



Full wwPDB EM Validation Report ⓘ

Dec 10, 2025 – 07:18 pm GMT

PDB ID : 8CMJ / pdb_00008cmj
EMDB ID : EMD-16729
Title : Translocation intermediate 4 (TI-4*) of 80S *S. cerevisiae* ribosome with eEF2
in the absence of sordarin
Authors : Milicevic, N.; Jenner, L.; Myasnikov, A.; Yusupov, M.; Yusupova, G.
Deposited on : 2023-02-20
Resolution : 3.79 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

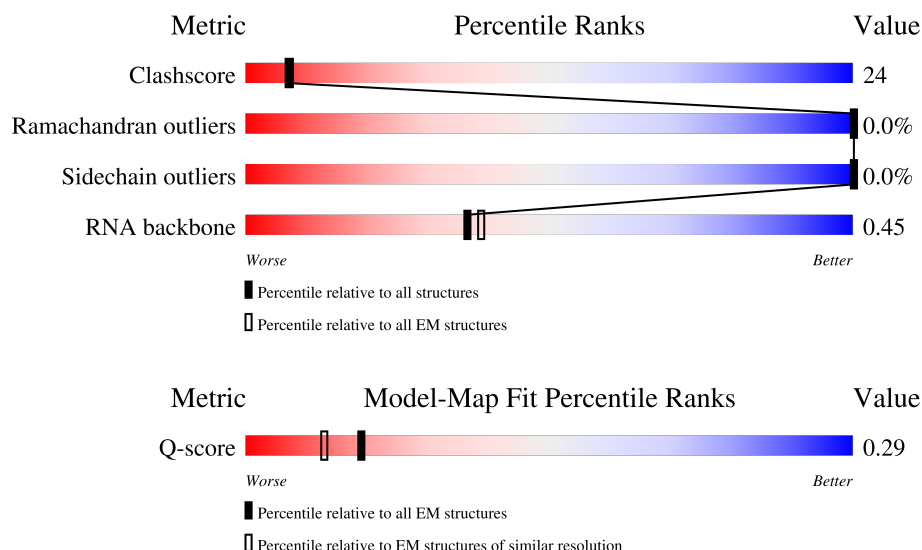
EMDB validation analysis : 0.0.1.dev129
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.47

1 Overall quality at a glance

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

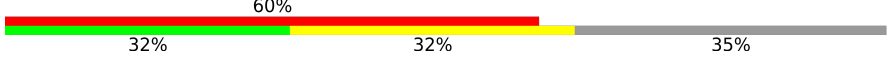
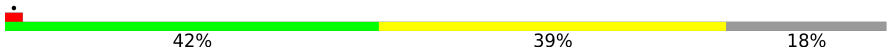
The reported resolution of this entry is 3.79 Å.

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



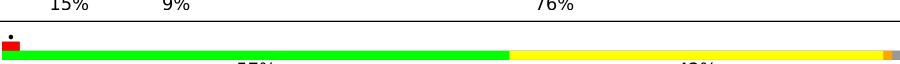
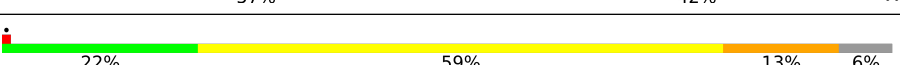
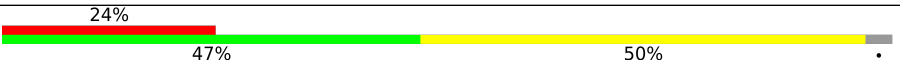
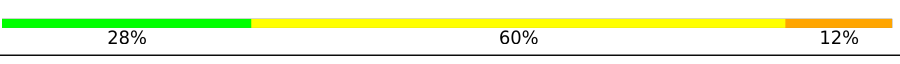
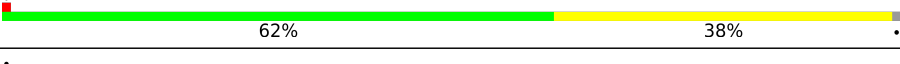
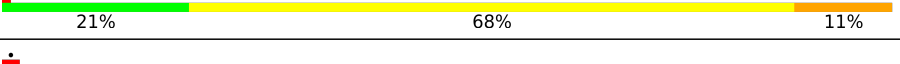
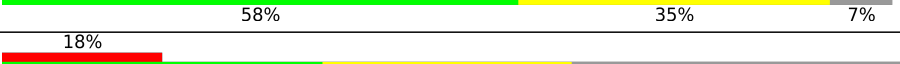
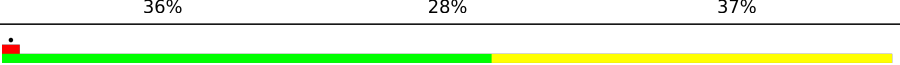
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
RNA backbone	6643	2191	-
Q-score	-	25397	10018 (3.29 - 4.29)

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	0	135	
2	1	108	
3	2	119	

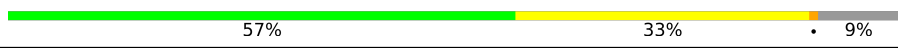
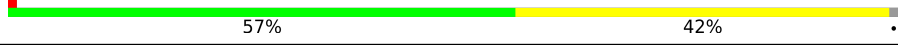
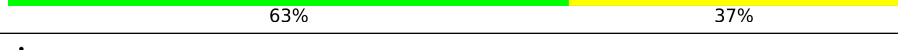
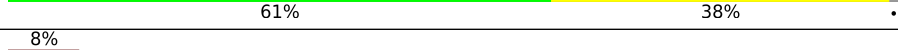
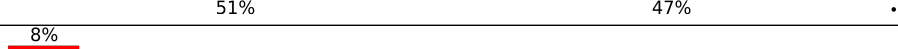
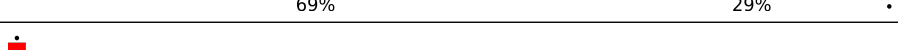
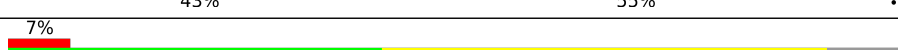
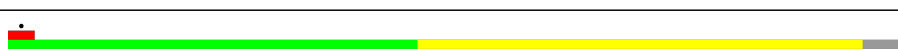
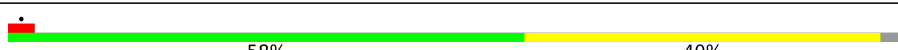
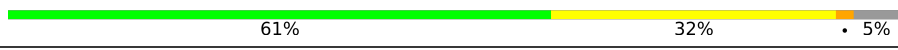
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Mol	Chain	Length	Quality of chain
4	3	82	
5	4	67	
6	5	56	
7	6	63	
8	7	319	
9	8	152	
10	A	199	
11	AA	3396	
12	Aa	842	
13	B	184	
14	BB	121	
15	C	186	
16	CC	158	
17	D	189	
18	DD	312	
19	E	172	
20	EE	254	
21	Ee	165	
22	F	160	
23	FF	387	
24	G	121	
25	GG	362	
26	H	137	
27	HH	297	
28	I	155	

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Mol	Chain	Length	Quality of chain
29	II	176	
30	J	142	
31	JJ	244	
32	K	127	
33	KK	256	
34	L	136	
35	LL	191	
36	M	149	
37	MM	221	
38	N	59	
39	NN	174	
40	O	105	
41	OO	199	
42	P	113	
43	PP	138	
44	Q	130	
45	QQ	204	
46	R	107	
47	S	121	
48	T	120	
49	U	100	
50	V	88	
51	W	78	
52	X	51	
53	Y	128	

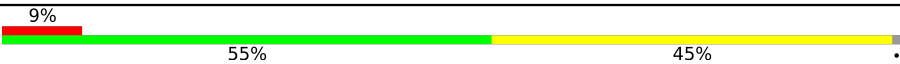
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Mol	Chain	Length	Quality of chain
54	Z	25	
55	a	106	
56	b	92	
57	c	1800	
58	d	252	
59	e	255	
60	f	254	
61	g	240	
62	h	261	
63	i	225	
64	j	236	
65	k	190	
66	l	200	
67	m	197	
68	n	105	
69	o	156	
70	p	151	
71	q	137	
72	r	142	
73	s	143	
74	t	136	
75	u	146	
76	v	144	
77	w	121	
78	x	87	

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Mol	Chain	Length	Quality of chain
79	y	130	
80	z	145	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
11	OMU	AA	2724	-	-	X	-
57	OMG	c	562	-	-	X	-

2 Entry composition

There are 85 unique types of molecules in this entry. The entry contains 202630 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 protein called 40S ribosomal protein S24-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
1	0	134	Total	C	N	O	0	0
			1073	676	208	189		

- Molecule 2 is a protein called 40S ribosomal protein S25-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
2	1	70	Total	C	N	O	0	0
			563	360	104	99		

- Molecule 3 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	2	97	Total	C	N	O	S	0	0
			769	475	160	129	5		

- Molecule 4 is a protein called 40S ribosomal protein S27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	3	81	Total	C	N	O	S	0	0
			610	382	110	113	5		

- Molecule 5 is a protein called 40S ribosomal protein S28-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	4	63	Total	C	N	O	S	0	0
			497	306	99	91	1		

- Molecule 6 is a protein called HLJ1_G0030400.mRNA.1.CDS.1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	5	49	Total	C	N	O	S	0	0
			404	249	86	65	4		

- Molecule 7 is a protein called 40S ribosomal protein S30-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	6	53	Total	C	N	O	S	0	0
			427	269	88	69	1		

- Molecule 8 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	7	318	Total	C	N	O	S	0	0
			2436	1541	418	469	8		

- Molecule 9 is a protein called Ubiquitin-40S ribosomal protein S31.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	8	36	Total	C	N	O	S	0	0
			276	173	54	45	4		

- Molecule 10 is a protein called 60S ribosomal protein L16-A.

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

- Molecule 11 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AA	3197	Total	C	N	O	P	0	0
			68429	30589	12334	22309	3197		

- Molecule 12 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	Aa	816	Total	C	N	O	S	0	0
			6368	4051	1088	1198	31		

- Molecule 13 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	B	154	Total	C	N	O	0	0
			1222	761	237	224		

- Molecule 14 is a RNA chain called 5S ribosomal RNA.

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

- Molecule 15 is a protein called 60S ribosomal protein L18-A.

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

- Molecule 16 is a RNA chain called 5.8S ribosomal RNA.

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

- Molecule 17 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	D	176	Total	C	N	O	0	0
			1423	875	308	240		

- Molecule 18 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	DD	197	Total	C	N	O	S	0	0
			1531	980	266	281	4		

- Molecule 19 is a protein called 60S ribosomal protein L20-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	E	172	Total	C	N	O	S	0	0
			1445	930	267	244	4		

- Molecule 20 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	EE	252	Total	C	N	O	S	0	0
			1914	1191	388	334	1		

- Molecule 21 is a protein called 60S ribosomal protein L12-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	Ee	158	Total	C	N	O	S	0	0
			1196	750	216	228	2		

- Molecule 22 is a protein called 60S ribosomal protein L21-A.

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

- Molecule 23 is a protein called 60S ribosomal protein L3.

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

- Molecule 24 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	G	97	Total	C	N	O		0	0
			770	499	126	145			

- Molecule 25 is a protein called 60S ribosomal protein L4-A.

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

- Molecule 26 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	H	129	Total	C	N	O	S	0	0
			963	607	180	169	7		

- Molecule 27 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	HH	296	Total	C	N	O	S	0	0
			2375	1501	414	458	2		

- Molecule 28 is a protein called 60S ribosomal protein L24-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	I	63	Total	C	N	O	S	0	0
			521	336	102	82	1		

- Molecule 29 is a protein called 60S ribosomal protein L6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	II	155	Total	C	N	O	S	0	0
			1230	795	221	213	1		

- Molecule 30 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	J	120	Total	C	N	O	S	0	0
			959	617	168	172	2		

- Molecule 31 is a protein called 60S ribosomal protein L7-A.

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

- Molecule 32 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
32	K	126	Total	C	N	O	0	0
			993	625	192	176		

- Molecule 33 is a protein called 60S ribosomal protein L8-A.

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

- Molecule 34 is a protein called 60S ribosomal protein L27-A.

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

- Molecule 35 is a protein called RPL9A isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	LL	191	Total	C	N	O	S	0	0
			1518	963	274	277	4		

- Molecule 36 is a protein called 60S ribosomal protein L28.

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

- Molecule 37 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	MM	215	Total	C	N	O	S	0	0
			1743	1102	331	303	7		

- Molecule 38 is a protein called 60S ribosomal protein L29.

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

- Molecule 39 is a protein called 60S ribosomal protein L11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	NN	169	Total	C	N	O	S	0	0
			1353	847	253	249	4		

- Molecule 40 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	O	97	Total	C	N	O	S	0	0
			742	479	124	138	1		

- Molecule 41 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	OO	193	Total	C	N	O		0	0
			1543	962	315	266			

- Molecule 42 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	P	109	Total	C	N	O	S	0	0
			883	559	167	156	1		

- Molecule 43 is a protein called 60S ribosomal protein L14-A.

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

- Molecule 44 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Q	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 45 is a protein called 60S ribosomal protein L15-A.

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

- Molecule 46 is a protein called 60S ribosomal protein L33-A.

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

- Molecule 47 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	S	109	Total	C	N	O	S	0	0
			861	533	175	149	4		

- Molecule 48 is a protein called 60S ribosomal protein L35-A.

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

- Molecule 49 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	U	99	Total	C	N	O	S	0	0
			771	481	156	132	2		

- Molecule 50 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	V	84	Total	C	N	O	S	0	0
			665	405	145	110	5		

- Molecule 51 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	W	77	Total	C	N	O	S	0	0
			612	391	115	106			

- Molecule 52 is a protein called 60S ribosomal protein L39.

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

- Molecule 53 is a protein called Ubiquitin-60S ribosomal protein L40.

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

- Molecule 54 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	Z	25	Total	C	N	O	S	0	0
			233	142	63	27	1		

- Molecule 55 is a protein called 60S ribosomal protein L42-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	a	102	Total	C	N	O	S	0	0
			819	514	166	134	5		

- Molecule 56 is a protein called 60S ribosomal protein L43-A.

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

- Molecule 57 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	c	1608	Total	C	N	O	P	0	0
			34321	15360	6093	11260	1608		

- Molecule 58 is a protein called 40S ribosomal protein S0-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	d	206	Total	C	N	O	S	0	0
			1583	1017	281	283	2		

- Molecule 59 is a protein called 40S ribosomal protein S1-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	e	212	Total	C	N	O	S	0	0
			1689	1073	303	309	4		

- Molecule 60 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	f	217	Total	C	N	O	S	0	0
			1635	1047	289	297	2		

- Molecule 61 is a protein called RPS3 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	g	183	Total	C	N	O	S	0	0
			1412	893	260	253	6		

- Molecule 62 is a protein called 40S ribosomal protein S4-A.

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

- Molecule 63 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	i	199	Total	C	N	O	S	0	0
			1572	987	290	292	3		

- Molecule 64 is a protein called 40S ribosomal protein S6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	j	219	Total	C	N	O	S	0	0
			1766	1108	341	314	3		

- Molecule 65 is a protein called 40S ribosomal protein S7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	k	184	Total	C	N	O	S	0	0
			1481	951	265	265			

- Molecule 66 is a protein called 40S ribosomal protein S8-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	l	184	Total	C	N	O	S	0	0
			1457	906	291	258	2		

- Molecule 67 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	m	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 68 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	n	33	Total	C	N	O	S	0	0
			300	199	46	55			

- Molecule 69 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	o	142	Total	C	N	O	S	0	0
			1146	735	217	191	3		

- Molecule 70 is a protein called 40S ribosomal protein S13.

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

- Molecule 71 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	q	127	Total	C	N	O	S	0	0
			891	545	182	163	1		

- Molecule 72 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	r	91	Total	C	N	O	S	0	0
			732	469	138	120	5		

- Molecule 73 is a protein called 40S ribosomal protein S16-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
73	s	136	Total	C	N	O	0	0
			1069	686	195	188		

- Molecule 74 is a protein called 40S ribosomal protein S17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	t	121	Total	C	N	O	S	0	0
			961	599	182	178	2		

- Molecule 75 is a protein called 40S ribosomal protein S18-A.

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

- Molecule 76 is a protein called 40S ribosomal protein S19-A.

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

- Molecule 77 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	w	100	Total	C	N	O	S	0	0
			800	509	144	146	1		

- Molecule 78 is a protein called 40S ribosomal protein S21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	x	87	Total	C	N	O	S	0	0
			684	420	125	137	2		

- Molecule 79 is a protein called 40S ribosomal protein S22-A.

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

- Molecule 80 is a protein called 40S ribosomal protein S23-A.

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

- Molecule 81 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
81	2	1	Total	Zn	0
			1	1	
81	5	1	Total	Zn	0
			1	1	
81	8	1	Total	Zn	0
			1	1	
81	S	1	Total	Zn	0
			1	1	
81	V	1	Total	Zn	0
			1	1	
81	Y	1	Total	Zn	0
			1	1	
81	a	1	Total	Zn	0
			1	1	
81	b	1	Total	Zn	0
			1	1	

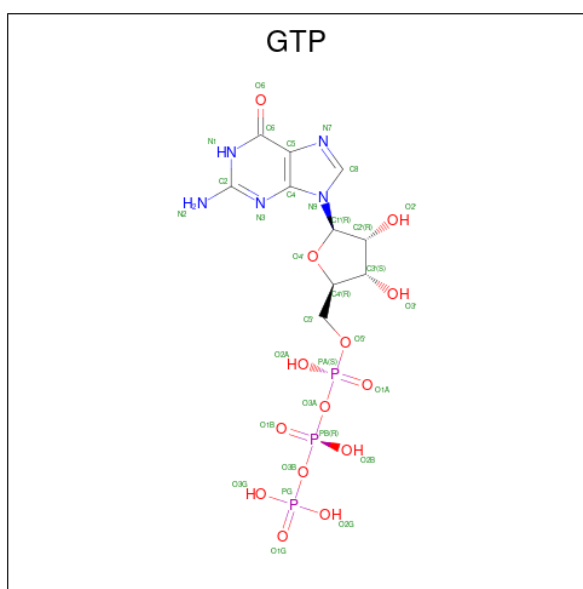
- Molecule 82 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
82	AA	119	Total	Mg	0
			119	119	
82	Aa	1	Total	Mg	0
			1	1	
82	BB	3	Total	Mg	0
			3	3	
82	CC	3	Total	Mg	0
			3	3	
82	H	1	Total	Mg	0
			1	1	
82	JJ	1	Total	Mg	0
			1	1	
82	c	25	Total	Mg	0
			25	25	

- Molecule 83 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms		AltConf
83	AA	9	Total	K	0
			9	9	
83	EE	1	Total	K	0
			1	1	

- Molecule 84 is GUANOSINE-5'-TRIPHOSPHATE (CCD ID: GTP) (formula: C₁₀H₁₆N₅O₁₄P₃).



Mol	Chain	Residues	Atoms					AltConf
84	Aa	1	Total	C	N	O	P	0
			32	10	5	14	3	

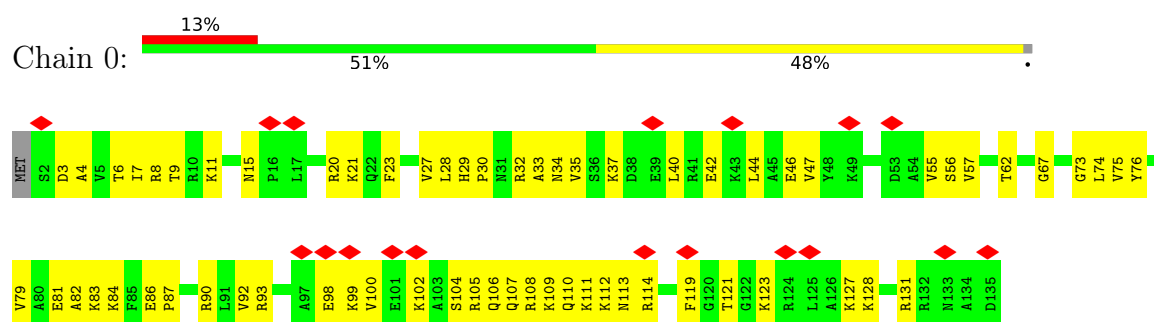
- Molecule 85 is water.

