Full wwPDB EM Validation Report ⓘ

Dec 15, 2025 – 04:49 PM EST

PDB ID	:	9P7H / pdb_00009p7h
EMDB ID	:	EMD-71342
Title	:	In situ HHT and CHX treated human eEF1A-A/T-P state 80S ribosome
Authors	:	Wei, Z.; Yong, X.
Deposited on	:	2025-06-20
Resolution	:	3.68 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
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:

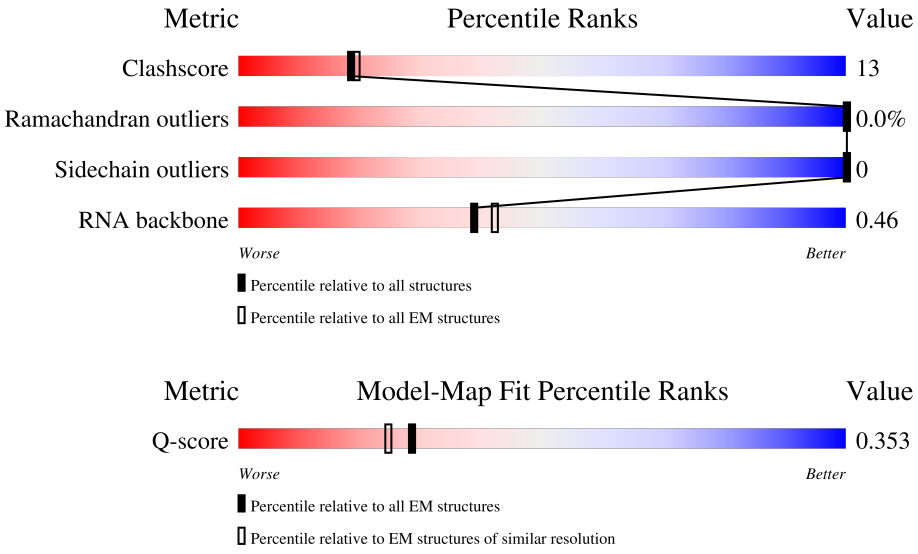
EMDB validation analysis	:	0.0.1.dev129
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.47

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.68 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
RNA backbone	6643	2191	-
Q-score	-	25397	11376 (3.18 - 4.18)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	Pt	74	32% 61% 7%
2	CF	441	66% 34%
3	AT	76	30% 43% 26%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	L5	3655	34% 55% 11%
5	L7	120	51% 45%
6	L8	156	29% 63% 6%
7	LA	248	75% 25%
8	LB	402	72% 28%
9	LC	368	79% 21%
10	LD	293	79% 21%
11	LE	250	70% 25%
12	LF	225	76% 24%
13	LG	241	79% 21%
14	LH	190	76% 24%
15	LI	213	77% 23%
16	LJ	176	81% 16%
17	LL	210	77% 23%
18	LM	139	73% 27%
19	LN	203	81% 19%
20	LO	201	81% 19%
21	LP	153	77% 23%
22	LQ	187	84% 16%
23	LR	187	71% 29%
24	LS	175	80% 20%
25	LT	159	81% 19%
26	LU	101	64% 36%
27	LV	131	79% 21%
28	LW	124	61% 32% 6%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	LX	120	83% 17%
30	LY	134	76% 24%
31	LZ	135	74% 26%
32	La	147	78% 22%
33	Lb	121	5% 74% 16% 10%
34	Lc	98	82% 18%
35	Ld	107	78% 22%
36	Le	128	79% 21%
37	Lf	109	80% 20%
38	Lg	114	80% 20%
39	Lh	122	73% 27%
40	Li	102	77% 23%
41	Lj	86	66% 34%
42	Lk	69	75% 25%
43	Ll	50	80% 20%
44	Lm	52	73% 27%
45	Ln	24	63% 38%
46	Lo	105	78% 22%
47	Lp	91	80% 20%
48	Lr	125	84% 16%
49	Ls	196	17% 73% 27%
50	Lt	157	17% 66% 20% 15%
51	SD	227	80% 20%
52	SF	189	72% 28%
53	SK	98	71% 29%

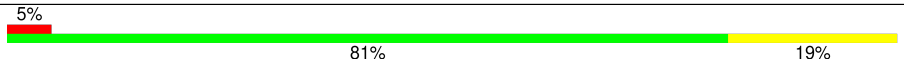
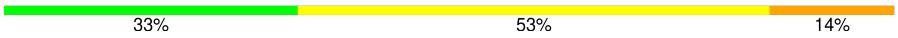
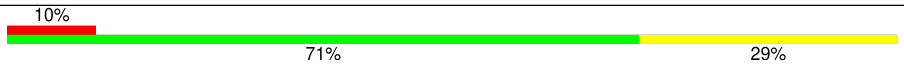
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
54	SM	122	11% 62% 38%
55	SP	121	71% 29%
56	SQ	144	67% 33%
57	SR	135	72% 27%
58	SS	145	59% 40%
59	ST	143	59% 41%
60	SU	104	62% 38%
61	SZ	75	60% 40%
62	Sc	64	64% 36%
63	Sd	55	64% 36%
64	Sf	67	60% 40%
65	Sg	313	67% 33%
66	SA	221	71% 29%
67	SB	214	75% 25%
68	SC	222	64% 35%
69	SE	262	68% 32%
70	SG	237	67% 33%
71	SH	189	67% 31%
72	SI	206	70% 30%
73	SJ	185	76% 23%
74	SL	153	5% 82% 18%
75	SN	150	87% 13%
76	SO	140	76% 21%
77	SV	83	76% 24%
78	SW	129	81% 19%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
79	SX	141	
80	SY	131	
81	Sa	102	
82	Sb	83	
83	Se	58	
84	S2	1740	
85	CI	31	

2 Entry composition

There are 91 unique types of molecules in this entry. The entry contains 223436 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 P site tRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	Pt	74	1576	705	286	512	73	0	0

- Molecule 2 is a protein called Elongation factor 1-alpha 1.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	N	O	P	S		
2	CF	441	3383	2148	581	636	1	17	0	0

- Molecule 3 is a RNA chain called A/T site tRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	AT	76	1616	723	291	527	75	0	0

- Molecule 4 is a RNA chain called 28S rRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	L5	3655	78444	34968	14346	25475	3655	1	0

- Molecule 5 is a RNA chain called 5S rRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
5	L7	120	2561	1141	456	844	120	0	0

- Molecule 6 is a RNA chain called 5.8S rRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	L8	156	3315	1481	585	1094	155	0	0

- Molecule 7 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LA	248	Total	C	N	O	S	0	0
			1898	1189	389	314	6		

- Molecule 8 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LB	402	Total	C	N	O	S	0	0
			3238	2060	608	556	14		

- Molecule 9 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	LC	368	Total	C	N	O	S	0	0
			2927	1840	583	489	15		

- Molecule 10 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LD	293	Total	C	N	O	S	0	0
			2382	1507	434	427	14		

- Molecule 11 is a protein called Large ribosomal subunit protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	LE	240	Total	C	N	O	S	0	0
			1935	1242	368	321	4		

- Molecule 12 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LF	225	Total	C	N	O	S	0	0
			1870	1202	358	301	9		

- Molecule 13 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LG	241	Total	C	N	O	S	0	0
			1927	1228	371	324	4		

- Molecule 14 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LH	190	Total	C	N	O	S	0	0
			1518	956	284	272	6		

- Molecule 15 is a protein called Ribosomal protein uL16-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LI	213	Total	C	N	O	S	0	0
			1711	1082	329	285	15		

- Molecule 16 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	LJ	170	Total	C	N	O	S	0	0
			1362	861	254	241	6		

- Molecule 17 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	LL	210	Total	C	N	O	S	0	0
			1701	1064	352	281	4		

- Molecule 18 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	LM	139	Total	C	N	O	S	0	0
			1138	730	218	183	7		

- Molecule 19 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	LN	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 20 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	LO	201	Total	C	N	O	S	0	0
			1650	1063	321	261	5		

- Molecule 21 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LP	153	Total	C	N	O	S	0	0
			1242	776	241	216	9		

- Molecule 22 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LQ	187	Total	C	N	O	S	0	0
			1513	944	314	250	5		

- Molecule 23 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LR	187	Total	C	N	O	S	0	0
			1566	971	336	250	9		

- Molecule 24 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LS	175	Total	C	N	O	S	0	0
			1453	925	283	235	10		

- Molecule 25 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LT	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 26 is a protein called Heparin-binding protein HBp15.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LU	101	Total	C	N	O	S	0	0
			825	529	144	150	2		

- Molecule 27 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LV	131	Total	C	N	O	S	0	0
			979	618	184	172	5		

- Molecule 28 is a protein called Ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	LW	116	Total	C	N	O	S	0	0
			945	592	193	156	4		

- Molecule 29 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	LX	120	Total	C	N	O	S	0	0
			985	630	185	169	1		

- Molecule 30 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	LY	134	Total	C	N	O	S	0	0
			1115	700	226	186	3		

- Molecule 31 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	LZ	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 32 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	La	147	Total	C	N	O	S	0	0
			1162	736	237	186	3		

- Molecule 33 is a protein called Large ribosomal subunit protein eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Lb	109	Total	C	N	O	S	0	0
			876	546	189	137	4		

- Molecule 34 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Lc	98	Total	C	N	O	S	0	0
			764	485	135	138	6		

- Molecule 35 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Ld	107	Total	C	N	O	S	0	0
			888	560	171	155	2		

- Molecule 36 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Le	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

- Molecule 37 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Lf	109	Total	C	N	O	S	0	0
			876	555	174	144	3		

- Molecule 38 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lg	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 39 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Lh	122	Total	C	N	O	S	0	0
			1015	641	205	168	1		

- Molecule 40 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Li	102	Total	C	N	O	S	0	0
			832	521	177	129	5		

- Molecule 41 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Lj	86	Total	C	N	O	S	0	0
			705	434	155	111	5		

- Molecule 42 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Lk	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

- Molecule 43 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Ll	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 44 is a protein called Large ribosomal subunit protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Lm	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 45 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Ln	24	Total	C	N	O	S	0	0
			230	139	62	26	3		

- Molecule 46 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Lo	105	Total	C	N	O	S	0	0
			862	542	175	139	6		

- Molecule 47 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Lp	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 48 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Lr	125	Total	C	N	O	S	0	0
			1002	622	207	168	5		

- Molecule 49 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Ls	196	Total	C	N	O	S	0	0
			1496	952	259	276	9		

- Molecule 50 is a protein called Large ribosomal subunit protein uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	Lt	134	Total	C	N	O	S	0	0
			998	626	180	189	3		

- Molecule 51 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SD	227	Total	C	N	O	S	0	0
			1765	1125	317	315	8		

- Molecule 52 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SF	189	Total	C	N	O	S	0	0
			1495	934	284	270	7		

- Molecule 53 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SK	98	Total	C	N	O	S	0	0
			827	539	148	134	6		

- Molecule 54 is a protein called Small ribosomal subunit protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SM	122	Total	C	N	O	S	0	0
			940	590	164	177	9		

- Molecule 55 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SP	121	Total	C	N	O	S	0	0
			985	623	185	170	7		

- Molecule 56 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SQ	144	Total	C	N	O	S	0	0
			1142	726	216	197	3		

- Molecule 57 is a protein called Small ribosomal subunit protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SR	135	Total	C	N	O	S	0	0
			1090	685	202	198	5		

- Molecule 58 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SS	145	Total	C	N	O	S	0	0
			1198	751	242	203	2		

- Molecule 59 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	ST	143	Total	C	N	O	S	0	0
			1112	697	214	198	3		

- Molecule 60 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SU	104	Total	C	N	O	S	0	0
			821	514	155	148	4		

- Molecule 61 is a protein called Small ribosomal subunit protein eS25.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SZ	75	Total	C	N	O	S	0	0
			598	382	111	104	1		

- Molecule 62 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	Sc	64	Total	C	N	O	S	0	0
			506	308	102	94	2		

- Molecule 63 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	Sd	55	Total	C	N	O	S	0	0
			459	286	94	74	5		

- Molecule 64 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	Sf	67	Total	C	N	O	S	0	0
			548	346	102	93	7		

- Molecule 65 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Sg	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 66 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SA	221	Total	C	N	O	S	0	0
			1741	1106	305	322	8		

- Molecule 67 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SB	214	Total	C	N	O	S	0	0
			1738	1103	310	311	14		

- Molecule 68 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	SC	220	Total	C	N	O	S	0	0
			1707	1104	293	300	10		

- Molecule 69 is a protein called Small ribosomal subunit protein eS4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	SE	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

- Molecule 70 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	SG	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 71 is a protein called Small ribosomal subunit protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SH	186	Total	C	N	O	S	0	0
			1497	956	274	266	1		

- Molecule 72 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	SI	206	Total	C	N	O	S	0	0
			1686	1058	332	291	5		

- Molecule 73 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	SJ	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 74 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SL	153	Total	C	N	O	S	0	0
			1247	793	234	214	6		

- Molecule 75 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	SN	150	Total	C	N	O	S	0	0
			1208	773	229	205	1		

- Molecule 76 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	SO	137	Total	C	N	O	S	0	0
			1024	627	200	191	6		

- Molecule 77 is a protein called Small ribosomal subunit protein eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	SV	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

- Molecule 78 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	SW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 79 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	SX	141	Total	C	N	O	S	0	0
			1098	693	219	183	3		

- Molecule 80 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	SY	131	Total	C	N	O	S	0	0
			1065	673	209	178	5		

- Molecule 81 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	Sa	102	Total	C	N	O	S	0	0
			821	512	171	133	5		

- Molecule 82 is a protein called Small ribosomal subunit protein eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	Sb	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 83 is a protein called Small ribosomal subunit protein eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	Se	58	Total	C	N	O	S	0	0
			459	284	100	74	1		

- Molecule 84 is a RNA chain called 18S rRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
84	S2	1740	Total 36953	C 16508	N 6600	O 12106	P 1739	0	0

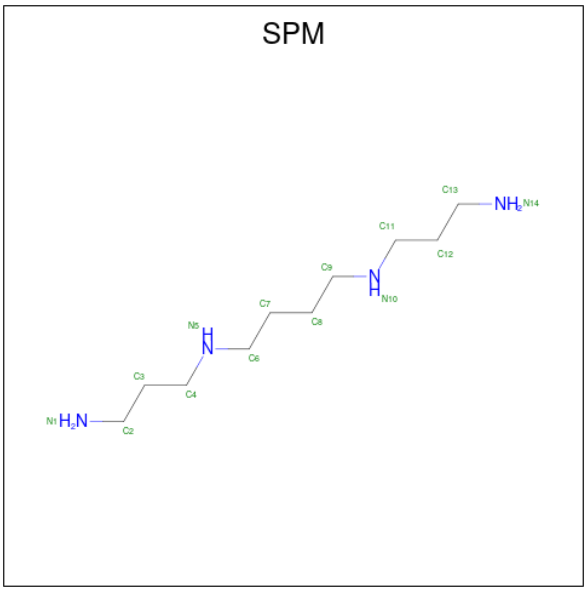
- Molecule 85 is a protein called Transcription factor BTF3.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	CI	31	Total 247	C 153	N 55	O 38	S 1	0	0

- Molecule 86 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

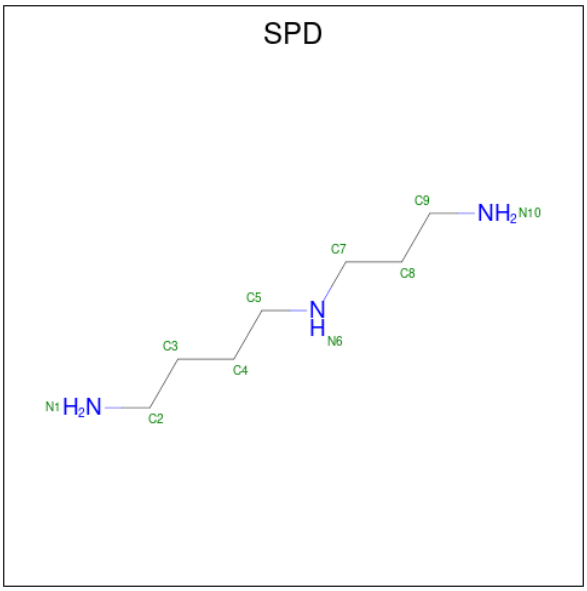
Mol	Chain	Residues	Atoms		AltConf
86	L5	178	Total 178	Mg 178	0
86	L7	3	Total 3	Mg 3	0
86	L8	5	Total 5	Mg 5	0
86	LA	1	Total 1	Mg 1	0
86	LB	1	Total 1	Mg 1	0
86	LP	1	Total 1	Mg 1	0
86	LV	1	Total 1	Mg 1	0
86	Le	1	Total 1	Mg 1	0
86	SO	1	Total 1	Mg 1	0
86	S2	27	Total 27	Mg 27	0

- Molecule 87 is SPERMINE (CCD ID: SPM) (formula: $C_{10}H_{26}N_4$) (labeled as "Ligand of Interest" by depositor).



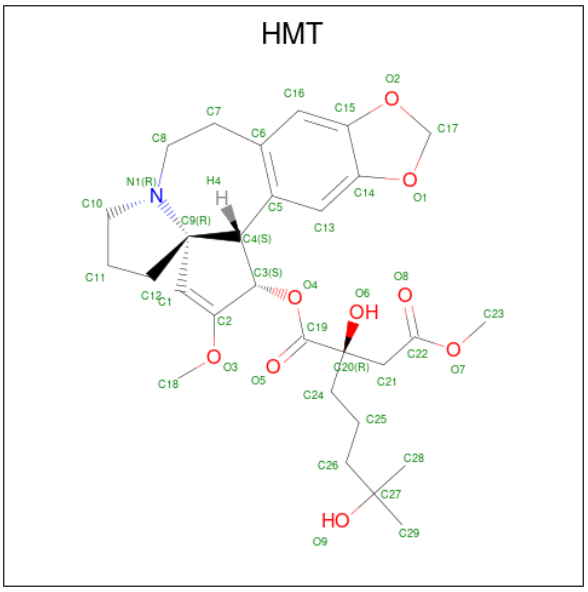
Mol	Chain	Residues	Atoms	AltConf
87	L5	1	Total C N 14 10 4	0
87	L5	1	Total C N 14 10 4	0
87	L5	1	Total C N 14 10 4	0
87	L5	1	Total C N 14 10 4	0
87	L5	1	Total C N 14 10 4	0
87	L5	1	Total C N 14 10 4	0
87	L5	1	Total C N 14 10 4	0

- Molecule 88 is SPERMIDINE (CCD ID: SPD) (formula: $C_7H_{19}N_3$) (labeled as "Ligand of Interest" by depositor).



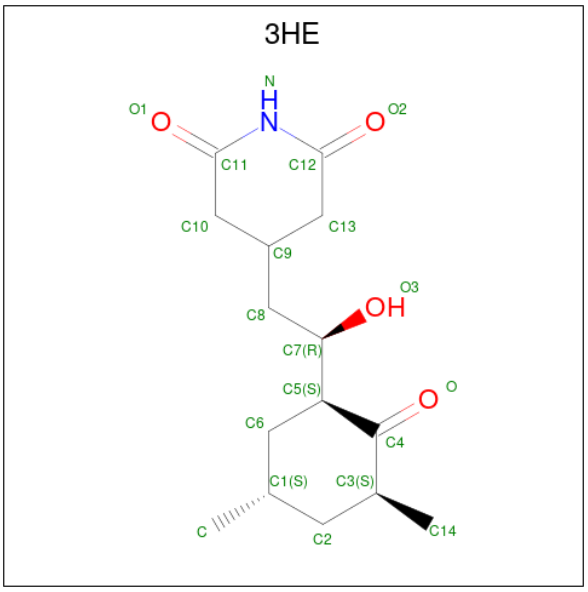
Mol	Chain	Residues	Atoms	AltConf
88	L5	1	Total C N 10 7 3	0
88	L5	1	Total C N 10 7 3	0
88	L5	1	Total C N 10 7 3	0
88	L5	1	Total C N 10 7 3	0
88	L5	1	Total C N 10 7 3	0
88	L5	1	Total C N 10 7 3	0
88	L5	1	Total C N 10 7 3	0
88	L5	1	Total C N 10 7 3	0
88	L8	1	Total C N 10 7 3	0
88	LN	1	Total C N 10 7 3	0

- Molecule 89 is (3beta)-O 3 -[(2R)-2,6-dihydroxy-2-(2-methoxy-2-oxoethyl)-6-methylheptan oyl]cephalotaxine (CCD ID: HMT) (formula: $C_{29}H_{39}NO_9$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
89	L5	1	39	29	1	9	0

- Molecule 90 is 4-{(2R)-2-[(1S,3S,5S)-3,5-dimethyl-2-oxocyclohexyl]-2-hydroxyethyl}piperidine-2,6-dione (CCD ID: 3HE) (formula: $C_{15}H_{23}NO_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
90	L5	1	20	15	1	4	0

- Molecule 91 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by

depositor).

Mol	Chain	Residues	Atoms	AltConf
91	Lg	1	Total Zn 1 1	0
91	Lj	1	Total Zn 1 1	0
91	Lm	1	Total Zn 1 1	0
91	Lo	1	Total Zn 1 1	0
91	Lp	1	Total Zn 1 1	0
91	Sa	1	Total Zn 1 1	0

3 Residue-property plots (i)

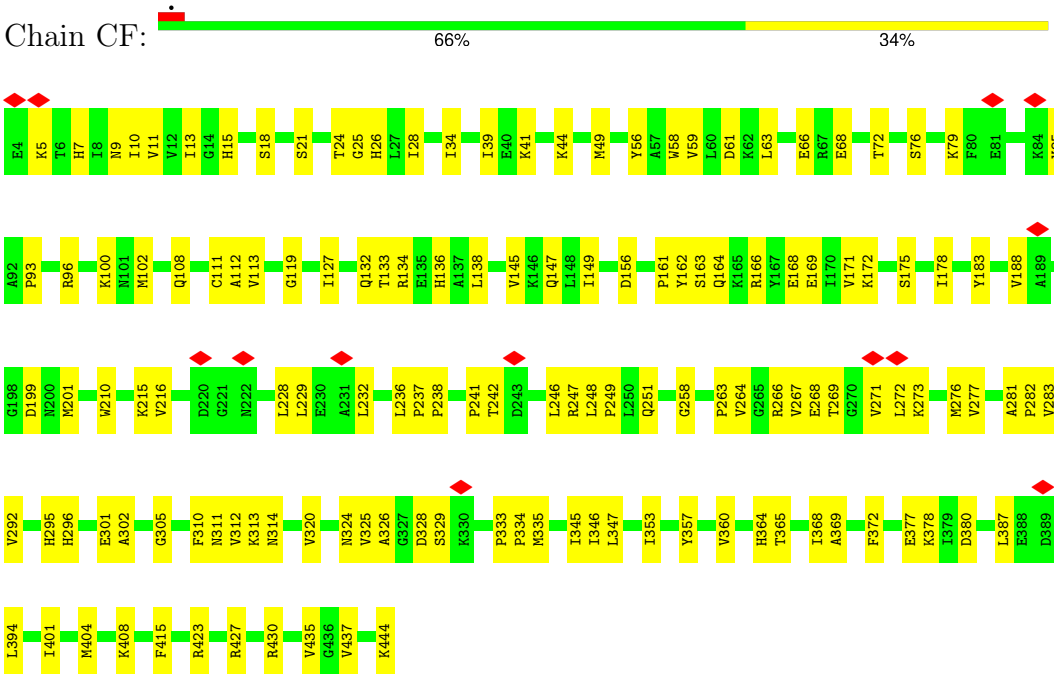
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: P site tRNA [Homo sapiens]

Chain Pt:

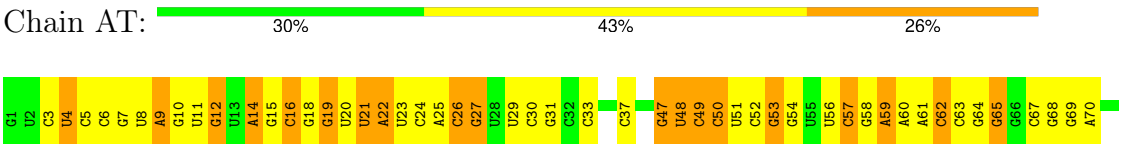
• Molecule 2: Elongation factor 1-alpha 1

Chain CF:



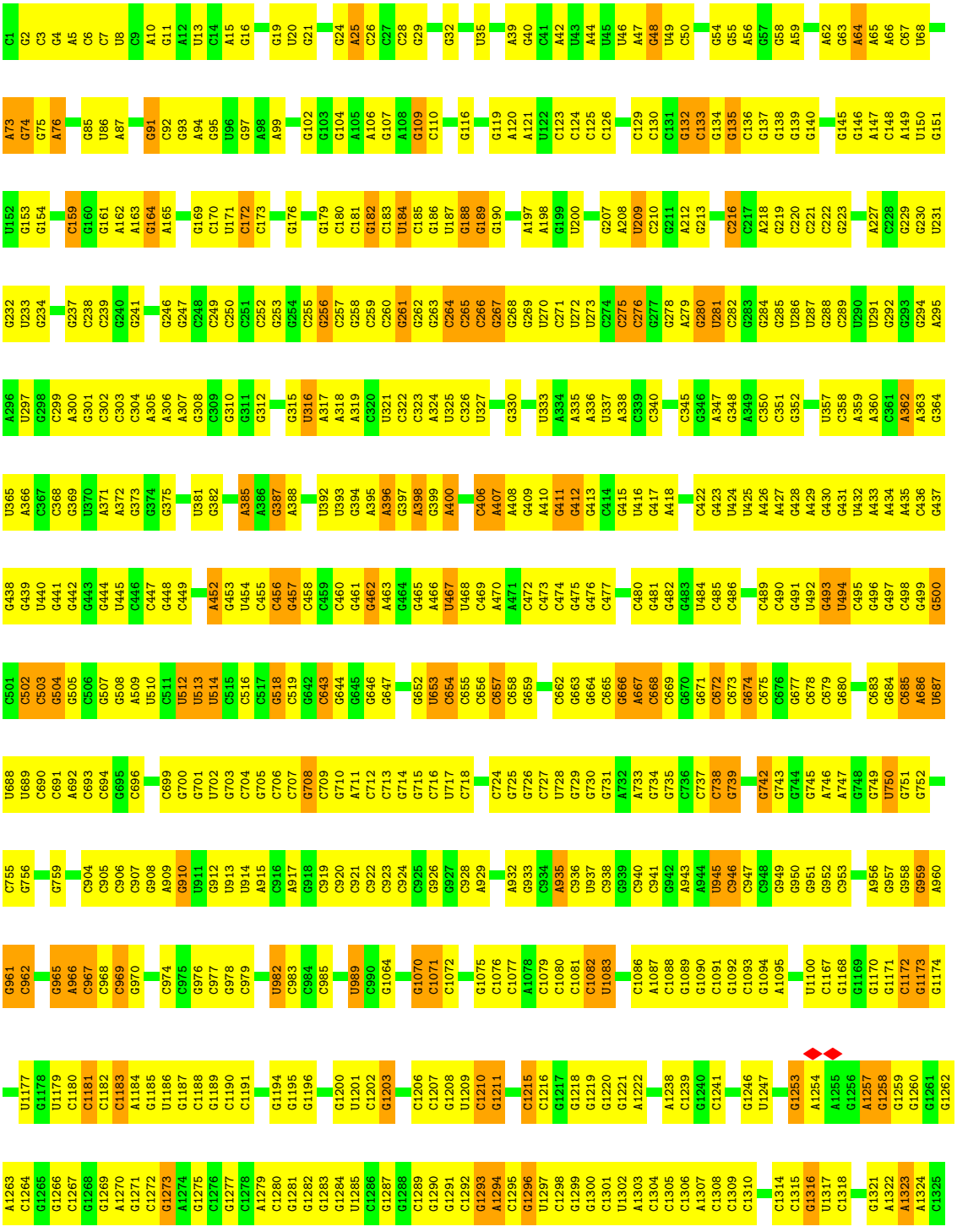
• Molecule 3: A/T site tRNA [Homo sapiens]

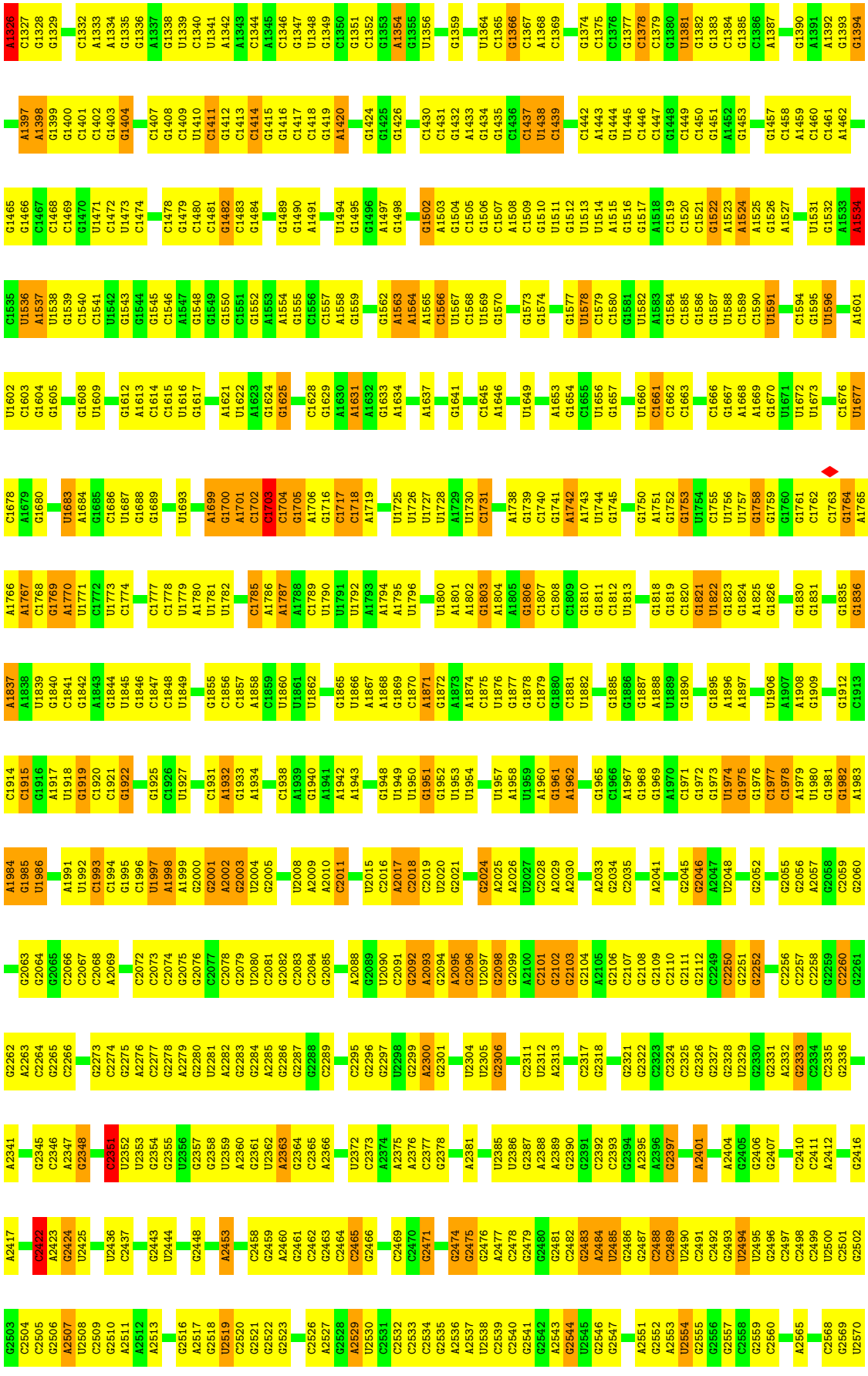
Chain AT:

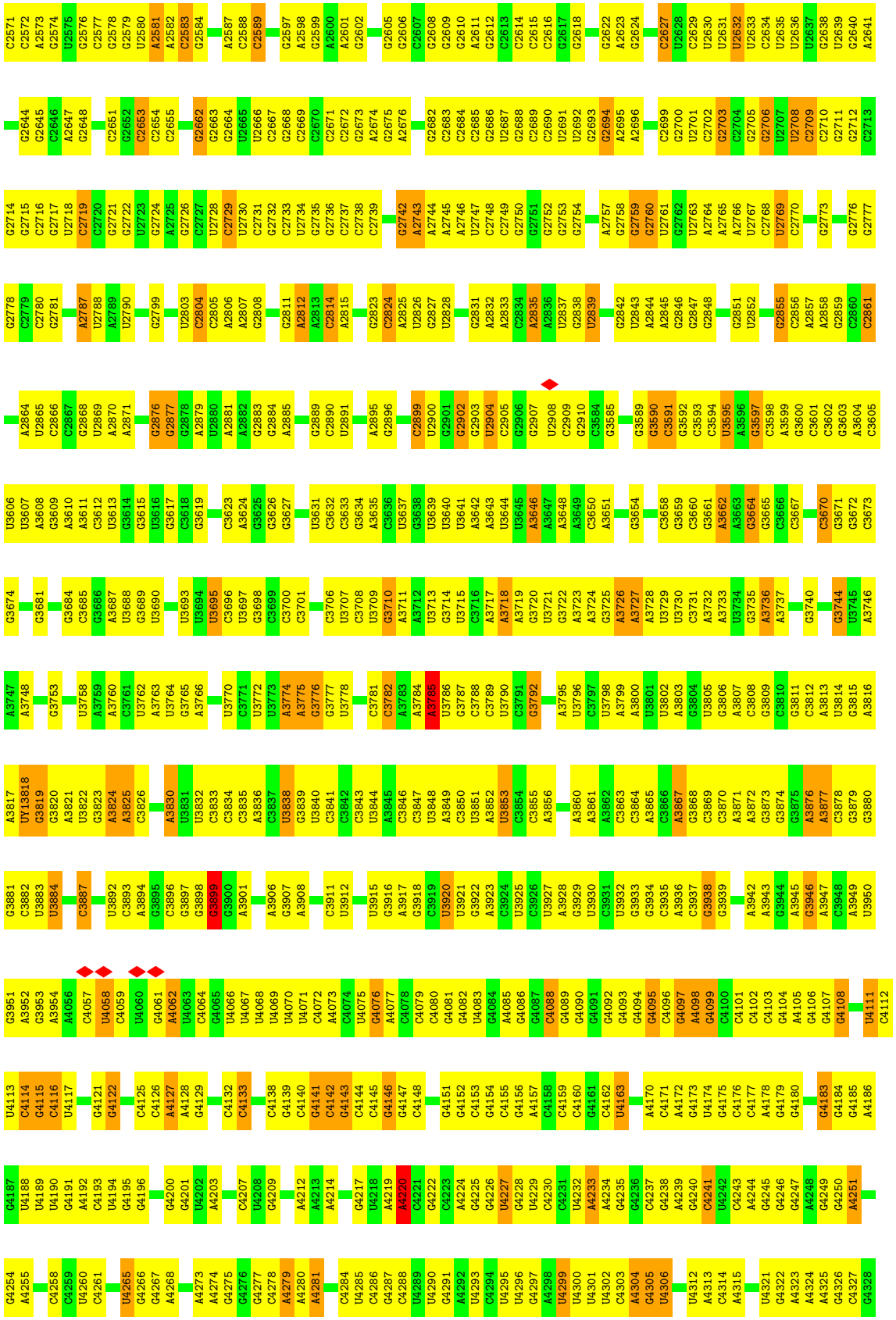


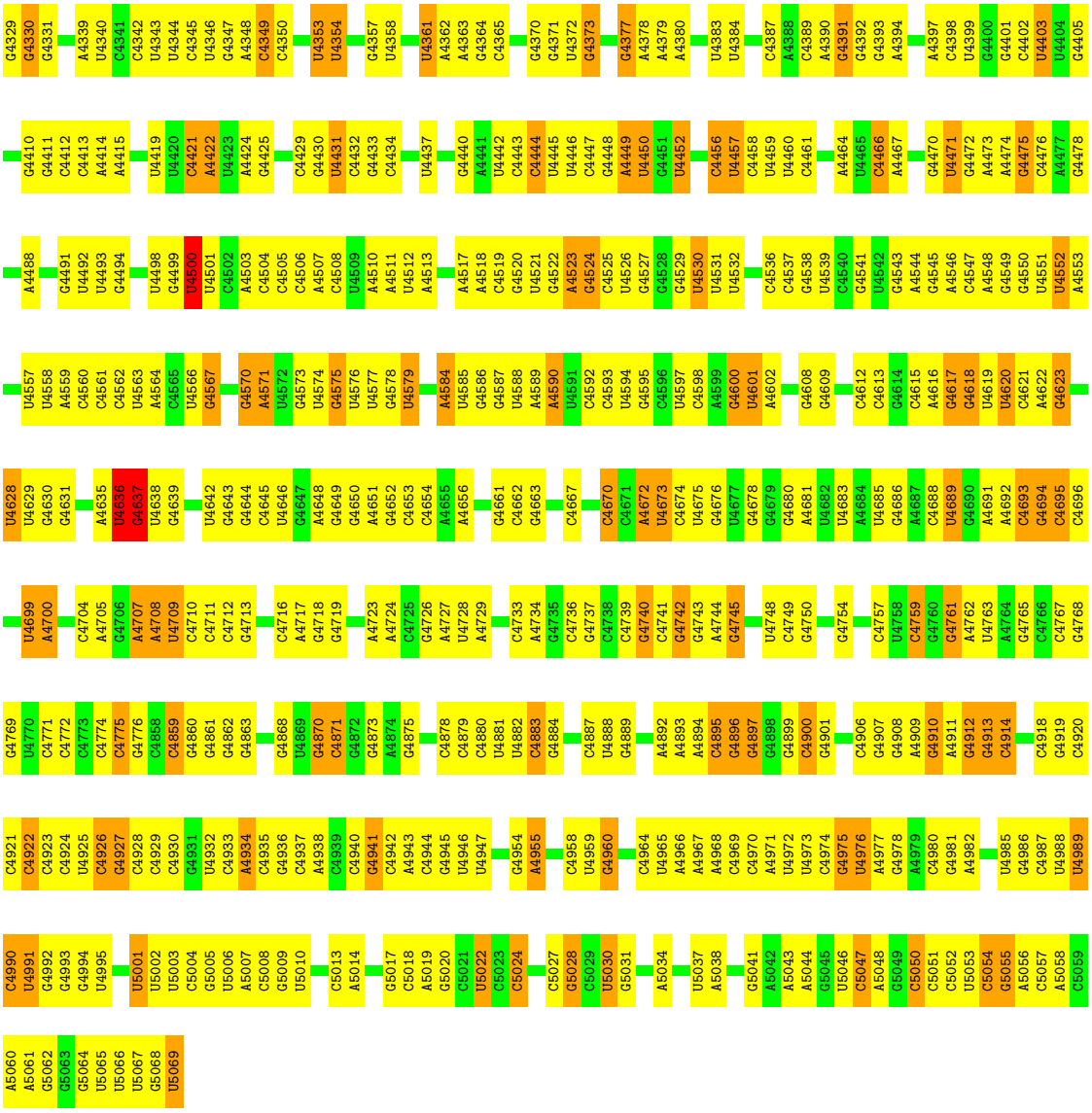
• Molecule 4: 28S rRNA [Homo sapiens]

Chain L5:



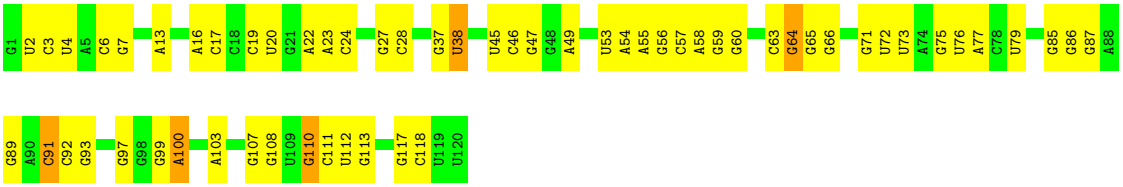






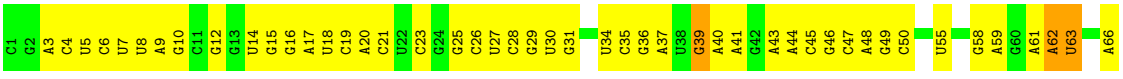
• Molecule 5: 5S rRNA [Homo sapiens]

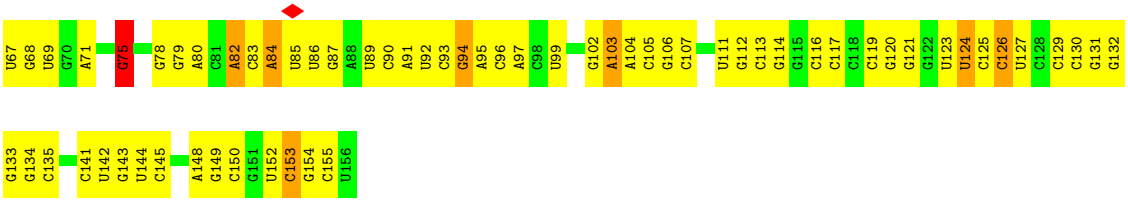
Chain L7:



• Molecule 6: 5.8S rRNA [Homo sapiens]

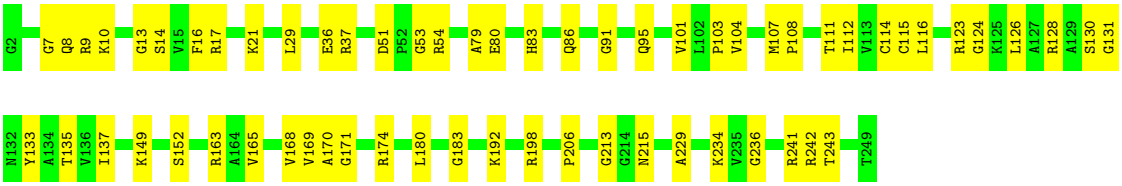
Chain L8:





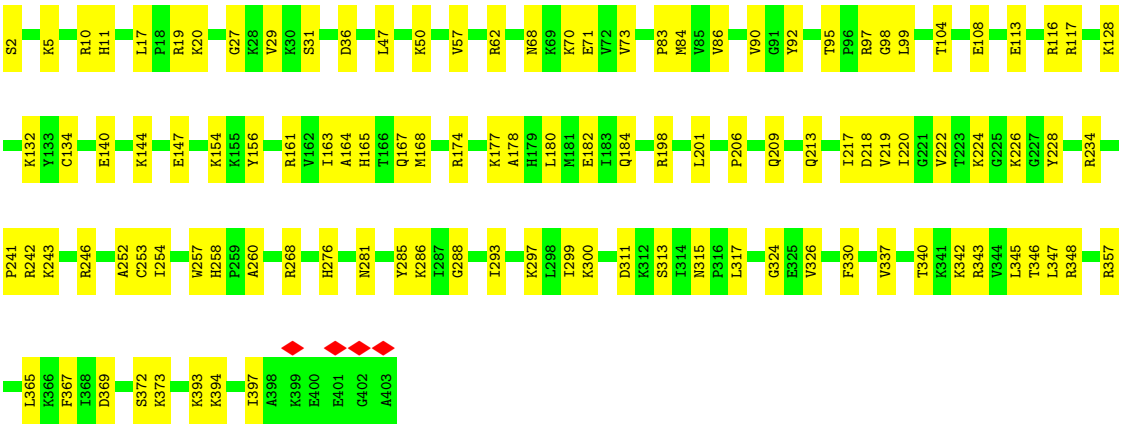
• Molecule 7: 60S ribosomal protein L8

Chain LA:



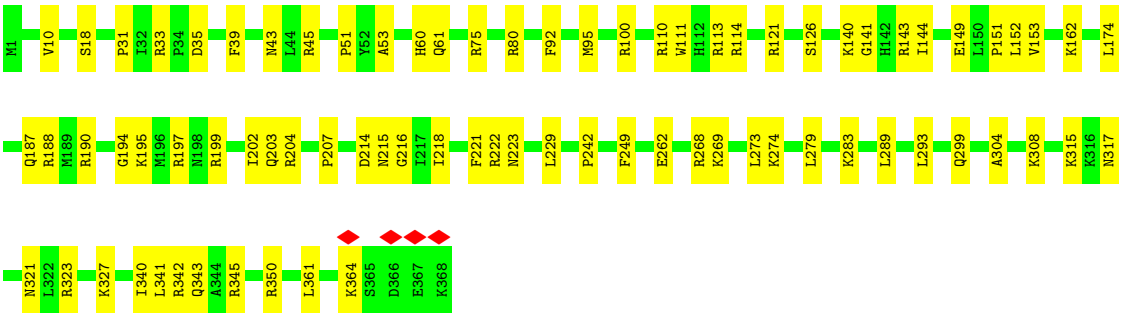
• Molecule 8: Large ribosomal subunit protein uL3

Chain LB:



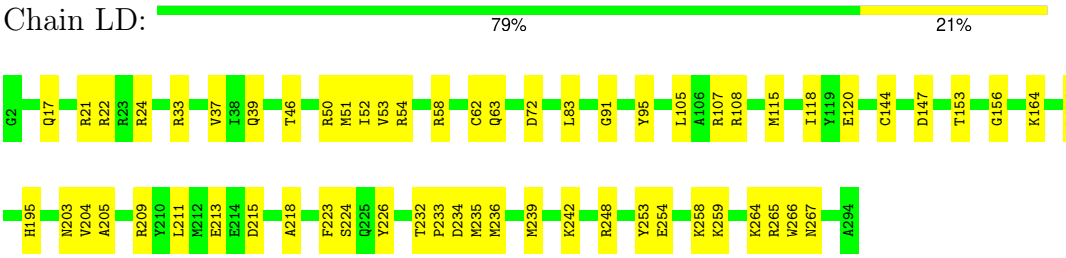
• Molecule 9: 60S ribosomal protein L4

Chain LC:



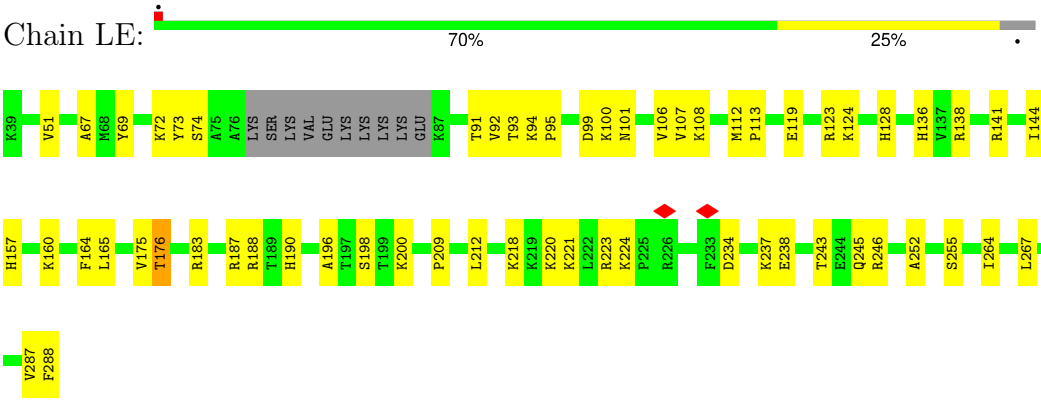
• Molecule 10: Large ribosomal subunit protein uL18

Chain LD:



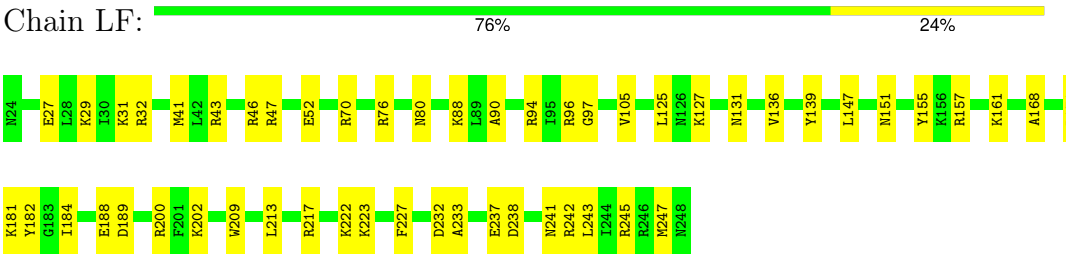
• Molecule 11: Large ribosomal subunit protein eL6

Chain LE:



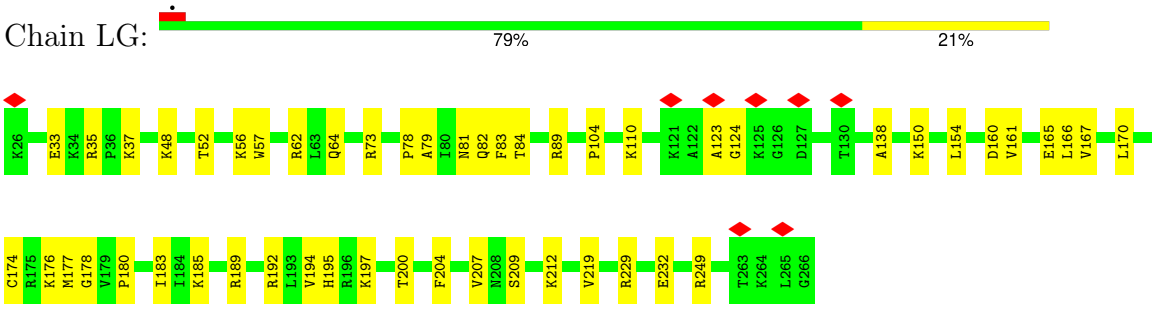
• Molecule 12: 60S ribosomal protein L7

Chain LF:



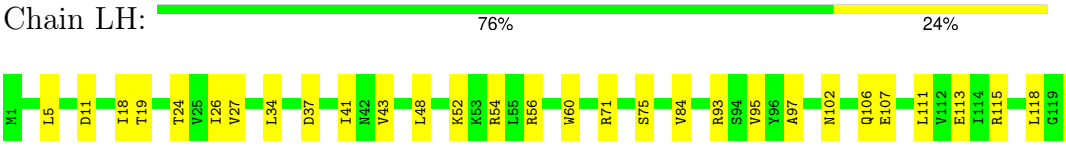
• Molecule 13: 60S ribosomal protein L7a

Chain LG:



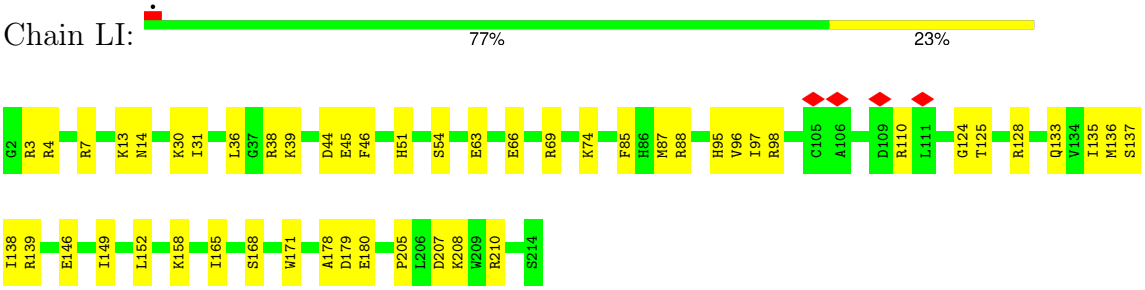
• Molecule 14: 60S ribosomal protein L9

Chain LH:



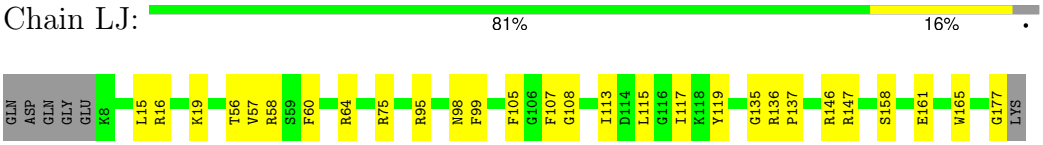
• Molecule 15: Ribosomal protein uL16-like

Chain LI:



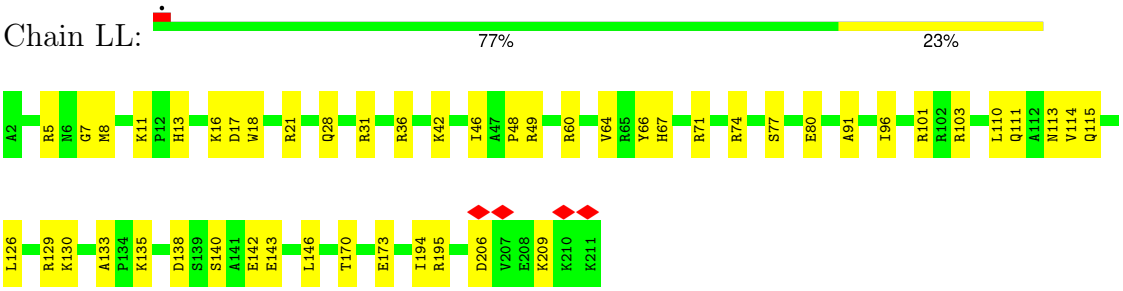
• Molecule 16: 60S ribosomal protein L11

Chain LJ:



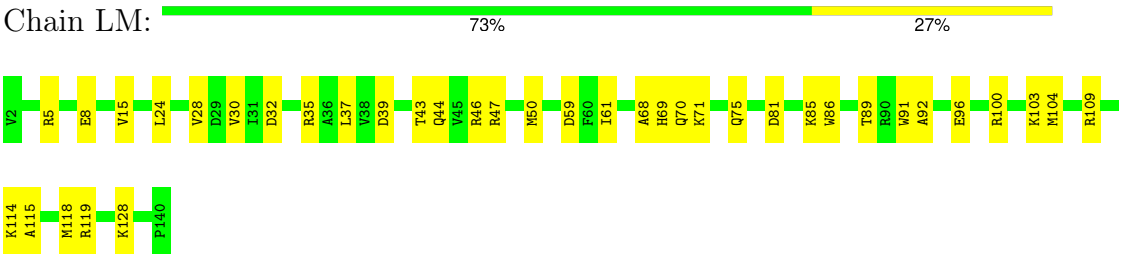
• Molecule 17: Large ribosomal subunit protein eL13

Chain LL:



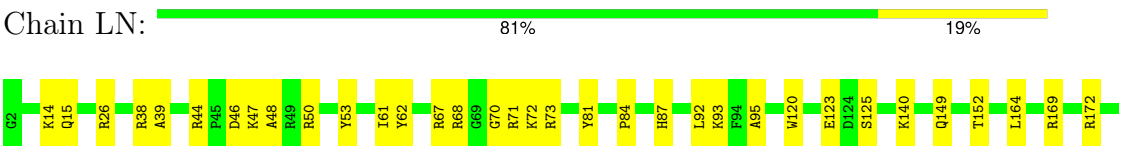
• Molecule 18: 60S ribosomal protein L14

Chain LM:



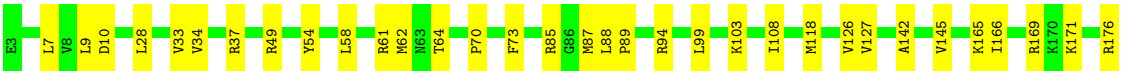
• Molecule 19: 60S ribosomal protein L15

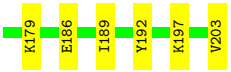
Chain LN:



• Molecule 20: 60S ribosomal protein L13a

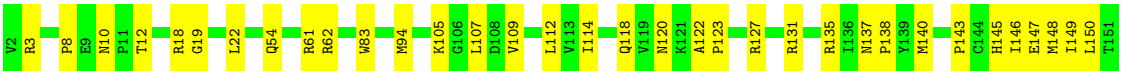
Chain LO:





• Molecule 21: 60S ribosomal protein L17

Chain LP:

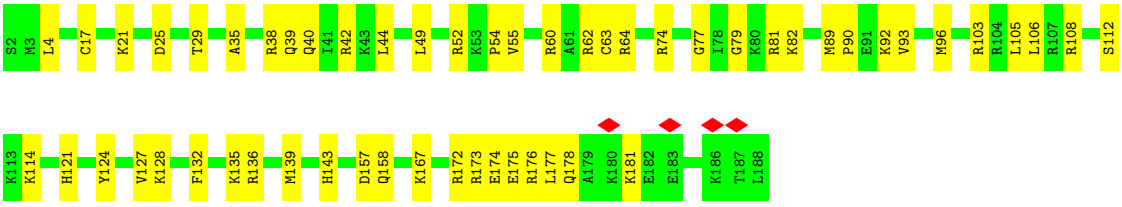


• Molecule 22: 60S ribosomal protein L18

Chain LQ:

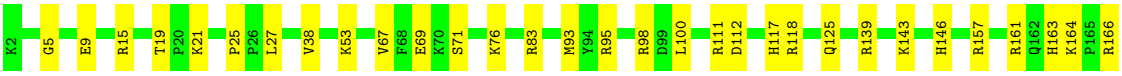
• Molecule 23: 60S ribosomal protein L19

Chain LR:



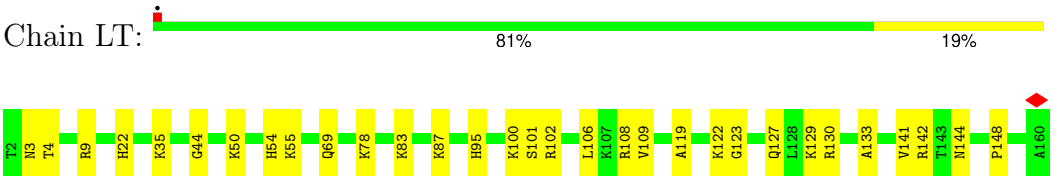
• Molecule 24: 60S ribosomal protein L18a

Chain LS:



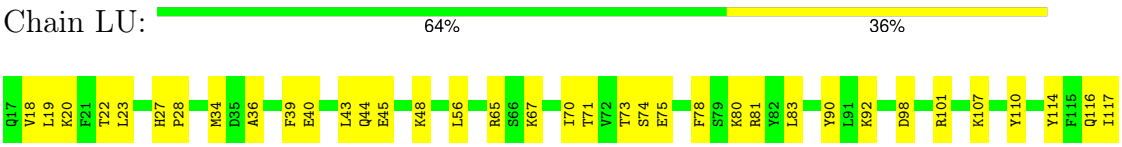
• Molecule 25: 60S ribosomal protein L21

Chain LT:



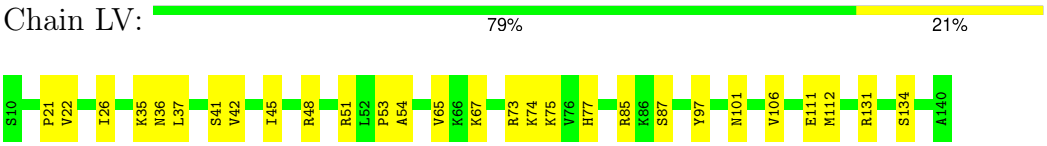
• Molecule 26: Heparin-binding protein HBp15

Chain LU:



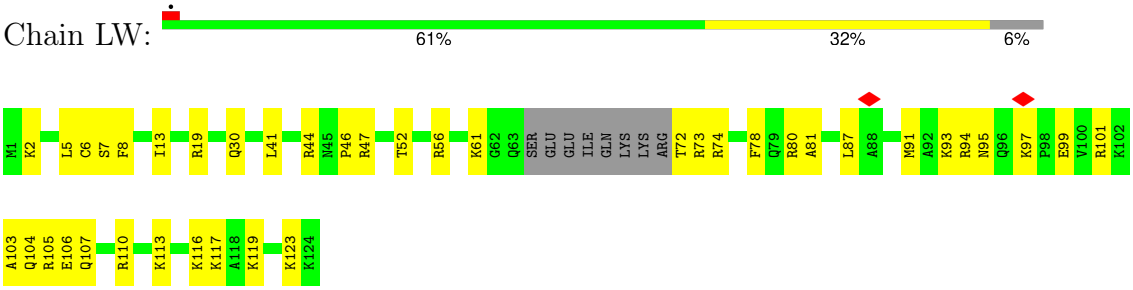
• Molecule 27: 60S ribosomal protein L23

Chain LV:



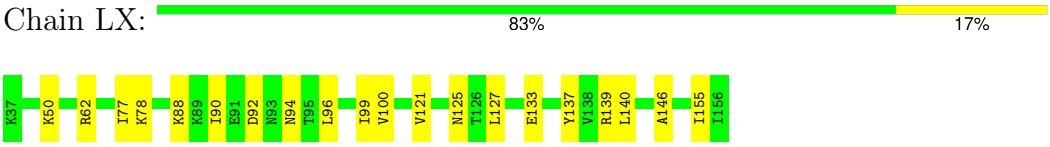
• Molecule 28: Ribosomal protein L24

Chain LW:



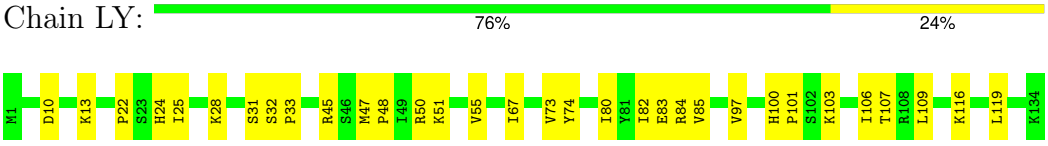
• Molecule 29: 60S ribosomal protein L23a

Chain LX:



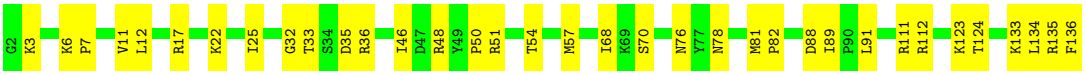
• Molecule 30: 60S ribosomal protein L26

Chain LY:

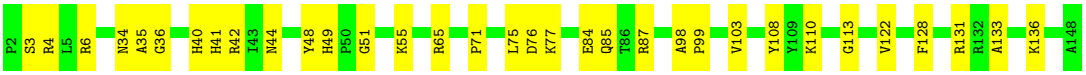


• Molecule 31: 60S ribosomal protein L27

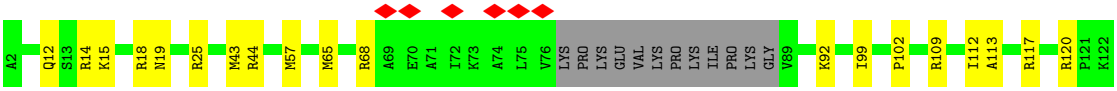
Chain LZ:



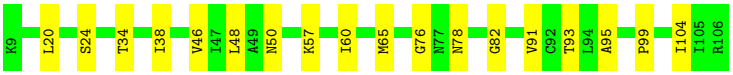
• Molecule 32: 60S ribosomal protein L27a



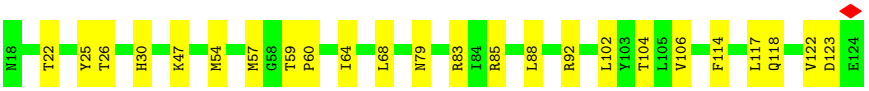
• Molecule 33: Large ribosomal subunit protein eL29



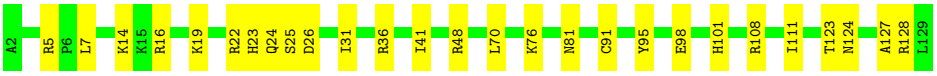
• Molecule 34: 60S ribosomal protein L30



• Molecule 35: 60S ribosomal protein L31



• Molecule 36: 60S ribosomal protein L32

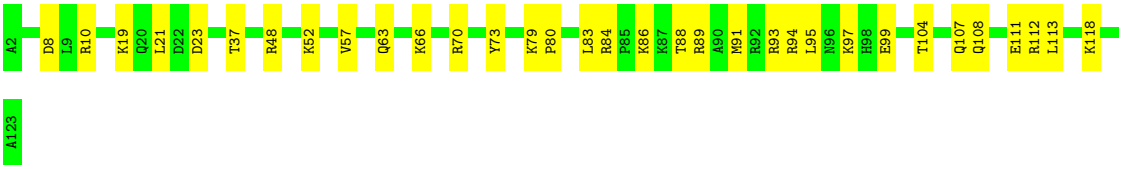


• Molecule 37: 60S ribosomal protein L35a

• Molecule 38: 60S ribosomal protein L34

• Molecule 39: 60S ribosomal protein L35

Chain Lh:

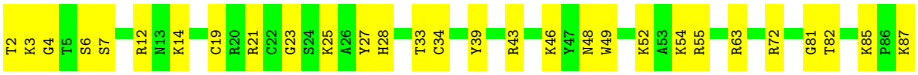


• Molecule 40: 60S ribosomal protein L36

Chain Li:

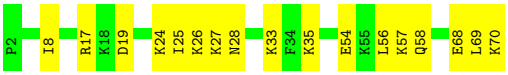
• Molecule 41: 60S ribosomal protein L37

Chain Lj:



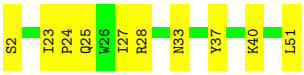
• Molecule 42: 60S ribosomal protein L38

Chain Lk:



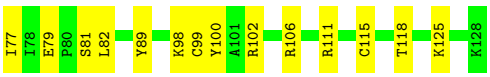
• Molecule 43: 60S ribosomal protein L39

Chain Ll:



• Molecule 44: Large ribosomal subunit protein eL40

Chain Lm:

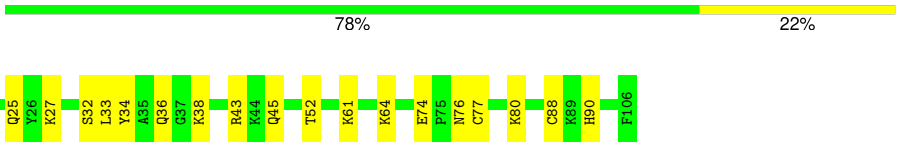


• Molecule 45: 60S ribosomal protein L41

Chain Ln:

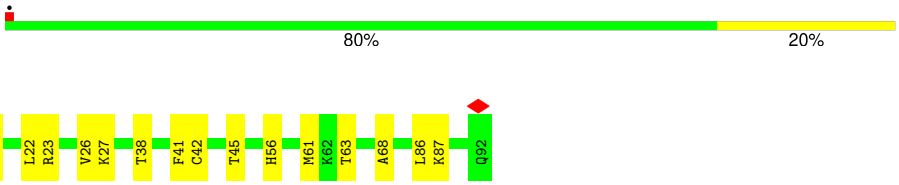
• Molecule 46: 60S ribosomal protein L36a

Chain Lo:



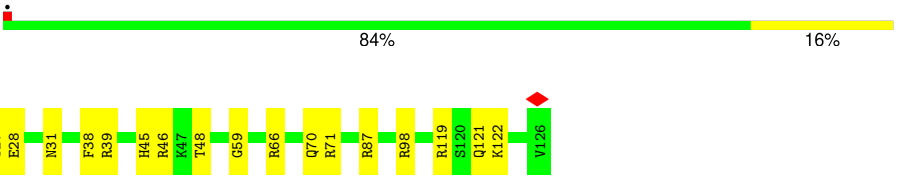
• Molecule 47: 60S ribosomal protein L37a

Chain Lp:



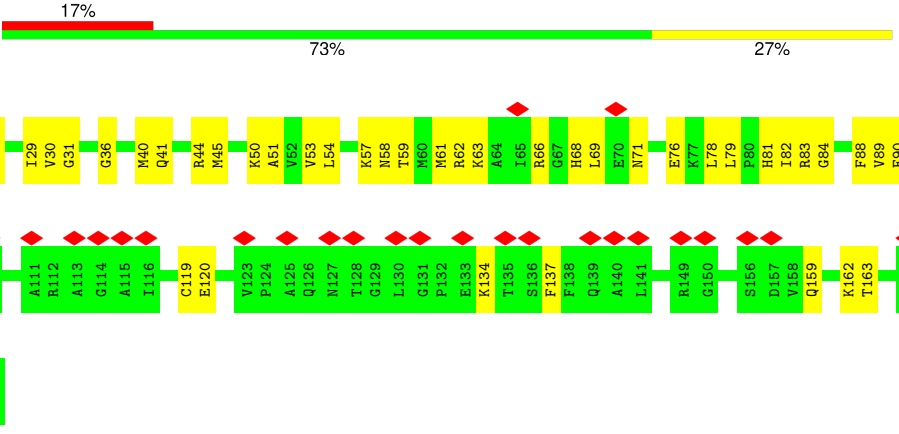
• Molecule 48: 60S ribosomal protein L28

Chain Lr:



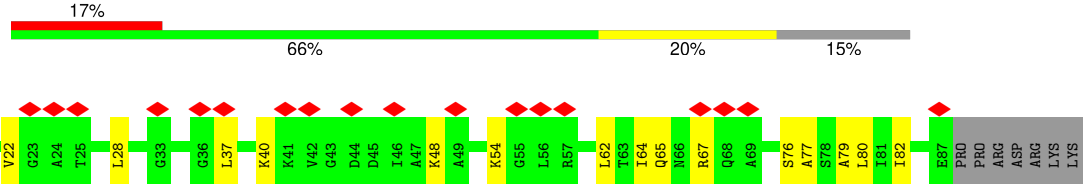
• Molecule 49: 60S acidic ribosomal protein P0

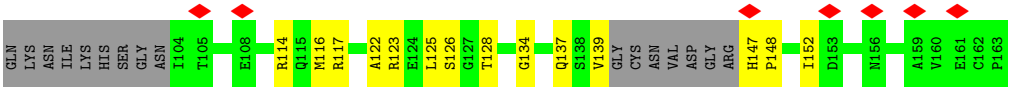
Chain Ls:



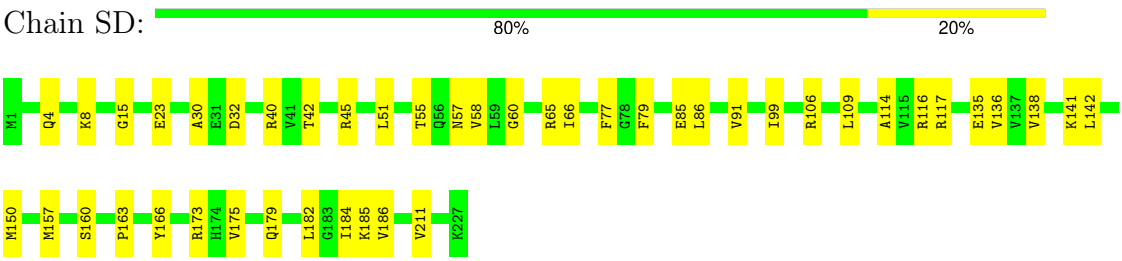
• Molecule 50: Large ribosomal subunit protein uL11

Chain Lt:

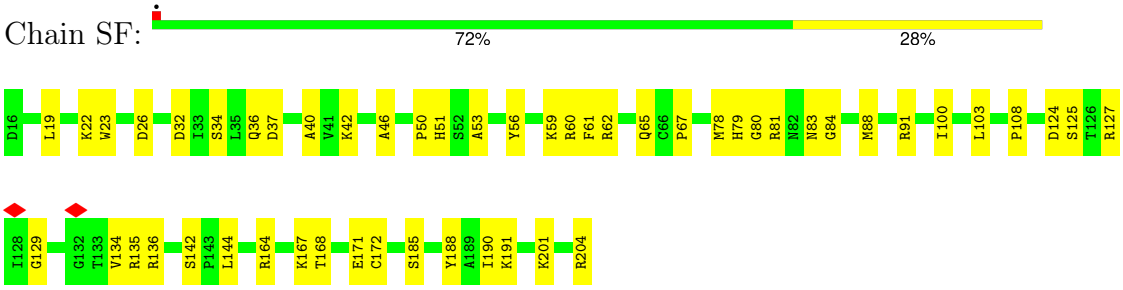




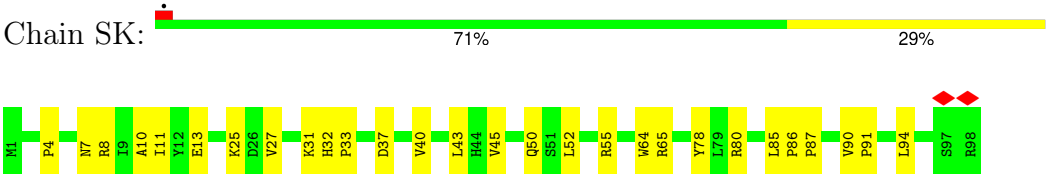
• Molecule 51: Small ribosomal subunit protein uS3



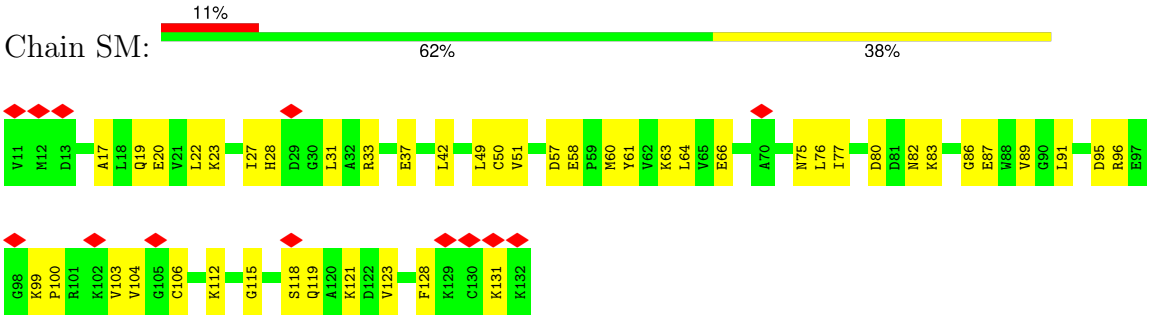
• Molecule 52: 40S ribosomal protein S5



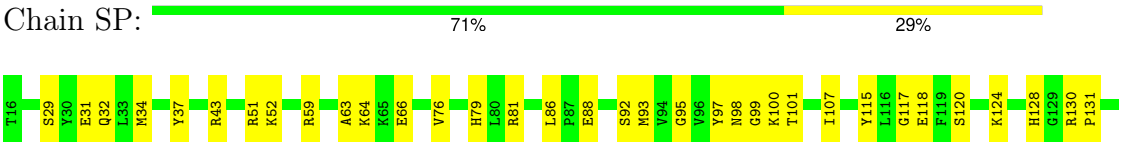
• Molecule 53: 40S ribosomal protein S10



• Molecule 54: Small ribosomal subunit protein eS12

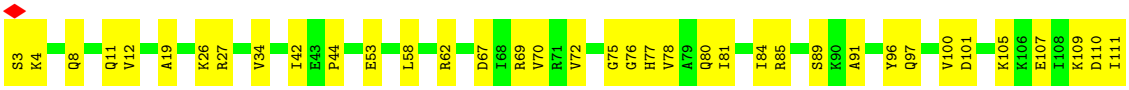


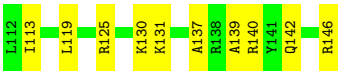
• Molecule 55: Small ribosomal subunit protein uS19



• Molecule 56: Small ribosomal subunit protein uS9

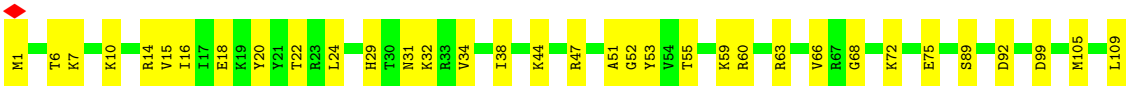
Chain SQ:

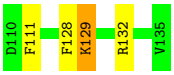




• Molecule 57: Small ribosomal subunit protein eS17

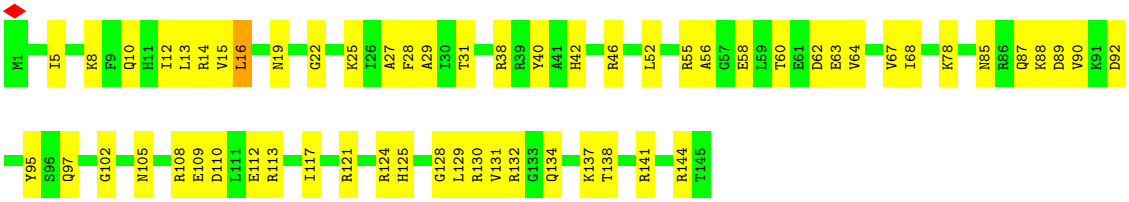
Chain SR:





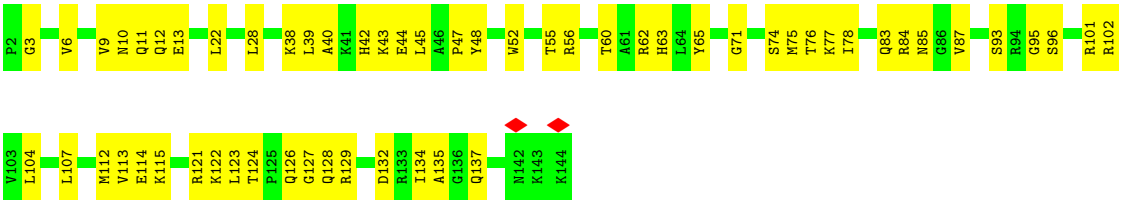
• Molecule 58: 40S ribosomal protein S18

Chain SS:



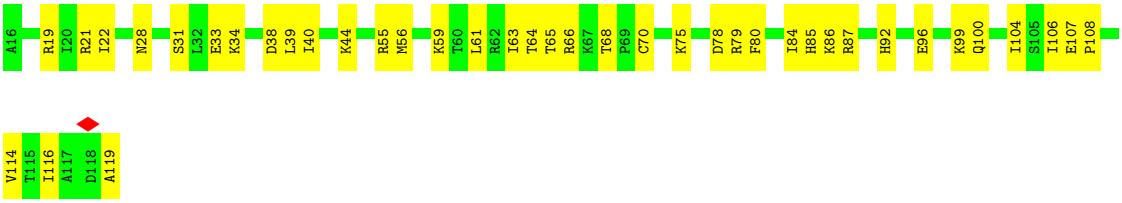
• Molecule 59: 40S ribosomal protein S19

Chain ST:



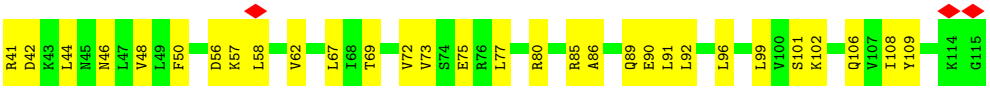
• Molecule 60: 40S ribosomal protein S20

Chain SU:



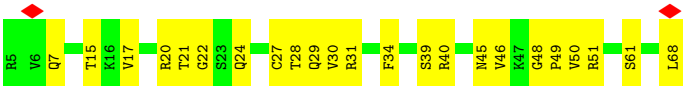
• Molecule 61: Small ribosomal subunit protein eS25

Chain SZ:



• Molecule 62: 40S ribosomal protein S28

Chain Sc:



• Molecule 63: 40S ribosomal protein S29

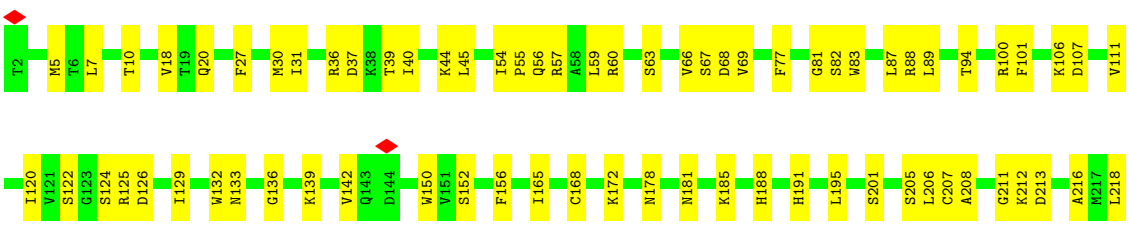
Chain Sd:

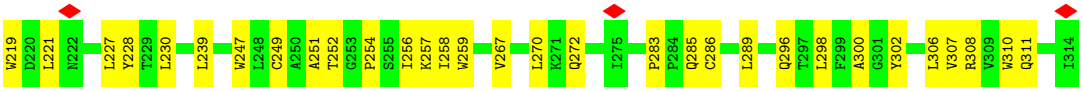
• Molecule 64: Ubiquitin-40S ribosomal protein S27a

Chain Sf:

• Molecule 65: Receptor of activated protein C kinase 1

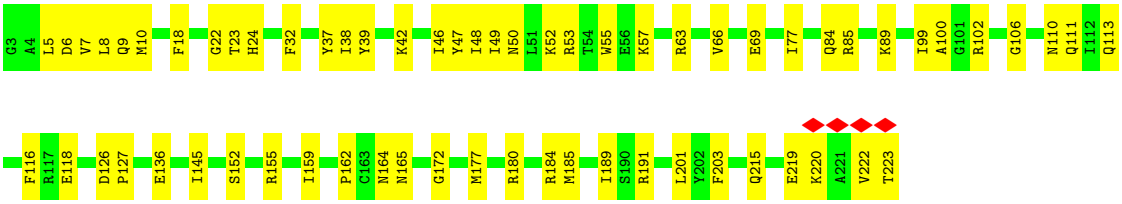
Chain Sg:





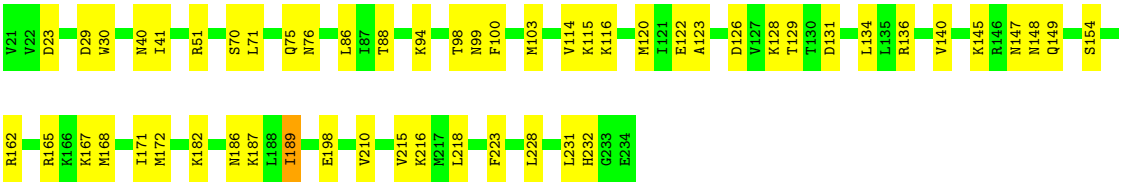
• Molecule 66: 40S ribosomal protein SA

Chain SA:



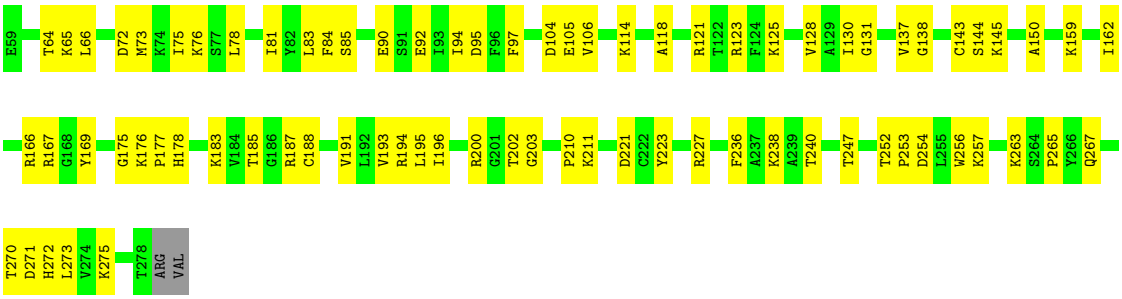
• Molecule 67: 40S ribosomal protein S3a

Chain SB:



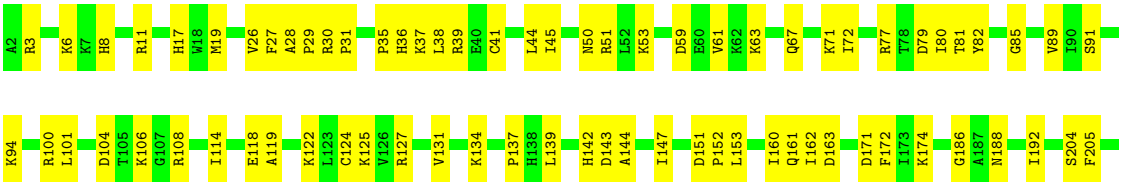
• Molecule 68: 40S ribosomal protein S2

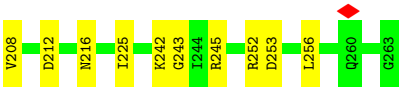
Chain SC:



• Molecule 69: Small ribosomal subunit protein eS4, X isoform

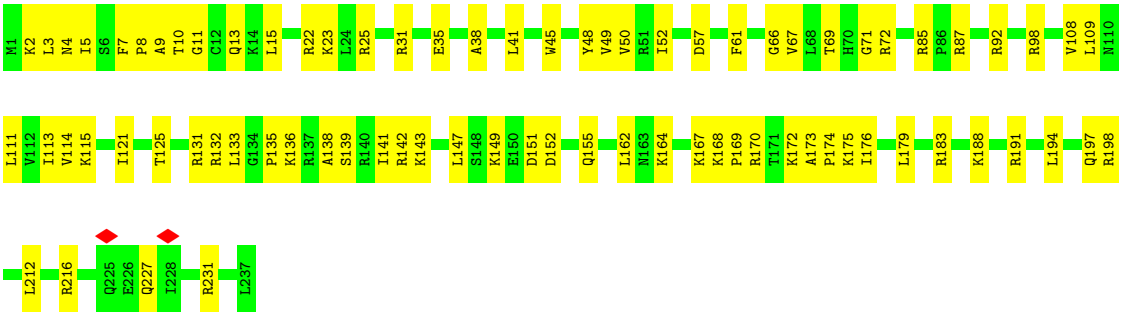
Chain SE:





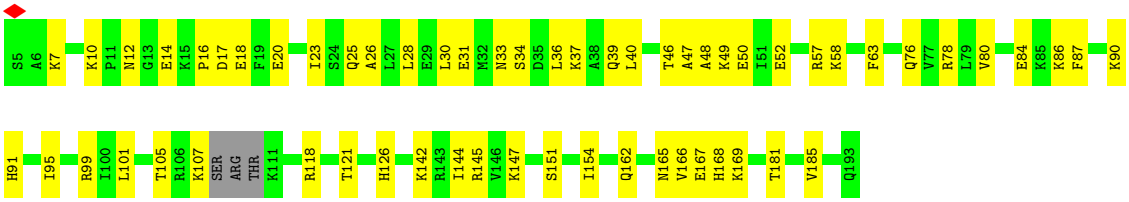
• Molecule 70: 40S ribosomal protein S6

Chain SG:



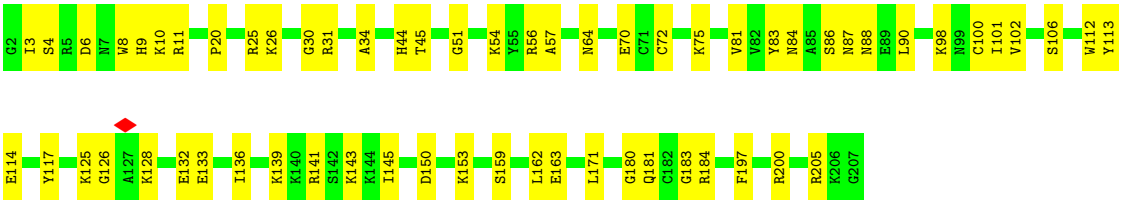
• Molecule 71: Small ribosomal subunit protein eS7

Chain SH:



• Molecule 72: 40S ribosomal protein S8

Chain SI:

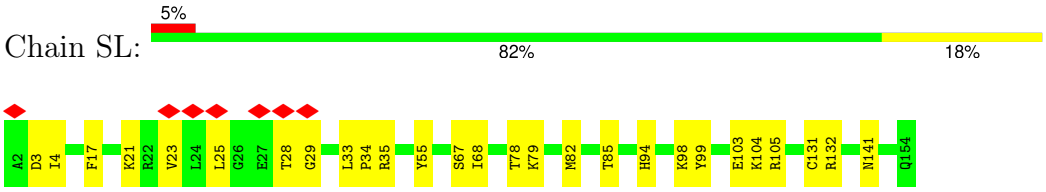


• Molecule 73: 40S ribosomal protein S9

Chain SJ:

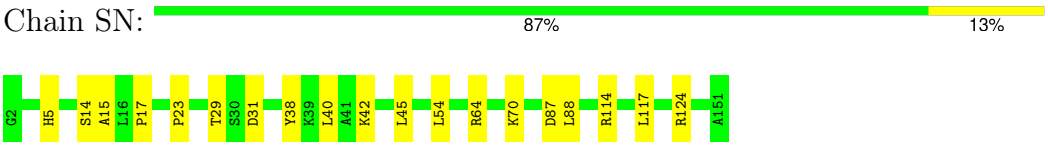
• Molecule 74: 40S ribosomal protein S11

Chain SL:



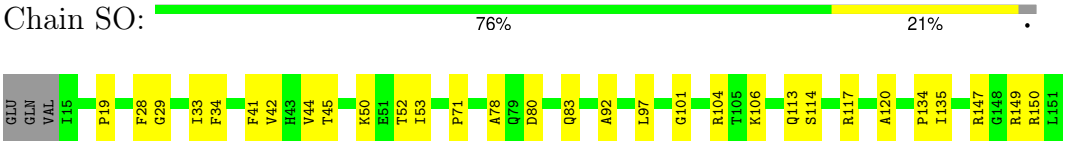
• Molecule 75: 40S ribosomal protein S13

Chain SN:



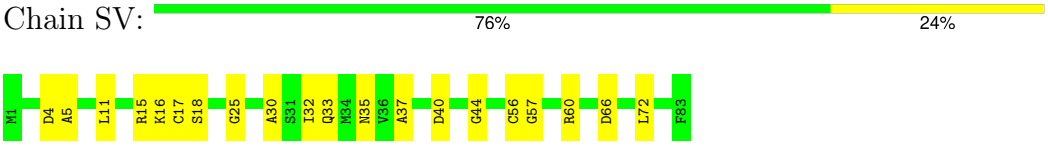
• Molecule 76: Small ribosomal subunit protein uS11

Chain SO:



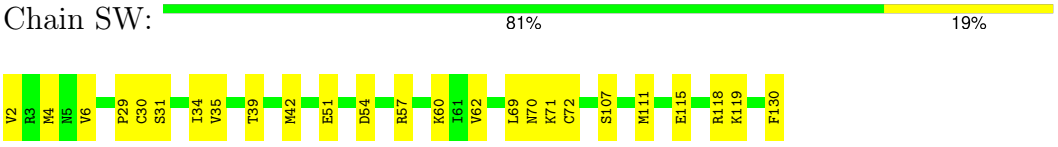
• Molecule 77: Small ribosomal subunit protein eS21

Chain SV:



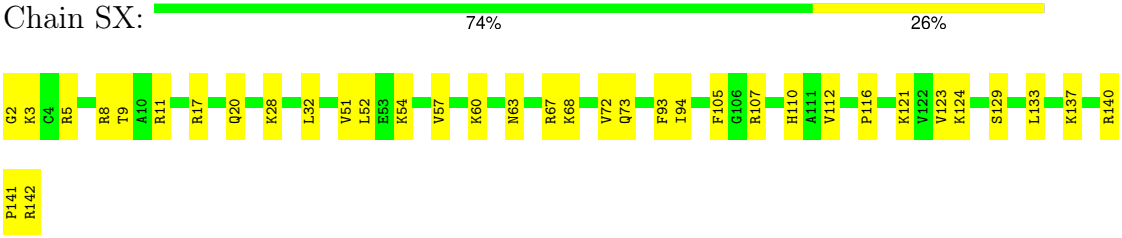
• Molecule 78: 40S ribosomal protein S15a

Chain SW:



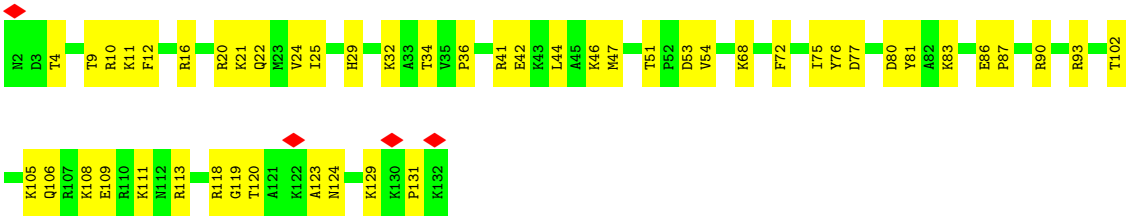
• Molecule 79: 40S ribosomal protein S23

Chain SX:



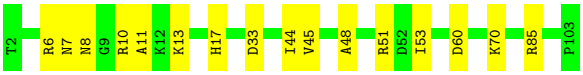
• Molecule 80: 40S ribosomal protein S24

Chain SY:



• Molecule 81: 40S ribosomal protein S26

Chain Sa:



• Molecule 82: Small ribosomal subunit protein eS27

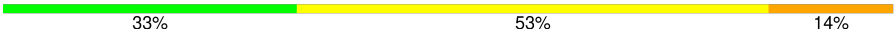
Chain Sb:

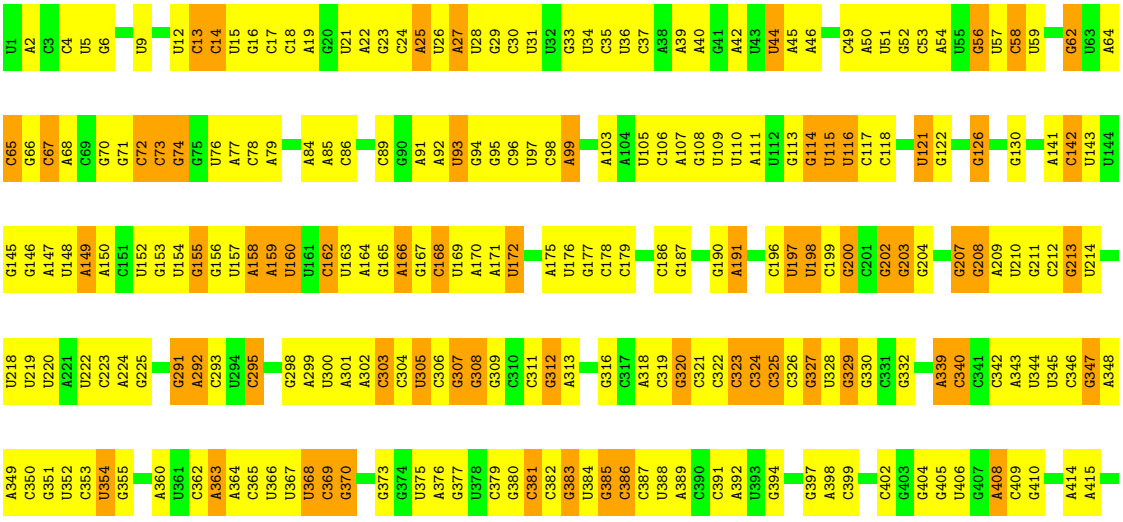
• Molecule 83: Small ribosomal subunit protein eS30

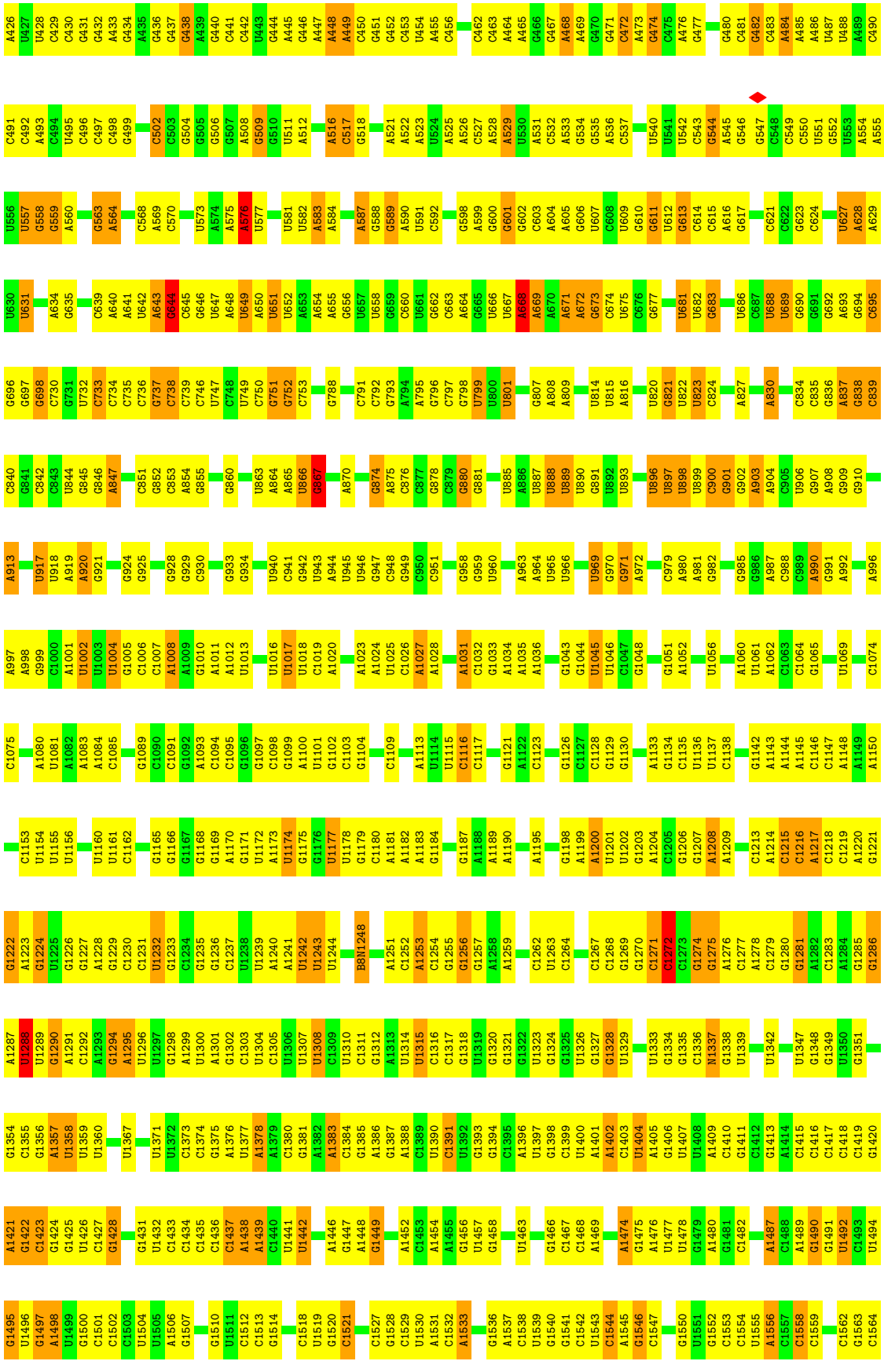
Chain Se:

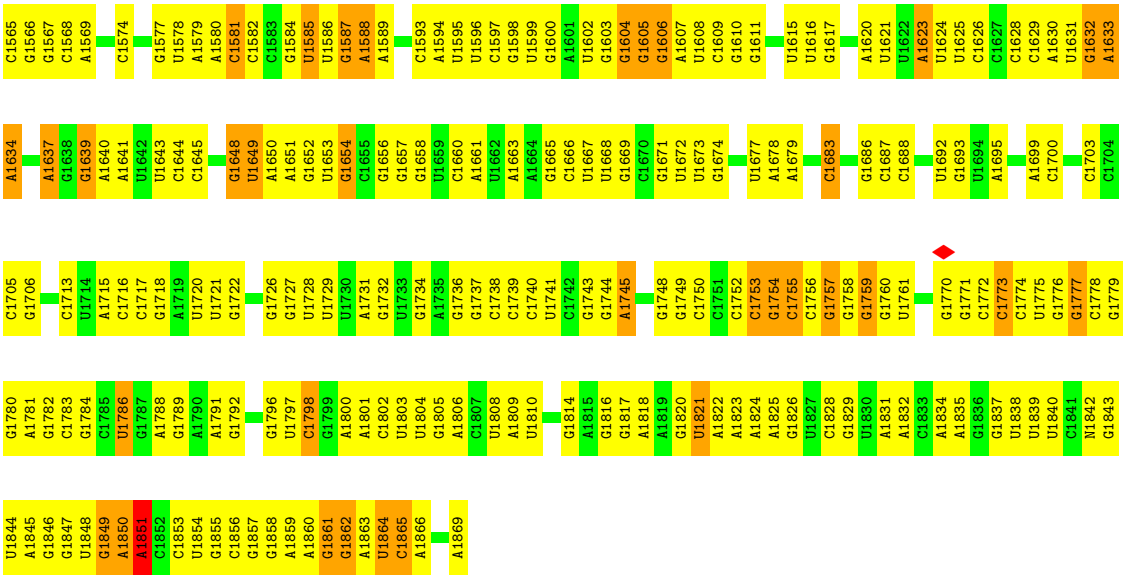
• Molecule 84: 18S rRNA [Homo sapiens]

Chain S2:



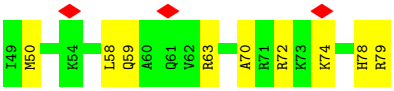






• Molecule 85: Transcription factor BTF3

Chain CI:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	8609	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.562	Depositor
Minimum map value	-0.204	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.036	Depositor
Recommended contour level	0.0796	Depositor
Map size (Å)	546.816, 546.816, 546.816	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.068, 1.068, 1.068	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: UR3, PSU, A2M, MG, B8N, OMC, 3HE, 6MZ, HMT, OMG, SPD, G7M, ZN, UY1, 1MA, SPM, SEP, 4AC, MA6, 5MC, OMU

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	Pt	0.20	0/1761	0.31	0/2741
2	CF	0.18	0/3442	0.43	0/4656
3	AT	0.16	0/1805	0.28	0/2809
4	L5	0.29	0/85098	0.33	1/132762 (0.0%)
5	L7	0.28	0/2861	0.28	0/4459
6	L8	0.29	0/3631	0.33	0/5657
7	LA	0.28	0/1936	0.42	0/2596
8	LB	0.29	0/3306	0.41	0/4424
9	LC	0.28	0/2981	0.43	0/4002
10	LD	0.25	0/2428	0.38	0/3252
11	LE	0.25	0/1973	0.46	0/2645
12	LF	0.28	0/1905	0.40	0/2539
13	LG	0.26	0/1960	0.42	0/2637
14	LH	0.25	0/1537	0.37	0/2066
15	LI	0.27	0/1751	0.40	0/2340
16	LJ	0.23	0/1385	0.40	0/1852
17	LL	0.26	0/1732	0.39	0/2315
18	LM	0.27	0/1161	0.43	0/1554
19	LN	0.29	0/1746	0.40	0/2338
20	LO	0.29	0/1682	0.42	0/2250
21	LP	0.28	0/1268	0.43	0/1701
22	LQ	0.28	0/1537	0.40	0/2052
23	LR	0.26	0/1582	0.41	0/2091
24	LS	0.29	0/1493	0.40	0/2003
25	LT	0.27	0/1326	0.38	0/1770
26	LU	0.26	0/839	0.47	0/1126
27	LV	0.27	0/993	0.43	0/1332
28	LW	0.25	0/959	0.42	0/1270
29	LX	0.25	0/1002	0.38	0/1345
30	LY	0.27	0/1132	0.40	0/1504
31	LZ	0.25	0/1130	0.41	0/1507

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
32	La	0.28	0/1191	0.39	0/1591
33	Lb	0.23	0/889	0.43	0/1175
34	Lc	0.26	0/774	0.39	0/1038
35	Ld	0.28	0/903	0.38	0/1216
36	Le	0.27	0/1071	0.41	0/1429
37	Lf	0.28	0/895	0.39	0/1198
38	Lg	0.26	0/916	0.41	0/1220
39	Lh	0.24	0/1023	0.37	0/1351
40	Li	0.24	0/843	0.40	0/1115
41	Lj	0.27	0/720	0.41	0/952
42	Lk	0.25	0/575	0.47	0/761
43	Ll	0.28	0/454	0.37	0/599
44	Lm	0.25	0/435	0.40	0/575
45	Ln	0.23	0/231	0.35	0/294
46	Lo	0.27	0/876	0.40	0/1156
47	Lp	0.28	0/718	0.38	0/953
48	Lr	0.27	0/1017	0.39	0/1364
49	Ls	0.18	0/1519	0.40	0/2052
50	Lt	0.20	0/1009	0.54	2/1363 (0.1%)
51	SD	0.20	0/1793	0.37	0/2414
52	SF	0.22	0/1516	0.40	0/2037
53	SK	0.22	0/851	0.48	0/1147
54	SM	0.26	0/950	0.45	0/1275
55	SP	0.27	0/1003	0.46	0/1342
56	SQ	0.22	0/1160	0.44	0/1553
57	SR	0.23	0/1105	0.48	0/1484
58	SS	0.22	0/1216	0.43	0/1628
59	ST	0.23	0/1131	0.45	0/1515
60	SU	0.24	0/831	0.49	0/1115
61	SZ	0.22	0/604	0.52	0/810
62	Sc	0.23	0/508	0.38	0/680
63	Sd	0.21	0/470	0.39	0/623
64	Sf	0.19	0/560	0.51	0/745
65	Sg	0.21	0/2493	0.44	0/3394
66	SA	0.26	0/1778	0.39	0/2416
67	SB	0.28	1/1765 (0.1%)	0.41	0/2362
68	SC	0.27	0/1744	0.42	0/2357
69	SE	0.23	0/2118	0.41	0/2849
70	SG	0.22	0/1946	0.44	0/2590
71	SH	0.24	0/1519	0.47	0/2033
72	SI	0.31	1/1715 (0.1%)	0.46	0/2287
73	SJ	0.22	0/1550	0.39	0/2069
74	SL	0.23	0/1268	0.37	0/1696

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
75	SN	0.27	0/1232	0.38	0/1656
76	SO	0.26	0/1037	0.41	0/1391
77	SV	0.25	0/643	0.43	0/860
78	SW	0.28	0/1051	0.41	0/1406
79	SX	0.23	0/1116	0.44	0/1490
80	SY	0.23	0/1083	0.47	0/1438
81	Sa	0.25	0/836	0.40	0/1121
82	Sb	0.26	0/665	0.41	0/891
83	Se	0.22	0/465	0.46	0/612
84	S2	0.27	1/39756 (0.0%)	0.32	0/61939
85	CI	0.16	0/247	0.30	0/323
All	All	0.27	3/235126 (0.0%)	0.36	3/344545 (0.0%)

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
11	LE	0	1
56	SQ	0	1
All	All	0	2

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	SB	189	ILE	CA-CB	-6.19	1.51	1.54
72	SI	114	GLU	CD-OE1	-5.56	1.14	1.25
84	S2	1326	OMU	O3'-P	5.12	1.61	1.56

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	1703	C	C2'-C3'-O3'	5.40	117.61	109.50
50	Lt	54	LYS	CA-C-N	5.25	131.14	121.70
50	Lt	54	LYS	C-N-CA	5.25	131.14	121.70

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	LE	176	THR	Peptide
56	SQ	107	GLU	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	Pt	1576	0	803	34	0
2	CF	3383	0	3431	107	0
3	AT	1616	0	824	40	0
4	L5	78444	0	39714	1987	0
5	L7	2561	0	1295	52	0
6	L8	3315	0	1685	106	0
7	LA	1898	0	1993	49	0
8	LB	3238	0	3376	83	0
9	LC	2927	0	3104	65	0
10	LD	2382	0	2410	48	0
11	LE	1935	0	2096	55	0
12	LF	1870	0	1996	43	0
13	LG	1927	0	2074	35	0
14	LH	1518	0	1601	34	0
15	LI	1711	0	1749	34	0
16	LJ	1362	0	1399	21	0
17	LL	1701	0	1818	44	0
18	LM	1138	0	1204	34	0
19	LN	1701	0	1749	35	0
20	LO	1650	0	1794	32	0
21	LP	1242	0	1269	25	0
22	LQ	1513	0	1628	29	0
23	LR	1566	0	1729	49	0
24	LS	1453	0	1490	25	0
25	LT	1298	0	1366	30	0
26	LU	825	0	850	27	0
27	LV	979	0	1039	19	0
28	LW	945	0	1003	33	0
29	LX	985	0	1066	16	0
30	LY	1115	0	1205	21	0
31	LZ	1107	0	1182	24	0
32	La	1162	0	1213	24	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	Lb	876	0	948	18	0
34	Lc	764	0	804	11	0
35	Ld	888	0	930	19	0
36	Le	1053	0	1147	21	0
37	Lf	876	0	912	20	0
38	Lg	906	0	998	22	0
39	Lh	1015	0	1148	30	0
40	Li	832	0	917	18	0
41	Lj	705	0	737	27	0
42	Lk	569	0	637	11	0
43	Ll	444	0	483	10	0
44	Lm	429	0	465	15	0
45	Ln	230	0	276	11	0
46	Lo	862	0	929	16	0
47	Lp	708	0	756	15	0
48	Lr	1002	0	1068	18	0
49	Ls	1496	0	1540	37	0
50	Lt	998	0	1032	22	0
51	SD	1765	0	1865	30	0
52	SF	1495	0	1549	37	0
53	SK	827	0	854	24	0
54	SM	940	0	965	31	0
55	SP	985	0	1031	31	0
56	SQ	1142	0	1213	34	0
57	SR	1090	0	1149	30	0
58	SS	1198	0	1261	47	0
59	ST	1112	0	1146	46	0
60	SU	821	0	883	32	0
61	SZ	598	0	656	24	0
62	Sc	506	0	536	19	0
63	Sd	459	0	452	20	0
64	Sf	548	0	551	24	0
65	Sg	2436	0	2393	71	0
66	SA	1741	0	1746	50	0
67	SB	1738	0	1809	40	0
68	SC	1707	0	1791	58	0
69	SE	2076	0	2177	63	0
70	SG	1923	0	2089	72	0
71	SH	1497	0	1590	43	0
72	SI	1686	0	1772	52	0
73	SJ	1525	0	1640	37	0
74	SL	1247	0	1323	21	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
75	SN	1208	0	1294	16	0
76	SO	1024	0	1050	23	0
77	SV	636	0	637	15	0
78	SW	1034	0	1080	19	0
79	SX	1098	0	1167	28	0
80	SY	1065	0	1142	44	0
81	Sa	821	0	870	14	0
82	Sb	651	0	672	14	0
83	Se	459	0	503	14	0
84	S2	36953	0	18679	995	0
85	CI	247	0	282	22	0
86	L5	178	0	0	0	0
86	L7	3	0	0	0	0
86	L8	5	0	0	0	0
86	LA	1	0	0	0	0
86	LB	1	0	0	0	0
86	LP	1	0	0	0	0
86	LV	1	0	0	0	0
86	Le	1	0	0	0	0
86	S2	27	0	0	0	0
86	SO	1	0	0	0	0
87	L5	98	0	182	8	0
88	L5	80	0	152	9	0
88	L8	10	0	19	0	0
88	LN	10	0	19	2	0
89	L5	39	0	36	6	0
90	L5	20	0	23	5	0
91	Lg	1	0	0	0	0
91	Lj	1	0	0	0	0
91	Lm	1	0	0	0	0
91	Lo	1	0	0	0	0
91	Lp	1	0	0	0	0
91	Sa	1	0	0	0	0
All	All	223436	0	167130	4866	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 13.

