54	0.42
25:RA:2552:OMU:N3	25:RA:2554:U:H5''	2.35	0.42
26:RB:74:U:H2'	26:RB:75:G:C8	2.55	0.42
1:XA:473:G:H2'	1:XA:474:G:H8	1.84	0.42
1:XA:948:C:OP1	13:XM:109:THR:HG22	2.19	0.42
1:XA:1030(A):C:H42	1:XA:1031:G:H1	1.67	0.42
1:XA:1117:G:H4'	9:XI:104:ARG:NH1	2.35	0.42
15:XO:47:LYS:HE2	15:XO:47:LYS:HB2	1.81	0.42
19:XS:13:ASP:OD1	19:XS:13:ASP:N	2.52	0.42
25:YA:106:C:H2'	25:YA:107:C:H6	1.84	0.42
25:YA:469:G:O6	53:Y7:37:LYS:NZ	2.34	0.42
25:YA:568:U:N3	25:YA:571:A:OP2	2.47	0.42
25:YA:1196:C:O2'	25:YA:1227:G:O2'	2.19	0.42
25:YA:1598:C:H2'	25:YA:1599:C:H6	1.85	0.42
25:YA:2773:C:H2'	25:YA:2774:C:H6	1.85	0.42
33:YN:102:ALA:O	33:YN:106:MET:HG3	2.19	0.42
34:YO:44:LYS:HA	34:YO:44:LYS:HD2	1.91	0.42
1:QA:243:A:H4'	1:QA:244:U:H3'	2.00	0.42
1:QA:581:G:N2	1:QA:582:U:O4	2.52	0.42
1:QA:584:G:H1	1:QA:757:U:H3	1.66	0.42
1:QA:1344:C:H5'	9:QI:120:ARG:O	2.19	0.42
1:QA:1489:G:H2'	1:QA:1490:C:O4'	2.20	0.42
9:QI:8:GLY:HA2	9:QI:79:LEU:HD22	2.02	0.42
17:QQ:9:VAL:HG13	17:QQ:22:LEU:HB3	2.02	0.42
25:RA:232:G:N2	25:RA:420:C:OP1	2.50	0.42
25:RA:455:C:N3	25:RA:473:G:H5'	2.35	0.42
25:RA:1336:A:H2'	25:RA:1337:G:H8	1.84	0.42
25:RA:1826:G:H2'	25:RA:1827:C:C6	2.54	0.42
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.54	0.42
25:RA:2061:G:H5''	25:RA:2503:2MA:C2	2.50	0.42
33:RN:24:GLY:O	33:RN:27:ALA:N	2.48	0.42
33:RN:36:GLY:HA2	33:RN:38:HIS:CE1	2.54	0.42
1:XA:22:G:O2'	1:XA:23:C:H5'	2.20	0.42
1:XA:406:G:N3	4:XD:119:GLN:NE2	2.63	0.42
5:XE:12:LEU:HD12	5:XE:12:LEU:HA	1.85	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:4:THR:OG1	15:XO:5:LYS:N	2.52	0.42
25:YA:567:A:H2'	25:YA:568:U:O5'	2.19	0.42
25:YA:820:A:C2	25:YA:943:U:H4'	2.54	0.42
25:YA:856:C:HO2'	25:YA:857:C:P	2.39	0.42
25:YA:1297:C:O2'	25:YA:1302:A:N1	2.48	0.42
25:YA:1799:G:N7	27:YD:179:SER:OG	2.50	0.42
25:YA:2437:U:H2'	25:YA:2438:U:C6	2.55	0.42
27:YD:70:TRP:CE2	27:YD:150:LYS:HE3	2.53	0.42
29:YF:101:LEU:HA	29:YF:102:PRO:HD3	1.88	0.42
34:YO:97:ARG:HA	34:YO:117:LEU:HD13	2.01	0.42
38:YS:35:ILE:HG13	38:YS:97:ARG:HH21	1.83	0.42
54:Y8:33:ASN:OD1	54:Y8:36:LYS:NZ	2.36	0.42
1:QA:689:C:H2'	1:QA:690:G:C8	2.54	0.42
3:QC:84:ILE:HD12	3:QC:87:LEU:HD12	2.02	0.42
3:QC:115:LEU:O	3:QC:119:ARG:N	2.52	0.42
4:QD:59:ARG:O	4:QD:63:LYS:N	2.49	0.42
25:RA:319:C:OP2	29:RF:137:LYS:NZ	2.26	0.42
25:RA:1101:U:H2'	25:RA:1102:C:O4'	2.18	0.42
25:RA:1297:C:H2'	25:RA:1298:C:H6	1.84	0.42
25:RA:1451:C:H5'	25:RA:1452:A:H5'	2.01	0.42
25:RA:1785:A:O2'	25:RA:1786:A:H5'	2.19	0.42
25:RA:2398:U:H2'	25:RA:2399:G:H8	1.85	0.42
25:RA:2412:A:H2'	25:RA:2413:G:O4'	2.19	0.42
25:RA:2749:A:OP1	31:RH:3:ARG:NH1	2.53	0.42
30:RG:120:LEU:HB2	30:RG:180:PHE:HD1	1.84	0.42
36:RQ:31:ASP:OD2	36:RQ:133:ARG:NH1	2.52	0.42
36:RQ:52:VAL:HA	36:RQ:55:VAL:HG22	2.01	0.42
40:RU:82:GLY:O	40:RU:85:LYS:N	2.52	0.42
1:XA:160:A:H2'	1:XA:161:A:C8	2.54	0.42
1:XA:490:G:OP2	4:XD:132:ARG:NH2	2.53	0.42
1:XA:868:C:H2'	1:XA:869:G:O4'	2.20	0.42
1:XA:1250:A:H4'	9:XI:68:GLY:N	2.35	0.42
8:XH:134:ILE:HG22	8:XH:135:CYS:HB3	2.01	0.42
20:XT:29:LYS:HD3	20:XT:71:THR:HG21	2.02	0.42
25:YA:30:G:H2'	25:YA:31:C:C6	2.54	0.42
25:YA:673:C:O2'	25:YA:674:G:H5'	2.20	0.42
25:YA:961:C:H6	25:YA:961:C:H2'	1.63	0.42
25:YA:1065:U:H1'	25:YA:1066:U:O5'	2.20	0.42
25:YA:1066:U:O2'	25:YA:1067:A:O5'	2.37	0.42
26:YB:112:U:H2'	26:YB:113:G:C8	2.54	0.42
31:YH:47:GLU:N	31:YH:47:GLU:CD	2.71	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:5:CYS:SG	47:Y1:8:SER:OG	2.66	0.42
1:QA:18:C:OP1	5:QE:127:ASN:ND2	2.53	0.42
1:QA:457:C:N4	1:QA:475:G:O6	2.53	0.42
1:QA:801:U:H2'	1:QA:802:A:H8	1.85	0.42
1:QA:1039:C:H2'	1:QA:1040:U:C6	2.54	0.42
1:QA:1506:U:N3	1:QA:1522:U:OP1	2.51	0.42
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.55	0.42
8:QH:9:MET:HE1	8:QH:32:LYS:HB3	2.01	0.42
13:QM:99:ARG:N	13:QM:101:GLN:OE1	2.52	0.42
25:RA:523:C:H4'	25:RA:540:C:O2	2.19	0.42
25:RA:690:G:H2'	25:RA:691:C:C6	2.55	0.42
25:RA:797:C:H2'	25:RA:798:G:C8	2.55	0.42
25:RA:1257:C:H4'	29:RF:83:PHE:CD2	2.55	0.42
25:RA:1539:G:H2'	25:RA:1540:U:C6	2.55	0.42
25:RA:1820:U:H4'	25:RA:1821:A:OP2	2.20	0.42
25:RA:2041:U:H2'	25:RA:2042:A:C8	2.54	0.42
25:RA:2051:A:H5'	25:RA:2578:G:O4'	2.19	0.42
25:RA:2623:G:H4'	25:RA:2825:C:O2	2.20	0.42
25:RA:2850:A:N7	25:RA:2868:A:O2'	2.37	0.42
27:RD:13:ARG:HD3	27:RD:13:ARG:HA	1.80	0.42
32:RI:78:THR:HG22	32:RI:141:LYS:HD2	2.02	0.42
34:RO:25:LEU:HA	34:RO:25:LEU:HD23	1.84	0.42
1:XA:28:G:H2'	1:XA:29:G:H8	1.84	0.42
1:XA:37:U:H2'	1:XA:38:G:H8	1.85	0.42
1:XA:1004:A:H5''	1:XA:1025:U:C4	2.55	0.42
1:XA:1065:U:O2'	1:XA:1066:C:OP2	2.28	0.42
5:XE:31:LEU:HD22	5:XE:43:LEU:HD11	2.01	0.42
25:YA:303:U:H2'	25:YA:304:G:H8	1.85	0.42
25:YA:1181:C:H2'	25:YA:1182:A:C8	2.54	0.42
25:YA:1813:G:H2'	25:YA:1814:G:H5'	2.02	0.42
25:YA:2163:C:OP1	25:YA:2172:U:H2'	2.20	0.42
25:YA:2329:G:H2'	25:YA:2330:G:C8	2.54	0.42
25:YA:2648:C:H2'	25:YA:2649:U:C6	2.54	0.42
25:YA:2820:A:OP2	25:YA:2821:A:N6	2.46	0.42
25:YA:2863:C:H2'	25:YA:2864:G:C8	2.55	0.42
1:QA:555:C:H2'	1:QA:556:C:C6	2.55	0.42
1:QA:999:C:H42	1:QA:1042:G:H1	1.68	0.42
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.35	0.42
6:QF:28:ARG:O	6:QF:32:ASN:N	2.36	0.42
14:QN:39:LEU:HD22	14:QN:43:CYS:HB3	2.02	0.42
25:RA:957:A:N6	25:RA:959:A:N1	2.67	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:996:A:O3'	40:RU:91:ASP:HB2	2.20	0.42
25:RA:1665:A:H4'	34:RO:67:LYS:HB2	2.02	0.42
25:RA:2134:A:O4'	25:RA:2156:G:N2	2.53	0.42
25:RA:2642:G:H5'	33:RN:78:TYR:CD2	2.55	0.42
28:RE:3:GLY:HA3	28:RE:81:ILE:HD13	2.01	0.42
30:RG:121:ASN:N	30:RG:181:ARG:HH21	2.18	0.42
33:RN:102:ALA:O	33:RN:106:MET:HG3	2.19	0.42
34:RO:17:ARG:HD3	34:RO:17:ARG:HA	1.82	0.42
40:RU:80:ILE:O	40:RU:84:LYS:N	2.41	0.42
55:R9:3:VAL:HG11	55:R9:35:ARG:HH21	1.85	0.42
1:XA:472:A:H4'	16:XP:80:PHE:O	2.19	0.42
1:XA:476:G:H2'	1:XA:477:A:H8	1.84	0.42
1:XA:559:A:OP1	5:XE:126:ARG:NH2	2.52	0.42
1:XA:776:G:H22	1:XA:802:A:P	2.43	0.42
4:XD:188:LEU:HA	4:XD:189:PRO:HD3	1.84	0.42
11:XK:18:ARG:HG3	11:XK:35:PRO:HA	2.01	0.42
22:XV:9:G:N2	22:XV:45:G:N7	2.68	0.42
25:YA:195:A:H61	25:YA:198:C:H3'	1.85	0.42
25:YA:358:U:H2'	25:YA:359:A:C8	2.54	0.42
25:YA:1660:C:H42	25:YA:2000:G:H1	1.68	0.42
25:YA:1814:G:OP2	25:YA:1815:A:O2'	2.18	0.42
25:YA:1935:G:O2'	25:YA:1936:A:H5''	2.19	0.42
25:YA:2019:A:H8	25:YA:2019:A:O5'	2.03	0.42
25:YA:2589:A:N1	25:YA:2606:C:N4	2.68	0.42
26:YB:42:C:H2'	30:YG:66:GLN:HE21	1.84	0.42
32:YI:120:ILE:HD12	32:YI:120:ILE:HA	1.95	0.42
1:QA:56:U:H4'	32:YI:82:ARG:NH1	2.35	0.42
1:QA:142:G:H2'	1:QA:143:A:C8	2.55	0.42
1:QA:261:U:OP2	20:QT:79:ARG:NH2	2.53	0.42
1:QA:272:C:H2'	1:QA:273:A:C8	2.55	0.42
1:QA:632:A:H5'	1:QA:633:G:OP2	2.20	0.42
1:QA:756:C:H2'	1:QA:757:U:C6	2.55	0.42
1:QA:876:G:O5'	8:QH:14:ARG:NH1	2.53	0.42
1:QA:923:A:H5'	5:QE:21:ALA:HB2	2.02	0.42
1:QA:1031:G:H2'	1:QA:1032:G:C8	2.55	0.42
1:QA:1189:C:OP1	10:QJ:51:ARG:NH1	2.46	0.42
1:QA:1263:C:H2'	1:QA:1264:C:C6	2.55	0.42
7:QG:15:ASP:OD1	7:QG:19:GLY:N	2.53	0.42
14:QN:39:LEU:HD23	14:QN:39:LEU:HA	1.83	0.42
25:RA:118:A:OP2	25:RA:119:A:H5''	2.20	0.42
25:RA:254:G:H4'	25:RA:384:U:H5'	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:839:U:H2'	25:RA:840:C:C6	2.55	0.42
25:RA:1466:G:H2'	25:RA:1547:C:H41	1.85	0.42
25:RA:1788:C:H2'	25:RA:1789:A:C8	2.54	0.42
25:RA:2315:G:H2'	25:RA:2316:C:C6	2.55	0.42
25:RA:2648:C:O2'	25:RA:2649:U:H5'	2.20	0.42
26:RB:4:C:H2'	26:RB:5:C:C6	2.55	0.42
32:RI:128:LEU:N	32:RI:138:ILE:O	2.34	0.42
33:RN:82:LEU:HD12	33:RN:82:LEU:HA	1.86	0.42
38:RS:29:PHE:HB3	38:RS:36:TYR:HB2	2.02	0.42
43:RX:23:GLU:H	43:RX:23:GLU:HG2	1.69	0.42
49:R3:12:PRO:HB2	49:R3:20:LYS:HG2	2.02	0.42
1:XA:23:C:OP2	1:XA:561:U:N3	2.44	0.42
1:XA:258:G:H2'	1:XA:259:G:H8	1.84	0.42
1:XA:584:G:H2'	1:XA:585:G:C8	2.55	0.42
1:XA:952:U:H2'	1:XA:953:G:H8	1.83	0.42
1:XA:1308:U:OP1	13:XM:98:VAL:HG12	2.20	0.42
4:XD:8:VAL:CG1	4:XD:115:ARG:NH1	2.83	0.42
4:XD:26:CYS:HA	58:XD:302:SF4:S2	2.60	0.42
25:YA:572:A:H2'	25:YA:573:G:O4'	2.19	0.42
25:YA:745:G:O6	25:YA:746:A:N6	2.53	0.42
25:YA:831:G:N2	35:YP:53:GLY:O	2.47	0.42
25:YA:973:A:HO2'	25:YA:974:G:C5'	2.30	0.42
25:YA:1085:A:H8	25:YA:1085:A:OP2	2.03	0.42
25:YA:1971:A:N3	27:YD:241:PRO:HD3	2.35	0.42
25:YA:2637:U:O2'	25:YA:2638:G:H5'	2.19	0.42
30:YG:26:GLN:H	30:YG:26:GLN:HG3	1.65	0.42
32:YI:40:THR:HG22	32:YI:42:SER:H	1.84	0.42
38:YS:63:THR:OG1	38:YS:64:GLU:N	2.53	0.42
49:Y3:11:SER:O	49:Y3:15:TYR:CE1	2.73	0.42
52:Y6:23:THR:HG22	52:Y6:24:GLU:H	1.85	0.42
1:QA:1118:C:H1'	1:QA:1179:A:C5	2.55	0.41
1:QA:1301:U:OP2	1:QA:1303:C:N4	2.53	0.41
2:QB:60:ASP:HB3	2:QB:64:ARG:HH12	1.84	0.41
2:QB:88:ALA:HB2	2:QB:219:VAL:HG13	2.02	0.41
4:QD:6:GLY:HA3	4:QD:7:PRO:HD3	1.74	0.41
7:QG:149:ARG:HD3	11:QK:59:TYR:CZ	2.54	0.41
11:QK:41:THR:HG21	11:QK:71:LYS:HD3	2.01	0.41
13:QM:92:HIS:CE1	13:QM:98:VAL:HG21	2.54	0.41
25:RA:39:C:H2'	25:RA:40:C:C6	2.54	0.41
25:RA:144:C:H2'	25:RA:145:G:C8	2.53	0.41
25:RA:437:G:H2'	25:RA:438:G:H8	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:810:U:H2'	35:RP:29:LYS:HA	2.02	0.41
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.85	0.41
25:RA:1599:C:O2'	25:RA:1600:C:H5'	2.20	0.41
25:RA:2745:C:H2'	25:RA:2746:U:C6	2.55	0.41
29:RF:93:LYS:HD3	29:RF:93:LYS:HA	1.81	0.41
34:RO:101:PRO:HG3	39:RT:67:SER:HB3	2.01	0.41
36:RQ:32:TYR:OH	36:RQ:111:GLU:OE2	2.34	0.41
36:RQ:43:THR:OG1	36:RQ:46:GLN:N	2.44	0.41
48:R2:1:MET:N	48:R2:52:ASP:OD2	2.52	0.41
1:XA:96:U:H2'	1:XA:97:G:H8	1.85	0.41
1:XA:156:G:H2'	1:XA:157:G:H8	1.85	0.41
1:XA:262:A:H2'	1:XA:263:A:C8	2.55	0.41
1:XA:486:U:H2'	1:XA:487:A:C8	2.54	0.41
1:XA:524:G:H2'	1:XA:525:C:C6	2.55	0.41
1:XA:711:G:O2'	1:XA:712:A:H5'	2.20	0.41
1:XA:877:C:OP1	8:XH:88:LYS:NZ	2.44	0.41
1:XA:892:A:H2'	1:XA:893:C:C6	2.55	0.41
2:XB:18:GLY:H	2:XB:42:ILE:HG23	1.85	0.41
3:XC:50:ALA:HA	3:XC:72:LYS:HD2	2.01	0.41
8:XH:69:ARG:NH2	8:XH:75:ARG:O	2.47	0.41
25:YA:118:A:H1'	25:YA:178:G:O4'	2.20	0.41
25:YA:373:U:H1'	25:YA:423:A:N3	2.35	0.41
25:YA:796:C:H2'	25:YA:797:C:H6	1.85	0.41
25:YA:936:C:O2'	25:YA:937:U:H5'	2.20	0.41
25:YA:1044:G:H21	25:YA:1111:A:H2	1.68	0.41
25:YA:1548:C:H2'	25:YA:1549:C:C6	2.55	0.41
25:YA:1683:C:H2'	25:YA:1684:C:C6	2.55	0.41
25:YA:1753:G:OP1	39:YT:95:ARG:HD3	2.20	0.41
25:YA:2015:A:H8	25:YA:2015:A:O5'	2.03	0.41
25:YA:2081:C:H2'	25:YA:2082:A:H8	1.84	0.41
25:YA:2523:G:C2'	25:YA:2524:G:H5'	2.50	0.41
25:YA:2561:A:H2'	25:YA:2562:U:O4'	2.20	0.41
25:YA:2572:A:H2'	28:YE:144:ARG:HD3	2.01	0.41
30:YG:142:PRO:HB2	50:Y4:31:ILE:HG21	2.01	0.41
31:YH:144:VAL:O	31:YH:148:ILE:HG12	2.20	0.41
34:YO:11:ALA:O	34:YO:99:PHE:N	2.38	0.41
38:YS:44:LYS:HE2	38:YS:44:LYS:HB3	1.99	0.41
38:YS:76:LYS:HE2	38:YS:76:LYS:HB3	1.89	0.41
39:YT:107:ASP:HA	39:YT:110:ILE:HD12	2.01	0.41
1:QA:339:C:H2'	1:QA:340:U:H6	1.85	0.41
1:QA:375:U:O3'	16:QP:6:LEU:HB2	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:632:A:H3'	1:QA:633:G:C8	2.52	0.41
1:QA:797:C:OP1	11:QK:124:LYS:HD3	2.20	0.41
1:QA:1005:A:N6	1:QA:1025:U:O2'	2.53	0.41
1:QA:1309:G:H4'	13:QM:74:VAL:HG23	2.03	0.41
1:QA:1400:5MC:H6	1:QA:1400:5MC:H2'	1.73	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:H	1.84	0.41
6:QF:45:LEU:HD11	6:QF:57:GLN:HB3	2.02	0.41
8:QH:41:ARG:NH2	8:QH:123:GLU:OE2	2.51	0.41
14:QN:42:ILE:O	14:QN:46:GLU:N	2.49	0.41
17:QQ:66:SER:OG	17:QQ:67:LYS:N	2.53	0.41
24:QY:40:C:H2'	24:QY:41:G:C8	2.55	0.41
25:RA:528:A:N7	25:RA:2043:C:H4'	2.35	0.41
25:RA:2117:A:O3'	25:RA:2147:G:O2'	2.36	0.41
25:RA:2623:G:H2'	25:RA:2624:G:H8	1.84	0.41
30:RG:174:GLU:HA	30:RG:178:PHE:H	1.85	0.41
31:RH:5:GLY:C	31:RH:69:ARG:HE	2.24	0.41
39:RT:110:ILE:O	39:RT:113:LYS:N	2.52	0.41
43:RX:50:LYS:O	43:RX:84:ALA:N	2.52	0.41
43:RX:90:GLU:HA	43:RX:93:GLU:HB2	2.02	0.41
45:RZ:63:ASP:OD1	45:RZ:63:ASP:N	2.53	0.41
50:R4:18:CYS:CB	50:R4:39:CYS:SG	2.84	0.41
1:XA:578:C:H2'	1:XA:579:G:H8	1.85	0.41
1:XA:740:U:OP1	15:XO:2:PRO:HA	2.19	0.41
1:XA:883:C:N4	1:XA:884:U:O4	2.53	0.41
1:XA:1118:C:H2'	1:XA:1119:C:H6	1.86	0.41
1:XA:1183:A:O2'	1:XA:1184:G:OP1	2.29	0.41
20:XT:34:LYS:HG2	20:XT:80:ARG:HH12	1.85	0.41
25:YA:11:G:H2'	25:YA:11:G:N3	2.34	0.41
25:YA:140:G:N2	25:YA:1596:A:H4'	2.36	0.41
25:YA:879:G:H2'	25:YA:880:G:H8	1.84	0.41
25:YA:1203:G:H5'	35:YP:3:LEU:HD12	2.01	0.41
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.20	0.41
25:YA:1588:C:H2'	25:YA:1589:C:H6	1.85	0.41
25:YA:1645:G:H5''	25:YA:1646:C:H5'	2.02	0.41
25:YA:1843:C:H2'	25:YA:1844:C:H6	1.85	0.41
25:YA:2321:G:H2'	25:YA:2321:G:N3	2.35	0.41
25:YA:2531:A:H2'	25:YA:2532:G:H8	1.85	0.41
37:YR:98:LEU:HA	37:YR:98:LEU:HD23	1.75	0.41
1:QA:12:U:H3	1:QA:22:G:H1	1.68	0.41
1:QA:602:A:H2'	1:QA:603:U:C6	2.55	0.41
1:QA:689:C:OP1	11:QK:27:ASN:ND2	2.54	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:994:A:H61	1:QA:1047:G:H4'	1.85	0.41
2:QB:95:GLN:HG3	2:QB:147:LYS:HD2	2.02	0.41
10:QJ:29:ARG:NH1	1:XA:1164:G:OP1	2.53	0.41
11:QK:38:ASN:HA	11:QK:39:PRO:HD3	1.83	0.41
25:RA:308:G:P	25:RA:308:G:H8	2.44	0.41
25:RA:394:A:H2'	25:RA:395:U:H5'	2.02	0.41
25:RA:494:G:H2'	25:RA:495:G:H8	1.85	0.41
25:RA:948:G:N2	25:RA:985:C:OP2	2.53	0.41
25:RA:1474:C:H2'	25:RA:1475:G:C8	2.55	0.41
25:RA:1687:G:O5'	25:RA:1687:G:H8	2.04	0.41
25:RA:1830:C:H2'	25:RA:1831:G:H8	1.85	0.41
25:RA:2271:G:H2'	25:RA:2272:U:C6	2.54	0.41
25:RA:2362:G:H2'	25:RA:2363:C:H5'	2.02	0.41
25:RA:2820:A:OP2	37:RR:2:ARG:NH2	2.54	0.41
34:RO:1:MET:HG3	34:RO:67:LYS:HG2	2.02	0.41
38:RS:12:PHE:O	38:RS:16:ASN:ND2	2.53	0.41
38:RS:35:ILE:HD12	38:RS:69:VAL:HG11	2.01	0.41
1:XA:425:G:O2'	1:XA:426:G:H5'	2.20	0.41
4:XD:175:SER:HB3	4:XD:186:LEU:HD21	2.03	0.41
8:XH:113:SER:HA	8:XH:118:VAL:HA	2.00	0.41
11:XK:23:ALA:HA	11:XK:28:THR:HG22	2.03	0.41
12:XL:119:LYS:H	12:XL:119:LYS:HG3	1.65	0.41
25:YA:534:U:H2'	25:YA:535:C:H6	1.85	0.41
25:YA:674:G:O2'	29:YF:67:GLN:NE2	2.44	0.41
25:YA:825:C:O2'	25:YA:826:U:H5'	2.20	0.41
25:YA:972:G:O5'	25:YA:972:G:H8	2.04	0.41
25:YA:1317:A:H2'	25:YA:1318:C:C6	2.55	0.41
25:YA:1317:A:O2'	25:YA:1318:C:H5'	2.20	0.41
25:YA:1500:G:H2'	25:YA:1501:C:C6	2.54	0.41
25:YA:1916:A:H2'	25:YA:1917:PSU:H6	1.85	0.41
29:YF:10:PRO:HG2	29:YF:124:LEU:HD13	2.02	0.41
31:YH:97:ARG:NH2	31:YH:104:GLU:OE2	2.53	0.41
32:YI:78:THR:HG22	32:YI:141:LYS:HB2	2.01	0.41
1:QA:68:G:H22	1:QA:101:A:H2	1.68	0.41
1:QA:360:A:H3'	1:QA:360:A:P	2.61	0.41
1:QA:537:G:H5'	12:QL:113:ARG:NH1	2.34	0.41
1:QA:601:C:H2'	1:QA:602:A:H8	1.86	0.41
1:QA:1346:A:H5''	9:QI:120:ARG:HH12	1.86	0.41
1:QA:1394:A:N6	1:QA:1500:A:O2'	2.45	0.41
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.94	0.41
13:QM:87:TYR:OH	13:QM:91:ARG:NH1	2.53	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:9:GLN:O	15:QO:12:ILE:N	2.52	0.41
22:QV:13:C:H42	22:QV:23:C:N4	2.18	0.41
25:RA:560:C:H4'	40:RU:52:ARG:NH1	2.35	0.41
25:RA:631:A:H2'	25:RA:632:A:C8	2.55	0.41
25:RA:729:G:C8	27:RD:208:LYS:HD2	2.56	0.41
25:RA:839:U:H1'	25:RA:1191:G:H1'	2.03	0.41
25:RA:1529:G:O6	25:RA:1540:U:O4	2.38	0.41
25:RA:2330:G:O2'	46:R0:41:ARG:O	2.21	0.41
25:RA:2563:U:H2'	25:RA:2564:A:H3'	2.01	0.41
31:RH:11:VAL:HB	31:RH:48:GLY:HA2	2.02	0.41
34:RO:113:LYS:O	34:RO:116:SER:OG	2.35	0.41
36:RQ:79:LEU:HA	36:RQ:79:LEU:HD23	1.83	0.41
48:R2:63:VAL:O	48:R2:67:LYS:N	2.50	0.41
1:XA:580:U:H2'	1:XA:581:G:C8	2.56	0.41
1:XA:1404:5MC:HN41	1:XA:1497:G:H1	1.68	0.41
1:XA:1429:C:O2'	1:XA:1430:C:H5'	2.20	0.41
5:XE:89:ILE:HD13	5:XE:135:THR:HG23	2.02	0.41
5:XE:106:PRO:HA	5:XE:109:ILE:HG22	2.01	0.41
25:YA:118:A:OP2	25:YA:119:A:H5''	2.21	0.41
25:YA:494:G:O2'	25:YA:495:G:H5'	2.20	0.41
25:YA:768:G:H2'	25:YA:769:G:H8	1.85	0.41
25:YA:1187:G:OP2	25:YA:1187:G:H8	2.02	0.41
25:YA:1544:A:O2'	25:YA:1545:A:H5'	2.20	0.41
25:YA:1572:A:H8	25:YA:1572:A:O5'	2.04	0.41
34:YO:104:ARG:HH11	34:YO:104:ARG:HD2	1.65	0.41
45:YZ:14:LYS:HA	45:YZ:15:PRO:HD3	1.90	0.41
1:QA:35:G:N3	12:QL:118:SER:HB2	2.36	0.41
1:QA:721:G:H8	1:QA:721:G:OP1	2.03	0.41
1:QA:1312:G:H5''	19:QS:5:LEU:HD13	2.01	0.41
3:QC:24:ALA:HB2	3:QC:32:LEU:HD12	2.01	0.41
4:QD:12:CYS:HB3	4:QD:19:LEU:H	1.85	0.41
10:QJ:78:ASN:ND2	10:QJ:80:LYS:HB2	2.35	0.41
25:RA:216:A:H2'	25:RA:217:G:C8	2.54	0.41
25:RA:831:G:H5''	35:RP:37:GLY:HA3	2.03	0.41
25:RA:918:A:H5''	26:RB:98:G:O2'	2.19	0.41
25:RA:1849:G:H2'	25:RA:1850:G:H8	1.84	0.41
25:RA:2300:G:N1	25:RA:2317:C:N3	2.68	0.41
25:RA:2660:A:H8	25:RA:2660:A:OP1	2.04	0.41
27:RD:254:THR:OG1	27:RD:254:THR:O	2.39	0.41
32:RI:97:ILE:H	32:RI:97:ILE:HG13	1.65	0.41
34:RO:2:ILE:HG23	34:RO:6:THR:HG21	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:27:THR:N	39:RT:90:GLN:O	2.49	0.41
1:XA:22:G:H2'	1:XA:23:C:H6	1.85	0.41
1:XA:244:U:H4'	1:XA:245:C:H5''	2.02	0.41
1:XA:405:U:H3'	1:XA:406:G:H5'	2.03	0.41
1:XA:688:G:H5'	11:XK:47:VAL:N	2.36	0.41
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.20	0.41
6:XF:81:ILE:HG23	27:YD:137:PRO:HG2	2.01	0.41
8:XH:91:ARG:HH21	17:XQ:33:GLY:HA3	1.84	0.41
25:YA:182:A:H61	25:YA:215:G:H1	1.67	0.41
25:YA:343:C:H2'	25:YA:344:G:C8	2.54	0.41
25:YA:820:A:H4'	25:YA:836:G:N2	2.35	0.41
25:YA:827:U:O2'	25:YA:2068:U:C2	2.73	0.41
25:YA:1011:G:OP2	40:YU:70:ARG:NH2	2.52	0.41
25:YA:1031:G:O2'	55:Y9:7:VAL:O	2.39	0.41
25:YA:1313:U:H4'	25:YA:1332:G:H4'	2.02	0.41
25:YA:1564:C:H2'	25:YA:1565:C:C6	2.56	0.41
25:YA:1613:G:O2'	53:Y7:3:ARG:NE	2.33	0.41
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.55	0.41
25:YA:1789:A:O2'	25:YA:1790:C:H5'	2.20	0.41
25:YA:2593:U:H2'	25:YA:2594:C:H6	1.85	0.41
26:YB:75:G:H5'	45:YZ:36:LYS:HD2	2.03	0.41
27:YD:45:ASN:OD1	27:YD:45:ASN:N	2.51	0.41
27:YD:177:LEU:HA	27:YD:177:LEU:HD23	1.81	0.41
27:YD:208:LYS:HG3	27:YD:210:GLY:H	1.85	0.41
1:QA:793:U:C2	1:QA:1516:G:H4'	2.56	0.41
1:QA:951:G:O2'	1:QA:970:C:O2'	2.31	0.41
1:QA:1154:G:H2'	1:QA:1155:G:C8	2.55	0.41
3:QC:71:ALA:HB2	3:QC:106:VAL:HB	2.03	0.41
13:QM:50:GLU:HA	13:QM:53:VAL:HG22	2.03	0.41
13:QM:65:LYS:HD2	50:R4:50:VAL:HG12	2.02	0.41
16:QP:38:TYR:CZ	16:QP:50:LYS:HB2	2.55	0.41
25:RA:332:A:O2'	25:RA:334:C:OP2	2.22	0.41
25:RA:443:A:H61	29:RF:41:LEU:HB3	1.85	0.41
25:RA:778:G:H5'	27:RD:48:ARG:HH11	1.85	0.41
25:RA:864:G:O6	25:RA:912:C:N4	2.53	0.41
25:RA:930:U:H4'	25:RA:931:G:O4'	2.20	0.41
25:RA:996:A:H4'	40:RU:91:ASP:OD2	2.19	0.41
25:RA:1630:G:H2'	25:RA:1631(A):C:O5'	2.20	0.41
25:RA:1685:C:H2'	25:RA:1686:C:C6	2.55	0.41
25:RA:2222:G:H5''	27:RD:186:HIS:NE2	2.35	0.41
25:RA:2257:U:O2'	25:RA:2258:C:H5'	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2307:G:H8	25:RA:2307:G:OP1	2.02	0.41
25:RA:2558:C:H2'	25:RA:2559:C:H6	1.84	0.41
25:RA:2630:G:H1'	25:RA:2894:G:C8	2.56	0.41
25:RA:2653:U:O2	31:RH:110:SER:OG	2.30	0.41
25:RA:2737:G:H2'	25:RA:2738:A:C8	2.55	0.41
25:RA:2818:G:O2'	25:RA:2819:G:H5'	2.19	0.41
31:RH:28:GLY:N	31:RH:31:GLY:O	2.48	0.41
1:XA:237:C:H5''	17:XQ:25:ARG:CZ	2.50	0.41
1:XA:813:U:O2'	1:XA:814:A:H5'	2.21	0.41
1:XA:864:A:H2'	1:XA:865:A:C8	2.56	0.41
7:XG:152:ALA:O	7:XG:155:ARG:NE	2.54	0.41
9:XI:55:ALA:HB1	9:XI:58:HIS:HB2	2.03	0.41
12:XL:6:THR:O	12:XL:10:LEU:HG	2.21	0.41
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.84	0.41
25:YA:140:G:O2'	25:YA:141:A:OP2	2.34	0.41
25:YA:637:A:H2'	35:YP:117:GLU:OE2	2.21	0.41
25:YA:663:G:H2'	25:YA:664:C:C6	2.56	0.41
25:YA:783:A:H4'	25:YA:2588:G:H4'	2.02	0.41
25:YA:836:G:H2'	25:YA:837:C:H6	1.84	0.41
25:YA:879:G:H1	25:YA:898:C:H42	1.67	0.41
25:YA:954:G:H1	25:YA:963:U:H3	1.68	0.41
25:YA:1203:G:OP2	25:YA:1204:A:O2'	2.17	0.41
25:YA:1548:C:H2'	25:YA:1549:C:H6	1.85	0.41
25:YA:1897:G:H2'	25:YA:1898:U:O4'	2.21	0.41
25:YA:2023:G:H5'	25:YA:2617:C:H4'	2.02	0.41
25:YA:2080:G:H1	25:YA:2240:C:H42	1.67	0.41
25:YA:2439:A:C5'	25:YA:2439:A:C8	3.03	0.41
31:YH:84:SER:HA	31:YH:133:VAL:O	2.20	0.41
48:Y2:17:SER:OG	48:Y2:20:GLU:OE1	2.38	0.41
56:ZB:1:C:O2'	56:ZB:2:C:H5'	2.21	0.41
1:QA:663:A:H5'	18:QR:61:LYS:HE3	2.02	0.41
1:QA:1001(A):A:H2'	1:QA:1001(B):G:C8	2.55	0.41
1:QA:1403:C:H1'	1:QA:1500:A:N1	2.36	0.41
4:QD:196:LEU:O	4:QD:198:VAL:N	2.53	0.41
12:QL:104:VAL:HG12	12:QL:105:TYR:CG	2.56	0.41
25:RA:21:A:O2'	25:RA:22:C:H5'	2.20	0.41
25:RA:272(I):G:H8	25:RA:272(I):G:O5'	2.03	0.41
25:RA:1356:G:H2'	25:RA:1357:U:H6	1.84	0.41
25:RA:1582:C:H2'	25:RA:1583:A:O4'	2.20	0.41
25:RA:2428:G:O2'	35:RP:56:SER:OG	2.38	0.41
25:RA:2529:G:C5'	25:RA:2530:A:H5''	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2881:C:H2'	25:RA:2882:A:C8	2.56	0.41
25:RA:2883:A:H5''	25:RA:2884:U:H5'	2.01	0.41
39:RT:8:LYS:HB3	39:RT:8:LYS:HE3	1.82	0.41
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.85	0.41
1:XA:513:C:H2'	1:XA:514:C:H6	1.85	0.41
1:XA:1129:C:H2'	1:XA:1139:G:N7	2.35	0.41
1:XA:1298:C:H4'	1:XA:1299:A:C4	2.55	0.41
2:XB:8:LYS:HB3	2:XB:10:LEU:HD12	2.01	0.41
2:XB:146:GLN:O	2:XB:150:SER:HB2	2.21	0.41
16:XP:57:ARG:HH21	16:XP:79:VAL:HA	1.86	0.41
25:YA:579:G:H2'	25:YA:580:C:C6	2.56	0.41
25:YA:750:A:N3	25:YA:750:A:H2'	2.35	0.41
25:YA:840:C:H2'	25:YA:841:A:C8	2.55	0.41
25:YA:971:C:O2'	25:YA:972:G:H5'	2.20	0.41
25:YA:1073:A:O2'	25:YA:1074:G:OP1	2.31	0.41
25:YA:1266:G:O2'	25:YA:2012:G:O6	2.34	0.41
25:YA:1326:U:H2'	25:YA:1327:C:C6	2.56	0.41
25:YA:1411:C:H2'	25:YA:1412:A:H8	1.86	0.41
25:YA:2126:A:N6	25:YA:2163:C:O4'	2.53	0.41
25:YA:2323:G:N1	25:YA:2332:U:N3	2.56	0.41
25:YA:2876:G:OP1	39:YT:3:ARG:HG3	2.21	0.41
27:YD:12:SER:HB3	27:YD:208:LYS:HB3	2.03	0.41
29:YF:79:GLY:O	29:YF:87:GLY:N	2.38	0.41
29:YF:127:GLU:HA	29:YF:196:LEU:HG	2.02	0.41
41:YV:4:ILE:HG22	41:YV:38:LEU:HB2	2.03	0.41
52:Y6:3:SER:OG	52:Y6:5:VAL:N	2.53	0.41
1:QA:600:C:OP1	8:QH:97:VAL:HG22	2.21	0.41
1:QA:680:C:H2'	1:QA:681:C:H6	1.85	0.41
1:QA:749:C:H2'	1:QA:750:G:H8	1.85	0.41
1:QA:794:A:H4'	1:QA:1521:G:O2'	2.21	0.41
1:QA:984:C:H2'	1:QA:985:C:C6	2.56	0.41
1:QA:1485:U:H2'	1:QA:1486:G:C8	2.56	0.41
4:QD:33:MET:HG2	58:QD:303:SF4:S4	2.60	0.41
11:QK:33:THR:OG1	11:QK:34:ASP:O	2.28	0.41
12:QL:47:LYS:HG2	12:QL:48:PRO:HD3	2.01	0.41
18:QR:45:SER:OG	18:QR:49:LYS:N	2.54	0.41
22:QV:6:G:H2'	22:QV:7:G:C8	2.56	0.41
25:RA:110:G:H2'	25:RA:111:A:C8	2.56	0.41
25:RA:630:G:N2	25:RA:633:A:OP2	2.53	0.41
25:RA:1149:G:H2'	25:RA:1150:C:H6	1.86	0.41
25:RA:1417:C:H4'	25:RA:1588:C:O2	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.55	0.41
25:RA:2013:A:O2'	25:RA:2014:A:H5'	2.21	0.41
25:RA:2413:G:H21	35:RP:70:GLN:NE2	2.18	0.41
25:RA:2611:U:C4	51:R5:3:LYS:HG2	2.56	0.41
25:RA:2612:C:H2'	25:RA:2613:U:H5'	2.03	0.41
30:RG:113:ARG:O	30:RG:115:ARG:NH1	2.41	0.41
38:RS:49:VAL:HG11	38:RS:77:ALA:HB2	2.02	0.41
42:RW:58:ALA:HA	42:RW:62:HIS:HB2	2.02	0.41
43:RX:53:LYS:HB3	43:RX:82:GLN:HB3	2.03	0.41
1:XA:322:C:H2'	1:XA:323:U:C6	2.55	0.41
1:XA:357:G:C5'	1:XA:367:U:H3'	2.46	0.41
1:XA:584:G:O2'	1:XA:585:G:H5'	2.21	0.41
1:XA:679:C:H2'	1:XA:680:C:C6	2.56	0.41
1:XA:1295:G:H21	1:XA:1302:U:H3	1.67	0.41
1:XA:1347:G:O2'	1:XA:1348:U:OP2	2.39	0.41
3:XC:130:VAL:HG11	3:XC:157:ILE:HG23	2.01	0.41
9:XI:96:LEU:HD22	9:XI:101:PHE:HB2	2.03	0.41
9:XI:110:GLU:OE2	9:XI:113:LYS:NZ	2.53	0.41
11:XK:21:ILE:HG23	11:XK:84:VAL:HA	2.01	0.41
14:YN:10:ALA:HB2	14:YN:23:ARG:HD2	2.03	0.41
15:XO:3:ILE:HD13	15:XO:34:LEU:HD21	2.03	0.41
24:XY:29:U:H2'	24:XY:30:C:C5	2.56	0.41
25:YA:345:A:N3	25:YA:346:A:N6	2.69	0.41
25:YA:590:A:OP1	29:YF:95:ARG:NH1	2.54	0.41
25:YA:688:U:H6	25:YA:688:U:O5'	2.04	0.41
25:YA:1039:G:O2'	25:YA:1040:C:H5'	2.21	0.41
25:YA:1045:A:N7	25:YA:1047:G:N2	2.69	0.41
25:YA:2147:G:H2'	25:YA:2148:G:O4'	2.21	0.41
25:YA:2172:U:H4'	25:YA:2173:A:OP2	2.20	0.41
32:YI:51:ILE:HD13	32:YI:51:ILE:HA	1.89	0.41
50:Y4:8:LYS:HA	50:Y4:8:LYS:HD2	1.96	0.41
1:QA:8:A:H4'	1:QA:9:G:OP1	2.21	0.41
1:QA:96:U:H2'	1:QA:97:G:C8	2.56	0.41
1:QA:375:U:H2'	1:QA:376:G:O4'	2.21	0.41
1:QA:423:G:H2'	1:QA:424:G:O4'	2.21	0.41
1:QA:481:G:H8	1:QA:481:G:H2'	1.71	0.41
1:QA:509:A:H2'	1:QA:510:A:C4	2.55	0.41
1:QA:601:C:H2'	1:QA:602:A:C8	2.56	0.41
1:QA:663:A:O2'	18:QR:64:ARG:NH2	2.54	0.41
1:QA:864:A:H2'	1:QA:865:A:C8	2.55	0.41
1:QA:867:G:H2'	1:QA:868:C:C6	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:941:G:H2'	1:QA:942:G:O4'	2.21	0.41
1:QA:959:A:H3'	1:QA:960:U:C5'	2.48	0.41
1:QA:1014:A:H2	1:QA:1219:U:H1'	1.86	0.41
1:QA:1034:G:H2'	1:QA:1035:A:C4	2.56	0.41
1:QA:1157:A:C2	1:QA:1178:G:N2	2.88	0.41
1:QA:1235:U:H5''	21:QU:3:LYS:HD2	2.03	0.41
1:QA:1255:G:O2'	1:QA:1258:G:H1'	2.21	0.41
1:QA:1309:G:H5'	13:QM:78:ILE:HD11	2.03	0.41
1:QA:1330:U:H4'	13:QM:23:TYR:CE1	2.56	0.41
2:QB:54:THR:O	2:QB:58:ILE:HG12	2.21	0.41
3:QC:137:ALA:HA	3:QC:140:ARG:HB2	2.03	0.41
7:QG:116:ALA:O	7:QG:120:ILE:HG12	2.21	0.41
11:QK:117:ASN:N	11:QK:117:ASN:ND2	2.69	0.41
22:QV:9:G:O2'	22:QV:10:G:N7	2.52	0.41
25:RA:89:G:C6	25:RA:90:U:H5	2.39	0.41
25:RA:192:C:H2'	25:RA:193:U:H5'	2.02	0.41
25:RA:528:A:N6	25:RA:2042:A:H2'	2.36	0.41
25:RA:563:G:H5'	25:RA:572:A:H4'	2.03	0.41
25:RA:797:C:H2'	25:RA:798:G:H8	1.86	0.41
25:RA:944:G:H5''	25:RA:945:A:O5'	2.21	0.41
25:RA:994:C:OP1	40:RU:53:ARG:NH2	2.53	0.41
25:RA:1084:A:H3'	25:RA:1085:A:O4'	2.21	0.41
25:RA:1359:A:OP2	25:RA:1371:G:N1	2.40	0.41
25:RA:1398:C:O3'	43:RX:25:LYS:NZ	2.46	0.41
25:RA:1813:G:H21	27:RD:51:VAL:HG13	1.86	0.41
25:RA:2010:G:H5''	42:RW:42:ARG:HB2	2.02	0.41
25:RA:2075:U:OP1	27:RD:244:ARG:NH2	2.54	0.41
25:RA:2223:G:H5''	27:RD:269:PHE:CZ	2.56	0.41
25:RA:2292:C:H2'	25:RA:2293:C:C6	2.56	0.41
25:RA:2341:G:H2'	25:RA:2342:C:C6	2.56	0.41
25:RA:2363:C:O2'	25:RA:2364:C:H5'	2.20	0.41
25:RA:2477:C:N4	55:R9:10:ILE:HG13	2.36	0.41
25:RA:2848:G:N2	25:RA:2868:A:H62	2.19	0.41
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.70	0.41
29:RF:107:LYS:HG2	29:RF:206:ILE:HA	2.01	0.41
35:RP:89:ALA:O	35:RP:121:LYS:NZ	2.43	0.41
36:RQ:44:ALA:HB2	36:RQ:70:PRO:HG3	2.03	0.41
38:RS:69:VAL:HG13	38:RS:101:LEU:HD13	2.03	0.41
39:RT:47:GLY:HA2	39:RT:65:LYS:HE2	2.03	0.41
39:RT:118:ARG:HA	39:RT:121:ILE:HG22	2.02	0.41
41:RV:40:LEU:HB2	41:RV:46:VAL:HB	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:10:ALA:O	43:RX:29:TRP:N	2.54	0.41
45:RZ:44:PHE:O	45:RZ:48:PHE:HB2	2.20	0.41
46:R0:77:ARG:HE	46:R0:77:ARG:HB3	1.67	0.41
1:XA:26:A:H1'	4:XD:209:ARG:HH21	1.86	0.41
1:XA:110:C:O2'	16:XP:25:ARG:O	2.28	0.41
1:XA:224:C:H2'	1:XA:225:C:H6	1.83	0.41
1:XA:349:A:O2'	1:XA:350:G:H5'	2.19	0.41
1:XA:489:C:H2'	1:XA:490:G:C8	2.56	0.41
1:XA:511:C:O2	4:XD:43:HIS:NE2	2.53	0.41
1:XA:539:A:OP2	12:XL:115:LYS:NZ	2.54	0.41
1:XA:624:C:H2'	1:XA:625:G:H8	1.84	0.41
1:XA:932:C:O3'	7:XG:4:ARG:NH2	2.54	0.41
1:XA:1316:G:N1	1:XA:1319:A:OP2	2.53	0.41
8:XH:14:ARG:HE	8:XH:83:ILE:HG23	1.84	0.41
19:XS:63:THR:OG1	19:XS:64:GLU:N	2.51	0.41
20:XT:51:GLU:O	20:XT:55:ILE:HG12	2.21	0.41
25:YA:18:C:O2'	25:YA:19:C:H5'	2.21	0.41
25:YA:24:G:H1'	42:YW:77:ASP:HB3	2.02	0.41
25:YA:198:C:O2'	25:YA:199:A:H5'	2.21	0.41
25:YA:378:C:C2'	25:YA:379:G:H5'	2.50	0.41
25:YA:730:C:H2'	25:YA:731:C:H6	1.85	0.41
25:YA:985:C:H2'	25:YA:986:C:C6	2.56	0.41
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.56	0.41
25:YA:1183:G:O2'	49:Y3:29:ARG:NH1	2.43	0.41
25:YA:1186:G:H2'	25:YA:1187:G:O4'	2.21	0.41
25:YA:1246:A:OP1	29:YF:38:ARG:NH1	2.54	0.41
25:YA:1354:A:H2'	25:YA:1355:G:O4'	2.20	0.41
25:YA:1422:G:H1	25:YA:1576:U:H3	1.69	0.41
25:YA:1657:C:H4'	28:YE:133:LYS:HB3	2.02	0.41
25:YA:2018:G:OP1	51:Y5:9:LYS:NZ	2.54	0.41
25:YA:2259:G:H2'	25:YA:2260:C:H6	1.86	0.41
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.21	0.41
25:YA:2592:G:C2'	25:YA:2593:U:H5'	2.51	0.41
25:YA:2817:G:OP1	37:YR:42:LYS:NZ	2.51	0.41
25:YA:2831:G:P	28:YE:58:ARG:HH21	2.44	0.41
26:YB:3:C:H2'	26:YB:4:C:C6	2.55	0.41
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.49	0.41
1:QA:109:A:C6	1:QA:326:G:O6	2.74	0.41
1:QA:382:A:H2'	1:QA:383:A:H8	1.85	0.41
3:QC:9:GLY:HA2	3:QC:12:LEU:HG	2.03	0.41
25:RA:23:G:N2	42:RW:77:ASP:OD1	2.42	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:746:A:O2'	25:RA:2611:U:O2'	2.29	0.41
25:RA:1178:C:H2'	25:RA:1179:C:H6	1.86	0.41
25:RA:1579:A:H2'	25:RA:1580:A:C8	2.56	0.41
25:RA:2079:U:O3'	47:R1:35:THR:OG1	2.29	0.41
25:RA:2321:G:H2'	25:RA:2321:G:N3	2.36	0.41
27:RD:164:GLN:OE1	27:RD:176:ARG:NH1	2.53	0.41
31:RH:98:LEU:HB2	31:RH:125:VAL:HG12	2.03	0.41
49:R3:55:ARG:NH2	49:R3:57:GLU:OE2	2.54	0.41
52:R6:27:LYS:NZ	52:R6:31:PRO:O	2.54	0.41
1:XA:925:G:O6	1:XA:1391:U:O4	2.39	0.41
1:XA:1003:G:N7	1:XA:1004:A:H1'	2.36	0.41
1:XA:1096:C:H2'	1:XA:1097:C:H6	1.85	0.41
1:XA:1240:U:N3	7:XG:32:ARG:HD2	2.35	0.41
2:XB:70:PHE:O	2:XB:92:TYR:HA	2.20	0.41
2:XB:71:VAL:HG13	2:XB:164:VAL:HA	2.03	0.41
25:YA:220:G:O2'	25:YA:233:A:N3	2.47	0.41
25:YA:363(B):A:H2'	25:YA:363(C):G:C8	2.55	0.41
25:YA:1433:U:O4	25:YA:1560:G:O6	2.39	0.41
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.42	0.41
25:YA:2496:C:O2'	25:YA:2497:A:H5'	2.20	0.41
27:YD:248:SER:OG	27:YD:250:TRP:N	2.41	0.41
38:YS:50:SER:O	38:YS:76:LYS:NZ	2.39	0.41
1:QA:384:G:H2'	1:QA:385:C:H6	1.85	0.40
1:QA:1177:G:H2'	1:QA:1178:G:C8	2.57	0.40
1:QA:1336:C:H4'	1:QA:1337:G:C4	2.56	0.40
2:QB:120:ALA:O	2:QB:123:ALA:N	2.50	0.40
3:QC:154:SER:O	3:QC:197:GLY:N	2.54	0.40
25:RA:150:C:H2'	25:RA:151:C:C6	2.56	0.40
25:RA:216:A:N7	25:RA:431:U:O4	2.54	0.40
25:RA:466:A:N3	25:RA:683:C:H1'	2.36	0.40
25:RA:639:U:H2'	25:RA:640:C:H6	1.86	0.40
25:RA:755:C:H2'	25:RA:756:C:C6	2.56	0.40
25:RA:848:G:C2	25:RA:933:A:H1'	2.56	0.40
25:RA:978:G:O4'	25:RA:1001:A:H2	2.04	0.40
25:RA:1017:G:O6	25:RA:1146:C:N4	2.53	0.40
25:RA:1805:U:H5''	27:RD:250:TRP:CD2	2.55	0.40
25:RA:1843:C:H2'	25:RA:1844:C:H6	1.86	0.40
25:RA:2282:G:H21	25:RA:2390:U:H3	1.69	0.40
25:RA:2340:G:H2'	25:RA:2341:G:C8	2.56	0.40
25:RA:2391:G:O2'	25:RA:2422:A:N7	2.54	0.40
25:RA:2414:G:H2'	25:RA:2415:G:H8	1.87	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:97:ILE:O	32:RI:100:ALA:N	2.55	0.40
47:R1:18:ILE:HG13	47:R1:37:ILE:HG12	2.02	0.40
53:R7:24:THR:O	53:R7:27:GLY:N	2.54	0.40
1:XA:353:A:H5'	1:XA:353:A:C8	2.56	0.40
1:XA:692:U:O2'	1:XA:694:A:N7	2.45	0.40
1:XA:797:C:O2'	1:XA:798:G:H5'	2.21	0.40
1:XA:1152:A:H5'	10:XJ:13:HIS:CE1	2.56	0.40
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.86	0.40
7:XG:126:ASP:O	7:XG:131:LYS:N	2.47	0.40
8:XH:95:VAL:HG21	8:XH:133:LEU:HD12	2.03	0.40
13:XM:4:ILE:HD13	13:XM:57:ARG:HE	1.86	0.40
16:XP:71:ARG:HA	16:XP:74:LEU:HB2	2.03	0.40
17:XQ:46:ASP:OD2	17:XQ:50:LYS:N	2.45	0.40
22:XV:59:A:C2'	22:XV:60:U:H5'	2.51	0.40
25:YA:215:G:H4'	25:YA:216:A:H4'	2.02	0.40
25:YA:522:G:H2'	25:YA:523:C:C6	2.56	0.40
25:YA:539:G:H2'	25:YA:540:C:H6	1.86	0.40
25:YA:2591:C:H2'	25:YA:2592:G:C8	2.56	0.40
35:YP:100:LEU:HD23	35:YP:100:LEU:HA	1.84	0.40
45:YZ:149:SER:OG	45:YZ:150:LEU:N	2.54	0.40
49:Y3:7:LYS:HA	49:Y3:33:GLN:O	2.21	0.40
50:Y4:24:THR:OG1	50:Y4:25:TYR:N	2.54	0.40
53:Y7:24:THR:HA	53:Y7:25:PRO:HD3	1.90	0.40
1:QA:258:G:H2'	1:QA:259:G:H8	1.85	0.40
1:QA:486:U:H2'	1:QA:487:A:C8	2.56	0.40
1:QA:1048:G:OP1	14:QN:4:LYS:HG2	2.21	0.40
10:QJ:12:ASP:OD1	10:QJ:12:ASP:N	2.40	0.40
18:QR:66:LEU:O	18:QR:69:THR:N	2.46	0.40
25:RA:17:G:H2'	25:RA:18:C:C6	2.56	0.40
25:RA:300:A:H2'	25:RA:334:C:H1'	2.03	0.40
25:RA:394:A:C2'	25:RA:395:U:H5'	2.52	0.40
25:RA:547:A:H3'	25:RA:548:A:C8	2.56	0.40
25:RA:715:G:H2'	25:RA:716:A:C8	2.55	0.40
25:RA:1614:A:N6	42:RW:92:ARG:O	2.49	0.40
25:RA:2057:A:C2	51:R5:4:HIS:HB3	2.55	0.40
25:RA:2125:G:N1	25:RA:2172:U:OP2	2.49	0.40
25:RA:2497:A:H1'	25:RA:2498:C:H5	1.86	0.40
30:RG:109:VAL:HG22	50:R4:33:VAL:HG21	2.03	0.40
32:RI:78:THR:HG22	32:RI:141:LYS:HB2	2.02	0.40
1:XA:17:U:H2'	1:XA:18:C:C6	2.57	0.40
1:XA:335:C:H2'	1:XA:336:C:C6	2.56	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:405:U:OP1	1:XA:406:G:H4'	2.22	0.40
1:XA:585:G:OP1	17:XQ:37:LYS:HD2	2.21	0.40
9:XI:42:ARG:NH2	9:XI:75:ASP:OD1	2.50	0.40
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HA	2.03	0.40
20:XT:83:ARG:O	20:XT:87:LYS:HG2	2.21	0.40
25:YA:370:G:H5''	25:YA:423:A:N6	2.36	0.40
25:YA:1113:U:H2'	25:YA:1114:G:H8	1.84	0.40
25:YA:1510:G:H2'	25:YA:1511:C:H6	1.85	0.40
25:YA:1791:A:H5'	27:YD:206:LEU:HD12	2.03	0.40
25:YA:2051:A:H5'	25:YA:2578:G:O4'	2.21	0.40
25:YA:2063:C:H2'	25:YA:2064:C:H5'	2.04	0.40
25:YA:2340:G:H2'	25:YA:2341:G:C8	2.56	0.40
25:YA:2875:C:O2'	39:YT:2:ASN:OD1	2.33	0.40
31:YH:68:THR:O	31:YH:72:ILE:HG12	2.21	0.40
46:Y0:15:ASP:OD1	46:Y0:16:SER:N	2.54	0.40
1:QA:123:C:H2'	1:QA:124:G:H8	1.87	0.40
1:QA:150:C:H2'	1:QA:151:A:H8	1.86	0.40
1:QA:539:A:H2'	1:QA:540:G:H8	1.86	0.40
1:QA:693:G:H2'	1:QA:694:A:C8	2.57	0.40
1:QA:959:A:O2'	1:QA:984:C:O2'	2.08	0.40
1:QA:1070:U:H2'	1:QA:1071:C:H6	1.87	0.40
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	2.03	0.40
2:QB:130:ARG:HA	2:QB:131:PRO:HD3	1.86	0.40
3:QC:17:ASP:O	3:QC:54:ARG:NH2	2.55	0.40
6:QF:6:VAL:HB	6:QF:63:TYR:HB2	2.03	0.40
11:QK:21:ILE:HG13	11:QK:84:VAL:HA	2.03	0.40
16:QP:72:ARG:HG2	16:QP:73:LEU:HD23	2.02	0.40
25:RA:34:C:H5''	25:RA:35:G:OP2	2.21	0.40
25:RA:263:C:H1'	25:RA:430:G:N3	2.36	0.40
25:RA:464:U:H2'	25:RA:465:G:O4'	2.21	0.40
25:RA:855:G:H1	25:RA:922:U:H3	1.69	0.40
25:RA:959:A:H1'	25:RA:2457:U:O2'	2.22	0.40
25:RA:1685:C:H2'	25:RA:1686:C:H6	1.86	0.40
25:RA:2393:A:O3'	35:RP:63:PRO:HA	2.21	0.40
25:RA:2703:C:H2'	25:RA:2704:C:C6	2.55	0.40
26:RB:78:A:H62	26:RB:99:G:N2	2.18	0.40
29:RF:78:ILE:H	29:RF:78:ILE:HG12	1.73	0.40
29:RF:170:LEU:HA	29:RF:171:PRO:HD3	1.90	0.40
30:RG:122:PRO:HG2	30:RG:123:ASN:ND2	2.35	0.40
31:RH:85:LYS:HD2	31:RH:85:LYS:HA	1.87	0.40
34:RO:73:ASP:OD2	39:RT:32:TYR:OH	2.33	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:79:PHE:HD2	39:RT:72:VAL:HG12	1.86	0.40
41:RV:30:GLY:H	41:RV:61:VAL:HB	1.86	0.40
43:RX:5:TYR:OH	48:R2:30:ARG:NH1	2.53	0.40
1:XA:336:C:H2'	1:XA:337:C:H6	1.86	0.40
1:XA:967:5MC:H2'	1:XA:968:A:C8	2.57	0.40
1:XA:1118:C:H1'	1:XA:1179:A:C5	2.56	0.40
4:XD:70:ILE:HD12	4:XD:70:ILE:HA	1.79	0.40
12:XL:32:PHE:HB3	12:XL:84:LEU:HD21	2.03	0.40
20:XT:63:ILE:HG21	20:XT:81:LYS:HG3	2.01	0.40
25:YA:28:A:H2'	25:YA:29:U:H6	1.86	0.40
25:YA:61:G:O6	25:YA:94(B):G:N2	2.55	0.40
25:YA:360:G:H2'	25:YA:361:G:C8	2.56	0.40
25:YA:576:U:H4'	25:YA:2502:G:N7	2.36	0.40
25:YA:699:A:H2'	25:YA:700:G:O4'	2.21	0.40
25:YA:840:C:OP2	25:YA:932:G:N2	2.52	0.40
25:YA:1857:G:O6	25:YA:1858:G:N1	2.55	0.40
25:YA:1956:U:H1'	25:YA:2552:OMU:H5'	2.04	0.40
25:YA:2168:G:N2	25:YA:2171:A:OP2	2.45	0.40
37:YR:2:ARG:NH1	37:YR:5:LYS:O	2.55	0.40
37:YR:79:LEU:HD12	37:YR:83:ILE:HB	2.04	0.40
1:QA:123:C:OP1	1:QA:312:C:H5'	2.22	0.40
1:QA:145:G:N1	1:QA:178:C:N3	2.69	0.40
1:QA:1057:G:OP1	3:QC:154:SER:OG	2.39	0.40
1:QA:1158:C:H4'	2:QB:133:LYS:HE3	2.04	0.40
1:QA:1179:A:H8	1:QA:1179:A:OP1	2.04	0.40
1:QA:1202:G:H4'	14:QN:29:ARG:NE	2.34	0.40
3:QC:82:GLU:O	3:QC:85:ARG:NH1	2.55	0.40
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	2.03	0.40
7:QG:29:LYS:O	7:QG:32:ARG:NH1	2.54	0.40
9:QI:34:ASN:O	9:QI:38:GLN:HB2	2.20	0.40
16:QP:55:ARG:HA	16:QP:55:ARG:HD2	1.94	0.40
25:RA:515:A:H1'	25:RA:581:C:H1'	2.04	0.40
25:RA:823:G:H2'	25:RA:824:A:H8	1.78	0.40
25:RA:868:U:H2'	25:RA:869:G:H8	1.86	0.40
25:RA:991:C:O2'	25:RA:992:C:H5'	2.21	0.40
25:RA:1060:U:H4'	25:RA:1070:A:C8	2.56	0.40
25:RA:1150:C:H2'	25:RA:1151:G:C8	2.56	0.40
25:RA:1256:G:O2'	29:RF:82:ILE:HD11	2.22	0.40
25:RA:1296:G:O2'	25:RA:1297:C:H5'	2.21	0.40
25:RA:1842:G:H2'	25:RA:1843:C:H6	1.83	0.40
25:RA:1971:A:N3	27:RD:241:PRO:HD3	2.37	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1972:A:H2'	25:RA:1973:G:H8	1.87	0.40
25:RA:2153:G:H2'	25:RA:2154:G:C8	2.57	0.40
25:RA:2186:G:OP2	25:RA:2186:G:H8	2.04	0.40
25:RA:2289:G:H5'	25:RA:2383:G:H21	1.85	0.40
25:RA:2297:C:H2'	25:RA:2298:A:C8	2.55	0.40
25:RA:2395:C:N4	25:RA:2421:G:O6	2.55	0.40
30:RG:59:GLU:OE1	30:RG:153:ARG:NH2	2.55	0.40
1:XA:922:G:H4'	5:XE:20:GLN:HA	2.04	0.40
1:XA:927:G:OP1	1:XA:1505:G:N2	2.51	0.40
1:XA:1079:G:H2'	1:XA:1080:A:C8	2.56	0.40
1:XA:1255:G:N1	1:XA:1279:A:N7	2.69	0.40
1:XA:1384:C:H2'	1:XA:1385:G:C8	2.56	0.40
1:XA:1409:C:H2'	1:XA:1410:G:C8	2.56	0.40
8:XH:11:THR:HG22	8:XH:14:ARG:NH1	2.36	0.40
10:XJ:50:ILE:HG22	10:XJ:60:ARG:HG2	2.03	0.40
10:XJ:63:PHE:HE1	14:YN:58:LYS:HG2	1.86	0.40
25:YA:118:A:O2'	25:YA:178:G:H5'	2.22	0.40
25:YA:277:C:O2'	25:YA:278:A:P	2.79	0.40
25:YA:313:C:H2'	25:YA:314:A:C8	2.56	0.40
25:YA:547:A:H2'	25:YA:548:A:C8	2.57	0.40
25:YA:772:C:C2'	25:YA:773:U:H5'	2.51	0.40
25:YA:1107:G:H2'	25:YA:1108:U:C6	2.57	0.40
25:YA:1435:G:H2'	25:YA:1436:G:C8	2.56	0.40
25:YA:1581:G:H2'	25:YA:1582:C:O4'	2.22	0.40
25:YA:2346:A:H5'	25:YA:2383:G:O4'	2.20	0.40
25:YA:2400:G:H8	25:YA:2400:G:O5'	2.04	0.40
25:YA:2810:A:H5''	28:YE:61:ARG:HD3	2.04	0.40
28:YE:3:GLY:HA3	28:YE:199:ARG:HG2	2.04	0.40
31:YH:47:GLU:OE1	31:YH:47:GLU:CA	2.69	0.40
41:YV:3:ALA:O	41:YV:13:ARG:HA	2.21	0.40
1:QA:362:G:N2	1:QA:365:U:OP2	2.52	0.40
1:QA:1236:A:OP1	21:QU:3:LYS:NZ	2.53	0.40
1:QA:1241:G:H2'	1:QA:1242:C:H6	1.86	0.40
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.86	0.40
2:QB:7:VAL:HG22	2:QB:217:ARG:HD3	2.04	0.40
4:QD:12:CYS:HB3	4:QD:19:LEU:N	2.36	0.40
8:QH:9:MET:HE2	8:QH:26:VAL:HG11	2.03	0.40
11:QK:34:ASP:OD1	11:QK:38:ASN:N	2.37	0.40
25:RA:185:U:H2'	25:RA:186:G:C8	2.57	0.40
25:RA:321:G:C4	25:RA:341:G:H4'	2.56	0.40
25:RA:321:G:OP1	29:RF:135:LYS:NZ	2.55	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:902:C:H2'	25:RA:903:C:C6	2.56	0.40
25:RA:1090:U:H3'	25:RA:1091:G:C8	2.57	0.40
25:RA:1327:C:O2'	37:RR:105:ARG:NH1	2.53	0.40
25:RA:2006:C:O2'	25:RA:2823:A:N3	2.54	0.40
25:RA:2362:G:C2'	25:RA:2363:C:H5'	2.52	0.40
25:RA:2675:A:H2'	25:RA:2676:C:H6	1.86	0.40
25:RA:2750:A:O2'	25:RA:2753:A:N6	2.53	0.40
25:RA:2875:C:H2'	25:RA:2876:G:O4'	2.22	0.40
26:RB:24:G:N3	26:RB:27:C:N4	2.69	0.40
33:RN:91:LEU:HA	33:RN:95:PRO:HB3	2.02	0.40
41:RV:35:LEU:HA	41:RV:36:PRO:HD3	1.89	0.40
45:RZ:30:ASN:OD1	45:RZ:30:ASN:N	2.52	0.40
45:RZ:98:MET:O	45:RZ:125:LEU:HA	2.21	0.40
47:R1:88:LYS:HA	47:R1:88:LYS:HD2	1.91	0.40
1:XA:110:C:H2'	1:XA:111:G:O4'	2.22	0.40
1:XA:636:U:H2'	1:XA:637:G:H8	1.86	0.40
1:XA:1183:A:H3'	1:XA:1184:G:C5'	2.50	0.40
1:XA:1423:G:H2'	1:XA:1424:C:H6	1.87	0.40
2:XB:130:ARG:HA	2:XB:131:PRO:HD3	1.83	0.40
4:XD:18:LYS:HA	4:XD:33:MET:HG3	2.04	0.40
25:YA:300:A:O2'	25:YA:318:C:O2	2.36	0.40
25:YA:565:C:H2'	25:YA:566:U:C6	2.57	0.40
25:YA:590:A:H2'	25:YA:591:C:C6	2.56	0.40
25:YA:769:G:H2'	25:YA:770:G:O4'	2.21	0.40
25:YA:1103:A:OP2	25:YA:1104:C:N4	2.55	0.40
25:YA:2145:C:OP2	25:YA:2146:C:N4	2.54	0.40
25:YA:2506:U:OP2	25:YA:2576:G:N2	2.49	0.40
25:YA:2693:A:H2'	25:YA:2694:G:C8	2.55	0.40
28:YE:126:PRO:HB2	28:YE:128:SER:H	1.87	0.40
37:YR:100:LEU:HD11	37:YR:113:LEU:HD23	2.02	0.40
44:YY:45:VAL:O	44:YY:62:GLU:HA	2.21	0.40