Mol	Chain	Residues	Atoms		AltConf
85	AA	71	Total 71	O 71	0
85	B	1	Total 1	O 1	0
85	CC	8	Total 8	O 8	0
85	F	1	Total 1	O 1	0
85	JJ	1	Total 1	O 1	0
85	R	1	Total 1	O 1	0
85	V	1	Total 1	O 1	0
85	c	18	Total 18	O 18	0

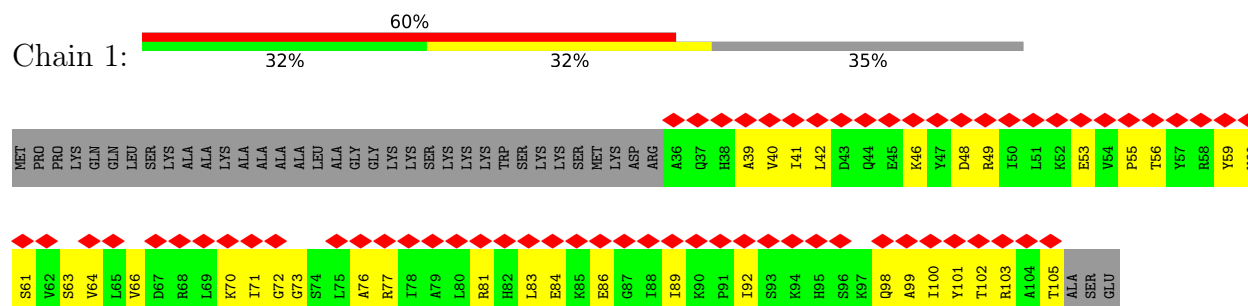
3 Residue-property plots [i](#)

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

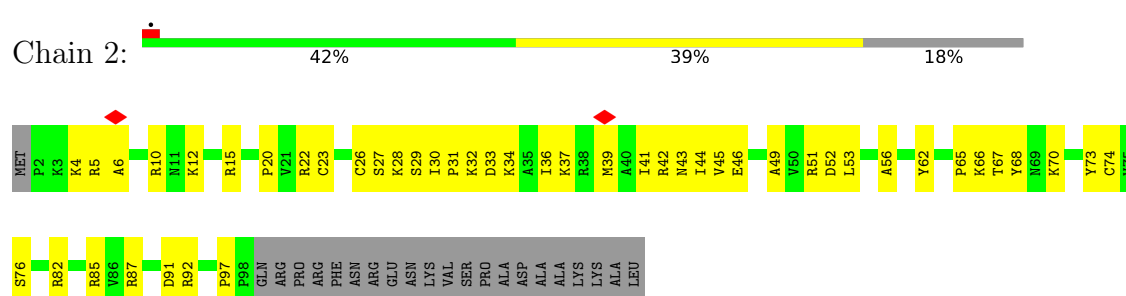
- Molecule 1: 40S ribosomal protein S24-A



- Molecule 2: 40S ribosomal protein S25-A

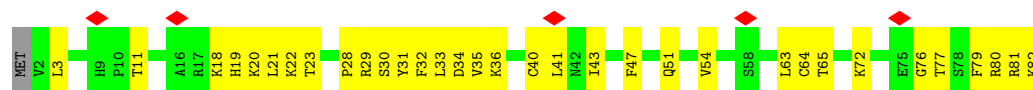


- Molecule 3: 40S ribosomal protein S26



- Molecule 4: 40S ribosomal protein S27-A

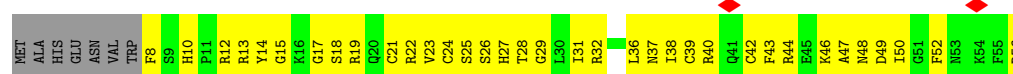




- Molecule 5: 40S ribosomal protein S28-A



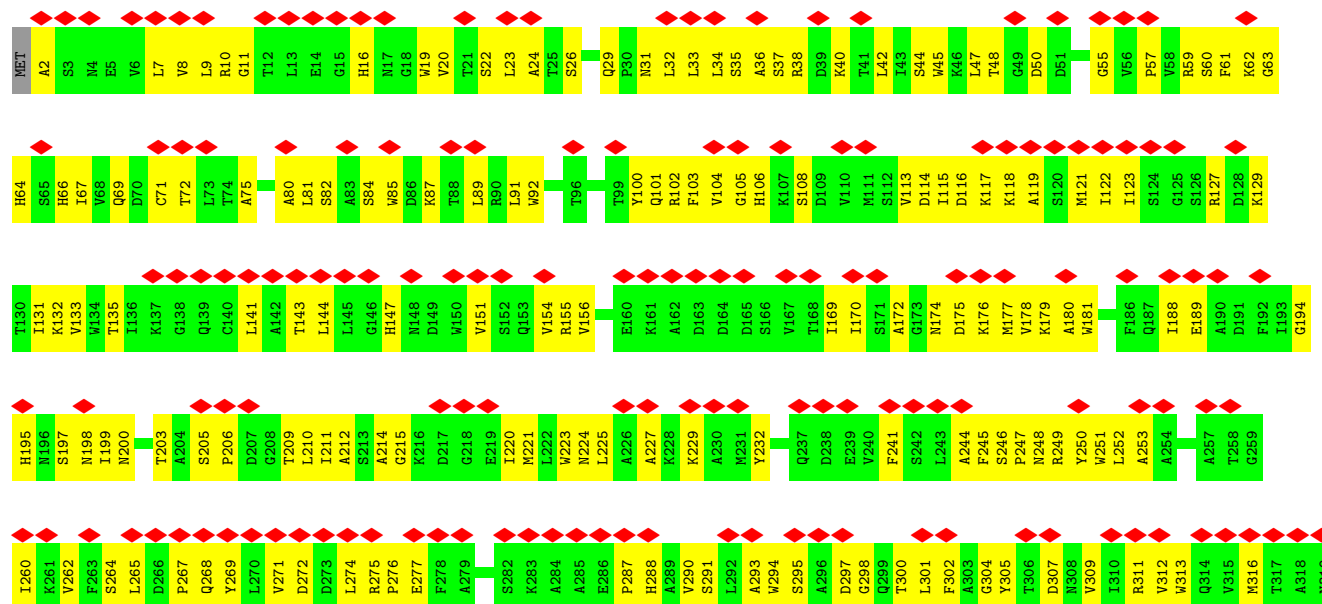
- Molecule 6: HLJ1_G0030400.mRNA.1.CDS.1



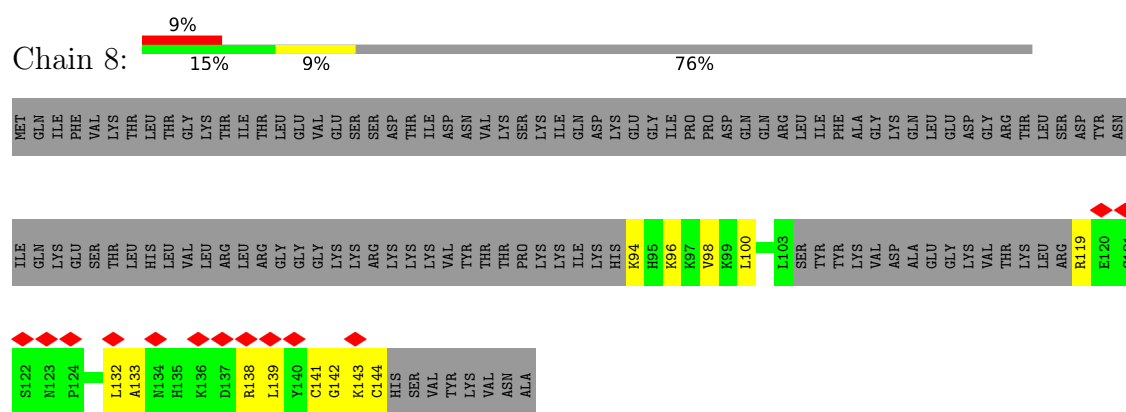
- Molecule 7: 40S ribosomal protein S30-A



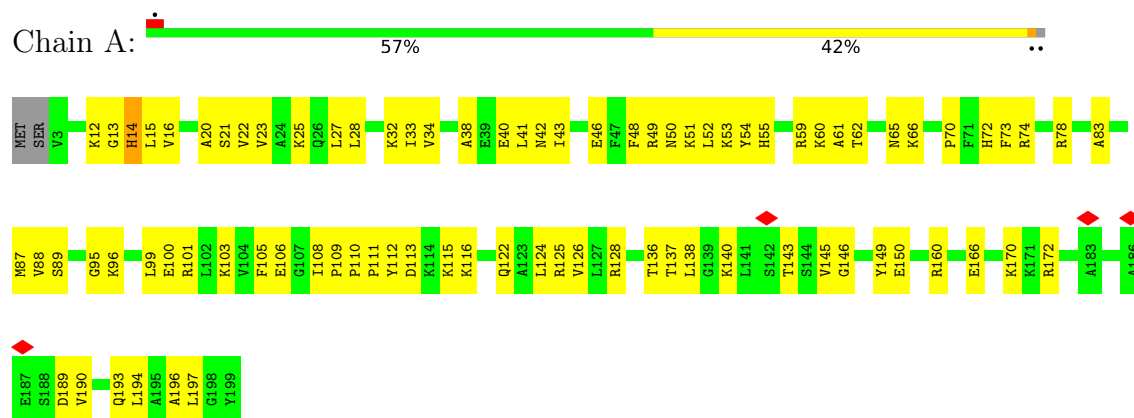
- Molecule 8: Guanine nucleotide-binding protein subunit beta-like protein



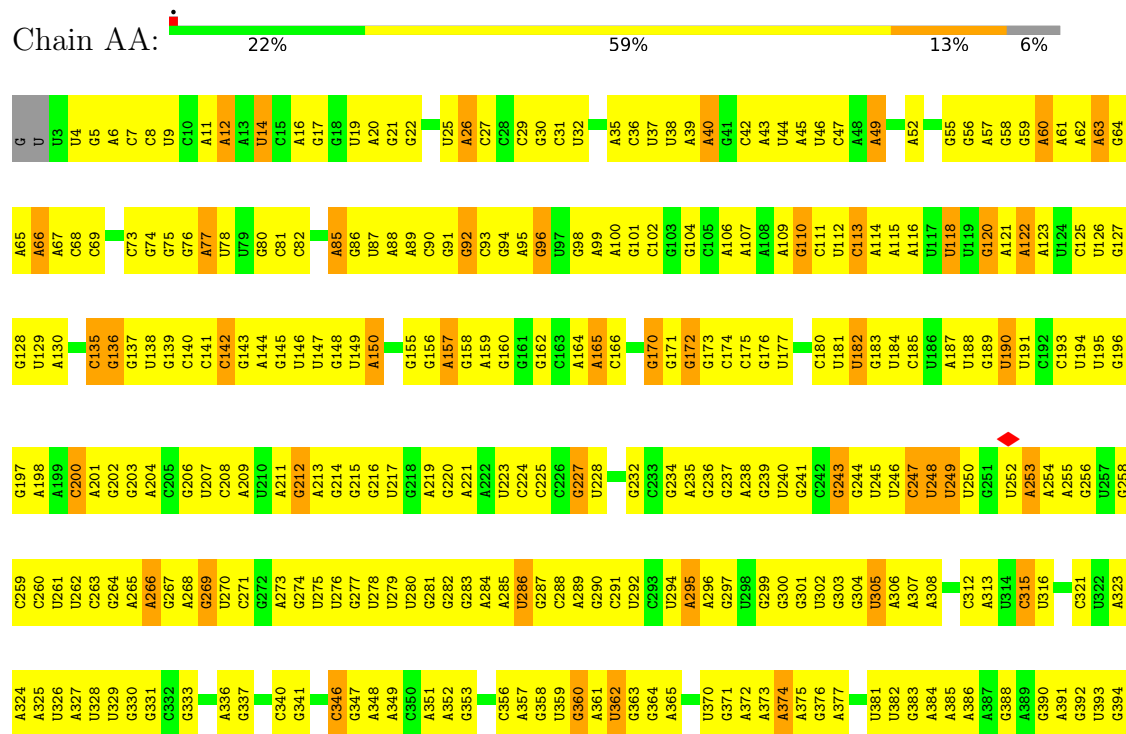
- Molecule 9: Ubiquitin-40S ribosomal protein S31



• Molecule 10: 60S ribosomal protein L16-A



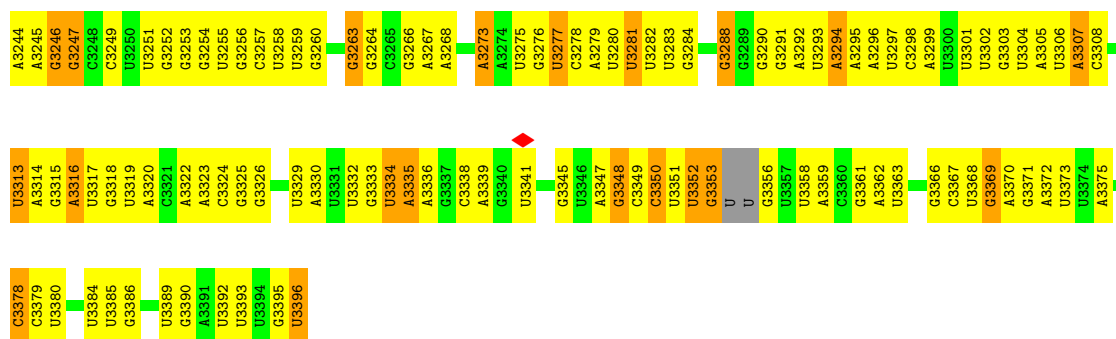
• Molecule 11: 25S ribosomal RNA



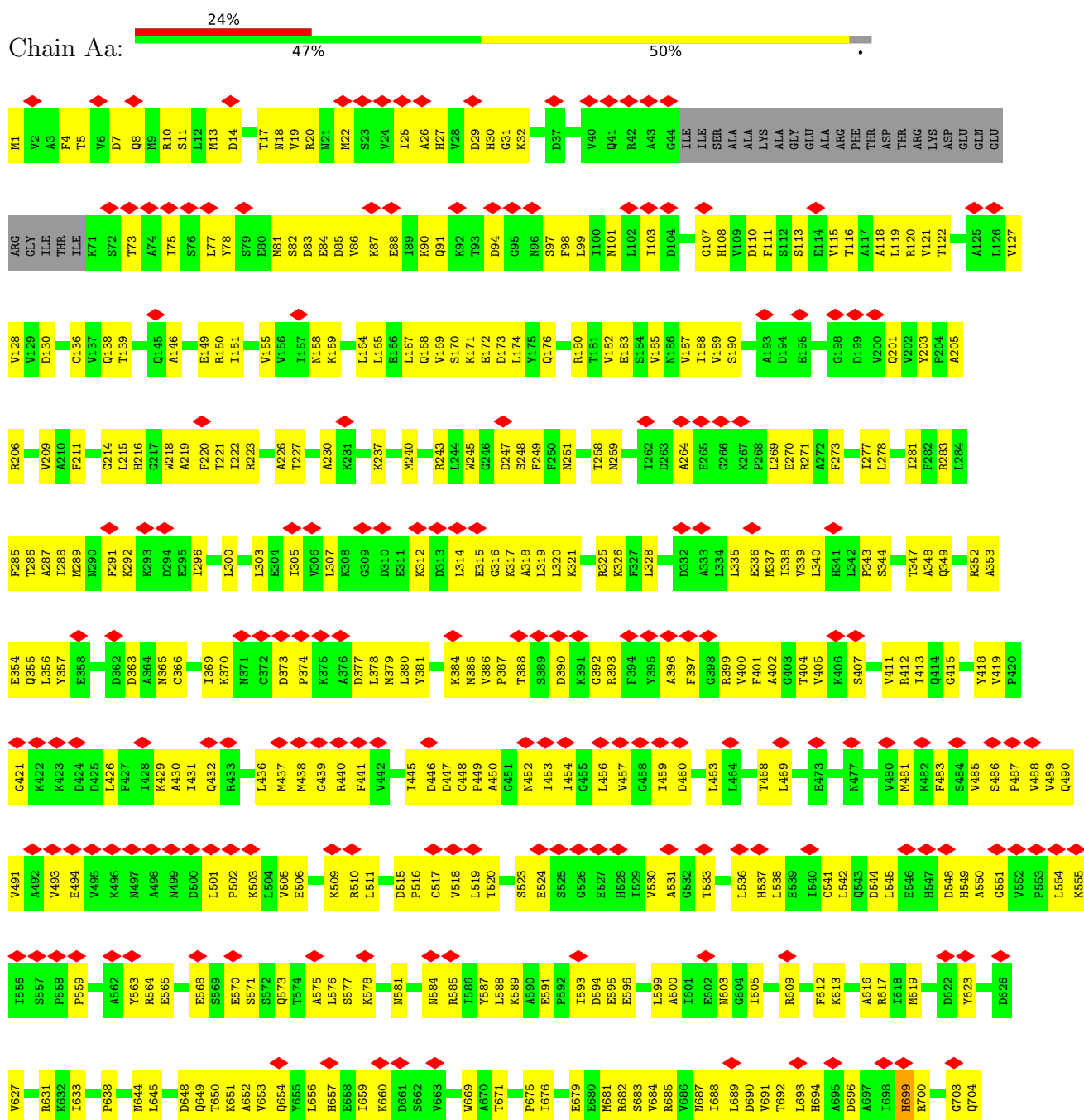
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A1098	A1099	U1100	G1101	A1102	G1103	U1104	G1105	A1106	G1107	U1108	U1109	U1110	U1111	A1112	G1113	G1114	G1115	G1116	G1117	C1118	C1119	A1120	U1125	G1126	G1127	U1128	A1129	A1130	G1131	C1132	A1133	G1134	A1135	A1136	C1137	U1138	G1139	G1140	C1141	G1142	U1143	U1144	G1145	C1146	G1147	G1148	G1149	A1150	U1151	G1152	A1153	A1154	C1155	C1156	G1157	A1158	A1159	C1160		
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A522	A523	U524	C525	C526	A527	U528	A529	G530	G531	U532	G533	A534	U535	G536	A537	G538	U540	U541	G542	C543	C544	U545	C546	G547	U548	U549	A550	G551	G552	U553	A554	U555	C556	U557	U558	A559	G560	C561	C562	U563	G564	U565	U566	G567	G568	U571	A572	U573	G574	G575	C576	C577	G578	A579	C580	U581	G582			
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G644	A645	A646	A647	C648	A649	C650	G651	G652	C655	A656	A657	G658	G659	A660	U661	U662	G663	U664	A665	A666	C667	G668	U671	A672	U673	G674	U675	U682	U683	G684	G685	G686	U687	A690	A691	A692	C693	C694	C695	C696	A697	U698	A699	C700	C701	C702	G703	U704	A705	A706										
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A775	U776	U777	U778	G779	A780	G781	U782	A783	U784	G785	A786	G787	C788	A789	U790	G791	G792	C793	U794	G795	U796	U797	G798	G799	A800	G801	C802	C803	U810	G805	A806	A807	A808	G809	A810	U811	G812	G813	U814	G815	A816	A817	C818	U819	A820	U821	G822	C823	C824	U825	G826	A830	G831	G832	G833	U834	G835			
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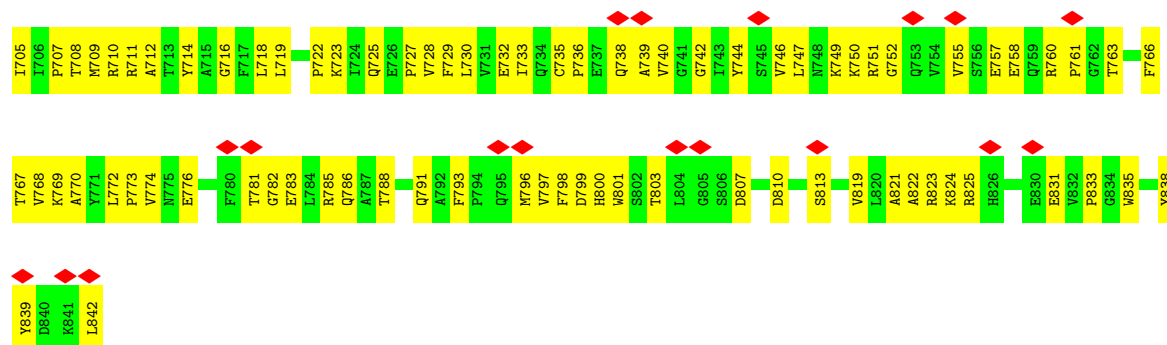
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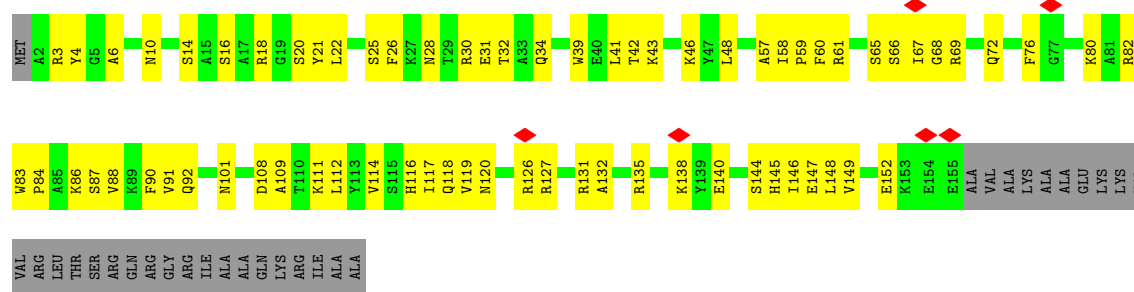


• Molecule 12: Elongation factor 2

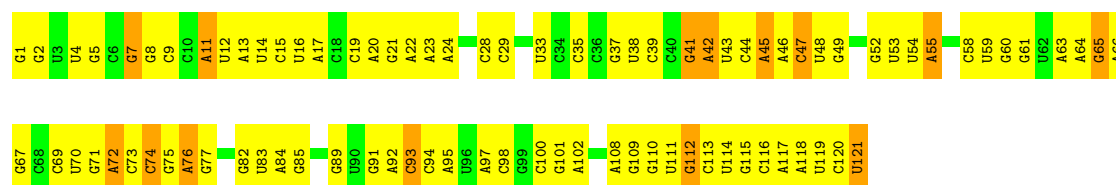




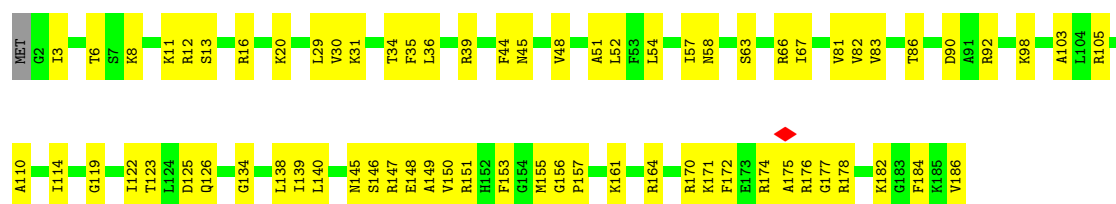
• Molecule 13: 60S ribosomal protein L17-A