All (4866) 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)
89:L5:5294:HMT:C7	89:L5:5294:HMT:C8	1.79	1.60
89:L5:5294:HMT:C7	89:L5:5294:HMT:C6	1.76	1.57
4:L5:2706:G:N7	85:CI:78:HIS:NE2	1.68	1.39
4:L5:2706:G:N7	85:CI:78:HIS:CD2	2.08	1.20
4:L5:2706:G:C8	85:CI:78:HIS:NE2	2.07	1.03
4:L5:1996:C:H42	4:L5:2000:G:N2	1.56	1.01
4:L5:2845:A:H61	4:L5:3843:C:N4	1.63	0.96
4:L5:1996:C:N4	4:L5:2000:G:H22	1.66	0.94
4:L5:3930:U:H3	4:L5:4180:G:H1	0.94	0.94
4:L5:2845:A:H61	4:L5:3843:C:H42	1.14	0.94
4:L5:1996:C:H42	4:L5:2000:G:H22	0.97	0.92
4:L5:2557:G:H1	4:L5:2570:U:H3	0.92	0.92
84:S2:928:G:H1	84:S2:1013:U:H3	1.13	0.90
5:L7:2:U:H3	5:L7:117:G:H1	1.11	0.90
65:Sg:152:SER:HG	65:Sg:168:CYS:HG	1.14	0.90
84:S2:1324:G:H1	84:S2:1504:U:H3	1.18	0.89
1:Pt:50:U:H3	1:Pt:64:G:H1	1.17	0.88
84:S2:70:G:H21	84:S2:79:A:H62	1.22	0.87
4:L5:2845:A:N6	4:L5:3843:C:H42	1.72	0.87
35:Ld:59:THR:HG1	35:Ld:104:THR:HG1	1.22	0.86
84:S2:1533:A:N6	84:S2:1602:U:H3	1.72	0.86
4:L5:4092:G:N7	4:L5:4114:C:N4	2.26	0.84
4:L5:2362:U:H2'	4:L5:2363:A2M:H8	1.60	0.83
4:L5:966:A:H5"	4:L5:2092:G:H22	1.45	0.81
4:L5:2103:G:N7	4:L5:2104:G:N2	2.29	0.81
8:LB:90:VAL:HG23	8:LB:163:ILE:HD11	1.62	0.81
4:L5:2706:G:C5	85:CI:78:HIS:CD2	2.68	0.81
69:SE:31:PRO:HA	69:SE:81:THR:HB	1.61	0.81
4:L5:1100:U:H3	4:L5:1194:G:H1	1.28	0.80
26:LU:114:TYR:CE2	85:CI:50:MET:HG3	2.16	0.80
4:L5:1982:G:N2	4:L5:2009:A:O2'	2.15	0.80
4:L5:3946:G:H1	4:L5:4067:U:H3	0.83	0.80
4:L5:2406:G:N7	43:Ll:2:SER:N	2.30	0.79
17:LL:64:VAL:HA	17:LL:67:HIS:HD2	1.46	0.79
84:S2:1754:G:N7	84:S2:1779:G:N2	2.30	0.78
60:SU:59:LYS:HB2	60:SU:84:ILE:HB	1.64	0.78
71:SH:87:PHE:HB3	71:SH:90:LYS:HD2	1.66	0.78
58:SS:85:ASN:OD1	58:SS:97:GLN:NE2	2.15	0.78
26:LU:116:GLN:O	85:CI:74:LYS:HA	1.83	0.78
16:LJ:146:ARG:HG2	16:LJ:147:ARG:HG3	1.66	0.77
84:S2:1533:A:N6	84:S2:1602:U:N3	2.30	0.77
4:L5:2706:G:C5	85:CI:78:HIS:NE2	2.52	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:664:G:N2	4:L5:666:G:O6	2.17	0.77
64:Sf:126:CYS:SG	64:Sf:144:CYS:N	2.54	0.77
4:L5:2300:A:N7	9:LC:143:ARG:NH1	2.33	0.77
4:L5:2702:C:OP1	26:LU:101:ARG:NH2	2.18	0.77
4:L5:4139:G:H21	4:L5:4140:C:H41	1.34	0.76
67:SB:103:MET:HG3	67:SB:215:VAL:HG12	1.67	0.76
2:CF:353:ILE:HB	2:CF:394:LEU:HB2	1.65	0.76
56:SQ:72:VAL:HG11	56:SQ:80:GLN:HG3	1.68	0.76
4:L5:3805:U:H2'	4:L5:3806:G:H8	1.50	0.76
4:L5:4873:G:N7	20:LO:179:LYS:NZ	2.33	0.76
4:L5:679:C:H2'	4:L5:680:G:H8	1.51	0.76
4:L5:4094:G:N2	4:L5:4115:G:OP2	2.18	0.76
84:S2:300:U:H2'	84:S2:301:A:H8	1.51	0.75
2:CF:127:ILE:HG13	2:CF:134:ARG:HD3	1.68	0.75
53:SK:25:LYS:NZ	84:S2:1497:G:N7	2.33	0.75
84:S2:1129:G:H3'	84:S2:1130:G:H21	1.51	0.75
4:L5:73:A:N7	17:LL:103:ARG:NH2	2.34	0.75
28:LW:116:LYS:NZ	84:S2:329:G:N7	2.34	0.75
4:L5:1509:C:H2'	4:L5:1510:G:H8	1.52	0.75
4:L5:1172:C:HO2'	4:L5:1173:G:H8	1.34	0.75
6:L8:90:C:H1'	30:LY:24:HIS:HB3	1.69	0.74
68:SC:176:LYS:O	68:SC:200:ARG:NH2	2.19	0.74
67:SB:122:GLU:HG2	67:SB:140:VAL:HG12	1.68	0.74
4:L5:4126:C:H5"	4:L5:4127:A:H5"	1.68	0.74
4:L5:1563:A:N6	84:S2:1028:A:N1	2.35	0.74
13:LG:180:PRO:HG3	13:LG:219:VAL:HG13	1.68	0.74
1:Pt:3:C:H42	1:Pt:70:A:H61	1.34	0.74
68:SC:196:ILE:HB	68:SC:223:TYR:HB2	1.70	0.74
4:L5:500:G:H1'	4:L5:504:G:H3'	1.70	0.74
4:L5:4403:PSU:HN3	4:L5:4440:G:H1	1.35	0.74
40:Li:2:ALA:N	40:Li:5:TYR:HH	1.84	0.74
4:L5:1435:G:N2	4:L5:1449:C:O2	2.17	0.73
84:S2:1656:G:H1	84:S2:1668:U:H3	0.78	0.73
4:L5:1408:G:O2'	4:L5:1411:C:N4	2.21	0.73
70:SG:183:ARG:HH12	84:S2:316:G:H5"	1.54	0.73
71:SH:10:LYS:HE3	71:SH:17:ASP:HB3	1.69	0.73
84:S2:1658:G:OP2	84:S2:1660:C:N4	2.22	0.73
27:LV:35:LYS:HB2	27:LV:67:LYS:HG3	1.70	0.73
79:SX:124:LYS:NZ	84:S2:29:G:OP1	2.22	0.73
84:S2:159:A2M:H2	84:S2:467:G:H21	1.54	0.73
84:S2:1776:G:N2	84:S2:1777:G:N7	2.37	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CF:378:LYS:HE2	2:CF:391:PRO:HB3	1.71	0.73
4:L5:184:U:O2	4:L5:253:G:N2	2.21	0.73
84:S2:677:G:H21	84:S2:1028:A:H62	1.36	0.73
4:L5:364:G:O6	41:Lj:55:ARG:NH2	2.22	0.73
8:LB:10:ARG:NH1	8:LB:11:HIS:O	2.22	0.73
4:L5:2554:U:O2	4:L5:2764:A:N7	2.21	0.73
56:SQ:19:ALA:HB2	56:SQ:75:GLY:HA3	1.71	0.73
4:L5:1534:A2M:H8	4:L5:1637:A:H61	1.53	0.72
59:ST:126:GLN:HB2	59:ST:129:ARG:HH21	1.54	0.72
4:L5:4689:PSU:N3	4:L5:4699:U:O4	2.22	0.72
4:L5:1366:G:H5"	17:LL:36:ARG:HH12	1.53	0.72
71:SH:105:THR:HG23	71:SH:107:LYS:H	1.54	0.72
2:CF:246:LEU:O	2:CF:247:ARG:NH1	2.21	0.72
23:LR:25:ASP:OD2	85:CI:72:ARG:NH2	2.22	0.72
4:L5:1414:C:H2'	4:L5:1415:G:H8	1.54	0.72
4:L5:2484:A:H62	4:L5:2494:U:H3	1.35	0.72
54:SM:91:LEU:HD12	54:SM:106:CYS:HB2	1.72	0.72
59:ST:121:ARG:HH21	84:S2:1563:G:H5"	1.54	0.72
4:L5:2706:G:N7	85:CI:78:HIS:HE2	1.25	0.72
46:Lo:2:VAL:N	46:Lo:90:HIS:O	2.23	0.72
4:L5:1306:C:H2'	4:L5:1307:A:H8	1.55	0.72
4:L5:3946:G:N2	4:L5:4067:U:O2	2.20	0.72
28:LW:80:ARG:NH2	70:SG:8:PRO:O	2.22	0.72
84:S2:1174:PSU:H2'	84:S2:1175:G:H8	1.55	0.72
5:L7:7:G:OP1	10:LD:33:ARG:NH1	2.22	0.72
4:L5:2486:G:O6	4:L5:2493:G:O6	2.08	0.71
8:LB:161:ARG:NH1	8:LB:182:GLU:OE1	2.23	0.71
41:Lj:25:LYS:HE3	43:Ll:51:LEU:HA	1.72	0.71
84:S2:1048:G:N1	84:S2:1069:U:OP2	2.23	0.71
84:S2:851:C:H5"	84:S2:852:G:H5'	1.73	0.71
52:SF:127:ARG:HG2	52:SF:136:ARG:HE	1.56	0.71
4:L5:2092:G:O2'	4:L5:2262:G:N2	2.24	0.71
66:SA:102:ARG:HH12	84:S2:1377:U:H3'	1.55	0.71
28:LW:105:ARG:NH2	70:SG:149:LYS:O	2.24	0.71
4:L5:4911:A:OP1	8:LB:97:ARG:NH2	2.23	0.71
3:AT:61:A:OP1	3:AT:63:C:N4	2.24	0.71
15:LI:205:PRO:HD2	15:LI:208:LYS:HE2	1.73	0.71
4:L5:2335:C:H2'	4:L5:2336:G:H8	1.55	0.71
4:L5:2601:A:N6	4:L5:2744:A:OP2	2.23	0.71
84:S2:1533:A:H62	84:S2:1602:U:H3	1.29	0.71
4:L5:3798:U:OP2	27:LV:74:LYS:NZ	2.23	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4077:A:N1	4:L5:4171:C:N4	2.38	0.70
70:SG:11:GLY:HA2	84:S2:166:A2M:HM'1	1.73	0.70
4:L5:188:G:N2	4:L5:190:G:O6	2.20	0.70
4:L5:989:U:O2	4:L5:1064:G:N2	2.22	0.70
61:SZ:101:SER:HG	61:SZ:108:ILE:H	1.39	0.70
70:SG:22:ARG:HG3	70:SG:25:ARG:HH12	1.55	0.70
84:S2:1422:G:H4'	84:S2:1423:C:H3'	1.74	0.70
84:S2:1417:C:N3	84:S2:1422:G:N1	2.39	0.70
4:L5:262:G:H2'	4:L5:263:G:H8	1.55	0.70
84:S2:350:C:HO2'	84:S2:383:G:H1	1.37	0.70
56:SQ:8:GLN:HG3	56:SQ:27:ARG:HE	1.56	0.70
84:S2:925:G:H1	84:S2:1017:U:H3	1.38	0.70
4:L5:2274:C:H2'	4:L5:2275:G:H8	1.57	0.70
30:LY:10:ASP:HB3	30:LY:13:LYS:HB2	1.74	0.70
4:L5:700:G:N1	4:L5:701:G:C6	2.60	0.70
58:SS:138:THR:HA	58:SS:141:ARG:HH21	1.55	0.70
8:LB:222:VAL:O	8:LB:343:ARG:NH1	2.24	0.69
4:L5:4107:G:N2	4:L5:4108:G:O6	2.20	0.69
50:Lt:76:SER:OG	50:Lt:116:MET:SD	2.50	0.69
4:L5:1961:G:N2	4:L5:2024:G:O2'	2.24	0.69
4:L5:2543:A:H2	4:L5:2773:G:H22	1.41	0.69
43:Ll:23:ILE:HD11	43:Ll:28:ARG:HE	1.56	0.69
60:SU:80:PHE:HB3	63:Sd:52:PHE:HB3	1.72	0.69
84:S2:1652:G:H1	84:S2:1672:U:H3	1.40	0.69
4:L5:1743:A:N1	4:L5:1789:C:O2'	2.24	0.69
4:L5:3921:U:H1'	4:L5:4543:G:H21	1.56	0.69
4:L5:4075:U:OP1	13:LG:249:ARG:NH2	2.25	0.69
84:S2:747:U:N3	84:S2:796:G:N1	2.40	0.69
4:L5:4670:C:O2'	4:L5:4672:A:OP2	2.09	0.69
41:Lj:2:THR:HG22	41:Lj:4:GLY:H	1.57	0.69
70:SG:198:ARG:NH1	84:S2:126:G:OP2	2.25	0.69
84:S2:948:C:H2'	84:S2:949:G:H8	1.57	0.69
4:L5:2758:G:O2'	4:L5:2765:A:N3	2.24	0.69
4:L5:4129:G:O6	4:L5:4156:G:N2	2.25	0.69
55:SP:52:LYS:NZ	84:S2:1299:A:O2'	2.25	0.69
4:L5:300:A:H2'	4:L5:301:G:H8	1.58	0.69
4:L5:2460:A:OP2	88:LN:301:SPD:N10	2.26	0.69
7:LA:29:LEU:O	7:LA:123:ARG:NH1	2.26	0.69
68:SC:73:MET:O	68:SC:76:LYS:NZ	2.25	0.69
84:S2:304:C:H5"	84:S2:305:U:H5'	1.73	0.69
4:L5:121:A:OP1	13:LG:110:LYS:NZ	2.24	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4991:U:H2'	4:L5:4992:G:H8	1.55	0.69
78:SW:71:LYS:NZ	84:S2:1156:U:OP1	2.26	0.69
84:S2:1589:A:N3	84:S2:1653:U:O2'	2.26	0.69
4:L5:1839:U:OP2	12:LF:202:LYS:NZ	2.26	0.69
49:Ls:68:HIS:O	49:Ls:71:ASN:ND2	2.25	0.69
70:SG:135:PRO:HG2	70:SG:141:ILE:HG22	1.74	0.69
4:L5:696:C:H42	11:LE:221:LYS:HG3	1.58	0.68
4:L5:1364:U:OP2	17:LL:36:ARG:NH2	2.24	0.68
52:SF:142:SER:HB3	62:Sc:50:VAL:HG22	1.76	0.68
68:SC:257:LYS:O	77:SV:16:LYS:NZ	2.26	0.68
64:Sf:107:LYS:NZ	64:Sf:108:VAL:O	2.26	0.68
78:SW:70:ASN:ND2	78:SW:130:PHE:O	2.26	0.68
84:S2:752:G:OP2	84:S2:752:G:N2	2.26	0.68
4:L5:1095:A:C2	4:L5:1200:G:N1	2.58	0.68
4:L5:4894:A:H5"	4:L5:4895:C:H5"	1.75	0.68
54:SM:51:VAL:HG12	54:SM:77:ILE:HB	1.75	0.68
84:S2:1128:C:H2'	84:S2:1129:G:H8	1.58	0.68
49:Ls:50:LYS:O	49:Ls:92:LYS:NZ	2.26	0.68
52:SF:185:SER:H	52:SF:190:ILE:HD11	1.58	0.68
54:SM:57:ASP:OD1	84:S2:1285:G:N1	2.27	0.68
59:ST:124:THR:HG23	59:ST:127:GLY:H	1.57	0.68
13:LG:33:GLU:OE2	13:LG:35:ARG:NH1	2.26	0.68
28:LW:80:ARG:NH1	84:S2:167:G:O2'	2.27	0.68
28:LW:123:LYS:HD2	84:S2:320:G:H5"	1.75	0.68
4:L5:1270:A:O2'	4:L5:1439:C:O2	2.12	0.68
4:L5:2411:C:H2'	4:L5:2412:A:H8	1.59	0.68
19:LN:120:TRP:HE1	19:LN:123:GLU:HB3	1.58	0.68
50:Lt:37:LEU:HA	50:Lt:40:LYS:HE3	1.75	0.68
4:L5:700:G:C6	4:L5:701:G:O6	2.47	0.68
4:L5:4541:G:N2	4:L5:4544:A:OP2	2.26	0.68
12:LF:94:ARG:NH2	12:LF:97:GLY:O	2.26	0.68
55:SP:130:ARG:HD3	55:SP:131:PRO:HD2	1.76	0.68
58:SS:121:ARG:HG3	58:SS:131:VAL:HB	1.74	0.68
84:S2:1759:G:N2	84:S2:1760:G:O6	2.27	0.68
4:L5:1435:G:N1	4:L5:1449:C:N3	2.35	0.68
4:L5:323:C:H2'	4:L5:324:A:H8	1.59	0.68
65:Sg:206:LEU:HD12	65:Sg:218:LEU:HD12	1.76	0.68
70:SG:2:LYS:HB2	70:SG:108:VAL:HG12	1.76	0.68
4:L5:2008:U:N3	4:L5:2011:C:OP2	2.27	0.68
4:L5:2899:C:OP1	23:LR:108:ARG:NH2	2.27	0.68
20:LO:166:ILE:HG12	20:LO:169:ARG:HH21	1.59	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:70:G:N2	84:S2:79:A:H62	1.92	0.68
2:CF:11:VAL:HG12	2:CF:90:ILE:HB	1.77	0.67
4:L5:2295:C:O2'	9:LC:45:ARG:NH2	2.27	0.67
4:L5:3641:U:OP2	4:L5:3646:A:N6	2.27	0.67
23:LR:25:ASP:OD2	85:CI:72:ARG:NH1	2.26	0.67
61:SZ:46:ASN:ND2	84:S2:1599:U:OP2	2.26	0.67
64:Sf:97:LYS:NZ	84:S2:1289:U:OP2	2.27	0.67
84:S2:830:A:OP2	84:S2:846:G:N2	2.27	0.67
84:S2:1171:G:O2'	84:S2:1187:G:O6	2.11	0.67
2:CF:430:ARG:HH12	3:AT:65:G:H4'	1.59	0.67
4:L5:2020:U:H2'	4:L5:2021:G:H8	1.59	0.67
4:L5:4910:G:H4'	8:LB:95:THR:HG22	1.77	0.67
24:LS:83:ARG:HG3	24:LS:125:GLN:HB2	1.76	0.67
4:L5:752:G:O6	4:L5:912:G:N2	2.28	0.67
4:L5:1390:G:N2	4:L5:1393:G:OP2	2.27	0.67
4:L5:1646:A:OP2	9:LC:80:ARG:NH1	2.26	0.67
84:S2:533:A:H61	84:S2:550:C:H42	1.42	0.67
4:L5:382:G:N1	4:L5:385:A:OP2	2.26	0.67
52:SF:168:THR:OG1	52:SF:171:GLU:OE1	2.12	0.67
64:Sf:92:LYS:NZ	84:S2:1271:C:OP1	2.26	0.67
3:AT:51:U:H3	3:AT:65:G:H1	1.42	0.67
70:SG:31:ARG:NH1	84:S2:1745:A:O3'	2.27	0.67
84:S2:1729:U:H3	84:S2:1805:G:H1	1.42	0.67
4:L5:2553:A:N6	4:L5:2765:A:OP2	2.28	0.67
75:SN:14:SER:HB3	84:S2:1016:U:H5"	1.76	0.67
84:S2:1393:G:H2'	84:S2:1394:G:C8	2.29	0.67
4:L5:2407:G:OP2	4:L5:2407:G:N2	2.18	0.67
5:L7:92:C:H2'	5:L7:93:G:H8	1.60	0.67
71:SH:31:GLU:HA	71:SH:37:LYS:HG3	1.77	0.67
2:CF:93:PRO:HD2	2:CF:102:MET:HB3	1.75	0.67
4:L5:137:G:H2'	4:L5:138:G:H8	1.60	0.67
4:L5:1802:A:H5"	4:L5:1803:G:H5'	1.75	0.67
4:L5:3615:G:H1'	28:LW:44:ARG:HD3	1.76	0.67
20:LO:61:ARG:HA	20:LO:70:PRO:HD2	1.77	0.67
24:LS:76:LYS:NZ	24:LS:100:LEU:O	2.28	0.67
66:SA:39:TYR:N	66:SA:48:ILE:O	2.28	0.67
4:L5:2701:U:H3	4:L5:2715:G:H1	1.40	0.67
4:L5:2745:A:H2'	4:L5:2746:A:H8	1.60	0.67
72:SI:75:LYS:HD2	84:S2:303:C:H5'	1.77	0.67
4:L5:1094:G:O6	4:L5:1201:U:O2	2.13	0.66
66:SA:110:ASN:HB3	66:SA:113:GLN:HE22	1.60	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:482:G:N1	84:S2:485:A:OP2	2.27	0.66
84:S2:1010:G:H2'	84:S2:1011:A:H8	1.59	0.66
4:L5:86:U:O2'	32:La:65:ARG:NH2	2.25	0.66
4:L5:1332:C:H2'	4:L5:1333:A:H8	1.61	0.66
4:L5:4870:G:O6	24:LS:157:ARG:NH1	2.27	0.66
4:L5:4954:G:H2'	4:L5:4955:A:C8	2.30	0.66
56:SQ:3:SER:OG	56:SQ:4:LYS:N	2.26	0.66
84:S2:1748:G:H1	84:S2:1786:U:H3	0.75	0.66
4:L5:1870:C:H2'	4:L5:1871:A2M:H8	1.77	0.66
4:L5:2279:A:O2'	36:Le:48:ARG:NH2	2.28	0.66
4:L5:4371:G:OP1	46:Lo:64:LYS:NZ	2.27	0.66
61:SZ:80:ARG:O	84:S2:1598:G:O2'	2.12	0.66
84:S2:1228:A:H2'	84:S2:1229:G:H8	1.60	0.66
84:S2:1417:C:H42	84:S2:1422:G:N2	1.94	0.66
4:L5:1914:C:H4'	20:LO:89:PRO:HD3	1.76	0.66
4:L5:2749:C:H2'	4:L5:2750:G:H8	1.60	0.66
42:Lk:27:LYS:O	42:Lk:70:LYS:NZ	2.29	0.66
63:Sd:44:ARG:NH1	84:S2:1336:C:O2'	2.29	0.66
84:S2:516:A:N1	84:S2:643:A:O2'	2.28	0.66
84:S2:1550:G:H3'	84:S2:1579:A:H61	1.60	0.66
4:L5:2716:C:O3'	26:LU:107:LYS:NZ	2.29	0.66
6:L8:8:U:H2'	6:L8:9:A:H8	1.61	0.66
4:L5:1502:G:OP1	22:LQ:65:ARG:NH2	2.27	0.66
4:L5:2378:G:N2	4:L5:2381:A:OP2	2.28	0.66
14:LH:19:THR:HB	14:LH:26:ILE:HB	1.77	0.66
59:ST:9:VAL:O	59:ST:11:GLN:NE2	2.28	0.66
79:SX:123:VAL:HG12	79:SX:124:LYS:HG3	1.78	0.66
2:CF:162:TYR:OH	2:CF:199:ASP:OD2	2.14	0.66
4:L5:4991:U:H2'	4:L5:4992:G:C8	2.31	0.66
89:L5:5294:HMT:C7	89:L5:5294:HMT:C16	2.67	0.66
61:SZ:58:LEU:HD12	61:SZ:62:VAL:HG21	1.77	0.66
72:SI:133:GLU:HA	72:SI:136:ILE:HG12	1.76	0.66
4:L5:3697:U:H5"	4:L5:3698:G:H5'	1.78	0.66
49:Ls:62:ARG:HB3	49:Ls:66:ARG:HH12	1.59	0.66
84:S2:649:PSU:H2'	84:S2:650:A:H8	1.59	0.66
4:L5:109:G:OP2	17:LL:74:ARG:NH2	2.29	0.66
71:SH:162:GLN:HE22	71:SH:166:VAL:HB	1.60	0.66
4:L5:2520:C:O2	4:L5:2640:G:N2	2.29	0.65
24:LS:15:ARG:HD2	24:LS:25:PRO:HG2	1.77	0.65
42:Lk:24:LYS:HB2	42:Lk:35:LYS:HB2	1.78	0.65
4:L5:1558:A:H2'	4:L5:1559:G:H8	1.61	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4377:G:N7	32:La:42:ARG:NH2	2.44	0.65
12:LF:238:ASP:O	12:LF:241:ASN:ND2	2.28	0.65
56:SQ:58:LEU:HB3	56:SQ:62:ARG:HD2	1.79	0.65
60:SU:21:ARG:NH2	84:S2:1404:U:OP2	2.29	0.65
66:SA:126:ASP:OD1	66:SA:165:ASN:ND2	2.29	0.65
4:L5:62:A:OP1	19:LN:172:ARG:NH1	2.27	0.65
4:L5:330:G:N7	88:L5:5283:SPD:N1	2.45	0.65
4:L5:1919:G:N2	24:LS:163:HIS:O	2.24	0.65
4:L5:4093:G:H3'	4:L5:4094:G:H8	1.60	0.65
50:Lt:65:GLN:HG3	50:Lt:67:ARG:H	1.61	0.65
65:Sg:283:PRO:O	65:Sg:285:GLN:NE2	2.29	0.65
70:SG:66:GLY:HA2	84:S2:1745:A:H1'	1.78	0.65
5:L7:28:C:H1'	5:L7:54:A:H61	1.61	0.65
4:L5:4098:A:N1	4:L5:4112:C:N4	2.44	0.65
79:SX:51:VAL:HA	79:SX:72:VAL:HG22	1.79	0.65
84:S2:1351:G:H1	84:S2:1360:U:H3	1.44	0.65
4:L5:4413:C:O2	15:LI:158:LYS:NZ	2.29	0.65
8:LB:213:GLN:NE2	8:LB:285:TYR:O	2.23	0.65
57:SR:59:LYS:NZ	84:S2:1456:G:OP1	2.28	0.65
80:SY:119:GLY:HA2	84:S2:85:A:H5'	1.79	0.65
84:S2:1417:C:N4	84:S2:1422:G:H22	1.94	0.65
84:S2:1528:G:O2'	84:S2:1666:C:OP1	2.14	0.65
4:L5:1628:C:OP1	7:LA:14:SER:OG	2.15	0.65
4:L5:1686:C:OP1	33:Lb:19:ASN:ND2	2.29	0.65
4:L5:4174:U:H2'	4:L5:4175:G:H8	1.62	0.65
24:LS:27:LEU:HB3	25:LT:148:PRO:HB3	1.79	0.65
69:SE:29:PRO:HA	84:S2:496:C:H5'	1.78	0.65
84:S2:1748:G:O6	84:S2:1786:U:O4	2.14	0.65
4:L5:1550:G:H1	4:L5:1578:U:H3	1.45	0.65
4:L5:1785:C:OP1	15:LI:133:GLN:NE2	2.30	0.65
4:L5:2444:U:HO2'	6:L8:112:G:HO2'	1.43	0.65
52:SF:134:VAL:HG12	52:SF:135:ARG:HG2	1.79	0.65
84:S2:1228:A:H2'	84:S2:1229:G:C8	2.32	0.65
4:L5:25:A:H61	4:L5:58:G:H1	1.44	0.65
4:L5:1927:U:OP1	4:L5:1949:U:O2'	2.13	0.65
4:L5:2093:A:N3	4:L5:2094:G:N1	2.45	0.65
70:SG:183:ARG:NH2	84:S2:316:G:OP2	2.29	0.65
4:L5:308:G:N2	4:L5:308:G:OP2	2.30	0.65
4:L5:4093:G:N2	4:L5:4114:C:N3	2.41	0.65
4:L5:4353:PSU:H5'	4:L5:4354:U:H5'	1.78	0.65
89:L5:5294:HMT:C7	89:L5:5294:HMT:N1	2.60	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:39:G:OP1	39:Lh:86:LYS:NZ	2.29	0.65
11:LE:209:PRO:HB2	11:LE:212:LEU:HG	1.79	0.65
74:SL:68:ILE:HD13	74:SL:131:CYS:HB3	1.79	0.65
84:S2:888:U:H4'	84:S2:889:U:H5'	1.79	0.65
2:CF:15:HIS:NE2	2:CF:133:THR:OG1	2.28	0.64
4:L5:268:G:H2'	4:L5:269:G:H8	1.61	0.64
7:LA:107:MET:HB3	7:LA:111:THR:HG21	1.77	0.64
31:LZ:12:LEU:HB2	31:LZ:81:MET:HB3	1.79	0.64
52:SF:78:MET:HE3	84:S2:1222:G:H5"	1.78	0.64
58:SS:134:GLN:NE2	84:S2:1608:U:OP1	2.30	0.64
62:Sc:17:VAL:HA	62:Sc:30:VAL:HG12	1.80	0.64
70:SG:170:ARG:HA	84:S2:72:C:H42	1.61	0.64
71:SH:165:ASN:O	71:SH:169:LYS:NZ	2.30	0.64
84:S2:300:U:H2'	84:S2:301:A:C8	2.31	0.64
4:L5:68:U:OP1	19:LN:178:HIS:ND1	2.29	0.64
4:L5:3823:G:N2	4:L5:3823:G:OP2	2.28	0.64
68:SC:169:TYR:OH	68:SC:175:GLY:O	2.11	0.64
84:S2:1513:C:H2'	84:S2:1514:G:H8	1.62	0.64
4:L5:2884:G:H2'	4:L5:2885:A:H8	1.61	0.64
4:L5:3796:U:O2'	84:S2:1720:U:O2'	2.14	0.64
11:LE:287:VAL:HG21	18:LM:103:LYS:HA	1.79	0.64
42:Lk:26:LYS:NZ	42:Lk:28:ASN:OD1	2.30	0.64
42:Lk:54:GLU:OE2	42:Lk:58:GLN:NE2	2.24	0.64
65:Sg:247:TRP:HB3	65:Sg:258:ILE:HD11	1.79	0.64
4:L5:24:G:N7	41:Lj:46:LYS:NZ	2.45	0.64
4:L5:1207:C:H2'	4:L5:1208:G:H8	1.62	0.64
4:L5:1494:U:H2'	4:L5:1495:G:H8	1.62	0.64
4:L5:1866:U:OP1	15:LI:4:ARG:NH1	2.31	0.64
4:L5:4431:PSU:OP2	15:LI:3:ARG:NH2	2.27	0.64
4:L5:1186:U:H3'	4:L5:1187:G:H21	1.62	0.64
4:L5:2318:G:N2	4:L5:2321:G:OP2	2.24	0.64
6:L8:96:C:H5"	39:Lh:66:LYS:HG2	1.78	0.64
24:LS:161:ARG:HD2	24:LS:164:LYS:HB2	1.77	0.64
66:SA:127:PRO:HG2	66:SA:152:SER:HB3	1.78	0.64
84:S2:1277:C:H2'	84:S2:1278:A:H8	1.60	0.64
84:S2:1434:C:O2'	84:S2:1437:C:N4	2.27	0.64
4:L5:4966:A:H5"	8:LB:128:LYS:HG3	1.79	0.64
4:L5:3664:G:H2'	4:L5:3665:G:H8	1.62	0.64
4:L5:4086:G:O6	13:LG:48:LYS:NZ	2.31	0.64
14:LH:97:ALA:O	44:Lm:77:ILE:N	2.31	0.64
21:LP:109:VAL:HA	21:LP:112:LEU:HD13	1.79	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:148:C:OP2	13:LG:197:LYS:NZ	2.24	0.64
4:L5:369:G:N2	4:L5:372:A:OP2	2.26	0.64
4:L5:5024:C:H41	4:L5:5028:G:H21	1.45	0.64
79:SX:17:ARG:NH2	84:S2:658:U:O2	2.28	0.64
2:CF:156:ASP:OD2	2:CF:197:ASN:ND2	2.31	0.64
4:L5:1438:U:H4'	12:LF:31:LYS:HE3	1.80	0.64
4:L5:1994:C:H2'	4:L5:1995:G:C8	2.32	0.64
4:L5:5022:U:O2'	4:L5:5024:C:OP2	2.16	0.64
84:S2:207:G:H3'	84:S2:208:G:H8	1.63	0.64
84:S2:1656:G:O6	84:S2:1668:U:O4	2.15	0.64
4:L5:1086:C:H2'	4:L5:1087:A:H8	1.62	0.63
4:L5:4594:U:H2'	4:L5:4595:G:H8	1.63	0.63
51:SD:8:LYS:HG2	60:SU:61:LEU:HD11	1.78	0.63
55:SP:37:TYR:O	58:SS:88:LYS:NZ	2.30	0.63
68:SC:72:ASP:OD2	68:SC:272:HIS:NE2	2.27	0.63
84:S2:677:G:N2	84:S2:1028:A:H62	1.96	0.63
84:S2:1854:U:H2'	84:S2:1855:G:H8	1.61	0.63
33:Lb:109:ARG:HA	33:Lb:112:ILE:HG12	1.81	0.63
73:SJ:40:LYS:NZ	84:S2:641:A:OP1	2.22	0.63
79:SX:8:ARG:NH1	84:S2:682:U:OP2	2.30	0.63
4:L5:1079:C:O2	4:L5:1221:G:N2	2.25	0.63
18:LM:100:ARG:NH1	20:LO:197:LYS:O	2.31	0.63
38:Lg:45:ALA:HB3	38:Lg:82:MET:HE2	1.81	0.63
51:SD:40:ARG:HA	60:SU:108:PRO:HB3	1.80	0.63
52:SF:124:ASP:OD1	52:SF:125:SER:N	2.28	0.63
69:SE:45:ILE:HD12	69:SE:80:ILE:HD11	1.80	0.63
84:S2:640:A:H2'	84:S2:641:A:C8	2.33	0.63
84:S2:1101:U:H2'	84:S2:1102:G:H8	1.63	0.63
2:CF:273:LYS:HE2	2:CF:301:GLU:HG2	1.79	0.63
2:CF:290:LYS:NZ	84:S2:477:G:O2'	2.32	0.63
4:L5:4620:OMU:OP2	4:L5:4670:C:N4	2.23	0.63
60:SU:65:THR:O	60:SU:78:ASP:N	2.31	0.63
60:SU:116:ILE:HG13	60:SU:119:ALA:H	1.63	0.63
4:L5:2083:C:OP2	22:LQ:14:ARG:NH2	2.28	0.63
4:L5:2488:C:N4	6:L8:126:C:OP2	2.31	0.63
28:LW:81:ALA:HB2	28:LW:87:LEU:HG	1.79	0.63
46:Lo:74:GLU:HB3	46:Lo:77:CYS:HB3	1.80	0.63
58:SS:22:GLY:HA2	58:SS:56:ALA:HB3	1.79	0.63
59:ST:12:GLN:NE2	84:S2:1593:C:O2	2.29	0.63
80:SY:36:PRO:HG3	84:S2:570:C:H4'	1.80	0.63
82:Sb:20:LYS:NZ	84:S2:1016:U:OP2	2.28	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:665:C:H4'	4:L5:666:G:H5'	1.79	0.63
4:L5:1718:C:O2'	12:LF:181:LYS:NZ	2.31	0.63
57:SR:22:THR:O	65:Sg:212:LYS:NZ	2.32	0.63
84:S2:941:C:H2'	84:S2:942:G:H8	1.62	0.63
4:L5:1404:G:N7	4:L5:1408:G:N1	2.46	0.63
4:L5:1555:G:O6	47:Lp:4:ARG:NH1	2.30	0.63
4:L5:1767:A:H2'	4:L5:1769:G:H5"	1.80	0.63
4:L5:3661:G:N7	7:LA:152:SER:OG	2.31	0.63
4:L5:4238:G:H2'	4:L5:4239:A:H8	1.63	0.63
6:L8:8:U:H2'	6:L8:9:A:C8	2.33	0.63
69:SE:151:ASP:HA	70:SG:212:LEU:HD21	1.80	0.63
84:S2:454:U:H2'	84:S2:455:A:H8	1.63	0.63
4:L5:935:A:N7	18:LM:46:ARG:NH2	2.47	0.63
4:L5:1241:C:O2'	33:Lb:120:ARG:O	2.14	0.63
23:LR:39:GLN:OE1	23:LR:42:ARG:NH1	2.31	0.63
10:LD:204:VAL:HB	10:LD:236:MET:HE1	1.80	0.63
14:LH:106:GLN:NE2	14:LH:113:GLU:OE2	2.29	0.63
18:LM:15:VAL:HG22	18:LM:50:MET:HE1	1.79	0.63
68:SC:191:VAL:HG11	68:SC:236:PHE:HA	1.80	0.63
84:S2:468:A2M:H2'	84:S2:469:A:C8	2.34	0.63
3:AT:24:C:H2'	3:AT:25:A:C8	2.34	0.62
4:L5:102:G:HO2'	4:L5:1381:U:HO2'	1.47	0.62
4:L5:1095:A:H2	4:L5:1200:G:H1	1.40	0.62
4:L5:2486:G:N7	4:L5:2493:G:N1	2.43	0.62
65:Sg:10:THR:HG22	65:Sg:308:ARG:HG2	1.80	0.62
65:Sg:216:ALA:N	65:Sg:230:LEU:O	2.30	0.62
72:SI:150:ASP:HA	72:SI:153:LYS:HG2	1.81	0.62
75:SN:64:ARG:NH2	84:S2:919:A:OP2	2.23	0.62
2:CF:289:VAL:HA	2:CF:312:VAL:HG12	1.80	0.62
26:LU:22:THR:HA	26:LU:71:THR:HA	1.81	0.62
68:SC:114:LYS:HE2	84:S2:1202:U:H4'	1.82	0.62
72:SI:84:ASN:HD22	72:SI:100:CYS:HB3	1.63	0.62
75:SN:124:ARG:NH2	84:S2:1024:A:OP2	2.30	0.62
75:SN:124:ARG:NH1	84:S2:677:G:OP1	2.30	0.62
1:Pt:73:A:N3	15:LI:110:ARG:NH1	2.48	0.62
4:L5:1995:G:O2'	50:Lt:122:ALA:O	2.13	0.62
4:L5:2764:A:H2'	4:L5:2765:A:H8	1.64	0.62
4:L5:3946:G:O6	4:L5:4067:U:O4	2.16	0.62
4:L5:4095:G:N7	4:L5:4096:C:N4	2.47	0.62
4:L5:4546:A:N7	7:LA:215:ASN:ND2	2.47	0.62
4:L5:435:A:O2'	36:Le:26:ASP:OD2	2.16	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1172:C:H42	4:L5:1188:C:H42	1.46	0.62
4:L5:1984:A:N6	4:L5:2010:A:O2'	2.32	0.62
4:L5:1992:U:H4'	4:L5:1993:C:H5"	1.80	0.62
4:L5:5006:U:H4'	4:L5:5007:A:H5'	1.81	0.62
6:L8:19:C:H2'	6:L8:20:A:H8	1.64	0.62
69:SE:153:LEU:O	69:SE:174:LYS:NZ	2.32	0.62
70:SG:172:LYS:NZ	84:S2:67:C:OP2	2.27	0.62
76:SO:34:PHE:HB3	76:SO:41:PHE:HB2	1.81	0.62
84:S2:543:C:H3'	84:S2:544:G:H8	1.63	0.62
62:Sc:7:GLN:HE22	62:Sc:61:SER:H	1.47	0.62
84:S2:1756:C:OP2	84:S2:1757:G:N2	2.31	0.62
4:L5:4424:A:H5'	44:Lm:125:LYS:HE3	1.81	0.62
17:LL:91:ALA:HB1	17:LL:96:ILE:HB	1.82	0.62
34:Lc:99:PRO:HG3	34:Lc:104:ILE:HB	1.82	0.62
65:Sg:68:ASP:HB3	65:Sg:111:VAL:HG22	1.81	0.62
79:SX:3:LYS:NZ	84:S2:663:C:OP2	2.28	0.62
4:L5:2458:C:H5"	19:LN:67:ARG:HD2	1.80	0.62
4:L5:4906:C:H2'	4:L5:4907:G:H8	1.64	0.62
26:LU:114:TYR:CD2	85:CI:50:MET:HG3	2.33	0.62
84:S2:1581:C:H5'	84:S2:1582:C:H5	1.65	0.62
4:L5:223:G:N3	9:LC:223:ASN:ND2	2.47	0.62
72:SI:184:ARG:NH1	84:S2:303:C:O2	2.32	0.62
84:S2:885:U:O2	84:S2:901:G:O6	2.17	0.62
4:L5:3870:C:H2'	4:L5:3871:A:H8	1.63	0.62
6:L8:67:U:H2'	6:L8:68:G:H8	1.65	0.62
66:SA:102:ARG:NH1	84:S2:1378:A:OP2	2.33	0.62
70:SG:23:LYS:HE3	70:SG:41:LEU:HA	1.81	0.62
4:L5:1332:C:H2'	4:L5:1333:A:C8	2.35	0.62
4:L5:3681:G:OP2	7:LA:128:ARG:NE	2.27	0.62
4:L5:3695:PSU:HN3	4:L5:3820:G:H1	1.48	0.62
4:L5:3954:A:H1'	4:L5:4058:U:H5'	1.82	0.62
4:L5:5047:C:O2'	4:L5:5050:C:OP2	2.14	0.62
6:L8:94:G:OP2	41:Lj:72:ARG:NH2	2.25	0.62
48:Lr:38:PHE:O	48:Lr:45:HIS:NE2	2.27	0.62
52:SF:36:GLN:NE2	52:SF:37:ASP:OD1	2.32	0.62
84:S2:149:A:H3'	84:S2:150:A:H8	1.65	0.62
4:L5:97:G:OP1	17:LL:16:LYS:NZ	2.30	0.61
4:L5:1705:G:OP1	4:L5:1705:G:N2	2.32	0.61
10:LD:39:GLN:NE2	10:LD:46:THR:O	2.33	0.61
59:ST:12:GLN:NE2	84:S2:1541:G:N3	2.48	0.61
71:SH:10:LYS:NZ	71:SH:16:PRO:O	2.28	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1417:C:H42	84:S2:1422:G:H22	1.46	0.61
3:AT:67:C:H2'	3:AT:68:G:H8	1.64	0.61
4:L5:4303:C:H3'	4:L5:4305:G:H21	1.65	0.61
6:L8:148:A:H2'	6:L8:149:G:C8	2.34	0.61
68:SC:78:LEU:HD12	68:SC:81:ILE:HD12	1.82	0.61
72:SI:70:GLU:OE2	74:SL:21:LYS:NZ	2.30	0.61
4:L5:161:G:H2'	4:L5:162:A:H8	1.65	0.61
12:LF:243:LEU:O	12:LF:247:MET:HB2	2.00	0.61
77:SV:40:ASP:OD1	77:SV:44:GLY:N	2.33	0.61
78:SW:4:MET:SD	84:S2:682:U:O2'	2.56	0.61
84:S2:323:C:O2'	84:S2:325:C:N4	2.32	0.61
84:S2:329:G:H2'	84:S2:330:G:C8	2.35	0.61
3:AT:67:C:H2'	3:AT:68:G:C8	2.36	0.61
4:L5:1837:A:OP2	25:LT:108:ARG:NH1	2.33	0.61
4:L5:3917:A:H2'	4:L5:3918:G:H8	1.65	0.61
28:LW:72:THR:OG1	28:LW:74:ARG:NH2	2.33	0.61
72:SI:56:ARG:HA	72:SI:180:GLY:HA2	1.82	0.61
4:L5:92:C:C2	32:La:55:LYS:HE2	2.35	0.61
4:L5:1484:G:O2'	17:LL:195:ARG:NH2	2.29	0.61
4:L5:3898:G:H5'	8:LB:254:ILE:HG13	1.82	0.61
4:L5:4617:G:OP1	8:LB:62:ARG:NH1	2.34	0.61
4:L5:4716:C:H2'	4:L5:4717:A:H8	1.65	0.61
55:SP:124:LYS:NZ	84:S2:1239:U:O3'	2.31	0.61
64:Sf:144:CYS:HB2	64:Sf:146:LEU:HD23	1.83	0.61
68:SC:106:VAL:HG22	68:SC:128:VAL:HG22	1.82	0.61
68:SC:200:ARG:O	73:SJ:54:ARG:NH2	2.32	0.61
84:S2:1748:G:N2	84:S2:1786:U:O2	2.30	0.61
4:L5:153:G:H2'	4:L5:154:G:H8	1.65	0.61
4:L5:1305:C:OP1	88:L5:5286:SPD:N1	2.34	0.61
4:L5:2448:G:OP2	4:L5:2510:G:N1	2.28	0.61
4:L5:3661:G:N2	4:L5:3681:G:O2'	2.34	0.61
5:L7:13:A:OP2	5:L7:66:G:N2	2.34	0.61
6:L8:142:U:OP1	19:LN:38:ARG:NH2	2.33	0.61
17:LL:60:ARG:NH1	17:LL:67:HIS:O	2.29	0.61
84:S2:996:A:H2'	84:S2:997:A:C8	2.36	0.61
84:S2:1562:C:H2'	84:S2:1563:G:H8	1.65	0.61
4:L5:4975:G:O2'	4:L5:4977:A:N6	2.33	0.61
21:LP:18:ARG:NH2	21:LP:147:GLU:OE1	2.34	0.61
51:SD:51:LEU:HD12	51:SD:91:VAL:HG12	1.82	0.61
84:S2:329:G:H2'	84:S2:330:G:H8	1.66	0.61
2:CF:194:SER:HB3	2:CF:199:ASP:HB2	1.82	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1095:A:N1	4:L5:1200:G:O6	2.33	0.61
4:L5:1239:C:OP1	33:Lb:92:LYS:NZ	2.34	0.61
4:L5:1259:G:H2'	4:L5:1260:G:H8	1.64	0.61
4:L5:3799:A:N3	4:L5:4506:C:O2'	2.29	0.61
4:L5:4274:A:H2'	4:L5:4275:G:H8	1.65	0.61
4:L5:4567:G:H5'	8:LB:20:LYS:HB3	1.83	0.61
4:L5:4667:C:OP1	8:LB:224:LYS:NZ	2.33	0.61
12:LF:127:LYS:HB2	25:LT:133:ALA:HB3	1.82	0.61
56:SQ:67:ASP:OD2	56:SQ:69:ARG:NH1	2.34	0.61
84:S2:508:A:H3'	84:S2:509:OMG:H8	1.66	0.61
3:AT:9:A:N6	3:AT:23:U:OP2	2.23	0.61
4:L5:2516:G:O2'	38:Lg:62:LYS:NZ	2.33	0.61
7:LA:229:ALA:HB3	7:LA:234:LYS:HB3	1.82	0.61
9:LC:262:GLU:HB3	9:LC:273:LEU:HD13	1.83	0.61
84:S2:889:U:OP2	84:S2:896:U:N3	2.34	0.61
4:L5:1351:G:O6	22:LQ:55:ARG:NH1	2.32	0.60
4:L5:1702:C:H4'	9:LC:308:LYS:HD2	1.82	0.60
4:L5:2527:A:OP1	23:LR:38:ARG:NH2	2.20	0.60
9:LC:39:PHE:O	9:LC:43:ASN:ND2	2.27	0.60
2:CF:58:TRP:HA	2:CF:61:ASP:HB2	1.83	0.60
4:L5:2599:G:N2	4:L5:2747:U:O4	2.34	0.60
4:L5:3937:C:H1'	19:LN:125:SER:HB3	1.83	0.60
4:L5:4566:U:O2'	8:LB:234:ARG:NH1	2.32	0.60
14:LH:95:VAL:HG12	44:Lm:82:LEU:HD13	1.81	0.60
15:LI:14:ASN:O	15:LI:128:ARG:NH2	2.28	0.60
60:SU:75:LYS:NZ	84:S2:1252:C:OP1	2.31	0.60
73:SJ:59:GLU:O	73:SJ:62:THR:OG1	2.17	0.60
82:Sb:14:GLU:HA	82:Sb:17:ARG:HG2	1.83	0.60
84:S2:610:G:H2'	84:S2:611:G:H8	1.67	0.60
4:L5:1354:A:N6	4:L5:1503:A:O4'	2.34	0.60
4:L5:1563:A:H2'	4:L5:1564:A:C8	2.36	0.60
5:L7:2:U:O4	5:L7:117:G:O6	2.19	0.60
8:LB:83:PRO:O	8:LB:167:GLN:NE2	2.33	0.60
37:Lf:36:ARG:NH1	37:Lf:79:GLY:O	2.32	0.60
72:SI:126:GLY:O	72:SI:128:LYS:NZ	2.33	0.60
76:SO:33:ILE:HB	76:SO:97:LEU:HD23	1.83	0.60
82:Sb:49:HIS:ND1	82:Sb:69:GLY:O	2.34	0.60
84:S2:1215:C:O2'	84:S2:1645:C:OP2	2.19	0.60
84:S2:1808:U:H2'	84:S2:1809:A:H8	1.66	0.60
4:L5:441:G:H2'	4:L5:442:G:H8	1.67	0.60
4:L5:669:C:OP1	48:Lr:71:ARG:NH1	2.29	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LE:282:TYR:HE1	37:Lf:31:GLU:HG2	1.65	0.60
14:LH:48:LEU:HB2	14:LH:54:ARG:HB2	1.84	0.60
20:LO:126:VAL:HG13	20:LO:127:VAL:HG13	1.82	0.60
78:SW:30:CYS:SG	78:SW:31:SER:N	2.74	0.60
84:S2:94:G:O2'	84:S2:508:A:O2'	2.19	0.60
84:S2:1004:PSU:H2'	84:S2:1005:G:H8	1.66	0.60
4:L5:1820:C:O2'	4:L5:1821:G:N7	2.33	0.60
4:L5:2317:C:OP1	36:Le:14:LYS:NZ	2.29	0.60
4:L5:2361:G:N2	4:L5:3860:A:OP2	2.32	0.60
4:L5:4419:U:OP1	4:L5:4421:C:N4	2.33	0.60
26:LU:117:ILE:CG2	85:CI:58:LEU:CD1	2.79	0.60
58:SS:38:ARG:O	58:SS:42:HIS:ND1	2.25	0.60
4:L5:310:G:H1	4:L5:327:U:H3	1.49	0.60
4:L5:2274:C:H2'	4:L5:2275:G:C8	2.37	0.60
11:LE:164:PHE:HA	11:LE:175:VAL:HG12	1.83	0.60
17:LL:142:GLU:HA	17:LL:146:LEU:HD12	1.83	0.60
20:LO:34:VAL:HG22	20:LO:103:LYS:HB2	1.82	0.60
32:La:84:GLU:OE1	32:La:87:ARG:NH2	2.34	0.60
38:Lg:61:PRO:HA	38:Lg:64:LEU:HD12	1.82	0.60
58:SS:5:ILE:N	61:SZ:50:PHE:O	2.34	0.60
79:SX:124:LYS:HG2	79:SX:129:SER:HA	1.84	0.60
84:S2:1269:G:H2'	84:S2:1270:G:C8	2.36	0.60
4:L5:2832:A:OP1	35:Ld:47:LYS:NZ	2.27	0.60
13:LG:57:TRP:O	13:LG:62:ARG:NH1	2.35	0.60
41:Lj:2:THR:HB	41:Lj:6:SER:HB2	1.84	0.60
48:Lr:28:GLU:OE2	48:Lr:31:ASN:ND2	2.32	0.60
55:SP:92:SER:HB2	55:SP:107:ILE:HD13	1.84	0.60
61:SZ:41:ARG:HH12	61:SZ:44:LEU:HG	1.65	0.60
67:SB:186:ASN:HA	67:SB:189:ILE:HD12	1.84	0.60
69:SE:6:LYS:O	69:SE:30:ARG:NH2	2.35	0.60
69:SE:19:MET:HB2	69:SE:51:ARG:HH22	1.64	0.60
70:SG:35:GLU:HG2	70:SG:114:VAL:HG21	1.83	0.60
2:CF:132:GLN:O	2:CF:136:HIS:ND1	2.34	0.60
4:L5:705:G:OP1	36:Le:5:ARG:NH2	2.35	0.60
4:L5:1942:A:H2'	4:L5:1943:A:C8	2.37	0.60
4:L5:3717:A:OP2	4:L5:3735:G:N2	2.31	0.60
4:L5:4452:U:OP2	4:L5:4522:G:N1	2.23	0.60
18:LM:104:MET:HE3	18:LM:109:ARG:HG2	1.84	0.60
51:SD:23:GLU:HG2	53:SK:64:TRP:HE1	1.66	0.60
65:Sg:254:PRO:O	65:Sg:272:GLN:NE2	2.35	0.60
79:SX:9:THR:HG22	84:S2:681:PSU:H4'	1.84	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:SY:102:THR:OG1	80:SY:106:GLN:OE1	2.19	0.60
84:S2:5:U:H2'	84:S2:6:G:H8	1.66	0.60
84:S2:91:A:H5"	84:S2:92:A:H5"	1.84	0.60
3:AT:16:C:O2'	3:AT:19:G:OP1	2.20	0.60
4:L5:2544:G:H22	6:L8:124:U:H5'	1.66	0.60
4:L5:4501:U:OP1	8:LB:5:LYS:NZ	2.34	0.60
44:Lm:79:GLU:OE2	44:Lm:82:LEU:N	2.32	0.60
59:ST:62:ARG:NH2	84:S2:1543:U:OP2	2.32	0.60
68:SC:187:ARG:NH2	84:S2:1143:A:OP2	2.34	0.60
68:SC:203:GLY:N	68:SC:221:ASP:OD1	2.33	0.60
80:SY:80:ASP:HA	80:SY:83:LYS:HD2	1.83	0.60
80:SY:86:GLU:OE2	80:SY:90:ARG:NH1	2.31	0.60
4:L5:724:C:OP1	9:LC:350:ARG:NH1	2.34	0.60
4:L5:1667:G:N1	4:L5:2281:U:OP2	2.31	0.60
4:L5:1982:G:O2'	4:L5:1984:A:N7	2.30	0.60
4:L5:4304:A:OP2	4:L5:4305:G:N2	2.35	0.60
4:L5:4389:C:H2'	4:L5:4390:A:H8	1.65	0.60
65:Sg:120:ILE:HB	65:Sg:132:TRP:HB2	1.84	0.60
69:SE:192:ILE:HG12	69:SE:243:GLY:HA3	1.84	0.60
70:SG:162:LEU:HG	70:SG:167:LYS:HE3	1.83	0.60
74:SL:35:ARG:NH2	74:SL:55:TYR:O	2.35	0.60
4:L5:207:G:H21	4:L5:232:G:H21	1.50	0.59
4:L5:338:A:OP1	17:LL:31:ARG:NH2	2.34	0.59
4:L5:512:U:H3	4:L5:647:G:H1	1.50	0.59
4:L5:1962:A:OP2	4:L5:2024:G:N2	2.30	0.59
4:L5:1971:C:O2	49:Ls:41:GLN:NE2	2.35	0.59
49:Ls:30:VAL:HA	49:Ls:189:ILE:HA	1.83	0.59
84:S2:554:A:HO2'	84:S2:555:A:H8	1.49	0.59
84:S2:1405:A:H2'	84:S2:1406:G:O4'	2.01	0.59
12:LF:105:VAL:HG13	12:LF:136:VAL:HG12	1.85	0.59
22:LQ:79:THR:HB	22:LQ:136:THR:HG22	1.84	0.59
23:LR:176:ARG:NH2	84:S2:910:G:OP1	2.33	0.59
32:La:36:GLY:HA3	32:La:40:HIS:CE1	2.36	0.59
36:Le:108:ARG:HD2	36:Le:128:ARG:HB2	1.83	0.59
51:SD:185:LYS:NZ	84:S2:1336:C:OP1	2.32	0.59
54:SM:96:ARG:NH2	54:SM:100:PRO:O	2.36	0.59
68:SC:238:LYS:NZ	84:S2:1355:C:O2'	2.32	0.59
84:S2:145:G:H2'	84:S2:146:G:C8	2.37	0.59
84:S2:1760:G:N1	84:S2:1774:C:OP1	2.34	0.59
4:L5:1845:U:H2'	4:L5:1846:G:H8	1.67	0.59
4:L5:2730:U:H2'	4:L5:2731:C:C6	2.37	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3893:C:H2'	4:L5:3894:A:H8	1.66	0.59
4:L5:4694:G:H4'	14:LH:71:ARG:HH12	1.67	0.59
4:L5:4723:A:H2'	4:L5:4724:A:C8	2.37	0.59
8:LB:29:VAL:HG12	8:LB:31:SER:H	1.67	0.59
20:LO:10:ASP:OD2	20:LO:37:ARG:NH2	2.35	0.59
41:Lj:14:LYS:NZ	43:Ll:51:LEU:OXT	2.35	0.59
65:Sg:63:SER:HB2	84:S2:1398:G:H1'	1.84	0.59
65:Sg:216:ALA:HB3	65:Sg:230:LEU:HB3	1.83	0.59
74:SL:104:LYS:NZ	84:S2:399:C:N3	2.38	0.59
84:S2:1259:A:N6	84:S2:1519:U:O5'	2.35	0.59
4:L5:4637:OMG:OP1	35:Ld:30:HIS:NE2	2.34	0.59
11:LE:165:LEU:HD11	11:LE:176:THR:HG22	1.83	0.59
11:LE:277:LEU:HA	11:LE:281:ILE:HD11	1.83	0.59
14:LH:106:GLN:HB2	14:LH:111:LEU:HB3	1.84	0.59
24:LS:5:GLY:O	24:LS:111:ARG:NH2	2.34	0.59
32:La:110:LYS:HG3	32:La:128:PHE:HB2	1.83	0.59
47:Lp:7:LYS:O	47:Lp:27:LYS:NZ	2.35	0.59
53:SK:65:ARG:NH1	63:Sd:20:SER:OG	2.35	0.59
84:S2:165:G:H2'	84:S2:166:A2M:H8	1.83	0.59
4:L5:662:C:H2'	4:L5:663:G:C8	2.36	0.59
4:L5:1680:G:O6	87:L5:5262:SPM:N1	2.36	0.59
4:L5:1739:G:N3	4:L5:1742:A:N6	2.50	0.59
4:L5:2387:G:H2'	4:L5:2388:A:H8	1.67	0.59
42:Lk:8:ILE:HD11	42:Lk:56:LEU:HD13	1.84	0.59
51:SD:99:ILE:HG23	51:SD:173:ARG:HH21	1.68	0.59
60:SU:19:ARG:HH11	60:SU:92:HIS:HB3	1.68	0.59
84:S2:66:G:H2'	84:S2:67:C:H4'	1.82	0.59
84:S2:1491:G:H2'	84:S2:1492:U:C6	2.37	0.59
4:L5:1333:A:H2'	4:L5:1334:A:H8	1.68	0.59
4:L5:1867:A:OP1	15:LI:13:LYS:NZ	2.23	0.59
4:L5:4088:C:OP1	7:LA:37:ARG:NH1	2.35	0.59
7:LA:130:SER:HB2	7:LA:171:GLY:HA3	1.83	0.59
17:LL:28:GLN:OE1	19:LN:202:ARG:NE	2.28	0.59
49:Ls:54:LEU:HD23	49:Ls:88:PHE:HD2	1.68	0.59
55:SP:43:ARG:NE	84:S2:1617:G:O6	2.34	0.59
68:SC:166:ARG:NH2	68:SC:254:ASP:OD2	2.31	0.59
84:S2:106:C:OP1	84:S2:431:G:O2'	2.20	0.59
2:CF:72:THR:HB	2:CF:93:PRO:HA	1.85	0.59
4:L5:1279:A:O2'	4:L5:1281:G:N7	2.29	0.59
4:L5:1998:A:N6	49:Ls:40:MET:SD	2.75	0.59
8:LB:394:LYS:HA	8:LB:397:ILE:HG12	1.85	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:Sf:99:LYS:NZ	84:S2:1287:A:OP1	2.34	0.59
84:S2:609:U:H2'	84:S2:610:G:H8	1.66	0.59
84:S2:1532:C:H3'	84:S2:1637:A:H62	1.67	0.59
4:L5:1392:A:H2'	4:L5:1393:G:C8	2.38	0.59
4:L5:5043:A:OP1	8:LB:393:LYS:NZ	2.31	0.59
8:LB:95:THR:OG1	8:LB:98:GLY:O	2.18	0.59
12:LF:157:ARG:HD2	12:LF:213:LEU:HD23	1.83	0.59
51:SD:138:VAL:HG13	51:SD:182:LEU:HD21	1.85	0.59
64:Sf:133:ALA:HB3	64:Sf:140:TYR:H	1.67	0.59
65:Sg:40:ILE:HB	65:Sg:59:LEU:HB2	1.84	0.59
65:Sg:252:THR:HG21	65:Sg:257:LYS:HD2	1.84	0.59
84:S2:1240:A:N3	84:S2:1267:C:O2'	2.32	0.59
4:L5:197:A:H2'	4:L5:198:A:C8	2.37	0.59
4:L5:279:A:OP1	19:LN:50:ARG:NH1	2.36	0.59
4:L5:679:C:H2'	4:L5:680:G:C8	2.36	0.59
4:L5:746:A:H2'	4:L5:747:A:C8	2.38	0.59
4:L5:4238:G:H2'	4:L5:4239:A:C8	2.38	0.59
4:L5:4415:A:O2'	15:LI:74:LYS:NZ	2.32	0.59
31:LZ:50:PRO:HD3	31:LZ:68:ILE:HG12	1.85	0.59
48:Lr:66:ARG:O	48:Lr:70:GLN:NE2	2.35	0.59
50:Lt:114:ARG:NH2	50:Lt:126:SER:OG	2.36	0.59
68:SC:194:ARG:NH1	84:S2:1156:U:O4	2.35	0.59
73:SJ:131:ARG:NH1	73:SJ:143:ASN:O	2.34	0.59
78:SW:2:VAL:N	84:S2:1091:C:HO2'	1.99	0.59
84:S2:146:G:H2'	84:S2:147:A:C8	2.38	0.59
4:L5:4563:U:H2'	4:L5:4564:A:H8	1.68	0.59
4:L5:4926:C:H5"	4:L5:4927:G:H21	1.67	0.59
28:LW:91:MET:O	28:LW:95:ASN:ND2	2.35	0.59
35:Ld:22:THR:HG23	35:Ld:122:VAL:HG13	1.84	0.59
39:Lh:95:LEU:HB3	39:Lh:99:GLU:HG3	1.84	0.59
55:SP:79:HIS:CE1	84:S2:1298:G:C8	2.91	0.59
68:SC:185:THR:OG1	84:S2:1155:U:OP1	2.16	0.59
84:S2:981:A:H2'	84:S2:982:G:C8	2.37	0.59
84:S2:1845:A:H2'	84:S2:1846:G:C8	2.38	0.59
4:L5:959:G:O2'	4:L5:2263:A:N6	2.36	0.58
4:L5:1558:A:H2'	4:L5:1559:G:C8	2.37	0.58
4:L5:2034:G:O2'	24:LS:118:ARG:NH1	2.31	0.58
4:L5:5055:G:H2'	4:L5:5056:A:C8	2.38	0.58
7:LA:13:GLY:O	7:LA:17:ARG:NH1	2.36	0.58
24:LS:173:ASN:ND2	24:LS:175:PHE:O	2.36	0.58
36:Le:16:ARG:NH2	36:Le:19:LYS:O	2.31	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Lg:105:LYS:HA	38:Lg:108:LYS:HE3	1.85	0.58
61:SZ:46:ASN:HB3	61:SZ:80:ARG:HA	1.84	0.58
64:Sf:108:VAL:HG12	64:Sf:114:ILE:HA	1.85	0.58
76:SO:149:ARG:NH1	84:S2:1064:C:O3'	2.36	0.58
84:S2:1128:C:H2'	84:S2:1129:G:C8	2.38	0.58
4:L5:4974:C:N4	4:L5:4975:G:O6	2.36	0.58
5:L7:27:G:O6	10:LD:58:ARG:NH2	2.36	0.58
57:SR:52:GLY:O	57:SR:55:THR:OG1	2.18	0.58
67:SB:98:THR:O	67:SB:232:HIS:NE2	2.35	0.58
4:L5:1857:C:H2'	4:L5:1858:A:H8	1.66	0.58
4:L5:2295:C:H2'	4:L5:2296:G:H8	1.67	0.58
4:L5:3893:C:H2'	4:L5:3894:A:C8	2.38	0.58
39:Lh:80:PRO:HD2	39:Lh:83:LEU:HD12	1.85	0.58
55:SP:31:GLU:HA	55:SP:34:MET:HE2	1.85	0.58
58:SS:14:ARG:HH11	58:SS:19:ASN:HB3	1.68	0.58
84:S2:941:C:H2'	84:S2:942:G:C8	2.37	0.58
4:L5:20:U:H3'	4:L5:21:G:H8	1.67	0.58
4:L5:447:C:H2'	4:L5:448:G:C8	2.38	0.58
4:L5:3788:C:N4	4:L5:3812:C:O4'	2.36	0.58
4:L5:4076:G:OP1	13:LG:73:ARG:NE	2.35	0.58
4:L5:4523:A2M:H1'	4:L5:4558:U:C4	2.38	0.58
4:L5:4981:G:H3'	4:L5:4982:A:H8	1.69	0.58
61:SZ:101:SER:OG	61:SZ:108:ILE:N	2.35	0.58
74:SL:17:PHE:CG	84:S2:222:U:H5"	2.37	0.58
84:S2:557:U:H2'	84:S2:558:G:C8	2.38	0.58
4:L5:399:G:H2'	4:L5:400:A2M:H8	1.85	0.58
4:L5:1915:C:OP2	20:LO:94:ARG:NH2	2.36	0.58
4:L5:1932:A:OP1	20:LO:49:ARG:NH2	2.29	0.58
4:L5:3688:U:OP2	7:LA:198:ARG:NH2	2.37	0.58
4:L5:4940:C:H5'	4:L5:4941:G:H5"	1.85	0.58
8:LB:108:GLU:HG3	8:LB:134:CYS:HB2	1.85	0.58
10:LD:265:ARG:NH1	10:LD:267:ASN:O	2.29	0.58
20:LO:186:GLU:OE1	20:LO:186:GLU:N	2.36	0.58
66:SA:37:TYR:OH	77:SV:66:ASP:OD2	2.21	0.58
69:SE:27:PHE:O	84:S2:495:U:O2'	2.22	0.58
4:L5:150:U:OP2	13:LG:200:THR:OG1	2.19	0.58
4:L5:262:G:H2'	4:L5:263:G:C8	2.38	0.58
4:L5:4389:C:H2'	4:L5:4390:A:C8	2.39	0.58
4:L5:4736:C:H2'	4:L5:4737:G:H8	1.69	0.58
10:LD:223:PHE:HB3	10:LD:226:TYR:HB2	1.84	0.58
12:LF:171:ASP:OD1	12:LF:172:ASN:N	2.37	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LM:115:ALA:HB1	20:LO:192:TYR:HB3	1.85	0.58
72:SI:10:LYS:NZ	84:S2:370:G:O2'	2.36	0.58
84:S2:751:G:H1'	84:S2:793:G:H21	1.69	0.58
2:CF:360:VAL:HA	2:CF:369:ALA:HA	1.86	0.58
4:L5:1437:C:O2'	4:L5:2098:G:O5'	2.19	0.58
4:L5:1505:C:H2'	4:L5:1506:G:C8	2.38	0.58
11:LE:264:ILE:HD11	11:LE:267:LEU:HD22	1.85	0.58
69:SE:144:ALA:HB3	84:S2:121:OMU:HM23	1.86	0.58
70:SG:13:GLN:NE2	84:S2:153:G:N3	2.51	0.58
76:SO:135:ILE:O	84:S2:943:U:O2'	2.22	0.58
4:L5:1315:C:H2'	4:L5:1316:OMG:H8	1.67	0.58
4:L5:1996:C:O3'	49:Ls:44:ARG:NH1	2.34	0.58
4:L5:3607:U:H2'	4:L5:3608:A:H8	1.67	0.58
4:L5:3873:G:H2'	4:L5:3874:G:C8	2.38	0.58
6:L8:28:C:H2'	6:L8:29:G:H8	1.68	0.58
50:Lt:82:ILE:HG12	50:Lt:137:GLN:HG2	1.86	0.58
4:L5:2021:G:OP1	49:Ls:58:ASN:N	2.36	0.58
4:L5:2749:C:H2'	4:L5:2750:G:C8	2.39	0.58
4:L5:4688:C:H2'	4:L5:4689:PSU:C6	2.38	0.58
10:LD:156:GLY:N	10:LD:179:ARG:O	2.32	0.58
18:LM:28:VAL:HB	18:LM:37:LEU:HB3	1.85	0.58
84:S2:159:A2M:O5'	84:S2:159:A2M:H8	2.03	0.58
84:S2:864:A:H2'	84:S2:865:A:H8	1.69	0.58
84:S2:888:U:O2'	84:S2:898:U:N3	2.33	0.58
84:S2:1208:A:H2'	84:S2:1209:A:H8	1.68	0.58
4:L5:974:C:H5"	12:LF:43:ARG:NH1	2.18	0.58
4:L5:3736:A:H2'	4:L5:3737:A:C8	2.39	0.58
4:L5:4274:A:H2'	4:L5:4275:G:C8	2.39	0.58
32:La:71:PRO:HG2	32:La:108:TYR:HA	1.86	0.58
69:SE:134:LYS:N	84:S2:298:G:OP1	2.29	0.58
4:L5:337:U:H2'	4:L5:338:A:H8	1.69	0.57
4:L5:1482:G:O6	40:Li:4:ARG:NH1	2.37	0.57
4:L5:3877:A:N3	4:L5:4401:G:O2'	2.37	0.57
4:L5:4260:U:H2'	4:L5:4261:C:H6	1.69	0.57
4:L5:4301:U:OP1	25:LT:78:LYS:NZ	2.36	0.57
4:L5:4586:G:O6	4:L5:4717:A:N6	2.37	0.57
59:ST:60:THR:HG22	59:ST:75:MET:HE2	1.86	0.57
71:SH:20:GLU:HG2	71:SH:48:ALA:HB3	1.85	0.57
73:SJ:28:GLU:OE2	73:SJ:44:TRP:NE1	2.32	0.57
84:S2:1533:A:N6	84:S2:1602:U:C2	2.72	0.57
4:L5:425:U:H2'	4:L5:426:A:H8	1.68	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4693:C:O2'	4:L5:4695:C:N4	2.26	0.57
4:L5:4992:G:H2'	4:L5:4993:G:C8	2.39	0.57
35:Ld:54:MET:HE3	35:Ld:60:PRO:HA	1.85	0.57
54:SM:49:LEU:HD21	54:SM:123:VAL:HG11	1.85	0.57
58:SS:15:VAL:HG12	58:SS:16:LEU:HG	1.86	0.57
58:SS:55:ARG:N	58:SS:58:GLU:OE2	2.33	0.57
60:SU:70:CYS:SG	84:S2:1491:G:O2'	2.63	0.57
65:Sg:172:LYS:HB3	65:Sg:191:HIS:HB2	1.86	0.57
67:SB:99:ASN:OD1	67:SB:100:PHE:N	2.34	0.57
68:SC:167:ARG:HB3	68:SC:177:PRO:HB2	1.86	0.57
69:SE:71:LYS:HB3	69:SE:91:SER:HB2	1.85	0.57
69:SE:127:ARG:HG3	69:SE:142:HIS:HA	1.86	0.57
71:SH:154:ILE:HB	71:SH:185:VAL:HG22	1.86	0.57
84:S2:388:U:H2'	84:S2:389:A:C8	2.39	0.57
84:S2:1198:G:H2'	84:S2:1199:A:H8	1.69	0.57
3:AT:14:A:H3'	3:AT:15:G:H8	1.69	0.57
4:L5:1511:U:H2'	4:L5:1512:G:H8	1.68	0.57
4:L5:3610:A:H2'	4:L5:3611:A:H8	1.67	0.57
4:L5:3633:C:H2'	4:L5:3634:G:C8	2.38	0.57
4:L5:4391:G:OP1	9:LC:75:ARG:NH1	2.25	0.57
4:L5:4636:PSU:N1	35:Ld:79:ASN:OD1	2.37	0.57
18:LM:24:LEU:HB2	18:LM:43:THR:HG21	1.85	0.57
66:SA:184:ARG:HG2	66:SA:189:ILE:HB	1.86	0.57
76:SO:117:ARG:NH1	81:Sa:48:ALA:O	2.37	0.57
84:S2:5:U:H2'	84:S2:6:G:C8	2.38	0.57
84:S2:639:C:H2'	84:S2:640:A:C8	2.39	0.57
4:L5:4239:A:H2'	4:L5:4240:G:C8	2.40	0.57
4:L5:4315:A:OP1	25:LT:69:GLN:NE2	2.33	0.57
14:LH:120:GLU:OE2	14:LH:124:ARG:NH1	2.33	0.57
53:SK:31:LYS:HZ3	53:SK:40:VAL:H	1.53	0.57
63:Sd:7:TYR:OH	84:S2:1274:G:N7	2.32	0.57
66:SA:50:ASN:HB3	66:SA:53:ARG:HD2	1.86	0.57
74:SL:68:ILE:HD11	74:SL:141:ASN:HD22	1.68	0.57
84:S2:1536:G:H2'	84:S2:1537:A:H8	1.69	0.57
1:Pt:50:U:O2	1:Pt:64:G:N2	2.25	0.57
2:CF:215:LYS:NZ	2:CF:216:VAL:O	2.37	0.57
4:L5:1195:G:H2'	4:L5:1196:G:C8	2.40	0.57
4:L5:1645:C:H2'	4:L5:1646:A:C8	2.39	0.57
4:L5:4594:U:H2'	4:L5:4595:G:C8	2.39	0.57
16:LJ:16:ARG:O	16:LJ:135:GLY:N	2.35	0.57
31:LZ:54:THR:HG23	31:LZ:57:MET:HE3	1.86	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SK:50:GLN:HE22	84:S2:1276:A:H1'	1.68	0.57
55:SP:76:VAL:O	55:SP:95:GLY:N	2.34	0.57
70:SG:4:ASN:ND2	84:S2:154:U:O2	2.37	0.57
4:L5:951:G:H2'	4:L5:952:G:H8	1.70	0.57
4:L5:1289:C:H2'	4:L5:1290:G:H8	1.70	0.57
4:L5:1818:G:O2'	4:L5:1820:C:OP2	2.20	0.57
4:L5:2666:U:OP2	23:LR:124:TYR:OH	2.15	0.57
6:L8:90:C:H2'	6:L8:91:A:C8	2.39	0.57
15:LI:207:ASP:OD1	15:LI:210:ARG:NH1	2.38	0.57
31:LZ:3:LYS:O	31:LZ:6:LYS:NZ	2.36	0.57
58:SS:109:GLU:HA	58:SS:112:GLU:HG2	1.86	0.57
84:S2:1845:A:H2'	84:S2:1846:G:H8	1.70	0.57
4:L5:1302:U:H3'	4:L5:1303:A:H8	1.69	0.57
4:L5:1509:C:H2'	4:L5:1510:G:C8	2.37	0.57
4:L5:3824:A:H3'	4:L5:3825:A2M:H8	1.85	0.57
4:L5:4106:G:H3'	4:L5:4107:G:H8	1.69	0.57
29:LX:90:ILE:HG12	29:LX:96:LEU:HD23	1.86	0.57
52:SF:83:ASN:OD1	84:S2:1651:A:O2'	2.21	0.57
56:SQ:42:ILE:HG23	56:SQ:44:PRO:HD2	1.86	0.57
67:SB:186:ASN:OD1	67:SB:187:LYS:N	2.38	0.57
84:S2:1130:G:N2	84:S2:1130:G:OP2	2.36	0.57
84:S2:1144:A:H2'	84:S2:1145:A:C8	2.40	0.57
4:L5:417:G:OP1	4:L5:2329:U:O2'	2.21	0.57
4:L5:945:U:OP1	9:LC:342:ARG:NH2	2.36	0.57
4:L5:1539:G:H2'	4:L5:1540:C:H6	1.70	0.57
4:L5:2411:C:O2'	4:L5:2526:C:O2	2.18	0.57
4:L5:3661:G:H4'	4:L5:3662:A:H5'	1.87	0.57
4:L5:4251:A:H5"	16:LJ:108:GLY:HA3	1.87	0.57
5:L7:6:C:O2'	10:LD:50:ARG:NH2	2.38	0.57
6:L8:123:U:H2'	6:L8:126:C:H42	1.69	0.57
27:LV:85:ARG:N	27:LV:101:ASN:OD1	2.35	0.57
28:LW:56:ARG:HE	28:LW:61:LYS:HB2	1.70	0.57
61:SZ:99:LEU:HD11	61:SZ:102:LYS:HB2	1.86	0.57
70:SG:138:ALA:HA	70:SG:176:ILE:HD11	1.86	0.57
84:S2:1588:A:H2'	84:S2:1589:A:C8	2.39	0.57
4:L5:4530:UR3:H2'	4:L5:4531:U:H2'	1.86	0.57
6:L8:47:C:H1'	6:L8:61:A:H2'	1.87	0.57
19:LN:84:PRO:HA	19:LN:87:HIS:ND1	2.20	0.57
41:Lj:2:THR:O	41:Lj:7:SER:OG	2.21	0.57
72:SI:125:LYS:HB2	72:SI:128:LYS:HZ3	1.70	0.57
80:SY:80:ASP:OD1	80:SY:81:TYR:N	2.37	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1174:PSU:H2'	84:S2:1175:G:C8	2.38	0.57
1:Pt:33:U:OP2	56:SQ:146:ARG:NH1	2.38	0.57
2:CF:108:GLN:HE22	2:CF:251:GLN:HG3	1.70	0.57
4:L5:436:C:H2'	4:L5:437:G:H8	1.70	0.57
4:L5:907:C:H2'	4:L5:908:G:H8	1.70	0.57
4:L5:1333:A:H2'	4:L5:1334:A:C8	2.40	0.57
4:L5:2778:G:N2	6:L8:113:C:OP2	2.38	0.57
4:L5:4601:U:H2'	4:L5:4602:A:H8	1.68	0.57
4:L5:4638:U:H2'	4:L5:4639:G:N3	2.20	0.57
4:L5:4742:G:OP1	4:L5:4900:C:N4	2.34	0.57
4:L5:4871:C:N4	24:LS:171:ARG:O	2.38	0.57
71:SH:34:SER:OG	71:SH:78:ARG:NH2	2.32	0.57
72:SI:88:ASN:OD1	72:SI:205:ARG:NH2	2.38	0.57
84:S2:672:A:N6	84:S2:1027:A:OP1	2.33	0.57
84:S2:1797:U:H2'	84:S2:1798:C:C6	2.39	0.57
2:CF:335:MET:HE1	2:CF:444:LYS:HB2	1.86	0.56
4:L5:163:A:H2'	4:L5:164:G:H8	1.69	0.56
4:L5:1683:PSU:OP1	32:La:44:ASN:ND2	2.38	0.56
4:L5:1795:A:N3	5:L7:79:U:O2'	2.37	0.56
4:L5:2492:C:H2'	4:L5:2493:G:H8	1.69	0.56
4:L5:2520:C:H2'	4:L5:2521:G:H8	1.70	0.56
4:L5:4297:G:H22	4:L5:4313:A:H2	1.53	0.56
4:L5:4474:A:OP2	4:L5:4476:C:N4	2.37	0.56
41:Lj:28:HIS:N	41:Lj:33:THR:O	2.33	0.56
78:SW:107:SER:HB2	84:S2:860:G:H21	1.68	0.56
84:S2:1203:G:H2'	84:S2:1204:A:C8	2.40	0.56
2:CF:249:PRO:HA	2:CF:325:VAL:HA	1.86	0.56
4:L5:1668:A:OP2	4:L5:2280:G:N2	2.31	0.56
4:L5:4088:C:H2'	4:L5:4089:G:H8	1.70	0.56
6:L8:130:C:H2'	6:L8:131:G:H8	1.69	0.56
11:LE:218:LYS:O	11:LE:220:LYS:NZ	2.34	0.56
23:LR:25:ASP:OD2	85:CI:72:ARG:CZ	2.53	0.56
23:LR:77:GLY:O	23:LR:81:ARG:NE	2.38	0.56
30:LY:55:VAL:HG12	30:LY:106:ILE:HA	1.86	0.56
53:SK:55:ARG:NH1	53:SK:78:TYR:OH	2.38	0.56
84:S2:349:A:H2'	84:S2:350:C:C6	2.40	0.56
84:S2:1183:A:H2'	84:S2:1184:G:H8	1.67	0.56
84:S2:1279:C:H2'	84:S2:1280:G:H8	1.70	0.56
2:CF:291:SER:O	2:CF:311:ASN:N	2.38	0.56
3:AT:18:G:H1	3:AT:56:U:H1'	1.70	0.56
4:L5:1258:G:H2'	4:L5:1259:G:C8	2.40	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1489:G:OP1	32:La:131:ARG:NH1	2.38	0.56
4:L5:2576:G:OP1	31:LZ:48:ARG:NH2	2.38	0.56
4:L5:2588:C:OP1	4:L5:2768:C:O2'	2.23	0.56
4:L5:2664:G:OP2	23:LR:121:HIS:ND1	2.21	0.56
4:L5:2745:A:H2'	4:L5:2746:A:C8	2.40	0.56
4:L5:4076:G:OP2	4:L5:4163:U:N3	2.36	0.56
4:L5:4593:C:H2'	4:L5:4594:U:H6	1.70	0.56
9:LC:194:GLY:HA2	9:LC:197:ARG:HB2	1.86	0.56
49:Ls:134:LYS:HD2	49:Ls:137:PHE:HE2	1.70	0.56
57:SR:7:LYS:NZ	84:S2:1373:C:OP1	2.35	0.56
58:SS:125:HIS:HE1	84:S2:1609:C:H4'	1.70	0.56
65:Sg:178:ASN:HB2	65:Sg:185:LYS:HD3	1.86	0.56
80:SY:108:LYS:NZ	84:S2:506:G:OP1	2.26	0.56
84:S2:1547:C:N4	84:S2:1586:U:O4	2.32	0.56
4:L5:267:G:H2'	4:L5:268:G:H8	1.70	0.56
4:L5:444:G:H2'	4:L5:445:U:H6	1.69	0.56
4:L5:3672:G:OP2	4:L5:3672:G:N2	2.37	0.56
4:L5:4742:G:H2'	4:L5:4743:G:H8	1.70	0.56
10:LD:108:ARG:CZ	10:LD:253:TYR:HB2	2.36	0.56
31:LZ:46:ILE:HA	31:LZ:70:SER:HA	1.87	0.56
53:SK:8:ARG:NH2	84:S2:1314:U:O2'	2.38	0.56
84:S2:1220:A:N3	84:S2:1677:U:O2'	2.34	0.56
84:S2:1779:G:H2'	84:S2:1780:G:C8	2.40	0.56
84:S2:1801:A:H2'	84:S2:1802:C:C6	2.41	0.56
2:CF:85:TYR:OH	2:CF:232:LEU:O	2.18	0.56
4:L5:246:G:H2'	4:L5:247:G:H8	1.70	0.56
4:L5:2611:A:H5'	4:L5:2688:G:H4'	1.87	0.56
20:LO:54:TYR:OH	20:LO:73:PHE:O	2.22	0.56
32:La:103:VAL:HB	32:La:108:TYR:HB2	1.86	0.56
34:Lc:50:ASN:ND2	34:Lc:76:GLY:O	2.38	0.56
55:SP:79:HIS:HE1	84:S2:1298:G:N7	2.02	0.56
70:SG:2:LYS:HB3	70:SG:15:LEU:HD11	1.88	0.56
84:S2:72:C:H5'	84:S2:73:C:C4	2.41	0.56
84:S2:1198:G:H2'	84:S2:1199:A:C8	2.40	0.56
84:S2:1289:U:H2'	84:S2:1290:G:C8	2.40	0.56
84:S2:1396:A:N7	84:S2:1449:G:O6	2.38	0.56
84:S2:1858:G:H2'	84:S2:1859:A:H8	1.70	0.56
4:L5:1082:C:HO2'	4:L5:1083:U:H6	1.52	0.56
4:L5:1660:U:N3	4:L5:2345:G:OP1	2.39	0.56
4:L5:3619:G:N2	4:L5:3623:C:N3	2.54	0.56
4:L5:4097:G:O6	4:L5:4098:A:N6	2.39	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4510:A:H2'	4:L5:4511:A:C8	2.41	0.56
4:L5:4954:G:H2'	4:L5:4955:A:H8	1.70	0.56
4:L5:4987:C:OP2	8:LB:116:ARG:NH2	2.38	0.56
45:Ln:2:ARG:NH2	84:S2:1842:4AC:O7	2.32	0.56
46:Lo:33:LEU:HA	46:Lo:38:LYS:HG2	1.87	0.56
67:SB:123:ALA:HB2	67:SB:165:ARG:HG2	1.87	0.56
69:SE:94:LYS:HE3	80:SY:16:ARG:HB3	1.88	0.56
79:SX:20:GLN:OE1	84:S2:1165:G:N2	2.36	0.56
84:S2:414:A:H2'	84:S2:415:A:H8	1.71	0.56
84:S2:907:G:H2'	84:S2:908:A:C8	2.40	0.56
84:S2:940:U:H3	84:S2:1002:U:H3	1.52	0.56
4:L5:3867:A2M:H2'	4:L5:3868:G:C8	2.41	0.56
4:L5:4507:A:O2'	27:LV:41:SER:OG	2.21	0.56
5:L7:63:C:H5'	5:L7:64:G:H5"	1.88	0.56
50:Lt:22:VAL:HA	50:Lt:48:LYS:HE2	1.87	0.56
55:SP:115:TYR:HB2	55:SP:118:GLU:HG3	1.87	0.56
67:SB:136:ARG:CZ	84:S2:941:C:H5"	2.36	0.56
78:SW:57:ARG:HD2	84:S2:919:A:H4'	1.87	0.56
84:S2:730:C:OP2	84:S2:734:C:N4	2.39	0.56
84:S2:1240:A:H2'	84:S2:1241:A:C8	2.41	0.56
84:S2:1354:G:N2	84:S2:1357:A:OP2	2.39	0.56
4:L5:123:C:H2'	4:L5:124:C:H6	1.71	0.56
4:L5:1668:A:O3'	33:Lb:18:ARG:NH2	2.39	0.56
4:L5:3725:G:N2	4:L5:3728:A:OP2	2.30	0.56
4:L5:4870:G:OP2	18:LM:5:ARG:NH1	2.31	0.56
5:L7:49:A:H5"	10:LD:224:SER:HB2	1.87	0.56
21:LP:118:GLN:OE1	21:LP:120:ASN:ND2	2.39	0.56
30:LY:85:VAL:HG12	30:LY:97:VAL:HB	1.87	0.56
64:Sf:138:ARG:NH2	84:S2:1292:C:N3	2.43	0.56
65:Sg:156:PHE:HA	65:Sg:165:ILE:HG22	1.88	0.56
70:SG:176:ILE:HG12	70:SG:179:LEU:HD11	1.87	0.56
77:SV:15:ARG:NH1	77:SV:33:GLN:OE1	2.37	0.56
84:S2:1279:C:H2'	84:S2:1280:G:C8	2.41	0.56
3:AT:3:C:H2'	3:AT:4:U:H6	1.71	0.56
4:L5:2557:G:O6	4:L5:2570:U:O4	2.24	0.56
4:L5:4946:U:HO2'	37:Lf:2:SER:N	2.04	0.56
5:L7:107:G:H2'	5:L7:108:G:H8	1.70	0.56
7:LA:79:ALA:HA	7:LA:169:VAL:HA	1.87	0.56
11:LE:157:HIS:HA	11:LE:160:LYS:HE3	1.86	0.56
17:LL:126:LEU:N	17:LL:138:ASP:OD2	2.28	0.56
51:SD:142:LEU:HD13	51:SD:150:MET:HE2	1.88	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SQ:78:VAL:HG12	84:S2:1673:U:H5"	1.88	0.56
57:SR:6:THR:HA	84:S2:1373:C:H5'	1.88	0.56
64:Sf:103:LEU:HB2	64:Sf:105:TYR:CE2	2.41	0.56
81:Sa:8:ASN:ND2	84:S2:1861:G:OP1	2.39	0.56
84:S2:19:A:H4'	84:S2:621:C:H5'	1.87	0.56
84:S2:1033:G:N2	84:S2:1080:A:HO2'	2.04	0.56
4:L5:424:U:H3	6:L8:10:G:H1	1.54	0.56
4:L5:513:U:N3	4:L5:516:C:OP2	2.30	0.56
4:L5:1100:U:H1'	4:L5:1167:C:H42	1.70	0.56
4:L5:4322:G:N2	4:L5:4325:A:OP2	2.34	0.56
13:LG:150:LYS:NZ	13:LG:177:MET:O	2.39	0.56
14:LH:118:LEU:HD11	14:LH:167:VAL:HG22	1.88	0.56
23:LR:21:LYS:HE3	23:LR:55:VAL:HA	1.88	0.56
23:LR:92:LYS:HG2	23:LR:96:MET:HE3	1.87	0.56
40:Li:57:ALA:HA	40:Li:60:LEU:HD12	1.88	0.56
58:SS:128:GLY:O	58:SS:144:ARG:NH2	2.39	0.56
65:Sg:44:LYS:HG2	65:Sg:56:GLN:HB2	1.88	0.56
69:SE:17:HIS:NE2	69:SE:39:ARG:O	2.36	0.56
69:SE:152:PRO:HG2	70:SG:216:ARG:HG3	1.88	0.56
72:SI:86:SER:OG	84:S2:376:A:N3	2.37	0.56
84:S2:838:G:H1	84:S2:840:C:HO2'	1.50	0.56
84:S2:1286:G:N2	84:S2:1312:G:O2'	2.39	0.56
84:S2:1417:C:O2	84:S2:1422:G:O6	2.24	0.56
84:S2:1605:G:N2	84:S2:1633:A:OP2	2.39	0.56
84:S2:1862:G:O2'	84:S2:1864:U:OP2	2.24	0.56
1:Pt:29:C:H2'	1:Pt:30:G:H8	1.71	0.55
4:L5:737:C:C4	4:L5:739:G:H5"	2.40	0.55
4:L5:1091:C:H2'	4:L5:1092:G:C8	2.41	0.55
4:L5:1683:PSU:H2'	4:L5:1684:A:C8	2.41	0.55
4:L5:2518:G:O2'	4:L5:2538:U:O2'	2.22	0.55
16:LJ:56:THR:OG1	16:LJ:64:ARG:N	2.37	0.55
38:Lg:44:SER:OG	38:Lg:46:CYS:SG	2.59	0.55
51:SD:32:ASP:OD1	51:SD:57:ASN:ND2	2.40	0.55
52:SF:164:ARG:NH1	84:S2:1533:A:OP2	2.38	0.55
67:SB:40:ASN:HD21	67:SB:76:ASN:HB2	1.71	0.55
69:SE:45:ILE:HG13	69:SE:61:VAL:HG11	1.88	0.55
74:SL:33:LEU:HD12	74:SL:34:PRO:HD2	1.88	0.55
84:S2:511:U:H2'	84:S2:512:A:H8	1.71	0.55
84:S2:1410:C:H2'	84:S2:1411:G:C8	2.42	0.55
84:S2:1849:G:H2'	84:S2:1850:MA6:H8	1.88	0.55
4:L5:1969:G:H4'	49:Ls:36:GLY:HA2	1.87	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2554:U:O2'	4:L5:2574:G:N2	2.38	0.55
4:L5:4237:C:H2'	4:L5:4238:G:C8	2.42	0.55
4:L5:4373:G:N7	46:Lo:61:LYS:NZ	2.50	0.55
4:L5:4537:C:H2'	4:L5:4538:G:H8	1.71	0.55
9:LC:207:PRO:HB3	9:LC:249:PHE:CD2	2.41	0.55
41:Lj:19:CYS:SG	41:Lj:34:CYS:HB2	2.46	0.55
50:Lt:114:ARG:NH1	50:Lt:126:SER:O	2.34	0.55
68:SC:193:VAL:HG11	68:SC:240:THR:HG22	1.88	0.55
84:S2:1700:C:O2	84:S2:1834:A:N6	2.39	0.55
4:L5:495:C:H2'	4:L5:496:G:C8	2.41	0.55
4:L5:1865:G:OP2	15:LI:98:ARG:NH2	2.31	0.55
4:L5:4347:G:H2'	4:L5:4348:A:C8	2.42	0.55
4:L5:4578:G:H2'	4:L5:4579:PSU:H6	1.70	0.55
28:LW:80:ARG:HH22	84:S2:167:G:H4'	1.71	0.55
36:Le:91:CYS:HB3	36:Le:95:TYR:HD2	1.72	0.55
72:SI:9:HIS:HE1	84:S2:386:C:H4'	1.71	0.55
83:Se:34:ARG:NH2	84:S2:642:U:OP2	2.39	0.55
84:S2:1496:U:H2'	84:S2:1498:A:H5'	1.88	0.55
2:CF:34:ILE:HD13	2:CF:59:VAL:HG21	1.88	0.55
4:L5:305:A:OP2	19:LN:15:GLN:NE2	2.35	0.55
4:L5:1503:A:H4'	4:L5:1504:G:H5'	1.86	0.55
4:L5:1645:C:H2'	4:L5:1646:A:H8	1.71	0.55
4:L5:1979:A:N6	4:L5:1984:A:OP1	2.33	0.55
4:L5:2397:G:O6	38:Lg:4:ARG:NH2	2.38	0.55
4:L5:4699:U:H1'	4:L5:4700:A:H5"	1.87	0.55
69:SE:161:GLN:N	69:SE:171:ASP:O	2.28	0.55
2:CF:427:ARG:HH11	2:CF:430:ARG:HH21	1.53	0.55
4:L5:268:G:H2'	4:L5:269:G:C8	2.40	0.55
4:L5:1693:U:OP1	22:LQ:143:ARG:NH2	2.40	0.55
4:L5:2041:A:N7	4:L5:4434:C:O2'	2.40	0.55
4:L5:3589:G:N2	4:L5:3590:G:N7	2.54	0.55
4:L5:4088:C:H2'	4:L5:4089:G:C8	2.41	0.55
10:LD:211:LEU:HD12	10:LD:223:PHE:HE2	1.72	0.55
20:LO:62:MET:HE2	20:LO:64:THR:HB	1.88	0.55
44:Lm:99:CYS:HB3	44:Lm:115:CYS:HB3	1.89	0.55
66:SA:22:GLY:O	66:SA:24:HIS:ND1	2.39	0.55
68:SC:131:GLY:HA3	68:SC:137:VAL:HA	1.88	0.55
68:SC:210:PRO:HB3	68:SC:240:THR:HG21	1.88	0.55
83:Se:8:ARG:HG2	83:Se:11:LYS:HD3	1.89	0.55
84:S2:106:C:H2'	84:S2:107:A:H8	1.71	0.55
84:S2:430:C:H2'	84:S2:431:G:H8	1.71	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1095:A:N1	4:L5:1200:G:C6	2.75	0.55
6:L8:27:U:H2'	6:L8:28:C:C6	2.42	0.55
10:LD:120:GLU:O	10:LD:248:ARG:NH1	2.31	0.55
11:LE:198:SER:N	11:LE:288:PHE:OXT	2.36	0.55
74:SL:78:THR:HG22	74:SL:79:LYS:HG3	1.88	0.55
80:SY:11:LYS:HB2	80:SY:24:VAL:HG12	1.89	0.55
84:S2:467:G:H2'	84:S2:468:A2M:H8	1.89	0.55
84:S2:576:A2M:HM'2	84:S2:577:U:H5'	1.89	0.55
84:S2:996:A:H2'	84:S2:997:A:H8	1.70	0.55
4:L5:438:G:OP1	36:Le:16:ARG:NH1	2.27	0.55
4:L5:1282:G:OP2	11:LE:128:HIS:NE2	2.29	0.55
4:L5:2028:C:H2'	4:L5:2029:A:H8	1.71	0.55
4:L5:2296:G:O2'	9:LC:242:PRO:O	2.18	0.55
4:L5:2622:G:O6	26:LU:81:ARG:NH2	2.40	0.55
4:L5:2846:G:H2'	4:L5:2847:G:H8	1.71	0.55
4:L5:3896:C:O2'	8:LB:268:ARG:NH2	2.37	0.55
4:L5:4139:G:O6	4:L5:4141:G:N2	2.40	0.55
4:L5:4648:A:H2'	4:L5:4649:G:H8	1.72	0.55
23:LR:105:LEU:HD22	23:LR:135:LYS:HG3	1.88	0.55
26:LU:44:GLN:HB2	26:LU:56:LEU:HD21	1.88	0.55
54:SM:95:ASP:HB3	54:SM:99:LYS:HB3	1.89	0.55
84:S2:57:U:OP1	84:S2:504:G:O2'	2.23	0.55
4:L5:146:G:H2'	4:L5:147:A:H8	1.70	0.55
4:L5:216:C:OP2	4:L5:219:G:O2'	2.25	0.55
4:L5:2018:C:H2'	4:L5:2019:C:C6	2.42	0.55
4:L5:3607:U:H2'	4:L5:3608:A:C8	2.41	0.55
4:L5:4113:U:H4'	4:L5:4115:G:C6	2.41	0.55
4:L5:4748:U:H5"	37:Lf:54:LYS:HE3	1.89	0.55
22:LQ:50:ARG:HH21	22:LQ:140:SER:HB2	1.72	0.55
65:Sg:107:ASP:HB2	65:Sg:125:ARG:HG3	1.88	0.55
66:SA:118:GLU:HG3	68:SC:65:LYS:HE2	1.89	0.55
84:S2:146:G:H2'	84:S2:147:A:H8	1.71	0.55
4:L5:1306:C:H2'	4:L5:1307:A:C8	2.39	0.55
4:L5:1779:U:H2'	4:L5:1780:A:C8	2.42	0.55
4:L5:1982:G:H1'	4:L5:2010:A:H4'	1.88	0.55
4:L5:4260:U:H2'	4:L5:4261:C:C6	2.42	0.55
4:L5:4630:G:H2'	4:L5:4631:G:H8	1.70	0.55
30:LY:67:ILE:HD12	30:LY:107:THR:HG21	1.89	0.55
63:Sd:12:ARG:NH1	84:S2:1513:C:OP1	2.27	0.55
66:SA:89:LYS:HD2	66:SA:201:LEU:HG	1.89	0.55
71:SH:30:LEU:HG	71:SH:33:ASN:HD22	1.72	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:468:A2M:H2'	84:S2:469:A:H8	1.72	0.55
84:S2:1201:U:H2'	84:S2:1202:U:C6	2.42	0.55
2:CF:13:ILE:HD12	2:CF:136:HIS:HB3	1.88	0.55
4:L5:179:G:H2'	4:L5:180:C:C6	2.42	0.55
4:L5:396:A:H2'	4:L5:397:G:C8	2.42	0.55
6:L8:90:C:H2'	6:L8:91:A:H8	1.71	0.55
6:L8:96:C:OP1	39:Lh:70:ARG:NH2	2.29	0.55
57:SR:99:ASP:OD2	66:SA:42:LYS:NZ	2.28	0.55
59:ST:6:VAL:HG12	59:ST:135:ALA:HB2	1.89	0.55
84:S2:1101:U:H2'	84:S2:1102:G:C8	2.42	0.55
84:S2:1692:U:H2'	84:S2:1693:G:H8	1.72	0.55
4:L5:32:G:OP1	19:LN:73:ARG:NH1	2.40	0.54
4:L5:107:G:OP2	17:LL:42:LYS:NZ	2.40	0.54
4:L5:709:C:OP1	37:Lf:89:ARG:NH2	2.38	0.54
4:L5:921:C:H2'	4:L5:922:C:C6	2.42	0.54
4:L5:1077:C:OP1	4:L5:1215:C:O2'	2.23	0.54
4:L5:1367:C:O2'	4:L5:1369:C:OP2	2.25	0.54
4:L5:1741:G:O6	5:L7:103:A:O2'	2.20	0.54
4:L5:1917:A:O2'	4:L5:2066:C:O2'	2.22	0.54
4:L5:4066:U:H2'	4:L5:4067:U:H6	1.72	0.54
4:L5:4537:C:H2'	4:L5:4538:G:C8	2.42	0.54
4:L5:4592:C:H2'	4:L5:4593:C:C6	2.42	0.54
4:L5:4923:C:C4	4:L5:4924:C:N4	2.75	0.54
4:L5:5002:U:H2'	4:L5:5003:U:C6	2.42	0.54
7:LA:133:TYR:HB3	7:LA:168:VAL:HG12	1.89	0.54
8:LB:317:LEU:HB3	8:LB:372:SER:HB2	1.88	0.54
63:Sd:2:GLY:N	84:S2:1271:C:O2	2.40	0.54
65:Sg:106:LYS:HD2	65:Sg:126:ASP:HA	1.89	0.54
79:SX:52:LEU:HD11	79:SX:73:GLN:HB2	1.88	0.54
84:S2:528:A:H2'	84:S2:529:A:C8	2.42	0.54
84:S2:795:A:H2'	84:S2:796:G:C8	2.42	0.54
4:L5:362:A:N6	43:Ll:37:TYR:O	2.39	0.54
4:L5:433:A:N3	4:L5:3867:A2M:H4'	2.22	0.54
4:L5:1526:G:H2'	4:L5:1527:A:H8	1.72	0.54
4:L5:1584:G:O6	88:L5:5284:SPD:N1	2.40	0.54
4:L5:1985:G:N2	4:L5:2003:G:O2'	2.40	0.54
4:L5:2716:C:H2'	4:L5:2717:G:C8	2.42	0.54
4:L5:4246:G:H2'	4:L5:4247:G:H8	1.72	0.54
6:L8:45:C:H2'	6:L8:46:G:H8	1.73	0.54
9:LC:162:LYS:NZ	9:LC:215:ASN:O	2.30	0.54
13:LG:165:GLU:OE2	19:LN:26:ARG:NH1	2.39	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Ln:2:ARG:NE	84:S2:1842:4AC:OP2	2.29	0.54
74:SL:105:ARG:NH1	84:S2:355:G:OP1	2.33	0.54
84:S2:291:G:H2'	84:S2:292:A:C8	2.42	0.54
4:L5:1967:A:H2'	4:L5:1968:G:H8	1.72	0.54
4:L5:2852:U:N3	4:L5:2855:G:OP2	2.34	0.54
4:L5:4526:U:H4'	8:LB:243:LYS:HE2	1.89	0.54
4:L5:4775:C:H2'	4:L5:4776:G:H8	1.71	0.54
8:LB:219:VAL:HG11	8:LB:337:VAL:HG13	1.89	0.54
22:LQ:155:ALA:O	22:LQ:158:THR:OG1	2.22	0.54
4:L5:138:G:H2'	4:L5:139:G:C8	2.43	0.54
4:L5:138:G:H2'	4:L5:139:G:H8	1.71	0.54
4:L5:161:G:H2'	4:L5:162:A:C8	2.43	0.54
4:L5:714:G:H2'	4:L5:715:G:H8	1.71	0.54
4:L5:718:C:OP1	12:LF:217:ARG:NH1	2.34	0.54
4:L5:1317:U:H2'	4:L5:1318:C:C6	2.42	0.54
4:L5:3916:G:H2'	4:L5:3917:A:C8	2.42	0.54
4:L5:4239:A:H2'	4:L5:4240:G:H8	1.71	0.54
4:L5:5002:U:H2'	4:L5:5003:U:H6	1.72	0.54
7:LA:101:VAL:HG22	7:LA:165:VAL:HG22	1.89	0.54
9:LC:340:ILE:HD13	11:LE:51:VAL:HG21	1.88	0.54
13:LG:79:ALA:O	13:LG:82:GLN:NE2	2.41	0.54
16:LJ:136:ARG:NH2	16:LJ:161:GLU:OE2	2.39	0.54
29:LX:88:LYS:O	29:LX:92:ASP:HB2	2.06	0.54
58:SS:8:LYS:HZ1	58:SS:60:THR:HA	1.72	0.54
58:SS:60:THR:OG1	58:SS:62:ASP:OD1	2.20	0.54
80:SY:119:GLY:O	84:S2:84:A:O2'	2.21	0.54
84:S2:902:G:O2'	84:S2:903:A:O4'	2.26	0.54
2:CF:79:LYS:HD2	2:CF:295:HIS:HB3	1.88	0.54
4:L5:85:G:O2'	4:L5:97:G:O6	2.25	0.54
4:L5:667:A:H5'	48:Lr:46:ARG:HH22	1.71	0.54
4:L5:684:G:OP2	4:L5:685:C:N4	2.37	0.54
4:L5:1341:U:H2'	4:L5:1342:A:H8	1.73	0.54
4:L5:1411:C:H2'	4:L5:1412:G:C8	2.43	0.54
4:L5:2262:G:OP2	48:Lr:98:ARG:NH2	2.28	0.54
4:L5:2299:G:O6	9:LC:188:ARG:NH2	2.38	0.54
4:L5:2754:G:O2'	31:LZ:51:ARG:NH1	2.41	0.54
4:L5:3722:G:H2'	4:L5:3723:A:H8	1.72	0.54
4:L5:3880:G:H2'	4:L5:3881:G:C8	2.43	0.54
4:L5:4459:U:H2'	4:L5:4460:U:C6	2.42	0.54
4:L5:4466:C:H2'	4:L5:4467:A:H8	1.72	0.54
4:L5:4622:A:H2'	4:L5:4623:OMG:H8	1.71	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:19:C:H2'	6:L8:20:A:C8	2.42	0.54
28:LW:119:LYS:O	28:LW:123:LYS:HB2	2.07	0.54
51:SD:136:VAL:HG12	51:SD:186:VAL:HG22	1.89	0.54
64:Sf:135:HIS:CE1	84:S2:1308:U:H1'	2.42	0.54
68:SC:130:ILE:O	68:SC:138:GLY:N	2.38	0.54
74:SL:3:ASP:OD1	74:SL:4:ILE:N	2.40	0.54
84:S2:587:A:H5'	84:S2:592:C:H41	1.72	0.54
4:L5:26:C:O2'	4:L5:338:A:N3	2.33	0.54
4:L5:318:A:H2'	4:L5:319:A:C8	2.43	0.54
4:L5:1481:C:H5	40:Li:3:LEU:HB3	1.72	0.54
4:L5:2404:A:O2'	41:Lj:12:ARG:O	2.25	0.54
4:L5:4069:U:H2'	4:L5:4070:U:C6	2.43	0.54
4:L5:4517:A:OP2	8:LB:2:SER:N	2.41	0.54
4:L5:4887:C:H42	4:L5:4932:U:H3	1.55	0.54
5:L7:75:G:O4'	24:LS:53:LYS:NZ	2.36	0.54
5:L7:110:G:H2'	5:L7:111:C:C6	2.42	0.54
11:LE:91:THR:HA	11:LE:108:LYS:HA	1.90	0.54
13:LG:104:PRO:O	13:LG:195:HIS:NE2	2.41	0.54
51:SD:106:ARG:HG3	51:SD:175:VAL:HG22	1.89	0.54
54:SM:20:GLU:HG2	54:SM:119:GLN:HB2	1.89	0.54
63:Sd:56:ASP:OXT	84:S2:1480:A:O2'	2.25	0.54
65:Sg:40:ILE:HD11	65:Sg:66:VAL:HG11	1.89	0.54
66:SA:10:MET:HE3	66:SA:55:TRP:HB2	1.89	0.54
69:SE:11:ARG:N	69:SE:26:VAL:O	2.36	0.54
70:SG:168:LYS:NZ	84:S2:74:G:O6	2.29	0.54
84:S2:1115:U:O2'	84:S2:1117:C:OP2	2.24	0.54
84:S2:1208:A:OP1	84:S2:1837:G:N2	2.41	0.54
4:L5:267:G:H2'	4:L5:268:G:C8	2.43	0.54
4:L5:308:G:H3'	40:Li:33:LEU:HB2	1.90	0.54
4:L5:1091:C:H2'	4:L5:1092:G:H8	1.73	0.54
4:L5:1787:A:O5'	87:L5:5258:SPM:N14	2.41	0.54
4:L5:2634:C:H2'	4:L5:2635:U:H6	1.72	0.54
6:L8:130:C:H2'	6:L8:131:G:C8	2.43	0.54
7:LA:137:ILE:HD11	7:LA:149:LYS:HB2	1.89	0.54
28:LW:7:SER:HB2	28:LW:13:ILE:HD11	1.89	0.54
40:Li:99:LYS:O	40:Li:103:LYS:NZ	2.36	0.54
49:Ls:120:GLU:HB3	49:Ls:163:THR:HG22	1.88	0.54
56:SQ:3:SER:HG	56:SQ:4:LYS:H	1.56	0.54
66:SA:85:ARG:NH1	66:SA:203:PHE:O	2.39	0.54
69:SE:67:GLN:HG2	84:S2:502:C:H42	1.73	0.54
72:SI:4:SER:OG	72:SI:6:ASP:OD2	2.23	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:980:A:H2'	84:S2:981:A:C8	2.43	0.54
4:L5:318:A:H2'	4:L5:319:A:H8	1.73	0.54
4:L5:2578:G:N7	31:LZ:17:ARG:NH2	2.46	0.54
4:L5:3855:C:H2'	4:L5:3856:A:H8	1.72	0.54
6:L8:63:U:O2'	39:Lh:52:LYS:NZ	2.26	0.54
6:L8:153:C:H2'	6:L8:154:G:H8	1.72	0.54
34:Lc:99:PRO:HD3	34:Lc:104:ILE:HD12	1.89	0.54
50:Lt:76:SER:O	50:Lt:117:ARG:NH1	2.41	0.54
69:SE:37:LYS:NZ	84:S2:346:C:OP2	2.39	0.54
73:SJ:38:ARG:NH1	84:S2:523:A:OP2	2.40	0.54
76:SO:134:PRO:HB3	84:S2:944:A:H5"	1.89	0.54
84:S2:1275:G:N2	84:S2:1506:A:OP2	2.34	0.54
84:S2:1277:C:H2'	84:S2:1278:A:C8	2.42	0.54
2:CF:162:TYR:HB3	2:CF:210:TRP:HE1	1.73	0.54
4:L5:2017:A:O2'	4:L5:2018:C:H6	1.89	0.54
4:L5:2780:C:H2'	4:L5:2781:G:H8	1.72	0.54
4:L5:3710:G:N1	4:L5:3740:G:O6	2.40	0.54
4:L5:3723:A:H2'	4:L5:3724:A:H8	1.73	0.54
4:L5:4986:G:H1'	8:LB:174:ARG:HH21	1.73	0.54
5:L7:23:A:N3	5:L7:118:C:O2'	2.32	0.54
6:L8:96:C:H2'	6:L8:97:A:C8	2.43	0.54
23:LR:157:ASP:OD1	23:LR:158:GLN:N	2.41	0.54
26:LU:65:ARG:HG2	26:LU:67:LYS:H	1.73	0.54
60:SU:68:THR:O	63:Sd:40:ARG:NH1	2.40	0.54
79:SX:28:LYS:NZ	84:S2:1189:A:OP1	2.35	0.54
80:SY:76:TYR:OH	80:SY:86:GLU:OE1	2.18	0.54
84:S2:808:A:H2	84:S2:855:G:H22	1.55	0.54
84:S2:1565:C:N4	84:S2:1566:G:O6	2.41	0.54
2:CF:111:CYS:SG	2:CF:112:ALA:N	2.80	0.54
4:L5:460:C:H2'	4:L5:461:G:H8	1.72	0.54
4:L5:1982:G:O2'	4:L5:2010:A:O2'	2.16	0.54
4:L5:2668:G:OP1	23:LR:103:ARG:NH2	2.40	0.54
4:L5:4188:U:H2'	4:L5:4189:U:C6	2.43	0.54
4:L5:4383:U:H2'	4:L5:4384:U:C6	2.43	0.54
13:LG:207:VAL:O	13:LG:212:LYS:NZ	2.41	0.54
22:LQ:151:HIS:ND1	22:LQ:164:LYS:O	2.38	0.54
31:LZ:76:ASN:HD21	31:LZ:78:ASN:HD22	1.55	0.54
54:SM:60:MET:HA	54:SM:63:LYS:HB3	1.89	0.54
55:SP:51:ARG:NE	84:S2:1300:U:O2'	2.41	0.54
58:SS:25:LYS:O	58:SS:29:ALA:N	2.40	0.54
67:SB:126:ASP:OD2	67:SB:136:ARG:NH2	2.39	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SG:136:LYS:NZ	70:SG:175:LYS:O	2.30	0.54
72:SI:57:ALA:HB2	72:SI:183:GLY:HA2	1.88	0.54
72:SI:87:ASN:HB3	72:SI:90:LEU:HG	1.90	0.54
80:SY:34:THR:O	84:S2:570:C:O2'	2.26	0.54
84:S2:186:C:H2'	84:S2:187:G:C8	2.43	0.54
4:L5:460:C:H2'	4:L5:461:G:C8	2.43	0.53
4:L5:951:G:H2'	4:L5:952:G:C8	2.44	0.53
4:L5:1413:C:H2'	4:L5:1414:C:C6	2.43	0.53
4:L5:1505:C:H2'	4:L5:1506:G:H8	1.73	0.53
4:L5:2059:C:H2'	4:L5:2060:G:H8	1.73	0.53
4:L5:2386:U:H2'	4:L5:2387:G:H8	1.73	0.53
4:L5:2651:C:O2'	4:L5:2653:C:OP1	2.25	0.53
6:L8:14:U:H5"	21:LP:123:PRO:HG3	1.90	0.53
6:L8:67:U:H2'	6:L8:68:G:C8	2.43	0.53
52:SF:32:ASP:OD2	52:SF:34:SER:OG	2.25	0.53
63:Sd:54:LYS:NZ	84:S2:1482:C:OP1	2.41	0.53
79:SX:63:ASN:OD1	84:S2:624:C:N4	2.38	0.53
84:S2:432:G:H2'	84:S2:433:A:H8	1.73	0.53
84:S2:928:G:H2'	84:S2:929:G:C8	2.43	0.53
84:S2:1347:U:H2'	84:S2:1348:G:N3	2.23	0.53
84:S2:1821:U:H2'	84:S2:1822:A:C8	2.42	0.53
4:L5:2376:A:H2'	4:L5:2377:C:C6	2.43	0.53
4:L5:2647:A:H3'	4:L5:2648:G:H8	1.73	0.53
4:L5:2699:C:H2'	4:L5:2700:G:H8	1.73	0.53
4:L5:3619:G:H22	4:L5:3624:A:H1'	1.72	0.53
23:LR:127:VAL:HG12	23:LR:132:PHE:HD2	1.73	0.53
46:Lo:45:GLN:OE1	46:Lo:52:THR:N	2.40	0.53
52:SF:53:ALA:HB1	56:SQ:125:ARG:HH21	1.74	0.53
72:SI:25:ARG:HA	84:S2:448:A:H5"	1.90	0.53
84:S2:639:C:H2'	84:S2:640:A:H8	1.71	0.53
84:S2:644:OMG:H2'	84:S2:645:C:C6	2.43	0.53
84:S2:1202:U:H2'	84:S2:1203:G:H8	1.73	0.53
84:S2:1770:G:OP1	84:S2:1771:G:N2	2.38	0.53
4:L5:347:A:H2'	4:L5:348:G:C8	2.43	0.53
4:L5:424:U:H2'	4:L5:425:U:C6	2.43	0.53
4:L5:711:A:H2'	4:L5:712:C:C6	2.44	0.53
4:L5:1177:U:H3	4:L5:1183:C:H42	1.55	0.53
4:L5:2884:G:H2'	4:L5:2885:A:C8	2.41	0.53
4:L5:3633:C:H2'	4:L5:3634:G:H8	1.74	0.53
4:L5:3736:A:H2'	4:L5:3737:A:H8	1.74	0.53
4:L5:4305:G:N7	25:LT:87:LYS:NZ	2.47	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4507:A:H2'	4:L5:4508:C:C6	2.44	0.53
4:L5:4892:A:H2'	4:L5:4893:A:O4'	2.09	0.53
45:Ln:12:ARG:HG2	45:Ln:15:ARG:HH21	1.72	0.53
49:Ls:79:LEU:O	49:Ls:83:ARG:NH1	2.41	0.53
49:Ls:91:THR:HG21	49:Ls:98:ILE:HG13	1.90	0.53
56:SQ:89:SER:OG	56:SQ:119:LEU:O	2.23	0.53
61:SZ:85:ARG:NH2	84:S2:1597:C:OP2	2.30	0.53
65:Sg:87:LEU:HB2	65:Sg:101:PHE:HB2	1.89	0.53
65:Sg:258:ILE:HG23	65:Sg:267:VAL:HG23	1.90	0.53
69:SE:208:VAL:HG11	69:SE:225:ILE:HG13	1.89	0.53
79:SX:107:ARG:HG3	79:SX:110:HIS:HB3	1.90	0.53
84:S2:649:PSU:H2'	84:S2:650:A:C8	2.40	0.53
4:L5:940:C:OP1	12:LF:242:ARG:NH2	2.39	0.53
4:L5:1430:C:OP1	22:LQ:135:GLY:N	2.41	0.53
4:L5:1514:U:H2'	4:L5:1515:A:C8	2.42	0.53
4:L5:1552:G:O2'	4:L5:1574:G:N2	2.38	0.53
4:L5:1596:U:O2'	21:LP:135:ARG:NH1	2.41	0.53
4:L5:1670:G:OP1	33:Lb:12:GLN:NE2	2.38	0.53
6:L8:141:C:H2'	6:L8:142:U:C6	2.43	0.53
10:LD:17:GLN:NE2	25:LT:22:HIS:O	2.34	0.53
45:Ln:11:ARG:NH2	84:S2:1184:G:OP1	2.35	0.53
66:SA:42:LYS:HD3	66:SA:46:ILE:HB	1.90	0.53
69:SE:108:ARG:NH1	84:S2:847:A:OP1	2.42	0.53
70:SG:135:PRO:HA	84:S2:169:U:H5"	1.90	0.53
71:SH:52:GLU:OE2	71:SH:57:ARG:N	2.42	0.53
79:SX:54:LYS:NZ	79:SX:94:ILE:O	2.31	0.53
84:S2:1269:G:H2'	84:S2:1270:G:H8	1.73	0.53
84:S2:1323:U:H2'	84:S2:1324:G:C8	2.44	0.53
1:Pt:11:U:H2'	1:Pt:12:G:C8	2.43	0.53
4:L5:652:G:H2'	4:L5:653:U:C6	2.44	0.53
4:L5:1340:OMC:H2'	4:L5:1341:U:C6	2.44	0.53
4:L5:1526:G:N1	4:L5:1649:U:O4	2.41	0.53
4:L5:2708:U:H1'	85:CI:79:ARG:HH22	1.73	0.53
4:L5:3606:U:H2'	4:L5:3607:U:C6	2.43	0.53
4:L5:4612:C:C2	14:LH:120:GLU:HB2	2.44	0.53
6:L8:12:G:OP1	21:LP:3:ARG:NH1	2.42	0.53
21:LP:54:GLN:HA	21:LP:83:TRP:CD1	2.43	0.53
27:LV:106:VAL:HG12	27:LV:112:MET:HA	1.91	0.53
51:SD:4:GLN:O	84:S2:1578:U:O2'	2.19	0.53
59:ST:65:TYR:HE1	59:ST:128:GLN:HG3	1.74	0.53
64:Sf:124:ASP:OD1	64:Sf:124:ASP:N	2.41	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SG:133:LEU:HD12	84:S2:65:C:C4	2.43	0.53
71:SH:144:ILE:HG23	71:SH:154:ILE:HG13	1.90	0.53
73:SJ:136:ARG:HA	73:SJ:141:VAL:HA	1.89	0.53
84:S2:115:U:H2'	84:S2:116:OMU:C6	2.38	0.53
84:S2:368:U:H3'	84:S2:369:C:H2'	1.89	0.53
84:S2:959:G:H2'	84:S2:960:U:C6	2.43	0.53
84:S2:1468:C:H2'	84:S2:1469:A:H8	1.74	0.53
4:L5:358:C:H2'	4:L5:359:A:C8	2.44	0.53
4:L5:490:C:H2'	4:L5:491:G:C8	2.44	0.53
4:L5:1294:A:H1'	4:L5:1296:G:N1	2.23	0.53
4:L5:2083:C:P	22:LQ:14:ARG:HH22	2.31	0.53
4:L5:2580:U:OP1	31:LZ:36:ARG:NH1	2.35	0.53
19:LN:46:ASP:OD1	19:LN:47:LYS:N	2.41	0.53
50:Lt:12:VAL:HG11	50:Lt:65:GLN:H	1.73	0.53
64:Sf:117:LEU:HD12	64:Sf:118:ARG:HD3	1.89	0.53
68:SC:83:LEU:O	77:SV:15:ARG:NE	2.40	0.53
71:SH:91:HIS:ND1	71:SH:169:LYS:HG2	2.24	0.53
84:S2:1017:U:H2'	84:S2:1018:U:H6	1.74	0.53
84:S2:1536:G:H2'	84:S2:1537:A:C8	2.42	0.53
4:L5:2764:A:H2'	4:L5:2765:A:C8	2.43	0.53
12:LF:182:TYR:HB3	12:LF:200:ARG:HG3	1.90	0.53
47:Lp:56:HIS:ND1	47:Lp:63:THR:OG1	2.38	0.53
52:SF:19:LEU:HD11	52:SF:50:PRO:HD3	1.91	0.53
59:ST:44:GLU:HG3	59:ST:45:LEU:HD12	1.91	0.53
68:SC:187:ARG:HH21	84:S2:1142:G:P	2.31	0.53
84:S2:365:C:HO2'	84:S2:402:C:HO2'	1.56	0.53
84:S2:1203:G:H2'	84:S2:1204:A:H8	1.73	0.53
84:S2:1568:C:H2'	84:S2:1569:A:C8	2.42	0.53
84:S2:1605:G:H2'	84:S2:1606:G:C4	2.44	0.53
84:S2:1748:G:H2'	84:S2:1749:G:C8	2.43	0.53
84:S2:1859:A:H2'	84:S2:1860:A:C8	2.43	0.53
3:AT:63:C:H2'	3:AT:64:G:C8	2.44	0.53
4:L5:67:C:N4	4:L5:325:U:O2'	2.38	0.53
4:L5:908:G:H2'	4:L5:909:A:H8	1.74	0.53
4:L5:1327:C:H2'	4:L5:1328:G:C8	2.43	0.53
4:L5:2443:G:OP2	4:L5:2516:G:N2	2.37	0.53
4:L5:2627:C:OP1	26:LU:92:LYS:NZ	2.35	0.53
4:L5:3758:U:H2'	4:L5:3765:G:N2	2.24	0.53
4:L5:4363:A:H5"	46:Lo:36:GLN:HG2	1.91	0.53
4:L5:4621:C:H2'	4:L5:4622:A:H8	1.73	0.53
7:LA:80:GLU:HB2	7:LA:170:ALA:HA	1.91	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LN:39:ALA:N	19:LN:61:ILE:O	2.41	0.53
54:SM:23:LYS:O	54:SM:27:ILE:HG12	2.09	0.53
55:SP:98:ASN:OD1	55:SP:101:THR:N	2.27	0.53
56:SQ:110:ASP:N	56:SQ:110:ASP:OD1	2.41	0.53
59:ST:3:GLY:HA3	84:S2:1424:G:N2	2.23	0.53
70:SG:132:ARG:NH2	84:S2:152:U:O4'	2.41	0.53
78:SW:6:VAL:HG13	78:SW:29:PRO:HB2	1.91	0.53
84:S2:433:A:H2'	84:S2:434:G:C8	2.44	0.53
84:S2:1222:G:H2'	84:S2:1223:A:C8	2.43	0.53
84:S2:1337:4AC:H2'	84:S2:1338:G:C8	2.43	0.53
84:S2:1348:G:H2'	84:S2:1349:G:H8	1.73	0.53
2:CF:423:ARG:HD3	2:CF:437:VAL:HG12	1.91	0.53
4:L5:46:U:H5"	17:LL:16:LYS:HG3	1.90	0.53
4:L5:180:C:H2'	4:L5:181:C:C6	2.44	0.53
4:L5:1207:C:H2'	4:L5:1208:G:C8	2.44	0.53
4:L5:1701:A:H5'	9:LC:304:ALA:HB3	1.91	0.53
4:L5:3852:A:N7	4:L5:3853:PSU:N1	2.57	0.53
4:L5:3867:A2M:H8	4:L5:3867:A2M:OP2	2.09	0.53
4:L5:4685:U:H2'	4:L5:4686:G:C8	2.43	0.53
27:LV:21:PRO:HA	27:LV:54:ALA:HA	1.90	0.53
51:SD:66:ILE:HD11	51:SD:86:LEU:HB3	1.91	0.53
68:SC:75:ILE:HG22	68:SC:97:PHE:HZ	1.73	0.53
69:SE:160:ILE:HA	69:SE:172:PHE:HA	1.90	0.53
80:SY:10:ARG:HA	84:S2:839:C:H41	1.73	0.53
84:S2:432:G:H2'	84:S2:433:A:C8	2.43	0.53
84:S2:1206:G:O2'	84:S2:1208:A:OP1	2.27	0.53
84:S2:1399:C:H2'	84:S2:1400:U:H6	1.73	0.53
1:Pt:23:C:H2'	1:Pt:24:A:H8	1.74	0.53
4:L5:163:A:H2'	4:L5:164:G:C8	2.44	0.53
4:L5:180:C:H2'	4:L5:181:C:H6	1.74	0.53
4:L5:264:C:H1'	39:Lh:112:ARG:HH21	1.74	0.53
4:L5:2716:C:H2'	4:L5:2717:G:H8	1.74	0.53
4:L5:4472:G:O2'	44:Lm:100:TYR:O	2.27	0.53
6:L8:92:U:H2'	6:L8:93:C:O4'	2.08	0.53
9:LC:187:GLN:NE2	9:LC:203:GLN:OE1	2.32	0.53
84:S2:1304:U:H2'	84:S2:1305:C:C6	2.44	0.53
84:S2:1692:U:H2'	84:S2:1693:G:C8	2.44	0.53
4:L5:148:C:H2'	4:L5:149:A:H2	1.74	0.52
4:L5:325:U:H2'	4:L5:326:C:C6	2.44	0.52
4:L5:351:C:OP2	9:LC:197:ARG:NH1	2.33	0.52
4:L5:1872:G:O2'	4:L5:4219:A:N3	2.31	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2000:G:O2'	4:L5:2001:G:N7	2.42	0.52
4:L5:2250:C:H2'	4:L5:2251:G:C8	2.44	0.52
4:L5:2521:G:H4'	38:Lg:26:PRO:HD2	1.90	0.52
4:L5:4156:G:H5"	4:L5:4157:A:H2'	1.91	0.52
7:LA:83:HIS:CE1	7:LA:86:GLN:HB2	2.44	0.52
10:LD:107:ARG:NH2	10:LD:120:GLU:OE2	2.42	0.52
10:LD:205:ALA:HB1	10:LD:233:PRO:HB3	1.91	0.52
25:LT:9:ARG:O	25:LT:55:LYS:NZ	2.37	0.52
55:SP:64:LYS:NZ	55:SP:88:GLU:O	2.43	0.52
65:Sg:133:ASN:HB3	65:Sg:139:LYS:HD2	1.92	0.52
69:SE:160:ILE:HD12	69:SE:162:ILE:HD11	1.91	0.52
74:SL:94:HIS:O	74:SL:103:GLU:N	2.41	0.52
84:S2:1226:G:N1	84:S2:1639:G7M:OP2	2.37	0.52
4:L5:1896:A:OP1	12:LF:223:LYS:NZ	2.40	0.52
4:L5:2017:A:O2'	4:L5:2018:C:O5'	2.26	0.52
4:L5:2322:G:OP1	36:Le:36:ARG:NH2	2.30	0.52
4:L5:4066:U:H2'	4:L5:4067:U:C6	2.44	0.52
4:L5:4174:U:H2'	4:L5:4175:G:C8	2.43	0.52
4:L5:4775:C:H41	4:L5:4859:C:H42	1.56	0.52
7:LA:104:VAL:HA	7:LA:107:MET:HE3	1.90	0.52
11:LE:74:SER:HA	33:Lb:117:ARG:HD3	1.92	0.52
12:LF:222:LYS:N	12:LF:232:ASP:OD1	2.35	0.52
21:LP:138:PRO:HB3	21:LP:140:MET:HE2	1.89	0.52
26:LU:23:LEU:HD23	26:LU:110:TYR:HB2	1.91	0.52
56:SQ:100:VAL:HG22	56:SQ:101:ASP:H	1.74	0.52
65:Sg:201:SER:HB3	65:Sg:206:LEU:HB2	1.92	0.52
76:SO:113:GLN:HE22	81:Sa:45:VAL:HA	1.74	0.52
84:S2:71:G:H2'	84:S2:72:C:H4'	1.91	0.52
84:S2:198:U:H2'	84:S2:199:C:H2'	1.91	0.52
84:S2:323:C:H2'	84:S2:327:G:H22	1.74	0.52
84:S2:454:U:H2'	84:S2:455:A:C8	2.43	0.52
84:S2:1177:PSU:H2'	84:S2:1178:U:C6	2.44	0.52
84:S2:1336:C:H2'	84:S2:1337:4AC:H6	1.90	0.52
84:S2:1533:A:N7	84:S2:1604:G:H1'	2.25	0.52
84:S2:1748:G:H2'	84:S2:1749:G:H8	1.75	0.52
3:AT:3:C:H2'	3:AT:4:U:C6	2.44	0.52
4:L5:1683:PSU:H2'	4:L5:1684:A:H8	1.74	0.52
4:L5:3782:5MC:OP1	45:Ln:23:ARG:NH2	2.42	0.52
4:L5:4220:6MZ:O5'	4:L5:4220:6MZ:H8	2.10	0.52
4:L5:4279:A:H5'	4:L5:4281:A:H1'	1.92	0.52
4:L5:4301:U:OP2	4:L5:4303:C:N4	2.42	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:LY:22:PRO:HD2	30:LY:25:ILE:HD11	1.90	0.52
41:Lj:27:TYR:HA	41:Lj:34:CYS:HA	1.91	0.52
47:Lp:38:THR:HA	47:Lp:45:THR:HA	1.91	0.52
49:Ls:31:GLY:N	49:Ls:188:VAL:O	2.38	0.52
52:SF:100:ILE:HD11	52:SF:108:PRO:HB3	1.90	0.52
73:SJ:124:HIS:CD2	83:Se:35:ARG:HD2	2.44	0.52
84:S2:1410:C:H2'	84:S2:1411:G:H8	1.74	0.52
3:AT:53:G:H2'	3:AT:54:G:H8	1.74	0.52
4:L5:302:C:H2'	4:L5:303:C:H6	1.74	0.52
4:L5:1511:U:H2'	4:L5:1512:G:C8	2.44	0.52
4:L5:1545:G:H2'	4:L5:1546:C:C6	2.44	0.52
4:L5:2521:G:H2'	4:L5:2522:G:H8	1.74	0.52
4:L5:3689:G:O2'	4:L5:3818:UY1:OP2	2.28	0.52
4:L5:4584:A:H62	4:L5:4718:G:H21	1.57	0.52
59:ST:132:ASP:OD2	84:S2:1415:C:O2'	2.21	0.52
60:SU:79:ARG:NH1	63:Sd:56:ASP:OXT	2.42	0.52
66:SA:77:ILE:HG13	66:SA:99:ILE:HB	1.92	0.52
66:SA:222:VAL:HG13	66:SA:223:THR:HG23	1.90	0.52
68:SC:118:ALA:HB1	84:S2:1487:A:H1'	1.91	0.52
84:S2:14:C:O2	84:S2:668:A2M:H2	2.08	0.52
84:S2:1495:G:H2'	84:S2:1496:U:C6	2.45	0.52
2:CF:147:GLN:NE2	2:CF:236:LEU:O	2.43	0.52
4:L5:2436:U:OP1	29:LX:137:TYR:OH	2.28	0.52
4:L5:2848:G:O2'	4:L5:3838:U:O4	2.25	0.52
7:LA:95:GLN:HB3	47:Lp:87:LYS:HE3	1.91	0.52
9:LC:61:GLN:O	41:Lj:52:LYS:NZ	2.31	0.52
9:LC:214:ASP:OD1	9:LC:216:GLY:N	2.42	0.52
10:LD:232:THR:OG1	10:LD:234:ASP:OD1	2.24	0.52
14:LH:113:GLU:HG2	14:LH:125:ARG:HG3	1.92	0.52
57:SR:32:LYS:O	57:SR:47:ARG:NH1	2.41	0.52
60:SU:96:GLU:OE1	60:SU:99:LYS:N	2.41	0.52
66:SA:32:PHE:CD1	84:S2:1097:G:H4'	2.45	0.52
69:SE:104:ASP:N	69:SE:108:ARG:O	2.40	0.52
71:SH:30:LEU:O	71:SH:33:ASN:ND2	2.43	0.52
81:Sa:60:ASP:OD1	81:Sa:60:ASP:N	2.38	0.52
84:S2:543:C:H3'	84:S2:544:G:C8	2.44	0.52
84:S2:1755:C:H2'	84:S2:1756:C:C6	2.44	0.52
84:S2:1802:C:H2'	84:S2:1803:U:C6	2.45	0.52
1:Pt:58:A:O2'	1:Pt:60:A:OP2	2.16	0.52
2:CF:251:GLN:N	2:CF:264:VAL:O	2.42	0.52
4:L5:1649:U:O2'	88:L5:5289:SPD:N1	2.42	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1982:G:H2'	4:L5:1983:A:O4'	2.09	0.52
4:L5:2079:G:H2'	4:L5:2080:U:C6	2.45	0.52
4:L5:2610:G:H2'	4:L5:2611:A:C8	2.45	0.52
4:L5:4759:C:O2	20:LO:165:LYS:NZ	2.29	0.52
4:L5:4759:C:OP2	20:LO:171:LYS:NZ	2.26	0.52
6:L8:62:A:OP1	39:Lh:52:LYS:NZ	2.43	0.52
10:LD:52:ILE:HA	10:LD:147:ASP:HB3	1.91	0.52
42:Lk:24:LYS:HD3	42:Lk:69:LEU:HD21	1.92	0.52
72:SI:54:LYS:NZ	84:S2:381:C:OP2	2.42	0.52
73:SJ:150:ARG:HG3	84:S2:821:G:C6	2.45	0.52
76:SO:29:GLY:N	76:SO:92:ALA:O	2.40	0.52
80:SY:111:LYS:NZ	84:S2:56:G:OP1	2.34	0.52
84:S2:218:U:N3	84:S2:304:C:O2	2.43	0.52
4:L5:4246:G:H2'	4:L5:4247:G:C8	2.44	0.52
6:L8:149:G:H21	13:LG:64:GLN:HE22	1.56	0.52
6:L8:153:C:OP1	13:LG:185:LYS:NZ	2.42	0.52
51:SD:114:ALA:HB3	51:SD:117:ARG:HG3	1.92	0.52
66:SA:8:LEU:O	66:SA:9:GLN:NE2	2.43	0.52
69:SE:204:SER:OG	69:SE:205:PHE:N	2.43	0.52
76:SO:120:ALA:HB2	81:Sa:53:ILE:HD13	1.92	0.52
84:S2:24:C:O2'	84:S2:25:A:H8	1.92	0.52
84:S2:527:C:H2'	84:S2:528:A:C8	2.45	0.52
1:Pt:23:C:H2'	1:Pt:24:A:C8	2.45	0.52
4:L5:1824:G:H2'	4:L5:1825:A:C8	2.44	0.52
21:LP:131:ARG:NH1	21:LP:137:ASN:OD1	2.43	0.52
52:SF:60:ARG:HD2	84:S2:1679:A:H2'	1.92	0.52
66:SA:18:PHE:HD1	66:SA:23:THR:HG21	1.74	0.52
69:SE:125:LYS:O	69:SE:142:HIS:N	2.43	0.52
84:S2:1438:A:H2'	84:S2:1439:A:H8	1.75	0.52
2:CF:249:PRO:HD2	2:CF:268:GLU:HG2	1.92	0.52
4:L5:264:C:H2'	4:L5:265:C:C4	2.44	0.52
4:L5:518:G:H1	4:L5:643:C:H2'	1.73	0.52
4:L5:1070:G:O2'	4:L5:1071:C:O5'	2.26	0.52
4:L5:1541:C:H5"	7:LA:21:LYS:HG2	1.91	0.52
4:L5:2533:C:OP1	29:LX:139:ARG:NH1	2.43	0.52
4:L5:2535:G:H2'	4:L5:2536:A:H8	1.75	0.52
4:L5:2777:G:H5"	4:L5:2778:G:H5'	1.92	0.52
4:L5:2870:A:OP2	4:L5:2879:A:N6	2.43	0.52
4:L5:3593:C:O2'	4:L5:3595:U:O4	2.23	0.52
4:L5:3717:A:H2'	4:L5:3718:A2M:H8	1.92	0.52
4:L5:3819:G:H2'	4:L5:3820:G:H8	1.74	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4570:G:H3'	4:L5:4571:A2M:H8	1.91	0.52
49:Ls:78:LEU:O	49:Ls:82:ILE:HG12	2.10	0.52
69:SE:80:ILE:HG23	69:SE:81:THR:HG23	1.91	0.52
72:SI:45:THR:OG1	84:S2:308:G:OP1	2.20	0.52
74:SL:98:LYS:HD3	74:SL:99:TYR:CE2	2.45	0.52
76:SO:150:ARG:NH2	84:S2:1854:U:OP1	2.35	0.52
84:S2:568:C:H2'	84:S2:569:A:C8	2.45	0.52
84:S2:1221:G:H2'	84:S2:1222:G:C8	2.45	0.52
4:L5:153:G:H2'	4:L5:154:G:C8	2.45	0.52
4:L5:444:G:H2'	4:L5:445:U:C6	2.45	0.52
4:L5:1253:G:O2'	4:L5:1257:A:N7	2.43	0.52
4:L5:4111:U:H2'	4:L5:4112:C:H5	1.75	0.52
4:L5:4305:G:O5'	25:LT:83:LYS:NZ	2.42	0.52
4:L5:4575:G:O2'	4:L5:5069:U:OP1	2.23	0.52
7:LA:242:ARG:NH2	7:LA:243:THR:O	2.42	0.52
10:LD:264:LYS:HD3	10:LD:266:TRP:CZ2	2.44	0.52
35:Ld:25:TYR:CD1	35:Ld:88:LEU:HD13	2.45	0.52
51:SD:163:PRO:HA	51:SD:166:TYR:CZ	2.45	0.52
55:SP:86:LEU:HB3	55:SP:88:GLU:HG3	1.93	0.52
66:SA:63:ARG:HG3	66:SA:185:MET:HE1	1.91	0.52
70:SG:7:PHE:HD1	70:SG:113:ILE:HB	1.75	0.52
72:SI:113:TYR:O	72:SI:117:TYR:HB2	2.10	0.52
81:Sa:11:ALA:HB3	81:Sa:33:ASP:HB2	1.92	0.52
84:S2:1468:C:H2'	84:S2:1469:A:C8	2.44	0.52
84:S2:1567:G:H2'	84:S2:1568:C:C6	2.45	0.52
84:S2:1606:G:N1	84:S2:1632:G:O2'	2.36	0.52
4:L5:1348:U:H2'	4:L5:1349:G:H8	1.74	0.51
4:L5:1479:G:H2'	4:L5:1480:C:C6	2.45	0.51
4:L5:1567:U:H2'	4:L5:1568:C:C6	2.45	0.51
4:L5:2521:G:H5'	4:L5:2640:G:H1'	1.92	0.51
4:L5:2638:G:N1	4:L5:2718:U:H2'	2.24	0.51
4:L5:3730:U:H2'	4:L5:3731:C:C6	2.44	0.51
4:L5:4083:U:O2'	4:L5:4086:G:OP2	2.24	0.51
4:L5:4111:U:H2'	4:L5:4112:C:C5	2.44	0.51
4:L5:4456:OMC:HM21	8:LB:241:PRO:HD3	1.92	0.51
4:L5:4619:U:H2'	4:L5:4620:OMU:H6	1.90	0.51
16:LJ:95:ARG:N	16:LJ:98:ASN:OD1	2.43	0.51
54:SM:82:ASN:OD1	54:SM:83:LYS:N	2.44	0.51
58:SS:129:LEU:HA	58:SS:144:ARG:NH2	2.25	0.51
71:SH:99:ARG:NH1	84:S2:913:A:OP2	2.40	0.51
84:S2:95:G:N2	84:S2:474:G:O5'	2.43	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:525:A:H2'	84:S2:526:A:C8	2.44	0.51
84:S2:1667:U:H2'	84:S2:1668:U:C6	2.45	0.51
4:L5:662:C:H2'	4:L5:663:G:H8	1.75	0.51
4:L5:710:G:HO2'	11:LE:190:HIS:HE2	1.59	0.51