All (42) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:46:GLU:CG	44:YY:22:GLY:O[4_445]	1.23	0.97
31:YH:46:GLU:CB	44:YY:22:GLY:O[4_445]	1.41	0.79
32:RI:89:TYR:CD2	1:XA:55:A:C2[4_555]	1.42	0.78
27:RD:134:ARG:NE	4:XD:166:LYS:NZ[4_555]	1.53	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:89:TYR:CE2	1:XA:55:A:N3[4_555]	1.58	0.62
6:QF:16:GLN:O	4:XD:195:ALA:CB[4_555]	1.62	0.58
31:YH:13:LYS:NZ	44:YY:78:ALA:O[4_445]	1.64	0.56
41:YV:51:VAL:CG2	51:Y5:59:GLU:OE2[4_445]	1.65	0.55
41:YV:51:VAL:CG2	51:Y5:59:GLU:CD[4_445]	1.67	0.53
27:RD:134:ARG:NE	4:XD:166:LYS:CE[4_555]	1.68	0.52
32:RI:89:TYR:CG	1:XA:55:A:N1[4_555]	1.69	0.51
32:RI:89:TYR:CG	1:XA:55:A:C2[4_555]	1.69	0.51
11:QK:99:GLN:NE2	3:XC:79:ARG:CD[4_555]	1.77	0.43
31:YH:46:GLU:CA	44:YY:24:VAL:CG2[4_445]	1.78	0.42
32:RI:89:TYR:O	1:XA:357:G:O2'[4_555]	1.80	0.40
25:YA:1281:G:O3'	41:YV:44:LYS:NZ[4_545]	1.80	0.40
31:YH:13:LYS:NZ	44:YY:79:CYS:C[4_445]	1.80	0.40
25:RA:2220:G:O3'	4:XD:159:ARG:NH1[4_555]	1.82	0.38
27:RD:134:ARG:NH2	4:XD:166:LYS:CD[4_555]	1.85	0.35
31:YH:46:GLU:CG	44:YY:22:GLY:C[4_445]	1.85	0.35
31:YH:46:GLU:CG	44:YY:23:ARG:CA[4_445]	1.88	0.32
25:YA:1281:G:O2'	41:YV:44:LYS:NZ[4_545]	1.90	0.30
42:RW:60:ASN:ND2	44:YY:91:GLU:O[3_555]	1.93	0.27
41:YV:51:VAL:CG2	51:Y5:59:GLU:CG[4_445]	1.93	0.27
32:RI:87:LYS:NZ	1:XA:358:U:O3'[4_555]	1.94	0.26
32:RI:89:TYR:CZ	1:XA:55:A:N3[4_555]	1.95	0.25
32:RI:89:TYR:CD2	1:XA:55:A:N3[4_555]	2.00	0.20
32:RI:89:TYR:CE2	1:XA:55:A:C2[4_555]	2.02	0.18
25:RA:2220:G:O3'	4:XD:159:ARG:NH2[4_555]	2.03	0.17
31:YH:13:LYS:CE	44:YY:78:ALA:O[4_445]	2.07	0.13
32:RI:87:LYS:NZ	1:XA:359:U:O5'[4_555]	2.08	0.12
31:YH:13:LYS:NZ	44:YY:80:GLY:N[4_445]	2.08	0.12
32:RI:89:TYR:CD1	1:XA:55:A:N1[4_555]	2.09	0.11
31:YH:46:GLU:OE2	44:YY:23:ARG:CG[4_445]	2.09	0.11
31:YH:13:LYS:NZ	44:YY:79:CYS:CA[4_445]	2.12	0.08
31:YH:46:GLU:CG	44:YY:23:ARG:N[4_445]	2.12	0.08
32:RI:89:TYR:CZ	1:XA:55:A:C4[4_555]	2.14	0.06
32:RI:89:TYR:CB	1:XA:55:A:N1[4_555]	2.15	0.05
31:YH:13:LYS:NZ	44:YY:78:ALA:C[4_445]	2.15	0.05
25:RA:305:U:OP1	48:Y2:68:ARG:NH1[3_555]	2.16	0.04
25:YA:1282:U:O5'	41:YV:44:LYS:NZ[4_545]	2.17	0.03
32:RI:91:SER:OG	1:XA:368:U:O5'[4_555]	2.18	0.02