• Molecule 14: 5S ribosomal RNA

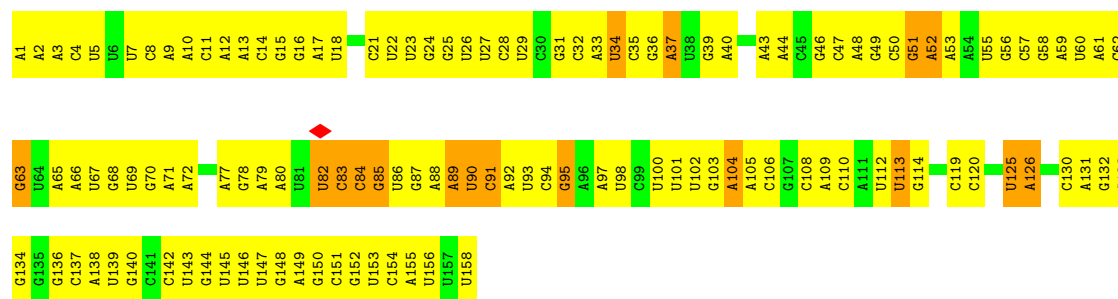


• Molecule 15: 60S ribosomal protein L18-A

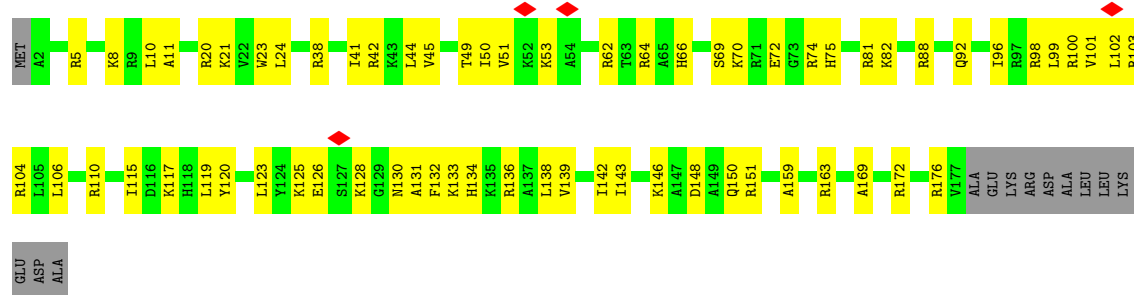


• Molecule 16: 5.8S ribosomal RNA

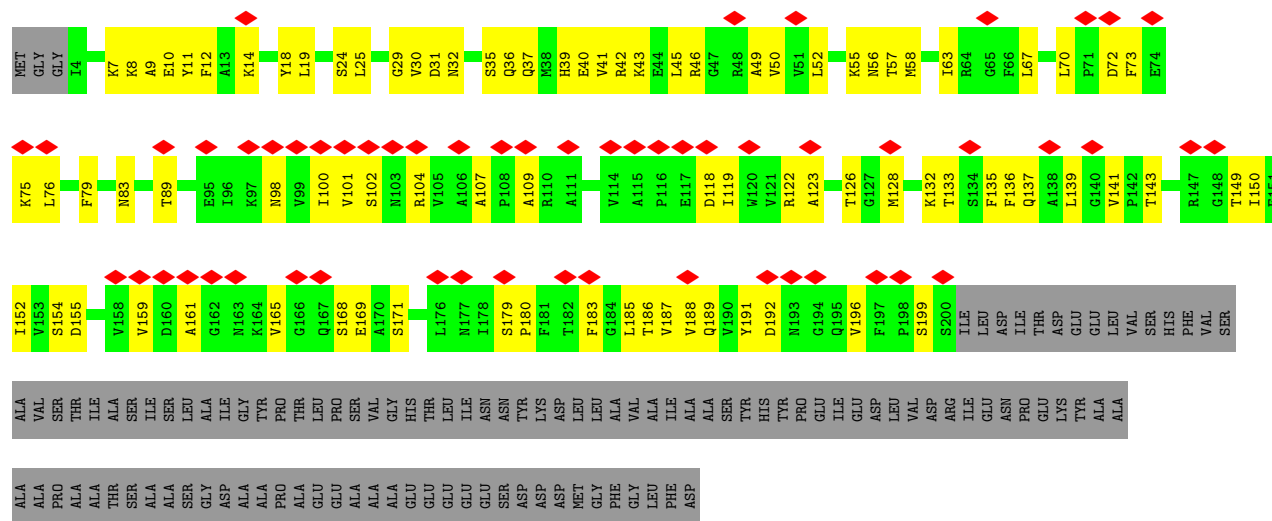




• Molecule 17: 60S ribosomal protein L19-A

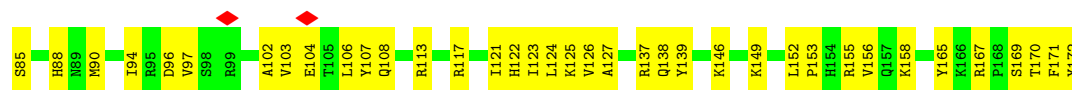


• Molecule 18: 60S acidic ribosomal protein P0

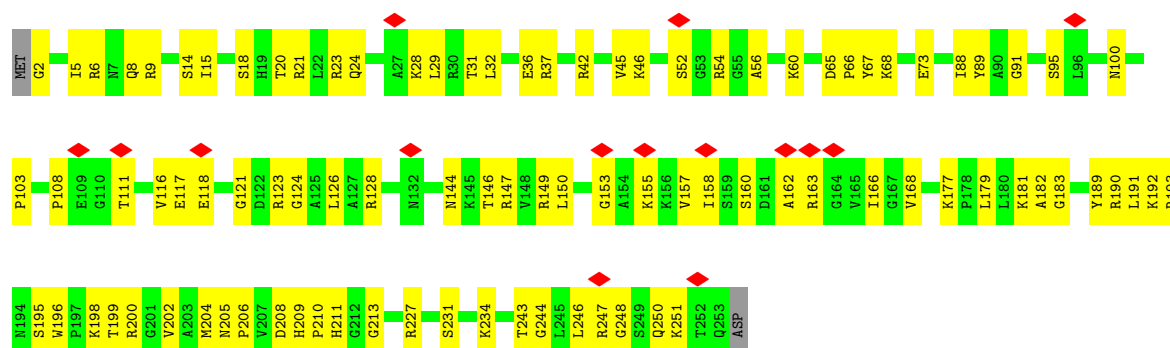


• Molecule 19: 60S ribosomal protein L20-A

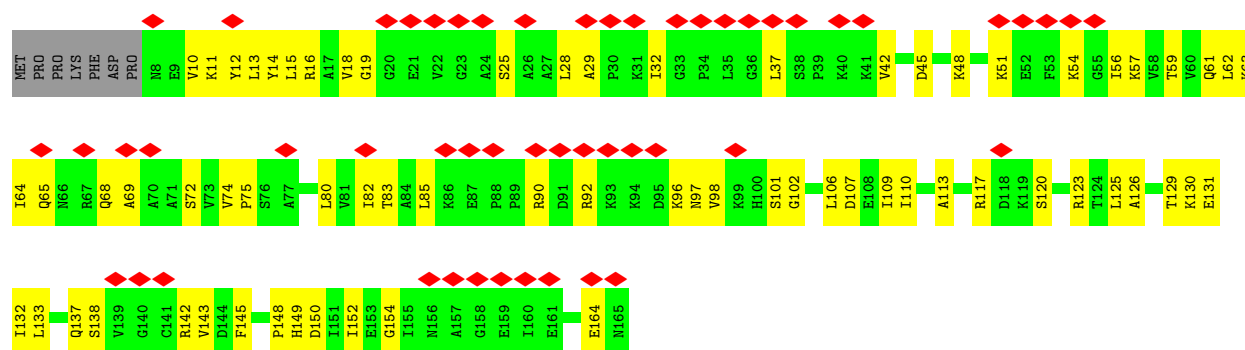




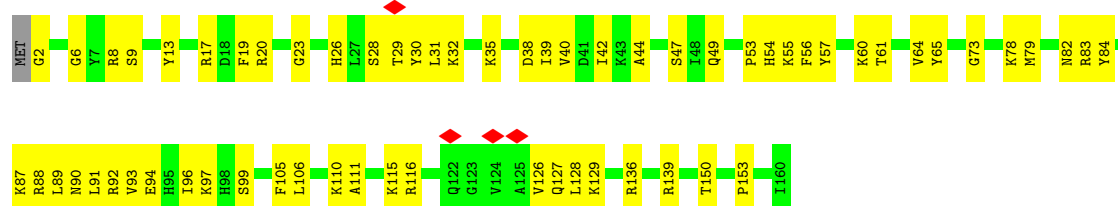
• Molecule 20: 60S ribosomal protein L2-A



• Molecule 21: 60S ribosomal protein L12-A

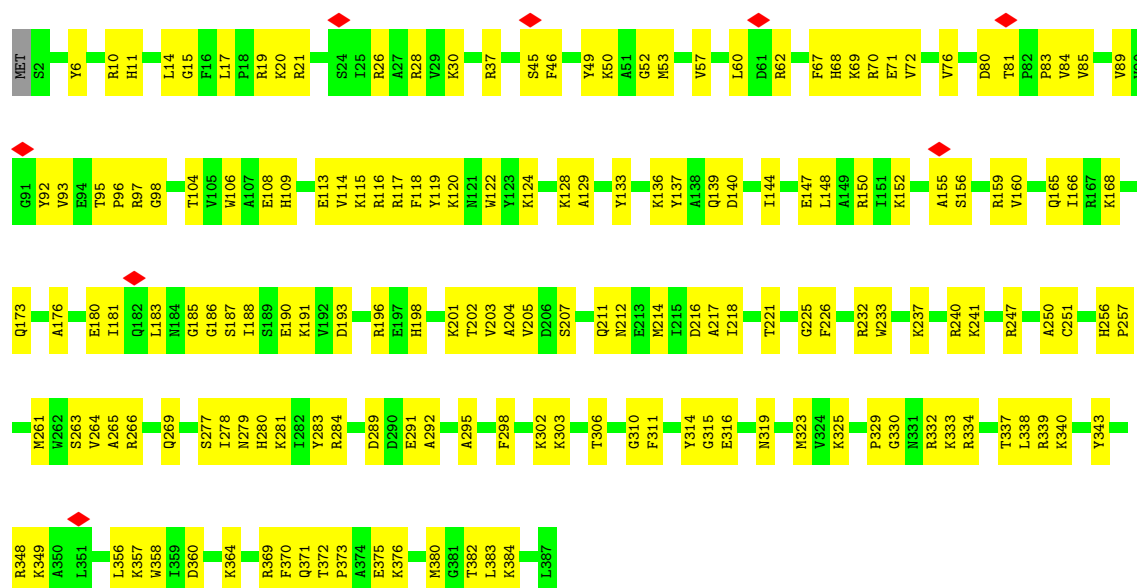


• Molecule 22: 60S ribosomal protein L21-A

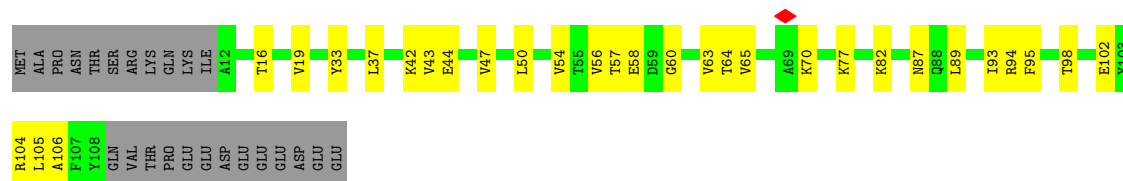


• Molecule 23: 60S ribosomal protein L3

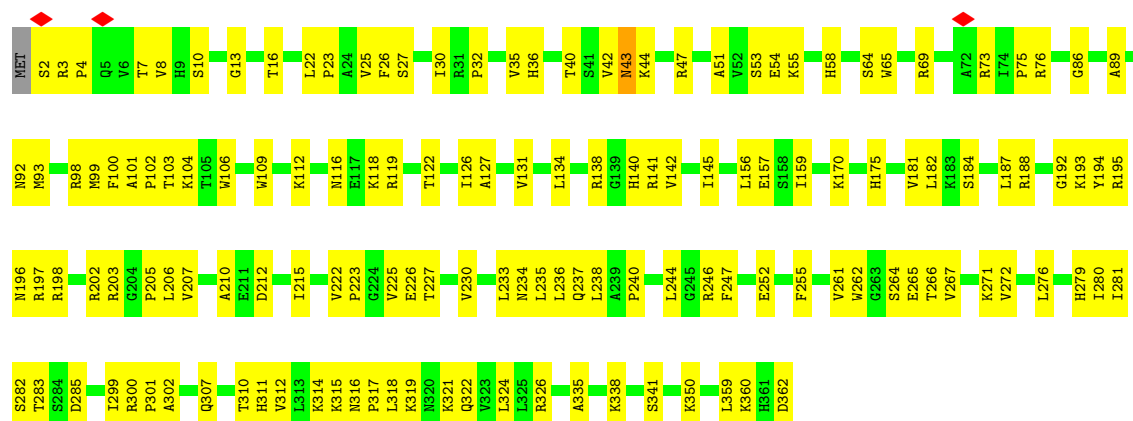




• Molecule 24: 60S ribosomal protein L22-A



• Molecule 25: 60S ribosomal protein L4-A

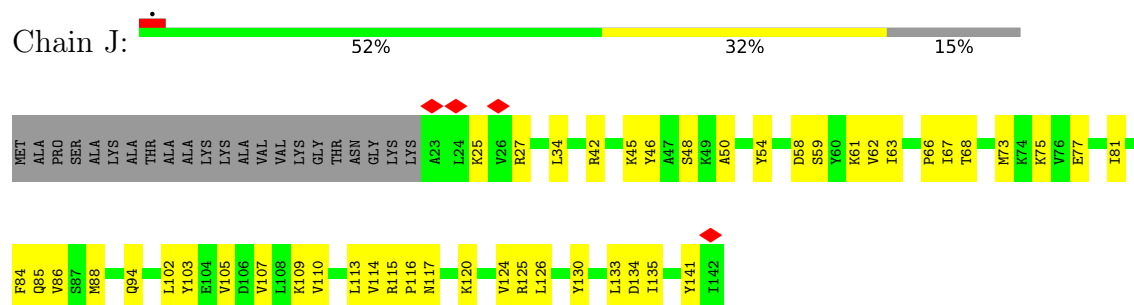


• Molecule 26: 60S ribosomal protein L23-A

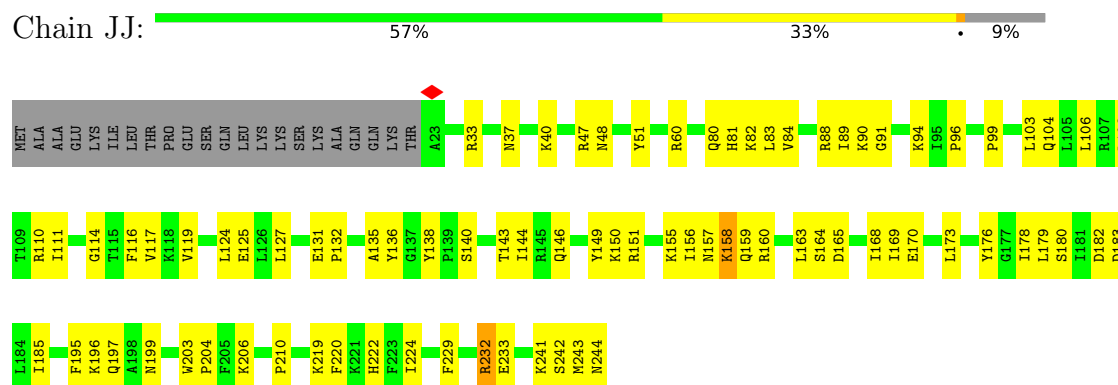




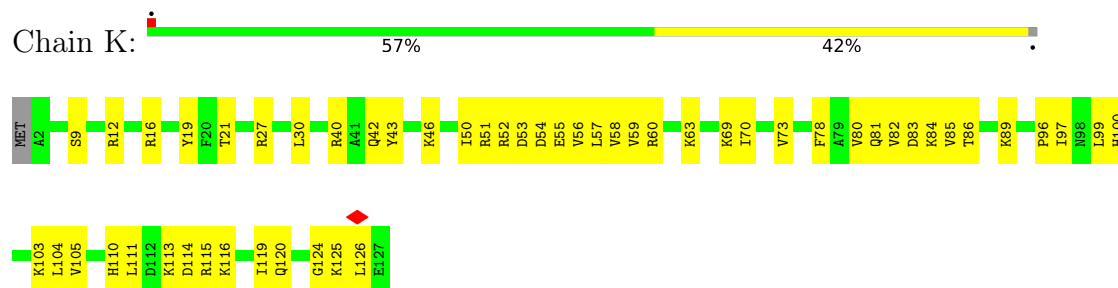
• Molecule 30: 60S ribosomal protein L25



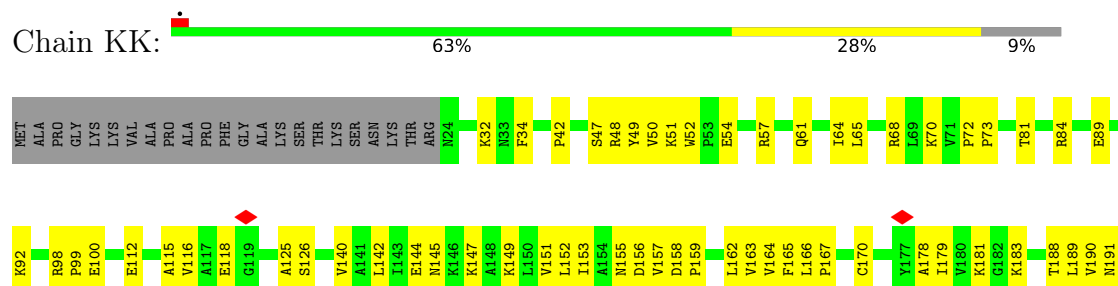
• Molecule 31: 60S ribosomal protein L7-A

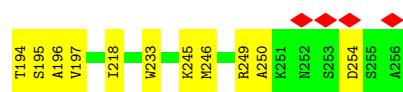


• Molecule 32: 60S ribosomal protein L26-A



• Molecule 33: 60S ribosomal protein L8-A

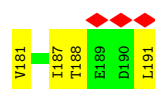
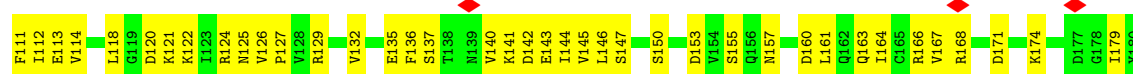




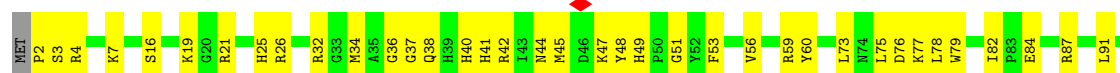
- Molecule 34: 60S ribosomal protein L27-A



- Molecule 35: RPL9A isoform 1

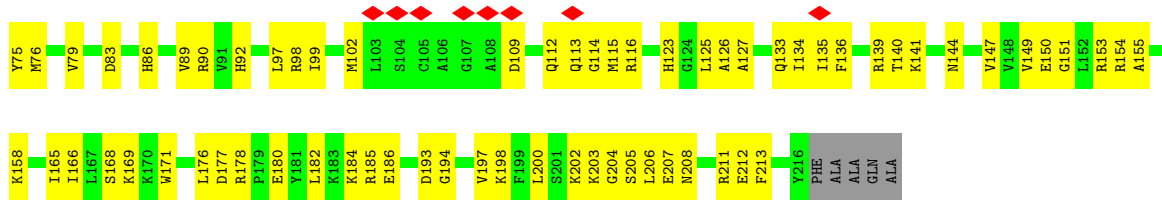


- Molecule 36: 60S ribosomal protein L28

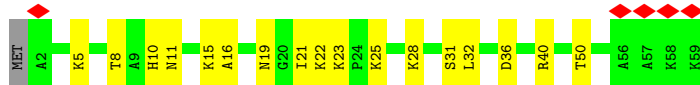


- Molecule 37: 60S ribosomal protein L10

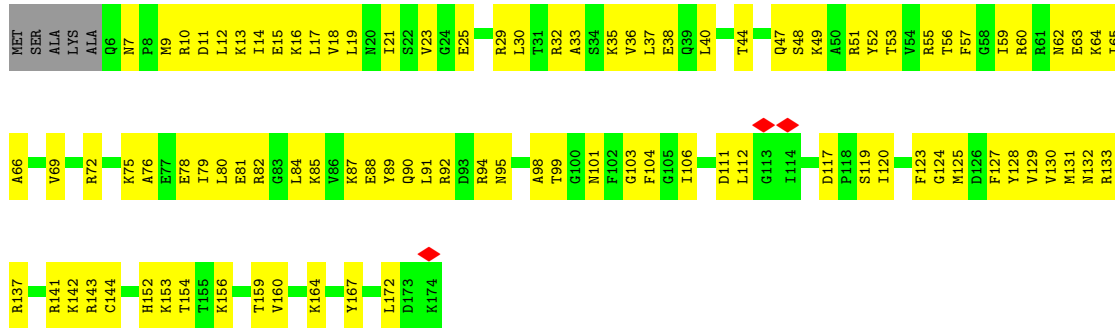
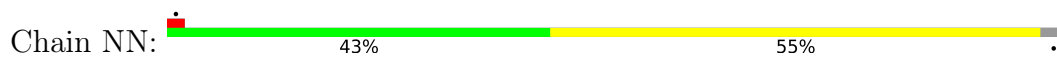