4:L5:1263:A:H2'	4:L5:1264:C:C6	2.46	0.51
4:L5:1334:A:H2'	4:L5:1335:G:H8	1.74	0.51
4:L5:1704:C:O3'	12:LF:46:ARG:NH1	2.43	0.51
4:L5:1811:G:H2'	4:L5:1812:C:C6	2.45	0.51
4:L5:1942:A:H2'	4:L5:1943:A:H8	1.75	0.51
4:L5:2856:C:O2	8:LB:242:ARG:NH2	2.36	0.51
4:L5:4578:G:H2'	4:L5:4579:PSU:C6	2.45	0.51
4:L5:4691:A:O3'	14:LH:71:ARG:HD3	2.10	0.51
4:L5:5018:C:H2'	4:L5:5019:A:H8	1.76	0.51
55:SP:100:LYS:HB2	84:S2:1240:A:C6	2.46	0.51
67:SB:134:LEU:HG	67:SB:218:LEU:HD12	1.92	0.51
84:S2:588:G:H4'	84:S2:589:G:H5'	1.92	0.51
84:S2:750:C:O2	84:S2:752:G:C2	2.63	0.51
84:S2:1084:A:OP1	84:S2:1858:G:O2'	2.22	0.51
84:S2:1146:C:O2'	84:S2:1150:A:N1	2.38	0.51
84:S2:1179:G:N2	84:S2:1182:A:OP2	2.42	0.51
2:CF:292:VAL:HG23	2:CF:310:PHE:HB3	1.91	0.51
4:L5:95:G:OP2	17:LL:11:LYS:NZ	2.43	0.51
4:L5:700:G:C6	4:L5:701:G:C6	2.99	0.51
4:L5:1876:U:H2'	4:L5:1877:G:C8	2.46	0.51
4:L5:3670:C:H2'	4:L5:3671:G:C8	2.46	0.51
4:L5:3825:A2M:H2'	4:L5:3826:C:O4'	2.10	0.51
4:L5:4321:U:H2'	4:L5:4322:G:C8	2.45	0.51
5:L7:75:G:N2	5:L7:100:A:OP2	2.38	0.51
8:LB:71:GLU:HB2	28:LW:2:LYS:HD3	1.91	0.51
14:LH:18:ILE:HG12	14:LH:27:VAL:HG22	1.92	0.51
18:LM:71:LYS:O	18:LM:75:GLN:HG3	2.10	0.51
25:LT:127:GLN:NE2	25:LT:129:LYS:O	2.43	0.51
29:LX:125:ASN:HB2	29:LX:137:TYR:HB2	1.91	0.51
44:Lm:79:GLU:OE2	44:Lm:81:SER:OG	2.17	0.51
66:SA:106:GLY:N	66:SA:136:GLU:OE2	2.36	0.51
78:SW:111:MET:HE1	78:SW:119:LYS:HD2	1.92	0.51
84:S2:866:PSU:H2'	84:S2:867:OMG:H8	1.74	0.51
84:S2:1403:C:OP2	84:S2:1405:A:N6	2.37	0.51
84:S2:1545:A:H2'	84:S2:1546:G:C8	2.46	0.51
4:L5:10:A:H2'	4:L5:11:G:H8	1.76	0.51
4:L5:212:A:H2'	4:L5:213:G:H8	1.76	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1504:G:H2'	4:L5:1505:C:C6	2.46	0.51
4:L5:1865:G:N2	4:L5:1868:A:OP2	2.35	0.51
4:L5:3929:G:OP1	19:LN:72:LYS:NZ	2.29	0.51
4:L5:4220:6MZ:H9	4:L5:4222:G:C4	2.46	0.51
4:L5:4478:G:O2'	4:L5:4602:A:N1	2.43	0.51
4:L5:4507:A:H2'	4:L5:4508:C:H6	1.76	0.51
8:LB:224:LYS:HB2	8:LB:226:LYS:HE3	1.93	0.51
9:LC:218:ILE:HA	9:LC:229:LEU:HD22	1.93	0.51
24:LS:69:GLU:HG3	24:LS:71:SER:H	1.74	0.51
28:LW:7:SER:OG	28:LW:8:PHE:N	2.44	0.51
49:Ls:45:MET:HE1	50:Lt:123:ARG:HG2	1.92	0.51
58:SS:27:ALA:HB2	58:SS:52:LEU:HD12	1.92	0.51
58:SS:137:LYS:NZ	84:S2:1236:G:O6	2.42	0.51
68:SC:144:SER:HB3	68:SC:150:ALA:HB2	1.92	0.51
69:SE:89:VAL:HG11	69:SE:119:ALA:HB1	1.92	0.51
70:SG:57:ASP:N	70:SG:61:PHE:O	2.38	0.51
70:SG:169:PRO:O	84:S2:72:C:N4	2.43	0.51
84:S2:15:U:H2'	84:S2:16:G:O4'	2.11	0.51
84:S2:1657:G:H2'	84:S2:1658:G:H8	1.75	0.51
2:CF:282:PRO:HG2	2:CF:324:ASN:HA	1.92	0.51
4:L5:690:C:H2'	4:L5:691:C:C6	2.45	0.51
4:L5:1490:G:H2'	4:L5:1491:A:H8	1.76	0.51
4:L5:2297:G:H4'	9:LC:242:PRO:HB2	1.93	0.51
4:L5:2436:U:H3'	29:LX:127:LEU:HD22	1.92	0.51
4:L5:3667:C:H4'	7:LA:8:GLN:HA	1.93	0.51
4:L5:3687:A:O2'	7:LA:236:GLY:N	2.43	0.51
4:L5:4419:U:OP1	4:L5:4475:G:N2	2.43	0.51
6:L8:48:A:O2'	6:L8:50:C:OP2	2.24	0.51
11:LE:93:THR:HA	11:LE:106:VAL:HA	1.92	0.51
17:LL:140:SER:HA	17:LL:143:GLU:HG2	1.93	0.51
26:LU:27:HIS:HB3	26:LU:114:TYR:HE1	1.74	0.51
26:LU:117:ILE:HG21	85:CI:58:LEU:CD1	2.40	0.51
35:Ld:114:PHE:HA	35:Ld:117:LEU:HD12	1.93	0.51
58:SS:87:GLN:O	84:S2:1611:G:O2'	2.28	0.51
65:Sg:37:ASP:OD1	65:Sg:39:THR:OG1	2.24	0.51
65:Sg:120:ILE:O	65:Sg:132:TRP:N	2.42	0.51
66:SA:177:MET:SD	66:SA:180:ARG:NH2	2.84	0.51
84:S2:1803:U:H2'	84:S2:1804:U:C6	2.45	0.51
84:S2:1817:G:H2'	84:S2:1818:A:C8	2.46	0.51
2:CF:201:MET:HG3	2:CF:228:LEU:HD12	1.92	0.51
4:L5:137:G:H2'	4:L5:138:G:C8	2.44	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1539:G:H2'	4:L5:1540:C:C6	2.45	0.51
4:L5:3606:U:H2'	4:L5:3607:U:H6	1.75	0.51
4:L5:3664:G:H2'	4:L5:3665:G:C8	2.44	0.51
4:L5:4147:G:H2'	4:L5:4148:C:H6	1.76	0.51
4:L5:4639:G:OP2	4:L5:4639:G:N2	2.39	0.51
6:L8:142:U:H2'	6:L8:143:G:C8	2.46	0.51
12:LF:41:MET:HE2	33:Lb:113:ALA:HB2	1.93	0.51
39:Lh:88:THR:HB	39:Lh:91:MET:HB2	1.92	0.51
61:SZ:106:GLN:HG3	61:SZ:108:ILE:HD11	1.93	0.51
66:SA:184:ARG:HE	66:SA:191:ARG:HA	1.75	0.51
71:SH:7:LYS:HD3	71:SH:10:LYS:HB3	1.91	0.51
77:SV:32:ILE:HG12	77:SV:60:ARG:HD2	1.92	0.51
1:Pt:18:G:N2	1:Pt:58:A:OP2	2.43	0.51
2:CF:164:GLN:O	2:CF:168:GLU:HG2	2.11	0.51
3:AT:59:A:O2'	3:AT:61:A:OP2	2.25	0.51
4:L5:231:U:O2	30:LY:103:LYS:NZ	2.29	0.51
4:L5:312:G:H1	4:L5:325:U:H3	1.59	0.51
4:L5:928:C:H2'	4:L5:929:A:H8	1.74	0.51
4:L5:982:U:OP1	11:LE:73:TYR:OH	2.21	0.51
4:L5:1703:C:O2'	4:L5:1704:C:O4'	2.27	0.51
4:L5:1794:A:H5"	4:L5:4214:A:H61	1.76	0.51
4:L5:2018:C:H2'	4:L5:2019:C:H6	1.75	0.51
4:L5:2601:A:O2'	4:L5:2743:A:OP1	2.23	0.51
4:L5:3610:A:H2'	4:L5:3611:A:C8	2.45	0.51
4:L5:4879:C:H2'	4:L5:4880:C:C6	2.46	0.51
8:LB:50:LYS:HB2	8:LB:345:LEU:HD11	1.91	0.51
8:LB:140:GLU:OE1	8:LB:144:LYS:NZ	2.32	0.51
54:SM:63:LYS:HD3	54:SM:64:LEU:HD22	1.92	0.51
58:SS:46:ARG:NH2	59:ST:48:TYR:O	2.38	0.51
68:SC:125:LYS:HA	68:SC:143:CYS:HA	1.92	0.51
69:SE:79:ASP:HB3	69:SE:82:TYR:HB2	1.93	0.51
69:SE:100:ARG:NH2	69:SE:118:GLU:OE2	2.43	0.51
73:SJ:111:GLN:HE21	73:SJ:123:ILE:HG13	1.76	0.51
84:S2:600:G:H2'	84:S2:601:OMG:H8	1.75	0.51
84:S2:880:G:H3'	84:S2:881:G:H8	1.76	0.51
84:S2:1239:U:N3	84:S2:1242:U:OP2	2.33	0.51
84:S2:1801:A:H2'	84:S2:1802:C:H6	1.73	0.51
1:Pt:43:A:H2'	1:Pt:44:A:C8	2.46	0.51
4:L5:1079:C:H2'	4:L5:1080:C:H6	1.76	0.51
4:L5:1281:G:N1	11:LE:128:HIS:HB2	2.26	0.51
4:L5:1773:U:H2'	4:L5:1774:C:C6	2.45	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1974:U:H4'	4:L5:1975:G:H3'	1.91	0.51
4:L5:2674:A:N6	47:Lp:41:PHE:O	2.42	0.51
4:L5:2683:C:H2'	4:L5:2684:C:H6	1.76	0.51
4:L5:4097:G:OP2	38:Lg:115:LYS:NZ	2.44	0.51
8:LB:217:ILE:HD12	8:LB:347:LEU:HB3	1.93	0.51
50:Lt:134:GLY:HA3	50:Lt:152:ILE:HD11	1.93	0.51
76:SO:42:VAL:HG11	76:SO:78:ALA:HA	1.91	0.51
80:SY:9:THR:HG22	84:S2:837:A:N6	2.25	0.51
84:S2:49:C:H2'	84:S2:472:C:H41	1.75	0.51
84:S2:199:C:H1'	84:S2:200:G:C8	2.45	0.51
84:S2:1136:U:H2'	84:S2:1137:U:C6	2.45	0.51
84:S2:1775:U:O2'	84:S2:1776:G:O4'	2.21	0.51
4:L5:6:C:H2'	4:L5:7:C:H6	1.76	0.51
4:L5:1819:G:H1'	10:LD:115:MET:HE1	1.91	0.51
4:L5:1824:G:H2'	4:L5:1825:A:H8	1.76	0.51
4:L5:2654:C:H2'	4:L5:2655:C:H6	1.74	0.51
4:L5:2823:G:H2'	4:L5:2824:OMC:H6	1.76	0.51
4:L5:3887:OMC:OP2	20:LO:85:ARG:NH1	2.37	0.51
4:L5:3916:G:H2'	4:L5:3917:A:H8	1.75	0.51
4:L5:4069:U:H2'	4:L5:4070:U:H6	1.74	0.51
4:L5:4209:G:O6	4:L5:4224:A:N6	2.44	0.51
4:L5:4691:A:H2'	4:L5:4692:A:O4'	2.09	0.51
4:L5:4775:C:H2'	4:L5:4776:G:C8	2.46	0.51
5:L7:28:C:O2'	5:L7:54:A:N1	2.43	0.51
11:LE:223:ARG:HH22	11:LE:238:GLU:HG3	1.75	0.51
48:Lr:16:PHE:HB3	48:Lr:27:THR:H	1.75	0.51
53:SK:4:PRO:HD2	53:SK:7:ASN:HD21	1.76	0.51
56:SQ:139:ALA:HB2	84:S2:1650:A:H5"	1.93	0.51
65:Sg:10:THR:HB	65:Sg:306:LEU:HD21	1.93	0.51
74:SL:85:THR:HG21	84:S2:373:G:H4'	1.92	0.51
84:S2:28:U:H3	84:S2:646:G:H1	1.58	0.51
84:S2:110:U:H2'	84:S2:111:A:C8	2.46	0.51
1:Pt:28:U:H2'	1:Pt:29:C:H6	1.75	0.51
4:L5:25:A:N6	4:L5:58:G:H1	2.09	0.51
4:L5:423:G:OP1	21:LP:62:ARG:NH1	2.42	0.51
4:L5:667:A:H5"	4:L5:668:C:H5"	1.92	0.51
4:L5:1727:U:OP1	12:LF:131:ASN:ND2	2.44	0.51
4:L5:1751:A:H2'	4:L5:1752:G:C8	2.46	0.51
4:L5:1881:C:H5'	4:L5:2281:U:H1'	1.93	0.51
4:L5:1933:G:H2'	4:L5:1934:A:C8	2.46	0.51
4:L5:2098:G:H2'	4:L5:2099:G:C8	2.45	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2411:C:H2'	4:L5:2412:A:C8	2.42	0.51
4:L5:2611:A:H2'	4:L5:2612:G:C8	2.46	0.51
4:L5:2691:U:H2'	4:L5:2692:U:C6	2.46	0.51
4:L5:3726:A:H2'	4:L5:3727:A:C8	2.46	0.51
4:L5:4653:C:H2'	4:L5:4654:C:C6	2.46	0.51
6:L8:155:C:OP1	13:LG:89:ARG:NH1	2.44	0.51
8:LB:224:LYS:HD2	8:LB:340:THR:HG22	1.92	0.51
20:LO:197:LYS:NZ	20:LO:203:VAL:O	2.44	0.51
60:SU:40:ILE:O	60:SU:44:LYS:HG2	2.11	0.51
65:Sg:124:SER:OG	65:Sg:125:ARG:N	2.44	0.51
73:SJ:38:ARG:N	73:SJ:42:GLU:OE2	2.37	0.51
79:SX:68:LYS:NZ	84:S2:616:A:OP1	2.44	0.51
84:S2:1649:U:H2'	84:S2:1650:A:H8	1.76	0.51
2:CF:7:HIS:HA	2:CF:86:TYR:O	2.11	0.50
4:L5:1876:U:H2'	4:L5:1877:G:H8	1.76	0.50
4:L5:2638:G:H22	4:L5:2719:C:P	2.34	0.50
4:L5:2671:C:H2'	4:L5:2672:C:C6	2.46	0.50
4:L5:4340:U:N3	90:L5:5295:3HE:O1	2.42	0.50
4:L5:4552:PSU:H2'	4:L5:4553:A:C8	2.46	0.50
4:L5:4600:G:H4'	4:L5:4601:U:O5'	2.11	0.50
4:L5:4978:G:O2'	4:L5:4980:C:OP2	2.23	0.50
45:Ln:2:ARG:HH21	84:S2:1842:4AC:H5	1.76	0.50
58:SS:132:ARG:HD3	84:S2:1623:A:C6	2.46	0.50
70:SG:85:ARG:O	70:SG:87:ARG:NH1	2.45	0.50
71:SH:142:LYS:HB3	78:SW:54:ASP:HB3	1.92	0.50
84:S2:52:G:H2'	84:S2:53:C:C6	2.46	0.50
84:S2:533:A:N6	84:S2:550:C:H42	2.07	0.50
84:S2:838:G:N1	84:S2:840:C:O2'	2.42	0.50
84:S2:1280:G:H2'	84:S2:1281:G:H8	1.76	0.50
84:S2:1383:A2M:H2'	84:S2:1384:C:C6	2.46	0.50
4:L5:184:U:H3	4:L5:253:G:H1	1.58	0.50
4:L5:287:U:H2'	4:L5:288:G:C8	2.46	0.50
4:L5:287:U:H2'	4:L5:288:G:H8	1.76	0.50
4:L5:717:U:H2'	4:L5:718:C:C6	2.46	0.50
4:L5:919:C:H2'	4:L5:920:C:H6	1.77	0.50
4:L5:1382:G:H2'	4:L5:1383:G:H8	1.76	0.50
4:L5:1414:C:H2'	4:L5:1415:G:C8	2.43	0.50
4:L5:4237:C:H2'	4:L5:4238:G:H8	1.76	0.50
4:L5:4592:C:H2'	4:L5:4593:C:H6	1.76	0.50
5:L7:92:C:H2'	5:L7:93:G:C8	2.45	0.50
82:Sb:26:GLN:NE2	84:S2:921:G:OP2	2.44	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1777:G:H2'	84:S2:1778:C:H6	1.75	0.50
3:AT:63:C:H2'	3:AT:64:G:H8	1.76	0.50
4:L5:326:C:OP2	40:Li:28:ARG:NH2	2.31	0.50
4:L5:684:G:H5"	11:LE:100:LYS:HE3	1.93	0.50
4:L5:1844:G:H5"	33:Lb:25:ARG:HH22	1.75	0.50
4:L5:2283:G:H2'	4:L5:2284:G:H8	1.77	0.50
4:L5:2304:U:H4'	4:L5:2305:U:H5"	1.94	0.50
4:L5:2358:G:H2'	4:L5:2359:U:O4'	2.11	0.50
4:L5:4079:C:H2'	4:L5:4080:C:H6	1.76	0.50
11:LE:220:LYS:O	11:LE:237:LYS:NZ	2.45	0.50
21:LP:122:ALA:HB3	21:LP:143:PRO:HG2	1.92	0.50
37:Lf:8:LYS:HB3	37:Lf:100:ARG:CZ	2.40	0.50
52:SF:40:ALA:HB3	52:SF:67:PRO:HA	1.92	0.50
55:SP:97:TYR:HH	84:S2:1268:C:HO2'	1.56	0.50
4:L5:683:C:H2'	4:L5:684:G:O4'	2.11	0.50
4:L5:1321:G:N2	4:L5:3876:A:O4'	2.44	0.50
4:L5:1800:U:H2'	4:L5:1801:A:C8	2.46	0.50
4:L5:2333:G:H5"	9:LC:195:LYS:HE3	1.93	0.50
4:L5:3667:C:O2'	7:LA:8:GLN:O	2.29	0.50
4:L5:4518:A:OP2	8:LB:258:HIS:ND1	2.34	0.50
4:L5:4538:G:H2'	4:L5:4539:U:C6	2.46	0.50
5:L7:76:U:H2'	5:L7:77:A:H8	1.76	0.50
8:LB:258:HIS:HA	8:LB:260:ALA:H	1.77	0.50
29:LX:94:ASN:OD1	29:LX:146:ALA:N	2.38	0.50
53:SK:80:ARG:HH22	53:SK:90:VAL:HG12	1.76	0.50
58:SS:88:LYS:H	58:SS:95:TYR:HD1	1.58	0.50
84:S2:160:U:O2'	84:S2:162:C:O5'	2.29	0.50
84:S2:1033:G:H1	84:S2:1080:A:HO2'	1.57	0.50
84:S2:1288:OMU:HN3	84:S2:1311:C:H42	1.60	0.50
84:S2:1844:U:H2'	84:S2:1845:A:C8	2.46	0.50
4:L5:184:U:O2'	4:L5:189:G:O4'	2.28	0.50
4:L5:1308:C:H2'	4:L5:1309:C:C6	2.47	0.50
4:L5:1802:A:N3	25:LT:130:ARG:NH2	2.60	0.50
4:L5:4504:C:H2'	4:L5:4505:C:C6	2.46	0.50
11:LE:92:VAL:O	11:LE:107:VAL:N	2.44	0.50
14:LH:93:ARG:NE	14:LH:142:ASP:O	2.42	0.50
20:LO:186:GLU:HA	20:LO:189:ILE:HB	1.93	0.50
55:SP:63:ALA:HA	55:SP:66:GLU:HG2	1.92	0.50
62:Sc:40:ARG:HH22	76:SO:117:ARG:HH21	1.59	0.50
65:Sg:195:LEU:HA	65:Sg:211:GLY:HA3	1.93	0.50
66:SA:145:ILE:HG23	66:SA:159:ILE:HB	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:SV:11:LEU:HD23	77:SV:11:LEU:H	1.76	0.50
82:Sb:11:SER:OG	82:Sb:14:GLU:OE1	2.28	0.50
84:S2:534:G:H2'	84:S2:535:G:C8	2.47	0.50
84:S2:668:A2M:H2'	84:S2:669:A:N7	2.26	0.50
4:L5:47:A:O2'	87:L5:5263:SPM:N14	2.45	0.50
4:L5:75:G:O2'	17:LL:101:ARG:NH1	2.32	0.50
4:L5:280:G:H5"	19:LN:14:LYS:HE2	1.93	0.50
4:L5:920:C:H2'	4:L5:921:C:C6	2.45	0.50
4:L5:1341:U:H2'	4:L5:1342:A:C8	2.46	0.50
4:L5:1348:U:H2'	4:L5:1349:G:C8	2.47	0.50
4:L5:1368:A:H2'	4:L5:1369:C:O4'	2.12	0.50
4:L5:1513:U:H2'	4:L5:1514:U:H6	1.77	0.50
4:L5:1585:C:N4	88:L5:5284:SPD:HN11	2.09	0.50
4:L5:2285:A:H2'	4:L5:2286:G:H8	1.76	0.50
4:L5:2521:G:H2'	4:L5:2522:G:C8	2.47	0.50
4:L5:2663:G:H2'	4:L5:2664:G:H8	1.77	0.50
4:L5:3659:G:OP1	7:LA:241:ARG:NH1	2.45	0.50
4:L5:3723:A:H2'	4:L5:3724:A:C8	2.46	0.50
4:L5:4680:G:H2'	4:L5:4681:A:C8	2.46	0.50
4:L5:4728:U:OP1	8:LB:132:LYS:NZ	2.42	0.50
4:L5:5057:C:H2'	4:L5:5058:A:C8	2.47	0.50
6:L8:6:C:H2'	6:L8:7:U:H6	1.76	0.50
17:LL:17:ASP:O	17:LL:21:ARG:NH2	2.45	0.50
25:LT:44:GLY:HA2	25:LT:95:HIS:HB3	1.93	0.50
29:LX:78:LYS:HD3	29:LX:99:ILE:HG22	1.94	0.50
32:La:35:ALA:O	32:La:41:HIS:ND1	2.43	0.50
56:SQ:11:GLN:OE1	84:S2:1407:U:O2'	2.28	0.50
56:SQ:80:GLN:O	56:SQ:84:ILE:HG13	2.11	0.50
60:SU:55:ARG:HG2	60:SU:87:ARG:HG3	1.94	0.50
84:S2:352:U:H2'	84:S2:353:C:C6	2.46	0.50
84:S2:388:U:H2'	84:S2:389:A:H8	1.76	0.50
84:S2:1202:U:H2'	84:S2:1203:G:C8	2.46	0.50
4:L5:1190:C:H2'	4:L5:1191:C:C6	2.47	0.50
4:L5:1270:A:H8	4:L5:2106:G:H21	1.60	0.50
4:L5:1336:G:H2'	4:L5:2346:C:H42	1.77	0.50
4:L5:1700:G:H5"	4:L5:1704:C:H42	1.75	0.50
4:L5:1770:A:N7	4:L5:1771:U:N3	2.60	0.50
4:L5:3936:A:N6	4:L5:4175:G:O6	2.45	0.50
4:L5:4712:C:H2'	4:L5:4713:G:H8	1.76	0.50
4:L5:4859:C:H2'	4:L5:4860:G:C8	2.46	0.50
5:L7:64:G:H2'	5:L7:65:G:H8	1.76	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LD:62:CYS:HB3	10:LD:105:LEU:HD22	1.93	0.50
18:LM:47:ARG:NH1	18:LM:68:ALA:O	2.38	0.50
43:Ll:28:ARG:HA	43:Ll:33:ASN:ND2	2.27	0.50
56:SQ:53:GLU:OE1	56:SQ:85:ARG:NH2	2.38	0.50
58:SS:113:ARG:O	58:SS:117:ILE:HG12	2.11	0.50
64:Sf:95:ARG:HH12	84:S2:1291:A:H62	1.60	0.50
65:Sg:188:HIS:HB3	65:Sg:219:TRP:CZ2	2.46	0.50
66:SA:172:GLY:HA3	66:SA:203:PHE:HD1	1.77	0.50
67:SB:114:VAL:O	84:S2:1869:A:N6	2.45	0.50
84:S2:1031:A2M:H2'	84:S2:1032:C:C6	2.47	0.50
84:S2:1844:U:H2'	84:S2:1845:A:H8	1.76	0.50
4:L5:452:A:H62	4:L5:1293:G:H5"	1.77	0.50
4:L5:1403:G:N2	4:L5:1404:G:N2	2.59	0.50
4:L5:1739:G:H1'	4:L5:1742:A:H62	1.77	0.50
4:L5:3785:A2M:HM'1	4:L5:4537:C:H1'	1.94	0.50
4:L5:4870:G:H5"	18:LM:91:TRP:CE2	2.46	0.50
4:L5:4989:U:H1'	4:L5:4990:C:C5	2.47	0.50
18:LM:5:ARG:NE	18:LM:59:ASP:OD1	2.32	0.50
59:ST:10:ASN:HB3	59:ST:13:GLU:OE2	2.12	0.50
72:SI:141:ARG:HD3	72:SI:145:ILE:HG21	1.94	0.50
79:SX:2:GLY:N	84:S2:1089:G:O6	2.45	0.50
84:S2:440:G:OP1	84:S2:1798:C:O2'	2.30	0.50
84:S2:534:G:H2'	84:S2:535:G:H8	1.77	0.50
2:CF:9:ASN:ND2	2:CF:305:GLY:O	2.32	0.50
4:L5:66:A:N6	4:L5:282:C:O2'	2.45	0.50
4:L5:207:G:H2'	4:L5:208:A:C8	2.46	0.50
4:L5:316:U:O2'	4:L5:317:A:N7	2.41	0.50
4:L5:663:G:H2'	4:L5:664:G:C8	2.46	0.50
4:L5:1100:U:O4	4:L5:1194:G:O6	2.30	0.50
4:L5:1554:A:OP2	47:Lp:4:ARG:NE	2.23	0.50
4:L5:2902:G:N2	4:L5:3597:G:H1	2.08	0.50
4:L5:3598:C:H2'	4:L5:3599:A:C8	2.47	0.50
4:L5:3809:G:OP2	4:L5:3809:G:N2	2.26	0.50
4:L5:4151:G:H2'	4:L5:4152:G:H8	1.76	0.50
8:LB:165:HIS:HB3	8:LB:180:LEU:HD23	1.93	0.50
10:LD:209:ARG:O	10:LD:213:GLU:HG2	2.12	0.50
12:LF:90:ALA:HB2	12:LF:125:LEU:HD11	1.94	0.50
15:LI:85:PHE:HE2	15:LI:87:MET:HE2	1.77	0.50
24:LS:143:LYS:HA	24:LS:146:HIS:CE1	2.47	0.50
41:Lj:48:ASN:OD1	41:Lj:54:LYS:NZ	2.44	0.50
50:Lt:77:ALA:HB3	50:Lt:80:LEU:HB2	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SK:91:PRO:HB2	53:SK:94:LEU:HD23	1.94	0.50
57:SR:32:LYS:NZ	84:S2:1452:A:OP2	2.44	0.50
66:SA:38:ILE:HG21	66:SA:47:TYR:HD1	1.77	0.50
72:SI:11:ARG:NH2	84:S2:367:U:OP1	2.44	0.50
78:SW:69:LEU:HD21	78:SW:72:CYS:HB3	1.94	0.50
84:S2:35:C:H2'	84:S2:36:U:C6	2.47	0.50
84:S2:1620:A:H1'	84:S2:1624:U:OP2	2.11	0.50
2:CF:248:LEU:HB3	2:CF:326:ALA:HB3	1.92	0.49
4:L5:665:C:H1'	4:L5:668:C:H41	1.76	0.49
4:L5:2570:U:H2'	4:L5:2571:C:C6	2.47	0.49
4:L5:4122:G:N1	38:Lg:98:GLU:OE2	2.43	0.49
4:L5:4522:G:O2'	4:L5:4525:C:OP2	2.20	0.49
6:L8:49:G:N7	39:Lh:48:ARG:NH2	2.59	0.49
53:SK:31:LYS:HZ3	53:SK:40:VAL:N	2.10	0.49
70:SG:49:VAL:HB	70:SG:115:LYS:HG2	1.93	0.49
72:SI:98:LYS:HB3	84:S2:377:G:H5'	1.93	0.49
79:SX:5:ARG:N	84:S2:1160:U:OP2	2.39	0.49
84:S2:70:G:H21	84:S2:79:A:N6	2.02	0.49
84:S2:1438:A:H2'	84:S2:1439:A:C8	2.47	0.49
4:L5:64:A:H1'	4:L5:76:A:H1'	1.94	0.49
4:L5:717:U:H3	4:L5:951:G:H1	1.60	0.49
4:L5:958:G:N2	11:LE:124:LYS:HB3	2.27	0.49
4:L5:2495:U:H2'	4:L5:2496:G:C8	2.47	0.49
4:L5:3684:G:H2'	4:L5:3685:C:C6	2.47	0.49
4:L5:3708:C:H2'	4:L5:3709:U:C6	2.47	0.49
4:L5:4177:C:H2'	4:L5:4178:A:H8	1.76	0.49
4:L5:4775:C:H41	4:L5:4859:C:N4	2.10	0.49
6:L8:123:U:H2'	6:L8:126:C:N4	2.27	0.49
17:LL:111:GLN:O	17:LL:115:GLN:HG2	2.12	0.49
53:SK:27:VAL:HB	53:SK:43:LEU:HD12	1.93	0.49
65:Sg:20:GLN:HB3	65:Sg:69:VAL:HG12	1.92	0.49
84:S2:51:U:H2'	84:S2:52:G:C8	2.47	0.49
84:S2:404:G:H2'	84:S2:405:G:H8	1.77	0.49
84:S2:1628:C:H2'	84:S2:1629:C:C6	2.48	0.49
84:S2:1657:G:H2'	84:S2:1658:G:C8	2.47	0.49
4:L5:132:G:N2	4:L5:136:C:O2'	2.45	0.49
4:L5:365:U:H2'	4:L5:366:A:H8	1.76	0.49
4:L5:1532:G:N2	4:L5:1637:A:OP2	2.36	0.49
4:L5:1577:G:O2'	4:L5:1612:G:H4'	2.13	0.49
4:L5:1976:G:H22	50:Lt:139:VAL:HG11	1.76	0.49
4:L5:2079:G:H2'	4:L5:2080:U:H6	1.77	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2277:C:H2'	4:L5:2278:G:C8	2.48	0.49
4:L5:2610:G:H2'	4:L5:2611:A:H8	1.77	0.49
4:L5:2823:G:H2'	4:L5:2824:OMC:C6	2.47	0.49
4:L5:4237:C:OP1	4:L5:4327:C:O2'	2.30	0.49
4:L5:4704:C:H2'	4:L5:4705:A:H8	1.77	0.49
4:L5:4935:C:H2'	4:L5:4936:G:C8	2.46	0.49
6:L8:66:A:H2'	6:L8:67:U:C6	2.47	0.49
6:L8:96:C:H2'	6:L8:97:A:H8	1.77	0.49
6:L8:132:G:H2'	6:L8:133:G:H8	1.76	0.49
56:SQ:125:ARG:HB2	84:S2:1648:G:H5"	1.94	0.49
84:S2:323:C:H2'	84:S2:327:G:H1	1.77	0.49
84:S2:339:A:H2'	84:S2:340:C:H5	1.77	0.49
84:S2:866:PSU:H2'	84:S2:867:OMG:C8	2.47	0.49
84:S2:1031:A2M:H2'	84:S2:1032:C:H6	1.78	0.49
3:AT:61:A:H5"	3:AT:62:C:C5	2.47	0.49
4:L5:295:A:C2	4:L5:317:A:H1'	2.47	0.49
4:L5:325:U:H2'	4:L5:326:C:H6	1.78	0.49
4:L5:500:G:N2	4:L5:504:G:HO2'	2.10	0.49
4:L5:1338:G:OP2	4:L5:1338:G:N2	2.31	0.49
4:L5:1403:G:N2	4:L5:1415:G:C4	2.81	0.49
4:L5:1426:G:N1	4:L5:1458:C:OP2	2.33	0.49
4:L5:1510:G:H2'	4:L5:1511:U:C6	2.47	0.49
4:L5:1996:C:N3	4:L5:2000:G:N1	2.46	0.49
4:L5:2634:C:H2'	4:L5:2635:U:C6	2.47	0.49
4:L5:3641:U:H5	4:L5:3646:A:N7	2.10	0.49
4:L5:4642:U:H2'	4:L5:4643:G:H8	1.78	0.49
4:L5:4861:G:H2'	4:L5:4862:G:H8	1.76	0.49
4:L5:4906:C:H2'	4:L5:4907:G:C8	2.45	0.49
5:L7:64:G:H2'	5:L7:65:G:C8	2.47	0.49
11:LE:282:TYR:CE1	37:Lf:31:GLU:HG2	2.47	0.49
31:LZ:22:LYS:HE3	31:LZ:134:LEU:HB2	1.94	0.49
32:La:76:ASP:OD1	32:La:77:LYS:N	2.44	0.49
62:Sc:7:GLN:OE1	62:Sc:61:SER:HB2	2.12	0.49
64:Sf:135:HIS:ND1	84:S2:1307:U:O2'	2.35	0.49
64:Sf:142:GLY:HA3	84:S2:1310:U:O4'	2.12	0.49
70:SG:61:PHE:CG	70:SG:72:ARG:HD3	2.48	0.49
80:SY:124:ASN:HD22	84:S2:84:A:H5"	1.77	0.49
1:Pt:28:U:H2'	1:Pt:29:C:C6	2.47	0.49
1:Pt:29:C:H2'	1:Pt:30:G:C8	2.47	0.49
4:L5:4:G:H2'	4:L5:5:A:H8	1.78	0.49
4:L5:280:G:N2	4:L5:305:A:H2'	2.27	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1188:C:H2'	4:L5:1189:G:H8	1.77	0.49
4:L5:1513:U:H2'	4:L5:1514:U:C6	2.48	0.49
4:L5:1758:G:H2'	4:L5:1759:G:C8	2.47	0.49
4:L5:1777:C:H2'	4:L5:1778:C:C6	2.47	0.49
4:L5:2754:G:OP2	31:LZ:133:LYS:NZ	2.32	0.49
4:L5:3798:U:O2'	4:L5:3800:A:N7	2.37	0.49
4:L5:3934:G:H2'	4:L5:3935:C:C6	2.48	0.49
4:L5:4446:U:O2'	4:L5:4450:U:OP1	2.30	0.49
4:L5:4645:C:OP2	23:LR:62:ARG:NH1	2.44	0.49
4:L5:4763:U:O2'	24:LS:174:THR:OG1	2.23	0.49
6:L8:82:A:N6	6:L8:84:A:O2'	2.45	0.49
10:LD:239:MET:HA	10:LD:242:LYS:NZ	2.27	0.49
31:LZ:11:VAL:HG12	31:LZ:82:PRO:HA	1.95	0.49
51:SD:42:THR:OG1	51:SD:45:ARG:O	2.21	0.49
51:SD:211:VAL:O	57:SR:20:TYR:OH	2.24	0.49
54:SM:31:LEU:HG	54:SM:33:ARG:HG3	1.94	0.49
57:SR:15:VAL:O	57:SR:18:GLU:HG2	2.13	0.49
63:Sd:3:HIS:CE1	63:Sd:5:GLN:HB2	2.47	0.49
64:Sf:102:VAL:HG22	64:Sf:104:LYS:HG2	1.94	0.49
65:Sg:66:VAL:HA	65:Sg:82:SER:HA	1.94	0.49
73:SJ:122:SER:H	73:SJ:125:HIS:HB3	1.77	0.49
84:S2:26:U:H2'	84:S2:27:A2M:H8	1.94	0.49
84:S2:1093:A:H2'	84:S2:1094:C:C6	2.47	0.49
84:S2:1558:C:H2'	84:S2:1559:C:C6	2.47	0.49
2:CF:76:SER:N	2:CF:91:ASP:OD1	2.44	0.49
4:L5:173:C:H5"	17:LL:129:ARG:HH12	1.78	0.49
4:L5:667:A:OP1	48:Lr:46:ARG:NH2	2.45	0.49
4:L5:730:G:OP2	12:LF:76:ARG:NE	2.45	0.49
4:L5:1076:C:H2'	4:L5:1077:C:H6	1.77	0.49
4:L5:1699:A:H3'	4:L5:1700:G:H21	1.78	0.49
4:L5:1871:A2M:H1'	4:L5:4195:G:O6	2.12	0.49
4:L5:2019:C:H2'	4:L5:2020:U:C6	2.48	0.49
4:L5:2108:G:H2'	4:L5:2109:G:C8	2.48	0.49
4:L5:3642:A:H2'	41:Lj:3:LYS:HE3	1.95	0.49
4:L5:4079:C:H2'	4:L5:4080:C:C6	2.48	0.49
4:L5:4524:G:C2	8:LB:252:ALA:HB1	2.47	0.49
4:L5:4742:G:H2'	4:L5:4743:G:C8	2.48	0.49
8:LB:36:ASP:N	8:LB:36:ASP:OD1	2.43	0.49
9:LC:315:LYS:HD2	12:LF:168:ALA:HB1	1.95	0.49
58:SS:124:ARG:HB2	58:SS:131:VAL:HG12	1.93	0.49
59:ST:62:ARG:NE	84:S2:1542:C:OP1	2.40	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:490:C:H2'	84:S2:491:C:C6	2.46	0.49
84:S2:1177:PSU:H2'	84:S2:1178:U:H6	1.77	0.49
4:L5:1401:C:H2'	4:L5:1402:C:C6	2.47	0.49
4:L5:1811:G:H2'	4:L5:1812:C:H6	1.78	0.49
4:L5:2275:G:H2'	4:L5:2276:A:C8	2.47	0.49
4:L5:2362:U:H2'	4:L5:2363:A2M:C8	2.36	0.49
4:L5:2387:G:H2'	4:L5:2388:A:C8	2.48	0.49
4:L5:2780:C:H2'	4:L5:2781:G:C8	2.47	0.49
4:L5:3602:C:H2'	4:L5:3603:G:H8	1.76	0.49
4:L5:4071:U:H2'	4:L5:4072:C:C6	2.48	0.49
4:L5:4525:C:OP1	8:LB:246:ARG:NH2	2.35	0.49
6:L8:5:U:H2'	6:L8:6:C:H6	1.77	0.49
23:LR:175:GLU:O	23:LR:178:GLN:HG3	2.12	0.49
24:LS:95:ARG:NH2	24:LS:112:ASP:OD2	2.45	0.49
56:SQ:130:LYS:NZ	56:SQ:131:LYS:O	2.45	0.49
67:SB:116:LYS:NZ	84:S2:990:A:O5'	2.45	0.49
70:SG:52:ILE:HA	70:SG:111:LEU:HD23	1.95	0.49
70:SG:67:VAL:HG12	70:SG:69:THR:HG22	1.95	0.49
71:SH:165:ASN:HA	71:SH:168:HIS:HE1	1.77	0.49
72:SI:51:GLY:HA3	84:S2:445:A:H5"	1.95	0.49
81:Sa:85:ARG:NE	84:S2:1209:A:O2'	2.46	0.49
1:Pt:33:U:N3	1:Pt:36:C:OP2	2.42	0.49
4:L5:239:C:H5'	30:LY:33:PRO:HD3	1.94	0.49
4:L5:674:G:H2'	4:L5:675:C:C6	2.47	0.49
4:L5:952:G:H2'	4:L5:953:C:C6	2.47	0.49
4:L5:1502:G:H1	22:LQ:89:ASP:HA	1.78	0.49
4:L5:1730:U:H1'	25:LT:101:SER:HB3	1.94	0.49
4:L5:2078:C:H2'	4:L5:2079:G:C8	2.48	0.49
4:L5:2529:A:H2'	4:L5:2532:C:H41	1.77	0.49
4:L5:2732:G:H2'	4:L5:2733:C:H6	1.77	0.49
4:L5:3707:U:H2'	4:L5:3708:C:C6	2.48	0.49
4:L5:3787:G:H1'	4:L5:3789:C:N4	2.27	0.49
6:L8:28:C:H2'	6:L8:29:G:C8	2.48	0.49
18:LM:39:ASP:OD2	18:LM:70:GLN:NE2	2.46	0.49
28:LW:78:PHE:CZ	70:SG:9:ALA:HA	2.48	0.49
36:Le:98:GLU:HG2	36:Le:123:THR:OG1	2.12	0.49
73:SJ:136:ARG:NH1	73:SJ:158:ASP:OD2	2.46	0.49
84:S2:874:G:H2'	84:S2:875:A:H8	1.78	0.49
84:S2:1161:U:H2'	84:S2:1162:C:C6	2.48	0.49
4:L5:288:G:H2'	4:L5:289:C:H6	1.77	0.49
4:L5:1503:A:H1'	4:L5:1504:G:C8	2.47	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1752:G:H2'	4:L5:1753:G:C8	2.47	0.49
4:L5:1871:A2M:HM'2	4:L5:1872:G:H5'	1.95	0.49
4:L5:2028:C:H2'	4:L5:2029:A:C8	2.46	0.49
4:L5:2386:U:H2'	4:L5:2387:G:C8	2.48	0.49
4:L5:4970:C:C2	4:L5:4971:A:C8	3.01	0.49
6:L8:58:G:O6	41:Lj:63:ARG:NH1	2.43	0.49
6:L8:95:A:OP1	41:Lj:81:GLY:N	2.39	0.49
8:LB:86:VAL:HG12	8:LB:201:LEU:HD23	1.94	0.49
11:LE:141:ARG:NH2	37:Lf:110:ILE:O	2.46	0.49
31:LZ:88:ASP:OD1	31:LZ:88:ASP:N	2.40	0.49
40:Li:55:ARG:O	40:Li:59:GLU:HG2	2.12	0.49
41:Lj:21:ARG:CZ	41:Lj:39:TYR:HA	2.42	0.49
51:SD:160:SER:OG	84:S2:1386:A:OP2	2.29	0.49
65:Sg:249:CYS:HB3	65:Sg:258:ILE:HD13	1.94	0.49
69:SE:100:ARG:HB2	69:SE:114:ILE:HD13	1.93	0.49
73:SJ:133:ARG:NH1	84:S2:581:U:OP1	2.32	0.49
79:SX:60:LYS:HE3	79:SX:116:PRO:HB3	1.95	0.49
84:S2:610:G:H2'	84:S2:611:G:C8	2.48	0.49
84:S2:634:A:H2'	84:S2:635:G:H8	1.78	0.49
84:S2:1856:C:H2'	84:S2:1857:G:H8	1.77	0.49
4:L5:221:C:H2'	4:L5:222:C:H6	1.77	0.49
4:L5:280:G:H22	4:L5:305:A:H2'	1.77	0.49
4:L5:364:G:O2'	4:L5:375:G:O6	2.26	0.49
4:L5:441:G:H2'	4:L5:442:G:C8	2.46	0.49
4:L5:937:U:H2'	4:L5:938:C:C6	2.48	0.49
4:L5:1514:U:H2'	4:L5:1515:A:H8	1.77	0.49
4:L5:3835:C:H2'	4:L5:3836:A:C8	2.48	0.49
9:LC:60:HIS:HA	9:LC:92:PHE:HE1	1.78	0.49
54:SM:128:PHE:HA	54:SM:131:LYS:HG2	1.94	0.49
75:SN:5:HIS:HB3	75:SN:117:LEU:HD13	1.95	0.49
84:S2:85:A:H2'	84:S2:86:C:H6	1.78	0.49
84:S2:644:OMG:HM23	84:S2:644:OMG:H1'	1.63	0.49
84:S2:1010:G:H2'	84:S2:1011:A:C8	2.45	0.49
84:S2:1013:U:OP1	84:S2:1129:G:O2'	2.30	0.49
84:S2:1616:U:O2'	84:S2:1661:A:N3	2.38	0.49
84:S2:1731:A:H2'	84:S2:1732:G:C8	2.48	0.49
84:S2:1849:G:H2'	84:S2:1850:MA6:C8	2.43	0.49
1:Pt:3:C:H2'	1:Pt:4:U:C6	2.48	0.48
4:L5:907:C:H2'	4:L5:908:G:C8	2.47	0.48
4:L5:1468:C:H2'	4:L5:1469:C:H6	1.77	0.48
4:L5:1565:A:C5	4:L5:1566:C:H1'	2.48	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1995:G:H2'	4:L5:1996:C:C6	2.48	0.48
4:L5:4615:C:H5"	8:LB:357:ARG:HH11	1.77	0.48
5:L7:19:C:H2'	5:L7:20:U:C6	2.48	0.48
8:LB:17:LEU:O	8:LB:19:ARG:N	2.45	0.48
13:LG:209:SER:HA	13:LG:212:LYS:HE2	1.96	0.48
40:Li:59:GLU:HA	40:Li:62:LYS:HE3	1.95	0.48
55:SP:79:HIS:CE1	84:S2:1298:G:N7	2.81	0.48
56:SQ:137:ALA:N	84:S2:1650:A:OP1	2.46	0.48
59:ST:22:LEU:HG	59:ST:28:LEU:HD21	1.94	0.48
66:SA:37:TYR:HA	66:SA:53:ARG:HD3	1.95	0.48
80:SY:22:GLN:HB2	80:SY:72:PHE:CZ	2.48	0.48
4:L5:308:G:H8	4:L5:310:G:H1'	1.78	0.48
4:L5:1281:G:H5'	9:LC:323:ARG:HB2	1.94	0.48
4:L5:1845:U:H2'	4:L5:1846:G:C8	2.47	0.48
4:L5:2869:U:O2'	4:L5:2881:A:N7	2.46	0.48
4:L5:4141:G:O2'	4:L5:4143:G:O6	2.20	0.48
4:L5:4505:C:H2'	4:L5:4506:C:H6	1.78	0.48
4:L5:5055:G:N2	35:Ld:118:GLN:OE1	2.41	0.48
5:L7:85:G:H2'	5:L7:86:G:H8	1.78	0.48
6:L8:45:C:H2'	6:L8:46:G:C8	2.48	0.48
59:ST:114:GLU:OE1	59:ST:114:GLU:N	2.45	0.48
65:Sg:100:ARG:CZ	84:S2:1399:C:H5"	2.44	0.48
65:Sg:207:CYS:HB3	65:Sg:221:LEU:HD21	1.96	0.48
70:SG:170:ARG:HG3	84:S2:72:C:N3	2.28	0.48
84:S2:62:G:H1'	84:S2:172:OMU:HM23	1.94	0.48
84:S2:383:G:H2'	84:S2:384:U:C6	2.49	0.48
84:S2:628:A:N6	84:S2:1500:G:O2'	2.45	0.48
2:CF:292:VAL:HA	2:CF:310:PHE:HA	1.95	0.48
4:L5:159:C:H5'	40:Li:25:ARG:NH2	2.28	0.48
4:L5:455:C:O2'	4:L5:456:C:H5'	2.13	0.48
4:L5:665:C:H1'	4:L5:668:C:N4	2.29	0.48
4:L5:961:G:O6	11:LE:123:ARG:NH1	2.37	0.48
4:L5:1086:C:H2'	4:L5:1087:A:C8	2.46	0.48
4:L5:1579:C:H2'	4:L5:1580:C:H6	1.78	0.48
4:L5:2615:C:H2'	4:L5:2616:C:H6	1.78	0.48
4:L5:2682:G:H2'	4:L5:2683:C:H6	1.77	0.48
6:L8:152:U:H2'	6:L8:153:C:O4'	2.14	0.48
20:LO:9:LEU:HD23	20:LO:118:MET:HB2	1.95	0.48
25:LT:119:ALA:O	25:LT:123:GLY:N	2.47	0.48
27:LV:42:VAL:HB	27:LV:45:ILE:HG13	1.95	0.48
48:Lr:26:SER:OG	48:Lr:28:GLU:OE1	2.24	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SF:26:ASP:N	52:SF:26:ASP:OD1	2.45	0.48
56:SQ:110:ASP:OD1	56:SQ:111:ILE:HD12	2.13	0.48
59:ST:113:VAL:HG22	59:ST:123:LEU:HD23	1.94	0.48
67:SB:23:ASP:N	67:SB:23:ASP:OD1	2.46	0.48
69:SE:186:GLY:HA3	84:S2:809:A:OP1	2.14	0.48
71:SH:63:PHE:HA	71:SH:95:ILE:O	2.13	0.48
72:SI:84:ASN:OD1	72:SI:86:SER:N	2.46	0.48
84:S2:647:U:H2'	84:S2:648:A:H8	1.78	0.48
84:S2:1317:C:H2'	84:S2:1318:G:C8	2.48	0.48
84:S2:1736:G:H2'	84:S2:1737:G:H8	1.78	0.48
4:L5:40:G:N2	4:L5:4380:A:H62	2.11	0.48
4:L5:129:C:H2'	4:L5:130:C:C6	2.48	0.48
4:L5:249:C:H2'	4:L5:250:C:C6	2.48	0.48
4:L5:288:G:H2'	4:L5:289:C:C6	2.48	0.48
4:L5:749:G:C6	4:L5:912:G:C8	3.01	0.48
4:L5:1181:C:O2'	4:L5:1183:C:H5"	2.13	0.48
4:L5:1351:G:N7	22:LQ:55:ARG:NH2	2.46	0.48
4:L5:1516:G:O2'	17:LL:18:TRP:NE1	2.43	0.48
4:L5:1844:G:H5"	33:Lb:25:ARG:NH2	2.28	0.48
4:L5:2522:G:H2'	4:L5:2523:G:H8	1.79	0.48
4:L5:2744:A:H2'	4:L5:2745:A:C8	2.49	0.48
4:L5:2803:U:H2'	4:L5:2804:OMC:H6	1.79	0.48
4:L5:2805:C:O2	38:Lg:4:ARG:HD2	2.13	0.48
4:L5:3589:G:N2	4:L5:3590:G:O6	2.46	0.48
4:L5:4897:G:OP1	18:LM:128:LYS:NZ	2.45	0.48
4:L5:4968:A:H2'	4:L5:4969:C:C6	2.47	0.48
4:L5:5024:C:N4	4:L5:5028:G:H21	2.09	0.48
8:LB:299:ILE:HB	8:LB:313:SER:HB3	1.96	0.48
25:LT:102:ARG:O	25:LT:106:LEU:HG	2.13	0.48
35:Ld:92:ARG:HA	35:Ld:102:LEU:HD23	1.94	0.48
52:SF:22:LYS:HG3	52:SF:23:TRP:CD2	2.48	0.48
74:SL:67:SER:OG	84:S2:114:G:OP2	2.31	0.48
84:S2:54:A:H3'	84:S2:451:G:H22	1.78	0.48
84:S2:1230:C:H2'	84:S2:1231:C:H6	1.78	0.48
84:S2:1541:G:H2'	84:S2:1542:C:C6	2.48	0.48
84:S2:1605:G:H1'	84:S2:1634:A:N6	2.29	0.48
2:CF:273:LYS:HG2	2:CF:276:MET:HE1	1.96	0.48
4:L5:6:C:H2'	4:L5:7:C:C6	2.48	0.48
4:L5:429:A:H2'	4:L5:430:G:C8	2.48	0.48
4:L5:461:G:H2'	4:L5:462:G:C8	2.48	0.48
4:L5:462:G:H2'	4:L5:463:A:C8	2.48	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1377:G:H4'	4:L5:1378:C:H3'	1.94	0.48
4:L5:1494:U:H2'	4:L5:1495:G:C8	2.45	0.48
4:L5:2376:A:H2'	4:L5:2377:C:H6	1.77	0.48
4:L5:3602:C:H2'	4:L5:3603:G:C8	2.48	0.48
4:L5:3848:U:H2'	4:L5:3849:A:H8	1.79	0.48
4:L5:4577:U:H2'	4:L5:4578:G:C8	2.48	0.48
4:L5:4630:G:H2'	4:L5:4631:G:C8	2.48	0.48
15:LI:96:VAL:HG22	15:LI:125:THR:HG22	1.95	0.48
23:LR:44:LEU:HD22	23:LR:49:LEU:HD12	1.94	0.48
25:LT:119:ALA:HA	25:LT:122:LYS:HE3	1.95	0.48
73:SJ:162:ARG:NH1	84:S2:582:U:OP1	2.46	0.48
80:SY:44:LEU:HD12	80:SY:47:MET:HB3	1.95	0.48
84:S2:162:C:H2'	84:S2:163:U:O4'	2.14	0.48
84:S2:321:C:H2'	84:S2:322:C:C6	2.47	0.48
84:S2:484:A2M:H8	84:S2:484:A2M:O5'	2.12	0.48
84:S2:853:C:C2	84:S2:854:A:C8	3.02	0.48
84:S2:1639:G7M:O2'	84:S2:1640:A:O4'	2.23	0.48
2:CF:96:ARG:CZ	2:CF:430:ARG:HG3	2.44	0.48
4:L5:271:C:H2'	4:L5:272:U:H6	1.78	0.48
4:L5:508:G:N2	32:La:85:GLN:OE1	2.38	0.48
4:L5:1399:G:H2'	4:L5:1400:G:H8	1.78	0.48
4:L5:1662:C:H2'	4:L5:1663:C:H6	1.79	0.48
4:L5:2284:G:H2'	4:L5:2285:A:H8	1.79	0.48
4:L5:4085:A:H5"	13:LG:56:LYS:HB2	1.94	0.48
4:L5:4102:C:H42	4:L5:4106:G:H22	1.62	0.48
4:L5:4185:G:H2'	4:L5:4186:A:H8	1.78	0.48
4:L5:4300:U:H2'	4:L5:4301:U:C6	2.48	0.48
4:L5:4616:A:H2'	4:L5:4617:G:O4'	2.14	0.48
7:LA:7:GLY:HA2	7:LA:10:LYS:HG3	1.95	0.48
49:Ls:25:PRO:HB2	49:Ls:195:ASN:HD21	1.79	0.48
50:Lt:22:VAL:HG13	50:Lt:48:LYS:HG2	1.95	0.48
70:SG:147:LEU:HD12	70:SG:151:ASP:HB2	1.95	0.48
71:SH:167:GLU:OE1	71:SH:167:GLU:N	2.43	0.48
84:S2:979:C:H2'	84:S2:980:A:C8	2.48	0.48
84:S2:1533:A:N7	84:S2:1602:U:O4	2.46	0.48
4:L5:170:C:H42	4:L5:266:C:H42	1.61	0.48
4:L5:249:C:H2'	4:L5:250:C:H6	1.79	0.48
4:L5:264:C:O2	39:Lh:112:ARG:NH2	2.47	0.48
4:L5:1756:U:O2'	4:L5:1758:G:OP2	2.24	0.48
4:L5:1961:G:H5"	49:Ls:59:THR:HG21	1.96	0.48
4:L5:2582:A:N3	4:L5:2654:C:H1'	2.29	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2896:G:OP1	23:LR:136:ARG:NH1	2.47	0.48
4:L5:4089:G:H2'	4:L5:4090:G:C8	2.48	0.48
4:L5:4177:C:OP1	19:LN:93:LYS:NZ	2.46	0.48
4:L5:4466:C:H2'	4:L5:4467:A:C8	2.48	0.48
4:L5:4551:U:H2'	4:L5:4552:PSU:C6	2.48	0.48
5:L7:7:G:H5"	10:LD:22:ARG:HD3	1.95	0.48
8:LB:369:ASP:OD1	8:LB:373:LYS:NZ	2.46	0.48
21:LP:112:LEU:HD23	21:LP:150:LEU:HD13	1.96	0.48
27:LV:87:SER:OG	28:LW:19:ARG:NH1	2.46	0.48
52:SF:188:TYR:HA	52:SF:191:LYS:HE3	1.96	0.48
57:SR:29:HIS:CD2	65:Sg:36:ARG:HH21	2.32	0.48
64:Sf:133:ALA:O	64:Sf:139:HIS:ND1	2.40	0.48
84:S2:62:G:O2'	84:S2:172:OMU:OP1	2.28	0.48
84:S2:1031:A2M:HM'3	84:S2:1031:A2M:H1'	1.48	0.48
84:S2:1278:A:H2'	84:S2:1279:C:C6	2.48	0.48
4:L5:86:U:H2'	4:L5:87:A:C8	2.49	0.48
4:L5:275:C:H2'	4:L5:276:C:C6	2.49	0.48
4:L5:395:A:H2'	4:L5:396:A:C8	2.49	0.48
4:L5:423:G:H2'	4:L5:424:U:C6	2.49	0.48
4:L5:908:G:H2'	4:L5:909:A:C8	2.48	0.48
4:L5:1327:C:H2'	4:L5:1328:G:H8	1.78	0.48
4:L5:1751:A:H2'	4:L5:1752:G:H8	1.79	0.48
4:L5:2328:G:H2'	4:L5:2329:U:C6	2.48	0.48
4:L5:2714:G:H2'	4:L5:2715:G:H8	1.78	0.48
4:L5:2876:OMG:HM22	4:L5:2877:G:H5'	1.95	0.48
4:L5:3871:A:H2'	4:L5:3872:A:C8	2.48	0.48
4:L5:4729:A:OP2	4:L5:5068:G:N1	2.33	0.48
4:L5:4989:U:O2'	4:L5:4990:C:O5'	2.32	0.48
6:L8:58:G:N7	41:Lj:63:ARG:NH2	2.41	0.48
9:LC:149:GLU:HG2	9:LC:151:PRO:HD2	1.96	0.48
35:Ld:57:MET:HG2	35:Ld:88:LEU:HD23	1.94	0.48
58:SS:63:GLU:O	58:SS:67:VAL:HG23	2.14	0.48
62:Sc:21:THR:N	62:Sc:27:CYS:O	2.37	0.48
65:Sg:256:ILE:HB	65:Sg:270:LEU:HB2	1.95	0.48
71:SH:20:GLU:HA	71:SH:23:ILE:HG22	1.95	0.48
72:SI:72:CYS:HG	72:SI:112:TRP:CG	2.31	0.48
73:SJ:145:PRO:HD2	84:S2:522:A:H5"	1.96	0.48
75:SN:114:ARG:NH2	84:S2:996:A:OP1	2.39	0.48
84:S2:366:U:O2	84:S2:394:G:O6	2.31	0.48
84:S2:544:G:H2'	84:S2:545:A:C8	2.48	0.48
84:S2:1643:U:H2'	84:S2:1644:C:C6	2.49	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1586:G:H2'	4:L5:1587:G:C8	2.49	0.48
4:L5:2890:C:H42	4:L5:3611:A:H61	1.62	0.48
4:L5:4061:G:C5	4:L5:4062:A:C8	3.02	0.48
4:L5:4113:U:H4'	4:L5:4115:G:C5	2.49	0.48
4:L5:4265:U:H4'	4:L5:4266:G:O4'	2.13	0.48
4:L5:4768:G:O3'	4:L5:4873:G:N2	2.47	0.48
5:L7:110:G:H2'	5:L7:111:C:H6	1.78	0.48
7:LA:116:LEU:HB3	7:LA:126:LEU:HB2	1.96	0.48
30:LY:32:SER:OG	30:LY:101:PRO:O	2.25	0.48
54:SM:42:LEU:HD21	54:SM:50:CYS:SG	2.54	0.48
68:SC:94:ILE:HD11	68:SC:159:LYS:HG2	1.96	0.48
69:SE:122:LYS:HE2	69:SE:124:CYS:SG	2.53	0.48
69:SE:188:ASN:HA	69:SE:245:ARG:HH12	1.79	0.48
69:SE:212:ASP:OD1	69:SE:216:ASN:N	2.46	0.48
84:S2:118:C:H1'	84:S2:445:A:C5	2.48	0.48
1:Pt:31:C:O3'	84:S2:1641:A:O2'	2.32	0.48
3:AT:5:C:H2'	3:AT:6:C:C6	2.49	0.48
4:L5:323:C:H2'	4:L5:324:A:C8	2.46	0.48
4:L5:452:A:N6	4:L5:1293:G:H5"	2.28	0.48
4:L5:928:C:H2'	4:L5:929:A:C8	2.48	0.48
4:L5:1461:C:H2'	4:L5:1462:A:C8	2.49	0.48
4:L5:1890:G:N2	4:L5:1890:G:OP2	2.47	0.48
4:L5:2101:C:H2'	4:L5:2102:G:C8	2.49	0.48
4:L5:2295:C:H2'	4:L5:2296:G:C8	2.46	0.48
4:L5:2366:A:N3	4:L5:3850:C:O2'	2.42	0.48
4:L5:2699:C:H2'	4:L5:2700:G:C8	2.48	0.48
4:L5:2747:U:H2'	4:L5:2748:C:C6	2.49	0.48
4:L5:2808:G:O2'	23:LR:60:ARG:NH1	2.47	0.48
6:L8:6:C:H2'	6:L8:7:U:C6	2.49	0.48
6:L8:20:A:H2'	6:L8:21:C:C6	2.49	0.48
10:LD:203:ASN:N	10:LD:203:ASN:OD1	2.44	0.48
15:LI:152:LEU:HB3	15:LI:165:ILE:HD12	1.94	0.48
16:LJ:115:LEU:O	16:LJ:117:ILE:N	2.43	0.48
49:Ls:58:ASN:ND2	49:Ls:84:GLY:O	2.33	0.48
51:SD:77:PHE:HB2	51:SD:79:PHE:CE1	2.47	0.48
62:Sc:20:ARG:HA	62:Sc:28:THR:HA	1.96	0.48
68:SC:271:ASP:OD1	68:SC:272:HIS:N	2.47	0.48
72:SI:143:LYS:NZ	84:S2:202:G:OP1	2.47	0.48
84:S2:165:G:OP2	84:S2:165:G:N2	2.33	0.48
84:S2:1103:C:H2'	84:S2:1104:G:C8	2.49	0.48
4:L5:724:C:H1'	9:LC:343:GLN:HG2	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1089:G:H2'	4:L5:1090:G:C8	2.49	0.47
4:L5:1238:A:O2'	12:LF:52:GLU:OE2	2.31	0.47
4:L5:1413:C:H2'	4:L5:1414:C:H6	1.79	0.47
4:L5:1662:C:H2'	4:L5:1663:C:C6	2.49	0.47
4:L5:1764:G:H1'	4:L5:1770:A:C6	2.49	0.47
4:L5:1846:G:H2'	4:L5:1847:C:C6	2.49	0.47
4:L5:1874:A:H2'	4:L5:1875:C:C6	2.48	0.47
4:L5:2728:U:H2'	4:L5:2729:C:C6	2.49	0.47
4:L5:3911:C:H2'	4:L5:3912:U:H6	1.79	0.47
4:L5:4371:G:C4	90:L5:5295:3HE:H4	2.49	0.47
4:L5:4743:G:H2'	4:L5:4744:A:C8	2.49	0.47
5:L7:16:A:H2'	5:L7:17:C:C6	2.49	0.47
10:LD:50:ARG:NH2	10:LD:72:ASP:OD2	2.36	0.47
17:LL:48:PRO:HG3	39:Lh:118:LYS:HE2	1.96	0.47
30:LY:83:GLU:OE1	30:LY:84:ARG:NH1	2.47	0.47
31:LZ:32:GLY:HA2	31:LZ:36:ARG:O	2.14	0.47
66:SA:5:LEU:HB3	66:SA:7:VAL:HG12	1.96	0.47
67:SB:145:LYS:HB2	67:SB:145:LYS:HE3	1.68	0.47
84:S2:98:C:OP2	84:S2:426:A:O2'	2.27	0.47
84:S2:598:G:H2'	84:S2:599:A:H8	1.79	0.47
84:S2:655:A:H4'	84:S2:656:G:H3'	1.96	0.47
84:S2:896:U:N3	84:S2:897:U:H5	2.11	0.47
84:S2:958:G:H2'	84:S2:959:G:C8	2.49	0.47
84:S2:1528:G:H2'	84:S2:1529:C:C6	2.49	0.47
84:S2:1780:G:H3'	84:S2:1781:A:H8	1.79	0.47
84:S2:1805:G:H2'	84:S2:1806:A:H8	1.79	0.47
4:L5:93:G:H2'	4:L5:94:A:C8	2.49	0.47
4:L5:974:C:H5"	12:LF:43:ARG:HH12	1.78	0.47
4:L5:1186:U:H2'	4:L5:1187:G:N3	2.28	0.47
4:L5:1190:C:H2'	4:L5:1191:C:H6	1.79	0.47
4:L5:1820:C:H2'	4:L5:1822:U:H5'	1.96	0.47
4:L5:2354:G:H2'	4:L5:2355:G:H8	1.78	0.47
4:L5:2640:G:H2'	4:L5:2641:A:C8	2.49	0.47
4:L5:4299:PSU:H2'	4:L5:4300:U:C6	2.49	0.47
4:L5:4711:C:H2'	4:L5:4712:C:C6	2.49	0.47
4:L5:4761:G:H2'	4:L5:4762:A:H8	1.79	0.47
12:LF:155:TYR:OH	12:LF:188:GLU:OE2	2.32	0.47
15:LI:88:ARG:N	15:LI:137:SER:O	2.43	0.47
17:LL:206:ASP:HA	17:LL:209:LYS:HD3	1.96	0.47
21:LP:107:LEU:HD13	21:LP:152:GLU:HG3	1.95	0.47
57:SR:29:HIS:HA	57:SR:32:LYS:HG2	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SS:132:ARG:NH1	84:S2:1623:A:N1	2.62	0.47
65:Sg:18:VAL:HG21	65:Sg:307:VAL:HB	1.97	0.47
68:SC:252:THR:OG1	68:SC:254:ASP:OD1	2.28	0.47
70:SG:191:ARG:HH12	84:S2:312:G:H2'	1.79	0.47
76:SO:101:GLY:HA2	76:SO:106:LYS:HD3	1.96	0.47
84:S2:218:U:H2'	84:S2:219:U:C6	2.50	0.47
84:S2:601:OMG:H2'	84:S2:602:G:C8	2.49	0.47
84:S2:1232:PSU:H2'	84:S2:1233:G:C8	2.49	0.47
84:S2:1399:C:H2'	84:S2:1400:U:C6	2.48	0.47
84:S2:1417:C:O2	84:S2:1422:G:C6	2.67	0.47
84:S2:1610:G:H2'	84:S2:1611:G:H8	1.79	0.47
2:CF:229:LEU:HD13	2:CF:232:LEU:HD11	1.96	0.47
4:L5:129:C:H2'	4:L5:130:C:H6	1.79	0.47
4:L5:685:C:O2'	4:L5:686:A:N7	2.43	0.47
4:L5:710:G:HO2'	11:LE:190:HIS:CD2	2.32	0.47
4:L5:1210:C:OP1	12:LF:70:ARG:HD3	2.14	0.47
4:L5:1326:A2M:H2'	4:L5:1327:C:C6	2.49	0.47
4:L5:1557:C:H2'	4:L5:1558:A:C8	2.49	0.47
4:L5:2273:G:H2'	4:L5:2274:C:C6	2.50	0.47
4:L5:2572:C:O2'	31:LZ:112:ARG:NH2	2.48	0.47
4:L5:2630:U:OP1	26:LU:48:LYS:NZ	2.47	0.47
4:L5:2752:G:C6	4:L5:2753:G:C6	3.03	0.47
4:L5:4342:C:H2'	4:L5:4343:U:C6	2.49	0.47
4:L5:5052:C:H2'	4:L5:5053:U:C6	2.48	0.47
12:LF:227:PHE:N	12:LF:233:ALA:O	2.43	0.47
14:LH:163:GLN:O	14:LH:166:THR:OG1	2.27	0.47
15:LI:135:ILE:HG22	15:LI:136:MET:HG3	1.95	0.47
18:LM:86:TRP:O	18:LM:89:THR:OG1	2.24	0.47
23:LR:172:ARG:NH1	84:S2:909:G:OP1	2.33	0.47
27:LV:36:ASN:ND2	27:LV:67:LYS:HG2	2.29	0.47
49:Ls:18:ILE:HG12	49:Ls:68:HIS:ND1	2.30	0.47
49:Ls:29:ILE:HG22	49:Ls:88:PHE:CD1	2.49	0.47
68:SC:114:LYS:HD2	84:S2:1358:U:H5'	1.95	0.47
69:SE:139:LEU:HD22	69:SE:147:ILE:HD11	1.95	0.47
70:SG:138:ALA:O	70:SG:142:ARG:HG3	2.15	0.47
73:SJ:143:ASN:OD1	84:S2:823:U:N3	2.46	0.47
73:SJ:160:SER:HB3	73:SJ:163:SER:HB3	1.95	0.47
84:S2:67:C:N4	84:S2:70:G:N7	2.62	0.47
84:S2:462:OMC:H2'	84:S2:463:C:C6	2.49	0.47
84:S2:605:A:N3	84:S2:639:C:H1'	2.29	0.47
84:S2:677:G:H21	84:S2:1028:A:N6	2.09	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1431:G:H4'	84:S2:1434:C:H41	1.79	0.47
84:S2:1780:G:H3'	84:S2:1781:A:C8	2.50	0.47
4:L5:123:C:H2'	4:L5:124:C:C6	2.50	0.47
4:L5:221:C:H2'	4:L5:222:C:C6	2.50	0.47
4:L5:261:G:H2'	4:L5:262:G:C8	2.49	0.47
4:L5:688:U:OP1	11:LE:94:LYS:NZ	2.32	0.47
4:L5:1296:G:H2'	4:L5:1297:U:C6	2.50	0.47
4:L5:1346:C:H2'	4:L5:1347:G:C8	2.49	0.47
4:L5:2072:C:O2'	12:LF:213:LEU:O	2.32	0.47
4:L5:2317:C:H2'	4:L5:2318:G:C8	2.49	0.47
4:L5:2437:C:H5'	29:LX:127:LEU:HB3	1.95	0.47
4:L5:2588:C:H4'	4:L5:2589:C:H5"	1.97	0.47
4:L5:2609:G:H2'	4:L5:2610:G:H8	1.79	0.47
4:L5:2672:C:H2'	4:L5:2673:G:H21	1.80	0.47
4:L5:3814:U:H2'	4:L5:3815:G:C8	2.50	0.47
4:L5:4676:G:OP1	8:LB:281:ASN:ND2	2.47	0.47
4:L5:4716:C:H2'	4:L5:4717:A:C8	2.47	0.47
14:LH:41:ILE:HG22	14:LH:43:VAL:HG13	1.96	0.47
23:LR:177:LEU:O	23:LR:181:LYS:HG2	2.14	0.47
28:LW:94:ARG:HA	28:LW:101:ARG:HH22	1.79	0.47
37:Lf:78:HIS:HB3	37:Lf:83:MET:HB3	1.95	0.47
39:Lh:104:THR:O	39:Lh:108:GLN:HG2	2.14	0.47
48:Lr:28:GLU:HG2	48:Lr:31:ASN:HB2	1.96	0.47
49:Ls:192:VAL:HG22	49:Ls:199:TYR:H	1.80	0.47
62:Sc:46:VAL:HG23	62:Sc:50:VAL:HG21	1.96	0.47
69:SE:108:ARG:NH2	84:S2:846:G:OP2	2.36	0.47
2:CF:380:ASP:HB2	2:CF:387:LEU:HD21	1.95	0.47
3:AT:51:U:H2'	3:AT:52:C:C6	2.50	0.47
4:L5:85:G:H1'	4:L5:86:U:H5	1.79	0.47
4:L5:271:C:H2'	4:L5:272:U:C6	2.50	0.47
4:L5:281:U:H2'	4:L5:282:C:H6	1.79	0.47
4:L5:909:A:H2'	4:L5:910:G:H8	1.78	0.47
4:L5:1194:G:H2'	4:L5:1195:G:C8	2.49	0.47
4:L5:1241:C:H5'	11:LE:72:LYS:NZ	2.29	0.47
4:L5:1789:C:H2'	4:L5:1790:U:C6	2.50	0.47
4:L5:2638:G:H2'	4:L5:2639:U:C6	2.50	0.47
4:L5:2640:G:H2'	4:L5:2641:A:H8	1.79	0.47
4:L5:2674:A:C6	47:Lp:42:CYS:HA	2.49	0.47
5:L7:37:G:H2'	5:L7:38:U:O4'	2.14	0.47
5:L7:59:G:H2'	5:L7:60:G:H8	1.79	0.47
6:L8:43:A:H2'	6:L8:44:A:H8	1.79	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:LY:67:ILE:O	30:LY:84:ARG:NH2	2.39	0.47
34:Lc:38:ILE:HD11	34:Lc:46:VAL:HG21	1.96	0.47
49:Ls:69:LEU:HD11	49:Ls:76:GLU:HB3	1.95	0.47
55:SP:131:PRO:HA	84:S2:1237:C:H5'	1.96	0.47
60:SU:66:ARG:NH1	60:SU:75:LYS:HG3	2.30	0.47
71:SH:33:ASN:ND2	71:SH:36:LEU:HB3	2.30	0.47
75:SN:114:ARG:HH22	84:S2:996:A:P	2.37	0.47
84:S2:14:C:H2'	84:S2:15:U:C6	2.48	0.47
84:S2:441:C:H2'	84:S2:442:C:C6	2.50	0.47
2:CF:15:HIS:HB2	2:CF:18:SER:HB3	1.96	0.47
4:L5:691:C:H2'	4:L5:692:A:C8	2.49	0.47
4:L5:1323:A2M:H2'	4:L5:1324:A:O4'	2.14	0.47
4:L5:1567:U:H2'	4:L5:1568:C:H6	1.80	0.47
4:L5:2568:C:H2'	4:L5:2569:G:H8	1.79	0.47
4:L5:2579:G:N1	4:L5:2583:C:N3	2.63	0.47
4:L5:2870:A:H2'	4:L5:2871:A:C8	2.49	0.47
4:L5:3688:U:H2'	4:L5:3689:G:C8	2.50	0.47
4:L5:3795:A:H2'	4:L5:3796:U:C6	2.49	0.47
4:L5:4546:A:H2'	4:L5:4547:C:C6	2.49	0.47
6:L8:82:A:O5'	6:L8:83:C:H5"	2.14	0.47
7:LA:53:GLY:O	7:LA:192:LYS:NZ	2.37	0.47
14:LH:180:TYR:HB3	44:Lm:89:TYR:CE2	2.49	0.47
15:LI:95:HIS:CE1	15:LI:128:ARG:HH21	2.33	0.47
23:LR:54:PRO:HG3	85:CI:70:ALA:HB2	1.95	0.47
26:LU:19:LEU:HB2	26:LU:74:SER:HB3	1.96	0.47
58:SS:102:GLY:HA2	58:SS:105:ASN:HD21	1.80	0.47
62:Sc:21:THR:OG1	62:Sc:22:GLY:N	2.47	0.47
62:Sc:29:GLN:HA	62:Sc:45:ASN:HA	1.96	0.47
63:Sd:19:ARG:O	63:Sd:27:ARG:NH1	2.48	0.47
67:SB:136:ARG:NH2	84:S2:941:C:OP1	2.48	0.47
70:SG:227:GLN:HB3	70:SG:231:ARG:HH21	1.80	0.47
72:SI:181:GLN:HE21	84:S2:379:C:P	2.37	0.47
73:SJ:138:ARG:NH2	73:SJ:152:ASP:O	2.48	0.47
84:S2:526:A:H2'	84:S2:527:C:C6	2.49	0.47
84:S2:629:A:O2'	84:S2:631:U:OP1	2.32	0.47
84:S2:930:C:H42	84:S2:1011:A:H62	1.61	0.47
84:S2:1860:A:HO2'	84:S2:1862:G:H8	1.63	0.47
2:CF:267:VAL:HG21	2:CF:302:ALA:HB1	1.97	0.47
4:L5:21:G:H1'	6:L8:103:A:N3	2.30	0.47
4:L5:189:G:H2'	4:L5:190:G:H8	1.79	0.47
4:L5:1089:G:H2'	4:L5:1090:G:H8	1.78	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1195:G:H2'	4:L5:1196:G:H8	1.79	0.47
4:L5:1836:G:H4'	25:LT:129:LYS:HG2	1.96	0.47
4:L5:1847:C:H2'	4:L5:1848:C:C6	2.50	0.47
4:L5:1912:G:H21	20:LO:87:MET:HE2	1.79	0.47
4:L5:2060:G:H4'	24:LS:118:ARG:HG3	1.97	0.47
4:L5:2605:G:H2'	4:L5:2606:G:C8	2.50	0.47
4:L5:2735:G:H2'	4:L5:2736:G:H8	1.80	0.47
4:L5:2844:A:N6	4:L5:3839:G:O2'	2.47	0.47
4:L5:4093:G:H3'	4:L5:4094:G:C8	2.47	0.47
4:L5:4178:A:H2'	4:L5:4179:G:C8	2.50	0.47
4:L5:4563:U:C2	4:L5:4564:A:C8	3.02	0.47
4:L5:4584:A:H2'	4:L5:4585:U:O4'	2.14	0.47
6:L8:94:G:H21	41:Lj:82:THR:HB	1.79	0.47
6:L8:150:C:N4	13:LG:52:THR:O	2.48	0.47
9:LC:110:ARG:O	9:LC:113:ARG:NH1	2.43	0.47
11:LE:223:ARG:NH2	11:LE:234:ASP:O	2.47	0.47
11:LE:243:THR:HG22	11:LE:245:GLN:H	1.79	0.47
14:LH:107:GLU:N	14:LH:107:GLU:OE1	2.48	0.47
21:LP:10:ASN:O	21:LP:12:THR:N	2.46	0.47
33:Lb:65:MET:HG3	33:Lb:68:ARG:HH12	1.79	0.47
45:Ln:7:LYS:NZ	84:S2:1843:G:OP1	2.39	0.47
49:Ls:53:VAL:HA	49:Ls:89:VAL:HA	1.96	0.47
52:SF:60:ARG:HE	84:S2:1679:A:P	2.38	0.47
56:SQ:139:ALA:O	56:SQ:140:ARG:NE	2.43	0.47
65:Sg:208:ALA:HB2	65:Sg:218:LEU:HD13	1.97	0.47
66:SA:24:HIS:HD2	66:SA:48:ILE:HD12	1.79	0.47
70:SG:92:ARG:O	84:S2:453:C:O2'	2.31	0.47
71:SH:18:GLU:OE1	71:SH:18:GLU:N	2.48	0.47
71:SH:76:GLN:O	71:SH:80:VAL:HG23	2.15	0.47
76:SO:45:THR:HA	76:SO:52:THR:HA	1.96	0.47
81:Sa:44:ILE:HG23	81:Sa:45:VAL:HG13	1.96	0.47
84:S2:57:U:H5"	84:S2:504:G:H1'	1.96	0.47
84:S2:674:C:H2'	84:S2:675:U:C6	2.50	0.47
84:S2:1093:A:H2'	84:S2:1094:C:H6	1.79	0.47
84:S2:1208:A:H2'	84:S2:1209:A:C8	2.48	0.47
84:S2:1347:U:H3'	84:S2:1348:G:H21	1.79	0.47
84:S2:1512:C:H2'	84:S2:1513:C:C6	2.50	0.47
84:S2:1716:C:H2'	84:S2:1717:C:H6	1.79	0.47
84:S2:1775:U:H2'	84:S2:1776:G:N3	2.29	0.47
4:L5:735:G:H5"	18:LM:70:GLN:HG3	1.96	0.47
4:L5:1354:A:OP1	22:LQ:108:ARG:NH2	2.35	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1846:G:H2'	4:L5:1847:C:H6	1.79	0.47
4:L5:1994:C:H2'	4:L5:1995:G:H8	1.77	0.47
4:L5:2326:G:H5"	36:Le:127:ALA:HB1	1.96	0.47
4:L5:4452:U:H5'	89:L5:5294:HMT:H7	1.97	0.47
4:L5:4941:G:O3'	11:LE:187:ARG:NH2	2.47	0.47
4:L5:5055:G:H2'	4:L5:5056:A:H8	1.79	0.47
8:LB:288:GLY:HA3	8:LB:330:PHE:CE1	2.50	0.47
10:LD:52:ILE:N	10:LD:63:GLN:O	2.44	0.47
15:LI:51:HIS:CD2	15:LI:168:SER:HB3	2.50	0.47
49:Ls:119:CYS:SG	49:Ls:120:GLU:N	2.87	0.47
52:SF:88:MET:O	52:SF:91:ARG:HG2	2.15	0.47
56:SQ:97:GLN:HB2	56:SQ:105:LYS:HG3	1.96	0.47
70:SG:7:PHE:CE2	70:SG:9:ALA:HB3	2.50	0.47
72:SI:98:LYS:HD2	84:S2:377:G:H5'	1.97	0.47
72:SI:106:SER:HB3	72:SI:171:LEU:HG	1.97	0.47
78:SW:115:GLU:HA	78:SW:118:ARG:HB2	1.96	0.47
80:SY:4:THR:C	80:SY:32:LYS:HZ2	2.23	0.47
84:S2:693:A:C2	84:S2:739:C:H4'	2.49	0.47
84:S2:1328:OMG:HM23	84:S2:1328:OMG:H1'	1.70	0.47
84:S2:1687:C:H2'	84:S2:1688:C:H6	1.80	0.47
1:Pt:9:A:O2'	1:Pt:10:G:N7	2.41	0.47
4:L5:382:G:HO2'	4:L5:407:A:H61	1.57	0.47
4:L5:701:G:C4	4:L5:702:U:N3	2.83	0.47
4:L5:727:C:H2'	4:L5:728:U:C6	2.50	0.47
4:L5:742:G:H2'	4:L5:743:G:H8	1.80	0.47
4:L5:1326:A2M:HM'3	4:L5:1326:A2M:H1'	1.50	0.47
4:L5:1354:A:H62	4:L5:1502:G:HO2'	1.61	0.47
4:L5:1613:A:H5"	7:LA:183:GLY:HA2	1.96	0.47
4:L5:1705:G:H2'	4:L5:1706:A:O4'	2.15	0.47
4:L5:2857:A:H2'	4:L5:2858:A:O4'	2.15	0.47
4:L5:3834:C:H2'	4:L5:3835:C:H6	1.80	0.47
4:L5:4284:C:H2'	4:L5:4285:U:C6	2.49	0.47
7:LA:114:CYS:HB3	7:LA:165:VAL:HB	1.97	0.47
10:LD:179:ARG:HA	10:LD:179:ARG:HD3	1.70	0.47
16:LJ:158:SER:N	16:LJ:161:GLU:OE1	2.48	0.47
28:LW:6:CYS:O	28:LW:30:GLN:NE2	2.48	0.47
28:LW:97:LYS:O	28:LW:99:GLU:N	2.47	0.47
36:Le:22:ARG:O	36:Le:25:SER:OG	2.25	0.47
57:SR:60:ARG:HA	57:SR:63:ARG:HG2	1.97	0.47
58:SS:40:TYR:OH	58:SS:97:GLN:HG2	2.15	0.47
58:SS:125:HIS:CD2	58:SS:131:VAL:HG11	2.50	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SZ:92:LEU:HD11	61:SZ:109:TYR:CE1	2.50	0.47
66:SA:172:GLY:HA3	66:SA:203:PHE:CD1	2.50	0.47
67:SB:128:LYS:HE3	67:SB:134:LEU:HD13	1.97	0.47
67:SB:129:THR:OG1	67:SB:131:ASP:OD1	2.28	0.47
83:Se:58:ASN:ND2	84:S2:606:G:H1'	2.30	0.47
84:S2:969:U:O2	84:S2:971:G:N1	2.48	0.47
84:S2:1024:A:H2'	84:S2:1025:U:C6	2.49	0.47
84:S2:1595:U:H2'	84:S2:1596:U:C6	2.50	0.47
84:S2:1743:G:H21	84:S2:1791:A:H62	1.63	0.47
4:L5:1307:A:H2'	4:L5:1308:C:H6	1.80	0.47
4:L5:1346:C:H2'	4:L5:1347:G:H8	1.80	0.47
4:L5:1398:A:N1	4:L5:1419:G:O2'	2.48	0.47
4:L5:1512:G:H2'	4:L5:1513:U:H6	1.80	0.47
4:L5:1526:G:H2'	4:L5:1527:A:C8	2.50	0.47
4:L5:2019:C:H2'	4:L5:2020:U:H6	1.80	0.47
4:L5:2693:G:H2'	4:L5:2694:G:N2	2.30	0.47
4:L5:3932:U:H2'	4:L5:3933:G:C8	2.50	0.47
4:L5:4159:C:H2'	4:L5:4160:C:C6	2.50	0.47
4:L5:4942:C:H4'	11:LE:154:THR:HB	1.97	0.47
8:LB:154:LYS:HE2	8:LB:154:LYS:HB2	1.71	0.47
45:Ln:17:ARG:NH1	84:S2:1173:A:OP1	2.48	0.47
52:SF:79:HIS:O	52:SF:81:ARG:N	2.45	0.47
55:SP:59:ARG:HH21	55:SP:76:VAL:HG23	1.79	0.47
58:SS:62:ASP:OD1	58:SS:62:ASP:N	2.47	0.47
58:SS:89:ASP:OD1	58:SS:90:VAL:N	2.48	0.47
65:Sg:82:SER:OG	65:Sg:83:TRP:N	2.48	0.47
76:SO:80:ASP:O	76:SO:83:GLN:HG3	2.15	0.47
84:S2:885:U:O2	84:S2:901:G:C6	2.68	0.47
84:S2:1649:U:H2'	84:S2:1650:A:C8	2.49	0.47
1:Pt:52:G:H2'	1:Pt:53:G:H8	1.80	0.46
2:CF:283:VAL:HG21	2:CF:320:VAL:HG22	1.96	0.46
4:L5:352:G:H21	4:L5:360:A:N6	2.13	0.46
4:L5:919:C:OP1	18:LM:69:HIS:ND1	2.37	0.46
4:L5:1478:C:H2'	4:L5:1479:G:H8	1.79	0.46
4:L5:1803:G:C6	25:LT:109:VAL:HG13	2.50	0.46
4:L5:1875:C:H2'	4:L5:1876:U:C6	2.50	0.46
4:L5:1953:U:H2'	4:L5:1954:U:C6	2.50	0.46
4:L5:2533:C:H2'	4:L5:2534:C:H6	1.81	0.46
4:L5:2605:G:H2'	4:L5:2606:G:H8	1.80	0.46
4:L5:2706:G:C8	85:CI:78:HIS:CE1	2.97	0.46
4:L5:2846:G:H2'	4:L5:2847:G:C8	2.49	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3654:G:O2'	4:L5:3693:U:OP1	2.32	0.46
4:L5:4070:U:H2'	4:L5:4071:U:C6	2.50	0.46
4:L5:4430:G:OP1	15:LI:30:LYS:NZ	2.47	0.46
4:L5:4475:G:O6	44:Lm:125:LYS:NZ	2.48	0.46
4:L5:4650:G:H2'	4:L5:4651:A:O4'	2.15	0.46
8:LB:84:MET:HB3	8:LB:164:ALA:HB1	1.97	0.46
32:La:113:GLY:O	32:La:136:LYS:NZ	2.37	0.46
48:Lr:119:ARG:O	48:Lr:122:LYS:HG2	2.15	0.46
57:SR:10:LYS:HG2	57:SR:53:TYR:CE2	2.50	0.46
60:SU:38:ASP:OD1	60:SU:39:LEU:N	2.48	0.46
67:SB:40:ASN:ND2	67:SB:75:GLN:OE1	2.49	0.46
69:SE:124:CYS:HA	69:SE:142:HIS:CE1	2.50	0.46
70:SG:7:PHE:HD2	70:SG:10:THR:HG22	1.80	0.46
84:S2:116:OMU:HN3	84:S2:347:G:H1	1.62	0.46
84:S2:1018:U:H2'	84:S2:1019:C:H6	1.80	0.46
84:S2:1605:G:H1'	84:S2:1634:A:H61	1.78	0.46
2:CF:26:HIS:HB3	2:CF:201:MET:HE3	1.97	0.46
4:L5:270:U:H2'	4:L5:271:C:C6	2.50	0.46
4:L5:392:U:H3	4:L5:399:G:H1	1.62	0.46
4:L5:1173:G:H2'	4:L5:1174:G:C8	2.49	0.46
4:L5:1466:G:OP2	33:Lb:44:ARG:NH2	2.48	0.46
4:L5:1490:G:H2'	4:L5:1491:A:C8	2.51	0.46
4:L5:1604:G:H2'	4:L5:1605:G:C8	2.51	0.46
4:L5:2535:G:H2'	4:L5:2536:A:C8	2.50	0.46
4:L5:2568:C:H2'	4:L5:2569:G:C8	2.49	0.46
4:L5:2683:C:H2'	4:L5:2684:C:C6	2.50	0.46
4:L5:4143:G:N3	4:L5:4145:C:H1'	2.30	0.46
4:L5:4424:A:C4	4:L5:4425:G:C8	3.03	0.46
4:L5:4529:G:H2'	4:L5:4530:UR3:H6	1.97	0.46
4:L5:4748:U:H2'	4:L5:4749:C:C6	2.51	0.46
4:L5:4878:C:H2'	4:L5:4879:C:H6	1.78	0.46
89:L5:5294:HMT:C7	89:L5:5294:HMT:C9	2.92	0.46
5:L7:58:A:H2'	5:L7:59:G:H8	1.80	0.46
6:L8:102:G:OP2	6:L8:104:A:O2'	2.26	0.46
9:LC:221:PHE:O	9:LC:222:ARG:HG2	2.15	0.46
13:LG:189:ARG:HG2	13:LG:192:ARG:NH2	2.30	0.46
16:LJ:16:ARG:HH21	16:LJ:137:PRO:HA	1.80	0.46
16:LJ:99:PHE:HA	16:LJ:105:PHE:HB3	1.97	0.46
19:LN:70:GLY:O	88:LN:301:SPD:N6	2.29	0.46
38:Lg:33:LEU:HA	38:Lg:33:LEU:HD23	1.82	0.46
49:Ls:57:LYS:O	49:Ls:61:MET:HG2	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:ST:74:SER:O	59:ST:78:ILE:HD12	2.15	0.46
61:SZ:69:THR:H	61:SZ:72:VAL:HG22	1.79	0.46
67:SB:120:MET:HE1	84:S2:987:A:C6	2.51	0.46
69:SE:242:LYS:HD3	69:SE:242:LYS:HA	1.72	0.46
70:SG:87:ARG:HD3	70:SG:87:ARG:HA	1.68	0.46
72:SI:141:ARG:HA	72:SI:141:ARG:CZ	2.45	0.46
79:SX:140:ARG:HE	79:SX:141:PRO:HD2	1.77	0.46
80:SY:9:THR:HG23	84:S2:839:C:H5	1.80	0.46
82:Sb:33:MET:HE3	82:Sb:48:SER:HA	1.96	0.46
84:S2:35:C:H2'	84:S2:36:U:H6	1.81	0.46
84:S2:609:U:H2'	84:S2:610:G:C8	2.49	0.46
84:S2:1739:C:H2'	84:S2:1740:C:C6	2.50	0.46
1:Pt:63:G:H2'	1:Pt:64:G:H8	1.80	0.46
3:AT:21:U:C4	3:AT:47:G:H1'	2.50	0.46
4:L5:1382:G:OP1	17:LL:66:TYR:OH	2.25	0.46
4:L5:1557:C:H2'	4:L5:1558:A:H8	1.80	0.46
4:L5:1847:C:H4'	22:LQ:152:PHE:CZ	2.51	0.46
4:L5:2017:A:HO2'	4:L5:2018:C:C5'	2.28	0.46
4:L5:2080:U:H2'	4:L5:2081:C:C6	2.50	0.46
4:L5:2095:A:H4'	4:L5:2096:G:H5'	1.97	0.46
4:L5:4302:U:H2'	4:L5:4303:C:O4'	2.16	0.46
6:L8:30:U:H2'	6:L8:31:G:C8	2.51	0.46
9:LC:141:GLY:O	9:LC:204:ARG:NH1	2.35	0.46
9:LC:341:LEU:HB3	9:LC:345:ARG:HH12	1.81	0.46
39:Lh:21:LEU:HB2	39:Lh:57:VAL:HG11	1.97	0.46
42:Lk:17:ARG:NH2	42:Lk:19:ASP:OD2	2.48	0.46
65:Sg:125:ARG:HD3	65:Sg:150:TRP:CE2	2.49	0.46
65:Sg:129:ILE:HB	65:Sg:142:VAL:HB	1.96	0.46
67:SB:149:GLN:HE22	67:SB:154:SER:HG	1.58	0.46
70:SG:191:ARG:HH22	84:S2:312:G:H5"	1.80	0.46
80:SY:22:GLN:HB2	80:SY:72:PHE:HZ	1.79	0.46
84:S2:85:A:H2'	84:S2:86:C:C6	2.50	0.46
84:S2:695:C:H5	84:S2:737:G:H21	1.64	0.46
84:S2:1144:A:H5'	84:S2:1355:C:H41	1.80	0.46
84:S2:1421:A:H5"	84:S2:1422:G:H2'	1.97	0.46
2:CF:149:ILE:HA	2:CF:188:VAL:HG23	1.98	0.46
2:CF:346:ILE:HD13	2:CF:353:ILE:HD13	1.97	0.46
4:L5:135:G:H22	39:Lh:94:ARG:HG2	1.80	0.46
4:L5:229:G:H2'	4:L5:230:G:H8	1.80	0.46
4:L5:270:U:H2'	4:L5:271:C:H6	1.80	0.46
4:L5:743:G:N1	4:L5:922:C:N3	2.63	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1317:U:OP2	36:Le:41:ILE:HG12	2.15	0.46
4:L5:1433:A:H3'	4:L5:1434:G:H8	1.81	0.46
4:L5:1621:A:H2'	4:L5:1622:U:C6	2.51	0.46
4:L5:1806:G:H2'	4:L5:1807:C:H6	1.79	0.46
4:L5:1960:A:C8	49:Ls:63:LYS:HE2	2.50	0.46
4:L5:3825:A2M:H1'	4:L5:3825:A2M:HM'3	1.53	0.46
4:L5:3834:C:H2'	4:L5:3835:C:C6	2.49	0.46
4:L5:4139:G:H1'	4:L5:4146:G:N1	2.30	0.46
16:LJ:57:VAL:HG21	16:LJ:60:PHE:CD2	2.50	0.46
24:LS:19:THR:C	24:LS:21:LYS:H	2.23	0.46
27:LV:65:VAL:HG23	27:LV:73:ARG:HA	1.97	0.46
27:LV:75:LYS:HE3	27:LV:77:HIS:CE1	2.50	0.46
31:LZ:33:THR:C	31:LZ:35:ASP:H	2.24	0.46
41:Lj:85:LYS:HB3	41:Lj:85:LYS:HE3	1.68	0.46
45:Ln:2:ARG:HB3	45:Ln:5:TRP:CD1	2.51	0.46
58:SS:10:GLN:HE21	58:SS:13:LEU:HG	1.79	0.46
78:SW:57:ARG:HG2	84:S2:920:A:H4'	1.96	0.46
78:SW:62:VAL:HG11	82:Sb:8:LEU:HG	1.98	0.46
80:SY:12:PHE:HZ	80:SY:21:LYS:HD2	1.80	0.46
84:S2:27:A2M:HM'3	84:S2:27:A2M:H1'	1.46	0.46
84:S2:142:C:N4	84:S2:330:G:OP2	2.45	0.46
84:S2:391:C:H2'	84:S2:392:A:H8	1.79	0.46
84:S2:1415:C:H2'	84:S2:1416:C:C6	2.50	0.46
2:CF:266:ARG:HD3	2:CF:305:GLY:HA2	1.96	0.46
3:AT:9:A:H62	3:AT:23:U:H5	1.63	0.46
3:AT:12:G:H22	3:AT:23:U:H3	1.63	0.46
4:L5:125:C:H2'	4:L5:126:C:H6	1.81	0.46
4:L5:252:C:H2'	4:L5:253:G:C8	2.49	0.46
4:L5:1340:OMC:H1'	4:L5:1340:OMC:HM23	1.64	0.46
4:L5:1596:U:O2	4:L5:3861:A:O2'	2.21	0.46
4:L5:1753:G:N2	4:L5:1778:C:C2	2.83	0.46
4:L5:1912:G:N2	20:LO:87:MET:HE2	2.31	0.46
4:L5:2889:G:H2'	4:L5:2890:C:C6	2.51	0.46
4:L5:3633:C:OP1	87:L5:5290:SPM:N10	2.48	0.46
4:L5:4139:G:N2	4:L5:4140:C:H41	2.07	0.46
4:L5:4342:C:H2'	4:L5:4343:U:H6	1.80	0.46
4:L5:4520:G:N2	8:LB:253:CYS:SG	2.89	0.46
6:L8:142:U:H2'	6:L8:143:G:H8	1.81	0.46
8:LB:315:ASN:OD1	8:LB:326:VAL:N	2.28	0.46
30:LY:47:MET:HE3	30:LY:48:PRO:HD2	1.97	0.46
49:Ls:13:TYR:O	49:Ls:17:ILE:HG12	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SM:17:ALA:O	54:SM:20:GLU:HG3	2.14	0.46
65:Sg:20:GLN:HG2	65:Sg:69:VAL:H	1.79	0.46
65:Sg:270:LEU:HD13	65:Sg:310:TRP:CE3	2.50	0.46
67:SB:115:LYS:HG2	84:S2:1869:A:C5	2.51	0.46
73:SJ:160:SER:O	73:SJ:163:SER:OG	2.24	0.46
76:SO:28:PHE:HA	76:SO:92:ALA:HB3	1.98	0.46
84:S2:612:U:H3'	84:S2:613:G:C8	2.51	0.46
84:S2:1007:C:H2'	84:S2:1008:A:C8	2.51	0.46
84:S2:1823:A:H2'	84:S2:1824:A:C4	2.50	0.46
3:AT:18:G:N1	3:AT:56:U:H1'	2.31	0.46
4:L5:94:A:H5"	32:La:34:ASN:HB2	1.96	0.46
4:L5:439:G:O3'	37:Lf:91:ASN:ND2	2.48	0.46
4:L5:512:U:O4	4:L5:647:G:O6	2.33	0.46
4:L5:519:C:H1'	4:L5:643:C:C2	2.51	0.46
4:L5:1095:A:H2	4:L5:1200:G:N1	2.06	0.46
4:L5:1194:G:H2'	4:L5:1195:G:H8	1.80	0.46
4:L5:1220:G:H2'	4:L5:1221:G:C8	2.50	0.46
4:L5:1424:G:O6	4:L5:1462:A:N6	2.49	0.46
4:L5:1666:C:H2'	4:L5:1667:G:O4'	2.16	0.46
4:L5:1738:A:H2'	4:L5:1739:G:H8	1.81	0.46
4:L5:2108:G:H2'	4:L5:2109:G:H8	1.81	0.46
4:L5:2491:C:O2'	4:L5:2492:C:O4'	2.28	0.46
4:L5:4173:G:H2'	4:L5:4174:U:C6	2.51	0.46
4:L5:4431:PSU:H2'	4:L5:4432:C:C6	2.51	0.46
4:L5:4470:G:H2'	4:L5:4471:PSU:O4'	2.14	0.46
4:L5:4524:G:H2'	4:L5:4525:C:H6	1.79	0.46
7:LA:112:ILE:HG22	7:LA:135:THR:HG23	1.97	0.46
39:Lh:107:GLN:O	39:Lh:111:GLU:HG3	2.16	0.46
64:Sf:123:SER:HG	64:Sf:144:CYS:HB3	1.80	0.46
67:SB:29:ASP:OD1	67:SB:29:ASP:N	2.47	0.46
84:S2:15:U:O2'	84:S2:669:A:N6	2.49	0.46
84:S2:23:G:H2'	84:S2:24:C:C6	2.50	0.46
84:S2:1129:G:H3'	84:S2:1130:G:N2	2.25	0.46
84:S2:1773:C:H2'	84:S2:1774:C:H5"	1.97	0.46
1:Pt:43:A:H2'	1:Pt:44:A:H8	1.81	0.46
2:CF:296:HIS:HE2	3:AT:77:A:P	2.39	0.46
3:AT:69:G:H2'	3:AT:70:A:H8	1.81	0.46
4:L5:1430:C:P	22:LQ:135:GLY:H	2.38	0.46
4:L5:1431:C:H2'	4:L5:1432:G:O4'	2.16	0.46
4:L5:3867:A2M:H2'	4:L5:3868:G:O4'	2.15	0.46
4:L5:4082:G:H2'	4:L5:4083:U:C6	2.51	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4968:A:H2'	4:L5:4969:C:H6	1.80	0.46
4:L5:5038:A:OP1	28:LW:61:LYS:NZ	2.32	0.46
7:LA:13:GLY:O	7:LA:17:ARG:HG3	2.16	0.46
9:LC:293:LEU:O	9:LC:299:GLN:NE2	2.48	0.46
19:LN:178:HIS:HA	19:LN:181:HIS:NE2	2.30	0.46
21:LP:123:PRO:HD3	21:LP:145:HIS:HE2	1.81	0.46
51:SD:109:LEU:HD12	51:SD:184:ILE:HD11	1.97	0.46
55:SP:97:TYR:OH	84:S2:1268:C:O2'	2.28	0.46
63:Sd:40:ARG:HD3	84:S2:1256:G:C5	2.51	0.46
65:Sg:31:ILE:HG12	65:Sg:45:LEU:HD21	1.97	0.46
67:SB:147:ASN:OD1	67:SB:148:ASN:N	2.49	0.46
78:SW:6:VAL:HG12	78:SW:34:ILE:HD11	1.98	0.46
84:S2:342:C:C2	84:S2:343:A:C8	3.04	0.46
84:S2:517:OMC:H2'	84:S2:518:G:O4'	2.16	0.46
84:S2:558:G:H1'	84:S2:559:G:C8	2.51	0.46
84:S2:945:U:H2'	84:S2:946:U:C6	2.50	0.46
84:S2:1295:A:H3'	84:S2:1296:U:H6	1.81	0.46
84:S2:1428:G:N1	84:S2:1585:U:O4'	2.48	0.46
2:CF:108:GLN:NE2	2:CF:251:GLN:HG3	2.31	0.46
4:L5:350:C:OP2	9:LC:199:ARG:NH2	2.46	0.46
4:L5:1291:G:H2'	4:L5:1292:C:C6	2.50	0.46
4:L5:1315:C:H2'	4:L5:1316:OMG:C8	2.50	0.46
4:L5:1554:A:H5'	47:Lp:9:GLY:C	2.41	0.46
4:L5:1800:U:H2'	4:L5:1801:A:H8	1.81	0.46
4:L5:2052:G:O2'	4:L5:2057:A:N1	2.48	0.46
4:L5:2489:C:H4'	4:L5:2491:C:H42	1.80	0.46
4:L5:3927:U:H2'	4:L5:3928:A:C8	2.51	0.46
4:L5:4089:G:H2'	4:L5:4090:G:H8	1.80	0.46
4:L5:4467:A:O2'	4:L5:4510:A:N3	2.39	0.46
4:L5:4473:A:P	44:Lm:102:ARG:HH21	2.39	0.46
4:L5:4920:C:H2'	4:L5:4921:C:H6	1.81	0.46
4:L5:5051:C:H4'	8:LB:324:GLY:HA2	1.98	0.46
6:L8:129:C:H2'	6:L8:130:C:C6	2.51	0.46
7:LA:206:PRO:HG3	7:LA:213:GLY:HA3	1.98	0.46
11:LE:119:GLU:HG3	36:Le:7:LEU:HD22	1.96	0.46
21:LP:94:MET:HE1	21:LP:146:ILE:HB	1.97	0.46
23:LR:173:ARG:O	23:LR:176:ARG:NH1	2.49	0.46
65:Sg:57:ARG:NH2	65:Sg:94:THR:O	2.49	0.46
68:SC:178:HIS:HB3	68:SC:200:ARG:HE	1.81	0.46
68:SC:267:GLN:OE1	77:SV:35:ASN:ND2	2.49	0.46
84:S2:375:U:H2'	84:S2:376:A:C8	2.51	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1006:C:H2’	84:S2:1007:C:H6	1.80	0.46
84:S2:1217:A:H2’	84:S2:1218:C:C6	2.51	0.46
84:S2:1218:C:H2’	84:S2:1219:C:C6	2.51	0.46
84:S2:1585:U:O2’	84:S2:1587:G:OP2	2.30	0.46
4:L5:171:U:H5”	4:L5:172:C:C5	2.51	0.46
4:L5:1591:U:OP2	4:L5:2856:C:O2’	2.27	0.46
4:L5:1688:G:H2’	4:L5:1689:G:C8	2.51	0.46
4:L5:2266:C:O2	48:Lr:39:ARG:NH2	2.48	0.46
4:L5:2769:U:N3	38:Lg:69:LYS:HD3	2.31	0.46
4:L5:3612:C:H2’	4:L5:3613:U:C6	2.51	0.46
4:L5:4371:G:N3	90:L5:5295:3HE:H4	2.31	0.46
4:L5:5018:C:H2’	4:L5:5019:A:C8	2.51	0.46
9:LC:10:VAL:O	9:LC:18:SER:OG	2.24	0.46
13:LG:176:LYS:HD3	40:Li:43:MET:HE1	1.96	0.46
43:Ll:25:GLN:HE22	43:Ll:28:ARG:HH12	1.64	0.46
58:SS:64:VAL:O	58:SS:68:ILE:HG12	2.16	0.46
69:SE:36:HIS:CG	69:SE:85:GLY:HA3	2.51	0.46
71:SH:49:LYS:NZ	71:SH:50:GLU:O	2.48	0.46
84:S2:186:C:H2’	84:S2:187:G:H8	1.80	0.46
84:S2:1143:A:O3’	84:S2:1355:C:N4	2.48	0.46
84:S2:1753:C:H4’	84:S2:1780:G:H1	1.80	0.46
84:S2:1777:G:H2’	84:S2:1778:C:C6	2.50	0.46
84:S2:1850:MA6:H8	84:S2:1850:MA6:O5’	2.16	0.46
1:Pt:3:C:H2’	1:Pt:4:U:H6	1.80	0.46
2:CF:166:ARG:O	2:CF:169:GLU:HG2	2.16	0.46
3:AT:5:C:H2’	3:AT:6:C:H6	1.81	0.46
4:L5:1079:C:H2’	4:L5:1080:C:C6	2.51	0.46
4:L5:1384:C:H2’	4:L5:1385:G:C8	2.51	0.46
4:L5:1430:C:H2’	4:L5:1431:C:C6	2.51	0.46
4:L5:1522:OMG:H2’	4:L5:1653:A:H61	1.81	0.46
4:L5:1825:A:H2’	4:L5:1826:G:C8	2.51	0.46
4:L5:2389:A:H2’	4:L5:2390:G:C8	2.51	0.46
4:L5:2891:U:OP2	23:LR:74:ARG:NE	2.44	0.46
4:L5:3911:C:H2’	4:L5:3912:U:C6	2.51	0.46
4:L5:4189:U:H2’	4:L5:4190:U:C6	2.51	0.46
4:L5:4524:G:H2’	4:L5:4525:C:C6	2.51	0.46
4:L5:4551:U:H2’	4:L5:4552:PSU:H6	1.81	0.46
5:L7:57:C:H2’	5:L7:58:A:H8	1.80	0.46
37:Lf:45:LYS:HA	37:Lf:107:PRO:HD2	1.98	0.46
53:SK:32:HIS:ND1	53:SK:33:PRO:HD2	2.30	0.46
79:SX:105:PHE:CE2	79:SX:112:VAL:HB	2.51	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:Sb:62:VAL:HG23	82:Sb:74:THR:HG21	1.98	0.46
84:S2:21:U:H2'	84:S2:22:A:C8	2.51	0.46
84:S2:156:G:H2'	84:S2:157:U:C6	2.51	0.46
84:S2:430:C:H2'	84:S2:431:G:C8	2.49	0.46
84:S2:747:U:C2	84:S2:796:G:N1	2.84	0.46
84:S2:1718:G:N2	84:S2:1814:G:H2'	2.31	0.46
2:CF:132:GLN:HB3	2:CF:136:HIS:CE1	2.51	0.45
4:L5:92:C:OP1	88:L5:5260:SPD:N10	2.49	0.45
4:L5:1305:C:H2'	4:L5:1306:C:C6	2.51	0.45
4:L5:2015:U:H2'	4:L5:2016:C:C6	2.51	0.45
4:L5:2352:U:H2'	4:L5:2353:U:C6	2.52	0.45
4:L5:2471:G:N3	4:L5:2471:G:H5'	2.30	0.45
4:L5:2481:G:H2'	4:L5:2482:C:C6	2.50	0.45
4:L5:3843:C:OP2	27:LV:51:ARG:NE	2.41	0.45
4:L5:4577:U:H2'	4:L5:4578:G:H8	1.81	0.45
4:L5:4646:U:OP2	23:LR:62:ARG:NH2	2.47	0.45
7:LA:171:GLY:O	47:Lp:68:ALA:HB2	2.16	0.45
8:LB:117:ARG:NH2	8:LB:178:ALA:O	2.34	0.45
9:LC:327:LYS:O	12:LF:47:ARG:NH1	2.38	0.45
18:LM:30:VAL:O	24:LS:98:ARG:NH1	2.48	0.45
18:LM:37:LEU:HD12	18:LM:37:LEU:HA	1.71	0.45
34:Lc:34:THR:HG23	34:Lc:95:ALA:HB2	1.98	0.45
49:Ls:159:GLN:NE2	49:Ls:162:LYS:HG3	2.32	0.45
57:SR:132:ARG:NH2	84:S2:1101:U:OP1	2.49	0.45
60:SU:56:MET:HB2	60:SU:86:LYS:HG3	1.98	0.45
61:SZ:42:ASP:OD1	61:SZ:42:ASP:N	2.43	0.45
62:Sc:7:GLN:HE22	62:Sc:61:SER:N	2.13	0.45
63:Sd:33:LYS:HE2	63:Sd:34:TYR:CZ	2.51	0.45
65:Sg:77:PHE:HB3	65:Sg:89:LEU:HD21	1.98	0.45
66:SA:49:ILE:HG21	66:SA:162:PRO:O	2.15	0.45
68:SC:253:PRO:HA	68:SC:256:TRP:CE2	2.51	0.45
68:SC:263:LYS:HA	68:SC:267:GLN:HE21	1.81	0.45
73:SJ:32:ILE:O	73:SJ:36:GLY:N	2.49	0.45
84:S2:107:A:H2'	84:S2:108:G:C8	2.52	0.45
84:S2:147:A:H2'	84:S2:148:U:C6	2.51	0.45
84:S2:155:G:C6	84:S2:164:A:C6	3.04	0.45
1:Pt:3:C:H42	1:Pt:70:A:N6	2.10	0.45
2:CF:313:LYS:HG3	2:CF:314:ASN:OD1	2.16	0.45
3:AT:50:C:H2'	3:AT:51:U:C6	2.52	0.45
4:L5:321:U:H2'	4:L5:322:C:C6	2.51	0.45
4:L5:989:U:H3	4:L5:1064:G:H1	1.64	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1259:G:H2'	4:L5:1260:G:C8	2.49	0.45
4:L5:1304:C:H2'	4:L5:1305:C:C6	2.52	0.45
4:L5:2476:G:H2'	4:L5:2477:A:H8	1.82	0.45
4:L5:2489:C:O3'	4:L5:2491:C:N4	2.49	0.45
4:L5:2491:C:H2'	4:L5:2492:C:C6	2.51	0.45
4:L5:2623:A:H2'	4:L5:2624:G:H8	1.81	0.45
4:L5:2682:G:H2'	4:L5:2683:C:C6	2.51	0.45
4:L5:3722:G:H2'	4:L5:3723:A:C8	2.50	0.45
4:L5:3917:A:H2'	4:L5:3918:G:C8	2.49	0.45
4:L5:3933:G:H2'	4:L5:3934:G:H8	1.81	0.45
4:L5:4364:G:H2'	4:L5:4365:C:H6	1.80	0.45
4:L5:4566:U:H2'	4:L5:4567:G:O4'	2.16	0.45
4:L5:4708:A:N3	4:L5:4709:U:H5'	2.31	0.45
4:L5:4913:G:H4'	4:L5:4914:C:O5'	2.16	0.45
4:L5:4964:C:H2'	4:L5:4965:U:C6	2.51	0.45
5:L7:76:U:H2'	5:L7:77:A:C8	2.51	0.45
14:LH:93:ARG:HG2	14:LH:182:SER:HB3	1.97	0.45
15:LI:171:TRP:HB2	15:LI:178:ALA:HA	1.98	0.45
30:LY:82:ILE:HG22	30:LY:83:GLU:H	1.81	0.45
40:Li:35:LYS:HB3	40:Li:35:LYS:HE3	1.70	0.45
54:SM:86:GLY:HA2	54:SM:89:VAL:HG12	1.97	0.45
65:Sg:67:SER:N	65:Sg:81:GLY:O	2.48	0.45
70:SG:152:ASP:OD1	70:SG:155:GLN:HB2	2.17	0.45
84:S2:58:C:H5"	84:S2:499:G:H21	1.81	0.45
84:S2:563:G:HO2'	84:S2:564:A:P	2.40	0.45
84:S2:1136:U:H2'	84:S2:1137:U:H6	1.81	0.45
84:S2:1253:A:H4'	84:S2:1254:C:H5"	1.98	0.45
84:S2:1280:G:H2'	84:S2:1281:G:C8	2.51	0.45
1:Pt:20(A):U:O4'	16:LJ:58:ARG:NH2	2.50	0.45
4:L5:73:A:N6	17:LL:103:ARG:HH22	2.14	0.45
4:L5:381:U:H4'	4:L5:415:G:H5'	1.98	0.45
4:L5:434:A:H3'	4:L5:435:A:H8	1.81	0.45
4:L5:949:G:H2'	4:L5:950:G:H8	1.81	0.45
4:L5:966:A:H3'	4:L5:967:C:C6	2.51	0.45
4:L5:1739:G:H2'	4:L5:1740:C:C6	2.51	0.45
4:L5:1807:C:H2'	4:L5:1808:C:C6	2.51	0.45
4:L5:1812:C:H2'	4:L5:1813:U:C6	2.52	0.45
4:L5:2858:A:H2'	4:L5:2859:G:H8	1.82	0.45
4:L5:2865:U:H2'	4:L5:2866:C:C6	2.52	0.45
4:L5:3727:A:O3'	40:Li:74:LYS:NZ	2.49	0.45
4:L5:4883:C:H2'	4:L5:4884:G:C8	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LG:81:ASN:O	13:LG:84:THR:OG1	2.22	0.45
15:LI:87:MET:HG2	15:LI:138:ILE:HG12	1.98	0.45
17:LL:46:ILE:HB	17:LL:49:ARG:HB2	1.97	0.45
20:LO:88:LEU:HD12	20:LO:99:LEU:HD13	1.97	0.45
32:La:3:SER:HA	32:La:6:ARG:HD2	1.97	0.45
39:Lh:52:LYS:HA	39:Lh:52:LYS:HD3	1.72	0.45
39:Lh:89:ARG:O	39:Lh:93:ARG:HG2	2.17	0.45
45:Ln:2:ARG:NH2	84:S2:1842:4AC:H5	2.31	0.45
46:Lo:74:GLU:HG3	46:Lo:76:ASN:H	1.81	0.45
51:SD:45:ARG:NH1	51:SD:85:GLU:OE1	2.49	0.45
57:SR:105:MET:SD	66:SA:50:ASN:HA	2.57	0.45
61:SZ:73:VAL:HG13	61:SZ:77:LEU:HD12	1.98	0.45
64:Sf:139:HIS:O	64:Sf:147:THR:HA	2.16	0.45
66:SA:215:GLN:O	66:SA:219:GLU:HG2	2.17	0.45
69:SE:253:ASP:N	69:SE:253:ASP:OD1	2.49	0.45
84:S2:29:G:C6	84:S2:646:G:C6	3.05	0.45
84:S2:299:A:H2'	84:S2:300:U:H6	1.82	0.45
84:S2:942:G:H2'	84:S2:943:U:C6	2.52	0.45
84:S2:1103:C:H2'	84:S2:1104:G:H8	1.79	0.45
84:S2:1577:G:O2'	84:S2:1579:A:N3	2.41	0.45
4:L5:305:A:P	19:LN:15:GLN:HE22	2.39	0.45
4:L5:657:C:H2'	4:L5:658:C:C6	2.51	0.45
4:L5:1352:C:O2'	4:L5:1356:U:OP1	2.35	0.45
4:L5:1727:U:H2'	4:L5:1728:U:C6	2.51	0.45
4:L5:1794:A:H5"	4:L5:4214:A:N6	2.31	0.45
4:L5:1919:G:N2	24:LS:166:ARG:HB2	2.31	0.45
4:L5:1942:A:N3	4:L5:4432:C:O2'	2.43	0.45
4:L5:2662:G:H2'	4:L5:2663:G:C8	2.52	0.45
4:L5:2706:G:C6	85:CI:78:HIS:CD2	3.05	0.45
4:L5:2734:U:H2'	4:L5:2735:G:H8	1.82	0.45
4:L5:3721:U:H2'	4:L5:3722:G:H8	1.82	0.45
4:L5:3731:C:H2'	4:L5:3732:A:H8	1.81	0.45
4:L5:3870:C:H2'	4:L5:3871:A:C8	2.50	0.45
4:L5:4637:OMG:H2'	4:L5:4638:U:C6	2.52	0.45
7:LA:51:ASP:HB3	7:LA:54:ARG:HG2	1.99	0.45
28:LW:113:LYS:O	28:LW:117:LYS:HG2	2.16	0.45
36:Le:101:HIS:O	36:Le:128:ARG:NH2	2.50	0.45
39:Lh:10:ARG:NH1	39:Lh:63:GLN:OE1	2.43	0.45
50:Lt:12:VAL:HG11	50:Lt:64:ILE:HA	1.98	0.45
70:SG:133:LEU:O	84:S2:168:C:O2'	2.32	0.45
84:S2:116:OMU:H2'	84:S2:117:C:C6	2.51	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:746:C:H2'	84:S2:747:U:C6	2.52	0.45
84:S2:807:G:H2'	84:S2:808:A:H8	1.81	0.45
84:S2:1217:A:H2'	84:S2:1218:C:H6	1.79	0.45
84:S2:1538:C:H2'	84:S2:1539:U:C6	2.51	0.45
84:S2:1731:A:H2'	84:S2:1732:G:H8	1.81	0.45
1:Pt:56:C:O4'	16:LJ:64:ARG:NE	2.43	0.45
2:CF:63:LEU:HB2	2:CF:66:GLU:HB2	1.97	0.45
4:L5:308:G:C8	4:L5:310:G:H1'	2.51	0.45
4:L5:347:A:H2'	4:L5:348:G:H8	1.80	0.45
4:L5:1328:G:H2'	4:L5:1329:G:C8	2.51	0.45
4:L5:1510:G:H2'	4:L5:1511:U:H6	1.81	0.45
4:L5:1589:C:H2'	4:L5:1590:C:C6	2.52	0.45
4:L5:1972:G:C6	4:L5:1973:G:C6	3.04	0.45
4:L5:1997:U:P	49:Ls:44:ARG:HH11	2.40	0.45
4:L5:2111:G:N2	4:L5:2252:G:O4'	2.50	0.45
4:L5:2281:U:C2	4:L5:2282:A:C8	3.04	0.45
4:L5:2533:C:H2'	4:L5:2534:C:C6	2.51	0.45
4:L5:2732:G:H2'	4:L5:2733:C:C6	2.50	0.45
4:L5:3765:G:H21	4:L5:3766:A:N6	2.13	0.45
4:L5:3863:C:H2'	4:L5:3864:C:C6	2.51	0.45
4:L5:3922[A]:G:H4'	4:L5:4183:G:H22	1.80	0.45
4:L5:4072:C:H2'	4:L5:4073:A:H8	1.82	0.45
4:L5:4152:G:H2'	4:L5:4153:C:C6	2.51	0.45
4:L5:4340:U:O2	88:L5:5260:SPD:N10	2.50	0.45
4:L5:4878:C:H2'	4:L5:4879:C:C6	2.51	0.45
6:L8:40:A:H2'	6:L8:41:A:C8	2.51	0.45
7:LA:10:LYS:HA	7:LA:16:PHE:CD2	2.52	0.45
7:LA:115:CYS:SG	7:LA:124:GLY:HA3	2.56	0.45
13:LG:83:PHE:HA	13:LG:183:ILE:HD13	1.98	0.45
23:LR:35:ALA:HA	23:LR:40:GLN:OE1	2.16	0.45
33:Lb:102:PRO:O	33:Lb:109:ARG:NH2	2.50	0.45
35:Ld:123:ASP:N	35:Ld:123:ASP:OD1	2.48	0.45
37:Lf:43:LEU:O	37:Lf:109:ARG:NH2	2.46	0.45
37:Lf:45:LYS:NZ	37:Lf:108:SER:HA	2.32	0.45
56:SQ:26:LYS:N	56:SQ:67:ASP:O	2.49	0.45
57:SR:109:LEU:HD13	66:SA:52:LYS:HB2	1.98	0.45
59:ST:96:SER:OG	84:S2:1568:C:OP1	2.31	0.45
61:SZ:80:ARG:HD3	84:S2:1598:G:P	2.56	0.45
65:Sg:27:PHE:HB3	65:Sg:30:MET:HB3	1.99	0.45
71:SH:145:ARG:HE	78:SW:51:GLU:HB2	1.82	0.45
75:SN:87:ASP:OD1	75:SN:88:LEU:N	2.49	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:SY:9:THR:H	84:S2:837:A:N6	2.15	0.45
80:SY:77:ASP:OD1	80:SY:77:ASP:N	2.49	0.45
83:Se:38:TYR:O	83:Se:42:PHE:HB2	2.17	0.45
84:S2:468:A2M:HM'3	84:S2:468:A2M:H1'	1.54	0.45
84:S2:563:G:O2'	84:S2:564:A:OP1	2.30	0.45
84:S2:1718:G:H2'	84:S2:1814:G:N2	2.32	0.45
4:L5:256:G:H2'	4:L5:257:C:C6	2.52	0.45
4:L5:1459:A:H2'	4:L5:1460:C:O4'	2.17	0.45
4:L5:1504:G:H2'	4:L5:1505:C:H6	1.82	0.45
4:L5:1569:U:H2'	4:L5:1570:G:C8	2.51	0.45
4:L5:2552:G:N2	4:L5:2767:U:O4	2.50	0.45
4:L5:3631:U:H2'	4:L5:3632:C:H6	1.82	0.45
4:L5:4113:U:H3'	4:L5:4114:C:H4'	1.99	0.45
4:L5:4151:G:H2'	4:L5:4152:G:C8	2.52	0.45
4:L5:4643:G:H2'	4:L5:4644:G:H8	1.81	0.45
4:L5:4704:C:H2'	4:L5:4705:A:C8	2.51	0.45
4:L5:4976:U:N3	8:LB:342:LYS:O	2.49	0.45
6:L8:75:OMG:OP2	30:LY:74:TYR:OH	2.32	0.45
11:LE:67:ALA:HA	11:LE:69:TYR:CE2	2.51	0.45
22:LQ:156:PRO:HD2	32:La:48:TYR:HA	1.98	0.45
57:SR:16:ILE:HB	57:SR:38:ILE:HD12	1.98	0.45
68:SC:202:THR:HG23	73:SJ:54:ARG:HH22	1.81	0.45
72:SI:81:VAL:HG22	72:SI:102:VAL:HG12	1.99	0.45
73:SJ:124:HIS:HD2	83:Se:31:ARG:HE	1.65	0.45
84:S2:598:G:H2'	84:S2:599:A:C8	2.51	0.45
84:S2:900:C:H5'	84:S2:901:G:N7	2.31	0.45
84:S2:1221:G:H2'	84:S2:1222:G:H8	1.82	0.45
84:S2:1513:C:H2'	84:S2:1514:G:C8	2.48	0.45
84:S2:1759:G:O2'	84:S2:1760:G:O4'	2.31	0.45
2:CF:360:VAL:HG12	2:CF:369:ALA:HB2	1.98	0.45
4:L5:106:A:H2'	4:L5:107:G:O4'	2.16	0.45
4:L5:687:U:N3	11:LE:95:PRO:HG2	2.31	0.45
4:L5:739:G:H22	4:L5:926:G:H1'	1.81	0.45
4:L5:978:G:H2'	4:L5:979:C:C6	2.52	0.45
4:L5:1321:G:H22	4:L5:4445:U:H5'	1.81	0.45
4:L5:1473:U:H2'	4:L5:1474:C:C6	2.52	0.45
4:L5:2286:G:H2'	4:L5:2287:G:H8	1.82	0.45
4:L5:2461:G:H2'	4:L5:2462:C:C6	2.52	0.45
4:L5:2629:C:H2'	4:L5:2630:U:C6	2.51	0.45
4:L5:2824:OMC:H1'	4:L5:2824:OMC:HM23	1.65	0.45
4:L5:4147:G:H2'	4:L5:4148:C:C6	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4287:G:H2'	4:L5:4288:C:C6	2.51	0.45
4:L5:4393:G:H1	4:L5:4397:A:H62	1.65	0.45
4:L5:4458:C:H2'	4:L5:4459:U:C6	2.51	0.45
4:L5:4622:A:H2'	4:L5:4623:OMG:C8	2.50	0.45
4:L5:4710:C:H2'	4:L5:4711:C:C6	2.52	0.45
6:L8:119:C:H2'	6:L8:120:G:C8	2.52	0.45
11:LE:252:ALA:O	11:LE:255:SER:OG	2.34	0.45
17:LL:110:LEU:O	17:LL:114:VAL:HG13	2.17	0.45
18:LM:119:ARG:HG3	20:LO:189:ILE:HG23	1.98	0.45
27:LV:87:SER:HA	27:LV:97:TYR:HB3	1.99	0.45
37:Lf:36:ARG:O	37:Lf:39:THR:OG1	2.25	0.45
65:Sg:205:SER:C	65:Sg:221:LEU:HD23	2.41	0.45
66:SA:110:ASN:HB3	66:SA:113:GLN:NE2	2.30	0.45
80:SY:10:ARG:HA	84:S2:839:C:N4	2.30	0.45
84:S2:431:G:H2'	84:S2:432:G:H8	1.81	0.45
84:S2:1199:A:H2'	84:S2:1200:A:C8	2.51	0.45
84:S2:1615:U:H2'	84:S2:1616:U:C6	2.51	0.45
84:S2:1633:A:H2'	84:S2:1634:A:C8	2.52	0.45
84:S2:1671:G:H2'	84:S2:1672:U:C6	2.52	0.45
2:CF:100:LYS:HB3	2:CF:427:ARG:NH2	2.31	0.45
4:L5:227:A:H62	4:L5:241:G:H21	1.64	0.45
4:L5:302:C:H2'	4:L5:303:C:C6	2.51	0.45
4:L5:408:A:O2'	4:L5:411:G:OP2	2.23	0.45
4:L5:707:C:H2'	4:L5:708:G:O4'	2.17	0.45
4:L5:1397:A:P	32:La:113:GLY:H	2.40	0.45
4:L5:1468:C:H2'	4:L5:1469:C:C6	2.51	0.45
4:L5:2347:A:O2'	4:L5:2348:G:O4'	2.26	0.45
4:L5:2377:C:H2'	4:L5:2378:G:O4'	2.16	0.45
4:L5:2437:C:H1'	29:LX:125:ASN:HB3	1.98	0.45
4:L5:2517:A:H5'	38:Lg:62:LYS:HD3	1.99	0.45
4:L5:3608:A:H2'	4:L5:3609:G:C8	2.52	0.45
4:L5:3697:U:H1'	4:L5:3819:G:N2	2.31	0.45
4:L5:4523:A2M:H2'	4:L5:4559:A:N7	2.32	0.45
5:L7:3:C:H2'	5:L7:4:U:H6	1.82	0.45
6:L8:133:G:H2'	6:L8:134:G:H8	1.81	0.45
14:LH:48:LEU:HD21	14:LH:56:ARG:HB2	1.99	0.45
14:LH:128:MET:SD	14:LH:157:SER:HB3	2.57	0.45
15:LI:36:LEU:HD11	15:LI:69:ARG:HH11	1.82	0.45
23:LR:105:LEU:HD13	23:LR:135:LYS:HE3	1.99	0.45
28:LW:41:LEU:HD23	28:LW:41:LEU:HA	1.79	0.45
58:SS:78:LYS:HD3	58:SS:78:LYS:HA	1.75	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SC:85:SER:OG	77:SV:25:GLY:O	2.35	0.45
68:SC:238:LYS:HZ2	84:S2:1355:C:HO2'	1.58	0.45
72:SI:139:LYS:HB2	72:SI:139:LYS:HE2	1.62	0.45
73:SJ:111:GLN:OE1	73:SJ:127:ARG:NH1	2.50	0.45
80:SY:113:ARG:NE	80:SY:131:PRO:HG2	2.32	0.45
82:Sb:11:SER:N	82:Sb:14:GLU:OE2	2.49	0.45
84:S2:324:C:H2'	84:S2:325:C:C2	2.51	0.45
84:S2:845:G:H2'	84:S2:846:G:C8	2.52	0.45
84:S2:885:U:C2	84:S2:901:G:O6	2.70	0.45
84:S2:1324:G:O2'	84:S2:1510:G:O2'	2.25	0.45
2:CF:364:HIS:CD2	2:CF:365:THR:H	2.35	0.45
4:L5:47:A:H5"	17:LL:16:LYS:HG2	1.99	0.45
4:L5:976:G:H2'	4:L5:977:C:O4'	2.16	0.45
4:L5:1076:C:H2'	4:L5:1077:C:C6	2.52	0.45
4:L5:1374:G:H2'	4:L5:1375:C:H6	1.82	0.45
4:L5:1450:C:H2'	4:L5:1451:G:O4'	2.17	0.45
4:L5:1614:C:H2'	4:L5:1615:C:C6	2.52	0.45
4:L5:2500:U:H2'	4:L5:2501:C:C6	2.52	0.45
4:L5:2554:U:C2	4:L5:2764:A:N7	2.83	0.45
4:L5:3718:A2M:HM'3	4:L5:3718:A2M:H1'	1.64	0.45
4:L5:3832:U:H2'	4:L5:3833:C:C6	2.52	0.45
4:L5:3871:A:H2'	4:L5:3872:A:H8	1.82	0.45
4:L5:4128:A:O2'	13:LG:33:GLU:O	2.24	0.45
4:L5:4299:PSU:H2'	4:L5:4300:U:H6	1.81	0.45
4:L5:4673:PSU:H2'	4:L5:4674:C:C6	2.51	0.45
4:L5:4739:C:H2'	4:L5:4740:G:H5'	1.99	0.45
6:L8:154:G:H2'	6:L8:155:C:C6	2.51	0.45
14:LH:5:LEU:HB2	14:LH:60:TRP:CZ3	2.51	0.45
16:LJ:119:TYR:CG	58:SS:12:ILE:HG12	2.51	0.45
19:LN:38:ARG:HB2	19:LN:62:TYR:CZ	2.52	0.45
28:LW:80:ARG:HD2	70:SG:131:ARG:HE	1.82	0.45
29:LX:78:LYS:NZ	29:LX:133:GLU:OE1	2.46	0.45
39:Lh:70:ARG:HG2	39:Lh:83:LEU:HD22	1.99	0.45
51:SD:116:ARG:NH2	51:SD:150:MET:SD	2.89	0.45
52:SF:84:GLY:O	84:S2:1673:U:O2'	2.25	0.45
62:Sc:34:PHE:CD1	62:Sc:40:ARG:HG2	2.52	0.45
69:SE:72:ILE:HD12	69:SE:77:ARG:HB2	1.97	0.45
70:SG:194:LEU:HD13	70:SG:197:GLN:NE2	2.32	0.45
73:SJ:30:LYS:HA	83:Se:38:TYR:HE1	1.81	0.45
84:S2:222:U:H2'	84:S2:223:C:C6	2.52	0.45
84:S2:1168:G:H2'	84:S2:1169:G:O4'	2.17	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:481:G:H2'	4:L5:482:G:H8	1.81	0.45
4:L5:755:C:H2'	4:L5:756:G:H8	1.82	0.45
4:L5:1519:C:H2'	4:L5:1520:C:C6	2.52	0.45
4:L5:2306:G:H1'	4:L5:2332:A:N6	2.32	0.45
4:L5:2520:C:H2'	4:L5:2521:G:C8	2.50	0.45
4:L5:2765:A:H2'	4:L5:2766:A:C8	2.52	0.45
4:L5:3830:A2M:HM'3	4:L5:3830:A2M:H1'	1.53	0.45
4:L5:4080:C:H2'	4:L5:4081:G:H8	1.82	0.45
4:L5:4126:C:OP1	13:LG:37:LYS:NZ	2.50	0.45
4:L5:4250:G:O2'	16:LJ:107:PHE:O	2.35	0.45
4:L5:4896:G:H2'	4:L5:4897:G:C8	2.52	0.45
4:L5:5056:A:H2'	4:L5:5057:C:C6	2.52	0.45
5:L7:75:G:N2	5:L7:99:G:H2'	2.32	0.45
6:L8:26:C:O2'	9:LC:53:ALA:O	2.33	0.45
10:LD:37:VAL:HG12	10:LD:50:ARG:HD3	1.98	0.45
17:LL:130:LYS:HB3	17:LL:133:ALA:HB3	1.99	0.45
18:LM:32:ASP:OD2	18:LM:35:ARG:NH2	2.46	0.45
19:LN:149:GLN:O	19:LN:152:THR:OG1	2.28	0.45
54:SM:58:GLU:OE1	54:SM:61:TYR:N	2.49	0.45
70:SG:3:LEU:HD23	70:SG:109:LEU:HB3	1.99	0.45
70:SG:174:PRO:O	84:S2:77:A:O2'	2.34	0.45
84:S2:21:U:H2'	84:S2:22:A:H8	1.82	0.45
84:S2:121:OMU:HM22	84:S2:122:G:O4'	2.17	0.45
1:Pt:6:C:H2'	1:Pt:7:G:C8	2.52	0.44
4:L5:74:G:O2'	17:LL:71:ARG:NH2	2.50	0.44
4:L5:139:G:H2'	4:L5:140:G:C8	2.52	0.44
4:L5:725:G:H2'	4:L5:726:G:H8	1.81	0.44
4:L5:946:C:H2'	4:L5:947:C:H6	1.82	0.44
4:L5:2539:C:H2'	4:L5:2540:C:C6	2.52	0.44
4:L5:2608:G:H2'	4:L5:2609:G:H8	1.81	0.44
4:L5:2631:U:H5"	4:L5:2632:PSU:H5"	1.99	0.44
4:L5:4345:C:H2'	4:L5:4346:U:C6	2.53	0.44
4:L5:4538:G:H2'	4:L5:4539:U:H6	1.81	0.44
4:L5:4918:C:H2'	4:L5:4919:G:C8	2.52	0.44
4:L5:4959:U:H2'	4:L5:4960:G:C8	2.53	0.44
8:LB:218:ASP:OD2	8:LB:348:ARG:NH2	2.35	0.44
18:LM:24:LEU:HD11	18:LM:86:TRP:CG	2.51	0.44
39:Lh:19:LYS:NZ	39:Lh:23:ASP:OD1	2.45	0.44
58:SS:124:ARG:NE	58:SS:130:ARG:O	2.42	0.44
60:SU:85:HIS:ND1	84:S2:1447:G:OP1	2.51	0.44
61:SZ:86:ALA:HA	61:SZ:89:GLN:HE21	1.82	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SA:220:LYS:HA	66:SA:220:LYS:HD3	1.83	0.44
69:SE:44:LEU:HD23	69:SE:82:TYR:HB3	1.99	0.44
73:SJ:150:ARG:HG3	84:S2:821:G:O6	2.18	0.44
74:SL:94:HIS:HB3	74:SL:103:GLU:HB3	1.98	0.44
76:SO:147:ARG:HH21	84:S2:1854:U:H3'	1.82	0.44
84:S2:445:A:H2'	84:S2:446:G:C8	2.52	0.44
84:S2:1180:C:H2'	84:S2:1181:A:C8	2.53	0.44
84:S2:1447:G:H2'	84:S2:1448:A:C8	2.52	0.44
84:S2:1804:U:H2'	84:S2:1805:G:C8	2.52	0.44
2:CF:345:ILE:N	2:CF:435:VAL:O	2.48	0.44
2:CF:415:PHE:HB2	2:CF:437:VAL:HB	1.99	0.44
4:L5:181:C:H2'	4:L5:182:G:C8	2.52	0.44
4:L5:919:C:H2'	4:L5:920:C:C6	2.52	0.44
4:L5:962:C:H1'	12:LF:32:ARG:NH1	2.32	0.44
4:L5:1656:U:H2'	4:L5:1657:G:H8	1.81	0.44
4:L5:1952:G:H2'	4:L5:1953:U:H6	1.82	0.44
4:L5:4192:A:H2'	4:L5:4193:C:H6	1.82	0.44
4:L5:4286:C:H2'	4:L5:4287:G:C8	2.52	0.44
4:L5:4674:C:H2'	4:L5:4675:U:C6	2.51	0.44
6:L8:18:U:H2'	6:L8:19:C:C6	2.52	0.44
10:LD:21:ARG:HA	10:LD:24:ARG:CZ	2.47	0.44
13:LG:123:ALA:HA	13:LG:124:GLY:HA2	1.80	0.44
15:LI:38:ARG:NH1	15:LI:45:GLU:OE1	2.48	0.44
50:Lt:15:LEU:HD13	50:Lt:62:LEU:HB2	1.99	0.44
54:SM:86:GLY:HA2	54:SM:106:CYS:HB3	1.98	0.44
54:SM:118:SER:O	54:SM:121:LYS:NZ	2.49	0.44
56:SQ:142:GLN:HG2	84:S2:1527:C:H5"	1.98	0.44
60:SU:64:THR:HA	60:SU:79:ARG:HA	1.98	0.44
63:Sd:21:CYS:HB3	63:Sd:26:ASN:H	1.82	0.44
64:Sf:103:LEU:HD12	64:Sf:105:TYR:CZ	2.52	0.44
65:Sg:213:ASP:OD1	65:Sg:213:ASP:N	2.50	0.44
66:SA:69:GLU:HB2	68:SC:270:THR:HG21	1.98	0.44
69:SE:106:LYS:HD2	69:SE:108:ARG:NH2	2.32	0.44
70:SG:164:LYS:H	70:SG:167:LYS:HB3	1.82	0.44
70:SG:174:PRO:HB3	84:S2:65:C:C5	2.53	0.44
80:SY:29:HIS:HB2	80:SY:32:LYS:HB2	1.99	0.44
84:S2:51:U:H2'	84:S2:52:G:H8	1.83	0.44
84:S2:525:A:H2'	84:S2:526:A:H8	1.81	0.44
84:S2:677:G:N1	84:S2:1027:A:OP2	2.30	0.44
84:S2:1004:PSU:H2'	84:S2:1005:G:C8	2.49	0.44
84:S2:1172:U:H2'	84:S2:1173:A:H8	1.81	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1428:G:H22	84:S2:1585:U:H5'	1.82	0.44
84:S2:1749:G:H2'	84:S2:1750:C:H6	1.81	0.44
84:S2:1749:G:H2'	84:S2:1750:C:C6	2.51	0.44
2:CF:132:GLN:HB3	2:CF:136:HIS:HE1	1.81	0.44
4:L5:10:A:H2'	4:L5:11:G:C8	2.52	0.44
4:L5:48:G:P	19:LN:192:TRP:HE1	2.40	0.44
4:L5:184:U:O2	4:L5:253:G:C2	2.70	0.44
4:L5:473:C:H2'	4:L5:474:C:C6	2.53	0.44
4:L5:474:C:H2'	4:L5:475:G:H8	1.82	0.44
4:L5:733:A:C2	4:L5:734:G:H1'	2.52	0.44
4:L5:1669:A:H5"	33:Lb:15:LYS:HD2	2.00	0.44
4:L5:2029:A:H2'	4:L5:2030:A:C8	2.52	0.44
4:L5:2257:C:H2'	4:L5:2260:C:N4	2.32	0.44
4:L5:2475:G:C6	29:LX:50:LYS:HG3	2.52	0.44
4:L5:2544:G:N1	6:L8:124:U:OP1	2.49	0.44
4:L5:3816:A:OP1	4:L5:3818:UY1:N1	2.51	0.44
4:L5:3843:C:P	27:LV:51:ARG:HE	2.39	0.44
4:L5:3865:A:H61	4:L5:3881:G:H1	1.65	0.44
4:L5:3920:PSU:H2'	4:L5:3921:U:C6	2.52	0.44
4:L5:4125:C:H2'	4:L5:4126:C:C6	2.52	0.44
4:L5:4678:G:N2	4:L5:4713:G:H1'	2.33	0.44
4:L5:4767:C:N3	4:L5:4868:G:N1	2.65	0.44
8:LB:113:GLU:OE1	8:LB:168:MET:N	2.49	0.44
