



Full wwPDB EM Validation Report ⓘ

Mar 14, 2026 – 07:22 AM UTC

PDB ID : 7ZUW / pdb_00007zuw
EMDB ID : EMD-14978
Title : Structure of RQT (C1) bound to the stalled ribosome in a disome unit from *S. cerevisiae*
Authors : Best, K.M.; Ikeuchi, K.; Kater, L.; Best, D.M.; Musial, J.; Matsuo, Y.; Berninghausen, O.; Becker, T.; Inada, T.; Beckmann, R.
Deposited on : 2022-05-13
Resolution : 4.30 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.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
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) : 2.49

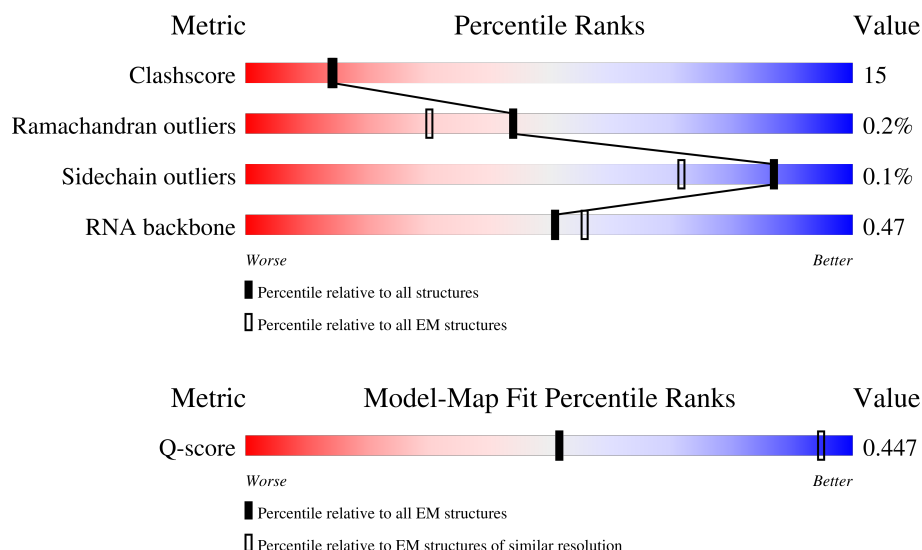
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.30 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	4585 (3.80 - 4.80)

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 $\leq 5\%$. 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	2	1800	
2	3	158	
3	4	121	

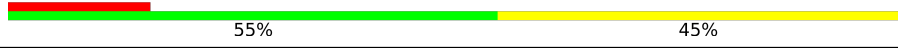
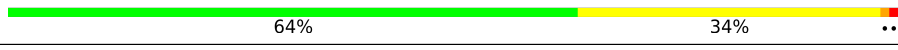
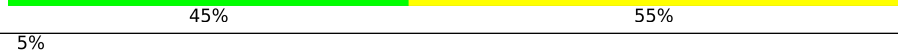
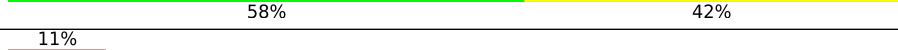
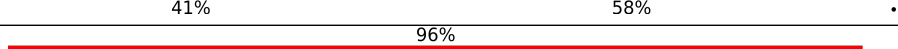
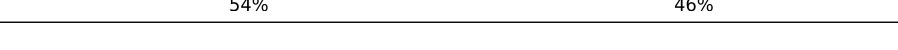
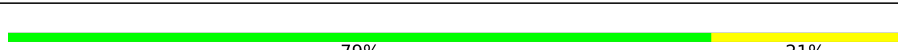
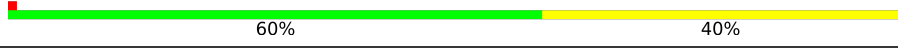
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Mol	Chain	Length	Quality of chain
4	5	3396	
5	6	76	
6	AA	206	
7	AB	255	
8	AC	216	
9	AD	222	
10	AE	258	
11	AF	206	
12	AG	228	
13	AH	184	
14	AI	200	
15	AJ	184	
16	AK	92	
17	AL	144	
18	AM	121	
19	AN	150	
20	AO	127	
21	AP	117	
22	AQ	141	
23	AR	136	
24	AS	145	
25	AT	143	
26	AU	100	
27	AV	87	
28	AW	129	

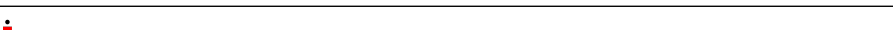
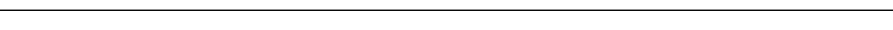
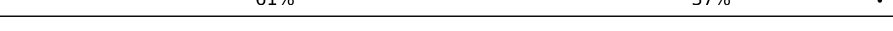
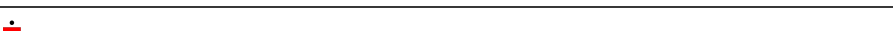
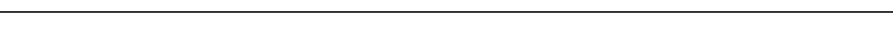
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Mol	Chain	Length	Quality of chain
29	AX	144	
30	AY	134	
31	AZ	82	
32	Aa	97	
33	Ab	81	
34	Ac	63	
35	Ad	53	
36	Ae	60	
37	Af	73	
38	Ag	312	
39	BA	251	
40	BB	386	
41	BC	361	
42	BD	294	
43	BE	176	
44	BF	222	
45	BG	233	
46	BH	191	
47	BI	218	
48	BJ	169	
49	BK	193	
50	BL	136	
51	BM	203	
52	BN	197	
53	BO	183	

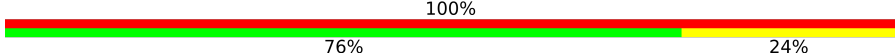
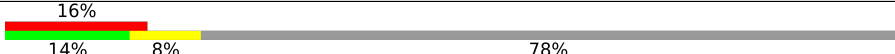
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Mol	Chain	Length	Quality of chain
54	BP	185	
55	BQ	188	
56	BR	171	
57	BS	159	
58	BT	100	
59	BU	136	
60	BV	126	
61	BW	121	
62	BX	125	
63	BY	135	
64	BZ	148	
65	Ba	58	
66	Bb	96	
67	Bc	109	
68	Bd	127	
69	Be	106	
70	Bf	112	
71	Bg	119	
72	Bh	99	
73	Bi	85	
74	Bj	77	
75	Bk	50	
76	Bl	52	
77	Bm	25	
78	Bn	103	

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Mol	Chain	Length	Quality of chain
79	Bo	91	 62% 38%
80	CA	1967	 50% 48% 41% 11%
81	CB	297	 100% 76% 24%
82	CC	530	 16% 14% 8% 78%

2 Entry composition

There are 84 unique types of molecules in this entry. The entry contains 218071 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 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	2	1771	Total	C	N	O	P	0	0
			37739	16872	6683	12413	1771		

- Molecule 2 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	3	158	Total	C	N	O	P	0	0
			3353	1500	586	1109	158		

- Molecule 3 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	4	121	Total	C	N	O	P	0	0
			2579	1152	461	845	121		

- Molecule 4 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	5	3163	Total	C	N	O	P	0	0
			67650	30218	12191	22078	3163		

- Molecule 5 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	6	76	Total	C	N	O	P	0	0
			1619	722	288	533	76		

- Molecule 6 is a protein called 40S ribosomal protein S0-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AA	206	Total	C	N	O	S	0	0
			1603	1030	284	287	2		

- Molecule 7 is a protein called 40S ribosomal protein S1-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AB	226	Total	C	N	O	S	0	0
			1798	1139	330	325	4		

- Molecule 8 is a protein called RPS2 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AC	216	Total	C	N	O	S	0	0
			1626	1042	287	295	2		

- Molecule 9 is a protein called RPS3 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AD	222	Total	C	N	O	S	0	0
			1729	1098	312	313	6		

- Molecule 10 is a protein called 40S ribosomal protein S4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AE	258	Total	C	N	O	S	0	0
			2056	1308	387	358	3		

- Molecule 11 is a protein called Rps5p.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AF	206	Total	C	N	O	S	0	0
			1605	1005	299	298	3		

- Molecule 12 is a protein called 40S ribosomal protein S6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AG	228	Total	C	N	O	S	0	0
			1815	1138	351	323	3		

- Molecule 13 is a protein called 40S ribosomal protein S7-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	AH	184	Total	C	N	O	0	0
			1473	946	263	264		

- Molecule 14 is a protein called 40S ribosomal protein S8-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AI	187	Total	C	N	O	S	0	0
			1476	916	295	263	2		

- Molecule 15 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AJ	184	Total	C	N	O	S	0	0
			1479	935	285	258	1		

- Molecule 16 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AK	92	Total	C	N	O	S	0	0
			752	487	122	141	2		

- Molecule 17 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AL	144	Total	C	N	O	S	0	0
			1159	742	219	195	3		

- Molecule 18 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AM	121	Total	C	N	O	S	0	0
			875	551	153	169	2		

- Molecule 19 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AN	150	Total	C	N	O	S	0	0
			1192	759	224	207	2		

- Molecule 20 is a protein called 40S ribosomal protein S14-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AO	127	Total	C	N	O	S	0	0
			926	569	185	169	3		

- Molecule 21 is a protein called RPS15 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AP	117	Total	C	N	O	S	0	0
			916	583	171	155	7		

- Molecule 22 is a protein called 40S ribosomal protein S16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AQ	141	Total	C	N	O	S	0	0
			1105	708	203	194			

- Molecule 23 is a protein called 40S ribosomal protein S17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AR	121	Total	C	N	O	S	0	0
			948	596	179	171	2		

- Molecule 24 is a protein called 40S ribosomal protein S18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AS	145	Total	C	N	O	S	0	0
			1192	743	237	210	2		

- Molecule 25 is a protein called 40S ribosomal protein S19-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AT	143	Total	C	N	O	S	0	0
			1112	694	208	208	2		

- Molecule 26 is a protein called RPS20 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AU	100	Total	C	N	O	S	0	0
			797	506	144	146	1		

- Molecule 27 is a protein called 40S ribosomal protein S21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AV	87	Total	C	N	O	S	0	0
			673	415	125	131	2		

- Molecule 28 is a protein called RPS22A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AW	129	Total	C	N	O	S	0	0
			1021	650	188	180	3		

- Molecule 29 is a protein called 40S ribosomal protein S23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	AX	144	Total	C	N	O	S	0	0
			1121	708	220	191	2		

- Molecule 30 is a protein called 40S ribosomal protein S24-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	AY	134	Total	C	N	O		0	0
			1073	676	208	189			

- Molecule 31 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	AZ	82	Total	C	N	O		0	0
			651	416	123	112			

- Molecule 32 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Aa	97	Total	C	N	O	S	0	0
			769	475	160	129	5		

- Molecule 33 is a protein called 40S ribosomal protein S27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Ab	81	Total	C	N	O	S	0	0
			610	382	110	113	5		

- Molecule 34 is a protein called RPS28A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Ac	63	Total	C	N	O	S	0	0
			491	303	96	91	1		

- Molecule 35 is a protein called RPS29A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Ad	53	Total	C	N	O	S	0	0
			442	274	92	72	4		

- Molecule 36 is a protein called 40S ribosomal protein S30-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Ae	60	Total	C	N	O	S	0	0
			472	298	97	76	1		

- Molecule 37 is a protein called RPS31 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Af	73	Total	C	N	O	S	0	0
			556	352	105	95	4		

- Molecule 38 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Ag	312	Total	C	N	O	S	0	0
			2383	1514	409	452	8		

- Molecule 39 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	BA	251	Total	C	N	O	S	0	0
			1899	1182	385	331	1		

- Molecule 40 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	BB	386	Total	C	N	O	S	0	0
			3075	1950	584	533	8		

- Molecule 41 is a protein called RPL4A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	BC	361	Total	C	N	O	S	0	0
			2748	1729	522	494	3		

- Molecule 42 is a protein called RPL5 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BD	294	Total	C	N	O	S	0	0
			2351	1484	410	455	2		

- Molecule 43 is a protein called 60S ribosomal protein L6-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	BE	167	Total	C	N	O	S	0	0
			1305	841	234	229	1		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BE	146	ILE	LEU	conflict	UNP P05739
BE	173	MET	LEU	conflict	UNP P05739

- Molecule 44 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BF	222	Total	C	N	O	S	0	0
			1784	1151	324	308	1		

- Molecule 45 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	BG	233	Total	C	N	O	S	0	0
			1804	1151	323	327	3		

- Molecule 46 is a protein called RPL9A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	BH	191	Total	C	N	O	S	0	0
			1508	957	274	273	4		

- Molecule 47 is a protein called RPL10 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BI	218	Total	C	N	O	S	0	0
			1764	1117	334	306	7		

- Molecule 48 is a protein called RPL11B isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	BJ	169	Total	C	N	O	S	0	0
			1350	846	253	247	4		

- Molecule 49 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	BK	193	Total	C	N	O	S	0	0
			1543	962	315	266			

- Molecule 50 is a protein called 60S ribosomal protein L14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	BL	136	Total	C	N	O	S	0	0
			1053	675	199	177	2		

- Molecule 51 is a protein called Ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	BM	203	Total	C	N	O	S	0	0
			1720	1077	361	281	1		

- Molecule 52 is a protein called 60S ribosomal protein L16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	BN	197	Total	C	N	O	S	197	0
			1555	1003	289	262	1		

- Molecule 53 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	BO	183	Total	C	N	O	S	0	0
			1416	879	284	253			

- Molecule 54 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BP	185	Total	C	N	O	S	0	0
			1441	908	290	241	2		

- Molecule 55 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
55	BQ	188	Total	C	N	O	0	0
			1515	932	323	260		

- Molecule 56 is a protein called 60S ribosomal protein L20-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	BR	171	Total	C	N	O	S	0	0
			1437	925	266	243	3		

- Molecule 57 is a protein called 60S ribosomal protein L21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	BS	159	Total	C	N	O	S	0	0
			1276	805	246	221	4		

- Molecule 58 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
58	BT	100	Total	C	N	O	0	0
			796	516	131	149		

- Molecule 59 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	BU	136	Total	C	N	O	S	0	0
			1003	628	189	179	7		

- Molecule 60 is a protein called RPL24A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	BV	126	Total	C	N	O	S	0	0
			836	525	165	145	1		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BV	104	GLN	ASN	conflict	UNP A0A6A5PY83
BV	109	GLN	LEU	conflict	UNP A0A6A5PY83
BV	112	ASP	ASN	conflict	UNP A0A6A5PY83
BV	119	ALA	GLU	conflict	UNP A0A6A5PY83

- Molecule 61 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	BW	121	Total	C	N	O	S	0	0
			964	620	169	173	2		

- Molecule 62 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	BX	125	Total	C	N	O		0	0
			984	620	191	173			

- Molecule 63 is a protein called 60S ribosomal protein L27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	BY	135	Total	C	N	O		0	0
			1092	710	202	180			

- Molecule 64 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	BZ	148	Total	C	N	O	S	0	0
			1173	749	231	190	3		

- Molecule 65 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Ba	58	Total	C	N	O		0	0
			462	289	100	73			

- Molecule 66 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Bb	96	Total	C	N	O	S	0	0
			737	476	123	137	1		

- Molecule 67 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Bc	109	Total	C	N	O	S	0	0
			876	556	167	152	1		

- Molecule 68 is a protein called RPL32 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Bd	127	Total	C	N	O	S	0	0
			1017	644	205	167	1		

- Molecule 69 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Be	106	Total	C	N	O	S	0	0
			850	540	165	144	1		

- Molecule 70 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Bf	112	Total	C	N	O	S	0	0
			880	545	179	152	4		

- Molecule 71 is a protein called 60S ribosomal protein L35-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Bg	119	Total	C	N	O	S	0	0
			969	615	186	167	1		

- Molecule 72 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Bh	99	Total	C	N	O	S	0	0
			766	478	154	132	2		

- Molecule 73 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Bi	85	Total	C	N	O	S	0	0
			670	408	146	111	5		

- Molecule 74 is a protein called RPL38 isoform 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
74	Bj	77	Total	C	N	O	0	0
			612	391	115	106		

- Molecule 75 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Bk	50	Total	C	N	O	S	0	0
			436	272	97	65	2		

- Molecule 76 is a protein called 60S ribosomal protein L40-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Bl	52	Total	C	N	O	S	0	0
			417	259	86	67	5		

- Molecule 77 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Bm	25	Total	C	N	O	S	0	0
			229	139	62	27	1		

- Molecule 78 is a protein called 60S ribosomal protein L42-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Bn	103	Total	C	N	O	S	0	0
			824	517	167	135	5		

- Molecule 79 is a protein called 60S ribosomal protein L43-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Bo	91	Total	C	N	O	S	0	0
			694	429	138	121	6		

- Molecule 80 is a protein called RQC trigger complex helicase SLH1.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	CA	1742	Total	C	N	O	S	0	0
			14008	8959	2378	2596	75		

- Molecule 81 is a protein called CUE3 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	CB	297	Total	C	N	O	S	0	0
			2415	1568	414	427	6		

- Molecule 82 is a protein called RQC trigger complex subunit RQT4.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	CC	114	Total	C	N	O	S	0	0
			886	539	167	172	8		

- Molecule 83 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
83	2	84	Total	Mg	0
			84	84	
83	AC	1	Total	Mg	0
			1	1	
83	AQ	1	Total	Mg	0
			1	1	

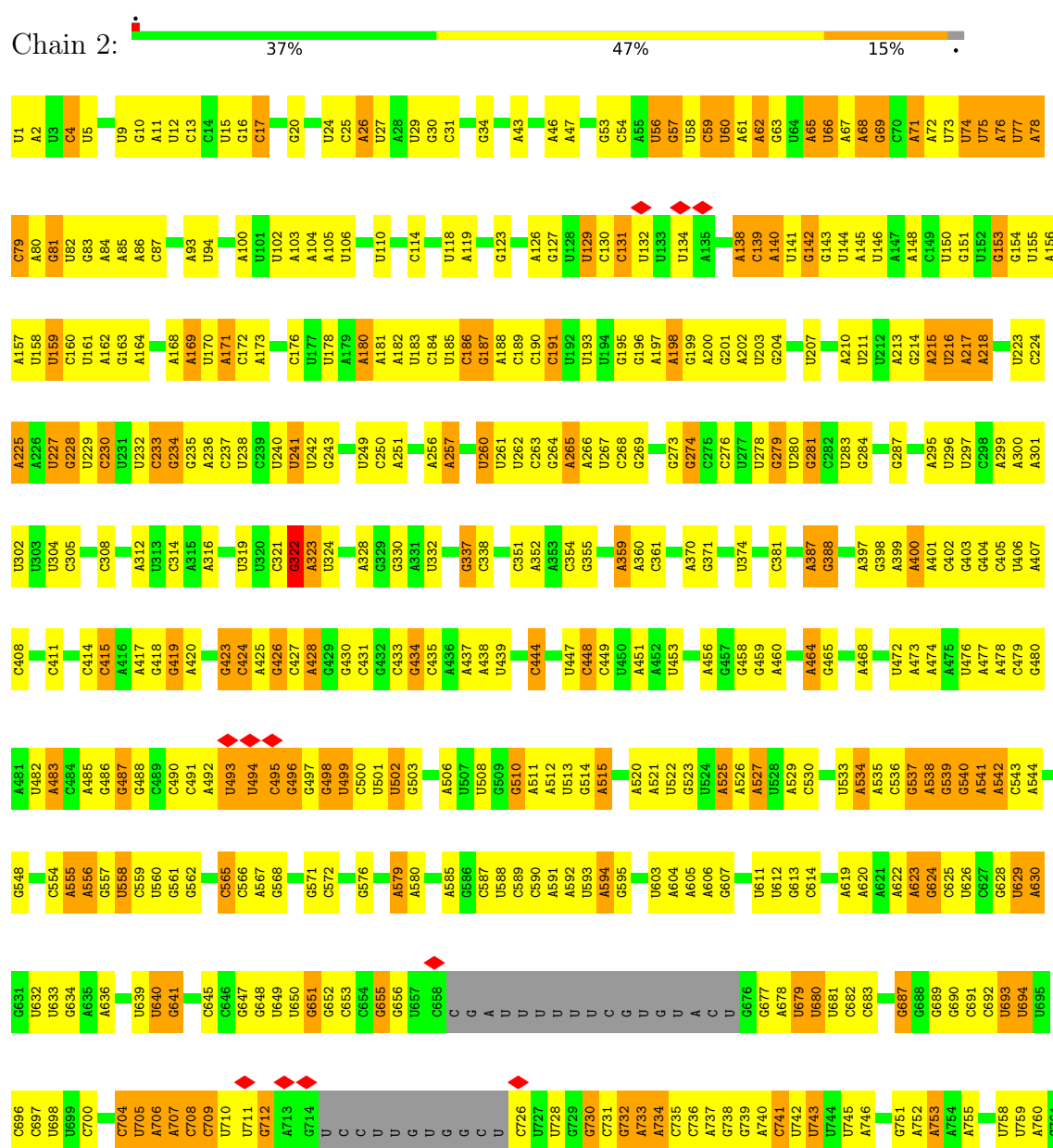
- Molecule 84 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
84	Ad	1	Total	Zn	0
			1	1	
84	Af	1	Total	Zn	0
			1	1	
84	Bf	1	Total	Zn	0
			1	1	
84	Bi	1	Total	Zn	0
			1	1	
84	Bl	1	Total	Zn	0
			1	1	
84	Bn	1	Total	Zn	0
			1	1	
84	Bo	1	Total	Zn	0
			1	1	
84	CC	2	Total	Zn	0
			2	2	

3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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: 18S ribosomal RNA

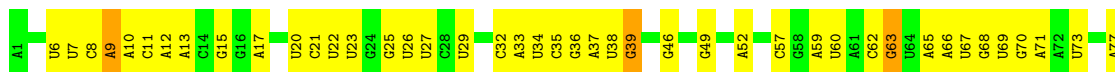


G1720	A1721	G1727	A1728	C1729	A1730	A1731	G1732	A1733	G1734	A1735	U1738	C1739	A1740	C1741	G1742	G1743	A1744	G1745	A1750	A1753	A1754	A1755	A1756	G1757	G1758	C1759	G1760	G1761	A1762	G1767	G1768	U1769	U1770	G1774	U1775	A1776	U1779	G1780	A1781	A1782	G1783	G1784	G1785	A1789	U1795	A1796	G802	A803	A804	U805	A806	U807	U808	A809	G810	A811	A812	G813	A814	G815	G816	A817	C818	G819	U820	U821	U822	G823	G824	U825	C827	U828	A829	U830	U831	U832																																																																																																																																																																																																																																																																																				
C1637	U1647	A1648	A1651	G1654	U1657	G1658	C1580	U1661	G1662	C1582	U1583	U1582	U1583	G1584	U1585	G1586	G1587	C1588	C1589	U1590	C1591	A1592	A1593	A1594	U1595	C1596	A1597	U1600	G1601	A1604	G1605	C1606	G1607	U1608	A1609	G1610	G1611	G1698	G1699	G1699	C1700	A1701	A1702	C1703	U1704	C1705	U1626	U1627	A1631	C1632	A1633	C1634	U1635	C1636	C1637	C1638	C1639	C1640	C1641	C1642	C1643	C1644	C1645	C1646	C1647	C1648	C1649	C1650	C1651	C1652	C1653	C1654	C1655	C1656	C1657	C1658	C1659	C1660	C1661	C1662	C1663	C1664	C1665	C1666	C1667	C1668	C1669	C1670	C1671	C1672	C1673	C1674	C1675	C1676	C1677	C1678	C1679	C1680	C1681	C1682	C1683	C1684	C1685	C1686	C1687	C1688	C1689	C1690	C1691	C1692	C1693	C1694	C1695	C1696	C1697	C1698	C1699	C1700	C1701	C1702	C1703	C1704	C1705	C1706	C1707	C1708	C1709	C1710	C1711	C1712	C1713	C1714	C1715	C1716	C1717	C1718	C1719	C1720																																																																																																																																																																																																																						
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• Molecule 2: 5.8S ribosomal RNA

Chain 3: 41% 52% 8%



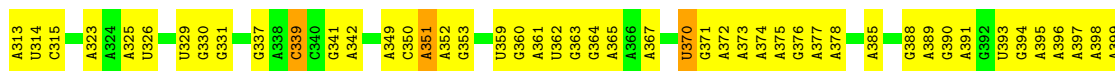
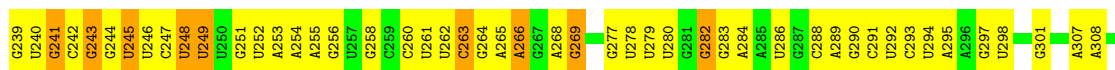
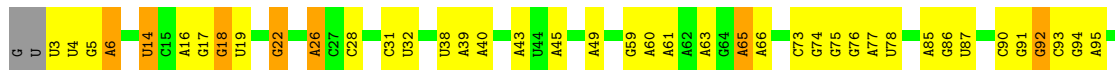
• Molecule 3: 5S ribosomal RNA

Chain 4: 48% 44% 8%



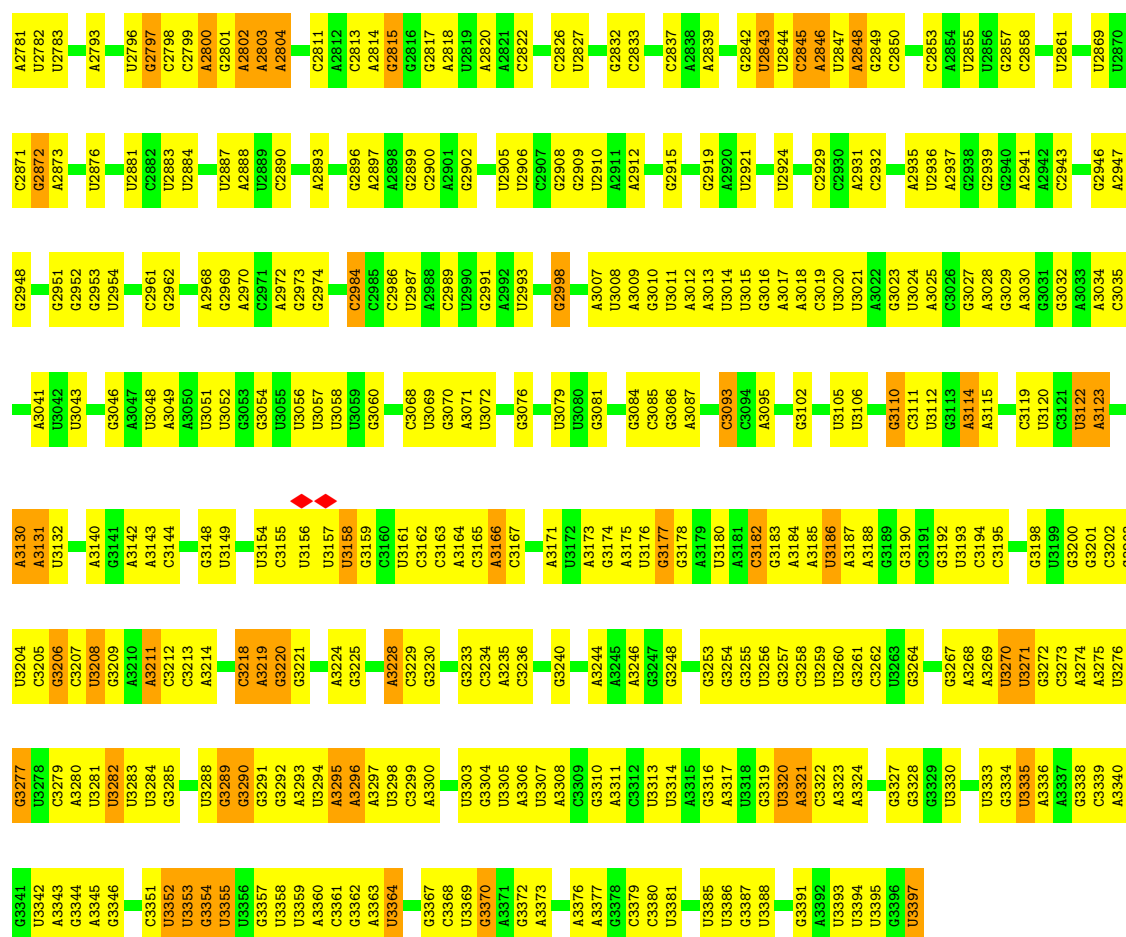
• Molecule 4: 25S ribosomal RNA

Chain 5: 44% 41% 8% 7%

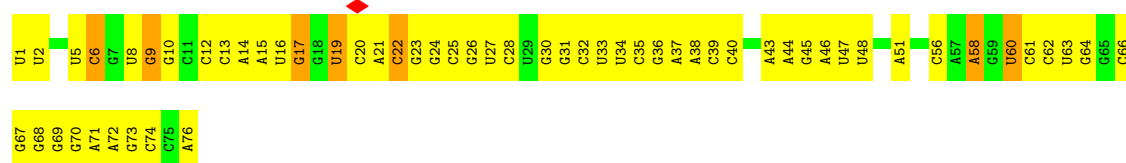




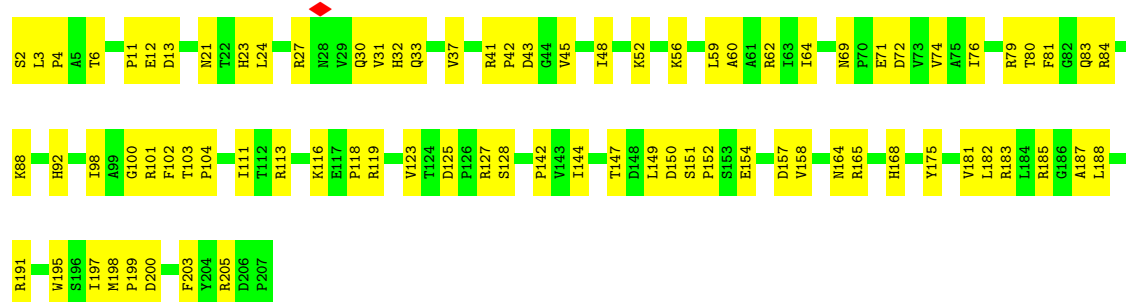




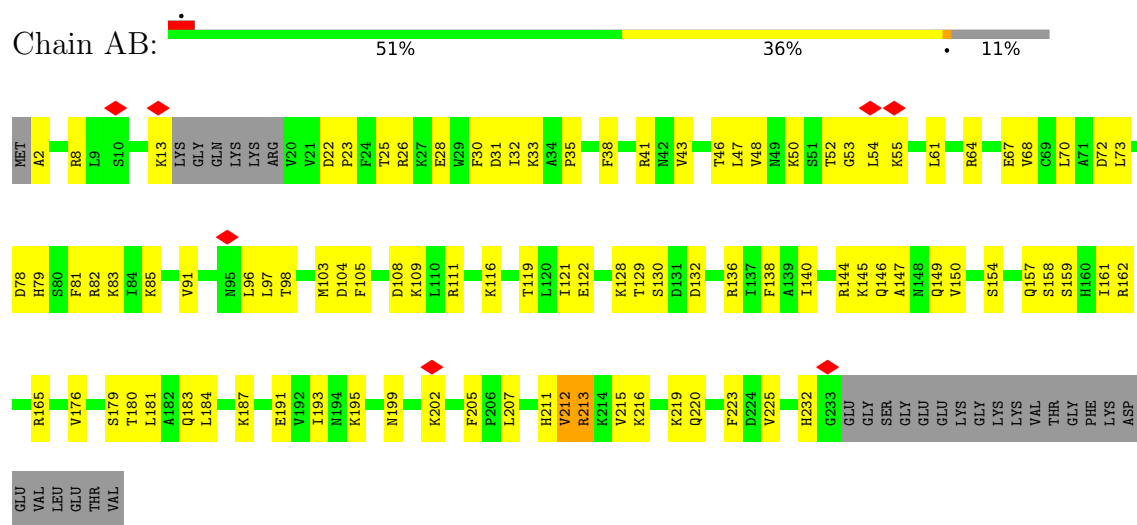
• Molecule 5: tRNA



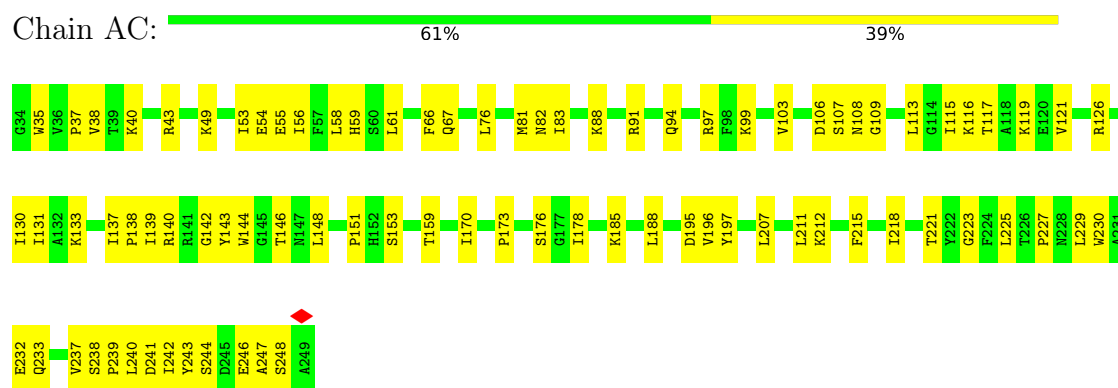
• Molecule 6: 40S ribosomal protein S0-A



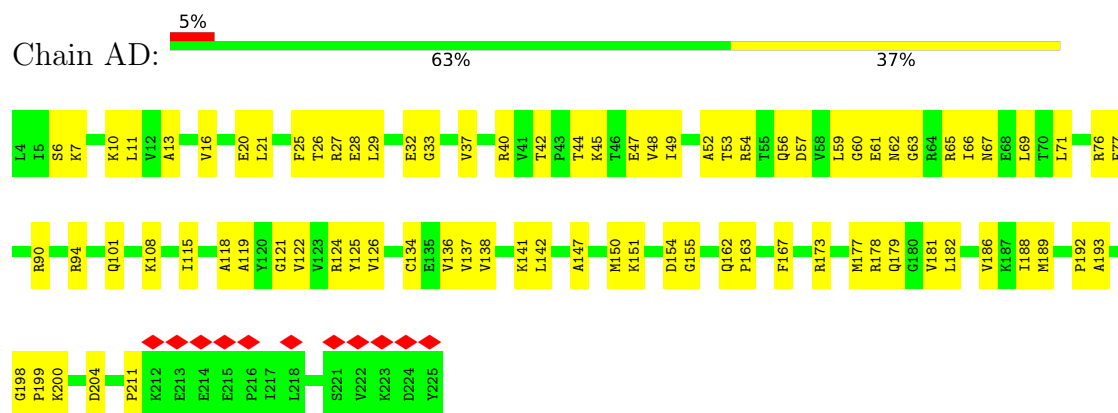
- Molecule 7: 40S ribosomal protein S1-A



- Molecule 8: RPS2 isoform 1

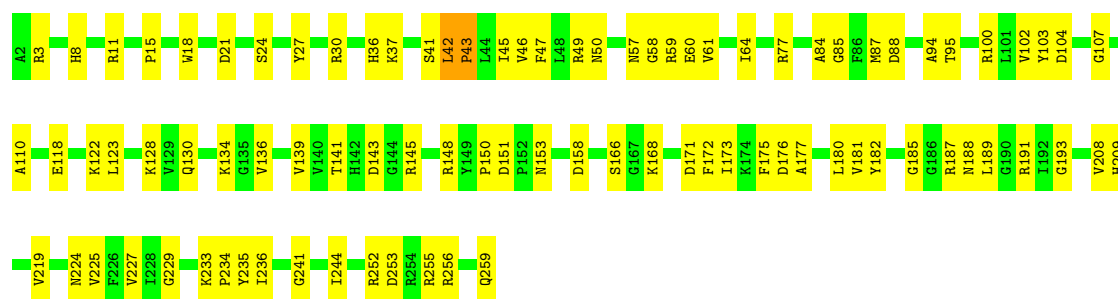


- Molecule 9: RPS3 isoform 1

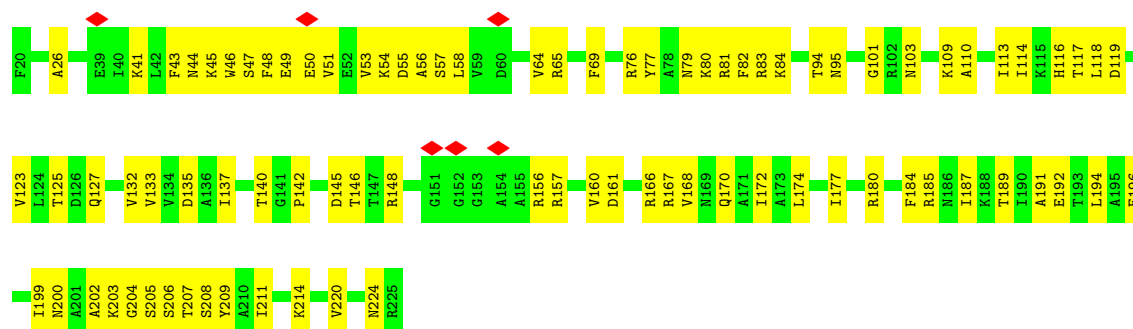


- Molecule 10: 40S ribosomal protein S4-A

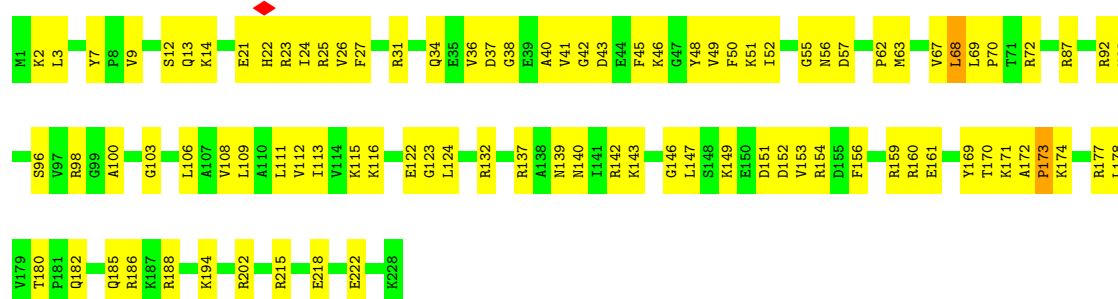




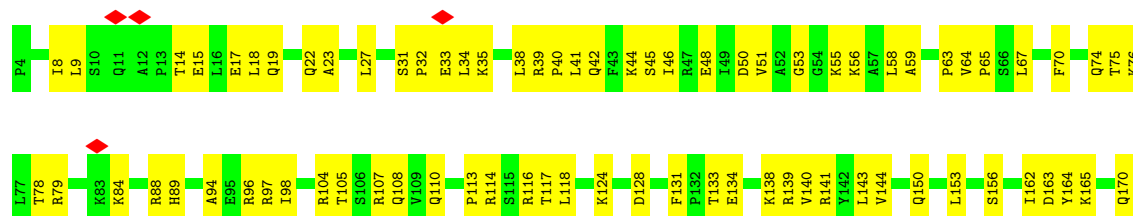
• Molecule 11: Rps5p

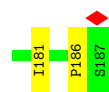


• Molecule 12: 40S ribosomal protein S6-A



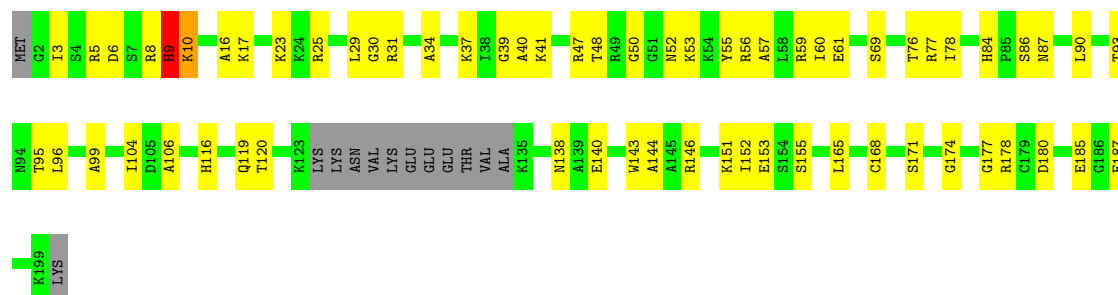
• Molecule 13: 40S ribosomal protein S7-A





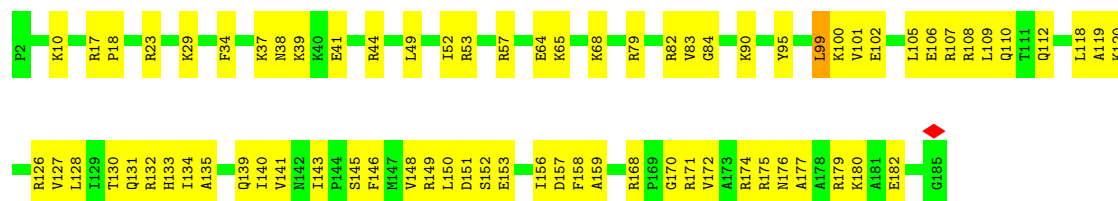
• Molecule 14: 40S ribosomal protein S8-B

Chain AI: 62% 31% 6%



• Molecule 15: 40S ribosomal protein S9-A

Chain AJ: 60% 40%



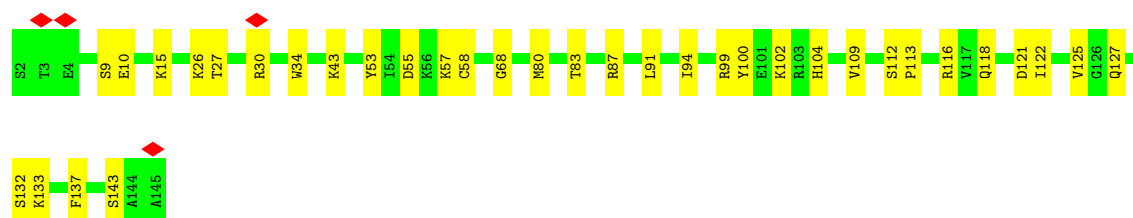
• Molecule 16: 40S ribosomal protein S10-A

Chain AK: 46% 54%

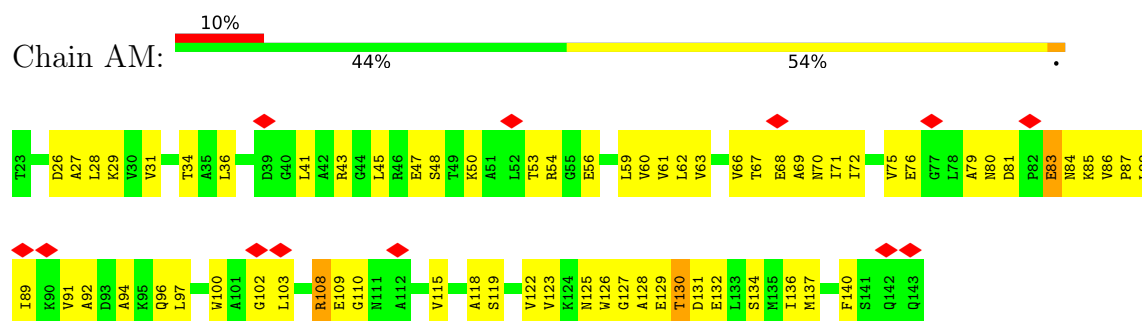


• Molecule 17: 40S ribosomal protein S11-A

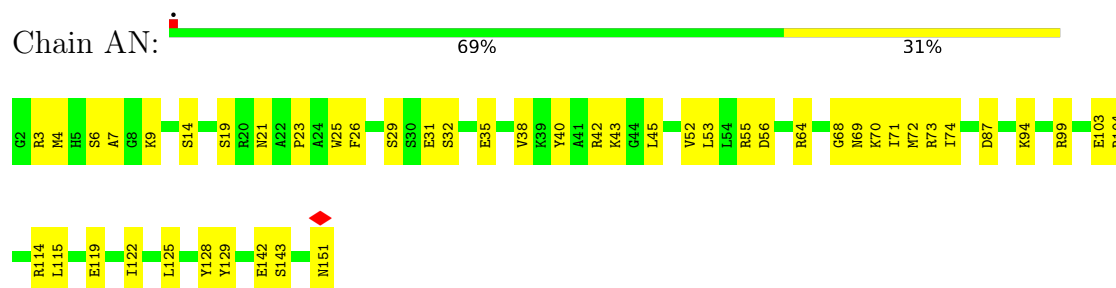
Chain AL: 76% 24%



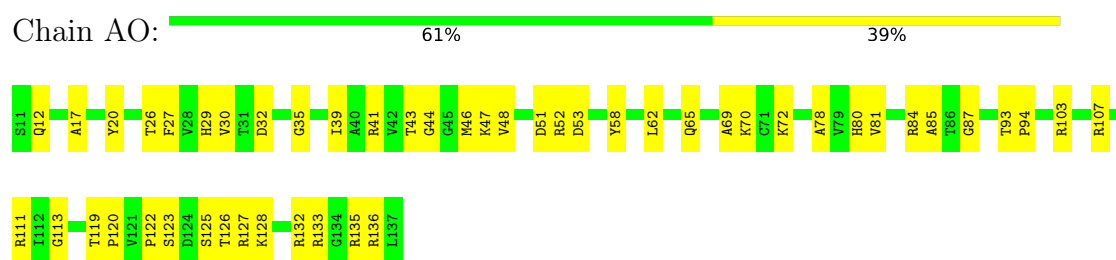
- Molecule 18: 40S ribosomal protein S12



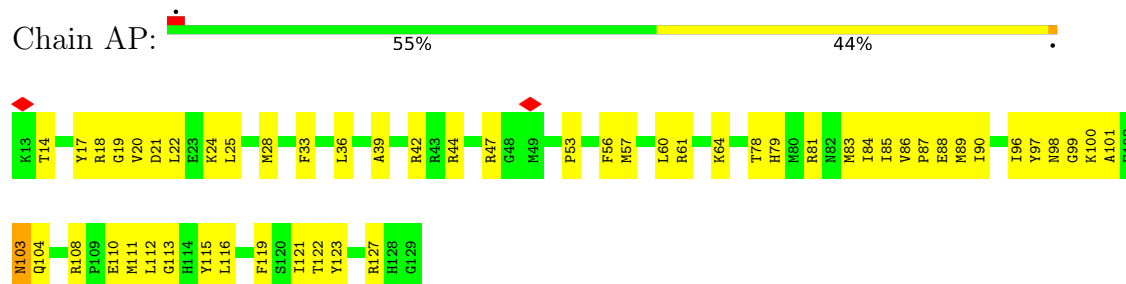
- Molecule 19: 40S ribosomal protein S13



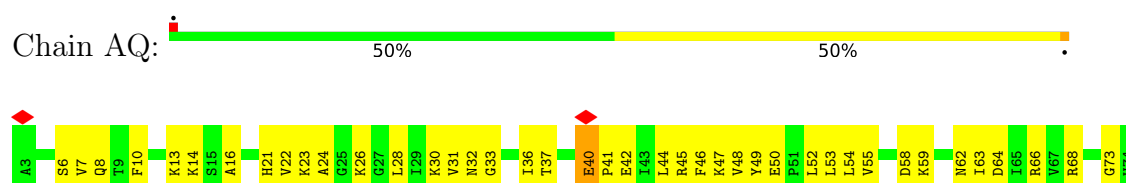
- Molecule 20: 40S ribosomal protein S14-B

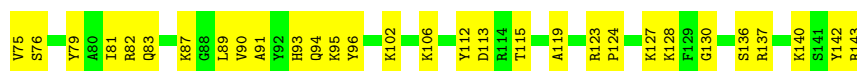


- Molecule 21: RPS15 isoform 1

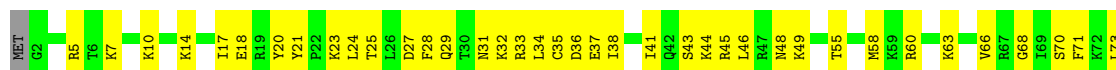


- Molecule 22: 40S ribosomal protein S16-A





- Molecule 23: 40S ribosomal protein S17-A



- Molecule 24: 40S ribosomal protein S18-A



- Molecule 25: 40S ribosomal protein S19-A



- Molecule 26: RPS20 isoform 1



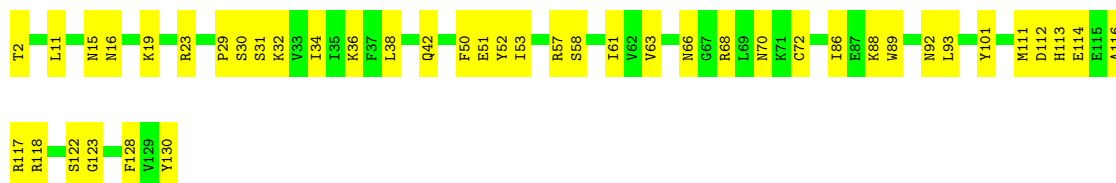
- Molecule 27: 40S ribosomal protein S21-A





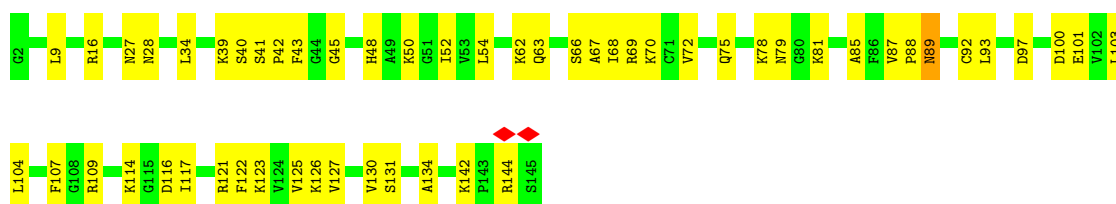
• Molecule 28: RPS22A isoform 1

Chain AW: 67% 33%



• Molecule 29: 40S ribosomal protein S23-A

Chain AX: 62% 37%



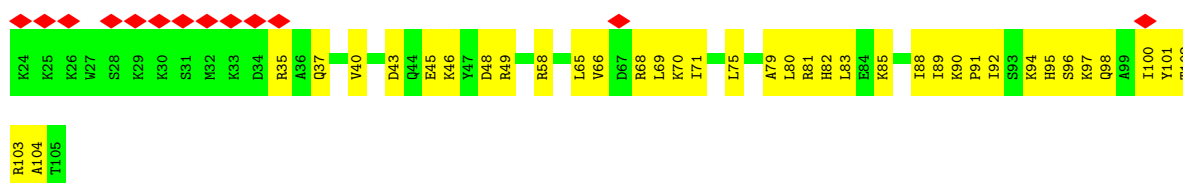
• Molecule 30: 40S ribosomal protein S24-A

Chain AY: 65% 34%



• Molecule 31: 40S ribosomal protein S25

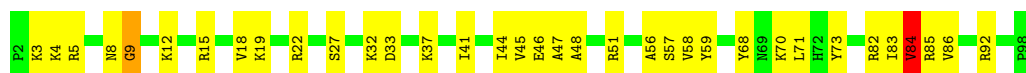
Chain AZ: 16% 55% 45%



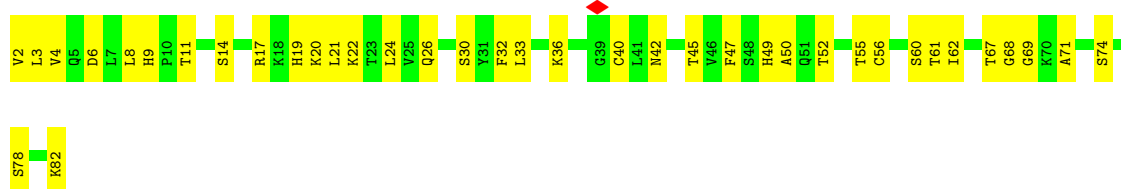
• Molecule 32: 40S ribosomal protein S26

Chain Aa: 64% 34%





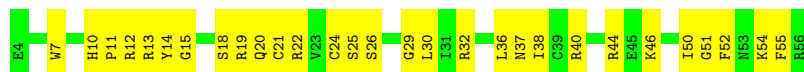
- Molecule 33: 40S ribosomal protein S27-A



- Molecule 34: RPS28A isoform 1



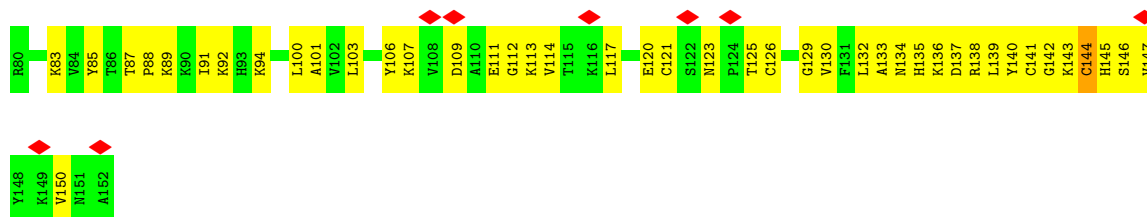
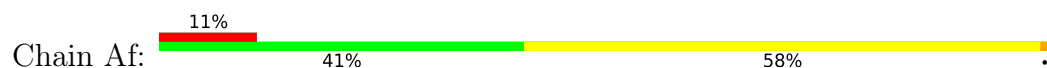
- Molecule 35: RPS29A isoform 1



- Molecule 36: 40S ribosomal protein S30-A

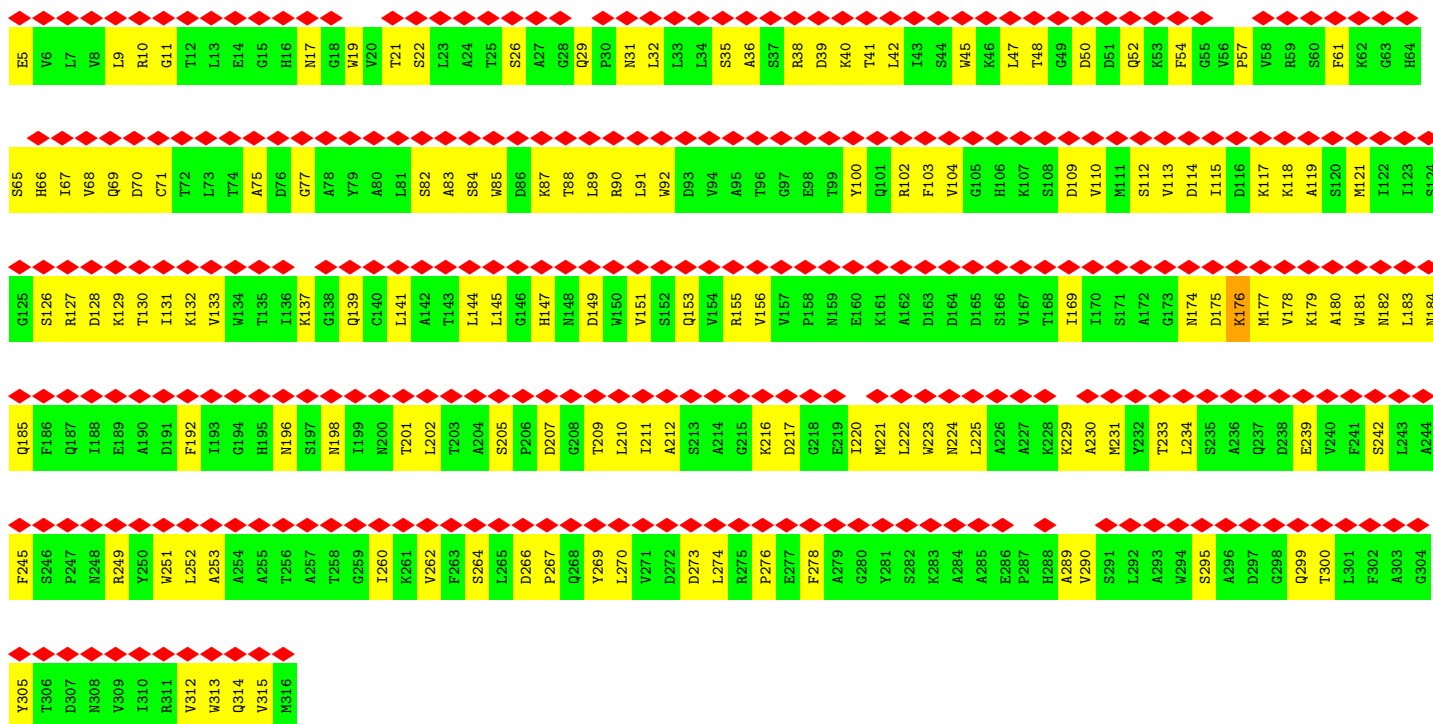


- Molecule 37: RPS31 isoform 1



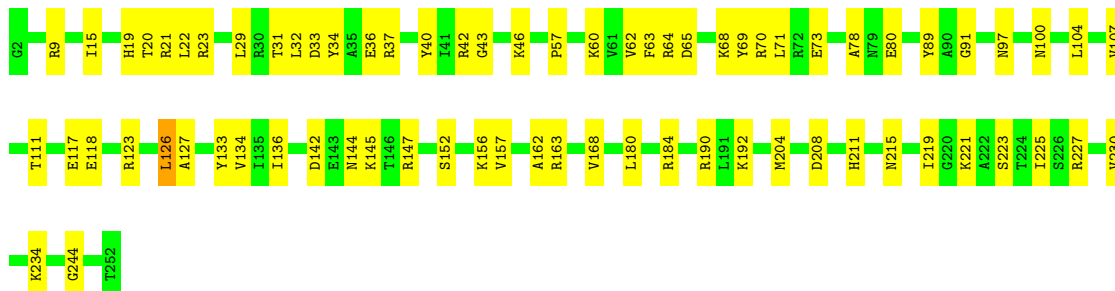
- Molecule 38: Guanine nucleotide-binding protein subunit beta-like protein





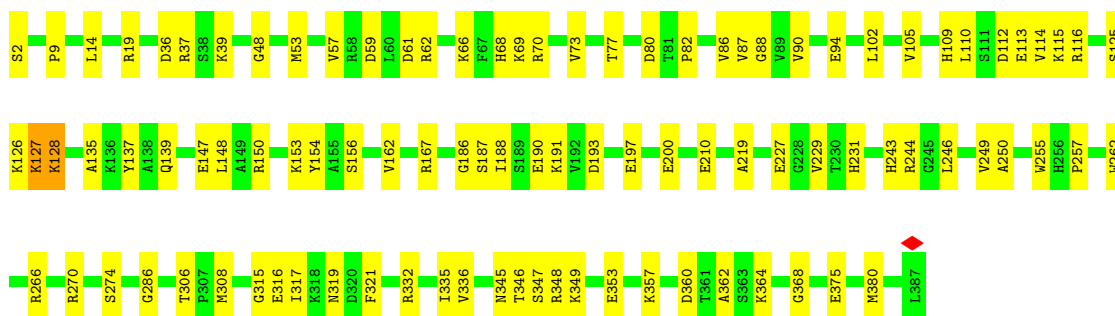
• Molecule 39: 60S ribosomal protein L2-A

Chain BA:



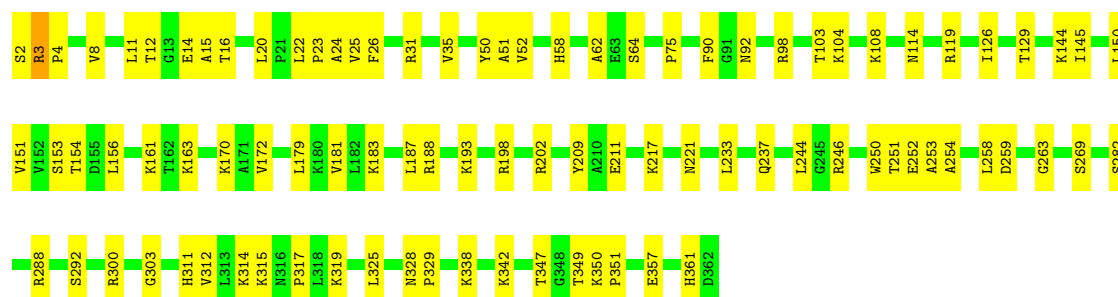
• Molecule 40: 60S ribosomal protein L3

Chain BB:



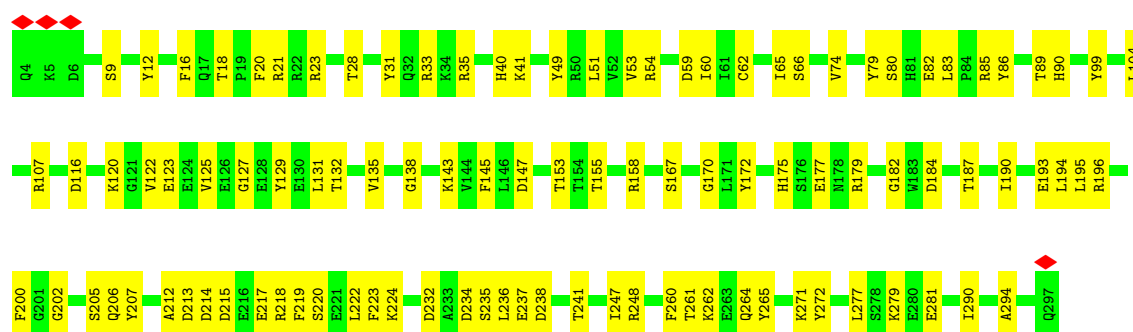
• Molecule 41: RPL4A isoform 1

Chain BC:  75% 25%



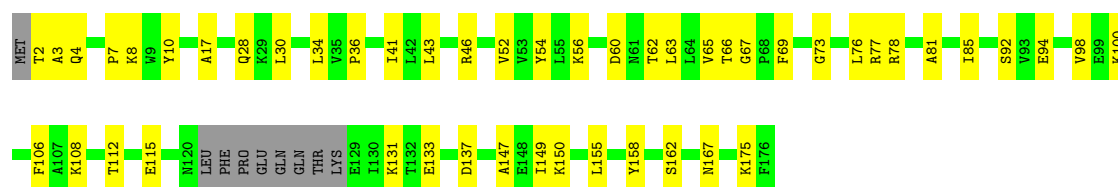
• Molecule 42: RPL5 isoform 1

Chain BD:  65% 35%



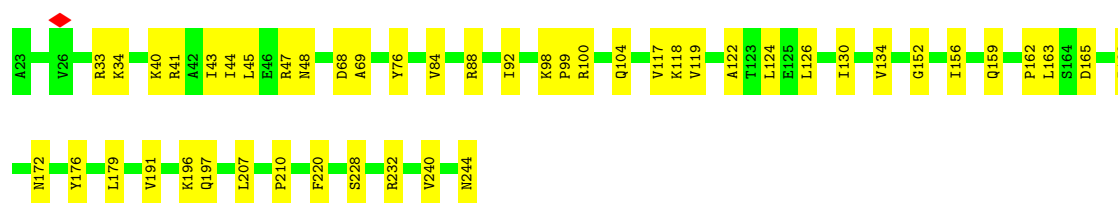
• Molecule 43: 60S ribosomal protein L6-B

Chain BE:  67% 28% 5%



• Molecule 44: 60S ribosomal protein L7-A

Chain BF:  79% 21%

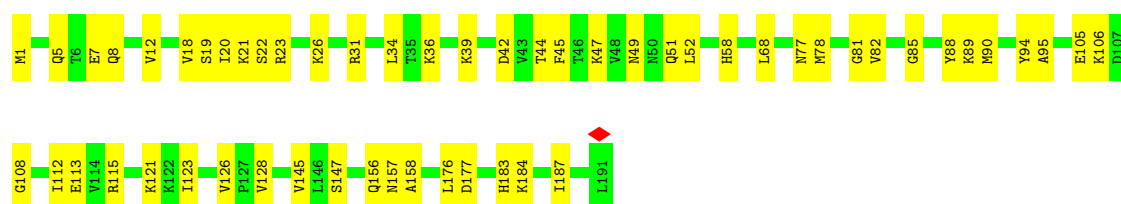


• Molecule 45: 60S ribosomal protein L8

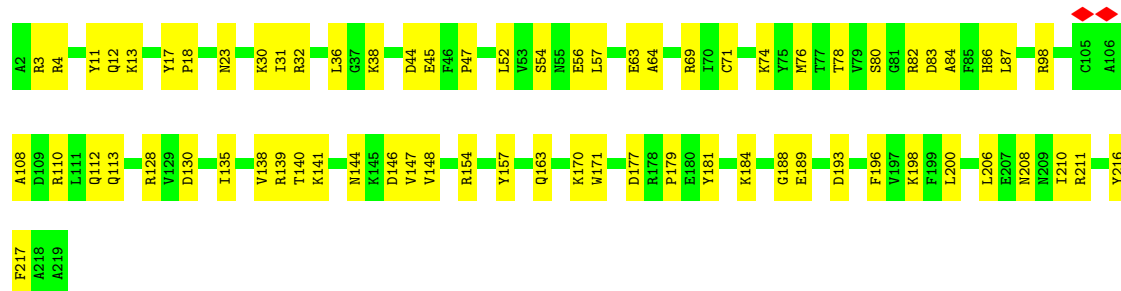
Chain BG:  68% 32%



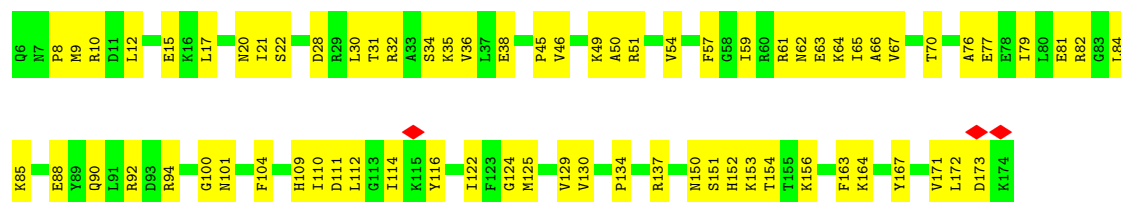
• Molecule 46: RPL9A isoform 1



• Molecule 47: RPL10 isoform 1

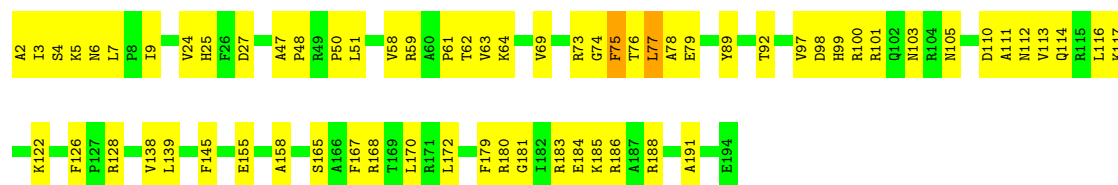


• Molecule 48: RPL11B isoform 1

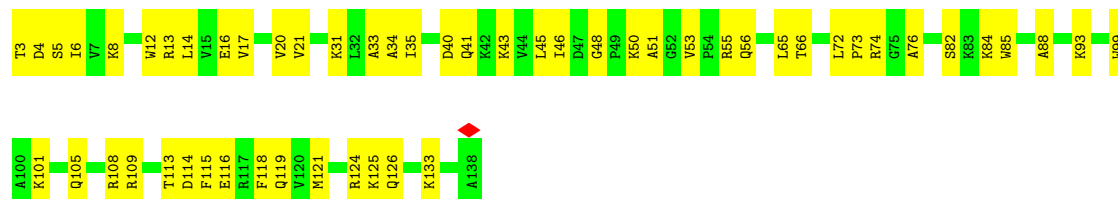


• Molecule 49: 60S ribosomal protein L13-A

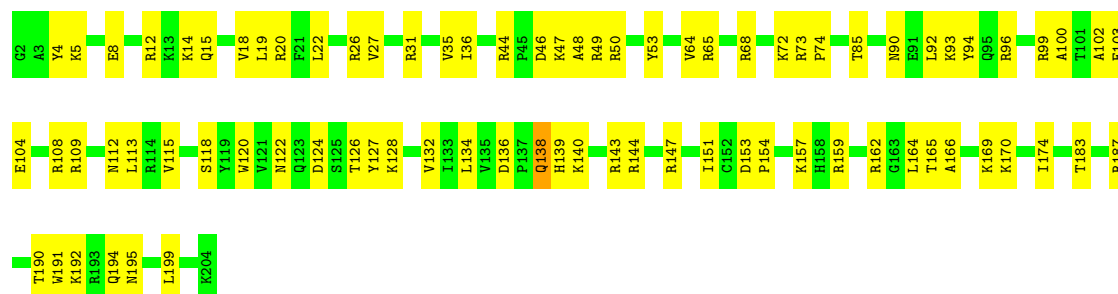




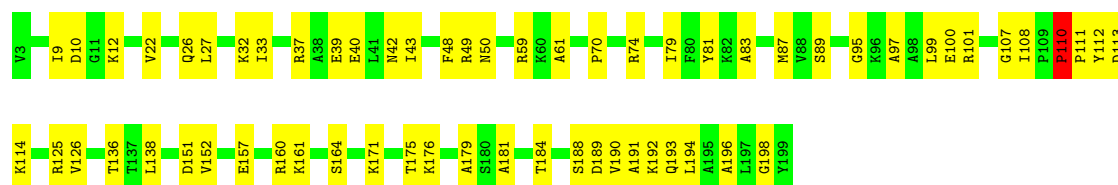
• Molecule 50: 60S ribosomal protein L14-A



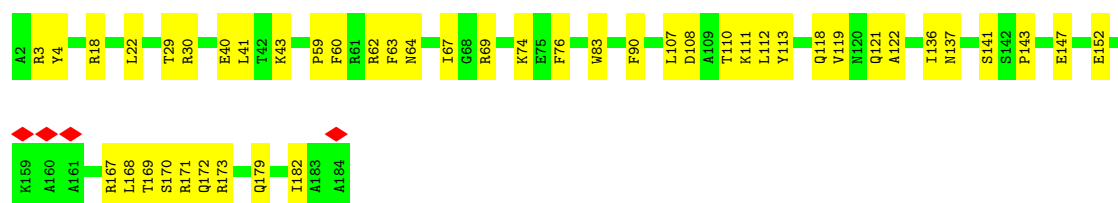
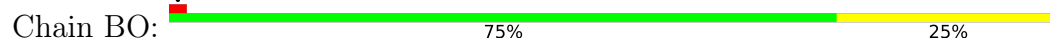
• Molecule 51: Ribosomal protein L15



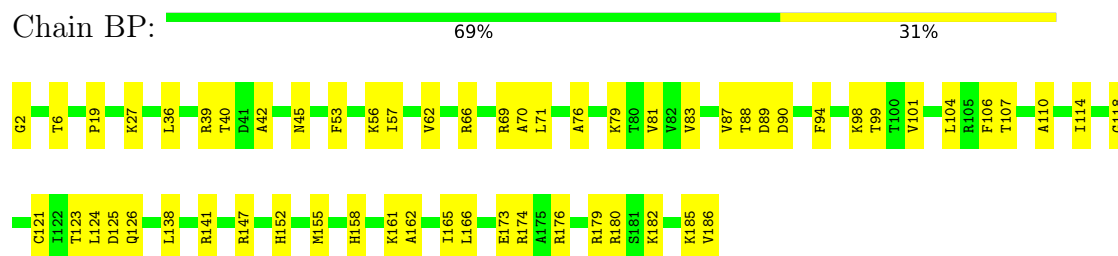
• Molecule 52: 60S ribosomal protein L16-A



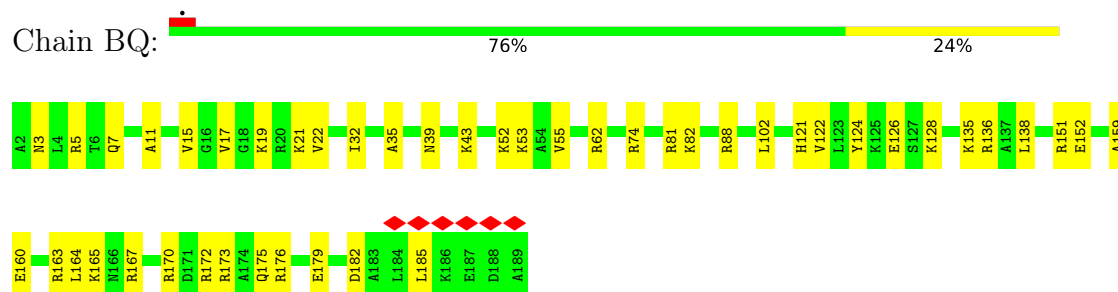
• Molecule 53: 60S ribosomal protein L17-A



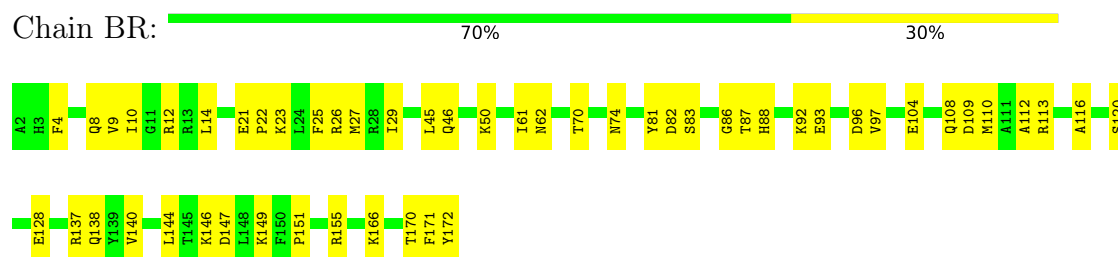
- Molecule 54: 60S ribosomal protein L18-A



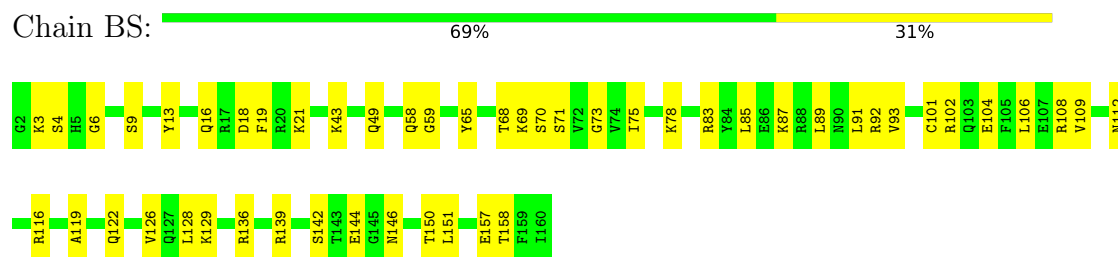
- Molecule 55: 60S ribosomal protein L19-A



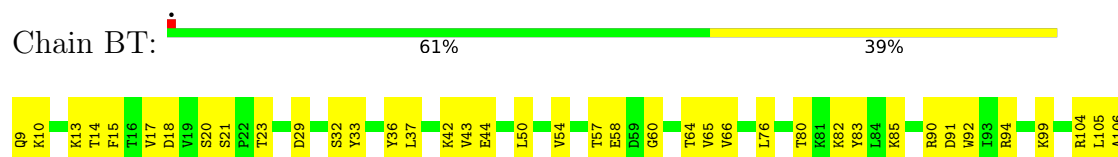
- Molecule 56: 60S ribosomal protein L20-A



- Molecule 57: 60S ribosomal protein L21-A

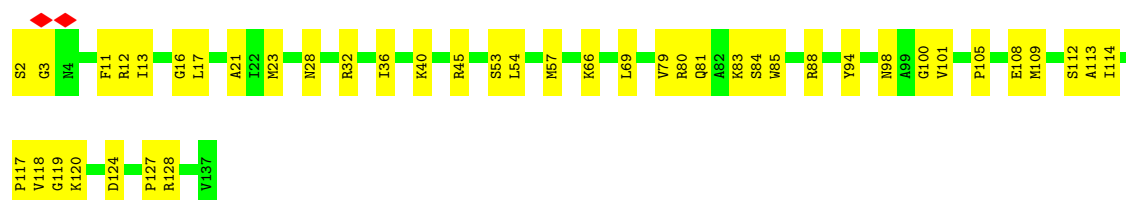


- Molecule 58: 60S ribosomal protein L22-A





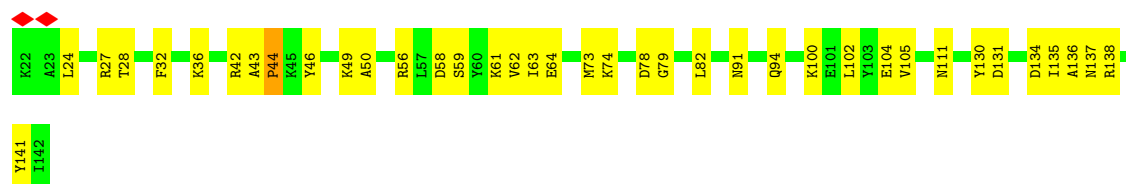
- Molecule 59: 60S ribosomal protein L23-A



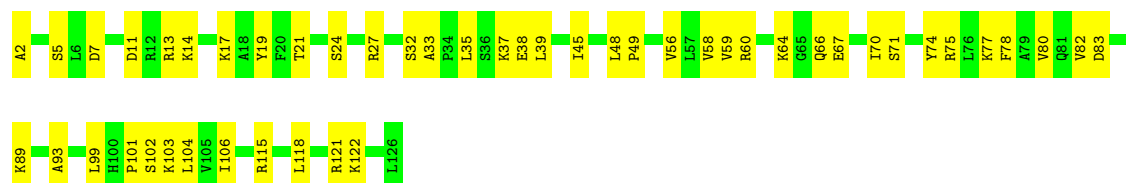
- Molecule 60: RPL24A isoform 1



- Molecule 61: 60S ribosomal protein L25



- Molecule 62: 60S ribosomal protein L26-A



- Molecule 63: 60S ribosomal protein L27-A





- Molecule 64: 60S ribosomal protein L28

Chain BZ: 61% 37%



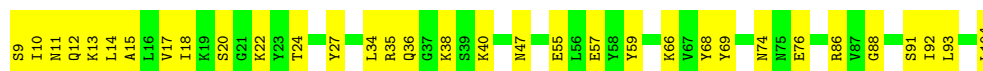
- Molecule 65: 60S ribosomal protein L29

Chain Ba: 86% 14%



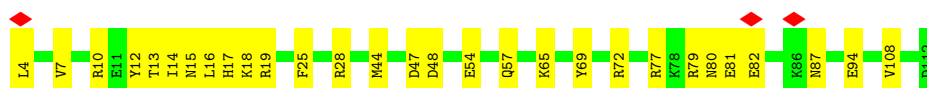
- Molecule 66: 60S ribosomal protein L30

Chain Bb: 66% 34%



- Molecule 67: 60S ribosomal protein L31-A

Chain Bc: 73% 27%



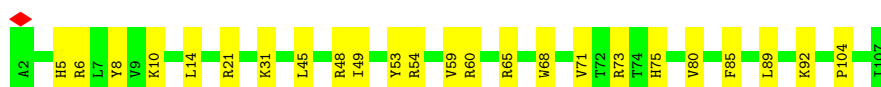
- Molecule 68: RPL32 isoform 1

Chain Bd: 77% 23%

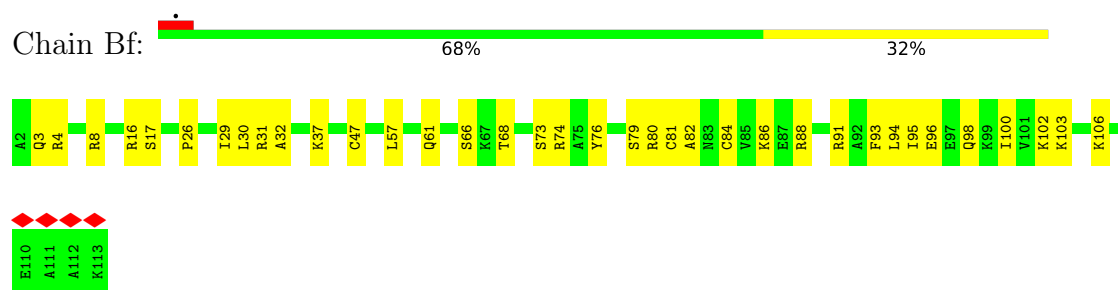


- Molecule 69: 60S ribosomal protein L33-A

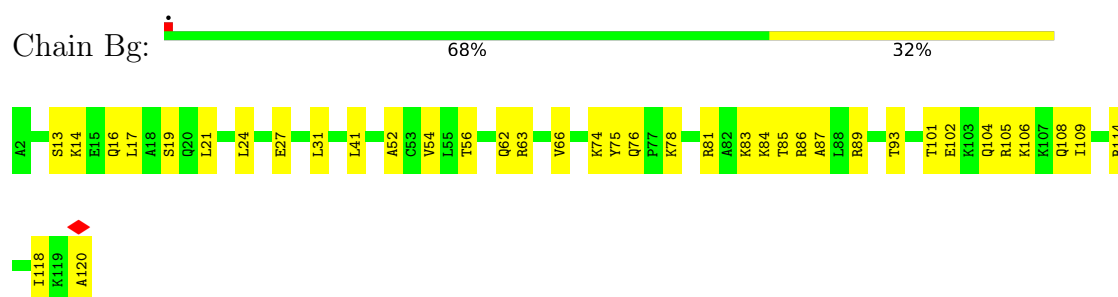
Chain Be: 77% 23%



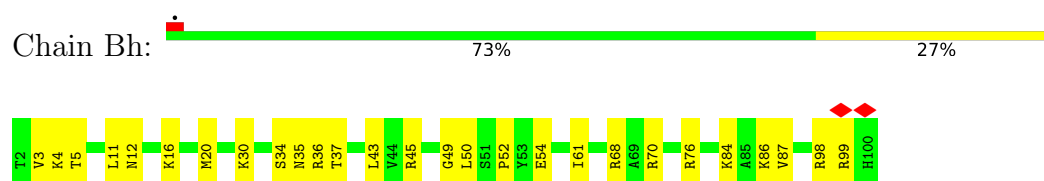
- Molecule 70: 60S ribosomal protein L34-A



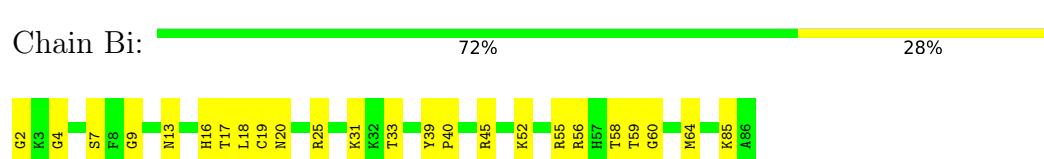
- Molecule 71: 60S ribosomal protein L35-A



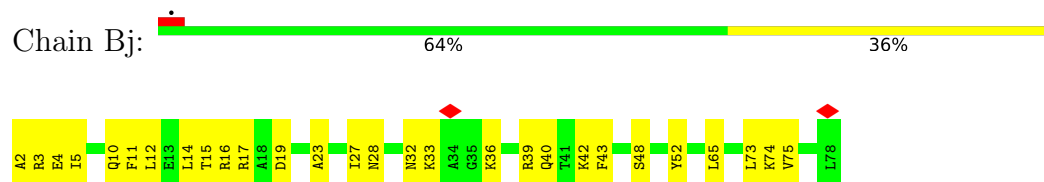
- Molecule 72: 60S ribosomal protein L36-A



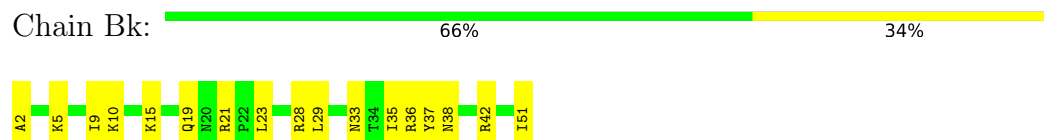
- Molecule 73: 60S ribosomal protein L37-A



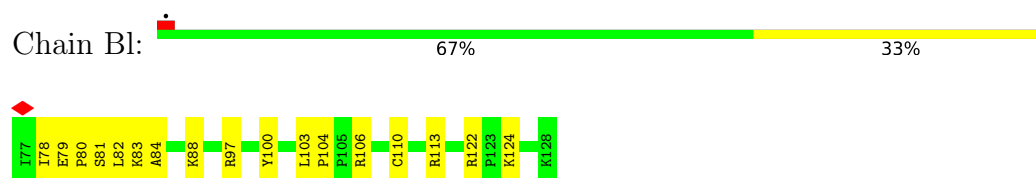
- Molecule 74: RPL38 isoform 1



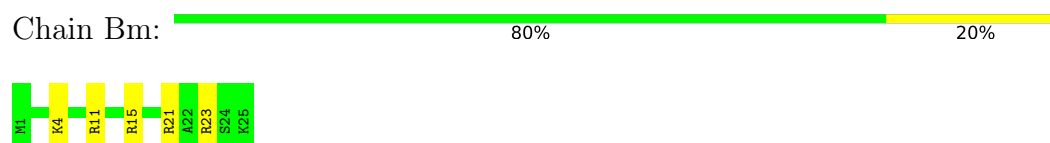
- Molecule 75: 60S ribosomal protein L39



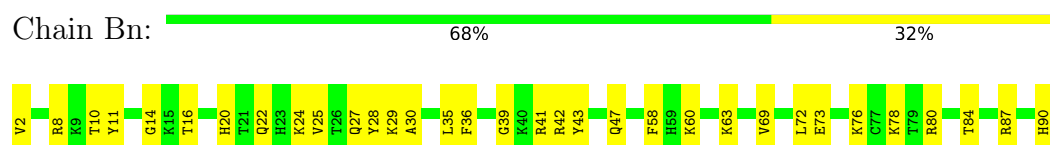
- Molecule 76: 60S ribosomal protein L40-A