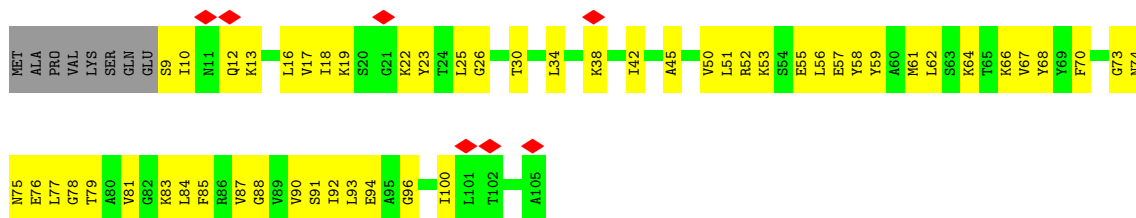
• Molecule 38: 60S ribosomal protein L29



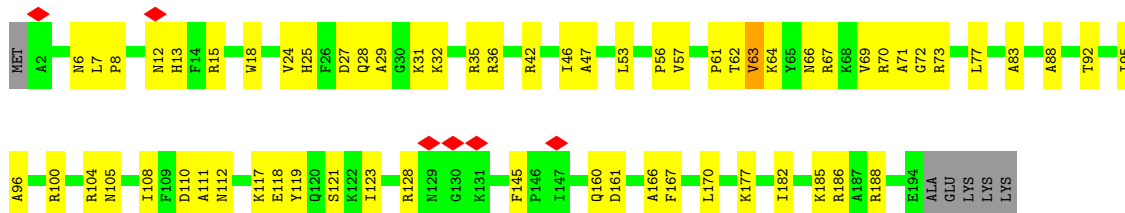
• Molecule 39: 60S ribosomal protein L11-A



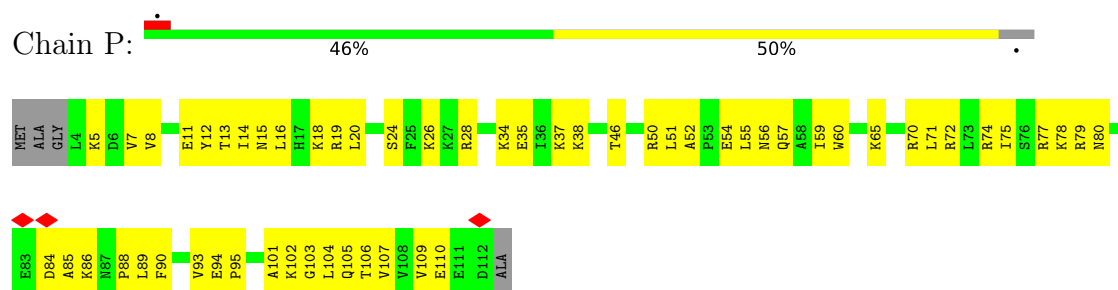
• Molecule 40: 60S ribosomal protein L30



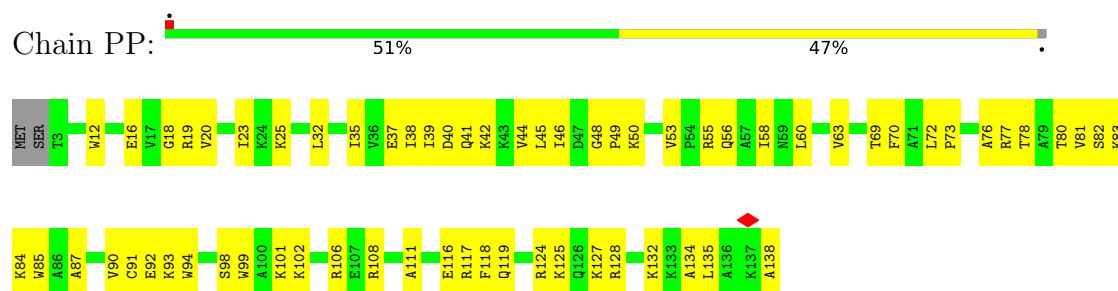
• Molecule 41: 60S ribosomal protein L13-A



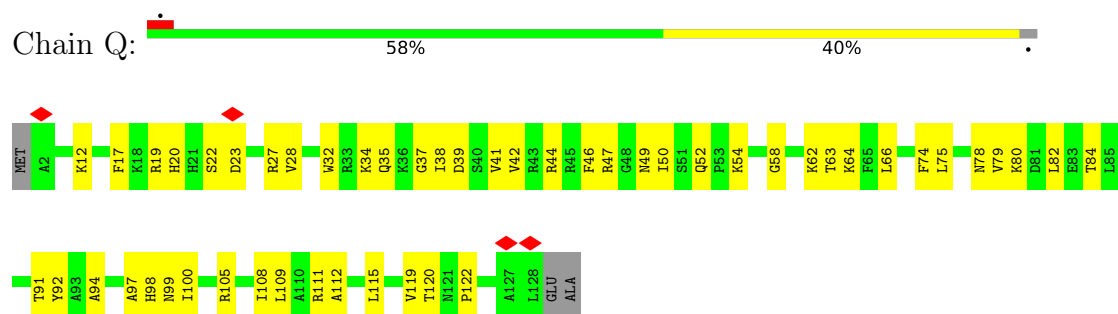
- Molecule 42: 60S ribosomal protein L31-A



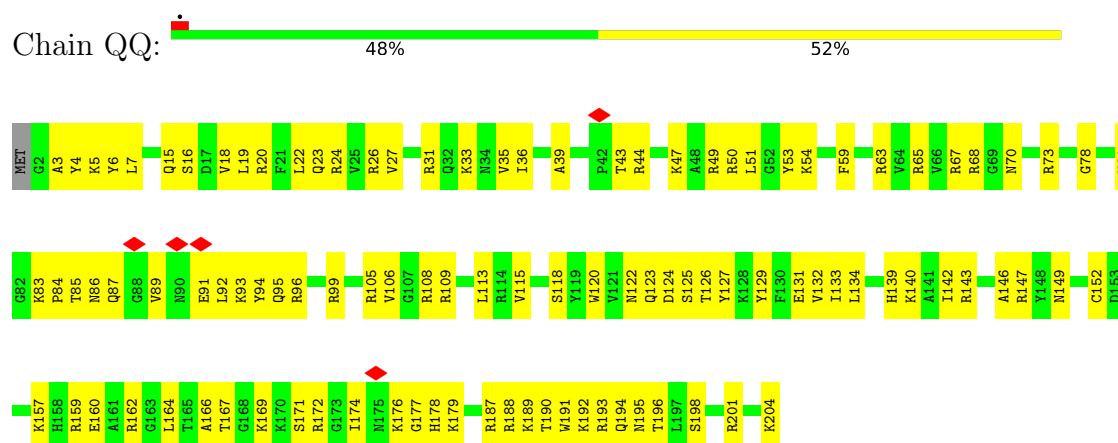
- Molecule 43: 60S ribosomal protein L14-A



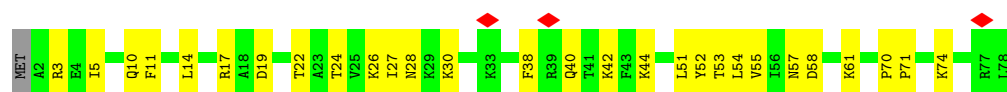
- Molecule 44: 60S ribosomal protein L32



- Molecule 45: 60S ribosomal protein L15-A



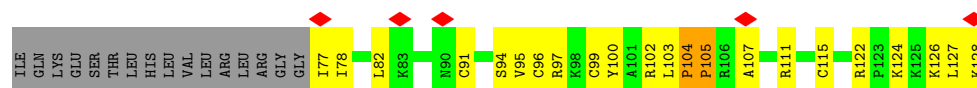
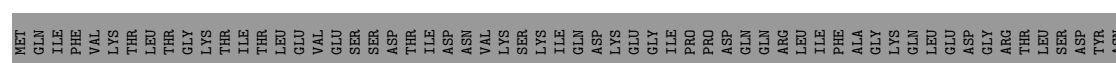
- Molecule 46: 60S ribosomal protein L33-A



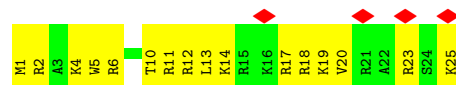
- Molecule 52: 60S ribosomal protein L39



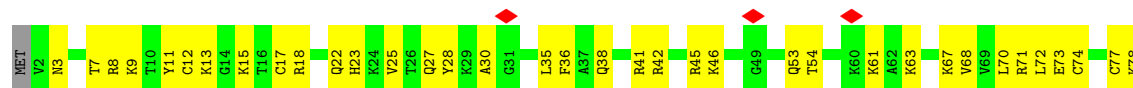
- Molecule 53: Ubiquitin-60S ribosomal protein L40



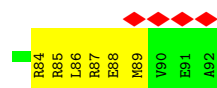
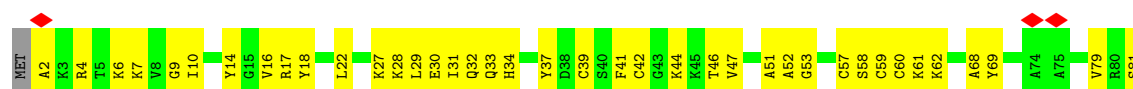
- Molecule 54: 60S ribosomal protein L41



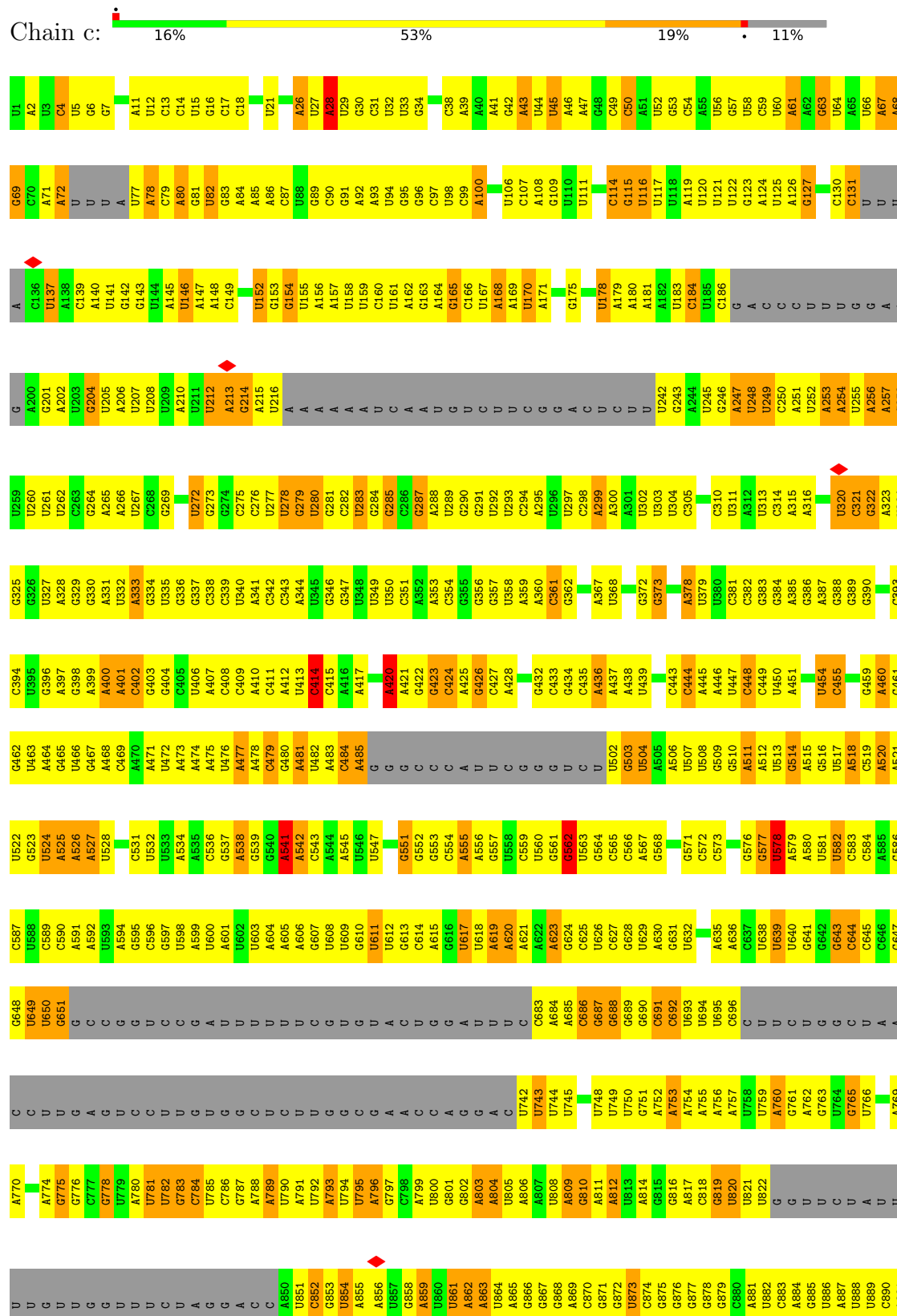
- Molecule 55: 60S ribosomal protein L42-A



- Molecule 56: 60S ribosomal protein L43-A



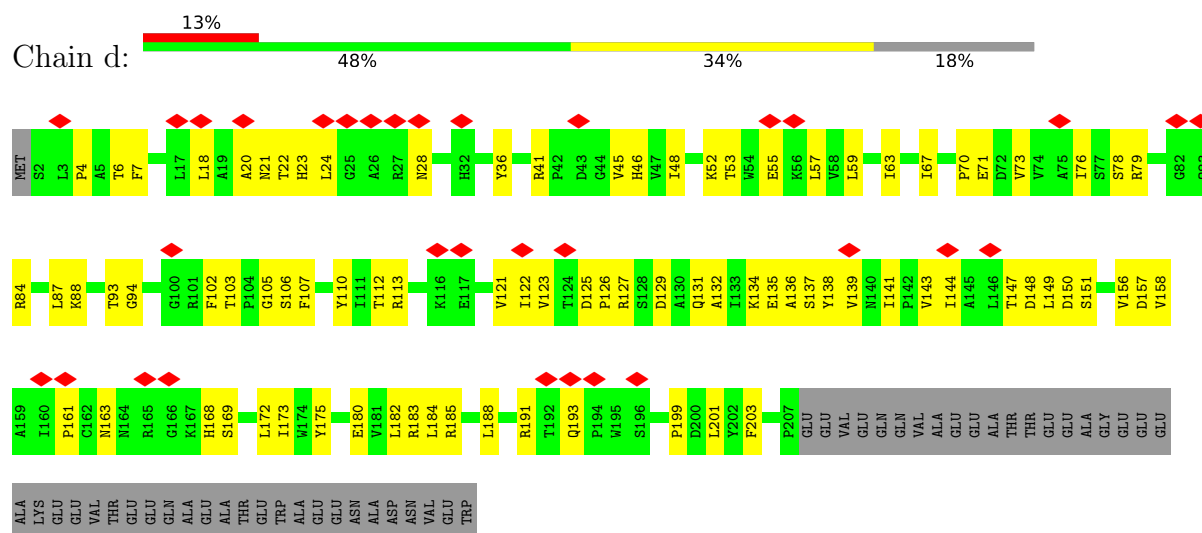
● Molecule 57: 18S ribosomal RNA



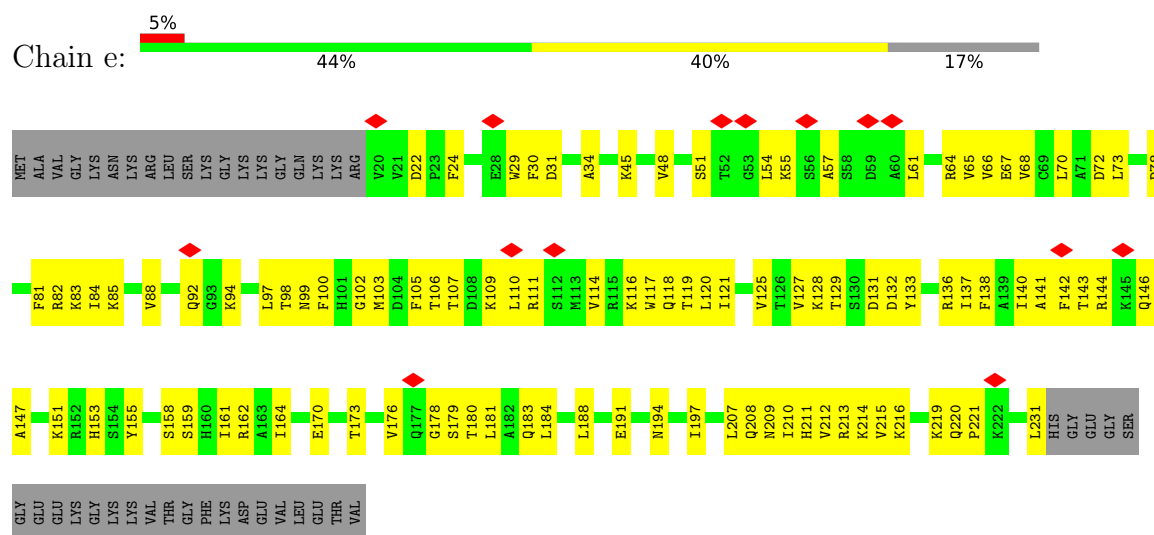
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C	G1643	U1581	G1455	U1392	C1332	U1269	C1209	G1150	G1083	U1018	C956	U894
C	G1644	U1582	G1456	C1393	C1333	G1270	C1210	G1151	G1084	A1019	G957	G895
A	G1645	A1583	C1457	G1394	U1334	G1271	A1211	A1152	A1085	C1022	U958	U896
U	G1646	U1584	C1458	U1335	U1335	G1272	G1212	G1153	G1086		U959	C937
C	G1647	G1521	C1459	A1336	A1336	G1273	G1213	G1154	A1087		U960	A898
U	A1584	A1524	A1460	A1337	A1337	C1274	U1214	G1155	A1088	A1026	U961	G899
C	A1586	A1525	C1461	U1398	C1338	A1275	C1215	A1156	A1089	A1027	C962	A900
A	A1587	A1526	G1462	C1399	C1339	U1276	A1216	C1157	G1090	C1028	A963	G901
G	G1588	G1527	G1463	A1400	U1340	G1277	A1217	C1158	C1091	U1029	U964	G902
	C1589	U1528	G1464	A1341	A1341	C1278	G1218	C1159	A1092	A1030	U965	U903
	C1590	C1529	G1465	G1402	U1342	C1279	A1219		A1093	U1031	A966	G904
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U1722	G1661	G1536	U1473	A1410	U1350	U1289	A1227	G1167	G1100	A1039	A974	U912
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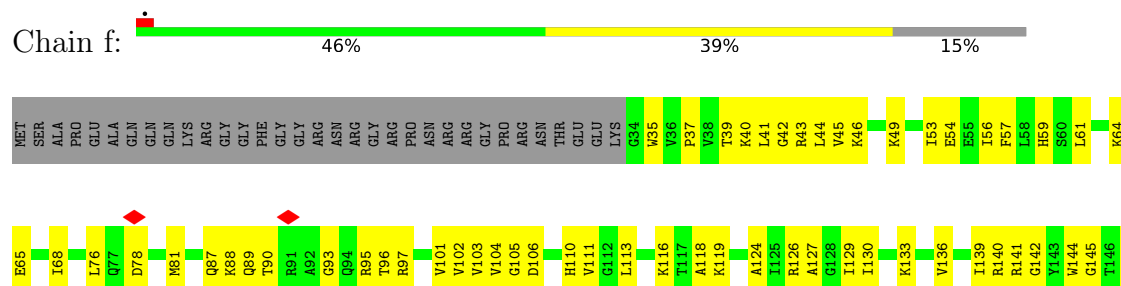
• Molecule 58: 40S ribosomal protein S0-A