10:LD:91:GLY:HA3	10:LD:226:TYR:OH	2.17	0.44
11:LE:144:ILE:HG12	11:LE:196:ALA:HB2	1.99	0.44
15:LI:31:ILE:HB	15:LI:66:GLU:HB2	2.00	0.44
30:LY:73:VAL:HA	30:LY:80:ILE:HG22	1.99	0.44
48:Lr:59:GLY:O	48:Lr:121:GLN:NE2	2.31	0.44
49:Ls:62:ARG:HB3	49:Ls:66:ARG:NH1	2.30	0.44
52:SF:167:LYS:HE3	52:SF:172:CYS:SG	2.57	0.44
53:SK:80:ARG:NE	53:SK:87:PRO:HA	2.31	0.44
58:SS:92:ASP:OD1	58:SS:92:ASP:N	2.49	0.44
71:SH:25:GLN:O	71:SH:28:LEU:HG	2.16	0.44
76:SO:149:ARG:HD2	84:S2:1065:G:OP1	2.17	0.44
77:SV:17:CYS:HB2	77:SV:56:CYS:HB3	1.98	0.44
80:SY:25:ILE:HD13	80:SY:44:LEU:HD22	2.00	0.44
84:S2:344:U:H2'	84:S2:345:U:C6	2.53	0.44
84:S2:511:U:H2'	84:S2:512:A:C8	2.52	0.44
84:S2:948:C:H2'	84:S2:949:G:C8	2.46	0.44
84:S2:1094:C:H2'	84:S2:1095:C:C6	2.53	0.44
84:S2:1380:C:H2'	84:S2:1381:G:C8	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CF:10:ILE:O	2:CF:90:ILE:N	2.50	0.44
2:CF:113:VAL:HG23	2:CF:149:ILE:HG13	2.00	0.44
4:L5:382:G:O2'	4:L5:407:A:N6	2.39	0.44
4:L5:716:C:OP1	9:LC:317:ASN:HB2	2.17	0.44
4:L5:729:G:H5"	12:LF:76:ARG:HD2	1.99	0.44
4:L5:1520:C:H2'	4:L5:1521:C:C6	2.52	0.44
4:L5:2422:OMC:H1'	4:L5:2422:OMC:HM23	1.77	0.44
4:L5:2693:G:OP2	4:L5:2694:G:O2'	2.24	0.44
4:L5:4154:G:H2'	4:L5:4155:C:C6	2.53	0.44
4:L5:4230:C:OP2	46:Lo:88:CYS:HA	2.17	0.44
4:L5:4500:PSU:H2'	4:L5:4501:U:H6	1.83	0.44
5:L7:112:U:H2'	5:L7:113:G:H8	1.82	0.44
6:L8:37:A:OP2	39:Lh:89:ARG:NH1	2.50	0.44
9:LC:268:ARG:NH1	9:LC:269:LYS:HE2	2.33	0.44
23:LR:17:CYS:HB3	23:LR:52:ARG:CZ	2.48	0.44
51:SD:60:GLY:HA3	51:SD:65:ARG:H	1.82	0.44
54:SM:58:GLU:HB3	54:SM:61:TYR:HB2	1.99	0.44
54:SM:91:LEU:HB3	54:SM:104:VAL:HG22	1.99	0.44
57:SR:14:ARG:NH2	84:S2:1374:C:OP1	2.47	0.44
59:ST:84:ARG:NH2	84:S2:1605:G:OP1	2.33	0.44
59:ST:84:ARG:HH12	84:S2:1605:G:P	2.40	0.44
66:SA:37:TYR:CD1	66:SA:162:PRO:HG3	2.52	0.44
71:SH:18:GLU:C	71:SH:20:GLU:H	2.24	0.44
73:SJ:169:ARG:HH12	73:SJ:175:ARG:CZ	2.31	0.44
77:SV:30:ALA:O	77:SV:60:ARG:HD3	2.18	0.44
84:S2:9:U:N3	84:S2:12:U:OP2	2.39	0.44
84:S2:115:U:H2'	84:S2:116:OMU:H6	1.99	0.44
84:S2:210:U:H2'	84:S2:211:G:O4'	2.17	0.44
84:S2:1334:G:H2'	84:S2:1335:G:C8	2.53	0.44
84:S2:1726:G:C6	84:S2:1809:A:C6	3.05	0.44
84:S2:1820:G:H2'	84:S2:1821:U:C6	2.53	0.44
1:Pt:3:C:N4	1:Pt:70:A:H61	2.10	0.44
1:Pt:56:C:OP1	16:LJ:64:ARG:NH2	2.50	0.44
4:L5:146:G:H2'	4:L5:147:A:C8	2.51	0.44
4:L5:1656:U:C2	4:L5:1657:G:C8	3.06	0.44
4:L5:3688:U:H2'	4:L5:3689:G:H8	1.82	0.44
4:L5:4330:G:H2'	4:L5:4331:G:H8	1.83	0.44
4:L5:4642:U:H2'	4:L5:4643:G:C8	2.52	0.44
4:L5:4685:U:H2'	4:L5:4686:G:H8	1.82	0.44
4:L5:4688:C:H2'	4:L5:4689:PSU:H6	1.80	0.44
4:L5:4909:A:OP2	8:LB:156:TYR:OH	2.19	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:5037:U:H2'	4:L5:5038:A:C8	2.52	0.44
6:L8:120:G:H2'	6:L8:121:G:H8	1.83	0.44
7:LA:131:GLY:H	7:LA:169:VAL:HG13	1.83	0.44
10:LD:53:VAL:O	10:LD:54:ARG:NH1	2.42	0.44
21:LP:19:GLY:HA3	21:LP:22:LEU:HD11	1.99	0.44
48:Lr:119:ARG:HA	48:Lr:122:LYS:HE3	2.00	0.44
55:SP:29:SER:HB3	55:SP:32:GLN:HE22	1.81	0.44
55:SP:81:ARG:NH2	55:SP:117:GLY:O	2.50	0.44
58:SS:138:THR:HA	58:SS:141:ARG:NH2	2.30	0.44
61:SZ:72:VAL:HA	61:SZ:75:GLU:HG2	2.00	0.44
71:SH:12:ASN:ND2	71:SH:14:GLU:OE2	2.50	0.44
75:SN:40:LEU:HD22	75:SN:45:LEU:HD12	1.99	0.44
76:SO:50:LYS:NZ	84:S2:951:C:H1'	2.33	0.44
83:Se:45:VAL:HG11	84:S2:535:G:H5'	2.00	0.44
84:S2:16:G:H2'	84:S2:17:C:C6	2.52	0.44
84:S2:602:G:OP2	84:S2:603:C:O2'	2.27	0.44
84:S2:602:G:H3'	84:S2:603:C:H2'	1.99	0.44
84:S2:795:A:H2'	84:S2:796:G:H8	1.83	0.44
84:S2:1734:G:O2'	84:S2:1800:A:N6	2.51	0.44
84:S2:1757:G:N7	84:S2:1758:G:H1'	2.33	0.44
1:Pt:4:U:H2'	1:Pt:5:C:C6	2.53	0.44
3:AT:24:C:N3	3:AT:25:A:N6	2.66	0.44
4:L5:169:G:O6	4:L5:170:C:N4	2.50	0.44
4:L5:198:A:O2'	4:L5:221:C:O2	2.33	0.44
4:L5:677:G:H2'	4:L5:678:C:C6	2.52	0.44
4:L5:742:G:H2'	4:L5:743:G:C8	2.53	0.44
4:L5:1471:U:H2'	4:L5:1472:C:H6	1.82	0.44
4:L5:1601:A:OP2	4:L5:3643:A:N6	2.51	0.44
4:L5:1701:A:C2	4:L5:1702:C:H5	2.35	0.44
4:L5:2075:G:H2'	4:L5:2076:G:H8	1.83	0.44
4:L5:2578:G:C6	4:L5:2584:G:C6	3.05	0.44
4:L5:2597:G:H2'	4:L5:2598:A:C8	2.52	0.44
4:L5:2843:U:H2'	4:L5:2844:A:C8	2.52	0.44
4:L5:2864:A:H2'	4:L5:2865:U:H6	1.82	0.44
4:L5:4921:C:H2'	4:L5:4922:C:C6	2.53	0.44
12:LF:29:LYS:HD2	12:LF:32:ARG:HH21	1.82	0.44
14:LH:173:ARG:NH1	44:Lm:125:LYS:O	2.44	0.44
23:LR:89:MET:HE3	23:LR:90:PRO:HD2	2.00	0.44
57:SR:31:ASN:HA	57:SR:34:VAL:HG22	1.98	0.44
61:SZ:91:LEU:HG	61:SZ:96:LEU:HD21	1.99	0.44
64:Sf:108:VAL:HB	64:Sf:113:LYS:H	1.82	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SA:6:ASP:OD1	66:SA:6:ASP:N	2.51	0.44
66:SA:145:ILE:HG12	66:SA:159:ILE:HB	1.98	0.44
68:SC:144:SER:OG	68:SC:145:LYS:N	2.51	0.44
79:SX:57:VAL:O	79:SX:67:ARG:N	2.50	0.44
79:SX:137:LYS:HE2	84:S2:30:C:O3'	2.16	0.44
80:SY:29:HIS:ND1	80:SY:32:LYS:O	2.46	0.44
82:Sb:67:THR:OG1	82:Sb:70:LYS:O	2.25	0.44
84:S2:145:G:H2'	84:S2:146:G:H8	1.79	0.44
84:S2:947:G:H2'	84:S2:948:C:C6	2.53	0.44
84:S2:1189:A:H2'	84:S2:1190:A:C8	2.53	0.44
84:S2:1243:U:OP2	84:S2:1518:C:O2'	2.21	0.44
84:S2:1569:A:O2'	84:S2:1626:C:O2	2.35	0.44
84:S2:1653:U:H2'	84:S2:1654:G:C8	2.52	0.44
4:L5:469:C:O2	4:L5:688:U:O2'	2.34	0.44
4:L5:1094:G:C6	4:L5:1201:U:O2	2.70	0.44
4:L5:1173:G:H2'	4:L5:1174:G:H8	1.83	0.44
4:L5:1548:G:O2'	4:L5:2812:A:N3	2.44	0.44
4:L5:1895:G:OP1	12:LF:96:ARG:NH2	2.50	0.44
4:L5:2306:G:OP1	36:Le:128:ARG:NH1	2.51	0.44
4:L5:2811:G:N1	4:L5:2814:C:OP2	2.49	0.44
4:L5:2876:OMG:P	47:Lp:6:LYS:H	2.40	0.44
4:L5:2899:C:P	23:LR:108:ARG:HH22	2.40	0.44
4:L5:2910:G:N1	4:L5:3585:G:O2'	2.51	0.44
4:L5:4491:G:H2'	4:L5:4492:U:C6	2.53	0.44
4:L5:4993:G:H1	4:L5:5058:A:H61	1.66	0.44
6:L8:39:G:H1'	6:L8:103:A:N6	2.33	0.44
12:LF:88:LYS:HA	12:LF:125:LEU:HB2	2.00	0.44
12:LF:241:ASN:O	12:LF:245:ARG:HG2	2.18	0.44
14:LH:27:VAL:HG12	14:LH:84:VAL:HG21	1.99	0.44
14:LH:181:VAL:O	44:Lm:89:TYR:OH	2.36	0.44
15:LI:54:SER:HB3	15:LI:135:ILE:HD11	1.99	0.44
17:LL:170:THR:OG1	17:LL:173:GLU:HG3	2.17	0.44
39:Lh:79:LYS:O	39:Lh:84:ARG:NH2	2.48	0.44
52:SF:125:SER:HB2	52:SF:135:ARG:HB2	2.00	0.44
53:SK:37:ASP:N	53:SK:37:ASP:OD1	2.47	0.44
56:SQ:34:VAL:HG22	56:SQ:70:VAL:HB	2.00	0.44
59:ST:40:ALA:HB3	59:ST:43:LYS:HG2	2.00	0.44
59:ST:107:LEU:HD13	59:ST:113:VAL:HG21	2.00	0.44
63:Sd:21:CYS:N	63:Sd:26:ASN:O	2.48	0.44
66:SA:180:ARG:HH11	66:SA:184:ARG:HH11	1.66	0.44
67:SB:136:ARG:HB3	67:SB:216:LYS:HG3	2.00	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SB:167:LYS:O	67:SB:171:ILE:HG12	2.17	0.44
68:SC:104:ASP:OD1	68:SC:105:GLU:N	2.50	0.44
69:SE:8:HIS:ND1	84:S2:93:PSU:O2'	2.40	0.44
70:SG:3:LEU:HB3	70:SG:5:ILE:HD11	1.99	0.44
72:SI:159:SER:O	72:SI:163:GLU:N	2.40	0.44
77:SV:18:SER:HB3	77:SV:72:LEU:HD21	1.99	0.44
79:SX:32:LEU:HD12	79:SX:32:LEU:HA	1.81	0.44
80:SY:41:ARG:HH21	80:SY:53:ASP:HA	1.82	0.44
81:Sa:7:ASN:ND2	81:Sa:10:ARG:O	2.51	0.44
84:S2:224:A:H2'	84:S2:225:G:C8	2.53	0.44
84:S2:1327:G:H2'	84:S2:1328:OMG:H8	1.81	0.44
84:S2:1328:OMG:H2'	84:S2:1329:U:C6	2.53	0.44
84:S2:1652:G:N2	84:S2:1672:U:O2	2.41	0.44
2:CF:25:GLY:HA2	2:CF:28:ILE:HG22	2.00	0.44
4:L5:491:G:H2'	4:L5:492:U:C6	2.53	0.44
4:L5:1480:C:O2'	4:L5:1482:G:OP2	2.30	0.44
4:L5:1537:A:H2'	4:L5:1538:U:C6	2.53	0.44
4:L5:1730:U:H2'	4:L5:1731:C:C6	2.52	0.44
4:L5:1795:A:H2'	4:L5:1796:U:O4'	2.17	0.44
4:L5:2073:C:H2'	4:L5:2074:C:C6	2.53	0.44
4:L5:2597:G:H2'	4:L5:2598:A:H8	1.82	0.44
4:L5:2769:U:H3	38:Lg:69:LYS:HD3	1.83	0.44
4:L5:3725:G:N7	40:Li:67:LYS:NZ	2.51	0.44
4:L5:3802:U:O2'	4:L5:3803:A:H5'	2.18	0.44
4:L5:3869:OMC:C2	87:L5:5291:SPM:H32	2.53	0.44
4:L5:4188:U:H2'	4:L5:4189:U:H6	1.83	0.44
4:L5:4277:G:H2'	4:L5:4278:C:C6	2.52	0.44
4:L5:4945:G:C2	37:Lf:5:LEU:HD12	2.52	0.44
23:LR:172:ARG:HH12	84:S2:909:G:P	2.38	0.44
38:Lg:41:ALA:O	38:Lg:52:ARG:HD3	2.18	0.44
54:SM:28:HIS:CE1	54:SM:115:GLY:HA3	2.52	0.44
60:SU:22:ILE:HG23	60:SU:114:VAL:HG22	2.00	0.44
67:SB:30:TRP:CG	76:SO:19:PRO:HB3	2.52	0.44
68:SC:271:ASP:O	68:SC:275:LYS:HG3	2.18	0.44
71:SH:37:LYS:HA	71:SH:40:LEU:HB3	1.99	0.44
73:SJ:30:LYS:HA	83:Se:38:TYR:CE1	2.53	0.44
76:SO:44:VAL:HG12	76:SO:53:ILE:HB	2.00	0.44
81:Sa:6:ARG:NH1	84:S2:1147:C:OP1	2.47	0.44
81:Sa:13:LYS:HD3	81:Sa:13:LYS:HA	1.72	0.44
84:S2:551:U:H2'	84:S2:552:G:C8	2.53	0.44
84:S2:1102:G:H2'	84:S2:1103:C:H6	1.81	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1102:G:H2'	84:S2:1103:C:C6	2.53	0.44
84:S2:1146:C:H2'	84:S2:1147:C:C6	2.52	0.44
84:S2:1391:OMC:H1'	84:S2:1391:OMC:HM23	1.78	0.44
2:CF:145:VAL:O	2:CF:183:TYR:OH	2.28	0.44
2:CF:263:PRO:HB2	2:CF:310:PHE:CZ	2.53	0.44
2:CF:267:VAL:O	2:CF:305:GLY:N	2.35	0.44
4:L5:238:C:OP2	30:LY:45:ARG:NH2	2.50	0.44
4:L5:305:A:H5"	40:Li:53:TYR:CE1	2.53	0.44
4:L5:663:G:H2'	4:L5:664:G:H8	1.83	0.44
4:L5:1323:A2M:HM'3	4:L5:1323:A2M:H1'	1.49	0.44
4:L5:1399:G:H2'	4:L5:1400:G:C8	2.52	0.44
4:L5:1687:U:H2'	4:L5:1688:G:C8	2.53	0.44
4:L5:2422:OMC:P	21:LP:127:ARG:HH12	2.40	0.44
4:L5:2497:C:H2'	4:L5:2498:C:C6	2.52	0.44
4:L5:2609:G:H2'	4:L5:2610:G:C8	2.53	0.44
4:L5:2858:A:H2'	4:L5:2859:G:C8	2.53	0.44
4:L5:4095:G:H2'	4:L5:4096:C:C6	2.53	0.44
4:L5:4500:PSU:H2'	4:L5:4501:U:C6	2.53	0.44
4:L5:4549:G:H2'	4:L5:4550:G:H8	1.83	0.44
88:L5:5289:SPD:H82	9:LC:60:HIS:O	2.17	0.44
6:L8:36:G:C5	39:Lh:89:ARG:HD3	2.52	0.44
6:L8:144:U:H2'	6:L8:145:C:C6	2.52	0.44
9:LC:279:LEU:HD23	9:LC:279:LEU:HA	1.81	0.44
15:LI:179:ASP:OD1	15:LI:180:GLU:N	2.49	0.44
26:LU:20:LYS:HA	26:LU:73:THR:HA	1.99	0.44
28:LW:103:ALA:O	28:LW:106:GLU:HG3	2.18	0.44
38:Lg:82:MET:HE3	38:Lg:82:MET:HB2	1.84	0.44
60:SU:28:ASN:HD21	60:SU:31:SER:HB3	1.83	0.44
67:SB:86:LEU:HD23	67:SB:100:PHE:HA	1.99	0.44
70:SG:174:PRO:HB3	84:S2:65:C:C6	2.53	0.44
73:SJ:39:ASN:HB2	84:S2:642:U:P	2.58	0.44
74:SL:28:THR:HA	74:SL:29:GLY:HA2	1.70	0.44
80:SY:118:ARG:NH1	84:S2:85:A:H5"	2.33	0.44
84:S2:98:C:H4'	84:S2:99:A2M:H8	2.00	0.44
84:S2:379:C:H2'	84:S2:380:G:C8	2.53	0.44
84:S2:947:G:H2'	84:S2:948:C:H6	1.82	0.44
4:L5:418:A:C2	6:L8:17:A:H1'	2.52	0.43
4:L5:739:G:OP2	18:LM:71:LYS:NZ	2.38	0.43
4:L5:1093:C:H2'	4:L5:1094:G:O4'	2.18	0.43
4:L5:1257:A:H3'	4:L5:1258:G:C8	2.53	0.43
4:L5:1384:C:H2'	4:L5:1385:G:H8	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1588:U:H2'	4:L5:1589:C:C6	2.53	0.43
4:L5:1688:G:H2'	4:L5:1689:G:H8	1.82	0.43
4:L5:1773:U:H2'	4:L5:1774:C:H6	1.82	0.43
4:L5:2285:A:H2'	4:L5:2286:G:C8	2.53	0.43
4:L5:3762:U:C2	4:L5:3763:A:C8	3.06	0.43
4:L5:3930:U:O4	4:L5:4180:G:O6	2.35	0.43
4:L5:4967:A:H2'	4:L5:4968:A:C8	2.52	0.43
4:L5:5030:U:H2'	4:L5:5031:G:H8	1.83	0.43
7:LA:180:LEU:HD21	47:Lp:22:LEU:HB3	1.99	0.43
8:LB:258:HIS:HA	8:LB:260:ALA:N	2.33	0.43
12:LF:147:LEU:O	12:LF:151:ASN:ND2	2.46	0.43
14:LH:133:ALA:O	14:LH:147:GLU:N	2.37	0.43
26:LU:36:ALA:HB1	26:LU:70:ILE:HD11	2.00	0.43
30:LY:28:LYS:O	30:LY:31:SER:OG	2.29	0.43
47:Lp:61:MET:HE3	47:Lp:61:MET:HB3	1.80	0.43
52:SF:42:LYS:O	52:SF:46:ALA:N	2.51	0.43
52:SF:144:LEU:HD23	62:Sc:49:PRO:HB2	2.00	0.43
56:SQ:12:VAL:HA	84:S2:1397:U:O4	2.17	0.43
59:ST:76:THR:HB	59:ST:95:GLY:H	1.83	0.43
60:SU:31:SER:HB2	60:SU:107:GLU:OE2	2.17	0.43
67:SB:223:PHE:HE1	67:SB:228:LEU:HD22	1.83	0.43
75:SN:23:PRO:HB3	82:Sb:83:GLN:NE2	2.32	0.43
84:S2:34:U:H2'	84:S2:35:C:C6	2.53	0.43
84:S2:323:C:H5'	84:S2:324:C:OP1	2.18	0.43
84:S2:344:U:H2'	84:S2:345:U:H6	1.82	0.43
84:S2:353:C:H2'	84:S2:354:OMU:H6	2.00	0.43
84:S2:656:G:H5'	84:S2:662:G:N2	2.32	0.43
84:S2:666:U:H2'	84:S2:667:U:C6	2.53	0.43
84:S2:1828:C:H2'	84:S2:1829:G:C8	2.53	0.43
2:CF:168:GLU:O	2:CF:172:LYS:HG2	2.18	0.43
4:L5:20:U:H3'	4:L5:21:G:C8	2.51	0.43
4:L5:73:A:H62	17:LL:103:ARG:HH22	1.66	0.43
4:L5:362:A:H2	43:Ll:40:LYS:HG3	1.82	0.43
4:L5:398:A2M:H8	4:L5:398:A2M:OP2	2.18	0.43
4:L5:678:C:H2'	4:L5:679:C:C6	2.53	0.43
4:L5:689:U:H2'	4:L5:690:C:C6	2.53	0.43
4:L5:1563:A:H2'	4:L5:1564:A:H8	1.83	0.43
4:L5:1840:G:H2'	4:L5:1841:C:C6	2.53	0.43
4:L5:2041:A:H62	4:L5:4434:C:H1'	1.83	0.43
4:L5:2063:G:H2'	4:L5:2064:G:H8	1.82	0.43
4:L5:2351:OMC:HM23	4:L5:2351:OMC:H1'	1.67	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2516:G:OP1	38:Lg:60:ARG:NH2	2.38	0.43
4:L5:2759:G:O2'	4:L5:2760:G:O4'	2.24	0.43
4:L5:3729:U:H2'	4:L5:3730:U:C6	2.52	0.43
4:L5:4092:G:H2'	4:L5:4093:G:O4'	2.18	0.43
4:L5:4324:A:H2'	4:L5:4325:A:C8	2.53	0.43
4:L5:4648:A:H2'	4:L5:4649:G:C8	2.53	0.43
4:L5:4940:C:O2'	11:LE:246:ARG:NH2	2.51	0.43
4:L5:4967:A:H2'	4:L5:4968:A:H8	1.83	0.43
6:L8:15:G:H2'	6:L8:16:G:C8	2.53	0.43
6:L8:20:A:H2'	6:L8:21:C:H6	1.84	0.43
6:L8:89:U:H2'	6:L8:90:C:C6	2.53	0.43
8:LB:293:ILE:HG12	8:LB:297:LYS:HA	1.99	0.43
10:LD:234:ASP:OD1	10:LD:235:MET:N	2.51	0.43
11:LE:223:ARG:HB3	11:LE:224:LYS:HB2	2.00	0.43
23:LR:60:ARG:NH2	23:LR:63:CYS:SG	2.91	0.43
48:Lr:8:MET:HB3	48:Lr:8:MET:HE3	1.74	0.43
59:ST:78:ILE:HD11	84:S2:1587:G:C5	2.53	0.43
71:SH:17:ASP:OD1	71:SH:17:ASP:N	2.51	0.43
72:SI:8:TRP:CE3	72:SI:20:PRO:HB3	2.53	0.43
74:SL:23:VAL:HG23	74:SL:25:LEU:HG	2.00	0.43
75:SN:15:ALA:HB2	82:Sb:20:LYS:HD3	1.99	0.43
75:SN:29:THR:OG1	75:SN:31:ASP:OD1	2.29	0.43
84:S2:40:A:H2'	84:S2:486:A:N7	2.33	0.43
84:S2:495:U:H2'	84:S2:496:C:O4'	2.18	0.43
84:S2:943:U:H2'	84:S2:944:A:H8	1.82	0.43
84:S2:1031:A2M:H2'	84:S2:1032:C:O4'	2.18	0.43
84:S2:1074:C:H2'	84:S2:1075:C:C6	2.53	0.43
84:S2:1383:A2M:HM'3	84:S2:1383:A2M:H1'	1.54	0.43
84:S2:1610:G:H2'	84:S2:1611:G:C8	2.53	0.43
84:S2:1610:G:O6	84:S2:1630:A:N6	2.51	0.43
4:L5:40:G:N2	4:L5:4380:A:N7	2.66	0.43
4:L5:91:G:O5'	4:L5:92:C:H5"	2.18	0.43
4:L5:258:G:H2'	4:L5:259:C:C6	2.53	0.43
4:L5:307:A:N3	4:L5:310:G:O2'	2.51	0.43
4:L5:481:G:H2'	4:L5:482:G:C8	2.53	0.43
4:L5:978:G:H2'	4:L5:979:C:H6	1.83	0.43
4:L5:1628:C:OP2	7:LA:9:ARG:HD2	2.18	0.43
4:L5:1646:A:O2'	41:Lj:49:TRP:O	2.33	0.43
4:L5:2357:G:H2'	4:L5:2358:G:C8	2.53	0.43
4:L5:2614:C:O2'	4:L5:2808:G:OP1	2.29	0.43
4:L5:2808:G:O3'	23:LR:60:ARG:NH1	2.49	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3660:C:OP1	7:LA:241:ARG:NH2	2.49	0.43
4:L5:4637:OMG:H5'	35:Ld:30:HIS:HE1	1.84	0.43
4:L5:4918:C:H2'	4:L5:4919:G:H8	1.82	0.43
6:L8:91:A:H2'	6:L8:92:U:C6	2.53	0.43
7:LA:51:ASP:OD2	7:LA:54:ARG:NE	2.41	0.43
9:LC:144:ILE:HG13	9:LC:144:ILE:O	2.18	0.43
10:LD:211:LEU:HD12	10:LD:223:PHE:CE2	2.52	0.43
27:LV:48:ARG:HB3	27:LV:51:ARG:HB3	2.00	0.43
48:Lr:28:GLU:CD	48:Lr:31:ASN:HD22	2.25	0.43
52:SF:164:ARG:HH11	84:S2:1533:A:P	2.41	0.43
53:SK:52:LEU:HD23	53:SK:52:LEU:HA	1.88	0.43
60:SU:99:LYS:HA	60:SU:99:LYS:HD3	1.86	0.43
63:Sd:13:LYS:HG3	84:S2:1556:A:N7	2.34	0.43
71:SH:101:LEU:HD23	71:SH:101:LEU:HA	1.83	0.43
74:SL:103:GLU:HG3	79:SX:11:ARG:HB2	2.00	0.43
84:S2:44:U:O2	84:S2:482:G:O2'	2.33	0.43
84:S2:158:A:H2'	84:S2:159:A2M:C8	2.48	0.43
84:S2:1446:A:O2'	84:S2:1447:G:H5"	2.17	0.43
84:S2:1846:G:H2'	84:S2:1847:G:C8	2.53	0.43
2:CF:156:ASP:O	2:CF:161:PRO:HB3	2.17	0.43
2:CF:162:TYR:O	2:CF:210:TRP:NE1	2.51	0.43
4:L5:125:C:H2'	4:L5:126:C:C6	2.54	0.43
4:L5:326:C:H2'	4:L5:327:U:C6	2.54	0.43
4:L5:466:A:H2'	4:L5:467:U:C6	2.52	0.43
4:L5:493:G:O2'	4:L5:494:U:OP1	2.30	0.43
4:L5:2067:C:H5"	37:Lf:78:HIS:CE1	2.54	0.43
4:L5:3938:G:N2	4:L5:4171:C:OP2	2.52	0.43
4:L5:4536:OMC:HM23	4:L5:4536:OMC:H1'	1.68	0.43
4:L5:4558:U:OP2	8:LB:246:ARG:NH1	2.50	0.43
4:L5:4561:C:H2'	4:L5:4562:C:H6	1.84	0.43
5:L7:3:C:H2'	5:L7:4:U:C6	2.53	0.43
6:L8:4:C:H2'	6:L8:5:U:H6	1.83	0.43
6:L8:106:G:H2'	6:L8:107:C:C6	2.53	0.43
8:LB:57:VAL:HG22	8:LB:73:VAL:HG22	2.00	0.43
17:LL:18:TRP:CD1	17:LL:18:TRP:H	2.36	0.43
18:LM:96:GLU:O	18:LM:100:ARG:HG2	2.18	0.43
20:LO:58:LEU:HD23	20:LO:58:LEU:HA	1.84	0.43
23:LR:176:ARG:NH1	23:LR:177:LEU:HG	2.34	0.43
28:LW:5:LEU:HD12	28:LW:30:GLN:NE2	2.33	0.43
34:Lc:82:GLY:HA2	34:Lc:91:VAL:HG12	2.01	0.43
40:Li:90:LEU:HA	40:Li:93:VAL:HG22	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SQ:96:TYR:HA	56:SQ:100:VAL:HG12	2.00	0.43
59:ST:115:LYS:HA	59:ST:121:ARG:HA	2.01	0.43
62:Sc:15:THR:OG1	62:Sc:31:ARG:O	2.33	0.43
65:Sg:239:LEU:HD12	65:Sg:239:LEU:HA	1.89	0.43
84:S2:583:A:C4	84:S2:584:A:C8	3.07	0.43
84:S2:1134:G:H2'	84:S2:1135:C:C6	2.53	0.43
84:S2:1739:C:H2'	84:S2:1740:C:H6	1.83	0.43
84:S2:1846:G:H2'	84:S2:1847:G:H8	1.83	0.43
2:CF:241:PRO:HG2	2:CF:269:THR:HG22	1.99	0.43
2:CF:357:TYR:HB3	2:CF:372:PHE:HD2	1.84	0.43
2:CF:404:MET:N	2:CF:404:MET:SD	2.92	0.43
4:L5:74:G:H3'	4:L5:75:G:C8	2.53	0.43
4:L5:371:A:H2'	4:L5:372:A:C8	2.54	0.43
4:L5:436:C:H2'	4:L5:437:G:C8	2.50	0.43
4:L5:457:G:H2'	4:L5:458:C:C6	2.54	0.43
4:L5:1209:U:O2'	4:L5:1211:G:O4'	2.35	0.43
4:L5:1779:U:H2'	4:L5:1780:A:H8	1.80	0.43
4:L5:2422:OMC:H2'	4:L5:2423:A:C8	2.54	0.43
4:L5:2522:G:H2'	4:L5:2523:G:C8	2.54	0.43
4:L5:2633:U:OP1	23:LR:64:ARG:NH1	2.52	0.43
4:L5:2667:C:O4'	23:LR:96:MET:HG2	2.18	0.43
4:L5:2909:C:H1'	4:L5:3585:G:C6	2.53	0.43
4:L5:3807:A:HO2'	84:S2:1816:G:HO2'	1.66	0.43
4:L5:4301:U:H4'	25:LT:54:HIS:CD2	2.54	0.43
4:L5:4593:C:H2'	4:L5:4594:U:C6	2.50	0.43
4:L5:4933:C:H2'	4:L5:4934:A:C8	2.53	0.43
14:LH:24:THR:HA	14:LH:37:ASP:HA	1.99	0.43
17:LL:64:VAL:HA	17:LL:67:HIS:CD2	2.38	0.43
27:LV:111:GLU:H	27:LV:111:GLU:CD	2.26	0.43
27:LV:131:ARG:O	27:LV:134:SER:OG	2.35	0.43
47:Lp:23:ARG:HA	47:Lp:26:VAL:HG12	2.00	0.43
67:SB:40:ASN:OD1	67:SB:41:ILE:HD12	2.17	0.43
69:SE:212:ASP:OD2	69:SE:216:ASN:HB2	2.18	0.43
73:SJ:174:LYS:NZ	84:S2:560:A:OP1	2.43	0.43
78:SW:60:LYS:NZ	84:S2:921:G:O6	2.50	0.43
80:SY:42:GLU:O	80:SY:46:LYS:HG3	2.18	0.43
84:S2:12:U:H2'	84:S2:13:C:C6	2.53	0.43
84:S2:117:C:O2'	84:S2:118:C:O2	2.23	0.43
84:S2:484:A2M:HM'3	84:S2:484:A2M:H1'	1.68	0.43
84:S2:1018:U:H2'	84:S2:1019:C:C6	2.53	0.43
84:S2:1051:G:H2'	84:S2:1052:A:H8	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1474:A:H2'	84:S2:1475:G:C8	2.54	0.43
2:CF:288:GLU:HB3	2:CF:313:LYS:HD3	2.01	0.43
3:AT:29:U:H2'	3:AT:30:C:C6	2.53	0.43
3:AT:57:C:C5	4:L5:2009:A:H1'	2.53	0.43
4:L5:406:C:O2'	4:L5:407:A:OP1	2.34	0.43
4:L5:1952:G:H2'	4:L5:1953:U:C6	2.53	0.43
4:L5:1997:U:H4'	49:Ls:44:ARG:HH12	1.83	0.43
4:L5:2327:G:H2'	4:L5:2328:G:H8	1.83	0.43
4:L5:2519:U:O2'	4:L5:2530:U:O2	2.28	0.43
4:L5:2700:G:C6	4:L5:2701:U:C4	3.07	0.43
4:L5:2706:G:C6	85:CI:78:HIS:HD2	2.36	0.43
4:L5:2728:U:H2'	4:L5:2729:C:H6	1.83	0.43
4:L5:2864:A:H2'	4:L5:2865:U:C6	2.53	0.43
4:L5:3650:C:C2	4:L5:3651:A:C8	3.07	0.43
4:L5:4736:C:H2'	4:L5:4737:G:C8	2.51	0.43
7:LA:80:GLU:N	7:LA:168:VAL:O	2.45	0.43
8:LB:90:VAL:HG22	8:LB:104:THR:HG23	2.00	0.43
8:LB:220:ILE:HB	8:LB:346:THR:HB	2.01	0.43
9:LC:60:HIS:HD2	9:LC:100:ARG:HB2	1.84	0.43
9:LC:283:LYS:NZ	22:LQ:22:ASP:OD2	2.30	0.43
12:LF:27:GLU:O	12:LF:31:LYS:HG2	2.19	0.43
13:LG:78:PRO:HA	13:LG:81:ASN:HB3	2.01	0.43
25:LT:119:ALA:HA	25:LT:122:LYS:HG3	2.00	0.43
28:LW:56:ARG:HE	28:LW:61:LYS:CB	2.31	0.43
34:Lc:20:LEU:O	34:Lc:24:SER:HB3	2.19	0.43
43:Ll:28:ARG:HA	43:Ll:33:ASN:HD22	1.81	0.43
53:SK:4:PRO:HD2	53:SK:7:ASN:ND2	2.33	0.43
58:SS:129:LEU:HD23	58:SS:144:ARG:HH21	1.82	0.43
59:ST:121:ARG:HH22	84:S2:1564:C:P	2.42	0.43
64:Sf:107:LYS:O	64:Sf:115:SER:OG	2.28	0.43
69:SE:188:ASN:HA	69:SE:245:ARG:NH1	2.32	0.43
70:SG:139:SER:OG	70:SG:142:ARG:NH2	2.42	0.43
71:SH:118:ARG:HD3	71:SH:121:THR:HG21	2.00	0.43
72:SI:3:ILE:O	72:SI:30:GLY:N	2.51	0.43
75:SN:70:LYS:NZ	84:S2:1020:A:N7	2.66	0.43
83:Se:8:ARG:NH1	84:S2:615:C:O3'	2.52	0.43
84:S2:348:A:H2'	84:S2:349:A:C8	2.52	0.43
84:S2:1294:G:H3'	84:S2:1295:A:H8	1.83	0.43
84:S2:1387:G:H3'	84:S2:1388:A:H8	1.84	0.43
2:CF:102:MET:HE3	2:CF:136:HIS:CD2	2.54	0.43
3:AT:59:A:H1'	3:AT:61:A:N7	2.34	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:952:G:H2'	4:L5:953:C:H6	1.84	0.43
4:L5:1349:G:C6	4:L5:1508:A:C6	3.06	0.43
4:L5:1507:C:H2'	4:L5:1508:A:H8	1.83	0.43
4:L5:1849:U:H3'	17:LL:5:ARG:HH12	1.84	0.43
4:L5:1967:A:H2'	4:L5:1968:G:C8	2.54	0.43
4:L5:2324:C:H2'	4:L5:2325:C:C6	2.54	0.43
4:L5:2353:U:H2'	4:L5:2354:G:H8	1.83	0.43
4:L5:2851:G:H2'	4:L5:2852:U:O4'	2.18	0.43
4:L5:2856:C:H2'	4:L5:2857:A:O4'	2.18	0.43
4:L5:4348:A:H5"	4:L5:4349:C:OP2	2.18	0.43
4:L5:4774:C:O2'	4:L5:4775:C:O2	2.22	0.43
4:L5:5046:U:P	35:Ld:83:ARG:HH12	2.41	0.43
7:LA:114:CYS:N	7:LA:165:VAL:O	2.52	0.43
9:LC:121:ARG:CZ	9:LC:274:LYS:HD3	2.49	0.43
16:LJ:95:ARG:HB3	16:LJ:177:GLY:O	2.18	0.43
19:LN:164:LEU:O	19:LN:169:ARG:NH2	2.51	0.43
24:LS:93:MET:HE1	24:LS:117:HIS:CE1	2.54	0.43
52:SF:127:ARG:HG2	52:SF:136:ARG:HB2	2.00	0.43
54:SM:60:MET:SD	54:SM:60:MET:N	2.89	0.43
65:Sg:205:SER:HA	65:Sg:221:LEU:HB2	2.00	0.43
70:SG:143:LYS:NZ	84:S2:146:G:OP1	2.44	0.43
76:SO:104:ARG:O	76:SO:106:LYS:NZ	2.50	0.43
84:S2:14:C:H2'	84:S2:15:U:H6	1.84	0.43
84:S2:17:C:H2'	84:S2:18:C:C6	2.53	0.43
84:S2:480:G:H2'	84:S2:481:C:C6	2.54	0.43
84:S2:668:A2M:HM'3	84:S2:668:A2M:H1'	1.64	0.43
84:S2:815:U:C2	84:S2:816:A:C8	3.07	0.43
84:S2:1134:G:H2'	84:S2:1135:C:H6	1.83	0.43
84:S2:1597:C:H4'	84:S2:1603:G:O6	2.19	0.43
84:S2:1673:U:H2'	84:S2:1674:G:O4'	2.19	0.43
84:S2:1770:G:O3'	84:S2:1771:G:N2	2.49	0.43
3:AT:48:U:OP1	3:AT:49:C:H5'	2.19	0.43
4:L5:44:A:N3	4:L5:94:A:H2	2.16	0.43
4:L5:474:C:H2'	4:L5:475:G:C8	2.54	0.43
4:L5:713:C:H2'	4:L5:714:G:C8	2.53	0.43
4:L5:959:G:C8	11:LE:123:ARG:HG2	2.54	0.43
4:L5:1764:G:O2'	4:L5:1769:G:N7	2.49	0.43
4:L5:1806:G:H2'	4:L5:1807:C:C6	2.52	0.43
4:L5:2804:OMC:C2	4:L5:2805:C:C5	3.06	0.43
4:L5:3619:G:H4'	23:LR:79:GLY:O	2.18	0.43
4:L5:3714:G:H2'	4:L5:3715:U:C6	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3719:A:C4	4:L5:3720:G:C8	3.07	0.43
4:L5:3732:A:H2'	4:L5:3733:A:H8	1.83	0.43
4:L5:3848:U:H2'	4:L5:3849:A:C8	2.53	0.43
4:L5:4597:U:H2'	4:L5:4598:C:O4'	2.19	0.43
15:LI:146:GLU:HA	15:LI:149:ILE:HD12	2.00	0.43
20:LO:28:LEU:HD23	20:LO:28:LEU:HA	1.85	0.43
21:LP:10:ASN:C	21:LP:12:THR:H	2.27	0.43
21:LP:114:ILE:HA	21:LP:150:LEU:HD23	2.01	0.43
23:LR:82:LYS:HD2	23:LR:82:LYS:HA	1.83	0.43
27:LV:26:ILE:HG12	27:LV:37:LEU:HB2	2.01	0.43
39:Lh:73:TYR:HB3	39:Lh:79:LYS:HG2	2.01	0.43
41:Lj:21:ARG:C	41:Lj:23:GLY:H	2.27	0.43
49:Ls:91:THR:OG1	49:Ls:93:GLU:OE1	2.36	0.43
52:SF:56:TYR:HE1	52:SF:65:GLN:HG3	1.84	0.43
53:SK:32:HIS:CD2	53:SK:45:VAL:HG11	2.54	0.43
57:SR:66:VAL:HG12	57:SR:68:GLY:H	1.83	0.43
58:SS:28:PHE:O	58:SS:31:THR:OG1	2.26	0.43
60:SU:19:ARG:HB3	60:SU:92:HIS:CE1	2.54	0.43
67:SB:40:ASN:ND2	67:SB:76:ASN:HB2	2.33	0.43
70:SG:183:ARG:NH1	84:S2:316:G:H5"	2.29	0.43
83:Se:41:ARG:NH2	84:S2:639:C:OP1	2.52	0.43
84:S2:116:OMU:H6	84:S2:116:OMU:O5'	2.19	0.43
84:S2:1501:C:H2'	84:S2:1502:C:H6	1.84	0.43
84:S2:1778:C:H2'	84:S2:1779:G:O4'	2.19	0.43
84:S2:1856:C:H2'	84:S2:1857:G:C8	2.52	0.43
1:Pt:2:U:H2'	1:Pt:3:C:C6	2.54	0.43
2:CF:138:LEU:HD21	2:CF:347:LEU:HD13	2.01	0.43
4:L5:2:G:H2'	4:L5:3:C:C6	2.53	0.43
4:L5:132:G:N3	4:L5:133:C:O2'	2.52	0.43
4:L5:307:A:H2'	4:L5:308:G:C4	2.54	0.43
4:L5:470:A:H61	4:L5:684:G:H1'	1.84	0.43
4:L5:502:C:H3'	4:L5:503:C:H3'	2.00	0.43
4:L5:952:G:H5"	37:Lf:73:LYS:HE3	1.99	0.43
4:L5:965:G:H21	4:L5:2092:G:H1'	1.84	0.43
4:L5:1100:U:O3'	4:L5:1167:C:N4	2.52	0.43
4:L5:1299:G:H2'	4:L5:1300:G:C8	2.54	0.43
4:L5:1394:G:N2	4:L5:1469:C:O3'	2.52	0.43
4:L5:1716:G:H2'	4:L5:1717:C:C6	2.53	0.43
4:L5:1786:A:H2'	4:L5:1789:C:C5	2.54	0.43
4:L5:1802:A:O2'	25:LT:108:ARG:NH2	2.51	0.43
4:L5:2045:G:O2'	4:L5:2046:G:H5"	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2102:G:H1'	4:L5:2103:G:N7	2.34	0.43
4:L5:2348:G:P	4:L5:2351:OMC:HN42	2.41	0.43
4:L5:3709:U:H2'	4:L5:3710:G:C8	2.54	0.43
4:L5:3805:U:H2'	4:L5:3806:G:C8	2.41	0.43
4:L5:4458:C:H2'	4:L5:4459:U:H6	1.84	0.43
4:L5:4459:U:H2'	4:L5:4460:U:H6	1.82	0.43
52:SF:201:LYS:HA	52:SF:204:ARG:HE	1.84	0.43
53:SK:11:ILE:HD11	53:SK:40:VAL:HG11	2.01	0.43
57:SR:128:PHE:CD2	57:SR:129:LYS:HG3	2.54	0.43
58:SS:85:ASN:ND2	84:S2:1629:C:O2'	2.52	0.43
60:SU:104:ILE:HB	60:SU:106:ILE:HG12	2.01	0.43
66:SA:164:ASN:OD1	66:SA:165:ASN:N	2.52	0.43
68:SC:188:CYS:SG	68:SC:238:LYS:HD2	2.59	0.43
68:SC:227:ARG:HH22	84:S2:663:C:H4'	1.84	0.43
69:SE:131:VAL:HA	69:SE:137:PRO:HA	2.00	0.43
75:SN:54:LEU:HD23	75:SN:54:LEU:HA	1.83	0.43
84:S2:17:C:H2'	84:S2:18:C:H6	1.84	0.43
84:S2:385:G:OP2	84:S2:386:C:N4	2.41	0.43
84:S2:429:C:H2'	84:S2:430:C:C6	2.54	0.43
84:S2:1043:G:H2'	84:S2:1044:G:O4'	2.19	0.43
84:S2:1230:C:H2'	84:S2:1231:C:C6	2.54	0.43
84:S2:1625:U:H2'	84:S2:1626:C:H6	1.83	0.43
84:S2:1657:G:H1	84:S2:1667:U:H3	1.67	0.43
84:S2:1738:C:H2'	84:S2:1739:C:H6	1.84	0.43
4:L5:7:C:H2'	4:L5:8:U:C6	2.53	0.43
4:L5:35:U:H4'	4:L5:1525:A:C2	2.54	0.43
4:L5:304:C:H2'	4:L5:305:A:O4'	2.19	0.43
4:L5:714:G:H2'	4:L5:715:G:C8	2.50	0.43
4:L5:957:G:C2	4:L5:1283:G:H2'	2.54	0.43
4:L5:1273:G:C6	11:LE:73:TYR:HB2	2.53	0.43
4:L5:1298:C:H2'	4:L5:1299:G:C8	2.54	0.43
4:L5:1885:G:H5"	37:Lf:20:ASN:ND2	2.34	0.43
4:L5:2483:G:H2'	4:L5:2484:A:O4'	2.19	0.43
4:L5:2787:A2M:HM'2	4:L5:2787:A2M:H1'	1.65	0.43
4:L5:2848:G:N2	4:L5:3841:OMC:HN41	2.16	0.43
4:L5:4122:G:N2	31:LZ:135:ARG:O	2.47	0.43
4:L5:4413:C:H42	4:L5:4429:C:N4	2.16	0.43
8:LB:300:LYS:HB3	8:LB:311:ASP:HA	2.00	0.43
10:LD:164:LYS:HG2	10:LD:195:HIS:CE1	2.54	0.43
10:LD:258:LYS:C	10:LD:259:LYS:HD2	2.44	0.43
11:LE:99:ASP:OD1	11:LE:99:ASP:N	2.49	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LM:81:ASP:O	18:LM:85:LYS:HG3	2.18	0.43
20:LO:142:ALA:HA	20:LO:145:VAL:HG12	2.00	0.43
37:Lf:36:ARG:HB2	37:Lf:80:ASN:HA	2.01	0.43
52:SF:61:PHE:CD2	62:Sc:51:ARG:HD3	2.54	0.43
54:SM:80:ASP:OD1	54:SM:80:ASP:N	2.52	0.43
59:ST:134:ILE:HA	59:ST:137:GLN:HG2	2.00	0.43
63:Sd:19:ARG:NH2	84:S2:1661:A:OP1	2.52	0.43
71:SH:47:ALA:H	71:SH:63:PHE:HB2	1.84	0.43
84:S2:96:C:H2'	84:S2:97:U:H6	1.84	0.43
84:S2:573:U:O2'	84:S2:575:A:N7	2.48	0.43
84:S2:689:U:H2'	84:S2:690:G:C4	2.54	0.43
84:S2:1143:A:H2'	84:S2:1144:A:C8	2.54	0.43
84:S2:1804:U:H2'	84:S2:1805:G:H8	1.83	0.43
84:S2:1850:MA6:H2'	84:S2:1851:MA6:C8	2.49	0.43
4:L5:278:G:O4'	19:LN:50:ARG:HD3	2.19	0.42
4:L5:685:C:OP1	11:LE:101:ASN:ND2	2.52	0.42
4:L5:946:C:H2'	4:L5:947:C:C6	2.54	0.42
4:L5:1184:A:H2'	4:L5:1185:G:C8	2.54	0.42
4:L5:1976:G:C8	4:L5:2002:A:H2'	2.53	0.42
4:L5:3744:OMG:H1'	4:L5:3744:OMG:HM23	1.83	0.42
4:L5:5043:A:H2'	4:L5:5044:A:C8	2.53	0.42
5:L7:47:G:OP1	10:LD:95:TYR:N	2.43	0.42
6:L8:27:U:H2'	6:L8:28:C:H6	1.83	0.42
19:LN:140:LYS:HD3	19:LN:140:LYS:HA	1.71	0.42
24:LS:9:GLU:HB3	24:LS:67:VAL:HB	2.00	0.42
26:LU:45:GLU:OE1	26:LU:45:GLU:N	2.52	0.42
26:LU:78:PHE:CE2	26:LU:83:LEU:HD11	2.54	0.42
50:Lt:79:ALA:HA	50:Lt:82:ILE:HG22	2.00	0.42
51:SD:40:ARG:NH2	60:SU:106:ILE:O	2.52	0.42
65:Sg:230:LEU:HD11	65:Sg:259:TRP:CG	2.54	0.42
65:Sg:286:CYS:HB2	65:Sg:302:TYR:CE2	2.54	0.42
66:SA:84:GLN:HG2	66:SA:100:ALA:HB1	2.01	0.42
68:SC:166:ARG:HB3	68:SC:247:THR:HB	2.00	0.42
69:SE:38:LEU:HA	69:SE:41:CYS:SG	2.59	0.42
70:SG:162:LEU:O	70:SG:167:LYS:NZ	2.52	0.42
72:SI:31:ARG:NE	84:S2:380:G:OP1	2.27	0.42
80:SY:86:GLU:CD	80:SY:87:PRO:HD2	2.44	0.42
84:S2:166:A2M:HM'3	84:S2:166:A2M:H1'	1.83	0.42
84:S2:1272:OMC:HM23	84:S2:1272:OMC:H1'	1.80	0.42
84:S2:1320:G:H2'	84:S2:1321:G:O4'	2.18	0.42
84:S2:1426:U:H2'	84:S2:1427:C:C6	2.54	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1518:C:OP1	84:S2:1519:U:H2'	2.19	0.42
2:CF:21:SER:HA	2:CF:24:THR:HG22	2.01	0.42
2:CF:108:GLN:HB2	2:CF:266:ARG:HB2	2.01	0.42
2:CF:175:SER:HA	2:CF:178:ILE:HG12	2.00	0.42
2:CF:346:ILE:HD11	2:CF:394:LEU:HD13	2.01	0.42
4:L5:713:C:H2'	4:L5:714:G:H8	1.85	0.42
4:L5:1351:G:OP1	9:LC:33:ARG:NH1	2.39	0.42
4:L5:1502:G:OP2	22:LQ:65:ARG:HB2	2.18	0.42
4:L5:1857:C:H2'	4:L5:1858:A:C8	2.51	0.42
4:L5:2283:G:H2'	4:L5:2284:G:C8	2.53	0.42
4:L5:2311:C:H2'	4:L5:2312:U:C6	2.54	0.42
4:L5:2353:U:H2'	4:L5:2354:G:C8	2.54	0.42
4:L5:2485:U:O4	4:L5:2489:C:O2'	2.35	0.42
4:L5:2689:C:H2'	4:L5:2690:C:C6	2.53	0.42
4:L5:2865:U:H2'	4:L5:2866:C:H6	1.84	0.42
4:L5:3660:C:P	7:LA:241:ARG:HH22	2.42	0.42
4:L5:3899:OMG:H5'	8:LB:257:TRP:NE1	2.34	0.42
4:L5:4357:G:H2'	4:L5:4358:U:H6	1.84	0.42
4:L5:4371:G:N2	90:L5:5295:3HE:H5	2.34	0.42
4:L5:4390:A:H2'	4:L5:4391:G:O4'	2.19	0.42
6:L8:78:G:H2'	6:L8:79:G:C8	2.54	0.42
6:L8:119:C:H2'	6:L8:120:G:H8	1.84	0.42
8:LB:147:GLU:OE2	8:LB:198:ARG:NH2	2.52	0.42
8:LB:286:LYS:HB2	8:LB:365:LEU:HD11	2.00	0.42
9:LC:31:PRO:O	9:LC:126:SER:OG	2.22	0.42
13:LG:167:VAL:HG12	13:LG:170:LEU:HD12	2.01	0.42
23:LR:167:LYS:HB3	23:LR:167:LYS:HE2	1.83	0.42
26:LU:39:PHE:HD1	26:LU:90:TYR:CD2	2.37	0.42
37:Lf:5:LEU:HA	37:Lf:5:LEU:HD23	1.80	0.42
48:Lr:45:HIS:HB2	48:Lr:48:THR:HG22	2.01	0.42
54:SM:37:GLU:OE2	84:S2:1286:G:N1	2.43	0.42
55:SP:135:ALA:HB2	84:S2:1235:G:H21	1.84	0.42
56:SQ:12:VAL:HG21	56:SQ:91:ALA:HA	2.01	0.42
56:SQ:130:LYS:NZ	84:S2:1669:G:OP2	2.42	0.42
59:ST:77:LYS:NZ	84:S2:1584:G:OP1	2.50	0.42
84:S2:30:C:H2'	84:S2:31:U:C6	2.54	0.42
84:S2:509:OMG:H1'	84:S2:509:OMG:HM23	1.74	0.42
84:S2:917:U:H2'	84:S2:918:U:C6	2.54	0.42
84:S2:1116:C:H2'	84:S2:1117:C:C6	2.54	0.42
84:S2:1161:U:H2'	84:S2:1162:C:H6	1.84	0.42
84:S2:1216:C:H4'	84:S2:1644:C:OP1	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1327:G:H2'	84:S2:1328:OMG:C8	2.54	0.42
84:S2:1359:U:H2'	84:S2:1360:U:H6	1.83	0.42
84:S2:1589:A:O2'	84:S2:1653:U:O3'	2.35	0.42
84:S2:1651:A:H2'	84:S2:1652:G:H8	1.84	0.42
1:Pt:69:A:H2'	1:Pt:70:A:H8	1.84	0.42
4:L5:286:U:H2'	4:L5:287:U:C6	2.55	0.42
4:L5:371:A:N3	4:L5:1531:U:O2'	2.52	0.42
4:L5:457:G:H4'	11:LE:113:PRO:HB3	2.01	0.42
4:L5:699:C:N4	4:L5:700:G:O6	2.52	0.42
4:L5:1554:A:H61	4:L5:1573:G:H1'	1.85	0.42
4:L5:1569:U:H2'	4:L5:1570:G:H8	1.84	0.42
4:L5:1874:A:H4'	4:L5:4217:G:H22	1.84	0.42
4:L5:1908:A:H2'	4:L5:1909:G:O4'	2.19	0.42
4:L5:2569:G:H2'	4:L5:2570:U:C6	2.54	0.42
4:L5:2571:C:H2'	4:L5:2572:C:C6	2.54	0.42
4:L5:2835:A:O2'	8:LB:228:TYR:O	2.38	0.42
4:L5:2904:U:O2	4:L5:3591:C:H2'	2.20	0.42
4:L5:4460:U:H2'	4:L5:4461:C:C6	2.54	0.42
5:L7:23:A:H2'	5:L7:24:C:C6	2.54	0.42
10:LD:83:LEU:HD23	10:LD:83:LEU:HA	1.87	0.42
11:LE:183:ARG:HA	11:LE:183:ARG:HD2	1.75	0.42
12:LF:96:ARG:HD3	12:LF:139:TYR:CG	2.54	0.42
14:LH:48:LEU:HB3	14:LH:54:ARG:HH21	1.84	0.42
51:SD:23:GLU:HG2	53:SK:64:TRP:NE1	2.33	0.42
59:ST:47:PRO:HA	84:S2:1539:U:H4'	2.00	0.42
59:ST:63:HIS:CE1	59:ST:78:ILE:HG21	2.54	0.42
59:ST:101:ARG:NH2	84:S2:1566:G:N7	2.66	0.42
60:SU:33:GLU:CD	60:SU:55:ARG:HH21	2.28	0.42
61:SZ:86:ALA:O	61:SZ:90:GLU:HG2	2.19	0.42
65:Sg:54:ILE:HD12	65:Sg:55:PRO:HD2	2.01	0.42
65:Sg:207:CYS:SG	65:Sg:219:TRP:HB2	2.59	0.42
69:SE:59:ASP:O	69:SE:63:LYS:HG3	2.18	0.42
72:SI:44:HIS:ND1	84:S2:1740:C:OP1	2.34	0.42
79:SX:105:PHE:CD1	79:SX:121:LYS:HB3	2.55	0.42
84:S2:363:A:N1	84:S2:397:G:O2'	2.43	0.42
84:S2:387:C:H2'	84:S2:388:U:C6	2.54	0.42
84:S2:408:A:O2'	84:S2:410:G:OP1	2.37	0.42
84:S2:991:G:C6	84:S2:1134:G:H4'	2.54	0.42
84:S2:1255:G:OP1	84:S2:1256:G:O2'	2.19	0.42
84:S2:1390:U:H2'	84:S2:1391:OMC:C6	2.54	0.42
84:S2:1425:G:H2'	84:S2:1426:U:C6	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1853:C:H2'	84:S2:1854:U:C6	2.55	0.42
4:L5:28:C:P	19:LN:193:ARG:HH22	2.42	0.42
4:L5:385:A:N3	4:L5:387:G:H5"	2.34	0.42
4:L5:416:U:H2'	4:L5:417:G:O4'	2.20	0.42
4:L5:433:A:H2'	4:L5:434:A:O4'	2.19	0.42
4:L5:935:A:O2'	18:LM:44:GLN:O	2.32	0.42
4:L5:1289:C:H2'	4:L5:1290:G:C8	2.52	0.42
4:L5:1507:C:H4'	9:LC:114:ARG:O	2.20	0.42
4:L5:1672:U:H2'	4:L5:1673:U:C6	2.55	0.42
4:L5:1951:G:C6	4:L5:2033:A:N1	2.87	0.42
4:L5:2444:U:O2'	6:L8:112:G:O2'	2.20	0.42
4:L5:2757:A:H2'	4:L5:2758:G:C8	2.54	0.42
4:L5:2831:G:H2'	4:L5:2832:A:H8	1.83	0.42
4:L5:4193:C:H3'	4:L5:4194:U:C6	2.54	0.42
4:L5:4207:C:C2	4:L5:4226:G:N2	2.87	0.42
4:L5:4323:A:N6	10:LD:153:THR:HG21	2.34	0.42
4:L5:4457:PSU:H1'	8:LB:252:ALA:HB3	2.00	0.42
4:L5:4663:G:HO2'	4:L5:5003:U:H4'	1.84	0.42
4:L5:5004:C:H2'	4:L5:5005:G:O4'	2.18	0.42
4:L5:5008:C:H2'	4:L5:5009:G:O4'	2.19	0.42
7:LA:108:PRO:HB2	47:Lp:86:LEU:HD23	2.02	0.42
8:LB:17:LEU:HD23	8:LB:17:LEU:HA	1.76	0.42
8:LB:68:ASN:O	8:LB:70:LYS:HG2	2.20	0.42
16:LJ:119:TYR:CD2	58:SS:12:ILE:HG12	2.55	0.42
21:LP:8:PRO:HD3	21:LP:149:ILE:HD13	2.00	0.42
22:LQ:35:LEU:HD23	22:LQ:35:LEU:HA	1.85	0.42
22:LQ:178:ARG:N	32:La:51:GLY:HA2	2.33	0.42
23:LR:174:GLU:HA	23:LR:177:LEU:HB2	2.02	0.42
25:LT:4:THR:OG1	25:LT:9:ARG:HD3	2.19	0.42
28:LW:52:THR:O	28:LW:56:ARG:HG2	2.19	0.42
32:La:75:LEU:HD11	32:La:133:ALA:HA	2.00	0.42
36:Le:70:LEU:HD11	36:Le:76:LYS:HB2	2.01	0.42
52:SF:129:GLY:HA3	52:SF:136:ARG:NH1	2.35	0.42
65:Sg:289:LEU:HD11	65:Sg:298:LEU:HD21	2.02	0.42
69:SE:104:ASP:OD1	69:SE:108:ARG:N	2.40	0.42
69:SE:252:ARG:O	69:SE:256:LEU:HG	2.20	0.42
72:SI:56:ARG:NH1	84:S2:379:C:OP1	2.52	0.42
73:SJ:179:LYS:HA	73:SJ:182:GLN:HG3	2.02	0.42
80:SY:105:LYS:O	80:SY:109:GLU:HG2	2.20	0.42
84:S2:291:G:H8	84:S2:291:G:OP1	2.03	0.42
84:S2:387:C:H2'	84:S2:388:U:H6	1.83	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:610:G:C6	84:S2:634:A:C6	3.07	0.42
84:S2:671:A:H4'	84:S2:672:A:H5"	2.01	0.42
84:S2:747:U:N3	84:S2:796:G:C6	2.86	0.42
84:S2:881:G:N2	84:S2:906:U:H1'	2.35	0.42
84:S2:1457:U:H2'	84:S2:1458:G:C8	2.54	0.42
84:S2:1687:C:H2'	84:S2:1688:C:C6	2.55	0.42
4:L5:393:U:H2'	4:L5:394:G:C8	2.55	0.42
4:L5:423:G:H2'	4:L5:424:U:H6	1.84	0.42
4:L5:1420:A:OP1	22:LQ:71:LYS:NZ	2.51	0.42
4:L5:1573:G:OP1	23:LR:92:LYS:NZ	2.30	0.42
4:L5:1629:G:H2'	4:L5:1631:A:C5	2.55	0.42
4:L5:2090:U:H4'	4:L5:2091:C:H3'	2.02	0.42
4:L5:2474:G:H2'	4:L5:2502:G:N2	2.35	0.42
4:L5:4240:G:H2'	4:L5:4241:C:C6	2.54	0.42
4:L5:4398:C:H2'	4:L5:4399:U:H6	1.84	0.42
4:L5:4410:G:C6	4:L5:4433:G:C6	3.08	0.42
4:L5:4460:U:H2'	4:L5:4461:C:H6	1.83	0.42
4:L5:4699:U:OP2	44:Lm:111:ARG:NH2	2.36	0.42
4:L5:4887:C:N4	4:L5:4932:U:H3	2.16	0.42
9:LC:152:LEU:HD21	9:LC:174:LEU:HD22	2.00	0.42
13:LG:138:ALA:HB2	13:LG:194:VAL:HG11	2.01	0.42
13:LG:174:CYS:O	13:LG:178:GLY:N	2.52	0.42
17:LL:80:GLU:OE2	17:LL:113:ASN:ND2	2.52	0.42
50:Lt:77:ALA:HB3	50:Lt:80:LEU:HD22	2.00	0.42
57:SR:44:LYS:HG3	57:SR:47:ARG:HH21	1.85	0.42
57:SR:72:LYS:O	57:SR:75:GLU:HG3	2.19	0.42
61:SZ:48:VAL:HG23	61:SZ:80:ARG:HD2	2.00	0.42
65:Sg:227:LEU:HD23	65:Sg:228:TYR:HB2	2.02	0.42
68:SC:84:PHE:CE2	68:SC:265:PRO:HD3	2.55	0.42
72:SI:64:ASN:HA	72:SI:75:LYS:HA	2.00	0.42
73:SJ:137:VAL:O	73:SJ:140:GLN:N	2.51	0.42
74:SL:98:LYS:HD3	74:SL:99:TYR:CZ	2.54	0.42
74:SL:132:ARG:HD3	84:S2:114:G:H5'	2.01	0.42
84:S2:89:C:O2	84:S2:499:G:H4'	2.20	0.42
84:S2:116:OMU:HM23	84:S2:116:OMU:H1'	1.67	0.42
84:S2:1338:G:H2'	84:S2:1339:U:C6	2.54	0.42
84:S2:1554:C:OP2	84:S2:1555:U:O2'	2.32	0.42
84:S2:1736:G:H2'	84:S2:1737:G:C8	2.53	0.42
4:L5:135:G:N7	39:Lh:97:LYS:HG3	2.35	0.42
4:L5:162:A:H2'	4:L5:163:A:H8	1.85	0.42
4:L5:468:U:O2	4:L5:686:A:N6	2.47	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:513:U:H3'	4:L5:514:U:H4'	2.02	0.42
4:L5:1812:C:H1'	33:Lb:57:MET:HE2	2.01	0.42
4:L5:1952:G:OP1	24:LS:139:ARG:NE	2.53	0.42
4:L5:2063:G:H2'	4:L5:2064:G:C8	2.55	0.42
4:L5:3608:A:H2'	4:L5:3609:G:H8	1.85	0.42
4:L5:4098:A:H2'	4:L5:4099:G:H4'	2.00	0.42
4:L5:4200:G:C6	4:L5:4201:G:C5	3.07	0.42
4:L5:4527:G:OP2	4:L5:4527:G:N2	2.48	0.42
4:L5:4584:A:H62	4:L5:4718:G:N2	2.18	0.42
6:L8:43:A:H2'	6:L8:44:A:C8	2.54	0.42
6:L8:71:A:N6	6:L8:83:C:O4'	2.52	0.42
9:LC:10:VAL:HG13	9:LC:153:VAL:HG12	2.01	0.42
10:LD:215:ASP:HB3	10:LD:218:ALA:HB3	2.00	0.42
17:LL:7:GLY:O	32:La:49:HIS:NE2	2.43	0.42
17:LL:77:SER:N	17:LL:80:GLU:OE1	2.51	0.42
17:LL:194:ILE:HD12	17:LL:194:ILE:HA	1.89	0.42
24:LS:5:GLY:H	24:LS:111:ARG:HH22	1.67	0.42
26:LU:18:VAL:HG22	26:LU:75:GLU:HG3	2.01	0.42
28:LW:104:GLN:O	28:LW:107:GLN:HG3	2.19	0.42
54:SM:75:ASN:OD1	54:SM:76:LEU:N	2.53	0.42
57:SR:51:ALA:O	57:SR:55:THR:HG23	2.20	0.42
59:ST:56:ARG:NE	84:S2:1541:G:OP1	2.46	0.42
59:ST:87:VAL:HG23	84:S2:1530:U:H1'	2.01	0.42
68:SC:183:LYS:HA	68:SC:195:LEU:O	2.20	0.42
71:SH:26:ALA:HB1	71:SH:86:LYS:HE2	2.02	0.42
72:SI:45:THR:O	84:S2:307:G:N2	2.53	0.42
80:SY:93:ARG:HH21	84:S2:575:A:P	2.42	0.42
84:S2:299:A:H2'	84:S2:300:U:C6	2.55	0.42
84:S2:1035:A:C4	84:S2:1036:A:C8	3.08	0.42
84:S2:1562:C:H2'	84:S2:1563:G:C8	2.50	0.42
84:S2:1705:C:H2'	84:S2:1706:G:C8	2.55	0.42
4:L5:294:G:OP1	87:L5:5263:SPM:N1	2.48	0.42
4:L5:1495:G:H4'	22:LQ:187:LYS:HE3	2.01	0.42
4:L5:1830:G:H2'	4:L5:1831:G:C8	2.54	0.42
4:L5:1878:G:H2'	4:L5:1879:C:H6	1.84	0.42
4:L5:2328:G:H2'	4:L5:2329:U:H6	1.82	0.42
4:L5:2557:G:N2	4:L5:2570:U:O2	2.37	0.42
4:L5:2706:G:C5	85:CI:78:HIS:HD2	2.34	0.42
4:L5:4122:G:O2'	31:LZ:136:PHE:OXT	2.29	0.42
4:L5:4266:G:H4'	4:L5:4267:G:C4	2.54	0.42
4:L5:4643:G:H2'	4:L5:4644:G:C8	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4695:C:O2	44:Lm:106:ARG:NH2	2.43	0.42
4:L5:4761:G:H2'	4:L5:4762:A:C8	2.54	0.42
5:L7:117:G:OP1	10:LD:253:TYR:OH	2.20	0.42
9:LC:190:ARG:O	9:LC:195:LYS:HD3	2.19	0.42
10:LD:115:MET:HG2	10:LD:118:ILE:HD11	2.02	0.42
11:LE:128:HIS:ND1	11:LE:128:HIS:O	2.53	0.42
16:LJ:113:ILE:HD11	58:SS:14:ARG:HD3	2.01	0.42
18:LM:118:MET:HG2	20:LO:192:TYR:CZ	2.55	0.42
22:LQ:50:ARG:HA	22:LQ:53:MET:HE3	2.01	0.42
26:LU:39:PHE:O	26:LU:43:LEU:HG	2.20	0.42
28:LW:46:PRO:HG2	28:LW:47:ARG:HD2	2.01	0.42
51:SD:141:LYS:HE2	51:SD:179:GLN:HB3	2.02	0.42
62:Sc:21:THR:HB	62:Sc:68:LEU:HD21	2.01	0.42
65:Sg:39:THR:HG22	65:Sg:60:ARG:HG2	2.02	0.42
66:SA:57:LYS:HD2	66:SA:57:LYS:HA	1.79	0.42
68:SC:121:ARG:NH1	68:SC:123:ARG:HE	2.18	0.42
69:SE:50:ASN:O	69:SE:53:LYS:NZ	2.41	0.42
70:SG:92:ARG:NH1	84:S2:1738:C:OP1	2.47	0.42
81:Sa:70:LYS:HZ2	84:S2:988:C:P	2.43	0.42
84:S2:176:U:H2'	84:S2:177:G:C8	2.54	0.42
2:CF:39:ILE:HD11	2:CF:56:TYR:CD1	2.54	0.42
2:CF:119:GLY:O	2:CF:166:ARG:NH2	2.53	0.42
2:CF:156:ASP:OD2	2:CF:194:SER:OG	2.38	0.42
2:CF:171:VAL:HG23	2:CF:172:LYS:HD2	2.02	0.42
4:L5:85:G:C6	17:LL:13:HIS:CD2	3.07	0.42
4:L5:246:G:H2'	4:L5:247:G:C8	2.52	0.42
4:L5:284:G:H2'	4:L5:285:G:H8	1.84	0.42
4:L5:726:G:H2'	4:L5:727:C:C6	2.54	0.42
4:L5:1594:C:H2'	4:L5:1595:G:O4'	2.19	0.42
4:L5:2385:U:H2'	4:L5:2386:U:H6	1.84	0.42
4:L5:2459:G:H2'	4:L5:2461:G:OP2	2.20	0.42
4:L5:2577:C:OP1	31:LZ:111:ARG:NH2	2.52	0.42
4:L5:2632:PSU:C4	4:L5:2633:U:C5	3.07	0.42
4:L5:2663:G:H2'	4:L5:2664:G:C8	2.53	0.42
4:L5:4227:OMU:HM23	4:L5:4227:OMU:H1'	1.82	0.42
4:L5:4361:PSU:H2'	4:L5:4362:A:H8	1.85	0.42
4:L5:4414:A:OP2	4:L5:4422:A:N6	2.52	0.42
4:L5:4563:U:H2'	4:L5:4564:A:C8	2.51	0.42
4:L5:4638:U:H3	4:L5:4661:G:H1	1.68	0.42
4:L5:4879:C:H2'	4:L5:4880:C:H6	1.83	0.42
4:L5:4887:C:H3'	4:L5:4888:U:C6	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:5064:G:H2'	4:L5:5065:U:C6	2.54	0.42
5:L7:6:C:OP2	10:LD:22:ARG:NH2	2.51	0.42
6:L8:116:C:H2'	6:L8:117:C:C6	2.55	0.42
7:LA:36:GLU:HA	7:LA:91:GLY:HA2	2.01	0.42
8:LB:161:ARG:HG2	8:LB:184:GLN:HA	2.01	0.42
8:LB:201:LEU:HD23	8:LB:201:LEU:HA	1.84	0.42
9:LC:341:LEU:HB3	9:LC:345:ARG:NH1	2.35	0.42
14:LH:34:LEU:HD23	14:LH:34:LEU:HA	1.85	0.42
30:LY:50:ARG:NH1	30:LY:51:LYS:HB3	2.34	0.42
34:Lc:48:LEU:HD13	34:Lc:57:LYS:HG3	2.02	0.42
34:Lc:78:ASN:OD1	34:Lc:78:ASN:N	2.53	0.42
42:Lk:25:ILE:HD13	42:Lk:57:LYS:HZ3	1.85	0.42
53:SK:31:LYS:NZ	53:SK:40:VAL:H	2.15	0.42
80:SY:53:ASP:OD1	80:SY:54:VAL:N	2.51	0.42
84:S2:695:C:H2'	84:S2:735:C:N4	2.35	0.42
3:AT:7:G:O2'	3:AT:50:C:H5'	2.19	0.42
4:L5:260:C:H2'	4:L5:261:G:C8	2.55	0.42
4:L5:427:A:H2'	4:L5:428:G:C8	2.55	0.42
4:L5:473:C:H2'	4:L5:474:C:H6	1.84	0.42
4:L5:513:U:H1'	4:L5:516:C:H5	1.85	0.42
4:L5:965:G:N2	4:L5:2092:G:H1'	2.35	0.42
4:L5:1307:A:H2'	4:L5:1308:C:C6	2.54	0.42
4:L5:1335:G:H2'	4:L5:1336:G:C8	2.55	0.42
4:L5:1339:U:H2'	4:L5:1340:OMC:C6	2.55	0.42
4:L5:1478:C:H2'	4:L5:1479:G:C8	2.55	0.42
4:L5:1666:C:O2'	4:L5:1688:G:H5"	2.20	0.42
4:L5:1837:A:OP2	25:LT:130:ARG:NH1	2.43	0.42
4:L5:2341:A:OP2	32:La:4:ARG:NH2	2.42	0.42
4:L5:2385:U:H2'	4:L5:2386:U:C6	2.55	0.42
4:L5:2662:G:H2'	4:L5:2663:G:H8	1.85	0.42
4:L5:2717:G:H2'	4:L5:2718:U:C6	2.54	0.42
4:L5:2776:G:H2'	4:L5:2777:G:C8	2.54	0.42
4:L5:4405:G:P	15:LI:7:ARG:HH21	2.43	0.42
4:L5:4587:G:H2'	4:L5:4588:U:O4'	2.20	0.42
4:L5:4993:G:H2'	4:L5:4994:G:H8	1.84	0.42
4:L5:5001:PSU:H2'	4:L5:5002:U:O4'	2.20	0.42
16:LJ:15:LEU:HD12	16:LJ:165:TRP:HB2	2.02	0.42
35:Ld:68:LEU:HD22	35:Ld:106:VAL:HG12	2.02	0.42
35:Ld:92:ARG:HD3	35:Ld:102:LEU:HD21	2.01	0.42
50:Lt:28:LEU:H	50:Lt:28:LEU:HD23	1.84	0.42
52:SF:80:GLY:HA3	84:S2:1224:G:OP1	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SK:10:ALA:O	53:SK:13:GLU:HG2	2.20	0.42
55:SP:92:SER:O	55:SP:93:MET:HE2	2.20	0.42
59:ST:83:GLN:NE2	59:ST:85:ASN:OD1	2.53	0.42
67:SB:167:LYS:HE2	67:SB:167:LYS:HB2	1.77	0.42
68:SC:202:THR:OG1	68:SC:221:ASP:HB3	2.19	0.42
69:SE:36:HIS:NE2	69:SE:143:ASP:OD1	2.53	0.42
71:SH:36:LEU:HA	71:SH:39:GLN:NE2	2.35	0.42
84:S2:77:A:H2'	84:S2:78:C:C6	2.54	0.42
84:S2:96:C:H2'	84:S2:97:U:C6	2.54	0.42
84:S2:533:A:H61	84:S2:550:C:N4	2.14	0.42
84:S2:1074:C:H2'	84:S2:1075:C:H6	1.83	0.42
84:S2:1098:C:H2'	84:S2:1099:G:C8	2.54	0.42
85:CI:63:ARG:HD2	85:CI:63:ARG:HA	1.85	0.42
2:CF:378:LYS:NZ	2:CF:393:PHE:O	2.38	0.42
4:L5:16:G:P	29:LX:62:ARG:HH22	2.43	0.42
4:L5:252:C:H2'	4:L5:253:G:H8	1.83	0.42
4:L5:425:U:H2'	4:L5:426:A:C8	2.51	0.42
4:L5:457:G:H2'	4:L5:458:C:H6	1.85	0.42
4:L5:1088:C:H2'	4:L5:1089:G:C8	2.55	0.42
4:L5:1187:G:OP2	4:L5:1187:G:N2	2.51	0.42
4:L5:1351:G:H2'	4:L5:1352:C:C6	2.55	0.42
4:L5:1404:G:O6	4:L5:1413:C:N4	2.52	0.42
4:L5:1578:U:H2'	4:L5:1579:C:C6	2.54	0.42
4:L5:1603:C:H2'	4:L5:1604:G:H8	1.85	0.42
4:L5:1661:C:H2'	4:L5:1662:C:C6	2.55	0.42
4:L5:1984:A:H5'	4:L5:1985:G:O3'	2.20	0.42
4:L5:1998:A:O2'	4:L5:2019:C:O2'	2.26	0.42
4:L5:2347:A:C4	36:Le:31:ILE:HD11	2.54	0.42
4:L5:2532:C:H2'	4:L5:2533:C:C6	2.54	0.42
4:L5:2540:C:H2'	4:L5:2541:G:C8	2.55	0.42
4:L5:2747:U:H2'	4:L5:2748:C:H6	1.85	0.42
4:L5:3700:C:H2'	4:L5:3746:A:H61	1.85	0.42
4:L5:3781:C:H5'	4:L5:3821:A:H4'	2.02	0.42
4:L5:4345:C:H2'	4:L5:4346:U:H6	1.84	0.42
4:L5:4683:U:C4	4:L5:4707:A:C5	3.08	0.42
5:L7:23:A:H2	5:L7:118:C:H1'	1.85	0.42
5:L7:59:G:H2'	5:L7:60:G:C8	2.55	0.42
6:L8:7:U:H2'	6:L8:8:U:C6	2.55	0.42
6:L8:68:G:OP2	41:Lj:87:LYS:HD2	2.19	0.42
8:LB:57:VAL:HB	8:LB:367:PHE:HB3	2.01	0.42
10:LD:181:PRO:HD2	10:LD:195:HIS:CD2	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LE:112:MET:O	48:Lr:87:ARG:NE	2.50	0.42
13:LG:160:ASP:OD1	13:LG:160:ASP:N	2.53	0.42
15:LI:44:ASP:HA	15:LI:171:TRP:HZ2	1.85	0.42
35:Ld:26:THR:HB	35:Ld:85:ARG:HH11	1.85	0.42
38:Lg:8:ARG:N	38:Lg:34:TYR:OH	2.52	0.42
46:Lo:12:CYS:O	46:Lo:16:GLY:N	2.51	0.42
46:Lo:12:CYS:HB3	46:Lo:15:CYS:HB2	2.01	0.42
54:SM:112:LYS:HB2	54:SM:112:LYS:HE2	1.76	0.42
57:SR:1:MET:HA	84:S2:1467:C:H5"	2.02	0.42
70:SG:45:TRP:O	70:SG:48:TYR:HB2	2.19	0.42
70:SG:139:SER:O	70:SG:143:LYS:HG3	2.19	0.42
80:SY:41:ARG:NH2	80:SY:53:ASP:HA	2.35	0.42
84:S2:447:A:H1'	84:S2:449:A:O4'	2.20	0.42
84:S2:1288:OMU:HM21	84:S2:1315:U:H1'	2.01	0.42
84:S2:1384:C:H2'	84:S2:1385:G:H8	1.84	0.42
84:S2:1409:A:H2'	84:S2:1410:C:C6	2.54	0.42
84:S2:1740:C:H2'	84:S2:1741:U:C6	2.55	0.42
84:S2:1745:A:H62	84:S2:1789:G:H21	1.67	0.42
84:S2:1805:G:H2'	84:S2:1806:A:C8	2.55	0.42
84:S2:1842:4AC:H2'	84:S2:1843:G:H8	1.85	0.42
2:CF:164:GLN:OE1	2:CF:210:TRP:HB2	2.20	0.41
2:CF:296:HIS:NE2	3:AT:77:A:OP2	2.51	0.41
3:AT:53:G:H2'	3:AT:54:G:C8	2.52	0.41
4:L5:231:U:H4'	30:LY:100:HIS:CG	2.55	0.41
4:L5:429:A:H2'	4:L5:430:G:H8	1.85	0.41
4:L5:958:G:C4	11:LE:124:LYS:HD2	2.55	0.41
4:L5:1418:C:H2'	4:L5:1419:G:C8	2.55	0.41
4:L5:1725:U:H2'	4:L5:1726:U:H6	1.85	0.41
4:L5:1839:U:H2'	4:L5:1840:G:C8	2.54	0.41
4:L5:1877:G:P	33:Lb:14:ARG:HH21	2.43	0.41
4:L5:2102:G:H1'	4:L5:2103:G:C8	2.54	0.41
4:L5:2286:G:H2'	4:L5:2287:G:C8	2.55	0.41
4:L5:2465:C:H2'	4:L5:2466:G:C8	2.55	0.41
4:L5:2569:G:H2'	4:L5:2570:U:H6	1.85	0.41
4:L5:3795:A:C6	4:L5:3806:G:C6	3.08	0.41
4:L5:3825:A2M:H2'	4:L5:3826:C:C6	2.55	0.41
4:L5:4132:C:H2'	4:L5:4133:C:O4'	2.20	0.41
4:L5:4179:G:H2'	4:L5:4180:G:H8	1.85	0.41
4:L5:4193:C:H3'	4:L5:4194:U:H6	1.85	0.41
4:L5:4233:A:C8	4:L5:4235:G:C8	3.08	0.41
4:L5:4744:A:H2'	4:L5:4745:G:O4'	2.19	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:148:A:H2'	6:L8:149:G:H8	1.82	0.41
8:LB:27:GLY:HA2	8:LB:276:HIS:CD2	2.55	0.41
9:LC:361:LEU:O	9:LC:364:LYS:HG2	2.19	0.41
13:LG:161:VAL:HG11	13:LG:166:LEU:HD12	2.02	0.41
15:LI:39:LYS:HE3	15:LI:39:LYS:HB2	1.77	0.41
18:LM:118:MET:HG2	20:LO:192:TYR:OH	2.20	0.41
54:SM:19:GLN:O	54:SM:22:LEU:HG	2.19	0.41
67:SB:182:LYS:HD3	67:SB:231:LEU:HD23	2.02	0.41
68:SC:65:LYS:HD2	68:SC:273:LEU:HD13	2.02	0.41
70:SG:149:LYS:HD2	70:SG:149:LYS:HA	1.89	0.41
72:SI:26:LYS:HE3	84:S2:444:G:O6	2.20	0.41
73:SJ:79:ARG:HH22	84:S2:820:U:P	2.43	0.41
80:SY:9:THR:HG22	84:S2:837:A:H61	1.83	0.41
83:Se:18:LYS:HE2	83:Se:18:LYS:HB2	1.87	0.41
84:S2:13:C:H1'	84:S2:1356:G:N2	2.35	0.41
84:S2:698:G:H5'	84:S2:733:C:C2	2.55	0.41
84:S2:1677:U:O4	84:S2:1678:A:N6	2.53	0.41
3:AT:22:A:H2'	3:AT:23:U:C6	2.55	0.41
4:L5:63:G:H22	4:L5:333:U:H2'	1.85	0.41
4:L5:229:G:H2'	4:L5:230:G:C8	2.54	0.41
4:L5:272:U:H2'	4:L5:273:U:C6	2.55	0.41
4:L5:691:C:H2'	4:L5:692:A:H8	1.85	0.41
4:L5:737:C:H3'	4:L5:738:C:H5'	2.01	0.41
4:L5:982:U:H2'	4:L5:983:C:C6	2.55	0.41
4:L5:1534:A2M:H2'	4:L5:1637:A:C6	2.55	0.41
4:L5:2264:C:H2'	4:L5:2265:G:O4'	2.20	0.41
4:L5:2276:A:H2'	4:L5:2277:C:H6	1.85	0.41
4:L5:2351:OMC:HM22	9:LC:95:MET:HG3	2.02	0.41
4:L5:2654:C:H2'	4:L5:2655:C:C6	2.53	0.41
4:L5:2807:A:H2'	4:L5:2808:G:H8	1.86	0.41
4:L5:3835:C:H2'	4:L5:3836:A:H8	1.84	0.41
4:L5:3867:A2M:HM'3	4:L5:3867:A2M:H1'	1.49	0.41
4:L5:4244:A:H2'	4:L5:4245:G:O4'	2.20	0.41
5:L7:72:U:H2'	5:L7:73:U:O4'	2.20	0.41
5:L7:87:G:N2	5:L7:89:G:H5"	2.35	0.41
6:L8:94:G:H1'	41:Lj:82:THR:O	2.20	0.41
6:L8:133:G:H2'	6:L8:134:G:C8	2.55	0.41
8:LB:47:LEU:HD23	8:LB:47:LEU:HA	1.80	0.41
8:LB:206:PRO:HG2	8:LB:209:GLN:HG3	2.02	0.41
13:LG:229:ARG:HB2	13:LG:232:GLU:OE2	2.21	0.41
23:LR:106:LEU:HD23	23:LR:106:LEU:HA	1.89	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Lo:14:LYS:HB3	46:Lo:77:CYS:SG	2.60	0.41
51:SD:30:ALA:HB1	51:SD:106:ARG:HH22	1.85	0.41
59:ST:104:LEU:HD13	59:ST:121:ARG:HD2	2.03	0.41
65:Sg:7:LEU:HD22	65:Sg:310:TRP:CZ3	2.55	0.41
65:Sg:101:PHE:CE2	65:Sg:136:GLY:HA2	2.55	0.41
65:Sg:251:ALA:HA	65:Sg:256:ILE:HD13	2.01	0.41
70:SG:38:ALA:HB2	70:SG:50:VAL:HG12	2.02	0.41
72:SI:34:ALA:HB2	72:SI:56:ARG:HD2	2.02	0.41
81:Sa:17:HIS:NE2	84:S2:1858:G:OP1	2.42	0.41
84:S2:455:A:H2'	84:S2:456:C:C6	2.55	0.41
84:S2:688:U:H1'	84:S2:689:U:OP2	2.20	0.41
84:S2:1019:C:H2'	84:S2:1020:A:O4'	2.20	0.41
84:S2:1275:G:H22	84:S2:1506:A:P	2.41	0.41
84:S2:1398:G:H22	84:S2:1448:A:H2	1.68	0.41
84:S2:1550:G:O2'	84:S2:1558:C:O2	2.30	0.41
2:CF:5:LYS:HD3	2:CF:86:TYR:HB2	2.00	0.41
2:CF:34:ILE:HD11	2:CF:39:ILE:HD12	2.01	0.41
4:L5:292:G:O6	19:LN:181:HIS:ND1	2.40	0.41
4:L5:1616:U:H2'	4:L5:1617:G:H8	1.86	0.41
4:L5:2685:C:OP1	38:Lg:57:ARG:HG3	2.20	0.41
4:L5:2759:G:H2'	4:L5:2760:G:C8	2.55	0.41
4:L5:3706:C:H2'	4:L5:3707:U:C6	2.55	0.41
4:L5:4080:C:H2'	4:L5:4081:G:C8	2.55	0.41
4:L5:4637:OMG:HM23	4:L5:4637:OMG:H1'	1.72	0.41
4:L5:4870:G:H5"	18:LM:91:TRP:CD2	2.55	0.41
5:L7:6:C:O2'	10:LD:72:ASP:OD2	2.31	0.41
12:LF:80:ASN:HB3	25:LT:141:VAL:O	2.19	0.41
15:LI:87:MET:HG2	15:LI:138:ILE:HG23	2.02	0.41
26:LU:40:GLU:OE1	26:LU:65:ARG:HB2	2.19	0.41
30:LY:116:LYS:O	30:LY:119:LEU:N	2.53	0.41
39:Lh:8:ASP:OD1	39:Lh:8:ASP:N	2.51	0.41
53:SK:64:TRP:CE3	63:Sd:23:VAL:HG22	2.55	0.41
59:ST:39:LEU:HD23	59:ST:39:LEU:HA	1.71	0.41
60:SU:63:ILE:O	60:SU:80:PHE:N	2.46	0.41
65:Sg:296:GLN:HG3	65:Sg:311:GLN:OE1	2.21	0.41
67:SB:94:LYS:HA	67:SB:94:LYS:HD2	1.94	0.41
68:SC:178:HIS:CG	68:SC:200:ARG:HE	2.38	0.41
72:SI:132:GLU:O	72:SI:136:ILE:HG23	2.20	0.41
73:SJ:33:GLY:HA3	83:Se:38:TYR:CD2	2.55	0.41
79:SX:105:PHE:HD1	79:SX:121:LYS:HB3	1.85	0.41
84:S2:27:A2M:HM'1	84:S2:483:C:H1'	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:142:C:H41	84:S2:330:G:P	2.43	0.41
84:S2:293:C:O2'	84:S2:295:C:H5'	2.19	0.41
84:S2:674:C:H2'	84:S2:675:U:H6	1.85	0.41
84:S2:698:G:H2'	84:S2:733:C:C4	2.55	0.41
84:S2:1025:U:H2'	84:S2:1026:C:O4'	2.21	0.41
2:CF:377:GLU:HG2	2:CF:401:ILE:HB	2.02	0.41
2:CF:427:ARG:HH11	2:CF:430:ARG:NH2	2.17	0.41
3:AT:56:U:N3	3:AT:58:G:H5"	2.36	0.41
4:L5:76:A:H5'	17:LL:101:ARG:NH1	2.35	0.41
4:L5:171:U:H4'	17:LL:135:LYS:HD3	2.03	0.41
4:L5:209:U:C4	4:L5:233:U:C4	3.09	0.41
4:L5:1081:C:C2'	4:L5:1082:C:H5'	2.50	0.41
4:L5:1335:G:C6	4:L5:1336:G:C6	3.08	0.41
4:L5:1347:G:P	22:LQ:146:ARG:HH22	2.44	0.41
4:L5:1826:G:H4'	33:Lb:43:MET:HE3	2.02	0.41
4:L5:1878:G:H2'	4:L5:1879:C:C6	2.55	0.41
4:L5:4411:G:H2'	4:L5:4412:C:H6	1.84	0.41
4:L5:4573:G:H2'	4:L5:4574:U:C6	2.56	0.41
4:L5:4661:G:H2'	4:L5:4662:C:C6	2.55	0.41
5:L7:45:U:H2'	5:L7:46:C:H6	1.85	0.41
11:LE:136:HIS:HB2	11:LE:138:ARG:NH1	2.36	0.41
12:LF:96:ARG:HB2	12:LF:139:TYR:CD2	2.55	0.41
12:LF:237:GLU:HG2	24:LS:38:VAL:HG22	2.02	0.41
23:LR:139:MET:HG2	23:LR:143:HIS:CE1	2.55	0.41
25:LT:100:LYS:HB3	25:LT:100:LYS:HE2	1.78	0.41
31:LZ:123:LYS:O	31:LZ:124:THR:OG1	2.25	0.41
46:Lo:25:GLN:HB3	46:Lo:27:LYS:NZ	2.36	0.41
59:ST:52:TRP:O	59:ST:55:THR:OG1	2.29	0.41
59:ST:114:GLU:OE2	59:ST:122:LYS:NZ	2.42	0.41
70:SG:136:LYS:O	70:SG:176:ILE:HG13	2.20	0.41
72:SI:197:PHE:HD1	72:SI:200:ARG:HH12	1.68	0.41
84:S2:17:C:H4'	84:S2:1166:G:C8	2.56	0.41
84:S2:166:A2M:H2'	84:S2:167:G:H8	1.85	0.41
84:S2:654:A:OP2	84:S2:655:A:O2'	2.27	0.41
84:S2:673:G:H2'	84:S2:674:C:C6	2.55	0.41
84:S2:1457:U:H2'	84:S2:1458:G:H8	1.86	0.41
84:S2:1839:U:H2'	84:S2:1840:U:C6	2.55	0.41
4:L5:335:A:H2'	4:L5:336:A:C8	2.56	0.41
4:L5:365:U:H2'	4:L5:366:A:C8	2.55	0.41
4:L5:368:C:H2'	4:L5:369:G:C8	2.54	0.41
4:L5:381:U:H2'	4:L5:382:G:O4'	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:671:G:H2'	4:L5:672:C:C6	2.55	0.41
4:L5:750:U:C2	4:L5:751:G:C8	3.09	0.41
4:L5:1080:C:H2'	4:L5:1081:C:H6	1.85	0.41
4:L5:1206:C:H2'	4:L5:1207:C:H6	1.85	0.41
4:L5:1836:G:O5'	25:LT:129:LYS:HE3	2.20	0.41
4:L5:2423:A:H2'	4:L5:2424:OMG:C8	2.55	0.41
4:L5:2453:A:C6	4:L5:2507:A:C8	3.09	0.41
4:L5:2616:C:C2	4:L5:2722:G:N2	2.89	0.41
4:L5:2638:G:H4'	38:Lg:24:ARG:HD3	2.01	0.41
4:L5:2664:G:O6	4:L5:2671:C:N4	2.54	0.41
4:L5:2838:G:H2'	4:L5:2839:PSU:H6	1.84	0.41
4:L5:3696:C:O2'	4:L5:3816:A:N1	2.49	0.41
4:L5:4103:C:H2'	4:L5:4105:A:N3	2.36	0.41
4:L5:4443:C:O2	4:L5:4444:C:N4	2.53	0.41
4:L5:4628:PSU:HN3	4:L5:4672:A:H1'	1.85	0.41
6:L8:9:A:H2'	6:L8:10:G:H8	1.85	0.41
6:L8:134:G:H2'	6:L8:135:C:H6	1.86	0.41
14:LH:11:ASP:OD1	14:LH:54:ARG:HG2	2.21	0.41
14:LH:102:ASN:HB2	14:LH:115:ARG:HB2	2.02	0.41
55:SP:120:SER:O	55:SP:120:SER:OG	2.35	0.41
60:SU:96:GLU:HB3	60:SU:100:GLN:OE1	2.20	0.41
68:SC:95:ASP:OD1	68:SC:95:ASP:N	2.51	0.41
69:SE:35:PRO:HB3	69:SE:144:ALA:H	1.85	0.41
70:SG:173:ALA:HB3	84:S2:78:C:H5'	2.01	0.41
75:SN:38:TYR:O	75:SN:42:LYS:HG2	2.21	0.41
84:S2:350:C:O2'	84:S2:383:G:N1	2.32	0.41
84:S2:737:G:H2'	84:S2:738:C:H4'	2.01	0.41
84:S2:890:U:H5	84:S2:897:U:C4	2.39	0.41
84:S2:1387:G:C2	84:S2:1388:A:H1'	2.55	0.41
84:S2:1540:G:C6	84:S2:1594:A:C6	3.08	0.41
84:S2:1847:G:H2'	84:S2:1848:U:C6	2.56	0.41
4:L5:172:C:H4'	4:L5:173:C:H5'	2.03	0.41
4:L5:265:C:H1'	4:L5:266:C:H5"	2.02	0.41
4:L5:505:G:N1	4:L5:654:C:H1'	2.36	0.41
4:L5:705:G:H2'	4:L5:706:C:C6	2.55	0.41
4:L5:1094:G:O6	4:L5:1201:U:C2	2.72	0.41
4:L5:1094:G:C5	4:L5:1203:G:C2	3.08	0.41
4:L5:1822:U:C2	4:L5:1823:G:C8	3.09	0.41
4:L5:2372:U:H2'	4:L5:2373:C:C6	2.55	0.41
4:L5:2476:G:H2'	4:L5:2477:A:C8	2.55	0.41
4:L5:2498:C:H2'	4:L5:2499:C:H6	1.86	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2752:G:H2'	4:L5:2753:G:C8	2.56	0.41
4:L5:3640:U:H3'	4:L5:3646:A:N6	2.35	0.41
4:L5:3882:C:H2'	4:L5:3883:U:C6	2.55	0.41
4:L5:3927:U:H2'	4:L5:3928:A:H8	1.86	0.41
4:L5:3933:G:H2'	4:L5:3934:G:C8	2.56	0.41
4:L5:4141:G:H5'	4:L5:4142:C:C5	2.56	0.41
4:L5:4613:C:N3	14:LH:121:LYS:HD2	2.36	0.41
4:L5:4923:C:C2	4:L5:4924:C:N3	2.89	0.41
4:L5:4958:C:H2'	4:L5:4959:U:H6	1.86	0.41
4:L5:5066:U:H2'	4:L5:5067:U:C6	2.55	0.41
5:L7:71:G:H2'	5:L7:72:U:C6	2.56	0.41
9:LC:60:HIS:HA	9:LC:92:PHE:CE1	2.56	0.41
12:LF:161:LYS:HG3	12:LF:209:TRP:CZ3	2.56	0.41
22:LQ:85:THR:HA	22:LQ:104:ARG:O	2.20	0.41
29:LX:121:VAL:HA	29:LX:140:LEU:HA	2.03	0.41
36:Le:81:ASN:HA	36:Le:111:ILE:HD11	2.03	0.41
38:Lg:69:LYS:HG3	38:Lg:73:HIS:CD2	2.56	0.41
41:Lj:21:ARG:O	41:Lj:23:GLY:N	2.54	0.41
51:SD:135:GLU:HB3	51:SD:157:MET:HE3	2.03	0.41
59:ST:71:GLY:O	59:ST:75:MET:HG2	2.21	0.41
68:SC:138:GLY:HA3	68:SC:162:ILE:HD13	2.03	0.41
79:SX:140:ARG:NH2	79:SX:142:ARG:HH21	2.19	0.41
80:SY:9:THR:HA	80:SY:25:ILE:HG22	2.02	0.41
84:S2:212:C:N4	84:S2:213:G:O6	2.54	0.41
84:S2:549:C:H2'	84:S2:550:C:C6	2.56	0.41
84:S2:808:A:H2'	84:S2:809:A:C8	2.55	0.41
84:S2:964:A:H2'	84:S2:965:U:H6	1.86	0.41
3:AT:50:C:H2'	3:AT:51:U:H6	1.86	0.41
4:L5:447:C:H2'	4:L5:448:G:H8	1.81	0.41
4:L5:745:G:H2'	4:L5:746:A:C8	2.56	0.41
4:L5:1404:G:N7	4:L5:1408:G:C2	2.89	0.41
4:L5:1602:U:H2'	4:L5:1603:C:H6	1.86	0.41
4:L5:1847:C:H2'	4:L5:1848:C:H6	1.86	0.41
4:L5:1887:G:H21	4:L5:1938:C:N4	2.18	0.41
4:L5:2602:G:O4'	4:L5:2742:G:H2'	2.20	0.41
4:L5:2666:U:O4	23:LR:128:LYS:HE2	2.20	0.41
4:L5:2708:U:H3	4:L5:2709:C:H5	1.69	0.41
4:L5:3718:A2M:H2'	4:L5:3719:A:O4'	2.21	0.41
4:L5:4212:A:N1	25:LT:3:ASN:ND2	2.62	0.41
4:L5:4524:G:N3	8:LB:252:ALA:HB1	2.36	0.41
4:L5:4601:U:OP2	4:L5:4609:G:N1	2.49	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L7:19:C:H2'	5:L7:20:U:H6	1.83	0.41
5:L7:23:A:H2'	5:L7:24:C:H6	1.85	0.41
7:LA:103:PRO:HA	7:LA:163:ARG:HA	2.02	0.41
10:LD:239:MET:HA	10:LD:242:LYS:HZ3	1.85	0.41
14:LH:52:LYS:HB2	14:LH:54:ARG:HH11	1.86	0.41
33:Lb:99:ILE:O	33:Lb:109:ARG:NH1	2.54	0.41
54:SM:87:GLU:HG3	54:SM:103:VAL:HG11	2.03	0.41
57:SR:89:SER:N	57:SR:92:ASP:OD2	2.53	0.41
58:SS:105:ASN:HB2	58:SS:108:ARG:HH21	1.84	0.41
65:Sg:191:HIS:CG	65:Sg:195:LEU:HD21	2.56	0.41
68:SC:64:THR:HG22	68:SC:66:LEU:N	2.35	0.41
77:SV:57:GLY:HA2	77:SV:60:ARG:HG2	2.02	0.41
80:SY:51:THR:OG1	80:SY:53:ASP:OD1	2.23	0.41
84:S2:1172:U:H2'	84:S2:1173:A:C8	2.56	0.41
84:S2:1222:G:H2'	84:S2:1223:A:H8	1.86	0.41
84:S2:1540:G:H2'	84:S2:1541:G:H8	1.86	0.41
84:S2:1796:G:H2'	84:S2:1797:U:C6	2.55	0.41
1:Pt:62:C:H2'	1:Pt:63:G:C8	2.56	0.41
1:Pt:74:C:H2'	1:Pt:75:C:C6	2.56	0.41
2:CF:368:ILE:HG23	2:CF:408:LYS:HB3	2.01	0.41
4:L5:308:G:O2'	40:Li:31:GLY:O	2.39	0.41
4:L5:387:G:HO2'	4:L5:412:G:H1	1.67	0.41
4:L5:693:C:H2'	4:L5:694:C:C6	2.56	0.41
4:L5:737:C:C5	4:L5:739:G:H5"	2.56	0.41
4:L5:1340:OMC:H2'	4:L5:1341:U:H6	1.84	0.41
4:L5:1354:A:OP1	22:LQ:88:ASP:HB3	2.20	0.41
4:L5:1512:G:H2'	4:L5:1513:U:C6	2.55	0.41
4:L5:2633:U:H2'	4:L5:2634:C:H6	1.85	0.41
4:L5:2824:OMC:H2'	4:L5:2825:A:C8	2.56	0.41
4:L5:2861:OMC:H1'	4:L5:2861:OMC:HM23	1.74	0.41
4:L5:3684:G:P	7:LA:174:ARG:HH22	2.43	0.41
4:L5:3689:G:C6	4:L5:3690:U:C4	3.09	0.41
4:L5:4938:A:P	11:LE:183:ARG:HH21	2.44	0.41
4:L5:5043:A:H2'	4:L5:5044:A:H8	1.85	0.41
9:LC:51:PRO:HB3	9:LC:111:TRP:NE1	2.35	0.41
16:LJ:19:LYS:HD3	16:LJ:75:ARG:NH1	2.36	0.41
26:LU:28:PRO:HB2	26:LU:34:MET:HG3	2.02	0.41
34:Lc:65:MET:HE3	34:Lc:65:MET:HB3	1.95	0.41
36:Le:124:ASN:OD1	36:Le:124:ASN:N	2.53	0.41
40:Li:76:ARG:HD3	40:Li:76:ARG:HA	1.75	0.41
42:Lk:26:LYS:HB3	42:Lk:33:LYS:HB2	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:Lk:68:GLU:HG3	42:Lk:70:LYS:H	1.86	0.41
57:SR:7:LYS:HG3	84:S2:1373:C:OP1	2.20	0.41
59:ST:38:LYS:NZ	84:S2:1628:C:OP1	2.36	0.41
59:ST:102:ARG:HD3	59:ST:102:ARG:HA	1.95	0.41
60:SU:19:ARG:NH1	60:SU:92:HIS:HB3	2.34	0.41
65:Sg:300:ALA:HB3	65:Sg:310:TRP:HE1	1.86	0.41
68:SC:90:GLU:HB2	68:SC:92:GLU:OE1	2.21	0.41
69:SE:28:ALA:O	84:S2:496:C:H4'	2.20	0.41
78:SW:35:VAL:O	78:SW:39:THR:OG1	2.32	0.41
83:Se:58:ASN:N	84:S2:607:U:OP1	2.40	0.41
84:S2:39:A:H2'	84:S2:40:A:O4'	2.21	0.41
84:S2:147:A:H2'	84:S2:148:U:H6	1.86	0.41
84:S2:998:A:O2'	84:S2:1034:A:O4'	2.34	0.41
84:S2:1213:C:H2'	84:S2:1214:A:H8	1.86	0.41
84:S2:1229:G:H2'	84:S2:1230:C:C6	2.56	0.41
84:S2:1373:C:H2'	84:S2:1374:C:H6	1.85	0.41
84:S2:1402:A:N6	84:S2:1441:U:O2'	2.53	0.41
84:S2:1630:A:N3	84:S2:1630:A:H2'	2.36	0.41
84:S2:1738:C:H2'	84:S2:1739:C:C6	2.56	0.41
2:CF:246:LEU:HD23	2:CF:328:ASP:HB2	2.03	0.41
2:CF:272:LEU:HB3	2:CF:302:ALA:HB3	2.03	0.41
3:AT:10:G:H2'	3:AT:11:U:H6	1.86	0.41
3:AT:26:C:C2'	3:AT:27:G:H5'	2.50	0.41
4:L5:62:A:H2'	4:L5:63:G:C8	2.55	0.41
4:L5:457:G:C6	4:L5:700:G:N1	2.89	0.41
4:L5:476:G:H2'	4:L5:477:C:C6	2.56	0.41
4:L5:480:C:H2'	4:L5:481:G:C8	2.56	0.41
4:L5:968:C:H1'	4:L5:969:C:H5	1.85	0.41
4:L5:1309:C:H2'	4:L5:1310:C:C6	2.55	0.41
4:L5:1824:G:H5"	25:LT:35:LYS:HE2	2.02	0.41
4:L5:1950:U:H2'	4:L5:1951:G:C8	2.56	0.41
4:L5:1977:C:O2'	4:L5:1978:C:OP1	2.38	0.41
4:L5:2354:G:H2'	4:L5:2355:G:C8	2.56	0.41
4:L5:2635:U:H2'	4:L5:2636:U:C6	2.55	0.41
4:L5:2838:G:H2'	4:L5:2839:PSU:C6	2.56	0.41
4:L5:2883:G:C2	4:L5:2884:G:C8	3.09	0.41
4:L5:3598:C:H2'	4:L5:3599:A:H8	1.83	0.41
4:L5:3600:G:H2'	4:L5:3601:C:C6	2.56	0.41
4:L5:3772:U:H3	4:L5:3776:G:H22	1.69	0.41
4:L5:3945:A:H2'	4:L5:3946:G:C8	2.56	0.41
4:L5:4175:G:H2'	4:L5:4176:C:C6	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4176:C:H2'	4:L5:4177:C:C6	2.56	0.41
4:L5:4339:A:C8	4:L5:4377:G:C2	3.09	0.41
4:L5:4371:G:O2'	4:L5:4372:U:OP2	2.36	0.41
4:L5:4503:A:H2'	4:L5:4504:C:C6	2.56	0.41
4:L5:4621:C:H2'	4:L5:4622:A:C8	2.53	0.41
4:L5:4691:A:OP1	14:LH:75:SER:OG	2.35	0.41
4:L5:4695:C:H2'	4:L5:4696:C:O4'	2.21	0.41
4:L5:4908:G:C6	4:L5:4912:G:C6	3.08	0.41
4:L5:4941:G:OP2	11:LE:188:ARG:NH2	2.27	0.41
6:L8:89:U:H2'	6:L8:90:C:H6	1.86	0.41
6:L8:120:G:H2'	6:L8:121:G:C8	2.55	0.41
6:L8:153:C:H2'	6:L8:154:G:C8	2.54	0.41
8:LB:117:ARG:HA	8:LB:177:LYS:HD2	2.03	0.41
9:LC:60:HIS:CD2	9:LC:100:ARG:HB2	2.56	0.41
10:LD:164:LYS:HE2	10:LD:195:HIS:HE1	1.86	0.41
11:LE:145:THR:HG23	11:LE:200:LYS:HZ2	1.84	0.41
12:LF:184:ILE:HG23	12:LF:189:ASP:HB3	2.03	0.41
13:LG:154:LEU:HB3	13:LG:204:PHE:HB2	2.03	0.41
17:LL:8:MET:HB2	22:LQ:166:TYR:HB3	2.03	0.41
18:LM:24:LEU:O	18:LM:43:THR:OG1	2.26	0.41
19:LN:48:ALA:C	19:LN:53:TYR:HB3	2.46	0.41
20:LO:7:LEU:HD23	20:LO:33:VAL:HG13	2.02	0.41
21:LP:94:MET:SD	21:LP:148:MET:HE3	2.61	0.41
21:LP:105:LYS:HE2	21:LP:105:LYS:HB3	1.91	0.41
22:LQ:22:ASP:HB3	22:LQ:25:LEU:HB3	2.03	0.41
23:LR:112:SER:OG	23:LR:114:LYS:HG3	2.20	0.41
25:LT:50:LYS:HE2	25:LT:50:LYS:HB3	1.79	0.41
28:LW:107:GLN:HB2	28:LW:110:ARG:HH21	1.85	0.41
35:Ld:102:LEU:HD23	35:Ld:102:LEU:HA	1.93	0.41
38:Lg:60:ARG:HD2	38:Lg:60:ARG:HA	1.81	0.41
44:Lm:98:LYS:HG3	44:Lm:118:THR:HG21	2.03	0.41
45:Ln:1:MET:HG3	84:S2:1706:G:H5'	2.03	0.41
50:Lt:125:LEU:HB3	50:Lt:128:THR:HG23	2.03	0.41
51:SD:55:THR:HA	51:SD:58:VAL:HG12	2.03	0.41
53:SK:85:LEU:HD12	53:SK:86:PRO:HD2	2.03	0.41
54:SM:66:GLU:HA	54:SM:76:LEU:HD11	2.03	0.41
55:SP:29:SER:HB3	55:SP:32:GLN:NE2	2.36	0.41
56:SQ:76:GLY:O	84:S2:1544:C:O2'	2.33	0.41
58:SS:110:ASP:OD1	58:SS:113:ARG:NH2	2.36	0.41
62:Sc:24:GLN:NE2	84:S2:1683:C:O2	2.52	0.41
66:SA:10:MET:HE2	66:SA:18:PHE:CE2	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SB:70:SER:OG	67:SB:71:LEU:N	2.53	0.41
67:SB:162:ARG:NH1	84:S2:1005:G:OP2	2.35	0.41
69:SE:38:LEU:HD23	84:S2:346:C:H5"	2.02	0.41
71:SH:126:HIS:CD2	71:SH:181:THR:HG23	2.56	0.41
72:SI:64:ASN:ND2	84:S2:303:C:O4'	2.51	0.41
72:SI:150:ASP:HA	72:SI:153:LYS:CG	2.49	0.41
80:SY:68:LYS:HE2	80:SY:68:LYS:HB3	1.74	0.41
80:SY:129:LYS:HA	80:SY:129:LYS:HD3	1.79	0.41
84:S2:12:U:H2'	84:S2:13:C:H6	1.85	0.41
84:S2:71:G:N2	84:S2:73:C:OP1	2.54	0.41
84:S2:141:A:O2'	84:S2:178:C:N3	2.48	0.41
84:S2:152:U:C2	84:S2:153:G:C8	3.09	0.41
84:S2:550:C:H2'	84:S2:551:U:C6	2.56	0.41
84:S2:875:A:H2'	84:S2:876:C:C6	2.55	0.41
84:S2:924:G:H1	84:S2:1018:U:H3	1.67	0.41
84:S2:1011:A:C4	84:S2:1012:A:C8	3.09	0.41
84:S2:1017:U:H2'	84:S2:1018:U:C6	2.53	0.41
84:S2:1101:U:C2	84:S2:1102:G:N7	2.89	0.41
84:S2:1262:C:H2'	84:S2:1263:U:O4'	2.21	0.41
84:S2:1564:C:H2'	84:S2:1565:C:H6	1.86	0.41
84:S2:1644:C:H2'	84:S2:1645:C:C6	2.56	0.41
84:S2:1788:A:H2'	84:S2:1789:G:O4'	2.20	0.41
84:S2:1857:G:H2'	84:S2:1858:G:H8	1.85	0.41
2:CF:258:GLY:HA3	84:S2:50:A:C4	2.56	0.41
2:CF:277:VAL:HG13	2:CF:329:SER:HB3	2.03	0.41
4:L5:302:C:P	19:LN:68:ARG:HH21	2.44	0.41
4:L5:1323:A2M:O5'	4:L5:1323:A2M:H8	2.21	0.41
4:L5:1403:G:C2	4:L5:1404:G:C2	3.09	0.41
4:L5:1511:U:C2	4:L5:1512:G:C8	3.09	0.41
4:L5:1602:U:H2'	4:L5:1603:C:C6	2.55	0.41
4:L5:2088:A:OP2	22:LQ:37:ARG:NH2	2.54	0.41
4:L5:2296:G:C6	4:L5:2297:G:C5	3.09	0.41
4:L5:2318:G:N1	4:L5:2322:G:C6	2.89	0.41
4:L5:2598:A:H2'	4:L5:2599:G:O4'	2.21	0.41
4:L5:2690:C:H2'	4:L5:2691:U:C6	2.56	0.41
4:L5:4171:C:C2	4:L5:4172:A:C8	3.09	0.41
4:L5:4340:U:H3	90:L5:5295:3HE:C11	2.30	0.41
4:L5:4910:G:N1	20:LO:108:ILE:O	2.54	0.41
4:L5:4929:C:H5"	18:LM:114:LYS:HD2	2.03	0.41
5:L7:91:C:H2'	5:L7:92:C:C6	2.56	0.41
15:LI:63:GLU:H	15:LI:63:GLU:CD	2.28	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:LI:97:ILE:HG13	15:LI:124:GLY:H	1.86	0.41
18:LM:8:GLU:OE2	18:LM:61:ILE:HD13	2.20	0.41
23:LR:4:LEU:HD11	23:LR:29:THR:HG23	2.02	0.41
26:LU:80:LYS:HG2	26:LU:110:TYR:CE2	2.56	0.41
29:LX:77:ILE:HD13	29:LX:100:VAL:HG12	2.03	0.41
35:Ld:64:ILE:HG23	35:Ld:68:LEU:HD23	2.01	0.41
39:Lh:113:LEU:HD23	39:Lh:113:LEU:HA	1.85	0.41
54:SM:60:MET:HB2	54:SM:63:LYS:HD2	2.03	0.41
56:SQ:109:LYS:O	56:SQ:113:ILE:HG12	2.21	0.41
57:SR:20:TYR:O	57:SR:24:LEU:HG	2.21	0.41
61:SZ:56:ASP:OD1	61:SZ:57:LYS:N	2.54	0.41
66:SA:111:GLN:HA	66:SA:116:PHE:CG	2.56	0.41
67:SB:198:GLU:HB2	67:SB:210:VAL:HG21	2.03	0.41
71:SH:118:ARG:HD3	71:SH:118:ARG:HA	1.93	0.41
73:SJ:109:ARG:NH2	73:SJ:111:GLN:OE1	2.55	0.41
76:SO:71:PRO:HB3	76:SO:114:SER:OG	2.20	0.41
84:S2:324:C:O2'	84:S2:325:C:O4'	2.28	0.41
84:S2:382:C:H2'	84:S2:383:G:C8	2.56	0.41
84:S2:437:G:H2'	84:S2:438:G:O4'	2.20	0.41
84:S2:521:A:H2'	84:S2:522:A:O4'	2.21	0.41
84:S2:627:OMU:H2'	84:S2:627:OMU:H6	1.80	0.41
84:S2:651:PSU:H2'	84:S2:652:U:H6	1.85	0.41
84:S2:694:G:O6	84:S2:737:G:H1'	2.21	0.41
84:S2:750:C:C2	84:S2:752:G:N2	2.88	0.41
84:S2:946:U:H2'	84:S2:947:G:C8	2.55	0.41
84:S2:979:C:H2'	84:S2:980:A:H8	1.86	0.41
84:S2:1189:A:H2'	84:S2:1190:A:H8	1.86	0.41
84:S2:1316:C:H2'	84:S2:1317:C:H6	1.86	0.41
84:S2:1775:U:H2'	84:S2:1776:G:C4	2.56	0.41
2:CF:281:ALA:HB2	2:CF:334:PRO:HB2	2.03	0.40
4:L5:55:G:P	41:Lj:43:ARG:HH12	2.44	0.40
4:L5:99:A:H4'	19:LN:181:HIS:CD2	2.56	0.40
4:L5:149:A:P	4:L5:151:G:H5'	2.61	0.40
4:L5:423:G:H21	21:LP:118:GLN:NE2	2.19	0.40
4:L5:502:C:O2'	4:L5:503:C:H2'	2.21	0.40
4:L5:920:C:H2'	4:L5:921:C:H6	1.84	0.40
4:L5:1430:C:H2'	4:L5:1431:C:H6	1.84	0.40
4:L5:1856:C:H2'	4:L5:1857:C:C6	2.57	0.40
4:L5:2078:C:H2'	4:L5:2079:G:H8	1.85	0.40
4:L5:2092:G:O2'	4:L5:2093:A:OP2	2.38	0.40
4:L5:2276:A:H2'	4:L5:2277:C:C6	2.56	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2551:A:H2'	4:L5:2552:G:O4'	2.21	0.40
4:L5:3774:A:H2'	4:L5:3775:A:C8	2.55	0.40
4:L5:3789:C:OP2	4:L5:3790:U:O2'	2.29	0.40
4:L5:3813:A:N3	4:L5:4538:G:O2'	2.46	0.40
4:L5:4127:A:HO2'	4:L5:4128:A:H8	1.67	0.40
4:L5:4588:U:P	87:L5:5287:SPM:HN11	2.44	0.40
5:L7:55:A:C4	5:L7:56:G:C8	3.09	0.40
9:LC:152:LEU:HA	9:LC:152:LEU:HD12	1.85	0.40
9:LC:190:ARG:HB2	9:LC:202:ILE:HG23	2.03	0.40
11:LE:223:ARG:NH2	11:LE:238:GLU:HG3	2.36	0.40
27:LV:22:VAL:HG23	27:LV:53:PRO:O	2.21	0.40
31:LZ:76:ASN:ND2	31:LZ:78:ASN:HD22	2.18	0.40
36:Le:23:HIS:CE1	36:Le:24:GLN:HG3	2.56	0.40
49:Ls:29:ILE:HG22	49:Ls:88:PHE:HD1	1.86	0.40
52:SF:51:HIS:NE2	84:S2:1674:G:OP1	2.41	0.40
52:SF:103:LEU:HD11	61:SZ:67:LEU:HD22	2.03	0.40
56:SQ:77:HIS:O	56:SQ:81:ILE:HG12	2.21	0.40
59:ST:112:MET:HG3	59:ST:113:VAL:HG23	2.03	0.40
61:SZ:102:LYS:HA	61:SZ:102:LYS:HD3	1.80	0.40
65:Sg:178:ASN:HB3	65:Sg:181:ASN:OD1	2.22	0.40
71:SH:58:LYS:HA	71:SH:58:LYS:HD2	1.81	0.40
72:SI:83:TYR:HB3	72:SI:101:ILE:HD11	2.02	0.40
72:SI:141:ARG:CZ	84:S2:191:A:H5"	2.50	0.40
73:SJ:60:LEU:HD23	73:SJ:60:LEU:HA	1.83	0.40
77:SV:4:ASP:OD1	77:SV:5:ALA:N	2.53	0.40
84:S2:497:C:H2'	84:S2:498:C:C6	2.56	0.40
84:S2:1374:C:H2'	84:S2:1375:G:O4'	2.21	0.40
84:S2:1538:C:H2'	84:S2:1539:U:H6	1.85	0.40
84:S2:1671:G:H2'	84:S2:1672:U:H6	1.86	0.40
2:CF:237:PRO:HA	2:CF:238:PRO:HD3	1.94	0.40
4:L5:299:C:O2'	19:LN:95:ALA:O	2.39	0.40
4:L5:422:C:H2'	4:L5:423:G:H8	1.85	0.40
4:L5:1082:C:O2'	4:L5:1083:U:H6	2.04	0.40
4:L5:1263:A:H2'	4:L5:1264:C:H6	1.83	0.40
4:L5:1299:G:H2'	4:L5:1300:G:H8	1.86	0.40
4:L5:1308:C:H2'	4:L5:1309:C:H6	1.85	0.40
4:L5:1608:G:C6	4:L5:1609:U:C4	3.09	0.40
4:L5:2082:G:H2'	4:L5:2083:C:C6	2.57	0.40
4:L5:2580:U:O2'	4:L5:2581:A:H5'	2.21	0.40
4:L5:2868:G:N1	4:L5:2881:A:OP1	2.46	0.40
4:L5:3589:G:N1	4:L5:3591:C:O2	2.54	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3650:C:H2'	4:L5:3651:A:C8	2.56	0.40
4:L5:3846:C:H2'	4:L5:3847:C:C6	2.57	0.40
4:L5:4105:A:H4'	4:L5:4106:G:N3	2.35	0.40
4:L5:4859:C:H2'	4:L5:4860:G:H8	1.85	0.40
4:L5:4929:C:H2'	4:L5:4930:C:C6	2.56	0.40
6:L8:14:U:C4	6:L8:15:G:C6	3.10	0.40
6:L8:116:C:H2'	6:L8:117:C:H6	1.86	0.40
9:LC:162:LYS:HD3	9:LC:216:GLY:HA3	2.03	0.40
23:LR:90:PRO:HB2	23:LR:93:VAL:HG23	2.03	0.40
28:LW:93:LYS:HD2	28:LW:93:LYS:HA	1.92	0.40
31:LZ:7:PRO:HA	31:LZ:25:ILE:HG22	2.04	0.40
31:LZ:89:ILE:HG22	31:LZ:91:LEU:HG	2.03	0.40
62:Sc:48:GLY:O	62:Sc:50:VAL:HG23	2.21	0.40
65:Sg:5:MET:HE2	65:Sg:298:LEU:HB3	2.03	0.40
65:Sg:87:LEU:HD21	65:Sg:122:SER:HB3	2.03	0.40
65:Sg:88:ARG:CZ	65:Sg:100:ARG:HD3	2.52	0.40
67:SB:168:MET:O	67:SB:172:MET:HG3	2.22	0.40
69:SE:3:ARG:HD3	84:S2:449:A:H4'	2.03	0.40
70:SG:188:LYS:HA	70:SG:191:ARG:HG2	2.04	0.40
71:SH:147:LYS:HB2	71:SH:151:SER:OG	2.21	0.40
72:SI:125:LYS:HA	72:SI:125:LYS:HD3	1.98	0.40
84:S2:222:U:H2'	84:S2:223:C:H6	1.85	0.40
84:S2:1316:C:H2'	84:S2:1317:C:C6	2.56	0.40
84:S2:1328:OMG:HN1	84:S2:1501:C:H42	1.69	0.40
84:S2:1564:C:H2'	84:S2:1565:C:C6	2.55	0.40
84:S2:1596:U:H2'	84:S2:1597:C:O4'	2.21	0.40
2:CF:49:MET:HE1	2:CF:68:GLU:HA	2.03	0.40
4:L5:91:G:C5	88:L5:5260:SPD:H42	2.57	0.40
4:L5:324:A:H2'	4:L5:325:U:C6	2.56	0.40
4:L5:715:G:OP1	9:LC:321:ASN:ND2	2.54	0.40
4:L5:909:A:H2'	4:L5:910:G:C8	2.55	0.40
4:L5:1661:C:H2'	4:L5:1662:C:H6	1.87	0.40
4:L5:1953:U:H2'	4:L5:1954:U:H6	1.86	0.40
4:L5:1957:U:H2'	4:L5:1958:A:H8	1.85	0.40
4:L5:1985:G:H2'	4:L5:1986:U:C6	2.56	0.40
4:L5:2737:C:H2'	4:L5:2738:C:C6	2.56	0.40
4:L5:4115:G:O2'	4:L5:4116:C:O5'	2.36	0.40
4:L5:4330:G:H2'	4:L5:4331:G:C8	2.57	0.40
4:L5:4344:U:H2'	4:L5:4345:C:C6	2.57	0.40
4:L5:4456:OMC:H2'	4:L5:4457:PSU:H6	1.86	0.40
4:L5:4974:C:H4'	8:LB:174:ARG:NH1	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:5053:U:H3'	4:L5:5054:C:C6	2.56	0.40
18:LM:86:TRP:CE2	18:LM:92:ALA:HB2	2.56	0.40
25:LT:142:ARG:NH1	25:LT:144:ASN:OD1	2.54	0.40
29:LX:155:ILE:HA	39:Lh:37:THR:HG21	2.03	0.40
32:La:99:PRO:HG2	32:La:122:VAL:HG23	2.03	0.40
34:Lc:60:ILE:HD13	34:Lc:93:THR:HG21	2.03	0.40
46:Lo:32:SER:C	46:Lo:34:TYR:H	2.29	0.40
52:SF:59:LYS:HB3	52:SF:62:ARG:HG3	2.02	0.40
55:SP:128:HIS:NE2	84:S2:1521:C:H1'	2.37	0.40
57:SR:109:LEU:HG	57:SR:111:PHE:HD2	1.87	0.40
59:ST:42:HIS:HB3	59:ST:93:SER:HB2	2.03	0.40
60:SU:31:SER:O	60:SU:34:LYS:HG3	2.21	0.40
64:Sf:133:ALA:N	64:Sf:140:TYR:O	2.41	0.40
67:SB:88:THR:HA	67:SB:98:THR:HA	2.04	0.40
69:SE:139:LEU:HB3	69:SE:147:ILE:HG13	2.02	0.40
71:SH:84:GLU:HG2	71:SH:90:LYS:O	2.21	0.40
72:SI:141:ARG:NH1	84:S2:191:A:H5"	2.37	0.40
74:SL:82:MET:HE3	74:SL:82:MET:HB2	1.81	0.40
80:SY:120:THR:OG1	80:SY:123:ALA:HB3	2.22	0.40
84:S2:490:C:H2'	84:S2:491:C:H6	1.85	0.40
84:S2:751:G:H1'	84:S2:793:G:N2	2.33	0.40
84:S2:1728:U:H2'	84:S2:1729:U:O4'	2.21	0.40
84:S2:1865:C:H5'	84:S2:1866:A:C8	2.57	0.40
2:CF:41:LYS:HA	2:CF:44:LYS:HE2	2.03	0.40
2:CF:242:THR:HG23	2:CF:271:VAL:HG23	2.02	0.40
4:L5:19:G:P	39:Lh:93:ARG:HE	2.45	0.40
4:L5:29:G:C6	4:L5:54:G:C6	3.10	0.40
4:L5:189:G:H2'	4:L5:190:G:C8	2.56	0.40
4:L5:280:G:OP2	19:LN:44:ARG:NH1	2.55	0.40
4:L5:493:G:HO2'	4:L5:494:U:P	2.43	0.40
4:L5:755:C:H2'	4:L5:756:G:C8	2.56	0.40
4:L5:1334:A:H2'	4:L5:1335:G:C8	2.55	0.40
4:L5:1950:U:H2'	4:L5:1951:G:H8	1.87	0.40
4:L5:2299:G:C2	4:L5:2336:G:C5	3.09	0.40
4:L5:2365:OMC:HM21	4:L5:2828:U:H2'	2.02	0.40
4:L5:2508:U:H2'	4:L5:2509:C:H6	1.86	0.40
4:L5:2644:G:H2'	4:L5:2645:G:H8	1.86	0.40
4:L5:2734:U:H2'	4:L5:2735:G:C8	2.56	0.40
4:L5:4140:C:O2	4:L5:4145:C:O2'	2.36	0.40
4:L5:4401:G:H2'	4:L5:4402:C:H6	1.87	0.40
4:L5:4448:G:H5"	4:L5:4449:A:C5'	2.52	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4575:G:C6	4:L5:5069:U:C4	3.09	0.40
4:L5:4726:G:C6	4:L5:4727:A:C6	3.10	0.40
4:L5:4769:G:H5"	20:LO:176:ARG:HD3	2.04	0.40
4:L5:4923:C:N4	4:L5:4924:C:H42	2.19	0.40
5:L7:58:A:H2'	5:L7:59:G:C8	2.56	0.40
6:L8:3:A:O2'	21:LP:61:ARG:NH1	2.47	0.40
6:L8:26:C:H2'	6:L8:27:U:C6	2.57	0.40
8:LB:92:TYR:HB3	8:LB:99:LEU:HD22	2.02	0.40
9:LC:33:ARG:HG3	9:LC:35:ASP:OD1	2.21	0.40
19:LN:71:ARG:O	19:LN:92:LEU:HB2	2.21	0.40
26:LU:98:ASP:OD2	85:CI:59:GLN:HG2	2.22	0.40
32:La:98:ALA:HB1	32:La:122:VAL:HA	2.04	0.40
49:Ls:81:HIS:ND1	49:Ls:81:HIS:O	2.55	0.40
50:Lt:147:HIS:HA	50:Lt:148:PRO:HD3	1.81	0.40
51:SD:15:GLY:HA3	63:Sd:50:ILE:HG23	2.03	0.40
55:SP:79:HIS:CE1	84:S2:1298:G:C5	3.09	0.40
55:SP:99:GLY:O	84:S2:1268:C:H1'	2.22	0.40
67:SB:29:ASP:HB3	67:SB:51:ARG:NH1	2.37	0.40
70:SG:71:GLY:O	70:SG:98:ARG:HD2	2.21	0.40
70:SG:121:ILE:HB	70:SG:125:THR:HG23	2.03	0.40
70:SG:136:LYS:HB2	84:S2:65:C:H41	1.85	0.40
71:SH:46:THR:N	71:SH:63:PHE:O	2.52	0.40
79:SX:93:PHE:CE1	79:SX:133:LEU:HB3	2.57	0.40
80:SY:20:ARG:HB2	80:SY:75:ILE:O	2.21	0.40
84:S2:197:U:C4	84:S2:203:G:H1'	2.56	0.40
84:S2:1348:G:OP2	84:S2:1348:G:N2	2.54	0.40
84:S2:1607:A:C5	84:S2:1608:U:C4	3.09	0.40
84:S2:1791:A:H2'	84:S2:1792:G:O4'	2.22	0.40
2:CF:333:PRO:HA	2:CF:334:PRO:HD2	1.99	0.40
4:L5:49:U:H2'	4:L5:50:C:H6	1.87	0.40
4:L5:85:G:H22	4:L5:97:G:H3'	1.86	0.40
4:L5:291:U:O4	46:Lo:43:ARG:NH2	2.55	0.40
4:L5:700:G:O6	4:L5:701:G:O6	2.39	0.40
4:L5:1922:G:C2	4:L5:2063:G:C5	3.09	0.40
4:L5:1996:C:H6	4:L5:1996:C:O5'	2.04	0.40
4:L5:2034:G:H2'	4:L5:2035:C:C6	2.57	0.40
4:L5:2375:A:H2'	4:L5:2376:A:H8	1.86	0.40
4:L5:2392:C:H2'	4:L5:2393:C:C6	2.56	0.40
4:L5:2703:G:C6	4:L5:2714:G:C6	3.10	0.40
4:L5:2870:A:H2'	4:L5:2871:A:H8	1.86	0.40
4:L5:3658:C:H2'	4:L5:3659:G:H8	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3883:U:H2'	4:L5:3884:PSU:C6	2.57	0.40
4:L5:4346:U:O2'	46:Lo:80:LYS:O	2.29	0.40
4:L5:4629:U:C2	4:L5:4630:G:C8	3.10	0.40
87:L5:5266:SPM:H21	19:LN:81:TYR:CE1	2.56	0.40
9:LC:140:LYS:HD2	9:LC:140:LYS:HA	1.96	0.40
9:LC:289:LEU:HD23	9:LC:289:LEU:HA	1.86	0.40
10:LD:51:MET:HB2	10:LD:144:CYS:SG	2.61	0.40
10:LD:254:GLU:OE1	10:LD:254:GLU:N	2.54	0.40
15:LI:46:PHE:HD2	15:LI:139:ARG:HG3	1.87	0.40
28:LW:72:THR:OG1	28:LW:73:ARG:N	2.53	0.40
30:LY:106:ILE:HG21	30:LY:109:LEU:HD23	2.04	0.40
42:Lk:26:LYS:HB2	42:Lk:69:LEU:HD12	2.04	0.40
43:Ll:24:PRO:HB2	43:Ll:27:ILE:HG12	2.04	0.40
49:Ls:51:ALA:HB1	49:Ls:90:PHE:O	2.22	0.40
62:Sc:39:SER:HB2	81:Sa:51:ARG:HH12	1.86	0.40
66:SA:66:VAL:HG23	77:SV:37:ALA:HB3	2.04	0.40
66:SA:155:ARG:HH21	84:S2:1137:U:H4'	1.87	0.40
68:SC:211:LYS:HE3	68:SC:211:LYS:HB2	1.95	0.40
69:SE:101:LEU:HA	69:SE:101:LEU:HD12	1.80	0.40
69:SE:163:ASP:N	69:SE:163:ASP:OD1	2.51	0.40
72:SI:159:SER:HB3	72:SI:162:LEU:HD12	2.04	0.40
73:SJ:63:LEU:O	73:SJ:70:ARG:NH1	2.50	0.40
75:SN:17:PRO:HD3	82:Sb:28:PRO:HG3	2.03	0.40
78:SW:42:MET:HE2	78:SW:42:MET:HB3	1.84	0.40
82:Sb:56:CYS:HB2	82:Sb:59:CYS:O	2.22	0.40
84:S2:1135:C:H2'	84:S2:1136:U:C6	2.56	0.40
84:S2:1727:G:H2'	84:S2:1728:U:C6	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	CF	438/441 (99%)	417 (95%)	21 (5%)	0	100	100
7	LA	246/248 (99%)	223 (91%)	23 (9%)	0	100	100
8	LB	400/402 (100%)	380 (95%)	20 (5%)	0	100	100
9	LC	366/368 (100%)	356 (97%)	10 (3%)	0	100	100
10	LD	291/293 (99%)	280 (96%)	11 (4%)	0	100	100
11	LE	236/250 (94%)	220 (93%)	16 (7%)	0	100	100
12	LF	223/225 (99%)	215 (96%)	8 (4%)	0	100	100
13	LG	239/241 (99%)	224 (94%)	15 (6%)	0	100	100
14	LH	188/190 (99%)	180 (96%)	8 (4%)	0	100	100
15	LI	211/213 (99%)	201 (95%)	10 (5%)	0	100	100
16	LJ	168/176 (96%)	159 (95%)	9 (5%)	0	100	100
17	LL	208/210 (99%)	199 (96%)	9 (4%)	0	100	100
18	LM	137/139 (99%)	127 (93%)	10 (7%)	0	100	100
19	LN	201/203 (99%)	197 (98%)	4 (2%)	0	100	100
20	LO	199/201 (99%)	194 (98%)	5 (2%)	0	100	100
21	LP	151/153 (99%)	144 (95%)	7 (5%)	0	100	100
22	LQ	185/187 (99%)	180 (97%)	5 (3%)	0	100	100
23	LR	185/187 (99%)	178 (96%)	7 (4%)	0	100	100
24	LS	173/175 (99%)	162 (94%)	11 (6%)	0	100	100
25	LT	157/159 (99%)	153 (98%)	4 (2%)	0	100	100
26	LU	99/101 (98%)	91 (92%)	8 (8%)	0	100	100
27	LV	129/131 (98%)	123 (95%)	6 (5%)	0	100	100
28	LW	112/124 (90%)	107 (96%)	5 (4%)	0	100	100
29	LX	118/120 (98%)	113 (96%)	5 (4%)	0	100	100
30	LY	132/134 (98%)	127 (96%)	5 (4%)	0	100	100
31	LZ	133/135 (98%)	125 (94%)	8 (6%)	0	100	100
32	La	145/147 (99%)	141 (97%)	4 (3%)	0	100	100
33	Lb	105/121 (87%)	100 (95%)	5 (5%)	0	100	100
34	Lc	96/98 (98%)	92 (96%)	4 (4%)	0	100	100
35	Ld	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
36	Le	126/128 (98%)	124 (98%)	2 (2%)	0	100	100
37	Lf	107/109 (98%)	104 (97%)	3 (3%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	Lg	112/114 (98%)	110 (98%)	2 (2%)	0	100	100
39	Lh	120/122 (98%)	116 (97%)	4 (3%)	0	100	100
40	Li	100/102 (98%)	100 (100%)	0	0	100	100
41	Lj	84/86 (98%)	82 (98%)	2 (2%)	0	100	100
42	Lk	67/69 (97%)	63 (94%)	4 (6%)	0	100	100
43	Ll	48/50 (96%)	45 (94%)	3 (6%)	0	100	100
44	Lm	50/52 (96%)	49 (98%)	1 (2%)	0	100	100
45	Ln	22/24 (92%)	22 (100%)	0	0	100	100
46	Lo	103/105 (98%)	98 (95%)	5 (5%)	0	100	100
47	Lp	89/91 (98%)	86 (97%)	3 (3%)	0	100	100
48	Lr	123/125 (98%)	118 (96%)	5 (4%)	0	100	100
49	Ls	194/196 (99%)	185 (95%)	9 (5%)	0	100	100
50	Lt	128/157 (82%)	107 (84%)	21 (16%)	0	100	100
51	SD	225/227 (99%)	217 (96%)	8 (4%)	0	100	100
52	SF	187/189 (99%)	176 (94%)	11 (6%)	0	100	100
53	SK	96/98 (98%)	89 (93%)	7 (7%)	0	100	100
54	SM	120/122 (98%)	109 (91%)	11 (9%)	0	100	100
55	SP	119/121 (98%)	116 (98%)	3 (2%)	0	100	100
56	SQ	142/144 (99%)	129 (91%)	13 (9%)	0	100	100
57	SR	133/135 (98%)	124 (93%)	8 (6%)	1 (1%)	16	48
58	SS	143/145 (99%)	136 (95%)	6 (4%)	1 (1%)	19	51
59	ST	141/143 (99%)	137 (97%)	4 (3%)	0	100	100
60	SU	102/104 (98%)	98 (96%)	4 (4%)	0	100	100
61	SZ	73/75 (97%)	68 (93%)	5 (7%)	0	100	100
62	Sc	62/64 (97%)	58 (94%)	4 (6%)	0	100	100
63	Sd	53/55 (96%)	51 (96%)	2 (4%)	0	100	100
64	Sf	65/67 (97%)	55 (85%)	10 (15%)	0	100	100
65	Sg	311/313 (99%)	293 (94%)	18 (6%)	0	100	100
66	SA	219/221 (99%)	203 (93%)	16 (7%)	0	100	100
67	SB	212/214 (99%)	202 (95%)	10 (5%)	0	100	100
68	SC	218/222 (98%)	204 (94%)	14 (6%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
69	SE	260/262 (99%)	249 (96%)	11 (4%)	0	100	100
70	SG	235/237 (99%)	219 (93%)	16 (7%)	0	100	100
71	SH	182/189 (96%)	167 (92%)	15 (8%)	0	100	100
72	SI	204/206 (99%)	192 (94%)	12 (6%)	0	100	100
73	SJ	183/185 (99%)	174 (95%)	8 (4%)	1 (0%)	25	57
74	SL	151/153 (99%)	143 (95%)	8 (5%)	0	100	100
75	SN	148/150 (99%)	145 (98%)	3 (2%)	0	100	100
76	SO	135/140 (96%)	128 (95%)	7 (5%)	0	100	100
77	SV	81/83 (98%)	77 (95%)	4 (5%)	0	100	100
78	SW	127/129 (98%)	126 (99%)	1 (1%)	0	100	100
79	SX	139/141 (99%)	133 (96%)	6 (4%)	0	100	100
80	SY	129/131 (98%)	122 (95%)	7 (5%)	0	100	100
81	Sa	100/102 (98%)	97 (97%)	3 (3%)	0	100	100
82	Sb	81/83 (98%)	77 (95%)	4 (5%)	0	100	100
83	Se	56/58 (97%)	49 (88%)	7 (12%)	0	100	100
85	CI	29/31 (94%)	29 (100%)	0	0	100	100
All	All	12110/12348 (98%)	11507 (95%)	600 (5%)	3 (0%)	100	100