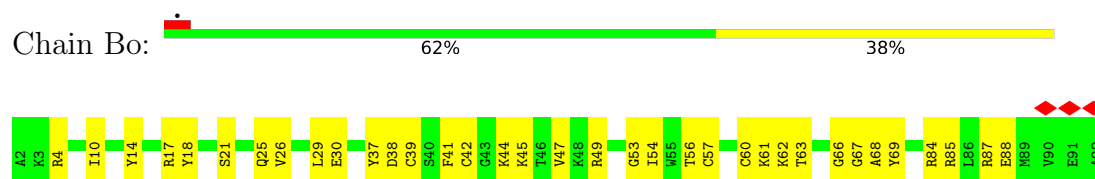
- Molecule 77: 60S ribosomal protein L41



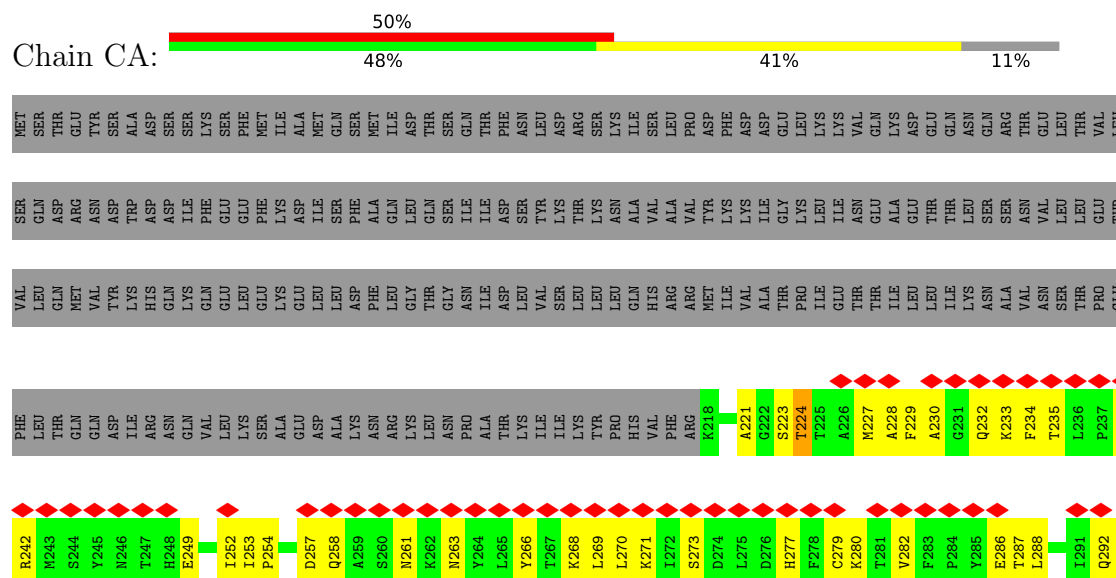
- Molecule 78: 60S ribosomal protein L42-A



- Molecule 79: 60S ribosomal protein L43-A



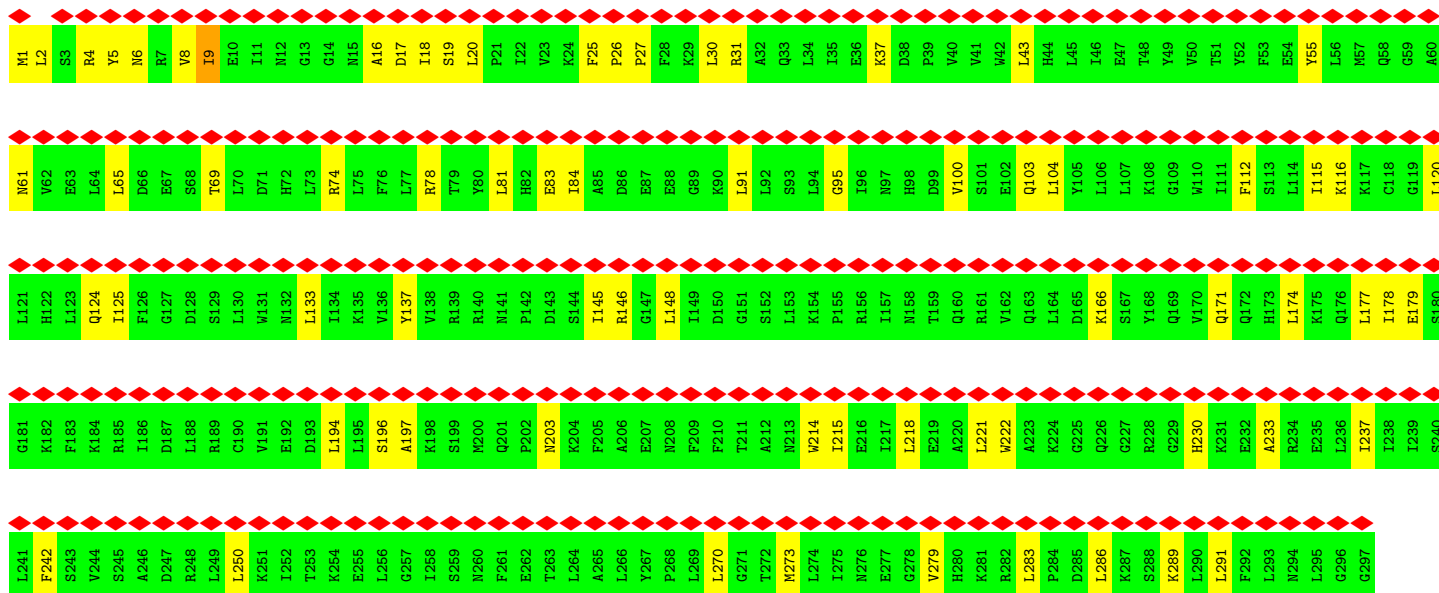
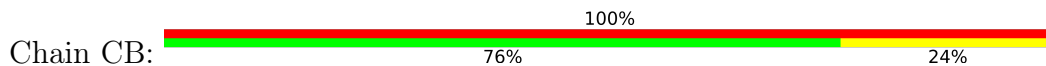
- Molecule 80: RQC trigger complex helicase SLH1



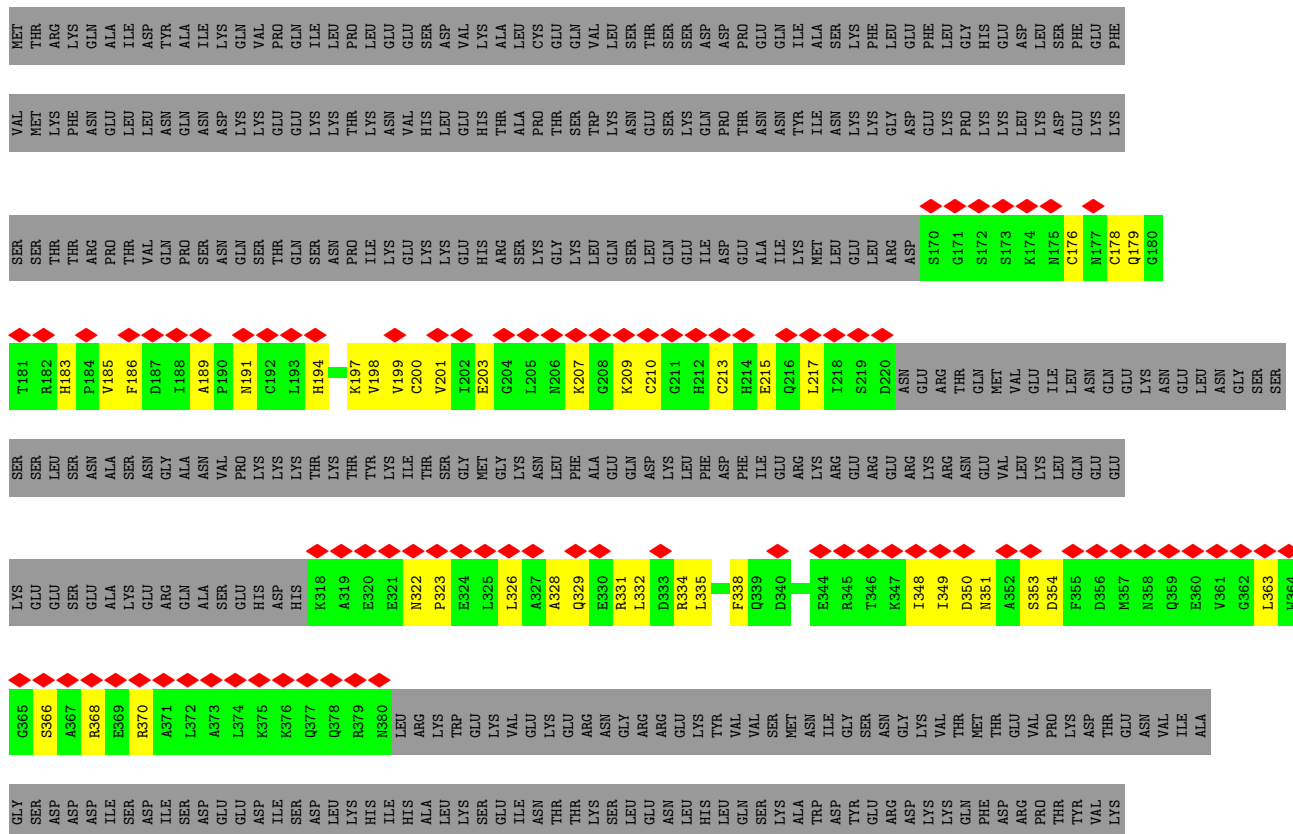
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F366	S367	K368	K369	L370	A371	P372	F373	N374	I375	Q376	V377	R378	E379	L380	T381	G382	D383	M384	Q385	L386	T387	K388	A389	E390	I391	L392	A393	T394	Q395	V396	I397	V398	T399	T400	P401	E402	K403	W404	D405	T408	R409	K410	A411	M412	G413	D414	L417	V418	S419	K420	V421	K422	L423	L424	I425	V426	D427	
E428	V429	H430	L431	H433	L432	E434	D435	R436	G437	S438	V439	I440	L443	R446	R449	Q450	V451	E452	S453	S454	Q455	S456	M457	I458	R459	I460	I461	Q462	L463	S464	A465	P468	M469	D472	V473	A474	D475	F476	L477	Q478	V479	M480	R481	G484	M485	F486	Y487	F488	D489	Q490	S491	F492	R493					
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E557	S558	N559	H560	E561	V562	D563	L564	F565	A566	P567	D568	P569	K572	D573	K574	Y575	S576	R577	L578	S579	V580	K581	N582	R583	D584	K585	D586	M587	I589	K588	E589	T590	F591	Q592	F593	G594	F595	G596	T597	H598	H599	A600	G601	M602	A603	R604	S605	D606	R607	M608	L609	T610	E611	K612	M613	F614	K615	D616
L619	K620	V621	L622	C623	C624	T625	A626	T627	W630	G631	V632	N633	L634	P635	T636	A636	D637	C638	V639	I640	T641	K642	G643	T644	Q645	V646	T647	D648	S649	K650	G651	G652	G653	F654	L655	D656	L657	G658	T659	S660	D661	V662	L663	Q664	L665	F666	G667	R668	G669	G670	R671	P672	G673	F674	G675	A677	T680	
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R742	K743	R744	K745	K746	S747	F748	T749	Y750	G751	D752	W754	I757	A758	W759	D760	F761	Q762	L763	E765	R766	K767	R768	K769	W770	R777	L778	H779	A780	L781	Q782	M783	L784	V785	F786	D787	E788	V789	S790	F793	I794	A795	K796	D797	L798	G799	R800	V801	S802	S803	D804	F805	Y806	L807	L808				
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L877	L878	Q879	A880	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A900	Q901	N902	R905	I906	C907	R908	A909	L910	F911	L912	I913	G914	V915	N916	R917	R918	W919	K921	F922	S923	N924	V925	M926	L927	N928	I929	C930	K931	E934	K935	R936	L937	S938	A939	D941					
C945	Q946	F947	F947	Y881	L882	S883	Q884	T885	F888	D889	S890	A891	L892	S896	I897	Y898	V899	A90																																								



- Molecule 81: CUE3 isoform 1



- Molecule 82: RQC trigger complex subunit RQT4



LYS
ASN
SER
ASP
THR
ALA
GLN
GLN
ASN
ARG
LYS
THR
GLU
GLU
LYS
ALA
HIS
ASP
MET
GLN
ALA
TYR
ASP
LEU
LYS
SER
ARG
VAL
GLN
VAL
VAL
ASP
GLN
ASN
ALA
ASP
ALA
SER
VAL
VAL
GLU
GLN
ASN
ILE
LEU
ALA
VAL
LEU

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	17885	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	44	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	4.383	Depositor
Minimum map value	-1.015	Depositor
Average map value	0.020	Depositor
Map value standard deviation	0.109	Depositor
Recommended contour level	0.3	Depositor
Map size ($\text{\AA}$)	585.19995, 585.19995, 585.19995	wwPDB
Map dimensions	560, 560, 560	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.045, 1.045, 1.045	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	2	0.44	0/42211	0.40	1/65773 (0.0%)
2	3	0.51	0/3746	0.42	0/5832
3	4	0.43	0/2883	0.37	0/4491
4	5	0.55	0/75723	0.42	0/118057
5	6	0.31	0/1808	0.30	0/2816
6	AA	0.32	0/1644	0.44	0/2249
7	AB	0.34	0/1823	0.53	2/2447 (0.1%)
8	AC	0.43	0/1656	0.47	0/2251
9	AD	0.33	0/1754	0.47	0/2361
10	AE	0.39	0/2097	0.53	1/2823 (0.0%)
11	AF	0.32	0/1625	0.50	0/2197
12	AG	0.30	0/1839	0.47	0/2460
13	AH	0.28	0/1498	0.49	0/2019
14	AI	0.44	0/1501	0.58	0/2006
15	AJ	0.38	0/1504	0.51	0/2016
16	AK	0.31	0/769	0.62	0/1039
17	AL	0.44	0/1185	0.45	0/1598
18	AM	0.20	0/883	0.60	0/1199
19	AN	0.40	0/1215	0.48	0/1638
20	AO	0.38	0/937	0.60	0/1261
21	AP	0.27	0/936	0.50	0/1259
22	AQ	0.31	0/1125	0.58	0/1510
23	AR	0.30	0/957	0.52	0/1283
24	AS	0.30	0/1211	0.53	0/1628
25	AT	0.28	0/1130	0.54	0/1517
26	AU	0.32	0/807	0.50	0/1091
27	AV	0.37	0/682	0.54	0/921
28	AW	0.44	0/1038	0.55	0/1395
29	AX	0.49	0/1139	0.58	0/1518
30	AY	0.34	0/1087	0.46	0/1449
31	AZ	0.24	0/661	0.52	0/888
32	Aa	0.42	0/782	0.63	0/1047

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Ab	0.35	0/620	0.52	0/838
34	Ac	0.34	0/493	0.60	0/663
35	Ad	0.39	0/452	0.54	0/600
36	Ae	0.32	0/480	0.50	0/639
37	Af	0.21	0/567	0.51	0/764
38	Ag	0.19	0/2436	0.43	0/3318
39	BA	0.52	0/1933	0.54	0/2598
40	BB	0.47	0/3146	0.50	0/4228
41	BC	0.48	0/2800	0.52	0/3790
42	BD	0.34	0/2400	0.48	0/3239
43	BE	0.32	0/1327	0.42	0/1790
44	BF	0.47	0/1821	0.46	0/2451
45	BG	0.33	0/1836	0.47	0/2481
46	BH	0.38	0/1529	0.48	0/2060
47	BI	0.45	0/1801	0.49	0/2416
48	BJ	0.34	0/1371	0.53	0/1838
49	BK	0.42	0/1568	0.52	0/2106
50	BL	0.35	0/1068	0.47	0/1438
51	BM	0.48	0/1757	0.51	0/2354
52	BN	0.49	0/1585	0.49	0/2128
53	BO	0.51	0/1439	0.51	0/1938
54	BP	0.47	0/1465	0.48	0/1965
55	BQ	0.44	0/1532	0.45	0/2043
56	BR	0.46	0/1473	0.49	0/1980
57	BS	0.45	0/1300	0.51	0/1743
58	BT	0.35	0/812	0.50	0/1099
59	BU	0.53	0/1018	0.46	0/1369
60	BV	0.39	0/850	0.43	0/1152
61	BW	0.40	0/979	0.47	0/1321
62	BX	0.42	0/995	0.49	0/1329
63	BY	0.33	0/1118	0.43	0/1497
64	BZ	0.52	0/1204	0.59	1/1612 (0.1%)
65	Ba	0.42	0/473	0.52	0/629
66	Bb	0.38	0/745	0.42	0/1001
67	Bc	0.44	0/890	0.50	1/1196 (0.1%)
68	Bd	0.50	0/1038	0.50	0/1390
69	Be	0.51	0/868	0.52	0/1168
70	Bf	0.45	0/890	0.46	0/1189
71	Bg	0.37	0/978	0.49	0/1301
72	Bh	0.31	0/772	0.41	0/1026
73	Bi	0.54	0/685	0.51	0/908
74	Bj	0.30	0/618	0.44	0/826
75	Bk	0.51	0/443	0.45	0/588

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	Bl	0.41	0/423	0.52	0/562
77	Bm	0.52	0/230	0.42	0/296
78	Bn	0.43	0/836	0.52	0/1104
79	Bo	0.50	0/701	0.51	0/934
80	CA	0.15	0/14309	0.37	1/19348 (0.0%)
81	CB	0.09	0/2463	0.25	0/3324
82	CC	0.12	0/897	0.36	0/1203
All	All	0.45	0/233290	0.44	7/340819 (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
7	AB	0	1
10	AE	0	1
12	AG	0	1
14	AI	0	1
18	AM	0	3
22	AQ	0	1
29	AX	0	1
32	Aa	0	2
37	Af	0	1
38	Ag	0	1
40	BB	0	1
41	BC	0	1
45	BG	0	2
49	BK	0	1
52	BN	0	1
61	BW	0	1
64	BZ	0	1
65	Ba	0	1
All	All	0	22

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
64	BZ	116	GLY	N-CA-C	6.46	118.08	111.95
10	AE	193	GLY	N-CA-C	5.34	125.83	113.18
80	CA	1633	SER	N-CA-C	-5.33	107.79	114.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	Bc	7	VAL	N-CA-C	-5.14	107.34	111.91
1	2	322	G	C2'-C3'-O3'	5.10	117.15	109.50
7	AB	147	ALA	CA-C-N	5.03	133.77	124.82
7	AB	147	ALA	C-N-CA	5.03	133.77	124.82

There are no chirality outliers.

All (22) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
7	AB	81	PHE	Peptide
10	AE	42	LEU	Peptide
12	AG	68	LEU	Peptide
14	AI	9	HIS	Peptide
18	AM	108	ARG	Peptide
18	AM	130	THR	Peptide
18	AM	83	GLU	Peptide
22	AQ	40	GLU	Peptide
29	AX	88	PRO	Peptide
32	Aa	84	VAL	Peptide
32	Aa	9	GLY	Peptide
37	Af	144	CYS	Peptide
38	Ag	176	LYS	Peptide
40	BB	127	LYS	Peptide
41	BC	3	ARG	Peptide
45	BG	30	THR	Peptide
45	BG	76	ALA	Peptide
49	BK	75	PHE	Peptide
52	BN	110[A]	PRO	Peptide
61	BW	43	ALA	Peptide
64	BZ	115	LYS	Peptide
65	Ba	20	GLY	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	2	37739	0	18987	1041	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	3	3353	0	1695	76	0
3	4	2579	0	1304	62	0
4	5	67650	0	33997	1298	0
5	6	1619	0	821	53	0
6	AA	1603	0	1610	74	0
7	AB	1798	0	1890	86	0
8	AC	1626	0	1715	82	0
9	AD	1729	0	1812	67	0
10	AE	2056	0	2140	75	0
11	AF	1605	0	1669	88	0
12	AG	1815	0	1894	84	0
13	AH	1473	0	1555	62	0
14	AI	1476	0	1501	57	0
15	AJ	1479	0	1556	68	0
16	AK	752	0	719	49	0
17	AL	1159	0	1225	31	0
18	AM	875	0	878	54	0
19	AN	1192	0	1255	40	0
20	AO	926	0	950	50	0
21	AP	916	0	941	66	0
22	AQ	1105	0	1166	63	0
23	AR	948	0	990	62	0
24	AS	1192	0	1222	77	0
25	AT	1112	0	1124	68	0
26	AU	797	0	863	49	0
27	AV	673	0	662	36	0
28	AW	1021	0	1060	30	0
29	AX	1121	0	1196	42	0
30	AY	1073	0	1132	48	0
31	AZ	651	0	682	37	0
32	Aa	769	0	818	42	0
33	Ab	610	0	633	34	0
34	Ac	491	0	524	23	0
35	Ad	442	0	428	33	0
36	Ae	472	0	521	27	0
37	Af	556	0	546	48	0
38	Ag	2383	0	2332	112	0
39	BA	1899	0	1957	67	0
40	BB	3075	0	3142	75	0
41	BC	2748	0	2859	77	0
42	BD	2351	0	2294	81	0
43	BE	1305	0	1370	45	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BF	1784	0	1862	38	0
45	BG	1804	0	1877	54	0
46	BH	1508	0	1572	51	0
47	BI	1764	0	1804	48	0
48	BJ	1350	0	1381	71	0
49	BK	1543	0	1608	61	0
50	BL	1053	0	1149	46	0
51	BM	1720	0	1779	73	0
52	BN	1555	0	1659	47	0
53	BO	1416	0	1433	40	0
54	BP	1441	0	1543	46	0
55	BQ	1515	0	1606	47	0
56	BR	1437	0	1475	54	0
57	BS	1276	0	1323	44	0
58	BT	796	0	812	32	0
59	BU	1003	0	1048	30	0
60	BV	836	0	709	13	0
61	BW	964	0	1025	35	0
62	BX	984	0	1075	46	0
63	BY	1092	0	1155	37	0
64	BZ	1173	0	1215	58	0
65	Ba	462	0	491	6	0
66	Bb	737	0	792	24	0
67	Bc	876	0	912	22	0
68	Bd	1017	0	1081	25	0
69	Be	850	0	880	19	0
70	Bf	880	0	941	29	0
71	Bg	969	0	1078	39	0
72	Bh	766	0	844	25	0
73	Bi	670	0	673	23	0
74	Bj	612	0	682	26	0
75	Bk	436	0	475	14	0
76	Bl	417	0	455	25	0
77	Bm	229	0	273	9	0
78	Bn	824	0	888	29	0
79	Bo	694	0	735	29	0
80	CA	14008	0	14058	612	0
81	CB	2415	0	2508	52	0
82	CC	886	0	857	39	0
83	2	84	0	0	0	0
83	AC	1	0	0	0	0
83	AQ	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
84	Ad	1	0	0	0	0
84	Af	1	0	0	0	0
84	Bf	1	0	0	0	0
84	Bi	1	0	0	0	0
84	Bl	1	0	0	0	0
84	Bn	1	0	0	0	0
84	Bo	1	0	0	0	0
84	CC	2	0	0	0	0
All	All	218071	0	165368	5820	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 15.