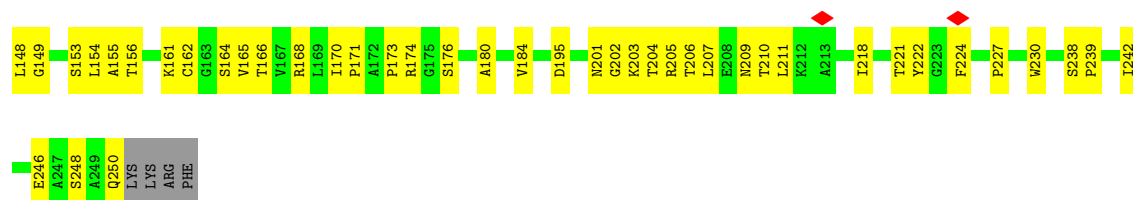


• Molecule 59: 40S ribosomal protein S1-A

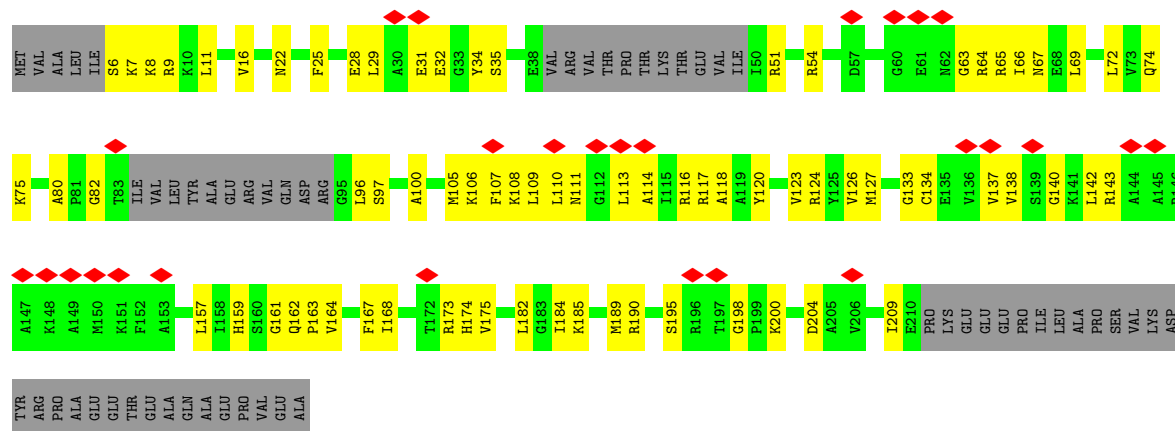
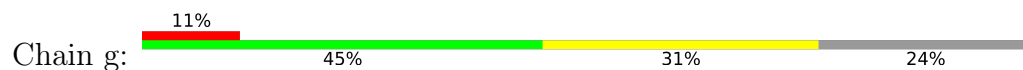


• Molecule 60: 40S ribosomal protein S2

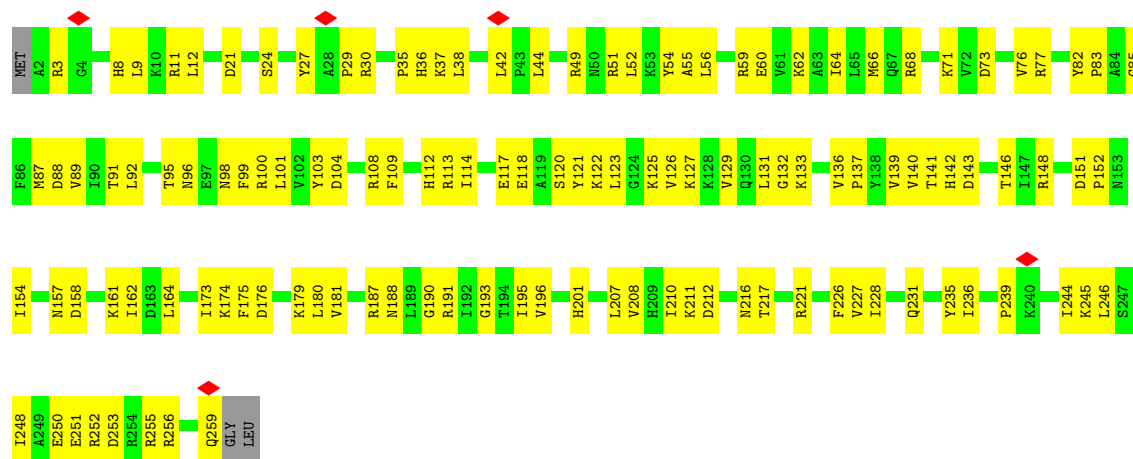




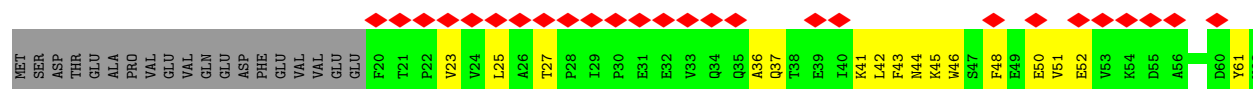
• Molecule 61: RPS3 isoform 1

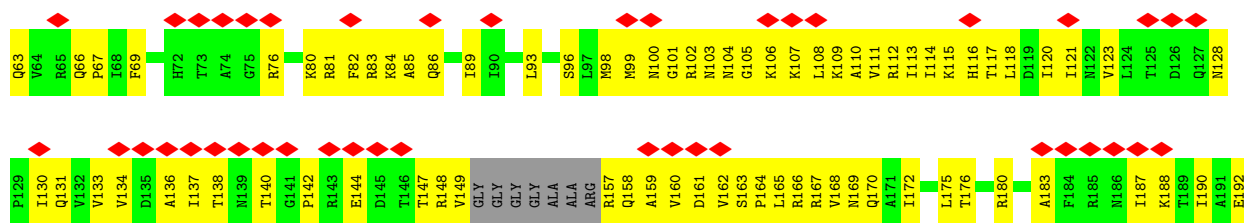


• Molecule 62: 40S ribosomal protein S4-A

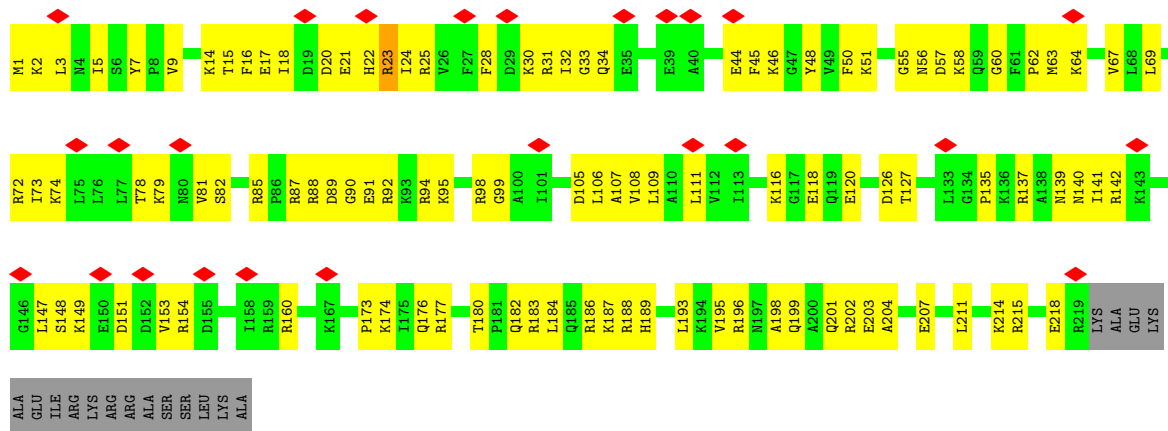


• Molecule 63: 40S ribosomal protein S5

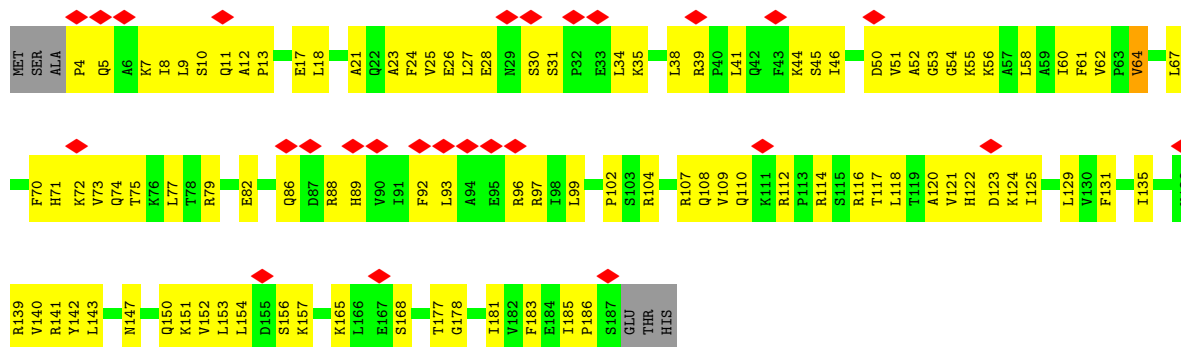
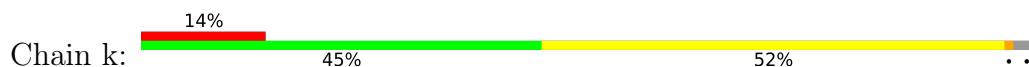




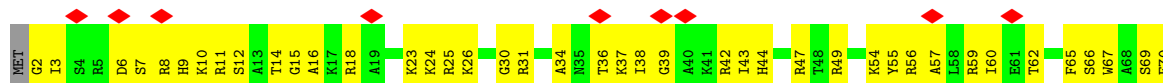
• Molecule 64: 40S ribosomal protein S6-A

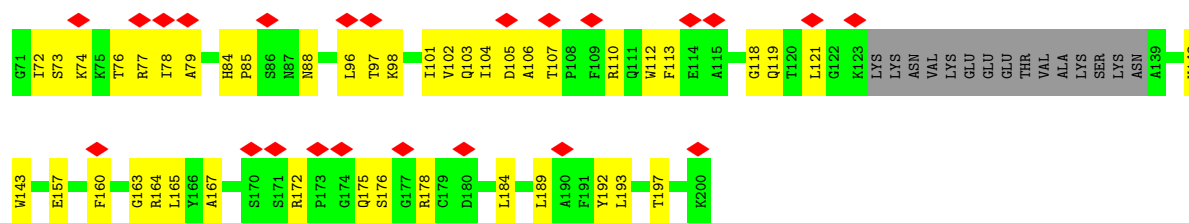


• Molecule 65: 40S ribosomal protein S7-A



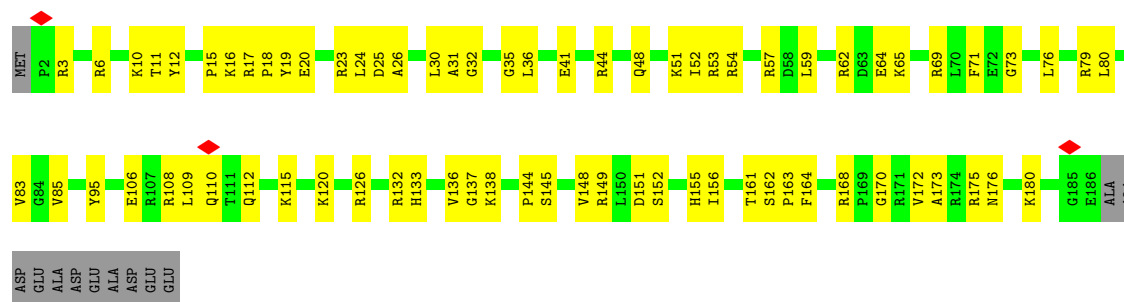
• Molecule 66: 40S ribosomal protein S8-B





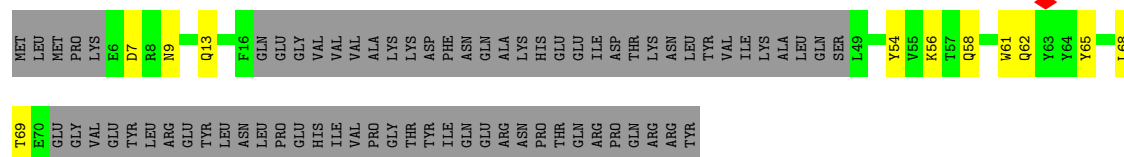
- Molecule 67: 40S ribosomal protein S9-A

Chain m: 57% 37% 6%



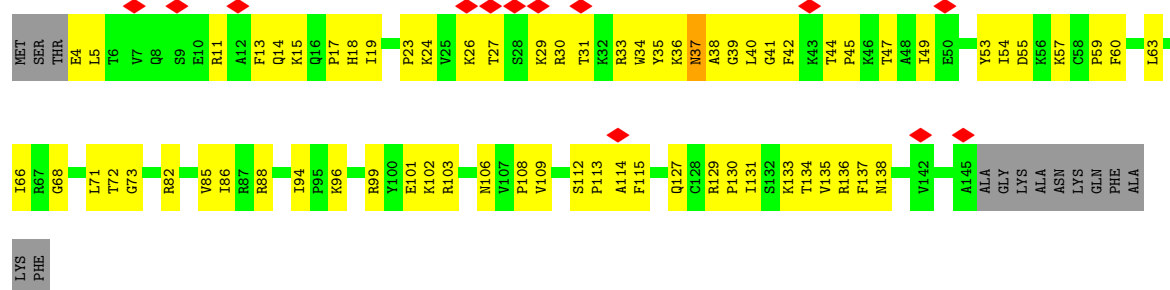
- Molecule 68: 40S ribosomal protein S10-A

Chain n: 21% 10% 69%



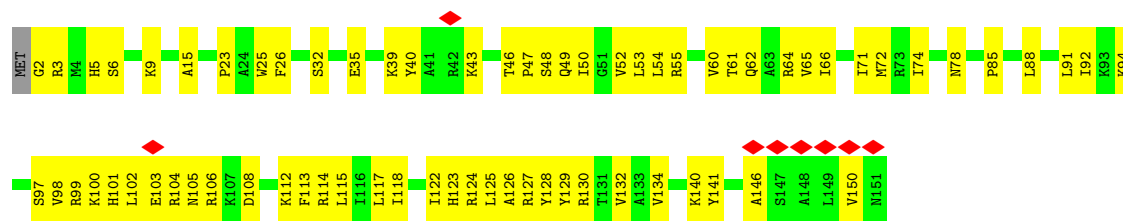
- Molecule 69: 40S ribosomal protein S11-A

Chain o: 8% 47% 44% 9%

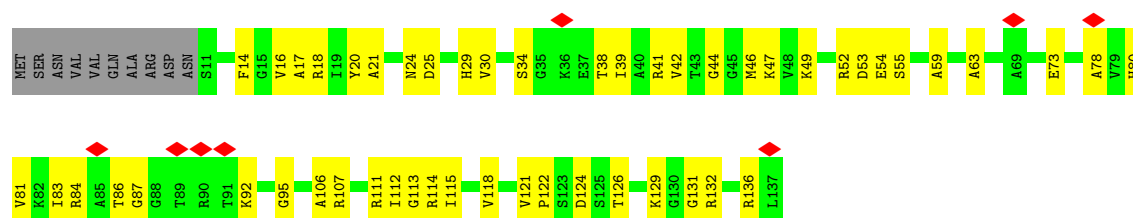


- Molecule 70: 40S ribosomal protein S13

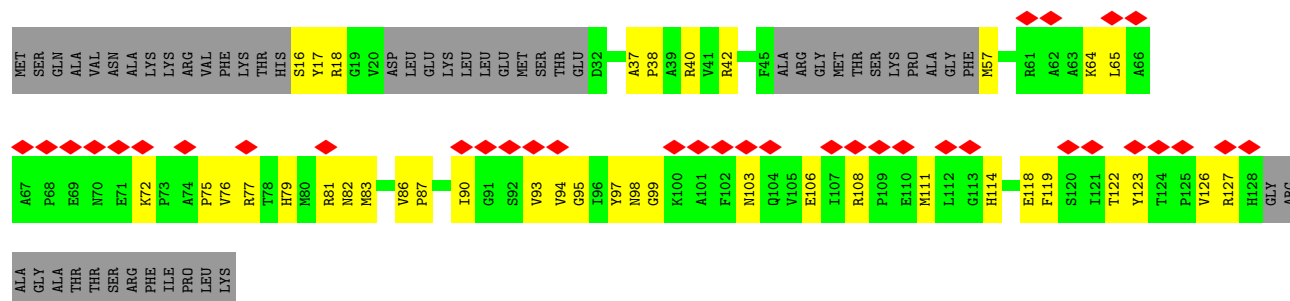
Chain p: 5% 53% 46%



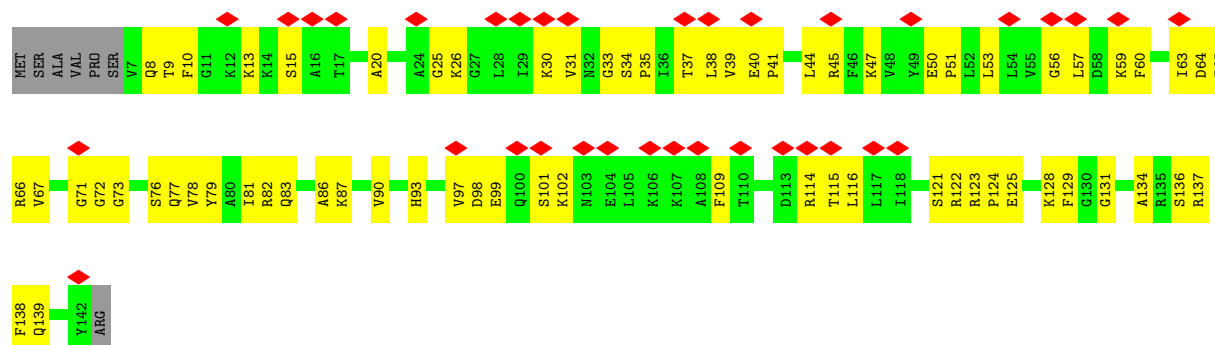
• Molecule 71: 40S ribosomal protein S14-A



• Molecule 72: 40S ribosomal protein S15

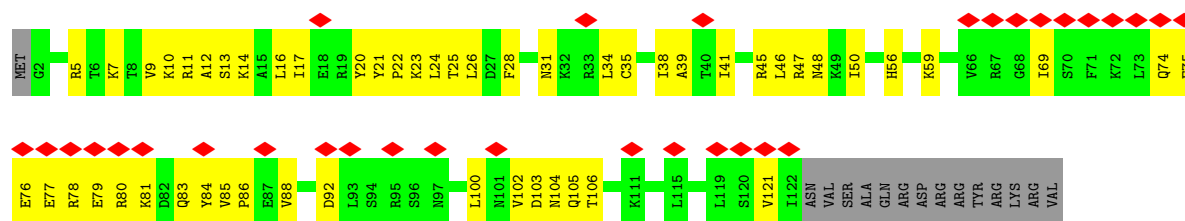


• Molecule 73: 40S ribosomal protein S16-A

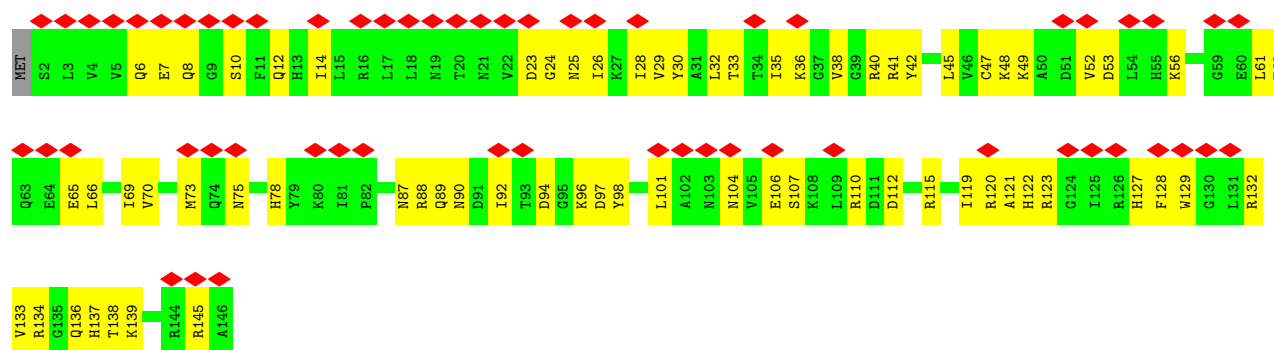
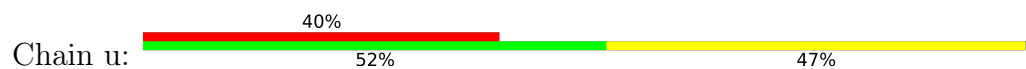


• Molecule 74: 40S ribosomal protein S17-A

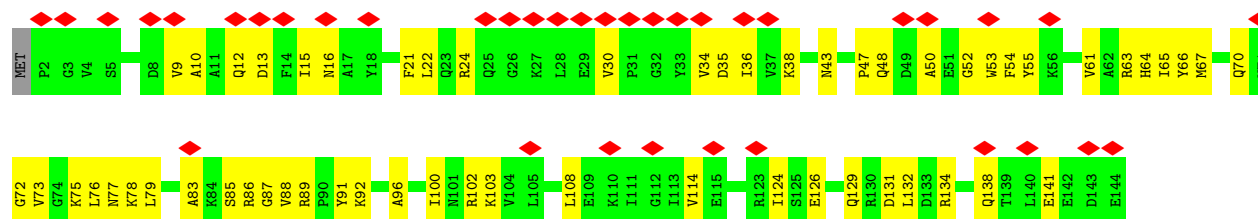




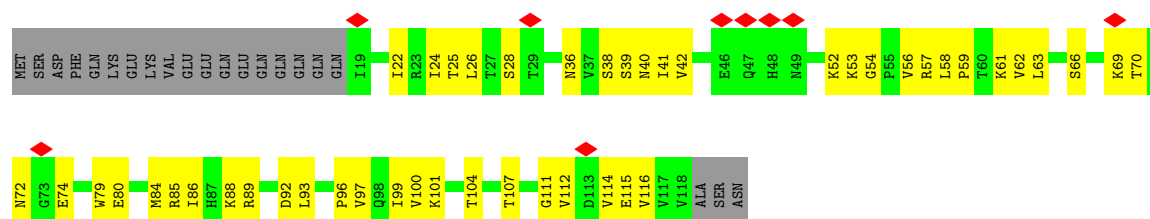
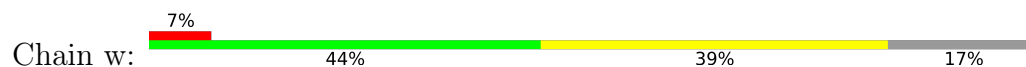
• Molecule 75: 40S ribosomal protein S18-A