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
73	SJ	138	ARG
57	SR	129	LYS
58	SS	16	LEU

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 PDB entries followed by that with respect to all EM entries.

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	CF	365/366 (100%)	365 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	LA	190/190 (100%)	190 (100%)	0	100	100
8	LB	348/348 (100%)	348 (100%)	0	100	100
9	LC	306/306 (100%)	306 (100%)	0	100	100
10	LD	246/247 (100%)	246 (100%)	0	100	100
11	LE	212/222 (96%)	212 (100%)	0	100	100
12	LF	194/194 (100%)	194 (100%)	0	100	100
13	LG	203/205 (99%)	203 (100%)	0	100	100
14	LH	169/169 (100%)	169 (100%)	0	100	100
15	LI	180/180 (100%)	180 (100%)	0	100	100
16	LJ	143/148 (97%)	143 (100%)	0	100	100
17	LL	176/176 (100%)	176 (100%)	0	100	100
18	LM	118/118 (100%)	118 (100%)	0	100	100
19	LN	171/171 (100%)	171 (100%)	0	100	100
20	LO	173/173 (100%)	173 (100%)	0	100	100
21	LP	134/134 (100%)	134 (100%)	0	100	100
22	LQ	164/164 (100%)	164 (100%)	0	100	100
23	LR	166/166 (100%)	166 (100%)	0	100	100
24	LS	156/156 (100%)	156 (100%)	0	100	100
25	LT	139/139 (100%)	139 (100%)	0	100	100
26	LU	91/91 (100%)	91 (100%)	0	100	100
27	LV	101/101 (100%)	101 (100%)	0	100	100
28	LW	95/103 (92%)	95 (100%)	0	100	100
29	LX	108/108 (100%)	108 (100%)	0	100	100
30	LY	124/124 (100%)	124 (100%)	0	100	100
31	LZ	117/117 (100%)	117 (100%)	0	100	100
32	La	120/120 (100%)	120 (100%)	0	100	100
33	Lb	88/101 (87%)	88 (100%)	0	100	100
34	Lc	83/83 (100%)	83 (100%)	0	100	100
35	Ld	98/98 (100%)	98 (100%)	0	100	100
36	Le	114/114 (100%)	114 (100%)	0	100	100
37	Lf	88/88 (100%)	88 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	Lg	98/98 (100%)	98 (100%)	0	100	100
39	Lh	109/109 (100%)	109 (100%)	0	100	100
40	Li	86/86 (100%)	86 (100%)	0	100	100
41	Lj	73/73 (100%)	73 (100%)	0	100	100
42	Lk	64/64 (100%)	64 (100%)	0	100	100
43	Ll	47/47 (100%)	47 (100%)	0	100	100
44	Lm	48/48 (100%)	48 (100%)	0	100	100
45	Ln	23/23 (100%)	23 (100%)	0	100	100
46	Lo	93/93 (100%)	93 (100%)	0	100	100
47	Lp	74/74 (100%)	74 (100%)	0	100	100
48	Lr	109/109 (100%)	109 (100%)	0	100	100
49	Ls	162/164 (99%)	162 (100%)	0	100	100
50	Lt	107/130 (82%)	107 (100%)	0	100	100
51	SD	190/190 (100%)	190 (100%)	0	100	100
52	SF	159/159 (100%)	159 (100%)	0	100	100
53	SK	89/89 (100%)	89 (100%)	0	100	100
54	SM	102/104 (98%)	102 (100%)	0	100	100
55	SP	107/107 (100%)	107 (100%)	0	100	100
56	SQ	119/119 (100%)	119 (100%)	0	100	100
57	SR	122/122 (100%)	122 (100%)	0	100	100
58	SS	126/126 (100%)	126 (100%)	0	100	100
59	ST	113/113 (100%)	113 (100%)	0	100	100
60	SU	94/94 (100%)	94 (100%)	0	100	100
61	SZ	66/66 (100%)	66 (100%)	0	100	100
62	Sc	57/57 (100%)	57 (100%)	0	100	100
63	Sd	48/48 (100%)	48 (100%)	0	100	100
64	Sf	60/60 (100%)	60 (100%)	0	100	100
65	Sg	272/272 (100%)	272 (100%)	0	100	100
66	SA	183/183 (100%)	183 (100%)	0	100	100
67	SB	195/195 (100%)	195 (100%)	0	100	100
68	SC	186/188 (99%)	186 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
69	SE	224/224 (100%)	224 (100%)	0	100	100
70	SG	207/207 (100%)	207 (100%)	0	100	100
71	SH	166/169 (98%)	166 (100%)	0	100	100
72	SI	178/178 (100%)	178 (100%)	0	100	100
73	SJ	161/161 (100%)	161 (100%)	0	100	100
74	SL	137/137 (100%)	137 (100%)	0	100	100
75	SN	130/130 (100%)	130 (100%)	0	100	100
76	SO	107/110 (97%)	107 (100%)	0	100	100
77	SV	67/67 (100%)	67 (100%)	0	100	100
78	SW	112/112 (100%)	112 (100%)	0	100	100
79	SX	113/113 (100%)	113 (100%)	0	100	100
80	SY	113/113 (100%)	113 (100%)	0	100	100
81	Sa	89/89 (100%)	89 (100%)	0	100	100
82	Sb	75/75 (100%)	75 (100%)	0	100	100
83	Se	47/47 (100%)	47 (100%)	0	100	100
85	CI	25/25 (100%)	25 (100%)	0	100	100
All	All	10512/10587 (99%)	10512 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (79) such sidechains are listed below:

Mol	Chain	Res	Type
2	CF	108	GLN
2	CF	153	ASN
2	CF	295	HIS
2	CF	348	ASN
8	LB	203	GLN
9	LC	41	HIS
9	LC	310	HIS
12	LF	58	HIS
12	LF	63	GLN
13	LG	64	GLN
13	LG	112	GLN
13	LG	141	ASN
13	LG	153	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
14	LH	98	HIS
14	LH	116	ASN
14	LH	138	GLN
15	LI	59	GLN
17	LL	19	GLN
18	LM	34	ASN
19	LN	37	HIS
19	LN	199	GLN
20	LO	50	ASN
20	LO	167	HIS
21	LP	25	HIS
21	LP	34	GLN
22	LQ	162	HIS
23	LR	134	ASN
24	LS	37	HIS
24	LS	173	ASN
25	LT	112	ASN
29	LX	57	GLN
30	LY	40	GLN
30	LY	56	GLN
31	LZ	78	ASN
32	La	34	ASN
33	Lb	7	HIS
33	Lb	60	ASN
35	Ld	121	ASN
37	Lf	20	ASN
37	Lf	99	HIS
38	Lg	3	GLN
48	Lr	21	ASN
48	Lr	30	ASN
48	Lr	31	ASN
48	Lr	36	ASN
52	SF	29	GLN
52	SF	118	ASN
53	SK	28	HIS
53	SK	32	HIS
54	SM	19	GLN
55	SP	79	HIS
58	SS	120	HIS
58	SS	125	HIS
59	ST	83	GLN
61	SZ	89	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
62	Sc	7	GLN
63	Sd	37	ASN
65	Sg	285	GLN
67	SB	76	ASN
67	SB	95	ASN
67	SB	149	GLN
68	SC	267	GLN
69	SE	197	ASN
71	SH	73	GLN
71	SH	162	GLN
71	SH	165	ASN
71	SH	168	HIS
72	SI	9	HIS
72	SI	35	ASN
72	SI	181	GLN
73	SJ	124	HIS
73	SJ	156	HIS
74	SL	141	ASN
77	SV	35	ASN
78	SW	5	ASN
78	SW	90	GLN
78	SW	120	HIS
79	SX	31	HIS
83	Se	58	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	Pt	72/74 (97%)	19 (26%)	0
3	AT	74/76 (97%)	28 (37%)	0
4	L5	3643/3655 (99%)	769 (21%)	16 (0%)
5	L7	119/120 (99%)	8 (6%)	0
6	L8	155/156 (99%)	26 (16%)	0
84	S2	1714/1740 (98%)	398 (23%)	5 (0%)
All	All	5777/5821 (99%)	1248 (21%)	21 (0%)

All (1248) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	Pt	10	G
1	Pt	13	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	Pt	19	G
1	Pt	21	A
1	Pt	42	A
1	Pt	46	G
1	Pt	47	U
1	Pt	48	C
1	Pt	49	C
1	Pt	58	A
1	Pt	59	A
1	Pt	61	C
1	Pt	63	G
1	Pt	66	C
1	Pt	67	G
1	Pt	70	A
1	Pt	72	C
1	Pt	74	C
1	Pt	76	A
3	AT	4	U
3	AT	8	U
3	AT	9	A
3	AT	12	G
3	AT	14	A
3	AT	16	C
3	AT	19	G
3	AT	20	U
3	AT	21	U
3	AT	22	A
3	AT	26	C
3	AT	27	G
3	AT	31	G
3	AT	33	C
3	AT	37	C
3	AT	47	G
3	AT	48	U
3	AT	49	C
3	AT	50	C
3	AT	53	G
3	AT	57	C
3	AT	59	A
3	AT	60	A
3	AT	62	C
3	AT	65	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	AT	74	A
3	AT	76	C
3	AT	77	A
4	L5	13	U
4	L5	15	A
4	L5	25	A
4	L5	39	A
4	L5	42	A
4	L5	48	G
4	L5	56	A
4	L5	59	A
4	L5	64	A
4	L5	65	A
4	L5	73	A
4	L5	74	G
4	L5	76	A
4	L5	91	G
4	L5	104	G
4	L5	109	G
4	L5	110	C
4	L5	116	G
4	L5	119	G
4	L5	120	A
4	L5	132	G
4	L5	133	C
4	L5	134	G
4	L5	135	G
4	L5	145	G
4	L5	159	C
4	L5	164	G
4	L5	165	A
4	L5	172	C
4	L5	176	G
4	L5	182	G
4	L5	183	C
4	L5	184	U
4	L5	185	C
4	L5	186	G
4	L5	187	U
4	L5	188	G
4	L5	189	G
4	L5	200	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	209	U
4	L5	210	C
4	L5	216	C
4	L5	218	A
4	L5	220	C
4	L5	234	G
4	L5	237	G
4	L5	255	C
4	L5	256	G
4	L5	261	G
4	L5	264	C
4	L5	265	C
4	L5	266	C
4	L5	267	G
4	L5	275	C
4	L5	276	C
4	L5	280	G
4	L5	281	U
4	L5	297	U
4	L5	306	A
4	L5	315	G
4	L5	316	U
4	L5	340	C
4	L5	345	C
4	L5	357	U
4	L5	362	A
4	L5	363	A
4	L5	373	G
4	L5	385	A
4	L5	387	G
4	L5	388	A
4	L5	396	A
4	L5	407	A
4	L5	409	G
4	L5	410	A
4	L5	411	G
4	L5	412	G
4	L5	413	G
4	L5	431	G
4	L5	432	U
4	L5	440	U
4	L5	449	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	452	A
4	L5	453	G
4	L5	454	U
4	L5	456	C
4	L5	457	G
4	L5	462	G
4	L5	465	G
4	L5	467	U
4	L5	472	C
4	L5	484	U
4	L5	485	C
4	L5	486	C
4	L5	489	C
4	L5	493	G
4	L5	494	U
4	L5	497	G
4	L5	498	C
4	L5	499	G
4	L5	500	G
4	L5	502	C
4	L5	503	C
4	L5	504	G
4	L5	507	G
4	L5	509	A
4	L5	510	U
4	L5	512	U
4	L5	513	U
4	L5	514	U
4	L5	518	G
4	L5	643	C
4	L5	644	G
4	L5	646	G
4	L5	653	U
4	L5	654	C
4	L5	655	C
4	L5	656	C
4	L5	657	C
4	L5	659	G
4	L5	666	G
4	L5	667	A
4	L5	668	C
4	L5	672	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	673	C
4	L5	674	G
4	L5	685	C
4	L5	686	A
4	L5	687	U
4	L5	703	G
4	L5	704	C
4	L5	708	G
4	L5	731	G
4	L5	738	C
4	L5	739	G
4	L5	742	G
4	L5	750	U
4	L5	759	G
4	L5	904	C
4	L5	905	C
4	L5	906	C
4	L5	910	G
4	L5	913	U
4	L5	914	U
4	L5	915	A
4	L5	917	A
4	L5	923	C
4	L5	924	C
4	L5	932	A
4	L5	933	G
4	L5	935	A
4	L5	936	C
4	L5	941	C
4	L5	943	A
4	L5	945	U
4	L5	946	C
4	L5	956	A
4	L5	959	G
4	L5	960	A
4	L5	961	G
4	L5	962	C
4	L5	965	G
4	L5	966	A
4	L5	967	C
4	L5	969	C
4	L5	970	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	982	U
4	L5	985	C
4	L5	989	U
4	L5	1070	G
4	L5	1071	C
4	L5	1072	C
4	L5	1075	G
4	L5	1082	C
4	L5	1083	U
4	L5	1168	G
4	L5	1170	G
4	L5	1171	G
4	L5	1172	C
4	L5	1173	G
4	L5	1179	U
4	L5	1180	C
4	L5	1181	C
4	L5	1182	C
4	L5	1183	C
4	L5	1202	C
4	L5	1203	G
4	L5	1210	C
4	L5	1211	G
4	L5	1215	C
4	L5	1216	C
4	L5	1218	G
4	L5	1219	G
4	L5	1222	A
4	L5	1246	G
4	L5	1247	U
4	L5	1253	G
4	L5	1254	A
4	L5	1257	A
4	L5	1258	G
4	L5	1262	G
4	L5	1266	G
4	L5	1267	C
4	L5	1269	G
4	L5	1271	G
4	L5	1272	C
4	L5	1273	G
4	L5	1275	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	1277	G
4	L5	1280	C
4	L5	1284	G
4	L5	1285	U
4	L5	1287	G
4	L5	1293	G
4	L5	1294	A
4	L5	1295	C
4	L5	1296	G
4	L5	1301	C
4	L5	1314	C
4	L5	1326	A2M
4	L5	1344	C
4	L5	1354	A
4	L5	1359	G
4	L5	1365	C
4	L5	1366	G
4	L5	1378	C
4	L5	1379	C
4	L5	1381	U
4	L5	1387	A
4	L5	1394	G
4	L5	1397	A
4	L5	1398	A
4	L5	1404	G
4	L5	1407	C
4	L5	1409	C
4	L5	1410	U
4	L5	1411	C
4	L5	1414	C
4	L5	1416	G
4	L5	1417	C
4	L5	1420	A
4	L5	1437	C
4	L5	1438	U
4	L5	1439	C
4	L5	1442	C
4	L5	1443	A
4	L5	1444	G
4	L5	1445	U
4	L5	1446	C
4	L5	1447	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	1453	G
4	L5	1457	G
4	L5	1465	G
4	L5	1482	G
4	L5	1483	C
4	L5	1497	A
4	L5	1498	G
4	L5	1502	G
4	L5	1517	G
4	L5	1523	A
4	L5	1524	A2M
4	L5	1534	A2M
4	L5	1536	PSU
4	L5	1537	A
4	L5	1543	G
4	L5	1562	G
4	L5	1563	A
4	L5	1564	A
4	L5	1566	C
4	L5	1578	U
4	L5	1591	U
4	L5	1596	U
4	L5	1624	G
4	L5	1625	OMG
4	L5	1631	A
4	L5	1633	G
4	L5	1634	A
4	L5	1641	G
4	L5	1654	G
4	L5	1661	C
4	L5	1676	C
4	L5	1677	PSU
4	L5	1678	C
4	L5	1699	A
4	L5	1700	G
4	L5	1701	A
4	L5	1702	C
4	L5	1704	C
4	L5	1705	G
4	L5	1717	C
4	L5	1718	C
4	L5	1719	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	1731	C
4	L5	1742	A
4	L5	1745	G
4	L5	1750	G
4	L5	1753	G
4	L5	1755	C
4	L5	1757	U
4	L5	1758	G
4	L5	1761	G
4	L5	1762	C
4	L5	1763	C
4	L5	1764	G
4	L5	1765	A
4	L5	1766	A
4	L5	1767	A
4	L5	1768	C
4	L5	1769	G
4	L5	1770	A
4	L5	1785	C
4	L5	1787	A
4	L5	1803	G
4	L5	1804	A
4	L5	1806	G
4	L5	1810	G
4	L5	1821	G
4	L5	1822	U
4	L5	1835	G
4	L5	1836	G
4	L5	1837	A
4	L5	1842	G
4	L5	1855	G
4	L5	1869	G
4	L5	1882	U
4	L5	1888	A
4	L5	1897	A
4	L5	1906	U
4	L5	1915	C
4	L5	1918	U
4	L5	1919	G
4	L5	1920	C
4	L5	1921	C
4	L5	1922	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	1925	G
4	L5	1931	C
4	L5	1932	A
4	L5	1940	G
4	L5	1948	G
4	L5	1951	G
4	L5	1961	G
4	L5	1962	A
4	L5	1965	G
4	L5	1974	U
4	L5	1975	G
4	L5	1978	C
4	L5	1980	U
4	L5	1981	G
4	L5	1982	G
4	L5	1984	A
4	L5	1985	G
4	L5	1986	U
4	L5	1991	A
4	L5	1993	C
4	L5	1997	U
4	L5	1998	A
4	L5	1999	A
4	L5	2001	G
4	L5	2002	A
4	L5	2003	G
4	L5	2004	U
4	L5	2005	G
4	L5	2011	C
4	L5	2017	A
4	L5	2018	C
4	L5	2024	G
4	L5	2025	A
4	L5	2026	A
4	L5	2046	G
4	L5	2048	U
4	L5	2055	G
4	L5	2056	G
4	L5	2068	C
4	L5	2069	A
4	L5	2084	C
4	L5	2085	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	2092	G
4	L5	2093	A
4	L5	2095	A
4	L5	2096	G
4	L5	2097	U
4	L5	2098	G
4	L5	2101	C
4	L5	2102	G
4	L5	2103	G
4	L5	2107	C
4	L5	2110	C
4	L5	2112	G
4	L5	2250	C
4	L5	2252	G
4	L5	2256	C
4	L5	2258	C
4	L5	2260	C
4	L5	2289	C
4	L5	2300	A
4	L5	2301	G
4	L5	2306	G
4	L5	2313	A
4	L5	2331	G
4	L5	2333	G
4	L5	2348	G
4	L5	2351	OMC
4	L5	2360	A
4	L5	2395	A
4	L5	2397	G
4	L5	2401	A2M
4	L5	2410	C
4	L5	2417	A
4	L5	2422	OMC
4	L5	2425	U
4	L5	2453	A
4	L5	2463	G
4	L5	2464	C
4	L5	2465	C
4	L5	2469	C
4	L5	2471	G
4	L5	2474	G
4	L5	2475	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	2478	C
4	L5	2479	G
4	L5	2483	G
4	L5	2484	A
4	L5	2485	U
4	L5	2487	G
4	L5	2488	C
4	L5	2489	C
4	L5	2490	U
4	L5	2494	U
4	L5	2504	C
4	L5	2505	C
4	L5	2506	G
4	L5	2507	A
4	L5	2511	A
4	L5	2513	A
4	L5	2519	U
4	L5	2529	A
4	L5	2537	A
4	L5	2544	G
4	L5	2546	G
4	L5	2547	G
4	L5	2554	U
4	L5	2555	G
4	L5	2559	G
4	L5	2560	C
4	L5	2565	A
4	L5	2573	A
4	L5	2581	A
4	L5	2583	C
4	L5	2587	A
4	L5	2589	C
4	L5	2618	G
4	L5	2627	C
4	L5	2653	C
4	L5	2662	G
4	L5	2669	C
4	L5	2675	G
4	L5	2676	A
4	L5	2686	G
4	L5	2687	U
4	L5	2694	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	2695	A
4	L5	2696	A
4	L5	2703	G
4	L5	2705	G
4	L5	2706	G
4	L5	2708	U
4	L5	2709	C
4	L5	2710	C
4	L5	2711	G
4	L5	2712	G
4	L5	2719	C
4	L5	2721	G
4	L5	2724	G
4	L5	2726	G
4	L5	2729	C
4	L5	2739	C
4	L5	2742	G
4	L5	2743	A
4	L5	2759	G
4	L5	2761	U
4	L5	2763	U
4	L5	2769	U
4	L5	2770	C
4	L5	2788	U
4	L5	2790	U
4	L5	2799	G
4	L5	2806	A
4	L5	2812	A
4	L5	2814	C
4	L5	2826	U
4	L5	2827	G
4	L5	2833	A
4	L5	2835	A
4	L5	2842	G
4	L5	2855	G
4	L5	2877	G
4	L5	2895	A
4	L5	2899	C
4	L5	2900	U
4	L5	2902	G
4	L5	2903	G
4	L5	2904	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	2905	C
4	L5	2907	G
4	L5	2908	U
4	L5	3590	G
4	L5	3591	C
4	L5	3592	G
4	L5	3594	C
4	L5	3595	U
4	L5	3597	G
4	L5	3604	A
4	L5	3605	C
4	L5	3617	G
4	L5	3626	G
4	L5	3635	A
4	L5	3644	U
4	L5	3646	A
4	L5	3648	A
4	L5	3662	A
4	L5	3664	G
4	L5	3670	C
4	L5	3673	C
4	L5	3674	G
4	L5	3701	OMC
4	L5	3710	G
4	L5	3711	A
4	L5	3713	U
4	L5	3726	A
4	L5	3727	A
4	L5	3736	A
4	L5	3748	A
4	L5	3753	G
4	L5	3760	A
4	L5	3764	U
4	L5	3770	U
4	L5	3774	A
4	L5	3775	A
4	L5	3776	G
4	L5	3777	G
4	L5	3778	U
4	L5	3784	A
4	L5	3785	A2M
4	L5	3786	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	3792	OMG
4	L5	3811	G
4	L5	3817	A
4	L5	3819	G
4	L5	3824	A
4	L5	3838	U
4	L5	3840	U
4	L5	3876	A
4	L5	3877	A
4	L5	3878	C
4	L5	3879	G
4	L5	3892	U
4	L5	3897	G
4	L5	3899	OMG
4	L5	3901	A
4	L5	3906	A
4	L5	3907	G
4	L5	3908	A
4	L5	3915	U
4	L5	3923	A
4	L5	3938	G
4	L5	3939	G
4	L5	3942	A
4	L5	3943	A
4	L5	3946	G
4	L5	3947	A
4	L5	3949	A
4	L5	3950	U
4	L5	3951	G
4	L5	3952	A
4	L5	3953	G
4	L5	4057	C
4	L5	4058	U
4	L5	4059	C
4	L5	4062	A
4	L5	4064	C
4	L5	4068	U
4	L5	4076	G
4	L5	4088	C
4	L5	4095	G
4	L5	4097	G
4	L5	4098	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	4099	G
4	L5	4101	C
4	L5	4104	G
4	L5	4108	G
4	L5	4111	U
4	L5	4114	C
4	L5	4115	G
4	L5	4116	C
4	L5	4117	U
4	L5	4121	G
4	L5	4122	G
4	L5	4127	A
4	L5	4133	C
4	L5	4138	C
4	L5	4141	G
4	L5	4142	C
4	L5	4143	G
4	L5	4144	C
4	L5	4146	G
4	L5	4162	C
4	L5	4163	U
4	L5	4170	A
4	L5	4183	G
4	L5	4184	G
4	L5	4191	G
4	L5	4203	A
4	L5	4220	6MZ
4	L5	4225	G
4	L5	4229	U
4	L5	4232	U
4	L5	4233	A
4	L5	4234	A
4	L5	4241	C
4	L5	4243	C
4	L5	4249	G
4	L5	4251	A
4	L5	4254	G
4	L5	4255	A
4	L5	4258	C
4	L5	4265	U
4	L5	4268	A
4	L5	4273	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	4279	A
4	L5	4280	A
4	L5	4281	A
4	L5	4290	U
4	L5	4291	G
4	L5	4295	U
4	L5	4304	A
4	L5	4305	G
4	L5	4306	OMU
4	L5	4314	C
4	L5	4326	G
4	L5	4329	G
4	L5	4330	G
4	L5	4349	C
4	L5	4350	C
4	L5	4354	U
4	L5	4373	G
4	L5	4377	G
4	L5	4378	A
4	L5	4379	A
4	L5	4387	C
4	L5	4391	G
4	L5	4394	A
4	L5	4421	C
4	L5	4422	A
4	L5	4437	U
4	L5	4444	C
4	L5	4449	A
4	L5	4450	U
4	L5	4452	U
4	L5	4464	A
4	L5	4466	C
4	L5	4475	G
4	L5	4488	A
4	L5	4500	PSU
4	L5	4512	U
4	L5	4513	A
4	L5	4519	C
4	L5	4524	G
4	L5	4545	G
4	L5	4548	A
4	L5	4557	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	4560	C
4	L5	4567	G
4	L5	4570	G
4	L5	4575	G
4	L5	4584	A
4	L5	4589	A
4	L5	4590	A2M
4	L5	4601	U
4	L5	4608	G
4	L5	4617	G
4	L5	4618	OMG
4	L5	4635	A
4	L5	4636	PSU
4	L5	4637	OMG
4	L5	4652	G
4	L5	4656	A
4	L5	4670	C
4	L5	4672	A
4	L5	4693	C
4	L5	4694	G
4	L5	4695	C
4	L5	4700	A
4	L5	4707	A
4	L5	4708	A
4	L5	4709	U
4	L5	4719	G
4	L5	4733	C
4	L5	4734	A
4	L5	4740	G
4	L5	4741	C
4	L5	4742	G
4	L5	4745	G
4	L5	4750	G
4	L5	4754	G
4	L5	4757	C
4	L5	4759	C
4	L5	4761	G
4	L5	4765	G
4	L5	4771	C
4	L5	4772	C
4	L5	4775	C
4	L5	4859	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	4863	G
4	L5	4870	G
4	L5	4871	C
4	L5	4875	G
4	L5	4881	U
4	L5	4882	U
4	L5	4883	C
4	L5	4889	G
4	L5	4895	C
4	L5	4896	G
4	L5	4897	G
4	L5	4899	G
4	L5	4900	C
4	L5	4901	G
4	L5	4910	G
4	L5	4912	G
4	L5	4914	C
4	L5	4922	C
4	L5	4925	U
4	L5	4926	C
4	L5	4927	G
4	L5	4928	C
4	L5	4934	A
4	L5	4937	C
4	L5	4941	G
4	L5	4943	A
4	L5	4944	C
4	L5	4947	U
4	L5	4955	A
4	L5	4960	G
4	L5	4975	G
4	L5	4976	U
4	L5	4985	U
4	L5	4988	U
4	L5	4989	U
4	L5	4990	C
4	L5	4991	U
4	L5	4995	U
4	L5	5013	C
4	L5	5014	A
4	L5	5017	G
4	L5	5020	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	5022	U
4	L5	5024	C
4	L5	5027	C
4	L5	5028	G
4	L5	5030	U
4	L5	5034	A
4	L5	5041	G
4	L5	5047	C
4	L5	5048	A
4	L5	5050	C
4	L5	5054	C
4	L5	5055	G
4	L5	5060	A
4	L5	5061	A
4	L5	5062	G
4	L5	5069	U
5	L7	22	A
5	L7	38	U
5	L7	53	U
5	L7	64	G
5	L7	91	C
5	L7	97	G
5	L7	100	A
5	L7	110	G
6	L8	23	C
6	L8	25	G
6	L8	34	U
6	L8	35	C
6	L8	39	G
6	L8	59	A
6	L8	62	A
6	L8	63	U
6	L8	75	OMG
6	L8	80	A
6	L8	82	A
6	L8	84	A
6	L8	85	U
6	L8	86	U
6	L8	87	G
6	L8	94	G
6	L8	99	U
6	L8	103	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	L8	105	C
6	L8	111	U
6	L8	114	G
6	L8	124	U
6	L8	125	C
6	L8	126	C
6	L8	127	U
6	L8	153	C
84	S2	2	A
84	S2	4	C
84	S2	13	C
84	S2	14	C
84	S2	25	A
84	S2	33	G
84	S2	37	C
84	S2	42	A
84	S2	44	U
84	S2	45	A
84	S2	46	A
84	S2	56	G
84	S2	58	C
84	S2	59	U
84	S2	62	G
84	S2	64	A
84	S2	65	C
84	S2	67	C
84	S2	68	A
84	S2	72	C
84	S2	73	C
84	S2	74	G
84	S2	76	U
84	S2	103	A
84	S2	113	G
84	S2	114	G
84	S2	115	U
84	S2	126	G
84	S2	130	G
84	S2	142	C
84	S2	143	U
84	S2	149	A
84	S2	155	G
84	S2	158	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	160	U
84	S2	162	C
84	S2	168	C
84	S2	170	A
84	S2	171	A
84	S2	175	A
84	S2	179	C
84	S2	190	G
84	S2	191	A
84	S2	196	C
84	S2	197	U
84	S2	198	U
84	S2	200	G
84	S2	202	G
84	S2	203	G
84	S2	204	G
84	S2	207	G
84	S2	208	G
84	S2	209	A
84	S2	213	G
84	S2	214	U
84	S2	220	U
84	S2	291	G
84	S2	292	A
84	S2	295	C
84	S2	302	A
84	S2	303	C
84	S2	305	U
84	S2	306	C
84	S2	307	G
84	S2	308	G
84	S2	309	G
84	S2	311	C
84	S2	312	G
84	S2	313	A
84	S2	318	A
84	S2	319	C
84	S2	320	G
84	S2	323	C
84	S2	324	C
84	S2	325	C
84	S2	326	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	327	G
84	S2	328	U
84	S2	329	G
84	S2	332	G
84	S2	339	A
84	S2	340	C
84	S2	347	G
84	S2	351	G
84	S2	360	A
84	S2	362	C
84	S2	363	A
84	S2	364	A
84	S2	368	U
84	S2	369	C
84	S2	370	G
84	S2	381	C
84	S2	383	G
84	S2	385	G
84	S2	386	C
84	S2	398	A
84	S2	408	A
84	S2	409	C
84	S2	438	G
84	S2	448	A
84	S2	449	A
84	S2	450	C
84	S2	452	G
84	S2	464	A
84	S2	465	A
84	S2	471	G
84	S2	472	C
84	S2	473	A
84	S2	474	G
84	S2	476	A
84	S2	482	G
84	S2	487	U
84	S2	488	U
84	S2	492	C
84	S2	493	A
84	S2	502	C
84	S2	516	A
84	S2	517	OMC

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	529	A
84	S2	531	A
84	S2	532	C
84	S2	536	A
84	S2	537	C
84	S2	540	U
84	S2	542	U
84	S2	544	G
84	S2	546	G
84	S2	547	G
84	S2	557	U
84	S2	558	G
84	S2	559	G
84	S2	563	G
84	S2	564	A
84	S2	576	A2M
84	S2	583	A
84	S2	587	A
84	S2	589	G
84	S2	590	A
84	S2	591	U
84	S2	604	A
84	S2	611	G
84	S2	613	G
84	S2	614	C
84	S2	617	G
84	S2	623	G
84	S2	628	A
84	S2	631	U
84	S2	643	A
84	S2	644	OMG
84	S2	660	C
84	S2	664	A
84	S2	668	A2M
84	S2	669	A
84	S2	671	A
84	S2	672	A
84	S2	673	G
84	S2	683	OMG
84	S2	688	U
84	S2	689	U
84	S2	692	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	695	C
84	S2	696	G
84	S2	697	G
84	S2	698	G
84	S2	732	U
84	S2	733	C
84	S2	736	C
84	S2	737	G
84	S2	738	C
84	S2	749	U
84	S2	751	G
84	S2	752	G
84	S2	753	C
84	S2	788	G
84	S2	791	C
84	S2	792	C
84	S2	798	G
84	S2	799	OMU
84	S2	801	PSU
84	S2	821	G
84	S2	822	U
84	S2	823	U
84	S2	824	C
84	S2	827	A
84	S2	830	A
84	S2	834	C
84	S2	835	C
84	S2	836	G
84	S2	837	A
84	S2	838	G
84	S2	839	C
84	S2	842	C
84	S2	844	U
84	S2	847	A
84	S2	867	OMG
84	S2	870	A
84	S2	874	G
84	S2	878	G
84	S2	880	G
84	S2	887	U
84	S2	888	U
84	S2	889	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	891	G
84	S2	893	U
84	S2	896	U
84	S2	897	U
84	S2	898	U
84	S2	899	U
84	S2	900	C
84	S2	901	G
84	S2	903	A
84	S2	904	A
84	S2	913	A
84	S2	917	U
84	S2	920	A
84	S2	933	G
84	S2	934	G
84	S2	963	A
84	S2	969	U
84	S2	970	G
84	S2	971	G
84	S2	972	A
84	S2	985	G
84	S2	990	A
84	S2	992	A
84	S2	999	G
84	S2	1001	A
84	S2	1002	U
84	S2	1008	A
84	S2	1017	U
84	S2	1023	A
84	S2	1027	A
84	S2	1045	PSU
84	S2	1060	A
84	S2	1061	U
84	S2	1062	A
84	S2	1083	A
84	S2	1085	C
84	S2	1100	A
84	S2	1109	C
84	S2	1113	A
84	S2	1116	C
84	S2	1121	G
84	S2	1123	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	1126	G
84	S2	1133	A
84	S2	1138	C
84	S2	1148	A
84	S2	1153	C
84	S2	1154	U
84	S2	1170	A
84	S2	1195	A
84	S2	1200	A
84	S2	1207	G
84	S2	1208	A
84	S2	1215	C
84	S2	1216	C
84	S2	1217	A
84	S2	1222	G
84	S2	1224	G
84	S2	1227	G
84	S2	1242	U
84	S2	1243	U
84	S2	1248	B8N
84	S2	1251	A
84	S2	1253	A
84	S2	1256	G
84	S2	1257	G
84	S2	1264	C
84	S2	1271	C
84	S2	1272	OMC
84	S2	1274	G
84	S2	1275	G
84	S2	1281	G
84	S2	1283	C
84	S2	1286	G
84	S2	1288	OMU
84	S2	1290	G
84	S2	1294	G
84	S2	1295	A
84	S2	1301	A
84	S2	1302	G
84	S2	1303	C
84	S2	1308	U
84	S2	1315	U
84	S2	1333	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	1342	U
84	S2	1357	A
84	S2	1358	U
84	S2	1371	U
84	S2	1376	A
84	S2	1378	A
84	S2	1401	A
84	S2	1402	A
84	S2	1404	U
84	S2	1413	G
84	S2	1418	C
84	S2	1419	C
84	S2	1420	G
84	S2	1421	A
84	S2	1422	G
84	S2	1423	C
84	S2	1428	G
84	S2	1432	U
84	S2	1433	C
84	S2	1435	C
84	S2	1436	C
84	S2	1437	C
84	S2	1438	A
84	S2	1439	A
84	S2	1442	OMU
84	S2	1449	G
84	S2	1454	A
84	S2	1463	U
84	S2	1466	G
84	S2	1474	A
84	S2	1476	A
84	S2	1478	U
84	S2	1487	A
84	S2	1489	A
84	S2	1490	OMG
84	S2	1492	U
84	S2	1494	U
84	S2	1495	G
84	S2	1497	G
84	S2	1498	A
84	S2	1507	G
84	S2	1520	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	1521	C
84	S2	1531	A
84	S2	1533	A
84	S2	1544	C
84	S2	1546	G
84	S2	1552	G
84	S2	1553	C
84	S2	1556	A
84	S2	1558	C
84	S2	1574	C
84	S2	1580	A
84	S2	1581	C
84	S2	1585	U
84	S2	1587	G
84	S2	1588	A
84	S2	1600	G
84	S2	1604	G
84	S2	1605	G
84	S2	1606	G
84	S2	1621	U
84	S2	1623	A
84	S2	1631	U
84	S2	1632	G
84	S2	1633	A
84	S2	1634	A
84	S2	1637	A
84	S2	1648	G
84	S2	1649	U
84	S2	1654	G
84	S2	1663	A
84	S2	1665	G
84	S2	1683	C
84	S2	1686	G
84	S2	1695	A
84	S2	1699	A
84	S2	1713	C
84	S2	1715	A
84	S2	1721	U
84	S2	1722	G
84	S2	1744	G
84	S2	1745	A
84	S2	1752	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
84	S2	1753	C
84	S2	1754	G
84	S2	1755	C
84	S2	1757	G
84	S2	1759	G
84	S2	1761	U
84	S2	1772	C
84	S2	1773	C
84	S2	1777	G
84	S2	1782	G
84	S2	1783	C
84	S2	1784	G
84	S2	1786	U
84	S2	1798	C
84	S2	1810	U
84	S2	1821	U
84	S2	1825	A
84	S2	1826	G
84	S2	1831	A
84	S2	1835	A
84	S2	1838	U
84	S2	1849	G
84	S2	1851	MA6
84	S2	1861	G
84	S2	1862	G
84	S2	1863	A
84	S2	1864	U
84	S2	1865	C

All (21) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
4	L5	406	C
4	L5	493	G
4	L5	914	U
4	L5	1082	C
4	L5	1633	G
4	L5	1703	C
4	L5	1977	C
4	L5	2416	G
4	L5	2675	G
4	L5	2760	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	L5	3673	C
4	L5	3701	OMC
4	L5	4447	5MC
4	L5	4600	G
4	L5	4699	U
4	L5	4913	G
84	S2	291	G
84	S2	563	G
84	S2	688	U
84	S2	797	C
84	S2	1477	U

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

179 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	$\#\|Z\| > 2$
4	OMU	L5	3925	4	19,22,23	3.25	7 (36%)	25,31,34	1.95	5 (20%)
4	PSU	L5	4521	86,4	18,21,22	1.11	3 (16%)	21,30,33	1.95	4 (19%)
4	PSU	L5	3637	4	18,21,22	1.06	1 (5%)	21,30,33	2.00	4 (19%)
4	PSU	L5	1536	4	18,21,22	1.04	2 (11%)	21,30,33	2.15	4 (19%)
4	OMC	L5	4456	4	19,22,23	0.69	0	25,31,34	0.81	1 (4%)
4	OMU	L5	4306	4	19,22,23	3.17	7 (36%)	25,31,34	1.94	5 (20%)
4	A2M	L5	1326	4	18,25,26	1.43	3 (16%)	20,36,39	1.89	9 (45%)
4	PSU	L5	4579	4	18,21,22	1.02	2 (11%)	21,30,33	1.96	4 (19%)
84	PSU	S2	406	84	18,21,22	1.05	2 (11%)	21,30,33	1.93	4 (19%)
4	PSU	L5	4673	86,4	18,21,22	1.09	2 (11%)	21,30,33	2.07	5 (23%)
4	OMC	L5	1340	4	19,22,23	0.67	0	25,31,34	0.60	0
84	OMC	S2	1272	84	19,22,23	0.58	0	25,31,34	0.89	1 (4%)
84	6MZ	S2	1832	86,84	21,26,26	1.37	1 (4%)	22,39,39	1.79	2 (9%)
4	OMU	L5	2837	4	19,22,23	3.26	7 (36%)	25,31,34	1.84	4 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	PSU	L5	4500	4	18,21,22	1.08	2 (11%)	21,30,33	1.99	4 (19%)
84	OMC	S2	462	84	19,22,23	0.58	0	25,31,34	0.61	0
4	PSU	L5	4296	4	18,21,22	1.13	1 (5%)	21,30,33	1.91	3 (14%)
4	OMC	L5	2351	86,4	19,22,23	0.69	0	25,31,34	1.20	2 (8%)
4	OMG	L5	4637	4	19,26,27	1.20	3 (15%)	21,38,41	0.80	1 (4%)
84	A2M	S2	166	84	18,25,26	1.39	2 (11%)	20,36,39	2.22	8 (40%)
84	OMC	S2	517	84	19,22,23	0.63	0	25,31,34	0.60	0
4	1MA	L5	1322	86,4	17,25,26	1.02	2 (11%)	17,37,40	1.07	2 (11%)
4	PSU	L5	3844	4	18,21,22	1.10	2 (11%)	21,30,33	1.92	4 (19%)
4	OMU	L5	4227	4	19,22,23	3.28	7 (36%)	25,31,34	1.90	5 (20%)
4	OMG	L5	2364	86,4	19,26,27	1.23	3 (15%)	21,38,41	0.80	1 (4%)
4	OMC	L5	3869	4	19,22,23	0.62	0	25,31,34	0.69	0
4	OMG	L5	4494	4	19,26,27	1.26	3 (15%)	21,38,41	0.73	1 (4%)
4	A2M	L5	4523	86,4	18,25,26	1.63	4 (22%)	20,36,39	2.46	7 (35%)
84	PSU	S2	105	84	18,21,22	1.06	1 (5%)	21,30,33	1.90	4 (19%)
4	A2M	L5	2787	4	18,25,26	1.28	2 (11%)	20,36,39	1.72	5 (25%)
4	A2M	L5	3785	86,4	18,25,26	1.52	3 (16%)	20,36,39	2.57	6 (30%)
4	OMG	L5	2424	4	19,26,27	1.21	3 (15%)	21,38,41	0.78	1 (4%)
84	OMU	S2	1442	84	19,22,23	3.36	7 (36%)	25,31,34	1.89	4 (16%)
84	A2M	S2	99	86,84	18,25,26	1.37	2 (11%)	20,36,39	1.90	5 (25%)
84	PSU	S2	1081	84	18,21,22	1.07	2 (11%)	21,30,33	2.08	6 (28%)
84	PSU	S2	93	84	18,21,22	1.14	1 (5%)	21,30,33	1.87	4 (19%)
84	MA6	S2	1851	84	19,26,27	1.53	3 (15%)	18,38,41	3.46	3 (16%)
84	A2M	S2	468	84	18,25,26	1.35	2 (11%)	20,36,39	2.06	6 (30%)
4	PSU	L5	4293	4	18,21,22	1.10	2 (11%)	21,30,33	2.07	4 (19%)
4	PSU	L5	4442	4	18,21,22	1.12	3 (16%)	21,30,33	2.13	6 (28%)
84	A2M	S2	27	84	18,25,26	1.49	4 (22%)	20,36,39	2.17	6 (30%)
84	PSU	S2	1046	84	18,21,22	1.04	2 (11%)	21,30,33	1.95	4 (19%)
84	4AC	S2	1842	84	21,24,25	0.39	0	28,34,37	0.43	0
4	A2M	L5	400	4	18,25,26	1.48	3 (16%)	20,36,39	2.10	7 (35%)
4	OMG	L5	4623	4	19,26,27	1.22	2 (10%)	21,38,41	0.77	1 (4%)
84	PSU	S2	1045	84	18,21,22	1.07	1 (5%)	21,30,33	1.99	4 (19%)
4	A2M	L5	1524	4	18,25,26	1.35	3 (16%)	20,36,39	2.22	6 (30%)
4	PSU	L5	3920	86,4	18,21,22	1.10	3 (16%)	21,30,33	2.15	6 (28%)
84	PSU	S2	1004	84	18,21,22	1.10	2 (11%)	21,30,33	2.03	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	PSU	L5	1683	4	18,21,22	1.06	2 (11%)	21,30,33	2.04	4 (19%)
84	PSU	S2	1232	84	18,21,22	1.06	1 (5%)	21,30,33	2.05	5 (23%)
84	OMG	S2	1490	84	19,26,27	1.22	3 (15%)	21,38,41	0.72	0
84	A2M	S2	484	84	18,25,26	1.27	1 (5%)	20,36,39	1.77	6 (30%)
4	PSU	L5	1782	4	18,21,22	1.03	1 (5%)	21,30,33	1.98	4 (19%)
84	A2M	S2	668	86,84	18,25,26	1.44	3 (16%)	20,36,39	1.98	7 (35%)
4	PSU	L5	4493	4	18,21,22	1.12	2 (11%)	21,30,33	2.05	5 (23%)
84	OMG	S2	1328	84	19,26,27	1.13	2 (10%)	21,38,41	0.82	1 (4%)
4	OMC	L5	4536	4	19,22,23	0.68	0	25,31,34	0.60	0
4	PSU	L5	4636	4	18,21,22	1.03	1 (5%)	21,30,33	2.03	5 (23%)
4	PSU	L5	2632	4	18,21,22	1.09	1 (5%)	21,30,33	1.93	4 (19%)
84	A2M	S2	1383	84	18,25,26	1.41	2 (11%)	20,36,39	2.25	6 (30%)
4	PSU	L5	4431	4	18,21,22	1.08	1 (5%)	21,30,33	1.98	5 (23%)
4	PSU	L5	3853	86,4	18,21,22	1.03	1 (5%)	21,30,33	1.83	4 (19%)
4	OMU	L5	4498	4	19,22,23	3.18	7 (36%)	25,31,34	1.93	5 (20%)
4	OMG	L5	4228	4	19,26,27	1.27	3 (15%)	21,38,41	0.90	1 (4%)
84	G7M	S2	1639	1,84	20,26,27	2.44	7 (35%)	16,39,42	1.16	1 (6%)
4	A2M	L5	2815	4	18,25,26	1.23	2 (11%)	20,36,39	1.80	6 (30%)
4	PSU	L5	4361	4	18,21,22	1.05	2 (11%)	21,30,33	1.90	4 (19%)
4	PSU	L5	1860	4	18,21,22	1.07	1 (5%)	21,30,33	2.02	4 (19%)
84	OMU	S2	1288	84	19,22,23	3.37	7 (36%)	25,31,34	1.78	4 (16%)
4	PSU	L5	4299	4	18,21,22	1.04	1 (5%)	21,30,33	2.03	5 (23%)
4	PSU	L5	1677	4	18,21,22	1.13	1 (5%)	21,30,33	1.99	5 (23%)
84	PSU	S2	1174	84	18,21,22	1.08	2 (11%)	21,30,33	1.96	4 (19%)
4	PSU	L5	3639	4	18,21,22	1.08	3 (16%)	21,30,33	2.06	5 (23%)
4	OMG	L5	4370	4	19,26,27	1.23	3 (15%)	21,38,41	0.79	1 (4%)
4	A2M	L5	1871	86,4	18,25,26	1.56	4 (22%)	20,36,39	2.37	6 (30%)
4	OMC	L5	2365	86,4	19,22,23	0.64	0	25,31,34	0.71	0
4	PSU	L5	3884	4	18,21,22	1.10	2 (11%)	21,30,33	1.98	4 (19%)
4	PSU	L5	4312	4	18,21,22	1.06	2 (11%)	21,30,33	2.04	5 (23%)
84	PSU	S2	866	84	18,21,22	1.09	3 (16%)	21,30,33	2.11	6 (28%)
4	PSU	L5	1582	4	18,21,22	1.10	2 (11%)	21,30,33	1.95	5 (23%)
6	PSU	L8	55	6	18,21,22	1.03	1 (5%)	21,30,33	2.07	5 (23%)
4	PSU	L5	2839	4	18,21,22	1.05	2 (11%)	21,30,33	1.91	4 (19%)
4	OMG	L5	4392	4	19,26,27	1.26	3 (15%)	21,38,41	0.78	1 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	PSU	L5	4628	4	18,21,22	1.05	1 (5%)	21,30,33	1.89	4 (19%)
4	A2M	L5	3830	4	18,25,26	1.35	3 (16%)	20,36,39	2.01	6 (30%)
4	PSU	L5	3822	4	18,21,22	1.07	3 (16%)	21,30,33	2.12	6 (28%)
4	PSU	L5	1862	4	18,21,22	1.09	2 (11%)	21,30,33	2.03	5 (23%)
4	PSU	L5	1781	4	18,21,22	1.04	1 (5%)	21,30,33	1.94	4 (19%)
4	A2M	L5	3718	4	18,25,26	1.36	2 (11%)	20,36,39	2.05	5 (25%)
84	A2M	S2	159	84	18,25,26	1.27	2 (11%)	20,36,39	1.84	5 (25%)
84	OMG	S2	644	84	19,26,27	1.16	2 (10%)	21,38,41	0.82	1 (4%)
84	OMG	S2	601	84	19,26,27	1.19	2 (10%)	21,38,41	0.86	1 (4%)
4	OMC	L5	2804	4	19,22,23	0.63	0	25,31,34	1.17	2 (8%)
4	OMG	L5	3792	4	19,26,27	1.17	2 (10%)	21,38,41	0.77	1 (4%)
4	OMG	L5	4618	4	19,26,27	1.21	2 (10%)	21,38,41	0.81	1 (4%)
4	OMC	L5	2861	4	19,22,23	0.61	0	25,31,34	0.90	2 (8%)
4	OMC	L5	3808	86,4	19,22,23	0.65	0	25,31,34	0.93	2 (8%)
4	A2M	L5	2401	4	18,25,26	1.41	2 (11%)	20,36,39	1.97	7 (35%)
84	PSU	S2	1056	84	18,21,22	1.01	1 (5%)	21,30,33	1.96	4 (19%)
4	PSU	L5	1792	4	18,21,22	1.00	1 (5%)	21,30,33	1.96	4 (19%)
84	4AC	S2	1337	84	21,24,25	0.40	0	28,34,37	0.81	2 (7%)
4	OMG	L5	3627	4	19,26,27	1.28	3 (15%)	21,38,41	0.83	1 (4%)
4	PSU	L5	3851	4	18,21,22	1.04	1 (5%)	21,30,33	2.00	4 (19%)
84	OMU	S2	172	84	19,22,23	3.37	7 (36%)	25,31,34	1.91	4 (16%)
4	OMC	L5	3887	4	19,22,23	0.62	0	25,31,34	0.88	1 (4%)
84	OMC	S2	174	84	19,22,23	0.59	0	25,31,34	0.65	0
4	OMG	L5	4499	4	19,26,27	1.26	3 (15%)	21,38,41	0.77	1 (4%)
4	PSU	L5	4457	4	18,21,22	1.07	3 (16%)	21,30,33	2.05	6 (28%)
84	OMG	S2	436	84	19,26,27	1.23	3 (15%)	21,38,41	0.74	1 (4%)
4	A2M	L5	1323	4	18,25,26	1.48	3 (16%)	20,36,39	2.11	8 (40%)
84	PSU	S2	1367	84	18,21,22	1.13	1 (5%)	21,30,33	2.06	5 (23%)
4	OMC	L5	2824	4	19,22,23	0.59	0	25,31,34	0.75	1 (4%)
4	UY1	L5	3818	4	19,22,23	4.85	9 (47%)	21,31,34	1.98	5 (23%)
84	A2M	S2	1031	84	18,25,26	1.33	2 (11%)	20,36,39	1.89	5 (25%)
4	PSU	L5	4973	4	18,21,22	1.12	2 (11%)	21,30,33	1.97	6 (28%)
4	OMC	L5	3841	4	19,22,23	0.64	0	25,31,34	0.66	0
4	A2M	L5	2363	86,4	18,25,26	1.42	2 (11%)	20,36,39	1.94	5 (25%)
4	A2M	L5	3867	4	18,25,26	1.41	3 (16%)	20,36,39	1.96	7 (35%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
84	PSU	S2	651	84	18,21,22	1.08	1 (5%)	21,30,33	2.07	5 (23%)
4	OMG	L5	4196	4,1	19,26,27	1.20	2 (10%)	21,38,41	0.83	1 (4%)
84	OMC	S2	1391	84	19,22,23	0.57	0	25,31,34	0.77	1 (4%)
84	PSU	S2	686	84	18,21,22	1.08	1 (5%)	21,30,33	1.86	4 (19%)
4	OMU	L5	4620	4	19,22,23	3.16	7 (36%)	25,31,34	1.83	5 (20%)
4	OMG	L5	3744	4	19,26,27	1.17	2 (10%)	21,38,41	0.80	1 (4%)
4	PSU	L5	4576	4	18,21,22	1.07	2 (11%)	21,30,33	2.03	6 (28%)
4	PSU	L5	4972	4	18,21,22	1.07	1 (5%)	21,30,33	1.87	5 (23%)
84	OMU	S2	354	84	19,22,23	3.29	7 (36%)	25,31,34	1.93	5 (20%)
84	PSU	S2	1177	84	18,21,22	1.10	2 (11%)	21,30,33	1.97	4 (19%)
4	A2M	L5	1534	86,4	18,25,26	1.33	2 (11%)	20,36,39	2.36	7 (35%)
84	PSU	S2	649	84	18,21,22	1.08	2 (11%)	21,30,33	2.01	4 (19%)
84	PSU	S2	863	84	18,21,22	1.11	1 (5%)	21,30,33	1.90	5 (23%)
4	PSU	L5	4353	4	18,21,22	1.06	3 (16%)	21,30,33	2.15	6 (28%)
4	A2M	L5	4590	4	18,25,26	1.39	2 (11%)	20,36,39	1.96	7 (35%)
84	PSU	S2	814	84	18,21,22	1.09	2 (11%)	21,30,33	1.97	4 (19%)
4	OMG	L5	1625	4	19,26,27	1.30	3 (15%)	21,38,41	0.78	0
84	OMG	S2	509	84	19,26,27	1.15	2 (10%)	21,38,41	0.86	1 (4%)
4	OMC	L5	3701	4	19,22,23	0.62	0	25,31,34	0.77	0
4	PSU	L5	4689	4	18,21,22	1.03	2 (11%)	21,30,33	2.01	4 (19%)
84	PSU	S2	801	84	18,21,22	1.15	1 (5%)	21,30,33	1.94	4 (19%)
4	PSU	L5	4403	4	18,21,22	1.09	3 (16%)	21,30,33	2.05	6 (28%)
84	PSU	S2	1244	84	18,21,22	1.08	1 (5%)	21,30,33	2.02	5 (23%)
84	OMU	S2	627	84	19,22,23	3.36	7 (36%)	25,31,34	1.82	5 (20%)
4	5MC	L5	3782	86,4	19,22,23	0.66	0	26,32,35	0.77	1 (3%)
4	PSU	L5	4471	4	18,21,22	1.11	2 (11%)	21,30,33	2.01	5 (23%)
84	OMU	S2	428	84	19,22,23	3.27	7 (36%)	25,31,34	1.86	5 (20%)
4	A2M	L5	4571	4	18,25,26	1.45	3 (16%)	20,36,39	2.10	6 (30%)
84	OMC	S2	1703	84	19,22,23	0.64	0	25,31,34	0.73	1 (4%)
84	PSU	S2	966	86,84	18,21,22	1.11	1 (5%)	21,30,33	1.92	4 (19%)
4	OMG	L5	1316	4	19,26,27	1.26	3 (15%)	21,38,41	0.75	1 (4%)
84	PSU	S2	681	84	18,21,22	1.07	2 (11%)	21,30,33	2.00	4 (19%)
4	PSU	L5	4532	4	18,21,22	1.05	1 (5%)	21,30,33	1.86	3 (14%)
84	OMG	S2	867	84	19,26,27	1.20	2 (10%)	21,38,41	0.84	1 (4%)
4	5MC	L5	4447	4	19,22,23	0.80	0	26,32,35	0.60	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	PSU	L5	1744	86,4	18,21,22	1.09	2 (11%)	21,30,33	1.98	4 (19%)
4	PSU	L5	5001	4	18,21,22	1.12	2 (11%)	21,30,33	1.98	4 (19%)
4	PSU	L5	5010	4	18,21,22	1.14	2 (11%)	21,30,33	1.98	4 (19%)
84	OMU	S2	121	84	19,22,23	3.26	7 (36%)	25,31,34	1.79	5 (20%)
4	PSU	L5	3695	4	18,21,22	1.08	1 (5%)	21,30,33	1.94	5 (23%)
84	MA6	S2	1850	84	19,26,27	1.57	3 (15%)	18,38,41	3.23	3 (16%)
84	OMU	S2	799	84	19,22,23	3.36	7 (36%)	25,31,34	1.83	4 (16%)
2	SEP	CF	163	2	8,9,10	1.57	1 (12%)	7,12,14	1.26	1 (14%)
84	PSU	S2	109	84	18,21,22	1.10	1 (5%)	21,30,33	1.97	6 (28%)
4	A2M	L5	398	4	18,25,26	1.36	2 (11%)	20,36,39	2.11	7 (35%)
4	OMG	L5	3899	4	19,26,27	1.27	3 (15%)	21,38,41	0.78	1 (4%)
84	OMG	S2	683	84	19,26,27	1.23	2 (10%)	21,38,41	0.79	1 (4%)
6	PSU	L8	69	6	18,21,22	1.11	2 (11%)	21,30,33	2.03	6 (28%)
4	OMG	L5	2876	4	19,26,27	1.25	3 (15%)	21,38,41	0.79	1 (4%)
84	OMU	S2	116	84	19,22,23	3.28	7 (36%)	25,31,34	1.65	5 (20%)
84	B8N	S2	1248	84	25,29,30	3.23	7 (28%)	28,42,45	2.00	8 (28%)
4	6MZ	L5	4220	4	17,25,26	3.64	7 (41%)	15,36,39	2.71	4 (26%)
4	A2M	L5	3825	4	18,25,26	1.47	4 (22%)	20,36,39	2.09	8 (40%)
84	A2M	S2	576	84	18,25,26	1.29	2 (11%)	20,36,39	2.06	5 (25%)
4	UR3	L5	4530	4	19,22,23	2.68	7 (36%)	26,32,35	1.60	3 (11%)
4	OMC	L5	2422	86,4	19,22,23	0.62	0	25,31,34	0.75	1 (4%)
4	PSU	L5	4552	4	18,21,22	1.05	2 (11%)	21,30,33	2.08	5 (23%)
6	OMG	L8	75	6	19,26,27	1.20	3 (15%)	21,38,41	0.79	1 (4%)
84	OMU	S2	1326	84	19,22,23	3.34	7 (36%)	25,31,34	1.76	5 (20%)
4	OMG	L5	1522	4	19,26,27	1.22	3 (15%)	21,38,41	0.84	1 (4%)