All (5820) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:69:G:H1	1:2:82:U:H3	1.09	0.99
1:2:521:A:N3	30:AY:34:ASN:ND2	2.12	0.97
20:AO:29:HIS:HB3	20:AO:41:ARG:HA	1.47	0.97
4:5:2139:A:HO2'	73:Bi:2:GLY:N	1.62	0.95
1:2:992:A:H2	1:2:1012:U:H3	1.12	0.94
16:AK:10:LYS:NZ	16:AK:36:ASP:OD1	2.01	0.93
24:AS:35:ILE:HG23	24:AS:102:ALA:HB2	1.49	0.92
46:BH:31:ARG:HH22	46:BH:187:ILE:HD12	1.34	0.92
4:5:1020:G:H1	4:5:1034:U:H3	0.93	0.92
4:5:1016:U:O4	4:5:1036:G:N1	2.03	0.92
70:Bf:47:CYS:HB3	70:Bf:84:CYS:SG	2.09	0.91
10:AE:128:LYS:HD3	10:AE:130:GLN:HE22	1.36	0.91
1:2:1070:C:H5''	33:Ab:17:ARG:HH21	1.36	0.90
1:2:480:G:H1	1:2:508:U:H3	1.17	0.90
1:2:1584:G:N2	1:2:1611:A:OP2	2.05	0.89
15:AJ:100:LYS:HD2	15:AJ:102:GLU:HG3	1.55	0.88
9:AD:178:ARG:NH1	9:AD:179:GLN:OE1	2.07	0.88
49:BK:4:SER:O	64:BZ:44:ASN:ND2	2.06	0.88
79:Bo:39:CYS:HB2	79:Bo:57:CYS:SG	2.14	0.87
57:BS:18:ASP:OD2	57:BS:19:PHE:N	2.07	0.87
1:2:1588:G:H1	1:2:1608:U:H3	0.91	0.87
56:BR:26:ARG:NH1	57:BS:150:THR:OG1	2.06	0.87
10:AE:185:GLY:H	10:AE:189:LEU:HD13	1.40	0.86
5:6:5:U:H3	5:6:68:G:H1	0.91	0.86
50:BL:40:ASP:OD2	50:BL:41:GLN:N	2.08	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:148:G:OP2	51:BM:4:TYR:OH	1.93	0.86
80:CA:1376:VAL:HG13	80:CA:1459:ILE:HD11	1.56	0.86
1:2:1275:A:N3	9:AD:141:LYS:NZ	2.25	0.85
38:Ag:89:LEU:HB2	38:Ag:103:PHE:HB2	1.58	0.85
4:5:394:G:N1	4:5:397:A:OP2	2.09	0.85
22:AQ:46:PHE:HA	22:AQ:49:TYR:HD2	1.37	0.85
47:BI:170:LYS:HA	47:BI:177:ASP:HA	1.59	0.84
80:CA:785:VAL:HB	80:CA:794:ILE:HB	1.56	0.84
4:5:2539:U:HO2'	4:5:2542:U:H3	1.22	0.84
1:2:706:A:H61	1:2:731:C:H5''	1.42	0.84
59:BU:54:LEU:HD21	59:BU:119:GLY:HA3	1.59	0.84
16:AK:1:MET:SD	16:AK:44:LYS:NZ	2.51	0.83
2:3:21:C:OP1	41:BC:193:LYS:NZ	2.11	0.83
7:AB:212:VAL:HG13	7:AB:213:ARG:H	1.41	0.83
9:AD:94:ARG:NH1	80:CA:969:GLU:OE2	2.11	0.83
11:AF:49:GLU:HA	11:AF:65:ARG:HH12	1.43	0.83
1:2:1173:C:O2	1:2:1601:G:N2	2.12	0.82
5:6:13:C:N3	5:6:22:C:N4	2.27	0.82
14:AI:40:ALA:N	14:AI:61:GLU:OE2	2.12	0.82
46:BH:89:LYS:HG2	46:BH:145:VAL:HG12	1.62	0.82
1:2:1401:A:OP1	23:AR:60:ARG:NH2	2.12	0.81
4:5:1258:C:N3	4:5:1262:G:N1	2.28	0.81
22:AQ:7:VAL:HG12	22:AQ:95:LYS:HE3	1.62	0.81
54:BP:62:VAL:HG23	54:BP:66:ARG:HD2	1.63	0.81
1:2:1789:G:OP2	20:AO:132:ARG:NH2	2.13	0.81
80:CA:806:TYR:O	80:CA:905:ARG:NH1	2.12	0.81
1:2:1429:G:N3	26:AU:72:ASN:ND2	2.28	0.81
8:AC:54:GLU:OE2	27:AV:12:TYR:HB2	1.81	0.80
81:CB:100:VAL:HA	81:CB:103:GLN:HE21	1.46	0.80
40:BB:306:THR:HG21	40:BB:316:GLU:HG3	1.61	0.80
1:2:932:U:O2	32:Aa:32:LYS:NZ	2.14	0.80
1:2:1436:A:OP2	9:AD:27:ARG:NH2	2.13	0.80
71:Bg:76:GLN:O	71:Bg:81:ARG:NH1	2.14	0.80
1:2:514:G:H2'	1:2:515:A:H8	1.47	0.80
1:2:566:C:O2	36:Ae:13:LYS:NZ	2.15	0.80
31:AZ:83:LEU:HB2	31:AZ:88:ILE:HD13	1.64	0.80
58:BT:18:ASP:HB3	58:BT:104:ARG:HG3	1.64	0.80
5:6:5:U:O2	5:6:68:G:N2	2.12	0.80
10:AE:42:LEU:HB3	10:AE:84:ALA:HB3	1.64	0.80
4:5:1353:A:H4'	4:5:1354:U:H5'	1.64	0.80
1:2:488:G:N1	1:2:499:U:O4	2.14	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:2728:A:OP2	4:5:2729:G:N2	2.13	0.79
29:AX:79:ASN:OD1	29:AX:81:LYS:NZ	2.14	0.79
63:BY:50:PRO:HG3	63:BY:68:ILE:HD11	1.62	0.79
8:AC:43:ARG:HH12	8:AC:248:SER:HA	1.46	0.79
4:5:525:U:O4	4:5:569:G:N1	2.11	0.79
59:BU:81:GLN:O	59:BU:98:ASN:ND2	2.15	0.79
80:CA:378:ARG:NH1	80:CA:379:GLU:O	2.16	0.79
4:5:284:A:OP2	78:Bn:41:ARG:NH1	2.15	0.79
12:AG:22:HIS:O	12:AG:25:ARG:NH1	2.16	0.79
48:BJ:92:ARG:HB3	48:BJ:172:LEU:HD12	1.63	0.79
1:2:1672:G:H2'	1:2:1673:G:C8	2.17	0.79
42:BD:54:ARG:NH2	42:BD:147:ASP:OD2	2.14	0.79
6:AA:56:LYS:HE2	6:AA:158:VAL:HG23	1.64	0.78
4:5:170:G:H1	4:5:248:U:H3	1.27	0.78
21:AP:123:TYR:OH	24:AS:126:ARG:NH1	2.17	0.78
31:AZ:68:ARG:HG3	31:AZ:69:LEU:H	1.49	0.78
49:BK:184:GLU:O	49:BK:188:ARG:NH1	2.17	0.78
18:AM:59:LEU:HB2	18:AM:123:VAL:HB	1.64	0.78
22:AQ:94:GLN:HB3	22:AQ:102:LYS:HD3	1.66	0.78
45:BG:144:GLU:HA	45:BG:173:MET:HE3	1.63	0.78
1:2:1003:A:O2'	1:2:1005:A:N7	2.16	0.78
4:5:2511:U:H2'	4:5:2512:A:H8	1.47	0.78
4:5:3310:G:H1'	53:BO:69:ARG:HD2	1.65	0.78
71:Bg:14:LYS:HE2	71:Bg:62:GLN:HE21	1.49	0.78
6:AA:205:ARG:HH12	23:AR:84:TYR:HB3	1.48	0.78
4:5:1019:G:N2	4:5:1035:U:O2	2.14	0.78
15:AJ:107:ARG:NH2	15:AJ:153:GLU:OE2	2.17	0.78
56:BR:8:GLN:HE21	56:BR:26:ARG:HE	1.30	0.78
4:5:297:G:N2	4:5:297:G:OP2	2.15	0.77
55:BQ:159:ALA:HB1	55:BQ:163:ARG:HH21	1.48	0.77
1:2:354:C:H5''	14:AI:16:ALA:HB2	1.64	0.77
4:5:1749:G:OP2	74:Bj:42:LYS:NZ	2.17	0.77
24:AS:22:VAL:HG11	24:AS:32:LEU:HD23	1.65	0.77
4:5:208:C:OP2	41:BC:163:LYS:NZ	2.16	0.77
1:2:1498:G:H5''	25:AT:72:GLY:HA3	1.67	0.77
4:5:2186:G:O2'	4:5:2315:U:OP2	2.03	0.77
12:AG:23:ARG:HH12	12:AG:42:GLY:HA2	1.48	0.77
14:AI:57:ALA:HB2	14:AI:177:GLY:HA2	1.67	0.77
1:2:1366:U:H4'	25:AT:7:ARG:HD2	1.67	0.77
79:Bo:39:CYS:CB	79:Bo:57:CYS:SG	2.70	0.77
1:2:68:A:N6	12:AG:132:ARG:O	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1502:G:N7	25:AT:102:ARG:NH2	2.32	0.77
4:5:3262:C:OP1	50:BL:126:GLN:NE2	2.18	0.77
4:5:1771:G:O2'	58:BT:99:LYS:NZ	2.18	0.77
9:AD:124:ARG:NE	80:CA:971:GLU:OE2	2.17	0.77
80:CA:1004:ILE:HD11	80:CA:1012:MET:HB3	1.66	0.77
13:AH:150:GLN:HB2	13:AH:181:ILE:HG22	1.65	0.76
46:BH:23:ARG:HH22	46:BH:42:ASP:HA	1.50	0.76
41:BC:35:VAL:HG21	41:BC:244:LEU:HD21	1.68	0.76
41:BC:151:VAL:HG12	41:BC:250:TRP:HB2	1.65	0.76
1:2:763:G:H4'	10:AE:255:ARG:HH22	1.49	0.76
1:2:826:U:N3	1:2:846:G:O6	2.15	0.76
38:Ag:266:ASP:OD1	38:Ag:267:PRO:HD3	1.86	0.76
7:AB:70:LEU:HD12	7:AB:82:ARG:HB3	1.67	0.76
13:AH:107:ARG:HD3	13:AH:108:GLN:H	1.48	0.76
17:AL:116:ARG:HH12	55:BQ:151:ARG:HH12	1.30	0.76
22:AQ:82:ARG:NH2	22:AQ:113:ASP:OD2	2.17	0.76
67:Bc:44:MET:O	67:Bc:77:ARG:NH1	2.18	0.76
72:Bh:3:VAL:HA	72:Bh:16:LYS:HZ1	1.50	0.76
4:5:86:G:O2'	4:5:98:G:O6	2.04	0.76
42:BD:107:ARG:NH2	42:BD:116:ASP:OD2	2.17	0.76
4:5:617:G:H2'	4:5:618:G:H8	1.51	0.76
1:2:1797:A:N6	32:Aa:84:VAL:O	2.19	0.75
4:5:1592:G:OP1	70:Bf:37:LYS:NZ	2.19	0.75
1:2:144:U:H2'	1:2:145:A:C8	2.21	0.75
4:5:777:U:OP1	65:Ba:41:ARG:NH1	2.19	0.75
38:Ag:117:LYS:HD3	38:Ag:118:LYS:HG3	1.66	0.75
4:5:597:C:OP2	44:BF:34:LYS:NZ	2.20	0.75
4:5:1902:A:O2'	4:5:2919:G:OP1	2.04	0.75
4:5:1239:C:O2	4:5:1252:A:N6	2.20	0.75
14:AI:87:ASN:HB3	14:AI:90:LEU:HD13	1.69	0.75
40:BB:37:ARG:HG3	40:BB:186:GLY:HA2	1.69	0.75
1:2:1301:U:OP2	8:AC:97:ARG:NH2	2.20	0.75
80:CA:877:LEU:HD22	80:CA:896:SER:HB2	1.69	0.75
1:2:337:G:O2'	14:AI:10:LYS:NZ	2.20	0.75
40:BB:125:SER:O	40:BB:127:LYS:NZ	2.20	0.75
12:AG:23:ARG:NH1	12:AG:41:VAL:O	2.19	0.75
38:Ag:182:ASN:ND2	38:Ag:184:ASN:OD1	2.19	0.74
80:CA:624:CYS:SG	80:CA:625:THR:N	2.58	0.74
4:5:1482:A:OP2	4:5:1860:A:N6	2.19	0.74
64:BZ:130:VAL:HG21	64:BZ:145:VAL:HG11	1.70	0.74
24:AS:86:LEU:HD22	24:AS:99:HIS:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:313:GLY:H	80:CA:316:LYS:HD3	1.52	0.74
1:2:224:C:N4	1:2:837:G:O6	2.19	0.74
41:BC:154:THR:HG23	41:BC:252:GLU:HB3	1.69	0.74
40:BB:227:GLU:HG3	40:BB:270:ARG:HE	1.51	0.74
54:BP:57:ILE:HB	54:BP:147:ARG:HH11	1.50	0.74
1:2:269:G:N7	12:AG:186:ARG:NH2	2.34	0.74
1:2:536:C:H5'	15:AJ:175:ARG:HH12	1.51	0.74
80:CA:889:ASP:HB3	80:CA:892:LEU:HB2	1.70	0.74
1:2:495:C:N4	80:CA:934:GLU:O	2.21	0.74
4:5:1102:G:OP2	44:BF:196:LYS:NZ	2.20	0.74
1:2:656:G:N1	1:2:679:U:N3	2.36	0.74
1:2:1735:U:OP1	59:BU:32:ARG:NH2	2.20	0.74
46:BH:47:LYS:NZ	50:BL:5:SER:O	2.20	0.73
1:2:1524:A:H2'	1:2:1525:A:C8	2.23	0.73
4:5:1230:G:H2'	4:5:1231:G:C8	2.23	0.73
4:5:2902:G:O2'	4:5:3025:A:N1	2.21	0.73
8:AC:170:ILE:HB	8:AC:197:TYR:HB2	1.70	0.73
1:2:227:U:H2'	1:2:228:G:H8	1.53	0.73
1:2:1458:G:OP2	24:AS:139:LYS:NZ	2.20	0.73
4:5:1355:G:O2'	43:BE:8:LYS:NZ	2.21	0.73
9:AD:26:THR:OG1	9:AD:173:ARG:NH1	2.20	0.73
80:CA:1542:LEU:HD21	80:CA:1574:LEU:HB2	1.71	0.73
24:AS:92:ILE:HG23	24:AS:93:THR:HG23	1.70	0.73
81:CB:2:LEU:O	81:CB:37:LYS:NZ	2.20	0.73
1:2:903:U:O2'	1:2:905:A:N7	2.19	0.73
4:5:301:G:H1	4:5:314:U:H3	1.35	0.73
6:AA:76:ILE:HB	6:AA:123:VAL:HG12	1.70	0.73
1:2:448:C:OP2	10:AE:49:ARG:NH1	2.20	0.73
7:AB:32:ILE:HD11	7:AB:46:THR:HG23	1.69	0.73
1:2:808:U:H2'	1:2:809:A:C8	2.24	0.73
1:2:1218:G:N2	1:2:1444:A:OP2	2.22	0.73
28:AW:86:ILE:HD11	28:AW:122:SER:HB2	1.70	0.73
4:5:144:A:OP1	45:BG:193:LYS:NZ	2.20	0.73
54:BP:62:VAL:HG11	54:BP:83:VAL:HG21	1.70	0.73
80:CA:500:GLN:HB2	80:CA:682:ILE:HG22	1.71	0.73
4:5:1825:U:H4'	74:Bj:17:ARG:HH12	1.54	0.73
22:AQ:83:GLN:NE2	22:AQ:115:THR:O	2.18	0.73
1:2:129:U:O2'	1:2:131:C:N4	2.22	0.73
1:2:1383:G:O5'	26:AU:89:ARG:NH2	2.21	0.73
1:2:1691:A:H2'	1:2:1692:G:H8	1.54	0.73
16:AK:8:ARG:O	16:AK:12:HIS:ND1	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AR:24:LEU:HB3	23:AR:34:LEU:HD23	1.70	0.73
1:2:1481:C:OP2	25:AT:63:ARG:NH2	2.22	0.72
10:AE:94:ALA:HB1	30:AY:16:PRO:HG2	1.71	0.72
75:Bk:21:ARG:O	75:Bk:38:ASN:ND2	2.22	0.72
1:2:538:A:O4'	1:2:543:C:N4	2.22	0.72
1:2:1591:C:H2'	1:2:1592:A:H8	1.54	0.72
66:Bb:66:LYS:HZ1	66:Bb:104:LEU:HD12	1.54	0.72
1:2:159:U:O2'	12:AG:87:ARG:NH1	2.22	0.72
51:BM:44:ARG:NH1	51:BM:120:TRP:O	2.22	0.72
80:CA:1160:VAL:HA	80:CA:1324:TYR:HB3	1.70	0.72
80:CA:1380:ARG:HH12	81:CB:1:MET:HG2	1.55	0.72
4:5:1135:G:O2'	4:5:2643:A:N3	2.22	0.72
42:BD:65:ILE:HG12	42:BD:74:VAL:HG12	1.71	0.72
1:2:1081:A:N3	1:2:1082:C:N4	2.38	0.72
4:5:351:A:N6	75:Bk:37:TYR:O	2.23	0.72
8:AC:232:GLU:O	8:AC:233:GLN:NE2	2.22	0.72
16:AK:56:LYS:HZ2	16:AK:67:THR:HB	1.55	0.72
32:Aa:46:GLU:HG3	32:Aa:48:ALA:H	1.54	0.72
70:Bf:3:GLN:NE2	70:Bf:4:ARG:O	2.23	0.72
1:2:17:C:O2'	1:2:1137:A:N1	2.23	0.72
1:2:1608:U:OP2	22:AQ:14:LYS:NZ	2.16	0.72
4:5:551:A:H2'	4:5:552:A:C8	2.25	0.72
63:BY:27:LYS:HE3	63:BY:42:LEU:HD22	1.72	0.72
4:5:172:G:H1	4:5:246:U:H3	1.38	0.72
80:CA:1551:GLY:HA2	80:CA:1554:ILE:HG22	1.70	0.72
1:2:924:A:H2'	1:2:925:G:C8	2.23	0.72
4:5:2715:G:H4'	4:5:2716:A:H5''	1.71	0.72
13:AH:75:THR:O	13:AH:79:ARG:NH1	2.22	0.72
30:AY:78:SER:N	30:AY:81:GLU:OE2	2.23	0.72
39:BA:42:ARG:HG3	39:BA:89:TYR:HE2	1.54	0.72
80:CA:897:ASN:O	80:CA:901:GLN:NE2	2.23	0.72
1:2:1555:A:O3'	21:AP:44:ARG:NH2	2.22	0.72
4:5:1758:A:OP1	58:BT:94:ARG:NH2	2.23	0.72
47:BI:38:LYS:HD3	47:BI:83:ASP:HB3	1.70	0.72
1:2:1273:G:O2'	1:2:1430:U:OP2	2.05	0.72
1:2:1462:G:N7	24:AS:143:ARG:NH2	2.37	0.72
4:5:2419:G:OP1	39:BA:221:LYS:NZ	2.22	0.72
1:2:1041:G:H2'	1:2:1042:G:H8	1.55	0.71
80:CA:866:GLN:NE2	80:CA:868:ASP:OD1	2.20	0.71
80:CA:921:LYS:HA	80:CA:924:ASN:HB2	1.72	0.71
3:4:112:G:H2'	3:4:113:C:C6	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BM:36:ILE:HG22	51:BM:64:VAL:HG23	1.70	0.71
4:5:1289:U:H2'	4:5:1290:G:H8	1.54	0.71
38:Ag:131:ILE:HB	38:Ag:144:LEU:HB3	1.72	0.71
46:BH:36:LYS:HB2	46:BH:78:MET:HE1	1.70	0.71
1:2:936:G:N7	32:Aa:15:ARG:NH2	2.37	0.71
1:2:1534:G:O2'	1:2:1535:U:O2	2.08	0.71
1:2:1756:A:H3'	4:5:2257:A:H61	1.54	0.71
4:5:294:U:OP2	51:BM:15:GLN:NE2	2.22	0.71
80:CA:598:HIS:HA	80:CA:602:MET:HE2	1.71	0.71
80:CA:1013:ARG:NH1	80:CA:1067:ASP:OD1	2.22	0.71
38:Ag:90:ARG:HG2	38:Ag:102:ARG:HG2	1.70	0.71
50:BL:72:LEU:HD12	50:BL:73:PRO:HD2	1.73	0.71
4:5:717:A:C6	64:BZ:117:ARG:HD2	2.25	0.71
11:AF:200:ASN:O	11:AF:204:GLY:N	2.20	0.71
71:Bg:101:THR:OG1	71:Bg:104:GLN:NE2	2.18	0.71
1:2:10:G:O2'	8:AC:94:GLN:OE1	2.09	0.71
4:5:14:U:O2	61:BW:42:ARG:NH1	2.23	0.71
23:AR:20:TYR:HE2	23:AR:38:ILE:HB	1.56	0.71
25:AT:65:ILE:HG12	25:AT:71:VAL:HG11	1.72	0.71
42:BD:31:TYR:O	42:BD:35:ARG:NH1	2.24	0.71
42:BD:120:LYS:O	42:BD:248:ARG:NH2	2.23	0.71
4:5:547:C:H5''	4:5:548:G:H5'	1.73	0.71
4:5:1950:G:OP2	55:BQ:135:LYS:NZ	2.23	0.71
40:BB:113:GLU:OE2	40:BB:167:ARG:NH1	2.22	0.71
80:CA:1383:ARG:NE	80:CA:1422:THR:OG1	2.21	0.71
4:5:1548:G:OP1	51:BM:108:ARG:NH2	2.23	0.70
13:AH:9:LEU:HD11	13:AH:17:GLU:HG3	1.73	0.70
4:5:1239:C:N4	4:5:1246:A:OP2	2.24	0.70
4:5:1349:U:O2	4:5:1350:G:N2	2.24	0.70
14:AI:34:ALA:HB2	14:AI:56:ARG:HD2	1.73	0.70
17:AL:122:ILE:O	17:AL:143:SER:OG	2.08	0.70
69:Be:45:LEU:HD21	69:Be:73:ARG:HA	1.73	0.70
80:CA:1262:LEU:HD13	80:CA:1298:ARG:HG3	1.71	0.70
1:2:487:G:H2'	1:2:488:G:C8	2.26	0.70
4:5:578:C:O2'	4:5:580:G:OP1	2.08	0.70
4:5:846:G:N2	4:5:849:A:OP2	2.24	0.70
4:5:915:A:N1	39:BA:204:MET:HE2	2.07	0.70
4:5:2768:U:O2'	78:Bn:30:ALA:O	2.09	0.70
8:AC:139:ILE:HD12	8:AC:218:ILE:HD11	1.73	0.70
13:AH:34:LEU:HB2	13:AH:38:LEU:HD13	1.73	0.70
41:BC:237:GLN:O	41:BC:246:ARG:NH1	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BD:294:ALA:HB1	47:BI:217:PHE:HB3	1.73	0.70
4:5:2558:A:OP1	39:BA:69:TYR:OH	2.06	0.70
53:BO:118:GLN:NE2	53:BO:147:GLU:OE1	2.23	0.70
80:CA:277:HIS:HA	80:CA:280:LYS:HG2	1.74	0.70
1:2:1456:C:H5''	1:2:1457:C:H5''	1.74	0.70
25:AT:40:SER:HB3	25:AT:43:ASN:HB2	1.72	0.70
53:BO:29:THR:HG23	53:BO:119:VAL:HG11	1.73	0.70
80:CA:361:GLU:HG2	80:CA:632:VAL:HG22	1.74	0.70
1:2:1292:G:H21	6:AA:111:ILE:HD11	1.56	0.70
30:AY:55:VAL:HG22	30:AY:75:VAL:HG22	1.74	0.70
32:Aa:22:ARG:NH2	32:Aa:27:SER:O	2.18	0.70
4:5:2601:C:OP1	51:BM:93:LYS:NZ	2.24	0.69
15:AJ:128:LEU:HB3	15:AJ:134:ILE:HD11	1.71	0.69
15:AJ:157:ASP:OD2	15:AJ:158:PHE:N	2.24	0.69
18:AM:43:ARG:HD3	18:AM:102:GLY:H	1.56	0.69
30:AY:111:LYS:HD2	30:AY:114:ARG:HH21	1.56	0.69
56:BR:12:ARG:HD2	56:BR:22:PRO:HD2	1.73	0.69
1:2:78:A:H2'	1:2:79:C:C6	2.26	0.69
1:2:1034:C:HO2'	28:AW:2:THR:N	1.90	0.69
37:Af:133:ALA:N	37:Af:140:TYR:O	2.23	0.69
55:BQ:179:GLU:HA	55:BQ:182:ASP:HB3	1.74	0.69
4:5:3093:C:O2'	4:5:3095:A:OP2	2.08	0.69
6:AA:41:ARG:HH21	6:AA:43:ASP:HB2	1.56	0.69
16:AK:55:VAL:HG12	16:AK:68:LEU:HA	1.73	0.69
32:Aa:82:ARG:HA	32:Aa:85:ARG:NH2	2.07	0.69
80:CA:1000:ILE:HG21	80:CA:1082:VAL:HG11	1.73	0.69
6:AA:21:ASN:HB3	6:AA:24:LEU:HD12	1.73	0.69
23:AR:77:GLU:OE2	23:AR:80:ARG:NH2	2.26	0.69
48:BJ:88:GLU:OE1	48:BJ:90:GLN:NE2	2.18	0.69
1:2:1434:U:O2'	1:2:1436:A:OP1	2.08	0.69
1:2:1785:U:OP1	20:AO:136:ARG:NH2	2.25	0.69
4:5:1048:A:N3	4:5:2634:U:O2'	2.24	0.69
17:AL:27:THR:O	17:AL:30:ARG:NH1	2.25	0.69
21:AP:17:TYR:CE1	21:AP:112:LEU:HD11	2.27	0.69
80:CA:522:TYR:OH	80:CA:561:GLU:OE1	2.09	0.69
81:CB:43:LEU:HD12	81:CB:103:GLN:HE22	1.57	0.69
4:5:1941:G:H21	4:5:3363:A:H8	1.38	0.69
46:BH:128:VAL:HA	46:BH:157:ASN:HD21	1.58	0.69
80:CA:348:LYS:HB2	80:CA:421:VAL:HA	1.74	0.69
18:AM:62:LEU:HD21	18:AM:72:ILE:HG23	1.75	0.69
53:BO:60:PHE:HB3	53:BO:64:ASN:HB3	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:282:VAL:HG13	80:CA:369:LYS:HB2	1.75	0.69
80:CA:1704:PRO:HG2	80:CA:1707:ASP:HB2	1.73	0.69
1:2:732:G:O2'	1:2:734:A:N6	2.25	0.69
1:2:1487:A:H2'	1:2:1488:G:H8	1.57	0.69
1:2:1555:A:OP2	21:AP:47:ARG:NH2	2.25	0.69
1:2:1594:G:OP2	1:2:1596:C:N4	2.24	0.69
4:5:1566:G:H1	4:5:1575:C:H41	1.41	0.69
4:5:2746:G:N1	4:5:2749:A:OP2	2.25	0.69
7:AB:121:ILE:HG12	7:AB:161:ILE:HG23	1.74	0.69
9:AD:136:VAL:HG12	9:AD:186:VAL:HG22	1.72	0.69
15:AJ:34:PHE:O	15:AJ:110:GLN:NE2	2.26	0.69
21:AP:87:PRO:HA	21:AP:90:ILE:HG13	1.74	0.69
46:BH:88:TYR:CE2	46:BH:184:LYS:HG2	2.27	0.69
80:CA:1554:ILE:HD12	80:CA:1558:SER:HB2	1.74	0.69
1:2:476:U:OP2	36:Ae:33:ARG:NH1	2.25	0.69
1:2:623:A:H3'	1:2:624:G:H5''	1.73	0.69
3:4:28:C:OP1	48:BJ:137:ARG:NH1	2.26	0.69
4:5:2643:A:OP2	57:BS:3:LYS:NZ	2.26	0.69
8:AC:109:GLY:HA2	8:AC:139:ILE:HG22	1.75	0.69
17:AL:109:VAL:HG12	17:AL:137:PHE:HB2	1.75	0.69
4:5:617:G:H2'	4:5:618:G:C8	2.28	0.68
4:5:3017:A:H2'	4:5:3018:A:H8	1.58	0.68
8:AC:53:ILE:HD12	8:AC:56:ILE:HD12	1.75	0.68
38:Ag:201:THR:HG21	38:Ag:242:SER:HA	1.74	0.68
57:BS:18:ASP:HB3	57:BS:21:LYS:HB2	1.74	0.68
64:BZ:60:TYR:HE2	64:BZ:63:LYS:HA	1.57	0.68
1:2:487:G:H2'	1:2:488:G:H8	1.58	0.68
1:2:566:C:OP2	29:AX:66:SER:OG	2.11	0.68
6:AA:168:HIS:HA	6:AA:203:PHE:HE1	1.59	0.68
11:AF:54:LYS:NZ	11:AF:135:ASP:OD1	2.27	0.68
59:BU:28:ASN:ND2	59:BU:112:SER:OG	2.26	0.68
80:CA:641:ILE:HB	80:CA:683:LEU:HA	1.73	0.68
1:2:741:C:OP2	17:AL:43:LYS:NZ	2.20	0.68
1:2:918:U:H2'	1:2:919:A:H8	1.58	0.68
14:AI:93:THR:OG1	14:AI:95:THR:OG1	2.10	0.68
51:BM:140:LYS:HE2	51:BM:144:ARG:HH12	1.59	0.68
1:2:555:A:N7	1:2:590:C:O2'	2.27	0.68
19:AN:99:ARG:HE	19:AN:115:LEU:HD21	1.57	0.68
79:Bo:39:CYS:HB3	79:Bo:42:CYS:SG	2.32	0.68
4:5:995:G:O2'	4:5:1054:A:N6	2.26	0.68
4:5:2569:C:O2'	4:5:2570:A:O4'	2.12	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:4:C:O2'	15:AJ:17:ARG:NH2	2.24	0.68
1:2:144:U:H2'	1:2:145:A:H8	1.57	0.68
1:2:938:G:N2	1:2:941:A:OP2	2.27	0.68
1:2:1389:C:OP1	23:AR:48:ASN:ND2	2.24	0.68
4:5:788:G:H2'	4:5:789:C:C6	2.29	0.68
4:5:2523:G:O6	39:BA:70:ARG:NH2	2.27	0.68
9:AD:7:LYS:NZ	26:AU:115:GLU:OE2	2.26	0.68
37:Af:120:GLU:HA	37:Af:132:LEU:HD13	1.76	0.68
80:CA:1162:SER:O	80:CA:1168:LYS:NZ	2.23	0.68
1:2:871:G:H2'	1:2:872:G:C8	2.29	0.68
43:BE:7:PRO:HG2	43:BE:10:TYR:CE2	2.29	0.68
1:2:1297:G:O2'	1:2:1299:G:O6	2.12	0.68
2:3:142:C:O2'	51:BM:136:ASP:OD2	2.12	0.68
3:4:11:A:O2'	3:4:13:A:OP2	2.12	0.68
4:5:1561:G:N7	61:BW:36:LYS:NZ	2.40	0.68
4:5:2989:C:O2	40:BB:266:ARG:NH2	2.16	0.68
13:AH:39:ARG:HH22	55:BQ:185:LEU:HG	1.59	0.68
40:BB:147:GLU:HA	40:BB:150:ARG:HD3	1.74	0.68
46:BH:89:LYS:HE2	46:BH:183:HIS:HB3	1.76	0.68
80:CA:258:GLN:HE22	80:CA:492:PHE:HA	1.59	0.68
80:CA:921:LYS:O	80:CA:925:VAL:N	2.21	0.68
27:AV:64:GLU:OE2	33:Ab:2:VAL:N	2.27	0.68
48:BJ:110:ILE:HA	48:BJ:114:ILE:HB	1.74	0.68
1:2:1223:A:H2'	1:2:1224:A:H8	1.57	0.67
4:5:560:A:O2'	50:BL:84:LYS:NZ	2.25	0.67
10:AE:59:ARG:HH22	30:AY:87:PRO:HG3	1.58	0.67
51:BM:46:ASP:OD1	51:BM:47:LYS:N	2.27	0.67
1:2:1247:U:O2'	37:Af:92:LYS:NZ	2.21	0.67
1:2:1445:G:N2	37:Af:88:PRO:O	2.27	0.67
40:BB:61:ASP:OD1	40:BB:68:HIS:NE2	2.24	0.67
4:5:2315:U:O2'	4:5:2316:G:OP1	2.12	0.67
24:AS:42:TYR:HE2	24:AS:73:MET:HG2	1.60	0.67
39:BA:42:ARG:HG3	39:BA:89:TYR:CE2	2.28	0.67
44:BF:119:VAL:HG13	44:BF:124:LEU:HD21	1.76	0.67
60:BV:27:LYS:HA	60:BV:27:LYS:HE3	1.76	0.67
1:2:1490:C:H5'	1:2:1492:A:H1'	1.76	0.67
4:5:1207:G:OP1	47:BI:157:TYR:OH	2.12	0.67
15:AJ:90:LYS:HB3	15:AJ:95:TYR:HD1	1.59	0.67
24:AS:111:ASP:OD1	24:AS:112:ASP:N	2.26	0.67
29:AX:54:LEU:HD11	29:AX:75:GLN:HB2	1.77	0.67
33:Ab:21:LEU:HD13	33:Ab:26:GLN:OE1	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Ag:220:ILE:N	38:Ag:234:LEU:O	2.23	0.67
57:BS:142:SER:OG	57:BS:144:GLU:OE1	2.11	0.67
63:BY:121:ARG:HE	63:BY:126:LYS:HE2	1.59	0.67
78:Bn:73:GLU:HG2	78:Bn:80:ARG:HB3	1.75	0.67
80:CA:931:LYS:HB3	80:CA:1090:ILE:HG13	1.76	0.67
4:5:198:A:N3	4:5:218:G:O2'	2.27	0.67
4:5:1525:A:O2'	4:5:1527:U:OP2	2.10	0.67
4:5:2783:U:H5'	49:BK:185:LYS:HZ1	1.58	0.67
19:AN:99:ARG:HH12	19:AN:143:SER:HB2	1.60	0.67
80:CA:323:THR:HG21	80:CA:461:ILE:HG13	1.76	0.67
81:CB:26:PRO:HB3	81:CB:30:LEU:HD23	1.76	0.67
1:2:142:G:OP2	12:AG:139:ASN:ND2	2.28	0.67
1:2:186:C:H3'	1:2:187:G:H8	1.59	0.67
29:AX:70:LYS:HB3	29:AX:93:LEU:HD22	1.75	0.67
31:AZ:82:HIS:O	31:AZ:85:LYS:NZ	2.28	0.67
46:BH:7:GLU:O	46:BH:8:GLN:NE2	2.28	0.67
80:CA:1315:TRP:HB2	80:CA:1576:ARG:HG3	1.77	0.67
80:CA:1595:GLY:O	80:CA:1599:HIS:ND1	2.25	0.67
1:2:447:U:O2'	10:AE:27:TYR:O	2.12	0.67
4:5:3292:G:H2'	4:5:3293:A:H8	1.60	0.67
9:AD:154:ASP:OD1	9:AD:155:GLY:N	2.26	0.67
22:AQ:46:PHE:HA	22:AQ:49:TYR:CD2	2.25	0.67
80:CA:1038:PHE:HB3	80:CA:1047:ILE:HD12	1.76	0.67
1:2:225:A:N6	1:2:837:G:O6	2.27	0.67
1:2:1066:C:H4'	7:AB:149:GLN:HE21	1.59	0.67
1:2:1544:U:OP1	24:AS:136:GLN:NE2	2.18	0.67
26:AU:44:ASN:OD1	26:AU:47:GLN:NE2	2.28	0.67
33:Ab:11:THR:HG23	33:Ab:14:SER:H	1.59	0.67
1:2:843:U:H2'	1:2:844:A:H8	1.60	0.67
1:2:1256:A:H4'	1:2:1257:U:O5'	1.95	0.67
2:3:22:U:O4	4:5:341:G:O2'	2.13	0.67
4:5:1605:G:H4'	4:5:1836:A:H4'	1.74	0.67
4:5:2441:G:H2'	4:5:2442:A:C8	2.30	0.67
23:AR:71:PHE:CE1	23:AR:73:LEU:HB2	2.30	0.67
26:AU:87:HIS:HB3	26:AU:89:ARG:NH1	2.09	0.67
74:Bj:74:LYS:NZ	74:Bj:75:VAL:O	2.28	0.67
80:CA:851:LEU:HD23	80:CA:867:LEU:HD11	1.77	0.67
1:2:435:C:H5''	29:AX:50:LYS:HE2	1.77	0.67
1:2:640:U:H2'	1:2:641:G:O4'	1.95	0.67
1:2:1060:U:H3'	1:2:1061:A:H5''	1.75	0.67
4:5:269:G:OP2	51:BM:44:ARG:NH2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AQ:37:THR:O	22:AQ:45:ARG:NH2	2.27	0.67
24:AS:129:TRP:HB3	24:AS:131:LEU:HD13	1.77	0.67
30:AY:78:SER:OG	30:AY:81:GLU:OE1	2.11	0.67
32:Aa:82:ARG:HA	32:Aa:85:ARG:HH21	1.60	0.67
34:Ac:13:ILE:HD11	34:Ac:29:ARG:HE	1.60	0.67
41:BC:23:PRO:HD2	41:BC:26:PHE:HD2	1.60	0.67
49:BK:126:PHE:O	71:Bg:114:ARG:NH2	2.27	0.67
80:CA:1374:ILE:HG13	80:CA:1476:ILE:HB	1.76	0.67
1:2:144:U:O4	12:AG:137:ARG:NH2	2.28	0.66
1:2:260:U:O2	14:AI:41:LYS:NZ	2.25	0.66
4:5:1024:C:O2	4:5:1030:G:N2	2.25	0.66
4:5:1567:A:N1	4:5:1572:A:N6	2.42	0.66
4:5:3027:G:N2	4:5:3030:A:OP2	2.28	0.66
9:AD:40:ARG:HB3	9:AD:47:GLU:HG2	1.77	0.66
11:AF:57:SER:HA	34:Ac:53:ILE:HB	1.77	0.66
22:AQ:36:ILE:HD13	22:AQ:52:LEU:HD11	1.78	0.66
70:Bf:66:SER:HG	70:Bf:68:THR:HG1	1.40	0.66
1:2:1591:C:H2'	1:2:1592:A:C8	2.30	0.66
10:AE:208:VAL:HG11	10:AE:225:VAL:HG21	1.77	0.66
14:AI:152:ILE:HG13	14:AI:153:GLU:H	1.59	0.66
22:AQ:89:LEU:O	22:AQ:93:HIS:N	2.20	0.66
41:BC:328:ASN:OD1	44:BF:48:ASN:ND2	2.28	0.66
80:CA:452:GLU:O	80:CA:455:GLN:NE2	2.28	0.66
4:5:965:G:H5'	64:BZ:29:PRO:HB2	1.76	0.66
4:5:1221:U:H4'	4:5:1222:A:H5''	1.77	0.66
4:5:1270:U:N3	4:5:1273:C:OP2	2.28	0.66
38:Ag:224:ASN:ND2	38:Ag:229:LYS:O	2.28	0.66
80:CA:509:GLY:O	80:CA:514:LYS:NZ	2.29	0.66
80:CA:1491:ARG:NH1	80:CA:1492:ASP:O	2.29	0.66
80:CA:1659:VAL:HB	80:CA:1767:MET:HE3	1.77	0.66
1:2:388:G:OP1	1:2:423:G:O2'	2.14	0.66
1:2:1331:A:H5''	23:AR:45:ARG:HH21	1.61	0.66
4:5:359:U:O3'	73:Bi:25:ARG:NH2	2.28	0.66
4:5:1232:A:N6	4:5:1277:U:OP2	2.29	0.66
4:5:2586:G:O6	45:BG:47:SER:OG	2.13	0.66
16:AK:25:LYS:HB3	16:AK:62:GLN:HB2	1.78	0.66
80:CA:348:LYS:HG3	80:CA:420:LYS:HB3	1.78	0.66
80:CA:1157:ASN:ND2	80:CA:1316:LEU:O	2.28	0.66
4:5:2167:A:O3'	51:BM:72:LYS:NZ	2.28	0.66
4:5:2283:U:OP1	4:5:2974:G:O2'	2.14	0.66
4:5:3277:G:O6	53:BO:171:ARG:NH2	2.22	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AF:189:THR:N	11:AF:192:GLU:OE2	2.27	0.66
13:AH:89:HIS:ND1	13:AH:165:LYS:HG2	2.10	0.66
39:BA:117:GLU:OE2	39:BA:163:ARG:NH2	2.29	0.66
73:Bi:19:CYS:SG	73:Bi:20:ASN:N	2.68	0.66
80:CA:1271:LEU:HA	80:CA:1276:GLY:HA3	1.76	0.66
1:2:12:U:H2'	1:2:13:C:C6	2.31	0.66
5:6:8:U:O2	5:6:15:A:N6	2.28	0.66
30:AY:51:GLU:OE1	30:AY:53:ASP:N	2.27	0.66
32:Aa:83:ILE:O	32:Aa:85:ARG:N	2.26	0.66
33:Ab:19:HIS:HB3	33:Ab:22:LYS:HG3	1.76	0.66
36:Ae:55:ARG:NH2	36:Ae:57:ASN:O	2.28	0.66
38:Ag:110:VAL:HA	38:Ag:126:SER:HA	1.77	0.66
45:BG:158:ASP:HB3	45:BG:159:PRO:HD3	1.78	0.66
58:BT:43:VAL:HG12	58:BT:44:GLU:OE1	1.95	0.66
1:2:1791:A:O2'	1:2:1792:G:OP2	2.11	0.66
4:5:370:U:H4'	4:5:404:G:H5'	1.76	0.66
4:5:2576:G:H2'	4:5:2577:G:H8	1.60	0.66
74:Bj:3:ARG:HH21	74:Bj:52:TYR:HE1	1.41	0.66
80:CA:1417:GLN:O	80:CA:1441:LYS:NZ	2.29	0.66
1:2:478:A:N1	1:2:510:G:O6	2.28	0.66
1:2:591:A:P	36:Ae:43:ARG:HH22	2.19	0.66
22:AQ:6:SER:N	22:AQ:96:TYR:OH	2.25	0.66
40:BB:62:ARG:O	40:BB:68:HIS:ND1	2.28	0.66
80:CA:695:SER:HA	80:CA:699:GLN:HB2	1.77	0.66
80:CA:1452:LYS:HG3	80:CA:1454:LYS:HG3	1.78	0.66
1:2:939:A:H2'	1:2:940:A:C8	2.31	0.66
4:5:696:C:P	41:BC:119:ARG:HH21	2.18	0.66
17:AL:58:CYS:HG	17:AL:112:SER:HG	1.31	0.66
38:Ag:231:MET:N	38:Ag:231:MET:SD	2.67	0.66
80:CA:898:TYR:O	80:CA:902:ASN:ND2	2.29	0.66
1:2:304:U:H2'	1:2:305:C:C6	2.31	0.66
2:3:152:G:OP1	45:BG:60:ARG:NE	2.29	0.66
4:5:2704:A:N6	42:BD:28:THR:O	2.29	0.66
42:BD:107:ARG:HH12	42:BD:120:LYS:HA	1.60	0.66
1:2:1604:U:OP1	22:AQ:130:GLY:N	2.23	0.65
4:5:529:U:H2'	4:5:530:A:H8	1.60	0.65
4:5:1239:C:H1'	4:5:1252:A:H61	1.60	0.65
4:5:3046:G:OP1	40:BB:19:ARG:NH2	2.29	0.65
24:AS:115:ARG:HE	24:AS:116:LEU:HD12	1.61	0.65
37:Af:141:CYS:SG	37:Af:142:GLY:N	2.69	0.65
50:BL:105:GLN:HE22	50:BL:109:ARG:NE	1.94	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:583:ARG:HH21	80:CA:609:LEU:HD22	1.61	0.65
2:3:37:A:OP1	71:Bg:89:ARG:NH2	2.29	0.65
4:5:3166:A:H2'	4:5:3167:C:C6	2.32	0.65
39:BA:57:PRO:HG2	39:BA:78:ALA:HB3	1.77	0.65
43:BE:4:GLN:OE1	68:Bd:75:LEU:N	2.28	0.65
80:CA:1174:LEU:HA	80:CA:1177:TRP:HD1	1.61	0.65
4:5:339:C:OP1	4:5:1381:G:O2'	2.14	0.65
4:5:566:U:H2'	4:5:567:G:H8	1.60	0.65
13:AH:32:PRO:HA	13:AH:35:LYS:HG3	1.78	0.65
19:AN:19:SER:OG	19:AN:21:ASN:O	2.14	0.65
45:BG:97:TYR:HE2	45:BG:203:VAL:HG12	1.59	0.65
49:BK:110:ASP:HA	49:BK:113:VAL:HG12	1.79	0.65
4:5:1478:A:OP1	4:5:3076:G:O2'	2.14	0.65
16:AK:80:LEU:HB3	16:AK:82:LEU:HD23	1.78	0.65
43:BE:30:LEU:HD22	43:BE:34:LEU:HD12	1.78	0.65
80:CA:438:SER:OG	80:CA:710:LYS:NZ	2.29	0.65
1:2:496:G:H2'	1:2:497:G:C8	2.32	0.65
4:5:1266:U:H2'	4:5:1267:G:C8	2.31	0.65
27:AV:2:GLU:HA	27:AV:9:VAL:HG22	1.77	0.65
38:Ag:130:THR:OG1	38:Ag:132:LYS:NZ	2.29	0.65
4:5:598:G:O3'	44:BF:41:ARG:NH2	2.29	0.65
4:5:1091:G:H2'	4:5:1092:A:H8	1.60	0.65
4:5:1475:A:O2'	67:Bc:57:GLN:NE2	2.30	0.65
24:AS:88:ARG:NH2	24:AS:91:ASP:OD2	2.30	0.65
54:BP:57:ILE:HD12	54:BP:147:ARG:HH12	1.62	0.65
72:Bh:34:SER:H	72:Bh:37:THR:HB	1.60	0.65
80:CA:472:ASP:OD2	80:CA:742:ARG:NH1	2.30	0.65
1:2:502:U:H2'	1:2:503:G:H8	1.61	0.65
1:2:1206:U:OP2	1:2:1207:C:O2'	2.14	0.65
1:2:1365:C:O3'	22:AQ:30:LYS:NZ	2.30	0.65
4:5:2632:U:OP2	57:BS:4:SER:OG	2.14	0.65
1:2:1520:U:OP2	25:AT:75:LYS:NZ	2.26	0.65
4:5:412:G:OP1	53:BO:62:ARG:NH1	2.28	0.65
4:5:592:G:N2	4:5:613:U:OP1	2.25	0.65
47:BI:208:ASN:HD22	47:BI:211:ARG:HH21	1.44	0.65
4:5:212:G:OP2	62:BX:2:ALA:N	2.29	0.65
9:AD:42:THR:HB	9:AD:45:LYS:HB2	1.77	0.65
13:AH:156:SER:OG	13:AH:186:PRO:O	2.14	0.65
24:AS:127:HIS:CD2	24:AS:133:VAL:HG21	2.32	0.65
52:BN:151[A]:ASP:OD2	52:BN:152[A]:VAL:N	2.30	0.65
54:BP:89:ASP:OD1	54:BP:90:ASP:N	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BR:8:GLN:HE22	56:BR:10:ILE:HD11	1.61	0.65
76:BL:80:PRO:HA	76:BL:83:LYS:HG2	1.79	0.65
82:CC:185:VAL:HA	82:CC:200:CYS:HA	1.78	0.65
1:2:145:A:H2'	1:2:146:U:C6	2.32	0.65
4:5:657:A:H2'	4:5:658:A:H8	1.60	0.65
6:AA:37:VAL:HG22	6:AA:149:LEU:HD13	1.79	0.65
50:BL:113:THR:N	50:BL:116:GLU:OE2	2.23	0.65
57:BS:112:ASN:HD22	57:BS:128:LEU:HD12	1.62	0.65
64:BZ:60:TYR:CE2	64:BZ:63:LYS:HA	2.31	0.65
64:BZ:104:THR:HG21	64:BZ:112:ILE:HD11	1.79	0.65
72:Bh:3:VAL:O	72:Bh:12:ASN:ND2	2.30	0.65
1:2:1041:G:H2'	1:2:1042:G:C8	2.32	0.64
4:5:1662:G:H2'	4:5:1663:G:C8	2.32	0.64
4:5:3187:A:N3	46:BH:44:THR:OG1	2.27	0.64
13:AH:128:ASP:HA	13:AH:131:PHE:HB2	1.78	0.64
19:AN:3:ARG:HB3	19:AN:6:SER:HB2	1.79	0.64
51:BM:27:VAL:HB	51:BM:122:ASN:HD21	1.61	0.64
80:CA:503:GLY:HA3	80:CA:690:LEU:HD12	1.79	0.64
80:CA:953:ILE:HG23	80:CA:979:VAL:HG11	1.79	0.64
2:3:136:G:OP1	61:BW:49:LYS:NZ	2.31	0.64
4:5:3284:U:H2'	4:5:3285:G:H8	1.60	0.64
7:AB:91:VAL:HG23	7:AB:96:LEU:HB3	1.79	0.64
7:AB:104:ASP:OD1	7:AB:105:PHE:N	2.30	0.64
23:AR:14:LYS:NZ	23:AR:68:GLY:O	2.30	0.64
46:BH:49:ASN:HD21	46:BH:52:LEU:HB2	1.62	0.64
48:BJ:10:ARG:NH2	48:BJ:151:SER:O	2.30	0.64
1:2:1697:G:H1	1:2:1704:U:H3	1.44	0.64
12:AG:50:PHE:HE1	12:AG:113:ILE:HG12	1.62	0.64
21:AP:108:ARG:NH1	21:AP:110:GLU:OE2	2.31	0.64
47:BI:47:PRO:HD2	47:BI:141:LYS:HA	1.79	0.64
64:BZ:85:ASP:OD2	64:BZ:86:LYS:N	2.29	0.64
1:2:841:U:H2'	1:2:842:C:C6	2.33	0.64
4:5:1179:G:N3	4:5:1329:C:O2'	2.29	0.64
4:5:2245:A:O2'	39:BA:223:SER:OG	2.14	0.64
80:CA:288:LEU:HB2	80:CA:292:GLN:HE21	1.62	0.64
1:2:458:G:OP1	30:AY:109:LYS:NZ	2.25	0.64
1:2:1241:G:N3	21:AP:79:HIS:ND1	2.45	0.64
4:5:532:G:H2'	4:5:533:A:C8	2.33	0.64
44:BF:47:ARG:HE	44:BF:179:LEU:HD12	1.63	0.64
80:CA:704:GLU:OE2	80:CA:742:ARG:NH2	2.24	0.64
4:5:17:G:H4'	71:Bg:75:TYR:HE1	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:135:C:O2	71:B _g :93:THR:OG1	2.15	0.64
4:5:544:C:O2'	4:5:545:C:O4'	2.13	0.64
14:AI:48:THR:OG1	14:AI:52:ASN:O	2.15	0.64
20:AO:20:TYR:HB3	20:AO:27:PHE:HB2	1.79	0.64
33:Ab:55:THR:HB	33:Ab:60:SER:HB2	1.79	0.64
50:BL:12:TRP:HB2	56:BR:172:TYR:C	2.22	0.64
52:BN:10[A]:ASP:OD2	52:BN:37[A]:ARG:NH2	2.30	0.64
80:CA:380:LEU:HB3	80:CA:403:LYS:HG2	1.78	0.64
80:CA:726:ASN:ND2	80:CA:790:SER:O	2.30	0.64
1:2:67:A:OP1	12:AG:171:LYS:NZ	2.28	0.64
1:2:1401:A:P	23:AR:60:ARG:HH22	2.20	0.64
4:5:2970:A:N7	39:BA:215:ASN:ND2	2.46	0.64
19:AN:104:ARG:NH1	19:AN:104:ARG:HA	2.13	0.64
26:AU:37:VAL:HG21	26:AU:112:VAL:HG11	1.78	0.64
41:BC:3:ARG:HH21	41:BC:22:LEU:HB3	1.62	0.64
43:BE:131:LYS:HG3	43:BE:133:GLU:HG3	1.79	0.64
46:BH:176:LEU:HD21	76:Bl:83:LYS:HZ1	1.63	0.64
55:BQ:160:GLU:HA	55:BQ:163:ARG:HG2	1.80	0.64
71:B _g :13:SER:N	71:B _g :16:GLN:OE1	2.30	0.64
80:CA:221:ALA:HB1	80:CA:294:LEU:HD23	1.79	0.64
80:CA:1269:HIS:HB2	80:CA:1538:VAL:HG11	1.80	0.64
1:2:707:A:N7	1:2:731:C:N4	2.45	0.64
4:5:435:C:H2'	4:5:436:A:H8	1.62	0.64
4:5:1232:A:N3	4:5:1279:A:N6	2.45	0.64
4:5:2096:G:H2'	4:5:2097:A:H8	1.62	0.64
14:AI:153:GLU:HG2	14:AI:155:SER:H	1.61	0.64
45:BG:78:PHE:O	45:BG:79:GLN:HG3	1.98	0.64
61:BW:62:VAL:HG13	61:BW:63:ILE:HG12	1.80	0.64
1:2:594:A:OP2	15:AJ:38:ASN:ND2	2.31	0.64
1:2:1388:A:OP2	23:AR:32:LYS:NZ	2.31	0.64
3:4:27:A:H2'	3:4:28:C:C6	2.33	0.64
13:AH:34:LEU:HD13	13:AH:38:LEU:HD22	1.79	0.64
13:AH:63:PRO:C	13:AH:65:PRO:HD3	2.23	0.64
15:AJ:176:ASN:OD1	15:AJ:180:LYS:NZ	2.31	0.64
19:AN:23:PRO:HD2	19:AN:26:PHE:HB2	1.80	0.64
21:AP:111:MET:HA	24:AS:119:ILE:HD11	1.79	0.64
47:BI:74:LYS:O	47:BI:78:THR:HG23	1.98	0.64
63:BY:23:VAL:HG12	63:BY:45:GLY:HA3	1.79	0.64
80:CA:1255:LYS:O	80:CA:1258:GLN:NE2	2.30	0.64
80:CA:1338:TYR:OH	82:CC:351:ASN:OD1	2.15	0.64
1:2:520:A:H2'	1:2:521:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:597:C:P	44:BF:33:ARG:HH12	2.21	0.64
4:5:1616:C:H2'	4:5:1617:U:C6	2.32	0.64
4:5:2839:A:OP1	47:BI:154:ARG:NH2	2.31	0.64
4:5:3086:G:OP1	60:BV:34:SER:OG	2.08	0.64
15:AJ:18:PRO:O	15:AJ:23:ARG:NH2	2.31	0.64
48:BJ:109:HIS:NE2	48:BJ:114:ILE:HG21	2.13	0.64
81:CB:1:MET:HB2	81:CB:4:ARG:HH12	1.63	0.64
1:2:629:U:H2'	1:2:630:A:H5'	1.79	0.63
1:2:739:G:H2'	1:2:740:A:C4	2.33	0.63
1:2:805:U:O4	13:AH:104:ARG:NH2	2.22	0.63
1:2:1487:A:H2'	1:2:1488:G:C8	2.33	0.63
4:5:114:A:N1	4:5:266:A:O2'	2.29	0.63
4:5:2214:A:H2'	4:5:2215:A:C8	2.32	0.63
4:5:2219:G:H2'	4:5:2220:A:H8	1.63	0.63
6:AA:32:HIS:O	6:AA:32:HIS:ND1	2.30	0.63
4:5:1019:G:O6	4:5:1035:U:O4	2.15	0.63
4:5:2139:A:O2'	73:BI:2:GLY:N	2.30	0.63
7:AB:108:ASP:OD1	7:AB:109:LYS:N	2.31	0.63
18:AM:70:ASN:OD1	18:AM:71:ILE:N	2.31	0.63
22:AQ:13:LYS:HG2	22:AQ:14:LYS:H	1.61	0.63
29:AX:27:ASN:OD1	29:AX:28:ASN:N	2.30	0.63
34:Ac:58:GLU:CD	34:Ac:61:ARG:HD3	2.23	0.63
80:CA:1250:ASN:OD1	80:CA:1253:THR:OG1	2.15	0.63
1:2:1257:U:O4'	16:AK:5:LYS:NZ	2.32	0.63
5:6:69:G:H2'	5:6:70:G:H8	1.63	0.63
37:Af:133:ALA:HB3	37:Af:140:TYR:HB3	1.80	0.63
41:BC:8:VAL:HA	41:BC:151:VAL:HG23	1.79	0.63
46:BH:147:SER:HB2	46:BH:187:ILE:HD11	1.79	0.63
48:BJ:77:GLU:OE2	48:BJ:167:TYR:OH	2.16	0.63
80:CA:1376:VAL:HA	80:CA:1478:LYS:HB3	1.81	0.63
1:2:849:C:H2'	1:2:850:A:H8	1.62	0.63
1:2:1532:U:P	31:AZ:81:ARG:HH22	2.21	0.63
1:2:1553:G:N2	1:2:1555:A:H3'	2.13	0.63
2:3:26:U:O2'	41:BC:51:ALA:O	2.17	0.63
4:5:676:C:O2'	4:5:680:U:OP1	2.14	0.63
4:5:1676:G:H2'	4:5:1677:A:H8	1.62	0.63
4:5:2218:U:H2'	4:5:2219:G:H8	1.64	0.63
6:AA:183:ARG:HD2	6:AA:191:ARG:HH11	1.64	0.63
13:AH:144:VAL:HA	28:AW:42:GLN:HE21	1.62	0.63
40:BB:68:HIS:CD2	40:BB:69:LYS:HG3	2.34	0.63
79:Bo:41:PHE:CD2	79:Bo:62:LYS:HG2	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1119:ARG:NH2	82:CC:191:ASN:O	2.32	0.63
81:CB:6:ASN:HB2	81:CB:37:LYS:HZ2	1.61	0.63
1:2:589:C:O2'	36:Ae:57:ASN:OD1	2.12	0.63
1:2:1280:C:H5'	35:Ad:44:ARG:HH12	1.63	0.63
1:2:1524:A:H2'	1:2:1525:A:H8	1.62	0.63
24:AS:125:ILE:HG22	24:AS:129:TRP:CZ3	2.33	0.63
50:BL:88:ALA:O	50:BL:93:LYS:NZ	2.22	0.63
80:CA:881:TYR:O	80:CA:936:ARG:NH2	2.26	0.63
81:CB:78:ARG:NH2	81:CB:124:GLN:O	2.30	0.63
4:5:170:G:N2	4:5:248:U:O2	2.22	0.63
4:5:2453:G:H2'	4:5:2495:A:H61	1.64	0.63
1:2:12:U:H2'	1:2:13:C:H6	1.64	0.63
78:Bn:8:ARG:O	78:Bn:22:GLN:NE2	2.30	0.63
80:CA:370:LEU:HD22	80:CA:375:ILE:HD13	1.81	0.63
1:2:495:C:H42	80:CA:935:LYS:HA	1.64	0.63
1:2:628:G:N1	1:2:970:A:OP2	2.24	0.63
4:5:1241:A:H61	4:5:1245:A:H2'	1.64	0.63
55:BQ:17:VAL:HG11	55:BQ:52:LYS:HE3	1.80	0.63
80:CA:602:MET:SD	80:CA:607:ARG:NH2	2.72	0.63
80:CA:1119:ARG:NE	82:CC:191:ASN:OD1	2.32	0.63
80:CA:1248:SER:O	80:CA:1285:ARG:NH1	2.32	0.63
1:2:930:A:H1'	7:AB:111:ARG:HH12	1.64	0.63
26:AU:102:ARG:O	80:CA:1105:ARG:NH1	2.32	0.63
47:BI:71:CYS:SG	47:BI:154:ARG:NH1	2.72	0.63
80:CA:223:SER:O	80:CA:224:THR:OG1	2.13	0.63
80:CA:604:ARG:HA	80:CA:607:ARG:HG2	1.81	0.63
4:5:2993:U:OP1	4:5:3311:A:O2'	2.14	0.62
10:AE:209:HIS:HA	10:AE:219:VAL:HG12	1.80	0.62
14:AI:84:HIS:CE1	14:AI:86:SER:HB2	2.33	0.62
16:AK:30:ALA:HA	16:AK:38:LYS:HB3	1.79	0.62
38:Ag:89:LEU:O	38:Ag:103:PHE:N	2.31	0.62
49:BK:76:THR:OG1	49:BK:101:ARG:NH2	2.31	0.62
80:CA:578:SER:HA	80:CA:581:LYS:HE2	1.81	0.62
80:CA:1769:GLN:NE2	80:CA:1952:ASN:O	2.31	0.62
80:CA:1795:ASP:O	80:CA:1810:GLN:NE2	2.32	0.62
4:5:2158:G:N7	39:BA:152:SER:OG	2.27	0.62
11:AF:132:VAL:HG13	11:AF:202:ALA:HB2	1.81	0.62
13:AH:14:THR:N	13:AH:17:GLU:OE2	2.30	0.62
18:AM:126:TRP:HD1	18:AM:128:ALA:HB3	1.63	0.62
81:CB:137:TYR:HB2	81:CB:145:ILE:HD11	1.80	0.62
4:5:3292:G:H2'	4:5:3293:A:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AE:141:THR:OG1	10:AE:143:ASP:OD1	2.16	0.62
13:AH:67:LEU:HD13	13:AH:94:ALA:HB2	1.80	0.62
17:AL:116:ARG:NH1	55:BQ:151:ARG:HH12	1.98	0.62
21:AP:103:ASN:C	21:AP:103:ASN:HD22	2.06	0.62
26:AU:105:GLN:HB3	80:CA:1105:ARG:HH21	1.64	0.62
52:BN:189[A]:ASP:OD1	52:BN:190[A]:VAL:N	2.32	0.62
66:Bb:9:SER:O	66:Bb:13:LYS:NZ	2.26	0.62
80:CA:852:LYS:HE3	80:CA:867:LEU:HD22	1.81	0.62
4:5:177:U:O2	4:5:241:G:O6	2.15	0.62
4:5:634:C:O2'	69:Be:21:ARG:O	2.16	0.62
4:5:3211:A:OP1	50:BL:109:ARG:NH1	2.29	0.62
4:5:3282:U:H2'	4:5:3283:U:H6	1.64	0.62
5:6:63:U:H2'	5:6:64:G:H8	1.64	0.62
11:AF:196:GLU:HA	11:AF:199:ILE:HG22	1.80	0.62
13:AH:133:THR:OG1	13:AH:134:GLU:N	2.31	0.62
16:AK:3:MET:SD	16:AK:8:ARG:NH1	2.72	0.62
38:Ag:144:LEU:HD21	38:Ag:181:TRP:NE1	2.14	0.62
46:BH:21:LYS:HG3	46:BH:22:SER:H	1.62	0.62
80:CA:387:THR:OG1	80:CA:390:GLU:OE1	2.16	0.62
4:5:1015:U:H3	4:5:1037:A:H61	1.46	0.62
4:5:2729:G:N7	57:BS:87:LYS:NZ	2.41	0.62
4:5:3164:A:N6	4:5:3289:G:O6	2.31	0.62
18:AM:47:GLU:HA	18:AM:50:LYS:HB3	1.82	0.62
21:AP:14:THR:OG1	21:AP:21:ASP:OD1	2.12	0.62
46:BH:23:ARG:CD	46:BH:39:LYS:HA	2.29	0.62
1:2:127:G:N7	12:AG:202:ARG:NH1	2.39	0.62
1:2:1318:G:H2'	1:2:1319:A:C8	2.34	0.62
3:4:19:C:H2'	3:4:20:A:H8	1.65	0.62
4:5:1623:U:H2'	4:5:1624:G:H8	1.63	0.62
4:5:3178:G:N7	43:BE:167:ASN:ND2	2.47	0.62
8:AC:188:LEU:HD13	8:AC:196:VAL:HG11	1.81	0.62
80:CA:707:PHE:HD1	80:CA:710:LYS:HZ3	1.48	0.62
1:2:753:A:OP1	10:AE:187:ARG:N	2.31	0.62
4:5:1561:G:H2'	4:5:1562:G:C8	2.34	0.62
4:5:2534:G:H2'	4:5:2535:G:H8	1.64	0.62
4:5:3353:U:O2	4:5:3354:G:N1	2.32	0.62
41:BC:126:ILE:O	41:BC:129:THR:OG1	2.15	0.62
66:Bb:9:SER:OG	66:Bb:10:ILE:N	2.32	0.62
1:2:76:A:N3	1:2:80:A:N6	2.48	0.62
1:2:647:G:H22	1:2:687:G:H1	1.46	0.62
1:2:1367:G:OP1	22:AQ:68:ARG:NH2	2.26	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:861:G:OP1	79:Bo:17:ARG:NH1	2.32	0.62
5:6:1:U:H2'	5:6:2:U:H6	1.65	0.62
9:AD:56:GLN:O	9:AD:60:GLY:N	2.26	0.62
11:AF:206:SER:H	11:AF:211:ILE:HD13	1.63	0.62
39:BA:184:ARG:NH2	79:Bo:14:TYR:OH	2.32	0.62
49:BK:188:ARG:O	49:BK:191:ALA:N	2.31	0.62
56:BR:74:ASN:HD21	56:BR:144:LEU:HD21	1.65	0.62
80:CA:851:LEU:HB3	80:CA:867:LEU:HD21	1.82	0.62
1:2:482:U:H2'	1:2:483:A:H8	1.65	0.62
4:5:613:U:H2'	4:5:614:G:H8	1.65	0.62
4:5:2682:U:O5'	48:BJ:51:ARG:NH1	2.33	0.62
9:AD:33:GLY:HA3	9:AD:53:THR:HG22	1.82	0.62
18:AM:69:ALA:HA	18:AM:72:ILE:HD13	1.81	0.62
30:AY:27:VAL:HG11	30:AY:35:VAL:HG21	1.81	0.62
38:Ag:295:SER:HG	38:Ag:300:THR:HG1	1.40	0.62
46:BH:115:ARG:HH11	46:BH:123:ILE:HD12	1.64	0.62
49:BK:75:PHE:H	49:BK:97:VAL:HA	1.65	0.62
50:BL:105:GLN:HE22	50:BL:109:ARG:HE	1.47	0.62
80:CA:349:VAL:HB	80:CA:396:VAL:HG22	1.81	0.62
1:2:143:G:OP2	12:AG:139:ASN:ND2	2.33	0.62
1:2:151:G:N3	12:AG:13:GLN:NE2	2.48	0.62
1:2:1507:G:H2'	1:2:1508:U:C6	2.35	0.62
3:4:38:U:N3	3:4:41:G:OP2	2.25	0.62
4:5:3166:A:H2'	4:5:3167:C:H6	1.65	0.62
32:Aa:45:VAL:HG23	32:Aa:46:GLU:H	1.64	0.62
42:BD:51:LEU:N	42:BD:145:PHE:O	2.27	0.62
80:CA:261:ASN:HD22	80:CA:491:SER:HB3	1.64	0.62
80:CA:261:ASN:ND2	80:CA:489:ASP:OD2	2.33	0.62
80:CA:1026:SER:OG	80:CA:1057:ARG:NH1	2.32	0.62
80:CA:1126:LEU:HD22	80:CA:1132:GLU:HG3	1.81	0.62
1:2:632:U:OP2	17:AL:102:LYS:NZ	2.28	0.61
2:3:46:G:OP2	75:Bk:15:LYS:NZ	2.33	0.61
50:BL:14:LEU:HD21	56:BR:149:LYS:HD2	1.82	0.61
51:BM:18:VAL:HG13	51:BM:19:LEU:HD12	1.82	0.61
66:Bb:20:SER:O	66:Bb:22:LYS:NZ	2.32	0.61
80:CA:1190:TYR:HB3	80:CA:1238:ILE:HG13	1.82	0.61
1:2:1553:G:O2'	35:Ad:14:TYR:OH	2.10	0.61
4:5:817:A:H5'	4:5:907:A:H61	1.65	0.61
12:AG:68:LEU:HB3	12:AG:69:LEU:HD23	1.81	0.61
24:AS:57:ARG:N	24:AS:60:GLU:OE2	2.33	0.61
38:Ag:38:ARG:HA	38:Ag:67:ILE:HD11	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Ag:202:LEU:HD12	38:Ag:211:ILE:HD11	1.81	0.61
80:CA:1153:ASN:HD21	82:CC:197:LYS:HE3	1.64	0.61
80:CA:1249:ARG:NH1	80:CA:1633:SER:O	2.32	0.61
1:2:1471:A:N3	1:2:1474:G:O2'	2.30	0.61
4:5:431:U:OP1	69:Be:65:ARG:NH1	2.32	0.61
10:AE:36:HIS:CG	10:AE:85:GLY:HA3	2.36	0.61
12:AG:31:ARG:N	12:AG:34:GLN:OE1	2.23	0.61
63:BY:22:LYS:NZ	63:BY:132:SER:O	2.33	0.61
80:CA:998:ILE:HB	80:CA:1084:VAL:HG11	1.82	0.61
1:2:66:U:H5''	12:AG:173:PRO:HB3	1.83	0.61
1:2:227:U:H2'	1:2:228:G:C8	2.35	0.61
1:2:1247:U:H2'	1:2:1248:C:C6	2.35	0.61
1:2:1477:G:H2'	1:2:1478:G:H8	1.65	0.61
1:2:1511:U:H2'	1:2:1512:G:C8	2.35	0.61
4:5:839:G:O6	79:Bo:4:ARG:NH1	2.29	0.61
4:5:1135:G:O3'	65:Ba:6:ASN:ND2	2.34	0.61
10:AE:151:ASP:OD2	12:AG:215:ARG:NH2	2.28	0.61
10:AE:153:ASN:OD1	12:AG:215:ARG:NH1	2.33	0.61
13:AH:17:GLU:HB3	13:AH:46:ILE:HG21	1.82	0.61
20:AO:20:TYR:CB	20:AO:27:PHE:HB2	2.30	0.61
23:AR:20:TYR:CE2	23:AR:38:ILE:HB	2.35	0.61
29:AX:69:ARG:HG3	29:AX:117:ILE:HG23	1.81	0.61
30:AY:60:PHE:H	30:AY:71:GLY:HA2	1.63	0.61
80:CA:288:LEU:HD13	80:CA:292:GLN:HG2	1.81	0.61
80:CA:1162:SER:N	80:CA:1303:SER:O	2.33	0.61
1:2:1521:G:O6	25:AT:68:ARG:NH2	2.31	0.61
7:AB:82:ARG:NH1	7:AB:191:GLU:OE2	2.33	0.61
11:AF:48:PHE:O	11:AF:65:ARG:NH1	2.34	0.61
12:AG:185:GLN:OE1	12:AG:188:ARG:NH1	2.32	0.61
49:BK:77:LEU:HD23	49:BK:99:HIS:HA	1.83	0.61
54:BP:123:THR:N	54:BP:126:GLN:OE1	2.32	0.61
74:Bj:12:LEU:O	74:Bj:15:THR:OG1	2.18	0.61
80:CA:799:GLY:O	80:CA:802:SER:OG	2.17	0.61
1:2:233:C:O2'	1:2:234:G:N2	2.32	0.61
1:2:514:G:H2'	1:2:515:A:C8	2.34	0.61
1:2:1409:G:N2	1:2:1411:A:H3'	2.15	0.61
3:4:44:C:OP2	48:BJ:137:ARG:NH2	2.32	0.61
4:5:1481:G:O2'	4:5:1872:U:O4	2.14	0.61
4:5:2782:U:O3'	49:BK:185:LYS:NZ	2.31	0.61
11:AF:109:LYS:O	11:AF:113:ILE:HG12	2.00	0.61
75:Bk:23:LEU:HD11	75:Bk:35:ILE:HG22	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Bo:39:CYS:CB	79:Bo:42:CYS:SG	2.89	0.61
80:CA:520:VAL:O	80:CA:524:LYS:NZ	2.34	0.61
80:CA:910:LEU:HA	80:CA:913:ILE:HD12	1.82	0.61
80:CA:1878:SER:HB3	80:CA:1931:ILE:HB	1.81	0.61
1:2:200:A:H2'	1:2:201:G:C8	2.36	0.61
4:5:17:G:H4'	71:Bg:75:TYR:CE1	2.35	0.61
10:AE:128:LYS:HD3	10:AE:130:GLN:NE2	2.12	0.61
10:AE:173:ILE:HD11	10:AE:235:TYR:CE2	2.36	0.61
11:AF:125:THR:OG1	11:AF:127:GLN:OE1	2.15	0.61
80:CA:1507:ARG:HB2	80:CA:1510:TYR:HB2	1.83	0.61
82:CC:186:PHE:HD1	82:CC:201:VAL:HA	1.66	0.61
1:2:1297:G:N2	1:2:1300:A:OP2	2.34	0.61
4:5:1368:G:OP1	68:Bd:45:ARG:NH2	2.33	0.61
6:AA:31:VAL:HG12	6:AA:33:GLN:H	1.65	0.61
11:AF:145:ASP:OD1	11:AF:146:THR:N	2.34	0.61
21:AP:108:ARG:HH22	24:AS:119:ILE:HA	1.65	0.61
23:AR:100:LEU:O	23:AR:120:SER:N	2.34	0.61
37:Af:140:TYR:HE1	37:Af:146:SER:HA	1.66	0.61
51:BM:165:THR:HG22	51:BM:166:ALA:H	1.66	0.61
80:CA:1164:THR:O	80:CA:1168:LYS:NZ	2.34	0.61
1:2:227:U:H1'	1:2:834:G:H22	1.66	0.61
2:3:104:A:C8	2:3:105:A:C8	2.89	0.61
4:5:2783:U:H5'	49:BK:185:LYS:NZ	2.14	0.61
18:AM:53:THR:C	18:AM:54:ARG:HD3	2.26	0.61
24:AS:71:GLN:HA	24:AS:74:GLN:HB2	1.81	0.61
38:Ag:19:TRP:N	38:Ag:38:ARG:HB2	2.16	0.61
51:BM:147:ARG:HE	71:Bg:101:THR:HG21	1.65	0.61
80:CA:1081:VAL:HG22	80:CA:1097:ALA:HA	1.81	0.61
80:CA:1554:ILE:HD11	80:CA:1559:ILE:HB	1.83	0.61
1:2:153:G:H3'	30:AY:131:ARG:HH22	1.66	0.61
1:2:1228:G:H5'	18:AM:45:LEU:HD22	1.82	0.61
4:5:592:G:O2'	43:BE:17:ALA:O	2.16	0.61
4:5:762:A:H2'	4:5:763:U:C6	2.35	0.61
5:6:70:G:H2'	5:6:71:A:H8	1.66	0.61
10:AE:18:TRP:NE1	10:AE:41:SER:O	2.33	0.61
38:Ag:66:HIS:CE1	38:Ag:67:ILE:HG22	2.36	0.61
42:BD:155:THR:HG22	42:BD:179:ARG:HD3	1.82	0.61
1:2:265:A:OP2	12:AG:194:LYS:NZ	2.22	0.60
1:2:512:A:O2'	15:AJ:133:HIS:NE2	2.30	0.60
1:2:558:U:OP2	36:Ae:55:ARG:NH2	2.34	0.60
4:5:657:A:H2'	4:5:658:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:1747:U:H2'	4:5:1748:G:H8	1.64	0.60
4:5:1759:G:H2'	4:5:1760:C:C6	2.35	0.60
7:AB:23:PRO:HA	7:AB:26:ARG:NH1	2.16	0.60
10:AE:57:ASN:HB2	10:AE:60:GLU:OE1	2.00	0.60
11:AF:205:SER:HB3	11:AF:207:THR:HG22	1.82	0.60
16:AK:64:TYR:HB3	16:AK:66:TYR:CE1	2.36	0.60
27:AV:17:CYS:HB2	27:AV:56:SER:HB3	1.82	0.60
27:AV:53:TYR:OH	27:AV:72:LEU:O	2.13	0.60
49:BK:3:ILE:HD13	64:BZ:45:MET:HE2	1.82	0.60
54:BP:114:ILE:HD11	54:BP:121:CYS:SG	2.40	0.60
58:BT:33:TYR:HE1	58:BT:37:LEU:HD11	1.65	0.60
62:BX:101:PRO:HA	62:BX:104:LEU:HD12	1.83	0.60
63:BY:57:HIS:HD2	63:BY:61:LYS:HE2	1.64	0.60
80:CA:1193:PRO:HG3	80:CA:1267:GLU:HB3	1.83	0.60
1:2:623:A:O2'	1:2:624:G:OP1	2.19	0.60
1:2:919:A:H2'	1:2:920:U:C6	2.36	0.60
4:5:596:G:H1	4:5:610:G:H5''	1.64	0.60
4:5:1109:U:H2'	4:5:1110:U:C6	2.35	0.60
4:5:2097:A:H2'	4:5:2098:U:C6	2.36	0.60
4:5:2116:G:H22	4:5:2121:A:H1'	1.65	0.60
6:AA:205:ARG:NH2	23:AR:84:TYR:O	2.33	0.60
9:AD:137:VAL:HG22	9:AD:151:LYS:HG3	1.83	0.60
11:AF:83:ARG:HH11	11:AF:83:ARG:HG3	1.65	0.60
14:AI:106:ALA:HB2	14:AI:165:LEU:HG	1.83	0.60
15:AJ:109:LEU:HB2	15:AJ:146:PHE:HB3	1.83	0.60
21:AP:22:LEU:HA	21:AP:25:LEU:HG	1.84	0.60
22:AQ:32:ASN:OD1	22:AQ:68:ARG:NH1	2.30	0.60
38:Ag:184:ASN:OD1	38:Ag:185:GLN:N	2.34	0.60
63:BY:77:TYR:O	66:Bb:35:ARG:NH2	2.35	0.60
75:Bk:28:ARG:HA	75:Bk:33:ASN:ND2	2.16	0.60
79:Bo:38:ASP:HA	79:Bo:45:LYS:HA	1.81	0.60
80:CA:380:LEU:HD12	80:CA:399:THR:HG22	1.83	0.60
1:2:321:C:O2'	1:2:322:G:OP1	2.20	0.60
1:2:1067:C:H5''	7:AB:150:VAL:HG23	1.83	0.60
1:2:1118:G:OP1	77:Bm:21:ARG:NH2	2.34	0.60
1:2:1135:U:OP2	29:AX:121:ARG:NH2	2.34	0.60
3:4:7:G:OP1	42:BD:33:ARG:NH1	2.34	0.60
4:5:1697:A:H2'	4:5:1698:A:C8	2.37	0.60
4:5:2357:A:H61	4:5:2984:C:H5	1.48	0.60
4:5:2527:C:H2'	4:5:2528:G:C8	2.36	0.60
11:AF:94:THR:HG22	11:AF:114:ILE:HG13	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BL:3:THR:OG1	50:BL:4:ASP:N	2.34	0.60
50:BL:43:LYS:NZ	56:BR:96:ASP:OD2	2.34	0.60
61:BW:50:ALA:HB1	71:Bg:66:VAL:HG11	1.83	0.60
70:Bf:98:GLN:HG3	70:Bf:102:LYS:HE2	1.82	0.60
80:CA:785:VAL:N	80:CA:794:ILE:O	2.30	0.60
80:CA:1524:LYS:HD2	80:CA:1527:PHE:HB2	1.83	0.60
81:CB:55:TYR:O	81:CB:61:ASN:ND2	2.29	0.60
1:2:1358:G:H2'	1:2:1359:C:C6	2.36	0.60
1:2:1584:G:OP2	11:AF:76:ARG:NH1	2.34	0.60
4:5:553:G:H2'	4:5:554:U:C6	2.36	0.60
4:5:2622:G:O6	47:BI:113:GLN:NE2	2.34	0.60
5:6:1:U:H2'	5:6:2:U:C6	2.36	0.60
16:AK:62:GLN:NE2	35:Ad:25:SER:OG	2.35	0.60
34:Ac:11:LYS:NZ	34:Ac:12:VAL:O	2.34	0.60
38:Ag:220:ILE:HB	38:Ag:234:LEU:HB3	1.83	0.60
40:BB:188:ILE:HA	40:BB:191:LYS:HB2	1.83	0.60
46:BH:176:LEU:HD21	76:BI:83:LYS:NZ	2.16	0.60
58:BT:50:LEU:HB2	58:BT:54:VAL:HG22	1.83	0.60
80:CA:254:PRO:HD2	80:CA:499:GLN:HB2	1.84	0.60
80:CA:345:ASP:OD1	80:CA:420:LYS:NZ	2.34	0.60
80:CA:1379:ARG:HH11	80:CA:1435:HIS:HD2	1.49	0.60
1:2:1616:G:H2'	1:2:1617:U:C6	2.37	0.60
1:2:1760:G:O2'	1:2:1781:A:N1	2.30	0.60
4:5:292:U:OP2	51:BM:68:ARG:NH2	2.35	0.60
8:AC:76:LEU:HD11	8:AC:133:LYS:HE2	1.82	0.60
38:Ag:68:VAL:HG13	38:Ag:84:SER:HB2	1.81	0.60
54:BP:123:THR:OG1	54:BP:125:ASP:OD1	2.18	0.60
67:Bc:4:LEU:O	67:Bc:79:ARG:NH1	2.34	0.60
80:CA:1349:CYS:SG	81:CB:37:LYS:NZ	2.60	0.60
1:2:970:A:H62	4:5:847:A:H62	1.48	0.60
4:5:568:G:H2'	4:5:569:G:C8	2.36	0.60
4:5:717:A:OP2	64:BZ:137:LYS:NZ	2.34	0.60
4:5:1383:G:OP2	41:BC:188:ARG:NH1	2.30	0.60
4:5:3071:A:OP1	55:BQ:62:ARG:NH1	2.31	0.60
4:5:3220:G:H1	43:BE:162:SER:HG	1.48	0.60
4:5:3254:G:H2'	4:5:3255:G:H8	1.66	0.60
5:6:56:C:O4'	48:BJ:61:ARG:NH1	2.28	0.60
9:AD:61:GLU:OE1	9:AD:62:ASN:ND2	2.33	0.60
37:Af:113:LYS:HD3	37:Af:114:VAL:H	1.67	0.60
50:BL:101:LYS:O	50:BL:105:GLN:N	2.34	0.60
1:2:201:G:H2'	1:2:202:A:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:399:A:H4'	10:AE:3:ARG:HG2	1.84	0.60
1:2:1247:U:H5''	37:Af:94:LYS:N	2.17	0.60
4:5:1614:A:OP1	74:Bj:2:ALA:N	2.34	0.60
4:5:1787:G:H2'	4:5:1788:A:C8	2.36	0.60
4:5:3043:U:OP2	4:5:3093:C:N4	2.34	0.60
62:BX:5:SER:OG	62:BX:7:ASP:OD2	2.16	0.60
64:BZ:24:LYS:O	64:BZ:26:ARG:HG2	2.00	0.60
80:CA:937:LEU:HD21	80:CA:945:CYS:HB2	1.84	0.60
80:CA:1122:PRO:O	80:CA:1124:SER:N	2.31	0.60
80:CA:1569:LEU:HD12	80:CA:1572:THR:HG21	1.84	0.60
1:2:636:A:H5''	28:AW:31:SER:HB2	1.83	0.60
1:2:961:U:H5''	19:AN:71:ILE:HD13	1.84	0.60
23:AR:74:GLN:O	23:AR:78:ARG:N	2.29	0.60
25:AT:37:VAL:HG12	25:AT:39:THR:H	1.66	0.60
32:Aa:12:LYS:HG3	32:Aa:15:ARG:HB2	1.83	0.60
55:BQ:7:GLN:HG2	55:BQ:32:ILE:HG22	1.84	0.60
80:CA:242:ARG:HA	80:CA:252:ILE:HG23	1.84	0.60
80:CA:711:LEU:O	80:CA:715:LEU:HG	2.01	0.60
80:CA:817:GLN:H	82:CC:370:ARG:HH12	1.49	0.60
80:CA:941:ASP:OD2	80:CA:958:ARG:NH1	2.34	0.60
80:CA:1268:ILE:HG12	80:CA:1303:SER:HB3	1.83	0.60
4:5:1020:G:N2	4:5:1034:U:O2	2.24	0.60
4:5:1278:C:O2'	4:5:1279:A:O5'	2.16	0.60
4:5:1391:A:N6	4:5:1419:A:O2'	2.35	0.60
14:AI:76:THR:HG21	14:AI:104:ILE:HD12	1.82	0.60
46:BH:23:ARG:HD2	46:BH:39:LYS:HG2	1.82	0.60
55:BQ:21:LYS:HA	55:BQ:53:LYS:HD2	1.84	0.60
80:CA:949:LEU:HD23	80:CA:987:ARG:HH21	1.66	0.60
81:CB:125:ILE:O	81:CB:166:LYS:NZ	2.35	0.60
7:AB:199:ASN:HA	7:AB:202:LYS:NZ	2.17	0.60
31:AZ:89:ILE:HG22	31:AZ:103:ARG:HA	1.84	0.60
38:Ag:69:GLN:HB2	38:Ag:85:TRP:HE3	1.65	0.60
47:BI:44:ASP:OD1	47:BI:45:GLU:N	2.35	0.60
51:BM:151:ILE:HD11	51:BM:159:ARG:HD2	1.83	0.60
80:CA:268:LYS:NZ	80:CA:269:LEU:O	2.34	0.60
80:CA:427:ASP:HA	80:CA:463:LEU:HB2	1.84	0.60
2:3:103:G:OP2	2:3:105:A:O2'	2.17	0.59
4:5:437:G:H2'	4:5:438:A:C8	2.37	0.59
4:5:529:U:H2'	4:5:530:A:C8	2.37	0.59
8:AC:142:GLY:N	8:AC:153:SER:O	2.35	0.59
17:AL:68:GLY:HA3	17:AL:127:GLN:HE21	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AS:2:SER:O	31:AZ:82:HIS:ND1	2.29	0.59
28:AW:15:ASN:O	28:AW:19:LYS:HG3	2.01	0.59
38:Ag:69:GLN:HB2	38:Ag:85:TRP:CE3	2.37	0.59
49:BK:9:ILE:HD12	64:BZ:34:MET:HE1	1.84	0.59
50:BL:20:VAL:O	50:BL:66:THR:OG1	2.20	0.59
53:BO:110:THR:HG23	53:BO:111:LYS:HD3	1.83	0.59
80:CA:319:ILE:HB	80:CA:463:LEU:HD21	1.84	0.59
1:2:539:G:O2'	1:2:540:G:O5'	2.18	0.59
1:2:1442:U:H2'	1:2:1443:U:C6	2.37	0.59
4:5:1388:G:HO2'	43:BE:2:THR:N	1.99	0.59
4:5:3268:A:OP1	4:5:3269:A:N6	2.34	0.59
47:BI:189:GLU:HB2	47:BI:200:LEU:HB3	1.84	0.59
80:CA:998:ILE:HG13	80:CA:1084:VAL:HG21	1.84	0.59
1:2:704:C:N4	1:2:732:G:O2'	2.36	0.59
1:2:1532:U:O4	31:AZ:97:LYS:NZ	2.36	0.59
4:5:597:C:OP1	44:BF:33:ARG:NH1	2.35	0.59
4:5:3282:U:H2'	4:5:3283:U:C6	2.37	0.59
7:AB:83:LYS:HB3	7:AB:104:ASP:HB3	1.85	0.59
40:BB:360:ASP:OD2	40:BB:364:LYS:NZ	2.34	0.59
56:BR:4:PHE:HD2	56:BR:104:GLU:HG2	1.67	0.59
80:CA:1346:LEU:HB3	80:CA:1350:PRO:HG2	1.84	0.59
1:2:1175:U:H2'	1:2:1176:G:H8	1.65	0.59
1:2:1739:C:H2'	1:2:1740:A:H8	1.66	0.59
4:5:342:A:N1	4:5:349:A:O2'	2.30	0.59
4:5:619:C:OP1	53:BO:173:ARG:NH2	2.35	0.59
4:5:830:U:H3	4:5:896:A:H62	1.50	0.59
4:5:2761:C:N3	78:Bn:63:LYS:NZ	2.50	0.59
23:AR:20:TYR:HD2	23:AR:38:ILE:HD12	1.67	0.59
48:BJ:101:ASN:HD21	48:BJ:130:VAL:HG13	1.67	0.59
49:BK:24:VAL:HG22	51:BM:199:LEU:HD12	1.82	0.59
73:Bi:60:GLY:HA2	73:Bi:64:MET:HE3	1.83	0.59
81:CB:81:LEU:HD12	81:CB:84:ILE:HD11	1.84	0.59
1:2:74:U:H4'	1:2:75:U:H5	1.68	0.59
1:2:283:U:H5''	12:AG:188:ARG:HD3	1.85	0.59
1:2:355:G:OP1	14:AI:17:LYS:NZ	2.35	0.59
4:5:716:A:HO2'	4:5:753:C:HO2'	1.49	0.59
4:5:1393:G:H5''	68:Bd:125:ARG:HH12	1.66	0.59
4:5:1625:G:H2'	4:5:1626:A:H8	1.67	0.59
4:5:2843:U:OP1	4:5:2845:C:N4	2.35	0.59
8:AC:81:MET:N	8:AC:81:MET:SD	2.75	0.59
12:AG:159:ARG:HB3	12:AG:170:THR:HB	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AK:50:THR:OG1	16:AK:55:VAL:HG23	2.03	0.59
32:Aa:5:ARG:HB2	32:Aa:8:ASN:HA	1.84	0.59
51:BM:31:ARG:NH1	51:BM:124:ASP:OD2	2.36	0.59
57:BS:89:LEU:HD23	57:BS:91:LEU:HD11	1.84	0.59
80:CA:862:GLN:NE2	80:CA:863:ILE:O	2.35	0.59
80:CA:1596:VAL:HG12	80:CA:1600:LEU:HD23	1.83	0.59
1:2:1031:U:H4'	1:2:1032:G:OP2	2.01	0.59
1:2:1360:A:HO2'	25:AT:2:PRO:N	2.00	0.59
4:5:3212:C:H2'	4:5:3213:C:C6	2.38	0.59
80:CA:640:ILE:HG23	80:CA:682:ILE:HD11	1.85	0.59
80:CA:1543:HIS:HA	80:CA:1546:LEU:HB3	1.83	0.59
1:2:241:U:H2'	1:2:242:U:H6	1.67	0.59
2:3:151:C:H5	61:BW:24:LEU:HD21	1.66	0.59
3:4:39:C:O2	48:BJ:70:THR:N	2.20	0.59
4:5:628:U:H2'	4:5:629:A:C8	2.37	0.59
4:5:2961:C:H2'	4:5:2962:G:C8	2.38	0.59
4:5:3213:C:OP2	50:BL:124:ARG:NH1	2.33	0.59
9:AD:20:GLU:HG2	9:AD:77:PHE:HZ	1.65	0.59
18:AM:61:VAL:HA	18:AM:88:LEU:HD13	1.85	0.59
38:Ag:270:LEU:HD21	38:Ag:273:ASP:HB2	1.84	0.59
42:BD:123:GLU:HA	42:BD:248:ARG:HH12	1.66	0.59
43:BE:65:VAL:N	43:BE:77:ARG:O	2.31	0.59
49:BK:25:HIS:ND1	51:BM:199:LEU:O	2.27	0.59
52:BN:110[A]:PRO:O	52:BN:112[A]:TYR:N	2.35	0.59
60:BV:4:GLU:HB2	60:BV:13:ILE:HB	1.83	0.59
61:BW:135:ILE:HA	61:BW:138:ARG:HD3	1.84	0.59
76:Bl:97:ARG:NE	76:Bl:122:ARG:HB3	2.18	0.59
78:Bn:2:VAL:N	78:Bn:90:HIS:O	2.35	0.59
80:CA:1903:LEU:HD11	80:CA:1919:ARG:HB3	1.85	0.59
1:2:65:A:H2	1:2:84:A:H62	1.49	0.59
1:2:1211:A:N3	21:AP:97:TYR:OH	2.36	0.59
4:5:2219:G:H2'	4:5:2220:A:C8	2.37	0.59
14:AI:69:SER:OG	14:AI:185:GLU:OE2	2.20	0.59
16:AK:49:LEU:HB3	16:AK:54:TYR:HB2	1.83	0.59
37:Af:140:TYR:CE1	37:Af:146:SER:HA	2.38	0.59
39:BA:80:GLU:HG3	79:Bo:66:GLY:HA2	1.83	0.59
43:BE:52:VAL:HG23	43:BE:67:GLY:HA2	1.85	0.59
46:BH:20:ILE:HG21	46:BH:45:PHE:HD1	1.66	0.59
67:Bc:14:ILE:HD12	67:Bc:16:LEU:HD13	1.84	0.59
80:CA:1773:GLN:NE2	80:CA:1893:CYS:SG	2.76	0.59
82:CC:349:ILE:O	82:CC:353:SER:OG	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1471:A:OP1	11:AF:185:ARG:NH2	2.36	0.59
3:4:107:C:H2'	3:4:108:A:H8	1.68	0.59
4:5:2182:C:OP1	39:BA:192:LYS:NZ	2.35	0.59
34:Ac:13:ILE:HD11	34:Ac:29:ARG:NE	2.18	0.59
38:Ag:149:ASP:H	38:Ag:175:ASP:CG	2.10	0.59
45:BG:101:THR:HG23	45:BG:104:GLU:H	1.67	0.59
80:CA:298:VAL:O	80:CA:302:THR:OG1	2.16	0.59
1:2:687:G:OP1	28:AW:118:ARG:NH1	2.36	0.59
1:2:1488:G:H3'	1:2:1515:A:H61	1.68	0.59
4:5:961:U:H4'	4:5:964:G:N1	2.18	0.59
4:5:1598:C:P	70:Bf:8:ARG:HH22	2.25	0.59
4:5:2501:A:O2'	4:5:2502:U:OP1	2.20	0.59
46:BH:23:ARG:HD3	46:BH:39:LYS:HA	1.84	0.59
62:BX:66:GLN:NE2	62:BX:67:GLU:O	2.36	0.59
80:CA:1539:GLU:OE2	80:CA:1577:ARG:NH2	2.32	0.59
1:2:68:A:H5'	12:AG:160:ARG:HH22	1.68	0.58
1:2:145:A:H2'	1:2:146:U:H6	1.66	0.58
1:2:1592:A:H2'	1:2:1593:A:H8	1.69	0.58
4:5:939:C:OP2	64:BZ:26:ARG:NH1	2.35	0.58
4:5:1303:A:N7	4:5:2858:C:O2'	2.36	0.58
59:BU:80:ARG:NH1	59:BU:117:PRO:O	2.33	0.58
72:Bh:35:ASN:OD1	72:Bh:36:ARG:N	2.36	0.58
77:Bm:23:ARG:HG2	77:Bm:23:ARG:HH11	1.69	0.58
80:CA:1152:TYR:HD1	80:CA:1177:TRP:HB3	1.68	0.58
80:CA:1302:MET:HA	80:CA:1302:MET:HE3	1.84	0.58
1:2:1164:G:H2'	1:2:1165:G:C8	2.38	0.58
1:2:1693:A:N1	1:2:1709:C:N4	2.51	0.58
3:4:110:G:OP2	42:BD:279:LYS:NZ	2.27	0.58
4:5:991:U:H1'	57:BS:101:CYS:HB3	1.84	0.58
4:5:2283:U:H5'	4:5:2283:U:H6	1.68	0.58
8:AC:225:LEU:HD13	27:AV:23:ILE:HD11	1.84	0.58
10:AE:103:TYR:O	10:AE:182:TYR:OH	2.21	0.58
12:AG:161:GLU:OE2	12:AG:169:TYR:N	2.35	0.58
37:Af:136:LYS:NZ	37:Af:137:ASP:OD2	2.36	0.58
42:BD:16:PHE:HE2	42:BD:18:THR:HG22	1.68	0.58
47:BI:76:MET:HE2	47:BI:148:VAL:HA	1.85	0.58
50:BL:16:GLU:CD	56:BR:149:LYS:HG2	2.28	0.58
80:CA:602:MET:SD	80:CA:602:MET:N	2.77	0.58
80:CA:948:ASP:O	80:CA:987:ARG:NH2	2.36	0.58
82:CC:207:LYS:NZ	82:CC:209:LYS:O	2.29	0.58
1:2:712:G:O6	1:2:726:C:O2'	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1164:G:H2'	1:2:1165:G:H8	1.68	0.58
1:2:1209:C:N3	1:2:1455:G:N2	2.51	0.58
1:2:1279:C:O2'	35:Ad:44:ARG:NH1	2.36	0.58
15:Aj:135:ALA:HA	15:Aj:140:ILE:HA	1.85	0.58
16:AK:64:TYR:HB3	16:AK:66:TYR:HE1	1.68	0.58
23:AR:75:GLU:HA	23:AR:78:ARG:HG2	1.85	0.58
45:BG:95:ASN:OD1	45:BG:98:ARG:NH2	2.32	0.58
50:BL:108:ARG:NE	52:BN:196[A]:ALA:O	2.31	0.58
59:BU:11:PHE:CD1	59:BU:88:ARG:HD2	2.38	0.58
80:CA:540:HIS:O	80:CA:542:ARG:NH2	2.36	0.58
82:CC:199:VAL:HG21	82:CC:217:LEU:HD21	1.85	0.58
1:2:20:G:O2'	1:2:554:C:N4	2.35	0.58
1:2:649:U:H2'	1:2:650:U:C6	2.39	0.58
1:2:1394:G:H2'	1:2:1395:G:H8	1.66	0.58
3:4:53:U:O2'	3:4:55:A:N7	2.35	0.58
4:5:1826:G:OP1	74:Bj:48:SER:OG	2.20	0.58
16:AK:14:TYR:HA	16:AK:17:GLN:HE22	1.68	0.58
25:AT:111:ILE:HG23	25:AT:113:ILE:H	1.67	0.58
41:BC:14:GLU:HG2	41:BC:15:ALA:H	1.68	0.58
42:BD:89:THR:HG23	42:BD:90:HIS:ND1	2.19	0.58
46:BH:176:LEU:HD23	46:BH:176:LEU:H	1.68	0.58
80:CA:919:TRP:HB3	80:CA:922:PHE:HB3	1.85	0.58
1:2:1459:C:OP2	24:AS:138:THR:OG1	2.21	0.58
4:5:1566:G:H1	4:5:1575:C:N4	2.00	0.58
4:5:2267:U:O2'	5:6:12:C:O2'	2.20	0.58
22:AQ:55:VAL:HG22	22:AQ:59:LYS:HE3	1.85	0.58
33:Ab:36:LYS:HB2	33:Ab:78:SER:HB2	1.84	0.58
39:BA:36:GLU:OE1	39:BA:163:ARG:NH1	2.35	0.58
62:BX:35:LEU:HD23	62:BX:106:ILE:HB	1.84	0.58
67:Bc:47:ASP:OD1	67:Bc:87:ASN:ND2	2.35	0.58
80:CA:355:LEU:H	80:CA:436:ARG:HH22	1.50	0.58
1:2:127:G:O6	12:AG:202:ARG:NH2	2.32	0.58
1:2:590:C:H2'	1:2:591:A:C8	2.38	0.58
4:5:3320:U:O2'	4:5:3321:A:OP1	2.20	0.58
7:AB:67:GLU:OE1	7:AB:85:LYS:HG2	2.03	0.58
25:AT:45:MET:HA	25:AT:45:MET:HE3	1.84	0.58
44:BF:84:VAL:HG23	44:BF:117:VAL:HB	1.86	0.58
56:BR:23:LYS:HA	56:BR:23:LYS:HE3	1.85	0.58
80:CA:1141:ASN:HB3	80:CA:1143:MET:SD	2.44	0.58
1:2:656:G:C6	1:2:679:U:N3	2.71	0.58
1:2:1186:U:OP1	1:2:1456:C:O2'	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:4:23:A:H1'	3:4:121:U:O3'	2.03	0.58
4:5:87:U:OP2	4:5:98:G:N1	2.24	0.58
4:5:1625:G:H2'	4:5:1626:A:C8	2.38	0.58
4:5:2961:C:H2'	4:5:2962:G:H8	1.69	0.58
11:AF:187:ILE:HG12	31:AZ:66:VAL:HG11	1.85	0.58
16:AK:47:GLN:O	16:AK:51:SER:N	2.29	0.58
25:AT:77:ASN:OD1	25:AT:101:ASN:ND2	2.35	0.58
38:Ag:11:GLY:HA2	38:Ag:52:GLN:HA	1.85	0.58
38:Ag:71:CYS:HA	38:Ag:82:SER:HA	1.84	0.58
48:BJ:49:LYS:HD3	48:BJ:62:ASN:HA	1.85	0.58
48:BJ:110:ILE:H	48:BJ:110:ILE:HD12	1.68	0.58
62:BX:118:LEU:HD11	62:BX:122:LYS:HE2	1.85	0.58
80:CA:1360:PHE:O	80:CA:1364:LYS:NZ	2.28	0.58
1:2:689:G:H2'	1:2:690:G:H8	1.68	0.58
1:2:1534:G:O2'	1:2:1535:U:O5'	2.22	0.58
2:3:37:A:OP2	71:Bg:86:ARG:NH1	2.36	0.58
4:5:185:C:OP1	62:BX:122:LYS:NZ	2.37	0.58
4:5:2229:A:H2'	4:5:2230:A:H8	1.68	0.58
4:5:2782:U:H2'	4:5:2783:U:C6	2.39	0.58
18:AM:50:LYS:O	18:AM:53:THR:OG1	2.14	0.58
21:AP:85:ILE:H	21:AP:85:ILE:HD12	1.69	0.58
27:AV:20:THR:HA	28:AW:23:ARG:HH12	1.68	0.58
33:Ab:50:ALA:H	33:Ab:71:ALA:HB2	1.68	0.58
35:Ad:19:ARG:HE	35:Ad:32:ARG:HE	1.52	0.58
48:BJ:63:GLU:OE1	48:BJ:63:GLU:N	2.37	0.58
67:Bc:54:GLU:HA	67:Bc:57:GLN:HG3	1.85	0.58
80:CA:356:LYS:HG3	80:CA:381:THR:HB	1.84	0.58
80:CA:1264:ILE:HG22	80:CA:1300:LEU:HB3	1.85	0.58
80:CA:1438:LEU:HB2	80:CA:1443:ARG:HD2	1.85	0.58
81:CB:18:ILE:O	81:CB:69:THR:OG1	2.21	0.58
1:2:1317:C:H2'	1:2:1318:G:O4'	2.04	0.58
4:5:1245:A:N6	4:5:1272:A:OP1	2.37	0.58
6:AA:168:HIS:HA	6:AA:203:PHE:CE1	2.39	0.58
18:AM:131:ASP:HA	18:AM:134:SER:HB2	1.86	0.58
23:AR:29:GLN:O	23:AR:33:ARG:NE	2.27	0.58
40:BB:66:LYS:O	40:BB:70:ARG:NH2	2.36	0.58
42:BD:182:GLY:HA2	42:BD:194:LEU:HD12	1.86	0.58
64:BZ:114:GLY:O	64:BZ:137:LYS:NZ	2.34	0.58
80:CA:761:PRO:HG2	81:CB:179:GLU:HG2	1.85	0.58
1:2:13:C:O2'	1:2:1298:U:O4	2.22	0.58
1:2:61:A:O2'	1:2:62:A:O4'	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1209:C:C2	1:2:1455:G:N2	2.72	0.58
4:5:421:G:O6	4:5:2384:C:O2'	2.17	0.58
4:5:785:A:H8	54:BP:69:ARG:HE	1.51	0.58
4:5:1498:C:H2'	4:5:1499:A:C8	2.39	0.58
4:5:3269:A:H5''	43:BE:46:ARG:HH21	1.68	0.58
4:5:3338:G:H2'	4:5:3339:C:C6	2.38	0.58
4:5:3345:A:H2	4:5:3362:G:H21	1.51	0.58
6:AA:84:ARG:NH1	6:AA:203:PHE:O	2.36	0.58
7:AB:78:ASP:OD1	7:AB:79:HIS:ND1	2.37	0.58
10:AE:256:ARG:NH1	10:AE:259:GLN:OE1	2.36	0.58
25:AT:25:GLN:NE2	25:AT:27:LYS:HE2	2.19	0.58
38:Ag:48:THR:OG1	38:Ag:50:ASP:OD1	2.20	0.58
67:Bc:10:ARG:HB2	67:Bc:12:TYR:HE2	1.69	0.58
80:CA:977:GLU:HG3	80:CA:982:LYS:HE2	1.85	0.58
1:2:189:C:H2'	1:2:190:C:C6	2.39	0.57
1:2:859:A:C6	19:AN:73:ARG:HD3	2.39	0.57
1:2:1684:U:H3	1:2:1717:G:H1	1.52	0.57
4:5:1019:G:H1	4:5:1035:U:H3	0.68	0.57
4:5:2746:G:N2	4:5:2749:A:OP2	2.36	0.57
24:AS:73:MET:HE1	24:AS:101:LEU:HD13	1.85	0.57
38:Ag:276:PRO:HG2	38:Ag:278:PHE:HE1	1.69	0.57
48:BJ:109:HIS:HB2	48:BJ:125:MET:HE1	1.85	0.57
49:BK:110:ASP:OD1	49:BK:111:ALA:N	2.36	0.57
80:CA:271:LYS:HG3	80:CA:273:SER:H	1.69	0.57
80:CA:1144:GLN:HB3	80:CA:1147:THR:HB	1.86	0.57
80:CA:1190:TYR:N	80:CA:1237:VAL:O	2.37	0.57
80:CA:1616:CYS:O	80:CA:1627:THR:OG1	2.14	0.57
4:5:375:A:OP2	62:BX:89:LYS:NZ	2.33	0.57
4:5:901:G:H1'	4:5:1590:A:N6	2.19	0.57
4:5:940:U:O2'	4:5:2403:A:N1	2.37	0.57
4:5:1245:A:O2'	4:5:1248:U:OP1	2.22	0.57
4:5:1747:U:O2'	74:Bj:4:GLU:OE2	2.19	0.57
4:5:3158:U:H4'	4:5:3159:G:H5'	1.86	0.57
18:AM:103:LEU:HD11	18:AM:115:VAL:HG23	1.85	0.57
22:AQ:32:ASN:O	22:AQ:68:ARG:NH1	2.37	0.57
26:AU:24:ILE:HG13	26:AU:116:VAL:HG23	1.86	0.57
32:Aa:22:ARG:NH2	32:Aa:27:SER:OG	2.37	0.57
42:BD:214:ASP:OD1	42:BD:215:ASP:N	2.37	0.57
58:BT:29:ASP:OD2	58:BT:32:SER:N	2.34	0.57
80:CA:380:LEU:HD22	80:CA:403:LYS:HE2	1.84	0.57
81:CB:174:LEU:HD23	81:CB:177:LEU:HD12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:71:A:H2'	1:2:72:A:C8	2.39	0.57
1:2:996:U:O2	1:2:1008:G:N2	2.32	0.57
4:5:18:G:OP2	61:BW:46:TYR:OH	2.22	0.57
4:5:1948:G:P	55:BQ:136:ARG:HH21	2.27	0.57
49:BK:186:ARG:NH1	49:BK:186:ARG:HB2	2.20	0.57
54:BP:125:ASP:OD1	54:BP:126:GLN:N	2.37	0.57
76:BL:79:GLU:O	76:BL:82:LEU:N	2.33	0.57
80:CA:980:HIS:ND1	80:CA:980:HIS:O	2.37	0.57
1:2:939:A:H2'	1:2:940:A:H8	1.69	0.57
1:2:1259:U:H2'	1:2:1260:U:C6	2.39	0.57
1:2:1558:U:OP2	1:2:1559:A:O2'	2.18	0.57
3:4:77:G:H5'	56:BR:46:GLN:O	2.04	0.57
4:5:163:C:H2'	4:5:164:A:C8	2.40	0.57
4:5:1718:U:H2'	4:5:1719:G:C8	2.39	0.57
4:5:1835:U:OP2	75:Bk:10:LYS:NZ	2.30	0.57
4:5:1890:G:OP1	40:BB:246:LEU:N	2.37	0.57
4:5:2218:U:H2'	4:5:2219:G:C8	2.39	0.57
4:5:2438:G:OP1	45:BG:70:LYS:NZ	2.36	0.57
4:5:2442:A:H2'	4:5:2443:G:C8	2.39	0.57
4:5:2674:A:OP2	48:BJ:94:ARG:NH1	2.38	0.57
10:AE:87:MET:SD	10:AE:123:LEU:HB2	2.45	0.57
12:AG:26:VAL:HG11	12:AG:40:ALA:HB1	1.86	0.57
40:BB:188:ILE:HG22	40:BB:191:LYS:HD2	1.85	0.57
48:BJ:38:GLU:HG3	48:BJ:45:PRO:HD3	1.86	0.57
52:BN:79[A]:ILE:HG21	52:BN:138[A]:LEU:HD11	1.87	0.57
62:BX:35:LEU:HD12	62:BX:45:ILE:O	2.03	0.57
63:BY:52:LYS:O	63:BY:65:ARG:NE	2.32	0.57
80:CA:1043:ASP:OD1	80:CA:1044:LYS:NZ	2.37	0.57
80:CA:1194:MET:HE3	80:CA:1194:MET:HA	1.86	0.57
80:CA:1288:TYR:OH	80:CA:1567:ASP:O	2.21	0.57
82:CC:199:VAL:HG13	82:CC:203:GLU:HB3	1.86	0.57
1:2:647:G:N2	1:2:687:G:H22	2.01	0.57
1:2:1439:C:H2'	1:2:1440:C:H6	1.68	0.57
3:4:52:G:H21	48:BJ:9:MET:HE1	1.70	0.57
3:4:77:G:N2	3:4:78:U:O4	2.31	0.57
4:5:1265:G:N2	4:5:1266:U:O4	2.37	0.57
4:5:3338:G:H2'	4:5:3339:C:H6	1.70	0.57
13:AH:50:ASP:HA	13:AH:56:LYS:HG3	1.86	0.57
57:BS:119:ALA:HB3	57:BS:126:VAL:HG12	1.84	0.57
62:BX:27:ARG:HD3	62:BX:78:PHE:CE1	2.39	0.57
63:BY:51:LEU:HB2	63:BY:65:ARG:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Bj:5:ILE:HD11	74:Bj:11:PHE:HD2	1.70	0.57
80:CA:299:ALA:O	80:CA:326:ASN:ND2	2.37	0.57
80:CA:408:THR:OG1	80:CA:446:ARG:NH1	2.36	0.57
1:2:199:G:H2'	1:2:200:A:H8	1.69	0.57
1:2:652:G:H1'	1:2:683:C:H42	1.70	0.57
1:2:1280:C:H5'	35:Ad:44:ARG:NH1	2.19	0.57
4:5:1689:U:H2'	4:5:1690:U:C6	2.39	0.57
4:5:3011:U:O2'	4:5:3012:A:H2'	2.04	0.57
23:AR:24:LEU:HD13	23:AR:31:ASN:OD1	2.05	0.57
24:AS:57:ARG:CZ	31:AZ:40:VAL:HG21	2.34	0.57
33:Ab:19:HIS:CE1	33:Ab:21:LEU:HD23	2.39	0.57
34:Ac:58:GLU:OE2	34:Ac:61:ARG:HD3	2.04	0.57
38:Ag:253:ALA:HA	38:Ag:262:VAL:HA	1.87	0.57
59:BU:84:SER:HA	59:BU:94:TYR:HB3	1.87	0.57
71:Bg:31:LEU:HD22	71:Bg:41:LEU:HD21	1.85	0.57
80:CA:1577:ARG:HH22	80:CA:1581:ASN:HD22	1.53	0.57
80:CA:1866:GLU:HB2	80:CA:1875:THR:HB	1.87	0.57
1:2:733:A:N3	1:2:736:C:N4	2.52	0.57
4:5:236:G:H2'	4:5:237:G:H8	1.69	0.57
4:5:3017:A:H2'	4:5:3018:A:C8	2.37	0.57
10:AE:176:ASP:OD1	10:AE:177:ALA:N	2.38	0.57
12:AG:140:ASN:HA	12:AG:143:LYS:NZ	2.20	0.57
13:AH:74:GLN:O	13:AH:78:THR:N	2.38	0.57
24:AS:87:ASN:HD21	24:AS:100:THR:HB	1.70	0.57
52:BN:37[A]:ARG:N	52:BN:107[A]:GLY:O	2.33	0.57
56:BR:81:TYR:HE1	56:BR:88:HIS:HB2	1.70	0.57
78:Bn:76:LYS:O	78:Bn:78:LYS:NZ	2.23	0.57
79:Bo:41:PHE:CE2	79:Bo:62:LYS:HG2	2.39	0.57
80:CA:270:LEU:HB2	80:CA:288:LEU:HD11	1.85	0.57
80:CA:694:VAL:O	80:CA:698:THR:OG1	2.19	0.57
1:2:494:U:N3	80:CA:881:TYR:OH	2.37	0.57
1:2:953:G:OP1	19:AN:94:LYS:NZ	2.28	0.57
1:2:1044:U:H2'	1:2:1045:C:C6	2.40	0.57
3:4:33:U:C2	42:BD:207:TYR:CD1	2.93	0.57
4:5:2274:G:O2'	4:5:2312:G:O6	2.11	0.57
6:AA:84:ARG:HE	6:AA:88:LYS:NZ	2.03	0.57
8:AC:35:TRP:CE2	8:AC:37:PRO:HB3	2.40	0.57
8:AC:99:LYS:HA	8:AC:117:THR:HG22	1.86	0.57
11:AF:47:SER:OG	11:AF:49:GLU:OE1	2.23	0.57
18:AM:97:LEU:HD12	18:AM:100:TRP:HB2	1.87	0.57
22:AQ:40:GLU:HG2	22:AQ:42:GLU:OE2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Aa:83:ILE:HG22	32:Aa:84:VAL:HG13	1.86	0.57
80:CA:662:VAL:HG21	80:CA:693:TYR:HE1	1.70	0.57
80:CA:870:PRO:O	80:CA:874:ALA:N	2.38	0.57
1:2:13:C:H4'	1:2:1298:U:H3	1.70	0.57
1:2:540:G:N2	1:2:542:A:N7	2.53	0.57
1:2:656:G:O6	1:2:679:U:O4	2.22	0.57
4:5:650:A:OP2	4:5:2869:U:O2'	2.23	0.57
4:5:1232:A:H4'	4:5:1262:G:H8	1.70	0.57
4:5:1352:U:H2'	4:5:1353:A:H2'	1.87	0.57
6:AA:200:ASP:HA	6:AA:203:PHE:CD2	2.39	0.57
7:AB:2:ALA:N	20:AO:48:VAL:O	2.38	0.57
12:AG:24:ILE:O	12:AG:26:VAL:N	2.38	0.57
42:BD:59:ASP:OD1	42:BD:60:ILE:N	2.38	0.57
55:BQ:15:VAL:HG23	55:BQ:17:VAL:HG22	1.87	0.57
80:CA:724:VAL:HG23	80:CA:729:GLU:HG2	1.85	0.57
82:CC:326:LEU:O	82:CC:329:GLN:NE2	2.37	0.57
1:2:830:U:H2'	1:2:831:U:C6	2.39	0.57
1:2:970:A:H62	4:5:847:A:N6	2.02	0.57
1:2:1159:C:O2'	22:AQ:140:LYS:NZ	2.36	0.57
1:2:1229:G:H22	1:2:1255:G:HO2'	1.52	0.57
1:2:1390:U:OP1	23:AR:5:ARG:NH1	2.38	0.57
2:3:49:G:C6	2:3:77:A:N1	2.73	0.57
4:5:771:G:H5'	49:BK:168:ARG:HH12	1.69	0.57
4:5:1279:A:O2'	4:5:1280:C:O5'	2.22	0.57
4:5:1668:A:H2'	4:5:1669:G:H8	1.70	0.57
8:AC:223:GLY:HA3	27:AV:25:LYS:HE3	1.87	0.57
24:AS:113:LEU:HD11	24:AS:127:HIS:HB3	1.86	0.57
30:AY:89:TYR:CE1	30:AY:90:ARG:HG3	2.40	0.57
34:Ac:29:ARG:HA	34:Ac:41:VAL:HA	1.86	0.57
38:Ag:88:THR:HG22	38:Ag:104:VAL:HG23	1.87	0.57
39:BA:107:VAL:CG2	39:BA:111:THR:HG21	2.35	0.57
40:BB:375:GLU:OE2	60:BV:14:TYR:OH	2.19	0.57
48:BJ:101:ASN:ND2	48:BJ:130:VAL:HG13	2.20	0.57
62:BX:60:ARG:HB2	62:BX:103:LYS:HB3	1.87	0.57
74:Bj:14:LEU:HD13	74:Bj:17:ARG:HD3	1.85	0.57
76:Bl:83:LYS:HA	76:Bl:83:LYS:HE3	1.86	0.57
80:CA:1400:ARG:HH12	80:CA:1428:GLN:HB3	1.69	0.57
1:2:200:A:H2'	1:2:201:G:H8	1.69	0.56
1:2:656:G:N2	1:2:679:U:O2	2.38	0.56
1:2:1229:G:N2	1:2:1255:G:O2'	2.34	0.56
4:5:1495:U:OP1	75:Bk:42:ARG:NH2	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:2527:C:H2'	4:5:2528:G:H8	1.70	0.56
9:AD:7:LYS:HA	9:AD:10:LYS:HB3	1.86	0.56
34:Ac:9:LEU:HB3	34:Ac:33:LEU:HD12	1.87	0.56
35:Ad:12:ARG:HH11	35:Ad:12:ARG:HG3	1.70	0.56
44:BF:130:ILE:HD12	44:BF:134:VAL:HG11	1.87	0.56
69:Be:14:LEU:HD11	69:Be:31:LYS:HB2	1.85	0.56
80:CA:1397:ASP:OD1	80:CA:1398:ASN:N	2.38	0.56
4:5:826:U:OP1	39:BA:21:ARG:NH1	2.37	0.56
4:5:1623:U:H2'	4:5:1624:G:C8	2.39	0.56
6:AA:23:HIS:O	6:AA:48:ILE:N	2.30	0.56
25:AT:130:ARG:HD3	25:AT:134:ARG:NH2	2.21	0.56
31:AZ:35:ARG:O	31:AZ:37:GLN:NE2	2.33	0.56
38:Ag:17:ASN:H	38:Ag:39:ASP:HB3	1.70	0.56
49:BK:59:ARG:HD2	49:BK:69:VAL:HG12	1.87	0.56
50:BL:12:TRP:NE1	56:BR:151:PRO:HB2	2.20	0.56
80:CA:828:VAL:HA	80:CA:831:MET:HG3	1.87	0.56
80:CA:1053:PHE:CE2	80:CA:1055:LEU:HG	2.41	0.56
1:2:273:G:H1	1:2:283:U:H3	1.52	0.56
1:2:556:A:O2'	36:Ae:57:ASN:OD1	2.21	0.56
1:2:740:A:H2'	1:2:741:C:O4'	2.05	0.56
1:2:992:A:H2	1:2:1012:U:N3	1.93	0.56
4:5:266:A:N6	72:Bh:30:LYS:HA	2.20	0.56
4:5:572:U:H2'	4:5:573:A:H8	1.70	0.56
4:5:1846:G:H5''	4:5:1847:C:H5'	1.86	0.56
4:5:2534:G:H2'	4:5:2535:G:C8	2.41	0.56
6:AA:72:ASP:HB3	6:AA:119:ARG:HG2	1.86	0.56
8:AC:97:ARG:HD3	8:AC:119:LYS:HE3	1.86	0.56
10:AE:36:HIS:CD2	10:AE:85:GLY:HA3	2.41	0.56
12:AG:7:TYR:CE2	12:AG:9:VAL:HB	2.40	0.56
12:AG:23:ARG:O	12:AG:23:ARG:HD3	2.05	0.56
22:AQ:13:LYS:CG	22:AQ:14:LYS:H	2.19	0.56
24:AS:26:ILE:HA	24:AS:57:ARG:NH2	2.20	0.56
24:AS:140:THR:HA	24:AS:143:ARG:HE	1.69	0.56
27:AV:34:ILE:N	27:AV:53:TYR:O	2.37	0.56
39:BA:65:ASP:HB3	39:BA:68:LYS:O	2.05	0.56
39:BA:225:ILE:HG21	39:BA:234:LYS:HA	1.88	0.56
40:BB:110:LEU:HD22	40:BB:114:VAL:HG11	1.87	0.56
47:BI:189:GLU:OE1	47:BI:189:GLU:N	2.38	0.56
50:BL:105:GLN:NE2	52:BN:198[A]:GLY:O	2.26	0.56
53:BO:22:LEU:HD22	53:BO:90:PHE:CE2	2.41	0.56
54:BP:81:VAL:HB	54:BP:101:VAL:HG12	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BQ:151:ARG:NE	55:BQ:152:GLU:OE1	2.38	0.56
58:BT:21:SER:OG	58:BT:105:LEU:O	2.17	0.56
61:BW:78:ASP:OD1	61:BW:79:GLY:N	2.38	0.56
80:CA:469:ASN:ND2	80:CA:472:ASP:OD2	2.38	0.56
80:CA:553:ILE:HG13	80:CA:593:PHE:HB3	1.86	0.56
80:CA:1009:THR:HB	80:CA:1108:ASN:HA	1.87	0.56
80:CA:1321:HIS:HE2	82:CC:178:CYS:HA	1.69	0.56
80:CA:1336:LYS:NZ	80:CA:1337:MET:O	2.38	0.56
80:CA:1705:MET:HE3	80:CA:1705:MET:O	2.05	0.56
1:2:980:G:H4'	1:2:1776:A:H4'	1.88	0.56
3:4:39:C:N3	48:BJ:70:THR:OG1	2.22	0.56
4:5:1258:C:O2	4:5:1262:G:O6	2.23	0.56
4:5:2589:U:OP1	45:BG:48:ARG:NH2	2.39	0.56
4:5:3165:C:O2'	4:5:3166:A:H8	1.89	0.56
6:AA:79:ARG:NH2	6:AA:164:ASN:O	2.33	0.56
11:AF:81:ARG:HD3	11:AF:82:PHE:CE2	2.40	0.56
32:Aa:44:ILE:HG23	32:Aa:45:VAL:HG13	1.87	0.56
44:BF:228:SER:OG	44:BF:232:ARG:NH2	2.36	0.56
48:BJ:31:THR:O	48:BJ:34:SER:OG	2.17	0.56
50:BL:21:VAL:HG12	50:BL:65:LEU:HD23	1.87	0.56
58:BT:20:SER:O	58:BT:23:THR:OG1	2.23	0.56
78:Bn:28:TYR:HB3	78:Bn:69:VAL:HB	1.86	0.56
80:CA:1010:ASN:O	80:CA:1011:VAL:HG13	2.05	0.56
4:5:14:U:H1'	61:BW:42:ARG:NH1	2.20	0.56
4:5:875:U:H5''	4:5:2951:G:OP1	2.04	0.56
9:AD:16:VAL:HG12	35:Ad:50:ILE:HD12	1.88	0.56
24:AS:14:ILE:HB	48:BJ:116:TYR:CD1	2.41	0.56
31:AZ:80:LEU:HD12	31:AZ:101:TYR:CD2	2.41	0.56
38:Ag:156:VAL:HG12	38:Ag:169:ILE:HG22	1.87	0.56
38:Ag:267:PRO:HB2	38:Ag:269:TYR:HD1	1.70	0.56
39:BA:33:ASP:O	39:BA:37:ARG:NE	2.34	0.56
67:Bc:80:ASN:OD1	67:Bc:81:GLU:N	2.38	0.56
80:CA:1909:HIS:NE2	80:CA:1947:GLN:OE1	2.38	0.56
82:CC:210:CYS:HB3	82:CC:215:GLU:H	1.71	0.56
1:2:1085:G:N2	1:2:1088:A:OP2	2.35	0.56
4:5:19:U:H4'	51:BM:138:GLN:HG2	1.86	0.56
4:5:73:C:N3	49:BK:59:ARG:NH2	2.54	0.56
4:5:3296:A:H2'	4:5:3297:A:H8	1.71	0.56
8:AC:83:ILE:HG21	8:AC:121:VAL:HG13	1.88	0.56
15:AJ:82:ARG:NH2	15:AJ:149:ARG:HD3	2.20	0.56
26:AU:23:ARG:HG3	26:AU:92:ASP:OD1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BK:79:GLU:OE1	49:BK:112:ASN:ND2	2.39	0.56
53:BO:30:ARG:HD2	53:BO:63:PHE:CE2	2.41	0.56
81:CB:178:ILE:HG21	81:CB:221:LEU:HD21	1.86	0.56
1:2:512:A:H2'	1:2:513:U:O4'	2.05	0.56
4:5:2661:G:OP1	4:5:2751:U:O2'	2.23	0.56
8:AC:40:LYS:NZ	8:AC:247:ALA:HA	2.21	0.56
12:AG:182:GLN:OE1	12:AG:186:ARG:NH1	2.38	0.56
23:AR:41:ILE:HG21	23:AR:46:LEU:HB3	1.88	0.56
41:BC:329:PRO:HB2	44:BF:45:LEU:HD13	1.87	0.56
68:Bd:83:GLU:O	68:Bd:86:THR:OG1	2.15	0.56
80:CA:468:PRO:HB3	80:CA:700:GLN:HB3	1.88	0.56
80:CA:575:TYR:O	80:CA:578:SER:OG	2.24	0.56
1:2:56:U:OP1	1:2:403:G:N1	2.29	0.56
1:2:1543:A:H2'	1:2:1544:U:O4'	2.06	0.56
4:5:1115:U:OP1	64:BZ:23:GLY:N	2.36	0.56
4:5:1859:A:HO2'	4:5:1860:A:P	2.28	0.56
4:5:2223:A:H8	4:5:2223:A:O5'	1.89	0.56
4:5:2760:U:H5''	4:5:2761:C:H5'	1.86	0.56
6:AA:62:ARG:HH22	27:AV:38:LYS:NZ	2.04	0.56
13:AH:14:THR:OG1	13:AH:17:GLU:OE1	2.24	0.56
21:AP:83:MET:N	21:AP:83:MET:SD	2.77	0.56
29:AX:93:LEU:HD21	36:Ae:8:LEU:HD23	1.87	0.56
33:Ab:40:CYS:HB2	33:Ab:42:ASN:ND2	2.21	0.56
37:Af:100:LEU:HB2	37:Af:103:LEU:HD11	1.88	0.56
42:BD:135:VAL:HG13	42:BD:138:GLY:HA3	1.87	0.56
43:BE:43:LEU:HD11	43:BE:85:ILE:HD11	1.88	0.56
1:2:180:A:H3'	1:2:181:A:H8	1.71	0.56
1:2:1229:G:N2	1:2:1255:G:HO2'	2.04	0.56
1:2:1254:U:H5'	37:Af:143:LYS:HZ1	1.70	0.56
4:5:1268:U:H3'	4:5:1269:G:H8	1.70	0.56
7:AB:26:ARG:O	7:AB:50:LYS:N	2.39	0.56
15:AJ:106:GLU:O	15:AJ:112:GLN:NE2	2.35	0.56
23:AR:71:PHE:HE1	23:AR:73:LEU:HB2	1.70	0.56
27:AV:23:ILE:HD12	27:AV:23:ILE:H	1.71	0.56
29:AX:79:ASN:OD1	29:AX:81:LYS:HG3	2.06	0.56
34:Ac:27:GLN:NE2	34:Ac:65:ARG:HA	2.21	0.56
37:Af:92:LYS:O	37:Af:92:LYS:HD3	2.06	0.56
40:BB:219:ALA:HB2	40:BB:336:VAL:HG23	1.87	0.56
42:BD:16:PHE:CE2	42:BD:18:THR:HG22	2.41	0.56
47:BI:146:ASP:OD1	47:BI:147:VAL:N	2.38	0.56
80:CA:1265:MET:HG2	80:CA:1268:ILE:HG22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1690:ARG:NH2	80:CA:1777:TYR:OH	2.39	0.56
1:2:78:A:O2'	1:2:79:C:O5'	2.22	0.56
1:2:140:A:OP2	1:2:140:A:H4'	2.05	0.56
1:2:407:A:H2'	1:2:408:C:H6	1.71	0.56
1:2:1248:C:H5'	37:Af:92:LYS:HZ3	1.70	0.56
1:2:1701:A:H2'	1:2:1702:A:C8	2.41	0.56
3:4:52:G:O2'	3:4:53:U:OP1	2.23	0.56
4:5:260:C:H2'	4:5:261:U:C6	2.40	0.56
4:5:3176:U:OP1	69:Be:10:LYS:NZ	2.24	0.56
9:AD:163:PRO:O	9:AD:167:PHE:N	2.35	0.56
10:AE:64:ILE:HG23	30:AY:17:LEU:HD22	1.87	0.56
30:AY:111:LYS:HD2	30:AY:114:ARG:NH2	2.21	0.56
41:BC:20:LEU:HD11	41:BC:252:GLU:OE1	2.06	0.56
80:CA:249:GLU:HA	80:CA:504:CYS:HA	1.88	0.56
80:CA:596:GLY:HA2	80:CA:622:LEU:HG	1.88	0.56
80:CA:910:LEU:HD12	80:CA:913:ILE:HB	1.87	0.56
1:2:119:A:H1'	1:2:397:A:C5	2.41	0.55
1:2:479:C:O3'	15:AJ:120:LYS:NZ	2.34	0.55
1:2:959:U:O2	33:Ab:30:SER:OG	2.25	0.55
1:2:1524:A:O2'	25:AT:93:HIS:HB2	2.06	0.55
4:5:269:G:H5''	51:BM:14:LYS:HE2	1.87	0.55
4:5:314:U:H2'	4:5:315:C:H6	1.70	0.55
4:5:836:G:O2'	4:5:858:G:N2	2.25	0.55
4:5:2229:A:H2'	4:5:2230:A:C8	2.41	0.55
4:5:2356:G:OP1	53:BO:141:SER:OG	2.19	0.55
4:5:3200:G:H5''	50:BL:6:ILE:HD13	1.88	0.55
14:AI:84:HIS:HE1	14:AI:86:SER:HB2	1.71	0.55
15:AJ:133:HIS:O	15:AJ:159:ALA:N	2.32	0.55
41:BC:317:PRO:C	41:BC:319:LYS:H	2.14	0.55
47:BI:30:LYS:HG3	47:BI:63:GLU:HB3	1.88	0.55
48:BJ:63:GLU:OE2	48:BJ:65:ILE:HD11	2.05	0.55
49:BK:62:THR:O	49:BK:64:LYS:N	2.39	0.55
56:BR:96:ASP:OD1	56:BR:97:VAL:N	2.34	0.55
67:Bc:81:GLU:HG3	67:Bc:82:GLU:H	1.71	0.55
80:CA:424:LEU:HB3	80:CA:460:ILE:HG22	1.89	0.55
80:CA:747:PRO:HG3	80:CA:757:ILE:HD13	1.88	0.55
80:CA:1112:GLN:OE1	80:CA:1325:ASN:N	2.37	0.55
1:2:473:A:OP1	15:AJ:44:ARG:NH1	2.38	0.55
1:2:1740:A:H2'	1:2:1741:U:H6	1.70	0.55
4:5:162:G:O6	4:5:260:C:N4	2.39	0.55
4:5:3296:A:H2'	4:5:3297:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:6:70:G:H2'	5:6:71:A:C8	2.41	0.55
8:AC:119:LYS:HD2	8:AC:119:LYS:N	2.20	0.55
17:AL:116:ARG:HH22	55:BQ:151:ARG:CZ	2.19	0.55
46:BH:18:VAL:O	50:BL:5:SER:OG	2.14	0.55
80:CA:1390:ILE:HG22	81:CB:91:LEU:HD11	1.88	0.55
1:2:351:C:O2	17:AL:104:HIS:ND1	2.30	0.55
1:2:836:U:H2'	1:2:837:G:H8	1.70	0.55
1:2:1690:G:H2'	1:2:1691:A:C8	2.41	0.55
2:3:77:A:C6	2:3:78:G:C2	2.94	0.55
4:5:129:U:H2'	4:5:130:A:C8	2.41	0.55
4:5:2837:C:H5	4:5:2853:C:H42	1.54	0.55
11:AF:45:LYS:HG3	11:AF:46:TRP:CZ3	2.41	0.55
11:AF:57:SER:OG	11:AF:167:ARG:NH2	2.40	0.55
39:BA:32:LEU:HD13	39:BA:163:ARG:HD3	1.88	0.55
80:CA:1267:GLU:OE2	80:CA:1269:HIS:NE2	2.39	0.55
81:CB:215:ILE:HG21	81:CB:270:LEU:HD23	1.88	0.55
3:4:103:A:H2'	3:4:104:A:O4'	2.07	0.55
4:5:377:A:N6	4:5:400:G:O2'	2.40	0.55
4:5:618:G:OP1	43:BE:108:LYS:NZ	2.40	0.55
4:5:1149:G:H2'	4:5:1150:G:H5'	1.88	0.55
4:5:1405:G:N2	4:5:1408:A:OP2	2.32	0.55
4:5:1502:U:H3	4:5:1516:A:H61	1.54	0.55
4:5:2782:U:O2'	49:BK:185:LYS:NZ	2.31	0.55
4:5:2909:G:H2'	4:5:2910:U:C6	2.41	0.55
9:AD:193:ALA:O	9:AD:200:LYS:NZ	2.40	0.55
15:AJ:29:LYS:HA	36:Ae:40:TYR:HE1	1.72	0.55
15:AJ:126:ARG:HD3	36:Ae:33:ARG:HD3	1.88	0.55
15:AJ:139:GLN:NE2	15:AJ:140:ILE:O	2.40	0.55
19:AN:87:ASP:OD2	19:AN:87:ASP:N	2.38	0.55
70:Bf:93:PHE:HD2	70:Bf:94:LEU:HD22	1.71	0.55
80:CA:1183:PHE:HB2	80:CA:1186:LYS:HE3	1.87	0.55
1:2:495:C:H4'	1:2:496:G:C8	2.42	0.55
1:2:1389:C:N4	1:2:1391:A:O4'	2.39	0.55
8:AC:126:ARG:NH1	8:AC:126:ARG:O	2.40	0.55
25:AT:140:LEU:HD23	25:AT:140:LEU:H	1.71	0.55
31:AZ:48:ASP:OD1	31:AZ:49:ARG:N	2.39	0.55
45:BG:90:THR:HA	45:BG:214:LEU:HD21	1.89	0.55
52:BN:43[A]:ILE:HD11	52:BN:138[A]:LEU:HD13	1.88	0.55
80:CA:504:CYS:SG	80:CA:505:ARG:N	2.80	0.55
80:CA:1498:ILE:HA	80:CA:1501:MET:HG2	1.86	0.55
80:CA:1879:LYS:NZ	80:CA:1880:HIS:O	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1145:U:H5	1:2:1633:A:N1	2.04	0.55
4:5:595:U:OP2	4:5:610:G:N1	2.29	0.55
4:5:1012:A:H2'	4:5:1013:G:C8	2.42	0.55
4:5:2566:U:H3	4:5:2577:G:H1	1.54	0.55
4:5:2896:G:O2'	76:BI:100:TYR:O	2.25	0.55
5:6:63:U:H2'	5:6:64:G:C8	2.40	0.55
7:AB:43:VAL:HG13	7:AB:68:VAL:HG11	1.88	0.55
12:AG:49:VAL:HG12	12:AG:115:LYS:HB3	1.88	0.55
18:AM:43:ARG:HD3	18:AM:102:GLY:N	2.22	0.55
37:Af:101:ALA:O	37:Af:103:LEU:HG	2.07	0.55
39:BA:62:VAL:HG22	39:BA:73:GLU:HB2	1.86	0.55
45:BG:53:PRO:HD3	61:BW:32:PHE:CD2	2.42	0.55
50:BL:116:GLU:HA	50:BL:119:GLN:HG3	1.88	0.55
80:CA:405:ASP:OD1	80:CA:446:ARG:NH1	2.40	0.55
81:CB:81:LEU:HD21	81:CB:133:LEU:HB2	1.88	0.55
1:2:656:G:O6	1:2:679:U:C4	2.59	0.55
1:2:885:G:N2	20:AO:123:SER:O	2.40	0.55
1:2:1793:G:O2'	1:2:1795:U:OP2	2.24	0.55
4:5:2505:U:H2'	4:5:2506:U:C6	2.41	0.55
4:5:3270:U:H4'	4:5:3271:U:O5'	2.07	0.55
5:6:33:U:OP2	22:AQ:143:ARG:NH2	2.39	0.55
5:6:56:C:OP1	48:BJ:61:ARG:NH2	2.38	0.55
11:AF:77:TYR:HB3	11:AF:84:LYS:HA	1.89	0.55
20:AO:30:VAL:HG23	20:AO:39:ILE:HB	1.89	0.55
22:AQ:13:LYS:HE2	22:AQ:76:SER:HA	1.88	0.55
24:AS:14:ILE:HD12	48:BJ:116:TYR:CZ	2.41	0.55
26:AU:50:LEU:HD21	26:AU:95:ALA:HB2	1.89	0.55
31:AZ:90:LYS:HZ3	31:AZ:104:ALA:HA	1.71	0.55
38:Ag:22:SER:HB3	38:Ag:36:ALA:HB3	1.88	0.55
48:BJ:100:GLY:HA2	48:BJ:156:LYS:HA	1.89	0.55
49:BK:183:ARG:HA	49:BK:186:ARG:NH2	2.22	0.55
52:BN:42[A]:ASN:ND2	52:BN:136[A]:THR:O	2.27	0.55
55:BQ:19:LYS:O	55:BQ:22:VAL:HG12	2.07	0.55
63:BY:76:ASN:OD1	63:BY:77:TYR:N	2.40	0.55
80:CA:917:ARG:HE	82:CC:354:ASP:HB3	1.71	0.55
80:CA:994:ARG:HB3	80:CA:1029:HIS:HE1	1.72	0.55
1:2:228:G:O6	1:2:834:G:H1'	2.07	0.55
4:5:92:G:H5'	4:5:93:C:H5''	1.88	0.55
4:5:121:A:C6	45:BG:129:PRO:HG3	2.41	0.55
4:5:722:G:H2'	4:5:723:G:H8	1.71	0.55
4:5:1949:G:C2	4:5:2100:A:C2	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:3193:U:H2'	4:5:3194:C:C6	2.42	0.55
42:BD:60:ILE:HB	42:BD:80:SER:OG	2.07	0.55
52:BN:37[A]:ARG:HG3	52:BN:108[A]:ILE:CD1	2.37	0.55
52:BN:157[A]:GLU:OE1	52:BN:160[A]:ARG:NE	2.34	0.55
58:BT:33:TYR:CE1	58:BT:37:LEU:HD11	2.41	0.55
63:BY:119:GLU:O	63:BY:123:GLN:HG2	2.07	0.55
80:CA:230:ALA:HA	80:CA:238:VAL:H	1.71	0.55
80:CA:967:LEU:HD12	80:CA:992:LEU:HD11	1.87	0.55
82:CC:334:ARG:O	82:CC:338:PHE:N	2.34	0.55
1:2:153:G:H2'	1:2:154:G:H8	1.71	0.55
1:2:520:A:H2'	1:2:521:A:H8	1.69	0.55
1:2:1479:A:OP1	25:AT:57:ARG:NE	2.36	0.55
4:5:16:A:H5''	61:BW:44:PRO:HB3	1.88	0.55
4:5:28:C:O2'	4:5:61:A:N3	2.40	0.55
4:5:770:G:O2'	49:BK:168:ARG:NH1	2.40	0.55
4:5:1350:G:O6	4:5:1356:A:N6	2.40	0.55
4:5:1563:C:H2'	4:5:1564:C:C6	2.42	0.55
4:5:3352:U:H5''	4:5:3353:U:C4	2.42	0.55
10:AE:181:VAL:HG12	10:AE:227:VAL:HG12	1.87	0.55
11:AF:43:PHE:CD2	11:AF:44:ASN:N	2.75	0.55
54:BP:94:PHE:CE1	64:BZ:119:PRO:HD3	2.41	0.55
59:BU:108:GLU:HA	59:BU:128:ARG:HG3	1.89	0.55
64:BZ:85:ASP:OD2	64:BZ:86:LYS:HG3	2.07	0.55
69:Be:6:ARG:HD2	69:Be:8:TYR:H	1.70	0.55
80:CA:1773:GLN:HB2	80:CA:1775:TYR:CD1	2.41	0.55
4:5:1016:U:O2	4:5:1018:C:O2'	2.25	0.55
4:5:1390:G:H5''	68:Bd:101:SER:HB3	1.89	0.55
4:5:1676:G:H2'	4:5:1677:A:C8	2.42	0.55
4:5:1758:A:H2'	4:5:1759:G:H8	1.72	0.55
4:5:3288:U:H3'	4:5:3289:G:C8	2.42	0.55
21:AP:84:ILE:HG23	21:AP:113:GLY:HA2	1.88	0.55
23:AR:31:ASN:O	23:AR:35:CYS:N	2.30	0.55
24:AS:86:LEU:HD12	24:AS:97:ASP:HB3	1.88	0.55
24:AS:116:LEU:HD21	24:AS:123:ARG:NH1	2.22	0.55
51:BM:126:THR:HG23	51:BM:127:TYR:CD2	2.41	0.55
51:BM:183:THR:HG22	51:BM:187:ARG:HB2	1.88	0.55
55:BQ:102:LEU:HD22	55:BQ:138:LEU:HD22	1.89	0.55
80:CA:1746:GLN:OE1	80:CA:1919:ARG:NH2	2.39	0.55
1:2:157:A:H2	1:2:419:G:H21	1.55	0.54
1:2:1251:U:H1'	37:Af:135:HIS:CD2	2.42	0.54
1:2:1433:G:O2'	35:Ad:24:CYS:SG	2.65	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1592:A:H2'	1:2:1593:A:C8	2.42	0.54
2:3:135:G:OP2	61:BW:56:ARG:NH2	2.39	0.54
4:5:1563:C:O2'	4:5:1564:C:O5'	2.25	0.54
6:AA:183:ARG:HD3	6:AA:191:ARG:HD2	1.89	0.54
10:AE:59:ARG:NH2	30:AY:87:PRO:HG3	2.22	0.54
26:AU:25:THR:C	26:AU:26:LEU:HD12	2.32	0.54
38:Ag:10:ARG:HB2	38:Ag:314:GLN:HE22	1.70	0.54
44:BF:156:ILE:HG13	44:BF:172:ASN:HD21	1.72	0.54
49:BK:165:SER:O	49:BK:167:PHE:N	2.40	0.54
1:2:1429:G:H2'	1:2:1430:U:C6	2.42	0.54
4:5:208:C:H2'	4:5:209:A:O4'	2.07	0.54
4:5:564:U:H2'	4:5:565:G:H8	1.71	0.54
4:5:788:G:H2'	4:5:789:C:H6	1.70	0.54
4:5:1012:A:H2'	4:5:1013:G:H8	1.71	0.54
4:5:1925:U:O2'	4:5:1928:G:O6	2.23	0.54
4:5:3372:G:H2'	4:5:3373:A:H8	1.72	0.54
6:AA:98:ILE:HD11	6:AA:116:LYS:HE3	1.88	0.54
16:AK:32:HIS:ND1	16:AK:35:ILE:HD13	2.23	0.54
19:AN:40:TYR:HD1	19:AN:43:LYS:HZ1	1.53	0.54
31:AZ:80:LEU:HD12	31:AZ:101:TYR:HD2	1.71	0.54
42:BD:83:LEU:O	42:BD:86:TYR:N	2.28	0.54
54:BP:152:HIS:ND1	54:BP:162:ALA:O	2.39	0.54
80:CA:1336:LYS:N	80:CA:1514:GLY:O	2.39	0.54
80:CA:1478:LYS:HE2	80:CA:1478:LYS:HA	1.89	0.54
80:CA:1719:HIS:NE2	80:CA:1771:ILE:O	2.34	0.54
1:2:705:U:O2'	1:2:706:A:O5'	2.20	0.54
1:2:763:G:H4'	10:AE:255:ARG:NH2	2.21	0.54
1:2:1368:G:P	25:AT:69:LYS:HZ3	2.29	0.54
2:3:38:U:O2'	71:Bg:83:LYS:NZ	2.39	0.54
3:4:19:C:H2'	3:4:20:A:C8	2.43	0.54
4:5:2577:G:H2'	4:5:2578:C:C6	2.42	0.54
4:5:3271:U:C6	43:BE:46:ARG:HD2	2.42	0.54
8:AC:82:ASN:ND2	8:AC:207:LEU:HD23	2.20	0.54
9:AD:40:ARG:NE	26:AU:110:PRO:HB3	2.22	0.54
13:AH:153:LEU:HD12	13:AH:186:PRO:HG3	1.88	0.54
33:Ab:19:HIS:HE1	33:Ab:21:LEU:HD23	1.71	0.54
38:Ag:5:GLU:HB2	38:Ag:315:VAL:HB	1.88	0.54
38:Ag:9:LEU:HA	38:Ag:313:TRP:CD1	2.42	0.54
38:Ag:289:ALA:HA	38:Ag:305:TYR:HA	1.89	0.54
44:BF:240:VAL:O	44:BF:244:ASN:N	2.38	0.54
64:BZ:21:ARG:HH12	68:Bd:38:ILE:HG23	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:Bn:63:LYS:HD3	78:Bn:87:ARG:NH1	2.22	0.54
80:CA:438:SER:HB2	80:CA:706:ARG:HH11	1.73	0.54
80:CA:1762:LEU:HB3	80:CA:1803:PHE:CZ	2.42	0.54
1:2:78:A:N1	12:AG:178:LEU:HD23	2.23	0.54
1:2:129:U:HO2'	1:2:131:C:N4	2.05	0.54
1:2:241:U:H2'	1:2:242:U:C6	2.42	0.54
1:2:777:C:H5	30:AY:10:ARG:HH21	1.54	0.54
1:2:1118:G:P	77:Bm:21:ARG:HH22	2.29	0.54
1:2:1160:A:H2'	1:2:1161:C:C6	2.42	0.54
4:5:377:A:O2'	4:5:391:A:N1	2.37	0.54
4:5:638:C:C2	4:5:639:C:C5	2.94	0.54
4:5:953:A:H4'	4:5:969:G:N2	2.22	0.54
4:5:1121:A:H2'	4:5:1122:U:H6	1.72	0.54
4:5:1825:U:O3'	74:Bj:17:ARG:NH2	2.41	0.54
4:5:3380:C:H4'	40:BB:315:GLY:HA2	1.90	0.54
18:AM:94:ALA:HA	18:AM:97:LEU:HB3	1.90	0.54
56:BR:81:TYR:CE1	56:BR:88:HIS:HB2	2.43	0.54
61:BW:59:SER:O	61:BW:102:LEU:HD11	2.06	0.54
80:CA:304:GLU:HA	80:CA:459:ARG:HE	1.72	0.54
80:CA:782:GLN:O	80:CA:796:LYS:HD2	2.07	0.54
1:2:406:U:H2'	1:2:407:A:H8	1.71	0.54
2:3:69:U:H2'	2:3:70:G:O4'	2.08	0.54
4:5:551:A:H2'	4:5:552:A:H8	1.72	0.54
4:5:1061:U:H2'	4:5:1062:A:H8	1.73	0.54
5:6:68:G:H2'	5:6:69:G:H8	1.71	0.54
11:AF:26:ALA:HB3	22:AQ:28:LEU:HB3	1.90	0.54
36:Ae:22:GLU:H	36:Ae:22:GLU:CD	2.15	0.54
56:BR:83:SER:OG	56:BR:86:GLY:O	2.24	0.54
64:BZ:77:LYS:C	64:BZ:79:TRP:H	2.15	0.54
80:CA:1202:VAL:HG22	80:CA:1238:ILE:HD13	1.89	0.54
1:2:536:C:H5''	15:AJ:175:ARG:NH1	2.21	0.54
1:2:1316:G:OP1	23:AR:7:LYS:N	2.39	0.54
1:2:1636:C:H4'	1:2:1637:C:O5'	2.06	0.54
2:3:12:A:OP1	53:BO:3:ARG:NE	2.38	0.54
4:5:1835:U:OP1	75:Bk:5:LYS:NZ	2.40	0.54
4:5:3323:A:H2'	4:5:3324:A:C8	2.42	0.54
6:AA:142:PRO:HB3	27:AV:34:ILE:HD11	1.87	0.54
8:AC:176:SER:N	8:AC:195:ASP:OD2	2.41	0.54
47:BI:181:TYR:HA	47:BI:184:LYS:HB2	1.89	0.54
53:BO:169:THR:HG21	53:BO:171:ARG:NH2	2.23	0.54
1:2:513:U:H2'	1:2:514:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:102:C:O2'	49:BK:62:THR:OG1	2.21	0.54
4:5:313:A:H2'	4:5:314:U:C6	2.43	0.54
4:5:885:A:OP2	4:5:2140:A:N6	2.41	0.54
4:5:915:A:C6	39:BA:204:MET:HE2	2.43	0.54
4:5:1220:C:O2'	4:5:1287:A:N1	2.38	0.54
4:5:1814:A:O2'	4:5:1817:A:N3	2.37	0.54
4:5:1865:A:OP1	55:BQ:88:ARG:NH1	2.40	0.54
4:5:2407:C:H2'	4:5:2408:C:C6	2.43	0.54
6:AA:127:ARG:CZ	6:AA:152:PRO:HD3	2.38	0.54
11:AF:174:LEU:HD13	11:AF:177:ILE:HD11	1.90	0.54
14:AI:39:GLY:O	14:AI:59:ARG:HB3	2.07	0.54
27:AV:71:ARG:HD3	33:Ab:4:VAL:HG11	1.89	0.54
32:Aa:3:LYS:HE3	32:Aa:8:ASN:OD1	2.06	0.54
43:BE:112:THR:HG23	43:BE:115:GLU:H	1.73	0.54
51:BM:153:ASP:OD1	51:BM:154:PRO:HD2	2.08	0.54
54:BP:57:ILE:HB	54:BP:147:ARG:NH1	2.21	0.54
54:BP:106:PHE:CE2	54:BP:121:CYS:HB3	2.43	0.54
70:Bf:79:SER:HB3	70:Bf:80:ARG:HH11	1.72	0.54
80:CA:1672:LEU:HD11	80:CA:1733:ASP:HB2	1.88	0.54
1:2:486:G:N2	1:2:501:U:O2'	2.27	0.54
1:2:1344:A:H2'	1:2:1345:A:C8	2.43	0.54
1:2:1525:A:H2'	1:2:1526:A:H8	1.73	0.54
1:2:1553:G:H22	1:2:1555:A:H3'	1.73	0.54
4:5:1389:U:O2'	68:Bd:99:ASN:O	2.26	0.54
4:5:1800:A:H2'	4:5:1801:A:C8	2.43	0.54
15:AJ:105:LEU:HD23	15:AJ:108:ARG:HD2	1.89	0.54
37:Af:111:GLU:N	37:Af:112:GLY:HA2	2.22	0.54
37:Af:120:GLU:OE1	37:Af:130:VAL:N	2.37	0.54
57:BS:65:TYR:CD1	57:BS:75:ILE:HG13	2.43	0.54
80:CA:588:LYS:NZ	80:CA:592:GLN:OE1	2.40	0.54
80:CA:1373:LEU:HD23	80:CA:1475:VAL:HG22	1.90	0.54
1:2:590:C:H2'	1:2:591:A:H8	1.72	0.54
1:2:1171:A:H2'	1:2:1172:G:C8	2.43	0.54
1:2:1483:A:OP2	1:2:1521:G:N2	2.29	0.54
1:2:1542:G:N2	1:2:1568:C:O2'	2.39	0.54
1:2:1546:G:H2'	1:2:1547:A:H8	1.73	0.54
1:2:1677:C:O3'	14:AI:59:ARG:NH2	2.41	0.54
4:5:1080:A:H2'	4:5:1081:A:C8	2.42	0.54
4:5:1349:U:H5''	4:5:1350:G:C5	2.43	0.54
4:5:2793:A:H5'	78:Bn:84:THR:HG21	1.89	0.54
26:AU:87:HIS:HB3	26:AU:89:ARG:HH11	1.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AW:89:TRP:O	28:AW:93:LEU:HD23	2.08	0.54
31:AZ:89:ILE:HD12	31:AZ:101:TYR:HB3	1.90	0.54
43:BE:100:LYS:NZ	43:BE:137:ASP:OD1	2.41	0.54
49:BK:7:LEU:O	64:BZ:49:HIS:NE2	2.39	0.54
72:Bh:45:ARG:HH21	72:Bh:50:LEU:HD23	1.71	0.54
80:CA:638:CYS:SG	80:CA:639:VAL:N	2.81	0.54
1:2:398:G:OP2	14:AI:47:ARG:NH2	2.31	0.54
1:2:405:C:O2'	12:AG:92:ARG:O	2.24	0.54
1:2:498:G:H2'	1:2:499:U:O2	2.08	0.54
4:5:502:A:H4'	43:BE:28:GLN:HG3	1.90	0.54
4:5:516:C:O2'	41:BC:342:LYS:O	2.19	0.54
4:5:1223:G:N2	4:5:1286:G:O2'	2.39	0.54
4:5:2358:A:H2'	4:5:2359:A:C8	2.43	0.54
4:5:3023:G:O2'	4:5:3032:G:O6	2.22	0.54
4:5:3212:C:C2	4:5:3213:C:C5	2.96	0.54
4:5:3372:G:H2'	4:5:3373:A:C8	2.43	0.54
5:6:5:U:H2'	5:6:6:C:C6	2.43	0.54
6:AA:41:ARG:HG2	6:AA:42:PRO:HD2	1.88	0.54
7:AB:205:PHE:HB3	7:AB:207:LEU:HD23	1.90	0.54
9:AD:115:ILE:HD11	9:AD:138:VAL:HG11	1.88	0.54
9:AD:141:LYS:O	9:AD:182:LEU:HD21	2.08	0.54
12:AG:67:VAL:H	12:AG:100:ALA:HB2	1.71	0.54
15:AJ:168:ARG:HH21	15:AJ:174:ARG:CZ	2.20	0.54
19:AN:104:ARG:HA	19:AN:104:ARG:CZ	2.38	0.54
22:AQ:31:VAL:O	22:AQ:33:GLY:N	2.41	0.54
31:AZ:89:ILE:HB	31:AZ:102:THR:O	2.08	0.54
39:BA:21:ARG:HE	39:BA:22:LEU:HG	1.73	0.54
80:CA:432:LEU:HA	80:CA:437:GLY:HA3	1.90	0.54
1:2:1410:A:C6	1:2:1411:A:C2	2.97	0.53
1:2:1477:G:C4	1:2:1478:G:C8	2.96	0.53
1:2:1693:A:H2'	1:2:1694:A:H8	1.72	0.53
4:5:94:G:H2'	4:5:95:A:C8	2.43	0.53
4:5:243:G:H2'	4:5:244:G:H8	1.73	0.53
4:5:2408:C:H2'	4:5:2409:U:H6	1.71	0.53
4:5:3257:G:H2'	4:5:3258:C:C6	2.43	0.53
11:AF:45:LYS:HE3	11:AF:46:TRP:CH2	2.44	0.53
24:AS:3:LEU:HA	31:AZ:82:HIS:CE1	2.43	0.53
26:AU:56:VAL:HB	26:AU:90:TYR:CE1	2.43	0.53
51:BM:140:LYS:CE	51:BM:144:ARG:HH12	2.21	0.53
1:2:849:C:H2'	1:2:850:A:C8	2.43	0.53
1:2:1172:G:H21	25:AT:88:VAL:HG21	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3:126:A:O2'	2:3:129:C:N4	2.40	0.53
4:5:164:A:N6	4:5:258:G:O6	2.41	0.53
4:5:764:G:O2'	4:5:765:U:OP1	2.23	0.53
4:5:904:U:N3	4:5:905:A:N7	2.56	0.53
4:5:2446:A:H2	4:5:2503:A:H61	1.56	0.53
4:5:3163:C:H2'	4:5:3164:A:C8	2.42	0.53
4:5:3192:G:O3'	52:BN:176[A]:LYS:NZ	2.39	0.53
6:AA:4:PRO:HG2	6:AA:6:THR:HG22	1.89	0.53
10:AE:104:ASP:HB3	10:AE:110:ALA:HB2	1.90	0.53
13:AH:39:ARG:HG3	13:AH:40:PRO:HD3	1.90	0.53
13:AH:107:ARG:HD3	13:AH:108:GLN:N	2.20	0.53
14:AI:152:ILE:HG13	14:AI:153:GLU:N	2.23	0.53
22:AQ:47:LYS:HD3	22:AQ:50:GLU:CD	2.33	0.53
24:AS:29:VAL:HG23	24:AS:54:LEU:HD13	1.90	0.53
24:AS:88:ARG:NH1	24:AS:112:ASP:OD2	2.41	0.53
29:AX:89:ASN:HB2	29:AX:92:CYS:SG	2.48	0.53
47:BI:206:LEU:O	47:BI:210:ILE:HG12	2.09	0.53
48:BJ:173:ASP:OD1	48:BJ:173:ASP:N	2.42	0.53
71:Bg:24:LEU:HA	71:Bg:27:GLU:OE1	2.09	0.53
80:CA:1620:HIS:HB2	80:CA:1623:ASP:HB3	1.89	0.53
1:2:1336:A:H2'	1:2:1337:A:C8	2.43	0.53
1:2:1357:A:H2'	1:2:1358:G:H8	1.72	0.53
1:2:1740:A:H2'	1:2:1741:U:C6	2.43	0.53
15:AJ:176:ASN:HA	15:AJ:179:ARG:NH2	2.23	0.53
38:Ag:182:ASN:ND2	38:Ag:185:GLN:H	2.06	0.53
38:Ag:295:SER:OG	38:Ag:300:THR:OG1	2.18	0.53
40:BB:86:VAL:HG22	40:BB:162:VAL:HG12	1.90	0.53
50:BL:31:LYS:HD3	50:BL:51:ALA:HB1	1.90	0.53
63:BY:99:GLU:O	63:BY:106:GLN:NE2	2.42	0.53
64:BZ:88:ASP:OD1	64:BZ:89:GLN:N	2.42	0.53
80:CA:1093:GLU:OE2	80:CA:1095:THR:OG1	2.24	0.53
80:CA:1775:TYR:HD2	80:CA:1779:ASP:HB2	1.71	0.53
1:2:1:U:O4	15:AJ:53:ARG:NH2	2.42	0.53
1:2:154:G:OP2	30:AY:131:ARG:NH1	2.39	0.53
1:2:183:U:H2'	1:2:184:C:C6	2.43	0.53
1:2:332:U:OP1	14:AI:31:ARG:NH1	2.38	0.53
1:2:1435:G:C4	16:AK:59:PHE:CE2	2.97	0.53
1:2:1755:A:H2'	4:5:2257:A:N6	2.24	0.53
4:5:135:C:H1'	71:Bg:93:THR:OG1	2.09	0.53
4:5:595:U:P	4:5:610:G:H1	2.30	0.53
8:AC:56:ILE:HG23	8:AC:61:LEU:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AC:106:ASP:OD1	8:AC:107:SER:N	2.40	0.53
9:AD:119:ALA:O	9:AD:122:VAL:HG12	2.09	0.53
44:BF:40:LYS:O	44:BF:43:ILE:N	2.40	0.53
50:BL:66:THR:HG22	50:BL:99:TRP:HZ3	1.74	0.53
56:BR:155:ARG:NH2	56:BR:171:PHE:O	2.41	0.53
71:Bg:78:LYS:HG3	71:Bg:81:ARG:NH2	2.23	0.53
1:2:156:A:C2	1:2:415:C:H1'	2.44	0.53
3:4:45:A:H2'	3:4:46:A:C8	2.43	0.53
3:4:71:G:H2'	3:4:72:A:C8	2.43	0.53
4:5:2298:U:O2	4:5:2921:U:H5'	2.09	0.53
4:5:3069:U:OP2	55:BQ:62:ARG:NH2	2.34	0.53
11:AF:43:PHE:N	11:AF:46:TRP:O	2.29	0.53
15:AJ:100:LYS:HD3	15:AJ:101:VAL:H	1.73	0.53
20:AO:48:VAL:HG21	20:AO:53:ASP:HB2	1.89	0.53
20:AO:128:LYS:HE3	32:Aa:27:SER:HB2	1.91	0.53
22:AQ:30:LYS:HB3	25:AT:7:ARG:HH12	1.73	0.53
38:Ag:176:LYS:NZ	38:Ag:196:ASN:HA	2.23	0.53
46:BH:112:ILE:HB	46:BH:126:VAL:HG23	1.91	0.53
52:BN:188[A]:SER:C	52:BN:192[A]:LYS:HZ2	2.17	0.53
61:BW:73:MET:HA	61:BW:73:MET:HE3	1.91	0.53
80:CA:1201:ARG:HH21	80:CA:1205:TRP:HH2	1.56	0.53
80:CA:1628:PRO:HA	80:CA:1631:SER:HB3	1.90	0.53
80:CA:1773:GLN:HB2	80:CA:1775:TYR:HD1	1.73	0.53
1:2:268:C:H2'	1:2:269:G:H8	1.73	0.53
1:2:826:U:H2'	1:2:827:C:H6	1.73	0.53
1:2:1315:U:P	1:2:1328:G:H1	2.32	0.53
4:5:917:G:H5'	4:5:918:A:OP1	2.09	0.53
4:5:963:A:N1	4:5:2815:G:O2'	2.39	0.53
7:AB:33:LYS:HB3	7:AB:97:LEU:HD23	1.90	0.53
8:AC:97:ARG:NH1	8:AC:117:THR:OG1	2.42	0.53
9:AD:40:ARG:HE	26:AU:110:PRO:HB3	1.73	0.53
10:AE:8:HIS:O	10:AE:30:ARG:HD2	2.08	0.53
10:AE:11:ARG:NH1	10:AE:21:ASP:O	2.40	0.53
10:AE:94:ALA:O	10:AE:95:THR:OG1	2.24	0.53
21:AP:39:ALA:HA	21:AP:42:ARG:HE	1.72	0.53
21:AP:96:ILE:HB	21:AP:103:ASN:HD21	1.74	0.53
62:BX:38:GLU:HG2	62:BX:39:LEU:HD12	1.90	0.53
1:2:295:A:C6	1:2:296:U:C4	2.96	0.53
1:2:522:U:OP1	30:AY:37:LYS:HG2	2.09	0.53
1:2:656:G:N1	1:2:679:U:C2	2.77	0.53
1:2:1569:A:H2'	1:2:1570:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:1720:G:OP2	55:BQ:121:HIS:ND1	2.25	0.53
4:5:1795:G:O2'	4:5:1797:G:N2	2.42	0.53
4:5:2619:G:OP1	4:5:2645:C:O2'	2.24	0.53
4:5:3182:C:H2'	4:5:3183:G:C8	2.43	0.53
4:5:3212:C:H2'	4:5:3213:C:H6	1.72	0.53
46:BH:31:ARG:NH2	46:BH:85:GLY:HA3	2.24	0.53
49:BK:51:LEU:HD22	49:BK:139:LEU:HD12	1.91	0.53
76:Bl:97:ARG:HE	76:Bl:122:ARG:HB3	1.72	0.53
80:CA:921:LYS:HE3	80:CA:1045:SER:HA	1.91	0.53
1:2:1048:G:O3'	33:Ab:69:GLY:HA3	2.08	0.53
1:2:1280:C:OP1	35:Ad:44:ARG:NH2	2.40	0.53
1:2:1584:G:HO2'	1:2:1610:G:H1	1.56	0.53
4:5:187:A:N3	4:5:208:C:O2'	2.37	0.53
4:5:514:G:C5	4:5:580:G:C6	2.97	0.53
4:5:849:A:C5	4:5:850:C:H1'	2.44	0.53
4:5:2766:C:O3'	78:Bn:39:GLY:HA3	2.09	0.53
4:5:3119:C:H4'	76:Bl:106:ARG:HH22	1.72	0.53
4:5:3164:A:H2'	4:5:3165:C:C6	2.43	0.53
7:AB:138:PHE:O	7:AB:213:ARG:HB2	2.09	0.53
12:AG:57:ASP:HA	12:AG:106:LEU:HA	1.90	0.53