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	233/256 (91%)	204 (88%)	29 (12%)	0	100	100
2	XB	234/256 (91%)	204 (87%)	30 (13%)	0	100	100
3	QC	203/239 (85%)	184 (91%)	19 (9%)	0	100	100
3	XC	203/239 (85%)	183 (90%)	20 (10%)	0	100	100
4	QD	206/209 (99%)	183 (89%)	21 (10%)	2 (1%)	15	54
4	XD	206/209 (99%)	196 (95%)	10 (5%)	0	100	100
5	QE	146/162 (90%)	134 (92%)	12 (8%)	0	100	100
5	XE	146/162 (90%)	134 (92%)	12 (8%)	0	100	100
6	QF	98/101 (97%)	96 (98%)	2 (2%)	0	100	100
6	XF	98/101 (97%)	96 (98%)	2 (2%)	0	100	100
7	QG	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
7	XG	153/156 (98%)	147 (96%)	6 (4%)	0	100	100
8	QH	135/138 (98%)	128 (95%)	7 (5%)	0	100	100
8	XH	135/138 (98%)	129 (96%)	6 (4%)	0	100	100
9	QI	125/128 (98%)	111 (89%)	14 (11%)	0	100	100
9	XI	124/128 (97%)	110 (89%)	14 (11%)	0	100	100
10	QJ	97/105 (92%)	90 (93%)	7 (7%)	0	100	100
10	XJ	94/105 (90%)	83 (88%)	11 (12%)	0	100	100
11	QK	112/129 (87%)	105 (94%)	7 (6%)	0	100	100
11	XK	112/129 (87%)	104 (93%)	8 (7%)	0	100	100
12	QL	119/132 (90%)	113 (95%)	6 (5%)	0	100	100
12	XL	119/132 (90%)	112 (94%)	7 (6%)	0	100	100
13	QM	114/126 (90%)	108 (95%)	6 (5%)	0	100	100
13	XM	112/126 (89%)	102 (91%)	10 (9%)	0	100	100
14	QN	58/61 (95%)	56 (97%)	2 (3%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	XN	58/61 (95%)	57 (98%)	1 (2%)	0	100	100
15	QO	86/89 (97%)	84 (98%)	2 (2%)	0	100	100
15	XO	86/89 (97%)	80 (93%)	6 (7%)	0	100	100
16	QP	80/88 (91%)	77 (96%)	3 (4%)	0	100	100
16	XP	80/88 (91%)	76 (95%)	4 (5%)	0	100	100
17	QQ	97/105 (92%)	88 (91%)	9 (9%)	0	100	100
17	XQ	97/105 (92%)	92 (95%)	5 (5%)	0	100	100
18	QR	66/88 (75%)	66 (100%)	0	0	100	100
18	XR	66/88 (75%)	65 (98%)	1 (2%)	0	100	100
19	QS	81/93 (87%)	73 (90%)	8 (10%)	0	100	100
19	XS	81/93 (87%)	78 (96%)	3 (4%)	0	100	100
20	QT	94/106 (89%)	89 (95%)	5 (5%)	0	100	100
20	XT	96/106 (91%)	91 (95%)	5 (5%)	0	100	100
21	QU	21/27 (78%)	20 (95%)	1 (5%)	0	100	100
21	XU	21/27 (78%)	21 (100%)	0	0	100	100
27	RD	273/276 (99%)	260 (95%)	13 (5%)	0	100	100
27	YD	273/276 (99%)	252 (92%)	21 (8%)	0	100	100
28	RE	202/206 (98%)	184 (91%)	17 (8%)	1 (0%)	29	67
28	YE	202/206 (98%)	181 (90%)	21 (10%)	0	100	100
29	RF	200/210 (95%)	192 (96%)	8 (4%)	0	100	100
29	YF	200/210 (95%)	188 (94%)	12 (6%)	0	100	100
30	RG	179/182 (98%)	156 (87%)	23 (13%)	0	100	100
30	YG	179/182 (98%)	151 (84%)	27 (15%)	1 (1%)	25	63
31	RH	172/180 (96%)	166 (96%)	6 (4%)	0	100	100
31	YH	171/180 (95%)	162 (95%)	8 (5%)	1 (1%)	25	63
32	RI	144/148 (97%)	115 (80%)	28 (19%)	1 (1%)	22	61
32	YI	144/148 (97%)	125 (87%)	19 (13%)	0	100	100
33	RN	138/140 (99%)	132 (96%)	6 (4%)	0	100	100
33	YN	138/140 (99%)	131 (95%)	7 (5%)	0	100	100
34	RO	120/122 (98%)	109 (91%)	11 (9%)	0	100	100
34	YO	120/122 (98%)	112 (93%)	8 (7%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	RP	147/150 (98%)	136 (92%)	10 (7%)	1 (1%)	22	61
35	YP	147/150 (98%)	135 (92%)	12 (8%)	0	100	100
36	RQ	139/141 (99%)	134 (96%)	5 (4%)	0	100	100
36	YQ	139/141 (99%)	132 (95%)	7 (5%)	0	100	100
37	RR	116/118 (98%)	114 (98%)	2 (2%)	0	100	100
37	YR	116/118 (98%)	111 (96%)	5 (4%)	0	100	100
38	RS	108/112 (96%)	103 (95%)	5 (5%)	0	100	100
38	YS	108/112 (96%)	101 (94%)	7 (6%)	0	100	100
39	RT	129/146 (88%)	120 (93%)	9 (7%)	0	100	100
39	YT	129/146 (88%)	124 (96%)	5 (4%)	0	100	100
40	RU	114/118 (97%)	107 (94%)	7 (6%)	0	100	100
40	YU	114/118 (97%)	111 (97%)	3 (3%)	0	100	100
41	RV	99/101 (98%)	93 (94%)	5 (5%)	1 (1%)	15	54
41	YV	99/101 (98%)	88 (89%)	10 (10%)	1 (1%)	15	54
42	RW	110/113 (97%)	105 (96%)	5 (4%)	0	100	100
42	YW	110/113 (97%)	107 (97%)	3 (3%)	0	100	100
43	RX	93/96 (97%)	84 (90%)	9 (10%)	0	100	100
43	YX	93/96 (97%)	89 (96%)	4 (4%)	0	100	100
44	RY	105/110 (96%)	98 (93%)	7 (7%)	0	100	100
44	YY	105/110 (96%)	101 (96%)	4 (4%)	0	100	100
45	RZ	194/206 (94%)	181 (93%)	13 (7%)	0	100	100
45	YZ	181/206 (88%)	154 (85%)	27 (15%)	0	100	100
46	R0	75/85 (88%)	73 (97%)	2 (3%)	0	100	100
46	Y0	75/85 (88%)	72 (96%)	3 (4%)	0	100	100
47	R1	95/98 (97%)	91 (96%)	4 (4%)	0	100	100
47	Y1	95/98 (97%)	91 (96%)	4 (4%)	0	100	100
48	R2	68/72 (94%)	67 (98%)	1 (2%)	0	100	100
48	Y2	68/72 (94%)	66 (97%)	2 (3%)	0	100	100
49	R3	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
49	Y3	57/60 (95%)	57 (100%)	0	0	100	100
50	R4	67/71 (94%)	53 (79%)	14 (21%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
50	Y4	67/71 (94%)	53 (79%)	14 (21%)	0	100	100
51	R5	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
51	Y5	56/60 (93%)	54 (96%)	2 (4%)	0	100	100
52	R6	51/54 (94%)	50 (98%)	1 (2%)	0	100	100
52	Y6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
53	R7	46/49 (94%)	42 (91%)	4 (9%)	0	100	100
53	Y7	46/49 (94%)	44 (96%)	2 (4%)	0	100	100
54	R8	62/65 (95%)	55 (89%)	7 (11%)	0	100	100
54	Y8	62/65 (95%)	59 (95%)	3 (5%)	0	100	100
55	R9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
55	Y9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
All	All	11420/12128 (94%)	10610 (93%)	801 (7%)	9 (0%)	51	83