• Molecule 76: 40S ribosomal protein S19-A



• Molecule 77: 40S ribosomal protein S20

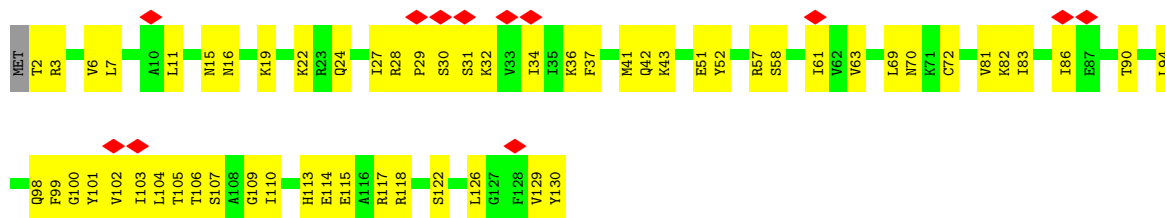


• Molecule 78: 40S ribosomal protein S21-A

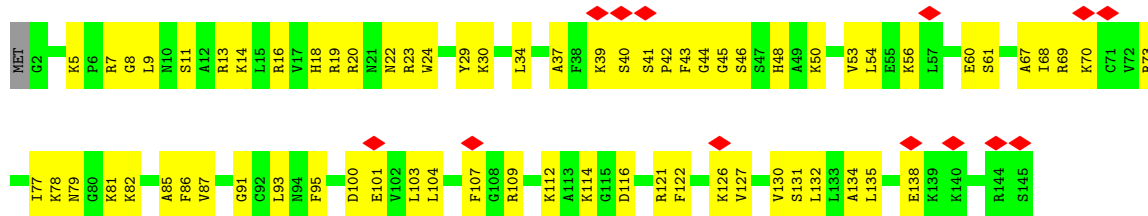




- Molecule 79: 40S ribosomal protein S22-A



- Molecule 80: 40S ribosomal protein S23-A



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	38558	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 ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	400	Depositor
Maximum defocus (nm)	1000	Depositor
Magnification	165000	Depositor
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	1.659	Depositor
Minimum map value	-0.906	Depositor
Average map value	0.004	Depositor
Map value standard deviation	0.044	Depositor
Recommended contour level	0.2	Depositor
Map size (Å)	638.88, 638.88, 638.88	wwPDB
Map dimensions	440, 440, 440	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.452, 1.452, 1.452	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MA6, G7M, ZN, A2M, K, OMG, UR3, OMU, GTP, MG, B8N, OMC, 1MA, 4AC, 5MC, DDE

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	0	0.18	0/1087	0.44	0/1449
2	1	0.19	0/571	0.57	0/768
3	2	0.20	0/782	0.44	0/1047
4	3	0.19	0/620	0.46	0/838
5	4	0.16	0/499	0.37	0/670
6	5	0.16	0/412	0.37	0/544
7	6	0.60	2/433 (0.5%)	1.14	6/575 (1.0%)
8	7	0.33	1/2489 (0.0%)	0.65	4/3389 (0.1%)
9	8	0.18	0/279	0.54	0/369
10	A	0.22	0/1585	0.39	0/2128
11	AA	0.21	2/75545 (0.0%)	0.30	0/117782
12	Aa	0.17	0/6470	0.41	0/8759
13	B	0.24	0/1245	0.42	0/1676
14	BB	0.19	0/2883	0.29	0/4491
15	C	0.18	0/1465	0.38	0/1965
16	CC	0.20	0/3746	0.29	0/5832
17	D	0.20	0/1440	0.40	0/1921
18	DD	0.15	0/1558	0.37	0/2107
19	E	0.23	0/1481	0.44	0/1990
20	EE	0.21	0/1948	0.41	0/2617
21	Ee	0.17	0/1210	0.47	0/1627
22	F	0.19	0/1300	0.38	0/1743
23	FF	0.20	0/3146	0.37	0/4228
24	G	0.17	0/786	0.40	0/1065
25	GG	0.20	0/2800	0.36	0/3790
26	H	0.21	0/978	0.41	0/1316
27	HH	0.18	0/2425	0.36	0/3271
28	I	0.22	0/533	0.43	0/707
29	II	0.20	0/1251	0.39	0/1682
30	J	0.19	0/974	0.39	0/1314
31	JJ	0.24	0/1821	0.44	2/2451 (0.1%)
32	K	0.19	0/1004	0.36	0/1341

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	KK	0.16	0/1836	0.33	0/2481
34	L	0.19	0/1118	0.40	0/1497
35	LL	0.22	0/1539	0.40	0/2073
36	M	0.18	0/1204	0.38	0/1612
37	MM	0.19	0/1779	0.36	0/2386
38	N	0.17	0/473	0.39	0/629
39	NN	0.18	0/1374	0.44	0/1842
40	O	0.22	0/750	0.46	0/1008
41	OO	0.18	0/1568	0.39	0/2106
42	P	0.21	0/897	0.44	0/1205
43	PP	0.19	0/1068	0.35	0/1438
44	Q	0.19	0/1041	0.34	0/1394
45	QQ	0.18	0/1757	0.35	0/2354
46	R	0.24	0/868	0.43	0/1168
47	S	0.20	0/871	0.39	0/1164
48	T	0.18	0/978	0.35	0/1301
49	U	0.18	0/778	0.40	0/1034
50	V	0.21	0/680	0.51	0/901
51	W	0.18	0/618	0.39	0/826
52	X	0.23	0/443	0.50	0/588
53	Y	0.21	0/423	0.55	0/562
54	Z	0.24	0/234	0.62	0/300
55	a	0.18	0/831	0.48	0/1097
56	b	0.21	0/701	0.44	0/934
57	c	0.20	2/37760 (0.0%)	0.38	23/58811 (0.0%)
58	d	0.18	0/1623	0.43	0/2222
59	e	0.21	0/1714	0.48	0/2308
60	f	0.20	0/1665	0.45	0/2263
61	g	0.18	0/1429	0.44	0/1913
62	h	0.20	0/2097	0.44	0/2823
63	i	0.19	0/1591	0.47	0/2151
64	j	0.18	0/1790	0.45	0/2393
65	k	0.19	0/1506	0.51	0/2028
66	l	0.22	0/1482	0.49	0/1980
67	m	0.18	0/1519	0.38	0/2035
68	n	0.20	0/309	0.38	0/416
69	o	0.20	0/1172	0.43	0/1580
70	p	0.21	0/1215	0.44	0/1638
71	q	0.18	0/901	0.47	1/1217 (0.1%)
72	r	0.19	0/747	0.51	0/1002
73	s	0.21	0/1088	0.54	0/1459
74	t	0.18	0/971	0.47	0/1303
75	u	0.17	0/1211	0.45	0/1628

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	v	0.15	0/1130	0.41	0/1517
77	w	0.16	0/810	0.47	0/1095
78	x	0.20	0/693	0.46	0/935
79	y	0.21	0/1038	0.44	0/1395
80	z	0.20	0/1139	0.45	0/1518
All	All	0.20	7/215195 (0.0%)	0.38	36/314982 (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	6	0	1
31	JJ	0	2
34	L	0	1
50	V	0	1
53	Y	0	1
64	j	0	1
65	k	0	1
69	o	0	1
73	s	0	1
All	All	0	10

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	7	287	PRO	CG-CD	-13.15	1.06	1.50
7	6	19	PRO	CG-CD	-8.02	1.23	1.50
57	c	619	A2M	O3'-P	5.23	1.61	1.56
57	c	541	A2M	O3'-P	5.21	1.61	1.56
7	6	18	THR	N-CA	-5.07	1.40	1.46
11	AA	2256	A2M	O3'-P	5.03	1.61	1.56
11	AA	2417	OMU	O3'-P	5.03	1.61	1.56

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	7	287	PRO	N-CD-CG	-18.44	75.55	103.20
7	6	18	THR	N-CA-CB	-13.11	92.55	110.77
8	7	287	PRO	CA-CB-CG	-12.41	80.92	104.50
7	6	19	PRO	N-CD-CG	-10.68	87.18	103.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	c	1591	C	C4'-C3'-O3'	-9.81	94.68	109.40
57	c	1602	C	OP1-P-O3'	-9.42	79.74	108.00
8	7	287	PRO	CB-CG-CD	9.23	135.64	106.10
57	c	1175	U	OP1-P-O3'	-9.17	80.50	108.00
57	c	1439	C	OP1-P-O3'	-9.07	80.79	108.00
57	c	1496	U	OP1-P-O3'	-9.06	80.82	108.00
57	c	1440	C	OP1-P-O3'	-9.03	80.91	108.00
57	c	804	A	OP1-P-O3'	-9.02	80.95	108.00
57	c	1157	A	OP1-P-O3'	-9.01	80.98	108.00
57	c	82	U	OP1-P-O3'	-8.85	81.46	108.00
57	c	1421	A	OP1-P-O3'	-8.79	81.62	108.00
57	c	81	G	OP1-P-O3'	-8.76	81.72	108.00
57	c	82	U	OP2-P-O3'	-8.71	81.86	108.00
7	6	18	THR	CA-C-N	-8.71	111.06	119.76
7	6	18	THR	C-N-CA	-8.71	111.06	119.76
57	c	804	A	OP2-P-O3'	-8.47	82.58	108.00
57	c	1175	U	OP2-P-O3'	-8.44	82.67	108.00
7	6	19	PRO	CA-N-CD	-8.34	100.32	112.00
8	7	287	PRO	CA-N-CD	-8.26	100.44	112.00
57	c	81	G	OP2-P-O3'	-8.03	83.90	108.00
57	c	1421	A	OP2-P-O3'	-7.92	84.23	108.00
57	c	1440	C	OP2-P-O3'	-7.86	84.41	108.00
57	c	1439	C	OP2-P-O3'	-7.86	84.42	108.00
57	c	1496	U	OP2-P-O3'	-7.48	85.57	108.00
57	c	1602	C	OP2-P-O3'	-7.24	86.29	108.00
57	c	1157	A	OP2-P-O3'	-6.99	87.02	108.00
57	c	1591	C	N1-C1'-C2'	5.85	122.78	114.00
7	6	19	PRO	CA-CB-CG	-5.70	93.67	104.50
71	q	73	GLU	N-CA-C	-5.64	107.05	114.04
31	JJ	157	ASN	CA-C-N	5.53	132.11	121.54
31	JJ	157	ASN	C-N-CA	5.53	132.11	121.54
57	c	1591	C	O4'-C1'-C2'	-5.51	100.29	105.80

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
7	6	17	GLN	Mainchain
31	JJ	158	LYS	Peptide
31	JJ	232	ARG	Peptide
34	L	102	GLU	Peptide
50	V	64	MET	Peptide

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Mol	Chain	Res	Type	Group
53	Y	104	PRO	Peptide
64	j	23	ARG	Sidechain
65	k	64	VAL	Peptide
69	o	37	ASN	Peptide
73	s	40	GLU	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	1073	0	1132	68	0
2	1	563	0	603	29	0
3	2	769	0	815	47	0
4	3	610	0	633	38	0
5	4	497	0	535	28	0
6	5	404	0	398	33	0
7	6	427	0	476	39	0
8	7	2436	0	2386	146	0
9	8	276	0	289	11	0
10	A	1555	0	1659	79	0
11	AA	68429	0	34442	2642	0
12	Aa	6368	0	6435	358	0
13	B	1222	0	1231	71	0
14	BB	2579	0	1304	107	0
15	C	1441	0	1543	70	0
16	CC	3353	0	1695	137	0
17	D	1423	0	1510	66	0
18	DD	1531	0	1571	72	0
19	E	1445	0	1487	73	0
20	EE	1914	0	1981	88	0
21	Ee	1196	0	1257	69	0
22	F	1276	0	1323	70	0
23	FF	3075	0	3142	169	0
24	G	770	0	780	23	0
25	GG	2748	0	2859	142	0
26	H	963	0	1015	54	0
27	HH	2375	0	2325	95	0
28	I	521	0	551	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	II	1230	0	1320	61	0
30	J	959	0	1023	46	0
31	JJ	1784	0	1862	85	0
32	K	993	0	1081	53	0
33	KK	1804	0	1877	62	0
34	L	1092	0	1155	43	0
35	LL	1518	0	1587	66	0
36	M	1173	0	1215	60	0
37	MM	1743	0	1785	95	0
38	N	462	0	491	20	0
39	NN	1353	0	1383	98	0
40	O	742	0	797	53	0
41	OO	1543	0	1608	65	0
42	P	883	0	918	49	0
43	PP	1053	0	1149	54	0
44	Q	1020	0	1090	37	0
45	QQ	1720	0	1779	107	0
46	R	850	0	880	38	0
47	S	861	0	918	53	0
48	T	969	0	1078	39	0
49	U	771	0	849	40	0
50	V	665	0	668	35	0
51	W	612	0	682	26	0
52	X	436	0	475	28	0
53	Y	417	0	455	27	0
54	Z	233	0	284	28	0
55	a	819	0	886	63	0
56	b	694	0	734	40	0
57	c	34321	0	17287	1679	0
58	d	1583	0	1578	77	0
59	e	1689	0	1763	105	0
60	f	1635	0	1723	90	0
61	g	1412	0	1473	63	0
62	h	2056	0	2140	134	0
63	i	1572	0	1639	119	0
64	j	1766	0	1859	103	0
65	k	1481	0	1572	89	0
66	l	1457	0	1488	102	0
67	m	1494	0	1573	66	0
68	n	300	0	279	14	0
69	o	1146	0	1213	71	0
70	p	1192	0	1255	69	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
71	q	891	0	883	53	0
72	r	732	0	760	53	0
73	s	1069	0	1127	72	0
74	t	961	0	999	55	0
75	u	1192	0	1222	67	0
76	v	1112	0	1124	58	0
77	w	800	0	869	40	0
78	x	684	0	672	32	0
79	y	1021	0	1060	56	0
80	z	1121	0	1196	73	0
81	2	1	0	0	0	0
81	5	1	0	0	0	0
81	8	1	0	0	0	0
81	S	1	0	0	0	0
81	V	1	0	0	0	0
81	Y	1	0	0	0	0
81	a	1	0	0	0	0
81	b	1	0	0	0	0
82	AA	119	0	0	0	0
82	Aa	1	0	0	0	0
82	BB	3	0	0	0	0
82	CC	3	0	0	0	0
82	H	1	0	0	0	0
82	JJ	1	0	0	0	0
82	c	25	0	0	0	0
83	AA	9	0	0	0	0
83	EE	1	0	0	0	0
84	Aa	32	0	12	7	0
85	AA	71	0	0	1	0
85	B	1	0	0	0	0
85	CC	8	0	0	0	0
85	F	1	0	0	0	0
85	JJ	1	0	0	0	0
85	R	1	0	0	0	0
85	V	1	0	0	0	0
85	c	18	0	0	0	0
All	All	202630	0	152172	8200	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 24.