26:AU:61:LYS:HB2	26:AU:86:ILE:HB	1.91	0.53
28:AW:66:ASN:ND2	28:AW:68:ARG:HH11	2.07	0.53
38:Ag:249:ARG:HB3	38:Ag:251:TRP:HE3	1.74	0.53
40:BB:137:TYR:O	40:BB:139:GLN:NE2	2.42	0.53
59:BU:13:ILE:HG13	59:BU:53:SER:HB3	1.90	0.53
78:Bn:35:LEU:HD12	78:Bn:36:PHE:H	1.74	0.53
80:CA:409:ARG:HB3	80:CA:803:SER:HB3	1.89	0.53
4:5:235:A:H2'	4:5:236:G:H8	1.72	0.53
4:5:505:A:O2'	41:BC:315:LYS:NZ	2.42	0.53
4:5:1747:U:H2'	4:5:1748:G:C8	2.44	0.53
4:5:2524:A:C5	45:BG:51:LYS:HG3	2.44	0.53
4:5:3220:G:O6	69:Be:5:HIS:NE2	2.42	0.53
12:AG:159:ARG:HG2	12:AG:172:ALA:HB2	1.91	0.53
15:AJ:172:VAL:O	15:AJ:176:ASN:N	2.27	0.53
17:AL:68:GLY:HA3	17:AL:127:GLN:NE2	2.23	0.53
26:AU:28:SER:OG	26:AU:30:LYS:O	2.13	0.53
48:BJ:76:ALA:HA	48:BJ:79:ILE:HG22	1.90	0.53
57:BS:83:ARG:HH12	57:BS:85:LEU:HD11	1.74	0.53
61:BW:136:ALA:HB1	61:BW:141:TYR:CE1	2.44	0.53
66:Bb:24:THR:OG1	66:Bb:91:SER:OG	2.26	0.53
1:2:1535:U:C4	11:AF:187:ILE:HA	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:1064:G:C6	57:BS:109:VAL:HG22	2.44	0.53
4:5:3110:G:H21	46:BH:156:GLN:HE22	1.56	0.53
8:AC:81:MET:HE3	8:AC:103:VAL:HG23	1.91	0.53
19:AN:151:ASN:HD21	66:Bb:15:ALA:HB2	1.73	0.53
26:AU:26:LEU:HB3	26:AU:34:LEU:HD11	1.91	0.53
43:BE:63:LEU:O	43:BE:78:ARG:HA	2.09	0.53
48:BJ:54:VAL:H	48:BJ:59:ILE:CG2	2.22	0.53
56:BR:8:GLN:HE21	56:BR:26:ARG:NE	2.00	0.53
80:CA:1468:VAL:O	80:CA:1504:ARG:NH1	2.41	0.53
80:CA:1602:SER:O	80:CA:1606:SER:N	2.39	0.53
1:2:1546:G:H2'	1:2:1547:A:C8	2.44	0.52
4:5:530:A:H2'	4:5:531:G:H8	1.74	0.52
4:5:1061:U:H2'	4:5:1062:A:C8	2.44	0.52
4:5:1266:U:H2'	4:5:1267:G:H8	1.72	0.52
4:5:1448:G:N2	4:5:2357:A:OP2	2.42	0.52
4:5:1616:C:H2'	4:5:1617:U:H6	1.73	0.52
4:5:2539:U:O2'	4:5:2542:U:N3	2.25	0.52
4:5:3254:G:H2'	4:5:3255:G:C8	2.44	0.52
4:5:3355:U:O2	14:AI:77:ARG:NH1	2.42	0.52
9:AD:211:PRO:HG3	23:AR:20:TYR:HE1	1.74	0.52
10:AE:42:LEU:HD21	10:AE:47:PHE:CD1	2.44	0.52
11:AF:156:ARG:HA	11:AF:156:ARG:NH1	2.24	0.52
12:AG:14:LYS:HG2	12:AG:124:LEU:HD21	1.91	0.52
19:AN:64:ARG:HH12	19:AN:69:ASN:HA	1.73	0.52
22:AQ:21:HIS:HB3	22:AQ:23:LYS:NZ	2.24	0.52
23:AR:24:LEU:O	23:AR:24:LEU:HD12	2.09	0.52
26:AU:30:LYS:NZ	26:AU:111:GLY:HA3	2.24	0.52
38:Ag:66:HIS:ND1	38:Ag:67:ILE:HG22	2.24	0.52
39:BA:133:TYR:HB3	39:BA:168:VAL:HG12	1.91	0.52
48:BJ:81:GLU:OE2	48:BJ:85:LYS:NZ	2.42	0.52
80:CA:1547:ASP:HA	80:CA:1550:LEU:HD23	1.91	0.52
80:CA:1693:VAL:HG21	80:CA:1710:VAL:HG13	1.91	0.52
1:2:58:U:O2'	1:2:451:A:N3	2.41	0.52
1:2:607:G:H5'	1:2:613:G:N2	2.24	0.52
1:2:651:G:H1	1:2:683:C:H41	1.58	0.52
1:2:746:A:N6	13:AH:104:ARG:HH12	2.07	0.52
1:2:1044:U:H2'	1:2:1045:C:H6	1.73	0.52
4:5:1648:A:H2'	4:5:1649:A:H8	1.74	0.52
4:5:2510:U:H2'	4:5:2511:U:C6	2.44	0.52
4:5:2681:A:C2	48:BJ:57:PHE:HB3	2.44	0.52
14:AI:140:GLU:HA	14:AI:143:TRP:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AK:7:ASP:O	16:AK:11:ILE:N	2.32	0.52
16:AK:56:LYS:NZ	16:AK:67:THR:HB	2.24	0.52
52:BN:37[A]:ARG:HG3	52:BN:108[A]:ILE:HD12	1.91	0.52
54:BP:180:ARG:HH11	54:BP:185:LYS:HD2	1.73	0.52
79:Bo:29:LEU:HD23	79:Bo:69:TYR:CD2	2.45	0.52
80:CA:240:THR:HB	80:CA:254:PRO:HB3	1.90	0.52
1:2:407:A:H2'	1:2:408:C:C6	2.44	0.52
1:2:655:G:H4'	1:2:656:G:C8	2.45	0.52
1:2:1078:C:H2'	1:2:1079:U:C6	2.44	0.52
1:2:1682:U:O4	1:2:1720:G:N2	2.42	0.52
4:5:90:C:O2'	4:5:282:G:OP1	2.26	0.52
4:5:428:A:H2'	4:5:429:U:C6	2.44	0.52
4:5:3190:G:H1	4:5:3204:U:H3	1.56	0.52
4:5:3276:U:H5'	69:Be:68:TRP:HZ2	1.74	0.52
4:5:3284:U:H2'	4:5:3285:G:C8	2.43	0.52
7:AB:48:VAL:HG21	7:AB:61:LEU:HD13	1.91	0.52
8:AC:35:TRP:CE2	8:AC:67:GLN:HB2	2.44	0.52
9:AD:108:LYS:HD2	9:AD:118:ALA:HB1	1.92	0.52
19:AN:56:ASP:OD1	33:Ab:52:THR:HG22	2.08	0.52
22:AQ:45:ARG:O	22:AQ:48:VAL:HG12	2.10	0.52
26:AU:20:ILE:N	26:AU:94:GLU:OE1	2.42	0.52
29:AX:107:PHE:CD1	29:AX:123:LYS:HB3	2.44	0.52
53:BO:108:ASP:OD2	53:BO:111:LYS:HE2	2.08	0.52
54:BP:76:ALA:HA	54:BP:79:LYS:HD2	1.91	0.52
59:BU:101:VAL:HB	59:BU:109:MET:HE3	1.91	0.52
80:CA:659:ILE:HD11	80:CA:697:ILE:HB	1.91	0.52
80:CA:1380:ARG:HE	80:CA:1381:GLN:NE2	2.07	0.52
1:2:199:G:H2'	1:2:200:A:C8	2.43	0.52
1:2:430:G:H2'	1:2:431:C:C6	2.44	0.52
1:2:1756:A:H3'	4:5:2257:A:N6	2.21	0.52
2:3:65:A:H2'	2:3:66:A:H8	1.75	0.52
4:5:216:G:H4'	62:BX:19:TYR:CE2	2.44	0.52
4:5:1247:G:O2'	4:5:1248:U:O4'	2.26	0.52
4:5:1466:A:H2'	4:5:1467:G:O4'	2.09	0.52
4:5:1494:G:O6	75:Bk:2:ALA:N	2.42	0.52
4:5:2511:U:H2'	4:5:2512:A:C8	2.36	0.52
4:5:2513:C:H2'	4:5:2514:U:C6	2.45	0.52
7:AB:97:LEU:HD22	7:AB:232:HIS:CG	2.44	0.52
13:AH:114:ARG:HA	13:AH:117:THR:HG23	1.91	0.52
21:AP:61:ARG:HG3	21:AP:64:LYS:HZ3	1.75	0.52
40:BB:135:ALA:O	40:BB:139:GLN:NE2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BG:160:ILE:O	45:BG:164:VAL:HG13	2.09	0.52
66:Bb:11:ASN:OD1	66:Bb:12:GLN:N	2.42	0.52
70:Bf:74:ARG:NH2	70:Bf:82:ALA:HA	2.24	0.52
80:CA:842:LYS:O	80:CA:844:ARG:NH1	2.43	0.52
80:CA:1047:ILE:HG21	80:CA:1050:PHE:HB3	1.90	0.52
80:CA:1383:ARG:O	80:CA:1387:LEU:HG	2.08	0.52
80:CA:1392:LEU:HA	80:CA:1395:MET:HE1	1.92	0.52
1:2:161:U:P	12:AG:87:ARG:HH21	2.33	0.52
1:2:1223:A:H2'	1:2:1224:A:C8	2.43	0.52
1:2:1382:A:H2'	1:2:1383:G:H8	1.73	0.52
4:5:414:U:N3	4:5:415:G:N7	2.57	0.52
4:5:1276:C:H2'	4:5:1277:U:C6	2.45	0.52
4:5:1910:A:H2'	4:5:1911:A:C8	2.45	0.52
4:5:2900:C:O2'	4:5:2902:G:OP2	2.25	0.52
7:AB:38:PHE:CE2	7:AB:73:LEU:HD13	2.45	0.52
8:AC:66:PHE:CE2	8:AC:67:GLN:NE2	2.76	0.52
13:AH:8:ILE:O	13:AH:42:GLN:HG3	2.09	0.52
13:AH:64:VAL:HG23	13:AH:67:LEU:HB2	1.92	0.52
80:CA:994:ARG:HD3	80:CA:1023:VAL:HG13	1.92	0.52
80:CA:1498:ILE:HA	80:CA:1501:MET:CG	2.39	0.52
80:CA:1639:SER:O	80:CA:1641:LEU:N	2.39	0.52
1:2:513:U:H2'	1:2:514:G:C8	2.44	0.52
1:2:887:A:H5''	20:AO:120:PRO:HB2	1.92	0.52
1:2:1739:C:H2'	1:2:1740:A:C8	2.45	0.52
1:2:1757:G:OP2	4:5:2257:A:N6	2.42	0.52
4:5:144:A:H2'	4:5:145:G:O4'	2.10	0.52
4:5:260:C:H2'	4:5:261:U:H6	1.74	0.52
4:5:438:A:H8	4:5:438:A:O5'	1.92	0.52
4:5:641:U:H2'	4:5:642:C:C6	2.45	0.52
4:5:1660:U:H2'	4:5:1661:C:C6	2.45	0.52
4:5:3262:C:P	50:BL:126:GLN:HE21	2.32	0.52
7:AB:97:LEU:HD22	7:AB:232:HIS:CD2	2.45	0.52
9:AD:177:MET:SD	9:AD:179:GLN:NE2	2.83	0.52
11:AF:125:THR:O	11:AF:127:GLN:N	2.43	0.52
38:Ag:9:LEU:HD13	38:Ag:313:TRP:HE1	1.74	0.52
38:Ag:129:LYS:HZ3	38:Ag:149:ASP:HA	1.74	0.52
39:BA:107:VAL:HG22	39:BA:111:THR:HG21	1.92	0.52
41:BC:300:ARG:O	54:BP:39:ARG:NH2	2.35	0.52
48:BJ:15:GLU:OE1	48:BJ:15:GLU:N	2.43	0.52
50:BL:35:ILE:HD13	50:BL:46:ILE:HG22	1.91	0.52
78:Bn:27:GLN:O	78:Bn:29:LYS:NZ	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:990:LYS:O	80:CA:994:ARG:NH1	2.43	0.52
80:CA:1661:ARG:HD3	80:CA:1696:THR:HG22	1.92	0.52
1:2:1218:G:H22	1:2:1444:A:P	2.33	0.52
1:2:1757:G:H5'	4:5:2257:A:C6	2.45	0.52
4:5:224:C:O2'	62:BX:102:SER:O	2.26	0.52
4:5:2656:U:H4'	4:5:2657:A:O4'	2.08	0.52
10:AE:158:ASP:OD1	10:AE:175:PHE:N	2.43	0.52
23:AR:18:GLU:CD	23:AR:70:SER:H	2.17	0.52
25:AT:130:ARG:HH11	25:AT:134:ARG:HH22	1.58	0.52
36:Ae:50:VAL:HA	36:Ae:54:ARG:HA	1.92	0.52
40:BB:190:GLU:HA	40:BB:193:ASP:HB2	1.92	0.52
41:BC:3:ARG:CZ	41:BC:24:ALA:HA	2.39	0.52
42:BD:129:TYR:OH	42:BD:175:HIS:O	2.27	0.52
48:BJ:164:LYS:HZ1	48:BJ:171:VAL:HG22	1.75	0.52
66:Bb:86:ARG:NH1	79:Bo:44:LYS:HG2	2.24	0.52
81:CB:74:ARG:NH1	81:CB:124:GLN:OE1	2.43	0.52
1:2:190:C:C5	1:2:191:C:H1'	2.44	0.52
1:2:215:A:H2'	1:2:216:U:O4'	2.08	0.52
1:2:414:C:N4	1:2:420:A:N1	2.58	0.52
1:2:473:A:H2'	1:2:474:A:O4'	2.10	0.52
1:2:1078:C:H2'	1:2:1079:U:H6	1.74	0.52
1:2:1382:A:H2'	1:2:1383:G:C8	2.45	0.52
1:2:1691:A:H2'	1:2:1692:G:C8	2.39	0.52
4:5:3041:A:H5''	59:BU:12:ARG:HB2	1.92	0.52
7:AB:223:PHE:CE2	7:AB:225:VAL:HG22	2.45	0.52
23:AR:36:ASP:OD1	23:AR:37:GLU:N	2.43	0.52
38:Ag:212:ALA:HA	38:Ag:222:LEU:HA	1.92	0.52
76:Bl:113:ARG:HH11	76:Bl:113:ARG:HG3	1.75	0.52
79:Bo:10:ILE:HD13	79:Bo:30:GLU:HG2	1.90	0.52
80:CA:1187:LYS:HG3	80:CA:1259:ASP:HB3	1.90	0.52
1:2:805:U:N3	1:2:806:A:N7	2.58	0.52
1:2:884:A:H2'	1:2:885:G:C8	2.44	0.52
1:2:919:A:H2'	1:2:920:U:H6	1.75	0.52
1:2:1381:U:H1'	1:2:1516:A:N6	2.25	0.52
1:2:1486:G:N1	1:2:1522:U:O4	2.42	0.52
1:2:1586:A:H1'	1:2:1611:A:H61	1.75	0.52
1:2:1791:A:O3'	32:Aa:8:ASN:ND2	2.33	0.52
2:3:26:U:H2'	2:3:27:U:C6	2.45	0.52
4:5:431:U:H2'	4:5:432:G:H8	1.73	0.52
4:5:1668:A:H2'	4:5:1669:G:C8	2.45	0.52
4:5:1758:A:H2'	4:5:1759:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AC:54:GLU:CD	27:AV:12:TYR:HB2	2.35	0.52
12:AG:153:VAL:HA	12:AG:156:PHE:HD2	1.74	0.52
19:AN:29:SER:OG	19:AN:31:GLU:OE1	2.19	0.52
22:AQ:49:TYR:O	22:AQ:53:LEU:HG	2.10	0.52
28:AW:101:TYR:HA	28:AW:113:HIS:CE1	2.45	0.52
38:Ag:179:LYS:NZ	38:Ag:180:ALA:O	2.40	0.52
41:BC:58:HIS:HA	41:BC:90:PHE:HE1	1.75	0.52
46:BH:12:VAL:HB	46:BH:51:GLN:HA	1.92	0.52
46:BH:36:LYS:HB2	46:BH:78:MET:CE	2.40	0.52
52:BN:39[A]:GLU:HG2	52:BN:40[A]:GLU:HG3	1.91	0.52
80:CA:595:PHE:CE2	80:CA:619:ILE:HA	2.45	0.52
80:CA:1664:SER:O	80:CA:1709:HIS:ND1	2.41	0.52
1:2:169:A:C8	1:2:171:A:N7	2.78	0.52
1:2:765:G:H21	1:2:765:G:P	2.33	0.52
1:2:1462:G:O2'	5:6:30:G:OP1	2.28	0.52
2:3:29:U:H5''	49:BK:27:ASP:HB3	1.92	0.52
2:3:149:A:H2'	2:3:150:G:C8	2.45	0.52
4:5:184:U:H2'	4:5:185:C:C6	2.45	0.52
4:5:1601:U:H3	4:5:1606:A:H62	1.58	0.52
4:5:2441:G:H2'	4:5:2442:A:H8	1.75	0.52
4:5:2855:U:OP2	47:BI:3:ARG:NH2	2.40	0.52
4:5:3299:C:C2	4:5:3300:A:C8	2.98	0.52
8:AC:238:SER:OG	8:AC:241:ASP:OD2	2.28	0.52
18:AM:68:GLU:OE2	18:AM:70:ASN:ND2	2.43	0.52
23:AR:33:ARG:HG2	38:Ag:109:ASP:OD2	2.10	0.52
25:AT:113:ILE:HG22	25:AT:114:VAL:HG23	1.92	0.52
28:AW:122:SER:OG	28:AW:123:GLY:N	2.43	0.52
34:Ac:57:MET:HA	34:Ac:57:MET:HE3	1.91	0.52
67:Bc:18:LYS:HE2	67:Bc:19:ARG:NH1	2.25	0.52
69:Be:53:TYR:CZ	69:Be:65:ARG:HB2	2.45	0.52
80:CA:1269:HIS:ND1	80:CA:1303:SER:HB2	2.25	0.52
80:CA:1336:LYS:HB3	80:CA:1515:THR:HA	1.92	0.52
80:CA:1524:LYS:HG3	80:CA:1528:TYR:CE2	2.45	0.52
80:CA:1576:ARG:O	80:CA:1580:HIS:ND1	2.43	0.52
1:2:207:U:O2	14:AI:178:ARG:NH1	2.43	0.51
1:2:444:C:N4	1:2:459:G:OP2	2.29	0.51
4:5:517:A:H2'	4:5:518:G:H8	1.75	0.51
4:5:1279:A:O2'	4:5:1280:C:H6	1.93	0.51
4:5:1718:U:H2'	4:5:1719:G:H8	1.75	0.51
4:5:2308:G:O2'	4:5:2311:U:OP2	2.27	0.51
4:5:2315:U:HO2'	4:5:2316:G:P	2.33	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AC:173:PRO:HG2	15:AJ:57:ARG:HD3	1.91	0.51
24:AS:63:GLN:HA	24:AS:66:LEU:HD12	1.92	0.51
27:AV:71:ARG:HG2	27:AV:71:ARG:HH11	1.75	0.51
67:Bc:25:PHE:HB3	67:Bc:65:LYS:HB3	1.91	0.51
80:CA:1336:LYS:HB3	80:CA:1515:THR:HG22	1.91	0.51
1:2:142:G:N2	1:2:173:A:H2	2.09	0.51
3:4:71:G:H2'	3:4:72:A:H8	1.76	0.51
4:5:364:G:O2'	4:5:365:A:O4'	2.27	0.51
4:5:2361:C:O2'	4:5:2363:C:OP2	2.23	0.51
4:5:3114:A:C2	4:5:3123:A:C4	2.98	0.51
5:6:9:G:O2'	5:6:45:G:N2	2.43	0.51
9:AD:32:GLU:O	9:AD:52:ALA:HB1	2.10	0.51
17:AL:118:GLN:N	17:AL:121:ASP:OD2	2.37	0.51
18:AM:137:MET:N	18:AM:137:MET:SD	2.82	0.51
24:AS:14:ILE:HG12	24:AS:23:ASP:HA	1.91	0.51
47:BI:193:ASP:OD2	47:BI:198:LYS:HG3	2.09	0.51
70:Bf:57:LEU:HB3	70:Bf:61:GLN:HB3	1.91	0.51
74:Bj:32:ASN:OD1	74:Bj:33:LYS:N	2.43	0.51
81:CB:1:MET:O	81:CB:4:ARG:NH1	2.44	0.51
1:2:1011:G:N2	1:2:1012:U:O4	2.44	0.51
1:2:1524:A:H2	1:2:1590:G:H1'	1.76	0.51
2:3:60:U:H3	71:Bg:56:THR:HG22	1.75	0.51
4:5:557:U:C4	4:5:561:G:C6	2.98	0.51
4:5:696:C:OP1	41:BC:119:ARG:NE	2.41	0.51
4:5:3051:U:O2'	60:BV:16:GLY:O	2.26	0.51
7:AB:33:LYS:HG3	7:AB:232:HIS:HD2	1.76	0.51
8:AC:143:TYR:CE1	8:AC:151:PRO:HA	2.46	0.51
16:AK:40:LEU:O	16:AK:44:LYS:HG2	2.10	0.51
20:AO:111:ARG:HH21	32:Aa:56:ALA:C	2.18	0.51
31:AZ:43:ASP:OD2	31:AZ:45:GLU:N	2.44	0.51
35:Ad:21:CYS:HB3	35:Ad:26:SER:H	1.76	0.51
42:BD:79:TYR:O	42:BD:82:GLU:HG2	2.10	0.51
48:BJ:28:ASP:OD2	48:BJ:32:ARG:NE	2.34	0.51
52:BN:27[A]:LEU:HD22	52:BN:101[A]:ARG:HB2	1.91	0.51
61:BW:105:VAL:HG23	61:BW:130:TYR:HD2	1.75	0.51
70:Bf:8:ARG:HD2	70:Bf:32:ALA:O	2.09	0.51
73:Bi:59:THR:HG22	73:Bi:64:MET:HE2	1.93	0.51
80:CA:286:GLU:OE1	80:CA:287:THR:HG23	2.10	0.51
1:2:59:C:O2'	1:2:60:U:O5'	2.27	0.51
1:2:279:G:C4	1:2:281:G:C8	2.98	0.51
2:3:114:G:HO2'	4:5:1531:U:HO2'	1.48	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:261:U:H2'	4:5:262:U:C6	2.45	0.51
4:5:268:A:OP2	51:BM:12:ARG:NH2	2.26	0.51
4:5:1647:G:H21	4:5:1810:A:H62	1.58	0.51
4:5:3253:G:H2'	4:5:3254:G:C8	2.45	0.51
4:5:3359:U:H2'	4:5:3360:A:H8	1.76	0.51
7:AB:158:SER:HA	7:AB:161:ILE:HD12	1.91	0.51
15:AJ:99:LEU:O	15:AJ:100:LYS:HB2	2.11	0.51
15:AJ:175:ARG:O	15:AJ:179:ARG:NH1	2.43	0.51
23:AR:21:TYR:O	23:AR:23:LYS:N	2.43	0.51
25:AT:86:ARG:NH2	25:AT:89:ARG:HH11	2.08	0.51
29:AX:41:SER:O	29:AX:43:PHE:N	2.42	0.51
30:AY:15:ASN:CG	30:AY:22:GLN:HE22	2.18	0.51
37:Af:83:LYS:HZ2	37:Af:85:TYR:HD1	1.58	0.51
37:Af:113:LYS:HE2	37:Af:113:LYS:HA	1.92	0.51
43:BE:92:SER:OG	43:BE:94:GLU:OE1	2.24	0.51
48:BJ:163:PHE:HE1	48:BJ:167:TYR:HD2	1.58	0.51
59:BU:66:LYS:HB3	59:BU:69:LEU:HD12	1.91	0.51
71:Bg:52:ALA:O	71:Bg:56:THR:HG23	2.10	0.51
1:2:186:C:H3'	1:2:187:G:C8	2.42	0.51
1:2:217:A:H3'	1:2:218:A:H5''	1.93	0.51
1:2:803:A:C4	13:AH:104:ARG:HD2	2.46	0.51
4:5:289:A:O2'	51:BM:93:LYS:O	2.27	0.51
4:5:532:G:H2'	4:5:533:A:H8	1.73	0.51
4:5:2104:U:H2'	4:5:2105:A:C8	2.45	0.51
4:5:2686:C:H2'	4:5:2687:A:H8	1.76	0.51
4:5:3370:G:N2	40:BB:380:MET:O	2.43	0.51
5:6:69:G:H2'	5:6:70:G:C8	2.43	0.51
13:AH:18:LEU:O	13:AH:22:GLN:HG2	2.10	0.51
17:AL:94:ILE:HD13	29:AX:16:ARG:HD3	1.91	0.51
23:AR:23:LYS:HG3	23:AR:24:LEU:H	1.75	0.51
35:Ad:19:ARG:NH2	35:Ad:32:ARG:HH21	2.08	0.51
38:Ag:137:LYS:HE3	38:Ag:139:GLN:HB2	1.93	0.51
38:Ag:225:LEU:HD23	38:Ag:225:LEU:H	1.76	0.51
40:BB:88:GLY:HA2	40:BB:105:VAL:O	2.11	0.51
41:BC:144:LYS:HE2	41:BC:144:LYS:HA	1.93	0.51
42:BD:222:LEU:HD12	42:BD:223:PHE:HD2	1.75	0.51
57:BS:13:TYR:HA	57:BS:16:GLN:HG3	1.92	0.51
67:Bc:13:THR:OG1	67:Bc:72:ARG:NH1	2.31	0.51
68:Bd:95:GLU:HG3	68:Bd:120:THR:OG1	2.11	0.51
80:CA:299:ALA:HA	80:CA:306:MET:HE1	1.93	0.51
80:CA:434:GLU:O	80:CA:706:ARG:NH1	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:765:GLU:HA	80:CA:768:ARG:HD3	1.92	0.51
80:CA:939:ALA:HA	80:CA:1090:ILE:HG21	1.92	0.51
80:CA:1041:GLU:HG2	80:CA:1048:LEU:HD11	1.92	0.51
80:CA:1151:LEU:HB2	80:CA:1298:ARG:HH12	1.76	0.51
1:2:351:C:N3	17:AL:87:ARG:NH2	2.59	0.51
4:5:1194:A:OP2	52:BN:49[A]:ARG:NH1	2.43	0.51
4:5:3014:U:H2'	4:5:3015:U:C6	2.46	0.51
4:5:3182:C:O2'	52:BN:164[A]:SER:OG	2.25	0.51
4:5:3224:A:H2'	4:5:3225:G:O4'	2.10	0.51
11:AF:51:VAL:H	11:AF:65:ARG:NH2	2.08	0.51
12:AG:147:LEU:HB3	12:AG:151:ASP:OD2	2.11	0.51
21:AP:28:MET:N	21:AP:28:MET:SD	2.84	0.51
27:AV:46:ILE:HG13	27:AV:46:ILE:O	2.09	0.51
36:Ae:26:LYS:NZ	36:Ae:29:LYS:HE2	2.25	0.51
47:BI:54:SER:HB2	47:BI:135:ILE:HD11	1.92	0.51
48:BJ:84:LEU:O	48:BJ:88:GLU:N	2.43	0.51
51:BM:5:LYS:NZ	72:Bh:36:ARG:O	2.44	0.51
79:Bo:85:ARG:O	79:Bo:88:GLU:HG2	2.10	0.51
80:CA:401:PRO:HA	80:CA:443:LEU:HD21	1.91	0.51
80:CA:435:ASP:OD2	80:CA:436:ARG:N	2.44	0.51
80:CA:1025:ASP:HB3	80:CA:1028:ILE:HG12	1.91	0.51
80:CA:1274:ASP:OD1	80:CA:1275:ARG:N	2.43	0.51
80:CA:1338:TYR:O	80:CA:1518:VAL:HG22	2.11	0.51
80:CA:1380:ARG:CZ	81:CB:2:LEU:HB3	2.41	0.51
1:2:773:C:OP1	10:AE:21:ASP:HB2	2.11	0.51
1:2:966:A:H5''	19:AN:4:MET:HE2	1.91	0.51
1:2:972:G:H21	4:5:848:A:H2	1.59	0.51
1:2:1001:A:H2'	1:2:1002:G:C8	2.46	0.51
1:2:1301:U:H2'	1:2:1302:U:O4'	2.11	0.51
1:2:1407:U:C2	1:2:1408:G:C8	2.99	0.51
3:4:91:G:H2'	3:4:92:A:C8	2.46	0.51
4:5:3:U:H2'	4:5:4:U:C6	2.46	0.51
4:5:288:C:OP1	51:BM:170:LYS:NZ	2.30	0.51
4:5:502:A:H2'	4:5:503:U:C6	2.46	0.51
4:5:504:C:C2	4:5:505:A:C8	2.99	0.51
4:5:512:G:H2'	4:5:513:U:O4'	2.10	0.51
4:5:1812:G:N2	4:5:1813:G:N3	2.59	0.51
4:5:3306:A:H2'	4:5:3307:U:O4'	2.11	0.51
11:AF:55:ASP:OD1	11:AF:56:ALA:N	2.44	0.51
23:AR:43:SER:OG	23:AR:44:LYS:N	2.43	0.51
24:AS:15:LEU:H	24:AS:15:LEU:HD23	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AU:83:GLU:HB2	35:Ad:55:PHE:HD1	1.75	0.51
27:AV:85:TYR:CE2	33:Ab:6:ASP:HB2	2.46	0.51
37:Af:106:TYR:C	37:Af:107:LYS:HD2	2.35	0.51
37:Af:106:TYR:O	37:Af:107:LYS:HD2	2.10	0.51
76:Bl:78:ILE:HG21	76:Bl:83:LYS:HZ3	1.75	0.51
80:CA:502:LEU:HB2	80:CA:683:LEU:O	2.11	0.51
1:2:1741:U:H2'	1:2:1742:U:H6	1.75	0.51
4:5:4:U:H2'	4:5:5:G:C8	2.45	0.51
4:5:31:C:H4'	51:BM:96:ARG:HG3	1.91	0.51
4:5:313:A:H2'	4:5:314:U:H6	1.76	0.51
4:5:1558:A:N7	4:5:1560:A:N6	2.58	0.51
4:5:1631:U:O5'	4:5:1814:A:N6	2.44	0.51
7:AB:205:PHE:HB3	7:AB:207:LEU:CD2	2.41	0.51
8:AC:143:TYR:HE1	8:AC:151:PRO:HA	1.75	0.51
12:AG:70:PRO:HA	12:AG:98:ARG:HH12	1.75	0.51
15:AJ:119:ALA:O	15:AJ:120:LYS:HG2	2.10	0.51
22:AQ:90:VAL:HG13	22:AQ:102:LYS:HG3	1.92	0.51
37:Af:109:ASP:HB3	37:Af:113:LYS:O	2.11	0.51
42:BD:200:PHE:HB3	42:BD:237:GLU:HG3	1.93	0.51
46:BH:5:GLN:OE1	46:BH:58:HIS:ND1	2.42	0.51
68:Bd:86:THR:HG23	68:Bd:115:LEU:HD23	1.93	0.51
80:CA:449:ARG:HG3	80:CA:733:TRP:CE3	2.46	0.51
80:CA:783:MET:HE1	80:CA:812:VAL:HG11	1.93	0.51
1:2:150:U:H2'	1:2:151:G:C8	2.46	0.51
1:2:156:A:N6	1:2:418:G:C6	2.79	0.51
1:2:319:U:H4'	1:2:323:A:C8	2.46	0.51
1:2:694:U:C2	13:AH:98:ILE:HG22	2.46	0.51
9:AD:37:VAL:HG23	9:AD:49:ILE:O	2.11	0.51
9:AD:167:PHE:CE2	9:AD:192:PRO:HB3	2.46	0.51
15:AJ:112:GLN:HG3	15:AJ:148:VAL:HG21	1.92	0.51
18:AM:126:TRP:CD1	18:AM:128:ALA:HB3	2.45	0.51
36:Ae:54:ARG:O	36:Ae:54:ARG:HD3	2.11	0.51
40:BB:229:VAL:HG11	40:BB:249:VAL:HG23	1.91	0.51
80:CA:1373:LEU:O	80:CA:1476:ILE:N	2.38	0.51
80:CA:1518:VAL:O	80:CA:1520:THR:HG23	2.11	0.51
1:2:592:A:OP1	15:AJ:39:LYS:NZ	2.34	0.51
1:2:693:U:H5''	1:2:694:U:H5'	1.93	0.51
1:2:1439:C:H2'	1:2:1440:C:C6	2.46	0.51
1:2:1445:G:C4	37:Af:91:ILE:HD11	2.45	0.51
1:2:1497:U:C2	1:2:1498:G:C8	2.99	0.51
4:5:3221:G:C6	4:5:3267:G:N1	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AM:108:ARG:O	18:AM:110:GLY:N	2.44	0.51
20:AO:20:TYR:HE2	20:AO:84:ARG:NH1	2.08	0.51
31:AZ:49:ARG:HH22	31:AZ:68:ARG:HH22	1.59	0.51
43:BE:63:LEU:HD11	43:BE:81:ALA:HA	1.92	0.51
45:BG:146:LYS:HD3	45:BG:173:MET:HG3	1.92	0.51
47:BI:12:GLN:HG2	47:BI:128:ARG:NH1	2.26	0.51
56:BR:93:GLU:HB2	56:BR:140:VAL:HG21	1.93	0.51
57:BS:136:ARG:HD2	57:BS:139:ARG:HH12	1.76	0.51
67:Bc:17:HIS:CG	67:Bc:69:TYR:HD2	2.29	0.51
80:CA:495:LYS:NZ	80:CA:674:PHE:O	2.44	0.51
80:CA:598:HIS:CE1	80:CA:607:ARG:HB2	2.46	0.51
1:2:78:A:H4'	12:AG:172:ALA:HB3	1.92	0.50
1:2:155:U:OP2	30:AY:132:ARG:NH2	2.40	0.50
1:2:885:G:H2'	1:2:886:U:C6	2.45	0.50
1:2:1378:U:C1'	22:AQ:8:GLN:HE22	2.24	0.50
4:5:1609:C:OP1	61:BW:111:ASN:ND2	2.36	0.50
4:5:2607:G:H2'	4:5:2607:G:N3	2.26	0.50
7:AB:128:LYS:NZ	7:AB:132:ASP:OD1	2.31	0.50
10:AE:180:LEU:HD23	10:AE:234:PRO:HB3	1.92	0.50
10:AE:241:GLY:O	10:AE:244:ILE:HG12	2.11	0.50
19:AN:99:ARG:NH1	19:AN:143:SER:HB2	2.24	0.50
21:AP:57:MET:HG2	21:AP:61:ARG:HH22	1.75	0.50
22:AQ:54:LEU:HD11	22:AQ:112:TYR:CD2	2.46	0.50
32:Aa:32:LYS:O	32:Aa:37:LYS:NZ	2.41	0.50
51:BM:113:LEU:HB2	51:BM:134:LEU:HD12	1.93	0.50
52:BN:175[A]:THR:O	52:BN:179[A]:ALA:N	2.39	0.50
64:BZ:79:TRP:O	64:BZ:87:ARG:NH1	2.36	0.50
80:CA:1142:PRO:HB3	82:CC:332:LEU:HD21	1.93	0.50
80:CA:1195:LYS:HZ1	80:CA:1243:LYS:HD3	1.75	0.50
80:CA:1590:ASP:HB3	80:CA:1595:GLY:HA3	1.92	0.50
80:CA:1711:LYS:HE3	80:CA:1730:TYR:CZ	2.46	0.50
81:CB:100:VAL:HG12	81:CB:104:LEU:HD23	1.93	0.50
1:2:424:C:O2'	1:2:426:G:OP1	2.26	0.50
1:2:841:U:H2'	1:2:842:C:H6	1.75	0.50
1:2:962:C:H2'	1:2:963:A:O4'	2.11	0.50
2:3:156:U:H2'	2:3:157:U:C6	2.47	0.50
4:5:314:U:H2'	4:5:315:C:C6	2.45	0.50
4:5:436:A:H2'	4:5:437:G:H8	1.75	0.50
4:5:1819:U:H3'	4:5:1820:U:H5''	1.93	0.50
4:5:2214:A:H2'	4:5:2215:A:H8	1.76	0.50
4:5:2778:G:C2	64:BZ:60:TYR:CE1	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AL:99:ARG:HB2	29:AX:9:LEU:O	2.11	0.50
40:BB:197:GLU:OE1	40:BB:197:GLU:N	2.44	0.50
41:BC:92:ASN:HA	41:BC:98:ARG:O	2.11	0.50
48:BJ:12:LEU:HD11	48:BJ:154:THR:HG22	1.93	0.50
71:Bg:102:GLU:HA	71:Bg:105:ARG:HB3	1.93	0.50
80:CA:697:ILE:HG23	80:CA:698:THR:HG23	1.93	0.50
80:CA:738:TYR:CZ	80:CA:742:ARG:HD3	2.45	0.50
1:2:1471:A:O2'	1:2:1472:C:OP1	2.25	0.50
2:3:8:C:H2'	2:3:9:A:C8	2.47	0.50
4:5:91:G:OP2	78:Bn:42:ARG:NE	2.42	0.50
4:5:169:U:N3	4:5:251:G:O6	2.44	0.50
4:5:307:A:H2'	4:5:308:A:C8	2.47	0.50
4:5:3161:U:H2'	4:5:3162:C:C6	2.47	0.50
15:AJ:84:GLY:HA3	15:AJ:150:LEU:HD13	1.92	0.50
17:AL:27:THR:H	17:AL:30:ARG:NH1	2.10	0.50
19:AN:52:VAL:HG23	19:AN:55:ARG:HH21	1.75	0.50
29:AX:41:SER:O	29:AX:41:SER:OG	2.27	0.50
37:Af:107:LYS:HE2	37:Af:117:LEU:N	2.26	0.50
38:Ag:114:ASP:OD1	38:Ag:155:ARG:NH1	2.45	0.50
49:BK:2:ALA:HB2	64:BZ:31:GLY:O	2.11	0.50
76:Bl:79:GLU:O	76:Bl:81:SER:N	2.45	0.50
80:CA:312:THR:O	80:CA:493:ARG:NH1	2.44	0.50
80:CA:358:LEU:O	80:CA:362:ILE:HG12	2.11	0.50
80:CA:1117:LYS:HB2	80:CA:1145:THR:HG23	1.92	0.50
1:2:1584:G:O2'	1:2:1585:U:OP2	2.20	0.50
4:5:417:A:H2'	4:5:418:A:C8	2.46	0.50
4:5:1258:C:C2	4:5:1262:G:N1	2.75	0.50
4:5:1275:A:H2'	4:5:1276:C:C6	2.46	0.50
4:5:1700:A:C6	4:5:1748:G:C6	2.99	0.50
4:5:1722:U:OP2	55:BQ:124:TYR:OH	2.28	0.50
5:6:68:G:H2'	5:6:69:G:C8	2.46	0.50
9:AD:121:GLY:O	9:AD:124:ARG:HG3	2.11	0.50
23:AR:25:THR:HG23	23:AR:27:ASP:H	1.75	0.50
31:AZ:68:ARG:HG3	31:AZ:69:LEU:N	2.23	0.50
33:Ab:8:LEU:HA	33:Ab:24:LEU:HD11	1.93	0.50
35:Ad:19:ARG:NE	35:Ad:32:ARG:HE	2.09	0.50
37:Af:141:CYS:HB3	37:Af:144:CYS:O	2.12	0.50
41:BC:329:PRO:HG3	44:BF:41:ARG:NH1	2.26	0.50
44:BF:104:GLN:OE1	54:BP:6:THR:HG22	2.11	0.50
63:BY:17:ARG:HD3	70:Bf:73:SER:HB3	1.93	0.50
66:Bb:10:ILE:HG21	66:Bb:68:TYR:HE2	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Bk:36:ARG:HG3	75:Bk:37:TYR:HD1	1.76	0.50
80:CA:541:SER:O	80:CA:545:THR:OG1	2.29	0.50
80:CA:699:GLN:OE1	80:CA:701:HIS:NE2	2.44	0.50
80:CA:797:ASP:HA	80:CA:800:ARG:HD3	1.93	0.50
80:CA:1018:LEU:H	80:CA:1018:LEU:HD12	1.76	0.50
1:2:30:G:H2'	1:2:31:C:C6	2.47	0.50
1:2:1175:U:H2'	1:2:1176:G:C8	2.46	0.50
1:2:1241:G:H3'	1:2:1242:A:H8	1.75	0.50
1:2:1260:U:H2'	1:2:1261:G:C8	2.47	0.50
1:2:1609:U:H2'	1:2:1610:G:O4'	2.12	0.50
2:3:102:U:H2'	2:3:103:G:C8	2.46	0.50
3:4:45:A:H2'	3:4:46:A:H8	1.77	0.50
4:5:1260:A:N3	4:5:1281:C:O2'	2.42	0.50
4:5:1498:C:H2'	4:5:1499:A:H8	1.76	0.50
4:5:2842:G:H21	4:5:2848:A:H62	1.60	0.50
4:5:2855:U:OP1	47:BI:64:ALA:HB2	2.11	0.50
4:5:3228:A:O2'	50:BL:133:LYS:NZ	2.31	0.50
14:AI:3:ILE:O	14:AI:30:GLY:N	2.44	0.50
18:AM:130:THR:OG1	18:AM:131:ASP:N	2.37	0.50
27:AV:2:GLU:HG3	27:AV:8:LEU:HA	1.92	0.50
28:AW:50:PHE:HB3	28:AW:63:VAL:HG13	1.94	0.50
39:BA:57:PRO:HB3	79:Bo:54:ILE:HD11	1.93	0.50
45:BG:25:PRO:HG2	45:BG:26:LEU:HD12	1.92	0.50
56:BR:27:MET:HG2	56:BR:29:ILE:HD11	1.93	0.50
58:BT:29:ASP:HB3	58:BT:32:SER:HB3	1.94	0.50
80:CA:451:VAL:O	80:CA:455:GLN:N	2.38	0.50
80:CA:715:LEU:O	80:CA:719:ILE:HG13	2.11	0.50
80:CA:1355:MET:C	80:CA:1358:PRO:HD2	2.37	0.50
1:2:154:G:P	30:AY:131:ARG:HH12	2.35	0.50
1:2:223:U:H2'	1:2:224:C:O4'	2.11	0.50
1:2:521:A:H4'	30:AY:36:SER:HB2	1.93	0.50
1:2:708:C:H4'	1:2:730:G:C5	2.46	0.50
1:2:963:A:O2'	1:2:964:U:O5'	2.29	0.50
1:2:1259:U:H2'	1:2:1260:U:H6	1.76	0.50
5:6:74:C:P	47:BI:110:ARG:HH21	2.35	0.50
12:AG:2:LYS:HB3	12:AG:108:VAL:HG23	1.94	0.50
16:AK:32:HIS:CE1	16:AK:35:ILE:HD13	2.45	0.50
23:AR:5:ARG:HB2	23:AR:10:LYS:HZ3	1.75	0.50
39:BA:97:ASN:HB2	39:BA:100:ASN:HD21	1.75	0.50
42:BD:127:GLY:HA2	42:BD:195:LEU:HD22	1.93	0.50
50:BL:66:THR:HG22	50:BL:99:TRP:CZ3	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BT:36:TYR:HD2	58:BT:83:TYR:HB2	1.77	0.50
63:BY:36:HIS:HB3	63:BY:38:PHE:CZ	2.45	0.50
75:Bk:28:ARG:HA	75:Bk:33:ASN:HD22	1.76	0.50
80:CA:540:HIS:CE1	80:CA:644:THR:HA	2.47	0.50
80:CA:956:ARG:HB2	80:CA:979:VAL:HG13	1.94	0.50
1:2:26:A:O2'	1:2:27:U:O5'	2.30	0.50
1:2:1333:C:C2	1:2:1334:U:C5	3.00	0.50
1:2:1389:C:H6	23:AR:28:PHE:CZ	2.29	0.50
1:2:1504:G:C6	1:2:1505:A:C6	3.00	0.50
1:2:1539:G:H4'	24:AS:40:ARG:CZ	2.42	0.50
2:3:122:U:H2'	2:3:123:G:H8	1.77	0.50
4:5:241:G:H2'	4:5:242:C:C6	2.47	0.50
4:5:552:A:O2'	4:5:553:G:H8	1.95	0.50
4:5:599:A:H5'	41:BC:325:LEU:HD22	1.94	0.50
4:5:599:A:H5'	41:BC:325:LEU:CD2	2.41	0.50
4:5:651:C:O5'	4:5:651:C:H6	1.94	0.50
4:5:1068:U:H2'	4:5:1069:C:C6	2.46	0.50
4:5:1572:A:H2'	4:5:1573:U:O4'	2.12	0.50
4:5:2220:A:OP2	72:Bh:68:ARG:NH1	2.45	0.50
6:AA:198:MET:SD	6:AA:199:PRO:HD2	2.51	0.50
40:BB:347:SER:C	40:BB:349:LYS:H	2.18	0.50
45:BG:178:ALA:HA	45:BG:222:PHE:CD2	2.47	0.50
47:BI:108:ALA:O	47:BI:112:GLN:HB2	2.11	0.50
53:BO:107:LEU:HD13	53:BO:152:GLU:OE1	2.11	0.50
80:CA:1319:LYS:NZ	80:CA:1321:HIS:HB2	2.26	0.50
1:2:16:G:H2'	1:2:17:C:C6	2.47	0.50
1:2:434:G:OP1	29:AX:78:LYS:HA	2.11	0.50
1:2:680:U:O4	1:2:682:C:N4	2.44	0.50
1:2:780:A:C2	30:AY:10:ARG:HD2	2.47	0.50
1:2:1523:G:N3	25:AT:78:LYS:NZ	2.60	0.50
4:5:185:C:H2'	4:5:186:U:C6	2.47	0.50
4:5:1665:G:H2'	4:5:1666:C:C6	2.45	0.50
4:5:2509:U:H2'	4:5:2510:U:C6	2.47	0.50
7:AB:122:GLU:OE2	7:AB:213:ARG:NH1	2.41	0.50
8:AC:40:LYS:HZ3	8:AC:247:ALA:HA	1.76	0.50
8:AC:59:HIS:HB2	8:AC:61:LEU:HD12	1.93	0.50
20:AO:70:LYS:O	20:AO:70:LYS:HD3	2.11	0.50
24:AS:55:HIS:O	24:AS:55:HIS:ND1	2.41	0.50
26:AU:99:ILE:HA	26:AU:102:ARG:HG2	1.94	0.50
37:Af:121:CYS:HB2	37:Af:132:LEU:HD21	1.92	0.50
40:BB:36:ASP:OD2	40:BB:39:LYS:NZ	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:912:LEU:HA	80:CA:915:VAL:HG22	1.92	0.50
80:CA:1721:SER:OG	80:CA:1776:TRP:NE1	2.31	0.50
1:2:1334:U:O3'	26:AU:85:ARG:NH2	2.44	0.50
1:2:1673:G:H2'	1:2:1674:C:H6	1.77	0.50
4:5:263:C:H2'	4:5:264:G:O4'	2.12	0.50
4:5:2404:G:H5''	4:5:2872:G:H5'	1.93	0.50
4:5:2441:G:H4'	7:AB:53:GLY:HA3	1.92	0.50
4:5:2447:U:O2'	4:5:2448:A:OP1	2.28	0.50
8:AC:81:MET:HE1	8:AC:103:VAL:N	2.27	0.50
24:AS:26:ILE:HD11	24:AS:31:ALA:HA	1.93	0.50
26:AU:55:PRO:HA	26:AU:91:ILE:HG13	1.94	0.50
29:AX:43:PHE:O	29:AX:45:GLY:N	2.44	0.50
51:BM:68:ARG:NH1	51:BM:124:ASP:O	2.36	0.50
51:BM:169:LYS:HB3	51:BM:174:ILE:HB	1.94	0.50
56:BR:26:ARG:HG2	56:BR:27:MET:N	2.27	0.50
56:BR:26:ARG:HH11	57:BS:150:THR:HG1	1.57	0.50
58:BT:36:TYR:CD2	58:BT:83:TYR:HD1	2.30	0.50
80:CA:525:LEU:HD11	80:CA:621:VAL:HG21	1.94	0.50
80:CA:1517:ILE:HG12	80:CA:1519:TYR:CZ	2.47	0.50
1:2:229:U:H5''	1:2:230:C:H5	1.77	0.49
1:2:533:U:C2'	1:2:534:A:H5''	2.42	0.49
1:2:1274:C:O2'	1:2:1275:A:OP2	2.23	0.49
2:3:9:A:H2'	2:3:10:A:H8	1.77	0.49
4:5:177:U:O2	4:5:241:G:C6	2.65	0.49
4:5:718:C:H2'	4:5:719:G:O4'	2.11	0.49
4:5:1238:G:H1	4:5:1253:A:HO2'	1.57	0.49
4:5:1280:C:H2'	4:5:1281:C:C6	2.46	0.49
4:5:1422:G:C2	4:5:1423:G:C5	3.00	0.49
4:5:1574:G:H2'	4:5:1575:C:O4'	2.12	0.49
4:5:2096:G:H2'	4:5:2097:A:C8	2.45	0.49
4:5:2998:G:C6	4:5:3397:U:C4	3.00	0.49
4:5:3024:U:H2'	4:5:3025:A:H8	1.76	0.49
4:5:3192:G:H5''	52:BN:176[A]:LYS:HD2	1.94	0.49
4:5:3360:A:H2'	4:5:3361:C:H6	1.77	0.49
5:6:44:A:H2'	5:6:45:G:C8	2.46	0.49
26:AU:97:VAL:O	26:AU:100:VAL:HG22	2.12	0.49
38:Ag:249:ARG:HB3	38:Ag:251:TRP:CE3	2.47	0.49
67:Bc:15:ASN:ND2	67:Bc:18:LYS:HD3	2.27	0.49
70:Bf:76:TYR:HB3	70:Bf:80:ARG:HB2	1.94	0.49
80:CA:544:GLU:O	80:CA:548:SER:N	2.44	0.49
1:2:187:G:H21	1:2:198:A:H62	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:555:A:H1'	1:2:556:A:H5'	1.94	0.49
1:2:1249:U:H2'	1:2:1250:U:C6	2.47	0.49
1:2:1458:G:OP2	24:AS:139:LYS:HG3	2.12	0.49
1:2:1582:U:O2'	1:2:1583:A:OP2	2.27	0.49
3:4:7:G:O3'	42:BD:33:ARG:NH2	2.45	0.49
4:5:170:G:OP1	49:BK:128:ARG:NH2	2.44	0.49
4:5:1251:G:N2	4:5:1252:A:N7	2.60	0.49
4:5:3177:G:O6	4:5:3214:A:H2	1.94	0.49
6:AA:200:ASP:HA	6:AA:203:PHE:CE2	2.47	0.49
11:AF:80:LYS:NZ	11:AF:81:ARG:H	2.09	0.49
13:AH:15:GLU:HA	13:AH:18:LEU:HD12	1.92	0.49
14:AI:5:ARG:NE	14:AI:29:LEU:O	2.32	0.49
15:AJ:100:LYS:HD3	15:AJ:101:VAL:N	2.27	0.49
18:AM:89:ILE:HD11	18:AM:140:PHE:HB2	1.94	0.49
21:AP:127:ARG:NH1	21:AP:127:ARG:O	2.45	0.49
30:AY:94:TYR:HB2	30:AY:96:LEU:HD23	1.94	0.49
48:BJ:36:VAL:HG21	48:BJ:109:HIS:CD2	2.47	0.49
53:BO:168:LEU:HD12	53:BO:172:GLN:HB3	1.93	0.49
55:BQ:52:LYS:O	55:BQ:53:LYS:HB2	2.11	0.49
63:BY:54:THR:HG23	63:BY:56:LYS:H	1.77	0.49
77:Bm:23:ARG:HG2	77:Bm:23:ARG:NH1	2.26	0.49
80:CA:1886:ASN:HD22	80:CA:1890:GLU:HB3	1.77	0.49
1:2:24:U:OP1	15:AJ:10:LYS:NZ	2.44	0.49
1:2:29:U:H2'	1:2:30:G:H8	1.77	0.49
2:3:9:A:H2'	2:3:10:A:C8	2.47	0.49
3:4:14:U:C4	3:4:67:G:N2	2.80	0.49
3:4:44:C:H2'	3:4:45:A:H8	1.78	0.49
4:5:155:G:H5''	4:5:156:G:C8	2.48	0.49
4:5:279:U:H2'	4:5:280:U:C6	2.48	0.49
4:5:1121:A:H2'	4:5:1122:U:C6	2.47	0.49
4:5:1647:G:C2	4:5:1809:G:C4	3.00	0.49
4:5:2501:A:H2'	4:5:2502:U:C6	2.47	0.49
6:AA:144:ILE:HG12	6:AA:158:VAL:HG13	1.94	0.49
10:AE:87:MET:HE2	10:AE:236:ILE:HD13	1.93	0.49
18:AM:34:THR:OG1	18:AM:127:GLY:O	2.29	0.49
28:AW:57:ARG:NH1	33:Ab:26:GLN:HE21	2.10	0.49
35:Ad:12:ARG:HG3	35:Ad:12:ARG:NH1	2.27	0.49
37:Af:133:ALA:O	37:Af:140:TYR:N	2.45	0.49
38:Ag:229:LYS:HZ3	38:Ag:231:MET:HB3	1.77	0.49
47:BI:56:GLU:OE1	47:BI:56:GLU:HA	2.12	0.49
53:BO:169:THR:HG21	53:BO:171:ARG:CZ	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Bb:27:TYR:OH	66:Bb:55:GLU:OE1	2.26	0.49
80:CA:640:ILE:HA	80:CA:682:ILE:HG12	1.93	0.49
1:2:496:G:H2'	1:2:497:G:H8	1.77	0.49
1:2:525:A:H4'	30:AY:89:TYR:HB2	1.94	0.49
1:2:1534:G:OP1	24:AS:57:ARG:NH2	2.36	0.49
1:2:1588:G:C6	1:2:1589:C:C4	3.00	0.49
2:3:78:G:O2'	2:3:79:A:H5'	2.13	0.49
4:5:777:U:H5	4:5:2720:U:O2	1.95	0.49
4:5:1254:U:C2	4:5:1264:A:H3'	2.47	0.49
4:5:1526:G:H5'	4:5:1831:G:OP2	2.13	0.49
4:5:2941:A:OP2	40:BB:2:SER:N	2.46	0.49
5:6:32:C:H2'	5:6:33:U:H5'	1.93	0.49
7:AB:130:SER:HB2	7:AB:180:THR:HG22	1.93	0.49
8:AC:119:LYS:HD2	8:AC:119:LYS:H	1.78	0.49
13:AH:70:PHE:O	13:AH:74:GLN:N	2.45	0.49
19:AN:64:ARG:HH22	19:AN:68:GLY:C	2.21	0.49
25:AT:34:VAL:O	25:AT:36:ILE:HG12	2.11	0.49
40:BB:68:HIS:HB3	40:BB:69:LYS:NZ	2.28	0.49
48:BJ:82:ARG:HA	48:BJ:85:LYS:NZ	2.27	0.49
59:BU:81:GLN:HG2	59:BU:83:LYS:H	1.77	0.49
73:Bi:17:THR:HG22	73:Bi:18:LEU:H	1.77	0.49
80:CA:488:PHE:HB3	80:CA:492:PHE:HD2	1.78	0.49
80:CA:1432:GLY:N	80:CA:1457:ILE:O	2.40	0.49
80:CA:1566:LEU:HD13	80:CA:1604:ILE:HD12	1.93	0.49
80:CA:1656:PHE:HA	80:CA:1767:MET:HE1	1.92	0.49
1:2:447:U:H2'	1:2:448:C:O4'	2.12	0.49
1:2:464:A:C2	1:2:465:G:C8	3.00	0.49
1:2:607:G:H21	1:2:614:C:H5''	1.77	0.49
1:2:1434:U:H4'	35:Ad:24:CYS:HB2	1.94	0.49
1:2:1470:C:C4	1:2:1573:A:C5	3.01	0.49
4:5:153:U:H4'	4:5:158:G:H4'	1.93	0.49
4:5:1356:A:H4'	4:5:1357:U:O5'	2.12	0.49
4:5:1636:G:N2	4:5:1639:A:OP2	2.33	0.49
4:5:1812:G:H2'	4:5:1813:G:O4'	2.13	0.49
4:5:2119:C:H3'	4:5:2120:A:C8	2.47	0.49
4:5:2683:C:OP2	48:BJ:51:ARG:NH1	2.45	0.49
8:AC:113:LEU:HD11	8:AC:211:LEU:HB3	1.95	0.49
9:AD:25:PHE:O	9:AD:28:GLU:N	2.41	0.49
11:AF:140:THR:C	11:AF:214:LYS:HD2	2.37	0.49
17:AL:58:CYS:SG	17:AL:112:SER:OG	2.49	0.49
21:AP:20:VAL:HG12	21:AP:25:LEU:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AU:106:ILE:HG23	80:CA:1105:ARG:CZ	2.42	0.49
50:BL:16:GLU:OE1	56:BR:149:LYS:HG2	2.12	0.49
54:BP:155:MET:HA	54:BP:161:LYS:HB3	1.93	0.49
54:BP:185:LYS:HG2	54:BP:186:VAL:HG23	1.95	0.49
56:BR:92:LYS:NZ	56:BR:109:ASP:OD2	2.45	0.49
59:BU:28:ASN:OD1	59:BU:113:ALA:N	2.45	0.49
60:BV:2:LYS:HZ2	60:BV:4:GLU:CD	2.20	0.49
67:Bc:48:ASP:HB2	67:Bc:87:ASN:HD21	1.77	0.49
76:Bl:78:ILE:HG22	76:Bl:78:ILE:O	2.12	0.49
80:CA:868:ASP:O	80:CA:873:LYS:NZ	2.45	0.49
80:CA:1135:TYR:CE1	80:CA:1137:PHE:HB3	2.47	0.49
1:2:237:C:O2'	1:2:238:U:O4'	2.30	0.49
1:2:846:G:H2'	1:2:847:A:O4'	2.11	0.49
1:2:903:U:H5''	20:AO:135:ARG:NH2	2.28	0.49
1:2:1004:U:O2'	1:2:1779:U:O2'	2.15	0.49
1:2:1204:A:H3'	1:2:1205:C:H6	1.78	0.49
1:2:1428:G:C2	1:2:1429:G:C8	3.00	0.49
4:5:429:U:H2'	4:5:430:U:H6	1.78	0.49
4:5:874:C:H5''	4:5:875:U:O5'	2.11	0.49
4:5:1204:A:H2'	4:5:1205:A:C8	2.47	0.49
4:5:1562:G:N1	4:5:1580:C:O2	2.45	0.49
4:5:1652:U:H5'	39:BA:71:LEU:HD12	1.94	0.49
4:5:1785:G:H2'	4:5:1786:U:O4'	2.12	0.49
6:AA:84:ARG:HH21	6:AA:88:LYS:HZ2	1.61	0.49
13:AH:51:VAL:HG12	13:AH:53:GLY:H	1.78	0.49
14:AI:116:HIS:CD2	14:AI:146:ARG:HD3	2.48	0.49
18:AM:66:VAL:HG13	18:AM:67:THR:HG23	1.95	0.49
20:AO:20:TYR:CE2	20:AO:84:ARG:NH1	2.79	0.49
21:AP:56:PHE:CE1	21:AP:78:THR:HG21	2.48	0.49
22:AQ:7:VAL:HG11	22:AQ:91:ALA:O	2.13	0.49
30:AY:78:SER:HG	30:AY:81:GLU:CD	2.18	0.49
42:BD:40:HIS:CE1	57:BS:69:LYS:HA	2.48	0.49
43:BE:60:ASP:O	43:BE:62:THR:HG23	2.12	0.49
44:BF:152:GLY:C	44:BF:163:LEU:HD13	2.37	0.49
55:BQ:172:ARG:O	55:BQ:175:GLN:HG3	2.12	0.49
65:Ba:54:LEU:O	65:Ba:58:LYS:HG2	2.13	0.49
80:CA:409:ARG:HG3	80:CA:446:ARG:HH12	1.77	0.49
80:CA:418:VAL:O	80:CA:450:GLN:NE2	2.45	0.49
80:CA:541:SER:HB3	80:CA:544:GLU:HG2	1.95	0.49
80:CA:821:PRO:HG3	80:CA:919:TRP:CE2	2.48	0.49
80:CA:1080:VAL:O	80:CA:1098:ILE:HB	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1267:GLU:HG2	80:CA:1466:TRP:HZ3	1.77	0.49
80:CA:1637:TYR:HE1	80:CA:1743:ARG:HE	1.60	0.49
80:CA:1641:LEU:HD12	80:CA:1644:ARG:HH21	1.78	0.49
80:CA:1655:THR:HB	80:CA:1800:GLU:HG3	1.93	0.49
1:2:4:C:HO2'	15:AJ:17:ARG:HH22	1.57	0.49
1:2:139:C:H4'	1:2:140:A:O5'	2.12	0.49
1:2:153:G:N7	30:AY:128:LYS:HD2	2.27	0.49
1:2:184:C:H2'	1:2:185:U:C6	2.48	0.49
1:2:328:A:N3	14:AI:86:SER:OG	2.44	0.49
1:2:1274:C:H5'	1:2:1274:C:O2	2.12	0.49
1:2:1525:A:H2'	1:2:1526:A:C8	2.47	0.49
1:2:1690:G:H2'	1:2:1691:A:H8	1.77	0.49
4:5:360:G:H2'	4:5:361:A:C8	2.48	0.49
4:5:414:U:C2	4:5:415:G:C8	3.00	0.49
4:5:888:G:H2'	4:5:889:A:C8	2.47	0.49
5:6:58:A:H2'	5:6:61:C:H41	1.77	0.49
11:AF:133:VAL:O	11:AF:137:ILE:HG12	2.12	0.49
13:AH:163:ASP:OD1	13:AH:164:TYR:N	2.46	0.49
26:AU:95:ALA:HB1	26:AU:99:ILE:HD11	1.94	0.49
28:AW:117:ARG:HG2	28:AW:117:ARG:HH11	1.76	0.49
39:BA:29:LEU:O	39:BA:123:ARG:NE	2.43	0.49
49:BK:168:ARG:O	49:BK:172:LEU:HG	2.11	0.49
57:BS:65:TYR:HD1	57:BS:75:ILE:HG13	1.77	0.49
58:BT:33:TYR:HE2	58:BT:80:THR:HG23	1.77	0.49
61:BW:100:LYS:O	61:BW:104:GLU:N	2.45	0.49
71:Bg:16:GLN:O	71:Bg:19:SER:OG	2.29	0.49
80:CA:902:ASN:HA	80:CA:905:ARG:HE	1.78	0.49
80:CA:1601:SER:O	80:CA:1605:ASP:N	2.36	0.49
80:CA:1761:VAL:HG21	80:CA:1914:LEU:HD22	1.95	0.49
1:2:448:C:H2'	1:2:449:C:C6	2.48	0.49
1:2:1306:C:N3	1:2:1319:A:N1	2.60	0.49
1:2:1331:A:H2'	1:2:1332:C:H5'	1.95	0.49
1:2:1523:G:H2'	25:AT:78:LYS:NZ	2.28	0.49
1:2:1658:G:O6	1:2:1743:U:O2	2.30	0.49
3:4:62:U:OP1	42:BD:277:LEU:HB2	2.12	0.49
4:5:245:U:H2'	4:5:246:U:H6	1.78	0.49
4:5:246:U:H2'	4:5:247:C:C6	2.48	0.49
4:5:663:U:H2'	4:5:664:C:C6	2.48	0.49
4:5:992:G:N2	57:BS:59:GLY:O	2.35	0.49
4:5:1467:G:N2	4:5:1511:G:H5''	2.28	0.49
4:5:2524:A:N7	45:BG:51:LYS:HG3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:2690:A:H2'	4:5:2690:A:N3	2.28	0.49
6:AA:164:ASN:OD1	6:AA:165:ARG:NH1	2.46	0.49
8:AC:229:LEU:O	27:AV:16:LYS:NZ	2.37	0.49
11:AF:148:ARG:HH11	11:AF:157:ARG:HG2	1.78	0.49
12:AG:36:VAL:HG23	12:AG:50:PHE:HB2	1.95	0.49
21:AP:17:TYR:HE1	21:AP:112:LEU:HD11	1.77	0.49
22:AQ:14:LYS:HE2	22:AQ:124:PRO:HG3	1.94	0.49
23:AR:79:GLU:HA	23:AR:82:ASP:OD2	2.11	0.49
23:AR:105:GLN:HG2	23:AR:106:THR:N	2.28	0.49
25:AT:26:GLY:C	25:AT:27:LYS:HD3	2.38	0.49
32:Aa:37:LYS:HD3	32:Aa:37:LYS:H	1.77	0.49
38:Ag:112:SER:HB2	38:Ag:153:GLN:HA	1.95	0.49
61:BW:64:GLU:N	61:BW:64:GLU:OE1	2.46	0.49
62:BX:71:SER:OG	62:BX:83:ASP:HB3	2.13	0.49
81:CB:8:VAL:O	81:CB:9:ILE:HG22	2.13	0.49
1:2:1024:U:C2'	1:2:1025:A:H5'	2.43	0.49
1:2:1232:U:H2'	1:2:1233:G:C8	2.48	0.49
1:2:1275:A:H8	1:2:1275:A:OP1	1.96	0.49
1:2:1344:A:H2'	1:2:1345:A:H8	1.78	0.49
2:3:71:A:N1	2:3:82:U:O2'	2.41	0.49
4:5:138:U:H2'	4:5:139:G:H8	1.78	0.49
4:5:1088:G:OP1	65:Ba:29:TYR:OH	2.21	0.49
4:5:1257:G:H2'	4:5:1258:C:C6	2.48	0.49
4:5:1683:U:O2	58:BT:82:LYS:HD3	2.12	0.49
4:5:1865:A:H5'	55:BQ:88:ARG:HG2	1.94	0.49
4:5:2804:A:OP1	78:Bn:60:LYS:HE3	2.13	0.49
4:5:3186:U:O2'	56:BR:170:THR:OG1	2.29	0.49
4:5:3186:U:C5	52:BN:126[A]:VAL:HG11	2.48	0.49
6:AA:205:ARG:NH1	23:AR:81:LYS:O	2.45	0.49
8:AC:225:LEU:HB2	27:AV:23:ILE:HD11	1.94	0.49
9:AD:124:ARG:HD2	9:AD:125:TYR:N	2.28	0.49
11:AF:41:LYS:HD2	11:AF:69:PHE:CZ	2.48	0.49
12:AG:159:ARG:HE	12:AG:170:THR:HG21	1.78	0.49
16:AK:17:GLN:HG2	16:AK:18:GLU:OE1	2.13	0.49
21:AP:85:ILE:HB	21:AP:112:LEU:HA	1.94	0.49
48:BJ:22:SER:HA	48:BJ:66:ALA:HB2	1.94	0.49
74:Bj:5:ILE:HD11	74:Bj:11:PHE:CD2	2.46	0.49
80:CA:440:ILE:HA	80:CA:443:LEU:HD13	1.93	0.49
80:CA:1639:SER:OG	80:CA:1642:THR:OG1	2.21	0.49
1:2:1170:G:C6	1:2:1574:G:C5	3.01	0.49
1:2:1477:G:O4'	25:AT:48:GLN:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3:15:G:H1'	4:5:408:A:N6	2.27	0.49
2:3:37:A:C8	2:3:39:G:N2	2.81	0.49
4:5:372:A:H2'	4:5:373:A:C8	2.48	0.49
8:AC:144:TRP:CE2	8:AC:173:PRO:HG3	2.48	0.49
9:AD:33:GLY:O	9:AD:52:ALA:HA	2.11	0.49
14:AI:56:ARG:HD3	14:AI:174:GLY:O	2.12	0.49
15:AJ:153:GLU:HA	15:AJ:156:ILE:HD12	1.95	0.49
17:AL:53:TYR:CD1	17:AL:113:PRO:HB2	2.48	0.49
20:AO:58:TYR:HB2	34:Ac:61:ARG:NH1	2.28	0.49
38:Ag:121:MET:HG2	38:Ag:183:LEU:HD13	1.93	0.49
38:Ag:216:LYS:HA	38:Ag:239:GLU:HG2	1.94	0.49
54:BP:36:LEU:O	54:BP:40:THR:OG1	2.17	0.49
55:BQ:11:ALA:O	55:BQ:15:VAL:HG22	2.12	0.49
79:Bo:49:ARG:NH1	79:Bo:68:ALA:O	2.45	0.49
80:CA:1483:PHE:HB2	80:CA:1490:TYR:CE2	2.48	0.49
1:2:142:G:C2	1:2:143:G:C8	3.01	0.48
1:2:989:U:H2'	1:2:990:C:C6	2.47	0.48
1:2:1787:C:OP2	20:AO:132:ARG:HB2	2.13	0.48
4:5:38:U:H2'	4:5:39:A:O4'	2.12	0.48
4:5:149:U:OP2	51:BM:49:ARG:NH2	2.39	0.48
4:5:1725:U:OP1	55:BQ:128:LYS:NZ	2.36	0.48
4:5:2535:G:H2'	4:5:2536:A:C8	2.47	0.48
4:5:3299:C:OP1	53:BO:74:LYS:NZ	2.37	0.48
5:6:10:G:N2	5:6:26:G:H1'	2.28	0.48
5:6:35:C:OP1	22:AQ:143:ARG:NH1	2.46	0.48
6:AA:62:ARG:HH22	27:AV:38:LYS:HZ2	1.61	0.48
7:AB:140:ILE:HG22	7:AB:211:HIS:O	2.13	0.48
8:AC:227:PRO:HA	8:AC:230:TRP:CE2	2.47	0.48
10:AE:100:ARG:HG2	10:AE:102:VAL:HG13	1.95	0.48
11:AF:113:ILE:O	11:AF:117:THR:HG23	2.12	0.48
13:AH:113:PRO:HG2	13:AH:116:ARG:HD3	1.95	0.48
14:AI:151:LYS:HE2	14:AI:151:LYS:HA	1.95	0.48
18:AM:54:ARG:HH12	37:Af:129:GLY:N	2.11	0.48
20:AO:47:LYS:HG3	20:AO:62:LEU:HB2	1.94	0.48
20:AO:87:GLY:HA3	20:AO:120:PRO:HG2	1.95	0.48
21:AP:108:ARG:NH2	24:AS:118:LYS:O	2.45	0.48
29:AX:126:LYS:HG2	29:AX:131:SER:HA	1.95	0.48
30:AY:7:ILE:HD12	30:AY:7:ILE:H	1.78	0.48
30:AY:26:ASP:OD1	30:AY:70:VAL:HG22	2.13	0.48
36:Ae:41:THR:HA	36:Ae:45:VAL:HG22	1.93	0.48
37:Af:141:CYS:SG	37:Af:144:CYS:N	2.85	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BC:209:TYR:HA	41:BC:251:THR:OG1	2.13	0.48
48:BJ:54:VAL:H	48:BJ:59:ILE:HG21	1.76	0.48
51:BM:99:ARG:NH1	51:BM:118:SER:O	2.45	0.48
52:BN:108[A]:ILE:HG21	52:BN:113[A]:ASP:HA	1.95	0.48
55:BQ:81:ARG:HG2	55:BQ:88:ARG:CZ	2.43	0.48
72:Bh:70:ARG:HD2	72:Bh:84:LYS:HG2	1.93	0.48
74:Bj:12:LEU:HB3	74:Bj:16:ARG:HH22	1.78	0.48
82:CC:179:GLN:OE1	82:CC:198:VAL:N	2.37	0.48
1:2:66:U:H5''	12:AG:173:PRO:CB	2.42	0.48
1:2:158:U:H3'	1:2:159:U:H5''	1.95	0.48
1:2:1164:G:C2	1:2:1165:G:C5	3.00	0.48
1:2:1171:A:H2'	1:2:1172:G:H8	1.78	0.48
1:2:1178:G:C6	1:2:1462:G:C6	3.01	0.48
1:2:1247:U:H5''	37:Af:94:LYS:H	1.78	0.48
1:2:1762:A:O2'	1:2:1783:C:H5'	2.13	0.48
4:5:279:U:H2'	4:5:280:U:H6	1.78	0.48
4:5:566:U:H2'	4:5:567:G:C8	2.45	0.48
4:5:1401:G:C2	4:5:1402:A:C8	3.01	0.48
4:5:1570:U:H5''	4:5:1571:U:H6	1.78	0.48
4:5:2098:U:H2'	4:5:2099:C:C6	2.48	0.48
4:5:2283:U:O2	4:5:2311:U:H4'	2.12	0.48
4:5:2871:C:H5''	4:5:2872:G:OP1	2.13	0.48
7:AB:23:PRO:HA	7:AB:26:ARG:HH12	1.78	0.48
7:AB:72:ASP:OD1	32:Aa:59:TYR:OH	2.20	0.48
16:AK:33:GLU:O	16:AK:34:GLU:HG3	2.13	0.48
18:AM:26:ASP:OD1	18:AM:29:LYS:NZ	2.46	0.48
38:Ag:91:LEU:HD23	38:Ag:100:TYR:HB2	1.95	0.48
49:BK:181:GLY:O	49:BK:185:LYS:N	2.45	0.48
59:BU:57:MET:HE1	59:BU:105:PRO:HA	1.95	0.48
62:BX:56:VAL:CG1	62:BX:104:LEU:HB3	2.43	0.48
63:BY:105:SER:OG	63:BY:106:GLN:OE1	2.29	0.48
64:BZ:77:LYS:C	64:BZ:79:TRP:N	2.70	0.48
78:Bn:25:VAL:HG22	78:Bn:72:LEU:HD23	1.95	0.48
80:CA:294:LEU:HB3	80:CA:486:PHE:HE2	1.77	0.48
80:CA:1404:ASN:HB2	80:CA:1454:LYS:HA	1.94	0.48
81:CB:116:LYS:HG3	81:CB:148:LEU:HD21	1.96	0.48
1:2:202:A:H2'	1:2:203:U:C6	2.48	0.48
1:2:430:G:H2'	1:2:431:C:H6	1.79	0.48
1:2:803:A:N6	13:AH:105:THR:OG1	2.45	0.48
1:2:885:G:OP1	7:AB:216:LYS:NZ	2.35	0.48
1:2:992:A:O2'	1:2:1785:U:O2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1365:C:OP1	22:AQ:66:ARG:NH2	2.45	0.48
1:2:1554:U:H2'	1:2:1555:A:O4'	2.14	0.48
1:2:1590:G:H2'	1:2:1591:C:C6	2.48	0.48
1:2:1775:U:O4	77:Bm:4:LYS:HE3	2.13	0.48
3:4:22:A:H1'	42:BD:272:TYR:CZ	2.48	0.48
3:4:107:C:H2'	3:4:108:A:C8	2.46	0.48
4:5:921:A:OP1	4:5:924:C:N4	2.39	0.48
4:5:1084:G:H2'	4:5:1085:A:C8	2.48	0.48
4:5:1243:G:O6	4:5:1244:G:N1	2.46	0.48
4:5:1412:C:OP1	68:Bd:98:HIS:N	2.41	0.48
4:5:2535:G:H2'	4:5:2536:A:H8	1.78	0.48
4:5:3009:A:N6	4:5:3140:A:N6	2.61	0.48
6:AA:182:LEU:HB3	6:AA:187:ALA:HB3	1.95	0.48
8:AC:59:HIS:CD2	8:AC:238:SER:HA	2.48	0.48
11:AF:140:THR:HA	11:AF:214:LYS:HD2	1.94	0.48
12:AG:31:ARG:HG3	12:AG:34:GLN:NE2	2.27	0.48
20:AO:43:THR:HG23	20:AO:46:MET:HE3	1.96	0.48
27:AV:32:VAL:HG22	27:AV:60:ARG:HD2	1.95	0.48
32:Aa:82:ARG:HE	32:Aa:85:ARG:HH22	1.59	0.48
36:Ae:42:ARG:HB3	36:Ae:42:ARG:NH1	2.28	0.48
37:Af:139:LEU:HD12	37:Af:150:VAL:HG13	1.95	0.48
42:BD:122:VAL:HG23	42:BD:125:VAL:HG22	1.94	0.48
42:BD:232:ASP:N	42:BD:235:SER:OG	2.46	0.48
46:BH:77:ASN:O	46:BH:81:GLY:N	2.45	0.48
49:BK:114:GLN:HA	49:BK:117:LYS:NZ	2.28	0.48
56:BR:109:ASP:OD1	56:BR:113:ARG:HD2	2.13	0.48
63:BY:124:ALA:HB3	63:BY:126:LYS:NZ	2.29	0.48
64:BZ:90:TYR:HA	64:BZ:93:SER:HG	1.78	0.48
80:CA:263:ASN:HA	80:CA:266:TYR:CZ	2.48	0.48
81:CB:74:ARG:HH21	81:CB:78:ARG:HH21	1.60	0.48
1:2:58:U:OP1	1:2:456:A:O2'	2.29	0.48
1:2:962:C:OP2	19:AN:70:LYS:NZ	2.35	0.48
1:2:1319:A:H8	1:2:1319:A:O5'	1.97	0.48
1:2:1420:C:OP1	35:Ad:54:LYS:NZ	2.43	0.48
1:2:1429:G:H2'	1:2:1430:U:H6	1.77	0.48
2:3:97:A:C6	2:3:98:U:C4	3.01	0.48
3:4:84:A:H2'	3:4:85:G:C8	2.48	0.48
4:5:600:C:H2'	4:5:601:G:O4'	2.13	0.48
4:5:913:G:N1	39:BA:208:ASP:OD2	2.43	0.48
4:5:1687:U:O2	4:5:3070:G:N2	2.47	0.48
4:5:2217:G:H22	4:5:2230:A:H2	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AA:41:ARG:NH1	6:AA:45:VAL:HB	2.29	0.48
6:AA:59:LEU:HD22	27:AV:79:LEU:HD22	1.95	0.48
6:AA:181:VAL:HG22	6:AA:185:ARG:HE	1.76	0.48
21:AP:103:ASN:C	21:AP:103:ASN:ND2	2.70	0.48
25:AT:135:ILE:O	25:AT:138:GLN:HG2	2.13	0.48
29:AX:125:VAL:HG12	29:AX:126:LYS:HG3	1.95	0.48
37:Af:107:LYS:HE2	37:Af:117:LEU:H	1.78	0.48
47:BI:171:TRP:CD2	47:BI:181:TYR:HD2	2.31	0.48
52:BN:113[A]:ASP:OD2	52:BN:114[A]:LYS:N	2.46	0.48
58:BT:14:THR:HG22	58:BT:66:VAL:HG13	1.95	0.48
62:BX:58:VAL:HA	62:BX:104:LEU:HD23	1.95	0.48
80:CA:1242:GLU:HB2	80:CA:1275:ARG:NH2	2.29	0.48
80:CA:1915:LEU:HD13	80:CA:1941:ILE:HG21	1.95	0.48
1:2:69:G:O6	1:2:82:U:O4	2.30	0.48
1:2:835:U:N3	1:2:836:U:O4	2.47	0.48
1:2:1406:A:H2'	1:2:1407:U:H6	1.78	0.48
1:2:1407:U:H2'	1:2:1408:G:H8	1.78	0.48
1:2:1565:C:H1'	24:AS:86:LEU:O	2.13	0.48
1:2:1661:U:H2'	1:2:1662:G:H8	1.78	0.48
3:4:42:A:C5	3:4:43:U:C5	3.01	0.48
3:4:52:G:N2	48:BJ:9:MET:HE1	2.28	0.48
4:5:2358:A:H2'	4:5:2359:A:H8	1.78	0.48
4:5:2431:A:H2'	4:5:2432:C:C6	2.49	0.48
4:5:2551:U:H6	45:BG:37:GLY:HA3	1.77	0.48
4:5:3289:G:H8	4:5:3289:G:OP2	1.96	0.48
7:AB:32:ILE:HB	7:AB:43:VAL:HB	1.96	0.48
8:AC:43:ARG:HH22	8:AC:248:SER:N	2.11	0.48
8:AC:59:HIS:HB2	8:AC:61:LEU:CD1	2.44	0.48
9:AD:59:LEU:HA	9:AD:66:ILE:HG23	1.94	0.48
12:AG:140:ASN:HA	12:AG:143:LYS:HZ3	1.78	0.48
21:AP:18:ARG:NH1	24:AS:90:ASN:O	2.46	0.48
26:AU:84:MET:HE2	35:Ad:51:GLY:HA3	1.94	0.48
43:BE:54:TYR:CE1	43:BE:63:LEU:HB3	2.48	0.48
43:BE:158:TYR:OH	50:BL:114:ASP:OD2	2.23	0.48
66:Bb:76:GLU:H	66:Bb:76:GLU:CD	2.22	0.48
80:CA:1216:LYS:HZ1	80:CA:1233:ASP:HB2	1.79	0.48
80:CA:1275:ARG:HH21	80:CA:1278:ILE:HG21	1.78	0.48
1:2:110:U:OP1	1:2:753:A:O2'	2.30	0.48
1:2:751:G:H2'	1:2:752:A:H8	1.78	0.48
1:2:1198:G:OP1	1:2:1199:G:O2'	2.16	0.48
1:2:1216:C:O2	1:2:1446:A:N6	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1275:A:H2'	9:AD:141:LYS:HE2	1.95	0.48
4:5:207:U:H2'	4:5:208:C:H6	1.77	0.48
4:5:437:G:C6	4:5:438:A:C6	3.01	0.48
4:5:528:A:H2'	4:5:529:U:H6	1.78	0.48
4:5:1379:U:H2'	4:5:1380:G:H8	1.78	0.48
4:5:3393:U:H2'	4:5:3394:U:H6	1.79	0.48
15:AJ:90:LYS:HB3	15:AJ:95:TYR:CD1	2.45	0.48
19:AN:32:SER:HA	19:AN:35:GLU:OE2	2.13	0.48
24:AS:94:ASP:OD2	24:AS:96:LYS:NZ	2.23	0.48
38:Ag:69:GLN:H	38:Ag:84:SER:HA	1.78	0.48
41:BC:311:HIS:ND1	41:BC:311:HIS:O	2.46	0.48
45:BG:90:THR:HG23	45:BG:214:LEU:HD21	1.94	0.48
46:BH:20:ILE:HG21	46:BH:45:PHE:CD1	2.47	0.48
46:BH:88:TYR:HE2	46:BH:184:LYS:HG2	1.75	0.48
46:BH:105:GLU:OE1	46:BH:106:LYS:N	2.46	0.48
51:BM:47:LYS:HD2	51:BM:50:ARG:HE	1.78	0.48
70:Bf:103:LYS:HA	70:Bf:106:LYS:HG2	1.96	0.48
72:Bh:45:ARG:NH2	72:Bh:50:LEU:HA	2.28	0.48
80:CA:510:SER:O	80:CA:513:SER:OG	2.23	0.48
80:CA:1941:ILE:HD12	80:CA:1946:LEU:HD11	1.94	0.48
1:2:184:C:H2'	1:2:185:U:H6	1.77	0.48
1:2:805:U:C4	1:2:806:A:N7	2.82	0.48
1:2:1254:U:H5'	37:Af:143:LYS:CE	2.43	0.48
1:2:1357:A:H2'	1:2:1358:G:C8	2.48	0.48
4:5:700:A:H2'	4:5:701:C:O4'	2.14	0.48
4:5:1091:G:H2'	4:5:1092:A:C8	2.45	0.48
4:5:2797:G:N7	78:Bn:63:LYS:NZ	2.57	0.48
4:5:3058:U:H2'	4:5:3058:U:O2	2.14	0.48
8:AC:237:VAL:HB	8:AC:242:ILE:HD11	1.94	0.48
14:AI:138:ASN:O	14:AI:138:ASN:ND2	2.44	0.48
18:AM:84:ASN:O	18:AM:86:VAL:HG13	2.14	0.48
62:BX:74:TYR:CE2	62:BX:77:LYS:HE2	2.49	0.48
64:BZ:77:LYS:O	64:BZ:79:TRP:N	2.46	0.48
68:Bd:75:LEU:HD23	68:Bd:95:GLU:HB3	1.94	0.48
72:Bh:4:LYS:HD3	72:Bh:12:ASN:OD1	2.14	0.48
80:CA:590:ILE:HA	80:CA:594:GLY:HA3	1.94	0.48
80:CA:1524:LYS:HG3	80:CA:1528:TYR:HE2	1.79	0.48
82:CC:350:ASP:OD1	82:CC:351:ASN:N	2.42	0.48
1:2:438:A:H1'	1:2:465:G:H22	1.78	0.48
1:2:735:C:H2'	1:2:736:C:C6	2.49	0.48
1:2:1071:U:O2'	33:Ab:19:HIS:HD2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1310:U:HO2'	1:2:1402:G:HO2'	1.61	0.48
1:2:1388:A:H4'	1:2:1389:C:O5'	2.13	0.48
4:5:236:G:H2'	4:5:237:G:C8	2.47	0.48
4:5:530:A:C6	4:5:565:G:C6	3.01	0.48
4:5:735:C:H2'	4:5:736:A:O4'	2.13	0.48
4:5:1565:U:H3	4:5:1576:A:H61	1.60	0.48
4:5:1581:A:H5''	4:5:2523:G:C2	2.47	0.48
6:AA:30:GLN:HE22	6:AA:149:LEU:HB3	1.78	0.48
7:AB:119:THR:HG21	7:AB:161:ILE:HD11	1.95	0.48
7:AB:157:GLN:C	7:AB:159:SER:H	2.21	0.48
15:AJ:68:LYS:HD3	15:AJ:68:LYS:HA	1.74	0.48
16:AK:45:ALA:O	16:AK:48:SER:OG	2.31	0.48
22:AQ:62:ASN:OD1	22:AQ:63:ILE:HG23	2.14	0.48
23:AR:32:LYS:HG3	23:AR:33:ARG:HD3	1.96	0.48
24:AS:90:ASN:OD1	24:AS:95:GLY:HA2	2.14	0.48
24:AS:110:ARG:NH1	24:AS:111:ASP:HB3	2.29	0.48
35:Ad:11:PRO:HB3	35:Ad:13:ARG:CZ	2.43	0.48
40:BB:348:ARG:HG2	40:BB:348:ARG:HH11	1.79	0.48
48:BJ:134:PRO:O	48:BJ:152:HIS:NE2	2.42	0.48
51:BM:8:GLU:O	51:BM:12:ARG:HG3	2.14	0.48
51:BM:165:THR:HG22	51:BM:166:ALA:N	2.27	0.48
72:Bh:34:SER:OG	72:Bh:37:THR:N	2.42	0.48
79:Bo:84:ARG:CZ	79:Bo:87:ARG:HH22	2.27	0.48
1:2:217:A:N6	1:2:218:A:N7	2.61	0.48
1:2:482:U:H2'	1:2:483:A:C8	2.47	0.48
1:2:522:U:H2'	1:2:523:G:C8	2.48	0.48
1:2:824:G:H2'	1:2:825:U:H6	1.78	0.48
1:2:1236:A:H1'	37:Af:138:ARG:NH1	2.29	0.48
1:2:1287:A:H4'	1:2:1288:G:H5'	1.95	0.48
1:2:1409:G:N2	1:2:1412:G:OP2	2.44	0.48
1:2:1569:A:H2'	1:2:1570:A:H8	1.78	0.48
4:5:102:C:HO2'	49:BK:62:THR:HG1	1.52	0.48
4:5:1278:C:O2'	4:5:1279:A:H8	1.96	0.48
4:5:1279:A:HO2'	4:5:1280:C:C5'	2.26	0.48
4:5:1591:G:OP1	70:Bf:17:SER:OG	2.23	0.48
4:5:1640:C:OP2	70:Bf:74:ARG:NH1	2.47	0.48
4:5:1648:A:H2'	4:5:1649:A:C8	2.49	0.48
4:5:3209:G:O4'	4:5:3211:A:C8	2.67	0.48
8:AC:99:LYS:HE3	8:AC:115:ILE:HG21	1.95	0.48
8:AC:240:LEU:O	8:AC:244:SER:OG	2.28	0.48
9:AD:21:LEU:HD11	9:AD:48:VAL:HG11	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AE:42:LEU:HD21	10:AE:47:PHE:CG	2.49	0.48
10:AE:45:ILE:HD11	10:AE:58:GLY:HA2	1.96	0.48
11:AF:50:GLU:N	11:AF:65:ARG:HH22	2.12	0.48
16:AK:74:GLU:HA	16:AK:77:ARG:HH12	1.78	0.48
26:AU:98:GLN:HG2	26:AU:99:ILE:HG23	1.96	0.48
28:AW:30:SER:HB2	28:AW:61:ILE:HG13	1.95	0.48
36:Ae:42:ARG:HB3	36:Ae:42:ARG:HH11	1.77	0.48
38:Ag:90:ARG:HB2	38:Ag:92:TRP:CH2	2.49	0.48
38:Ag:109:ASP:HB2	38:Ag:127:ARG:HG3	1.96	0.48
41:BC:64:SER:HA	41:BC:75:PRO:HA	1.96	0.48
45:BG:54:GLU:O	45:BG:58:VAL:HG23	2.13	0.48
47:BI:87:LEU:HD13	47:BI:138:VAL:HG22	1.94	0.48
58:BT:57:THR:OG1	58:BT:64:THR:HB	2.13	0.48
79:Bo:61:LYS:N	79:Bo:61:LYS:HD3	2.29	0.48
80:CA:716:ASN:OD1	80:CA:783:MET:HB3	2.13	0.48
80:CA:1785:LEU:HB2	80:CA:1788:LEU:HD12	1.96	0.48
1:2:592:A:OP1	15:AJ:39:LYS:HG3	2.13	0.48
1:2:647:G:H2'	1:2:648:G:H8	1.79	0.48
1:2:1098:U:OP1	8:AC:159:THR:OG1	2.26	0.48
1:2:1504:G:OP1	25:AT:98:GLY:N	2.46	0.48
4:5:221:A:N6	62:BX:103:LYS:HE3	2.29	0.48
4:5:235:A:H2'	4:5:236:G:C8	2.47	0.48
4:5:602:U:H2'	4:5:603:A:O4'	2.14	0.48
4:5:757:U:H2'	4:5:758:C:C6	2.49	0.48
4:5:909:G:N1	4:5:2415:G:OP1	2.41	0.48
4:5:1896:A:O2'	4:5:3054:G:H4'	2.14	0.48
4:5:3056:U:H1'	4:5:3058:U:OP2	2.14	0.48
4:5:3310:G:H1'	53:BO:69:ARG:CD	2.39	0.48
7:AB:54:LEU:HD23	7:AB:54:LEU:H	1.78	0.48
8:AC:49:LYS:HE2	8:AC:243:TYR:CZ	2.49	0.48
18:AM:54:ARG:HD3	18:AM:54:ARG:N	2.29	0.48
23:AR:28:PHE:HA	23:AR:55:THR:HG21	1.96	0.48
24:AS:16:ARG:NH2	48:BJ:111:ASP:OD2	2.47	0.48
41:BC:357:GLU:O	41:BC:361:HIS:N	2.47	0.48
51:BM:5:LYS:NZ	72:Bh:37:THR:HA	2.28	0.48
53:BO:40:GLU:OE2	53:BO:43:LYS:HB2	2.14	0.48
54:BP:19:PRO:HB3	54:BP:53:PHE:HA	1.96	0.48
71:Bg:85:THR:HG22	71:Bg:87:ALA:H	1.78	0.48
80:CA:433:HIS:O	80:CA:706:ARG:NH2	2.47	0.48
1:2:629:U:H5''	4:5:847:A:N3	2.29	0.47
1:2:828:U:H2'	1:2:829:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:939:A:OP1	19:AN:114:ARG:NH2	2.40	0.47
1:2:959:U:H5''	19:AN:14:SER:HB2	1.96	0.47
1:2:1107:G:O2'	1:2:1108:G:H5'	2.14	0.47
1:2:1483:A:H2'	1:2:1484:G:C8	2.50	0.47
1:2:1733:C:H2'	1:2:1734:U:C6	2.49	0.47
4:5:65:A:N1	4:5:109:A:O2'	2.46	0.47
4:5:913:G:H2'	4:5:915:A:N7	2.29	0.47
4:5:3269:A:H5''	43:BE:46:ARG:NH2	2.29	0.47
4:5:3344:G:H21	4:5:3363:A:H2	1.59	0.47
4:5:3387:G:H2'	4:5:3388:U:C6	2.49	0.47
6:AA:175:TYR:CZ	6:AA:199:PRO:HG3	2.49	0.47
6:AA:175:TYR:CE2	6:AA:199:PRO:HG3	2.49	0.47
24:AS:7:GLU:HB2	31:AZ:43:ASP:HA	1.94	0.47
34:Ac:11:LYS:HZ3	34:Ac:51:ASN:HA	1.77	0.47
38:Ag:276:PRO:HG2	38:Ag:278:PHE:CE1	2.48	0.47
42:BD:277:LEU:HB3	42:BD:281:GLU:OE2	2.13	0.47
46:BH:49:ASN:OD1	46:BH:52:LEU:N	2.47	0.47
55:BQ:163:ARG:HB2	55:BQ:167:ARG:NH1	2.28	0.47
58:BT:50:LEU:HD12	58:BT:50:LEU:O	2.13	0.47
60:BV:47:ARG:HD3	60:BV:58:HIS:ND1	2.29	0.47
80:CA:877:LEU:O	80:CA:881:TYR:N	2.46	0.47
80:CA:1086:SER:HB3	80:CA:1092:CYS:HB3	1.96	0.47
1:2:930:A:H1'	7:AB:111:ARG:NH1	2.29	0.47
1:2:1183:A:C2	21:AP:100:LYS:HB2	2.50	0.47
1:2:1248:C:H5'	37:Af:92:LYS:NZ	2.30	0.47
2:3:73:U:OP1	62:BX:24:SER:OG	2.30	0.47
4:5:242:C:O2'	4:5:243:G:H8	1.96	0.47
4:5:1505:A:N1	4:5:1516:A:O2'	2.43	0.47
4:5:1734:G:H2'	4:5:1735:G:H8	1.79	0.47
4:5:2909:G:H2'	4:5:2910:U:H6	1.79	0.47
10:AE:233:LYS:HZ2	10:AE:235:TYR:HE1	1.62	0.47
16:AK:77:ARG:O	16:AK:81:ASN:N	2.48	0.47
21:AP:22:LEU:HD13	21:AP:25:LEU:HD11	1.96	0.47
21:AP:44:ARG:NH2	21:AP:115:TYR:OH	2.40	0.47
22:AQ:140:LYS:HG2	22:AQ:142:TYR:OH	2.14	0.47
39:BA:33:ASP:CG	39:BA:34:TYR:H	2.21	0.47
72:Bh:70:ARG:HD3	72:Bh:87:VAL:HG11	1.96	0.47
80:CA:395:GLN:OE1	80:CA:395:GLN:N	2.47	0.47
80:CA:435:ASP:HA	80:CA:706:ARG:HD2	1.97	0.47
80:CA:555:LEU:HD12	80:CA:558:SER:HB2	1.95	0.47
80:CA:990:LYS:O	80:CA:994:ARG:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1349:CYS:SG	81:CB:5:TYR:HB2	2.54	0.47
1:2:1212:G:C2	1:2:1213:G:C8	3.01	0.47
1:2:1241:G:H3'	1:2:1242:A:C8	2.49	0.47
1:2:1474:G:OP2	11:AF:109:LYS:NZ	2.35	0.47
1:2:1586:A:N3	1:2:1611:A:N6	2.62	0.47
4:5:438:A:H2'	4:5:439:C:C6	2.49	0.47
4:5:1226:A:C6	4:5:1227:G:C6	3.02	0.47
4:5:1665:G:H2'	4:5:1666:C:H6	1.79	0.47
4:5:1898:G:O2'	59:BU:16:GLY:O	2.31	0.47
4:5:1943:U:OP2	55:BQ:74:ARG:NH2	2.43	0.47
4:5:2545:U:H2'	4:5:2546:C:C6	2.49	0.47
5:6:39:C:H2'	5:6:40:C:C6	2.50	0.47
11:AF:117:THR:HG21	11:AF:194:LEU:HD23	1.95	0.47
12:AG:38:GLY:O	12:AG:45:PHE:HB2	2.14	0.47
20:AO:26:THR:O	20:AO:44:GLY:N	2.48	0.47
21:AP:17:TYR:CD2	21:AP:18:ARG:HG2	2.49	0.47
25:AT:138:GLN:HA	25:AT:141:GLU:HB2	1.96	0.47
33:Ab:61:THR:O	33:Ab:62:ILE:HG12	2.14	0.47
36:Ae:26:LYS:HZ1	36:Ae:29:LYS:HE2	1.79	0.47
39:BA:127:ALA:HB2	39:BA:134:VAL:HG23	1.96	0.47
41:BC:350:LYS:HD2	41:BC:351:PRO:HD2	1.97	0.47
43:BE:10:TYR:HD1	68:Bd:88:HIS:CD2	2.33	0.47
64:BZ:60:TYR:CE2	64:BZ:63:LYS:HD3	2.49	0.47
67:Bc:81:GLU:HG3	67:Bc:82:GLU:N	2.29	0.47
74:Bj:17:ARG:NE	74:Bj:19:ASP:OD2	2.46	0.47
74:Bj:32:ASN:HD21	74:Bj:36:LYS:HD2	1.79	0.47
80:CA:326:ASN:HA	80:CA:329:LYS:NZ	2.30	0.47
80:CA:534:GLN:HB2	80:CA:637:ASP:HB2	1.97	0.47
80:CA:970:LEU:HD22	80:CA:975:LEU:HD23	1.96	0.47
80:CA:1260:VAL:HG11	80:CA:1286:MET:HE3	1.95	0.47
80:CA:1291:SER:O	80:CA:1294:LYS:NZ	2.31	0.47
80:CA:1356:ASN:OD1	80:CA:1357:LYS:N	2.46	0.47
80:CA:1546:LEU:HA	80:CA:1549:HIS:CE1	2.50	0.47
1:2:78:A:H5''	12:AG:159:ARG:HH12	1.78	0.47
1:2:625:C:H2'	1:2:626:U:C6	2.49	0.47
1:2:918:U:H2'	1:2:919:A:C8	2.45	0.47
1:2:928:U:H4'	1:2:929:A:O5'	2.14	0.47
1:2:1339:C:O2'	1:2:1341:A:N7	2.44	0.47
1:2:1345:A:H2'	1:2:1348:A:N6	2.29	0.47
1:2:1546:G:N7	24:AS:134:ARG:NH2	2.63	0.47
3:4:19:C:C2	3:4:61:G:N2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:123:A:C6	4:5:150:A:C5	3.02	0.47
4:5:162:G:H2'	4:5:163:C:H6	1.79	0.47
4:5:245:U:H2'	4:5:246:U:C6	2.49	0.47
4:5:282:G:C8	4:5:282:G:H3'	2.50	0.47
4:5:847:A:H5''	4:5:848:A:OP2	2.13	0.47
4:5:902:G:OP1	73:Bi:13:ASN:ND2	2.36	0.47
4:5:1568:U:H2'	4:5:1569:U:H4'	1.95	0.47
4:5:1592:G:P	70:Bf:16:ARG:HH21	2.37	0.47
5:6:32:C:H42	5:6:38:A:N6	2.12	0.47
6:AA:27:ARG:HE	6:AA:27:ARG:HB3	1.53	0.47
19:AN:142:GLU:OE2	19:AN:142:GLU:N	2.44	0.47
20:AO:78:ALA:HB2	20:AO:111:ARG:HB2	1.97	0.47
38:Ag:66:HIS:CG	38:Ag:67:ILE:H	2.33	0.47
41:BC:259:ASP:O	41:BC:263:GLY:N	2.47	0.47
42:BD:261:THR:O	42:BD:264:GLN:HG3	2.14	0.47
46:BH:23:ARG:HD2	46:BH:39:LYS:HA	1.95	0.47
48:BJ:35:LYS:HA	48:BJ:38:GLU:OE2	2.13	0.47
48:BJ:112:LEU:O	48:BJ:114:ILE:HG12	2.13	0.47
51:BM:190:THR:O	51:BM:194:GLN:HG2	2.15	0.47
80:CA:721:LEU:HD11	80:CA:723:SER:HB3	1.97	0.47
80:CA:1651:HIS:O	80:CA:1760:THR:OG1	2.32	0.47
81:CB:250:LEU:HB2	81:CB:289:LYS:HD2	1.96	0.47
1:2:215:A:C2	1:2:242:U:C4	3.02	0.47
1:2:234:G:N1	1:2:235:G:N3	2.63	0.47
1:2:1116:A:H2'	1:2:1117:U:O4'	2.14	0.47
1:2:1159:C:OP1	1:2:1160:A:H8	1.98	0.47
2:3:17:A:O2'	4:5:657:A:O2'	2.26	0.47
2:3:25:G:N7	62:BX:13:ARG:NH1	2.62	0.47
4:5:1276:C:H2'	4:5:1277:U:H6	1.79	0.47
4:5:1948:G:OP1	55:BQ:136:ARG:NH2	2.42	0.47
4:5:2802:A:O2'	4:5:2803:A:H2'	2.14	0.47
4:5:2849:G:OP1	76:Bl:100:TYR:OH	2.30	0.47
4:5:3177:G:OP2	69:Be:6:ARG:HB2	2.14	0.47
4:5:3233:G:H2'	4:5:3234:C:C6	2.49	0.47
13:AH:46:ILE:HD11	13:AH:58:LEU:HD22	1.95	0.47
20:AO:103:ARG:NH2	20:AO:107:ARG:HH21	2.13	0.47
48:BJ:61:ARG:HG2	48:BJ:62:ASN:ND2	2.30	0.47
53:BO:30:ARG:HD2	53:BO:63:PHE:HE2	1.79	0.47
62:BX:19:TYR:CE2	62:BX:78:PHE:HE2	2.32	0.47
68:Bd:32:TRP:CZ2	68:Bd:53:PRO:HD2	2.49	0.47
1:2:743:U:C2	1:2:809:A:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3:121:U:H2'	2:3:122:U:C6	2.48	0.47
3:4:24:A:H2'	3:4:25:G:C8	2.49	0.47
4:5:517:A:H2'	4:5:518:G:C8	2.49	0.47
4:5:528:A:H2'	4:5:529:U:C6	2.48	0.47
4:5:1235:G:H2'	4:5:1236:U:C5	2.49	0.47
4:5:1244:G:O2'	4:5:1272:A:O2'	2.26	0.47
4:5:1318:A:O2'	4:5:1319:A:H3'	2.14	0.47
4:5:2140:A:H62	73:Bi:4:GLY:HA3	1.80	0.47
4:5:3393:U:H2'	4:5:3394:U:C6	2.49	0.47
23:AR:45:ARG:HB3	23:AR:49:LYS:NZ	2.30	0.47
24:AS:67:GLU:OE1	24:AS:67:GLU:N	2.39	0.47
38:Ag:267:PRO:HB2	38:Ag:269:TYR:CD1	2.50	0.47
44:BF:122:ALA:O	44:BF:126:LEU:HD13	2.15	0.47
55:BQ:39:ASN:N	55:BQ:39:ASN:OD1	2.44	0.47
63:BY:101:PHE:HA	63:BY:107:ARG:HH11	1.79	0.47
68:Bd:89:THR:HG22	68:Bd:117:ILE:HG12	1.96	0.47
80:CA:430:HIS:CE1	80:CA:660:SER:HB2	2.50	0.47
80:CA:527:GLU:HG3	80:CA:528:MET:HE2	1.97	0.47
80:CA:598:HIS:NE2	80:CA:607:ARG:HB2	2.30	0.47
1:2:322:G:O2'	1:2:323:A:OP2	2.23	0.47
1:2:824:G:H2'	1:2:825:U:C6	2.50	0.47
1:2:826:U:H2'	1:2:827:C:C6	2.49	0.47
1:2:1583:A:H3'	11:AF:76:ARG:HH12	1.79	0.47
1:2:1584:G:O2'	1:2:1610:G:N1	2.48	0.47
1:2:1797:A:N6	32:Aa:84:VAL:HB	2.30	0.47
2:3:67:U:H2'	2:3:68:G:H8	1.80	0.47
2:3:73:U:P	62:BX:75:ARG:HD2	2.55	0.47
3:4:76:A:N3	56:BR:50:LYS:NZ	2.56	0.47
4:5:148:G:O2'	4:5:149:U:OP2	2.32	0.47
4:5:184:U:H4'	62:BX:121:ARG:HH21	1.79	0.47
4:5:195:U:H2'	4:5:196:G:O4'	2.14	0.47
4:5:201:A:H2'	4:5:202:G:H8	1.79	0.47
4:5:361:A:O3'	73:Bi:45:ARG:NH2	2.47	0.47
4:5:367:A:H8	4:5:367:A:O5'	1.98	0.47
4:5:822:U:O2'	4:5:913:G:OP1	2.27	0.47
4:5:965:G:OP2	4:5:1116:G:N1	2.41	0.47
4:5:1168:U:O2'	44:BF:210:PRO:O	2.32	0.47
4:5:1289:U:H2'	4:5:1290:G:C8	2.42	0.47
4:5:1393:G:H5''	68:Bd:125:ARG:NH1	2.29	0.47
4:5:1496:U:H5	4:5:1836:A:N1	2.13	0.47
4:5:1647:G:N2	4:5:1810:A:H62	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:2156:G:H4'	39:BA:227:ARG:HH21	1.79	0.47
4:5:2377:G:H2'	4:5:2378:G:C8	2.50	0.47
4:5:3028:A:O2'	4:5:3029:G:H5'	2.15	0.47
4:5:3192:G:C6	4:5:3203:G:C6	3.02	0.47
4:5:3219:A:H5''	4:5:3220:G:C8	2.50	0.47
6:AA:188:LEU:HD21	6:AA:195:TRP:CD1	2.50	0.47
7:AB:183:GLN:NE2	7:AB:184:LEU:H	2.13	0.47
11:AF:83:ARG:HG3	11:AF:83:ARG:NH1	2.26	0.47
11:AF:166:ARG:NE	11:AF:170:GLN:OE1	2.47	0.47
13:AH:19:GLN:OE1	13:AH:84:LYS:NZ	2.48	0.47
13:AH:138:LYS:C	13:AH:139:ARG:HD2	2.40	0.47
15:AJ:100:LYS:HD3	15:AJ:101:VAL:HG12	1.97	0.47
18:AM:36:LEU:HG	18:AM:41:LEU:HB3	1.96	0.47
19:AN:25:TRP:CD2	33:Ab:82:LYS:HD3	2.50	0.47
23:AR:28:PHE:CE2	23:AR:32:LYS:HD2	2.50	0.47
29:AX:50:LYS:HB3	29:AX:101:GLU:OE2	2.14	0.47
30:AY:39:GLU:HB3	30:AY:43:LYS:NZ	2.29	0.47
34:Ac:46:GLY:O	34:Ac:48:VAL:HG23	2.14	0.47
35:Ad:15:GLY:O	35:Ad:18:SER:OG	2.22	0.47
38:Ag:26:SER:OG	38:Ag:75:ALA:O	2.31	0.47
38:Ag:176:LYS:HZ1	38:Ag:196:ASN:HA	1.80	0.47
39:BA:97:ASN:OD1	79:Bo:87:ARG:NH2	2.47	0.47
40:BB:82:PRO:HB3	40:BB:319:ASN:ND2	2.30	0.47
42:BD:260:PHE:HB3	42:BD:264:GLN:NE2	2.30	0.47
44:BF:169:ILE:H	44:BF:169:ILE:HD12	1.79	0.47
45:BG:98:ARG:HG2	45:BG:98:ARG:HH11	1.79	0.47
45:BG:156:ASP:OD1	45:BG:156:ASP:N	2.48	0.47
46:BH:90:MET:HE1	46:BH:158:ALA:O	2.14	0.47
47:BI:57:LEU:HA	47:BI:130:ASP:HA	1.97	0.47
48:BJ:110:ILE:HD11	48:BJ:122:ILE:HG22	1.97	0.47
49:BK:2:ALA:HA	64:BZ:33:GLY:O	2.15	0.47
57:BS:101:CYS:O	57:BS:104:GLU:HG3	2.15	0.47
59:BU:127:PRO:HB2	59:BU:128:ARG:HH12	1.80	0.47
62:BX:17:LYS:O	62:BX:21:THR:OG1	2.21	0.47
67:Bc:47:ASP:OD1	67:Bc:48:ASP:N	2.48	0.47
74:Bj:27:ILE:HD12	74:Bj:39:ARG:NH2	2.30	0.47
79:Bo:41:PHE:HD2	79:Bo:62:LYS:HG2	1.79	0.47
80:CA:540:HIS:HE1	80:CA:644:THR:HA	1.79	0.47
80:CA:911:PHE:CE1	80:CA:927:LEU:HD13	2.49	0.47
80:CA:1007:ILE:HB	80:CA:1011:VAL:HG23	1.97	0.47
80:CA:1270:LEU:HD23	80:CA:1270:LEU:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1559:ILE:HG23	80:CA:1564:GLU:HG3	1.95	0.47
82:CC:186:PHE:HD2	82:CC:189:ALA:H	1.61	0.47
1:2:1592:A:C6	1:2:1605:G:N1	2.82	0.47
2:3:82:U:C2	2:3:83:C:H5	2.33	0.47
4:5:1624:G:C4	4:5:1625:G:C8	3.03	0.47
7:AB:176:VAL:O	7:AB:179:SER:OG	2.27	0.47
11:AF:43:PHE:HB3	11:AF:46:TRP:HB2	1.97	0.47
20:AO:84:ARG:HG2	20:AO:119:THR:HA	1.97	0.47
26:AU:58:LEU:HD22	26:AU:88:LYS:HE2	1.97	0.47
28:AW:93:LEU:HD12	28:AW:128:PHE:CD1	2.50	0.47
32:Aa:51:ARG:HE	34:Ac:38:ARG:NH2	2.12	0.47
47:BI:36:LEU:HD21	47:BI:69:ARG:HH11	1.80	0.47
51:BM:22:LEU:O	51:BM:26:ARG:HG3	2.14	0.47
56:BR:82:ASP:OD1	56:BR:87:THR:HG22	2.14	0.47
57:BS:119:ALA:HA	57:BS:122:GLN:NE2	2.29	0.47
57:BS:157:GLU:OE1	57:BS:158:THR:N	2.48	0.47
63:BY:14:VAL:HB	70:Bf:86:LYS:HG3	1.96	0.47
80:CA:253:ILE:HA	80:CA:499:GLN:O	2.15	0.47
80:CA:257:ASP:HA	80:CA:496:PRO:HB3	1.96	0.47
80:CA:363:VAL:HG12	80:CA:377:VAL:HG12	1.95	0.47
1:2:296:U:H2'	1:2:297:U:C6	2.50	0.47
1:2:628:G:O2'	4:5:847:A:H1'	2.15	0.47
1:2:1273:G:H4'	1:2:1274:C:H3'	1.96	0.47
1:2:1482:C:P	1:2:1521:G:H1	2.38	0.47
1:2:1535:U:H1'	1:2:1536:G:N2	2.29	0.47
1:2:1586:A:C4	1:2:1587:A:C8	3.03	0.47
2:3:141:C:O2	51:BM:112:ASN:ND2	2.48	0.47
4:5:110:G:OP2	49:BK:73:ARG:NH2	2.44	0.47
4:5:530:A:H2'	4:5:531:G:C8	2.50	0.47
4:5:1011:G:C6	4:5:1012:A:N7	2.82	0.47
4:5:1120:C:H2'	4:5:1121:A:H8	1.80	0.47
4:5:1232:A:O2'	4:5:1262:G:H1'	2.14	0.47
4:5:2408:C:H2'	4:5:2409:U:C6	2.49	0.47
4:5:2505:U:H2'	4:5:2506:U:H6	1.80	0.47
4:5:3120:U:H4'	76:Bl:104:PRO:HG2	1.97	0.47
6:AA:27:ARG:NH1	6:AA:43:ASP:O	2.48	0.47
6:AA:205:ARG:NH1	23:AR:84:TYR:HB3	2.23	0.47
18:AM:129:GLU:OE1	18:AM:130:THR:HG22	2.15	0.47
24:AS:87:ASN:O	24:AS:88:ARG:HG3	2.15	0.47
32:Aa:4:LYS:HD3	32:Aa:5:ARG:HH12	1.80	0.47
32:Aa:27:SER:O	32:Aa:27:SER:OG	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Af:123:ASN:ND2	37:Af:125:THR:OG1	2.47	0.47
38:Ag:207:ASP:HB3	38:Ag:209:THR:HG22	1.97	0.47
41:BC:150:LEU:HD21	41:BC:172:VAL:HB	1.97	0.47
50:BL:8:LYS:HD3	50:BL:8:LYS:HA	1.77	0.47
51:BM:8:GLU:OE1	51:BM:50:ARG:NH1	2.47	0.47
56:BR:110:MET:HE2	56:BR:110:MET:HB2	1.68	0.47
79:Bo:56:THR:HG22	79:Bo:63:THR:HG23	1.97	0.47
80:CA:252:ILE:HG22	80:CA:254:PRO:HD3	1.96	0.47
80:CA:517:ILE:HG23	80:CA:684:CYS:HB3	1.96	0.47
80:CA:865:SER:HG	80:CA:869:THR:HG1	1.56	0.47
80:CA:1041:GLU:HB3	80:CA:1077:PRO:HG3	1.97	0.47
80:CA:1380:ARG:NH2	81:CB:2:LEU:HB3	2.30	0.47
80:CA:1425:LEU:HD23	80:CA:1425:LEU:H	1.80	0.47
81:CB:197:ALA:HB2	81:CB:203:ASN:HB2	1.96	0.47
1:2:492:A:H4'	1:2:493:U:H5''	1.96	0.47
1:2:694:U:O2	13:AH:97:ARG:NH1	2.48	0.47
1:2:842:C:H2'	1:2:843:U:O4'	2.15	0.47
1:2:850:A:H2'	1:2:851:U:C6	2.49	0.47
1:2:1161:C:H2'	1:2:1162:C:H6	1.80	0.47
1:2:1247:U:H2'	1:2:1248:C:H6	1.79	0.47
1:2:1607:G:H2'	1:2:1608:U:H6	1.80	0.47
4:5:104:G:H2'	4:5:105:C:O4'	2.15	0.47
4:5:294:U:P	51:BM:15:GLN:HE22	2.37	0.47
4:5:1745:G:H2'	4:5:1746:C:C6	2.49	0.47
4:5:3394:U:H2'	4:5:3395:U:H6	1.80	0.47
7:AB:31:ASP:O	7:AB:96:LEU:HG	2.15	0.47
12:AG:63:MET:HG2	12:AG:98:ARG:HD2	1.96	0.47
22:AQ:41:PRO:HG2	22:AQ:44:LEU:HB2	1.97	0.47
24:AS:11:PHE:HE2	24:AS:13:HIS:CE1	2.33	0.47
25:AT:67:MET:N	25:AT:67:MET:SD	2.88	0.47
29:AX:131:SER:O	29:AX:134:ALA:N	2.42	0.47
37:Af:136:LYS:H	37:Af:138:ARG:HG2	1.80	0.47
42:BD:9:SER:HG	42:BD:12:TYR:H	1.60	0.47
42:BD:49:TYR:CE1	42:BD:66:SER:HB3	2.50	0.47
42:BD:193:GLU:OE1	42:BD:193:GLU:N	2.46	0.47
72:Bh:54:GLU:OE1	72:Bh:86:LYS:NZ	2.39	0.47
80:CA:1646:LEU:HD22	80:CA:1748:TYR:HE1	1.79	0.47
1:2:229:U:H5''	1:2:230:C:C5	2.49	0.46
1:2:273:G:H2'	1:2:274:G:H8	1.79	0.46
1:2:1480:G:C2	1:2:1528:U:C2	3.03	0.46
1:2:1783:C:H2'	1:2:1784:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:149:U:P	51:BM:49:ARG:HH22	2.38	0.46
4:5:207:U:H2'	4:5:208:C:C6	2.50	0.46
4:5:591:G:O6	4:5:592:G:N1	2.48	0.46
4:5:1683:U:H3'	58:BT:85:LYS:NZ	2.30	0.46
4:5:2908:G:C2	4:5:2909:G:C8	3.03	0.46
4:5:3360:A:H2'	4:5:3361:C:C6	2.49	0.46
7:AB:193:ILE:H	7:AB:193:ILE:HD12	1.80	0.46
11:AF:57:SER:O	11:AF:58:LEU:HD23	2.14	0.46
19:AN:35:GLU:HA	19:AN:38:VAL:HG22	1.96	0.46
20:AO:125:SER:OG	20:AO:126:THR:N	2.48	0.46
21:AP:19:GLY:N	24:AS:93:THR:O	2.48	0.46
24:AS:4:VAL:HG22	31:AZ:82:HIS:CE1	2.49	0.46
35:Ad:36:LEU:HD12	35:Ad:38:ILE:H	1.80	0.46
38:Ag:31:ASN:HA	38:Ag:47:LEU:HB2	1.98	0.46
40:BB:57:VAL:HG22	40:BB:73:VAL:HG22	1.97	0.46
40:BB:109:HIS:N	40:BB:200:GLU:OE2	2.37	0.46
50:BL:34:ALA:HB2	50:BL:85:TRP:HZ3	1.79	0.46
51:BM:94:TYR:CZ	51:BM:96:ARG:HB2	2.51	0.46
56:BR:10:ILE:HG12	56:BR:26:ARG:HG3	1.96	0.46
62:BX:115:ARG:HD2	62:BX:118:LEU:HD23	1.97	0.46
71:Bg:17:LEU:O	71:Bg:21:LEU:N	2.43	0.46
73:Bi:58:THR:OG1	73:Bi:59:THR:N	2.48	0.46
79:Bo:37:TYR:O	79:Bo:47:VAL:N	2.40	0.46
80:CA:1135:TYR:CZ	80:CA:1170:ILE:HD12	2.50	0.46
81:CB:112:PHE:O	81:CB:115:ILE:HG22	2.16	0.46
1:2:172:C:H2'	1:2:173:A:H8	1.79	0.46
1:2:561:G:C6	1:2:585:A:C6	3.04	0.46
1:2:1241:G:O4'	21:AP:79:HIS:ND1	2.28	0.46
1:2:1260:U:H2'	1:2:1261:G:H8	1.79	0.46
1:2:1349:G:H2'	1:2:1350:U:C6	2.51	0.46
1:2:1481:C:P	25:AT:63:ARG:HH22	2.37	0.46
1:2:1774:G:N7	77:Bm:4:LYS:NZ	2.49	0.46
4:5:129:U:H3	4:5:139:G:H1	1.61	0.46
4:5:431:U:H2'	4:5:432:G:C8	2.51	0.46
4:5:2897:A:OP1	76:Bl:124:LYS:NZ	2.48	0.46
4:5:3233:G:C6	4:5:3257:G:C6	3.04	0.46
6:AA:41:ARG:HH12	6:AA:45:VAL:HB	1.80	0.46
6:AA:183:ARG:HD2	6:AA:191:ARG:NH1	2.29	0.46
8:AC:178:ILE:O	8:AC:185:LYS:HE2	2.14	0.46
10:AE:136:VAL:HG11	10:AE:148:ARG:CZ	2.46	0.46
22:AQ:21:HIS:HB3	22:AQ:23:LYS:HZ3	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Ad:30:LEU:HD21	35:Ad:37:ASN:HA	1.97	0.46
38:Ag:19:TRP:H	38:Ag:38:ARG:HB2	1.80	0.46
40:BB:210:GLU:N	40:BB:210:GLU:OE2	2.48	0.46
42:BD:184:ASP:HB3	42:BD:187:THR:O	2.15	0.46
49:BK:145:PHE:CE2	71:Bg:118:ILE:HD11	2.51	0.46
59:BU:79:VAL:HB	59:BU:118:VAL:HG12	1.97	0.46
60:BV:86:SER:O	60:BV:90:ILE:N	2.44	0.46
80:CA:563:ASP:N	80:CA:563:ASP:OD1	2.46	0.46
80:CA:718:GLU:HA	80:CA:721:LEU:HG	1.97	0.46
80:CA:743:MET:SD	80:CA:747:PRO:HA	2.55	0.46
81:CB:146:ARG:NH2	81:CB:196:SER:O	2.48	0.46
82:CC:189:ALA:HB1	82:CC:217:LEU:HD23	1.97	0.46
1:2:1081:A:H1'	1:2:1082:C:N3	2.30	0.46
1:2:1430:U:O2'	1:2:1431:C:OP1	2.24	0.46
1:2:1477:G:H2'	1:2:1478:G:C8	2.49	0.46
1:2:1478:G:O2'	25:AT:56:LYS:HE2	2.15	0.46
2:3:15:G:H1'	4:5:408:A:H61	1.81	0.46
4:5:237:G:C2	4:5:238:A:C5	3.03	0.46
4:5:353:G:H22	4:5:364:G:H2'	1.80	0.46
4:5:388:G:H4'	53:BO:18:ARG:O	2.15	0.46
4:5:1194:A:P	52:BN:49[A]:ARG:HH12	2.38	0.46
4:5:1306:U:C2	40:BB:257:PRO:HB3	2.50	0.46
4:5:1815:A:H4'	4:5:1816:U:H5'	1.97	0.46
6:AA:31:VAL:HG23	6:AA:150:ASP:HA	1.96	0.46
6:AA:102:PHE:O	6:AA:103:THR:OG1	2.30	0.46
8:AC:49:LYS:HB3	8:AC:243:TYR:CE1	2.50	0.46
10:AE:59:ARG:NH2	10:AE:60:GLU:OE2	2.47	0.46
15:AJ:141:VAL:HG22	15:AJ:143:ILE:H	1.81	0.46
25:AT:107:ALA:HA	25:AT:110:LYS:NZ	2.30	0.46
40:BB:362:ALA:HB1	40:BB:368:GLY:HA3	1.97	0.46
42:BD:290:ILE:HD12	47:BI:217:PHE:CE2	2.50	0.46
46:BH:105:GLU:OE1	46:BH:108:GLY:N	2.49	0.46
69:Be:48:ARG:HH21	69:Be:104:PRO:HD3	1.81	0.46
80:CA:1331:ARG:NH1	80:CA:1335:LEU:HB2	2.30	0.46
80:CA:1545:VAL:HG22	80:CA:1548:ASP:HB3	1.98	0.46
1:2:15:U:H2'	1:2:16:G:O4'	2.16	0.46
1:2:533:U:H2'	1:2:534:A:H5''	1.97	0.46
1:2:1044:U:C2	1:2:1045:C:C5	3.03	0.46
1:2:1344:A:O2'	1:2:1345:A:OP1	2.29	0.46
1:2:1348:A:H2'	1:2:1349:G:O4'	2.15	0.46
1:2:1473:U:H1'	11:AF:103:ASN:OD1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1513:G:O2'	1:2:1515:A:N3	2.48	0.46
1:2:1580:C:O3'	22:AQ:137:ARG:HG2	2.15	0.46
2:3:151:C:C5	61:BW:24:LEU:HD21	2.48	0.46
4:5:687:G:C2	4:5:696:C:C2	3.03	0.46
4:5:801:G:O6	41:BC:104:LYS:NZ	2.42	0.46
4:5:953:A:N3	4:5:1115:U:O2'	2.42	0.46
4:5:1459:U:H2'	4:5:1460:C:C6	2.51	0.46
7:AB:50:LYS:NZ	7:AB:52:THR:HG22	2.31	0.46
7:AB:212:VAL:HG13	7:AB:213:ARG:N	2.19	0.46
10:AE:139:VAL:HG13	10:AE:150:PRO:HG3	1.97	0.46
18:AM:84:ASN:OD1	18:AM:85:LYS:HD3	2.16	0.46
22:AQ:31:VAL:HG11	22:AQ:81:ILE:CD1	2.46	0.46
23:AR:5:ARG:CB	23:AR:10:LYS:HZ3	2.28	0.46
28:AW:53:ILE:HG12	33:Ab:24:LEU:HD21	1.96	0.46
28:AW:70:ASN:HB2	28:AW:130:TYR:C	2.39	0.46
29:AX:127:VAL:O	29:AX:130:VAL:HG12	2.15	0.46
31:AZ:83:LEU:HD23	31:AZ:83:LEU:H	1.81	0.46
31:AZ:91:PRO:HB2	31:AZ:94:LYS:HE3	1.97	0.46
36:Ae:51:ASN:HD21	36:Ae:55:ARG:HG3	1.80	0.46
38:Ag:67:ILE:HG23	38:Ag:85:TRP:CZ2	2.51	0.46
39:BA:147:ARG:HB3	39:BA:157:VAL:HG12	1.96	0.46
46:BH:19:SER:OG	46:BH:26:LYS:HE2	2.16	0.46
49:BK:116:LEU:HA	49:BK:116:LEU:HD23	1.76	0.46
80:CA:232:GLN:O	80:CA:233:LYS:HG3	2.15	0.46
80:CA:918:ARG:HE	80:CA:1526:MET:HE3	1.79	0.46
81:CB:242:PHE:HE1	81:CB:279:VAL:HG22	1.80	0.46
1:2:187:G:H2'	1:2:198:A:H61	1.81	0.46
1:2:743:U:N3	1:2:809:A:N1	2.64	0.46
4:5:3194:C:H2'	4:5:3195:C:C6	2.50	0.46
13:AH:141:ARG:NH2	13:AH:143:LEU:HD21	2.31	0.46
14:AI:37:LYS:HA	14:AI:37:LYS:HD3	1.77	0.46
21:AP:61:ARG:HA	21:AP:64:LYS:NZ	2.31	0.46
22:AQ:64:ASP:N	22:AQ:64:ASP:OD1	2.46	0.46
30:AY:83:LYS:HE2	30:AY:96:LEU:HD12	1.98	0.46
35:Ad:11:PRO:HB3	35:Ad:13:ARG:NH2	2.30	0.46
38:Ag:45:TRP:NE1	38:Ag:57:PRO:HD3	2.31	0.46
42:BD:205:SER:OG	42:BD:236:LEU:HD22	2.15	0.46
42:BD:212:ALA:HB2	42:BD:219:PHE:CE1	2.51	0.46
49:BK:89:TYR:O	49:BK:92:THR:OG1	2.32	0.46
51:BM:64:VAL:HG11	51:BM:102:ALA:HB1	1.97	0.46
79:Bo:60:CYS:N	79:Bo:61:LYS:HZ2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:373:PHE:HB2	80:CA:375:ILE:HD11	1.97	0.46
80:CA:817:GLN:HB2	82:CC:370:ARG:CZ	2.46	0.46
80:CA:1257:VAL:HG13	80:CA:1257:VAL:O	2.16	0.46
80:CA:1401:ARG:HH12	80:CA:1457:ILE:HD11	1.80	0.46
80:CA:1691:TYR:N	80:CA:1717:GLN:OE1	2.29	0.46
80:CA:1733:ASP:OD1	80:CA:1734:THR:N	2.48	0.46
80:CA:1906:LEU:HD23	80:CA:1935:LEU:HD21	1.97	0.46
1:2:996:U:H3	1:2:1008:G:H1	1.63	0.46
1:2:1229:G:H1	1:2:1255:G:HO2'	1.64	0.46
1:2:1406:A:H2'	1:2:1407:U:C6	2.50	0.46
1:2:1512:G:H2'	1:2:1513:G:H8	1.81	0.46
1:2:1584:G:O3'	22:AQ:124:PRO:HA	2.16	0.46
4:5:435:C:H2'	4:5:436:A:C8	2.47	0.46
4:5:965:G:H2'	4:5:966:A:C8	2.51	0.46
4:5:1018:C:N4	4:5:2672:A:OP1	2.49	0.46
4:5:1893:G:H2'	4:5:1894:A:H5''	1.97	0.46
4:5:2181:G:H2'	4:5:2182:C:C6	2.49	0.46
4:5:2551:U:C6	45:BG:37:GLY:HA3	2.50	0.46
8:AC:144:TRP:CZ2	8:AC:173:PRO:HG3	2.50	0.46
9:AD:101:GLN:OE1	9:AD:101:GLN:HA	2.16	0.46
10:AE:100:ARG:NH1	10:AE:118:GLU:OE2	2.49	0.46
14:AI:116:HIS:HD2	14:AI:146:ARG:HD3	1.81	0.46
18:AM:27:ALA:O	18:AM:31:VAL:HG13	2.15	0.46
29:AX:107:PHE:HB2	29:AX:122:PHE:HA	1.98	0.46
42:BD:177:GLU:HG3	42:BD:190:ILE:HB	1.98	0.46
43:BE:41:ILE:HB	43:BE:85:ILE:HB	1.97	0.46
44:BF:68:ASP:OD1	44:BF:69:ALA:N	2.49	0.46
52:BN:22[A]:VAL:O	52:BN:26[A]:GLN:HG2	2.14	0.46
52:BN:37[A]:ARG:HG2	52:BN:107[A]:GLY:HA2	1.97	0.46
56:BR:82:ASP:HB2	56:BR:120:SER:HB3	1.97	0.46
64:BZ:76:ASP:OD2	64:BZ:115:LYS:HB3	2.15	0.46
80:CA:531:ARG:HD2	80:CA:533:TYR:CZ	2.50	0.46
80:CA:644:THR:HB	80:CA:657:LEU:H	1.80	0.46
80:CA:838:PHE:HZ	80:CA:902:ASN:HB2	1.81	0.46
1:2:510:G:H5'	15:AJ:176:ASN:HD21	1.80	0.46
1:2:1201:G:N2	1:2:1600:A:N3	2.64	0.46
1:2:1473:U:C5	11:AF:180:ARG:HG2	2.51	0.46
1:2:1606:C:H2'	1:2:1607:G:H8	1.81	0.46
3:4:7:G:C2	3:4:115:G:C5	3.04	0.46
4:5:621:U:C4	4:5:623:A:C6	3.03	0.46
4:5:675:G:O6	54:BP:56:LYS:NZ	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:1914:A:N3	4:5:2121:A:H2'	2.31	0.46
4:5:2158:G:N2	4:5:2179:A:OP2	2.42	0.46
8:AC:55:GLU:O	8:AC:59:HIS:ND1	2.42	0.46
10:AE:173:ILE:HG12	10:AE:229:GLY:HA2	1.98	0.46
14:AI:6:ASP:OD2	14:AI:6:ASP:N	2.48	0.46
20:AO:46:MET:C	20:AO:47:LYS:HD3	2.41	0.46
22:AQ:58:ASP:OD1	22:AQ:58:ASP:N	2.47	0.46
40:BB:9:PRO:HD2	59:BU:45:ARG:NH1	2.31	0.46
41:BC:170:LYS:HZ3	41:BC:170:LYS:HG2	1.38	0.46
48:BJ:17:LEU:HD13	48:BJ:129:VAL:HB	1.97	0.46
49:BK:122:LYS:HD2	71:Bg:120:ALA:HA	1.98	0.46
69:Be:75:HIS:N	69:Be:80:VAL:O	2.43	0.46
80:CA:734:LEU:O	80:CA:737:THR:OG1	2.31	0.46
81:CB:146:ARG:NE	81:CB:194:LEU:O	2.42	0.46
1:2:1341:A:H1'	38:Ag:65:SER:HB2	1.98	0.46
1:2:1422:A:H2'	1:2:1423:U:C6	2.50	0.46
1:2:1525:A:H1'	1:2:1590:G:H4'	1.98	0.46
1:2:1689:A:H1'	1:2:1713:G:N2	2.31	0.46
3:4:112:G:O6	42:BD:21:ARG:HD3	2.16	0.46
4:5:553:G:H2'	4:5:554:U:H6	1.79	0.46
4:5:1076:A:C5	65:Ba:45:HIS:CE1	3.04	0.46
4:5:1204:A:H2'	4:5:1205:A:H8	1.80	0.46
4:5:3339:C:H2'	4:5:3340:A:H8	1.80	0.46
6:AA:154:GLU:HA	27:AV:63:GLY:HA2	1.98	0.46
7:AB:103:MET:HB3	7:AB:215:VAL:HG12	1.97	0.46
10:AE:57:ASN:O	10:AE:61:VAL:HG23	2.16	0.46
11:AF:177:ILE:HG13	11:AF:209:TYR:HE1	1.80	0.46
14:AI:57:ALA:HB1	14:AI:60:ILE:CG2	2.46	0.46
21:AP:111:MET:HE3	21:AP:119:PHE:CG	2.51	0.46
25:AT:14:PHE:HE2	25:AT:63:ARG:HB2	1.81	0.46
25:AT:52:GLY:C	25:AT:54:PHE:H	2.24	0.46
29:AX:42:PRO:HA	29:AX:81:LYS:HZ1	1.80	0.46
43:BE:2:THR:HG22	68:Bd:81:ASP:OD2	2.15	0.46
43:BE:78:ARG:HD3	43:BE:106:PHE:CD2	2.51	0.46
56:BR:27:MET:HG2	56:BR:29:ILE:CD1	2.45	0.46
57:BS:43:LYS:HA	57:BS:58:GLN:OE1	2.16	0.46
64:BZ:72:VAL:HB	64:BZ:113:LEU:HD13	1.98	0.46
71:Bg:21:LEU:HB2	71:Bg:54:VAL:HG11	1.97	0.46
1:2:502:U:H2'	1:2:503:G:C8	2.45	0.46
1:2:604:A:H2'	1:2:605:A:O4'	2.16	0.46
1:2:632:U:P	17:AL:102:LYS:HZ2	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:851:U:O2'	1:2:852:C:H6	1.99	0.46
1:2:1170:G:C2	1:2:1171:A:C8	3.04	0.46
1:2:1753:A:H2'	1:2:1754:A:C8	2.51	0.46
4:5:783:U:H2'	4:5:784:A:O4'	2.16	0.46
4:5:1462:A:H2'	4:5:1463:A:H8	1.81	0.46
4:5:2813:C:H2'	4:5:2814:A:C8	2.51	0.46
4:5:3352:U:H5''	4:5:3353:U:C5	2.51	0.46
7:AB:154:SER:O	7:AB:154:SER:OG	2.31	0.46
8:AC:178:ILE:HG23	8:AC:196:VAL:HG12	1.96	0.46
9:AD:54:ARG:HB3	9:AD:56:GLN:HE22	1.81	0.46
10:AE:151:ASP:CG	12:AG:215:ARG:HH22	2.22	0.46
11:AF:117:THR:HG22	11:AF:191:ALA:O	2.16	0.46
22:AQ:22:VAL:C	22:AQ:23:LYS:HD3	2.41	0.46
22:AQ:24:ALA:HA	22:AQ:63:ILE:HA	1.98	0.46
24:AS:23:ASP:OD1	24:AS:24:GLY:N	2.49	0.46
24:AS:53:ASP:HB3	24:AS:56:LYS:HG2	1.97	0.46
26:AU:26:LEU:N	26:AU:89:ARG:O	2.45	0.46
27:AV:55:LEU:HD11	27:AV:69:LEU:CD2	2.46	0.46
28:AW:11:LEU:HD22	28:AW:72:CYS:SG	2.56	0.46
30:AY:39:GLU:HB3	30:AY:43:LYS:HZ1	1.81	0.46
52:BN:193[A]:GLN:NE2	52:BN:194[A]:LEU:HG	2.31	0.46
53:BO:22:LEU:HD22	53:BO:90:PHE:HE2	1.78	0.46
54:BP:71:LEU:HD11	54:BP:99:THR:HG21	1.98	0.46
63:BY:124:ALA:HB3	63:BY:126:LYS:HZ2	1.81	0.46
80:CA:421:VAL:HG13	80:CA:458:ILE:HG12	1.97	0.46
80:CA:1189:VAL:HG22	80:CA:1237:VAL:HB	1.97	0.46
80:CA:1669:TYR:CE1	80:CA:1737:VAL:HG13	2.50	0.46
1:2:521:A:H2'	1:2:522:U:H6	1.81	0.46
1:2:571:G:C8	1:2:572:C:C5	3.04	0.46
1:2:780:A:H2	30:AY:10:ARG:HD2	1.80	0.46
1:2:888:U:H2'	1:2:889:U:C6	2.51	0.46
1:2:1242:A:O2'	1:2:1244:A:OP1	2.19	0.46
1:2:1280:C:C2	1:2:1281:G:C8	3.03	0.46
1:2:1298:U:O2'	8:AC:212:LYS:NZ	2.25	0.46
1:2:1456:C:P	1:2:1457:C:H2'	2.56	0.46
1:2:1540:G:P	24:AS:40:ARG:HH12	2.39	0.46
2:3:80:A:H2'	2:3:82:U:H5	1.80	0.46
4:5:216:G:H4'	62:BX:19:TYR:CZ	2.51	0.46
4:5:533:A:H2'	4:5:534:A:C8	2.51	0.46
4:5:1254:U:N3	4:5:1265:G:OP1	2.48	0.46
4:5:2780:A:C6	4:5:2781:A:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:2947:A:H5''	4:5:2948:G:H5'	1.98	0.46
4:5:3068:C:H3'	55:BQ:62:ARG:HH22	1.80	0.46
7:AB:33:LYS:HE2	7:AB:33:LYS:HA	1.98	0.46
8:AC:246:GLU:OE1	8:AC:246:GLU:N	2.49	0.46
9:AD:63:GLY:O	9:AD:67:ASN:HB2	2.15	0.46
22:AQ:10:PHE:O	22:AQ:87:LYS:NZ	2.28	0.46
23:AR:23:LYS:HG3	23:AR:34:LEU:HD21	1.97	0.46
23:AR:80:ARG:HA	23:AR:83:GLN:HE22	1.81	0.46
26:AU:69:LYS:HE2	26:AU:80:GLU:OE1	2.16	0.46
27:AV:55:LEU:HD11	27:AV:69:LEU:HD21	1.98	0.46
41:BC:11:LEU:HD21	41:BC:156:LEU:HB2	1.98	0.46
42:BD:155:THR:HG22	42:BD:179:ARG:HA	1.98	0.46
45:BG:78:PHE:C	45:BG:80:TYR:H	2.24	0.46
45:BG:178:ALA:HB2	45:BG:218:ILE:HD13	1.98	0.46
46:BH:115:ARG:NH1	46:BH:123:ILE:HD12	2.31	0.46
49:BK:105:ASN:C	72:Bh:20:MET:HE2	2.40	0.46
51:BM:27:VAL:HB	51:BM:122:ASN:ND2	2.30	0.46
54:BP:182:LYS:HE3	64:BZ:55:LYS:O	2.16	0.46
56:BR:146:LYS:HG3	56:BR:147:ASP:OD1	2.16	0.46
64:BZ:73:LEU:HG	64:BZ:74:ASN:O	2.16	0.46
67:Bc:25:PHE:HA	67:Bc:28:ARG:HG3	1.97	0.46
68:Bd:40:SER:O	68:Bd:44:ARG:HG3	2.16	0.46
80:CA:270:LEU:HD13	80:CA:293:SER:HA	1.97	0.46
80:CA:502:LEU:HB2	80:CA:684:CYS:HA	1.97	0.46
80:CA:813:GLU:O	82:CC:370:ARG:NH1	2.43	0.46
1:2:817:A:C2	1:2:818:C:C2	3.03	0.45
1:2:835:U:H2'	1:2:836:U:C5	2.51	0.45
1:2:886:U:O2	20:AO:123:SER:N	2.37	0.45
1:2:1234:A:O2'	37:Af:140:TYR:OH	2.23	0.45
1:2:1392:U:H2'	1:2:1393:C:C6	2.51	0.45
1:2:1441:C:H2'	1:2:1442:U:C6	2.51	0.45
1:2:1504:G:OP1	25:AT:99:SER:N	2.45	0.45
3:4:91:G:H2'	3:4:92:A:H8	1.81	0.45
4:5:709:G:H5'	4:5:710:A:OP2	2.16	0.45
4:5:841:C:H2'	4:5:842:A:H8	1.81	0.45
4:5:944:U:H3'	64:BZ:13:GLY:HA2	1.98	0.45
4:5:1040:U:H2'	4:5:1041:A:C8	2.50	0.45
4:5:1191:A:N3	4:5:1191:A:H2'	2.30	0.45
4:5:1327:A:H2'	4:5:1328:C:O4'	2.16	0.45
4:5:1348:U:H5''	41:BC:303:GLY:H	1.81	0.45
4:5:1751:A:H4'	4:5:1752:G:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:1765:U:OP1	55:BQ:43:LYS:HE3	2.16	0.45
4:5:1811:A:H2'	4:5:1812:G:H8	1.81	0.45
4:5:2583:C:H2'	4:5:2584:C:C6	2.50	0.45
4:5:2632:U:H4'	4:5:2698:A:H2	1.82	0.45
4:5:2682:U:O2'	48:BJ:20:ASN:ND2	2.49	0.45
4:5:3202:C:H2'	4:5:3203:G:C8	2.51	0.45
4:5:3330:U:H5''	40:BB:308:MET:HE2	1.99	0.45
7:AB:146:GLN:O	7:AB:149:GLN:HB2	2.16	0.45
9:AD:126:VAL:HG11	9:AD:134:CYS:SG	2.57	0.45
11:AF:53:VAL:HG12	11:AF:55:ASP:H	1.81	0.45
12:AG:43:ASP:HA	12:AG:46:LYS:HE3	1.97	0.45
14:AI:53:LYS:HD2	14:AI:55:TYR:OH	2.16	0.45
14:AI:140:GLU:OE1	14:AI:140:GLU:N	2.31	0.45
16:AK:17:GLN:H	16:AK:17:GLN:CD	2.23	0.45
23:AR:60:ARG:HG2	23:AR:66:VAL:HG22	1.98	0.45
32:Aa:18:VAL:HG11	32:Aa:33:ASP:OD2	2.16	0.45
48:BJ:32:ARG:HA	48:BJ:35:LYS:HE2	1.98	0.45
49:BK:47:ALA:HB3	49:BK:48:PRO:HD3	1.99	0.45
53:BO:40:GLU:HA	53:BO:113:TYR:HA	1.98	0.45
64:BZ:75:LEU:N	64:BZ:113:LEU:O	2.43	0.45
73:Bi:18:LEU:HA	73:Bi:25:ARG:HA	1.98	0.45
78:Bn:25:VAL:HG22	78:Bn:72:LEU:CD2	2.46	0.45
80:CA:728:ASP:OD2	80:CA:728:ASP:N	2.48	0.45
80:CA:1035:PHE:CE1	80:CA:1055:LEU:HD12	2.51	0.45
80:CA:1206:ARG:HH12	80:CA:1217:VAL:HB	1.81	0.45
80:CA:1593:THR:O	80:CA:1597:SER:OG	2.32	0.45
80:CA:1753:SER:HA	80:CA:1914:LEU:HD23	1.97	0.45
82:CC:176:CYS:SG	82:CC:183:HIS:CE1	3.09	0.45
1:2:300:A:H2'	1:2:301:A:C8	2.50	0.45
1:2:521:A:H2'	1:2:522:U:C6	2.51	0.45
1:2:525:A:H4'	30:AY:89:TYR:CB	2.46	0.45
1:2:1277:G:H22	1:2:1434:U:H3	1.64	0.45
3:4:46:A:OP2	42:BD:158:ARG:NH1	2.49	0.45
4:5:993:A:H5''	57:BS:43:LYS:HD2	1.98	0.45
4:5:1749:G:P	74:Bj:42:LYS:HZ3	2.38	0.45
4:5:1759:G:H2'	4:5:1760:C:H6	1.77	0.45
4:5:2883:U:H2'	4:5:2884:U:C6	2.51	0.45
4:5:3268:A:O2'	43:BE:73:GLY:O	2.29	0.45
4:5:3313:U:C4	4:5:3314:U:C5	3.05	0.45
5:6:14:A:H2'	5:6:15:A:C8	2.51	0.45
5:6:19:U:O2'	5:6:20:C:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AB:176:VAL:HG22	7:AB:184:LEU:HD11	1.98	0.45
10:AE:88:ASP:OD1	10:AE:122:LYS:NZ	2.43	0.45
12:AG:173:PRO:O	12:AG:174:LYS:HG3	2.16	0.45
12:AG:180:THR:HG22	12:AG:182:GLN:H	1.81	0.45
14:AI:187:GLU:OE2	14:AI:187:GLU:HA	2.16	0.45
16:AK:57:THR:O	16:AK:58:GLN:NE2	2.49	0.45
20:AO:12:GLN:OE1	20:AO:12:GLN:N	2.50	0.45
23:AR:41:ILE:HG22	23:AR:43:SER:H	1.81	0.45
29:AX:43:PHE:C	29:AX:45:GLY:H	2.24	0.45
33:Ab:6:ASP:OD2	33:Ab:9:HIS:ND1	2.50	0.45
34:Ac:43:ASN:ND2	34:Ac:63:ALA:HB1	2.31	0.45
38:Ag:217:ASP:OD1	38:Ag:217:ASP:N	2.49	0.45
40:BB:317:ILE:HG22	40:BB:317:ILE:O	2.16	0.45
41:BC:193:LYS:HA	41:BC:198:ARG:HA	1.98	0.45
47:BI:86:HIS:HB3	47:BI:139:ARG:HG3	1.98	0.45
49:BK:138:VAL:HG22	71:Bg:118:ILE:HG23	1.99	0.45
50:BL:21:VAL:HG22	50:BL:33:ALA:O	2.15	0.45
51:BM:20:ARG:NH2	72:Bh:52:PRO:HG3	2.31	0.45
51:BM:118:SER:OG	51:BM:132:VAL:HA	2.15	0.45
63:BY:78:ASN:HA	66:Bb:35:ARG:HH22	1.81	0.45
80:CA:1364:LYS:HA	80:CA:1364:LYS:HD3	1.76	0.45
80:CA:1424:LYS:O	80:CA:1428:GLN:NE2	2.28	0.45
81:CB:25:PHE:HE2	81:CB:83:GLU:HG3	1.81	0.45
81:CB:283:LEU:HD22	81:CB:286:LEU:HD23	1.98	0.45
1:2:81:G:C6	1:2:82:U:C4	3.05	0.45
1:2:490:C:H2'	1:2:491:C:C6	2.52	0.45
1:2:1241:G:N3	21:AP:79:HIS:CE1	2.84	0.45
1:2:1276:U:OP1	9:AD:147:ALA:N	2.31	0.45
1:2:1558:U:O4	21:AP:122:THR:OG1	2.26	0.45
1:2:1732:A:H2'	1:2:1733:C:C6	2.51	0.45
4:5:405:U:H2'	4:5:406:G:H5'	1.98	0.45
4:5:593:A:C4	4:5:594:C:C5	3.03	0.45
4:5:1209:U:H4'	4:5:1210:G:OP1	2.15	0.45
4:5:1232:A:HO2'	4:5:1263:G:H1	1.64	0.45
4:5:1630:U:O5'	63:BY:112:LYS:NZ	2.50	0.45
4:5:2709:C:H2'	4:5:2710:C:H6	1.80	0.45
6:AA:205:ARG:HH22	23:AR:84:TYR:HB3	1.81	0.45
10:AE:49:ARG:HB2	10:AE:61:VAL:HG21	1.98	0.45
15:AJ:90:LYS:HD2	15:AJ:95:TYR:CD1	2.51	0.45
25:AT:42:GLY:HA2	25:AT:84:LYS:HG3	1.98	0.45
25:AT:130:ARG:HD3	25:AT:134:ARG:HH21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AV:12:TYR:O	27:AV:12:TYR:CG	2.69	0.45
36:Ae:30:PRO:HB2	36:Ae:34:ALA:HB3	1.99	0.45
39:BA:19:HIS:ND1	39:BA:190:ARG:O	2.44	0.45
40:BB:59:ASP:CG	40:BB:357:LYS:HD2	2.41	0.45
41:BC:187:LEU:HD22	41:BC:193:LYS:HD2	1.99	0.45
51:BM:140:LYS:HB3	51:BM:144:ARG:NH1	2.32	0.45
52:BN:181[A]:ALA:O	52:BN:184[A]:THR:HG22	2.16	0.45
56:BR:14:LEU:HD23	56:BR:14:LEU:HA	1.86	0.45
62:BX:89:LYS:N	62:BX:93:ALA:O	2.45	0.45
63:BY:25:ILE:HG13	63:BY:43:VAL:HG12	1.98	0.45
71:Bg:105:ARG:NH2	71:Bg:109:ILE:HD11	2.31	0.45
80:CA:616:ASP:N	80:CA:616:ASP:OD1	2.48	0.45
80:CA:1497:ASP:O	80:CA:1500:GLN:HG3	2.17	0.45
81:CB:218:LEU:HD22	81:CB:233:ALA:HB1	1.98	0.45
1:2:86:A:H2'	1:2:87:C:H6	1.81	0.45
1:2:406:U:H2'	1:2:407:A:C8	2.50	0.45
1:2:707:A:N6	1:2:733:A:OP1	2.45	0.45
1:2:875:G:OP1	7:AB:158:SER:HB3	2.15	0.45
1:2:891:A:H2'	1:2:892:A:H8	1.80	0.45
1:2:1037:C:O2	28:AW:16:ASN:ND2	2.50	0.45
1:2:1343:U:H2'	1:2:1344:A:C8	2.51	0.45
1:2:1455:G:C6	1:2:1456:C:N3	2.85	0.45
1:2:1471:A:HO2'	1:2:1472:C:P	2.39	0.45
2:3:142:C:H2'	2:3:143:U:C6	2.52	0.45
4:5:113:C:C2	4:5:114:A:C8	3.05	0.45
4:5:547:C:H5'	4:5:548:G:N3	2.31	0.45
4:5:610:G:O2'	41:BC:312:VAL:HG22	2.16	0.45
4:5:757:U:H2'	4:5:758:C:H6	1.81	0.45
4:5:980:U:O2	4:5:981:A:C6	2.70	0.45
4:5:2364:A:C2	4:5:2377:G:C6	3.05	0.45
4:5:3358:U:H2'	4:5:3359:U:C6	2.51	0.45
10:AE:103:TYR:CD2	10:AE:189:LEU:HD11	2.51	0.45
11:AF:45:LYS:HG3	11:AF:46:TRP:CE3	2.51	0.45
15:AJ:171:ARG:HA	15:AJ:174:ARG:NH2	2.32	0.45
27:AV:75:ASN:OD1	27:AV:76:ASP:N	2.49	0.45
27:AV:78:LEU:HD23	27:AV:78:LEU:H	1.81	0.45
33:Ab:20:LYS:HG3	33:Ab:21:LEU:HD22	1.99	0.45
35:Ad:19:ARG:HH21	35:Ad:32:ARG:HH21	1.64	0.45
49:BK:76:THR:O	49:BK:78:ALA:N	2.49	0.45
52:BN:83[A]:ALA:O	52:BN:87[A]:MET:HE3	2.16	0.45
53:BO:64:ASN:O	53:BO:67:ILE:HG12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BR:12:ARG:NH2	57:BS:139:ARG:HH21	2.14	0.45
70:Bf:100:ILE:O	70:Bf:103:LYS:HG2	2.16	0.45
80:CA:348:LYS:HE3	80:CA:417:LEU:HA	1.98	0.45
80:CA:764:TYR:HA	80:CA:767:ARG:HE	1.81	0.45
80:CA:993:SER:HB2	80:CA:994:ARG:NH1	2.32	0.45
80:CA:1308:ASN:CG	80:CA:1537:PRO:HB3	2.42	0.45
1:2:592:A:H2'	1:2:593:U:O4'	2.17	0.45
1:2:934:C:N3	1:2:1077:C:H4'	2.32	0.45
1:2:1202:A:H1'	1:2:1207:C:N4	2.32	0.45
1:2:1433:G:H2'	1:2:1434:U:O4'	2.17	0.45
4:5:74:G:C2	4:5:75:G:C8	3.05	0.45
4:5:255:A:H2'	4:5:256:G:C8	2.52	0.45
4:5:255:A:H2'	4:5:256:G:H8	1.82	0.45
4:5:436:A:H2'	4:5:437:G:C8	2.51	0.45
4:5:570:A:H2'	4:5:571:A:H8	1.81	0.45
4:5:966:A:C2	64:BZ:43:ILE:HD12	2.51	0.45
4:5:1070:C:H2'	4:5:1071:U:C6	2.51	0.45
4:5:1510:A:H2'	4:5:1511:G:C8	2.51	0.45
4:5:1700:A:N6	4:5:1748:G:O6	2.49	0.45
4:5:2353:A:H5''	53:BO:83:TRP:O	2.17	0.45
4:5:2534:G:C6	4:5:2548:A:N1	2.84	0.45
4:5:2915:G:N3	4:5:2935:A:H2	2.14	0.45
9:AD:44:THR:O	9:AD:45:LYS:HE2	2.16	0.45
11:AF:43:PHE:O	11:AF:44:ASN:C	2.59	0.45
31:AZ:49:ARG:NH2	31:AZ:68:ARG:HH22	2.15	0.45
39:BA:142:ASP:N	39:BA:142:ASP:OD1	2.47	0.45
41:BC:153:SER:HA	41:BC:252:GLU:HB2	1.97	0.45
42:BD:224:LYS:HE2	42:BD:224:LYS:HB3	1.61	0.45
46:BH:49:ASN:ND2	46:BH:52:LEU:HB2	2.29	0.45
54:BP:165:ILE:HG12	54:BP:173:GLU:OE2	2.16	0.45
56:BR:110:MET:HG3	56:BR:116:ALA:HB3	1.97	0.45
61:BW:74:LYS:HE3	61:BW:78:ASP:OD2	2.17	0.45
63:BY:5:LEU:HD23	63:BY:5:LEU:HA	1.70	0.45
80:CA:380:LEU:HG	80:CA:397:ILE:HD11	1.99	0.45
80:CA:1025:ASP:O	80:CA:1029:HIS:N	2.46	0.45
80:CA:1174:LEU:HA	80:CA:1177:TRP:CD1	2.46	0.45
80:CA:1351:LEU:HD12	80:CA:1355:MET:HE1	1.99	0.45
80:CA:1762:LEU:HB3	80:CA:1803:PHE:HZ	1.81	0.45
80:CA:1819:GLU:HB2	80:CA:1957:LEU:HD22	1.98	0.45
81:CB:237:ILE:HG23	81:CB:273:MET:HE1	1.99	0.45
1:2:57:G:OP2	30:AY:116:LYS:NZ	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:81:G:H2'	1:2:82:U:H6	1.82	0.45
1:2:1334:U:H2'	1:2:1335:U:H6	1.81	0.45
1:2:1452:U:OP2	35:Ad:10:HIS:HD2	2.00	0.45
1:2:1512:G:H2'	1:2:1513:G:C8	2.52	0.45
1:2:1523:G:H2'	1:2:1523:G:OP1	2.16	0.45
2:3:126:A:O2'	2:3:128:U:OP2	2.29	0.45
4:5:176:G:C2	4:5:243:G:C5	3.04	0.45
4:5:961:U:H4'	4:5:964:G:C2	2.52	0.45
4:5:1687:U:OP1	58:BT:42:LYS:NZ	2.41	0.45
4:5:2407:C:H2'	4:5:2408:C:H6	1.81	0.45
4:5:2575:G:H2'	4:5:2576:G:H8	1.81	0.45
4:5:2636:A:H4'	4:5:2637:A:O5'	2.17	0.45
4:5:3034:A:H2'	4:5:3035:C:H6	1.80	0.45
5:6:24:G:H2'	5:6:25:C:C6	2.52	0.45
9:AD:54:ARG:HD3	9:AD:57:ASP:OD2	2.17	0.45
11:AF:199:ILE:HG12	11:AF:203:LYS:NZ	2.31	0.45
12:AG:50:PHE:CE1	12:AG:113:ILE:HG12	2.48	0.45
15:AJ:118:LEU:HD22	15:AJ:158:PHE:HE2	1.81	0.45
18:AM:71:ILE:HG13	18:AM:72:ILE:HD12	1.98	0.45
21:AP:57:MET:HA	21:AP:60:LEU:HD12	1.99	0.45
21:AP:108:ARG:NH2	24:AS:119:ILE:HA	2.29	0.45
29:AX:69:ARG:HD3	29:AX:69:ARG:HA	1.70	0.45
38:Ag:21:THR:HA	38:Ag:290:VAL:HG23	1.98	0.45
44:BF:176:TYR:CZ	44:BF:197:GLN:HG2	2.51	0.45
59:BU:2:SER:OG	59:BU:3:GLY:N	2.50	0.45
80:CA:227:MET:HG3	80:CA:228:ALA:H	1.81	0.45
80:CA:375:ILE:HG23	80:CA:395:GLN:HG2	1.98	0.45
80:CA:542:ARG:NH1	80:CA:599:HIS:HB2	2.31	0.45
1:2:106:U:OP1	14:AI:8:ARG:NH2	2.35	0.45
1:2:172:C:H2'	1:2:173:A:C8	2.52	0.45
1:2:647:G:N2	1:2:687:G:H1	2.14	0.45
1:2:848:C:H2'	1:2:849:C:C6	2.51	0.45
1:2:1525:A:OP1	25:AT:82:GLY:HA2	2.16	0.45
1:2:1528:U:OP1	11:AF:109:LYS:HG3	2.16	0.45
4:5:16:A:OP1	61:BW:44:PRO:HB3	2.17	0.45
4:5:207:U:C2	4:5:208:C:C5	3.04	0.45
4:5:593:A:H2'	4:5:594:C:C6	2.52	0.45
4:5:614:G:H2'	4:5:615:C:H6	1.82	0.45
4:5:1009:U:N3	4:5:1044:C:C4	2.85	0.45
4:5:1215:U:H2'	4:5:1216:U:C6	2.52	0.45
4:5:1702:C:H2'	4:5:1703:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:1849:G:H4'	4:5:1850:C:OP2	2.16	0.45
4:5:2905:U:H2'	4:5:2906:U:C6	2.52	0.45
4:5:3018:A:H2'	4:5:3019:C:H6	1.81	0.45
5:6:10:G:C2	5:6:26:G:H1'	2.52	0.45
5:6:56:C:H6	48:BJ:61:ARG:HH22	1.64	0.45
12:AG:7:TYR:HD1	12:AG:113:ILE:HD12	1.82	0.45
13:AH:144:VAL:HA	28:AW:42:GLN:NE2	2.30	0.45
15:AJ:84:GLY:HA2	15:AJ:150:LEU:HD22	1.99	0.45
19:AN:53:LEU:HD23	19:AN:53:LEU:HA	1.77	0.45
19:AN:103:GLU:O	19:AN:104:ARG:NH1	2.50	0.45
21:AP:104:GLN:OE1	21:AP:104:GLN:HA	2.16	0.45
29:AX:62:LYS:N	29:AX:116:ASP:O	2.45	0.45
38:Ag:10:ARG:HB2	38:Ag:314:GLN:NE2	2.30	0.45
40:BB:94:GLU:HG3	40:BB:156:SER:OG	2.16	0.45
41:BC:233:LEU:HA	41:BC:233:LEU:HD23	1.57	0.45
49:BK:4:SER:OG	49:BK:5:LYS:N	2.49	0.45
50:BL:13:ARG:NH1	50:BL:65:LEU:O	2.49	0.45
52:BN:12[A]:LYS:HD2	52:BN:37[A]:ARG:NH1	2.31	0.45
62:BX:59:VAL:O	62:BX:64:LYS:NZ	2.42	0.45
63:BY:29:HIS:HD1	63:BY:40:HIS:CD2	2.34	0.45
64:BZ:78:LEU:O	64:BZ:78:LEU:HD23	2.17	0.45
80:CA:361:GLU:HA	80:CA:364:ASP:OD2	2.17	0.45
80:CA:1452:LYS:HD2	80:CA:1454:LYS:HE2	1.98	0.45
1:2:526:A:C5	1:2:527:A:C8	3.05	0.45
1:2:898:A:C2	1:2:915:A:C5	3.04	0.45
1:2:986:G:H2'	1:2:987:G:O4'	2.17	0.45
1:2:1241:G:H1'	21:AP:79:HIS:H	1.82	0.45
1:2:1479:A:P	25:AT:57:ARG:HH21	2.40	0.45
1:2:1495:C:N3	1:2:1513:G:N1	2.65	0.45
1:2:1657:U:H5'	1:2:1658:G:H5''	1.98	0.45
1:2:1678:A:P	14:AI:59:ARG:HH22	2.40	0.45
4:5:152:U:OP1	71:Bg:106:LYS:NZ	2.36	0.45
4:5:665:U:H2'	4:5:666:A:C8	2.52	0.45
4:5:831:A:H2'	4:5:832:G:O4'	2.17	0.45
4:5:1270:U:O2	4:5:1272:A:H5''	2.17	0.45
4:5:1334:C:OP1	54:BP:2:GLY:N	2.50	0.45
4:5:1663:G:H2'	4:5:1664:C:H6	1.82	0.45
4:5:2676:C:H3'	4:5:2677:A:H8	1.81	0.45
6:AA:125:ASP:OD2	6:AA:128:SER:N	2.42	0.45
11:AF:101:GLY:O	11:AF:103:ASN:N	2.50	0.45
15:AJ:179:ARG:HA	15:AJ:182:GLU:OE2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AR:75:GLU:HG2	23:AR:76:GLU:N	2.32	0.45
34:Ac:32:PHE:HE1	34:Ac:59:SER:HB2	1.82	0.45
40:BB:87:VAL:HG23	40:BB:87:VAL:O	2.17	0.45
42:BD:104:LEU:HD13	42:BD:247:ILE:HG23	1.99	0.45
56:BR:45:LEU:HD12	56:BR:45:LEU:HA	1.71	0.45
59:BU:21:ALA:HB3	59:BU:36:ILE:HD12	1.99	0.45
64:BZ:79:TRP:HH2	64:BZ:119:PRO:HG3	1.80	0.45
66:Bb:22:LYS:HD3	66:Bb:22:LYS:HA	1.72	0.45
69:Be:85:PHE:CE2	69:Be:89:LEU:HD21	2.52	0.45
71:Bg:83:LYS:HG2	71:Bg:83:LYS:O	2.17	0.45
80:CA:814:ILE:O	82:CC:370:ARG:NH1	2.50	0.45
80:CA:1174:LEU:O	80:CA:1178:HIS:N	2.49	0.45
80:CA:1358:PRO:HA	80:CA:1361:MET:HG3	1.99	0.45
1:2:73:U:C5	1:2:74:U:H1'	2.51	0.45
1:2:751:G:H2'	1:2:752:A:C8	2.51	0.45
1:2:827:C:H2'	1:2:828:U:H6	1.82	0.45
1:2:1147:A:H2'	1:2:1148:C:C6	2.51	0.45
4:5:130:A:H2'	4:5:131:C:C6	2.52	0.45
4:5:130:A:H2'	4:5:131:C:H6	1.82	0.45
4:5:162:G:H2'	4:5:163:C:C6	2.52	0.45
4:5:375:A:O3'	62:BX:89:LYS:HE3	2.17	0.45
4:5:547:C:H5'	4:5:548:G:C4	2.52	0.45
4:5:605:G:H2'	4:5:606:U:C6	2.52	0.45
4:5:2575:G:H2'	4:5:2576:G:C8	2.51	0.45
4:5:2733:G:H2'	4:5:2734:A:O4'	2.17	0.45
4:5:2774:C:C2	4:5:2775:C:C5	3.05	0.45
4:5:2799:C:H5''	4:5:2800:A:OP1	2.17	0.45
4:5:2832:G:H2'	4:5:2833:C:H6	1.82	0.45
6:AA:181:VAL:HG23	6:AA:185:ARG:HH21	1.81	0.45
10:AE:171:ASP:OD1	10:AE:172:PHE:N	2.48	0.45
11:AF:156:ARG:HG3	20:AO:52:ARG:CZ	2.47	0.45
11:AF:200:ASN:OD1	11:AF:205:SER:N	2.50	0.45
29:AX:85:ALA:HB2	29:AX:104:LEU:HD13	1.99	0.45
38:Ag:67:ILE:HG23	38:Ag:85:TRP:CE2	2.52	0.45
38:Ag:205:SER:HB3	38:Ag:210:LEU:HB2	1.99	0.45
39:BA:46:LYS:HD3	39:BA:46:LYS:HA	1.65	0.45
42:BD:217:GLU:O	42:BD:220:SER:OG	2.34	0.45
61:BW:105:VAL:HG23	61:BW:130:TYR:CD2	2.52	0.45
61:BW:131:ASP:HB3	61:BW:134:ASP:CG	2.42	0.45
80:CA:970:LEU:HD23	80:CA:974:GLU:HB3	1.99	0.45