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	QD	32	ALA
4	QD	31	CYS
30	YG	81	LYS
32	RI	132	PRO
41	RV	50	PRO
41	YV	50	PRO
28	RE	147	PRO
35	RP	44	GLY
31	YH	126	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	203/220 (92%)	201 (99%)	2 (1%)	76	88

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	XB	204/220 (93%)	201 (98%)	3 (2%)	65	83
3	QC	159/188 (85%)	158 (99%)	1 (1%)	86	94
3	XC	159/188 (85%)	157 (99%)	2 (1%)	69	85
4	QD	180/181 (99%)	175 (97%)	5 (3%)	43	71
4	XD	180/181 (99%)	175 (97%)	5 (3%)	43	71
5	QE	114/123 (93%)	114 (100%)	0	100	100
5	XE	114/123 (93%)	113 (99%)	1 (1%)	78	89
6	QF	90/90 (100%)	89 (99%)	1 (1%)	73	87
6	XF	90/90 (100%)	89 (99%)	1 (1%)	73	87
7	QG	126/127 (99%)	123 (98%)	3 (2%)	49	74
7	XG	126/127 (99%)	126 (100%)	0	100	100
8	QH	118/119 (99%)	118 (100%)	0	100	100
8	XH	118/119 (99%)	117 (99%)	1 (1%)	81	91
9	QI	98/99 (99%)	98 (100%)	0	100	100
9	XI	97/99 (98%)	96 (99%)	1 (1%)	76	88
10	QJ	89/92 (97%)	89 (100%)	0	100	100
10	XJ	86/92 (94%)	86 (100%)	0	100	100
11	QK	86/99 (87%)	85 (99%)	1 (1%)	71	86
11	XK	86/99 (87%)	86 (100%)	0	100	100
12	QL	102/108 (94%)	102 (100%)	0	100	100
12	XL	102/108 (94%)	102 (100%)	0	100	100
13	QM	94/101 (93%)	93 (99%)	1 (1%)	73	87
13	XM	93/101 (92%)	93 (100%)	0	100	100
14	QN	49/50 (98%)	47 (96%)	2 (4%)	30	63
14	XN	49/50 (98%)	49 (100%)	0	100	100
15	QO	79/80 (99%)	78 (99%)	1 (1%)	69	85
15	XO	79/80 (99%)	78 (99%)	1 (1%)	69	85
16	QP	71/74 (96%)	71 (100%)	0	100	100
16	XP	71/74 (96%)	71 (100%)	0	100	100
17	QQ	94/97 (97%)	93 (99%)	1 (1%)	73	87
17	XQ	94/97 (97%)	93 (99%)	1 (1%)	73	87

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	QR	59/77 (77%)	59 (100%)	0	100	100
18	XR	59/77 (77%)	58 (98%)	1 (2%)	60	81
19	QS	72/80 (90%)	72 (100%)	0	100	100
19	XS	72/80 (90%)	72 (100%)	0	100	100
20	QT	74/82 (90%)	74 (100%)	0	100	100
20	XT	76/82 (93%)	75 (99%)	1 (1%)	69	85
21	QU	18/22 (82%)	18 (100%)	0	100	100
21	XU	18/22 (82%)	18 (100%)	0	100	100
27	RD	217/218 (100%)	217 (100%)	0	100	100
27	YD	217/218 (100%)	217 (100%)	0	100	100
28	RE	165/166 (99%)	165 (100%)	0	100	100
28	YE	165/166 (99%)	163 (99%)	2 (1%)	71	86
29	RF	161/166 (97%)	161 (100%)	0	100	100
29	YF	161/166 (97%)	160 (99%)	1 (1%)	86	94
30	RG	155/156 (99%)	155 (100%)	0	100	100
30	YG	155/156 (99%)	154 (99%)	1 (1%)	86	94
31	RH	145/148 (98%)	145 (100%)	0	100	100
31	YH	144/148 (97%)	142 (99%)	2 (1%)	67	84
32	RI	122/124 (98%)	122 (100%)	0	100	100
32	YI	122/124 (98%)	122 (100%)	0	100	100
33	RN	119/119 (100%)	117 (98%)	2 (2%)	60	81
33	YN	119/119 (100%)	119 (100%)	0	100	100
34	RO	100/100 (100%)	100 (100%)	0	100	100
34	YO	100/100 (100%)	100 (100%)	0	100	100
35	RP	116/116 (100%)	116 (100%)	0	100	100
35	YP	116/116 (100%)	115 (99%)	1 (1%)	78	89
36	RQ	111/111 (100%)	111 (100%)	0	100	100
36	YQ	111/111 (100%)	110 (99%)	1 (1%)	78	89
37	RR	101/101 (100%)	99 (98%)	2 (2%)	55	78
37	YR	101/101 (100%)	101 (100%)	0	100	100
38	RS	87/88 (99%)	86 (99%)	1 (1%)	73	87