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
4	OMU	L5	3925	4	-	0/9/27/28	0/2/2/2
4	PSU	L5	4521	86,4	-	2/7/25/26	0/2/2/2
4	PSU	L5	3637	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	1536	4	-	2/7/25/26	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	OMC	L5	4456	4	-	0/9/27/28	0/2/2/2
4	OMU	L5	4306	4	-	0/9/27/28	0/2/2/2
4	A2M	L5	1326	4	-	4/5/27/28	0/3/3/3
4	PSU	L5	4579	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	406	84	-	0/7/25/26	0/2/2/2
4	PSU	L5	4673	86,4	-	0/7/25/26	0/2/2/2
4	OMC	L5	1340	4	-	1/9/27/28	0/2/2/2
84	OMC	S2	1272	84	-	3/9/27/28	0/2/2/2
84	6MZ	S2	1832	86,84	-	7/8/28/28	0/3/3/3
4	OMU	L5	2837	4	-	0/9/27/28	0/2/2/2
4	PSU	L5	4500	4	-	5/7/25/26	0/2/2/2
84	OMC	S2	462	84	-	1/9/27/28	0/2/2/2
4	PSU	L5	4296	4	-	2/7/25/26	0/2/2/2
4	OMC	L5	2351	86,4	-	4/9/27/28	0/2/2/2
4	OMG	L5	4637	4	-	3/5/27/28	0/3/3/3
84	A2M	S2	166	84	-	0/5/27/28	0/3/3/3
84	OMC	S2	517	84	-	3/9/27/28	0/2/2/2
4	1MA	L5	1322	86,4	-	0/3/25/26	0/3/3/3
4	PSU	L5	3844	4	-	1/7/25/26	0/2/2/2
4	OMU	L5	4227	4	-	0/9/27/28	0/2/2/2
4	OMG	L5	2364	86,4	-	3/5/27/28	0/3/3/3
4	OMC	L5	3869	4	-	0/9/27/28	0/2/2/2
4	OMG	L5	4494	4	-	0/5/27/28	0/3/3/3
4	A2M	L5	4523	86,4	-	0/5/27/28	0/3/3/3
84	PSU	S2	105	84	-	0/7/25/26	0/2/2/2
4	A2M	L5	2787	4	-	2/5/27/28	0/3/3/3
4	A2M	L5	3785	86,4	-	0/5/27/28	0/3/3/3
4	OMG	L5	2424	4	-	2/5/27/28	0/3/3/3
84	OMU	S2	1442	84	-	2/9/27/28	0/2/2/2
84	A2M	S2	99	86,84	-	1/5/27/28	0/3/3/3
84	PSU	S2	1081	84	-	1/7/25/26	0/2/2/2
84	PSU	S2	93	84	-	0/7/25/26	0/2/2/2
84	MA6	S2	1851	84	-	1/7/29/30	0/3/3/3
84	A2M	S2	468	84	-	1/5/27/28	0/3/3/3
4	PSU	L5	4293	4	-	1/7/25/26	0/2/2/2
4	PSU	L5	4442	4	-	0/7/25/26	0/2/2/2
84	A2M	S2	27	84	-	1/5/27/28	0/3/3/3
84	PSU	S2	1046	84	-	0/7/25/26	0/2/2/2
84	4AC	S2	1842	84	-	0/11/29/30	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	A2M	L5	400	4	-	0/5/27/28	0/3/3/3
4	OMG	L5	4623	4	-	3/5/27/28	0/3/3/3
84	PSU	S2	1045	84	-	2/7/25/26	0/2/2/2
4	A2M	L5	1524	4	-	2/5/27/28	0/3/3/3
4	PSU	L5	3920	86,4	-	0/7/25/26	0/2/2/2
84	PSU	S2	1004	84	-	1/7/25/26	0/2/2/2
4	PSU	L5	1683	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	1232	84	-	0/7/25/26	0/2/2/2
84	OMG	S2	1490	84	-	1/5/27/28	0/3/3/3
84	A2M	S2	484	84	-	1/5/27/28	0/3/3/3
4	PSU	L5	1782	4	-	0/7/25/26	0/2/2/2
84	A2M	S2	668	86,84	-	1/5/27/28	0/3/3/3
4	PSU	L5	4493	4	-	0/7/25/26	0/2/2/2
84	OMG	S2	1328	84	-	1/5/27/28	0/3/3/3
4	OMC	L5	4536	4	-	1/9/27/28	0/2/2/2
4	PSU	L5	4636	4	-	1/7/25/26	0/2/2/2
4	PSU	L5	2632	4	-	2/7/25/26	0/2/2/2
84	A2M	S2	1383	84	-	3/5/27/28	0/3/3/3
4	PSU	L5	4431	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	3853	86,4	-	0/7/25/26	0/2/2/2
4	OMU	L5	4498	4	-	0/9/27/28	0/2/2/2
4	OMG	L5	4228	4	-	2/5/27/28	0/3/3/3
84	G7M	S2	1639	1,84	-	0/3/25/26	0/3/3/3
4	A2M	L5	2815	4	-	0/5/27/28	0/3/3/3
4	PSU	L5	4361	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	1860	4	-	0/7/25/26	0/2/2/2
84	OMU	S2	1288	84	-	2/9/27/28	0/2/2/2
4	PSU	L5	4299	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	1677	4	-	2/7/25/26	0/2/2/2
84	PSU	S2	1174	84	-	0/7/25/26	0/2/2/2
4	PSU	L5	3639	4	-	0/7/25/26	0/2/2/2
4	OMG	L5	4370	4	-	0/5/27/28	0/3/3/3
4	A2M	L5	1871	86,4	-	0/5/27/28	0/3/3/3
4	OMC	L5	2365	86,4	-	0/9/27/28	0/2/2/2
4	PSU	L5	3884	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4312	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	866	84	-	0/7/25/26	0/2/2/2
4	PSU	L5	1582	4	-	2/7/25/26	0/2/2/2
6	PSU	L8	55	6	-	0/7/25/26	0/2/2/2
4	PSU	L5	2839	4	-	0/7/25/26	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	OMG	L5	4392	4	-	0/5/27/28	0/3/3/3
4	PSU	L5	4628	4	-	0/7/25/26	0/2/2/2
4	A2M	L5	3830	4	-	1/5/27/28	0/3/3/3
4	PSU	L5	3822	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	1862	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	1781	4	-	1/7/25/26	0/2/2/2
4	A2M	L5	3718	4	-	1/5/27/28	0/3/3/3
84	A2M	S2	159	84	-	0/5/27/28	0/3/3/3
84	OMG	S2	644	84	-	4/5/27/28	0/3/3/3
84	OMG	S2	601	84	-	1/5/27/28	0/3/3/3
4	OMC	L5	2804	4	-	2/9/27/28	0/2/2/2
4	OMG	L5	3792	4	-	2/5/27/28	0/3/3/3
4	OMG	L5	4618	4	-	2/5/27/28	0/3/3/3
4	OMC	L5	2861	4	-	2/9/27/28	0/2/2/2
4	OMC	L5	3808	86,4	-	0/9/27/28	0/2/2/2
4	A2M	L5	2401	4	-	2/5/27/28	0/3/3/3
84	PSU	S2	1056	84	-	0/7/25/26	0/2/2/2
4	PSU	L5	1792	4	-	0/7/25/26	0/2/2/2
84	4AC	S2	1337	84	-	1/11/29/30	0/2/2/2
4	OMG	L5	3627	4	-	2/5/27/28	0/3/3/3
4	PSU	L5	3851	4	-	0/7/25/26	0/2/2/2
84	OMU	S2	172	84	-	1/9/27/28	0/2/2/2
4	OMC	L5	3887	4	-	1/9/27/28	0/2/2/2
84	OMC	S2	174	84	-	0/9/27/28	0/2/2/2
4	OMG	L5	4499	4	-	0/5/27/28	0/3/3/3
4	PSU	L5	4457	4	-	0/7/25/26	0/2/2/2
84	OMG	S2	436	84	-	0/5/27/28	0/3/3/3
4	A2M	L5	1323	4	-	3/5/27/28	0/3/3/3
84	PSU	S2	1367	84	-	0/7/25/26	0/2/2/2
4	OMC	L5	2824	4	-	1/9/27/28	0/2/2/2
4	UY1	L5	3818	4	-	2/9/27/28	0/2/2/2
84	A2M	S2	1031	84	-	1/5/27/28	0/3/3/3
4	PSU	L5	4973	4	-	0/7/25/26	0/2/2/2
4	OMC	L5	3841	4	-	0/9/27/28	0/2/2/2
4	A2M	L5	2363	86,4	-	0/5/27/28	0/3/3/3
4	A2M	L5	3867	4	-	1/5/27/28	0/3/3/3
84	PSU	S2	651	84	-	0/7/25/26	0/2/2/2
4	OMG	L5	4196	4,1	-	1/5/27/28	0/3/3/3
84	OMC	S2	1391	84	-	0/9/27/28	0/2/2/2
84	PSU	S2	686	84	-	0/7/25/26	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	OMU	L5	4620	4	-	1/9/27/28	0/2/2/2
4	OMG	L5	3744	4	-	0/5/27/28	0/3/3/3
4	PSU	L5	4576	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4972	4	-	0/7/25/26	0/2/2/2
84	OMU	S2	354	84	-	1/9/27/28	0/2/2/2
84	PSU	S2	1177	84	-	0/7/25/26	0/2/2/2
4	A2M	L5	1534	86,4	-	2/5/27/28	0/3/3/3
84	PSU	S2	649	84	-	0/7/25/26	0/2/2/2
84	PSU	S2	863	84	-	0/7/25/26	0/2/2/2
4	PSU	L5	4353	4	-	0/7/25/26	0/2/2/2
4	A2M	L5	4590	4	-	4/5/27/28	0/3/3/3
84	PSU	S2	814	84	-	0/7/25/26	0/2/2/2
4	OMG	L5	1625	4	-	2/5/27/28	0/3/3/3
84	OMG	S2	509	84	-	1/5/27/28	0/3/3/3
4	OMC	L5	3701	4	-	4/9/27/28	0/2/2/2
4	PSU	L5	4689	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	801	84	-	2/7/25/26	0/2/2/2
4	PSU	L5	4403	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	1244	84	-	0/7/25/26	0/2/2/2
84	OMU	S2	627	84	-	5/9/27/28	0/2/2/2
4	5MC	L5	3782	86,4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4471	4	-	0/7/25/26	0/2/2/2
84	OMU	S2	428	84	-	2/9/27/28	0/2/2/2
4	A2M	L5	4571	4	-	1/5/27/28	0/3/3/3
84	OMC	S2	1703	84	-	0/9/27/28	0/2/2/2
84	PSU	S2	966	86,84	-	0/7/25/26	0/2/2/2
4	OMG	L5	1316	4	-	1/5/27/28	0/3/3/3
84	PSU	S2	681	84	-	0/7/25/26	0/2/2/2
4	PSU	L5	4532	4	-	0/7/25/26	0/2/2/2
84	OMG	S2	867	84	-	2/5/27/28	0/3/3/3
4	5MC	L5	4447	4	-	5/7/25/26	0/2/2/2
4	PSU	L5	1744	86,4	-	0/7/25/26	0/2/2/2
4	PSU	L5	5001	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	5010	4	-	0/7/25/26	0/2/2/2
84	OMU	S2	121	84	-	0/9/27/28	0/2/2/2
4	PSU	L5	3695	4	-	0/7/25/26	0/2/2/2
84	MA6	S2	1850	84	-	0/7/29/30	0/3/3/3
84	OMU	S2	799	84	-	0/9/27/28	0/2/2/2
2	SEP	CF	163	2	-	6/6/8/10	-
84	PSU	S2	109	84	-	0/7/25/26	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	A2M	L5	398	4	-	1/5/27/28	0/3/3/3
4	OMG	L5	3899	4	-	3/5/27/28	0/3/3/3
84	OMG	S2	683	84	-	2/5/27/28	0/3/3/3
6	PSU	L8	69	6	-	0/7/25/26	0/2/2/2
4	OMG	L5	2876	4	-	1/5/27/28	0/3/3/3
84	OMU	S2	116	84	-	1/9/27/28	0/2/2/2
84	B8N	S2	1248	84	-	9/16/34/35	0/2/2/2
4	6MZ	L5	4220	4	-	4/5/27/28	0/3/3/3
4	A2M	L5	3825	4	-	3/5/27/28	0/3/3/3
84	A2M	S2	576	84	-	3/5/27/28	0/3/3/3
4	UR3	L5	4530	4	-	0/7/25/26	0/2/2/2
4	OMC	L5	2422	86,4	-	3/9/27/28	0/2/2/2
4	PSU	L5	4552	4	-	0/7/25/26	0/2/2/2
6	OMG	L8	75	6	-	0/5/27/28	0/3/3/3
84	OMU	S2	1326	84	-	0/9/27/28	0/2/2/2
4	OMG	L5	1522	4	-	0/5/27/28	0/3/3/3

All (428) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	3818	UY1	C6-C5	12.60	1.49	1.35
4	L5	3818	UY1	C2-N1	11.67	1.51	1.36
4	L5	4220	6MZ	C3'-C2'	-8.58	1.30	1.53
84	S2	172	OMU	C2-N1	8.51	1.51	1.38
84	S2	1288	OMU	C2-N1	8.42	1.51	1.38
84	S2	799	OMU	C2-N1	8.40	1.51	1.38
84	S2	1442	OMU	C2-N1	8.34	1.51	1.38
84	S2	1248	B8N	C4-N3	-8.09	1.26	1.40
84	S2	627	OMU	C2-N1	8.08	1.51	1.38
84	S2	354	OMU	C2-N1	7.98	1.51	1.38
84	S2	121	OMU	C2-N1	7.95	1.50	1.38
4	L5	4220	6MZ	O4'-C1'	-7.94	1.30	1.40
4	L5	2837	OMU	C2-N1	7.94	1.50	1.38
84	S2	116	OMU	C2-N1	7.92	1.50	1.38
84	S2	1326	OMU	C2-N1	7.84	1.50	1.38
4	L5	3925	OMU	C2-N1	7.81	1.50	1.38
4	L5	4227	OMU	C2-N1	7.75	1.50	1.38
84	S2	1248	B8N	C6-N1	7.71	1.55	1.36
4	L5	3818	UY1	C2-N3	7.63	1.50	1.37
4	L5	4306	OMU	C2-N1	7.63	1.50	1.38
84	S2	428	OMU	C2-N1	7.59	1.50	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	4620	OMU	C2-N1	7.54	1.50	1.38
4	L5	4498	OMU	C2-N1	7.39	1.50	1.38
84	S2	1326	OMU	C2-N3	7.03	1.50	1.38
84	S2	627	OMU	C2-N3	6.92	1.50	1.38
84	S2	1442	OMU	C2-N3	6.91	1.50	1.38
84	S2	116	OMU	C2-N3	6.87	1.49	1.38
84	S2	1288	OMU	C2-N3	6.85	1.49	1.38
84	S2	428	OMU	C2-N3	6.83	1.49	1.38
84	S2	799	OMU	C2-N3	6.81	1.49	1.38
84	S2	172	OMU	C2-N3	6.79	1.49	1.38
4	L5	4227	OMU	C2-N3	6.74	1.49	1.38
4	L5	2837	OMU	C2-N3	6.70	1.49	1.38
84	S2	1248	B8N	C4-C5	6.69	1.62	1.47
84	S2	354	OMU	C2-N3	6.65	1.49	1.38
4	L5	3925	OMU	C2-N3	6.59	1.49	1.38
4	L5	4498	OMU	C2-N3	6.57	1.49	1.38
84	S2	121	OMU	C2-N3	6.55	1.49	1.38
4	L5	4620	OMU	C2-N3	6.42	1.49	1.38
4	L5	4306	OMU	C2-N3	6.42	1.49	1.38
4	L5	4530	UR3	C2-N1	6.21	1.47	1.38
4	L5	4530	UR3	C6-C5	6.14	1.49	1.35
84	S2	1326	OMU	C6-C5	5.94	1.48	1.35
84	S2	428	OMU	C6-C5	5.88	1.48	1.35
84	S2	172	OMU	C6-C5	5.83	1.48	1.35
84	S2	1248	B8N	C2-N1	5.82	1.56	1.39
84	S2	1288	OMU	C6-C5	5.79	1.48	1.35
4	L5	4227	OMU	C6-C5	5.78	1.48	1.35
84	S2	627	OMU	C6-C5	5.77	1.48	1.35
84	S2	121	OMU	C6-C5	5.75	1.48	1.35
84	S2	799	OMU	C6-C5	5.75	1.48	1.35
4	L5	4530	UR3	C2-N3	5.70	1.50	1.39
84	S2	116	OMU	C6-C5	5.69	1.48	1.35
84	S2	354	OMU	C6-C5	5.68	1.48	1.35
4	L5	3925	OMU	O4-C4	-5.68	1.13	1.24
84	S2	1442	OMU	C6-C5	5.67	1.48	1.35
4	L5	3925	OMU	C6-C5	5.67	1.48	1.35
4	L5	2837	OMU	C6-C5	5.67	1.48	1.35
4	L5	4498	OMU	C6-C5	5.67	1.48	1.35
4	L5	4306	OMU	O4-C4	-5.63	1.13	1.24
4	L5	4620	OMU	O4-C4	-5.62	1.13	1.24
4	L5	4498	OMU	O4-C4	-5.61	1.13	1.24
4	L5	4620	OMU	C6-C5	5.58	1.48	1.35

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	S2	354	OMU	O4-C4	-5.57	1.13	1.24
84	S2	121	OMU	O4-C4	-5.53	1.13	1.24
4	L5	4227	OMU	O4-C4	-5.53	1.13	1.24
4	L5	4306	OMU	C6-C5	5.52	1.47	1.35
84	S2	428	OMU	O4-C4	-5.52	1.13	1.24
84	S2	799	OMU	O4-C4	-5.51	1.13	1.24
84	S2	116	OMU	O4-C4	-5.50	1.13	1.24
84	S2	1442	OMU	O4-C4	-5.49	1.13	1.24
4	L5	2837	OMU	O4-C4	-5.47	1.13	1.24
84	S2	172	OMU	O4-C4	-5.42	1.13	1.24
84	S2	627	OMU	O4-C4	-5.42	1.13	1.24
4	L5	3818	UY1	C6-N1	5.41	1.45	1.36
84	S2	1288	OMU	O4-C4	-5.38	1.14	1.24
84	S2	1326	OMU	O4-C4	-5.38	1.14	1.24
84	S2	1639	G7M	C2-N3	5.31	1.46	1.33
84	S2	1248	B8N	C6-C5	5.13	1.42	1.35
84	S2	1639	G7M	C2-N2	4.99	1.45	1.34
84	S2	1639	G7M	C4-N3	4.92	1.49	1.37
4	L5	4220	6MZ	C6-C5	-4.63	1.37	1.44
4	L5	4220	6MZ	O4'-C4'	4.63	1.55	1.45
84	S2	627	OMU	C4-N3	4.63	1.46	1.38
84	S2	1326	OMU	C4-N3	4.52	1.46	1.38
4	L5	4220	6MZ	C5'-C4'	-4.51	1.38	1.51
84	S2	1832	6MZ	C6-C5	-4.43	1.38	1.44
4	L5	3818	UY1	C4-N3	4.42	1.47	1.38
84	S2	1850	MA6	C6-C5	-4.40	1.38	1.44
84	S2	1442	OMU	C4-N3	4.33	1.46	1.38
84	S2	1288	OMU	C4-N3	4.32	1.46	1.38
4	L5	4227	OMU	C4-N3	4.32	1.46	1.38
84	S2	172	OMU	C4-N3	4.28	1.46	1.38
84	S2	354	OMU	C4-N3	4.28	1.45	1.38
84	S2	428	OMU	C4-N3	4.25	1.45	1.38
84	S2	116	OMU	C4-N3	4.21	1.45	1.38
84	S2	1851	MA6	C6-C5	-4.21	1.38	1.44
84	S2	799	OMU	C4-N3	4.20	1.45	1.38
4	L5	2837	OMU	C4-N3	4.19	1.45	1.38
4	L5	4498	OMU	C4-N3	4.01	1.45	1.38
4	L5	3925	OMU	C4-N3	3.99	1.45	1.38
84	S2	121	OMU	C4-N3	3.93	1.45	1.38
4	L5	4306	OMU	C4-N3	3.89	1.45	1.38
4	L5	4620	OMU	C4-N3	3.84	1.45	1.38
84	S2	93	PSU	C6-C5	3.77	1.39	1.35

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	3818	UY1	O4-C4	-3.77	1.16	1.23
84	S2	1639	G7M	C6-N1	3.65	1.43	1.37
84	S2	801	PSU	C6-C5	3.62	1.39	1.35
4	L5	5010	PSU	C6-C5	3.61	1.39	1.35
4	L5	4523	A2M	O5'-C5'	-3.61	1.33	1.44
4	L5	1871	A2M	C1'-N9	-3.61	1.41	1.49
84	S2	668	A2M	O5'-C5'	-3.59	1.33	1.44
4	L5	1323	A2M	O5'-C5'	-3.57	1.33	1.44
4	L5	400	A2M	O5'-C5'	-3.56	1.33	1.44
84	S2	576	A2M	O5'-C5'	-3.53	1.33	1.44
4	L5	1326	A2M	O5'-C5'	-3.53	1.33	1.44
84	S2	966	PSU	C6-C5	3.53	1.39	1.35
84	S2	1367	PSU	C6-C5	3.52	1.39	1.35
84	S2	27	A2M	O5'-C5'	-3.50	1.34	1.44
4	L5	4571	A2M	O5'-C5'	-3.49	1.34	1.44
84	S2	99	A2M	O5'-C5'	-3.48	1.34	1.44
4	L5	398	A2M	O5'-C5'	-3.46	1.34	1.44
84	S2	1383	A2M	O5'-C5'	-3.46	1.34	1.44
4	L5	1677	PSU	C6-C5	3.45	1.39	1.35
2	CF	163	SEP	P-O1P	3.43	1.61	1.50
4	L5	4296	PSU	C6-C5	3.43	1.39	1.35
4	L5	3718	A2M	O5'-C5'	-3.42	1.34	1.44
4	L5	1534	A2M	O5'-C5'	-3.41	1.34	1.44
84	S2	1031	A2M	O5'-C5'	-3.41	1.34	1.44
4	L5	3825	A2M	O5'-C5'	-3.40	1.34	1.44
84	S2	1004	PSU	C6-C5	3.40	1.39	1.35
84	S2	863	PSU	C6-C5	3.39	1.39	1.35
4	L5	2401	A2M	O5'-C5'	-3.39	1.34	1.44
84	S2	109	PSU	C6-C5	3.37	1.39	1.35
4	L5	2632	PSU	C6-C5	3.37	1.39	1.35
4	L5	2363	A2M	O5'-C5'	-3.37	1.34	1.44
84	S2	686	PSU	C6-C5	3.37	1.39	1.35
4	L5	3867	A2M	O5'-C5'	-3.36	1.34	1.44
4	L5	4493	PSU	C6-C5	3.36	1.39	1.35
4	L5	2815	A2M	O5'-C5'	-3.36	1.34	1.44
4	L5	2787	A2M	O5'-C5'	-3.34	1.34	1.44
4	L5	3830	A2M	O5'-C5'	-3.34	1.34	1.44
4	L5	1871	A2M	O5'-C5'	-3.32	1.34	1.44
4	L5	3695	PSU	C6-C5	3.32	1.39	1.35
4	L5	3884	PSU	C6-C5	3.31	1.39	1.35
84	S2	166	A2M	O5'-C5'	-3.31	1.34	1.44
4	L5	3818	UY1	O2-C2	-3.31	1.16	1.23

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	S2	1244	PSU	C6-C5	3.30	1.38	1.35
84	S2	484	A2M	O5'-C5'	-3.30	1.34	1.44
6	L8	69	PSU	C6-C5	3.30	1.38	1.35
84	S2	1850	MA6	C6-N6	3.28	1.45	1.37
84	S2	468	A2M	O5'-C5'	-3.28	1.34	1.44
4	L5	3899	OMG	C8-N7	-3.27	1.29	1.34
4	L5	1860	PSU	C6-C5	3.27	1.38	1.35
4	L5	3844	PSU	C6-C5	3.26	1.38	1.35
84	S2	1232	PSU	C6-C5	3.26	1.38	1.35
4	L5	5001	PSU	C6-C5	3.26	1.38	1.35
4	L5	4590	A2M	O5'-C5'	-3.25	1.34	1.44
84	S2	1248	B8N	C1'-C5	3.25	1.57	1.50
4	L5	4973	PSU	C6-C5	3.24	1.38	1.35
84	S2	814	PSU	C6-C5	3.24	1.38	1.35
4	L5	4523	A2M	C1'-N9	-3.24	1.41	1.49
4	L5	4293	PSU	C6-C5	3.23	1.38	1.35
4	L5	3637	PSU	C6-C5	3.22	1.38	1.35
84	S2	1851	MA6	C6-N6	3.22	1.44	1.37
4	L5	4521	PSU	C6-C5	3.22	1.38	1.35
84	S2	1639	G7M	C5-C6	3.21	1.53	1.45
4	L5	3785	A2M	O5'-C5'	-3.21	1.34	1.44
84	S2	649	PSU	C6-C5	3.20	1.38	1.35
4	L5	1781	PSU	C6-C5	3.19	1.38	1.35
4	L5	4431	PSU	C6-C5	3.19	1.38	1.35
4	L5	2876	OMG	C8-N7	-3.19	1.29	1.34
84	S2	1177	PSU	C6-C5	3.19	1.38	1.35
4	L5	2364	OMG	C8-N7	-3.18	1.29	1.34
4	L5	4471	PSU	C6-C5	3.18	1.38	1.35
4	L5	3627	OMG	C8-N7	-3.17	1.29	1.34
4	L5	4623	OMG	C8-N7	-3.17	1.29	1.34
4	L5	1524	A2M	O5'-C5'	-3.17	1.35	1.44
84	S2	651	PSU	C6-C5	3.16	1.38	1.35
84	S2	866	PSU	C6-C5	3.16	1.38	1.35
84	S2	159	A2M	O5'-C5'	-3.15	1.35	1.44
84	S2	105	PSU	C6-C5	3.15	1.38	1.35
4	L5	1582	PSU	C6-C5	3.15	1.38	1.35
4	L5	4532	PSU	C6-C5	3.14	1.38	1.35
4	L5	3818	UY1	C1'-C5	3.14	1.57	1.50
84	S2	1045	PSU	C6-C5	3.14	1.38	1.35
4	L5	4972	PSU	C6-C5	3.13	1.38	1.35
4	L5	3853	PSU	C6-C5	3.13	1.38	1.35
4	L5	4499	OMG	C8-N7	-3.13	1.29	1.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	1862	PSU	C6-C5	3.12	1.38	1.35
4	L5	4442	PSU	C6-C5	3.12	1.38	1.35
4	L5	4361	PSU	C6-C5	3.12	1.38	1.35
84	S2	406	PSU	C6-C5	3.11	1.38	1.35
84	S2	1174	PSU	C6-C5	3.11	1.38	1.35
84	S2	681	PSU	C6-C5	3.11	1.38	1.35
4	L5	1323	A2M	C1'-N9	-3.11	1.42	1.49
4	L5	1625	OMG	C8-N7	-3.10	1.30	1.34
4	L5	1316	OMG	C8-N7	-3.10	1.30	1.34
4	L5	1782	PSU	C6-C5	3.09	1.38	1.35
4	L5	4196	OMG	C8-N7	-3.09	1.30	1.34
4	L5	1744	PSU	C6-C5	3.08	1.38	1.35
4	L5	1683	PSU	C6-C5	3.08	1.38	1.35
84	S2	601	OMG	C8-N7	-3.08	1.30	1.34
4	L5	4673	PSU	C6-C5	3.07	1.38	1.35
4	L5	4494	OMG	C8-N7	-3.07	1.30	1.34
84	S2	1081	PSU	C6-C5	3.06	1.38	1.35
84	S2	644	OMG	C8-N7	-3.06	1.30	1.34
84	S2	683	OMG	C8-N7	-3.06	1.30	1.34
4	L5	3920	PSU	C6-C5	3.06	1.38	1.35
4	L5	4312	PSU	C6-C5	3.05	1.38	1.35
84	S2	867	OMG	C8-N7	-3.05	1.30	1.34
6	L8	55	PSU	C6-C5	3.04	1.38	1.35
4	L5	2839	PSU	C6-C5	3.04	1.38	1.35
4	L5	3851	PSU	C6-C5	3.04	1.38	1.35
4	L5	3785	A2M	C1'-N9	-3.04	1.42	1.49
84	S2	468	A2M	C1'-N9	-3.04	1.42	1.49
84	S2	1490	OMG	C8-N7	-3.03	1.30	1.34
4	L5	4628	PSU	C6-C5	3.03	1.38	1.35
4	L5	4636	PSU	C6-C5	3.03	1.38	1.35
4	L5	4392	OMG	C8-N7	-3.03	1.30	1.34
4	L5	4299	PSU	C6-C5	3.02	1.38	1.35
4	L5	4576	PSU	C6-C5	3.01	1.38	1.35
4	L5	4500	PSU	C6-C5	3.01	1.38	1.35
4	L5	3744	OMG	C8-N7	-3.01	1.30	1.34
4	L5	4571	A2M	C1'-N9	-3.00	1.42	1.49
84	S2	436	OMG	C8-N7	-3.00	1.30	1.34
4	L5	1522	OMG	C8-N7	-2.99	1.30	1.34
4	L5	4403	PSU	C6-C5	2.98	1.38	1.35
4	L5	3639	PSU	C6-C5	2.98	1.38	1.35
4	L5	2401	A2M	C1'-N9	-2.97	1.42	1.49
4	L5	4637	OMG	C8-N7	-2.97	1.30	1.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	4618	OMG	C8-N7	-2.97	1.30	1.34
4	L5	2424	OMG	C8-N7	-2.95	1.30	1.34
6	L8	75	OMG	C8-N7	-2.94	1.30	1.34
4	L5	4228	OMG	C8-N7	-2.94	1.30	1.34
4	L5	4590	A2M	C1'-N9	-2.93	1.42	1.49
4	L5	3792	OMG	C8-N7	-2.92	1.30	1.34
4	L5	1625	OMG	C5-C6	-2.91	1.41	1.47
4	L5	4457	PSU	C6-C5	2.91	1.38	1.35
4	L5	4552	PSU	C6-C5	2.90	1.38	1.35
84	S2	627	OMU	C5-C4	2.90	1.50	1.43
4	L5	4689	PSU	C6-C5	2.90	1.38	1.35
4	L5	3825	A2M	C1'-N9	-2.89	1.42	1.49
84	S2	27	A2M	C1'-N9	-2.88	1.42	1.49
84	S2	1326	OMU	C5-C4	2.87	1.49	1.43
84	S2	1328	OMG	C8-N7	-2.86	1.30	1.34
84	S2	1046	PSU	C6-C5	2.86	1.38	1.35
84	S2	1288	OMU	C5-C4	2.86	1.49	1.43
84	S2	166	A2M	C1'-N9	-2.86	1.42	1.49
4	L5	4579	PSU	C6-C5	2.85	1.38	1.35
4	L5	1792	PSU	C6-C5	2.84	1.38	1.35
4	L5	2363	A2M	C1'-N9	-2.84	1.42	1.49
4	L5	3627	OMG	C5-C6	-2.84	1.41	1.47
4	L5	4370	OMG	C8-N7	-2.84	1.30	1.34
84	S2	1056	PSU	C6-C5	2.82	1.38	1.35
4	L5	1323	A2M	O4'-C4'	-2.82	1.38	1.45
4	L5	4353	PSU	C6-C5	2.82	1.38	1.35
84	S2	172	OMU	C5-C4	2.82	1.49	1.43
84	S2	683	OMG	C5-C6	-2.82	1.41	1.47
4	L5	4494	OMG	C5-C6	-2.81	1.41	1.47
4	L5	4392	OMG	C5-C6	-2.81	1.41	1.47
4	L5	1316	OMG	C5-C6	-2.81	1.41	1.47
84	S2	601	OMG	C5-C6	-2.80	1.41	1.47
4	L5	4228	OMG	C5-C6	-2.79	1.41	1.47
4	L5	2424	OMG	C5-C6	-2.78	1.41	1.47
4	L5	2364	OMG	C5-C6	-2.77	1.42	1.47
84	S2	1490	OMG	C5-C6	-2.77	1.42	1.47
84	S2	799	OMU	C5-C4	2.77	1.49	1.43
4	L5	3792	OMG	C5-C6	-2.76	1.42	1.47
84	S2	1639	G7M	C2-N1	2.76	1.44	1.37
4	L5	3822	PSU	C6-C5	2.76	1.38	1.35
4	L5	4227	OMU	C5-C4	2.75	1.49	1.43
4	L5	2876	OMG	C5-C6	-2.75	1.42	1.47

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	S2	428	OMU	C5-C4	2.75	1.49	1.43
84	S2	867	OMG	C5-C6	-2.74	1.42	1.47
84	S2	436	OMG	C5-C6	-2.73	1.42	1.47
84	S2	354	OMU	C5-C4	2.73	1.49	1.43
4	L5	4499	OMG	C5-C6	-2.73	1.42	1.47
4	L5	4623	OMG	C5-C6	-2.73	1.42	1.47
84	S2	509	OMG	C8-N7	-2.72	1.30	1.34
4	L5	1326	A2M	C1'-N9	-2.70	1.43	1.49
4	L5	4370	OMG	C5-C6	-2.70	1.42	1.47
84	S2	1383	A2M	C1'-N9	-2.70	1.43	1.49
4	L5	400	A2M	C1'-N9	-2.69	1.43	1.49
84	S2	1442	OMU	C5-C4	2.69	1.49	1.43
84	S2	121	OMU	C5-C4	2.68	1.49	1.43
4	L5	4530	UR3	O2-C2	-2.67	1.17	1.22
4	L5	4220	6MZ	O3'-C3'	2.67	1.49	1.43
4	L5	4523	A2M	O3'-C3'	-2.66	1.36	1.43
4	L5	3925	OMU	C5-C4	2.66	1.49	1.43
4	L5	4637	OMG	C5-C6	-2.66	1.42	1.47
4	L5	1322	1MA	C5-C4	-2.66	1.36	1.43
4	L5	3899	OMG	C5-C6	-2.66	1.42	1.47
84	S2	1442	OMU	C6-N1	2.65	1.44	1.38
4	L5	1536	PSU	C6-C5	2.64	1.38	1.35
84	S2	1288	OMU	C6-N1	2.64	1.44	1.38
84	S2	627	OMU	C6-N1	2.64	1.44	1.38
4	L5	398	A2M	C1'-N9	-2.64	1.43	1.49
84	S2	1326	OMU	C6-N1	2.63	1.44	1.38
4	L5	4196	OMG	C5-C6	-2.62	1.42	1.47
6	L8	75	OMG	C5-C6	-2.62	1.42	1.47
4	L5	2837	OMU	C5-C4	2.61	1.49	1.43
4	L5	1522	OMG	C5-C6	-2.61	1.42	1.47
4	L5	4498	OMU	C5-C4	2.61	1.49	1.43
4	L5	3867	A2M	C1'-N9	-2.59	1.43	1.49
84	S2	799	OMU	C6-N1	2.58	1.44	1.38
84	S2	644	OMG	C5-C6	-2.58	1.42	1.47
84	S2	172	OMU	C6-N1	2.57	1.44	1.38
4	L5	4227	OMU	C6-N1	2.57	1.44	1.38
84	S2	116	OMU	C5-C4	2.56	1.49	1.43
4	L5	3744	OMG	C5-C6	-2.52	1.42	1.47
84	S2	576	A2M	C1'-N9	-2.52	1.43	1.49
84	S2	354	OMU	C6-N1	2.52	1.44	1.38
4	L5	4306	OMU	C5-C4	2.51	1.49	1.43
4	L5	1322	1MA	C8-N7	-2.51	1.30	1.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	S2	121	OMU	C6-N1	2.50	1.44	1.38
84	S2	668	A2M	C1'-N9	-2.50	1.43	1.49
4	L5	4620	OMU	C5-C4	2.50	1.49	1.43
4	L5	4618	OMG	C5-C6	-2.49	1.42	1.47
84	S2	1851	MA6	C2-N3	2.48	1.35	1.32
84	S2	428	OMU	C6-N1	2.45	1.43	1.38
84	S2	1328	OMG	C5-C6	-2.45	1.42	1.47
84	S2	1850	MA6	C2-N3	2.44	1.35	1.32
4	L5	4498	OMU	C6-N1	2.44	1.43	1.38
4	L5	2837	OMU	C6-N1	2.43	1.43	1.38
84	S2	99	A2M	C1'-N9	-2.41	1.44	1.49
84	S2	116	OMU	C6-N1	2.40	1.43	1.38
4	L5	4523	A2M	O4'-C4'	-2.40	1.39	1.45
4	L5	4530	UR3	C6-N1	2.39	1.43	1.38
84	S2	509	OMG	C5-C6	-2.39	1.42	1.47
4	L5	3867	A2M	O4'-C4'	-2.39	1.39	1.45
4	L5	1534	A2M	C1'-N9	-2.38	1.44	1.49
4	L5	3718	A2M	C1'-N9	-2.37	1.44	1.49
4	L5	3925	OMU	C6-N1	2.36	1.43	1.38
4	L5	2787	A2M	C1'-N9	-2.34	1.44	1.49
84	S2	1248	B8N	O4'-C1'	-2.34	1.40	1.43
4	L5	1871	A2M	O4'-C4'	-2.33	1.39	1.45
4	L5	4471	PSU	C4-C5	-2.33	1.37	1.44
84	S2	27	A2M	O4'-C4'	-2.32	1.39	1.45
84	S2	668	A2M	O4'-C4'	-2.30	1.39	1.45
84	S2	159	A2M	C1'-N9	-2.30	1.44	1.49
4	L5	4306	OMU	C6-N1	2.28	1.43	1.38
4	L5	3785	A2M	O3'-C3'	-2.27	1.37	1.43
4	L5	1536	PSU	C4-C5	-2.26	1.38	1.44
4	L5	4392	OMG	C5-C4	-2.25	1.37	1.43
4	L5	4620	OMU	C6-N1	2.24	1.43	1.38
4	L5	4530	UR3	C3U-N3	2.23	1.50	1.47
4	L5	3830	A2M	C1'-N9	-2.22	1.44	1.49
4	L5	3822	PSU	O4'-C1'	-2.22	1.40	1.43
4	L5	4228	OMG	C5-C4	-2.22	1.37	1.43
4	L5	1744	PSU	C4-C5	-2.21	1.38	1.44
4	L5	4571	A2M	O4'-C4'	-2.21	1.40	1.45
4	L5	2815	A2M	C1'-N9	-2.21	1.44	1.49
4	L5	400	A2M	O4'-C4'	-2.20	1.40	1.45
4	L5	4370	OMG	C5-C4	-2.19	1.37	1.43
4	L5	4494	OMG	C5-C4	-2.18	1.37	1.43
4	L5	4293	PSU	C4-C5	-2.18	1.38	1.44

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	4973	PSU	C4-C5	-2.18	1.38	1.44
4	L5	5001	PSU	C4-C5	-2.18	1.38	1.44
4	L5	3825	A2M	O4'-C4'	-2.18	1.40	1.45
4	L5	4403	PSU	C4-C5	-2.18	1.38	1.44
84	S2	27	A2M	O3'-C3'	-2.18	1.37	1.43
4	L5	2876	OMG	C5-C4	-2.17	1.37	1.43
4	L5	4530	UR3	C5-C4	2.17	1.49	1.43
4	L5	4353	PSU	C4-C5	-2.15	1.38	1.44
4	L5	3830	A2M	O3'-C3'	-2.15	1.37	1.43
4	L5	1524	A2M	C1'-N9	-2.15	1.44	1.49
4	L5	3844	PSU	C4-C5	-2.15	1.38	1.44
4	L5	4312	PSU	C4-C5	-2.15	1.38	1.44
4	L5	4442	PSU	C4-C5	-2.15	1.38	1.44
4	L5	3627	OMG	C5-C4	-2.15	1.37	1.43
4	L5	4673	PSU	C4-C5	-2.13	1.38	1.44
4	L5	4499	OMG	C5-C4	-2.13	1.37	1.43
4	L5	3818	UY1	O4'-C1'	-2.13	1.40	1.43
4	L5	2839	PSU	C4-C5	-2.12	1.38	1.44
4	L5	1625	OMG	C5-C4	-2.12	1.37	1.43
4	L5	3822	PSU	C4-C5	-2.12	1.38	1.44
4	L5	4500	PSU	C4-C5	-2.12	1.38	1.44
4	L5	3884	PSU	C4-C5	-2.12	1.38	1.44
4	L5	1582	PSU	C4-C5	-2.12	1.38	1.44
4	L5	4220	6MZ	C2-N3	2.11	1.35	1.32
4	L5	1316	OMG	C5-C4	-2.11	1.37	1.43
4	L5	4521	PSU	C4-C5	-2.10	1.38	1.44
4	L5	4442	PSU	O4'-C1'	-2.10	1.40	1.43
84	S2	1081	PSU	C4-C5	-2.10	1.38	1.44
4	L5	3825	A2M	O3'-C3'	-2.10	1.37	1.43
4	L5	4457	PSU	C4-C5	-2.10	1.38	1.44
84	S2	436	OMG	C5-C4	-2.09	1.37	1.43
84	S2	1177	PSU	C4-C5	-2.09	1.38	1.44
84	S2	1174	PSU	C4-C5	-2.08	1.38	1.44
4	L5	3920	PSU	C4-C5	-2.08	1.38	1.44
4	L5	3639	PSU	C4-C5	-2.07	1.38	1.44
4	L5	3899	OMG	C5-C4	-2.07	1.38	1.43
4	L5	4521	PSU	O4'-C1'	-2.07	1.41	1.43
84	S2	406	PSU	C4-C5	-2.07	1.38	1.44
4	L5	4579	PSU	C4-C5	-2.07	1.38	1.44
4	L5	3639	PSU	O4'-C1'	-2.07	1.41	1.43
4	L5	5010	PSU	C4-C5	-2.07	1.38	1.44
4	L5	3920	PSU	O4'-C1'	-2.07	1.41	1.43

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	1862	PSU	C4-C5	-2.06	1.38	1.44
4	L5	4552	PSU	C4-C5	-2.06	1.38	1.44
84	S2	681	PSU	C4-C5	-2.06	1.38	1.44
4	L5	4689	PSU	C4-C5	-2.06	1.38	1.44
4	L5	1683	PSU	C4-C5	-2.05	1.38	1.44
84	S2	866	PSU	C4-C5	-2.05	1.38	1.44
84	S2	649	PSU	C4-C5	-2.05	1.38	1.44
4	L5	1326	A2M	O4'-C4'	-2.05	1.40	1.45
84	S2	1639	G7M	O6-C6	-2.04	1.18	1.23
4	L5	4353	PSU	O4'-C1'	-2.04	1.41	1.43
4	L5	4576	PSU	C4-C5	-2.04	1.38	1.44
4	L5	1522	OMG	C5-C4	-2.04	1.38	1.43
84	S2	1490	OMG	C5-C4	-2.04	1.38	1.43
84	S2	1031	A2M	C1'-N9	-2.04	1.44	1.49
4	L5	2424	OMG	C5-C4	-2.04	1.38	1.43
4	L5	4637	OMG	C5-C4	-2.04	1.38	1.43
4	L5	2364	OMG	C5-C4	-2.03	1.38	1.43
84	S2	1004	PSU	C4-C5	-2.03	1.38	1.44
84	S2	1046	PSU	C4-C5	-2.03	1.38	1.44
4	L5	1871	A2M	O3'-C3'	-2.03	1.37	1.43
6	L8	75	OMG	C5-C4	-2.02	1.38	1.43
6	L8	69	PSU	C4-C5	-2.02	1.38	1.44
84	S2	814	PSU	C4-C5	-2.02	1.38	1.44
4	L5	4361	PSU	C4-C5	-2.02	1.38	1.44
4	L5	4457	PSU	O4'-C1'	-2.01	1.41	1.43
4	L5	4403	PSU	O4'-C1'	-2.01	1.41	1.43
4	L5	4493	PSU	C4-C5	-2.01	1.38	1.44
4	L5	1524	A2M	O4'-C4'	-2.00	1.40	1.45
84	S2	866	PSU	O4'-C1'	-2.00	1.41	1.43

All (665) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	S2	1851	MA6	N1-C6-N6	-12.57	102.31	116.83
84	S2	1850	MA6	N1-C6-N6	-11.54	103.49	116.83
4	L5	3785	A2M	C4'-O4'-C1'	-8.47	102.17	109.92
4	L5	4523	A2M	C4'-O4'-C1'	-7.07	103.45	109.92
84	S2	1832	6MZ	N3-C2-N1	-6.42	119.95	128.67
4	L5	4220	6MZ	N3-C2-N1	-6.41	119.97	128.67
84	S2	1851	MA6	N3-C2-N1	-6.40	119.98	128.67
4	L5	1871	A2M	C4'-O4'-C1'	-6.28	104.18	109.92
4	L5	4306	OMU	C4-N3-C2	-6.14	118.98	126.61

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	1524	A2M	C4'-O4'-C1'	-6.12	104.32	109.92
84	S2	1850	MA6	N3-C2-N1	-6.12	120.36	128.67
4	L5	3925	OMU	C4-N3-C2	-6.11	119.03	126.61
4	L5	4498	OMU	C4-N3-C2	-6.06	119.09	126.61
84	S2	354	OMU	C4-N3-C2	-6.04	119.11	126.61
4	L5	1534	A2M	C4'-O4'-C1'	-5.95	104.48	109.92
4	L5	4227	OMU	C4-N3-C2	-5.88	119.31	126.61
84	S2	428	OMU	C4-N3-C2	-5.84	119.36	126.61
84	S2	172	OMU	C4-N3-C2	-5.80	119.41	126.61
84	S2	627	OMU	C4-N3-C2	-5.76	119.46	126.61
84	S2	1442	OMU	C4-N3-C2	-5.73	119.49	126.61
4	L5	1536	PSU	C4-N3-C2	-5.69	118.53	126.37
84	S2	799	OMU	C4-N3-C2	-5.65	119.60	126.61
4	L5	4620	OMU	C4-N3-C2	-5.63	119.62	126.61
4	L5	2837	OMU	C4-N3-C2	-5.60	119.66	126.61
84	S2	1288	OMU	C4-N3-C2	-5.56	119.70	126.61
4	L5	4530	UR3	C4-N3-C2	-5.53	120.13	124.58
84	S2	1326	OMU	C4-N3-C2	-5.50	119.79	126.61
84	S2	121	OMU	C4-N3-C2	-5.48	119.81	126.61
4	L5	4353	PSU	C4-N3-C2	-5.45	118.86	126.37
84	S2	166	A2M	C4'-O4'-C1'	-5.43	104.95	109.92
4	L5	3920	PSU	N1-C2-N3	5.35	120.81	115.17
4	L5	4636	PSU	C4-N3-C2	-5.33	119.03	126.37
84	S2	1248	B8N	C5-C4-N3	5.31	125.80	116.15
4	L5	4293	PSU	C4-N3-C2	-5.28	119.10	126.37
4	L5	3920	PSU	C4-N3-C2	-5.27	119.11	126.37
4	L5	1536	PSU	N1-C2-N3	5.26	120.72	115.17
4	L5	3639	PSU	C4-N3-C2	-5.26	119.13	126.37
6	L8	55	PSU	N1-C2-N3	5.26	120.71	115.17
84	S2	1383	A2M	C4'-O4'-C1'	-5.26	105.11	109.92
4	L5	4500	PSU	C4-N3-C2	-5.25	119.14	126.37
6	L8	55	PSU	C4-N3-C2	-5.21	119.19	126.37
4	L5	4552	PSU	N1-C2-N3	5.21	120.66	115.17
84	S2	866	PSU	N1-C2-N3	5.21	120.66	115.17
4	L5	4471	PSU	C4-N3-C2	-5.20	119.21	126.37
84	S2	651	PSU	C4-N3-C2	-5.20	119.21	126.37
4	L5	3637	PSU	N1-C2-N3	5.20	120.65	115.17
84	S2	1045	PSU	C4-N3-C2	-5.19	119.22	126.37
84	S2	651	PSU	N1-C2-N3	5.19	120.65	115.17
84	S2	681	PSU	C4-N3-C2	-5.19	119.22	126.37
4	L5	4353	PSU	N1-C2-N3	5.19	120.64	115.17
4	L5	1862	PSU	C4-N3-C2	-5.19	119.22	126.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	S2	814	PSU	C4-N3-C2	-5.19	119.22	126.37
84	S2	27	A2M	C4'-O4'-C1'	-5.19	105.17	109.92
4	L5	3639	PSU	N1-C2-N3	5.17	120.62	115.17
4	L5	1860	PSU	N1-C2-N3	5.17	120.62	115.17
84	S2	1081	PSU	C4-N3-C2	-5.17	119.26	126.37
4	L5	3822	PSU	N1-C2-N3	5.17	120.62	115.17
84	S2	1367	PSU	N1-C2-N3	5.16	120.61	115.17
4	L5	4442	PSU	N1-C2-N3	5.16	120.61	115.17
4	L5	4673	PSU	N1-C2-N3	5.16	120.61	115.17
84	S2	1046	PSU	C4-N3-C2	-5.15	119.28	126.37
4	L5	5001	PSU	C4-N3-C2	-5.15	119.28	126.37
4	L5	3851	PSU	N1-C2-N3	5.14	120.59	115.17
4	L5	4442	PSU	C4-N3-C2	-5.14	119.29	126.37
4	L5	4312	PSU	C4-N3-C2	-5.14	119.29	126.37
84	S2	1244	PSU	N1-C2-N3	5.13	120.58	115.17
4	L5	4312	PSU	N1-C2-N3	5.13	120.58	115.17
4	L5	4493	PSU	C4-N3-C2	-5.13	119.30	126.37
4	L5	4296	PSU	C4-N3-C2	-5.13	119.31	126.37
4	L5	4293	PSU	N1-C2-N3	5.13	120.58	115.17
4	L5	4299	PSU	N1-C2-N3	5.13	120.58	115.17
84	S2	1004	PSU	N1-C2-N3	5.13	120.58	115.17
84	S2	1232	PSU	N1-C2-N3	5.13	120.58	115.17
4	L5	1683	PSU	N1-C2-N3	5.12	120.57	115.17
84	S2	649	PSU	C4-N3-C2	-5.12	119.31	126.37
84	S2	1004	PSU	C4-N3-C2	-5.12	119.32	126.37
84	S2	1081	PSU	N1-C2-N3	5.12	120.56	115.17
4	L5	1683	PSU	C4-N3-C2	-5.11	119.33	126.37
4	L5	4673	PSU	C4-N3-C2	-5.11	119.33	126.37
4	L5	4576	PSU	N1-C2-N3	5.11	120.56	115.17
4	L5	1677	PSU	N1-C2-N3	5.10	120.54	115.17
4	L5	4457	PSU	N1-C2-N3	5.09	120.54	115.17
84	S2	1174	PSU	C4-N3-C2	-5.09	119.36	126.37
4	L5	4299	PSU	C4-N3-C2	-5.08	119.37	126.37
4	L5	4689	PSU	N1-C2-N3	5.08	120.53	115.17
4	L5	3884	PSU	C4-N3-C2	-5.07	119.38	126.37
4	L5	3637	PSU	C4-N3-C2	-5.06	119.40	126.37
4	L5	4521	PSU	C4-N3-C2	-5.06	119.41	126.37
4	L5	1860	PSU	C4-N3-C2	-5.05	119.41	126.37
4	L5	1792	PSU	C4-N3-C2	-5.05	119.42	126.37
84	S2	406	PSU	C4-N3-C2	-5.05	119.42	126.37
84	S2	649	PSU	N1-C2-N3	5.05	120.49	115.17
4	L5	1781	PSU	N1-C2-N3	5.04	120.49	115.17

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	1677	PSU	C4-N3-C2	-5.03	119.44	126.37
4	L5	3822	PSU	C4-N3-C2	-5.03	119.44	126.37
4	L5	4493	PSU	N1-C2-N3	5.03	120.47	115.17
84	S2	1056	PSU	C4-N3-C2	-5.03	119.45	126.37
6	L8	69	PSU	N1-C2-N3	5.02	120.47	115.17
4	L5	1862	PSU	N1-C2-N3	5.02	120.47	115.17
4	L5	3718	A2M	C4'-O4'-C1'	-5.02	105.33	109.92
84	S2	801	PSU	N1-C2-N3	5.02	120.46	115.17
4	L5	4552	PSU	C4-N3-C2	-5.02	119.46	126.37
84	S2	1045	PSU	N1-C2-N3	5.01	120.45	115.17
84	S2	1367	PSU	C4-N3-C2	-5.01	119.47	126.37
84	S2	1056	PSU	N1-C2-N3	5.00	120.44	115.17
4	L5	4576	PSU	C4-N3-C2	-5.00	119.49	126.37
84	S2	109	PSU	C4-N3-C2	-4.99	119.50	126.37
4	L5	2632	PSU	N1-C2-N3	4.98	120.42	115.17
4	L5	5010	PSU	C4-N3-C2	-4.98	119.52	126.37
4	L5	1782	PSU	N1-C2-N3	4.98	120.42	115.17
4	L5	2839	PSU	C4-N3-C2	-4.97	119.52	126.37
4	L5	3844	PSU	C4-N3-C2	-4.95	119.55	126.37
84	S2	681	PSU	N1-C2-N3	4.95	120.39	115.17
84	S2	1244	PSU	C4-N3-C2	-4.95	119.55	126.37
4	L5	1582	PSU	C4-N3-C2	-4.95	119.56	126.37
4	L5	3851	PSU	C4-N3-C2	-4.95	119.56	126.37
4	L5	1744	PSU	C4-N3-C2	-4.95	119.56	126.37
4	L5	5010	PSU	N1-C2-N3	4.94	120.38	115.17
4	L5	1781	PSU	C4-N3-C2	-4.94	119.56	126.37
4	L5	4457	PSU	C4-N3-C2	-4.94	119.57	126.37
4	L5	3695	PSU	N1-C2-N3	4.94	120.37	115.17
4	L5	3884	PSU	N1-C2-N3	4.93	120.37	115.17
6	L8	69	PSU	C4-N3-C2	-4.93	119.58	126.37
4	L5	1792	PSU	N1-C2-N3	4.93	120.37	115.17
4	L5	4532	PSU	C4-N3-C2	-4.93	119.59	126.37
4	L5	4220	6MZ	C4'-O4'-C1'	-4.92	105.42	109.92
84	S2	1177	PSU	N1-C2-N3	4.92	120.35	115.17
4	L5	4361	PSU	C4-N3-C2	-4.91	119.61	126.37
4	L5	4628	PSU	C4-N3-C2	-4.90	119.62	126.37
4	L5	4579	PSU	N1-C2-N3	4.90	120.34	115.17
84	S2	93	PSU	N1-C2-N3	4.90	120.33	115.17
4	L5	4403	PSU	N1-C2-N3	4.89	120.33	115.17
4	L5	4431	PSU	N1-C2-N3	4.89	120.33	115.17
84	S2	105	PSU	N1-C2-N3	4.89	120.33	115.17
84	S2	1248	B8N	C4-N3-C2	-4.89	119.60	125.62

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	4431	PSU	C4-N3-C2	-4.88	119.65	126.37
84	S2	866	PSU	C4-N3-C2	-4.87	119.67	126.37
4	L5	4500	PSU	N1-C2-N3	4.86	120.30	115.17
84	S2	468	A2M	C4'-O4'-C1'	-4.86	105.47	109.92
84	S2	109	PSU	N1-C2-N3	4.86	120.29	115.17
84	S2	863	PSU	C4-N3-C2	-4.86	119.68	126.37
4	L5	3695	PSU	C4-N3-C2	-4.86	119.68	126.37
84	S2	966	PSU	C4-N3-C2	-4.86	119.68	126.37
4	L5	4220	6MZ	C9-N6-C6	-4.86	118.35	122.85
4	L5	5001	PSU	N1-C2-N3	4.85	120.28	115.17
4	L5	4972	PSU	C4-N3-C2	-4.85	119.69	126.37
4	L5	4973	PSU	C4-N3-C2	-4.84	119.70	126.37
4	L5	4973	PSU	N1-C2-N3	4.83	120.27	115.17
4	L5	1782	PSU	C4-N3-C2	-4.83	119.72	126.37
84	S2	1177	PSU	C4-N3-C2	-4.82	119.72	126.37
84	S2	1232	PSU	C4-N3-C2	-4.82	119.73	126.37
84	S2	966	PSU	N1-C2-N3	4.82	120.25	115.17
4	L5	3818	UY1	C4-N3-C2	-4.82	119.73	126.37
4	L5	4636	PSU	N1-C2-N3	4.82	120.25	115.17
4	L5	3853	PSU	C4-N3-C2	-4.82	119.74	126.37
4	L5	2839	PSU	N1-C2-N3	4.82	120.25	115.17
4	L5	1744	PSU	N1-C2-N3	4.81	120.25	115.17
84	S2	801	PSU	C4-N3-C2	-4.81	119.75	126.37
84	S2	1046	PSU	N1-C2-N3	4.81	120.24	115.17
4	L5	3844	PSU	N1-C2-N3	4.81	120.24	115.17
4	L5	4471	PSU	N1-C2-N3	4.80	120.23	115.17
84	S2	1174	PSU	N1-C2-N3	4.79	120.22	115.17
4	L5	1582	PSU	N1-C2-N3	4.78	120.21	115.17
4	L5	4521	PSU	N1-C2-N3	4.77	120.20	115.17
84	S2	406	PSU	N1-C2-N3	4.77	120.20	115.17
84	S2	814	PSU	N1-C2-N3	4.76	120.19	115.17
4	L5	3825	A2M	C4'-O4'-C1'	-4.75	105.57	109.92
84	S2	686	PSU	C4-N3-C2	-4.75	119.83	126.37
4	L5	4628	PSU	N1-C2-N3	4.74	120.17	115.17
4	L5	2632	PSU	C4-N3-C2	-4.73	119.86	126.37
4	L5	4403	PSU	C4-N3-C2	-4.72	119.87	126.37
4	L5	4579	PSU	C4-N3-C2	-4.72	119.88	126.37
84	S2	863	PSU	N1-C2-N3	4.71	120.14	115.17
4	L5	4689	PSU	C4-N3-C2	-4.71	119.88	126.37
4	L5	4361	PSU	N1-C2-N3	4.70	120.12	115.17
4	L5	2363	A2M	C4'-O4'-C1'	-4.70	105.62	109.92
84	S2	116	OMU	C4-N3-C2	-4.69	120.79	126.61

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	S2	93	PSU	C4-N3-C2	-4.69	119.91	126.37
4	L5	3830	A2M	C4'-O4'-C1'	-4.69	105.63	109.92
84	S2	105	PSU	C4-N3-C2	-4.67	119.93	126.37
4	L5	4523	A2M	C1'-N9-C4	-4.64	118.50	126.64
84	S2	686	PSU	N1-C2-N3	4.61	120.03	115.17
84	S2	576	A2M	C4'-O4'-C1'	-4.61	105.70	109.92
4	L5	4296	PSU	N1-C2-N3	4.59	120.01	115.17
4	L5	3853	PSU	N1-C2-N3	4.58	120.00	115.17
4	L5	1323	A2M	C1'-N9-C4	-4.56	118.63	126.64
4	L5	398	A2M	C4'-O4'-C1'	-4.56	105.75	109.92
4	L5	400	A2M	C4'-O4'-C1'	-4.56	105.75	109.92
4	L5	4972	PSU	N1-C2-N3	4.54	119.95	115.17
4	L5	4532	PSU	N1-C2-N3	4.54	119.95	115.17
4	L5	1871	A2M	C3'-C2'-C1'	-4.43	94.33	102.81
4	L5	4571	A2M	C4'-O4'-C1'	-4.36	105.93	109.92
84	S2	1832	6MZ	C2-N1-C6	4.30	119.94	116.60
4	L5	1534	A2M	C3'-C2'-C1'	-4.28	94.61	102.81
4	L5	3818	UY1	N1-C2-N3	4.26	119.66	115.17
4	L5	3925	OMU	N3-C2-N1	4.26	120.44	114.89
4	L5	2401	A2M	C1'-N9-C4	-4.24	119.20	126.64
4	L5	3867	A2M	C4'-O4'-C1'	-4.23	106.05	109.92
84	S2	27	A2M	C1'-N9-C4	-4.14	119.37	126.64
4	L5	4498	OMU	N3-C2-N1	4.12	120.25	114.89
4	L5	4227	OMU	N3-C2-N1	4.12	120.25	114.89
4	L5	398	A2M	C1'-N9-C4	-4.11	119.41	126.64
4	L5	1871	A2M	C1'-N9-C4	-4.11	119.42	126.64
84	S2	1383	A2M	C1'-N9-C4	-4.11	119.43	126.64
4	L5	4306	OMU	N3-C2-N1	4.10	120.23	114.89
4	L5	4590	A2M	C4'-O4'-C1'	-4.08	106.19	109.92
84	S2	166	A2M	C1'-N9-C4	-4.07	119.48	126.64
84	S2	354	OMU	N3-C2-N1	4.05	120.16	114.89
84	S2	1383	A2M	C3'-C2'-C1'	-4.03	95.09	102.81
84	S2	668	A2M	C1'-N9-C4	-4.00	119.62	126.64
84	S2	468	A2M	C1'-N9-C4	-3.99	119.64	126.64
84	S2	172	OMU	N3-C2-N1	3.98	120.08	114.89
4	L5	4620	OMU	N3-C2-N1	3.96	120.05	114.89
84	S2	627	OMU	C5-C4-N3	3.96	120.34	114.80
84	S2	99	A2M	C4'-O4'-C1'	-3.95	106.31	109.92
4	L5	4571	A2M	C1'-N9-C4	-3.94	119.73	126.64
84	S2	428	OMU	N3-C2-N1	3.93	120.00	114.89
84	S2	354	OMU	C5-C4-N3	3.91	120.28	114.80
4	L5	1534	A2M	C1'-N9-C4	-3.91	119.78	126.64

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	S2	1031	A2M	C4'-O4'-C1'	-3.89	106.36	109.92
4	L5	4306	OMU	C5-C4-N3	3.89	120.25	114.80
84	S2	1442	OMU	N3-C2-N1	3.89	119.95	114.89
4	L5	4590	A2M	C1'-N9-C4	-3.87	119.84	126.64
4	L5	3867	A2M	C1'-N9-C4	-3.87	119.85	126.64
84	S2	576	A2M	C3'-C2'-C1'	-3.84	95.45	102.81
4	L5	3925	OMU	C5-C4-N3	3.84	120.18	114.80
4	L5	4498	OMU	C5-C4-N3	3.84	120.18	114.80
4	L5	2837	OMU	N3-C2-N1	3.83	119.88	114.89
4	L5	3825	A2M	C1'-N9-C4	-3.83	119.91	126.64
4	L5	4523	A2M	C3'-C2'-C1'	-3.82	95.49	102.81
4	L5	4530	UR3	C5-C4-N3	3.82	120.07	115.04
84	S2	799	OMU	C5-C4-N3	3.81	120.14	114.80
84	S2	799	OMU	N3-C2-N1	3.79	119.83	114.89
84	S2	121	OMU	N3-C2-N1	3.79	119.83	114.89
4	L5	1323	A2M	C4'-O4'-C1'	-3.77	106.48	109.92
84	S2	1442	OMU	C5-C4-N3	3.76	120.07	114.80
4	L5	4620	OMU	C5-C4-N3	3.75	120.05	114.80
4	L5	2401	A2M	C4'-O4'-C1'	-3.74	106.50	109.92
4	L5	4227	OMU	C5-C4-N3	3.72	120.01	114.80
4	L5	2787	A2M	C1'-N9-C4	-3.71	120.12	126.64
84	S2	1288	OMU	C5-C4-N3	3.68	119.95	114.80
4	L5	2351	OMC	C1'-N1-C2	3.68	126.56	118.44
84	S2	121	OMU	C5-C4-N3	3.66	119.93	114.80
4	L5	2804	OMC	C1'-N1-C2	3.64	126.48	118.44
84	S2	1326	OMU	N3-C2-N1	3.63	119.62	114.89
4	L5	4220	6MZ	C2-N1-C6	3.63	119.42	116.60
84	S2	1288	OMU	N3-C2-N1	3.63	119.62	114.89
84	S2	428	OMU	C5-C4-N3	3.63	119.88	114.80
84	S2	159	A2M	C1'-N9-C4	-3.61	120.30	126.64
4	L5	400	A2M	C1'-N9-C4	-3.60	120.32	126.64
4	L5	2837	OMU	C5-C4-N3	3.58	119.81	114.80
84	S2	1031	A2M	C1'-N9-C4	-3.57	120.37	126.64
84	S2	99	A2M	C1'-N9-C4	-3.57	120.37	126.64
84	S2	866	PSU	O2-C2-N1	-3.57	119.11	122.79
84	S2	172	OMU	C5-C4-N3	3.55	119.78	114.80
4	L5	3785	A2M	C1'-N9-C4	-3.52	120.46	126.64
4	L5	3718	A2M	C1'-N9-C4	-3.52	120.46	126.64
84	S2	576	A2M	O3'-C3'-C2'	3.49	120.95	111.19
84	S2	27	A2M	C3'-C2'-C1'	-3.48	96.14	102.81
4	L5	4552	PSU	O2-C2-N1	-3.48	119.20	122.79
4	L5	4689	PSU	O2-C2-N1	-3.48	119.20	122.79

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	398	A2M	O3'-C3'-C2'	3.46	120.88	111.19
84	S2	1326	OMU	C5-C4-N3	3.46	119.64	114.80
4	L5	3830	A2M	C1'-N9-C4	-3.45	120.57	126.64
4	L5	4571	A2M	O3'-C3'-C2'	3.45	120.83	111.19
84	S2	1850	MA6	C2-N1-C6	3.41	120.19	116.84
4	L5	4689	PSU	C6-N1-C2	-3.41	119.53	122.69
84	S2	1442	OMU	O4-C4-C5	-3.41	119.28	125.16
84	S2	159	A2M	C4'-O4'-C1'	-3.39	106.82	109.92
84	S2	1248	B8N	N3-C2-N1	3.39	120.86	116.72
84	S2	116	OMU	N3-C2-N1	3.38	119.29	114.89
4	L5	1782	PSU	O2-C2-N1	-3.38	119.31	122.79
84	S2	484	A2M	C1'-N9-C4	-3.37	120.72	126.64
4	L5	3718	A2M	C3'-C2'-C1'	-3.37	96.35	102.81
4	L5	1524	A2M	O3'-C3'-C2'	3.36	120.60	111.19
84	S2	627	OMU	N3-C2-N1	3.36	119.27	114.89
84	S2	468	A2M	C3'-C2'-C1'	-3.33	96.43	102.81
4	L5	1524	A2M	C1'-N9-C4	-3.32	120.81	126.64
84	S2	1232	PSU	O2-C2-N1	-3.32	119.36	122.79
84	S2	1851	MA6	C2-N1-C6	3.29	120.07	116.84
84	S2	1248	B8N	C1'-C5-C4	3.28	122.59	117.61
84	S2	1383	A2M	O3'-C3'-C2'	3.28	120.36	111.19
4	L5	1683	PSU	O2-C2-N1	-3.27	119.41	122.79
84	S2	166	A2M	C3'-C2'-C1'	-3.26	96.57	102.81
4	L5	4579	PSU	O2-C2-N1	-3.24	119.45	122.79
4	L5	3830	A2M	C3'-C2'-C1'	-3.23	96.62	102.81
4	L5	1326	A2M	C1'-N9-C4	-3.23	120.97	126.64
84	S2	576	A2M	C1'-N9-C4	-3.23	120.97	126.64
4	L5	1326	A2M	C4'-O4'-C1'	-3.21	106.98	109.92
84	S2	1004	PSU	O2-C2-N1	-3.21	119.48	122.79
84	S2	1177	PSU	O2-C2-N1	-3.20	119.49	122.79
4	L5	2815	A2M	C4'-O4'-C1'	-3.19	107.00	109.92
84	S2	166	A2M	O3'-C3'-C2'	3.19	120.12	111.19
4	L5	1860	PSU	O2-C2-N1	-3.19	119.50	122.79
4	L5	4431	PSU	O2-C2-N1	-3.18	119.51	122.79
84	S2	1244	PSU	O2-C2-N1	-3.18	119.51	122.79
84	S2	1367	PSU	O2-C2-N1	-3.17	119.52	122.79
84	S2	1174	PSU	O2-C2-N1	-3.17	119.52	122.79
4	L5	4299	PSU	O2-C2-N1	-3.17	119.52	122.79
4	L5	1871	A2M	O3'-C3'-C2'	3.17	120.05	111.19
84	S2	627	OMU	O4-C4-C5	-3.17	119.70	125.16
4	L5	3822	PSU	O2-C2-N1	-3.17	119.52	122.79
4	L5	4457	PSU	O2-C2-N1	-3.16	119.53	122.79

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	1744	PSU	O2-C2-N1	-3.16	119.53	122.79
84	S2	651	PSU	O2-C2-N1	-3.16	119.53	122.79
84	S2	116	OMU	C5-C4-N3	3.15	119.22	114.80
4	L5	1323	A2M	O4'-C1'-C2'	3.15	111.97	106.61
4	L5	4442	PSU	O2-C2-N1	-3.13	119.56	122.79
84	S2	354	OMU	O4-C4-C5	-3.13	119.77	125.16
4	L5	4673	PSU	O2-C2-N1	-3.12	119.57	122.79
4	L5	3825	A2M	C3'-C2'-C1'	-3.12	96.83	102.81
4	L5	4306	OMU	O4-C4-C5	-3.12	119.78	125.16
4	L5	4579	PSU	C6-N1-C2	-3.12	119.80	122.69
4	L5	4576	PSU	O2-C2-N1	-3.11	119.58	122.79
84	S2	159	A2M	O3'-C3'-C2'	3.10	119.86	111.19
6	L8	69	PSU	O2-C2-N1	-3.10	119.59	122.79
4	L5	1536	PSU	O2-C2-N1	-3.10	119.59	122.79
84	S2	681	PSU	O2-C2-N1	-3.10	119.59	122.79
4	L5	3818	UY1	C6-N1-C2	-3.10	119.82	122.69
84	S2	668	A2M	O4'-C1'-C2'	3.09	111.87	106.61
4	L5	4227	OMU	O4-C4-C5	-3.09	119.84	125.16
4	L5	4498	OMU	O4-C4-C5	-3.09	119.84	125.16
4	L5	4403	PSU	C6-C5-C4	3.08	120.25	118.17
6	L8	55	PSU	O2-C2-N1	-3.07	119.62	122.79
4	L5	1677	PSU	O2-C2-N1	-3.07	119.62	122.79
84	S2	866	PSU	C6-N1-C2	-3.07	119.84	122.69
4	L5	3925	OMU	O4-C4-C5	-3.05	119.90	125.16
4	L5	400	A2M	O3'-C3'-C2'	3.05	119.72	111.19
4	L5	398	A2M	C3'-C2'-C1'	-3.05	96.97	102.81
4	L5	2363	A2M	C3'-C2'-C1'	-3.04	96.98	102.81
4	L5	3920	PSU	O2-C2-N1	-3.03	119.67	122.79
4	L5	4571	A2M	C3'-C2'-C1'	-3.02	97.02	102.81
84	S2	172	OMU	O4-C4-C5	-3.02	119.95	125.16
4	L5	4293	PSU	O2-C2-N1	-3.02	119.68	122.79
84	S2	1056	PSU	O2-C2-N1	-3.01	119.68	122.79
84	S2	27	A2M	O3'-C3'-C2'	3.01	119.62	111.19
4	L5	3718	A2M	O3'-C3'-C2'	3.00	119.59	111.19
84	S2	1177	PSU	C6-N1-C2	-3.00	119.91	122.69
4	L5	2837	OMU	O4-C4-C5	-3.00	119.99	125.16
4	L5	5010	PSU	O2-C2-N1	-2.99	119.70	122.79
84	S2	468	A2M	O3'-C3'-C2'	2.99	119.55	111.19
4	L5	4552	PSU	C6-N1-C2	-2.99	119.92	122.69
4	L5	4620	OMU	O4-C4-C5	-2.98	120.03	125.16
4	L5	1582	PSU	O2-C2-N1	-2.98	119.72	122.79
84	S2	428	OMU	O4-C4-C5	-2.97	120.04	125.16

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	S2	1046	PSU	O2-C2-N1	-2.97	119.72	122.79
84	S2	1337	4AC	N4-C4-N3	2.97	118.69	113.87
84	S2	799	OMU	O4-C4-C5	-2.96	120.05	125.16
4	L5	2632	PSU	C6-N1-C2	-2.96	119.94	122.69
4	L5	4312	PSU	O2-C2-N1	-2.96	119.73	122.79
4	L5	3808	OMC	C1'-N1-C2	2.95	124.96	118.44
4	L5	4636	PSU	O2-C2-N1	-2.95	119.75	122.79
84	S2	1081	PSU	O2-C2-N1	-2.94	119.76	122.79
4	L5	3818	UY1	C6-C5-C4	2.94	120.16	118.17
84	S2	649	PSU	O2-C2-N1	-2.93	119.77	122.79
84	S2	99	A2M	O3'-C3'-C2'	2.93	119.38	111.19
4	L5	3851	PSU	O2-C2-N1	-2.93	119.77	122.79
4	L5	4521	PSU	O2-C2-N1	-2.93	119.77	122.79
84	S2	1232	PSU	C6-N1-C2	-2.92	119.98	122.69
4	L5	2363	A2M	C1'-N9-C4	-2.92	121.51	126.64
4	L5	1782	PSU	C6-N1-C2	-2.91	119.99	122.69
4	L5	1323	A2M	C2'-C1'-N9	2.91	119.03	112.56
4	L5	400	A2M	C3'-C2'-C1'	-2.91	97.24	102.81
4	L5	2804	OMC	C1'-N1-C6	-2.91	114.57	120.78
84	S2	1639	G7M	C2-N1-C6	-2.90	119.79	125.11
4	L5	1792	PSU	O2-C2-N1	-2.90	119.80	122.79
4	L5	3785	A2M	C4-C5-N7	2.90	112.40	109.34
4	L5	4457	PSU	C6-N1-C2	-2.90	120.00	122.69
84	S2	105	PSU	C6-N1-C2	-2.89	120.01	122.69
84	S2	966	PSU	O2-C2-N1	-2.89	119.81	122.79
84	S2	105	PSU	O2-C2-N1	-2.89	119.81	122.79
84	S2	686	PSU	O2-C2-N1	-2.88	119.81	122.79
4	L5	3637	PSU	O2-C2-N1	-2.88	119.81	122.79
4	L5	4471	PSU	O2-C2-N1	-2.88	119.82	122.79
4	L5	2815	A2M	O3'-C3'-C2'	2.87	119.23	111.19
4	L5	2632	PSU	O2-C2-N1	-2.87	119.83	122.79
84	S2	1288	OMU	O4-C4-C5	-2.87	120.22	125.16
4	L5	2351	OMC	C1'-N1-C6	-2.86	114.66	120.78
4	L5	1326	A2M	O3'-C3'-C2'	2.86	119.20	111.19
4	L5	4493	PSU	C6-C5-C4	2.86	120.10	118.17
4	L5	3639	PSU	O2-C2-N1	-2.86	119.84	122.79
84	S2	1045	PSU	O2-C2-N1	-2.85	119.84	122.79
4	L5	2401	A2M	O3'-C3'-C2'	2.85	119.17	111.19
4	L5	3920	PSU	C6-C5-C4	2.85	120.10	118.17
84	S2	1326	OMU	O4-C4-C5	-2.84	120.26	125.16
4	L5	1534	A2M	C2'-C1'-N9	2.84	118.86	112.56
84	S2	1244	PSU	C6-N1-C2	-2.83	120.06	122.69

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	S2	116	OMU	O4-C4-C5	-2.83	120.28	125.16
84	S2	406	PSU	O2-C2-N1	-2.83	119.87	122.79
4	L5	4973	PSU	O2-C2-N1	-2.83	119.87	122.79
4	L5	2861	OMC	C1'-N1-C2	2.83	124.69	118.44
84	S2	668	A2M	O3'-C3'-C2'	2.82	119.09	111.19
84	S2	121	OMU	O4-C4-C5	-2.82	120.31	125.16
4	L5	2815	A2M	C1'-N9-C4	-2.82	121.69	126.64
4	L5	4576	PSU	C6-N1-C2	-2.81	120.08	122.69
4	L5	1871	A2M	C4-C5-N7	2.80	112.30	109.34
4	L5	4353	PSU	O2-C2-N1	-2.80	119.90	122.79
4	L5	1862	PSU	O2-C2-N1	-2.79	119.91	122.79
84	S2	484	A2M	O3'-C3'-C2'	2.79	119.00	111.19
4	L5	4493	PSU	O2-C2-N1	-2.78	119.92	122.79
4	L5	3853	PSU	O2-C2-N1	-2.77	119.93	122.79
84	S2	93	PSU	O2-C2-N1	-2.77	119.94	122.79
84	S2	428	OMU	O2-C2-N1	-2.77	119.20	122.80
4	L5	3822	PSU	C6-N1-C2	-2.76	120.13	122.69
4	L5	4628	PSU	O2-C2-N1	-2.76	119.94	122.79
4	L5	1781	PSU	O2-C2-N1	-2.76	119.94	122.79
4	L5	3884	PSU	O2-C2-N1	-2.75	119.95	122.79
84	S2	109	PSU	O2-C2-N1	-2.75	119.95	122.79
4	L5	5010	PSU	C6-N1-C2	-2.75	120.14	122.69
4	L5	3851	PSU	C6-N1-C2	-2.74	120.15	122.69
6	L8	69	PSU	C6-N1-C2	-2.74	120.15	122.69
4	L5	3825	A2M	O3'-C3'-C2'	2.73	118.84	111.19
4	L5	2787	A2M	O4'-C1'-C2'	2.73	111.26	106.61
4	L5	5001	PSU	O2-C2-N1	-2.72	119.98	122.79
84	S2	576	A2M	C4-C5-N7	2.71	112.20	109.34
4	L5	4353	PSU	C6-C5-C4	2.71	120.00	118.17
84	S2	159	A2M	C3'-C2'-C1'	-2.70	97.63	102.81
4	L5	1677	PSU	C6-N1-C2	-2.70	120.19	122.69
4	L5	3818	UY1	O2-C2-N1	-2.70	120.00	122.79
4	L5	4500	PSU	O2-C2-N1	-2.70	120.00	122.79
84	S2	93	PSU	C6-N1-C2	-2.69	120.19	122.69
84	S2	484	A2M	C4'-O4'-C1'	-2.69	107.47	109.92
4	L5	3830	A2M	C4-C5-N7	2.68	112.17	109.34
4	L5	3637	PSU	C6-N1-C2	-2.68	120.20	122.69
4	L5	1326	A2M	C4-C5-N7	2.68	112.17	109.34
84	S2	99	A2M	C3'-C2'-C1'	-2.68	97.68	102.81
84	S2	814	PSU	O2-C2-N1	-2.68	120.03	122.79
4	L5	3884	PSU	C6-N1-C2	-2.68	120.21	122.69
4	L5	4590	A2M	C3'-C2'-C1'	-2.68	97.68	102.81

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	4227	OMU	O2-C2-N1	-2.67	119.32	122.80
4	L5	4673	PSU	C6-N1-C2	-2.67	120.21	122.69
4	L5	4296	PSU	O2-C2-N1	-2.67	120.03	122.79
4	L5	4498	OMU	O2-C2-N1	-2.67	119.32	122.80
2	CF	163	SEP	OG-CB-CA	2.67	110.74	108.14
4	L5	2401	A2M	C4-C5-N7	2.67	112.15	109.34
4	L5	4442	PSU	C6-N1-C2	-2.67	120.22	122.69
84	S2	1004	PSU	C6-N1-C2	-2.66	120.22	122.69
84	S2	1031	A2M	C3'-C2'-C1'	-2.66	97.72	102.81
84	S2	1367	PSU	C6-N1-C2	-2.65	120.23	122.69
84	S2	801	PSU	C6-N1-C2	-2.65	120.23	122.69
84	S2	1248	B8N	O4-C4-N3	-2.65	115.69	119.99
84	S2	668	A2M	C4'-O4'-C1'	-2.64	107.51	109.92
4	L5	1860	PSU	C6-N1-C2	-2.64	120.24	122.69
4	L5	4312	PSU	C6-N1-C2	-2.64	120.24	122.69
4	L5	4299	PSU	C6-N1-C2	-2.64	120.24	122.69
4	L5	4403	PSU	O2-C2-N1	-2.63	120.07	122.79
4	L5	4442	PSU	C6-C5-C4	2.63	119.95	118.17
84	S2	1031	A2M	O3'-C3'-C2'	2.63	118.54	111.19
84	S2	649	PSU	C6-N1-C2	-2.62	120.26	122.69
4	L5	1534	A2M	O3'-C3'-C2'	2.61	118.50	111.19
4	L5	1323	A2M	O3'-C3'-C2'	2.61	118.50	111.19
4	L5	1683	PSU	C6-N1-C2	-2.61	120.27	122.69
4	L5	2787	A2M	O3'-C3'-C2'	2.61	118.50	111.19
84	S2	1232	PSU	C6-C5-C4	2.61	119.94	118.17
4	L5	1744	PSU	C6-N1-C2	-2.61	120.27	122.69
4	L5	2839	PSU	C6-N1-C2	-2.61	120.27	122.69
4	L5	2363	A2M	C4-C5-N7	2.60	112.09	109.34
4	L5	4590	A2M	O3'-C3'-C2'	2.60	118.47	111.19
4	L5	3830	A2M	O3'-C3'-C2'	2.60	118.45	111.19
84	S2	801	PSU	O2-C2-N1	-2.59	120.12	122.79
4	L5	4973	PSU	C6-N1-C2	-2.59	120.29	122.69
4	L5	3822	PSU	C6-C5-C4	2.59	119.92	118.17
4	L5	4403	PSU	C6-N1-C2	-2.58	120.29	122.69
4	L5	1534	A2M	C4-C5-N7	2.58	112.07	109.34
4	L5	4571	A2M	C4-C5-N7	2.58	112.06	109.34
4	L5	4361	PSU	O2-C2-N1	-2.58	120.13	122.79
4	L5	3785	A2M	O3'-C3'-C2'	2.58	118.40	111.19
84	S2	863	PSU	O2-C2-N1	-2.58	120.13	122.79
84	S2	1248	B8N	C31-N3-C2	2.58	121.44	117.64
84	S2	966	PSU	C6-N1-C2	-2.57	120.30	122.69
84	S2	1272	OMC	C1'-N1-C2	2.57	124.11	118.44

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	S2	1367	PSU	C6-C5-C4	2.56	119.90	118.17
84	S2	668	A2M	O4'-C4'-C3'	2.56	110.23	105.15
84	S2	27	A2M	C4-C5-N7	2.56	112.04	109.34
84	S2	651	PSU	C6-N1-C2	-2.55	120.32	122.69
4	L5	2815	A2M	C4-C5-N7	2.55	112.03	109.34
84	S2	166	A2M	C4-C5-N7	2.55	112.03	109.34
4	L5	2363	A2M	O3'-C3'-C2'	2.55	118.31	111.19
84	S2	1081	PSU	C6-N1-C2	-2.54	120.33	122.69
4	L5	3920	PSU	C6-N1-C2	-2.54	120.33	122.69
4	L5	1781	PSU	C6-N1-C2	-2.54	120.33	122.69
4	L5	3844	PSU	C6-N1-C2	-2.54	120.33	122.69
4	L5	400	A2M	C4-C5-N7	2.54	112.02	109.34
4	L5	4431	PSU	C6-N1-C2	-2.54	120.33	122.69
4	L5	4628	PSU	C6-N1-C2	-2.53	120.34	122.69
4	L5	4523	A2M	O3'-C3'-C2'	2.52	118.24	111.19
4	L5	1323	A2M	C4-C5-N7	2.52	112.00	109.34
4	L5	3718	A2M	C4-C5-N7	2.51	111.99	109.34
84	S2	866	PSU	C6-C5-C4	2.51	119.87	118.17
4	L5	3844	PSU	O2-C2-N1	-2.51	120.20	122.79
4	L5	4521	PSU	C6-N1-C2	-2.51	120.36	122.69
4	L5	3695	PSU	C6-N1-C2	-2.51	120.37	122.69
4	L5	2787	A2M	C4-C5-N7	2.50	111.98	109.34
4	L5	4532	PSU	O2-C2-N1	-2.50	120.21	122.79
4	L5	3867	A2M	C2'-C1'-N9	2.50	118.10	112.56
4	L5	4590	A2M	C4-C5-N7	2.49	111.97	109.34
4	L5	4972	PSU	O2-C2-N1	-2.49	120.22	122.79
84	S2	116	OMU	C1'-N1-C2	2.49	122.06	117.59
84	S2	681	PSU	C6-N1-C2	-2.48	120.39	122.69
4	L5	3639	PSU	C6-N1-C2	-2.48	120.39	122.69
4	L5	3822	PSU	O4'-C1'-C2'	2.48	108.58	105.15
4	L5	4403	PSU	O4'-C1'-C2'	2.47	108.57	105.15
84	S2	1383	A2M	C4-C5-N7	2.46	111.94	109.34
4	L5	4293	PSU	C6-N1-C2	-2.45	120.42	122.69
84	S2	1031	A2M	C4-C5-N7	2.45	111.92	109.34
4	L5	1862	PSU	C6-C5-C4	2.44	119.82	118.17
84	S2	484	A2M	C4-C5-N7	2.44	111.91	109.34
84	S2	651	PSU	C6-C5-C4	2.44	119.82	118.17
84	S2	1056	PSU	C6-N1-C2	-2.44	120.43	122.69
4	L5	4196	OMG	O6-C6-C5	2.43	129.14	124.32
4	L5	3867	A2M	C4-C5-N7	2.43	111.90	109.34
4	L5	1582	PSU	C6-N1-C2	-2.43	120.44	122.69
84	S2	1326	OMU	O2-C2-N1	-2.42	119.64	122.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	L8	55	PSU	C6-N1-C2	-2.42	120.45	122.69
84	S2	1328	OMG	O6-C6-C5	2.41	129.11	124.32
4	L5	4571	A2M	O4'-C1'-C2'	2.41	110.72	106.61
4	L5	3785	A2M	C3'-C2'-C1'	-2.41	98.19	102.81
4	L5	2839	PSU	O2-C2-N1	-2.41	120.30	122.79
4	L5	3785	A2M	O4'-C1'-N9	2.41	111.94	108.75
4	L5	1524	A2M	O4'-C1'-C2'	2.41	110.72	106.61
84	S2	468	A2M	C4-C5-N7	2.41	111.88	109.34
84	S2	509	OMG	O6-C6-C5	2.41	129.09	124.32
84	S2	601	OMG	O6-C6-C5	2.41	129.09	124.32
4	L5	4442	PSU	O4'-C1'-C2'	2.40	108.47	105.15
4	L5	4523	A2M	O4'-C1'-C2'	2.40	110.69	106.61
4	L5	3825	A2M	C4-C5-N7	2.39	111.86	109.34
84	S2	1174	PSU	C6-N1-C2	-2.37	120.49	122.69
84	S2	668	A2M	C4-C5-N7	2.37	111.84	109.34
4	L5	5001	PSU	C6-N1-C2	-2.36	120.50	122.69
4	L5	1323	A2M	C3'-C2'-C1'	-2.36	98.29	102.81
84	S2	406	PSU	C6-N1-C2	-2.36	120.50	122.69
4	L5	4353	PSU	O4'-C1'-C2'	2.36	108.41	105.15
84	S2	109	PSU	C6-N1-C2	-2.36	120.50	122.69
84	S2	686	PSU	C6-N1-C2	-2.36	120.50	122.69
4	L5	4523	A2M	C4-C5-N7	2.35	111.82	109.34
84	S2	1248	B8N	O4'-C1'-C2'	2.35	108.41	105.15
84	S2	1248	B8N	O4-C4-C5	-2.35	118.52	122.58
84	S2	1081	PSU	C6-C5-C4	2.35	119.76	118.17
84	S2	27	A2M	O4'-C1'-C2'	2.35	110.60	106.61
84	S2	1045	PSU	C6-N1-C2	-2.34	120.52	122.69
4	L5	398	A2M	C4-C5-N7	2.34	111.81	109.34
4	L5	4228	OMG	O6-C6-C5	2.33	128.95	124.32
4	L5	398	A2M	O4'-C1'-C2'	2.33	110.58	106.61
84	S2	867	OMG	O6-C6-C5	2.33	128.94	124.32
4	L5	3744	OMG	O6-C6-C5	2.32	128.92	124.32
84	S2	354	OMU	O2-C2-N1	-2.31	119.78	122.80
4	L5	1524	A2M	C4-C5-N7	2.31	111.78	109.34
4	L5	3925	OMU	O2-C2-N1	-2.31	119.79	122.80
84	S2	468	A2M	O4'-C1'-C2'	2.31	110.54	106.61
4	L5	4618	OMG	O6-C6-C5	2.30	128.89	124.32
84	S2	866	PSU	O4'-C1'-C2'	2.30	108.34	105.15
4	L5	1534	A2M	O3'-C3'-C4'	-2.29	104.49	111.08
4	L5	1326	A2M	C2'-C1'-N9	2.29	117.64	112.56
84	S2	863	PSU	C6-N1-C2	-2.29	120.57	122.69
4	L5	1524	A2M	CM'-O2'-C2'	-2.28	108.62	114.47

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	1677	PSU	C6-C5-C4	2.28	119.71	118.17
4	L5	1792	PSU	C6-N1-C2	-2.28	120.58	122.69
4	L5	3867	A2M	C3'-C2'-C1'	-2.28	98.44	102.81
84	S2	159	A2M	C4-C5-N7	2.28	111.74	109.34
4	L5	3792	OMG	O6-C6-C5	2.27	128.83	124.32
4	L5	3695	PSU	O2-C2-N1	-2.27	120.44	122.79
84	S2	644	OMG	O6-C6-C5	2.27	128.82	124.32
84	S2	1337	4AC	C5-C4-N4	-2.26	119.13	122.94
84	S2	166	A2M	O4'-C1'-C2'	2.26	110.47	106.61
4	L5	2401	A2M	C3'-C2'-C1'	-2.26	98.48	102.81
4	L5	4457	PSU	C6-C5-C4	2.26	119.70	118.17
4	L5	4471	PSU	C6-N1-C2	-2.26	120.59	122.69
84	S2	1081	PSU	O4'-C1'-C2'	2.26	108.28	105.15
4	L5	2422	OMC	C1'-N1-C2	2.26	123.43	118.44
4	L5	2861	OMC	C1'-N1-C6	-2.25	115.97	120.78
4	L5	4431	PSU	C6-C5-C4	2.25	119.69	118.17
84	S2	484	A2M	O4'-C1'-C2'	2.25	110.44	106.61
6	L8	55	PSU	C6-C5-C4	2.24	119.69	118.17
4	L5	4552	PSU	C6-C5-C4	2.24	119.69	118.17
4	L5	3830	A2M	C2'-C1'-N9	2.24	117.53	112.56
4	L5	3887	OMC	C1'-N1-C2	2.24	123.38	118.44
84	S2	484	A2M	O4'-C4'-C3'	2.24	109.59	105.15
6	L8	69	PSU	C6-C5-C4	2.24	119.68	118.17
4	L5	4673	PSU	C6-C5-C4	2.24	119.68	118.17
4	L5	4590	A2M	O4'-C1'-C2'	2.23	110.41	106.61
4	L5	1862	PSU	C6-N1-C2	-2.23	120.62	122.69
4	L5	4493	PSU	C6-N1-C2	-2.23	120.62	122.69
4	L5	2787	A2M	C4'-O4'-C1'	-2.23	107.89	109.92
6	L8	75	OMG	O6-C6-C5	2.23	128.74	124.32
4	L5	4361	PSU	C6-N1-C2	-2.22	120.63	122.69
4	L5	3867	A2M	O3'-C3'-C2'	2.21	117.38	111.19
4	L5	2424	OMG	O6-C6-C5	2.21	128.71	124.32
4	L5	3920	PSU	O4'-C1'-C2'	2.21	108.21	105.15
4	L5	1522	OMG	O6-C6-C5	2.21	128.70	124.32
4	L5	1326	A2M	O3'-C3'-C4'	-2.21	104.74	111.08
4	L5	4457	PSU	O4'-C1'-C2'	2.21	108.20	105.15
4	L5	1871	A2M	O4'-C1'-C2'	2.21	110.37	106.61
4	L5	2824	OMC	C1'-N1-C2	2.20	123.30	118.44
4	L5	2364	OMG	O6-C6-C5	2.19	128.67	124.32
4	L5	4637	OMG	O6-C6-C5	2.19	128.66	124.32
4	L5	3782	5MC	C5-C4-N4	-2.19	118.31	121.39
84	S2	1703	OMC	C1'-N1-C2	2.18	123.26	118.44

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	4636	PSU	C6-C5-C4	2.18	119.64	118.17
84	S2	1046	PSU	C6-N1-C2	-2.18	120.67	122.69
4	L5	3825	A2M	C2'-C1'-N9	2.18	117.39	112.56
4	L5	400	A2M	O4'-C1'-C2'	2.18	110.32	106.61
84	S2	99	A2M	C4-C5-N7	2.17	111.63	109.34
84	S2	109	PSU	C6-C5-C4	2.16	119.63	118.17
84	S2	627	OMU	O2-C2-N1	-2.16	119.98	122.80
4	L5	3808	OMC	C1'-N1-C6	-2.16	116.16	120.78
4	L5	4973	PSU	C6-C5-C4	2.16	119.63	118.17
4	L5	1326	A2M	O4'-C1'-C2'	2.16	110.28	106.61
4	L5	1316	OMG	O6-C6-C5	2.16	128.59	124.32
4	L5	4312	PSU	C6-C5-C4	2.15	119.63	118.17
4	L5	4392	OMG	O6-C6-C5	2.15	128.59	124.32
6	L8	69	PSU	O4'-C1'-C2'	2.15	108.12	105.15
4	L5	4353	PSU	C6-N1-C2	-2.14	120.70	122.69
4	L5	2815	A2M	C2'-C1'-N9	2.14	117.31	112.56
4	L5	1322	1MA	C5-C6-N1	-2.14	110.88	113.95
4	L5	1536	PSU	C6-N1-C2	-2.14	120.71	122.69
84	S2	683	OMG	O6-C6-C5	2.14	128.56	124.32
4	L5	4370	OMG	O6-C6-C5	2.14	128.56	124.32
4	L5	4623	OMG	O6-C6-C5	2.14	128.56	124.32
4	L5	4972	PSU	C6-N1-C2	-2.13	120.71	122.69
4	L5	4306	OMU	O2-C2-N1	-2.12	120.03	122.80
4	L5	4530	UR3	C1'-N1-C2	2.12	120.51	117.04
4	L5	3695	PSU	O4'-C1'-C2'	2.11	108.07	105.15
4	L5	2876	OMG	O6-C6-C5	2.11	128.50	124.32
4	L5	3627	OMG	O6-C6-C5	2.10	128.49	124.32
84	S2	166	A2M	C6-C5-C4	-2.10	113.81	117.90
4	L5	2815	A2M	O4'-C4'-C3'	2.10	109.31	105.15
4	L5	4636	PSU	O4'-C1'-C2'	2.10	108.05	105.15
4	L5	2401	A2M	O4'-C4'-C3'	2.09	109.30	105.15
84	S2	814	PSU	C6-C5-C4	2.09	119.58	118.17
4	L5	1326	A2M	O4'-C4'-C3'	2.08	109.29	105.15
4	L5	4576	PSU	O4'-C1'-C2'	2.08	108.03	105.15
4	L5	1322	1MA	N1-C6-N6	2.08	124.94	119.71
4	L5	4500	PSU	C6-N1-C2	-2.08	120.77	122.69
4	L5	3867	A2M	O4'-C1'-C2'	2.07	110.14	106.61
4	L5	2401	A2M	O4'-C1'-C2'	2.07	110.14	106.61
4	L5	4456	OMC	C1'-N1-C2	2.07	123.01	118.44
4	L5	4973	PSU	O4'-C1'-C2'	2.06	108.00	105.15
4	L5	4499	OMG	O6-C6-C5	2.06	128.40	124.32
4	L5	4494	OMG	O6-C6-C5	2.06	128.40	124.32

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	L5	4972	PSU	O4'-C1'-C2'	2.05	107.99	105.15
4	L5	400	A2M	C2'-C1'-N9	2.05	117.10	112.56
84	S2	863	PSU	C6-C5-C4	2.05	119.55	118.17
4	L5	4620	OMU	O2-C2-N1	-2.04	120.14	122.80
4	L5	3899	OMG	O6-C6-C5	2.04	128.36	124.32
4	L5	3825	A2M	O4'-C1'-C2'	2.04	110.08	106.61
4	L5	4471	PSU	C6-C5-C4	2.03	119.55	118.17
84	S2	121	OMU	O2-C2-N1	-2.03	120.15	122.80
4	L5	4590	A2M	O3'-C3'-C4'	-2.03	105.25	111.08
84	S2	166	A2M	O3'-C3'-C4'	-2.03	105.25	111.08
84	S2	109	PSU	O4'-C1'-C2'	2.03	107.96	105.15
4	L5	3853	PSU	C6-N1-C2	-2.03	120.81	122.69
84	S2	1383	A2M	O4'-C1'-C2'	2.02	110.06	106.61
4	L5	4299	PSU	C6-C5-C4	2.02	119.54	118.17
84	S2	1391	OMC	C1'-N1-C2	2.02	122.91	118.44
84	S2	436	OMG	O6-C6-C5	2.01	128.31	124.32
4	L5	1323	A2M	C6-C5-C4	-2.01	113.98	117.90
4	L5	3639	PSU	O4'-C1'-C2'	2.01	107.94	105.15
84	S2	1244	PSU	O4'-C1'-C2'	2.01	107.93	105.15
4	L5	1582	PSU	C6-C5-C4	2.01	119.53	118.17
4	L5	4576	PSU	C6-C5-C4	2.01	119.53	118.17
4	L5	1326	A2M	C3'-C2'-C1'	-2.01	98.96	102.81
4	L5	398	A2M	O3'-C3'-C4'	-2.01	105.32	111.08
84	S2	668	A2M	O3'-C3'-C4'	-2.01	105.32	111.08
4	L5	4523	A2M	C6-C5-C4	-2.00	114.00	117.90
4	L5	3825	A2M	O3'-C3'-C4'	-2.00	105.33	111.08

There are no chirality outliers.