80:CA:1378:SER:HA	80:CA:1482:PHE:HE1	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1778:GLU:HA	80:CA:1798:PHE:CE2	2.52	0.45
81:CB:27:PRO:O	81:CB:31:ARG:HG2	2.16	0.45
81:CB:291:LEU:HD23	81:CB:291:LEU:H	1.81	0.45
1:2:53:G:H2'	1:2:54:C:H6	1.81	0.45
1:2:68:A:N6	12:AG:132:ARG:HG3	2.32	0.45
1:2:68:A:OP1	12:AG:171:LYS:NZ	2.37	0.45
1:2:74:U:H4'	1:2:75:U:C5	2.51	0.45
1:2:1126:G:OP1	77:Bm:15:ARG:NE	2.48	0.45
1:2:1146:G:N3	1:2:1635:A:H2	2.15	0.45
1:2:1237:G:C4	1:2:1238:A:C8	3.05	0.45
4:5:235:A:C2	4:5:236:G:C5	3.05	0.45
4:5:1567:A:H2'	4:5:1568:U:C6	2.51	0.45
4:5:2210:U:H5	7:AB:13:LYS:HE2	1.82	0.45
4:5:2796:U:H4'	78:Bn:58:PHE:HZ	1.81	0.45
7:AB:138:PHE:O	7:AB:212:VAL:HG22	2.18	0.45
9:AD:42:THR:OG1	9:AD:47:GLU:OE1	2.25	0.45
11:AF:148:ARG:HD2	11:AF:148:ARG:HA	1.77	0.45
23:AR:27:ASP:O	23:AR:31:ASN:ND2	2.51	0.45
25:AT:31:PRO:HG2	25:AT:34:VAL:HB	1.99	0.45
42:BD:132:THR:OG1	42:BD:167:SER:O	2.35	0.45
52:BN:61[A]:ALA:HA	52:BN:70[A]:PRO:HD2	1.97	0.45
80:CA:391:ILE:HD11	80:CA:417:LEU:HB2	1.98	0.45
80:CA:1577:ARG:HH12	80:CA:1581:ASN:HB2	1.81	0.45
80:CA:1768:MET:SD	80:CA:1768:MET:N	2.89	0.45
1:2:1407:U:H2'	1:2:1408:G:C8	2.52	0.44
1:2:1754:A:H2'	1:2:1755:A:C8	2.51	0.44
4:5:77:A:H5'	49:BK:100:ARG:NH1	2.32	0.44
4:5:187:A:C6	4:5:211:A:C4	3.05	0.44
4:5:190:U:O4	62:BX:103:LYS:HD3	2.17	0.44
4:5:212:G:H2'	41:BC:221:ASN:OD1	2.17	0.44
4:5:277:G:H2'	4:5:278:U:C6	2.52	0.44
4:5:590:A:H5''	4:5:591:G:OP2	2.17	0.44
4:5:763:U:C4	4:5:764:G:C8	3.05	0.44
4:5:966:A:H2	64:BZ:43:ILE:HD12	1.82	0.44
4:5:1065:A:H5''	4:5:1067:G:O4'	2.17	0.44
4:5:1689:U:C2	4:5:1690:U:C5	3.04	0.44
4:5:1730:A:OP1	66:Bb:88:GLY:N	2.50	0.44
4:5:2342:A:OP1	40:BB:231:HIS:ND1	2.45	0.44
4:5:2683:C:OP2	48:BJ:51:ARG:NH2	2.49	0.44
4:5:3007:A:H2'	4:5:3008:U:O4'	2.18	0.44
4:5:3255:G:H2'	4:5:3256:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:6:62:C:H2'	5:6:63:U:H6	1.81	0.44
6:AA:147:THR:OG1	6:AA:151:SER:HB2	2.17	0.44
9:AD:90:ARG:CZ	80:CA:1096:HIS:HD2	2.30	0.44
12:AG:55:GLY:O	12:AG:63:MET:HG3	2.17	0.44
15:AJ:134:ILE:O	15:AJ:140:ILE:HG13	2.17	0.44
18:AM:48:SER:HB2	18:AM:122:VAL:HG13	1.99	0.44
18:AM:130:THR:O	18:AM:132:GLU:HG3	2.17	0.44
20:AO:111:ARG:HA	20:AO:111:ARG:HE	1.82	0.44
21:AP:44:ARG:HH21	21:AP:115:TYR:HH	1.64	0.44
25:AT:23:GLN:HE21	25:AT:55:TYR:HD2	1.64	0.44
26:AU:70:THR:HG23	26:AU:72:ASN:O	2.16	0.44
28:AW:88:LYS:NZ	28:AW:92:ASN:OD1	2.46	0.44
32:Aa:41:ILE:HG12	32:Aa:68:TYR:CD1	2.52	0.44
40:BB:153:LYS:HD3	40:BB:154:TYR:CZ	2.51	0.44
41:BC:23:PRO:HB3	41:BC:258:LEU:HB3	1.98	0.44
41:BC:23:PRO:HG2	41:BC:258:LEU:HD23	1.98	0.44
42:BD:196:ARG:NH1	42:BD:237:GLU:OE2	2.48	0.44
45:BG:90:THR:OG1	45:BG:214:LEU:HD11	2.17	0.44
52:BN:9[A]:ILE:HD12	52:BN:33[A]:ILE:HG23	1.99	0.44
62:BX:56:VAL:HG11	62:BX:104:LEU:HD13	1.99	0.44
75:Bk:9:ILE:HG23	75:Bk:51:ILE:HD12	1.98	0.44
80:CA:854:LEU:O	80:CA:858:SER:OG	2.22	0.44
80:CA:1440:GLN:OE1	80:CA:1443:ARG:NH1	2.49	0.44
1:2:123:G:P	10:AE:77:ARG:HH22	2.40	0.44
1:2:594:A:OP2	15:AJ:37:LYS:NZ	2.51	0.44
1:2:759:U:C2	1:2:760:A:C8	3.05	0.44
1:2:855:A:H8	1:2:855:A:OP2	2.01	0.44
1:2:1079:U:H2'	1:2:1080:U:C6	2.52	0.44
1:2:1211:A:H1'	21:AP:100:LYS:HA	1.99	0.44
1:2:1584:G:O2'	1:2:1585:U:P	2.76	0.44
1:2:1684:U:H2'	1:2:1685:G:H8	1.81	0.44
4:5:728:G:C5	4:5:744:C:N4	2.86	0.44
4:5:1683:U:O5'	58:BT:85:LYS:NZ	2.50	0.44
4:5:2207:G:O2'	4:5:2209:A:N6	2.50	0.44
4:5:3272:G:O2'	43:BE:108:LYS:HE2	2.17	0.44
5:6:27:U:H2'	5:6:28:C:H6	1.82	0.44
7:AB:52:THR:HG1	7:AB:55:LYS:H	1.64	0.44
7:AB:199:ASN:HA	7:AB:202:LYS:HZ2	1.82	0.44
7:AB:219:LYS:HD2	7:AB:220:GLN:N	2.32	0.44
8:AC:116:LYS:HD3	8:AC:131:ILE:HD11	1.99	0.44
8:AC:143:TYR:HE1	8:AC:151:PRO:CA	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AD:52:ALA:O	9:AD:90:ARG:HA	2.16	0.44
10:AE:173:ILE:HD11	10:AE:235:TYR:CD2	2.51	0.44
11:AF:80:LYS:HZ2	11:AF:81:ARG:H	1.64	0.44
15:AJ:64:GLU:OE1	15:AJ:65:LYS:HE3	2.17	0.44
18:AM:81:ASP:C	18:AM:83:GLU:H	2.24	0.44
19:AN:7:ALA:O	19:AN:9:LYS:NZ	2.50	0.44
19:AN:125:LEU:HD11	19:AN:129:TYR:CE2	2.52	0.44
22:AQ:127:LYS:HG2	22:AQ:128:LYS:N	2.32	0.44
29:AX:48:HIS:HB3	29:AX:103:LEU:HD11	1.99	0.44
36:Ae:52:GLY:O	36:Ae:53:LYS:HE2	2.17	0.44
38:Ag:89:LEU:N	38:Ag:103:PHE:O	2.43	0.44
44:BF:88:ARG:NH2	44:BF:92:ILE:HA	2.32	0.44
55:BQ:7:GLN:NE2	55:BQ:35:ALA:O	2.50	0.44
56:BR:137:ARG:HD3	56:BR:137:ARG:HA	1.78	0.44
58:BT:90:ARG:O	58:BT:91:ASP:OD1	2.35	0.44
64:BZ:62:HIS:CE1	64:BZ:64:GLN:HE21	2.36	0.44
73:Bi:17:THR:HG22	73:Bi:18:LEU:N	2.32	0.44
74:Bj:23:ALA:HB2	74:Bj:73:LEU:HD21	1.99	0.44
76:Bl:84:ALA:O	76:Bl:88:LYS:HG2	2.18	0.44
80:CA:661:ASP:OD1	80:CA:664:GLN:NE2	2.48	0.44
80:CA:1104:ILE:HG22	80:CA:1106:PRO:HD2	1.98	0.44
80:CA:1254:ARG:HG3	80:CA:1256:PHE:HB3	1.99	0.44
80:CA:1337:MET:SD	82:CC:348:ILE:HG23	2.58	0.44
1:2:1041:G:C2	1:2:1042:G:C5	3.04	0.44
1:2:1096:C:H4'	1:2:1099:U:H4'	2.00	0.44
1:2:1145:U:O2'	8:AC:88:LYS:HE3	2.16	0.44
1:2:1661:U:H2'	1:2:1662:G:C8	2.52	0.44
2:3:6:U:H2'	2:3:7:U:C6	2.53	0.44
2:3:67:U:OP1	73:Bi:85:LYS:HD3	2.17	0.44
4:5:167:U:H2'	4:5:168:U:C6	2.52	0.44
4:5:599:A:H2'	4:5:600:C:C6	2.51	0.44
4:5:685:G:H2'	4:5:686:G:H8	1.82	0.44
4:5:819:C:H2'	4:5:820:U:O4'	2.16	0.44
4:5:1223:G:O2'	4:5:1224:A:OP2	2.34	0.44
4:5:2133:C:O2	4:5:2133:C:H2'	2.18	0.44
4:5:3008:U:OP1	52:BN:74[A]:ARG:HG2	2.16	0.44
4:5:3182:C:H2'	4:5:3183:G:H8	1.81	0.44
4:5:3183:G:H4'	52:BN:161[A]:LYS:HD3	1.98	0.44
4:5:3316:G:OP1	40:BB:116:ARG:NH2	2.51	0.44
5:6:9:G:H21	5:6:45:G:H3'	1.82	0.44
7:AB:195:LYS:O	7:AB:195:LYS:NZ	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AC:126:ARG:HH22	8:AC:130:ILE:HD11	1.81	0.44
11:AF:161:ASP:OD2	34:Ac:42:ARG:NH2	2.51	0.44
17:AL:132:SER:OG	17:AL:133:LYS:N	2.50	0.44
39:BA:180:LEU:HD22	79:Bo:18:TYR:HB3	1.98	0.44
40:BB:105:VAL:HG21	40:BB:148:LEU:HD22	1.99	0.44
41:BC:52:VAL:N	41:BC:103:THR:OG1	2.49	0.44
42:BD:49:TYR:CD1	42:BD:66:SER:HB3	2.53	0.44
46:BH:8:GLN:HG2	46:BH:68:LEU:HG	1.98	0.44
57:BS:70:SER:OG	57:BS:92:ARG:NH1	2.50	0.44
69:Be:92:LYS:HB2	69:Be:92:LYS:HE3	1.71	0.44
72:Bh:5:THR:HG22	72:Bh:12:ASN:O	2.17	0.44
73:Bi:39:TYR:CG	73:Bi:40:PRO:HA	2.51	0.44
80:CA:381:THR:O	80:CA:384:MET:HE1	2.17	0.44
80:CA:506:GLY:O	80:CA:507:LYS:HG2	2.17	0.44
80:CA:883:SER:HB2	80:CA:885:THR:HG23	2.00	0.44
80:CA:1721:SER:HB2	80:CA:1723:VAL:HG23	2.00	0.44
81:CB:174:LEU:HA	81:CB:177:LEU:HD12	1.98	0.44
81:CB:222:TRP:CD1	81:CB:230:HIS:HA	2.52	0.44
1:2:81:G:H2'	1:2:82:U:C6	2.53	0.44
1:2:142:G:N2	1:2:173:A:C2	2.85	0.44
1:2:187:G:N1	1:2:197:A:N1	2.65	0.44
1:2:207:U:O2	14:AI:178:ARG:NH2	2.51	0.44
1:2:978:A:H2'	1:2:979:A:O4'	2.17	0.44
1:2:1210:C:C2	1:2:1454:G:C2	3.06	0.44
1:2:1502:G:C2	1:2:1506:G:C6	3.05	0.44
1:2:1738:U:H2'	1:2:1739:C:C6	2.53	0.44
4:5:209:A:H5''	41:BC:161:LYS:HZ1	1.83	0.44
4:5:353:G:N2	4:5:364:G:H2'	2.33	0.44
4:5:393:U:H2'	4:5:394:G:O4'	2.17	0.44
4:5:976:C:H2'	4:5:977:U:C6	2.52	0.44
4:5:1097:U:OP2	57:BS:116:ARG:NH2	2.50	0.44
4:5:1462:A:H2'	4:5:1463:A:C8	2.52	0.44
4:5:1563:C:N4	4:5:1579:C:H42	2.16	0.44
4:5:1724:A:OP1	55:BQ:128:LYS:NZ	2.50	0.44
4:5:3220:G:N1	43:BE:162:SER:OG	2.37	0.44
4:5:3235:A:H2	4:5:3254:G:H22	1.64	0.44
4:5:3335:U:H4'	4:5:3336:A:H5'	1.99	0.44
4:5:3345:A:N6	4:5:3362:G:O2'	2.51	0.44
6:AA:84:ARG:NH2	23:AR:82:ASP:O	2.50	0.44
7:AB:47:LEU:O	7:AB:64:ARG:NH2	2.51	0.44
11:AF:145:ASP:O	11:AF:160:VAL:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AM:80:ASN:ND2	18:AM:86:VAL:HG11	2.32	0.44
18:AM:84:ASN:OD1	18:AM:85:LYS:N	2.45	0.44
20:AO:58:TYR:HB2	34:Ac:61:ARG:HH11	1.81	0.44
27:AV:83:TRP:CH2	27:AV:85:TYR:HB2	2.52	0.44
32:Aa:45:VAL:HG23	32:Aa:46:GLU:N	2.31	0.44
33:Ab:47:PHE:HD2	33:Ab:49:HIS:O	2.01	0.44
35:Ad:29:GLY:O	35:Ad:40:ARG:N	2.47	0.44
37:Af:89:LYS:HE3	37:Af:91:ILE:HD13	1.99	0.44
41:BC:14:GLU:HG2	41:BC:15:ALA:N	2.32	0.44
45:BG:84:ARG:HA	45:BG:84:ARG:HD3	1.69	0.44
49:BK:170:LEU:HD21	64:BZ:147:LEU:HD11	2.00	0.44
53:BO:59:PRO:HD3	53:BO:76:PHE:CE1	2.52	0.44
53:BO:179:GLN:HA	53:BO:182:ILE:HG22	2.00	0.44
59:BU:23:MET:HE3	59:BU:100:GLY:HA3	2.00	0.44
61:BW:91:ASN:H	61:BW:94:GLN:NE2	2.16	0.44
61:BW:134:ASP:OD2	61:BW:135:ILE:HG23	2.18	0.44
62:BX:11:ASP:OD2	62:BX:14:LYS:N	2.44	0.44
62:BX:74:TYR:CE2	62:BX:77:LYS:HG3	2.53	0.44
63:BY:103:GLN:NE2	63:BY:106:GLN:HE22	2.16	0.44
74:Bj:10:GLN:O	74:Bj:14:LEU:HD23	2.17	0.44
80:CA:229:PHE:HB3	80:CA:239:GLY:O	2.18	0.44
80:CA:1383:ARG:HH22	81:CB:95:GLY:HA2	1.82	0.44
1:2:85:A:N3	1:2:148:A:O2'	2.51	0.44
1:2:587:C:H2'	1:2:588:U:O4'	2.18	0.44
1:2:830:U:H2'	1:2:831:U:H6	1.82	0.44
1:2:859:A:N6	19:AN:73:ARG:HD3	2.33	0.44
1:2:1435:G:N3	16:AK:59:PHE:CE2	2.86	0.44
1:2:1543:A:C2	1:2:1569:A:C4	3.05	0.44
4:5:5:G:C2	4:5:6:A:C8	3.05	0.44
4:5:599:A:P	44:BF:41:ARG:HH21	2.40	0.44
4:5:770:G:O2'	4:5:771:G:H5'	2.18	0.44
4:5:861:G:H3'	4:5:861:G:N3	2.32	0.44
4:5:1368:G:P	68:Bd:45:ARG:HH22	2.40	0.44
4:5:1714:G:H1	4:5:1731:G:HO2'	1.58	0.44
4:5:2169:A:H8	4:5:2169:A:O5'	2.00	0.44
4:5:2208:A:P	4:5:2208:A:H8	2.41	0.44
4:5:2434:U:OP2	4:5:2435:U:O2'	2.28	0.44
4:5:2667:C:H1'	4:5:2692:A:C2	2.52	0.44
4:5:2881:U:H1'	40:BB:250:ALA:HB3	1.99	0.44
4:5:3068:C:H3'	55:BQ:62:ARG:NH2	2.32	0.44
8:AC:140:ARG:HB3	8:AC:221:THR:HB	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AF:82:PHE:CD2	34:Ac:49:ARG:NE	2.84	0.44
13:AH:31:SER:HB2	13:AH:33:GLU:OE2	2.17	0.44
16:AK:80:LEU:HB3	16:AK:82:LEU:CD2	2.47	0.44
20:AO:111:ARG:HH21	32:Aa:57:SER:N	2.16	0.44
21:AP:112:LEU:C	21:AP:112:LEU:HD12	2.42	0.44
25:AT:18:TYR:O	25:AT:21:PHE:HB3	2.17	0.44
25:AT:100:ILE:HG13	25:AT:101:ASN:N	2.32	0.44
27:AV:4:ASP:OD1	27:AV:5:LYS:N	2.50	0.44
28:AW:114:GLU:OE1	28:AW:114:GLU:HA	2.17	0.44
32:Aa:83:ILE:HG22	32:Aa:84:VAL:H	1.82	0.44
38:Ag:54:PHE:CD2	38:Ag:312:VAL:HG21	2.53	0.44
40:BB:53:MET:HA	40:BB:77:THR:HA	1.97	0.44
44:BF:118:LYS:HE2	44:BF:191:VAL:HG11	1.99	0.44
47:BI:17:TYR:CE2	47:BI:98:ARG:HD3	2.53	0.44
47:BI:82:ARG:HB3	47:BI:82:ARG:CZ	2.47	0.44
52:BN:32[A]:LYS:O	52:BN:33[A]:ILE:HD13	2.17	0.44
66:Bb:47:ASN:HD21	66:Bb:74:ASN:CG	2.25	0.44
68:Bd:20:HIS:CG	68:Bd:42:VAL:HG21	2.52	0.44
71:Bg:118:ILE:HG23	71:Bg:118:ILE:O	2.18	0.44
80:CA:535:VAL:O	80:CA:621:VAL:HA	2.17	0.44
80:CA:797:ASP:OD2	80:CA:916:ASN:ND2	2.50	0.44
80:CA:1171:VAL:HA	80:CA:1174:LEU:HD23	2.00	0.44
80:CA:1308:ASN:HB3	80:CA:1537:PRO:HB3	1.99	0.44
81:CB:16:ALA:HB3	81:CB:20:LEU:HA	2.00	0.44
1:2:1087:A:H2'	1:2:1088:A:C8	2.53	0.44
1:2:1374:C:H2'	1:2:1375:A:C8	2.52	0.44
1:2:1543:A:N1	1:2:1569:A:C8	2.86	0.44
1:2:1741:U:H2'	1:2:1742:U:C6	2.53	0.44
1:2:1796:C:OP2	32:Aa:92:ARG:HG2	2.16	0.44
3:4:90:U:H2'	3:4:91:G:O4'	2.18	0.44
4:5:254:A:H2'	4:5:255:A:C8	2.52	0.44
4:5:511:G:C6	4:5:583:G:C6	3.06	0.44
4:5:2425:A:H2'	4:5:2426:G:O4'	2.18	0.44
4:5:2556:G:C6	4:5:2557:C:C4	3.05	0.44
4:5:2657:A:C8	4:5:2659:G:C8	3.05	0.44
4:5:2700:G:N2	57:BS:49:GLN:HE21	2.16	0.44
4:5:3321:A:H2'	4:5:3322:C:C6	2.52	0.44
8:AC:148:LEU:HD23	8:AC:148:LEU:HA	1.76	0.44
10:AE:24:SER:O	10:AE:24:SER:OG	2.34	0.44
11:AF:65:ARG:HA	11:AF:65:ARG:HD3	1.72	0.44
12:AG:152:ASP:C	12:AG:154:ARG:H	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AI:9:HIS:CG	14:AI:10:LYS:H	2.35	0.44
22:AQ:94:GLN:NE2	22:AQ:95:LYS:HB3	2.33	0.44
31:AZ:43:ASP:H	31:AZ:46:LYS:HB2	1.82	0.44
32:Aa:85:ARG:HG3	32:Aa:86:VAL:H	1.82	0.44
36:Ae:26:LYS:HD3	36:Ae:27:PRO:O	2.18	0.44
38:Ag:40:LYS:H	38:Ag:67:ILE:CD1	2.30	0.44
39:BA:20:THR:HG22	39:BA:23:ARG:HD2	1.99	0.44
47:BI:193:ASP:HB2	47:BI:196:PHE:O	2.18	0.44
56:BR:22:PRO:O	57:BS:146:ASN:ND2	2.45	0.44
78:Bn:43:TYR:OH	78:Bn:47:GLN:NE2	2.45	0.44
79:Bo:61:LYS:HD3	79:Bo:61:LYS:H	1.82	0.44
80:CA:1141:ASN:HB2	80:CA:1144:GLN:HG3	2.00	0.44
80:CA:1906:LEU:N	80:CA:1918:LYS:O	2.51	0.44
80:CA:1938:PRO:HD2	80:CA:1941:ILE:HD11	1.98	0.44
1:2:332:U:P	14:AI:56:ARG:HH22	2.41	0.44
1:2:534:A:C5	1:2:535:A:C8	3.06	0.44
1:2:762:A:OP1	15:AJ:79:ARG:NH1	2.47	0.44
1:2:863:A:N7	1:2:964:U:O4	2.51	0.44
1:2:1358:G:O2'	25:AT:133:ASP:OD2	2.28	0.44
1:2:1521:G:C6	1:2:1523:G:C8	3.06	0.44
1:2:1720:G:H8	1:2:1720:G:O5'	2.00	0.44
2:3:147:U:N3	2:3:148:G:C8	2.85	0.44
4:5:509:U:H3	4:5:584:G:H1	1.63	0.44
4:5:586:A:H2'	4:5:587:C:C6	2.53	0.44
4:5:797:U:H2'	4:5:798:U:C6	2.53	0.44
4:5:1498:C:O2'	4:5:1603:A:N3	2.47	0.44
4:5:2145:A:H1'	4:5:2282:A:H61	1.82	0.44
4:5:2153:A:H2'	4:5:2154:U:H6	1.83	0.44
4:5:3071:A:H2'	4:5:3072:U:H6	1.82	0.44
5:6:71:A:H2'	5:6:72:A:C8	2.53	0.44
7:AB:30:PHE:HB3	7:AB:96:LEU:HD23	2.00	0.44
9:AD:11:LEU:HD11	26:AU:29:THR:HB	2.00	0.44
9:AD:204:ASP:OD2	9:AD:204:ASP:N	2.40	0.44
10:AE:188:ASN:OD1	10:AE:191:ARG:NH1	2.51	0.44
16:AK:58:GLN:O	16:AK:64:TYR:HA	2.18	0.44
17:AL:15:LYS:HB2	17:AL:15:LYS:HE3	1.75	0.44
28:AW:111:MET:HE3	28:AW:116:ALA:HA	1.99	0.44
45:BG:178:ALA:HA	45:BG:222:PHE:CE2	2.52	0.44
60:BV:86:SER:O	60:BV:89:LEU:N	2.50	0.44
66:Bb:12:GLN:N	66:Bb:12:GLN:OE1	2.49	0.44
67:Bc:10:ARG:HG2	67:Bc:108:VAL:HG22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:405:ASP:CG	80:CA:409:ARG:HE	2.25	0.44
80:CA:569:PRO:HA	80:CA:572:LYS:HE2	1.99	0.44
80:CA:1395:MET:SD	80:CA:1395:MET:N	2.91	0.44
1:2:151:G:N1	1:2:164:A:C6	2.86	0.44
1:2:359:A:H61	29:AX:39:LYS:HE2	1.82	0.44
1:2:381:C:O2'	1:2:755:A:N1	2.43	0.44
1:2:419:G:H5'	12:AG:72:ARG:HH21	1.83	0.44
1:2:560:U:H2'	1:2:561:G:H8	1.83	0.44
4:5:385:A:H8	4:5:385:A:O5'	1.99	0.44
4:5:621:U:H5'	53:BO:167:ARG:NH2	2.32	0.44
4:5:929:C:H2'	4:5:930:A:C8	2.53	0.44
4:5:1232:A:O2'	4:5:1263:G:N1	2.51	0.44
4:5:2496:C:O2'	4:5:2497:C:OP1	2.32	0.44
4:5:3148:G:H2'	4:5:3149:U:O4'	2.17	0.44
4:5:3256:U:H2'	4:5:3257:G:C8	2.53	0.44
4:5:3258:C:H2'	4:5:3259:U:C6	2.53	0.44
5:6:23:G:H2'	5:6:24:G:C8	2.53	0.44
9:AD:134:CYS:SG	9:AD:188:ILE:HG12	2.58	0.44
10:AE:87:MET:HG2	10:AE:87:MET:O	2.18	0.44
13:AH:44:LYS:HG3	13:AH:45:SER:N	2.33	0.44
17:AL:91:LEU:HB3	17:AL:100:TYR:HB3	2.00	0.44
23:AR:21:TYR:CE1	23:AR:58:MET:HE1	2.53	0.44
26:AU:34:LEU:HA	26:AU:37:VAL:HG22	2.00	0.44
26:AU:52:LYS:HA	26:AU:93:LEU:HD13	2.00	0.44
33:Ab:36:LYS:N	33:Ab:78:SER:O	2.29	0.44
42:BD:213:ASP:OD1	42:BD:214:ASP:N	2.51	0.44
53:BO:136:ILE:O	53:BO:137:ASN:ND2	2.51	0.44
57:BS:108:ARG:HG2	57:BS:112:ASN:OD1	2.17	0.44
64:BZ:96:LYS:HG3	64:BZ:97:GLU:OE1	2.18	0.44
80:CA:1843:SER:O	80:CA:1846:THR:OG1	2.31	0.44
1:2:1382:A:HO2'	1:2:1383:G:P	2.38	0.44
1:2:1609:U:H5''	22:AQ:75:VAL:HB	1.99	0.44
1:2:1662:G:H2'	1:2:1663:G:H8	1.83	0.44
1:2:1688:U:H3'	1:2:1689:A:H8	1.83	0.44
2:3:13:A:O2'	53:BO:121:GLN:O	2.36	0.44
2:3:32:C:O2'	2:3:33:A:H5'	2.18	0.44
2:3:91:C:H2'	2:3:92:A:C8	2.53	0.44
4:5:183:G:C6	4:5:234:G:C5	3.06	0.44
4:5:226:C:H2'	4:5:227:G:O4'	2.18	0.44
4:5:307:A:H2'	4:5:308:A:H8	1.83	0.44
4:5:396:A:C6	4:5:399:A:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:567:G:H2'	4:5:568:G:H8	1.83	0.44
7:AB:8:ARG:HG3	7:AB:8:ARG:HH11	1.83	0.44
12:AG:7:TYR:HB3	12:AG:12:SER:OG	2.17	0.44
12:AG:52:ILE:HA	12:AG:111:LEU:HD23	1.99	0.44
17:AL:26:LYS:HG2	17:AL:30:ARG:NH2	2.33	0.44
20:AO:126:THR:OG1	20:AO:127:ARG:N	2.51	0.44
40:BB:286:GLY:HA3	40:BB:321:PHE:CE2	2.52	0.44
40:BB:346:THR:O	40:BB:348:ARG:N	2.51	0.44
41:BC:161:LYS:HA	41:BC:161:LYS:HD2	1.71	0.44
42:BD:238:ASP:HA	42:BD:241:THR:HB	2.00	0.44
45:BG:82:LEU:HD11	45:BG:178:ALA:HB1	2.00	0.44
47:BI:11:TYR:O	47:BI:13:LYS:N	2.50	0.44
48:BJ:81:GLU:HA	48:BJ:84:LEU:HG	1.99	0.44
49:BK:61:PRO:O	49:BK:62:THR:OG1	2.36	0.44
49:BK:158:ALA:HA	64:BZ:97:GLU:HA	2.00	0.44
78:Bn:11:TYR:HB2	78:Bn:20:HIS:CE1	2.53	0.44
80:CA:399:THR:HG21	80:CA:404:TRP:HD1	1.82	0.44
80:CA:720:SER:HA	80:CA:800:ARG:NH1	2.32	0.44
80:CA:929:ILE:H	80:CA:929:ILE:HD12	1.82	0.44
80:CA:1051:GLU:OE2	80:CA:1066:MET:SD	2.76	0.44
80:CA:1120:PRO:HG3	80:CA:1139:TYR:HE1	1.82	0.44
80:CA:1139:TYR:HE2	82:CC:331:ARG:HH21	1.66	0.44
1:2:78:A:C5	1:2:79:C:N4	2.85	0.43
1:2:539:G:H4'	1:2:540:G:OP1	2.18	0.43
1:2:1145:U:C5	1:2:1633:A:N1	2.85	0.43
1:2:1491:U:H4'	1:2:1492:A:O4'	2.18	0.43
1:2:1733:C:H2'	1:2:1734:U:H6	1.83	0.43
4:5:143:G:H2'	4:5:144:A:H8	1.83	0.43
4:5:363:G:OP2	73:Bi:56:ARG:NH2	2.41	0.43
4:5:1065:A:H4'	4:5:1066:A:O5'	2.17	0.43
4:5:1296:G:H2'	4:5:1297:C:C6	2.53	0.43
4:5:1745:G:H2'	4:5:1746:C:H6	1.83	0.43
4:5:2548:A:H2'	4:5:2549:C:O4'	2.17	0.43
4:5:2826:C:C4	4:5:2827:U:C5	3.05	0.43
4:5:2837:C:H5	4:5:2853:C:N4	2.15	0.43
4:5:3105:U:O2'	4:5:3106:U:H5'	2.18	0.43
4:5:3203:G:C6	4:5:3204:U:C4	3.05	0.43
4:5:3385:U:H2'	4:5:3386:U:C6	2.53	0.43
11:AF:200:ASN:HD21	11:AF:205:SER:HB3	1.83	0.43
21:AP:111:MET:HA	24:AS:119:ILE:CD1	2.45	0.43
24:AS:25:ASN:C	24:AS:57:ARG:HE	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AT:66:TYR:CG	25:AT:132:LEU:HD13	2.53	0.43
28:AW:51:GLU:OE2	33:Ab:8:LEU:HD22	2.18	0.43
29:AX:107:PHE:CE1	29:AX:123:LYS:HB3	2.53	0.43
38:Ag:182:ASN:HD22	38:Ag:185:GLN:H	1.66	0.43
43:BE:149:ILE:HG23	43:BE:155:LEU:HD23	2.00	0.43
48:BJ:150:ASN:HA	48:BJ:153:LYS:NZ	2.33	0.43
49:BK:103:ASN:HB3	72:Bh:20:MET:HE1	2.00	0.43
55:BQ:122:VAL:O	55:BQ:126:GLU:HG3	2.17	0.43
59:BU:17:LEU:HD21	59:BU:98:ASN:CG	2.43	0.43
66:Bb:10:ILE:HA	66:Bb:13:LYS:HE2	2.00	0.43
70:Bf:79:SER:HB3	70:Bf:80:ARG:NH1	2.33	0.43
75:Bk:15:LYS:O	75:Bk:19:GLN:HG3	2.18	0.43
80:CA:1385:THR:HG21	80:CA:1478:LYS:HG2	2.00	0.43
80:CA:1874:LEU:HB3	80:CA:1935:LEU:HB2	1.99	0.43
81:CB:2:LEU:HD23	81:CB:2:LEU:H	1.82	0.43
1:2:628:G:H21	1:2:971:A:H62	1.66	0.43
1:2:933:A:OP1	32:Aa:70:LYS:NZ	2.38	0.43
1:2:1075:C:C4	1:2:1076:A:C8	3.06	0.43
1:2:1220:C:H2'	1:2:1221:A:H8	1.82	0.43
1:2:1280:C:C5'	35:Ad:44:ARG:HH12	2.31	0.43
1:2:1459:C:OP1	24:AS:126:ARG:NH2	2.49	0.43
1:2:1479:A:P	25:AT:57:ARG:HE	2.39	0.43
1:2:1663:G:C6	1:2:1664:C:C4	3.06	0.43
4:5:648:A:C2	4:5:2373:A:H2'	2.53	0.43
4:5:1068:U:H2'	4:5:1069:C:H6	1.83	0.43
4:5:1099:A:OP2	57:BS:129:LYS:HA	2.18	0.43
4:5:1499:A:H2'	4:5:1500:C:C6	2.53	0.43
4:5:2577:G:H2'	4:5:2578:C:H6	1.83	0.43
6:AA:119:ARG:NH1	8:AC:240:LEU:HB3	2.33	0.43
8:AC:215:PHE:O	8:AC:218:ILE:HG22	2.18	0.43
11:AF:161:ASP:OD2	11:AF:161:ASP:N	2.51	0.43
13:AH:162:ILE:HA	13:AH:165:LYS:HE2	1.99	0.43
13:AH:170:GLN:HG2	13:AH:181:ILE:O	2.18	0.43
16:AK:77:ARG:NE	16:AK:84:GLU:HA	2.33	0.43
19:AN:71:ILE:HD12	19:AN:71:ILE:H	1.82	0.43
26:AU:105:GLN:CB	80:CA:1105:ARG:HH21	2.30	0.43
40:BB:347:SER:C	40:BB:349:LYS:N	2.76	0.43
42:BD:41:LYS:HB2	57:BS:68:THR:O	2.18	0.43
42:BD:53:VAL:HG22	42:BD:62:CYS:SG	2.58	0.43
45:BG:226:TYR:CZ	45:BG:230:LYS:NZ	2.86	0.43
47:BI:84:ALA:O	47:BI:140:THR:OG1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BJ:50:ALA:HB2	48:BJ:65:ILE:HG13	2.00	0.43
52:BN:188[A]:SER:H	52:BN:191[A]:ALA:HB3	1.83	0.43
54:BP:166:LEU:HD23	54:BP:166:LEU:HA	1.86	0.43
55:BQ:170:ARG:HA	55:BQ:173:ARG:HB3	1.99	0.43
56:BR:9:VAL:HG22	56:BR:61:ILE:HG13	2.00	0.43
66:Bb:17:VAL:HG11	66:Bb:92:ILE:HD12	2.00	0.43
70:Bf:93:PHE:CD2	70:Bf:94:LEU:HD22	2.53	0.43
78:Bn:24:LYS:N	78:Bn:73:GLU:O	2.34	0.43
80:CA:1880:HIS:HB2	80:CA:1929:VAL:HB	1.99	0.43
1:2:11:A:C6	1:2:12:U:C5	3.06	0.43
1:2:324:U:O2'	17:AL:80:MET:HE1	2.17	0.43
1:2:835:U:H2'	1:2:836:U:H5	1.83	0.43
1:2:891:A:H2'	1:2:892:A:C8	2.52	0.43
1:2:964:U:H4'	19:AN:128:TYR:HE1	1.84	0.43
1:2:1208:A:H5''	1:2:1209:C:OP2	2.18	0.43
1:2:1246:C:C4	1:2:1247:U:C4	3.06	0.43
1:2:1347:U:O2	26:AU:23:ARG:NH2	2.52	0.43
1:2:1381:U:H1'	1:2:1516:A:H61	1.83	0.43
1:2:1556:A:H2'	1:2:1560:U:OP2	2.18	0.43
1:2:1577:A:O2'	5:6:31:G:O2'	2.35	0.43
1:2:1680:G:H1'	1:2:1721:A:H61	1.84	0.43
4:5:4:U:H2'	4:5:5:G:H8	1.82	0.43
4:5:269:G:P	51:BM:44:ARG:HH22	2.39	0.43
4:5:1406:U:OP1	68:Bd:58:GLY:HA2	2.19	0.43
4:5:1461:A:H2'	4:5:1462:A:C8	2.53	0.43
4:5:1581:A:OP2	4:5:2523:G:N2	2.52	0.43
4:5:3233:G:H2'	4:5:3234:C:H6	1.82	0.43
4:5:3256:U:H2'	4:5:3257:G:H8	1.82	0.43
6:AA:101:ARG:NH2	6:AA:104:PRO:HD3	2.33	0.43
9:AD:142:LEU:HD13	9:AD:150:MET:HE3	2.00	0.43
11:AF:80:LYS:HB3	11:AF:83:ARG:HB2	2.01	0.43
15:AJ:132:ARG:C	15:AJ:140:ILE:HD11	2.44	0.43
26:AU:35:GLU:HA	26:AU:35:GLU:OE2	2.18	0.43
26:AU:44:ASN:HA	26:AU:47:GLN:NE2	2.33	0.43
29:AX:97:ASP:OD1	29:AX:97:ASP:N	2.50	0.43
33:Ab:33:LEU:O	33:Ab:45:THR:HA	2.18	0.43
33:Ab:62:ILE:HG22	33:Ab:74:SER:OG	2.18	0.43
38:Ag:22:SER:O	38:Ag:35:SER:HB2	2.18	0.43
39:BA:180:LEU:HD11	79:Bo:26:VAL:HG21	1.99	0.43
41:BC:23:PRO:HB2	41:BC:25:VAL:HG12	1.99	0.43
42:BD:184:ASP:CG	42:BD:187:THR:H	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BF:98:LYS:HB3	44:BF:99:PRO:HD3	2.00	0.43
44:BF:100:ARG:HD2	44:BF:104:GLN:HE21	1.82	0.43
45:BG:71:VAL:HG23	45:BG:235:GLY:HA3	2.00	0.43
80:CA:671:ARG:HB2	80:CA:674:PHE:CE2	2.54	0.43
80:CA:742:ARG:HA	80:CA:742:ARG:HD2	1.74	0.43
80:CA:1169:THR:O	80:CA:1173:GLU:HG2	2.18	0.43
80:CA:1627:THR:O	80:CA:1631:SER:N	2.51	0.43
1:2:479:C:H4'	15:AJ:120:LYS:HE3	2.01	0.43
1:2:645:C:N4	1:2:690:G:O6	2.52	0.43
1:2:1250:U:H2'	37:Af:135:HIS:HD2	1.83	0.43
2:3:10:A:H2'	2:3:11:C:C6	2.54	0.43
4:5:372:A:H8	4:5:372:A:OP1	2.01	0.43
4:5:1351:A:H2'	4:5:1352:U:C6	2.53	0.43
4:5:1390:G:C6	4:5:1420:A:N6	2.87	0.43
4:5:1522:G:C2	4:5:1523:U:H5	2.36	0.43
4:5:1577:G:H2'	4:5:1578:G:C8	2.53	0.43
4:5:2259:U:C4	4:5:2260:A:N7	2.86	0.43
4:5:3280:A:O2'	4:5:3281:U:H5'	2.19	0.43
5:6:61:C:H2'	5:6:62:C:H6	1.83	0.43
5:6:62:C:H2'	5:6:63:U:C6	2.53	0.43
7:AB:187:LYS:HB3	7:AB:193:ILE:HD11	2.00	0.43
9:AD:59:LEU:HD23	9:AD:60:GLY:O	2.18	0.43
10:AE:168:LYS:HA	10:AE:168:LYS:HD3	1.90	0.43
16:AK:32:HIS:CD2	16:AK:33:GLU:H	2.35	0.43
38:Ag:115:ILE:HD11	38:Ag:119:ALA:HA	2.00	0.43
38:Ag:121:MET:HE1	38:Ag:141:LEU:HD21	1.99	0.43
38:Ag:174:ASN:HB3	38:Ag:198:ASN:OD1	2.18	0.43
41:BC:145:ILE:HD12	41:BC:150:LEU:HD22	1.99	0.43
46:BH:23:ARG:NH2	46:BH:42:ASP:HA	2.26	0.43
47:BI:36:LEU:HD21	47:BI:69:ARG:NH1	2.34	0.43
50:BL:45:LEU:HD12	50:BL:56:GLN:O	2.18	0.43
53:BO:169:THR:HG22	53:BO:170:SER:N	2.34	0.43
59:BU:54:LEU:HD22	59:BU:85:TRP:CH2	2.53	0.43
59:BU:109:MET:HE1	59:BU:114:ILE:HG12	1.99	0.43
63:BY:90:GLU:HA	63:BY:93:LYS:HZ2	1.83	0.43
80:CA:458:ILE:O	80:CA:458:ILE:HG22	2.18	0.43
80:CA:931:LYS:HB3	80:CA:1090:ILE:CG1	2.44	0.43
80:CA:1349:CYS:HB2	80:CA:1350:PRO:HD3	2.00	0.43
1:2:514:G:N3	1:2:515:A:C8	2.87	0.43
1:2:692:C:H2'	1:2:693:U:C6	2.54	0.43
1:2:704:C:N4	1:2:732:G:HO2'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:884:A:OP1	7:AB:136:ARG:NH2	2.51	0.43
1:2:1362:U:O2'	1:2:1363:U:O2	2.26	0.43
1:2:1586:A:H5''	22:AQ:136:SER:HB2	2.00	0.43
3:4:115:G:H2'	3:4:116:C:C6	2.53	0.43
4:5:422:A:C2	4:5:2364:A:H4'	2.53	0.43
4:5:719:G:OP1	64:BZ:117:ARG:NH2	2.52	0.43
4:5:749:U:H2'	4:5:750:C:C6	2.53	0.43
4:5:915:A:C2	39:BA:204:MET:HE2	2.53	0.43
4:5:1258:C:C4	4:5:1262:G:N2	2.86	0.43
4:5:1362:U:O2	44:BF:159:GLN:NE2	2.40	0.43
4:5:1652:U:C5'	39:BA:71:LEU:HD12	2.48	0.43
4:5:1801:A:H2'	4:5:1802:U:O4'	2.19	0.43
4:5:2368:A:H2'	4:5:2369:A:C8	2.54	0.43
4:5:2570:A:H1'	4:5:2571:U:C5	2.54	0.43
4:5:2698:A:H2'	4:5:2699:G:H8	1.83	0.43
4:5:2729:G:O6	57:BS:78:LYS:NZ	2.39	0.43
4:5:3016:G:H2'	4:5:3017:A:H8	1.84	0.43
4:5:3205:C:H2'	4:5:3206:G:C8	2.54	0.43
4:5:3268:A:H2'	43:BE:69:PHE:CE1	2.53	0.43
4:5:3272:G:C4	43:BE:108:LYS:HG3	2.53	0.43
6:AA:84:ARG:HH21	6:AA:88:LYS:NZ	2.17	0.43
11:AF:123:VAL:O	31:AZ:58:ARG:NE	2.46	0.43
12:AG:37:ASP:HA	12:AG:49:VAL:HG23	2.01	0.43
16:AK:22:VAL:O	16:AK:32:HIS:NE2	2.47	0.43
19:AN:70:LYS:O	19:AN:74:ILE:HG12	2.19	0.43
20:AO:65:GLN:O	20:AO:69:ALA:N	2.39	0.43
38:Ag:128:ASP:CG	38:Ag:132:LYS:HZ3	2.27	0.43
38:Ag:131:ILE:HD11	38:Ag:151:VAL:HG21	2.00	0.43
39:BA:97:ASN:HB2	39:BA:100:ASN:ND2	2.33	0.43
39:BA:104:LEU:HD23	39:BA:136:ILE:HD12	2.00	0.43
41:BC:288:ARG:CZ	41:BC:288:ARG:HB3	2.48	0.43
45:BG:170:CYS:O	45:BG:174:GLY:N	2.50	0.43
48:BJ:109:HIS:CD2	48:BJ:114:ILE:HG21	2.53	0.43
51:BM:190:THR:HG22	51:BM:194:GLN:NE2	2.33	0.43
53:BO:112:LEU:HA	53:BO:152:GLU:HA	2.01	0.43
53:BO:122:ALA:HB3	53:BO:143:PRO:HB2	1.99	0.43
55:BQ:21:LYS:NZ	55:BQ:55:VAL:HA	2.34	0.43
73:Bi:31:LYS:O	73:Bi:33:THR:HG23	2.18	0.43
80:CA:358:LEU:HD11	80:CA:630:TRP:CE3	2.53	0.43
80:CA:750:TYR:O	80:CA:752:ILE:HG12	2.18	0.43
80:CA:1500:GLN:NE2	80:CA:1501:MET:SD	2.91	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:296:U:H2'	1:2:297:U:H6	1.84	0.43
1:2:558:U:P	36:Ae:55:ARG:HH22	2.41	0.43
1:2:1274:C:C2	1:2:1427:A:C5	3.06	0.43
1:2:1392:U:H2'	1:2:1393:C:H6	1.82	0.43
1:2:1586:A:C4	1:2:1611:A:C6	3.06	0.43
4:5:290:G:H2'	4:5:291:C:C6	2.53	0.43
4:5:570:A:H2'	4:5:571:A:C8	2.54	0.43
4:5:599:A:H2'	4:5:600:C:H6	1.83	0.43
4:5:1020:G:O6	4:5:1034:U:O4	2.36	0.43
4:5:1085:A:H2'	4:5:1086:A:C8	2.54	0.43
4:5:1149:G:C2'	4:5:1150:G:H5'	2.48	0.43
4:5:1482:A:H1'	4:5:1859:A:N3	2.34	0.43
4:5:2682:U:P	48:BJ:51:ARG:HH11	2.41	0.43
4:5:3111:C:H2'	4:5:3112:U:C6	2.53	0.43
4:5:3183:G:H2'	4:5:3184:A:C8	2.53	0.43
4:5:3193:U:H2'	4:5:3194:C:H6	1.83	0.43
4:5:3212:C:P	50:BL:109:ARG:HH22	2.41	0.43
4:5:3234:C:H2'	4:5:3235:A:C8	2.54	0.43
4:5:3333:U:H2'	4:5:3334:G:O4'	2.18	0.43
9:AD:69:LEU:HD23	9:AD:69:LEU:HA	1.69	0.43
15:AJ:177:ALA:HA	15:AJ:180:LYS:HD3	2.01	0.43
32:Aa:85:ARG:HG3	32:Aa:86:VAL:N	2.34	0.43
39:BA:31:THR:O	39:BA:33:ASP:N	2.51	0.43
43:BE:131:LYS:HA	43:BE:131:LYS:HD2	1.80	0.43
50:BL:17:VAL:HG11	50:BL:74:ARG:HA	2.00	0.43
56:BR:21:GLU:O	56:BR:21:GLU:HG2	2.18	0.43
57:BS:101:CYS:SG	57:BS:102:ARG:N	2.91	0.43
63:BY:49:TYR:CD1	63:BY:133:LYS:HA	2.54	0.43
64:BZ:36:GLY:HA2	64:BZ:39:HIS:HB2	2.00	0.43
64:BZ:79:TRP:HB3	64:BZ:87:ARG:NH1	2.33	0.43
67:Bc:94:GLU:OE1	67:Bc:94:GLU:N	2.52	0.43
80:CA:354:PRO:HA	80:CA:436:ARG:HH22	1.83	0.43
80:CA:508:ALA:H	80:CA:688:ASP:HB2	1.84	0.43
80:CA:804:ASP:OD1	80:CA:804:ASP:N	2.52	0.43
80:CA:1187:LYS:HD2	80:CA:1187:LYS:O	2.19	0.43
1:2:427:C:C2	1:2:428:A:C8	3.07	0.43
1:2:781:U:OP2	30:AY:9:THR:OG1	2.22	0.43
1:2:814:A:C8	1:2:816:G:C8	3.07	0.43
1:2:822:U:H2'	1:2:823:G:O4'	2.19	0.43
1:2:1022:C:N4	1:2:1023:A:N6	2.67	0.43
1:2:1428:G:C2	1:2:1429:G:N7	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1445:G:N2	37:Af:87:THR:HG23	2.34	0.43
1:2:1446:A:C5	1:2:1448:G:C5	3.07	0.43
1:2:1516:A:OP2	26:AU:61:LYS:NZ	2.51	0.43
1:2:1689:A:H1'	1:2:1713:G:H22	1.82	0.43
1:2:1783:C:H2'	1:2:1784:C:C6	2.54	0.43
2:3:132:G:C4	2:3:133:G:C8	3.06	0.43
4:5:26:A:C4	4:5:330:G:C8	3.07	0.43
4:5:32:U:H6	4:5:32:U:O5'	2.02	0.43
4:5:45:A:OP2	51:BM:85:THR:HG21	2.18	0.43
4:5:824:C:H2'	4:5:825:C:H6	1.84	0.43
4:5:1158:G:H5''	44:BF:220:PHE:HE2	1.84	0.43
4:5:1818:G:H2'	4:5:1819:U:C6	2.54	0.43
4:5:2779:G:C2	4:5:2780:A:C8	3.07	0.43
10:AE:256:ARG:O	10:AE:259:GLN:NE2	2.51	0.43
16:AK:68:LEU:HD23	16:AK:68:LEU:H	1.84	0.43
20:AO:80:HIS:HA	20:AO:113:GLY:O	2.19	0.43
21:AP:121:ILE:HD12	21:AP:123:TYR:O	2.19	0.43
24:AS:101:LEU:O	24:AS:105:VAL:HG23	2.18	0.43
26:AU:115:GLU:N	26:AU:115:GLU:OE1	2.51	0.43
27:AV:64:GLU:OE1	33:Ab:3:LEU:HD13	2.19	0.43
46:BH:34:LEU:HD23	46:BH:34:LEU:HA	1.75	0.43
46:BH:95:ALA:HA	76:Bl:78:ILE:CD1	2.49	0.43
48:BJ:109:HIS:HE2	48:BJ:114:ILE:HG21	1.81	0.43
49:BK:114:GLN:HA	49:BK:117:LYS:HZ3	1.83	0.43
62:BX:37:LYS:HD3	62:BX:37:LYS:HA	1.81	0.43
63:BY:106:GLN:HA	63:BY:109:GLU:OE2	2.18	0.43
68:Bd:97:ALA:HB3	68:Bd:100:ILE:HG12	2.00	0.43
70:Bf:84:CYS:O	70:Bf:88:ARG:HG2	2.19	0.43
80:CA:348:LYS:HE2	80:CA:420:LYS:HE2	2.00	0.43
80:CA:808:LEU:HB3	80:CA:810:GLU:OE1	2.19	0.43
80:CA:859:VAL:HG23	80:CA:879:GLN:OE1	2.19	0.43
80:CA:1255:LYS:C	80:CA:1258:GLN:HE22	2.24	0.43
80:CA:1312:MET:HA	80:CA:1573:PHE:HE1	1.84	0.43
80:CA:1947:GLN:HG2	80:CA:1962:VAL:HG22	2.00	0.43
1:2:82:U:H2'	1:2:83:G:O4'	2.18	0.43
1:2:322:G:P	1:2:322:G:H3'	2.59	0.43
1:2:495:C:H4'	1:2:496:G:N7	2.34	0.43
1:2:1066:C:H4'	7:AB:149:GLN:NE2	2.31	0.43
1:2:1072:C:H5'	33:Ab:19:HIS:CD2	2.54	0.43
1:2:1228:G:H5'	18:AM:45:LEU:CD2	2.47	0.43
1:2:1647:U:C2	1:2:1648:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1759:C:H2'	1:2:1760:G:O4'	2.19	0.43
3:4:47:C:H2'	3:4:48:U:C6	2.54	0.43
4:5:330:G:C2	4:5:331:G:C8	3.07	0.43
4:5:744:C:O2	54:BP:141:ARG:NE	2.39	0.43
4:5:1160:A:O2'	4:5:1161:C:H5'	2.18	0.43
4:5:1282:G:C6	4:5:1283:G:N7	2.87	0.43
4:5:1308:G:OP1	52:BN:59[A]:ARG:NH2	2.47	0.43
4:5:1900:G:O2'	4:5:2335:U:O4	2.27	0.43
4:5:2243:A:H5''	39:BA:244:GLY:HA3	2.01	0.43
4:5:2682:U:H1'	48:BJ:22:SER:HB2	2.00	0.43
4:5:3009:A:H2'	4:5:3010:G:H8	1.82	0.43
4:5:3208:U:O2	56:BR:166:LYS:NZ	2.51	0.43
7:AB:33:LYS:NZ	7:AB:41:ARG:HG3	2.33	0.43
8:AC:146:THR:O	8:AC:148:LEU:N	2.52	0.43
12:AG:56:ASN:HD22	12:AG:62:PRO:HA	1.84	0.43
12:AG:93:LYS:HB3	12:AG:93:LYS:HE3	1.80	0.43
12:AG:106:LEU:HA	12:AG:106:LEU:HD13	1.89	0.43
12:AG:218:GLU:O	12:AG:222:GLU:N	2.42	0.43
13:AH:14:THR:O	13:AH:18:LEU:HG	2.18	0.43
20:AO:17:ALA:HB3	20:AO:81:VAL:HA	2.00	0.43
20:AO:20:TYR:HE2	20:AO:84:ARG:HH11	1.58	0.43
22:AQ:123:ARG:HD3	22:AQ:123:ARG:HA	1.88	0.43
28:AW:34:ILE:O	28:AW:38:LEU:HG	2.19	0.43
30:AY:10:ARG:O	30:AY:24:VAL:HG12	2.18	0.43
30:AY:28:LEU:HD12	30:AY:67:GLY:O	2.19	0.43
34:Ac:15:VAL:HG12	34:Ac:28:VAL:HG22	2.00	0.43
37:Af:147:VAL:HG13	37:Af:147:VAL:O	2.19	0.43
40:BB:14:LEU:HD13	40:BB:262:TRP:CH2	2.54	0.43
40:BB:80:ASP:OD1	40:BB:319:ASN:HB2	2.19	0.43
40:BB:243:HIS:O	40:BB:244:ARG:HB2	2.19	0.43
45:BG:143:ILE:HD11	45:BG:151:VAL:HG11	2.00	0.43
45:BG:228:GLU:HA	45:BG:231:LYS:NZ	2.34	0.43
47:BI:140:THR:OG1	47:BI:141:LYS:N	2.52	0.43
52:BN:27[A]:LEU:O	52:BN:101[A]:ARG:NH1	2.51	0.43
55:BQ:43:LYS:HE2	55:BQ:43:LYS:HB2	1.87	0.43
55:BQ:164:LEU:HD12	55:BQ:165:LYS:N	2.34	0.43
58:BT:17:VAL:HG21	58:BT:76:LEU:HD21	2.01	0.43
68:Bd:82:LEU:HD22	68:Bd:108:ILE:HG23	1.99	0.43
69:Be:49:ILE:HD11	69:Be:71:VAL:HG22	2.01	0.43
70:Bf:29:ILE:HD11	70:Bf:31:ARG:NH2	2.33	0.43
80:CA:1207:LYS:HA	80:CA:1211:PRO:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1922:PRO:HA	80:CA:1931:ILE:HG12	2.00	0.43
1:2:228:G:C4	1:2:835:U:H1'	2.54	0.43
1:2:629:U:C6	4:5:847:A:C5	3.07	0.43
1:2:817:A:H2'	1:2:818:C:C6	2.54	0.43
1:2:1482:C:OP1	1:2:1521:G:N1	2.42	0.43
1:2:1556:A:OP1	21:AP:115:TYR:OH	2.37	0.43
1:2:1588:G:O6	1:2:1608:U:O4	2.36	0.43
2:3:131:A:H2'	2:3:132:G:H8	1.83	0.43
2:3:150:G:C2	2:3:152:G:C5	3.06	0.43
3:4:1:G:N3	3:4:2:G:C8	2.86	0.43
4:5:268:A:H5''	51:BM:47:LYS:NZ	2.34	0.43
4:5:401:U:O2'	4:5:402:A:OP1	2.28	0.43
4:5:613:U:H2'	4:5:614:G:C8	2.49	0.43
4:5:755:G:C4	4:5:756:A:C8	3.07	0.43
4:5:761:G:N2	4:5:771:G:C4	2.86	0.43
4:5:762:A:C2	4:5:772:A:H1'	2.54	0.43
4:5:1129:U:H5'	47:BI:4:ARG:NH1	2.33	0.43
4:5:1628:U:O2	4:5:1818:G:N2	2.52	0.43
4:5:2406:C:O2	4:5:2820:A:N1	2.52	0.43
4:5:3202:C:H2'	4:5:3203:G:H8	1.83	0.43
4:5:3276:U:H5'	69:Be:68:TRP:CZ2	2.53	0.43
7:AB:22:ASP:HB3	7:AB:25:THR:HG23	2.01	0.43
10:AE:15:PRO:HG2	10:AE:18:TRP:CE2	2.53	0.43
11:AF:118:LEU:HD12	11:AF:119:ASP:N	2.34	0.43
13:AH:96:ARG:NH1	13:AH:124:LYS:HB3	2.34	0.43
18:AM:36:LEU:HD23	18:AM:36:LEU:HA	1.77	0.43
20:AO:20:TYR:CE2	20:AO:84:ARG:HD2	2.54	0.43
25:AT:57:ARG:O	25:AT:61:VAL:HG22	2.19	0.43
30:AY:57:VAL:HB	30:AY:60:PHE:CE2	2.53	0.43
38:Ag:177:MET:HE3	38:Ag:178:VAL:O	2.19	0.43
39:BA:68:LYS:NZ	39:BA:69:TYR:HB3	2.34	0.43
41:BC:62:ALA:HB1	41:BC:75:PRO:HB2	1.99	0.43
42:BD:143:LYS:HA	42:BD:172:TYR:O	2.18	0.43
42:BD:262:LYS:HA	42:BD:265:TYR:HD2	1.84	0.43
43:BE:66:THR:HB	43:BE:76:LEU:HD23	2.01	0.43
46:BH:23:ARG:NH2	46:BH:42:ASP:OD2	2.52	0.43
52:BN:151[A]:ASP:OD2	52:BN:151[A]:ASP:C	2.61	0.43
54:BP:88:THR:HG22	54:BP:107:THR:HG21	2.01	0.43
63:BY:46:ILE:HB	63:BY:49:TYR:HE2	1.84	0.43
80:CA:462:GLY:HA3	80:CA:477:LEU:HD21	1.99	0.43
80:CA:502:LEU:HD22	80:CA:684:CYS:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:606:ASP:OD1	80:CA:607:ARG:N	2.52	0.43
80:CA:686:SER:HB2	80:CA:689:ARG:NH1	2.33	0.43
80:CA:1084:VAL:O	80:CA:1093:GLU:HA	2.19	0.43
80:CA:1334:PRO:HD2	80:CA:1512:THR:O	2.19	0.43
80:CA:1561:ASN:OD1	80:CA:1562:LYS:N	2.52	0.43
82:CC:366:SER:HB2	82:CC:368:ARG:CZ	2.49	0.43
1:2:400:A:H5''	14:AI:25:ARG:HD3	2.01	0.43
1:2:438:A:H2	1:2:465:G:O6	2.02	0.43
3:4:62:U:H5'	42:BD:277:LEU:HD23	2.01	0.43
4:5:747:A:H2'	4:5:748:A:C8	2.54	0.43
4:5:1187:G:N3	56:BR:112:ALA:HB1	2.33	0.43
4:5:1268:U:H3'	4:5:1269:G:C8	2.52	0.43
4:5:1351:A:C2'	4:5:1352:U:H5'	2.49	0.43
4:5:1499:A:H2'	4:5:1500:C:H6	1.84	0.43
4:5:1687:U:H5''	58:BT:42:LYS:NZ	2.34	0.43
4:5:3218:C:H1'	53:BO:182:ILE:HD11	2.00	0.43
5:6:35:C:P	22:AQ:143:ARG:NH1	2.92	0.43
9:AD:29:LEU:HD21	9:AD:65:ARG:HH21	1.84	0.43
9:AD:167:PHE:HB3	9:AD:189:MET:HE3	2.01	0.43
10:AE:166:SER:C	10:AE:168:LYS:H	2.27	0.43
12:AG:48:TYR:CE2	12:AG:116:LYS:HA	2.54	0.43
14:AI:87:ASN:HB3	14:AI:90:LEU:CD1	2.45	0.43
16:AK:70:GLU:O	16:AK:73:VAL:HG22	2.19	0.43
20:AO:58:TYR:CZ	20:AO:62:LEU:HD21	2.54	0.43
23:AR:116:LYS:C	23:AR:117:LEU:HD22	2.44	0.43
39:BA:43:GLY:HA3	39:BA:63:PHE:CD1	2.54	0.43
40:BB:112:ASP:HA	40:BB:115:LYS:HG2	2.00	0.43
40:BB:126:LYS:HB2	40:BB:128:LYS:HG2	1.99	0.43
40:BB:345:ASN:OD1	40:BB:347:SER:HB3	2.18	0.43
44:BF:40:LYS:O	44:BF:44:ILE:HD12	2.19	0.43
47:BI:52:LEU:HD11	47:BI:163:GLN:HB3	2.01	0.43
49:BK:186:ARG:HB2	49:BK:186:ARG:HH11	1.83	0.43
51:BM:162:ARG:HB2	51:BM:164:LEU:HD23	1.99	0.43
66:Bb:57:GLU:OE1	66:Bb:69:TYR:OH	2.30	0.43
76:Bl:97:ARG:HD3	76:Bl:122:ARG:HD3	2.01	0.43
76:Bl:113:ARG:HG3	76:Bl:113:ARG:NH1	2.32	0.43
80:CA:704:GLU:HB3	80:CA:750:TYR:OH	2.19	0.43
80:CA:813:GLU:HA	80:CA:816:ASN:ND2	2.34	0.43
80:CA:1187:LYS:HZ1	80:CA:1257:VAL:HA	1.84	0.43
80:CA:1249:ARG:HD2	80:CA:1634:SER:HA	2.01	0.43
80:CA:1834:ASP:OD2	80:CA:1834:ASP:N	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:10:G:OP1	1:2:1633:A:O2'	2.28	0.42
1:2:142:G:C8	1:2:266:A:C6	3.06	0.42
1:2:160:C:H2'	1:2:161:U:O4'	2.19	0.42
1:2:182:A:H2'	1:2:183:U:C6	2.54	0.42
1:2:256:A:H2'	1:2:257:A:O4'	2.19	0.42
1:2:472:U:O2'	1:2:769:A:N3	2.43	0.42
1:2:795:U:C2	1:2:796:A:C8	3.07	0.42
1:2:895:G:H2'	1:2:896:U:C6	2.54	0.42
1:2:1202:A:H3'	1:2:1202:A:N3	2.34	0.42
1:2:1409:G:H22	1:2:1411:A:H3'	1.84	0.42
2:3:57:C:H4'	2:3:63:G:C8	2.54	0.42
2:3:91:C:H2'	2:3:92:A:H8	1.84	0.42
4:5:74:G:C6	4:5:75:G:N7	2.87	0.42
4:5:389:A:OP1	53:BO:4:TYR:OH	2.30	0.42
4:5:762:A:H2'	4:5:763:U:H6	1.78	0.42
4:5:912:C:OP2	39:BA:9:ARG:NH1	2.47	0.42
4:5:1292:A:H2'	4:5:1293:C:O4'	2.19	0.42
4:5:1719:G:H2'	4:5:1720:G:H8	1.83	0.42
4:5:2558:A:C5	39:BA:64:ARG:CZ	3.02	0.42
4:5:2668:A:C2	4:5:2691:G:C5	3.07	0.42
4:5:3183:G:H2'	4:5:3184:A:H8	1.84	0.42
4:5:3275:A:C8	53:BO:171:ARG:HD3	2.54	0.42
6:AA:198:MET:HG3	6:AA:200:ASP:OD1	2.18	0.42
7:AB:138:PHE:C	7:AB:213:ARG:HB2	2.44	0.42
9:AD:198:GLY:HA3	9:AD:199:PRO:HD3	1.92	0.42
10:AE:104:ASP:OD1	10:AE:107:GLY:N	2.52	0.42
14:AI:57:ALA:HB1	14:AI:60:ILE:HG21	2.00	0.42
15:AJ:151:ASP:OD1	15:AJ:152:SER:N	2.52	0.42
16:AK:77:ARG:HE	16:AK:84:GLU:HA	1.84	0.42
17:AL:55:ASP:O	17:AL:57:LYS:N	2.52	0.42
25:AT:14:PHE:CD2	25:AT:63:ARG:HD3	2.54	0.42
29:AX:109:ARG:HG3	29:AX:114:LYS:HA	2.00	0.42
38:Ag:121:MET:HE2	38:Ag:133:VAL:HB	2.00	0.42
39:BA:144:ASN:O	39:BA:145:LYS:HD2	2.18	0.42
41:BC:209:TYR:HD1	41:BC:211:GLU:N	2.17	0.42
43:BE:147:ALA:HA	43:BE:150:LYS:HG2	2.01	0.42
47:BI:18:PRO:O	47:BI:23:ASN:ND2	2.42	0.42
54:BP:161:LYS:HD3	54:BP:161:LYS:HA	1.79	0.42
63:BY:25:ILE:H	63:BY:25:ILE:HD12	1.84	0.42
80:CA:373:PHE:HB2	80:CA:375:ILE:CD1	2.48	0.42
80:CA:449:ARG:HG3	80:CA:733:TRP:HE3	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1122:PRO:HB2	80:CA:1138:LYS:HD2	2.01	0.42
80:CA:1279:LEU:HD12	80:CA:1282:ILE:HD12	2.00	0.42
80:CA:1691:TYR:O	80:CA:1717:GLN:NE2	2.31	0.42
82:CC:331:ARG:O	82:CC:335:LEU:N	2.40	0.42
1:2:168:A:H2'	1:2:169:A:C8	2.54	0.42
1:2:273:G:H2'	1:2:274:G:C8	2.54	0.42
1:2:279:G:C2	1:2:281:G:C4	3.07	0.42
1:2:448:C:H2'	1:2:449:C:H6	1.83	0.42
1:2:802:G:H2'	1:2:803:A:O4'	2.18	0.42
1:2:931:C:H5''	7:AB:116:LYS:HB3	2.00	0.42
1:2:1324:G:H4'	6:AA:113:ARG:HH21	1.83	0.42
2:3:17:A:H1'	4:5:407:A:C2	2.54	0.42
3:4:39:C:C6	48:BJ:46:VAL:HB	2.54	0.42
4:5:952:A:OP2	4:5:1368:G:N2	2.41	0.42
4:5:1039:C:H2'	4:5:1040:U:C6	2.54	0.42
4:5:1767:G:H2'	4:5:1768:C:C6	2.54	0.42
4:5:3192:G:C6	4:5:3193:U:C4	3.07	0.42
4:5:3198:G:C6	4:5:3200:G:C5	3.07	0.42
7:AB:82:ARG:HE	7:AB:103:MET:CE	2.32	0.42
7:AB:157:GLN:O	7:AB:159:SER:N	2.53	0.42
7:AB:162:ARG:CZ	7:AB:162:ARG:HB2	2.48	0.42
8:AC:49:LYS:HE2	8:AC:243:TYR:CE1	2.54	0.42
11:AF:76:ARG:NH2	11:AF:79:ASN:OD1	2.52	0.42
18:AM:36:LEU:HD12	18:AM:102:GLY:HA3	2.01	0.42
22:AQ:16:ALA:CB	22:AQ:76:SER:HB3	2.48	0.42
24:AS:72:ILE:HG12	24:AS:79:TYR:CD2	2.54	0.42
25:AT:49:ASP:C	25:AT:51:GLU:H	2.27	0.42
31:AZ:65:LEU:HD23	31:AZ:71:ILE:HD11	2.01	0.42
34:Ac:19:THR:OG1	34:Ac:64:ARG:NH1	2.40	0.42
39:BA:40:TYR:HA	39:BA:91:GLY:HA3	2.02	0.42
41:BC:347:THR:HG22	41:BC:349:THR:HG23	2.01	0.42
42:BD:123:GLU:HG3	42:BD:248:ARG:NH1	2.34	0.42
42:BD:155:THR:N	42:BD:179:ARG:HH11	2.17	0.42
43:BE:3:ALA:CB	68:Bd:75:LEU:HB3	2.48	0.42
45:BG:160:ILE:HD12	45:BG:160:ILE:HA	1.88	0.42
48:BJ:17:LEU:HD23	48:BJ:79:ILE:HG23	2.00	0.42
58:BT:58:GLU:OE2	58:BT:60:GLY:N	2.49	0.42
62:BX:38:GLU:HG2	62:BX:39:LEU:N	2.34	0.42
69:Be:6:ARG:HG2	69:Be:8:TYR:CE1	2.54	0.42
71:Bg:105:ARG:NH1	71:Bg:108:GLN:OE1	2.52	0.42
78:Bn:63:LYS:HD3	78:Bn:87:ARG:CZ	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:234:PHE:CD2	80:CA:235:THR:HG22	2.54	0.42
80:CA:365:LYS:HA	80:CA:368:LYS:HE2	2.01	0.42
80:CA:610:THR:O	80:CA:614:PHE:HB2	2.19	0.42
80:CA:1921:GLN:HG2	80:CA:1922:PRO:HD2	1.99	0.42
80:CA:1939:GLU:HA	80:CA:1942:ARG:HG2	2.01	0.42
1:2:204:G:N1	1:2:264:G:C2	2.87	0.42
1:2:427:C:H2'	1:2:428:A:O4'	2.19	0.42
1:2:1176:G:C6	1:2:1464:G:C6	3.07	0.42
1:2:1349:G:H2'	1:2:1350:U:H6	1.83	0.42
1:2:1452:U:C2	1:2:1453:G:C8	3.07	0.42
1:2:1606:C:H2'	1:2:1607:G:C8	2.54	0.42
4:5:184:U:O3'	62:BX:121:ARG:NH2	2.53	0.42
4:5:189:G:C6	4:5:206:G:C5	3.07	0.42
4:5:210:U:O2	41:BC:217:LYS:HD3	2.19	0.42
4:5:362:U:OP1	73:Bi:45:ARG:NH2	2.52	0.42
4:5:675:G:OP1	41:BC:31:ARG:NH1	2.52	0.42
4:5:1122:U:C4	4:5:1123:U:C4	3.07	0.42
4:5:1192:U:C6	52:BN:48[A]:PHE:HD2	2.37	0.42
4:5:1225:C:N4	4:5:1226:A:H62	2.18	0.42
4:5:1262:G:N2	4:5:1262:G:OP2	2.52	0.42
4:5:1704:U:O4	4:5:1741:U:O2'	2.31	0.42
4:5:2159:A:OP2	39:BA:156:LYS:NZ	2.51	0.42
4:5:2893:A:N3	4:5:3130:A:O2'	2.46	0.42
4:5:2946:G:H5'	4:5:2948:G:N7	2.34	0.42
4:5:3007:A:C2	4:5:3142:A:C4	3.07	0.42
4:5:3323:A:H2'	4:5:3324:A:H8	1.84	0.42
8:AC:58:LEU:HD22	8:AC:59:HIS:NE2	2.35	0.42
12:AG:21:GLU:HA	12:AG:24:ILE:HD13	2.00	0.42
14:AI:78:ILE:HD13	14:AI:96:LEU:HD21	2.01	0.42
15:AJ:83:VAL:HA	15:AJ:149:ARG:HA	2.01	0.42
18:AM:63:VAL:HG11	18:AM:94:ALA:HB2	2.01	0.42
19:AN:64:ARG:NE	19:AN:64:ARG:O	2.52	0.42
20:AO:20:TYR:OH	20:AO:84:ARG:NH1	2.52	0.42
21:AP:33:PHE:HZ	21:AP:112:LEU:HD13	1.83	0.42
21:AP:79:HIS:O	21:AP:81:ARG:HG3	2.20	0.42
21:AP:96:ILE:HD13	21:AP:116:LEU:HB3	2.02	0.42
36:Ae:43:ARG:HG2	36:Ae:54:ARG:NH2	2.33	0.42
36:Ae:49:LEU:O	36:Ae:54:ARG:HA	2.19	0.42
39:BA:104:LEU:HD12	39:BA:162:ALA:O	2.19	0.42
40:BB:128:LYS:HD3	40:BB:128:LYS:HA	1.73	0.42
41:BC:209:TYR:C	41:BC:254:ALA:HB2	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BI:31:ILE:C	47:BI:32:ARG:HD2	2.44	0.42
62:BX:49:PRO:O	62:BX:115:ARG:NH2	2.52	0.42
62:BX:74:TYR:HE2	62:BX:77:LYS:HG3	1.84	0.42
62:BX:80:VAL:N	62:BX:99:LEU:O	2.43	0.42
64:BZ:34:MET:HE3	64:BZ:34:MET:HB3	1.92	0.42
70:Bf:81:CYS:SG	70:Bf:82:ALA:N	2.92	0.42
78:Bn:73:GLU:CD	78:Bn:80:ARG:HE	2.27	0.42
80:CA:574:LYS:HZ2	80:CA:613:MET:HE1	1.84	0.42
80:CA:652:GLY:HA2	80:CA:841:ILE:HG13	2.02	0.42
80:CA:907:CYS:SG	80:CA:908:ARG:N	2.92	0.42
1:2:210:A:H2'	1:2:211:U:H6	1.85	0.42
1:2:433:C:H2'	1:2:434:G:O4'	2.20	0.42
1:2:529:A:C5	1:2:530:C:C5	3.07	0.42
1:2:852:C:H2'	1:2:853:G:N9	2.34	0.42
1:2:1014:G:H2'	1:2:1015:U:O4'	2.20	0.42
1:2:1189:A:H8	1:2:1189:A:O5'	2.03	0.42
1:2:1226:A:H4'	1:2:1227:A:OP1	2.19	0.42
1:2:1233:G:H2'	1:2:1234:A:O4'	2.19	0.42
1:2:1699:G:C2	1:2:1700:C:H1'	2.54	0.42
2:3:6:U:H2'	2:3:7:U:H6	1.84	0.42
3:4:14:U:O4	3:4:67:G:N2	2.52	0.42
4:5:790:A:N3	41:BC:114:ASN:ND2	2.59	0.42
4:5:1390:G:N2	4:5:1391:A:N1	2.68	0.42
4:5:1667:G:H2'	4:5:1668:A:H8	1.85	0.42
4:5:1696:U:O2	70:Bf:26:PRO:HB3	2.20	0.42
4:5:1920:G:H2'	4:5:1921:U:O4'	2.19	0.42
4:5:2101:A:H5'	4:5:2102:C:OP2	2.20	0.42
4:5:2156:G:O2'	39:BA:227:ARG:NH2	2.53	0.42
4:5:2175:G:H4'	4:5:2176:U:O5'	2.20	0.42
4:5:3219:A:C4	4:5:3279:C:N3	2.87	0.42
8:AC:109:GLY:HA2	8:AC:139:ILE:CG2	2.44	0.42
9:AD:54:ARG:NH2	80:CA:964:MET:HG3	2.34	0.42
11:AF:119:ASP:C	11:AF:119:ASP:OD2	2.63	0.42
11:AF:220:VAL:O	11:AF:224:ASN:ND2	2.53	0.42
12:AG:103:GLY:O	12:AG:106:LEU:HD23	2.19	0.42
15:AJ:108:ARG:HH21	15:AJ:145:SER:HB3	1.83	0.42
17:AL:109:VAL:HG11	17:AL:125:VAL:HG11	2.01	0.42
20:AO:20:TYR:HB2	20:AO:27:PHE:HB2	1.99	0.42
28:AW:32:LYS:O	28:AW:36:LYS:HG2	2.19	0.42
41:BC:282:SER:N	54:BP:125:ASP:OD2	2.51	0.42
41:BC:311:HIS:NE2	41:BC:314:LYS:HA	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BR:104:GLU:O	56:BR:108:GLN:HG2	2.19	0.42
73:Bi:52:LYS:HG2	73:Bi:55:ARG:NH2	2.34	0.42
80:CA:294:LEU:O	80:CA:297:PRO:HD2	2.19	0.42
80:CA:535:VAL:HG12	80:CA:638:CYS:SG	2.59	0.42
80:CA:1638:ILE:HG22	80:CA:1640:HIS:H	1.85	0.42
80:CA:1772:LYS:NZ	80:CA:1953:ASP:OD2	2.52	0.42
1:2:154:G:H3'	30:AY:132:ARG:HH22	1.85	0.42
1:2:567:A:H61	1:2:576:G:H1'	1.84	0.42
1:2:758:U:C4	1:2:759:U:C5	3.08	0.42
1:2:1228:G:OP1	18:AM:119:SER:OG	2.32	0.42
1:2:1686:C:H2'	1:2:1687:U:C6	2.54	0.42
1:2:1712:A:H2'	1:2:1713:G:O4'	2.19	0.42
1:2:1786:G:OP2	20:AO:133:ARG:NH1	2.52	0.42
4:5:146:U:H5''	4:5:148:G:O4'	2.20	0.42
4:5:164:A:N1	4:5:258:G:C6	2.87	0.42
4:5:184:U:H2'	4:5:185:C:H6	1.82	0.42
4:5:225:C:H4'	62:BX:32:SER:O	2.20	0.42
4:5:265:A:H5''	4:5:266:A:OP2	2.19	0.42
4:5:517:A:C2	4:5:518:G:C5	3.07	0.42
4:5:652:G:C6	4:5:653:G:C6	3.08	0.42
4:5:1439:U:H2'	4:5:1440:U:C6	2.54	0.42
4:5:2101:A:H5'	4:5:2102:C:P	2.60	0.42
4:5:3177:G:C6	4:5:3214:A:H2	2.37	0.42
4:5:3257:G:C6	4:5:3258:C:C4	3.08	0.42
5:6:37:A:H3'	5:6:38:A:H8	1.84	0.42
6:AA:195:TRP:O	6:AA:197:ILE:N	2.51	0.42
9:AD:67:ASN:O	9:AD:71:LEU:HB2	2.19	0.42
10:AE:49:ARG:NE	10:AE:50:ASN:OD1	2.51	0.42
11:AF:110:ALA:O	11:AF:113:ILE:HB	2.20	0.42
13:AH:27:LEU:O	13:AH:34:LEU:HD11	2.19	0.42
14:AI:99:ALA:HA	14:AI:168:CYS:SG	2.60	0.42
19:AN:119:GLU:HA	19:AN:122:ILE:HD12	2.01	0.42
22:AQ:79:TYR:O	22:AQ:82:ARG:HG2	2.19	0.42
23:AR:74:GLN:HA	23:AR:77:GLU:HB3	2.01	0.42
25:AT:105:LEU:HD23	25:AT:105:LEU:HA	1.89	0.42
27:AV:74:GLN:OE1	27:AV:83:TRP:HB3	2.19	0.42
29:AX:107:PHE:CE2	29:AX:114:LYS:HE3	2.55	0.42
30:AY:104:SER:HB3	30:AY:107:GLN:HG2	2.01	0.42
36:Ae:28:LYS:HE3	36:Ae:31:LYS:NZ	2.34	0.42
42:BD:262:LYS:O	42:BD:265:TYR:HB2	2.20	0.42
48:BJ:21:ILE:HG12	48:BJ:124:GLY:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BM:139:HIS:O	51:BM:143:ARG:HG3	2.20	0.42
52:BN:89[A]:SER:O	52:BN:95[A]:GLY:HA3	2.19	0.42
52:BN:97[A]:ALA:O	52:BN:100[A]:GLU:HG2	2.20	0.42
56:BR:25:PHE:CD2	57:BS:151:LEU:HD11	2.54	0.42
58:BT:104:ARG:HH12	58:BT:106:ALA:HB2	1.85	0.42
63:BY:117:ALA:O	63:BY:121:ARG:HG2	2.19	0.42
68:Bd:15:LYS:HE2	68:Bd:15:LYS:HB3	1.69	0.42
74:Bj:32:ASN:OD1	74:Bj:36:LYS:HB3	2.19	0.42
79:Bo:53:GLY:HA2	79:Bo:67:GLY:O	2.20	0.42
80:CA:866:GLN:NE2	80:CA:869:THR:HG23	2.33	0.42
80:CA:921:LYS:HE2	80:CA:921:LYS:HB3	1.86	0.42
80:CA:1188:ILE:HG23	80:CA:1262:LEU:O	2.19	0.42
1:2:737:A:H2'	1:2:738:G:C8	2.54	0.42
1:2:1216:C:O2'	1:2:1217:A:H2'	2.20	0.42
1:2:1291:G:C8	1:2:1292:G:C8	3.07	0.42
1:2:1383:G:H2'	1:2:1384:A:O4'	2.19	0.42
1:2:1385:G:H2'	1:2:1386:G:C8	2.54	0.42
1:2:1615:C:OP1	11:AF:81:ARG:NH2	2.50	0.42
4:5:45:A:P	51:BM:85:THR:HG21	2.59	0.42
4:5:181:U:H2'	4:5:182:U:O4'	2.20	0.42
4:5:736:A:H2'	4:5:737:A:C8	2.55	0.42
4:5:756:A:C6	4:5:757:U:C4	3.08	0.42
4:5:1380:G:C6	4:5:1429:A:C2	3.08	0.42
4:5:1455:A:H8	4:5:1455:A:O5'	2.03	0.42
4:5:1622:A:H2'	4:5:1623:U:H6	1.85	0.42
4:5:2197:C:O2'	4:5:2271:A:N3	2.44	0.42
4:5:2571:U:H4'	4:5:2572:U:C6	2.54	0.42
4:5:3114:A:H2'	4:5:3115:A:O4'	2.19	0.42
4:5:3297:A:H2'	4:5:3298:U:H6	1.83	0.42
4:5:3355:U:H3	14:AI:77:ARG:HD3	1.83	0.42
6:AA:12:GLU:HG2	6:AA:13:ASP:N	2.35	0.42
6:AA:41:ARG:HD3	23:AR:105:GLN:HE22	1.84	0.42
8:AC:43:ARG:NH1	8:AC:248:SER:HA	2.23	0.42
9:AD:13:ALA:O	9:AD:16:VAL:HG22	2.20	0.42
12:AG:137:ARG:HD3	12:AG:177:ARG:HD2	2.00	0.42
29:AX:142:LYS:O	29:AX:144:ARG:NH2	2.53	0.42
37:Af:123:ASN:HB3	37:Af:126:CYS:SG	2.60	0.42
37:Af:134:ASN:HA	37:Af:138:ARG:O	2.19	0.42
41:BC:2:SER:OG	41:BC:3:ARG:N	2.53	0.42
41:BC:311:HIS:CE1	44:BF:162:PRO:HG3	2.54	0.42
42:BD:234:ASP:N	42:BD:234:ASP:OD1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BG:153:ILE:HG22	45:BG:154:ALA:O	2.19	0.42
45:BG:185:ARG:HA	45:BG:188:THR:HG22	2.01	0.42
45:BG:240:ASN:C	45:BG:240:ASN:HD22	2.27	0.42
47:BI:36:LEU:HD11	47:BI:69:ARG:HD2	2.02	0.42
51:BM:35:VAL:HG23	51:BM:65:ARG:HG2	2.01	0.42
51:BM:103:GLU:OE2	51:BM:165:THR:HG21	2.20	0.42
54:BP:70:ALA:HB1	54:BP:138:LEU:HD21	2.01	0.42
54:BP:87:VAL:HG12	54:BP:110:ALA:HB1	2.02	0.42
66:Bb:36:GLN:OE1	66:Bb:38:LYS:NZ	2.52	0.42
80:CA:227:MET:HG3	80:CA:228:ALA:N	2.34	0.42
80:CA:234:PHE:CG	80:CA:235:THR:N	2.88	0.42
80:CA:351:TYR:HB3	80:CA:398:VAL:HG22	2.02	0.42
80:CA:1177:TRP:O	80:CA:1181:LYS:NZ	2.53	0.42
80:CA:1373:LEU:HG	80:CA:1375:PHE:CE1	2.55	0.42
80:CA:1522:GLU:HG2	80:CA:1523:SER:N	2.34	0.42
80:CA:1554:ILE:HD12	80:CA:1554:ILE:HA	1.91	0.42
80:CA:1773:GLN:HB3	80:CA:1784:VAL:HG11	2.02	0.42
82:CC:363:LEU:O	82:CC:363:LEU:HD23	2.19	0.42
1:2:102:U:H3'	1:2:360:A:H61	1.85	0.42
1:2:420:A:OP1	12:AG:96:SER:OG	2.21	0.42
1:2:502:U:C2	1:2:503:G:C8	3.08	0.42
1:2:561:G:H2'	1:2:562:G:H8	1.84	0.42
1:2:633:U:O2'	1:2:1102:G:H4'	2.20	0.42
1:2:1252:C:H2'	1:2:1253:U:O4'	2.18	0.42
1:2:1450:U:H2'	1:2:1451:C:C6	2.54	0.42
1:2:1486:G:C2	1:2:1487:A:C4	3.08	0.42
1:2:1531:G:H21	25:AT:48:GLN:CD	2.24	0.42
1:2:1611:A:O2'	11:AF:95:ASN:HB3	2.19	0.42
1:2:1689:A:H2'	1:2:1690:G:N7	2.35	0.42
1:2:1739:C:C2	1:2:1740:A:C8	3.07	0.42
3:4:3:U:H2'	3:4:4:U:H6	1.84	0.42
4:5:168:U:H2'	4:5:169:U:C6	2.54	0.42
4:5:823:G:H1'	39:BA:15:ILE:HB	2.00	0.42
4:5:2149:U:H2'	4:5:2150:A:C8	2.55	0.42
4:5:2515:U:OP2	4:5:2587:G:N1	2.53	0.42
4:5:2631:C:H3'	57:BS:4:SER:OG	2.20	0.42
4:5:2746:G:C2	4:5:2749:A:OP2	2.71	0.42
4:5:2986:C:H2'	4:5:2987:U:C6	2.55	0.42
4:5:3165:C:O2'	4:5:3166:A:O5'	2.35	0.42
7:AB:28:GLU:OE1	7:AB:28:GLU:N	2.53	0.42
7:AB:54:LEU:HG	7:AB:55:LYS:HD2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AF:51:VAL:HG22	11:AF:65:ARG:NH2	2.34	0.42
11:AF:76:ARG:HE	11:AF:79:ASN:HD21	1.67	0.42
25:AT:78:LYS:HE3	25:AT:78:LYS:HB3	1.66	0.42
25:AT:85:SER:HA	25:AT:91:TYR:CE2	2.55	0.42
31:AZ:75:LEU:O	31:AZ:79:ALA:N	2.34	0.42
32:Aa:51:ARG:HH21	34:Ac:38:ARG:NH2	2.17	0.42
39:BA:104:LEU:HD12	39:BA:104:LEU:H	1.85	0.42
40:BB:262:TRP:CD1	40:BB:262:TRP:H	2.37	0.42
42:BD:271:LYS:HE2	42:BD:272:TYR:CE1	2.55	0.42
51:BM:73:ARG:HA	51:BM:74:PRO:HD3	1.89	0.42
51:BM:192:LYS:HE2	51:BM:192:LYS:HB2	1.78	0.42
56:BR:8:GLN:N	56:BR:62:ASN:O	2.43	0.42
59:BU:128:ARG:CZ	59:BU:128:ARG:HA	2.49	0.42
63:BY:54:THR:HG22	63:BY:57:HIS:ND1	2.35	0.42
64:BZ:7:LYS:HA	64:BZ:7:LYS:HD3	1.87	0.42
64:BZ:103:ASP:OD1	64:BZ:103:ASP:N	2.47	0.42
67:Bc:10:ARG:HD3	67:Bc:108:VAL:HG22	2.00	0.42
70:Bf:91:ARG:HG2	70:Bf:95:ILE:CD1	2.50	0.42
70:Bf:96:GLU:HA	70:Bf:96:GLU:OE2	2.20	0.42
78:Bn:73:GLU:HG2	78:Bn:80:ARG:HE	1.84	0.42
80:CA:522:TYR:OH	80:CA:556:ALA:HA	2.19	0.42
80:CA:999:ASN:ND2	80:CA:1021:ASP:OD2	2.41	0.42
80:CA:1217:VAL:HG13	80:CA:1236:ILE:O	2.20	0.42
80:CA:1277:PRO:HB3	80:CA:1542:LEU:HA	2.01	0.42
81:CB:120:LEU:HD12	81:CB:166:LYS:HD2	2.02	0.42
1:2:387:A:OP1	14:AI:23:LYS:NZ	2.53	0.42
1:2:588:U:C2	1:2:589:C:C6	3.08	0.42
1:2:827:C:H2'	1:2:828:U:C6	2.55	0.42
1:2:852:C:H2'	1:2:853:G:C8	2.55	0.42
1:2:901:G:H3'	1:2:902:G:C8	2.55	0.42
1:2:979:A:N3	1:2:1775:U:O2'	2.53	0.42
1:2:1458:G:N3	1:2:1458:G:H2'	2.34	0.42
4:5:167:U:H2'	4:5:168:U:H6	1.85	0.42
4:5:185:C:H2'	4:5:186:U:H6	1.85	0.42
4:5:253:A:H2'	4:5:254:A:H8	1.84	0.42
4:5:930:A:H2'	4:5:931:U:C6	2.55	0.42
4:5:1000:G:H21	4:5:1003:A:N6	2.18	0.42
4:5:1352:U:O2'	4:5:1353:A:H5'	2.20	0.42
4:5:1356:A:H4'	4:5:1357:U:C5'	2.50	0.42
4:5:1395:A:H2'	4:5:1396:G:O4'	2.18	0.42
4:5:1689:U:H2'	4:5:1690:U:C5	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:1719:G:H2'	4:5:1720:G:C8	2.55	0.42
4:5:2161:G:H2'	4:5:2162:G:H8	1.85	0.42
4:5:3018:A:H2'	4:5:3019:C:C6	2.54	0.42
5:6:17:G:OP2	5:6:60:U:O2'	2.37	0.42
8:AC:137:ILE:HD13	8:AC:215:PHE:CZ	2.55	0.42
13:AH:46:ILE:HG13	13:AH:59:ALA:O	2.20	0.42
13:AH:55:LYS:HZ2	13:AH:89:HIS:CD2	2.38	0.42
13:AH:138:LYS:O	13:AH:139:ARG:HD2	2.20	0.42
16:AK:44:LYS:HA	16:AK:47:GLN:HE22	1.85	0.42
17:AL:9:SER:OG	17:AL:10:GLU:OE2	2.22	0.42
18:AM:60:VAL:HG23	18:AM:87:PRO:HG2	2.02	0.42
21:AP:57:MET:N	21:AP:57:MET:SD	2.86	0.42
22:AQ:73:GLY:O	22:AQ:76:SER:N	2.51	0.42
24:AS:72:ILE:HG12	24:AS:79:TYR:CE2	2.55	0.42
24:AS:74:GLN:CD	24:AS:101:LEU:HD11	2.45	0.42
25:AT:66:TYR:HA	25:AT:124:ILE:HD11	2.01	0.42
38:Ag:70:ASP:O	38:Ag:82:SER:HB2	2.20	0.42
38:Ag:264:SER:O	38:Ag:267:PRO:HD2	2.20	0.42
39:BA:33:ASP:N	39:BA:33:ASP:OD1	2.52	0.42
40:BB:109:HIS:HB2	40:BB:200:GLU:OE1	2.19	0.42
45:BG:43:LYS:HD2	61:BW:28:THR:HB	2.00	0.42
46:BH:1:MET:HE2	56:BR:138:GLN:HE22	1.85	0.42
51:BM:100:ALA:O	51:BM:104:GLU:HG2	2.20	0.42
54:BP:42:ALA:HB3	54:BP:45:ASN:OD1	2.20	0.42
60:BV:3:VAL:HG11	60:BV:12:LYS:HB3	2.01	0.42
60:BV:4:GLU:HB3	60:BV:30:ARG:CD	2.50	0.42
60:BV:47:ARG:HD3	60:BV:58:HIS:CE1	2.55	0.42
61:BW:82:LEU:HD23	61:BW:82:LEU:HA	1.80	0.42
61:BW:131:ASP:HB3	61:BW:134:ASP:OD1	2.19	0.42
71:Bg:105:ARG:HD2	71:Bg:105:ARG:O	2.19	0.42
75:Bk:29:LEU:HD23	75:Bk:29:LEU:HA	1.85	0.42
78:Bn:10:THR:HG21	78:Bn:72:LEU:HD13	2.01	0.42
80:CA:838:PHE:CD1	80:CA:899:VAL:HG22	2.55	0.42
80:CA:993:SER:HB2	80:CA:994:ARG:HH11	1.84	0.42
80:CA:1150:THR:HA	82:CC:197:LYS:NZ	2.35	0.42
80:CA:1346:LEU:HB2	80:CA:1351:LEU:CD2	2.49	0.42
80:CA:1616:CYS:HB3	80:CA:1630:LEU:HG	2.01	0.42
1:2:828:U:C2	1:2:829:A:C8	3.08	0.42
1:2:850:A:H4'	55:BQ:165:LYS:NZ	2.35	0.42
1:2:1083:G:HO2'	1:2:1094:G:HO2'	1.60	0.42
1:2:1234:A:HO2'	37:Af:145:HIS:CD2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1358:G:H4'	25:AT:130:ARG:HB3	2.02	0.42
1:2:1438:G:C5	1:2:1439:C:C5	3.08	0.42
4:5:243:G:H2'	4:5:244:G:C8	2.55	0.42
4:5:601:G:C2	4:5:605:G:C6	3.08	0.42
4:5:1078:U:H2'	4:5:1079:U:C6	2.54	0.42
4:5:1099:A:C6	4:5:1100:A:N7	2.87	0.42
4:5:1222:A:H5''	4:5:1223:G:H5''	2.02	0.42
4:5:1622:A:H2'	4:5:1623:U:C6	2.55	0.42
4:5:2377:G:O2'	4:5:2378:G:H5'	2.20	0.42
4:5:2497:C:H2'	4:5:2498:U:C6	2.54	0.42
4:5:3211:A:C4	4:5:3212:C:C5	3.08	0.42
4:5:3295:A:H2'	4:5:3296:A:O4'	2.19	0.42
6:AA:11:PRO:HD3	23:AR:115:LEU:HD11	2.01	0.42
7:AB:144:ARG:HD2	7:AB:145:LYS:O	2.19	0.42
9:AD:211:PRO:CG	23:AR:20:TYR:HE1	2.32	0.42
13:AH:76:LYS:HA	13:AH:79:ARG:NH1	2.35	0.42
14:AI:119:GLN:OE1	14:AI:120:THR:HG22	2.20	0.42
17:AL:27:THR:H	17:AL:30:ARG:HH12	1.67	0.42
19:AN:38:VAL:O	19:AN:42:ARG:N	2.52	0.42
20:AO:69:ALA:HA	20:AO:72:LYS:NZ	2.35	0.42
24:AS:26:ILE:HA	24:AS:57:ARG:HH21	1.84	0.42
32:Aa:33:ASP:OD1	32:Aa:33:ASP:N	2.51	0.42
35:Ad:20:GLN:OE1	35:Ad:25:SER:HA	2.19	0.42
35:Ad:46:LYS:O	35:Ad:50:ILE:HG12	2.20	0.42
38:Ag:192:PHE:HD1	38:Ag:223:TRP:CZ3	2.38	0.42
41:BC:181:VAL:HG12	41:BC:202:ARG:HB2	2.01	0.42
42:BD:85:ARG:NH1	42:BD:86:TYR:OH	2.53	0.42
47:BI:188:GLY:O	47:BI:216:TYR:HB2	2.20	0.42
52:BN:81[A]:TYR:HE2	52:BN:99[A]:LEU:HD22	1.85	0.42
62:BX:11:ASP:HB3	62:BX:14:LYS:HB2	2.02	0.42
62:BX:27:ARG:NH1	62:BX:78:PHE:HE1	2.18	0.42
64:BZ:36:GLY:O	64:BZ:41:HIS:HB2	2.20	0.42
64:BZ:103:ASP:HB3	64:BZ:126:LYS:HE3	2.02	0.42
80:CA:1365:GLN:HG2	80:CA:1366:HIS:N	2.35	0.42
1:2:301:A:H2'	1:2:302:U:O4'	2.19	0.42
1:2:560:U:H2'	1:2:561:G:C8	2.55	0.42
1:2:1290:U:C2	1:2:1291:G:C2	3.08	0.42
1:2:1323:C:H2'	1:2:1324:G:C8	2.55	0.42
1:2:1680:G:H1'	1:2:1721:A:N6	2.35	0.42
1:2:1741:U:C2	1:2:1742:U:C5	3.08	0.42
4:5:158:G:H2'	4:5:159:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:325:A:H5''	4:5:326:U:OP2	2.20	0.42
4:5:423:A:H2'	4:5:424:G:O4'	2.20	0.42
4:5:2425:A:N1	39:BA:230:VAL:HG11	2.35	0.42
4:5:2513:C:O2'	4:5:2514:U:H5'	2.19	0.42
4:5:2613:U:H2'	4:5:2614:U:O4'	2.20	0.42
4:5:3122:U:H1'	4:5:3123:A:H5''	2.02	0.42
4:5:3130:A:H5'	4:5:3131:A:OP2	2.20	0.42
4:5:3290:G:C4	4:5:3291:G:C8	3.08	0.42
4:5:3327:G:C6	4:5:3328:G:C5	3.07	0.42
4:5:3363:A:H2'	4:5:3364:U:O4'	2.20	0.42
8:AC:106:ASP:C	8:AC:108:ASN:H	2.27	0.42
8:AC:116:LYS:HB2	8:AC:131:ILE:HD12	2.01	0.42
12:AG:7:TYR:HE2	12:AG:9:VAL:HB	1.84	0.42
13:AH:48:GLU:OE2	13:AH:88:ARG:NH1	2.53	0.42
16:AK:4:PRO:HB2	16:AK:6:GLU:HG3	2.01	0.42
21:AP:85:ILE:HD12	21:AP:85:ILE:N	2.35	0.42
26:AU:106:ILE:HG13	26:AU:107:THR:HG23	2.01	0.42
32:Aa:82:ARG:HE	32:Aa:85:ARG:NH2	2.18	0.42
40:BB:348:ARG:O	40:BB:348:ARG:HD3	2.20	0.42
43:BE:7:PRO:HG2	43:BE:10:TYR:HE2	1.79	0.42
45:BG:68:ARG:NH1	45:BG:237:ILE:O	2.52	0.42
72:Bh:98:ARG:HD2	72:Bh:99:ARG:N	2.35	0.42
74:Bj:28:ASN:O	74:Bj:40:GLN:N	2.49	0.42
80:CA:446:ARG:HG2	80:CA:733:TRP:HH2	1.85	0.42
80:CA:844:ARG:HB3	80:CA:846:GLU:OE1	2.20	0.42
80:CA:1353:LYS:HA	80:CA:1356:ASN:ND2	2.35	0.42
1:2:77:U:H1'	1:2:78:A:OP2	2.20	0.41
1:2:213:A:H2'	1:2:214:G:O4'	2.19	0.41
1:2:371:G:N2	1:2:612:U:O2	2.53	0.41
1:2:555:A:O2'	1:2:556:A:O5'	2.27	0.41
1:2:851:U:C2	1:2:852:C:C5	3.08	0.41
1:2:1440:C:C2	1:2:1441:C:C5	3.08	0.41
1:2:1597:A:C8	35:Ad:14:TYR:CD2	3.08	0.41
4:5:63:A:N3	4:5:78:U:O2'	2.44	0.41
4:5:160:G:H2'	4:5:161:G:O4'	2.20	0.41
4:5:185:C:C4	4:5:186:U:C4	3.08	0.41
4:5:330:G:C6	4:5:331:G:N7	2.88	0.41
4:5:1029:U:OP2	4:5:1030:G:H5'	2.20	0.41
4:5:1278:C:HO2'	4:5:1279:A:P	2.41	0.41
4:5:1396:G:O6	4:5:1416:U:O2	2.37	0.41
4:5:1563:C:H4'	4:5:1564:C:OP1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:2334:C:H2'	4:5:2335:U:O4'	2.20	0.41
4:5:2781:A:H4'	49:BK:180:ARG:NH2	2.35	0.41
4:5:2845:C:O2'	4:5:2846:A:H5'	2.20	0.41
4:5:3034:A:H2'	4:5:3035:C:C6	2.54	0.41
4:5:3303:U:O2'	4:5:3304:G:H5'	2.20	0.41
6:AA:69:ASN:HB3	6:AA:71:GLU:CD	2.45	0.41
11:AF:140:THR:CA	11:AF:214:LYS:HD2	2.51	0.41
13:AH:75:THR:O	13:AH:78:THR:HG22	2.20	0.41
18:AM:61:VAL:HG13	18:AM:91:VAL:HG11	2.02	0.41
21:AP:53:PRO:HB2	21:AP:57:MET:HE1	2.00	0.41
21:AP:97:TYR:OH	21:AP:99:GLY:O	2.37	0.41
28:AW:29:PRO:HB2	28:AW:58:SER:HB3	2.02	0.41
38:Ag:29:GLN:NE2	38:Ag:77:GLY:HA3	2.34	0.41
38:Ag:178:VAL:HG23	38:Ag:192:PHE:HB2	2.01	0.41
39:BA:211:HIS:ND1	39:BA:219:ILE:HG23	2.34	0.41
40:BB:82:PRO:HB3	40:BB:319:ASN:HD22	1.84	0.41
58:BT:90:ARG:C	58:BT:92:TRP:H	2.28	0.41
59:BU:120:LYS:NZ	59:BU:124:ASP:OD1	2.40	0.41
76:Bl:103:LEU:HD11	76:Bl:110:CYS:SG	2.60	0.41
80:CA:362:ILE:HG23	80:CA:366:PHE:CE2	2.54	0.41
80:CA:538:PHE:HD2	80:CA:639:VAL:HG13	1.84	0.41
80:CA:586:ASP:HB3	80:CA:590:ILE:HD13	2.02	0.41
80:CA:1220:LEU:HD11	80:CA:1231:VAL:HG13	2.02	0.41
1:2:907:A:C2	1:2:908:U:C4	3.08	0.41
1:2:1171:A:C2	1:2:1172:G:C5	3.08	0.41
1:2:1191:U:O2	5:6:34:U:H5'	2.19	0.41
1:2:1336:A:C2	1:2:1416:G:C5	3.08	0.41
1:2:1385:G:H2'	1:2:1386:G:H8	1.84	0.41
1:2:1394:G:H2'	1:2:1395:G:C8	2.52	0.41
1:2:1504:G:H2'	1:2:1505:A:O4'	2.20	0.41
1:2:1768:G:H4'	1:2:1769:U:H5''	2.02	0.41
3:4:11:A:N1	3:4:67:G:O2'	2.48	0.41
4:5:183:G:C5	4:5:234:G:C6	3.08	0.41
4:5:293:C:O2'	72:Bh:76:ARG:O	2.33	0.41
4:5:511:G:C5	4:5:583:G:C6	3.08	0.41
4:5:1022:G:N1	4:5:1033:C:N3	2.68	0.41
4:5:1306:U:O2	40:BB:257:PRO:HB3	2.20	0.41
4:5:1341:G:H2'	4:5:1342:U:C6	2.56	0.41
4:5:1496:U:C5	4:5:1836:A:N1	2.88	0.41
4:5:2674:A:H4'	48:BJ:104:PHE:HA	2.02	0.41
4:5:3224:A:C6	4:5:3264:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:6:66:C:H2'	5:6:67:G:C8	2.55	0.41
10:AE:185:GLY:O	10:AE:224:ASN:ND2	2.53	0.41
12:AG:27:PHE:HE1	12:AG:36:VAL:HG21	1.85	0.41
12:AG:37:ASP:N	12:AG:37:ASP:OD1	2.53	0.41
13:AH:23:ALA:HB2	13:AH:84:LYS:HE2	2.02	0.41
13:AH:124:LYS:HA	13:AH:124:LYS:HD2	1.73	0.41
17:AL:80:MET:HB2	17:AL:83:THR:O	2.21	0.41
18:AM:54:ARG:HB2	18:AM:56:GLU:OE2	2.20	0.41
18:AM:136:ILE:O	18:AM:140:PHE:N	2.43	0.41
21:AP:98:ASN:O	21:AP:122:THR:HG22	2.21	0.41
30:AY:36:SER:O	30:AY:38:ASP:N	2.53	0.41
31:AZ:68:ARG:CG	31:AZ:69:LEU:H	2.27	0.41
38:Ag:22:SER:OG	38:Ag:70:ASP:OD1	2.26	0.41
38:Ag:223:TRP:CZ2	38:Ag:230:ALA:HB2	2.55	0.41
41:BC:108:LYS:HB2	41:BC:108:LYS:HE3	1.92	0.41
45:BG:81:THR:HB	45:BG:181:LYS:HG3	2.01	0.41
46:BH:176:LEU:HD11	76:BI:83:LYS:CE	2.50	0.41
79:Bo:21:SER:O	79:Bo:25:GLN:HG3	2.20	0.41
80:CA:279:CYS:SG	80:CA:300:TYR:OH	2.62	0.41
80:CA:365:LYS:HD3	80:CA:369:LYS:HE3	2.02	0.41
80:CA:724:VAL:HG23	80:CA:729:GLU:CG	2.48	0.41
80:CA:917:ARG:HH21	82:CC:354:ASP:HB2	1.85	0.41
80:CA:1006:PRO:HB3	80:CA:1012:MET:SD	2.61	0.41
81:CB:17:ASP:C	81:CB:19:SER:H	2.28	0.41
1:2:29:U:H2'	1:2:30:G:C8	2.55	0.41
1:2:118:U:O5'	1:2:118:U:H6	2.04	0.41
1:2:691:C:H2'	1:2:692:C:C6	2.55	0.41
1:2:947:U:OP1	7:AB:165:ARG:NH1	2.54	0.41
1:2:1235:C:H2'	1:2:1236:A:O4'	2.20	0.41
1:2:1330:G:H2'	1:2:1331:A:O4'	2.20	0.41
4:5:232:G:H2'	4:5:233:C:C6	2.55	0.41
4:5:248:U:H3'	4:5:249:U:H5''	2.02	0.41
4:5:337:G:H21	41:BC:50:TYR:HB3	1.86	0.41
4:5:541:U:H2'	4:5:542:U:C6	2.55	0.41
4:5:665:U:H2'	4:5:666:A:H8	1.85	0.41
4:5:938:G:N2	4:5:962:C:OP1	2.53	0.41
4:5:1308:G:H4'	4:5:1309:A:H5'	2.02	0.41
4:5:1471:U:C2	4:5:1472:U:C5	3.08	0.41
4:5:1558:A:N7	4:5:1560:A:C6	2.88	0.41
4:5:1842:A:O2'	4:5:1843:A:H5''	2.20	0.41
4:5:2546:C:H2'	4:5:2547:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:2948:G:C2	40:BB:250:ALA:HB1	2.55	0.41
4:5:2968:A:N7	4:5:2969:G:H1'	2.35	0.41
4:5:3048:U:O2'	4:5:3049:A:H5'	2.20	0.41
4:5:3154:U:OP2	4:5:3294:U:O2'	2.28	0.41
4:5:3293:A:C6	4:5:3294:U:C4	3.09	0.41
5:6:38:A:H2'	5:6:39:C:O4'	2.21	0.41
7:AB:32:ILE:HG13	7:AB:96:LEU:HD11	2.01	0.41
9:AD:6:SER:O	9:AD:10:LYS:N	2.42	0.41
12:AG:122:GLU:HG2	12:AG:123:GLY:N	2.35	0.41
18:AM:125:ASN:C	18:AM:126:TRP:CG	2.98	0.41
21:AP:86:VAL:HG13	21:AP:88:GLU:H	1.85	0.41
24:AS:104:ASN:HA	24:AS:107:SER:OG	2.20	0.41
25:AT:97:SER:OG	25:AT:100:ILE:HG12	2.20	0.41
25:AT:107:ALA:HA	25:AT:110:LYS:HZ3	1.84	0.41
28:AW:101:TYR:HB3	28:AW:112:ASP:HB2	2.03	0.41
33:Ab:56:CYS:O	33:Ab:60:SER:HB3	2.21	0.41
38:Ag:41:THR:OG1	38:Ag:61:PHE:O	2.35	0.41
38:Ag:221:MET:SD	38:Ag:233:THR:HB	2.59	0.41
42:BD:23:ARG:HA	42:BD:23:ARG:HD2	1.87	0.41
47:BI:177:ASP:OD1	47:BI:179:PRO:HD2	2.20	0.41
49:BK:50:PRO:HB3	71:Bg:118:ILE:HG21	2.02	0.41
51:BM:154:PRO:O	51:BM:157:LYS:HG3	2.21	0.41
53:BO:41:LEU:HD23	53:BO:41:LEU:C	2.44	0.41
56:BR:128:GLU:N	56:BR:128:GLU:OE1	2.54	0.41
80:CA:534:GLN:O	80:CA:536:MET:HE2	2.20	0.41
80:CA:912:LEU:O	80:CA:912:LEU:HD23	2.20	0.41
80:CA:952:ASN:OD1	80:CA:953:ILE:HD12	2.20	0.41
80:CA:1697:PHE:HB3	80:CA:1702:GLU:HA	2.01	0.41
1:2:67:A:H2'	1:2:69:G:H8	1.85	0.41
1:2:153:G:C4	1:2:162:A:N1	2.88	0.41
1:2:210:A:H2'	1:2:211:U:C6	2.55	0.41
1:2:397:A:H4'	14:AI:50:GLY:HA2	2.02	0.41
1:2:522:U:H2'	1:2:523:G:H8	1.85	0.41
1:2:556:A:H5''	36:Ae:56:MET:SD	2.61	0.41
1:2:762:A:C8	1:2:789:A:N6	2.88	0.41
1:2:1488:G:C8	1:2:1515:A:N6	2.88	0.41
2:3:104:A:N3	4:5:22:G:H1'	2.36	0.41
3:4:72:A:C5	3:4:74:C:N4	2.88	0.41
4:5:75:G:H5''	49:BK:58:VAL:HG22	2.01	0.41
4:5:236:G:C2	4:5:237:G:C5	3.09	0.41
4:5:297:G:O6	51:BM:12:ARG:NH1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:603:A:H2'	4:5:604:A:C8	2.55	0.41
4:5:1071:U:H2'	4:5:1072:U:C6	2.54	0.41
4:5:1158:G:H5''	44:BF:220:PHE:CE2	2.55	0.41
4:5:1335:U:H2'	4:5:1336:C:C6	2.55	0.41
4:5:2763:A:H2'	4:5:2764:U:H6	1.86	0.41
4:5:2778:G:H5''	4:5:2779:G:OP1	2.20	0.41
4:5:3024:U:H2'	4:5:3025:A:C8	2.56	0.41
4:5:3291:G:C2	4:5:3292:G:C8	3.08	0.41
6:AA:92:HIS:HB3	6:AA:182:LEU:HD11	2.01	0.41
8:AC:59:HIS:CD2	8:AC:239:PRO:HD3	2.55	0.41
12:AG:3:LEU:HD23	12:AG:109:LEU:HB2	2.01	0.41
14:AI:140:GLU:O	14:AI:144:ALA:N	2.36	0.41
15:AJ:127:VAL:O	15:AJ:131:GLN:N	2.54	0.41
20:AO:85:ALA:H	20:AO:119:THR:HB	1.86	0.41
24:AS:65:GLU:O	24:AS:69:ILE:HG12	2.19	0.41
29:AX:34:LEU:HD23	29:AX:34:LEU:HA	1.83	0.41
29:AX:52:ILE:HA	29:AX:100:ASP:O	2.20	0.41
31:AZ:70:LYS:HA	31:AZ:70:LYS:HD3	1.89	0.41
42:BD:41:LYS:HD2	57:BS:93:VAL:HG11	2.03	0.41
42:BD:99:TYR:OH	42:BD:125:VAL:HG21	2.20	0.41
42:BD:131:LEU:H	42:BD:131:LEU:HD23	1.85	0.41
46:BH:128:VAL:HA	46:BH:157:ASN:ND2	2.31	0.41
49:BK:74:GLY:CA	49:BK:98:ASP:HB2	2.50	0.41
50:BL:115:PHE:O	50:BL:118:PHE:N	2.53	0.41
54:BP:104:LEU:HD23	54:BP:124:LEU:HD23	2.02	0.41
54:BP:173:GLU:HA	64:BZ:51:GLY:O	2.19	0.41
71:Bg:14:LYS:HE2	71:Bg:62:GLN:NE2	2.26	0.41
73:Bi:60:GLY:CA	73:Bi:64:MET:HE3	2.50	0.41
80:CA:762:GLN:HB2	81:CB:179:GLU:HG3	2.01	0.41
80:CA:910:LEU:HD23	80:CA:926:MET:HE3	2.03	0.41
80:CA:1140:PHE:CZ	80:CA:1148:PHE:HA	2.56	0.41
80:CA:1262:LEU:HA	80:CA:1298:ARG:O	2.20	0.41
80:CA:1390:ILE:HD11	80:CA:1431:ILE:HG21	2.03	0.41
80:CA:1904:TRP:HB3	80:CA:1950:LEU:HD11	2.01	0.41
81:CB:61:ASN:O	81:CB:65:LEU:HG	2.21	0.41
1:2:262:U:H2'	1:2:263:C:C6	2.55	0.41
1:2:297:U:OP1	10:AE:37:LYS:HE3	2.20	0.41
1:2:323:A:OP2	14:AI:10:LYS:HE3	2.20	0.41
1:2:607:G:N2	1:2:614:C:H5''	2.35	0.41
1:2:1334:U:H2'	1:2:1335:U:C6	2.56	0.41
1:2:1360:A:C2	1:2:1364:G:N1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1654:G:C6	1:2:1745:G:C6	3.09	0.41
4:5:3:U:H2'	4:5:4:U:H6	1.84	0.41
4:5:883:A:H2'	4:5:884:A:H5''	2.01	0.41
4:5:993:A:O2'	4:5:994:G:H5'	2.20	0.41
4:5:1195:G:H2'	4:5:1196:A:C8	2.55	0.41
4:5:2931:A:H2'	4:5:2932:C:C6	2.55	0.41
4:5:3185:A:H2'	4:5:3186:U:O4'	2.19	0.41
4:5:3257:G:H2'	4:5:3258:C:H6	1.84	0.41
4:5:3292:G:C2	4:5:3293:A:C5	3.08	0.41
8:AC:59:HIS:NE2	8:AC:239:PRO:HD3	2.34	0.41
10:AE:143:ASP:OD2	10:AE:145:ARG:HD2	2.21	0.41
12:AG:139:ASN:HA	12:AG:142:ARG:HB2	2.02	0.41
12:AG:142:ARG:O	12:AG:146:GLY:N	2.30	0.41
13:AH:41:LEU:HD22	13:AH:70:PHE:CD2	2.55	0.41
15:AJ:128:LEU:HA	15:AJ:128:LEU:HD23	1.79	0.41
26:AU:82:TYR:HB3	35:Ad:52:PHE:HB3	2.02	0.41
31:AZ:43:ASP:OD2	31:AZ:43:ASP:C	2.62	0.41
34:Ac:31:GLU:HA	34:Ac:39:THR:HA	2.03	0.41
37:Af:106:TYR:CE2	37:Af:107:LYS:HD3	2.56	0.41
38:Ag:175:ASP:O	38:Ag:176:LYS:HB3	2.20	0.41
42:BD:85:ARG:NH1	42:BD:86:TYR:CZ	2.88	0.41
44:BF:76:TYR:CD1	44:BF:76:TYR:C	2.97	0.41
46:BH:113:GLU:CD	46:BH:115:ARG:HH22	2.27	0.41
48:BJ:54:VAL:HG22	48:BJ:59:ILE:HG21	2.01	0.41
50:BL:50:LYS:NZ	50:BL:82:SER:O	2.53	0.41
51:BM:90:ASN:O	51:BM:92:LEU:N	2.50	0.41
52:BN:189[A]:ASP:OD1	52:BN:190[A]:VAL:HG23	2.21	0.41
54:BP:125:ASP:OD1	54:BP:126:GLN:HG3	2.21	0.41
54:BP:174:ARG:O	54:BP:179:ARG:NH2	2.52	0.41
55:BQ:21:LYS:HA	55:BQ:21:LYS:HD3	1.89	0.41
57:BS:73:GLY:HA2	57:BS:89:LEU:O	2.21	0.41
62:BX:33:ALA:HB2	62:BX:101:PRO:HB2	2.02	0.41
66:Bb:40:LYS:HG2	66:Bb:93:LEU:O	2.20	0.41
72:Bh:43:LEU:HD23	72:Bh:43:LEU:C	2.46	0.41
78:Bn:76:LYS:HB2	78:Bn:76:LYS:HE3	1.71	0.41
80:CA:375:ILE:HA	80:CA:395:GLN:NE2	2.34	0.41
80:CA:619:ILE:HG13	80:CA:619:ILE:O	2.20	0.41
80:CA:911:PHE:CD1	80:CA:927:LEU:HD13	2.56	0.41
80:CA:1351:LEU:HB3	80:CA:1355:MET:HE1	2.02	0.41
81:CB:218:LEU:HD13	81:CB:237:ILE:HB	2.02	0.41
1:2:156:A:H2'	1:2:157:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:170:U:OP1	1:2:267:U:O2'	2.28	0.41
1:2:656:G:C6	1:2:679:U:C4	3.09	0.41
1:2:743:U:C4	1:2:809:A:N1	2.88	0.41
1:2:866:G:N2	1:2:965:U:C4	2.89	0.41
1:2:1225:U:H2'	1:2:1226:A:O4'	2.20	0.41
1:2:1437:U:O2'	9:AD:181:VAL:HG23	2.19	0.41
1:2:1471:A:H5'	11:AF:184:PHE:CE1	2.56	0.41
1:2:1593:A:O2'	1:2:1594:G:H5'	2.21	0.41
1:2:1727:G:H2'	1:2:1728:A:C8	2.55	0.41
3:4:46:A:OP1	42:BD:158:ARG:HG2	2.21	0.41
3:4:115:G:C4	3:4:116:C:C5	3.09	0.41
4:5:363:G:H2'	4:5:364:G:H5'	2.02	0.41
4:5:408:A:H2'	4:5:409:A:O4'	2.21	0.41
4:5:545:C:H2'	4:5:548:G:N1	2.35	0.41
4:5:554:U:H2'	4:5:555:A:O4'	2.20	0.41
4:5:826:U:P	39:BA:21:ARG:NH1	2.93	0.41
4:5:946:C:H2'	4:5:947:U:H6	1.84	0.41
4:5:1100:A:C6	4:5:1101:U:C4	3.08	0.41
4:5:1247:G:O4'	4:5:1265:G:H5''	2.19	0.41
4:5:1567:A:H2'	4:5:1568:U:C5	2.55	0.41
4:5:2605:U:H2'	4:5:2606:G:O4'	2.21	0.41
4:5:2670:G:H2'	4:5:2671:G:H8	1.86	0.41
5:6:51:A:C6	5:6:64:G:C6	3.08	0.41
7:AB:83:LYS:N	7:AB:104:ASP:O	2.54	0.41
7:AB:181:LEU:N	7:AB:183:GLN:HE22	2.18	0.41
8:AC:137:ILE:HD13	8:AC:215:PHE:CE2	2.56	0.41
16:AK:59:PHE:CD1	16:AK:64:TYR:HE1	2.38	0.41
18:AM:92:ALA:HB1	18:AM:96:GLN:HE21	1.86	0.41
22:AQ:83:GLN:HE22	22:AQ:119:ALA:HA	1.84	0.41
24:AS:24:GLY:HA2	24:AS:58:ALA:HB3	2.03	0.41
26:AU:23:ARG:HB3	26:AU:117:VAL:CG1	2.51	0.41
32:Aa:46:GLU:HG3	32:Aa:47:ALA:N	2.35	0.41
40:BB:102:LEU:HA	40:BB:102:LEU:HD12	1.90	0.41
42:BD:207:TYR:HH	42:BD:218:ARG:HH12	1.66	0.41
45:BG:72:PRO:HA	45:BG:233:TRP:CZ3	2.55	0.41
45:BG:190:VAL:HG11	45:BG:195:SER:HB2	2.01	0.41
45:BG:248:LYS:HD3	45:BG:251:LYS:HZ1	1.84	0.41
47:BI:208:ASN:ND2	47:BI:211:ARG:HH21	2.12	0.41
50:BL:121:MET:O	50:BL:125:LYS:HG3	2.19	0.41
59:BU:109:MET:HE1	59:BU:114:ILE:CG1	2.50	0.41
64:BZ:75:LEU:HD12	64:BZ:78:LEU:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:Bh:11:LEU:H	72:Bh:11:LEU:HD23	1.86	0.41
80:CA:1778:GLU:HG2	80:CA:1798:PHE:CG	2.56	0.41
1:2:156:A:C6	1:2:157:A:C2	3.09	0.41
1:2:295:A:H2'	1:2:296:U:H6	1.86	0.41
1:2:525:A:H4'	30:AY:89:TYR:CG	2.56	0.41
1:2:579:A:C2	1:2:1439:C:H4'	2.55	0.41
1:2:691:C:H2'	1:2:692:C:H6	1.85	0.41
1:2:784:C:H2'	1:2:785:U:C6	2.56	0.41
1:2:832:U:H3'	1:2:833:U:H5''	2.03	0.41
1:2:962:C:OP1	19:AN:72:MET:HB3	2.20	0.41
1:2:1125:A:O3'	77:Bm:15:ARG:NH2	2.53	0.41
1:2:1588:G:C6	1:2:1589:C:N4	2.89	0.41
1:2:1601:G:C8	25:AT:89:ARG:HG2	2.54	0.41
2:3:36:G:OP2	71:Bg:85:THR:HG23	2.20	0.41
3:4:43:U:C4	3:4:44:C:C4	3.08	0.41
4:5:17:G:H5'	61:BW:46:TYR:HE1	1.85	0.41
4:5:237:G:H2'	4:5:238:A:C8	2.55	0.41
4:5:352:A:H61	4:5:365:A:H5''	1.86	0.41
4:5:535:U:O2	56:BR:146:LYS:HA	2.21	0.41
4:5:742:U:H2'	4:5:743:G:O4'	2.20	0.41
4:5:1223:G:C2	4:5:1286:G:C4	3.08	0.41
4:5:1235:G:H2'	4:5:1236:U:C6	2.56	0.41
4:5:1902:A:O3'	4:5:2919:G:H5'	2.21	0.41
4:5:2953:G:H2'	4:5:2954:U:O4'	2.21	0.41
4:5:3019:C:C4	4:5:3020:U:C4	3.09	0.41
4:5:3140:A:OP1	40:BB:274:SER:OG	2.34	0.41
4:5:3359:U:H2'	4:5:3360:A:C8	2.55	0.41
6:AA:2:SER:OG	6:AA:3:LEU:N	2.54	0.41
6:AA:52:LYS:HD3	27:AV:82:VAL:HA	2.01	0.41
6:AA:83:GLN:OE1	6:AA:100:GLY:N	2.53	0.41
7:AB:38:PHE:HD2	7:AB:73:LEU:HB3	1.85	0.41
9:AD:47:GLU:N	9:AD:47:GLU:OE2	2.54	0.41
9:AD:76:ARG:O	9:AD:76:ARG:NH1	2.53	0.41
10:AE:252:ARG:NH1	10:AE:253:ASP:OD1	2.54	0.41
11:AF:26:ALA:HB2	22:AQ:26:LYS:HG3	2.03	0.41
11:AF:142:PRO:HG2	11:AF:170:GLN:NE2	2.35	0.41
14:AI:171:SER:HB3	14:AI:180:ASP:H	1.86	0.41
23:AR:17:ILE:O	23:AR:71:PHE:HB3	2.21	0.41
24:AS:117:LYS:HD3	24:AS:128:PHE:HB2	2.01	0.41
25:AT:35:ASP:H	25:AT:53:TRP:HE1	1.69	0.41
29:AX:72:VAL:HG13	29:AX:87:VAL:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Ag:130:THR:HG22	38:Ag:145:LEU:HB3	2.03	0.41
38:Ag:147:HIS:ND1	38:Ag:149:ASP:O	2.36	0.41
39:BA:107:VAL:HG21	39:BA:111:THR:HG21	2.03	0.41
40:BB:332:ARG:HD3	40:BB:332:ARG:H	1.85	0.41
46:BH:31:ARG:HD3	46:BH:82:VAL:O	2.21	0.41
51:BM:109:ARG:HA	51:BM:109:ARG:HD3	1.89	0.41
54:BP:158:HIS:H	54:BP:186:VAL:HG11	1.85	0.41
63:BY:12:VAL:HG12	63:BY:81:LEU:HB3	2.03	0.41
63:BY:27:LYS:HA	63:BY:28:PRO:HD3	1.87	0.41
80:CA:430:HIS:HE1	80:CA:660:SER:HB2	1.85	0.41
80:CA:511:ARG:HD2	80:CA:512:GLN:N	2.36	0.41
80:CA:531:ARG:HD2	80:CA:533:TYR:CE2	2.55	0.41
80:CA:546:VAL:HG22	80:CA:597:ILE:HG23	2.03	0.41
80:CA:550:ARG:HA	80:CA:553:ILE:HG22	2.02	0.41
80:CA:1131:ILE:HG21	80:CA:1177:TRP:CZ2	2.56	0.41
80:CA:1672:LEU:HD12	80:CA:1673:PRO:HD2	2.03	0.41
1:2:171:A:C6	1:2:172:C:C4	3.09	0.41
1:2:243:G:C6	1:2:251:A:C6	3.09	0.41
1:2:591:A:H2'	1:2:592:A:C8	2.55	0.41
1:2:915:A:C5	1:2:916:U:C4	3.08	0.41
1:2:1258:U:H6	1:2:1258:U:H2'	1.72	0.41
1:2:1333:C:H1'	9:AD:162:GLN:NE2	2.36	0.41
1:2:1345:A:H2'	1:2:1348:A:H62	1.86	0.41
1:2:1522:U:H4'	1:2:1523:G:OP2	2.19	0.41
1:2:1524:A:N3	1:2:1590:G:O2'	2.46	0.41
4:5:155:G:C4	4:5:266:A:C2	3.09	0.41
4:5:574:C:H2'	4:5:575:U:C6	2.56	0.41
4:5:916:A:H8	4:5:2137:C:O2'	2.03	0.41
4:5:1171:A:H2'	4:5:1172:G:O4'	2.21	0.41
4:5:1335:U:H5'	44:BF:207:LEU:O	2.21	0.41
4:5:1538:A:C2	4:5:1586:C:C2	3.08	0.41
4:5:1682:U:H2'	4:5:1683:U:O4'	2.21	0.41
4:5:2108:A:H2	4:5:3345:A:H8	1.67	0.41
4:5:2218:U:C2	4:5:2219:G:C8	3.08	0.41
4:5:2657:A:N7	4:5:2659:G:C8	2.89	0.41
4:5:2737:A:H4'	57:BS:71:SER:OG	2.21	0.41
4:5:3164:A:C6	4:5:3289:G:N1	2.89	0.41
4:5:3339:C:H2'	4:5:3340:A:C8	2.55	0.41
4:5:3377:A:H1'	67:Bc:18:LYS:O	2.21	0.41
4:5:3380:C:H2'	4:5:3381:U:H6	1.86	0.41
16:AK:11:ILE:HD13	16:AK:11:ILE:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AK:68:LEU:HD11	16:AK:73:VAL:HG12	2.01	0.41
18:AM:56:GLU:H	18:AM:56:GLU:CD	2.27	0.41
21:AP:98:ASN:OD1	21:AP:101:ALA:N	2.32	0.41
22:AQ:31:VAL:C	22:AQ:33:GLY:H	2.28	0.41
23:AR:63:LYS:O	23:AR:63:LYS:HG3	2.21	0.41
23:AR:83:GLN:O	23:AR:85:VAL:HG13	2.20	0.41
24:AS:144:ARG:CZ	24:AS:144:ARG:HA	2.50	0.41
25:AT:29:GLU:HB3	25:AT:110:LYS:NZ	2.35	0.41
26:AU:53:LYS:HB3	26:AU:92:ASP:HB2	2.03	0.41
26:AU:88:LYS:O	26:AU:89:ARG:HD2	2.20	0.41
27:AV:71:ARG:HG2	27:AV:71:ARG:NH1	2.35	0.41
38:Ag:249:ARG:HH21	38:Ag:299:GLN:HE21	1.69	0.41
50:BL:48:GLY:HA3	50:BL:53:VAL:HB	2.03	0.41
50:BL:73:PRO:HG2	50:BL:76:ALA:HB2	2.02	0.41
54:BP:173:GLU:HA	64:BZ:51:GLY:C	2.46	0.41
56:BR:25:PHE:HD2	57:BS:151:LEU:HD11	1.85	0.41
57:BS:91:LEU:HA	57:BS:91:LEU:HD23	1.86	0.41
57:BS:106:LEU:HA	57:BS:106:LEU:HD23	1.85	0.41
58:BT:13:LYS:HG3	58:BT:15:PHE:HE2	1.86	0.41
61:BW:58:ASP:OD1	61:BW:61:LYS:N	2.52	0.41
65:Ba:25:LYS:HE2	65:Ba:25:LYS:HA	2.03	0.41
71:Bg:84:LYS:O	71:Bg:85:THR:OG1	2.30	0.41
78:Bn:14:GLY:C	78:Bn:16:THR:H	2.28	0.41
80:CA:377:VAL:HG22	80:CA:396:VAL:HB	2.03	0.41
80:CA:1410:GLU:HG3	80:CA:1414:TYR:HE2	1.86	0.41
80:CA:1763:THR:HG22	80:CA:1767:MET:HE2	2.03	0.41
80:CA:1818:LEU:HB2	80:CA:1957:LEU:HD21	2.02	0.41
1:2:154:G:H2'	1:2:155:U:C6	2.56	0.41
1:2:273:G:C5	1:2:284:G:C2	3.09	0.41
1:2:536:C:C4	1:2:537:G:C5	3.09	0.41
1:2:541:A:O2'	1:2:542:A:OP1	2.36	0.41
1:2:565:C:H5''	1:2:566:C:C5	2.56	0.41
1:2:587:C:H2'	1:2:588:U:H6	1.86	0.41
1:2:706:A:H2	1:2:732:G:H4'	1.85	0.41
1:2:1157:A:C6	1:2:1622:G:N1	2.89	0.41
1:2:1194:A:C6	1:2:1195:C:N3	2.89	0.41
1:2:1293:U:C4	1:2:1294:G:N7	2.89	0.41
1:2:1354:G:C6	1:2:1355:C:C4	3.08	0.41
1:2:1395:G:N1	1:2:1404:C:N3	2.69	0.41
1:2:1405:G:H2'	1:2:1406:A:H8	1.86	0.41
1:2:1626:U:H2'	1:2:1627:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1704:U:H2'	1:2:1705:C:H6	1.86	0.41
1:2:1714:A:H2'	1:2:1715:G:O4'	2.21	0.41
1:2:1729:C:H2'	1:2:1730:A:O4'	2.21	0.41
2:3:97:A:H5'	71:Bg:63:ARG:CZ	2.50	0.41
2:3:109:A:C2	2:3:114:G:C6	3.08	0.41
4:5:123:A:N6	4:5:150:A:N7	2.69	0.41
4:5:127:G:H2'	4:5:128:G:H8	1.85	0.41
4:5:131:C:H2'	4:5:132:C:C6	2.56	0.41
4:5:211:A:H3'	41:BC:221:ASN:ND2	2.35	0.41
4:5:254:A:H2'	4:5:255:A:H8	1.86	0.41
4:5:574:C:H2'	4:5:575:U:H6	1.85	0.41
4:5:816:G:OP1	73:Bi:16:HIS:NE2	2.34	0.41
4:5:891:C:O2	4:5:2325:A:H2	2.04	0.41
4:5:970:C:N4	4:5:1113:A:H62	2.18	0.41
4:5:1015:U:H3	4:5:1037:A:N6	2.14	0.41
4:5:1258:C:N3	4:5:1262:G:C2	2.88	0.41
4:5:1644:A:O2'	4:5:1645:C:O4'	2.34	0.41
4:5:1744:G:H2'	4:5:1745:G:H8	1.85	0.41
4:5:1825:U:H4'	74:Bj:17:ARG:NH1	2.30	0.41
4:5:1853:G:N3	73:Bi:9:GLY:HA3	2.36	0.41
4:5:2108:A:H2	4:5:3345:A:C8	2.38	0.41
4:5:2108:A:C2	4:5:3345:A:H8	2.38	0.41
4:5:2509:U:H2'	4:5:2510:U:H6	1.84	0.41
4:5:2525:A:H1'	4:5:2526:G:H8	1.86	0.41
4:5:2566:U:H2'	4:5:2567:C:C6	2.54	0.41
4:5:2656:U:H1'	4:5:2657:A:C2	2.56	0.41
4:5:3289:G:C4	4:5:3290:G:C8	3.09	0.41
5:6:35:C:O2'	5:6:36:G:H5'	2.20	0.41
6:AA:74:VAL:HG23	6:AA:118:PRO:HB3	2.03	0.41
10:AE:36:HIS:CE1	10:AE:85:GLY:HA3	2.56	0.41
11:AF:119:ASP:OD2	31:AZ:100:ILE:HD13	2.20	0.41
13:AH:140:VAL:HB	28:AW:52:TYR:HB3	2.02	0.41
15:AJ:41:GLU:N	15:AJ:41:GLU:OE2	2.54	0.41
18:AM:62:LEU:HD22	18:AM:75:VAL:HG11	2.02	0.41
18:AM:76:GLU:HA	18:AM:79:ALA:HB3	2.03	0.41
19:AN:45:LEU:HD23	19:AN:45:LEU:HA	1.86	0.41
20:AO:51:ASP:OD1	20:AO:51:ASP:O	2.38	0.41
21:AP:36:LEU:HD23	21:AP:36:LEU:H	1.86	0.41
24:AS:100:THR:HG21	24:AS:105:VAL:HA	2.02	0.41
25:AT:39:THR:O	25:AT:39:THR:HG22	2.20	0.41
26:AU:85:ARG:O	26:AU:86:ILE:HD13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AV:79:LEU:HA	27:AV:79:LEU:HD12	1.74	0.41
29:AX:40:SER:OG	29:AX:41:SER:N	2.54	0.41
30:AY:57:VAL:HB	30:AY:60:PHE:CZ	2.55	0.41
32:Aa:19:LYS:HE2	32:Aa:19:LYS:HB2	1.79	0.41
33:Ab:32:PHE:C	33:Ab:33:LEU:HD12	2.46	0.41
33:Ab:67:THR:HG22	33:Ab:68:GLY:N	2.36	0.41
38:Ag:260:ILE:HB	38:Ag:274:LEU:HB2	2.02	0.41
40:BB:353:GLU:O	40:BB:353:GLU:HG2	2.20	0.41
41:BC:62:ALA:HB3	41:BC:90:PHE:CE2	2.56	0.41
41:BC:179:LEU:O	41:BC:183:LYS:HG2	2.21	0.41
42:BD:129:TYR:CD1	42:BD:177:GLU:HB3	2.56	0.41
43:BE:36:PRO:HA	43:BE:54:TYR:CD2	2.56	0.41
45:BG:94:PHE:CE2	45:BG:152:LEU:HD11	2.56	0.41
45:BG:214:LEU:HD12	45:BG:214:LEU:HA	1.83	0.41
49:BK:155:GLU:O	64:BZ:100:PRO:HA	2.20	0.41
52:BN:171[A]:LYS:O	52:BN:175[A]:THR:HG23	2.20	0.41
53:BO:152:GLU:OE1	53:BO:152:GLU:N	2.50	0.41
56:BR:155:ARG:CZ	56:BR:172:TYR:HD1	2.34	0.41
57:BS:6:GLY:H	57:BS:9:SER:HB2	1.85	0.41
59:BU:66:LYS:HE2	59:BU:66:LYS:HB2	1.94	0.41
63:BY:41:ALA:O	63:BY:74:VAL:HG13	2.21	0.41
64:BZ:79:TRP:CH2	64:BZ:119:PRO:HG3	2.56	0.41
66:Bb:14:LEU:O	66:Bb:18:ILE:HG12	2.21	0.41
74:Bj:12:LEU:HB3	74:Bj:16:ARG:NH2	2.36	0.41
80:CA:341:ASP:OD1	80:CA:341:ASP:N	2.53	0.41
80:CA:648:ASP:OD1	80:CA:650:LYS:HG2	2.21	0.41
80:CA:734:LEU:HB2	80:CA:767:ARG:HD2	2.01	0.41
80:CA:782:GLN:O	80:CA:798:LEU:HD23	2.20	0.41
80:CA:1195:LYS:O	80:CA:1199:ARG:NH1	2.54	0.41
80:CA:1266:ASP:HA	80:CA:1302:MET:HB2	2.02	0.41
80:CA:1267:GLU:O	80:CA:1270:LEU:HD22	2.20	0.41
80:CA:1493:MET:HE3	80:CA:1493:MET:HB3	1.90	0.41
80:CA:1798:PHE:CE2	80:CA:1804:ILE:HG12	2.56	0.41
82:CC:179:GLN:HB3	82:CC:198:VAL:HB	2.02	0.41
1:2:138:A:H2'	1:2:139:C:C6	2.56	0.41
1:2:907:A:H8	1:2:907:A:O5'	2.04	0.41
1:2:1254:U:H2'	1:2:1255:G:O4'	2.21	0.41
1:2:1257:U:O2'	16:AK:8:ARG:NH2	2.53	0.41
1:2:1382:A:O2'	1:2:1383:G:OP1	2.28	0.41
1:2:1382:A:O2'	1:2:1383:G:P	2.79	0.41
1:2:1408:G:C4	1:2:1409:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1471:A:O2'	1:2:1472:C:P	2.79	0.41
2:3:67:U:H2'	2:3:68:G:C8	2.56	0.41
4:5:109:A:H4'	4:5:110:G:OP1	2.21	0.41
4:5:787:A:H1'	4:5:788:G:C8	2.56	0.41
4:5:841:C:H2'	4:5:842:A:C8	2.55	0.41
4:5:1915:G:O2'	55:BQ:82:LYS:O	2.31	0.41
4:5:1947:A:O3'	55:BQ:136:ARG:NH2	2.54	0.41
4:5:2932:C:H5''	59:BU:40:LYS:HD3	2.02	0.41
4:5:3201:G:H2'	4:5:3202:C:C6	2.56	0.41
5:6:58:A:C4	5:6:61:C:C5	3.09	0.41
5:6:66:C:H2'	5:6:67:G:H8	1.86	0.41
6:AA:80:THR:HG23	6:AA:81:PHE:CD1	2.56	0.41
7:AB:61:LEU:H	7:AB:61:LEU:HD23	1.86	0.41
7:AB:129:THR:HG22	7:AB:176:VAL:HG13	2.02	0.41
10:AE:252:ARG:O	10:AE:256:ARG:N	2.44	0.41
11:AF:64:VAL:O	11:AF:65:ARG:HB2	2.21	0.41
11:AF:168:VAL:O	11:AF:172:ILE:N	2.50	0.41
18:AM:97:LEU:HD23	18:AM:118:ALA:O	2.21	0.41
20:AO:17:ALA:N	20:AO:80:HIS:O	2.37	0.41
20:AO:93:THR:HA	20:AO:94:PRO:HD3	1.98	0.41
22:AQ:106:LYS:HB2	22:AQ:106:LYS:HE3	1.77	0.41
25:AT:99:SER:O	25:AT:103:LYS:NZ	2.48	0.41
31:AZ:95:HIS:ND1	31:AZ:96:SER:O	2.53	0.41
38:Ag:29:GLN:HG3	38:Ag:32:LEU:HD13	2.02	0.41
41:BC:8:VAL:O	41:BC:16:THR:HG22	2.21	0.41
41:BC:269:SER:O	41:BC:269:SER:OG	2.32	0.41
41:BC:338:LYS:HA	41:BC:338:LYS:HD3	1.93	0.41
43:BE:175:LYS:HD3	43:BE:175:LYS:HA	1.65	0.41
46:BH:94:TYR:HA	46:BH:177:ASP:OD1	2.21	0.41
48:BJ:46:VAL:O	48:BJ:67:VAL:HA	2.21	0.41
53:BO:108:ASP:OD2	53:BO:111:LYS:HB2	2.21	0.41
55:BQ:3:ASN:HD21	55:BQ:5:ARG:NH1	2.18	0.41
58:BT:15:PHE:HB2	58:BT:65:VAL:HB	2.02	0.41
76:Bl:79:GLU:C	76:Bl:81:SER:N	2.79	0.41
80:CA:370:LEU:HB3	80:CA:375:ILE:HB	2.03	0.41
80:CA:1000:ILE:HG23	80:CA:1016:ILE:HG23	2.01	0.41
80:CA:1042:SER:HB2	80:CA:1078:PRO:HD2	2.03	0.41
80:CA:1139:TYR:CZ	82:CC:328:ALA:HB1	2.56	0.41
80:CA:1554:ILE:HD11	80:CA:1559:ILE:CB	2.50	0.41
80:CA:1629:PHE:CE2	80:CA:1647:LEU:HD11	2.56	0.41
81:CB:171:GLN:HB2	81:CB:214:TRP:CE3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:163:G:OP2	1:2:163:G:N2	2.52	0.40
1:2:227:U:H1'	1:2:834:G:N2	2.34	0.40
1:2:512:A:OP1	15:AJ:170:GLY:HA3	2.21	0.40
1:2:709:C:C5	1:2:730:G:H1'	2.56	0.40
1:2:1147:A:H5''	8:AC:91:ARG:HG2	2.02	0.40
1:2:1309:C:H2'	1:2:1310:U:C6	2.56	0.40
1:2:1476:C:C2	1:2:1477:G:N7	2.88	0.40
1:2:1754:A:C6	1:2:1755:A:C6	3.09	0.40
2:3:132:G:C2	2:3:133:G:C8	3.09	0.40
4:5:610:G:H3'	4:5:610:G:N3	2.36	0.40
4:5:797:U:H2'	4:5:798:U:H6	1.86	0.40
4:5:2101:A:H5''	4:5:2101:A:N3	2.36	0.40
4:5:2501:A:HO2'	4:5:2502:U:P	2.43	0.40
4:5:2542:U:H1'	4:5:2543:U:O4'	2.21	0.40
4:5:2686:C:C2	4:5:2687:A:C8	3.10	0.40
6:AA:30:GLN:OE1	6:AA:149:LEU:HB3	2.21	0.40
6:AA:79:ARG:HH11	6:AA:125:ASP:HB2	1.86	0.40
7:AB:35:PRO:HD3	7:AB:98:THR:HG23	2.03	0.40
8:AC:137:ILE:HG23	8:AC:138:PRO:HD2	2.03	0.40
11:AF:116:HIS:CE1	31:AZ:98:GLN:HB3	2.56	0.40
11:AF:208:SER:OG	11:AF:211:ILE:HG22	2.21	0.40
15:AJ:49:LEU:O	15:AJ:52:ILE:HB	2.21	0.40
21:AP:20:VAL:CG1	21:AP:25:LEU:HB3	2.51	0.40
24:AS:112:ASP:O	24:AS:115:ARG:HB3	2.21	0.40
31:AZ:88:ILE:HG22	31:AZ:89:ILE:HG23	2.03	0.40
32:Aa:71:LEU:HD23	32:Aa:73:TYR:OH	2.21	0.40
35:Ad:22:ARG:HB3	35:Ad:38:ILE:HG12	2.02	0.40
38:Ag:223:TRP:CE2	38:Ag:230:ALA:HB2	2.55	0.40
45:BG:133:LYS:N	45:BG:199:ALA:O	2.53	0.40
45:BG:220:ALA:HA	45:BG:224:ASP:OD2	2.21	0.40
51:BM:103:GLU:HG3	51:BM:115:VAL:HG11	2.02	0.40
54:BP:27:LYS:HE2	54:BP:27:LYS:HB2	1.87	0.40
54:BP:176:ARG:HB3	64:BZ:53:PHE:O	2.20	0.40
58:BT:44:GLU:OE1	58:BT:44:GLU:N	2.54	0.40
72:Bh:45:ARG:NH2	72:Bh:49:GLY:O	2.54	0.40
73:Bi:7:SER:C	73:Bi:9:GLY:H	2.29	0.40
80:CA:377:VAL:HA	80:CA:396:VAL:O	2.21	0.40
80:CA:707:PHE:HD1	80:CA:710:LYS:NZ	2.16	0.40
80:CA:721:LEU:CD1	80:CA:723:SER:HB3	2.52	0.40
80:CA:779:HIS:HD1	80:CA:786:PHE:H	1.69	0.40
80:CA:1139:TYR:OH	82:CC:332:LEU:HD21	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:1487:ILE:O	80:CA:1488:GLU:HG3	2.21	0.40
1:2:374:U:O2	1:2:603:U:H4'	2.21	0.40
1:2:985:G:C4	1:2:986:G:C8	3.09	0.40
1:2:1120:U:H2'	1:2:1121:C:C6	2.55	0.40
1:2:1315:U:OP1	1:2:1328:G:N2	2.46	0.40
1:2:1325:A:C2	1:2:1326:A:C8	3.09	0.40
1:2:1564:U:H2'	1:2:1565:C:H6	1.86	0.40
1:2:1576:A:C5	1:2:1577:A:H1'	2.56	0.40
2:3:37:A:C8	2:3:39:G:C2	3.09	0.40
2:3:70:G:C2	2:3:87:G:N3	2.89	0.40
2:3:122:U:H2'	2:3:123:G:C8	2.55	0.40
2:3:157:U:N3	4:5:3:U:O4	2.48	0.40
4:5:122:A:C2	4:5:149:U:C2	3.09	0.40
4:5:1416:U:H2'	4:5:1417:C:O4'	2.20	0.40
4:5:1714:G:N1	4:5:1731:G:O2'	2.46	0.40
4:5:2315:U:H6	4:5:2315:U:H2'	1.66	0.40
4:5:2401:G:H5''	4:5:2402:A:OP2	2.22	0.40
4:5:3071:A:C4	4:5:3072:U:C5	3.09	0.40
5:6:43:A:H2'	5:6:44:A:C8	2.56	0.40
6:AA:60:ALA:O	6:AA:64:ILE:HD12	2.22	0.40
10:AE:252:ARG:HG3	10:AE:253:ASP:N	2.37	0.40
12:AG:51:LYS:HE3	12:AG:112:VAL:CG1	2.51	0.40
14:AI:41:LYS:HA	14:AI:59:ARG:O	2.21	0.40
15:AJ:90:LYS:CB	15:AJ:95:TYR:HD1	2.29	0.40
15:AJ:127:VAL:HA	15:AJ:130:THR:HG22	2.03	0.40
24:AS:100:THR:OG1	24:AS:108:LYS:NZ	2.53	0.40
24:AS:116:LEU:HB3	24:AS:124:GLY:HA3	2.03	0.40
30:AY:17:LEU:HD23	30:AY:17:LEU:HA	1.88	0.40
35:Ad:7:TRP:HA	35:Ad:7:TRP:CE3	2.56	0.40
40:BB:48:GLY:O	40:BB:335:ILE:HD12	2.20	0.40
40:BB:186:GLY:C	40:BB:187:SER:HG	2.25	0.40
41:BC:154:THR:HG22	41:BC:253:ALA:H	1.86	0.40
44:BF:100:ARG:HD2	44:BF:104:GLN:NE2	2.37	0.40
45:BG:50:VAL:HG21	61:BW:27:ARG:HD3	2.03	0.40
48:BJ:30:LEU:HD21	48:BJ:64:LYS:HB3	2.04	0.40
51:BM:191:TRP:O	51:BM:195:ASN:ND2	2.29	0.40
54:BP:98:LYS:HZ3	54:BP:118:GLY:C	2.29	0.40
58:BT:9:GLN:HB3	58:BT:10:LYS:H	1.64	0.40
58:BT:105:LEU:HD23	58:BT:105:LEU:HA	1.86	0.40
61:BW:137:ASN:N	61:BW:137:ASN:OD1	2.53	0.40
63:BY:5:LEU:HD13	63:BY:77:TYR:CD1	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Bj:43:PHE:CE2	74:Bj:65:LEU:HD22	2.56	0.40
76:Bl:84:ALA:O	76:Bl:88:LYS:NZ	2.48	0.40
80:CA:656:ASP:OD1	80:CA:656:ASP:N	2.53	0.40
80:CA:817:GLN:H	82:CC:370:ARG:NH1	2.18	0.40
80:CA:850:GLU:O	80:CA:854:LEU:N	2.49	0.40
80:CA:925:VAL:O	80:CA:929:ILE:HD12	2.21	0.40
80:CA:1117:LYS:HE3	80:CA:1145:THR:O	2.21	0.40
80:CA:1675:ARG:NH1	80:CA:1678:GLU:OE2	2.43	0.40
80:CA:1783:SER:HB2	80:CA:1789:GLN:O	2.21	0.40
1:2:249:U:H5	17:AL:34:TRP:CE2	2.39	0.40
1:2:589:C:C2	1:2:590:C:C5	3.09	0.40
1:2:772:G:H2'	1:2:773:C:C6	2.56	0.40
1:2:823:G:N7	1:2:850:A:C6	2.90	0.40
1:2:1079:U:H2'	1:2:1080:U:H6	1.87	0.40
1:2:1210:C:C2	1:2:1454:G:N2	2.90	0.40
1:2:1419:G:H2'	1:2:1420:C:O4'	2.21	0.40
1:2:1454:G:H4'	21:AP:122:THR:HG21	2.02	0.40
1:2:1474:G:H2'	1:2:1475:A:C8	2.56	0.40
1:2:1558:U:O2'	1:2:1559:A:OP2	2.35	0.40
1:2:1564:U:H2'	1:2:1565:C:C6	2.56	0.40
1:2:1585:U:O4	1:2:1611:A:H2	2.04	0.40
2:3:77:A:O2'	2:3:78:G:H5'	2.21	0.40
3:4:16:U:O4	3:4:17:A:N6	2.54	0.40
3:4:53:U:H4'	48:BJ:8:PRO:HB2	2.04	0.40
4:5:202:G:C6	4:5:203:G:N7	2.90	0.40
4:5:1220:C:H4'	4:5:1224:A:H5'	2.04	0.40
4:5:1364:A:H2'	4:5:1365:C:O4'	2.22	0.40
4:5:1494:G:OP2	4:5:1494:G:N2	2.52	0.40
4:5:1779:G:O2'	4:5:1781:G:OP2	2.38	0.40
4:5:2578:C:H2'	4:5:2579:U:C6	2.56	0.40
4:5:3084:G:H2'	4:5:3085:C:O4'	2.21	0.40
4:5:3280:A:N6	69:Be:54:ARG:CZ	2.83	0.40
4:5:3283:U:H2'	4:5:3284:U:H6	1.87	0.40
4:5:3394:U:H2'	4:5:3395:U:C6	2.56	0.40
6:AA:157:ASP:O	6:AA:158:VAL:C	2.65	0.40
12:AG:149:LYS:O	12:AG:149:LYS:HD3	2.21	0.40
16:AK:36:ASP:OD1	16:AK:36:ASP:N	2.54	0.40
16:AK:74:GLU:HA	16:AK:77:ARG:NH1	2.36	0.40
20:AO:122:PRO:HB2	20:AO:125:SER:HB2	2.03	0.40
21:AP:60:LEU:HD13	21:AP:89:MET:HB3	2.02	0.40
21:AP:85:ILE:HD11	21:AP:116:LEU:CD2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AT:29:GLU:OE2	25:AT:31:PRO:HD3	2.21	0.40
29:AX:63:GLN:N	29:AX:63:GLN:OE1	2.54	0.40
31:AZ:92:ILE:HD11	31:AZ:100:ILE:HG22	2.03	0.40
38:Ag:41:THR:OG1	38:Ag:42:LEU:N	2.54	0.40
38:Ag:85:TRP:C	38:Ag:87:LYS:H	2.29	0.40
40:BB:148:LEU:HA	40:BB:148:LEU:HD13	1.90	0.40
41:BC:329:PRO:HD2	44:BF:44:ILE:HG22	2.03	0.40
42:BD:132:THR:HG21	42:BD:170:GLY:HA2	2.03	0.40
43:BE:54:TYR:HE1	43:BE:63:LEU:HB3	1.86	0.40
43:BE:56:LYS:HB2	43:BE:98:VAL:HG21	2.03	0.40
45:BG:204:ARG:NH1	45:BG:206:GLU:OE2	2.54	0.40
49:BK:165:SER:C	49:BK:167:PHE:H	2.29	0.40
49:BK:179:PHE:O	49:BK:183:ARG:HG3	2.20	0.40
51:BM:65:ARG:HA	51:BM:128:LYS:O	2.21	0.40
62:BX:70:ILE:HD13	62:BX:82:VAL:HG23	2.02	0.40
64:BZ:24:LYS:O	64:BZ:25:HIS:C	2.62	0.40
69:Be:59:VAL:HG23	69:Be:60:ARG:N	2.36	0.40
70:Bf:3:GLN:OE1	70:Bf:30:LEU:HB3	2.20	0.40
80:CA:437:GLY:HA2	80:CA:440:ILE:HG12	2.02	0.40
80:CA:664:GLN:NE2	80:CA:665:ILE:HG23	2.35	0.40
80:CA:946:GLN:OE1	80:CA:1090:ILE:HB	2.21	0.40
80:CA:1338:TYR:O	80:CA:1517:ILE:HD12	2.21	0.40
82:CC:322:ASN:OD1	82:CC:323:PRO:HD2	2.21	0.40
1:2:61:A:H8	1:2:269:G:HO2'	1.63	0.40
1:2:103:A:H4'	1:2:105:A:C8	2.57	0.40
1:2:171:A:C5	1:2:172:C:C5	3.09	0.40
1:2:451:A:N6	1:2:453:U:O2	2.54	0.40
1:2:811:A:C6	13:AH:110:GLN:NE2	2.89	0.40
1:2:986:G:C4	1:2:987:G:C8	3.10	0.40
1:2:1127:G:OP1	77:Bm:11:ARG:NH2	2.55	0.40
1:2:1359:C:O2'	25:AT:3:GLY:HA2	2.21	0.40
1:2:1484:G:H1'	1:2:1607:G:H4'	2.03	0.40
1:2:1586:A:N3	1:2:1611:A:C6	2.89	0.40
1:2:1586:A:C4	1:2:1611:A:N6	2.90	0.40
1:2:1767:G:OP1	1:2:1770:U:H4'	2.21	0.40
3:4:3:U:H2'	3:4:4:U:C6	2.55	0.40
3:4:112:G:H2'	3:4:113:C:H6	1.80	0.40
4:5:143:G:C2	4:5:144:A:C5	3.10	0.40
4:5:146:U:H6	4:5:146:U:H2'	1.74	0.40
4:5:178:U:H2'	4:5:179:C:H6	1.86	0.40
4:5:396:A:N6	4:5:399:A:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:580:G:H2'	4:5:581:C:C6	2.57	0.40
4:5:1158:G:C2	4:5:1159:A:H1'	2.57	0.40
4:5:1358:G:H2'	4:5:1359:C:C6	2.57	0.40
4:5:2178:G:O2'	39:BA:126:LEU:HA	2.21	0.40
4:5:2279:C:H2'	4:5:2280:A:H5''	2.04	0.40
4:5:2426:G:H2'	4:5:2427:U:O4'	2.21	0.40
4:5:2586:G:H2'	4:5:2586:G:N3	2.36	0.40
4:5:3367:G:H2'	4:5:3368:C:C6	2.57	0.40
8:AC:81:MET:HB3	8:AC:207:LEU:HD21	2.04	0.40
9:AD:76:ARG:HD2	16:AK:65:TYR:OH	2.21	0.40
10:AE:42:LEU:O	10:AE:46:VAL:HB	2.22	0.40
10:AE:134:LYS:HA	10:AE:134:LYS:HD3	2.00	0.40
18:AM:28:LEU:HA	18:AM:31:VAL:HG22	2.02	0.40
21:AP:20:VAL:HG13	21:AP:24:LYS:NZ	2.36	0.40
21:AP:53:PRO:O	21:AP:57:MET:HE1	2.21	0.40
22:AQ:7:VAL:HG22	22:AQ:22:VAL:HB	2.02	0.40
23:AR:77:GLU:CD	23:AR:80:ARG:HH21	2.26	0.40
29:AX:67:ALA:O	29:AX:68:ILE:HD13	2.21	0.40
30:AY:2:SER:OG	30:AY:32:ARG:HD2	2.22	0.40
30:AY:16:PRO:C	30:AY:19:ALA:H	2.29	0.40
32:Aa:58:VAL:HG23	32:Aa:59:TYR:CD2	2.56	0.40
38:Ag:221:MET:HE2	38:Ag:223:TRP:HE1	1.86	0.40
38:Ag:245:PHE:CE1	38:Ag:252:LEU:HD13	2.57	0.40
39:BA:118:GLU:OE2	39:BA:156:LYS:NZ	2.54	0.40
40:BB:255:TRP:CD1	40:BB:255:TRP:C	2.98	0.40
42:BD:177:GLU:C	42:BD:179:ARG:H	2.30	0.40
43:BE:56:LYS:HD2	43:BE:98:VAL:HG13	2.03	0.40
48:BJ:49:LYS:NZ	48:BJ:64:LYS:HG3	2.36	0.40
51:BM:48:ALA:C	51:BM:53:TYR:HB3	2.46	0.40
60:BV:2:LYS:HD2	60:BV:2:LYS:C	2.46	0.40
61:BW:91:ASN:OD1	61:BW:94:GLN:NE2	2.25	0.40
66:Bb:34:LEU:HD23	66:Bb:59:TYR:HB3	2.04	0.40
72:Bh:61:ILE:HD11	72:Bh:87:VAL:HG23	2.03	0.40
76:Bl:78:ILE:HG21	76:Bl:83:LYS:NZ	2.37	0.40
80:CA:362:ILE:HG22	80:CA:398:VAL:HG21	2.04	0.40
80:CA:376:GLN:O	80:CA:394:THR:HG23	2.22	0.40
80:CA:884:GLN:HA	80:CA:936:ARG:NH2	2.35	0.40
80:CA:1217:VAL:HG22	80:CA:1236:ILE:HB	2.03	0.40
80:CA:1948:PHE:CE2	80:CA:1963:HIS:HB3	2.57	0.40
82:CC:194:HIS:HB3	82:CC:213:CYS:SG	2.61	0.40
1:2:93:A:H4'	1:2:94:U:OP2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:819:G:H4'	1:2:820:U:O5'	2.21	0.40
1:2:901:G:H3'	1:2:902:G:H8	1.86	0.40
1:2:963:A:HO2'	1:2:964:U:P	2.43	0.40
1:2:1041:G:C2	1:2:1078:C:C2	3.09	0.40
1:2:1128:C:C4	1:2:1129:U:C5	3.09	0.40
1:2:1450:U:H2'	1:2:1451:C:H6	1.87	0.40
1:2:1595:U:H5	1:2:1596:C:C4	2.40	0.40
2:3:26:U:H2'	2:3:27:U:H6	1.85	0.40
2:3:149:A:H2'	2:3:150:G:H8	1.84	0.40
3:4:1:G:C2	3:4:2:G:C8	3.09	0.40
3:4:2:G:H1	3:4:119:U:H3	1.70	0.40
3:4:106:U:H2'	3:4:107:C:H6	1.87	0.40
4:5:533:A:H2'	4:5:534:A:H8	1.87	0.40
4:5:1014:G:H2'	4:5:1015:U:C6	2.56	0.40
4:5:1232:A:H1'	4:5:1279:A:H61	1.86	0.40
4:5:1340:C:OP1	68:Bd:61:LYS:NZ	2.47	0.40
4:5:1744:G:C2	4:5:1745:G:C8	3.09	0.40
4:5:2138:U:C6	4:5:2142:U:C4	3.09	0.40
4:5:2216:A:H2'	4:5:2217:G:O4'	2.21	0.40
4:5:2218:U:C2	4:5:2219:G:N7	2.89	0.40
4:5:2528:G:H2'	4:5:2529:G:C8	2.56	0.40
4:5:2742:C:O2'	78:Bn:20:HIS:N	2.53	0.40
4:5:3021:U:O2'	46:BH:121:LYS:HE2	2.21	0.40
4:5:3186:U:HO2'	56:BR:170:THR:HG1	1.62	0.40
7:AB:82:ARG:HE	7:AB:103:MET:HE3	1.85	0.40
8:AC:38:VAL:O	8:AC:38:VAL:HG13	2.21	0.40
10:AE:18:TRP:CZ2	10:AE:43:PRO:HD2	2.57	0.40
13:AH:98:ILE:HD11	13:AH:118:LEU:HA	2.04	0.40
16:AK:7:ASP:OD1	16:AK:7:ASP:N	2.55	0.40
20:AO:32:ASP:O	20:AO:35:GLY:N	2.53	0.40
38:Ag:22:SER:HB2	38:Ag:70:ASP:HA	2.02	0.40
38:Ag:83:ALA:HB2	38:Ag:113:VAL:HB	2.04	0.40
39:BA:60:LYS:HB3	39:BA:73:GLU:OE1	2.22	0.40
42:BD:153:THR:HG23	42:BD:153:THR:O	2.21	0.40
42:BD:202:GLY:O	42:BD:206:GLN:HG2	2.21	0.40
42:BD:207:TYR:OH	42:BD:218:ARG:NH1	2.41	0.40
44:BF:163:LEU:O	44:BF:165:ASP:N	2.54	0.40
45:BG:177:TYR:HH	45:BG:226:TYR:HD2	1.68	0.40
47:BI:80:SER:OG	47:BI:144:ASN:ND2	2.54	0.40
50:BL:55:ARG:HE	56:BR:70:THR:HB	1.87	0.40
51:BM:112:ASN:OD1	51:BM:113:LEU:HG	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BN:42[A]:ASN:OD1	52:BN:125[A]:ARG:NH1	2.54	0.40
54:BP:98:LYS:HZ1	54:BP:118:GLY:HA3	1.86	0.40
55:BQ:175:GLN:NE2	55:BQ:176:ARG:HD3	2.36	0.40
62:BX:35:LEU:HD11	62:BX:48:LEU:HD12	2.04	0.40
70:Bf:74:ARG:HH21	70:Bf:82:ALA:HA	1.85	0.40
71:Bg:74:LYS:HE2	71:Bg:74:LYS:HB3	1.84	0.40
74:Bj:43:PHE:CZ	74:Bj:65:LEU:HD22	2.57	0.40
80:CA:524:LYS:O	80:CA:528:MET:HG2	2.21	0.40
80:CA:538:PHE:CD2	80:CA:639:VAL:HG13	2.56	0.40
80:CA:911:PHE:O	80:CA:915:VAL:HG13	2.22	0.40
80:CA:956:ARG:CB	80:CA:979:VAL:HG13	2.51	0.40
80:CA:1249:ARG:HB3	80:CA:1635:TYR:H	1.86	0.40
80:CA:1654:ALA:O	80:CA:1801:GLN:HG2	2.21	0.40
82:CC:328:ALA:O	82:CC:331:ARG:HG2	2.22	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	
6	AA	204/206 (99%)	186 (91%)	18 (9%)	0	100	100
7	AB	222/255 (87%)	207 (93%)	13 (6%)	2 (1%)	14	49
8	AC	214/216 (99%)	204 (95%)	10 (5%)	0	100	100
9	AD	220/222 (99%)	215 (98%)	5 (2%)	0	100	100
10	AE	256/258 (99%)	237 (93%)	18 (7%)	1 (0%)	30	66
11	AF	204/206 (99%)	197 (97%)	7 (3%)	0	100	100
12	AG	226/228 (99%)	212 (94%)	13 (6%)	1 (0%)	30	66
13	AH	182/184 (99%)	171 (94%)	11 (6%)	0	100	100
14	AI	183/200 (92%)	167 (91%)	14 (8%)	2 (1%)	11	45