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	YS	87/88 (99%)	87 (100%)	0	100	100
39	RT	115/127 (91%)	115 (100%)	0	100	100
39	YT	115/127 (91%)	115 (100%)	0	100	100
40	RU	93/94 (99%)	93 (100%)	0	100	100
40	YU	93/94 (99%)	92 (99%)	1 (1%)	73	87
41	RV	82/82 (100%)	82 (100%)	0	100	100
41	YV	82/82 (100%)	81 (99%)	1 (1%)	71	86
42	RW	91/92 (99%)	91 (100%)	0	100	100
42	YW	91/92 (99%)	91 (100%)	0	100	100
43	RX	77/78 (99%)	77 (100%)	0	100	100
43	YX	77/78 (99%)	77 (100%)	0	100	100
44	RY	88/91 (97%)	87 (99%)	1 (1%)	73	87
44	YY	88/91 (97%)	88 (100%)	0	100	100
45	RZ	170/179 (95%)	169 (99%)	1 (1%)	86	94
45	YZ	162/179 (90%)	160 (99%)	2 (1%)	71	86
46	R0	62/67 (92%)	61 (98%)	1 (2%)	62	82
46	Y0	62/67 (92%)	62 (100%)	0	100	100
47	R1	82/83 (99%)	82 (100%)	0	100	100
47	Y1	82/83 (99%)	82 (100%)	0	100	100
48	R2	66/67 (98%)	65 (98%)	1 (2%)	65	83
48	Y2	66/67 (98%)	66 (100%)	0	100	100
49	R3	51/52 (98%)	49 (96%)	2 (4%)	32	64
49	Y3	51/52 (98%)	51 (100%)	0	100	100
50	R4	62/63 (98%)	62 (100%)	0	100	100
50	Y4	62/63 (98%)	61 (98%)	1 (2%)	62	82
51	R5	51/52 (98%)	50 (98%)	1 (2%)	55	78
51	Y5	50/52 (96%)	49 (98%)	1 (2%)	55	78
52	R6	51/52 (98%)	50 (98%)	1 (2%)	55	78
52	Y6	51/52 (98%)	48 (94%)	3 (6%)	19	54
53	R7	41/42 (98%)	40 (98%)	1 (2%)	49	74
53	Y7	41/42 (98%)	41 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
54	R8	54/55 (98%)	54 (100%)	0	100	100
54	Y8	54/55 (98%)	54 (100%)	0	100	100
55	R9	34/34 (100%)	33 (97%)	1 (3%)	42	71
55	Y9	34/34 (100%)	34 (100%)	0	100	100
All	All	9676/10064 (96%)	9608 (99%)	68 (1%)	84	92

All (68) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	96	ARG
2	QB	139	LYS
3	QC	59	ARG
4	QD	8	VAL
4	QD	12	CYS
4	QD	13	ARG
4	QD	18	LYS
4	QD	76	ARG
6	QF	100	ASN
7	QG	24	THR
7	QG	70	LYS
7	QG	94	ARG
11	QK	41	THR
13	QM	63	THR
14	QN	11	LYS
14	QN	40	CYS
15	QO	10	LYS
17	QQ	100	LYS
33	RN	106	MET
33	RN	120	LEU
37	RR	70	LEU
37	RR	79	LEU
38	RS	13	ARG
44	RY	99	CYS
45	RZ	55	HIS
46	R0	14	ARG
48	R2	8	LYS
49	R3	5	LYS
49	R3	40	THR
51	R5	37	LYS
52	R6	44	ARG
53	R7	47	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
55	R9	20	HIS
2	XB	21	ARG
2	XB	137	ARG
2	XB	141	GLU
3	XC	21	ARG
3	XC	188	LEU
4	XD	12	CYS
4	XD	22	LYS
4	XD	31	CYS
4	XD	33	MET
4	XD	139	ARG
5	XE	41	VAL
6	XF	72	VAL
8	XH	37	ARG
9	XI	9	ARG
15	XO	34	LEU
17	XQ	63	ARG
18	XR	66	LEU
20	XT	68	LYS
28	YE	9	VAL
28	YE	31	CYS
29	YF	202	PHE
30	YG	58	GLN
31	YH	45	VAL
31	YH	47	GLU
35	YP	32	THR
36	YQ	66	ILE
40	YU	95	LEU
41	YV	22	VAL
45	YZ	9	TYR
45	YZ	59	LEU
50	Y4	48	ARG
51	Y5	56	LYS
52	Y6	6	ARG
52	Y6	18	ARG
52	Y6	27	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	212	GLN
9	QI	73	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
28	RE	143	ASN
35	RP	9	ASN
14	XN	52	GLN
15	XO	9	GLN
27	YD	166	GLN
30	YG	58	GLN
32	YI	133	HIS
52	Y6	49	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1494/1521 (98%)	292 (19%)	14 (0%)
1	XA	1498/1521 (98%)	287 (19%)	14 (0%)
22	QV	76/77 (98%)	18 (23%)	0
22	XV	76/77 (98%)	17 (22%)	1 (1%)
23	QX	7/26 (26%)	1 (14%)	1 (14%)
23	XX	10/26 (38%)	7 (70%)	1 (10%)
24	QY	13/18 (72%)	5 (38%)	2 (15%)
24	XY	15/18 (83%)	9 (60%)	1 (6%)
25	RA	2860/2915 (98%)	599 (20%)	21 (0%)
25	YA	2861/2915 (98%)	580 (20%)	19 (0%)
26	RB	119/122 (97%)	17 (14%)	0
26	YB	119/122 (97%)	24 (20%)	0
56	ZA	1/3 (33%)	0	0
56	ZB	1/3 (33%)	1 (100%)	0
All	All	9150/9364 (97%)	1857 (20%)	74 (0%)