All (8200) 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)
11:AA:1237:G:N1	11:AA:1251:A:C2	2.01	1.28
57:c:1550:A:N6	57:c:1562:G:H21	1.32	1.28
57:c:1550:A:H62	57:c:1562:G:N2	1.31	1.28
6:5:21:CYS:SG	6:5:39:CYS:N	2.12	1.21
57:c:1541:G:N2	57:c:1570:A:H62	1.36	1.20
57:c:1541:G:H21	57:c:1570:A:N6	1.45	1.14
6:5:24:CYS:HB3	6:5:42:CYS:SG	1.89	1.11
7:6:18:THR:HB	57:c:562:OMG:HM21	1.35	1.05
57:c:143:G:H1	57:c:171:A:N6	1.53	1.04
60:f:90:THR:H	60:f:93:GLY:HA2	1.23	1.01
11:AA:2216:G:H1	11:AA:2229:A:H61	1.06	1.00
57:c:16:G:N2	57:c:1138:A:H62	1.59	1.00
57:c:1294:G:H1	57:c:1303:U:H3	1.11	0.99
55:a:17:CYS:SG	55:a:77:CYS:HB3	2.03	0.99
11:AA:2951:G:OP2	11:AA:2952:G:OP2	1.79	0.98
11:AA:3326:G:H1	11:AA:3380:U:H3	1.11	0.98
57:c:628:G:H21	57:c:971:A:H62	0.98	0.97
11:AA:2471:U:C4	11:AA:2473:C:N3	2.34	0.96
11:AA:2565:U:H3	11:AA:2576:G:H1	1.12	0.96
11:AA:646:A:H61	11:AA:2371:G:H21	1.04	0.96
11:AA:509:U:H3	11:AA:582:G:H1	1.05	0.96
2:1:40:VAL:HG12	2:1:41:ILE:HG13	1.49	0.95
11:AA:528:U:H3	11:AA:564:G:H1	1.03	0.95
62:h:92:LEU:O	62:h:96:ASN:HA	1.67	0.95
11:AA:3160:U:H3	11:AA:3290:G:H1	1.09	0.94
8:7:42:LEU:HB2	8:7:61:PHE:HB2	1.47	0.94
6:5:43:PHE:O	6:5:47:ALA:HB2	1.66	0.94
11:AA:2844:C:H42	11:AA:2898:G:N2	1.63	0.94
57:c:1663:G:H1	57:c:1738:U:H3	1.11	0.94
11:AA:645:1MA:O2'	44:Q:39:ASP:OD2	1.86	0.92
11:AA:1479:U:OP2	11:AA:1480:G:N7	2.02	0.92
7:6:18:THR:HB	57:c:562:OMG:CM2	1.99	0.91
11:AA:3055:U:HO2'	11:AA:3085:G:H1	1.14	0.91
30:J:25:LYS:HB2	30:J:27:ARG:HH21	1.34	0.91
57:c:1524:A:H5''	76:v:78:LYS:HE2	1.53	0.91
11:AA:2883:U:H3	11:AA:2939:G:H1	0.92	0.91
57:c:1590:G:O2'	57:c:1591:C:H4'	1.70	0.91
57:c:16:G:H21	57:c:1138:A:H62	0.95	0.90
57:c:16:G:H21	57:c:1138:A:N6	1.70	0.90
11:AA:1039:U:H2'	11:AA:1040:A:H8	1.35	0.90
11:AA:2568:C:O2	11:AA:2573:G:N2	2.03	0.90
11:AA:2999:U:H3	11:AA:3149:G:H1	1.01	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:299:G:H1	11:AA:316:U:H3	1.15	0.90
11:AA:2844:C:N4	11:AA:2898:G:H22	1.70	0.90
11:AA:1722:U:H5''	17:D:99:LEU:HD23	1.54	0.89
12:Aa:593:ILE:HG13	12:Aa:685:ARG:HB2	1.54	0.89
57:c:1175:U:H3	57:c:1465:C:H42	1.20	0.89
70:p:100:LYS:HG3	70:p:104:ARG:HH12	1.32	0.89
66:l:74:LYS:HB2	66:l:112:TRP:HZ2	1.37	0.89
9:8:143:LYS:NZ	57:c:1253:U:O2'	2.05	0.89
57:c:628:G:N2	57:c:971:A:H62	1.71	0.89
38:N:8:THR:HG22	38:N:10:HIS:H	1.38	0.88
76:v:63:ARG:HE	76:v:67:MET:HE1	1.39	0.88
15:C:29:LEU:HG	25:GG:281:ILE:HD11	1.56	0.88
63:i:128:ASN:HD22	63:i:131:GLN:HG2	1.37	0.87
11:AA:2957:G:H1	11:AA:2975:U:H3	0.90	0.87
11:AA:3067:C:OP2	17:D:62:ARG:NH1	2.08	0.87
65:k:56:LYS:O	65:k:88:ARG:HA	1.74	0.87
64:j:57:ASP:HA	64:j:106:LEU:HA	1.55	0.87
56:b:39:CYS:HB3	56:b:42:CYS:SG	2.15	0.86
26:H:108:GLU:HA	26:H:128:ARG:HG3	1.58	0.86
57:c:482:U:H2'	57:c:483:A:H8	1.40	0.86
11:AA:2826:U:H3	11:AA:2863:G:H1	1.21	0.86
12:Aa:436:LEU:HD23	12:Aa:445:ILE:HG13	1.57	0.85
55:a:8:ARG:HB3	55:a:23:HIS:O	1.75	0.85
56:b:42:CYS:HB3	56:b:60:CYS:SG	2.16	0.85
11:AA:100:A:H3'	11:AA:101:G:H21	1.41	0.85
57:c:1454:G:H5'	72:r:81:ARG:HH12	1.42	0.85
11:AA:1237:G:N1	11:AA:1251:A:H2	1.75	0.85
64:j:20:ASP:HB2	64:j:23:ARG:HG2	1.60	0.84
6:5:29:GLY:HA3	6:5:40:ARG:HD3	1.57	0.84
15:C:36:LEU:HB3	15:C:45:ASN:HD21	1.40	0.84
53:Y:97:ARG:HH12	53:Y:122:ARG:HB3	1.43	0.84
57:c:628:G:H21	57:c:971:A:N6	1.75	0.84
11:AA:164:A:N1	11:AA:258:G:C6	2.45	0.84
57:c:445:A:H2'	57:c:446:A:H8	1.42	0.84
57:c:93:A:H1'	62:h:3:ARG:HB3	1.60	0.83
57:c:480:G:H21	57:c:509:G:H2'	1.43	0.83
66:l:104:ILE:HB	66:l:165:LEU:HB2	1.57	0.83
74:t:9:VAL:HG23	74:t:50:ILE:HD13	1.59	0.83
11:AA:3192:U:H3	11:AA:3200:G:H1	1.25	0.83
12:Aa:616:ALA:HB3	12:Aa:631:ARG:HH11	1.41	0.83
66:l:103:GLN:HA	66:l:165:LEU:O	1.79	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1648:A:H62	11:AA:1807:G:H21	1.25	0.83
14:BB:45:A:H4'	27:HH:154:THR:HG21	1.59	0.83
59:e:138:PHE:HB2	59:e:214:LYS:HG3	1.60	0.83
11:AA:668:G:H1	11:AA:794:U:H3	1.26	0.83
57:c:58:U:O2'	57:c:451:A:N3	2.10	0.83
57:c:1365:C:O2'	73:s:30:LYS:NZ	2.12	0.82
57:c:1345:A:H5'	77:w:53:LYS:HB3	1.58	0.82
25:GG:35:VAL:HG11	25:GG:244:LEU:HD21	1.57	0.82
11:AA:646:A:N6	11:AA:2371:G:H21	1.77	0.82
63:i:23:VAL:HB	73:s:57:LEU:HD22	1.61	0.82
8:7:132:LYS:HG2	8:7:143:THR:HG22	1.62	0.82
32:K:63:LYS:HD2	32:K:99:LEU:HD11	1.60	0.82
57:c:816:G:H2'	57:c:817:A:H8	1.45	0.82
57:c:1156:C:H2'	57:c:1157:A:H8	1.45	0.82
11:AA:659:G:H21	11:AA:1435:A:H62	1.25	0.82
13:B:32:THR:HG22	13:B:58:ILE:HD13	1.61	0.82
10:A:16:VAL:HB	10:A:41:LEU:HD21	1.62	0.82
12:Aa:617:ARG:HH22	12:Aa:627:VAL:HG22	1.42	0.82
57:c:863:A:H4'	79:y:57:ARG:HD3	1.61	0.82
11:AA:2561:A:H61	11:AA:2579:G:H2'	1.43	0.81
11:AA:3174:A:N6	11:AA:3279:A:O4'	2.13	0.81
19:E:97:VAL:HG13	43:PP:39:ILE:HD11	1.62	0.81
57:c:751:G:H2'	57:c:752:A:H8	1.45	0.81
46:R:42:GLN:HA	46:R:45:LEU:HD23	1.62	0.81
7:6:18:THR:CB	57:c:562:OMG:HM21	2.10	0.81
11:AA:640:U:OP1	36:M:21:ARG:NH2	2.14	0.81
57:c:1348:A:H2'	57:c:1349:G:C8	2.16	0.81
57:c:1772:C:H2'	57:c:1773:4AC:H6	1.63	0.81
35:LL:22:SER:O	35:LL:23:ARG:NH1	2.14	0.81
11:AA:931:C:H3'	11:AA:932:U:H2'	1.63	0.80
11:AA:1567:U:H3	11:AA:1571:A:H1'	1.44	0.80
11:AA:3219:G:H1	29:II:162:SER:HG	1.23	0.80
54:Z:14:LYS:HD3	54:Z:17:ARG:HH22	1.46	0.80
57:c:1267:G:H1	57:c:1442:U:H3	1.28	0.80
34:L:15:ARG:HH22	47:S:86:LYS:HB2	1.45	0.80
11:AA:2844:C:N4	11:AA:2898:G:N2	2.25	0.80
72:r:16:SER:N	75:u:92:ILE:O	2.14	0.80
11:AA:1243:G:N2	11:AA:1270:A:O2'	2.15	0.80
11:AA:1661:G:H2'	11:AA:1662:G:C8	2.16	0.80
11:AA:2216:G:H1	11:AA:2229:A:N6	1.78	0.80
12:Aa:616:ALA:HA	12:Aa:619:MET:HE2	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:u:88:ARG:HB3	75:u:98:TYR:HB2	1.62	0.80
20:EE:147:ARG:HG2	20:EE:157:VAL:HG12	1.63	0.80
64:j:195:VAL:O	64:j:199:GLN:NE2	2.15	0.80
66:l:110:ARG:HH22	66:l:163:GLY:HA2	1.44	0.80
14:BB:93:C:H4'	37:MM:57:LEU:HD21	1.60	0.80
57:c:1358:G:N1	57:c:1366:U:N3	2.29	0.80
57:c:1528:U:H5''	63:i:108:LEU:HD22	1.62	0.80
11:AA:388:G:N2	13:B:101:ASN:OD1	2.13	0.79
57:c:448:C:OP1	62:h:49:ARG:NH2	2.15	0.79
79:y:19:LYS:NZ	79:y:70:ASN:O	2.14	0.79
11:AA:1570:U:H3	11:AA:1572:U:H1'	1.45	0.79
57:c:245:U:N3	57:c:248:U:OP1	2.15	0.79
57:c:394:C:H42	57:c:401:A:H62	1.29	0.79
11:AA:1939:G:H1	11:AA:2109:U:H3	1.28	0.79
57:c:252:U:OP1	62:h:133:LYS:NZ	2.14	0.79
57:c:256:A:O2'	66:l:72:ILE:O	2.00	0.79
57:c:1334:U:O2'	77:w:85:ARG:NH2	2.16	0.79
11:AA:1019:G:H1	11:AA:1033:U:H3	1.30	0.79
11:AA:646:A:H61	11:AA:2371:G:N2	1.80	0.79
11:AA:969:C:OP1	38:N:19:ASN:ND2	2.16	0.79
11:AA:2659:G:H2'	11:AA:2660:G:H8	1.48	0.79
57:c:1501:C:N4	57:c:1507:G:N3	2.31	0.79
57:c:1443:U:H5''	57:c:1444:A:H5'	1.65	0.79
11:AA:2964:G:N2	11:AA:2967:A:OP2	2.16	0.78
11:AA:3252:G:H2'	11:AA:3253:G:H8	1.47	0.78
25:GG:140:HIS:HE1	25:GG:246:ARG:HD2	1.48	0.78
11:AA:542:G:H1	11:AA:549:U:H3	1.32	0.78
28:I:4:GLU:HG3	28:I:13:ILE:HB	1.65	0.78
5:4:49:ARG:NH1	63:i:61:TYR:OH	2.16	0.78
11:AA:2561:A:N7	11:AA:2580:A:N6	2.32	0.78
11:AA:164:A:C2	11:AA:258:G:N1	2.52	0.78
14:BB:97:A:H4'	31:JJ:224:ILE:HD11	1.63	0.78
57:c:143:G:H1	57:c:171:A:H61	0.79	0.78
62:h:181:VAL:HG12	62:h:227:VAL:HG22	1.66	0.78
69:o:71:LEU:HD12	69:o:72:THR:H	1.47	0.78
3:2:5:ARG:HH21	57:c:1795:U:H3'	1.49	0.78
14:BB:53:U:O2'	14:BB:55:A:N7	2.17	0.78
23:FF:70:ARG:HD2	26:H:88:ARG:HH22	1.48	0.78
11:AA:158:G:H2'	11:AA:159:A:H8	1.49	0.78
57:c:393:C:OP1	66:l:2:GLY:N	2.17	0.78
61:g:28:GLU:HG2	68:n:58:GLN:HE22	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:f:139:ILE:HD12	60:f:218:ILE:HB	1.66	0.78
61:g:157:LEU:HA	61:g:189:MET:HE3	1.65	0.78
57:c:1135:U:OP2	80:z:121:ARG:NH1	2.17	0.78
58:d:84:ARG:NH1	58:d:203:PHE:O	2.16	0.77
16:CC:155:A:OP1	33:KK:181:LYS:NZ	2.17	0.77
55:a:35:LEU:HD12	55:a:36:PHE:H	1.50	0.77
2:1:77:ARG:NH2	57:c:1533:C:OP2	2.15	0.77
11:AA:1237:G:O6	11:AA:1251:A:N1	2.17	0.77
8:7:260:ILE:HD11	8:7:274:LEU:H	1.49	0.77
11:AA:911:C:H3'	20:EE:9:ARG:HH12	1.50	0.77
11:AA:1237:G:C6	11:AA:1251:A:N1	2.52	0.77
12:Aa:32:LYS:HG2	84:Aa:901:GTP:O1B	1.84	0.77
42:P:55:LEU:HB2	42:P:95:PRO:HD3	1.65	0.77
8:7:23:LEU:HB2	8:7:33:LEU:HD21	1.66	0.77
57:c:1673:G:O6	57:c:1728:A:N1	2.17	0.77
72:r:118:GLU:O	75:u:122:HIS:N	2.15	0.77
11:AA:1392:G:N2	11:AA:1417:G:O2'	2.17	0.77
11:AA:271:C:N4	11:AA:294:U:O2	2.17	0.77
57:c:272:U:O2	57:c:284:G:N2	2.17	0.77
62:h:56:LEU:N	62:h:60:GLU:OE2	2.17	0.77
74:t:83:GLN:HB3	74:t:86:PRO:HB3	1.66	0.77
20:EE:29:LEU:O	20:EE:123:ARG:NH1	2.17	0.77
11:AA:2450:G:H1	11:AA:2497:U:H3	1.33	0.76
11:AA:2769:A:OP1	55:a:80:ARG:NH1	2.18	0.76
19:E:124:LEU:HA	22:F:153:PRO:HG2	1.66	0.76
47:S:100:ILE:HA	47:S:103:LYS:HZ2	1.49	0.76
59:e:214:LYS:HD3	59:e:216:LYS:HG2	1.67	0.76
11:AA:804:C:OP1	25:GG:98:ARG:NH2	2.17	0.76
11:AA:1395:G:H1	11:AA:1415:U:H3	1.31	0.76
39:NN:47:GLN:HG2	39:NN:64:LYS:HG3	1.66	0.76
57:c:930:A:N3	59:e:111:ARG:NH1	2.32	0.76
11:AA:110:G:OP2	41:OO:73:ARG:NH2	2.18	0.76
11:AA:2960:C:H2'	11:AA:2961:G:H8	1.50	0.76
57:c:462:G:OP1	67:m:3:ARG:NH1	2.18	0.76
64:j:139:ASN:OD1	64:j:142:ARG:NH1	2.18	0.76
27:HH:146:LEU:HD22	27:HH:163:LEU:HD13	1.67	0.76
45:QQ:36:ILE:HD12	45:QQ:109:ARG:HD2	1.68	0.76
57:c:822:U:H3	57:c:851:U:H3'	1.50	0.76
11:AA:1618:G:O2'	16:CC:126:A:N1	2.19	0.76
11:AA:337:G:OP2	25:GG:196:ASN:ND2	2.18	0.76
27:HH:117:GLU:O	27:HH:120:LYS:NZ	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:87:MET:SD	11:AA:1174:G:N2	2.59	0.76
11:AA:3186:A:O2'	35:LL:23:ARG:NH2	2.19	0.76
54:Z:14:LYS:NZ	57:c:1116:A:OP2	2.19	0.76
11:AA:3068:U:OP2	17:D:62:ARG:NH2	2.19	0.76
57:c:895:G:N3	57:c:918:U:N3	2.33	0.76
57:c:1229:G:N2	57:c:1255:G:O2'	2.18	0.76
67:m:54:ARG:HE	67:m:57:ARG:HH21	1.34	0.76
1:0:8:ARG:HE	1:0:9:THR:H	1.33	0.76
4:3:54:VAL:HG13	4:3:63:LEU:HB2	1.65	0.76
7:6:10:ARG:NH1	7:6:10:ARG:O	2.18	0.76
11:AA:215:G:OP1	32:K:12:ARG:NH1	2.19	0.76
11:AA:1310:G:H2'	11:AA:1311:G:C8	2.21	0.76
35:LL:23:ARG:NH2	35:LL:43:VAL:O	2.19	0.76
57:c:560:U:H2'	57:c:561:G:H8	1.51	0.76
57:c:685:A:N6	57:c:687:G:O6	2.18	0.76
5:4:14:LYS:HB3	5:4:29:ARG:HB3	1.67	0.75
11:AA:767:U:H4'	41:OO:186:ARG:HH12	1.51	0.75
11:AA:1717:U:H2'	11:AA:1718:G:H8	1.50	0.75
11:AA:3232:G:O6	11:AA:3255:U:O4	2.04	0.75
31:JJ:158:LYS:O	31:JJ:203:TRP:HH2	1.69	0.75
11:AA:20:A:OP2	48:T:86:ARG:NH2	2.19	0.75
64:j:85:ARG:O	64:j:87:ARG:NH1	2.20	0.75
65:k:7:LYS:HD3	65:k:8:ILE:HG12	1.67	0.75
8:7:179:LYS:HZ1	8:7:189:GLU:H	1.31	0.75
27:HH:150:LEU:HD11	39:NN:142:LYS:HE2	1.68	0.75
57:c:161:U:OP1	64:j:85:ARG:N	2.15	0.75
57:c:1236:A:H61	57:c:1250:U:H1'	1.50	0.75
57:c:1618:C:O2	57:c:1620:C:N4	2.15	0.75
58:d:24:LEU:O	58:d:163:ASN:ND2	2.19	0.75
66:l:43:ILE:HD11	66:l:55:TYR:HB3	1.67	0.75
78:x:55:LEU:HD21	78:x:65:SER:HB2	1.69	0.75
11:AA:2852:C:O2	37:MM:158:LYS:NZ	2.19	0.75
12:Aa:638:PRO:HD3	12:Aa:671:THR:HB	1.68	0.75
23:FF:136:LYS:HB3	23:FF:144:ILE:HD11	1.68	0.75
40:O:22:LYS:HG3	40:O:93:LEU:HB2	1.68	0.75
42:P:18:LYS:HZ2	42:P:19:ARG:HG3	1.52	0.75
66:l:7:SER:O	66:l:18:ARG:NH2	2.19	0.75
11:AA:1480:G:N2	11:AA:1872:C:OP2	2.19	0.75
11:AA:2428:U:H2'	11:AA:2429:G:H8	1.49	0.75
12:Aa:240:MET:HA	12:Aa:243:ARG:HB3	1.68	0.75
14:BB:38:U:O2	14:BB:42:A:N6	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:D:133:LYS:HD2	17:D:134:HIS:CD2	2.22	0.75
57:c:1409:G:N2	57:c:1412:G:OP2	2.20	0.75
3:2:4:LYS:NZ	57:c:1629:G:OP1	2.19	0.75
11:AA:1560:G:O2'	11:AA:1561:G:O4'	2.04	0.75
16:CC:8:C:H2'	16:CC:9:A:H8	1.50	0.75
29:II:36:PRO:O	29:II:90:LYS:NZ	2.19	0.75
52:X:25:GLN:OE1	52:X:28:ARG:NH1	2.19	0.75
63:i:176:THR:OG1	63:i:180:ARG:NH2	2.20	0.75
74:t:103:ASP:OD1	74:t:104:ASN:ND2	2.18	0.75
10:A:41:LEU:HD22	10:A:138:LEU:HD22	1.69	0.75
63:i:25:LEU:HD12	63:i:27:THR:H	1.52	0.75
63:i:37:GLN:HG2	73:s:53:LEU:HB3	1.69	0.75
11:AA:824:C:H5''	20:EE:21:ARG:HD3	1.67	0.74
11:AA:1071:U:O2	11:AA:1087:G:O6	2.04	0.74
11:AA:1288:U:H2'	11:AA:1289:G:H8	1.52	0.74
57:c:567:A:OP1	80:z:70:LYS:NZ	2.20	0.74
79:y:36:LYS:HB3	79:y:110:ILE:HG21	1.68	0.74
11:AA:1899:G:O2'	11:AA:2334:U:O4	2.04	0.74
13:B:30:ARG:HH21	13:B:34:GLN:HG3	1.51	0.74
16:CC:113:U:H5''	52:X:7:PHE:HB2	1.69	0.74
57:c:742:U:H1'	65:k:107:ARG:HA	1.68	0.74
57:c:1148:C:H2'	57:c:1149:G:H8	1.53	0.74
57:c:1158:C:OP2	57:c:1160:A:N6	2.20	0.74
11:AA:1695:U:O2'	11:AA:1749:A:N1	2.19	0.74
12:Aa:730:LEU:HB2	12:Aa:799:ASP:HB2	1.68	0.74
19:E:15:PRO:HB3	19:E:22:PRO:HD3	1.69	0.74
33:KK:159:PRO:HG2	33:KK:162:LEU:HD12	1.67	0.74
57:c:1546:G:OP1	75:u:134:ARG:NH1	2.19	0.74
1:0:20:ARG:HD2	1:0:74:LEU:HD22	1.70	0.74
11:AA:1805:C:H2'	11:AA:1806:A:H8	1.52	0.74
12:Aa:388:THR:HG21	12:Aa:393:ARG:HB2	1.68	0.74
57:c:905:A:H5''	71:q:52:ARG:HG3	1.67	0.74
11:AA:394:G:H22	11:AA:397:A:H5'	1.53	0.74
12:Aa:26:ALA:HB3	12:Aa:32:LYS:HE3	1.70	0.74
21:Ee:117:ARG:NH2	21:Ee:123:ARG:O	2.19	0.74
48:T:35:LYS:HE2	48:T:44:ILE:HB	1.70	0.74
3:2:85:ARG:HH21	57:c:1153:G:H4'	1.52	0.74
11:AA:591:G:N2	11:AA:612:U:OP1	2.21	0.74
11:AA:2185:G:O2'	11:AA:2314:U:OP2	2.04	0.74
44:Q:42:VAL:O	44:Q:52:GLN:NE2	2.20	0.74
57:c:477:A:H2'	57:c:478:A:H8	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1585:U:N3	57:c:1612:U:O4	2.20	0.74
80:z:30:LYS:HE2	80:z:34:LEU:HD11	1.68	0.74
11:AA:665:A:H2	41:OO:12:ASN:HD22	1.35	0.74
19:E:155:ARG:O	19:E:170:THR:OG1	2.06	0.74
33:KK:98:ARG:NH1	33:KK:188:THR:O	2.19	0.74