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
15	AJ	182/184 (99%)	171 (94%)	10 (6%)	1 (0%)	24	62
16	AK	90/92 (98%)	86 (96%)	4 (4%)	0	100	100
17	AL	142/144 (99%)	134 (94%)	8 (6%)	0	100	100
18	AM	119/121 (98%)	95 (80%)	23 (19%)	1 (1%)	16	52
19	AN	148/150 (99%)	141 (95%)	7 (5%)	0	100	100
20	AO	125/127 (98%)	114 (91%)	11 (9%)	0	100	100
21	AP	115/117 (98%)	112 (97%)	3 (3%)	0	100	100
22	AQ	139/141 (99%)	127 (91%)	12 (9%)	0	100	100
23	AR	117/136 (86%)	113 (97%)	4 (3%)	0	100	100
24	AS	143/145 (99%)	130 (91%)	13 (9%)	0	100	100
25	AT	141/143 (99%)	130 (92%)	11 (8%)	0	100	100
26	AU	98/100 (98%)	96 (98%)	2 (2%)	0	100	100
27	AV	85/87 (98%)	72 (85%)	13 (15%)	0	100	100
28	AW	127/129 (98%)	121 (95%)	6 (5%)	0	100	100
29	AX	142/144 (99%)	129 (91%)	12 (8%)	1 (1%)	18	55
30	AY	132/134 (98%)	124 (94%)	7 (5%)	1 (1%)	16	52
31	AZ	80/82 (98%)	75 (94%)	5 (6%)	0	100	100
32	Aa	95/97 (98%)	77 (81%)	16 (17%)	2 (2%)	5	30
33	Ab	79/81 (98%)	72 (91%)	7 (9%)	0	100	100
34	Ac	61/63 (97%)	59 (97%)	2 (3%)	0	100	100
35	Ad	51/53 (96%)	49 (96%)	2 (4%)	0	100	100
36	Ae	58/60 (97%)	54 (93%)	4 (7%)	0	100	100
37	Af	71/73 (97%)	62 (87%)	9 (13%)	0	100	100
38	Ag	310/312 (99%)	300 (97%)	10 (3%)	0	100	100
39	BA	249/251 (99%)	236 (95%)	12 (5%)	1 (0%)	30	66
40	BB	384/386 (100%)	361 (94%)	22 (6%)	1 (0%)	36	71
41	BC	359/361 (99%)	338 (94%)	19 (5%)	2 (1%)	21	58
42	BD	292/294 (99%)	280 (96%)	11 (4%)	1 (0%)	36	71
43	BE	163/176 (93%)	158 (97%)	5 (3%)	0	100	100
44	BF	220/222 (99%)	209 (95%)	11 (5%)	0	100	100
45	BG	231/233 (99%)	217 (94%)	14 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	BH	189/191 (99%)	183 (97%)	6 (3%)	0	100	100
47	BI	216/218 (99%)	210 (97%)	6 (3%)	0	100	100
48	BJ	167/169 (99%)	154 (92%)	13 (8%)	0	100	100
49	BK	191/193 (99%)	176 (92%)	13 (7%)	2 (1%)	12	47
50	BL	134/136 (98%)	126 (94%)	8 (6%)	0	100	100
51	BM	201/203 (99%)	189 (94%)	12 (6%)	0	100	100
52	BN	195/197 (99%)	189 (97%)	4 (2%)	2 (1%)	12	47
53	BO	181/183 (99%)	172 (95%)	9 (5%)	0	100	100
54	BP	183/185 (99%)	174 (95%)	9 (5%)	0	100	100
55	BQ	186/188 (99%)	177 (95%)	9 (5%)	0	100	100
56	BR	169/171 (99%)	165 (98%)	4 (2%)	0	100	100
57	BS	157/159 (99%)	147 (94%)	10 (6%)	0	100	100
58	BT	98/100 (98%)	93 (95%)	5 (5%)	0	100	100
59	BU	134/136 (98%)	130 (97%)	4 (3%)	0	100	100
60	BV	124/126 (98%)	122 (98%)	2 (2%)	0	100	100
61	BW	119/121 (98%)	114 (96%)	4 (3%)	1 (1%)	16	52
62	BX	123/125 (98%)	121 (98%)	2 (2%)	0	100	100
63	BY	133/135 (98%)	129 (97%)	4 (3%)	0	100	100
64	BZ	146/148 (99%)	135 (92%)	10 (7%)	1 (1%)	18	55
65	Ba	56/58 (97%)	49 (88%)	7 (12%)	0	100	100
66	Bb	94/96 (98%)	93 (99%)	1 (1%)	0	100	100
67	Bc	107/109 (98%)	99 (92%)	8 (8%)	0	100	100
68	Bd	125/127 (98%)	120 (96%)	5 (4%)	0	100	100
69	Be	104/106 (98%)	102 (98%)	2 (2%)	0	100	100
70	Bf	110/112 (98%)	107 (97%)	3 (3%)	0	100	100
71	Bg	117/119 (98%)	113 (97%)	4 (3%)	0	100	100
72	Bh	97/99 (98%)	96 (99%)	1 (1%)	0	100	100
73	Bi	83/85 (98%)	80 (96%)	3 (4%)	0	100	100
74	Bj	75/77 (97%)	74 (99%)	1 (1%)	0	100	100
75	Bk	48/50 (96%)	47 (98%)	1 (2%)	0	100	100
76	Bl	50/52 (96%)	48 (96%)	2 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
77	Bm	23/25 (92%)	23 (100%)	0	0	100	100
78	Bn	101/103 (98%)	97 (96%)	4 (4%)	0	100	100
79	Bo	89/91 (98%)	85 (96%)	4 (4%)	0	100	100
80	CA	1738/1967 (88%)	1664 (96%)	70 (4%)	4 (0%)	43	77
81	CB	295/297 (99%)	291 (99%)	3 (1%)	1 (0%)	36	71
82	CC	110/530 (21%)	107 (97%)	3 (3%)	0	100	100
All	All	13127/14000 (94%)	12439 (95%)	660 (5%)	28 (0%)	44	77