All (1857) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	11	G
1	QA	21	G
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	41	G
1	QA	46	G
1	QA	47	C
1	QA	48	C
1	QA	51	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	59	A
1	QA	61	G
1	QA	64	G
1	QA	79	G
1	QA	91	C
1	QA	93	G
1	QA	116	A
1	QA	121	C
1	QA	129(B)	G
1	QA	131	C
1	QA	159	G
1	QA	163	C
1	QA	174	C
1	QA	182	U
1	QA	189(G)	U
1	QA	189(H)	G
1	QA	195	A
1	QA	197	A
1	QA	201	C
1	QA	202	U
1	QA	204	U
1	QA	216	G
1	QA	220	G
1	QA	226	G
1	QA	240	C
1	QA	247	G
1	QA	251	G
1	QA	252	U
1	QA	262	A
1	QA	267	C
1	QA	289	G
1	QA	306	G
1	QA	309	G
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	330	C
1	QA	332	G
1	QA	345	C
1	QA	347	G
1	QA	351	G
1	QA	352	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	353	A
1	QA	354	G
1	QA	360	A
1	QA	367	U
1	QA	372	C
1	QA	373	A
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	414	A
1	QA	421	U
1	QA	422	C
1	QA	423	G
1	QA	424	G
1	QA	427	U
1	QA	428	G
1	QA	429	U
1	QA	439	A
1	QA	448	A
1	QA	452	A
1	QA	461	A
1	QA	470	C
1	QA	484	G
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	498	U
1	QA	502	G
1	QA	505	G
1	QA	507	C
1	QA	508	C
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	518	C
1	QA	527	G7M
1	QA	528	C
1	QA	531	U
1	QA	532	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	533	A
1	QA	534	U
1	QA	537	G
1	QA	547	A
1	QA	550	G
1	QA	559	A
1	QA	563	A
1	QA	572	A
1	QA	576	G
1	QA	577	G
1	QA	596	C
1	QA	607	A
1	QA	619	U
1	QA	630	G
1	QA	631	G
1	QA	632	A
1	QA	653	A
1	QA	659	U
1	QA	665	A
1	QA	687	A
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	731	G
1	QA	737	A
1	QA	750	G
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	774	G
1	QA	778	G
1	QA	793	U
1	QA	794	A
1	QA	816	A
1	QA	817	C
1	QA	818	G
1	QA	821	G
1	QA	828	A
1	QA	829	G
1	QA	840	C
1	QA	841	U
1	QA	848	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	851	G
1	QA	858	G
1	QA	859	A
1	QA	862	C
1	QA	872	A
1	QA	873	A
1	QA	876	G
1	QA	880	C
1	QA	889	A
1	QA	902	G
1	QA	906	G
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	931	C
1	QA	934	C
1	QA	935	A
1	QA	961	U
1	QA	965	A
1	QA	968	A
1	QA	969	A
1	QA	970	C
1	QA	971	G
1	QA	974	A
1	QA	975	A
1	QA	976	G
1	QA	977	A
1	QA	981	U
1	QA	982	U
1	QA	984	C
1	QA	992	U
1	QA	993	G
1	QA	1003	G
1	QA	1004	A
1	QA	1006	C
1	QA	1019	C
1	QA	1022	G
1	QA	1023	G
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1027	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	1028	C
1	QA	1030(A)	C
1	QA	1030(B)	G
1	QA	1030(C)	C
1	QA	1030(E)	A
1	QA	1031	G
1	QA	1033	G
1	QA	1037	C
1	QA	1048	G
1	QA	1053	G
1	QA	1054	C
1	QA	1065	U
1	QA	1066	C
1	QA	1068	G
1	QA	1081	G
1	QA	1084	G
1	QA	1085	U
1	QA	1091	U
1	QA	1094	G
1	QA	1095	U
1	QA	1101	A
1	QA	1104	G
1	QA	1108	G
1	QA	1123	A
1	QA	1124	G
1	QA	1125	U
1	QA	1130	A
1	QA	1135	U
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1140	C
1	QA	1152	A
1	QA	1154	G
1	QA	1158	C
1	QA	1159	U
1	QA	1161	C
1	QA	1166	G
1	QA	1177	G
1	QA	1183	A
1	QA	1184	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	1186	G
1	QA	1196	U
1	QA	1197	G
1	QA	1198	G
1	QA	1202	G
1	QA	1213	A
1	QA	1214	C
1	QA	1224	G
1	QA	1225	A
1	QA	1226	C
1	QA	1228	C
1	QA	1236	A
1	QA	1238	A
1	QA	1241	G
1	QA	1257	U
1	QA	1258	G
1	QA	1260	C
1	QA	1270	C
1	QA	1278	U
1	QA	1279	A
1	QA	1280	A
1	QA	1285	A
1	QA	1286	A
1	QA	1287	A
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G
1	QA	1301	U
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1310	G
1	QA	1312	G
1	QA	1320	C
1	QA	1322	C
1	QA	1323	G
1	QA	1336	C
1	QA	1337	G
1	QA	1340	A
1	QA	1345	U
1	QA	1347	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	1363(A)	C
1	QA	1364	U
1	QA	1370	G
1	QA	1379	G
1	QA	1383	C
1	QA	1397	C
1	QA	1398	A
1	QA	1419	G
1	QA	1442(A)	G
1	QA	1442(B)	G
1	QA	1442(C)	A
1	QA	1446	U
1	QA	1447	A
1	QA	1452	C
1	QA	1456	G
1	QA	1457	G
1	QA	1492	A
1	QA	1493	A
1	QA	1494	G
1	QA	1497	G
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1507	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
1	QA	1531	A
22	QV	2	G
22	QV	4	G
22	QV	5	G
22	QV	9	G
22	QV	13	C
22	QV	16	C
22	QV	17(A)	U
22	QV	18	G
22	QV	19	G
22	QV	21	A
22	QV	47	U
22	QV	48	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	QV	49	G
22	QV	53	G
22	QV	65	C
22	QV	67	C
22	QV	75	C
22	QV	76	A
23	QX	19	C
24	QY	33	U
24	QY	34	C
24	QY	35	G
24	QY	37	G
24	QY	41	G
25	RA	10	G
25	RA	11	G
25	RA	12	U
25	RA	34	C
25	RA	35	G
25	RA	45	C
25	RA	50	U
25	RA	51	G
25	RA	61	G
25	RA	71	A
25	RA	72	U
25	RA	73	A
25	RA	74	A
25	RA	75	G
25	RA	78	A
25	RA	84	A
25	RA	90	U
25	RA	103	A
25	RA	105	C
25	RA	110	G
25	RA	118	A
25	RA	119	A
25	RA	120	U
25	RA	121	G
25	RA	126	A
25	RA	131	G
25	RA	140	G
25	RA	157	U
25	RA	173	G
25	RA	181	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	196	A
25	RA	199	A
25	RA	201	C
25	RA	204	A
25	RA	205	G
25	RA	214	G
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	225	A
25	RA	227	A
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	239	U
25	RA	248	G
25	RA	251	A
25	RA	272(J)	C
25	RA	272(K)	U
25	RA	272(L)	U
25	RA	272(M)	G
25	RA	272(N)	U
25	RA	272(O)	C
25	RA	272(Y)	U
25	RA	273(B)	U
25	RA	273(C)	G
25	RA	273(K)	C
25	RA	276	A
25	RA	277	C
25	RA	283	A
25	RA	294	A
25	RA	302	C
25	RA	311	A
25	RA	317	G
25	RA	324	A
25	RA	329	G
25	RA	330	A
25	RA	331	A
25	RA	352	G
25	RA	363(A)	G
25	RA	363(D)	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	364	C
25	RA	366	C
25	RA	372	G
25	RA	383	U
25	RA	386	G
25	RA	391	G
25	RA	396	G
25	RA	406	G
25	RA	407	G
25	RA	411	G
25	RA	412	A
25	RA	425	G
25	RA	428	A
25	RA	434	U
25	RA	444	C
25	RA	454	A
25	RA	455	C
25	RA	456	C
25	RA	457	A
25	RA	458	G
25	RA	464	U
25	RA	470	A
25	RA	481	G
25	RA	491	G
25	RA	504	U
25	RA	505	A
25	RA	508	G
25	RA	509	C
25	RA	519	U
25	RA	527	C
25	RA	528	A
25	RA	530	G
25	RA	531	C
25	RA	532	A
25	RA	533	G
25	RA	545	G
25	RA	547	A
25	RA	556	G
25	RA	563	G
25	RA	567	A
25	RA	568	U
25	RA	571	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	572	A
25	RA	573	G
25	RA	575	A
25	RA	603	A
25	RA	604	G
25	RA	607	U
25	RA	610	G
25	RA	614(C)	G
25	RA	615	G
25	RA	627	A
25	RA	628	G
25	RA	634	C
25	RA	637	A
25	RA	645	C
25	RA	646	A
25	RA	652(B)	A
25	RA	652(D)	G
25	RA	652(V)	G
25	RA	662	G
25	RA	663	G
25	RA	669	G
25	RA	670	A
25	RA	675	A
25	RA	677	A
25	RA	686	G
25	RA	695	G
25	RA	729	G
25	RA	730	C
25	RA	733	G
25	RA	736	C
25	RA	748	G
25	RA	764	A
25	RA	765	G
25	RA	775	G
25	RA	776	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	789	A
25	RA	792	G
25	RA	794	G
25	RA	800	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	805	G
25	RA	811	U
25	RA	812	C
25	RA	817	C
25	RA	827	U
25	RA	828	U
25	RA	830	G
25	RA	831	G
25	RA	846	C
25	RA	847	U
25	RA	857	C
25	RA	859	G
25	RA	866	A
25	RA	886	C
25	RA	887	A
25	RA	888	C
25	RA	889	C
25	RA	890	A
25	RA	893	C
25	RA	896	A
25	RA	897	C
25	RA	900	A
25	RA	907	U
25	RA	910	A
25	RA	914	C
25	RA	917	A
25	RA	931	G
25	RA	932	G
25	RA	941	A
25	RA	945	A
25	RA	946	G
25	RA	958	U
25	RA	959	A
25	RA	961	C
25	RA	962	G
25	RA	972	G
25	RA	974	G
25	RA	975(A)	C
25	RA	980	A
25	RA	983	A
25	RA	990	A
25	RA	996	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	1012	U
25	RA	1013	C
25	RA	1022	G
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1033	U
25	RA	1042	G
25	RA	1044	G
25	RA	1046	A
25	RA	1047	G
25	RA	1052	C
25	RA	1054	A
25	RA	1057	A
25	RA	1060	U
25	RA	1063	G
25	RA	1064	C
25	RA	1065	U
25	RA	1066	U
25	RA	1067	A
25	RA	1068	G
25	RA	1069	A
25	RA	1071	G
25	RA	1072	C
25	RA	1073	A
25	RA	1074	G
25	RA	1077	A
25	RA	1078	U
25	RA	1079	C
25	RA	1082	U
25	RA	1083	U
25	RA	1084	A
25	RA	1085	A
25	RA	1086	A
25	RA	1088	A
25	RA	1090	U
25	RA	1091	G
25	RA	1092	C
25	RA	1095	A
25	RA	1096	A
25	RA	1097	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	1098	A
25	RA	1099	G
25	RA	1102	C
25	RA	1109	C
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1115	G
25	RA	1116	C
25	RA	1126	A
25	RA	1128	A
25	RA	1129	A
25	RA	1130	U
25	RA	1131	G
25	RA	1135	C
25	RA	1136	G
25	RA	1142(B)	A
25	RA	1155	A
25	RA	1206	G
25	RA	1211	U
25	RA	1212	G
25	RA	1218	C
25	RA	1220	A
25	RA	1221(A)	C
25	RA	1236	G
25	RA	1241	A
25	RA	1248	G
25	RA	1252	G
25	RA	1253	A
25	RA	1255	U
25	RA	1256	G
25	RA	1265	A
25	RA	1271	G
25	RA	1272	A
25	RA	1300	U
25	RA	1301	A
25	RA	1302	A
25	RA	1304	C
25	RA	1306	C
25	RA	1312	U
25	RA	1314	C
25	RA	1329	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	1330	C
25	RA	1338	G
25	RA	1341	U
25	RA	1352	U
25	RA	1355	G
25	RA	1359	A
25	RA	1360	A
25	RA	1365	A
25	RA	1368	G
25	RA	1378	A
25	RA	1379	A
25	RA	1384	A
25	RA	1385	G
25	RA	1395	A
25	RA	1397	U
25	RA	1411	C
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G
25	RA	1428	C
25	RA	1445(A)	A
25	RA	1450(A)	G
25	RA	1455	G
25	RA	1458	C
25	RA	1459	G
25	RA	1467	C
25	RA	1471	A
25	RA	1482	G
25	RA	1485	G
25	RA	1490	A
25	RA	1493	C
25	RA	1494	A
25	RA	1496	A
25	RA	1497	U
25	RA	1508	A
25	RA	1509(A)	C
25	RA	1509(B)	A
25	RA	1525	G
25	RA	1530	C
25	RA	1531	C
25	RA	1532	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	1533	G
25	RA	1539	G
25	RA	1542	A
25	RA	1543	C
25	RA	1546	C
25	RA	1554	A
25	RA	1558	A
25	RA	1559	G
25	RA	1560	G
25	RA	1566	A
25	RA	1569	A
25	RA	1571	A
25	RA	1578	U
25	RA	1580	A
25	RA	1583	A
25	RA	1584	C
25	RA	1586	A
25	RA	1588	C
25	RA	1608	A
25	RA	1609	A
25	RA	1610	A
25	RA	1616	A
25	RA	1631(A)	C
25	RA	1639	U
25	RA	1646	C
25	RA	1648	C
25	RA	1651	G
25	RA	1654	A
25	RA	1665	A
25	RA	1673	U
25	RA	1674	G
25	RA	1693	U
25	RA	1696	G
25	RA	1700	A
25	RA	1701	A
25	RA	1721	G
25	RA	1722	A
25	RA	1739	U
25	RA	1762	A
25	RA	1763	G
25	RA	1764	G
25	RA	1772	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	1773	A
25	RA	1780	A
25	RA	1782	C
25	RA	1784	A
25	RA	1791	A
25	RA	1800	C
25	RA	1801	G
25	RA	1816	G
25	RA	1829	A
25	RA	1835	G
25	RA	1836	C
25	RA	1847	A
25	RA	1860	G
25	RA	1877	A
25	RA	1878	G
25	RA	1882	C
25	RA	1900	A
25	RA	1903	G
25	RA	1906	G
25	RA	1913	A
25	RA	1914	C
25	RA	1927	A
25	RA	1929	G
25	RA	1930	G
25	RA	1934	C
25	RA	1936	A
25	RA	1938	A
25	RA	1955	U
25	RA	1963	U
25	RA	1964	G
25	RA	1967	C
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1975	G
25	RA	1993	U
25	RA	1997	G
25	RA	2004	G
25	RA	2023	G
25	RA	2031	A
25	RA	2032	G
25	RA	2033	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	2043	C
25	RA	2049	G
25	RA	2052	G
25	RA	2055	C
25	RA	2056	G
25	RA	2060	A
25	RA	2061	G
25	RA	2062	A
25	RA	2069	G
25	RA	2072	G
25	RA	2093	G
25	RA	2096	U
25	RA	2100	G
25	RA	2103	C
25	RA	2104	G
25	RA	2107	C
25	RA	2108	C
25	RA	2110	G
25	RA	2112	G
25	RA	2116	G
25	RA	2117	A
25	RA	2118	U
25	RA	2119	A
25	RA	2120	G
25	RA	2121	G
25	RA	2122	U
25	RA	2127	G
25	RA	2129	C
25	RA	2130	U
25	RA	2131	G
25	RA	2132	U
25	RA	2133	G
25	RA	2134	A
25	RA	2136	C
25	RA	2141	G
25	RA	2145	C
25	RA	2146	C
25	RA	2148	G
25	RA	2151	G
25	RA	2157	G
25	RA	2158	A
25	RA	2159	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	2163	C
25	RA	2165	G
25	RA	2167	U
25	RA	2172	U
25	RA	2174	C
25	RA	2178	C
25	RA	2179	C
25	RA	2185	C
25	RA	2186	G
25	RA	2189	U
25	RA	2198	A
25	RA	2199	A
25	RA	2206	G
25	RA	2207	G
25	RA	2208	A
25	RA	2218	U
25	RA	2219	G
25	RA	2221	G
25	RA	2222	G
25	RA	2225	A
25	RA	2235	G
25	RA	2238	G
25	RA	2239	G
25	RA	2249	U
25	RA	2251	OMG
25	RA	2266	A
25	RA	2268	A
25	RA	2269	A
25	RA	2275	C
25	RA	2278	A
25	RA	2279	G
25	RA	2283	C
25	RA	2287	A
25	RA	2288	A
25	RA	2305	A
25	RA	2307	G
25	RA	2309	A
25	RA	2312	U
25	RA	2319	G
25	RA	2320	A
25	RA	2321	G
25	RA	2322	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	2325	G
25	RA	2334	G
25	RA	2335	A
25	RA	2336	A
25	RA	2343	C
25	RA	2347	C
25	RA	2350	C
25	RA	2383	G
25	RA	2385	C
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2410	G
25	RA	2422	A
25	RA	2423	U
25	RA	2424	C
25	RA	2425	A
25	RA	2426	A
25	RA	2428	G
25	RA	2429	G
25	RA	2430	A
25	RA	2431	U
25	RA	2439	A
25	RA	2441	C
25	RA	2447	G
25	RA	2448	A
25	RA	2449	U
25	RA	2465	C
25	RA	2469	A
25	RA	2470	G
25	RA	2476	A
25	RA	2478	A
25	RA	2480	C
25	RA	2494	G
25	RA	2498	C
25	RA	2504	U
25	RA	2505	G
25	RA	2518	A
25	RA	2519	U
25	RA	2529	G
25	RA	2549	G
25	RA	2554	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	2564	A
25	RA	2566	A
25	RA	2567	G
25	RA	2576	G
25	RA	2582	G
25	RA	2585	U
25	RA	2597	G
25	RA	2602	A
25	RA	2611	U
25	RA	2612	C
25	RA	2615	U
25	RA	2621	A
25	RA	2630	G
25	RA	2632	A
25	RA	2645	G
25	RA	2646	C
25	RA	2654	A
25	RA	2656	U
25	RA	2663	G
25	RA	2679	A
25	RA	2682	U
25	RA	2689	U
25	RA	2690	C
25	RA	2691	C
25	RA	2702	U
25	RA	2703	C
25	RA	2712(B)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2715	C
25	RA	2718	G
25	RA	2726	U
25	RA	2732	G
25	RA	2733	A
25	RA	2739	U
25	RA	2744	G
25	RA	2746	U
25	RA	2748	A
25	RA	2750	A
25	RA	2751	G
25	RA	2756	U
25	RA	2757	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	RA	2758	A
25	RA	2763	G
25	RA	2765	A
25	RA	2766	G
25	RA	2778	A
25	RA	2789	C
25	RA	2793	G
25	RA	2810	A
25	RA	2811	G
25	RA	2820	A
25	RA	2821	A
25	RA	2823	A
25	RA	2835	A
25	RA	2866	U
25	RA	2872	G
25	RA	2876	G
25	RA	2879	C
25	RA	2880	C
25	RA	2883	A
25	RA	2889	C
25	RA	2892	A
25	RA	2894	G
25	RA	2897	U
26	RB	9	G
26	RB	13	A
26	RB	15	A
26	RB	25	A
26	RB	31	C
26	RB	32	C
26	RB	35	U
26	RB	41	U
26	RB	44	G
26	RB	54	G
26	RB	56	G
26	RB	73	A
26	RB	75	G
26	RB	89	G
26	RB	106	G
26	RB	108	U
26	RB	110	G
1	XA	5	U
1	XA	6	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	7	G
1	XA	9	G
1	XA	31	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	50	A
1	XA	51	A
1	XA	52	G
1	XA	61	G
1	XA	66	G
1	XA	78	G
1	XA	80	G
1	XA	88	A
1	XA	89	C
1	XA	105	G
1	XA	121	C
1	XA	129(B)	G
1	XA	131	C
1	XA	144	G
1	XA	151	A
1	XA	163	C
1	XA	174	C
1	XA	182	U
1	XA	189(G)	U
1	XA	189(H)	G
1	XA	189(I)	G
1	XA	195	A
1	XA	197	A
1	XA	199	G
1	XA	202	U
1	XA	204	U
1	XA	216	G
1	XA	220	G
1	XA	246	A
1	XA	247	G
1	XA	251	G
1	XA	266	G
1	XA	267	C
1	XA	270	A
1	XA	280	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	281	G
1	XA	289	G
1	XA	301	G
1	XA	316	G
1	XA	321	A
1	XA	327	A
1	XA	328	C
1	XA	330	C
1	XA	332	G
1	XA	342	C
1	XA	345	C
1	XA	347	G
1	XA	350	G
1	XA	351	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	358	U
1	XA	359	U
1	XA	360	A
1	XA	367	U
1	XA	368	U
1	XA	372	C
1	XA	373	A
1	XA	384	G
1	XA	392	G
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	412	A
1	XA	413	G
1	XA	423	G
1	XA	427	U
1	XA	428	G
1	XA	429	U
1	XA	439	A
1	XA	452	A
1	XA	453	A
1	XA	471	G
1	XA	482	A
1	XA	485	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	496	A
1	XA	498	U
1	XA	505	G
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	512	U
1	XA	516	PSU
1	XA	517	G
1	XA	518	C
1	XA	521	G
1	XA	527	G7M
1	XA	532	A
1	XA	533	A
1	XA	547	A
1	XA	559	A
1	XA	564	C
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	589	C
1	XA	601	C
1	XA	602	A
1	XA	618	C
1	XA	630	G
1	XA	632	A
1	XA	653	A
1	XA	661	G
1	XA	665	A
1	XA	666	G
1	XA	683	G
1	XA	687	A
1	XA	688	G
1	XA	702	A
1	XA	721	G
1	XA	723	U
1	XA	731	G
1	XA	734	G
1	XA	749	C
1	XA	755	G
1	XA	763	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	770	C
1	XA	774	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	813	U
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	829	G
1	XA	836	G
1	XA	840	C
1	XA	841	U
1	XA	848	C
1	XA	851	G
1	XA	855	G
1	XA	864	A
1	XA	867	G
1	XA	872	A
1	XA	873	A
1	XA	891	U
1	XA	902	G
1	XA	914	A
1	XA	920	U
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	960	U
1	XA	961	U
1	XA	968	A
1	XA	969	A
1	XA	971	G
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	982	U
1	XA	992	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	993	G
1	XA	994	A
1	XA	1001(B)	G
1	XA	1003	G
1	XA	1004	A
1	XA	1005	A
1	XA	1006	C
1	XA	1020	U
1	XA	1022	G
1	XA	1024	G
1	XA	1025	U
1	XA	1026	G
1	XA	1027	C
1	XA	1028	C
1	XA	1030(A)	C
1	XA	1030(C)	C
1	XA	1031	G
1	XA	1032	G
1	XA	1043	C
1	XA	1044	A
1	XA	1046	A
1	XA	1053	G
1	XA	1055	A
1	XA	1065	U
1	XA	1066	C
1	XA	1068	G
1	XA	1078	U
1	XA	1081	G
1	XA	1085	U
1	XA	1092	A
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1104	G
1	XA	1108	G
1	XA	1117	G
1	XA	1118	C
1	XA	1125	U
1	XA	1129	C
1	XA	1130	A
1	XA	1136	U
1	XA	1137	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	1139	G
1	XA	1140	C
1	XA	1147	C
1	XA	1152	A
1	XA	1159	U
1	XA	1160	G
1	XA	1161	C
1	XA	1170	A
1	XA	1183	A
1	XA	1184	G
1	XA	1191	A
1	XA	1196	U
1	XA	1197	G
1	XA	1201	A
1	XA	1210	C
1	XA	1211	U
1	XA	1213	A
1	XA	1215	G
1	XA	1224	G
1	XA	1227	A
1	XA	1237	C
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1260	C
1	XA	1270	C
1	XA	1275	A
1	XA	1278	U
1	XA	1279	A
1	XA	1281	U
1	XA	1282	C
1	XA	1285	A
1	XA	1286	A
1	XA	1287	A
1	XA	1300	G
1	XA	1302	U
1	XA	1303	C
1	XA	1305	G
1	XA	1312	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	1317	C
1	XA	1320	C
1	XA	1323	G
1	XA	1340	A
1	XA	1346	A
1	XA	1347	G
1	XA	1353	G
1	XA	1363(A)	C
1	XA	1364	U
1	XA	1370	G
1	XA	1397	C
1	XA	1398	A
1	XA	1419	G
1	XA	1442(A)	G
1	XA	1442(B)	G
1	XA	1447	A
1	XA	1452	C
1	XA	1456	G
1	XA	1457	G
1	XA	1487	G
1	XA	1492	A
1	XA	1494	G
1	XA	1497	G
1	XA	1499	A
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1506	U
1	XA	1517	G
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
1	XA	1531	A
22	XV	5	G
22	XV	8	U
22	XV	9	G
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	21	A
22	XV	42	G
22	XV	47	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	XV	48	C
22	XV	49	G
22	XV	53	G
22	XV	54	U
22	XV	59	A
22	XV	67	C
22	XV	75	C
22	XV	76	A
23	XX	15	A
23	XX	18	G
23	XX	19	C
23	XX	20	C
23	XX	21	C
23	XX	22	U
23	XX	23	A
24	XY	29	U
24	XY	30	C
24	XY	31	G
24	XY	32	U
24	XY	33	U
24	XY	34	C
24	XY	35	G
24	XY	36	G
24	XY	43	G
25	YA	10	G
25	YA	12	U
25	YA	15	G
25	YA	19	C
25	YA	34	C
25	YA	45	C
25	YA	51	G
25	YA	64	A
25	YA	71	A
25	YA	72	U
25	YA	74	A
25	YA	75	G
25	YA	83	G
25	YA	84	A
25	YA	92	A
25	YA	95	G
25	YA	102	G
25	YA	118	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	120	U
25	YA	125	G
25	YA	131	G
25	YA	141	A
25	YA	157	U
25	YA	173	G
25	YA	179	G
25	YA	181	A
25	YA	196	A
25	YA	199	A
25	YA	201	C
25	YA	205	G
25	YA	216	A
25	YA	221	A
25	YA	222	A
25	YA	225	A
25	YA	227	A
25	YA	228	A
25	YA	229	A
25	YA	230	U
25	YA	232	G
25	YA	233	A
25	YA	248	G
25	YA	264	C
25	YA	269	U
25	YA	272(D)	G
25	YA	272(L)	U
25	YA	272(N)	U
25	YA	273(B)	U
25	YA	273(C)	G
25	YA	273(D)	G
25	YA	276	A
25	YA	277	C
25	YA	278	A
25	YA	279	C
25	YA	311	A
25	YA	322	A
25	YA	323	G
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	331	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	332	A
25	YA	342	G
25	YA	345	A
25	YA	346	A
25	YA	352	G
25	YA	362	U
25	YA	363(A)	G
25	YA	363(C)	G
25	YA	370	G
25	YA	372	G
25	YA	386	G
25	YA	396	G
25	YA	407	G
25	YA	411	G
25	YA	428	A
25	YA	444	C
25	YA	455	C
25	YA	457	A
25	YA	458	G
25	YA	470	A
25	YA	473	G
25	YA	477	A
25	YA	481	G
25	YA	505	A
25	YA	509	C
25	YA	512	G
25	YA	528	A
25	YA	529	A
25	YA	530	G
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	546	C
25	YA	547	A
25	YA	563	G
25	YA	568	U
25	YA	571	A
25	YA	573	G
25	YA	574	C
25	YA	575	A
25	YA	579	G
25	YA	580	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	603	A
25	YA	604	G
25	YA	607	U
25	YA	610	G
25	YA	614(B)	U
25	YA	614(C)	G
25	YA	615	G
25	YA	618	C
25	YA	627	A
25	YA	634	C
25	YA	637	A
25	YA	645	C
25	YA	646	A
25	YA	652(C)	A
25	YA	652(D)	G
25	YA	669	G
25	YA	674	G
25	YA	686	G
25	YA	687	C
25	YA	695	G
25	YA	701	G
25	YA	716	A
25	YA	717	G
25	YA	728	G
25	YA	730	C
25	YA	738	G
25	YA	747	U
25	YA	749	C
25	YA	750	A
25	YA	753	C
25	YA	764	A
25	YA	773	U
25	YA	775	G
25	YA	776	G
25	YA	779	U
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	788	A
25	YA	793	A
25	YA	800	A
25	YA	801	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	802	A
25	YA	805	G
25	YA	812	C
25	YA	827	U
25	YA	831	G
25	YA	843	G
25	YA	846	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	866	A
25	YA	886	C
25	YA	887	A
25	YA	888	C
25	YA	889	C
25	YA	890	A
25	YA	893	C
25	YA	896	A
25	YA	897	C
25	YA	907	U
25	YA	910	A
25	YA	914	C
25	YA	917	A
25	YA	925	C
25	YA	932	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	953	A
25	YA	957	A
25	YA	959	A
25	YA	961	C
25	YA	962	G
25	YA	968	G
25	YA	973	A
25	YA	974	G
25	YA	983	A
25	YA	996	A
25	YA	1005	C
25	YA	1012	U
25	YA	1013	C
25	YA	1017	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	1022	G
25	YA	1023	U
25	YA	1026	U
25	YA	1033	U
25	YA	1038	C
25	YA	1042	G
25	YA	1045	A
25	YA	1046	A
25	YA	1047	G
25	YA	1054	A
25	YA	1057	A
25	YA	1058	G
25	YA	1060	U
25	YA	1063	G
25	YA	1064	C
25	YA	1065	U
25	YA	1066	U
25	YA	1067	A
25	YA	1068	G
25	YA	1069	A
25	YA	1071	G
25	YA	1072	C
25	YA	1073	A
25	YA	1074	G
25	YA	1077	A
25	YA	1078	U
25	YA	1079	C
25	YA	1082	U
25	YA	1083	U
25	YA	1084	A
25	YA	1087	G
25	YA	1088	A
25	YA	1090	U
25	YA	1092	C
25	YA	1093	G
25	YA	1096	A
25	YA	1097	U
25	YA	1108	U
25	YA	1109	C
25	YA	1110	G
25	YA	1126	A
25	YA	1129	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	1130	U
25	YA	1132	A
25	YA	1135	C
25	YA	1136	G
25	YA	1142(A)	U
25	YA	1142(B)	A
25	YA	1143	A
25	YA	1150	C
25	YA	1154	G
25	YA	1155	A
25	YA	1156	A
25	YA	1160	G
25	YA	1171	G
25	YA	1179	C
25	YA	1186	G
25	YA	1205	U
25	YA	1206	G
25	YA	1211	U
25	YA	1212	G
25	YA	1218	C
25	YA	1236	G
25	YA	1253	A
25	YA	1255	U
25	YA	1256	G
25	YA	1259	G
25	YA	1264	G
25	YA	1266	G
25	YA	1268	A
25	YA	1271	G
25	YA	1272	A
25	YA	1273	U
25	YA	1274	A
25	YA	1275	A
25	YA	1281	G
25	YA	1282	U
25	YA	1300	U
25	YA	1301	A
25	YA	1310	G
25	YA	1314	C
25	YA	1325	G
25	YA	1328	G
25	YA	1329	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	1330	C
25	YA	1352	U
25	YA	1359	A
25	YA	1360	A
25	YA	1365	A
25	YA	1368	G
25	YA	1377	G
25	YA	1378	A
25	YA	1379	A
25	YA	1384	A
25	YA	1385	G
25	YA	1395	A
25	YA	1398	C
25	YA	1416	G
25	YA	1417	C
25	YA	1420	U
25	YA	1421	G
25	YA	1427	A
25	YA	1428	C
25	YA	1445(A)	A
25	YA	1450(A)	G
25	YA	1453	U
25	YA	1455	G
25	YA	1459	G
25	YA	1467	C
25	YA	1470	G
25	YA	1471	A
25	YA	1482	G
25	YA	1490	A
25	YA	1493	C
25	YA	1494	A
25	YA	1497	U
25	YA	1508	A
25	YA	1509(A)	C
25	YA	1514	U
25	YA	1531	C
25	YA	1542	A
25	YA	1544	A
25	YA	1546	C
25	YA	1553	A
25	YA	1554	A
25	YA	1558	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	1559	G
25	YA	1566	A
25	YA	1569	A
25	YA	1571	A
25	YA	1578	U
25	YA	1580	A
25	YA	1583	A
25	YA	1584	C
25	YA	1586	A
25	YA	1587	A
25	YA	1607	C
25	YA	1608	A
25	YA	1609	A
25	YA	1612	C
25	YA	1616	A
25	YA	1634	A
25	YA	1639	U
25	YA	1640	C
25	YA	1645	G
25	YA	1648	C
25	YA	1664	A
25	YA	1668	A
25	YA	1672	C
25	YA	1673	U
25	YA	1674	G
25	YA	1681	G
25	YA	1696	G
25	YA	1700	A
25	YA	1701	A
25	YA	1721	G
25	YA	1722	A
25	YA	1756	G
25	YA	1762	A
25	YA	1763	G
25	YA	1764	G
25	YA	1773	A
25	YA	1780	A
25	YA	1782	C
25	YA	1791	A
25	YA	1800	C
25	YA	1801	G
25	YA	1802	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	1808	U
25	YA	1815	A
25	YA	1816	G
25	YA	1829	A
25	YA	1839	G
25	YA	1847	A
25	YA	1848	A
25	YA	1876	A
25	YA	1877	A
25	YA	1878	G
25	YA	1889	A
25	YA	1901	A
25	YA	1903	G
25	YA	1906	G
25	YA	1913	A
25	YA	1914	C
25	YA	1927	A
25	YA	1929	G
25	YA	1930	G
25	YA	1934	C
25	YA	1936	A
25	YA	1937	A
25	YA	1938	A
25	YA	1939	5MU
25	YA	1940	U
25	YA	1955	U
25	YA	1963	U
25	YA	1965	C
25	YA	1966	A
25	YA	1967	C
25	YA	1968	G
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1981	A
25	YA	1993	U
25	YA	1997	G
25	YA	2003	G
25	YA	2004	G
25	YA	2009	G
25	YA	2020	A
25	YA	2023	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	2031	A
25	YA	2032	G
25	YA	2033	A
25	YA	2043	C
25	YA	2055	C
25	YA	2056	G
25	YA	2059	A
25	YA	2060	A
25	YA	2061	G
25	YA	2062	A
25	YA	2069	G
25	YA	2076	U
25	YA	2077	A
25	YA	2093	G
25	YA	2096	U
25	YA	2097	C
25	YA	2102	U
25	YA	2104	G
25	YA	2107	C
25	YA	2108	C
25	YA	2116	G
25	YA	2117	A
25	YA	2118	U
25	YA	2119	A
25	YA	2127	G
25	YA	2128	C
25	YA	2129	C
25	YA	2131	G
25	YA	2132	U
25	YA	2133	G
25	YA	2134	A
25	YA	2138	C
25	YA	2141	G
25	YA	2146	C
25	YA	2147	G
25	YA	2148	G
25	YA	2151	G
25	YA	2159	G
25	YA	2172	U
25	YA	2173	A
25	YA	2185	C
25	YA	2187	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	2189	U
25	YA	2192	G
25	YA	2198	A
25	YA	2206	G
25	YA	2207	G
25	YA	2208	A
25	YA	2218	U
25	YA	2219	G
25	YA	2225	A
25	YA	2237	G
25	YA	2238	G
25	YA	2239	G
25	YA	2249	U
25	YA	2266	A
25	YA	2267	A
25	YA	2268	A
25	YA	2269	A
25	YA	2274	A
25	YA	2275	C
25	YA	2278	A
25	YA	2279	G
25	YA	2280	G
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2305	A
25	YA	2312	U
25	YA	2320	A
25	YA	2321	G
25	YA	2322	A
25	YA	2325	G
25	YA	2327	A
25	YA	2335	A
25	YA	2336	A
25	YA	2343	C
25	YA	2345	G
25	YA	2347	C
25	YA	2350	C
25	YA	2358	G
25	YA	2378	A
25	YA	2383	G
25	YA	2384	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	2385	C
25	YA	2389	G
25	YA	2403	C
25	YA	2406	U
25	YA	2410	G
25	YA	2413	G
25	YA	2423	U
25	YA	2424	C
25	YA	2425	A
25	YA	2428	G
25	YA	2429	G
25	YA	2430	A
25	YA	2431	U
25	YA	2435	A
25	YA	2439	A
25	YA	2440	C
25	YA	2441	C
25	YA	2447	G
25	YA	2448	A
25	YA	2473	U
25	YA	2474	C
25	YA	2476	A
25	YA	2478	A
25	YA	2484	G
25	YA	2502	G
25	YA	2504	U
25	YA	2505	G
25	YA	2515	C
25	YA	2516	G
25	YA	2517	C
25	YA	2518	A
25	YA	2520	C
25	YA	2529	G
25	YA	2543	G
25	YA	2554	U
25	YA	2566	A
25	YA	2567	G
25	YA	2569	G
25	YA	2573	C
25	YA	2577	A
25	YA	2578	G
25	YA	2582	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	2585	U
25	YA	2602	A
25	YA	2609	U
25	YA	2610	C
25	YA	2612	C
25	YA	2615	U
25	YA	2621	A
25	YA	2629	A
25	YA	2630	G
25	YA	2636	U
25	YA	2654	A
25	YA	2661	G
25	YA	2680	C
25	YA	2687	U
25	YA	2689	U
25	YA	2690	C
25	YA	2691	C
25	YA	2702	U
25	YA	2703	C
25	YA	2712(B)	A
25	YA	2713	A
25	YA	2714	G
25	YA	2718	G
25	YA	2726	U
25	YA	2727	G
25	YA	2733	A
25	YA	2739	U
25	YA	2744	G
25	YA	2748	A
25	YA	2750	A
25	YA	2751	G
25	YA	2755	C
25	YA	2757	A
25	YA	2759	G
25	YA	2764	A
25	YA	2765	A
25	YA	2766	G
25	YA	2770	G
25	YA	2776	A
25	YA	2778	A
25	YA	2780	G
25	YA	2802	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	YA	2804	C
25	YA	2808	U
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2849	U
25	YA	2872	G
25	YA	2879	C
25	YA	2880	C
25	YA	2889	C
25	YA	2894	G
25	YA	2895	U
25	YA	2897	U
26	YB	2	C
26	YB	7	G
26	YB	8	U
26	YB	9	G
26	YB	13	A
26	YB	24	G
26	YB	25	A
26	YB	26	A
26	YB	31	C
26	YB	32	C
26	YB	40	U
26	YB	41	U
26	YB	42	C
26	YB	44	G
26	YB	56	G
26	YB	57	A
26	YB	67	G
26	YB	73	A
26	YB	75	G
26	YB	80	U
26	YB	84	C
26	YB	88	C
26	YB	97	G
26	YB	110	G
56	ZB	2	C