All (181) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	CF	163	SEP	C-CA-CB-OG
2	CF	163	SEP	CB-OG-P-O2P
4	L5	398	A2M	C1'-C2'-O2'-CM'
4	L5	1316	OMG	C1'-C2'-O2'-CM2
4	L5	1323	A2M	C1'-C2'-O2'-CM'
4	L5	1326	A2M	O4'-C4'-C5'-O5'
4	L5	1326	A2M	C1'-C2'-O2'-CM'
4	L5	1340	OMC	C1'-C2'-O2'-CM2
4	L5	1536	PSU	O4'-C4'-C5'-O5'
4	L5	1625	OMG	O4'-C4'-C5'-O5'
4	L5	2351	OMC	C1'-C2'-O2'-CM2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
4	L5	2364	OMG	C1'-C2'-O2'-CM2
4	L5	2401	A2M	O4'-C4'-C5'-O5'
4	L5	2422	OMC	C1'-C2'-O2'-CM2
4	L5	2787	A2M	C1'-C2'-O2'-CM'
4	L5	2824	OMC	C1'-C2'-O2'-CM2
4	L5	2861	OMC	C1'-C2'-O2'-CM2
4	L5	3627	OMG	C1'-C2'-O2'-CM2
4	L5	3718	A2M	C1'-C2'-O2'-CM'
4	L5	3792	OMG	O4'-C4'-C5'-O5'
4	L5	3818	UY1	C1'-C2'-O2'-CM2
4	L5	3825	A2M	C1'-C2'-O2'-CM'
4	L5	3830	A2M	C1'-C2'-O2'-CM'
4	L5	3867	A2M	C1'-C2'-O2'-CM'
4	L5	4220	6MZ	C5-C6-N6-C9
4	L5	4220	6MZ	N1-C6-N6-C9
4	L5	4220	6MZ	O4'-C4'-C5'-O5'
4	L5	4447	5MC	C2'-C1'-N1-C2
4	L5	4447	5MC	C2'-C1'-N1-C6
4	L5	4536	OMC	C1'-C2'-O2'-CM2
4	L5	4590	A2M	C3'-C4'-C5'-O5'
4	L5	4590	A2M	C1'-C2'-O2'-CM'
4	L5	4618	OMG	O4'-C4'-C5'-O5'
4	L5	4620	OMU	C1'-C2'-O2'-CM2
4	L5	4637	OMG	C1'-C2'-O2'-CM2
84	S2	27	A2M	C1'-C2'-O2'-CM'
84	S2	116	OMU	C1'-C2'-O2'-CM2
84	S2	354	OMU	C1'-C2'-O2'-CM2
84	S2	462	OMC	C1'-C2'-O2'-CM2
84	S2	468	A2M	C1'-C2'-O2'-CM'
84	S2	509	OMG	C1'-C2'-O2'-CM2
84	S2	517	OMC	O4'-C4'-C5'-O5'
84	S2	576	A2M	O4'-C4'-C5'-O5'
84	S2	601	OMG	C1'-C2'-O2'-CM2
84	S2	644	OMG	O4'-C4'-C5'-O5'
84	S2	644	OMG	C1'-C2'-O2'-CM2
84	S2	668	A2M	C1'-C2'-O2'-CM'
84	S2	867	OMG	C3'-C4'-C5'-O5'
84	S2	1031	A2M	C1'-C2'-O2'-CM'
84	S2	1248	B8N	O4'-C4'-C5'-O5'
84	S2	1248	B8N	C31-C32-C33-C34
84	S2	1248	B8N	C31-C32-C33-N34
84	S2	1272	OMC	C3'-C4'-C5'-O5'

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
84	S2	1272	OMC	O4'-C4'-C5'-O5'
84	S2	1288	OMU	O4'-C4'-C5'-O5'
84	S2	1328	OMG	C1'-C2'-O2'-CM2
84	S2	1337	4AC	N3-C4-N4-C7
84	S2	1383	A2M	C1'-C2'-O2'-CM'
84	S2	1832	6MZ	C5-C6-N6-C9
84	S2	1832	6MZ	N1-C6-N6-C9
84	S2	1832	6MZ	C5'-O5'-P-O1P
84	S2	1832	6MZ	C5'-O5'-P-O3P
4	L5	1326	A2M	C3'-C4'-C5'-O5'
4	L5	1524	A2M	C3'-C4'-C5'-O5'
4	L5	1536	PSU	C3'-C4'-C5'-O5'
4	L5	1625	OMG	C3'-C4'-C5'-O5'
4	L5	2401	A2M	C3'-C4'-C5'-O5'
4	L5	3899	OMG	O4'-C4'-C5'-O5'
4	L5	3899	OMG	C3'-C4'-C5'-O5'
4	L5	4500	PSU	C3'-C4'-C5'-O5'
4	L5	4500	PSU	O4'-C4'-C5'-O5'
4	L5	4618	OMG	C3'-C4'-C5'-O5'
4	L5	4637	OMG	O4'-C4'-C5'-O5'
84	S2	517	OMC	C3'-C4'-C5'-O5'
84	S2	576	A2M	C3'-C4'-C5'-O5'
84	S2	683	OMG	C3'-C4'-C5'-O5'
84	S2	801	PSU	C3'-C4'-C5'-O5'
84	S2	1288	OMU	C3'-C4'-C5'-O5'
4	L5	1323	A2M	O4'-C4'-C5'-O5'
4	L5	1524	A2M	O4'-C4'-C5'-O5'
4	L5	2364	OMG	O4'-C4'-C5'-O5'
4	L5	2422	OMC	C3'-C4'-C5'-O5'
4	L5	2422	OMC	O4'-C4'-C5'-O5'
4	L5	3701	OMC	C3'-C4'-C5'-O5'
4	L5	3701	OMC	O4'-C4'-C5'-O5'
4	L5	3792	OMG	C3'-C4'-C5'-O5'
4	L5	4590	A2M	O4'-C4'-C5'-O5'
84	S2	683	OMG	O4'-C4'-C5'-O5'
84	S2	867	OMG	O4'-C4'-C5'-O5'
84	S2	1045	PSU	C3'-C4'-C5'-O5'
84	S2	1045	PSU	O4'-C4'-C5'-O5'
84	S2	1442	OMU	O4'-C4'-C5'-O5'
84	S2	1832	6MZ	O4'-C4'-C5'-O5'
84	S2	627	OMU	C2'-C1'-N1-C6
84	S2	644	OMG	C3'-C4'-C5'-O5'

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
84	S2	1248	B8N	C3'-C4'-C5'-O5'
84	S2	627	OMU	C2'-C1'-N1-C2
4	L5	4220	6MZ	C3'-C4'-C5'-O5'
4	L5	4637	OMG	C3'-C4'-C5'-O5'
84	S2	801	PSU	O4'-C4'-C5'-O5'
4	L5	2632	PSU	O4'-C4'-C5'-O5'
84	S2	627	OMU	O4'-C4'-C5'-O5'
84	S2	1442	OMU	C3'-C4'-C5'-O5'
4	L5	4447	5MC	O4'-C1'-N1-C6
84	S2	1832	6MZ	C5'-O5'-P-O2P
4	L5	4590	A2M	C4'-C5'-O5'-P
4	L5	1323	A2M	C3'-C4'-C5'-O5'
4	L5	2632	PSU	C3'-C4'-C5'-O5'
4	L5	3701	OMC	O4'-C1'-N1-C2
4	L5	4447	5MC	O4'-C1'-N1-C2
4	L5	3818	UY1	C4'-C5'-O5'-P
84	S2	1248	B8N	N34-C33-C34-O35
4	L5	4296	PSU	C3'-C4'-C5'-O5'
84	S2	1832	6MZ	C3'-C4'-C5'-O5'
4	L5	3701	OMC	O4'-C1'-N1-C6
4	L5	2787	A2M	C3'-C4'-C5'-O5'
4	L5	4296	PSU	O4'-C4'-C5'-O5'
4	L5	1582	PSU	C3'-C4'-C5'-O5'
2	CF	163	SEP	CA-CB-OG-P
4	L5	3887	OMC	C3'-C4'-C5'-O5'
84	S2	627	OMU	O4'-C1'-N1-C2
4	L5	3825	A2M	O4'-C4'-C5'-O5'
2	CF	163	SEP	CB-OG-P-O1P
4	L5	1326	A2M	C4'-C5'-O5'-P
84	S2	1851	MA6	C4'-C5'-O5'-P
2	CF	163	SEP	N-CA-CB-OG
4	L5	4228	OMG	O4'-C4'-C5'-O5'
84	S2	627	OMU	O4'-C1'-N1-C6
84	S2	576	A2M	C4'-C5'-O5'-P
4	L5	4293	PSU	O4'-C1'-C5-C4
4	L5	4500	PSU	O4'-C1'-C5-C4
4	L5	4521	PSU	O4'-C1'-C5-C4
4	L5	4636	PSU	O4'-C1'-C5-C4
84	S2	1004	PSU	O4'-C1'-C5-C4
84	S2	1248	B8N	O4'-C1'-C5-C4
4	L5	2364	OMG	C3'-C4'-C5'-O5'
4	L5	3825	A2M	C3'-C4'-C5'-O5'

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
4	L5	4623	OMG	C3'-C4'-C5'-O5'
84	S2	1383	A2M	C3'-C4'-C5'-O5'
4	L5	3844	PSU	C4'-C5'-O5'-P
4	L5	4500	PSU	C4'-C5'-O5'-P
84	S2	172	OMU	O4'-C4'-C5'-O5'
84	S2	1383	A2M	O4'-C4'-C5'-O5'
84	S2	644	OMG	C4'-C5'-O5'-P
84	S2	1490	OMG	C4'-C5'-O5'-P
4	L5	2424	OMG	C3'-C2'-O2'-CM2
84	S2	517	OMC	C4'-C5'-O5'-P
84	S2	99	A2M	O4'-C4'-C5'-O5'
4	L5	4228	OMG	C3'-C4'-C5'-O5'
4	L5	2351	OMC	C2'-C1'-N1-C6
4	L5	2804	OMC	C2'-C1'-N1-C6
4	L5	2424	OMG	C1'-C2'-O2'-CM2
4	L5	4571	A2M	C1'-C2'-O2'-CM'
4	L5	4623	OMG	C1'-C2'-O2'-CM2
84	S2	484	A2M	C1'-C2'-O2'-CM'
84	S2	1272	OMC	C1'-C2'-O2'-CM2
4	L5	4196	OMG	C3'-C4'-C5'-O5'
84	S2	1248	B8N	N34-C33-C34-O36
2	CF	163	SEP	CB-OG-P-O3P
4	L5	1677	PSU	O4'-C1'-C5-C6
4	L5	4500	PSU	O4'-C1'-C5-C6
4	L5	4521	PSU	O4'-C1'-C5-C6
84	S2	1248	B8N	O4'-C1'-C5-C6
4	L5	2876	OMG	C3'-C2'-O2'-CM2
4	L5	1582	PSU	O4'-C4'-C5'-O5'
4	L5	1781	PSU	C3'-C4'-C5'-O5'
84	S2	428	OMU	C2'-C1'-N1-C6
4	L5	3627	OMG	O4'-C4'-C5'-O5'
4	L5	3899	OMG	C4'-C5'-O5'-P
4	L5	2804	OMC	C2'-C1'-N1-C2
4	L5	1677	PSU	C2'-C1'-C5-C6
84	S2	428	OMU	O4'-C1'-N1-C6
4	L5	2351	OMC	C2'-C1'-N1-C2
4	L5	1534	A2M	C3'-C2'-O2'-CM'
4	L5	4623	OMG	O4'-C4'-C5'-O5'
84	S2	1248	B8N	N3-C31-C32-C33
4	L5	4447	5MC	O4'-C4'-C5'-O5'
4	L5	1534	A2M	C4'-C5'-O5'-P
84	S2	1081	PSU	C4'-C5'-O5'-P

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
4	L5	2861	OMC	C2'-C1'-N1-C2
4	L5	2351	OMC	O4'-C4'-C5'-O5'

There are no ring outliers.

103 monomers are involved in 199 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	L5	4456	OMC	2	0
4	L5	1326	A2M	2	0
4	L5	4579	PSU	2	0
4	L5	4673	PSU	1	0
4	L5	1340	OMC	4	0
84	S2	1272	OMC	1	0
4	L5	4500	PSU	2	0
84	S2	462	OMC	1	0
4	L5	2351	OMC	3	0
4	L5	4637	OMG	4	0
84	S2	166	A2M	4	0
84	S2	517	OMC	1	0
4	L5	4227	OMU	1	0
4	L5	3869	OMC	1	0
4	L5	4523	A2M	2	0
4	L5	2787	A2M	1	0
4	L5	3785	A2M	1	0
4	L5	2424	OMG	1	0
84	S2	99	A2M	1	0
84	S2	93	PSU	1	0
84	S2	1851	MA6	1	0
84	S2	468	A2M	4	0
84	S2	27	A2M	3	0
84	S2	1842	4AC	5	0
4	L5	400	A2M	1	0
4	L5	4623	OMG	2	0
4	L5	3920	PSU	1	0
84	S2	1004	PSU	2	0
4	L5	1683	PSU	3	0
84	S2	1232	PSU	1	0
84	S2	484	A2M	2	0
84	S2	668	A2M	3	0
84	S2	1328	OMG	5	0
4	L5	4536	OMC	1	0
4	L5	4636	PSU	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	L5	2632	PSU	2	0
84	S2	1383	A2M	2	0
4	L5	4431	PSU	2	0
4	L5	3853	PSU	1	0
84	S2	1639	G7M	2	0
4	L5	4361	PSU	1	0
84	S2	1288	OMU	2	0
4	L5	4299	PSU	2	0
84	S2	1174	PSU	2	0
4	L5	1871	A2M	3	0
4	L5	2365	OMC	1	0
4	L5	3884	PSU	1	0
84	S2	866	PSU	2	0
4	L5	2839	PSU	2	0
4	L5	4628	PSU	1	0
4	L5	3830	A2M	1	0
4	L5	3718	A2M	3	0
84	S2	159	A2M	3	0
84	S2	644	OMG	2	0
84	S2	601	OMG	2	0
4	L5	2804	OMC	2	0
4	L5	2861	OMC	1	0
84	S2	1337	4AC	2	0
84	S2	172	OMU	2	0
4	L5	3887	OMC	1	0
4	L5	4457	PSU	2	0
4	L5	1323	A2M	3	0
4	L5	2824	OMC	4	0
4	L5	3818	UY1	2	0
84	S2	1031	A2M	4	0
4	L5	3841	OMC	1	0
4	L5	2363	A2M	2	0
4	L5	3867	A2M	5	0
84	S2	651	PSU	1	0
84	S2	1391	OMC	2	0
4	L5	4620	OMU	2	0
4	L5	3744	OMG	1	0
84	S2	354	OMU	1	0
84	S2	1177	PSU	2	0
4	L5	1534	A2M	2	0
84	S2	649	PSU	2	0
4	L5	4353	PSU	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	S2	509	OMG	2	0
4	L5	4689	PSU	3	0
4	L5	4403	PSU	1	0
84	S2	627	OMU	1	0
4	L5	3782	5MC	1	0
4	L5	4471	PSU	1	0
4	L5	4571	A2M	1	0
4	L5	1316	OMG	2	0
84	S2	681	PSU	1	0
84	S2	867	OMG	2	0
4	L5	5001	PSU	1	0
84	S2	121	OMU	2	0
4	L5	3695	PSU	1	0
84	S2	1850	MA6	4	0
4	L5	398	A2M	1	0
4	L5	3899	OMG	1	0
4	L5	2876	OMG	2	0
84	S2	116	OMU	6	0
4	L5	4220	6MZ	2	0
4	L5	3825	A2M	4	0
84	S2	576	A2M	1	0
4	L5	4530	UR3	2	0
4	L5	2422	OMC	3	0
4	L5	4552	PSU	3	0
6	L8	75	OMG	1	0
4	L5	1522	OMG	1	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 244 ligands modelled in this entry, 225 are monoatomic - leaving 19 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	$\#\|Z\|>2$
87	SPM	L5	5263	-	13,13,13	0.36	0	12,12,12	0.91	0
88	SPD	L8	202	-	9,9,9	0.33	0	8,8,8	0.78	0
90	3HE	L5	5295	-	21,21,21	0.42	0	23,30,30	0.82	0
87	SPM	L5	5266	-	13,13,13	0.34	0	12,12,12	1.04	0
88	SPD	L5	5288	-	9,9,9	0.32	0	8,8,8	0.79	0
88	SPD	L5	5260	-	9,9,9	0.33	0	8,8,8	0.96	0
89	HMT	L5	5294	-	41,43,43	4.51	15 (36%)	43,66,66	1.95	13 (30%)
88	SPD	LN	301	-	9,9,9	0.32	0	8,8,8	0.87	0
87	SPM	L5	5258	-	13,13,13	0.35	0	12,12,12	1.04	0
87	SPM	L5	5291	-	13,13,13	0.35	0	12,12,12	0.87	0
88	SPD	L5	5286	-	9,9,9	0.30	0	8,8,8	0.81	0
88	SPD	L5	5282	-	9,9,9	0.33	0	8,8,8	0.80	0
88	SPD	L5	5283	-	9,9,9	0.33	0	8,8,8	0.78	0
87	SPM	L5	5287	-	13,13,13	0.36	0	12,12,12	0.88	0
87	SPM	L5	5262	-	13,13,13	0.34	0	12,12,12	0.94	0
87	SPM	L5	5290	-	13,13,13	0.34	0	12,12,12	1.04	0
88	SPD	L5	5289	-	9,9,9	0.31	0	8,8,8	0.82	0
88	SPD	L5	5284	-	9,9,9	0.31	0	8,8,8	0.89	0
88	SPD	L5	5285	-	9,9,9	0.32	0	8,8,8	0.81	0

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
87	SPM	L5	5263	-	-	2/11/11/11	-
88	SPD	L8	202	-	-	4/7/7/7	-
90	3HE	L5	5295	-	-	0/8/36/36	0/2/2/2
87	SPM	L5	5266	-	-	1/11/11/11	-
88	SPD	L5	5288	-	-	0/7/7/7	-
88	SPD	L5	5260	-	-	0/7/7/7	-
89	HMT	L5	5294	-	-	7/27/74/74	0/5/5/5
88	SPD	LN	301	-	-	2/7/7/7	-
87	SPM	L5	5258	-	-	4/11/11/11	-
87	SPM	L5	5291	-	-	1/11/11/11	-
88	SPD	L5	5286	-	-	1/7/7/7	-
88	SPD	L5	5282	-	-	1/7/7/7	-
88	SPD	L5	5283	-	-	2/7/7/7	-
87	SPM	L5	5287	-	-	6/11/11/11	-
87	SPM	L5	5262	-	-	0/11/11/11	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
87	SPM	L5	5290	-	-	5/11/11/11	-
88	SPD	L5	5289	-	-	2/7/7/7	-
88	SPD	L5	5284	-	-	2/7/7/7	-
88	SPD	L5	5285	-	-	0/7/7/7	-

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
89	L5	5294	HMT	C8-C7	18.07	1.79	1.52
89	L5	5294	HMT	C7-C6	11.87	1.76	1.51
89	L5	5294	HMT	C5-C4	-10.48	1.35	1.51
89	L5	5294	HMT	C10-N1	7.34	1.57	1.47
89	L5	5294	HMT	C1-C2	6.90	1.43	1.32
89	L5	5294	HMT	O4-C19	5.69	1.45	1.34
89	L5	5294	HMT	C9-N1	-5.04	1.34	1.48
89	L5	5294	HMT	O4-C3	-4.63	1.36	1.44
89	L5	5294	HMT	C12-C9	3.45	1.59	1.54
89	L5	5294	HMT	O3-C2	3.12	1.41	1.35
89	L5	5294	HMT	C3-C2	-2.58	1.43	1.50
89	L5	5294	HMT	O7-C22	2.57	1.41	1.33
89	L5	5294	HMT	O2-C15	2.24	1.41	1.38
89	L5	5294	HMT	O1-C14	2.19	1.41	1.38
89	L5	5294	HMT	C21-C22	2.06	1.54	1.50

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
89	L5	5294	HMT	O4-C19-C20	5.12	120.64	111.24
89	L5	5294	HMT	O7-C22-C21	4.85	119.67	111.16
89	L5	5294	HMT	C3-O4-C19	-4.10	110.78	117.24
89	L5	5294	HMT	O1-C14-C13	3.07	131.94	127.86
89	L5	5294	HMT	O2-C15-C16	2.90	131.72	127.86
89	L5	5294	HMT	C25-C24-C20	-2.67	109.13	115.34
89	L5	5294	HMT	O4-C19-O5	-2.31	119.87	123.95
89	L5	5294	HMT	C13-C5-C6	-2.23	116.96	119.39
89	L5	5294	HMT	C20-C21-C22	-2.11	107.76	114.09
89	L5	5294	HMT	C10-N1-C9	-2.08	101.89	107.65
89	L5	5294	HMT	O5-C19-C20	-2.05	119.48	124.07
89	L5	5294	HMT	C18-O3-C2	-2.01	113.21	116.53
89	L5	5294	HMT	C16-C15-C14	-2.01	119.51	122.03

There are no chirality outliers.

All (40) torsion outliers are listed below:

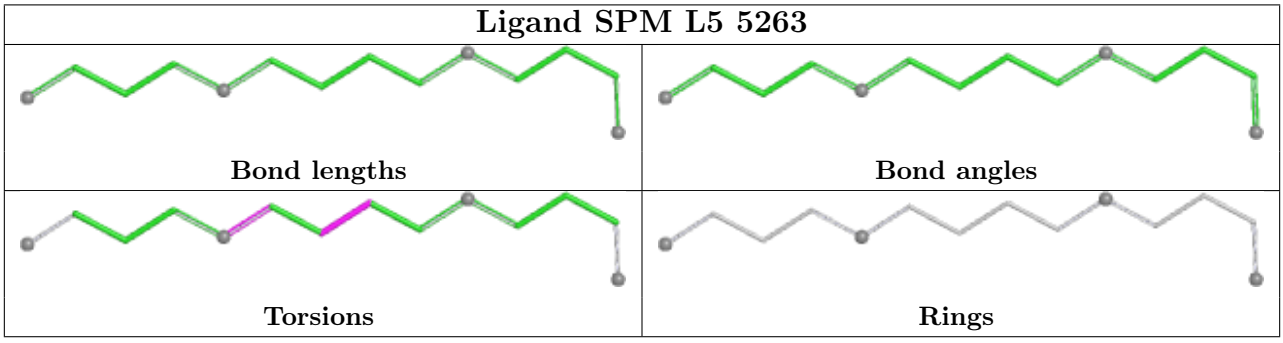
Mol	Chain	Res	Type	Atoms
89	L5	5294	HMT	C1-C2-O3-C18
89	L5	5294	HMT	C3-C2-O3-C18
89	L5	5294	HMT	C21-C22-O7-C23
89	L5	5294	HMT	O8-C22-O7-C23
88	L8	202	SPD	N6-C7-C8-C9
88	L5	5283	SPD	C3-C4-C5-N6
88	L5	5284	SPD	C3-C4-C5-N6
87	L5	5287	SPM	C7-C6-N5-C4
87	L5	5287	SPM	C8-C9-N10-C11
87	L5	5258	SPM	C3-C4-N5-C6
87	L5	5291	SPM	C8-C9-N10-C11
88	L5	5284	SPD	C2-C3-C4-C5
87	L5	5290	SPM	C8-C9-N10-C11
87	L5	5263	SPM	C6-C7-C8-C9
89	L5	5294	HMT	C20-C24-C25-C26
87	L5	5266	SPM	N10-C11-C12-C13
87	L5	5290	SPM	C6-C7-C8-C9
88	LN	301	SPD	C2-C3-C4-C5
88	L5	5282	SPD	C2-C3-C4-C5
88	LN	301	SPD	C8-C7-N6-C5
87	L5	5290	SPM	N10-C11-C12-C13
88	L5	5283	SPD	N1-C2-C3-C4
87	L5	5263	SPM	C8-C9-N10-C11
87	L5	5258	SPM	C6-C7-C8-C9
88	L8	202	SPD	C3-C4-C5-N6
87	L5	5287	SPM	N1-C2-C3-C4
88	L8	202	SPD	C7-C8-C9-N10
89	L5	5294	HMT	O6-C20-C21-C22
87	L5	5287	SPM	C7-C8-C9-N10
88	L5	5289	SPD	C2-C3-C4-C5
88	L5	5286	SPD	C3-C4-C5-N6
87	L5	5287	SPM	C12-C11-N10-C9
87	L5	5290	SPM	C12-C11-N10-C9
87	L5	5290	SPM	C7-C6-N5-C4
87	L5	5287	SPM	N5-C6-C7-C8
87	L5	5258	SPM	C12-C11-N10-C9
87	L5	5258	SPM	C11-C12-C13-N14
88	L5	5289	SPD	C8-C7-N6-C5
89	L5	5294	HMT	C19-C20-C21-C22
88	L8	202	SPD	C2-C3-C4-C5

There are no ring outliers.

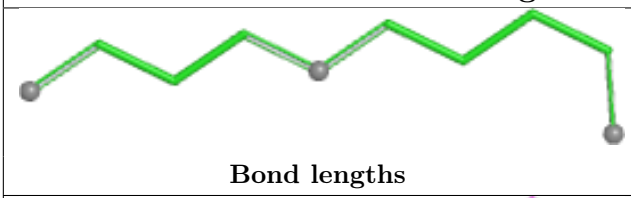
15 monomers are involved in 30 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
87	L5	5263	SPM	2	0
90	L5	5295	3HE	5	0
87	L5	5266	SPM	1	0
88	L5	5260	SPD	3	0
89	L5	5294	HMT	6	0
88	LN	301	SPD	2	0
87	L5	5258	SPM	1	0
87	L5	5291	SPM	1	0
88	L5	5286	SPD	1	0
88	L5	5283	SPD	1	0
87	L5	5287	SPM	1	0
87	L5	5262	SPM	1	0
87	L5	5290	SPM	1	0
88	L5	5289	SPD	2	0
88	L5	5284	SPD	2	0

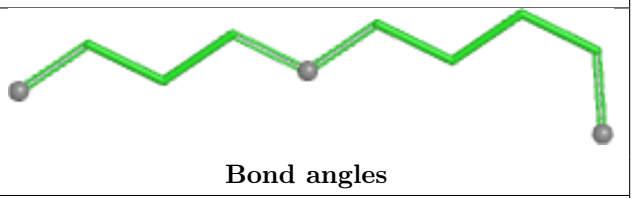
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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



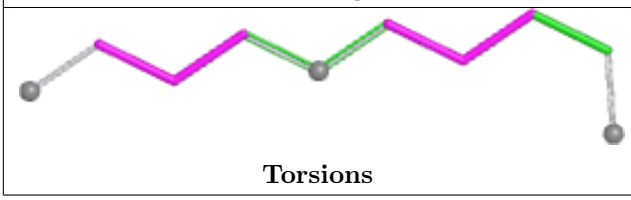
Ligand SPD L8 202



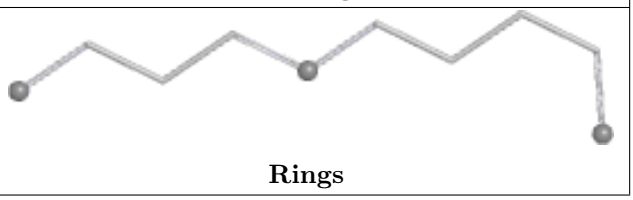
Bond lengths



Bond angles

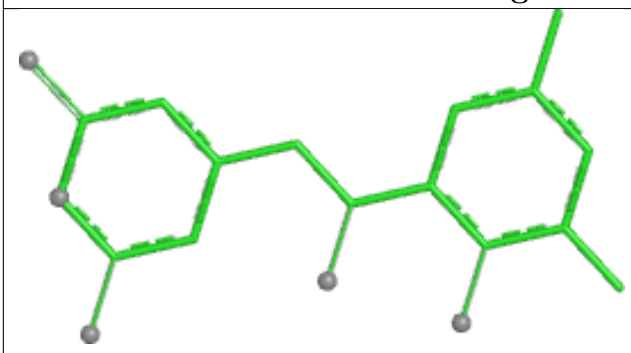


Torsions

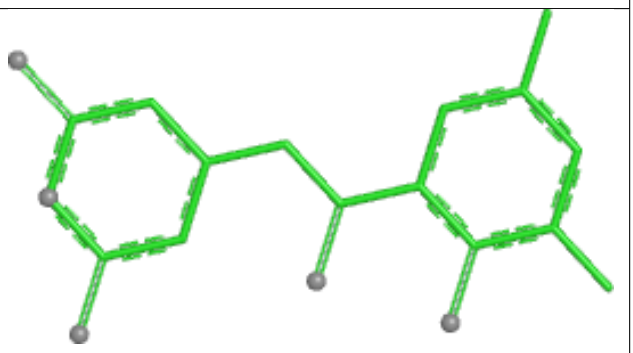


Rings

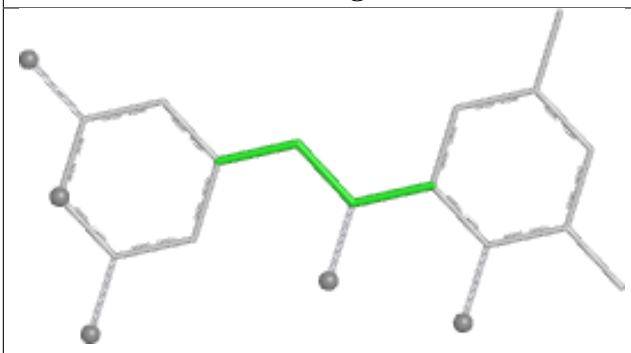
Ligand 3HE L5 5295



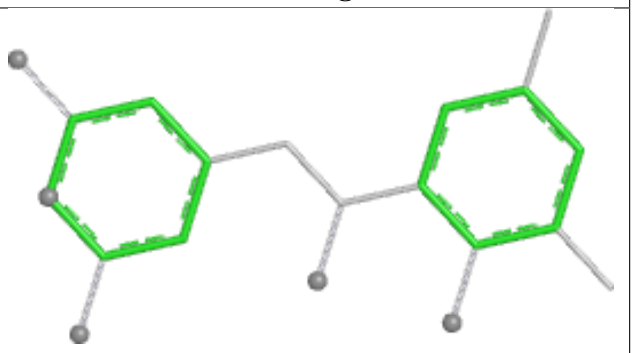
Bond lengths



Bond angles

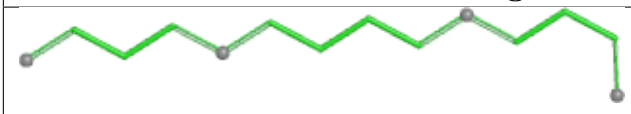


Torsions

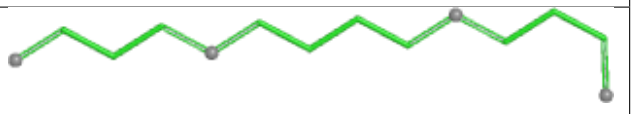


Rings

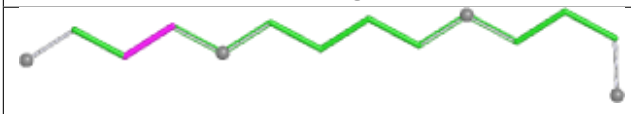
Ligand SPM L5 5266



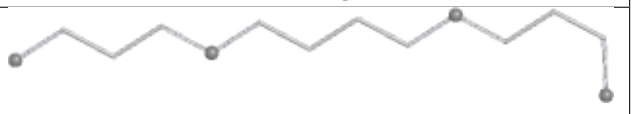
Bond lengths



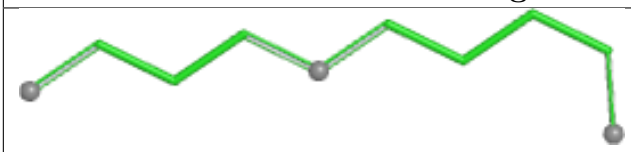
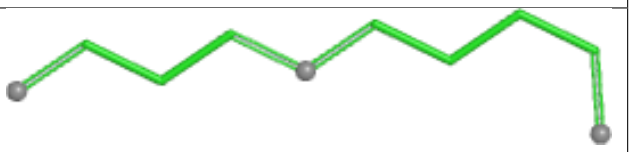
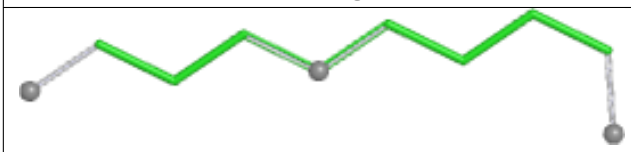
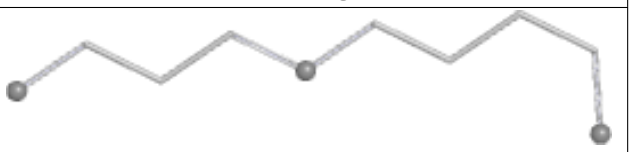
Bond angles

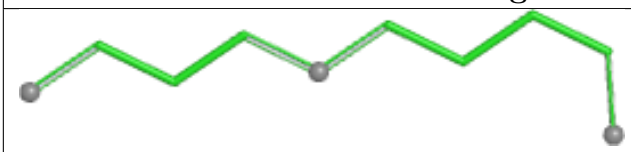
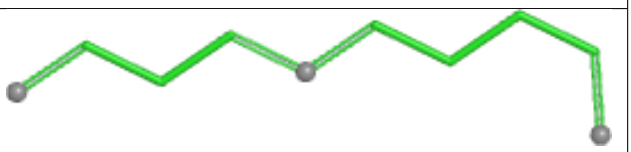
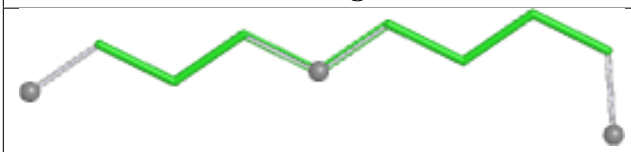
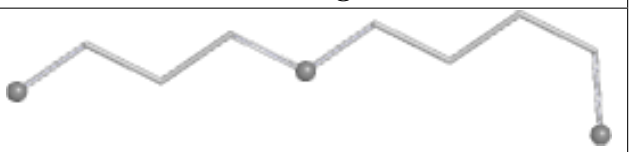


Torsions

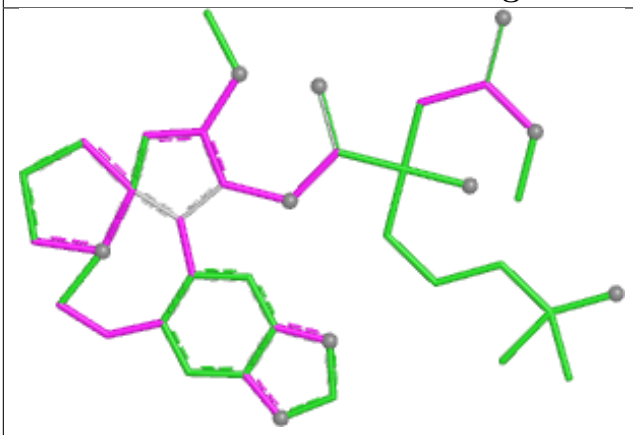


Rings

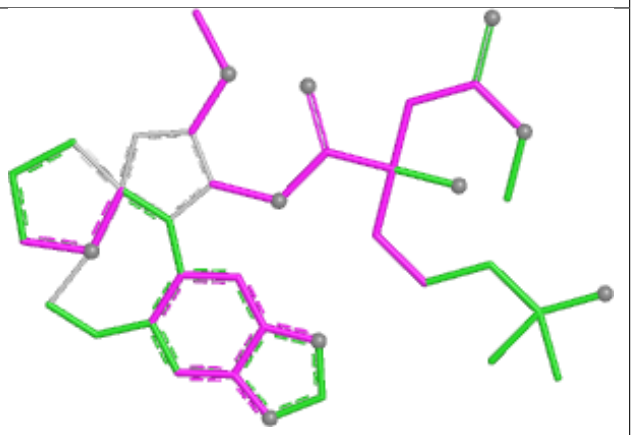
Ligand SPD L5 5288	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand SPD L5 5260	
 Bond lengths	 Bond angles
 Torsions	 Rings

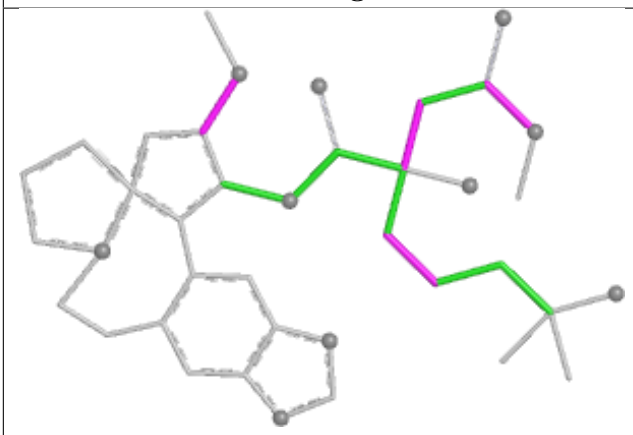
Ligand HMT L5 5294



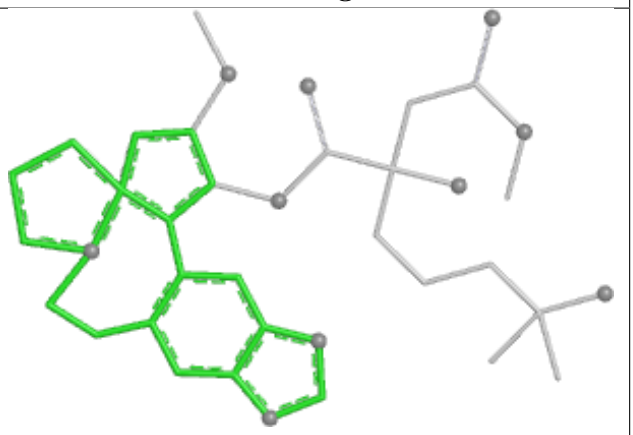
Bond lengths



Bond angles

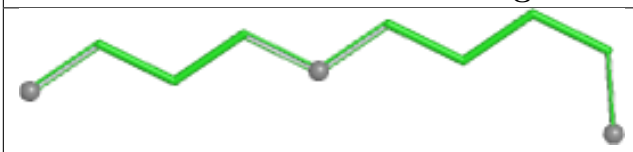


Torsions

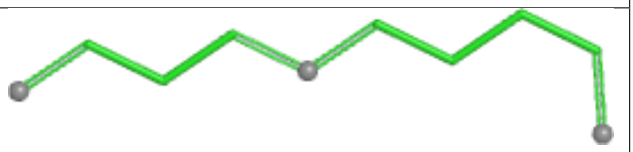


Rings

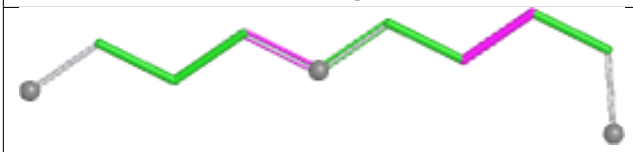
Ligand SPD LN 301



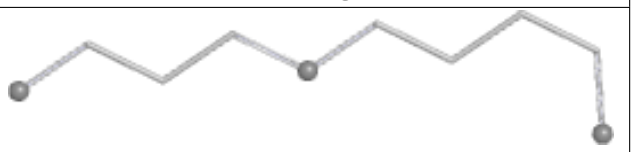
Bond lengths



Bond angles

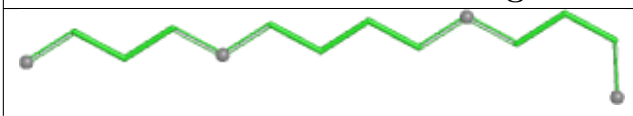


Torsions

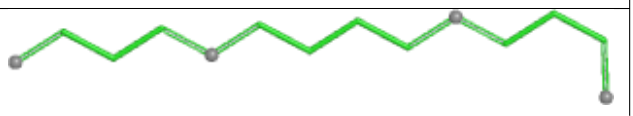


Rings

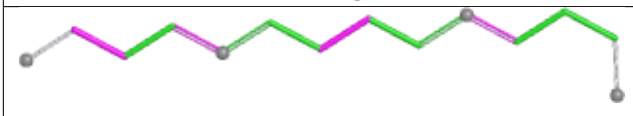
Ligand SPM L5 5258



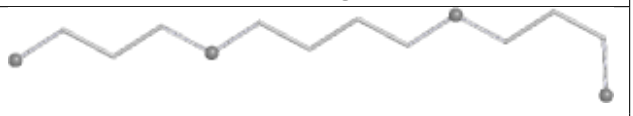
Bond lengths



Bond angles

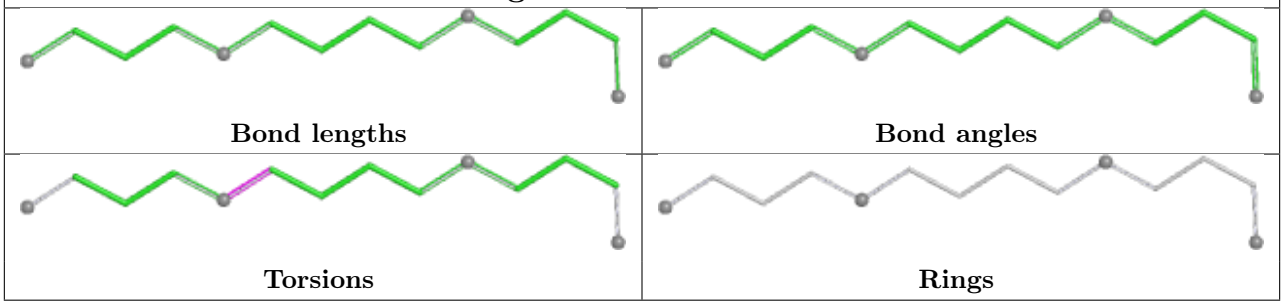


Torsions

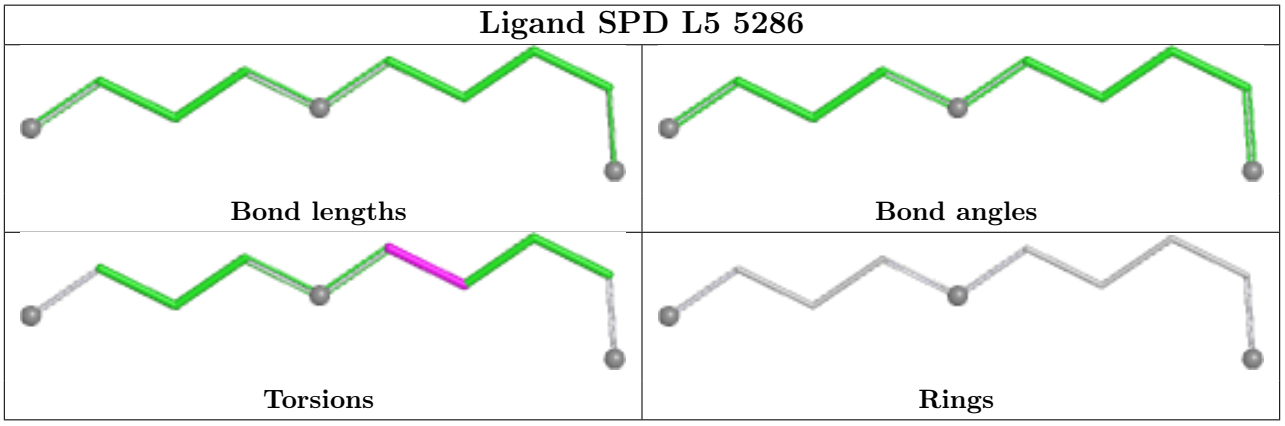


Rings

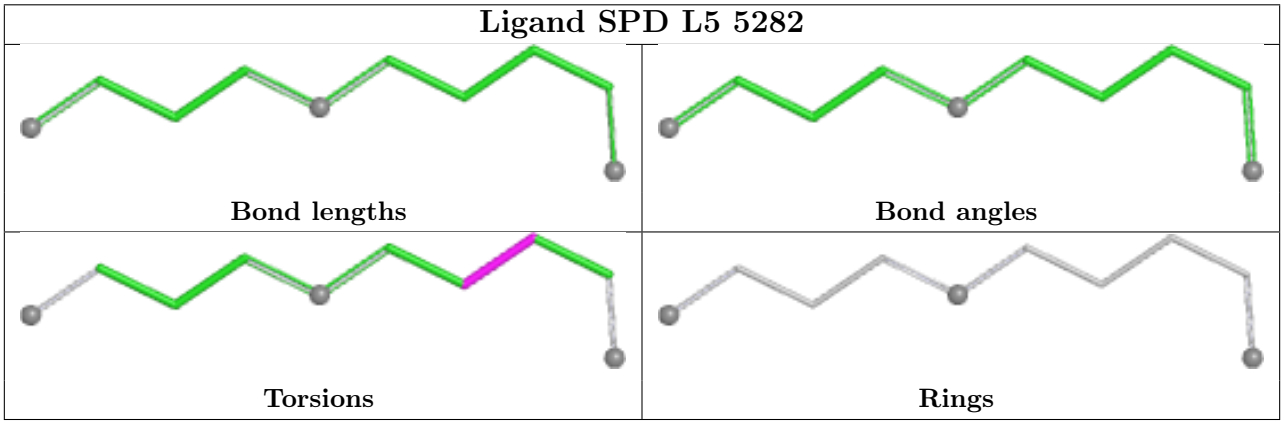
Ligand SPM L5 5291



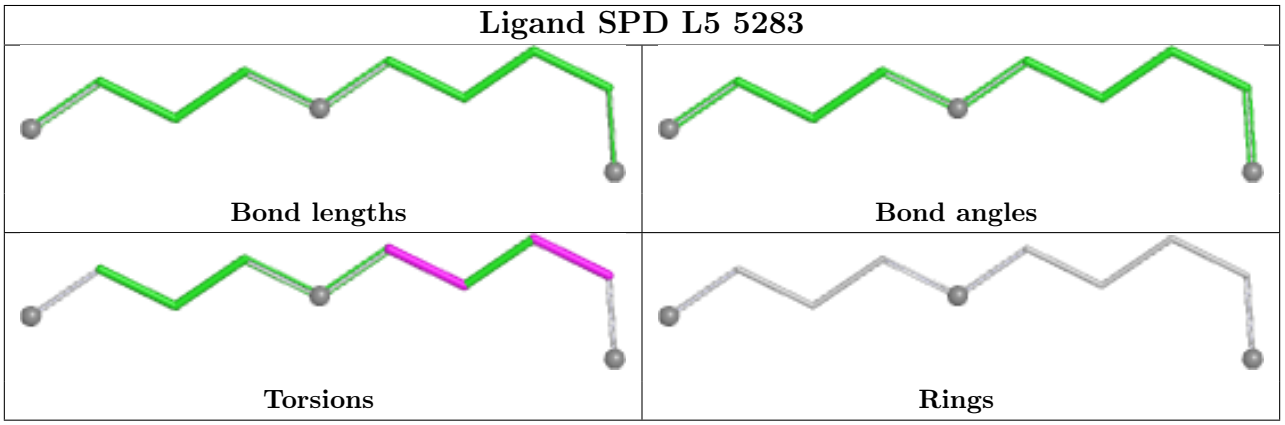
Ligand SPD L5 5286



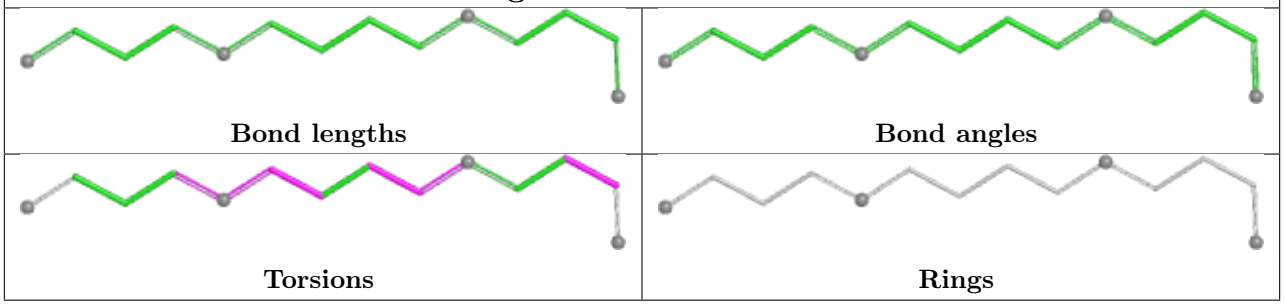
Ligand SPD L5 5282



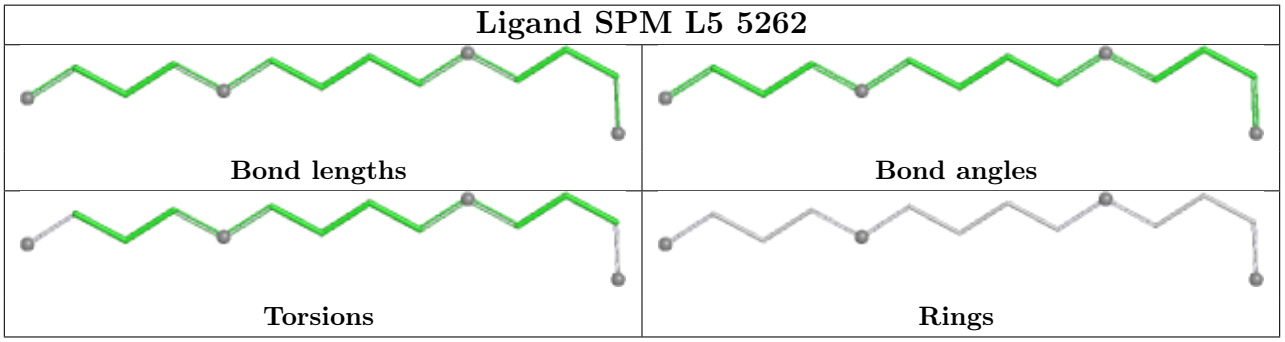
Ligand SPD L5 5283



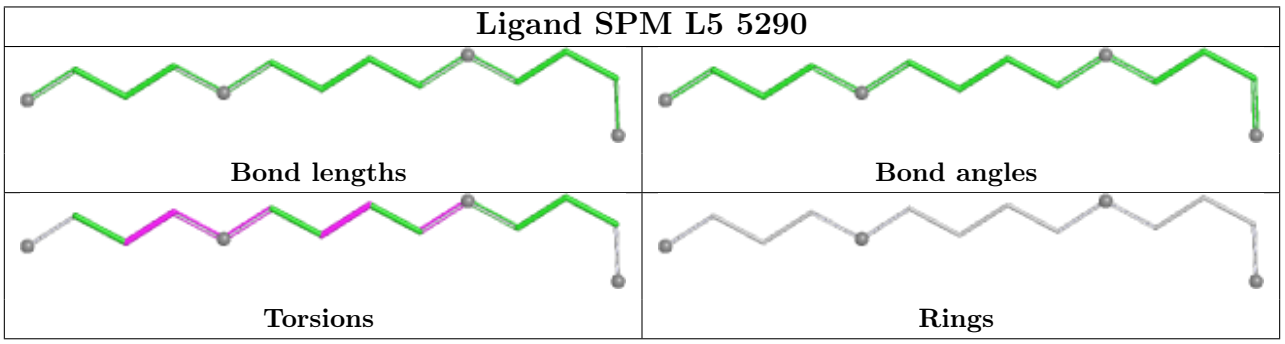
Ligand SPM L5 5287



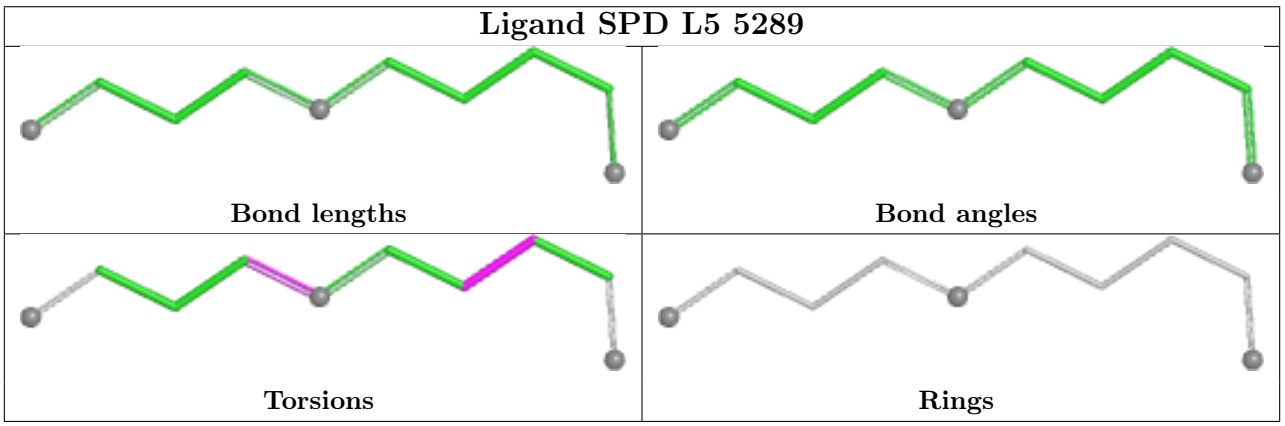
Ligand SPM L5 5262

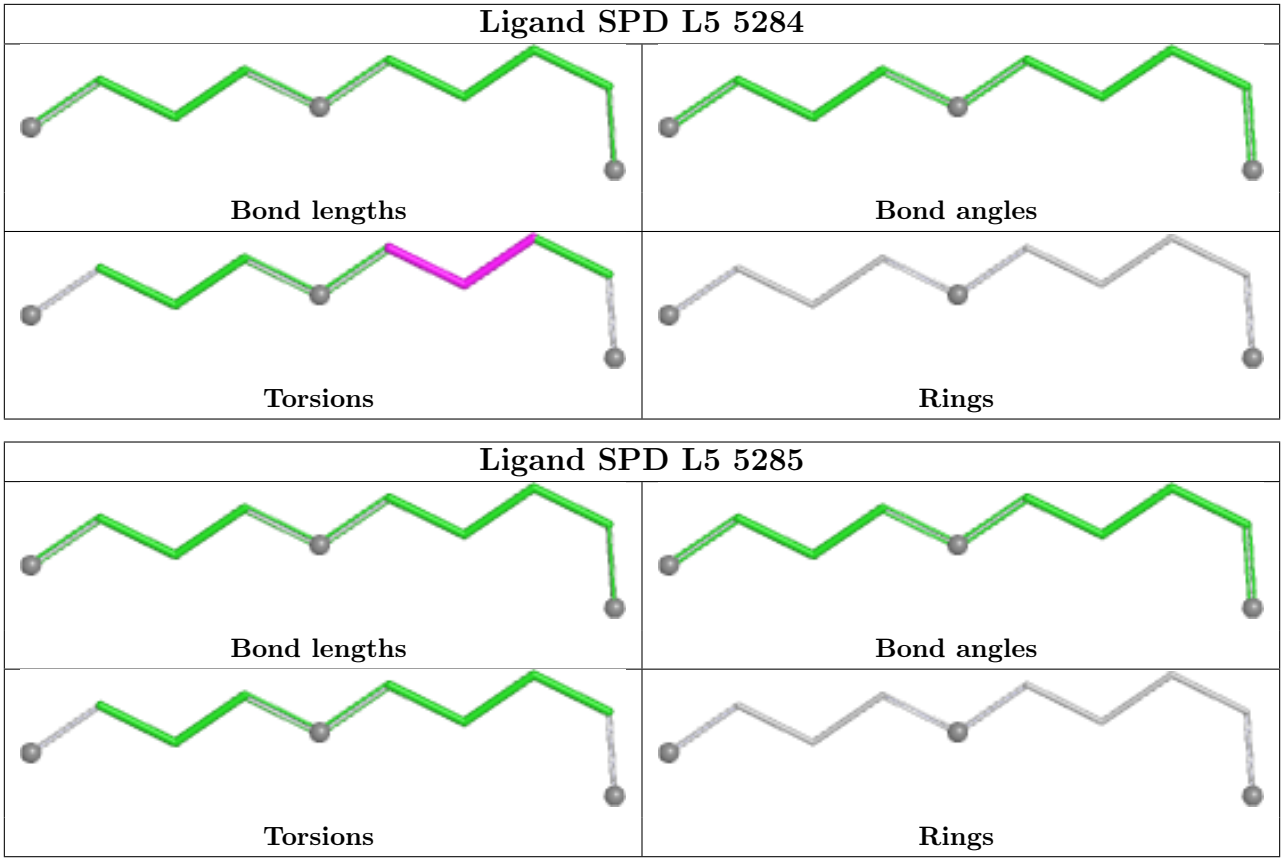


Ligand SPM L5 5290



Ligand SPD L5 5289





5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
4	L5	10
84	S2	5
1	Pt	1
3	AT	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	S2	753:C	O3'	785:C	P	29.45
1	L5	1706:A	O3'	1716:G	P	21.51
1	L5	2910:G	O3'	3584:C	P	20.98
1	L5	760:G	O3'	903:C	P	16.47

Continued on next page...

Continued from previous page...

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	L5	519:C	O3'	642:G	P	15.35
1	L5	4776:G	O3'	4858:C	P	14.95
1	L5	2112:G	O3'	2249:C	P	14.64
1	S2	698:G	O3'	730:C	P	14.11
1	L5	3954:A	O3'	4056:A	P	13.07
1	S2	739:C	O3'	746:C	P	12.72
1	L5	990:C	O3'	1064:G	P	11.52
1	L5	1222:A	O3'	1234:G	P	11.10
1	Pt	15:G	O3'	18:G	P	9.36
1	S2	225:G	O3'	287:U	P	7.20
1	L5	1100:U	O3'	1167:C	P	6.35
1	AT	16:C	O3'	18:G	P	4.37
1	S2	1831:A	O3'	1832:6MZ	P	4.29

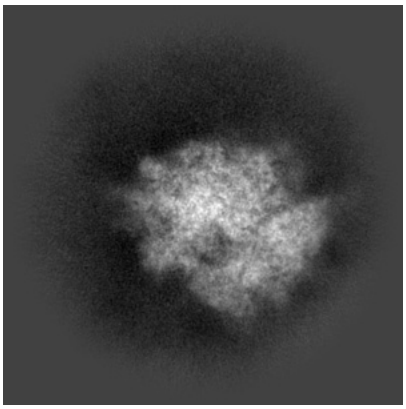
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-71342. These allow visual inspection of the internal detail of the map and identification of artifacts.

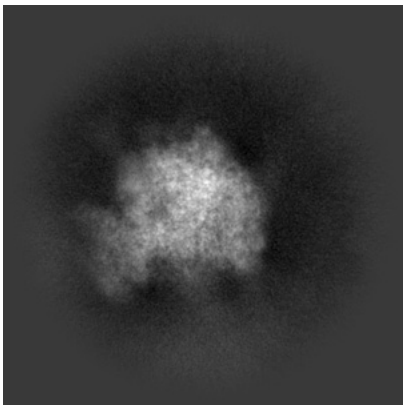
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

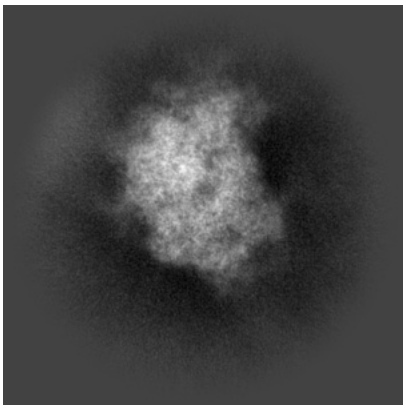
6.1.1 Primary map



X

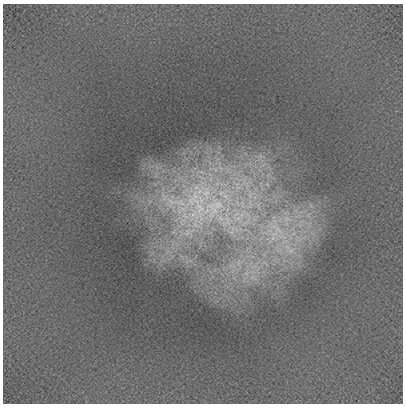


Y

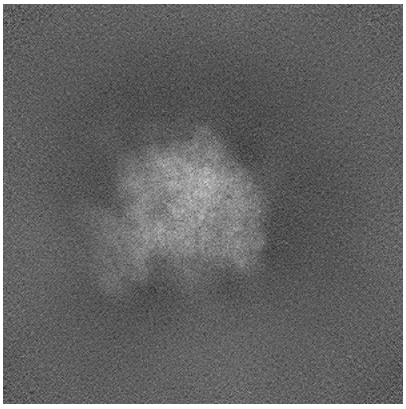


Z

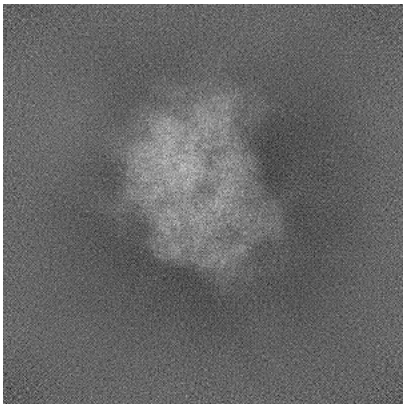
6.1.2 Raw map



X



Y

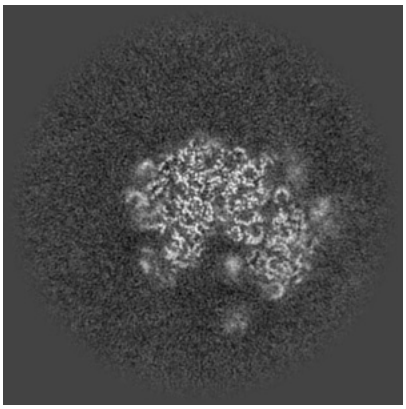


Z

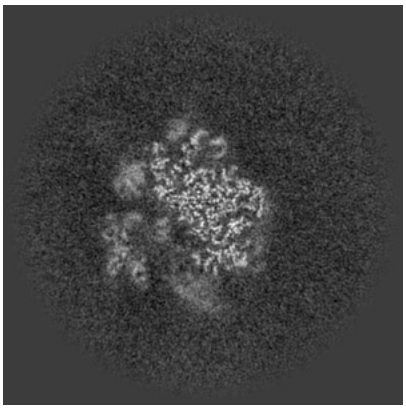
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

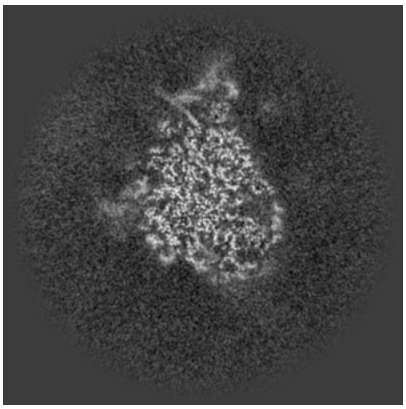
6.2.1 Primary map



X Index: 256

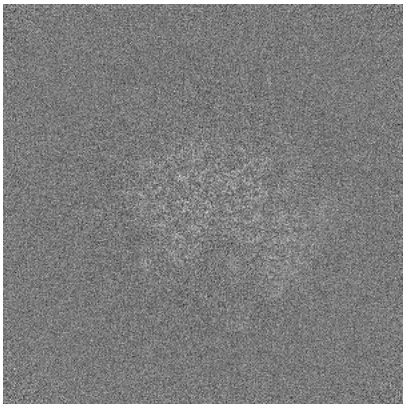


Y Index: 256

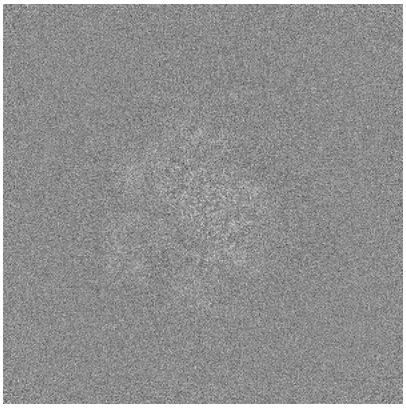


Z Index: 256

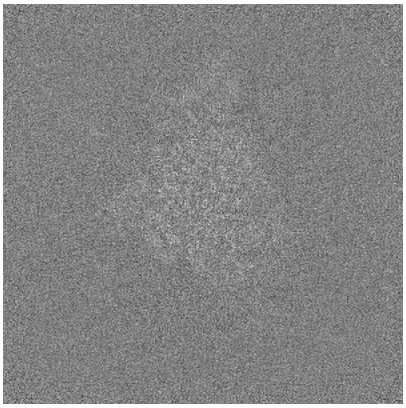
6.2.2 Raw map



X Index: 256



Y Index: 256

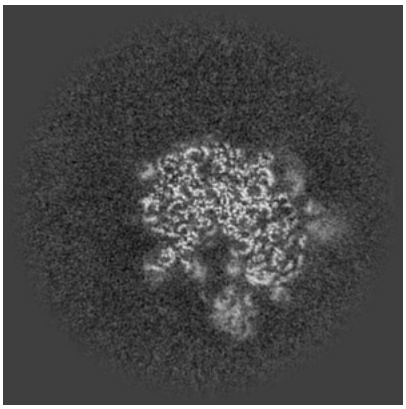


Z Index: 256

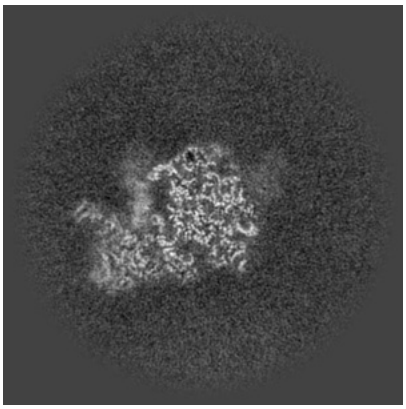
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

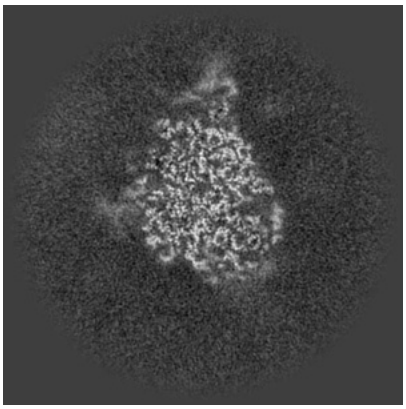
6.3.1 Primary map



X Index: 243

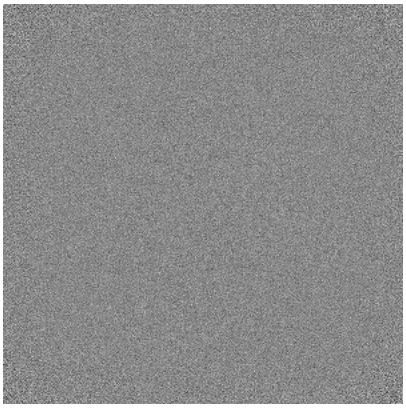


Y Index: 295

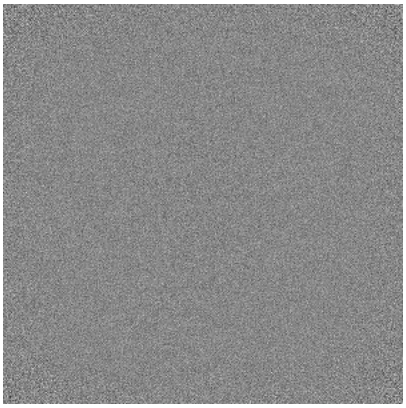


Z Index: 258

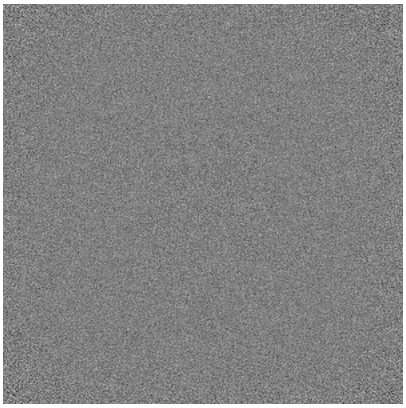
6.3.2 Raw map



X Index: 0



Y Index: 0

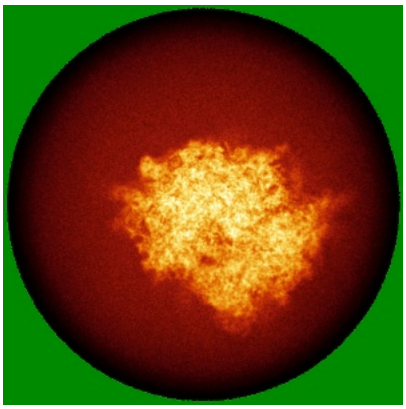


Z Index: 0

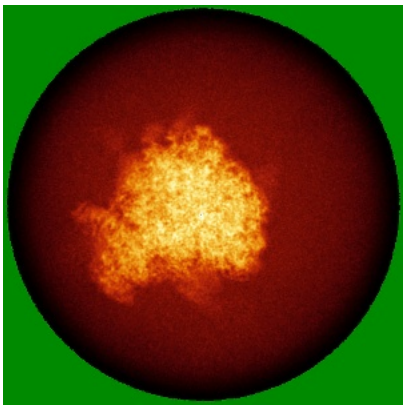
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

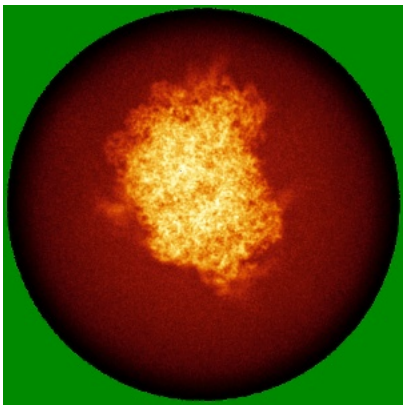
6.4.1 Primary map



X

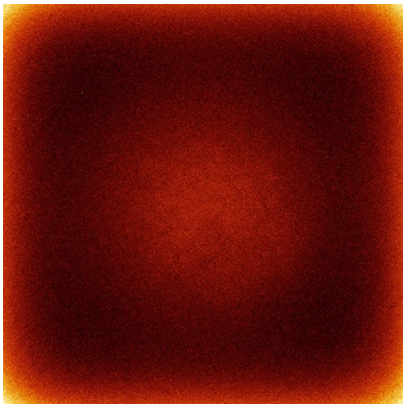


Y

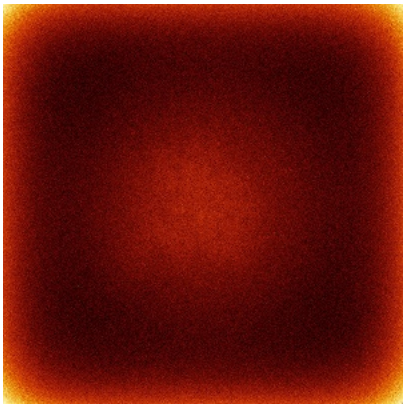


Z

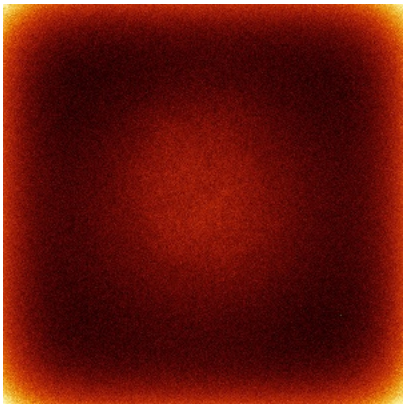
6.4.2 Raw map



X



Y

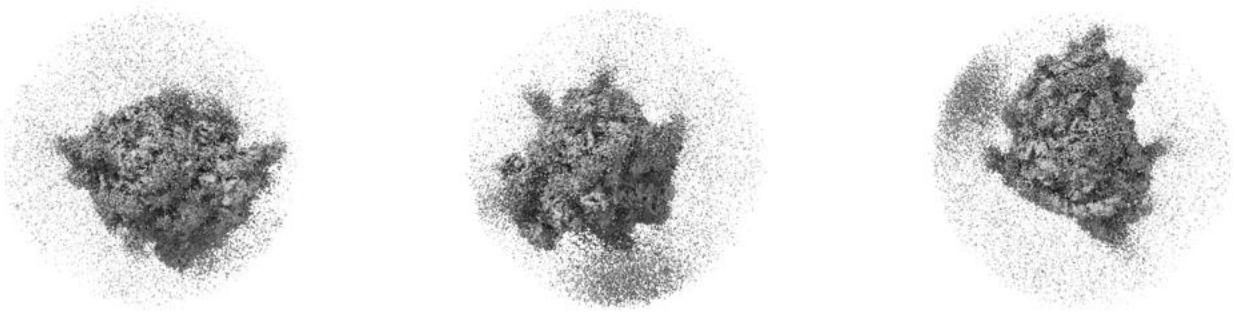


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

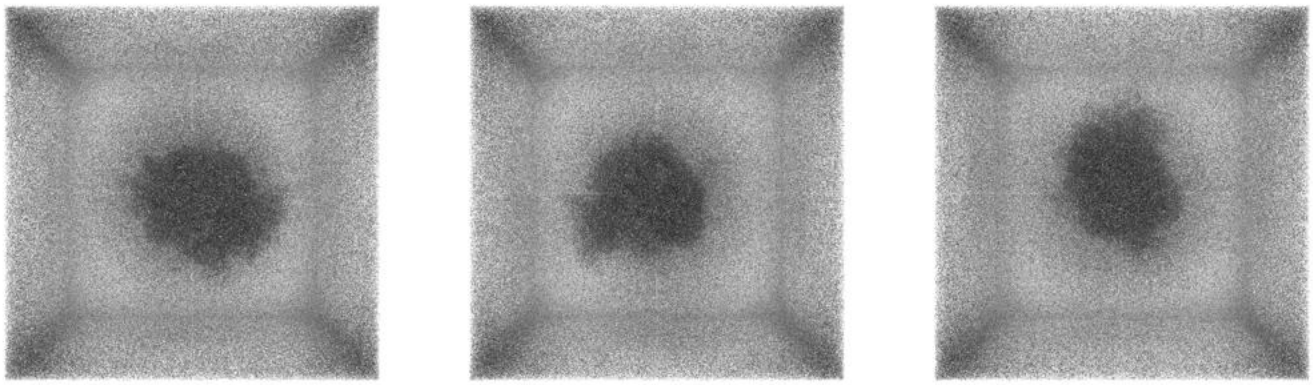
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.0796. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

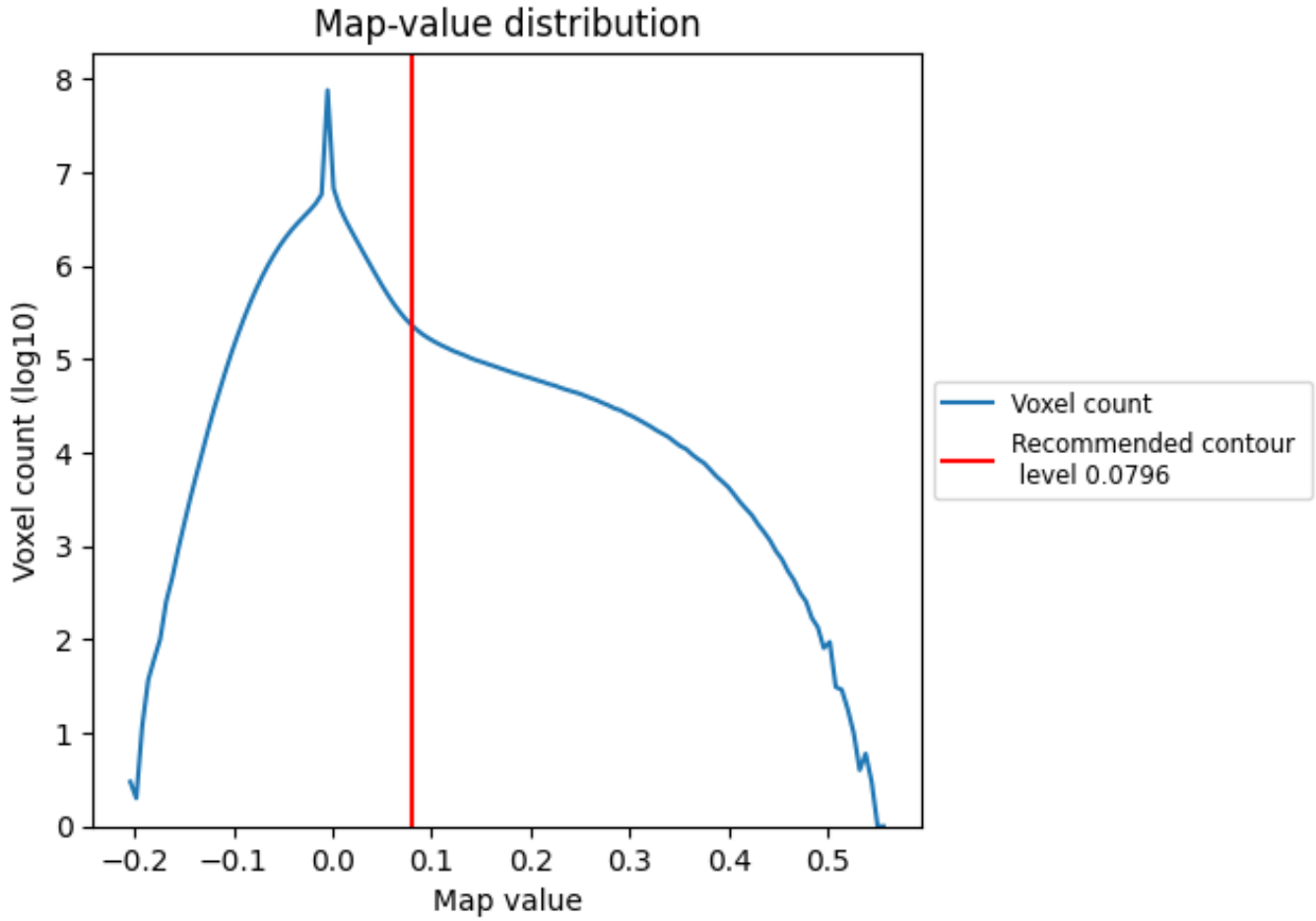
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

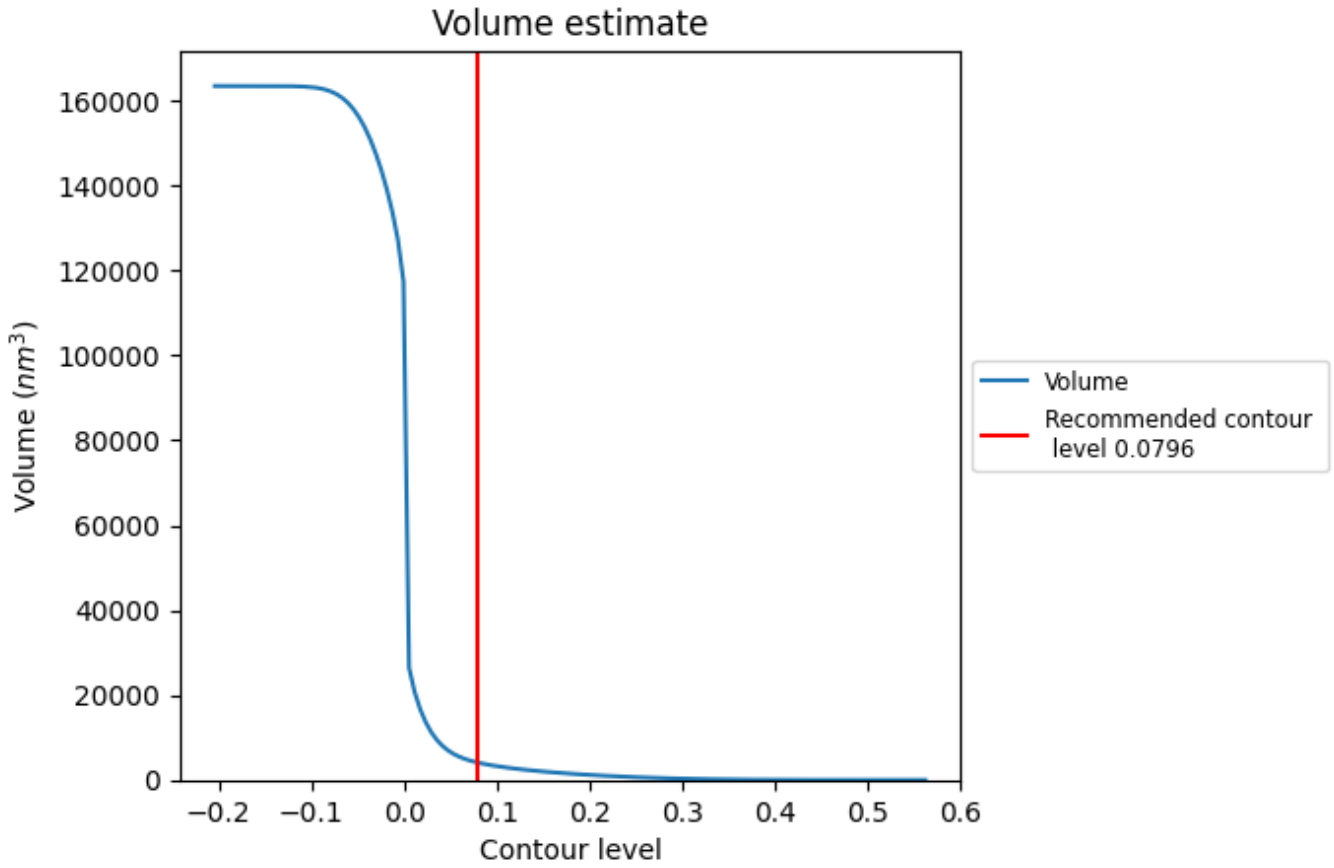
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

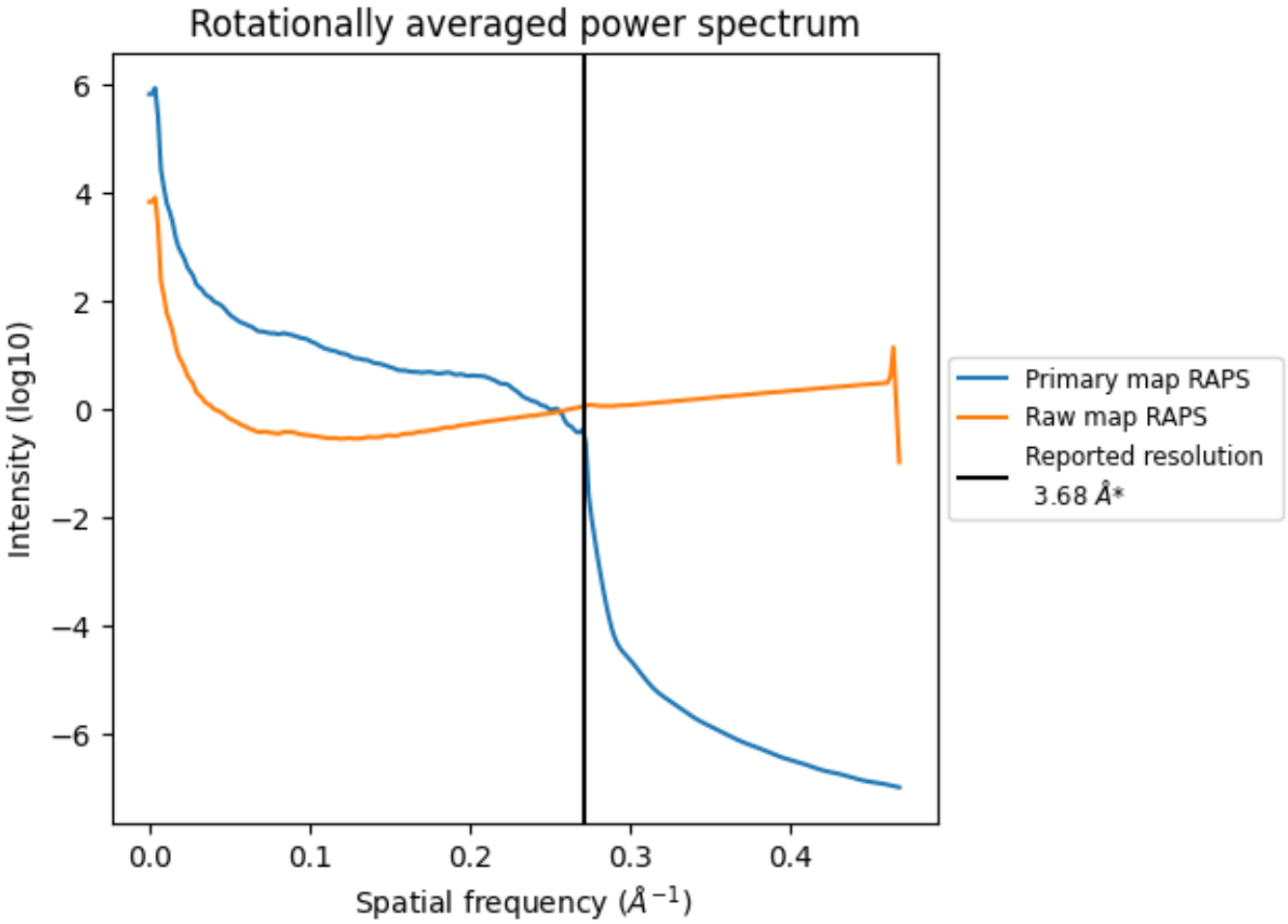
7.2 Volume estimate



The volume at the recommended contour level is 4098 nm^3; this corresponds to an approximate mass of 3702 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

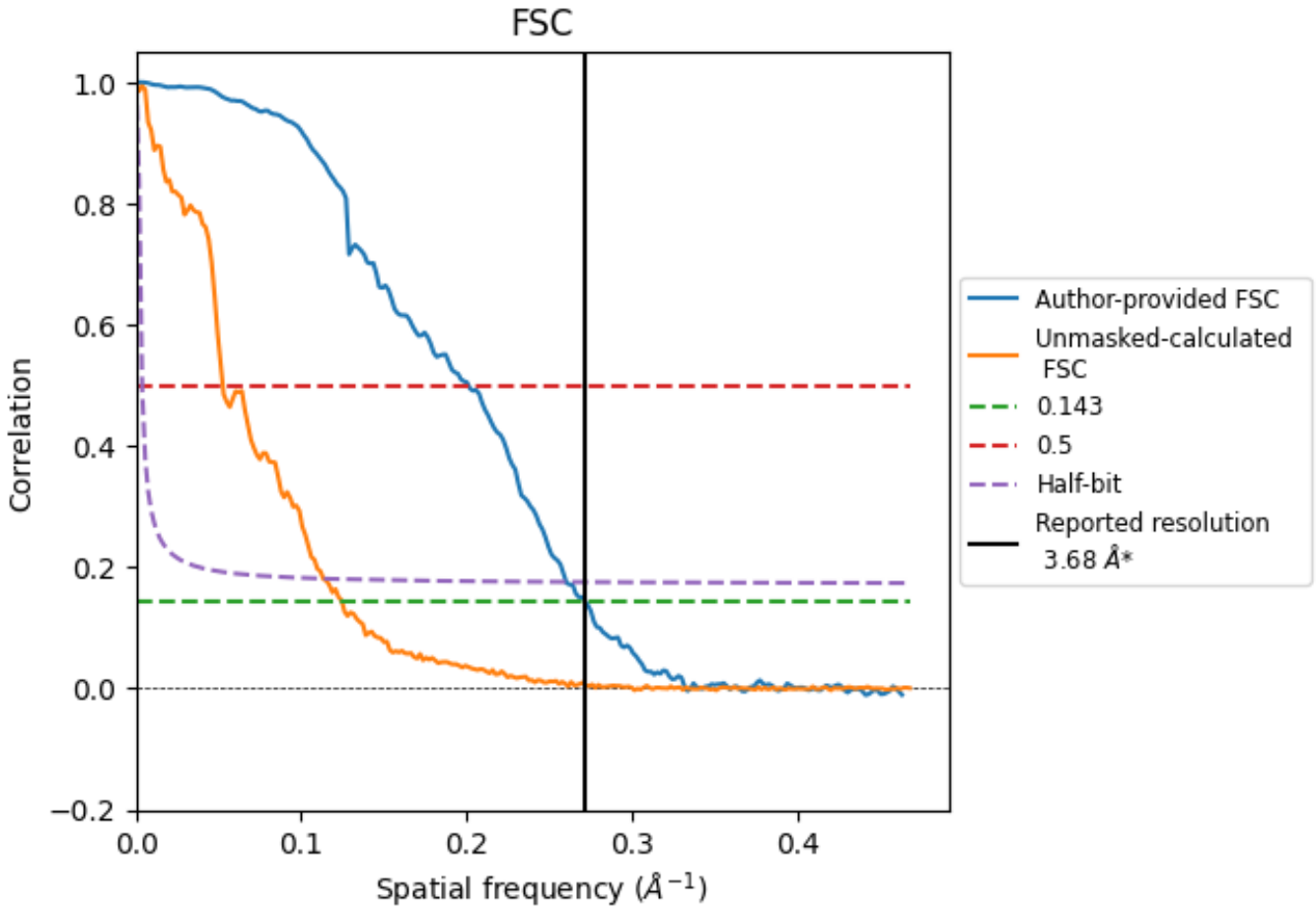


*Reported resolution corresponds to spatial frequency of 0.272 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.272 Å^{-1}

8.2 Resolution estimates (i)

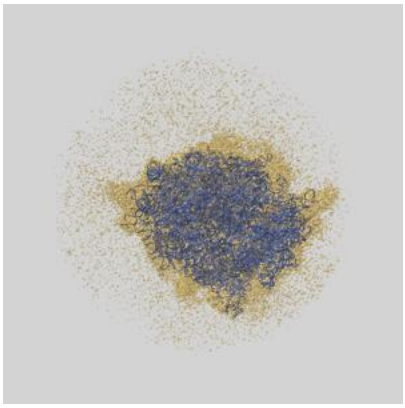
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.68	-	-
Author-provided FSC curve	3.68	4.97	3.84
Unmasked-calculated*	8.03	19.05	8.83

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 8.03 differs from the reported value 3.68 by more than 10 %

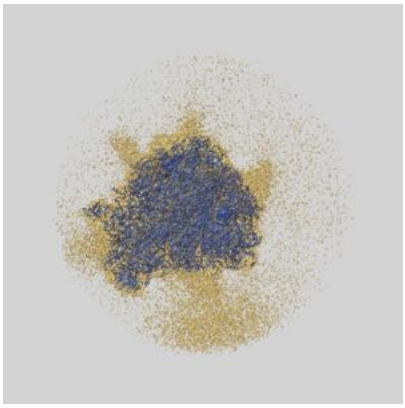
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-71342 and PDB model 9P7H. Per-residue inclusion information can be found in section 3 on page 24.

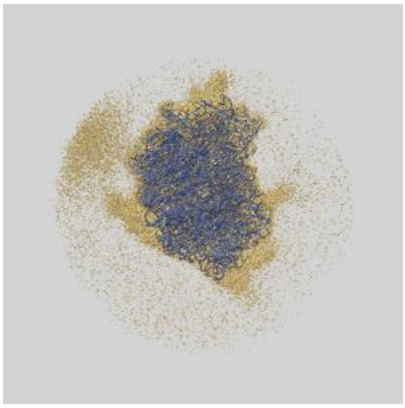
9.1 Map-model overlay



X



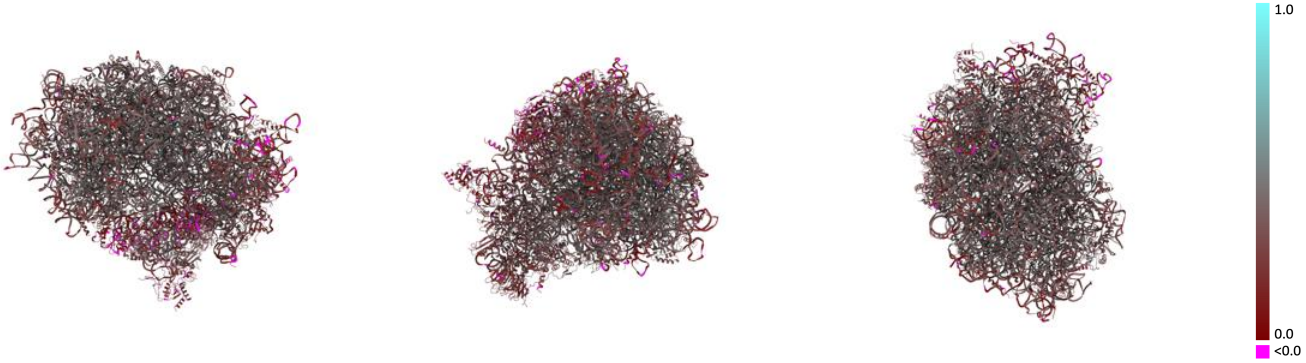
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0796 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

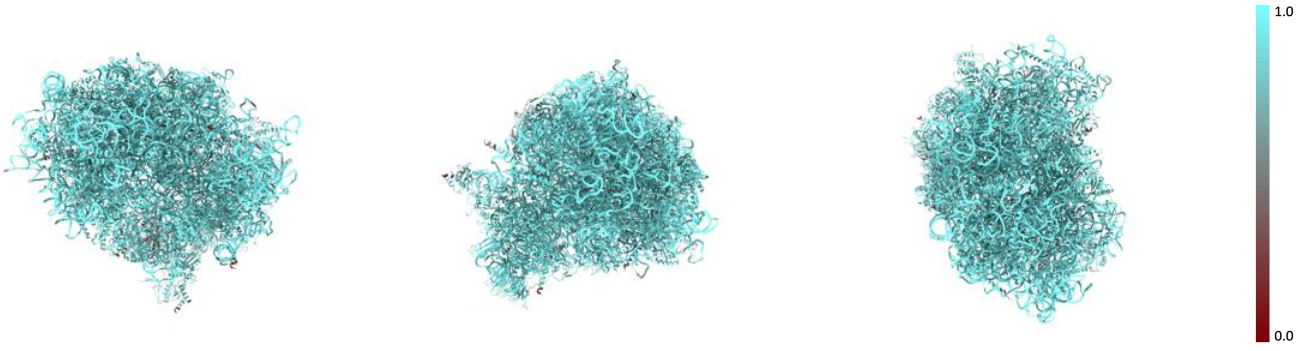
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

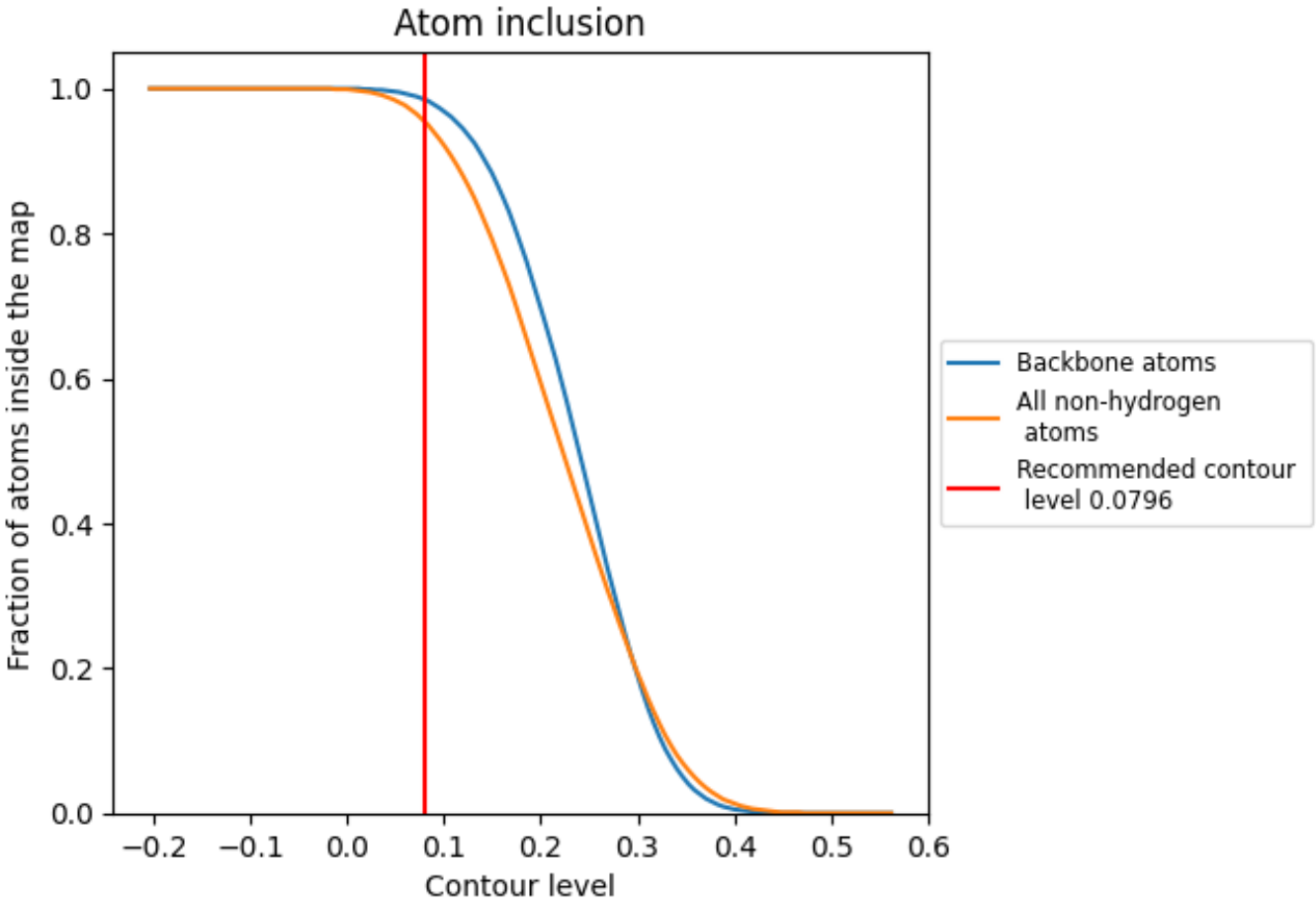
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0796).

9.4 Atom inclusion (i)



At the recommended contour level, 98% of all backbone atoms, 96% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.0796) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9550	0.3530
AT	0.9850	0.1920
CF	0.9050	0.1760
CI	0.6530	0.2540
L5	0.9900	0.3720
L7	0.9990	0.3990
L8	0.9880	0.3830
LA	0.9420	0.4190
LB	0.9250	0.4040
LC	0.9290	0.3990
LD	0.9380	0.3490
LE	0.9230	0.3570
LF	0.9290	0.3870
LG	0.8720	0.3450
LH	0.9300	0.3920
LI	0.9240	0.3890
LJ	0.9240	0.3530
LL	0.9200	0.3770
LM	0.9320	0.3730
LN	0.9490	0.4210
LO	0.9290	0.3880
LP	0.9500	0.4120
LQ	0.9340	0.4150
LR	0.8990	0.3630
LS	0.9410	0.4070
LT	0.9220	0.4040
LU	0.9160	0.3300
LV	0.9320	0.4160
LW	0.9010	0.3000
LX	0.9230	0.3960
LY	0.9430	0.3820
LZ	0.9260	0.3840
La	0.9490	0.4130
Lb	0.8930	0.3360
Lc	0.9100	0.3830

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
Ld	0.9180	0.3940
Le	0.9340	0.4120
Lf	0.9450	0.4190
Lg	0.9330	0.3990
Lh	0.9030	0.3680
Li	0.9300	0.3770
Lj	0.9730	0.4180
Lk	0.8850	0.3530
Ll	0.9570	0.3900
Lm	0.9350	0.3830
Ln	0.9230	0.3650
Lo	0.9390	0.4020
Lp	0.9330	0.3910
Lr	0.9350	0.4000
Ls	0.7260	0.1510
Lt	0.6980	0.1340
Pt	0.9780	0.3130
S2	0.9920	0.3450
SA	0.8850	0.3380
SB	0.8970	0.3630
SC	0.9350	0.3660
SD	0.9190	0.3100
SE	0.9340	0.3230
SF	0.8780	0.3070
SG	0.9140	0.2620
SH	0.8720	0.3090
SI	0.9000	0.3290
SJ	0.8960	0.3120
SK	0.9110	0.2440
SL	0.8970	0.3730
SM	0.7440	0.1610
SN	0.9200	0.3770
SO	0.9080	0.3680
SP	0.9000	0.2750
SQ	0.8940	0.2930
SR	0.8760	0.3040
SS	0.8790	0.2940
ST	0.9300	0.2800
SU	0.9260	0.2860
SV	0.9260	0.3690
SW	0.9370	0.3820
SX	0.9210	0.3630

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
SY	0.8920	0.2590
SZ	0.8080	0.2630
Sa	0.9340	0.3730
Sb	0.9230	0.3780
Sc	0.8760	0.3280
Sd	0.9590	0.3120
Se	0.8380	0.2510
Sf	0.8710	0.1640
Sg	0.8780	0.2460