All (28) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
14	AI	10	LYS
32	Aa	84	VAL
52	BN	111[A]	PRO
80	CA	224	THR
80	CA	621	VAL
81	CB	9	ILE
49	BK	63	VAL
7	AB	212	VAL
10	AE	43	PRO
18	AM	109	GLU
40	BB	128	LYS
52	BN	110[A]	PRO
61	BW	44	PRO
80	CA	1148	PHE
12	AG	173	PRO
30	AY	37	LYS
64	BZ	78	LEU
7	AB	213	ARG
14	AI	9	HIS
15	AJ	99	LEU
29	AX	89	ASN
39	BA	126	LEU
41	BC	292	SER
32	Aa	9	GLY
41	BC	4	PRO
42	BD	20	PHE
49	BK	77	LEU
80	CA	507	LYS

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
6	AA	170/173 (98%)	170 (100%)	0	100	100
7	AB	200/224 (89%)	200 (100%)	0	100	100
8	AC	175/175 (100%)	175 (100%)	0	100	100
9	AD	182/182 (100%)	182 (100%)	0	100	100
10	AE	220/220 (100%)	220 (100%)	0	100	100
11	AF	172/173 (99%)	172 (100%)	0	100	100
12	AG	189/195 (97%)	189 (100%)	0	100	100
13	AH	163/165 (99%)	163 (100%)	0	100	100
14	AI	148/161 (92%)	148 (100%)	0	100	100
15	AJ	156/157 (99%)	156 (100%)	0	100	100
16	AK	77/85 (91%)	77 (100%)	0	100	100
17	AL	129/129 (100%)	129 (100%)	0	100	100
18	AM	88/98 (90%)	88 (100%)	0	100	100
19	AN	127/127 (100%)	127 (100%)	0	100	100
20	AO	91/96 (95%)	91 (100%)	0	100	100
21	AP	95/98 (97%)	94 (99%)	1 (1%)	65	74
22	AQ	117/117 (100%)	117 (100%)	0	100	100
23	AR	101/124 (82%)	101 (100%)	0	100	100
24	AS	128/128 (100%)	128 (100%)	0	100	100
25	AT	115/115 (100%)	115 (100%)	0	100	100
26	AU	93/93 (100%)	93 (100%)	0	100	100
27	AV	71/74 (96%)	71 (100%)	0	100	100
28	AW	110/110 (100%)	110 (100%)	0	100	100
29	AX	119/119 (100%)	119 (100%)	0	100	100
30	AY	112/112 (100%)	112 (100%)	0	100	100
31	AZ	67/73 (92%)	67 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	Aa	83/83 (100%)	83 (100%)	0	100	100
33	Ab	70/70 (100%)	70 (100%)	0	100	100
34	Ac	55/56 (98%)	55 (100%)	0	100	100
35	Ad	47/47 (100%)	47 (100%)	0	100	100
36	Ae	50/51 (98%)	50 (100%)	0	100	100
37	Af	56/64 (88%)	56 (100%)	0	100	100
38	Ag	250/257 (97%)	250 (100%)	0	100	100
39	BA	190/193 (98%)	190 (100%)	0	100	100
40	BB	321/322 (100%)	320 (100%)	1 (0%)	86	84
41	BC	288/288 (100%)	287 (100%)	1 (0%)	86	84
42	BD	241/243 (99%)	241 (100%)	0	100	100
43	BE	138/155 (89%)	138 (100%)	0	100	100
44	BF	186/186 (100%)	186 (100%)	0	100	100
45	BG	187/191 (98%)	187 (100%)	0	100	100
46	BH	168/171 (98%)	168 (100%)	0	100	100
47	BI	185/185 (100%)	185 (100%)	0	100	100
48	BJ	146/147 (99%)	146 (100%)	0	100	100
49	BK	154/154 (100%)	153 (99%)	1 (1%)	78	80
50	BL	107/107 (100%)	107 (100%)	0	100	100
51	BM	175/175 (100%)	174 (99%)	1 (1%)	78	80
52	BN	160/160 (100%)	159 (99%)	1 (1%)	78	80
53	BO	138/145 (95%)	138 (100%)	0	100	100
54	BP	150/150 (100%)	150 (100%)	0	100	100
55	BQ	152/153 (99%)	152 (100%)	0	100	100
56	BR	155/155 (100%)	155 (100%)	0	100	100
57	BS	136/136 (100%)	136 (100%)	0	100	100
58	BT	87/87 (100%)	87 (100%)	0	100	100
59	BU	104/104 (100%)	104 (100%)	0	100	100
60	BV	56/107 (52%)	56 (100%)	0	100	100
61	BW	104/105 (99%)	104 (100%)	0	100	100
62	BX	108/108 (100%)	108 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
63	BY	115/115 (100%)	115 (100%)	0	100	100
64	BZ	118/118 (100%)	118 (100%)	0	100	100
65	Ba	46/46 (100%)	46 (100%)	0	100	100
66	Bb	81/81 (100%)	81 (100%)	0	100	100
67	Bc	92/96 (96%)	92 (100%)	0	100	100
68	Bd	108/109 (99%)	108 (100%)	0	100	100
69	Be	90/90 (100%)	90 (100%)	0	100	100
70	Bf	95/95 (100%)	95 (100%)	0	100	100
71	Bg	104/104 (100%)	104 (100%)	0	100	100
72	Bh	80/81 (99%)	80 (100%)	0	100	100
73	Bi	69/69 (100%)	69 (100%)	0	100	100
74	Bj	68/68 (100%)	68 (100%)	0	100	100
75	Bk	45/45 (100%)	45 (100%)	0	100	100
76	Bl	47/47 (100%)	47 (100%)	0	100	100
77	Bm	22/23 (96%)	22 (100%)	0	100	100
78	Bn	87/88 (99%)	87 (100%)	0	100	100
79	Bo	71/71 (100%)	71 (100%)	0	100	100
80	CA	1560/1770 (88%)	1560 (100%)	0	100	100
81	CB	266/266 (100%)	266 (100%)	0	100	100
82	CC	97/482 (20%)	97 (100%)	0	100	100
All	All	11123/11942 (93%)	11117 (100%)	6 (0%)	87	88