All (74) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	115	G
1	QA	251	G
1	QA	266	G
1	QA	429	U
1	QA	509	A
1	QA	687	A
1	QA	913	A
1	QA	1026	G
1	QA	1065	U
1	QA	1067	A
1	QA	1201	A
1	QA	1285	A
1	QA	1299	A
1	QA	1442(A)	G
23	QX	18	G
24	QY	36	G
24	QY	40	C
25	RA	9	U
25	RA	272(M)	G
25	RA	455	C
25	RA	805	G
25	RA	856	C
25	RA	961	C
25	RA	1065	U
25	RA	1073	A
25	RA	1210	A
25	RA	1240	U
25	RA	1300	U
25	RA	1420	U
25	RA	1992	G
25	RA	2031	A
25	RA	2126	A
25	RA	2171	A
25	RA	2321	G
25	RA	2406	U
25	RA	2501	C
25	RA	2585	U
25	RA	2689	U
1	XA	60	A
1	XA	65	U
1	XA	88	A
1	XA	358	U
1	XA	367	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	509	A
1	XA	687	A
1	XA	748	C
1	XA	913	A
1	XA	991	U
1	XA	992	U
1	XA	1065	U
1	XA	1067	A
1	XA	1442(A)	G
22	XV	53	G
23	XX	18	G
24	XY	34	C
25	YA	120	U
25	YA	272(M)	G
25	YA	752	A
25	YA	774	A
25	YA	856	C
25	YA	1065	U
25	YA	1073	A
25	YA	1210	A
25	YA	1420	U
25	YA	1672	C
25	YA	1900	A
25	YA	1992	G
25	YA	2003	G
25	YA	2126	A
25	YA	2172	U
25	YA	2321	G
25	YA	2439	A
25	YA	2515	C
25	YA	2689	U

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

50 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	5MC	QA	1400	1	18,22,23	0.93	1 (5%)	26,32,35	1.22	1 (3%)
1	PSU	QA	516	1	18,21,22	1.37	3 (16%)	22,30,33	1.91	5 (22%)
25	5MU	RA	1915	25	19,22,23	1.57	5 (26%)	28,32,35	2.43	9 (32%)
25	5MC	YA	1942	25	18,22,23	1.17	2 (11%)	26,32,35	1.54	2 (7%)
25	OMG	YA	2251	25,22,57	18,26,27	1.19	1 (5%)	19,38,41	1.21	4 (21%)
1	5MC	XA	1400	1	18,22,23	0.99	2 (11%)	26,32,35	1.25	2 (7%)
25	5MU	YA	1915	25	19,22,23	1.52	5 (26%)	28,32,35	2.51	9 (32%)
25	OMC	YA	1920	25	19,22,23	0.92	1 (5%)	26,31,34	1.81	5 (19%)
12	0TD	QL	92	12	7,9,10	1.40	1 (14%)	6,11,13	2.18	3 (50%)
1	5MC	XA	1404	1	18,22,23	1.02	1 (5%)	26,32,35	1.35	3 (11%)
25	OMG	RA	2251	25,22,57	18,26,27	1.13	1 (5%)	19,38,41	1.19	2 (10%)
1	4OC	QA	1402	1	20,23,24	0.78	0	26,32,35	0.95	1 (3%)
1	5MC	XA	967	1	18,22,23	0.96	1 (5%)	26,32,35	1.33	2 (7%)
1	5MC	QA	967	1	18,22,23	0.96	2 (11%)	26,32,35	1.30	2 (7%)
56	PPU	ZB	3	25,56	32,40,41	0.89	0	33,57,60	1.57	7 (21%)
25	2MA	YA	2503	25,57	17,25,26	1.26	2 (11%)	17,37,40	0.96	1 (5%)
1	MA6	XA	1518	1	19,26,27	1.00	1 (5%)	18,38,41	1.77	4 (22%)
25	OMU	YA	2552	25,57	19,22,23	1.41	3 (15%)	26,31,34	2.01	7 (26%)
25	PSU	RA	1911	25	18,21,22	1.55	5 (27%)	22,30,33	2.01	4 (18%)
25	OMC	RA	1920	25	19,22,23	0.95	1 (5%)	26,31,34	1.87	8 (30%)
1	G7M	XA	527	1	20,26,27	2.49	4 (20%)	17,39,42	1.00	1 (5%)
25	PSU	YA	1917	25	18,21,22	1.44	3 (16%)	22,30,33	2.01	4 (18%)
1	PSU	XA	516	1,57	18,21,22	1.37	4 (22%)	22,30,33	1.82	5 (22%)
1	2MG	QA	1207	1	18,26,27	1.00	1 (5%)	16,38,41	1.16	3 (18%)
25	5MC	RA	1942	25	18,22,23	1.07	1 (5%)	26,32,35	1.39	2 (7%)
1	UR3	QA	1498	1	19,22,23	0.96	2 (10%)	26,32,35	1.34	2 (7%)
25	PSU	RA	2605	25	18,21,22	1.71	4 (22%)	22,30,33	2.10	5 (22%)
1	MA6	XA	1519	1	19,26,27	0.82	0	18,38,41	2.10	6 (33%)
1	M2G	XA	966	1	20,27,28	1.21	2 (10%)	22,40,43	1.11	3 (13%)
1	MA6	QA	1519	1	19,26,27	0.93	1 (5%)	18,38,41	1.95	6 (33%)
1	M2G	QA	966	1	20,27,28	1.34	3 (15%)	22,40,43	0.99	2 (9%)
1	5MC	XA	1407	1	18,22,23	0.96	2 (11%)	26,32,35	1.39	5 (19%)
1	UR3	XA	1498	1	19,22,23	1.01	2 (10%)	26,32,35	1.39	2 (7%)
1	5MC	QA	1407	1	18,22,23	0.88	2 (11%)	26,32,35	1.10	3 (11%)
12	0TD	XL	92	12	7,9,10	1.38	2 (28%)	6,11,13	1.40	1 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	MA6	QA	1518	1	19,26,27	0.88	1 (5%)	18,38,41	1.97	7 (38%)
25	PSU	YA	2605	25	18,21,22	1.60	4 (22%)	22,30,33	2.19	4 (18%)
25	2MA	RA	2503	25,57	17,25,26	1.10	1 (5%)	17,37,40	0.98	2 (11%)
1	G7M	QA	527	1	20,26,27	2.53	4 (20%)	17,39,42	1.04	1 (5%)
25	5MU	YA	1939	25,57	19,22,23	1.55	4 (21%)	28,32,35	2.20	6 (21%)
1	4OC	XA	1402	1	20,23,24	0.85	1 (5%)	26,32,35	0.95	2 (7%)
25	5MC	YA	1962	25	18,22,23	1.00	1 (5%)	26,32,35	2.27	8 (30%)
1	5MC	QA	1404	1	18,22,23	0.92	1 (5%)	26,32,35	1.42	4 (15%)
25	PSU	YA	1911	25	18,21,22	1.56	5 (27%)	22,30,33	1.89	4 (18%)
25	PSU	RA	1917	25	18,21,22	1.47	4 (22%)	22,30,33	2.08	4 (18%)
56	PPU	ZA	3	25,57,56	32,40,41	0.96	1 (3%)	33,57,60	1.82	7 (21%)
25	5MU	RA	1939	25,57	19,22,23	1.45	4 (21%)	28,32,35	2.31	6 (21%)
25	5MC	RA	1962	25,57	18,22,23	0.98	1 (5%)	26,32,35	1.60	7 (26%)
25	OMU	RA	2552	25	19,22,23	1.38	3 (15%)	26,31,34	1.95	6 (23%)
1	2MG	XA	1207	1	18,26,27	1.08	1 (5%)	16,38,41	1.25	3 (18%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	5MC	QA	1400	1	-	5/7/25/26	0/2/2/2
1	PSU	QA	516	1	-	0/7/25/26	0/2/2/2
25	5MU	RA	1915	25	-	3/7/25/26	0/2/2/2
25	5MC	YA	1942	25	-	0/7/25/26	0/2/2/2
25	OMG	YA	2251	25,22,57	-	0/5/27/28	0/3/3/3
1	5MC	XA	1400	1	-	4/7/25/26	0/2/2/2
25	5MU	YA	1915	25	-	4/7/25/26	0/2/2/2
25	OMC	YA	1920	25	-	4/9/27/28	0/2/2/2
12	0TD	QL	92	12	-	4/7/12/14	-
1	5MC	XA	1404	1	-	0/7/25/26	0/2/2/2
25	OMG	RA	2251	25,22,57	-	0/5/27/28	0/3/3/3
1	4OC	QA	1402	1	-	2/9/29/30	0/2/2/2
1	5MC	XA	967	1	-	0/7/25/26	0/2/2/2
1	5MC	QA	967	1	-	0/7/25/26	0/2/2/2
56	PPU	ZB	3	25,56	-	5/21/43/44	0/4/4/4

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	2MA	YA	2503	25,57	-	2/3/25/26	0/3/3/3
1	MA6	XA	1518	1	-	1/7/29/30	0/3/3/3
25	OMU	YA	2552	25,57	-	2/9/27/28	0/2/2/2
25	PSU	RA	1911	25	-	0/7/25/26	0/2/2/2
25	OMC	RA	1920	25	-	4/9/27/28	0/2/2/2
1	G7M	XA	527	1	-	2/3/25/26	0/3/3/3
25	PSU	YA	1917	25	-	0/7/25/26	0/2/2/2
1	PSU	XA	516	1,57	-	0/7/25/26	0/2/2/2
1	2MG	QA	1207	1	-	0/5/27/28	0/3/3/3
25	5MC	RA	1942	25	-	0/7/25/26	0/2/2/2
1	UR3	QA	1498	1	-	2/7/25/26	0/2/2/2
25	PSU	RA	2605	25	-	0/7/25/26	0/2/2/2
1	MA6	XA	1519	1	-	6/7/29/30	0/3/3/3
1	M2G	XA	966	1	-	2/7/29/30	0/3/3/3
1	MA6	QA	1519	1	-	5/7/29/30	0/3/3/3
1	M2G	QA	966	1	-	0/7/29/30	0/3/3/3
1	5MC	XA	1407	1	-	0/7/25/26	0/2/2/2
1	UR3	XA	1498	1	-	0/7/25/26	0/2/2/2
1	5MC	QA	1407	1	-	0/7/25/26	0/2/2/2
12	0TD	XL	92	12	-	4/7/12/14	-
1	MA6	QA	1518	1	-	1/7/29/30	0/3/3/3
25	PSU	YA	2605	25	-	0/7/25/26	0/2/2/2
25	2MA	RA	2503	25,57	-	1/3/25/26	0/3/3/3
1	G7M	QA	527	1	-	2/3/25/26	0/3/3/3
25	5MU	YA	1939	25,57	-	0/7/25/26	0/2/2/2
1	4OC	XA	1402	1	-	2/9/29/30	0/2/2/2
25	5MC	YA	1962	25	-	4/7/25/26	0/2/2/2
1	5MC	QA	1404	1	-	0/7/25/26	0/2/2/2
25	PSU	YA	1911	25	-	0/7/25/26	0/2/2/2
25	PSU	RA	1917	25	-	0/7/25/26	0/2/2/2
56	PPU	ZA	3	25,57,56	-	5/21/43/44	0/4/4/4
25	5MU	RA	1939	25,57	-	0/7/25/26	0/2/2/2
25	5MC	RA	1962	25,57	-	0/7/25/26	0/2/2/2
25	OMU	RA	2552	25	-	3/9/27/28	0/2/2/2
1	2MG	XA	1207	1	-	0/5/27/28	0/3/3/3

All (107) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	QA	527	G7M	C8-N9	7.06	1.46	1.33
1	XA	527	G7M	C8-N9	7.02	1.46	1.33
1	QA	527	G7M	C8-N7	6.58	1.45	1.33
1	XA	527	G7M	C8-N7	6.18	1.44	1.33
25	RA	1915	5MU	C4-N3	-3.96	1.31	1.38
1	QA	966	M2G	C2-N3	3.91	1.35	1.30
25	YA	2552	OMU	C4-N3	-3.84	1.31	1.38
1	XA	527	G7M	C5-C4	3.74	1.46	1.39
25	RA	1939	5MU	C4-N3	-3.67	1.32	1.38
1	QA	527	G7M	C5-C4	3.67	1.46	1.39
25	YA	1915	5MU	C4-N3	-3.66	1.32	1.38
25	RA	2251	OMG	C6-N1	-3.62	1.32	1.37
25	YA	2251	OMG	C6-N1	-3.61	1.32	1.37
25	RA	2605	PSU	C4-N3	-3.58	1.32	1.38
25	RA	1942	5MC	C6-N1	-3.55	1.32	1.38
1	QA	527	G7M	C6-N1	-3.55	1.32	1.37
25	YA	1942	5MC	C6-N1	-3.52	1.32	1.38
25	YA	1962	5MC	C6-N1	-3.51	1.32	1.38
1	XA	1207	2MG	C6-N1	-3.51	1.32	1.37
25	YA	1939	5MU	C4-N3	-3.50	1.32	1.38
1	XA	527	G7M	C6-N1	-3.42	1.32	1.37
25	RA	2552	OMU	C4-N3	-3.36	1.32	1.38
25	YA	2605	PSU	C2-N1	-3.35	1.32	1.36
25	YA	1939	5MU	C6-N1	-3.33	1.32	1.38
25	RA	1962	5MC	C6-N1	-3.26	1.32	1.38
12	QL	92	0TD	CB-SB	3.20	1.85	1.82
25	YA	1911	PSU	C4-N3	-3.19	1.32	1.38
25	RA	1939	5MU	C6-N1	-3.17	1.32	1.38
1	XA	1400	5MC	C6-N1	-3.17	1.32	1.38
1	XA	1404	5MC	C6-N1	-3.14	1.32	1.38
25	YA	2605	PSU	C4-N3	-3.11	1.33	1.38
1	XA	967	5MC	C6-N1	-3.05	1.32	1.38
25	RA	1917	PSU	C4-N3	-3.05	1.33	1.38
1	QA	1207	2MG	C6-N1	-3.03	1.33	1.37
1	QA	966	M2G	C6-N1	-3.01	1.33	1.37
25	YA	1917	PSU	C4-N3	-2.99	1.33	1.38
25	RA	2605	PSU	C2-N3	-2.97	1.32	1.37
1	XA	966	M2G	C6-N1	-2.96	1.33	1.37
1	QA	1404	5MC	C6-N1	-2.94	1.33	1.38
25	RA	1911	PSU	C4-N3	-2.92	1.33	1.38
1	XA	1407	5MC	C6-N1	-2.88	1.33	1.38
25	YA	2552	OMU	C2-N3	-2.87	1.32	1.38
25	YA	1915	5MU	C6-N1	-2.85	1.33	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	RA	1911	PSU	C6-C5	2.84	1.38	1.35
1	QA	967	5MC	C6-N1	-2.84	1.33	1.38
1	XA	966	M2G	C2-N3	2.83	1.34	1.30
1	XA	516	PSU	C4-N3	-2.80	1.33	1.38
1	QA	1400	5MC	C6-N1	-2.80	1.33	1.38
25	RA	2552	OMU	C2-N3	-2.80	1.33	1.38
1	QA	516	PSU	C4-N3	-2.77	1.33	1.38
25	YA	1911	PSU	C2-N1	-2.76	1.33	1.36
25	YA	1915	5MU	C2-N3	-2.75	1.33	1.38
25	RA	1920	OMC	C5-C4	-2.73	1.36	1.42
25	RA	2605	PSU	C2-N1	-2.71	1.33	1.36
25	RA	1917	PSU	C2-N1	-2.71	1.33	1.36
25	RA	1915	5MU	C2-N3	-2.67	1.33	1.38
25	YA	2503	2MA	C6-N1	-2.67	1.32	1.38
25	YA	1939	5MU	C2-N3	-2.66	1.33	1.38
25	YA	1915	5MU	C2-N1	2.66	1.42	1.38
25	YA	1920	OMC	C5-C4	-2.65	1.36	1.42
25	RA	1911	PSU	C2-N1	-2.61	1.33	1.36
1	XA	1498	UR3	C5-C4	-2.60	1.37	1.43
25	RA	1939	5MU	C2-N3	-2.59	1.33	1.38
25	RA	1915	5MU	C2-N1	2.59	1.42	1.38
25	RA	2503	2MA	C6-N1	-2.58	1.32	1.38
25	YA	1917	PSU	C2-N3	-2.56	1.33	1.37
25	YA	2605	PSU	C2-N3	-2.53	1.33	1.37
25	YA	1917	PSU	C2-N1	-2.52	1.33	1.36
25	YA	1911	PSU	C2-N3	-2.52	1.33	1.37
25	YA	2605	PSU	C6-C5	2.48	1.38	1.35
25	RA	1915	5MU	C6-C5	2.48	1.38	1.34
25	RA	1915	5MU	C6-N1	-2.46	1.33	1.38
25	RA	1939	5MU	C6-C5	2.41	1.38	1.34
1	XA	1498	UR3	C6-N1	-2.39	1.32	1.38
1	XA	516	PSU	C2-N3	-2.39	1.33	1.37
25	RA	2605	PSU	C1'-C5	-2.38	1.44	1.50
25	YA	2552	OMU	C6-N1	-2.36	1.32	1.38
1	XA	516	PSU	C6-C5	2.35	1.38	1.35
25	RA	1917	PSU	C2-N3	-2.35	1.33	1.37
1	QA	1498	UR3	C5-C4	-2.34	1.37	1.43
1	QA	1519	MA6	C5-C4	2.32	1.47	1.40
56	ZA	3	PPU	C2'-C1'	-2.31	1.50	1.53
25	RA	1911	PSU	C2-N3	-2.30	1.33	1.37
1	QA	1407	5MC	C6-N1	-2.29	1.34	1.38
1	QA	1407	5MC	C6-C5	2.28	1.38	1.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	XA	1402	4OC	C6-N1	-2.27	1.32	1.38
25	RA	2552	OMU	C6-N1	-2.26	1.32	1.38
1	QA	967	5MC	C6-C5	2.26	1.38	1.34
1	QA	516	PSU	C2-N3	-2.25	1.33	1.37
25	YA	1911	PSU	O4'-C1'	-2.22	1.40	1.43
1	XA	1407	5MC	C6-C5	2.22	1.38	1.34
1	QA	1498	UR3	C6-N1	-2.21	1.32	1.38
1	XA	516	PSU	C2-N1	-2.20	1.33	1.36
25	YA	1911	PSU	C1'-C5	-2.18	1.45	1.50
25	YA	1939	5MU	O5'-C5'	-2.16	1.39	1.44
1	QA	516	PSU	C6-C5	2.14	1.37	1.35
1	QA	966	M2G	C2-N2	2.13	1.39	1.35
12	XL	92	0TD	OD2-CG	-2.12	1.23	1.30
12	XL	92	0TD	CB-SB	2.12	1.84	1.82
25	RA	1917	PSU	C6-C5	2.09	1.37	1.35
1	XA	1400	5MC	C6-C5	2.09	1.38	1.34
25	YA	2503	2MA	C2-N3	2.06	1.35	1.31
25	RA	1911	PSU	O4'-C1'	-2.06	1.41	1.43
1	XA	1518	MA6	C5-C4	2.05	1.46	1.40
1	QA	1518	MA6	C5-C4	2.04	1.46	1.40
25	YA	1942	5MC	C6-C5	2.03	1.37	1.34
25	YA	1915	5MU	C6-C5	2.01	1.37	1.34

All (202) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1917	PSU	N1-C2-N3	6.22	122.18	115.13
25	RA	1915	5MU	N3-C2-N1	6.21	123.14	114.89
25	RA	2605	PSU	N1-C2-N3	6.14	122.09	115.13
25	RA	1911	PSU	N1-C2-N3	6.13	122.08	115.13
25	YA	1917	PSU	N1-C2-N3	6.11	122.06	115.13
25	YA	2605	PSU	N1-C2-N3	5.96	121.88	115.13
25	YA	2552	OMU	N3-C2-N1	5.89	122.71	114.89
25	YA	1911	PSU	N1-C2-N3	5.74	121.63	115.13
25	RA	1939	5MU	C4-N3-C2	-5.72	119.95	127.35
25	RA	1939	5MU	N3-C2-N1	5.71	122.47	114.89
25	YA	1942	5MC	C5-C6-N1	-5.68	117.49	123.34
25	YA	1962	5MC	C1'-N1-C6	-5.47	112.02	121.12
25	YA	1939	5MU	C4-N3-C2	-5.43	120.32	127.35
1	QA	1498	UR3	C4-N3-C2	-5.40	119.47	124.56
1	QA	516	PSU	N1-C2-N3	5.31	121.14	115.13
25	YA	1915	5MU	N3-C2-N1	5.29	121.91	114.89

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1939	5MU	N3-C2-N1	5.09	121.65	114.89
25	YA	1915	5MU	C1'-N1-C2	5.05	126.71	117.57
25	RA	2552	OMU	N3-C2-N1	5.02	121.55	114.89
1	XA	1519	MA6	N1-C6-N6	4.99	122.31	117.06
25	YA	1915	5MU	C4-N3-C2	-4.98	120.91	127.35
25	YA	1939	5MU	O4-C4-C5	-4.97	119.14	124.90
25	YA	2605	PSU	O2-C2-N1	-4.90	117.40	122.79
25	RA	1915	5MU	C1'-N1-C2	4.81	126.28	117.57
25	RA	1942	5MC	C5-C6-N1	-4.78	118.42	123.34
1	XA	1498	UR3	C4-N3-C2	-4.75	120.09	124.56
25	RA	2605	PSU	C4-N3-C2	-4.71	119.55	126.34
1	QA	1518	MA6	N1-C6-N6	4.71	122.01	117.06
25	RA	1915	5MU	O2-C2-N3	-4.70	112.74	121.50
25	RA	1939	5MU	C5-C6-N1	-4.69	118.51	123.34
1	QA	967	5MC	C5-C6-N1	-4.69	118.51	123.34
25	YA	1920	OMC	C1'-N1-C2	4.67	128.84	118.42
25	YA	2552	OMU	C4-N3-C2	-4.64	120.46	126.58
25	RA	1915	5MU	C4-N3-C2	-4.57	121.44	127.35
1	XA	1400	5MC	C5-C6-N1	-4.55	118.66	123.34
25	YA	1962	5MC	C5-C6-N1	-4.54	118.66	123.34
25	YA	1962	5MC	C5-C4-N4	-4.54	114.69	121.48
1	QA	1519	MA6	N1-C6-N6	4.54	121.83	117.06
25	RA	1917	PSU	O2-C2-N1	-4.53	117.80	122.79
25	RA	1920	OMC	C1'-N1-C2	4.53	128.53	118.42
1	XA	967	5MC	C5-C6-N1	-4.53	118.68	123.34
25	RA	1920	OMC	O2-C2-N3	-4.52	114.98	122.33
25	RA	2552	OMU	CM2-O2'-C2'	-4.50	102.71	114.52
1	XA	516	PSU	N1-C2-N3	4.47	120.19	115.13
25	YA	1915	5MU	C5-C4-N3	4.46	119.12	115.31
1	XA	1404	5MC	C5-C6-N1	-4.45	118.76	123.34
25	RA	1939	5MU	O4-C4-C5	-4.43	119.76	124.90
25	YA	1939	5MU	C5-C4-N3	4.43	119.09	115.31
25	YA	1920	OMC	O2-C2-N3	-4.39	115.18	122.33
25	YA	1915	5MU	O2-C2-N3	-4.38	113.34	121.50
1	XA	1518	MA6	C4-C5-N7	-4.33	104.89	109.40
1	QA	1400	5MC	C5-C6-N1	-4.30	118.92	123.34
56	ZA	3	PPU	N1-C6-N6	4.30	121.58	117.06
25	RA	1939	5MU	C5-C4-N3	4.29	118.97	115.31
1	QA	516	PSU	C4-N3-C2	-4.25	120.22	126.34
25	RA	1911	PSU	O2-C2-N1	-4.21	118.16	122.79
56	ZA	3	PPU	CG-CB-CA	-4.20	105.40	114.13
25	RA	1915	5MU	C6-N1-C2	-4.19	117.06	121.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1915	5MU	O4-C4-C5	-4.16	120.08	124.90
25	RA	2552	OMU	C4-N3-C2	-4.15	121.10	126.58
1	XA	1519	MA6	C9-N6-C6	-4.15	106.94	119.51
25	YA	1962	5MC	C1'-N1-C2	4.05	127.46	118.42
1	XA	516	PSU	C6-C5-C4	-4.02	115.38	118.20
25	YA	1917	PSU	C4-N3-C2	-4.01	120.56	126.34
25	YA	1915	5MU	C1'-N1-C6	-4.00	114.47	121.12
25	RA	1917	PSU	C4-N3-C2	-3.96	120.63	126.34
56	ZA	3	PPU	O4'-C1'-C2'	-3.96	101.15	106.93
25	YA	2605	PSU	C4-N3-C2	-3.91	120.71	126.34
25	YA	1939	5MU	C5-C6-N1	-3.90	119.33	123.34
25	RA	1911	PSU	C4-N3-C2	-3.89	120.74	126.34
56	ZB	3	PPU	N1-C6-N6	3.86	121.12	117.06
25	YA	2552	OMU	O2-C2-N1	-3.86	117.66	122.79
25	YA	1962	5MC	C4-N3-C2	-3.84	115.50	120.69
56	ZB	3	PPU	CG-CB-CA	-3.72	106.38	114.13
1	QA	516	PSU	O2-C2-N1	-3.68	118.74	122.79
25	RA	1962	5MC	C5-C6-N1	-3.68	119.56	123.34
25	YA	1917	PSU	O2-C2-N1	-3.67	118.75	122.79
25	YA	1911	PSU	C4-N3-C2	-3.65	121.08	126.34
1	QA	1404	5MC	O2-C2-N3	-3.61	116.46	122.33
25	YA	1911	PSU	O2-C2-N1	-3.55	118.89	122.79
1	XA	516	PSU	C4-N3-C2	-3.51	121.28	126.34
25	RA	1939	5MU	O2-C2-N1	-3.51	118.13	122.79
1	XA	1407	5MC	C5-C6-N1	-3.43	119.81	123.34
25	RA	1962	5MC	C1'-N1-C6	-3.43	115.42	121.12
56	ZA	3	PPU	C9-N6-C6	-3.40	109.21	119.51
25	RA	2605	PSU	O2-C2-N1	-3.40	119.05	122.79
1	XA	1519	MA6	C10-N6-C6	-3.33	109.45	119.51
25	YA	1920	OMC	C1'-N1-C6	-3.25	113.76	120.84
1	QA	1404	5MC	C5-C4-N3	-3.24	118.18	121.67
25	RA	1915	5MU	C5-C4-N3	3.24	118.08	115.31
1	QA	1518	MA6	N3-C2-N1	-3.20	123.67	128.68
1	QA	1519	MA6	C10-N6-C6	-3.20	109.82	119.51
1	XA	1407	5MC	C1'-N1-C6	3.19	126.43	121.12
56	ZB	3	PPU	N3-C2-N1	-3.17	123.73	128.68
1	QA	1518	MA6	C4-C5-N7	-3.16	106.10	109.40
12	QL	92	0TD	OD1-CG-CB	-3.15	115.83	122.44
1	QA	1519	MA6	C9-N6-C6	-3.14	110.00	119.51
56	ZA	3	PPU	C10-N6-C6	-3.12	110.05	119.51
25	YA	1920	OMC	O2-C2-N1	3.12	125.33	118.89
1	QA	1404	5MC	C5-C6-N1	-3.11	120.14	123.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	ZB	3	PPU	C10-N6-C6	-3.11	110.09	119.51
1	XA	1518	MA6	C10-N6-C9	-3.11	106.10	116.12
1	XA	1519	MA6	N3-C2-N1	-3.11	123.82	128.68
25	RA	1962	5MC	O2-C2-N3	-3.07	117.33	122.33
12	QL	92	0TD	OD2-CG-CB	3.06	119.77	113.15
1	QA	1519	MA6	N3-C2-N1	-3.06	123.89	128.68
25	RA	1920	OMC	O2-C2-N1	3.06	125.21	118.89
25	YA	2605	PSU	C6-C5-C4	-3.03	116.08	118.20
1	XA	1518	MA6	N3-C2-N1	-3.03	123.94	128.68
1	XA	527	G7M	CN7-N7-C8	-3.00	111.01	125.43
25	RA	2552	OMU	O4-C4-C5	-2.97	119.94	125.16
56	ZB	3	PPU	C9-N6-C6	-2.96	110.56	119.51
1	QA	527	G7M	CN7-N7-C8	-2.94	111.26	125.43
25	YA	1962	5MC	N4-C4-N3	2.94	123.84	118.48
25	YA	1920	OMC	CM2-O2'-C2'	-2.93	106.83	114.52
1	XA	1407	5MC	C5-C4-N3	-2.91	118.53	121.67
25	RA	1942	5MC	C5-C4-N3	-2.91	118.53	121.67
1	QA	1407	5MC	C5-C6-N1	-2.88	120.38	123.34
25	YA	1917	PSU	C6-C5-C4	-2.86	116.20	118.20
1	QA	1518	MA6	C9-N6-C6	-2.85	110.87	119.51
1	XA	1519	MA6	C10-N6-C9	-2.84	106.98	116.12
1	XA	1498	UR3	C1'-N1-C2	2.83	121.77	116.99
1	XA	1207	2MG	CM2-N2-C2	-2.81	117.66	123.86
12	XL	92	0TD	O-C-CA	-2.79	117.47	124.78
25	RA	1917	PSU	C6-C5-C4	-2.77	116.26	118.20
1	QA	1519	MA6	C4-C5-N7	-2.76	106.52	109.40
56	ZB	3	PPU	C4-C5-N7	-2.76	106.53	109.40
1	XA	1518	MA6	C9-N6-C6	-2.72	111.28	119.51
25	RA	1920	OMC	N4-C4-N3	2.71	122.72	117.97
25	YA	1962	5MC	N1-C2-N3	2.70	123.73	118.81
12	QL	92	0TD	O-C-CA	-2.70	117.69	124.78
25	YA	1915	5MU	C5-C6-N1	-2.70	120.56	123.34
25	RA	1915	5MU	C1'-N1-C6	-2.70	116.63	121.12
56	ZA	3	PPU	N3-C2-N1	-2.70	124.47	128.68
25	RA	2503	2MA	C5-C6-N1	2.68	118.64	114.02
25	RA	1920	OMC	C6-N1-C2	-2.67	115.87	120.49
1	XA	516	PSU	O2-C2-N1	-2.66	119.86	122.79
25	RA	2552	OMU	C5-C4-N3	2.66	118.82	114.84
25	YA	2503	2MA	C5-C6-N1	2.64	118.58	114.02
25	RA	2552	OMU	O2-C2-N1	-2.60	119.34	122.79
25	YA	2552	OMU	C5-C4-N3	2.58	118.69	114.84
1	QA	1519	MA6	C10-N6-C9	-2.58	107.82	116.12

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1915	5MU	O4-C4-C5	-2.56	121.94	124.90
25	YA	2552	OMU	O4-C4-C5	-2.55	120.67	125.16
25	RA	1962	5MC	C5-C4-N3	-2.54	118.93	121.67
56	ZA	3	PPU	C4-C5-N7	-2.53	106.77	109.40
1	QA	516	PSU	O4'-C1'-C2'	2.51	108.68	105.14
25	RA	1920	OMC	C1'-N1-C6	-2.48	115.43	120.84
25	YA	1915	5MU	C6-N1-C2	-2.44	118.82	121.30
25	RA	1962	5MC	N4-C4-N3	2.44	122.93	118.48
1	XA	1207	2MG	C5-C6-N1	2.43	118.24	113.95
1	QA	1207	2MG	C5-C6-N1	2.42	118.23	113.95
25	YA	1942	5MC	C5-C4-N3	-2.41	119.07	121.67
1	XA	516	PSU	O4'-C1'-C2'	2.40	108.53	105.14
25	RA	1962	5MC	C1'-N1-C2	2.40	123.77	118.42
1	QA	1407	5MC	C5-C4-N3	-2.35	119.13	121.67
1	QA	1518	MA6	C10-N6-C9	-2.33	108.62	116.12
25	YA	1911	PSU	O4'-C1'-C2'	2.29	108.38	105.14
25	YA	2251	OMG	CM2-O2'-C2'	-2.29	108.52	114.52
56	ZB	3	PPU	C3'-N3'-C	-2.28	119.78	123.21
25	YA	1962	5MC	O2-C2-N3	-2.27	118.64	122.33
1	XA	1404	5MC	C5-C4-N3	-2.27	119.22	121.67
1	QA	1518	MA6	C10-N6-C6	-2.27	112.64	119.51
25	YA	2552	OMU	CM2-O2'-C2'	-2.26	108.59	114.52
25	RA	2251	OMG	C5-C6-N1	2.26	117.94	113.95
1	XA	1407	5MC	C1'-N1-C2	-2.25	113.39	118.42
1	XA	1207	2MG	C8-N7-C5	2.25	107.27	102.99
25	RA	1920	OMC	CM2-O2'-C2'	-2.25	108.63	114.52
25	RA	1962	5MC	C5-C4-N4	-2.23	118.14	121.48
1	XA	1407	5MC	O2-C2-N3	-2.22	118.72	122.33
1	XA	1404	5MC	O2-C2-N3	-2.22	118.72	122.33
25	RA	2503	2MA	C8-N7-C5	2.21	107.20	102.99
1	QA	1518	MA6	C1'-N9-C4	-2.20	122.77	126.64
1	QA	966	M2G	C5-C6-N1	2.20	117.84	113.95
1	QA	967	5MC	C5-C4-N3	-2.19	119.31	121.67
25	YA	2552	OMU	C1'-N1-C6	2.19	125.61	120.84
1	XA	967	5MC	C5-C4-N3	-2.18	119.32	121.67
25	YA	2251	OMG	C8-N7-C5	2.18	107.14	102.99
1	QA	1207	2MG	C8-N7-C5	2.18	107.14	102.99
1	QA	1404	5MC	CM5-C5-C6	-2.17	119.95	122.85
1	XA	966	M2G	N1-C2-N2	2.15	119.87	118.04
1	XA	966	M2G	C8-N7-C5	2.14	107.07	102.99
1	QA	1207	2MG	CM2-N2-C2	-2.14	119.14	123.86
1	QA	1498	UR3	C3U-N3-C4	2.13	120.94	117.89

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1519	MA6	C4-C5-N7	-2.13	107.18	109.40
25	RA	1915	5MU	C5-C6-N1	-2.11	121.17	123.34
1	XA	1402	4OC	C5-C4-N4	-2.11	118.31	122.61
25	RA	2605	PSU	O2'-C2'-C1'	-2.10	106.22	111.23
25	RA	1920	OMC	C5-C4-N4	-2.10	117.28	120.57
25	RA	2251	OMG	CM2-O2'-C2'	-2.09	109.05	114.52
1	QA	516	PSU	C5-C6-N1	-2.07	119.01	122.11
25	YA	2251	OMG	C2-N1-C6	-2.06	121.30	125.10
25	YA	2251	OMG	C5-C6-N1	2.06	117.59	113.95
1	QA	966	M2G	C8-N7-C5	2.06	106.91	102.99
25	YA	1939	5MU	O2-C2-N1	-2.05	120.06	122.79
25	RA	1911	PSU	C6-C5-C4	-2.05	116.77	118.20
1	XA	1400	5MC	C5-C4-N3	-2.04	119.47	121.67
1	XA	966	M2G	C5-C6-N1	2.04	117.55	113.95
1	QA	1407	5MC	O2-C2-N3	-2.04	119.02	122.33
25	RA	2605	PSU	C5-C6-N1	-2.04	119.06	122.11
1	QA	1402	4OC	C5-C4-N4	-2.01	118.52	122.61
1	XA	1402	4OC	C6-C5-C4	2.00	119.41	116.96

There are no chirality outliers.

All (79) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
12	QL	92	0TD	O-C-CA-CB
12	QL	92	0TD	CA-CB-SB-CSB
12	QL	92	0TD	CG-CB-SB-CSB
1	QA	527	G7M	O4'-C4'-C5'-O5'
1	QA	527	G7M	C3'-C4'-C5'-O5'
1	XA	527	G7M	C3'-C4'-C5'-O5'
1	QA	1498	UR3	C3'-C4'-C5'-O5'
1	QA	1519	MA6	O4'-C4'-C5'-O5'
1	QA	1519	MA6	C3'-C4'-C5'-O5'
1	QA	1519	MA6	C5-C6-N6-C10
1	XA	1519	MA6	O4'-C4'-C5'-O5'
1	XA	1519	MA6	C3'-C4'-C5'-O5'
1	XA	1519	MA6	C5-C6-N6-C9
1	XA	1519	MA6	N1-C6-N6-C9
25	RA	1915	5MU	O4'-C1'-N1-C2
25	RA	1915	5MU	O4'-C1'-N1-C6
25	YA	1915	5MU	O4'-C1'-N1-C2
25	YA	1915	5MU	O4'-C1'-N1-C6
25	RA	2503	2MA	O4'-C4'-C5'-O5'

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
56	ZA	3	PPU	C3'-C4'-C5'-O5'
56	ZA	3	PPU	C5-C6-N6-C9
56	ZB	3	PPU	C5-C6-N6-C9
56	ZB	3	PPU	CE1-CZ-OC-CM
56	ZB	3	PPU	CE2-CZ-OC-CM
1	QA	1402	4OC	O4'-C4'-C5'-O5'
1	XA	1402	4OC	O4'-C4'-C5'-O5'
1	QA	1498	UR3	O4'-C4'-C5'-O5'
25	YA	2503	2MA	O4'-C4'-C5'-O5'
56	ZA	3	PPU	O4'-C4'-C5'-O5'
1	QA	1402	4OC	C3'-C4'-C5'-O5'
1	XA	1402	4OC	C3'-C4'-C5'-O5'
25	YA	1915	5MU	O4'-C4'-C5'-O5'
1	QA	1400	5MC	C2'-C1'-N1-C6
1	XA	527	G7M	O4'-C4'-C5'-O5'
25	YA	1962	5MC	C2'-C1'-N1-C6
1	XA	1519	MA6	C5-C6-N6-C10
56	ZB	3	PPU	N-CA-CB-CG
56	ZB	3	PPU	C5-C6-N6-C10
25	YA	1915	5MU	C3'-C4'-C5'-O5'
56	ZA	3	PPU	CE2-CZ-OC-CM
1	QA	1519	MA6	C4'-C5'-O5'-P
56	ZA	3	PPU	CE1-CZ-OC-CM
25	YA	2503	2MA	C3'-C4'-C5'-O5'
1	QA	1400	5MC	C2'-C1'-N1-C2
12	XL	92	0TD	CG-CB-SB-CSB
1	QA	1400	5MC	O4'-C1'-N1-C6
12	XL	92	0TD	SB-CB-CG-OD1
25	YA	1920	OMC	C2'-C1'-N1-C6
1	XA	966	M2G	C3'-C4'-C5'-O5'
25	YA	1920	OMC	C3'-C4'-C5'-O5'
1	XA	1519	MA6	C4'-C5'-O5'-P
1	QA	1519	MA6	N1-C6-N6-C10
25	YA	1962	5MC	C2'-C1'-N1-C2
12	XL	92	0TD	CA-CB-CG-OD2
1	QA	1518	MA6	C5-C6-N6-C10
1	XA	1518	MA6	C5-C6-N6-C10
1	XA	966	M2G	O4'-C4'-C5'-O5'
1	XA	1400	5MC	O4'-C4'-C5'-O5'
25	RA	1915	5MU	O4'-C4'-C5'-O5'
25	RA	1920	OMC	C3'-C4'-C5'-O5'
1	QA	1400	5MC	O4'-C1'-N1-C2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
25	YA	1962	5MC	O4'-C1'-N1-C6
25	YA	1920	OMC	C2'-C1'-N1-C2
25	YA	2552	OMU	C3'-C2'-O2'-CM2
25	RA	1920	OMC	C2'-C1'-N1-C6
25	RA	2552	OMU	C3'-C2'-O2'-CM2
1	XA	1400	5MC	C2'-C1'-N1-C6
25	YA	1962	5MC	O4'-C1'-N1-C2
25	RA	1920	OMC	O4'-C4'-C5'-O5'
25	YA	1920	OMC	O4'-C4'-C5'-O5'
12	QL	92	0TD	SB-CB-CG-OD2
12	XL	92	0TD	SB-CB-CG-OD2
1	XA	1400	5MC	C3'-C4'-C5'-O5'
1	XA	1400	5MC	O4'-C1'-N1-C6
25	RA	1920	OMC	C2'-C1'-N1-C2
25	RA	2552	OMU	O4'-C4'-C5'-O5'
25	YA	2552	OMU	C3'-C4'-C5'-O5'
1	QA	1400	5MC	O4'-C4'-C5'-O5'
25	RA	2552	OMU	C4'-C5'-O5'-P

There are no ring outliers.

26 monomers are involved in 46 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	QA	1400	5MC	1	0
25	YA	2251	OMG	1	0
25	YA	1920	OMC	2	0
12	QL	92	0TD	1	0
1	XA	1404	5MC	2	0
25	RA	2251	OMG	2	0
1	QA	1402	4OC	1	0
1	XA	967	5MC	1	0
56	ZB	3	PPU	4	0
25	YA	2503	2MA	1	0
1	XA	1518	MA6	1	0
25	YA	2552	OMU	2	0
25	RA	1920	OMC	1	0
25	YA	1917	PSU	1	0
25	RA	1942	5MC	1	0
1	QA	1519	MA6	1	0
1	QA	966	M2G	1	0
1	XA	1407	5MC	1	0
12	XL	92	0TD	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
25	RA	2503	2MA	2	0
25	YA	1939	5MU	1	0
1	XA	1402	4OC	1	0
25	YA	1962	5MC	1	0
56	ZA	3	PPU	10	0
25	RA	2552	OMU	3	0
1	XA	1207	2MG	2	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1328 ligands modelled in this entry, 1326 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
58	SF4	QD	303	4	0,12,12	-	-	-		
58	SF4	XD	302	4	0,12,12	-	-	-		

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
58	SF4	QD	303	4	-	-	0/6/5/5
58	SF4	XD	302	4	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	QD	303	SF4	6	0
58	XD	302	SF4	4	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

EDS failed to run properly - this section is therefore empty.

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

EDS failed to run properly - this section is therefore empty.

6.3 Carbohydrates [i](#)

EDS failed to run properly - this section is therefore empty.

6.4 Ligands [i](#)

EDS failed to run properly - this section is therefore empty.

6.5 Other polymers [i](#)

EDS failed to run properly - this section is therefore empty.