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
21	AP	103	ASN
40	BB	90	VAL
41	BC	12	THR
49	BK	6	ASN
51	BM	138	GLN
52	BN	50[A]	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (108) such sidechains are listed below:

Mol	Chain	Res	Type
7	AB	149	GLN
7	AB	183	GLN
8	AC	89	GLN
8	AC	108	ASN
10	AE	98	ASN
10	AE	201	HIS
13	AH	42	GLN
16	AK	39	ASN
16	AK	62	GLN
18	AM	142	GLN
19	AN	58	HIS
19	AN	151	ASN
22	AQ	100	GLN
24	AS	6	GLN
24	AS	122	HIS
26	AU	47	GLN
28	AW	12	ASN
28	AW	64	GLN
28	AW	66	ASN
28	AW	120	HIS
29	AX	21	ASN
29	AX	75	GLN
30	AY	22	GLN
31	AZ	98	GLN
32	Aa	72	HIS
32	Aa	80	HIS
33	Ab	19	HIS
37	Af	134	ASN
38	Ag	187	GLN
38	Ag	200	ASN
38	Ag	237	GLN
39	BA	139	HIS
39	BA	187	HIS
40	BB	11	HIS
40	BB	259	HIS
40	BB	269	GLN
41	BC	115	HIS
41	BC	237	GLN
41	BC	260	GLN
41	BC	291	ASN
42	BD	296	GLN
45	BG	240	ASN
45	BG	243	GLN

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Mol	Chain	Res	Type
46	BH	102	ASN
46	BH	149	ASN
46	BH	157	ASN
47	BI	144	ASN
48	BJ	62	ASN
49	BK	6	ASN
49	BK	13	HIS
49	BK	17	HIS
50	BL	27	GLN
50	BL	105	GLN
51	BM	32	GLN
51	BM	70	ASN
53	BO	45	GLN
53	BO	97	ASN
53	BO	137	ASN
55	BQ	7	GLN
55	BQ	141	HIS
56	BR	8	GLN
56	BR	62	ASN
56	BR	138	GLN
57	BS	5	HIS
57	BS	103	GLN
57	BS	131	GLN
58	BT	88	GLN
60	BV	42	GLN
62	BX	110	HIS
63	BY	127	ASN
64	BZ	64	GLN
65	Ba	42	ASN
67	Bc	15	ASN
67	Bc	57	GLN
69	Be	39	GLN
70	Bf	98	GLN
71	Bg	62	GLN
71	Bg	113	GLN
72	Bh	92	ASN
73	Bi	57	HIS
73	Bi	76	ASN
76	Bl	109	ASN
78	Bn	20	HIS
78	Bn	22	GLN
78	Bn	82	GLN

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Mol	Chain	Res	Type
80	CA	258	GLN
80	CA	261	ASN
80	CA	692	HIS
80	CA	817	GLN
80	CA	884	GLN
80	CA	901	GLN
80	CA	924	ASN
80	CA	1096	HIS
80	CA	1128	ASN
80	CA	1144	GLN
80	CA	1155	ASN
80	CA	1404	ASN
80	CA	1412	GLN
80	CA	1610	ASN
80	CA	1649	GLN
80	CA	1773	GLN
80	CA	1835	GLN
81	CB	103	GLN
81	CB	160	GLN
81	CB	213	ASN
81	CB	276	ASN
82	CC	212	HIS
82	CC	380	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	2	1768/1800 (98%)	434 (24%)	36 (2%)
2	3	157/158 (99%)	31 (19%)	1 (0%)
3	4	120/121 (99%)	14 (11%)	1 (0%)
4	5	3159/3396 (93%)	584 (18%)	32 (1%)
5	6	75/76 (98%)	14 (18%)	0
All	All	5279/5551 (95%)	1077 (20%)	70 (1%)

All (1077) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	2	2	A
1	2	4	C
1	2	5	U
1	2	9	U

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Mol	Chain	Res	Type
1	2	17	C
1	2	25	C
1	2	26	A
1	2	34	G
1	2	43	A
1	2	46	A
1	2	47	A
1	2	56	U
1	2	57	G
1	2	60	U
1	2	62	A
1	2	63	G
1	2	65	A
1	2	66	U
1	2	68	A
1	2	69	G
1	2	71	A
1	2	74	U
1	2	75	U
1	2	76	A
1	2	78	A
1	2	79	C
1	2	81	G
1	2	100	A
1	2	104	A
1	2	114	C
1	2	126	A
1	2	129	U
1	2	130	C
1	2	131	C
1	2	132	U
1	2	134	U
1	2	138	A
1	2	140	A
1	2	141	U
1	2	142	G
1	2	153	G
1	2	159	U
1	2	169	A
1	2	171	A
1	2	176	C
1	2	178	U

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Mol	Chain	Res	Type
1	2	180	A
1	2	186	C
1	2	187	G
1	2	188	A
1	2	191	C
1	2	193	U
1	2	195	G
1	2	196	G
1	2	198	A
1	2	215	A
1	2	216	U
1	2	217	A
1	2	218	A
1	2	225	A
1	2	227	U
1	2	228	G
1	2	230	C
1	2	232	U
1	2	233	C
1	2	234	G
1	2	236	A
1	2	240	U
1	2	241	U
1	2	250	C
1	2	257	A
1	2	260	U
1	2	261	U
1	2	265	A
1	2	274	G
1	2	276	C
1	2	278	U
1	2	279	G
1	2	280	U
1	2	281	G
1	2	287	G
1	2	299	A
1	2	308	C
1	2	312	A
1	2	314	C
1	2	316	A
1	2	322	G
1	2	323	A

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Mol	Chain	Res	Type
1	2	330	G
1	2	337	G
1	2	338	C
1	2	352	A
1	2	359	A
1	2	361	C
1	2	370	A
1	2	387	A
1	2	388	G
1	2	400	A
1	2	401	A
1	2	402	C
1	2	404	G
1	2	411	C
1	2	415	C
1	2	417	A
1	2	419	G
1	2	423	G
1	2	424	C
1	2	425	A
1	2	426	G
1	2	428	A
1	2	434	G
1	2	437	A
1	2	439	U
1	2	444	C
1	2	448	C
1	2	460	A
1	2	464	A
1	2	468	A
1	2	477	A
1	2	483	A
1	2	485	A
1	2	487	G
1	2	493	U
1	2	494	U
1	2	495	C
1	2	496	G
1	2	498	G
1	2	499	U
1	2	500	C
1	2	502	U

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Mol	Chain	Res	Type
1	2	506	A
1	2	510	G
1	2	511	A
1	2	515	A
1	2	525	A
1	2	527	A
1	2	534	A
1	2	537	G
1	2	538	A
1	2	540	G
1	2	541	A
1	2	542	A
1	2	544	A
1	2	548	G
1	2	555	A
1	2	556	A
1	2	557	G
1	2	558	U
1	2	559	C
1	2	565	C
1	2	568	G
1	2	579	A
1	2	580	A
1	2	594	A
1	2	595	G
1	2	606	A
1	2	611	U
1	2	619	A
1	2	620	A
1	2	622	A
1	2	623	A
1	2	624	G
1	2	629	U
1	2	630	A
1	2	634	G
1	2	639	U
1	2	640	U
1	2	641	G
1	2	651	G
1	2	653	C
1	2	655	G
1	2	677	G

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Mol	Chain	Res	Type
1	2	678	A
1	2	679	U
1	2	680	U
1	2	681	U
1	2	687	G
1	2	693	U
1	2	694	U
1	2	696	C
1	2	697	C
1	2	698	U
1	2	700	C
1	2	704	C
1	2	705	U
1	2	706	A
1	2	707	A
1	2	708	C
1	2	709	C
1	2	710	U
1	2	711	U
1	2	712	G
1	2	728	U
1	2	730	G
1	2	732	G
1	2	733	A
1	2	734	A
1	2	741	C
1	2	742	U
1	2	743	U
1	2	745	U
1	2	753	A
1	2	765	G
1	2	766	U
1	2	771	A
1	2	774	A
1	2	775	G
1	2	778	G
1	2	780	A
1	2	781	U
1	2	782	U
1	2	783	G
1	2	789	A
1	2	803	A

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Mol	Chain	Res	Type
1	2	812	A
1	2	813	U
1	2	814	A
1	2	815	G
1	2	816	G
1	2	820	U
1	2	821	U
1	2	823	G
1	2	833	U
1	2	836	U
1	2	840	U
1	2	841	U
1	2	846	G
1	2	852	C
1	2	856	A
1	2	857	U
1	2	860	U
1	2	861	U
1	2	863	A
1	2	876	G
1	2	886	U
1	2	899	G
1	2	901	G
1	2	902	G
1	2	904	G
1	2	912	U
1	2	913	G
1	2	914	G
1	2	915	A
1	2	929	A
1	2	933	A
1	2	934	C
1	2	935	U
1	2	942	G
1	2	945	U
1	2	960	U
1	2	964	U
1	2	966	A
1	2	970	A
1	2	971	A
1	2	988	A
1	2	992	A

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Mol	Chain	Res	Type
1	2	993	A
1	2	1004	U
1	2	1005	A
1	2	1023	A
1	2	1024	U
1	2	1025	A
1	2	1028	C
1	2	1029	U
1	2	1039	A
1	2	1052	U
1	2	1053	G
1	2	1058	U
1	2	1060	U
1	2	1061	A
1	2	1076	A
1	2	1082	C
1	2	1092	A
1	2	1093	A
1	2	1096	C
1	2	1100	G
1	2	1108	G
1	2	1109	G
1	2	1126	G
1	2	1138	A
1	2	1150	G
1	2	1158	C
1	2	1160	A
1	2	1164	G
1	2	1166	A
1	2	1167	G
1	2	1170	G
1	2	1185	U
1	2	1194	A
1	2	1196	A
1	2	1198	G
1	2	1199	G
1	2	1200	G
1	2	1212	G
1	2	1217	A
1	2	1218	G
1	2	1219	A
1	2	1227	A

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Mol	Chain	Res	Type
1	2	1228	G
1	2	1229	G
1	2	1241	G
1	2	1243	G
1	2	1244	A
1	2	1245	G
1	2	1246	C
1	2	1249	U
1	2	1252	C
1	2	1256	A
1	2	1257	U
1	2	1274	C
1	2	1275	A
1	2	1276	U
1	2	1285	U
1	2	1286	U
1	2	1298	U
1	2	1299	G
1	2	1301	U
1	2	1314	U
1	2	1315	U
1	2	1321	A
1	2	1322	A
1	2	1325	A
1	2	1337	A
1	2	1338	C
1	2	1340	U
1	2	1344	A
1	2	1345	A
1	2	1346	A
1	2	1348	A
1	2	1360	A
1	2	1361	U
1	2	1363	U
1	2	1367	G
1	2	1370	U
1	2	1371	A
1	2	1372	U
1	2	1373	C
1	2	1382	A
1	2	1383	G
1	2	1389	C

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Mol	Chain	Res	Type
1	2	1390	U
1	2	1398	U
1	2	1399	C
1	2	1400	A
1	2	1402	G
1	2	1412	G
1	2	1414	U
1	2	1427	A
1	2	1428	G
1	2	1429	G
1	2	1431	C
1	2	1432	U
1	2	1436	A
1	2	1437	U
1	2	1445	G
1	2	1446	A
1	2	1456	C
1	2	1459	C
1	2	1460	A
1	2	1465	C
1	2	1466	G
1	2	1471	A
1	2	1472	C
1	2	1473	U
1	2	1479	A
1	2	1491	U
1	2	1493	A
1	2	1496	U
1	2	1503	A
1	2	1514	U
1	2	1516	A
1	2	1520	U
1	2	1521	G
1	2	1523	G
1	2	1524	A
1	2	1535	U
1	2	1536	G
1	2	1537	C
1	2	1540	G
1	2	1542	G
1	2	1543	A
1	2	1545	A

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Mol	Chain	Res	Type
1	2	1546	G
1	2	1557	U
1	2	1558	U
1	2	1559	A
1	2	1561	U
1	2	1563	C
1	2	1564	U
1	2	1569	A
1	2	1570	A
1	2	1573	A
1	2	1575	G
1	2	1576	A
1	2	1577	A
1	2	1583	A
1	2	1584	G
1	2	1585	U
1	2	1601	G
1	2	1611	A
1	2	1614	A
1	2	1616	G
1	2	1619	C
1	2	1622	G
1	2	1631	A
1	2	1634	C
1	2	1636	C
1	2	1637	C
1	2	1651	A
1	2	1657	U
1	2	1658	G
1	2	1688	U
1	2	1701	A
1	2	1709	C
1	2	1711	C
1	2	1715	G
1	2	1717	G
1	2	1742	U
1	2	1750	A
1	2	1756	A
1	2	1760	G
1	2	1767	G
1	2	1769	U
1	2	1770	U

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Mol	Chain	Res	Type
1	2	1780	G
1	2	1782	A
1	2	1783	C
1	2	1791	A
1	2	1792	G
1	2	1793	G
1	2	1794	A
1	2	1795	U
1	2	1796	C
1	2	1799	U
2	3	9	A
2	3	20	U
2	3	23	U
2	3	34	U
2	3	35	C
2	3	39	G
2	3	52	A
2	3	59	A
2	3	62	C
2	3	63	G
2	3	80	A
2	3	81	U
2	3	82	U
2	3	84	C
2	3	86	U
2	3	87	G
2	3	90	U
2	3	95	G
2	3	99	C
2	3	104	A
2	3	105	A
2	3	106	C
2	3	111	A
2	3	113	U
2	3	116	G
2	3	125	U
2	3	126	A
2	3	148	G
2	3	152	G
2	3	156	U
2	3	158	U
3	4	7	G

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Mol	Chain	Res	Type
3	4	11	A
3	4	29	C
3	4	53	U
3	4	54	U
3	4	55	A
3	4	65	G
3	4	74	C
3	4	76	A
3	4	77	G
3	4	101	G
3	4	102	A
3	4	112	G
3	4	121	U
4	5	6	A
4	5	14	U
4	5	18	G
4	5	22	G
4	5	26	A
4	5	40	A
4	5	43	A
4	5	49	A
4	5	59	G
4	5	60	A
4	5	65	A
4	5	66	A
4	5	76	G
4	5	85	A
4	5	92	G
4	5	99	A
4	5	109	A
4	5	110	G
4	5	111	C
4	5	113	C
4	5	118	U
4	5	121	A
4	5	122	A
4	5	123	A
4	5	133	U
4	5	135	C
4	5	136	G
4	5	146	U
4	5	156	G

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Mol	Chain	Res	Type
4	5	157	A
4	5	161	G
4	5	166	C
4	5	187	A
4	5	190	U
4	5	191	U
4	5	210	U
4	5	211	A
4	5	213	A
4	5	218	G
4	5	219	A
4	5	237	G
4	5	240	U
4	5	241	G
4	5	243	G
4	5	245	U
4	5	248	U
4	5	249	U
4	5	252	U
4	5	263	C
4	5	266	A
4	5	269	G
4	5	282	G
4	5	283	G
4	5	286	U
4	5	295	A
4	5	298	U
4	5	323	A
4	5	329	U
4	5	339	C
4	5	350	C
4	5	351	A
4	5	370	U
4	5	371	G
4	5	374	A
4	5	376	G
4	5	378	A
4	5	390	G
4	5	395	A
4	5	398	A
4	5	401	U
4	5	402	A

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Mol	Chain	Res	Type
4	5	403	C
4	5	421	G
4	5	422	A
4	5	439	C
4	5	521	U
4	5	522	A
4	5	524	A
4	5	536	G
4	5	537	U
4	5	544	C
4	5	547	C
4	5	548	G
4	5	549	G
4	5	551	A
4	5	553	G
4	5	556	U
4	5	558	A
4	5	560	A
4	5	579	A
4	5	580	G
4	5	590	A
4	5	593	A
4	5	601	G
4	5	610	G
4	5	611	G
4	5	612	A
4	5	621	U
4	5	622	A
4	5	623	A
4	5	637	C
4	5	639	C
4	5	650	A
4	5	668	C
4	5	678	A
4	5	682	U
4	5	692	A
4	5	706	A
4	5	713	G
4	5	716	A
4	5	717	A
4	5	718	C
4	5	720	U

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Mol	Chain	Res	Type
4	5	726	G
4	5	765	U
4	5	768	U
4	5	777	U
4	5	778	U
4	5	781	A
4	5	782	G
4	5	786	G
4	5	787	A
4	5	807	A
4	5	817	A
4	5	818	A
4	5	831	A
4	5	847	A
4	5	848	A
4	5	850	C
4	5	862	C
4	5	870	G
4	5	872	U
4	5	875	U
4	5	880	U
4	5	896	A
4	5	897	A
4	5	908	G
4	5	909	G
4	5	915	A
4	5	917	G
4	5	918	A
4	5	922	A
4	5	924	C
4	5	926	A
4	5	938	G
4	5	940	U
4	5	945	C
4	5	960	C
4	5	961	U
4	5	975	G
4	5	980	U
4	5	995	G
4	5	996	U
4	5	1003	A
4	5	1011	G

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Mol	Chain	Res	Type
4	5	1016	U
4	5	1025	G
4	5	1026	A
4	5	1029	U
4	5	1030	G
4	5	1033	C
4	5	1037	A
4	5	1042	U
4	5	1048	A
4	5	1050	C
4	5	1065	A
4	5	1066	A
4	5	1073	G
4	5	1082	U
4	5	1094	A
4	5	1095	U
4	5	1096	U
4	5	1098	G
4	5	1099	A
4	5	1104	A
4	5	1105	G
4	5	1118	G
4	5	1130	A
4	5	1132	G
4	5	1144	A
4	5	1145	U
4	5	1154	A
4	5	1156	C
4	5	1160	A
4	5	1161	C
4	5	1180	A
4	5	1181	A
4	5	1182	U
4	5	1191	A
4	5	1193	C
4	5	1194	A
4	5	1197	C
4	5	1202	C
4	5	1203	A
4	5	1207	G
4	5	1209	U
4	5	1218	A

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Mol	Chain	Res	Type
4	5	1223	G
4	5	1226	A
4	5	1227	G
4	5	1228	C
4	5	1232	A
4	5	1233	C
4	5	1237	G
4	5	1241	A
4	5	1243	G
4	5	1246	A
4	5	1247	G
4	5	1254	U
4	5	1255	C
4	5	1259	U
4	5	1263	G
4	5	1264	A
4	5	1265	G
4	5	1266	U
4	5	1267	G
4	5	1270	U
4	5	1271	A
4	5	1272	A
4	5	1273	C
4	5	1275	A
4	5	1279	A
4	5	1280	C
4	5	1286	G
4	5	1287	A
4	5	1288	A
4	5	1296	G
4	5	1306	U
4	5	1310	U
4	5	1314	G
4	5	1331	A
4	5	1332	U
4	5	1346	G
4	5	1349	U
4	5	1350	G
4	5	1352	U
4	5	1353	A
4	5	1355	G
4	5	1356	A

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Mol	Chain	Res	Type
4	5	1357	U
4	5	1358	G
4	5	1387	A
4	5	1392	C
4	5	1400	A
4	5	1401	G
4	5	1419	A
4	5	1420	A
4	5	1435	G
4	5	1438	C
4	5	1447	A
4	5	1451	G
4	5	1467	G
4	5	1482	A
4	5	1483	A
4	5	1484	G
4	5	1495	U
4	5	1496	U
4	5	1509	C
4	5	1524	U
4	5	1534	U
4	5	1537	G
4	5	1540	A
4	5	1557	C
4	5	1558	A
4	5	1559	A
4	5	1561	G
4	5	1563	C
4	5	1564	C
4	5	1568	U
4	5	1569	U
4	5	1570	U
4	5	1573	U
4	5	1574	G
4	5	1576	A
4	5	1577	G
4	5	1581	A
4	5	1584	A
4	5	1588	A
4	5	1589	A
4	5	1590	A
4	5	1594	A

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Mol	Chain	Res	Type
4	5	1595	A
4	5	1597	C
4	5	1606	A
4	5	1621	U
4	5	1630	U
4	5	1640	C
4	5	1643	A
4	5	1644	A
4	5	1646	U
4	5	1718	U
4	5	1725	U
4	5	1726	C
4	5	1742	A
4	5	1751	A
4	5	1752	G
4	5	1766	U
4	5	1767	G
4	5	1771	G
4	5	1776	G
4	5	1781	G
4	5	1797	G
4	5	1798	A
4	5	1815	A
4	5	1817	A
4	5	1818	G
4	5	1820	U
4	5	1821	U
4	5	1822	U
4	5	1840	A
4	5	1843	A
4	5	1847	C
4	5	1851	A
4	5	1865	A
4	5	1867	C
4	5	1868	A
4	5	1872	U
4	5	1879	G
4	5	1881	U
4	5	1894	A
4	5	1896	A
4	5	1907	G
4	5	1909	A

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Mol	Chain	Res	Type
4	5	1926	U
4	5	1927	C
4	5	1931	A
4	5	1933	A
4	5	1936	G
4	5	1952	C
4	5	1953	G
4	5	1955	G
4	5	2102	C
4	5	2103	U
4	5	2114	A
4	5	2115	C
4	5	2122	G
4	5	2123	G
4	5	2127	A
4	5	2132	A
4	5	2141	U
4	5	2143	A
4	5	2145	A
4	5	2146	A
4	5	2159	A
4	5	2170	G
4	5	2172	G
4	5	2188	G
4	5	2189	A
4	5	2193	C
4	5	2194	U
4	5	2205	C
4	5	2206	U
4	5	2207	G
4	5	2208	A
4	5	2210	U
4	5	2211	G
4	5	2223	A
4	5	2224	A
4	5	2226	U
4	5	2245	A
4	5	2247	G
4	5	2250	G
4	5	2253	A
4	5	2257	A
4	5	2258	C

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Mol	Chain	Res	Type
4	5	2273	G
4	5	2274	G
4	5	2282	A
4	5	2283	U
4	5	2284	G
4	5	2288	C
4	5	2289	G
4	5	2308	G
4	5	2311	U
4	5	2314	A
4	5	2315	U
4	5	2316	G
4	5	2335	U
4	5	2337	U
4	5	2351	C
4	5	2357	A
4	5	2368	A
4	5	2373	A
4	5	2374	A
4	5	2375	C
4	5	2376	G
4	5	2389	U
4	5	2390	C
4	5	2394	G
4	5	2398	A
4	5	2403	A
4	5	2404	G
4	5	2405	A
4	5	2412	U
4	5	2419	G
4	5	2420	A
4	5	2436	G
4	5	2440	A
4	5	2447	U
4	5	2448	A
4	5	2450	A
4	5	2453	G
4	5	2497	C
4	5	2499	U
4	5	2500	U
4	5	2502	U
4	5	2503	A

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Mol	Chain	Res	Type
4	5	2506	U
4	5	2507	U
4	5	2508	C
4	5	2509	U
4	5	2515	U
4	5	2516	A
4	5	2523	G
4	5	2532	C
4	5	2534	G
4	5	2538	U
4	5	2539	U
4	5	2540	C
4	5	2541	A
4	5	2542	U
4	5	2543	U
4	5	2547	C
4	5	2550	G
4	5	2551	U
4	5	2553	C
4	5	2562	A
4	5	2570	A
4	5	2571	U
4	5	2572	U
4	5	2573	C
4	5	2574	G
4	5	2586	G
4	5	2588	U
4	5	2594	A
4	5	2607	G
4	5	2608	G
4	5	2615	G
4	5	2627	A
4	5	2630	U
4	5	2637	A
4	5	2640	G
4	5	2653	U
4	5	2657	A
4	5	2658	A
4	5	2675	A
4	5	2678	G
4	5	2682	U
4	5	2690	A

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Mol	Chain	Res	Type
4	5	2691	G
4	5	2692	A
4	5	2697	A
4	5	2700	G
4	5	2704	A
4	5	2705	A
4	5	2720	U
4	5	2729	G
4	5	2730	U
4	5	2738	C
4	5	2753	U
4	5	2754	G
4	5	2756	C
4	5	2769	U
4	5	2778	G
4	5	2779	G
4	5	2797	G
4	5	2798	C
4	5	2800	A
4	5	2801	G
4	5	2802	A
4	5	2803	A
4	5	2804	A
4	5	2811	C
4	5	2815	G
4	5	2817	G
4	5	2818	A
4	5	2822	C
4	5	2843	U
4	5	2844	U
4	5	2845	C
4	5	2846	A
4	5	2847	U
4	5	2848	A
4	5	2850	C
4	5	2857	G
4	5	2861	U
4	5	2872	G
4	5	2873	A
4	5	2876	U
4	5	2887	U
4	5	2888	A

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Mol	Chain	Res	Type
4	5	2890	C
4	5	2899	G
4	5	2912	A
4	5	2924	U
4	5	2929	C
4	5	2936	U
4	5	2937	A
4	5	2939	G
4	5	2943	C
4	5	2952	G
4	5	2972	A
4	5	2973	G
4	5	2984	C
4	5	2991	G
4	5	2998	G
4	5	3013	A
4	5	3052	U
4	5	3057	U
4	5	3060	G
4	5	3079	U
4	5	3081	G
4	5	3087	A
4	5	3093	C
4	5	3102	G
4	5	3110	G
4	5	3114	A
4	5	3123	A
4	5	3130	A
4	5	3131	A
4	5	3132	U
4	5	3143	A
4	5	3144	C
4	5	3155	C
4	5	3156	U
4	5	3157	U
4	5	3158	U
4	5	3166	A
4	5	3171	A
4	5	3173	A
4	5	3174	G
4	5	3175	A
4	5	3177	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	5	3180	U
4	5	3182	C
4	5	3186	U
4	5	3188	A
4	5	3206	G
4	5	3207	C
4	5	3208	U
4	5	3211	A
4	5	3218	C
4	5	3219	A
4	5	3220	G
4	5	3228	A
4	5	3230	G
4	5	3236	C
4	5	3240	G
4	5	3244	A
4	5	3246	A
4	5	3248	G
4	5	3260	U
4	5	3261	G
4	5	3271	U
4	5	3273	C
4	5	3274	A
4	5	3277	G
4	5	3282	U
4	5	3289	G
4	5	3290	G
4	5	3295	A
4	5	3296	A
4	5	3305	U
4	5	3308	A
4	5	3317	A
4	5	3319	G
4	5	3320	U
4	5	3321	A
4	5	3335	U
4	5	3342	U
4	5	3343	A
4	5	3346	G
4	5	3352	U
4	5	3353	U
4	5	3354	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	5	3355	U
4	5	3357	G
4	5	3364	U
4	5	3369	U
4	5	3370	G
4	5	3376	A
4	5	3379	C
4	5	3391	G
4	5	3397	U
5	6	6	C
5	6	9	G
5	6	16	U
5	6	17	G
5	6	19	U
5	6	21	A
5	6	22	C
5	6	46	A
5	6	47	U
5	6	48	U
5	6	58	A
5	6	60	U
5	6	73	G
5	6	76	A

All (70) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	2	59	C
1	2	68	A
1	2	77	U
1	2	78	A
1	2	139	C
1	2	141	U
1	2	280	U
1	2	322	G
1	2	387	A
1	2	400	A
1	2	539	G
1	2	541	A
1	2	555	A
1	2	639	U
1	2	640	U

Continued on next page...

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Mol	Chain	Res	Type
1	2	705	U
1	2	711	U
1	2	765	G
1	2	819	G
1	2	912	U
1	2	928	U
1	2	963	A
1	2	1023	A
1	2	1226	A
1	2	1256	A
1	2	1273	G
1	2	1274	C
1	2	1344	A
1	2	1382	A
1	2	1430	U
1	2	1471	A
1	2	1534	G
1	2	1584	G
1	2	1633	A
1	2	1636	C
1	2	1791	A
2	3	85	G
3	4	52	G
4	5	239	G
4	5	282	G
4	5	706	A
4	5	716	A
4	5	764	G
4	5	847	A
4	5	874	C
4	5	917	G
4	5	1065	A
4	5	1098	G
4	5	1356	A
4	5	1563	C
4	5	1816	U
4	5	1817	A
4	5	1821	U
4	5	2101	A
4	5	2102	C
4	5	2113	U
4	5	2447	U

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Continued from previous page...

Mol	Chain	Res	Type
4	5	2496	C
4	5	2501	A
4	5	2538	U
4	5	2542	U
4	5	2587	G
4	5	2802	A
4	5	3122	U
4	5	3219	A
4	5	3229	C
4	5	3270	U
4	5	3320	U
4	5	3351	C
4	5	3352	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 95 ligands modelled in this entry, 95 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

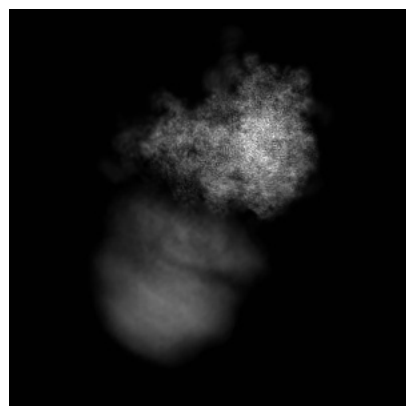
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-14978. These allow visual inspection of the internal detail of the map and identification of artifacts.

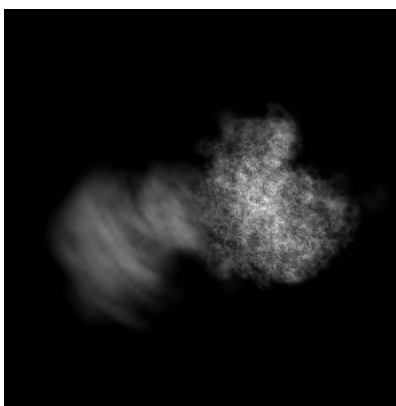
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

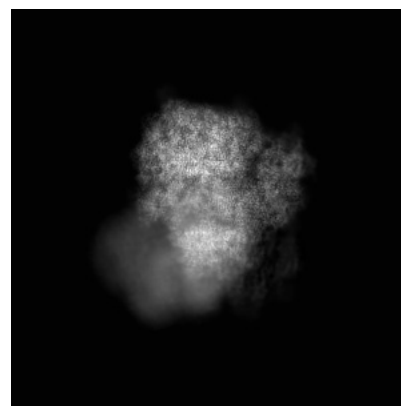
6.1.1 Primary map



X

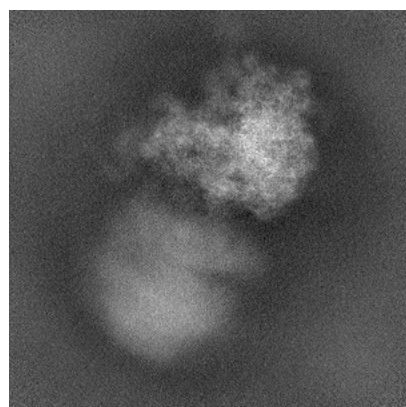


Y

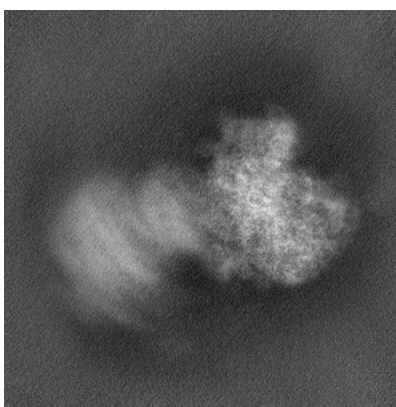


Z

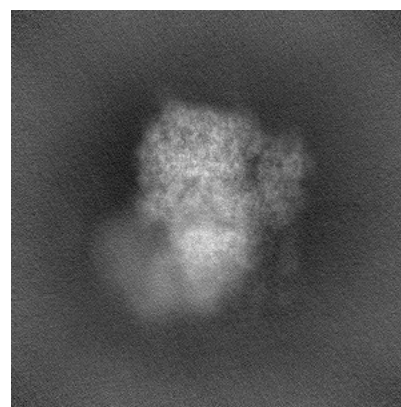
6.1.2 Raw map



X



Y

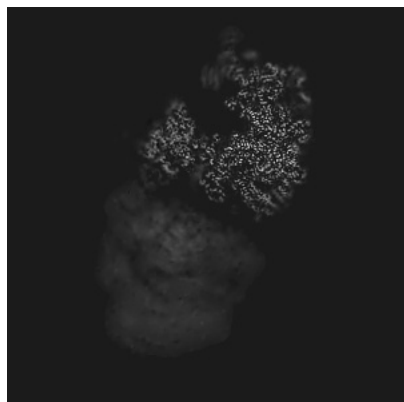


Z

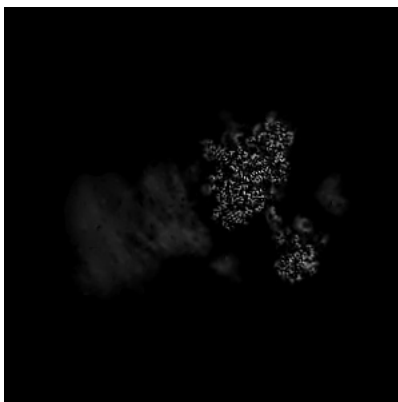
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 280

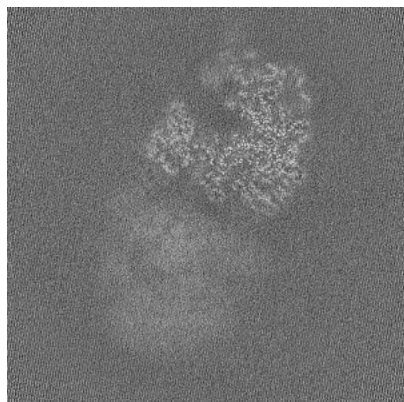


Y Index: 280

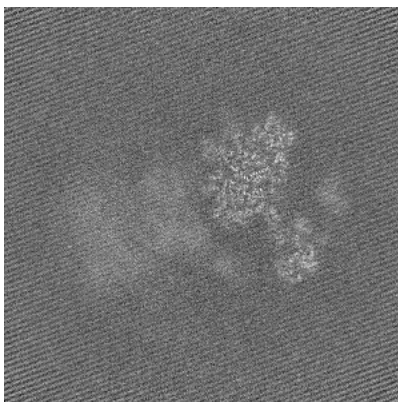


Z Index: 280

6.2.2 Raw map



X Index: 280



Y Index: 280

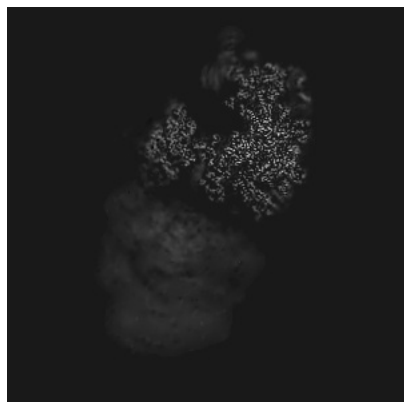


Z Index: 280

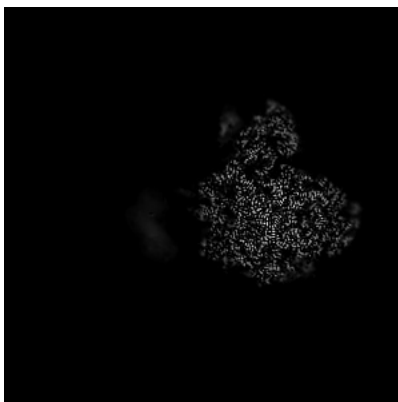
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

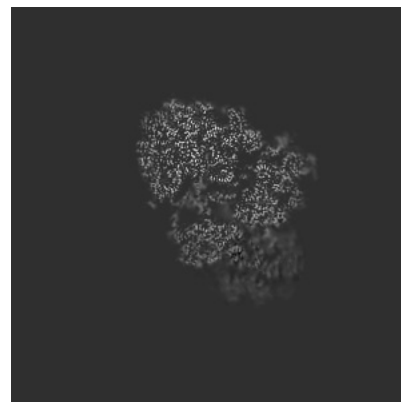
6.3.1 Primary map



X Index: 281

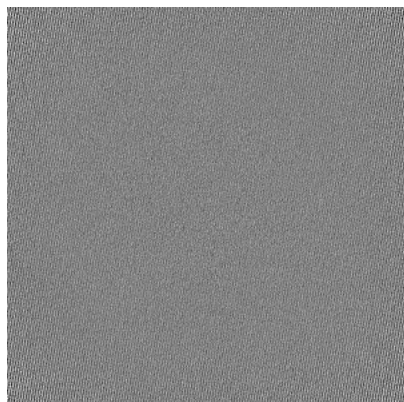


Y Index: 345

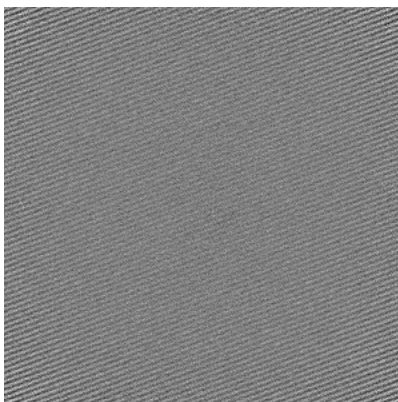


Z Index: 380

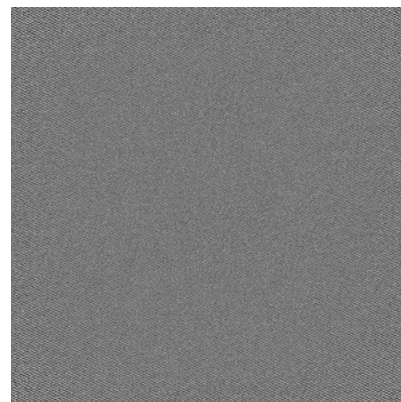
6.3.2 Raw map



X Index: 0



Y Index: 0

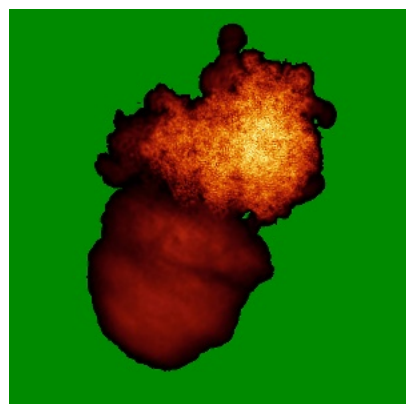


Z Index: 0

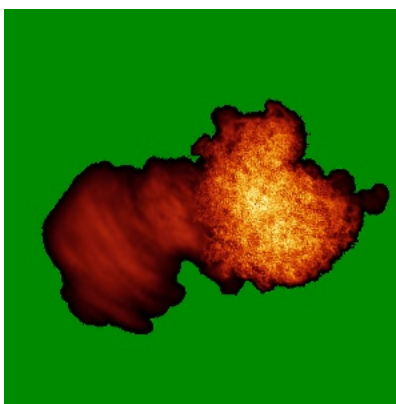
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

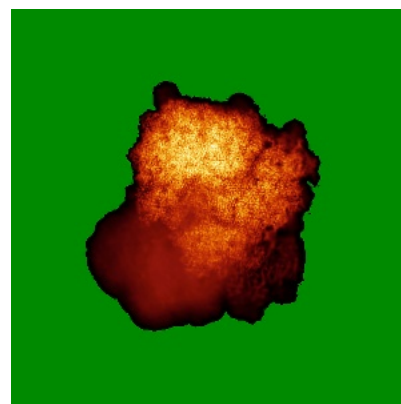
6.4.1 Primary map



X

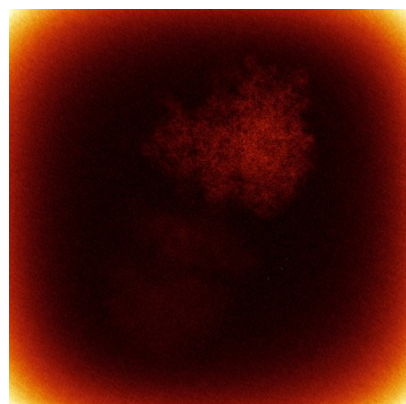


Y

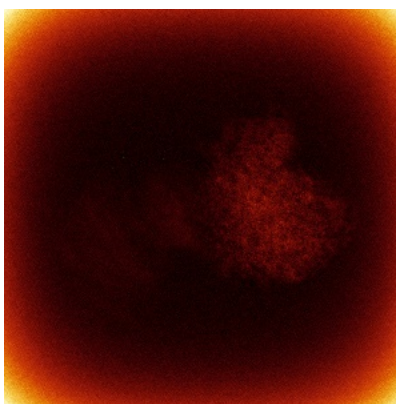


Z

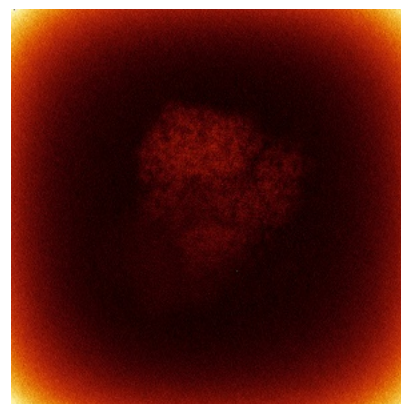
6.4.2 Raw map



X



Y



Z

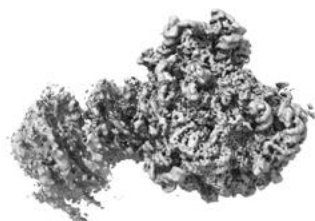
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



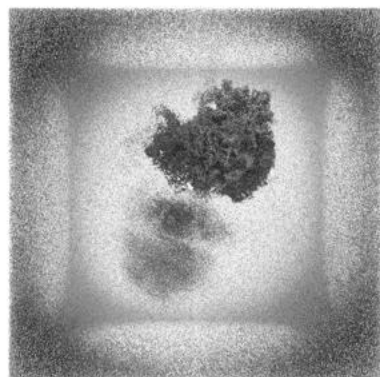
Y



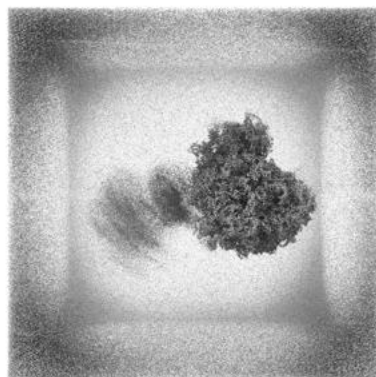
Z

The images above show the 3D surface view of the map at the recommended contour level 0.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

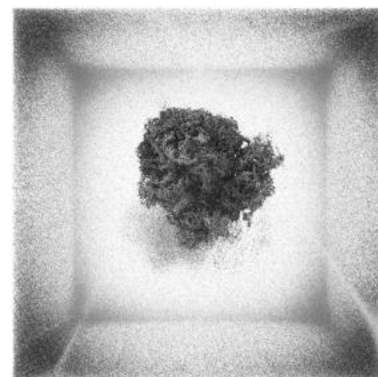
6.5.2 Raw map



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.

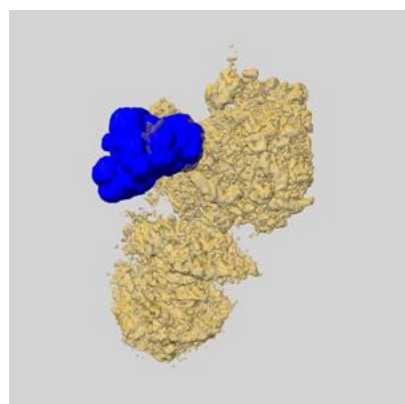
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

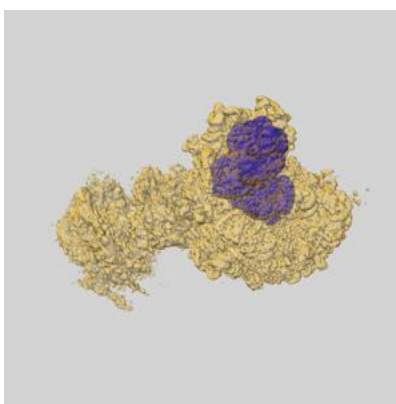
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

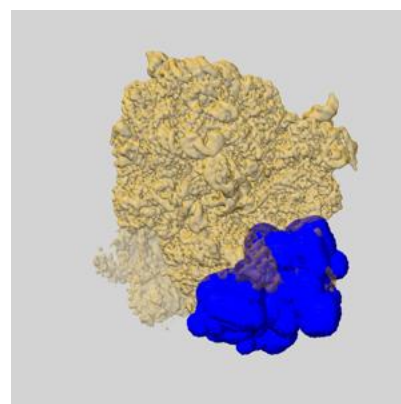
6.6.1 emd_14978_msk_1.map [i](#)



X

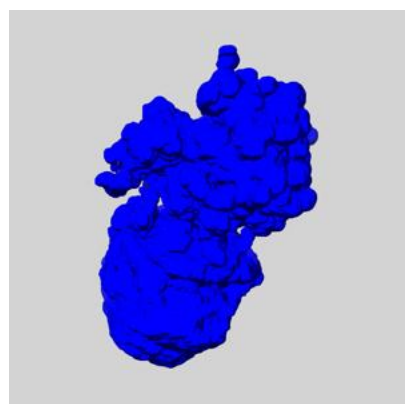


Y

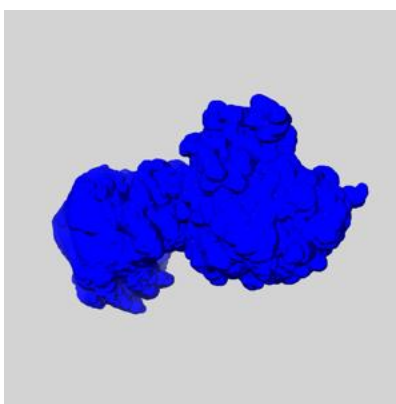


Z

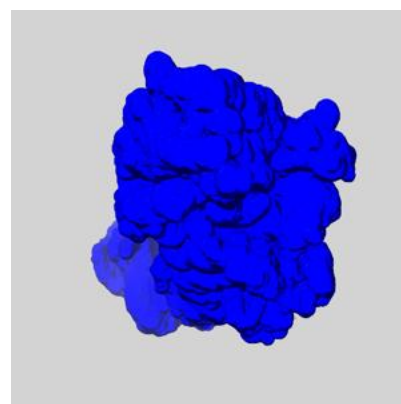
6.6.2 emd_14978_msk_2.map [i](#)



X



Y

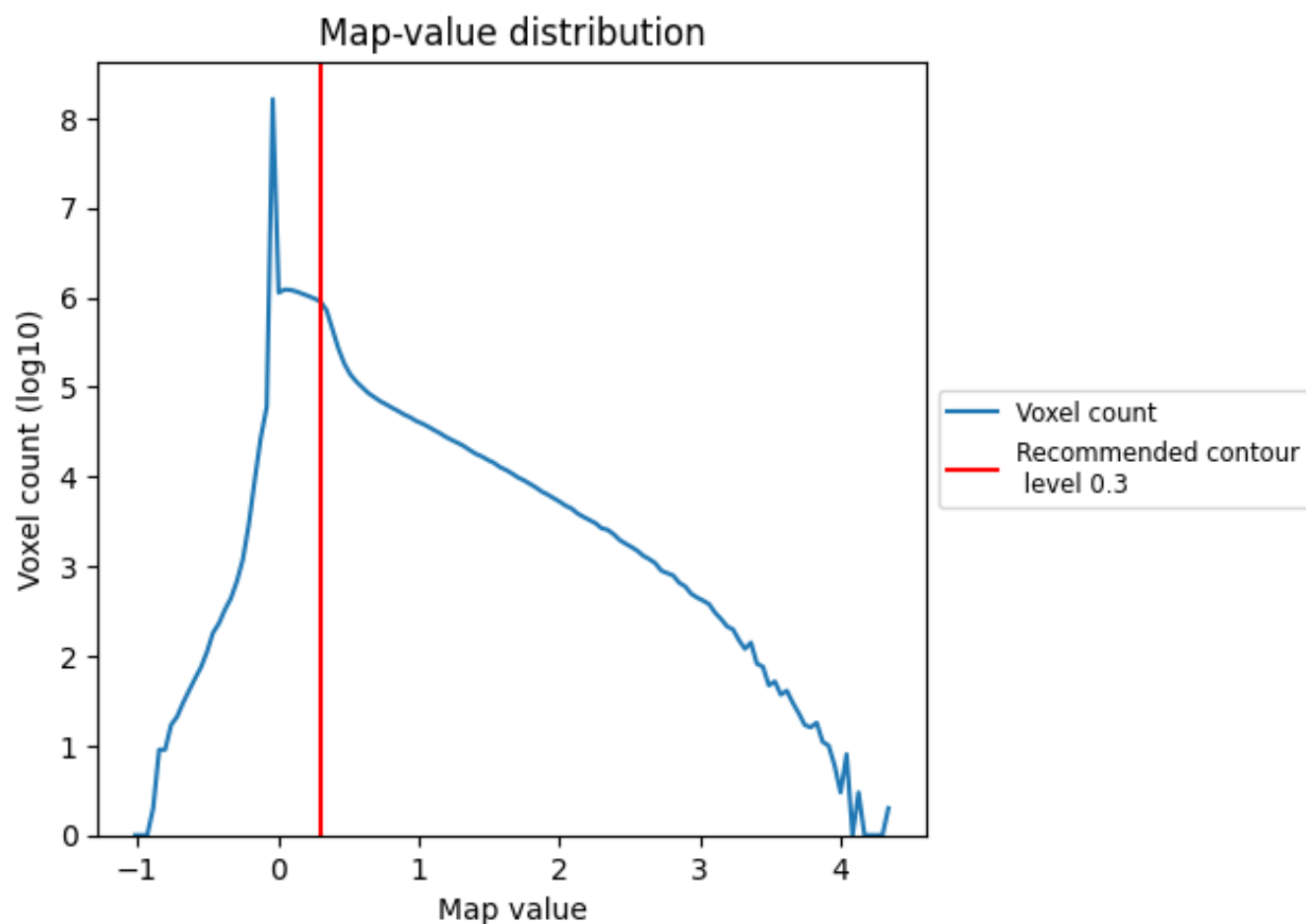


Z

7 Map analysis [i](#)

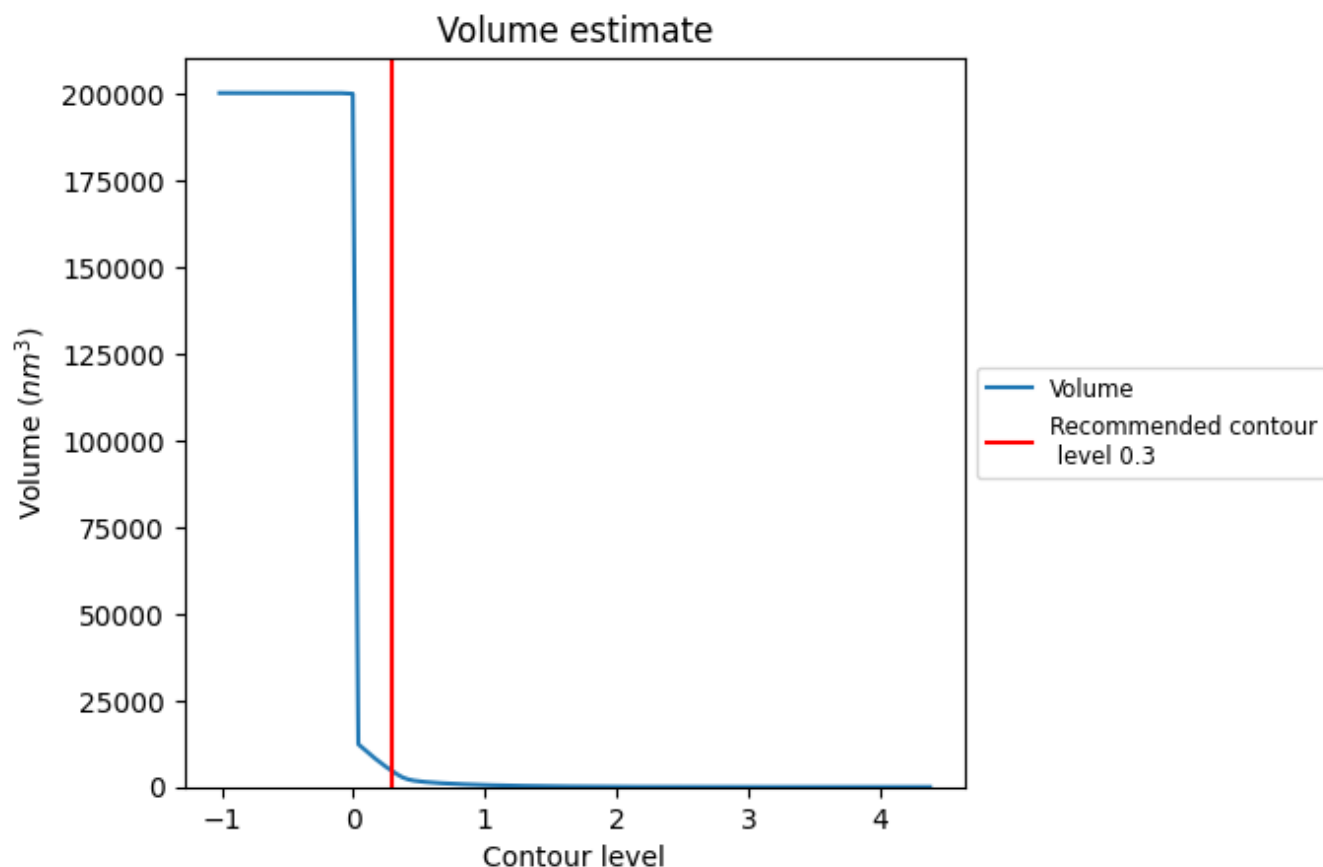
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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.

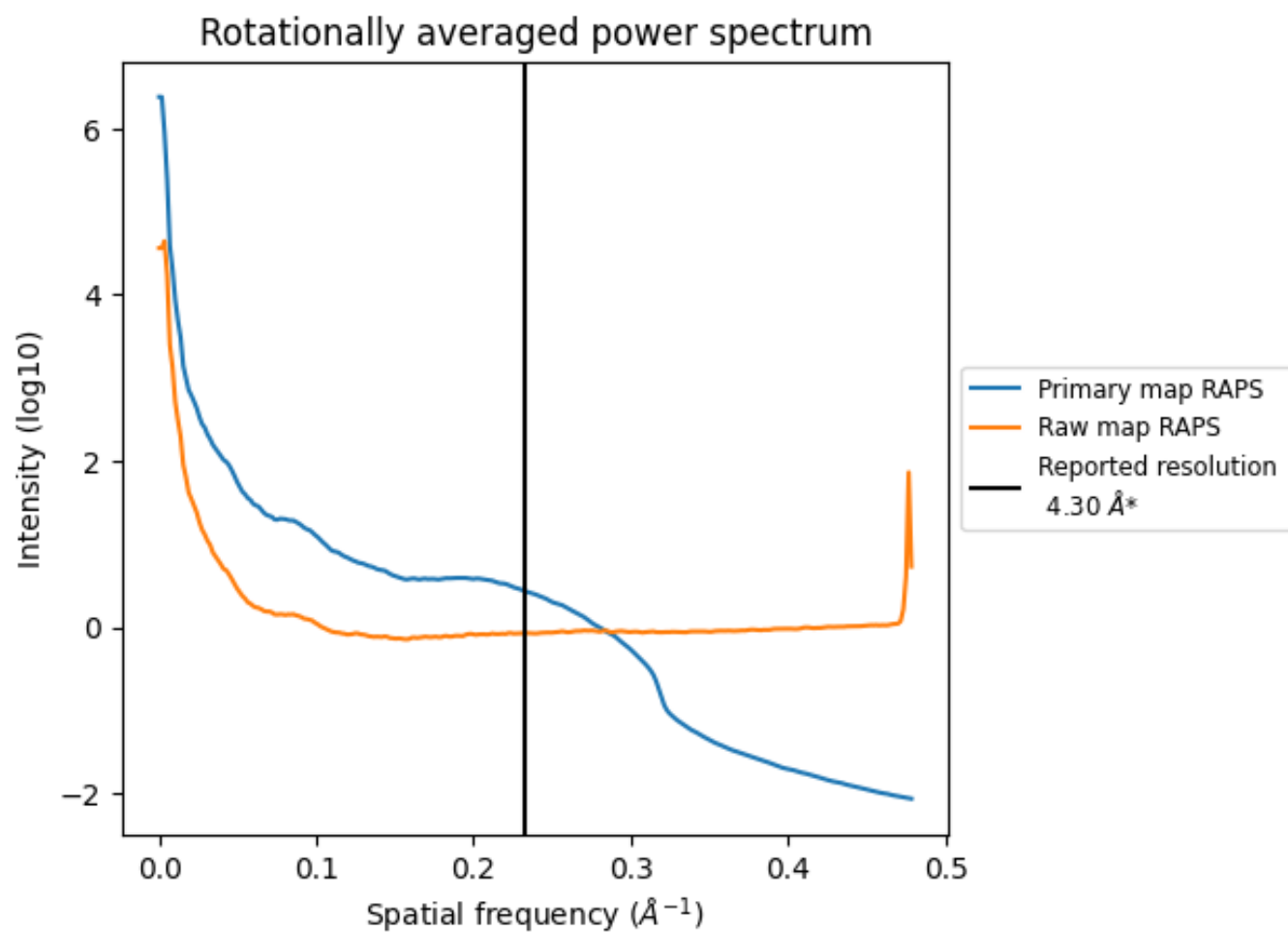
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 4493 nm^3 ; this corresponds to an approximate mass of 4059 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 ⓘ

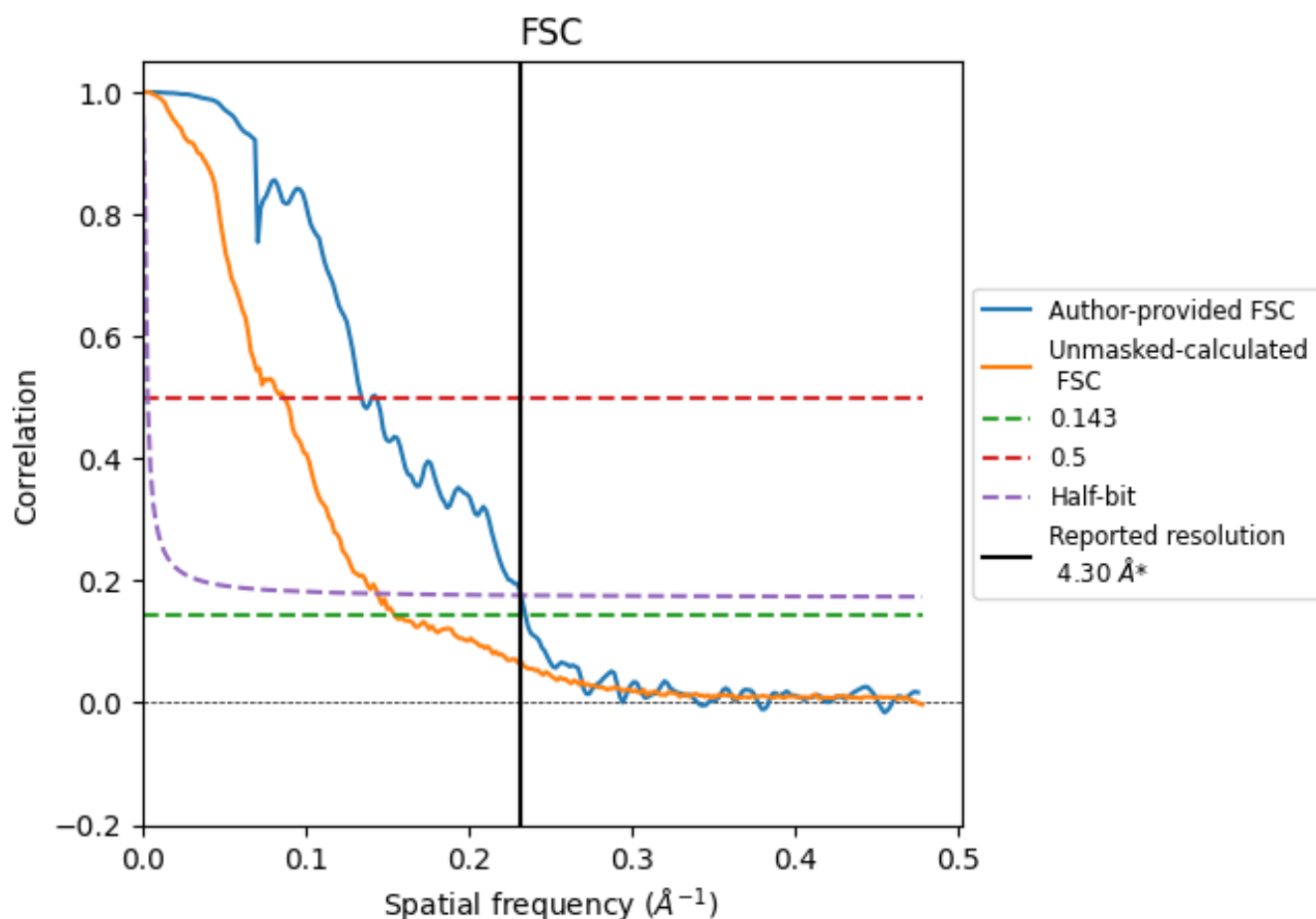


*Reported resolution corresponds to spatial frequency of 0.233 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.233 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

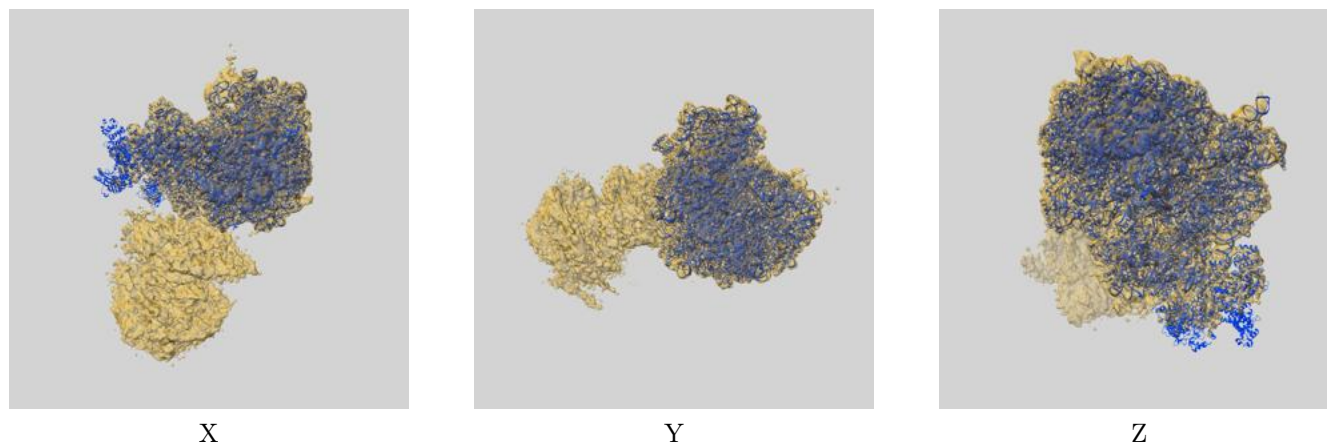
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.30	-	-
Author-provided FSC curve	4.25	7.43	4.30
Unmasked-calculated*	6.46	11.49	6.92

*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 6.46 differs from the reported value 4.3 by more than 10 %

9 Map-model fit [i](#)

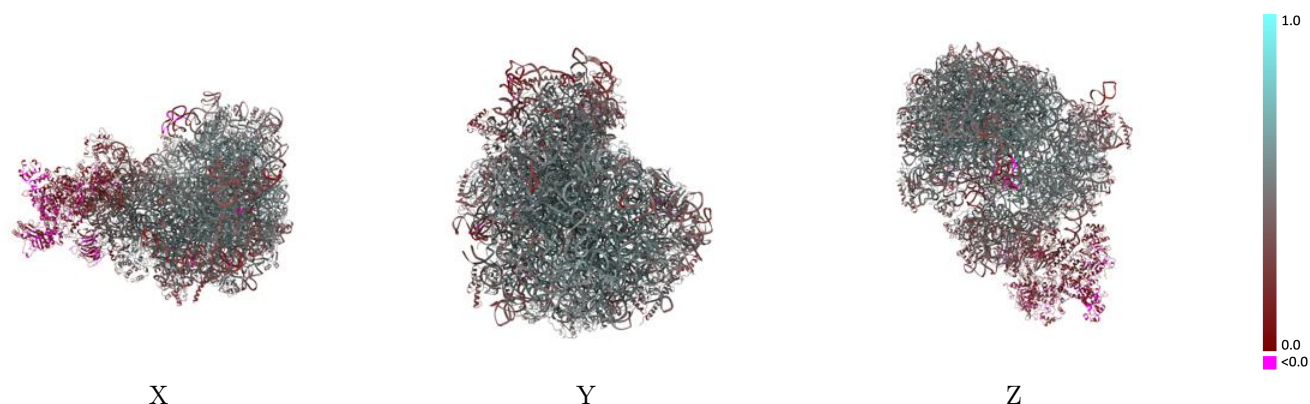
This section contains information regarding the fit between EMDB map EMD-14978 and PDB model 7ZUW. Per-residue inclusion information can be found in section [3](#) on page [20](#).

9.1 Map-model overlay [i](#)



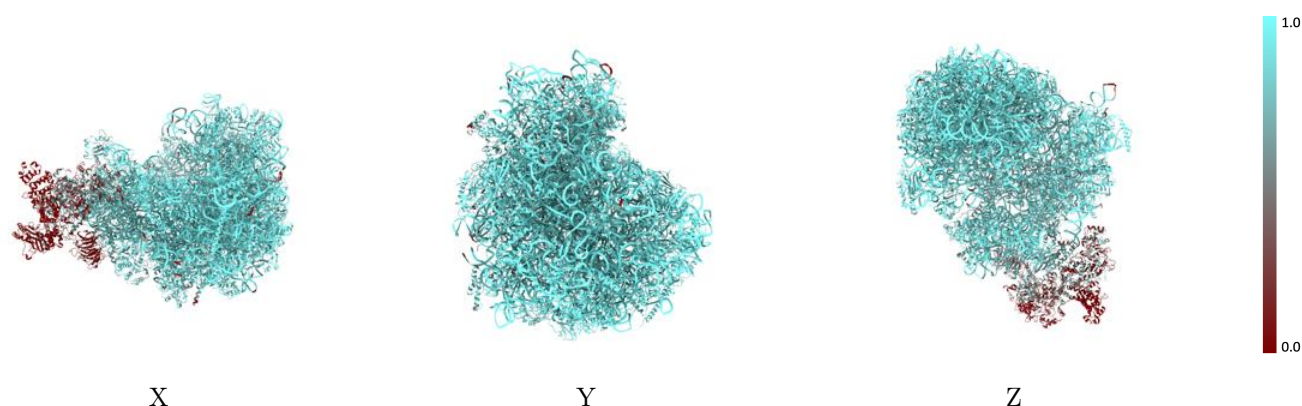
The images above show the 3D surface view of the map at the recommended contour level 0.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



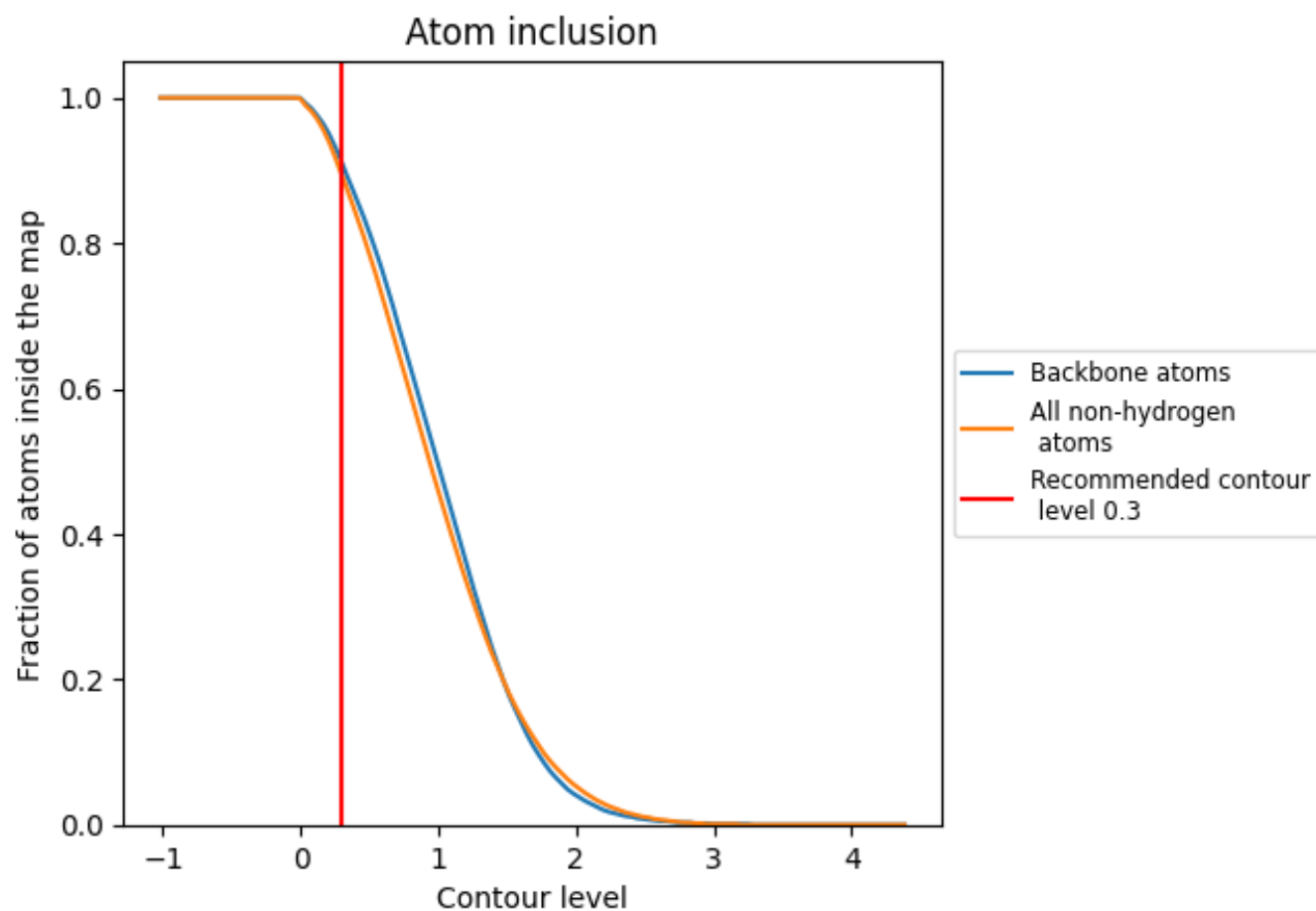
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 [i](#)



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 (0.3).

9.4 Atom inclusion [i](#)



At the recommended contour level, 91% of all backbone atoms, 89% 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 (0.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8940	 0.4470
2	 0.9700	 0.4490
3	 0.9880	 0.5060
4	 0.9930	 0.4820
5	 0.9790	 0.5100
6	 0.9660	 0.3900
AA	 0.8950	 0.4260
AB	 0.8510	 0.4360
AC	 0.9320	 0.4800
AD	 0.8650	 0.3930
AE	 0.9540	 0.4910
AF	 0.8550	 0.3850
AG	 0.9110	 0.3870
AH	 0.8330	 0.3740
AI	 0.9590	 0.4980
AJ	 0.9500	 0.4460
AK	 0.8970	 0.3180
AL	 0.9220	 0.5140
AM	 0.7540	 0.2070
AN	 0.9140	 0.4800
AO	 0.9180	 0.4910
AP	 0.9100	 0.3570
AQ	 0.8830	 0.3830
AR	 0.8230	 0.3630
AS	 0.9050	 0.3610
AT	 0.8810	 0.3400
AU	 0.8860	 0.3600
AV	 0.9080	 0.4500
AW	 0.9560	 0.5190
AX	 0.9700	 0.5350
AY	 0.9440	 0.4420
AZ	 0.7330	 0.3040
Aa	 0.9200	 0.4790
Ab	 0.8600	 0.4290
Ac	 0.8010	 0.4040



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Chain	Atom inclusion	Q-score
Ad	 0.9690	 0.4690
Ae	 0.8840	 0.4330
Af	 0.8220	 0.2180
Ag	 0.0700	 0.1180
BA	 0.9590	 0.5570
BB	 0.9760	 0.5300
BC	 0.9670	 0.5180
BD	 0.9160	 0.4200
BE	 0.9280	 0.4320
BF	 0.9670	 0.5180
BG	 0.8670	 0.4130
BH	 0.9420	 0.4780
BI	 0.9420	 0.4950
BJ	 0.9020	 0.4000
BK	 0.9450	 0.4840
BL	 0.9510	 0.4520
BM	 0.9730	 0.5520
BN	 0.9700	 0.5230
BO	 0.9670	 0.5300
BP	 0.9770	 0.5400
BQ	 0.9200	 0.4810
BR	 0.9530	 0.5150
BS	 0.9650	 0.5140
BT	 0.9360	 0.4360
BU	 0.9560	 0.5600
BV	 0.9420	 0.4570
BW	 0.9500	 0.4830
BX	 0.9720	 0.4800
BY	 0.9170	 0.4450
BZ	 0.9530	 0.5280
Ba	 0.9490	 0.5030
Bb	 0.9350	 0.4890
Bc	 0.9540	 0.5040
Bd	 0.9740	 0.5520
Be	 0.9610	 0.5490
Bf	 0.9170	 0.5050
Bg	 0.9510	 0.4680
Bh	 0.9010	 0.4400
Bi	 0.9950	 0.5690
Bj	 0.9160	 0.4040
Bk	 0.9830	 0.5650
Bl	 0.9510	 0.5160

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Chain	Atom inclusion	Q-score
Bm	 0.9860	 0.5870
Bn	 0.9430	 0.5110
Bo	 0.9390	 0.5410
CA	 0.3620	 0.1550
CB	 0.0060	 0.0480
CC	 0.2120	 0.1450