58:d:78:SER:OG	58:d:129:ASP:OD1	2.04	0.74
63:i:63:GLN:H	63:i:89:ILE:HD11	1.52	0.74
57:c:335:U:O2'	69:o:130:PRO:O	2.05	0.74
59:e:194:ASN:HD21	59:e:211:HIS:HA	1.53	0.74
57:c:1541:G:H21	57:c:1570:A:H62	0.74	0.74
61:g:31:GLU:O	61:g:54:ARG:NH2	2.20	0.74
62:h:191:ARG:HH21	62:h:245:LYS:HD3	1.52	0.74
57:c:1267:G:N2	57:c:1442:U:O2	2.18	0.74
62:h:131:LEU:HA	62:h:137:PRO:HA	1.70	0.74
8:7:123:ILE:HG13	8:7:133:VAL:HG13	1.68	0.73
11:AA:276:U:O2'	45:QQ:91:GLU:OE2	2.06	0.73
11:AA:3336:A:N6	11:AA:3368:U:O4	2.17	0.73
3:2:37:LYS:NZ	57:c:933:A:OP2	2.18	0.73
11:AA:1119:C:H2'	11:AA:1120:A:H8	1.53	0.73
11:AA:2560:C:N4	11:AA:2575:G:OP1	2.21	0.73
57:c:44:U:OP2	57:c:437:A:N6	2.18	0.73
11:AA:1237:G:C6	11:AA:1251:A:C2	2.76	0.73
11:AA:1887:A:H1'	23:FF:226:PHE:CE2	2.22	0.73
11:AA:2228:A:H2'	11:AA:2229:A:H8	1.52	0.73
12:Aa:570:GLU:O	12:Aa:589:LYS:NZ	2.18	0.73
39:NN:137:ARG:HG3	39:NN:141:ARG:HB3	1.70	0.73
57:c:1001:A:H2'	57:c:1002:G:C8	2.23	0.73
57:c:1408:G:N2	57:c:1412:G:O6	2.18	0.73
8:7:80:ALA:HB3	8:7:92:TRP:HB2	1.71	0.73
11:AA:992:A:H61	11:AA:1057:A:H61	1.36	0.73
11:AA:3009:G:N2	23:FF:15:GLY:O	2.21	0.73
35:LL:114:VAL:HB	35:LL:124:ARG:HB2	1.69	0.73
37:MM:149:VAL:HG13	37:MM:165:ILE:HG21	1.70	0.73
44:Q:41:VAL:HG13	44:Q:46:PHE:HB2	1.69	0.73
57:c:153:G:O6	57:c:161:U:C2	2.40	0.73
7:6:18:THR:CG2	57:c:562:OMG:HM22	2.18	0.73
11:AA:601:U:OP1	11:AA:602:A:N6	2.22	0.73
11:AA:2745:G:N2	11:AA:2748:A:OP2	2.16	0.73
28:I:45:ASN:HB3	28:I:48:ARG:HG2	1.70	0.73
35:LL:16:VAL:HG11	35:LL:79:ILE:HG23	1.71	0.73
44:Q:38:ILE:O	44:Q:44:ARG:NH2	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:W:14:LEU:HD13	51:W:17:ARG:HD3	1.68	0.73
57:c:78:A:OP1	64:j:154:ARG:NH2	2.21	0.73
69:o:23:PRO:O	69:o:26:LYS:NZ	2.22	0.73
74:t:26:LEU:HD22	74:t:59:LYS:HA	1.68	0.73
11:AA:20:A:H2'	11:AA:21:G:C8	2.23	0.73
11:AA:303:G:H5''	11:AA:304:G:H5''	1.70	0.73
11:AA:360:G:N2	11:AA:815:G:O2'	2.22	0.73
11:AA:2781:U:H4'	41:OO:185:LYS:HD2	1.71	0.73
57:c:947:U:H2'	57:c:948:G:H8	1.53	0.73
72:r:119:PHE:HA	75:u:121:ALA:HA	1.70	0.73
11:AA:3231:U:H2'	11:AA:3232:G:H8	1.52	0.73
23:FF:369:ARG:HH21	28:I:11:ALA:HB2	1.52	0.73
57:c:251:A:H2'	57:c:252:U:O4'	1.89	0.73
57:c:332:U:OP1	66:l:31:ARG:NH1	2.20	0.73
11:AA:1486:G:H21	47:S:6:THR:HG22	1.54	0.73
11:AA:3153:U:H3'	11:AA:3154:C:H2'	1.69	0.73
29:II:154:LEU:HD23	43:PP:119:GLN:HG3	1.71	0.73
41:OO:70:ARG:NH1	41:OO:71:ALA:O	2.21	0.73
57:c:354:C:H5''	66:l:16:ALA:HB2	1.71	0.73
57:c:1316:G:O2'	74:t:10:LYS:NZ	2.21	0.73
58:d:6:THR:HG21	78:x:42:GLU:HG2	1.70	0.73
62:h:256:ARG:O	62:h:259:GLN:NE2	2.22	0.73
11:AA:3016:A:H2'	11:AA:3017:A:H8	1.54	0.73
23:FF:52:GLY:HA2	23:FF:332:ARG:HD2	1.71	0.73
50:V:64:MET:O	50:V:66:TYR:N	2.22	0.73
50:V:67:LEU:HA	50:V:70:VAL:HG22	1.71	0.73
76:v:47:PRO:HG2	76:v:53:TRP:HB3	1.71	0.73
11:AA:216:G:OP1	32:K:16:ARG:NH1	2.22	0.72
57:c:1667:A:H2'	57:c:1668:G:H8	1.54	0.72
65:k:61:PHE:HA	65:k:93:LEU:O	1.89	0.72
68:n:58:GLN:HB2	68:n:65:TYR:HB3	1.71	0.72
11:AA:612:U:H2'	11:AA:613:G:H8	1.54	0.72
11:AA:1258:U:O2'	18:DD:42:ARG:NH2	2.21	0.72
23:FF:76:VAL:HG12	23:FF:325:LYS:HA	1.71	0.72
40:O:73:GLY:N	40:O:76:GLU:OE2	2.20	0.72
66:l:106:ALA:HB2	66:l:165:LEU:HG	1.71	0.72
11:AA:1011:A:H2'	11:AA:1012:G:C8	2.24	0.72
11:AA:2101:C:H2'	11:AA:2102:U:H6	1.54	0.72
11:AA:2950:G:N2	11:AA:2950:G:OP2	2.20	0.72
11:AA:3324:C:OP1	42:P:19:ARG:NH1	2.21	0.72
31:JJ:151:ARG:NH1	31:JJ:244:ASN:OD1	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:KK:183:LYS:HZ2	33:KK:194:THR:HB	1.53	0.72
57:c:643:G:H2'	57:c:644:C:H6	1.53	0.72
8:7:200:ASN:H	8:7:215:GLY:HA2	1.53	0.72
11:AA:297:G:OP2	11:AA:297:G:N2	2.20	0.72
11:AA:584:G:H2'	11:AA:585:A:H8	1.54	0.72
11:AA:2480:A:OP1	11:AA:2482:U:N3	2.21	0.72
11:AA:2735:U:O2	22:F:90:ASN:ND2	2.21	0.72
11:AA:2831:G:N2	11:AA:2858:U:O2	2.22	0.72
23:FF:50:LYS:HE2	23:FF:332:ARG:HE	1.53	0.72
11:AA:2916:U:H2'	11:AA:2917:G:H8	1.55	0.72
13:B:22:LEU:HD22	13:B:146:ILE:HD13	1.70	0.72
57:c:279:G:H2'	57:c:280:U:H3'	1.71	0.72
57:c:1164:G:H2'	57:c:1165:G:C8	2.25	0.72
57:c:1591:C:OP1	76:v:92:LYS:HG2	1.90	0.72
7:6:43:ARG:NH2	57:c:590:C:OP1	2.22	0.72
11:AA:373:A:N6	11:AA:394:G:O2'	2.21	0.72
11:AA:3084:C:O2'	11:AA:3332:U:OP1	2.06	0.72
12:Aa:10:ARG:HH22	12:Aa:449:PRO:HD3	1.54	0.72
14:BB:35:C:O2'	27:HH:155:THR:O	2.05	0.72
16:CC:112:U:OP1	52:X:8:ARG:NH1	2.22	0.72
18:DD:76:LEU:HB2	18:DD:196:VAL:HG11	1.72	0.72
57:c:1164:G:H2'	57:c:1165:G:H8	1.54	0.72
57:c:1500:C:H5''	76:v:102:ARG:HD3	1.71	0.72
63:i:50:GLU:O	63:i:128:ASN:ND2	2.23	0.72
63:i:61:TYR:HA	63:i:85:ALA:HB1	1.71	0.72
64:j:31:ARG:NH1	64:j:32:ILE:O	2.22	0.72
7:6:14:VAL:O	7:6:18:THR:HG21	1.90	0.72
11:AA:1662:G:H1	11:AA:1787:A:H61	1.36	0.72
25:GG:44:LYS:HG3	25:GG:47:ARG:HH22	1.54	0.72
30:J:105:VAL:HG11	30:J:126:LEU:HD13	1.72	0.72
57:c:436:A2M:H8	57:c:436:A2M:O5'	1.89	0.72
11:AA:3092:C:O2'	11:AA:3094:A:OP2	2.08	0.72
11:AA:3368:U:H5'	23:FF:384:LYS:HD2	1.70	0.72
12:Aa:438:MET:HG3	12:Aa:439:GLY:H	1.55	0.72
12:Aa:589:LYS:HB3	12:Aa:687:ASN:HB2	1.72	0.72
57:c:590:C:H2'	57:c:591:A:H8	1.55	0.72
12:Aa:121:VAL:HG13	12:Aa:122:THR:HG23	1.70	0.72
12:Aa:366:CYS:SG	12:Aa:370:LYS:NZ	2.57	0.72
14:BB:7:G:N2	14:BB:114:U:O2	2.19	0.72
26:H:44:SER:O	26:H:45:ARG:NH1	2.22	0.72
23:FF:212:ASN:O	23:FF:281:LYS:NZ	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1484:G:N2	57:c:1592:A:O2'	2.18	0.72
7:6:17:GLN:C	7:6:18:THR:HG23	2.15	0.71
11:AA:727:G:OP2	11:AA:742:G:N2	2.23	0.71
11:AA:1104:G:H2'	11:AA:1105:A:H8	1.53	0.71
11:AA:2149:A:H4'	20:EE:179:LEU:HD11	1.70	0.71
11:AA:2516:U:OP1	45:QQ:31:ARG:NH1	2.17	0.71
31:JJ:173:LEU:HB3	31:JJ:178:ILE:HB	1.72	0.71
57:c:1502:G:N2	57:c:1505:A:OP2	2.23	0.71
11:AA:1794:G:O2'	11:AA:1796:G:N2	2.22	0.71
57:c:1171:A:H2'	57:c:1172:G:C8	2.25	0.71
11:AA:596:C:OP1	31:JJ:37:ASN:ND2	2.23	0.71
11:AA:1259:A:HO2'	11:AA:1280:C:HO2'	1.38	0.71
11:AA:2177:G:N1	20:EE:118:GLU:OE2	2.23	0.71
11:AA:2736:A:OP1	22:F:92:ARG:NH1	2.23	0.71
11:AA:2947:G:OP1	11:AA:2982:A:N6	2.23	0.71
12:Aa:729:PHE:HA	12:Aa:798:PHE:HA	1.72	0.71
57:c:396:G:H1	66:l:26:LYS:HE2	1.55	0.71
57:c:1555:A:O2'	72:r:82:ASN:ND2	2.23	0.71
64:j:18:ILE:HG13	64:j:23:ARG:NH1	2.05	0.71
67:m:48:GLN:HA	67:m:51:LYS:HZ3	1.55	0.71
69:o:27:THR:O	69:o:30:ARG:NE	2.22	0.71
11:AA:3298:C:O3'	13:B:72:GLN:NE2	2.22	0.71
14:BB:19:C:H2'	14:BB:20:A:H8	1.55	0.71
39:NN:11:ASP:OD1	39:NN:13:LYS:NZ	2.23	0.71
43:PP:55:ARG:NH2	43:PP:76:ALA:O	2.23	0.71
57:c:638:U:OP2	79:y:32:LYS:NZ	2.17	0.71
11:AA:171:G:N1	11:AA:248:U:N3	2.38	0.71
11:AA:1211:U:O2'	19:E:113:ARG:NH1	2.24	0.71
11:AA:1662:G:H1	11:AA:1787:A:N6	1.89	0.71
11:AA:3209:A:N7	43:PP:106:ARG:NH2	2.38	0.71
57:c:153:G:H2'	57:c:154:G:C8	2.25	0.71
57:c:1553:G:N2	57:c:1556:A:OP2	2.24	0.71
64:j:56:ASN:ND2	64:j:60:GLY:O	2.19	0.71
7:6:18:THR:HG22	57:c:562:OMG:HM22	1.72	0.71
11:AA:655:C:H2'	11:AA:656:A:H8	1.55	0.71
12:Aa:122:THR:O	12:Aa:352:ARG:NH1	2.23	0.71
17:D:172:ARG:NH1	57:c:852:C:OP1	2.23	0.71
79:y:15:ASN:ND2	79:y:72:CYS:O	2.24	0.71
8:7:205:SER:HB2	8:7:245:PHE:HD2	1.56	0.71
11:AA:164:A:C2	11:AA:258:G:C6	2.78	0.71
11:AA:2894:C:HO2'	11:AA:3107:U:HO2'	1.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:247:ASP:HB3	18:DD:154:SER:HB2	1.71	0.71
50:V:18:LEU:HD21	52:X:51:ILE:HG21	1.71	0.71
57:c:1594:G:OP2	57:c:1605:G:N2	2.22	0.71
58:d:20:ALA:HB2	58:d:172:LEU:HD13	1.72	0.71
75:u:94:ASP:HB2	75:u:96:LYS:HE2	1.72	0.71
80:z:50:LYS:HE3	80:z:77:ILE:HD13	1.71	0.71
2:1:61:SER:H	2:1:64:VAL:HB	1.55	0.71
11:AA:785:G:N2	15:C:90:ASP:OD1	2.24	0.71
20:EE:146:THR:N	20:EE:158:ILE:O	2.24	0.71
31:JJ:155:LYS:HE3	31:JJ:203:TRP:HE1	1.56	0.71
31:JJ:160:ARG:HA	31:JJ:203:TRP:CZ3	2.26	0.71
57:c:1428:OMG:N2	77:w:74:GLU:OE1	2.21	0.71
11:AA:651:G:O2'	11:AA:1435:A:OP1	2.08	0.71
11:AA:908:OMG:N2	11:AA:2609:A:OP1	2.23	0.71
12:Aa:573:GLN:HB3	12:Aa:719:LEU:HD23	1.71	0.71
17:D:130:ASN:OD1	17:D:131:ALA:N	2.24	0.71
23:FF:292:ALA:HB2	23:FF:302:LYS:HD3	1.72	0.71
31:JJ:158:LYS:O	31:JJ:160:ARG:N	2.20	0.71
62:h:122:LYS:HB3	62:h:164:LEU:HD12	1.73	0.71
57:c:1376:C:O2'	57:c:1377:U:O4'	2.09	0.70
57:c:1590:G:C2'	57:c:1591:C:H4'	2.21	0.70
80:z:69:ARG:HB3	80:z:86:PHE:HE1	1.56	0.70
2:1:81:ARG:HA	2:1:84:GLU:HG2	1.72	0.70
5:4:29:ARG:HD2	5:4:39:THR:HB	1.74	0.70
11:AA:1521:G:OP2	30:J:115:ARG:NH2	2.25	0.70
11:AA:2761:G:OP2	55:a:67:LYS:NZ	2.19	0.70
11:AA:1717:U:H2'	11:AA:1718:G:C8	2.27	0.70
11:AA:2717:U:O4	11:AA:2752:U:N3	2.16	0.70
14:BB:114:U:H2'	14:BB:115:G:H8	1.55	0.70
26:H:96:GLU:OE1	28:I:24:GLY:N	2.25	0.70
57:c:91:G:OP1	57:c:397:A:N6	2.24	0.70
77:w:26:LEU:HD13	77:w:114:VAL:HG12	1.73	0.70
11:AA:1132:C:H2'	11:AA:1133:A2M:H8	1.73	0.70
11:AA:2467:G:H22	11:AA:2488:A:H5''	1.57	0.70
30:J:50:ALA:HB1	48:T:66:VAL:HG11	1.74	0.70
53:Y:103:LEU:HD13	53:Y:111:ARG:HD2	1.73	0.70
57:c:400:A:OP1	66:l:25:ARG:NH1	2.24	0.70
57:c:1484:G:N2	57:c:1607:G:O2'	2.24	0.70
57:c:1552:U:O4	72:r:40:ARG:NH1	2.15	0.70
6:5:44:ARG:NH1	77:w:69:LYS:O	2.24	0.70
36:M:105:LEU:HG	41:OO:67:ARG:HD2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:X:23:LEU:O	52:X:25:GLN:NE2	2.24	0.70
73:s:13:LYS:HD3	73:s:79:TYR:HB3	1.73	0.70
75:u:133:VAL:HG13	75:u:134:ARG:HD3	1.72	0.70
7:6:15:LYS:NZ	57:c:584:C:O3'	2.24	0.70
11:AA:292:U:OP2	45:QQ:68:ARG:NH2	2.25	0.70
11:AA:627:U:H2'	11:AA:628:A:H8	1.55	0.70
11:AA:1370:G:OP1	36:M:16:SER:OG	2.10	0.70
11:AA:2213:A:H2'	11:AA:2214:A:C8	2.27	0.70
11:AA:2728:G:N7	22:F:87:LYS:NZ	2.37	0.70
57:c:639:U:OP1	65:k:112:ARG:NH2	2.24	0.70
11:AA:371:G:N1	11:AA:374:A:OP2	2.24	0.70
11:AA:576:C:OP1	31:JJ:241:LYS:NZ	2.19	0.70
11:AA:1011:A:H2'	11:AA:1012:G:H8	1.56	0.70
11:AA:1239:C:H2'	11:AA:1240:A:C8	2.26	0.70
11:AA:1378:U:H2'	11:AA:1379:G:H8	1.55	0.70
11:AA:2160:G:H2'	11:AA:2161:G:H8	1.56	0.70
39:NN:29:ARG:HG3	39:NN:123:PHE:HE1	1.56	0.70
57:c:1512:G:H2'	57:c:1513:G:C8	2.25	0.70
6:5:22:ARG:N	6:5:37:ASN:O	2.25	0.70
11:AA:1203:A:OP2	11:AA:1301:A:N6	2.25	0.70
11:AA:1903:U:N3	11:AA:1906:G:OP2	2.22	0.70
11:AA:2402:A:N7	25:GG:73:ARG:NH1	2.40	0.70
11:AA:2717:U:H4'	55:a:13:LYS:HD3	1.72	0.70
12:Aa:121:VAL:O	12:Aa:399:ARG:NH1	2.25	0.70
23:FF:57:VAL:HB	23:FF:358:TRP:HB3	1.74	0.70
25:GG:3:ARG:HE	25:GG:22:LEU:H	1.38	0.70
37:MM:3:ARG:NH1	37:MM:63:GLU:OE1	2.25	0.70
57:c:283:U:H5''	64:j:188:ARG:HD2	1.74	0.70
57:c:997:G:H2'	57:c:998:A:H8	1.56	0.70
11:AA:3190:C:H2'	11:AA:3191:G:H8	1.57	0.70
8:7:249:ARG:HB2	8:7:251:TRP:CZ3	2.26	0.70
11:AA:856:G:OP1	17:D:92:GLN:NE2	2.23	0.70
12:Aa:167:LEU:HB3	12:Aa:169:VAL:HG13	1.74	0.70
12:Aa:380:LEU:HB2	12:Aa:400:VAL:HG22	1.73	0.70
14:BB:7:G:OP2	27:HH:28:THR:OG1	2.10	0.70
16:CC:84:C:N3	32:K:116:LYS:NZ	2.39	0.70
64:j:177:ARG:HA	64:j:183:ARG:HH12	1.56	0.70
11:AA:590:G:OP1	44:Q:62:LYS:NZ	2.24	0.69
11:AA:1382:G:OP2	25:GG:188:ARG:NH1	2.24	0.69
11:AA:2369:G:H2'	11:AA:2370:G:C8	2.27	0.69
11:AA:2469:G:N2	11:AA:2477:G:O2'	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2661:G:H2'	11:AA:2662:G:H8	1.57	0.69
11:AA:2724:OMU:H4'	22:F:54:HIS:CE1	2.27	0.69
11:AA:3002:C:O2'	23:FF:180:GLU:OE2	2.08	0.69
15:C:155:MET:HE1	36:M:48:TYR:HA	1.74	0.69
57:c:1006:C:O2'	71:q:136:ARG:O	2.09	0.69
57:c:1465:C:H5''	73:s:139:GLN:HE21	1.55	0.69
65:k:96:ARG:HD3	65:k:124:LYS:HZ2	1.56	0.69
11:AA:2450:G:O6	11:AA:2497:U:O4	2.09	0.69
12:Aa:694:HIS:CE1	12:Aa:699:DDE:HD2	2.27	0.69
24:G:98:THR:OG1	24:G:102:GLU:OE1	2.09	0.69
35:LL:137:SER:OG	35:LL:143:GLU:OE2	2.09	0.69
40:O:76:GLU:HA	40:O:79:THR:HG22	1.74	0.69
57:c:1268:G:O2'	57:c:1270:G:OP1	2.10	0.69
62:h:127:LYS:N	62:h:140:VAL:O	2.25	0.69
71:q:83:ILE:HG12	71:q:115:ILE:HD11	1.73	0.69
80:z:46:SER:OG	80:z:78:LYS:NZ	2.25	0.69
11:AA:664:U:H2'	11:AA:665:A:C8	2.27	0.69
11:AA:3183:A:N7	19:E:167:ARG:NH1	2.39	0.69
57:c:872:G:H1	57:c:955:A:N6	1.91	0.69
77:w:63:LEU:HD12	77:w:84:MET:HB3	1.74	0.69
11:AA:1546:A:H5''	45:QQ:105:ARG:HH21	1.55	0.69
11:AA:2167:A:O2'	11:AA:2168:A:O5'	2.10	0.69
11:AA:2207:A:N6	11:AA:2232:A:OP1	2.25	0.69
57:c:108:A:H2'	57:c:109:G:C8	2.27	0.69
57:c:1208:A:H8	57:c:1269:OMU:H6	1.58	0.69
11:AA:2553:U:O2'	47:S:91:ARG:NH1	2.25	0.69
36:M:19:LYS:HG2	36:M:25:HIS:HB2	1.74	0.69
57:c:480:G:H3'	57:c:509:G:H21	1.58	0.69
57:c:867:G:H1	57:c:961:U:H3	1.38	0.69
61:g:74:GLN:NE2	61:g:80:ALA:O	2.25	0.69
11:AA:340:C:OP2	25:GG:195:ARG:NH1	2.23	0.69
11:AA:1322:U:OP1	19:E:117:ARG:NH1	2.25	0.69
16:CC:60:U:OP1	30:J:54:TYR:OH	2.09	0.69
25:GG:193:LYS:O	32:K:12:ARG:NH2	2.26	0.69
57:c:1186:U:H1'	57:c:1209:C:H5'	1.72	0.69
57:c:1483:A:H2'	57:c:1484:G:C8	2.28	0.69
73:s:13:LYS:NZ	73:s:83:GLN:HB2	2.07	0.69
11:AA:75:G:O2'	41:OO:70:ARG:NH2	2.25	0.69
11:AA:627:U:H2'	11:AA:628:A:C8	2.27	0.69
11:AA:2425:G:H1	11:AA:2604:U:H3	1.40	0.69
57:c:1550:A:OP1	72:r:42:ARG:NH1	2.24	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:148:G:N2	11:AA:149:U:O4	2.23	0.69
11:AA:246:U:H2'	11:AA:247:C:C6	2.26	0.69
11:AA:277:G:H1'	45:QQ:93:LYS:HE3	1.75	0.69
12:Aa:222:ILE:O	12:Aa:226:ALA:N	2.24	0.69
17:D:51:VAL:HG12	17:D:53:LYS:H	1.58	0.69
20:EE:144:ASN:HB2	20:EE:160:SER:HB2	1.75	0.69
21:Ee:117:ARG:HD2	21:Ee:125:LEU:HD13	1.75	0.69
35:LL:26:LYS:HG3	35:LL:35:THR:HG22	1.75	0.69
37:MM:11:TYR:O	37:MM:59:GLN:NE2	2.26	0.69
48:T:74:LYS:HD3	48:T:75:TYR:H	1.56	0.69
53:Y:97:ARG:NH1	53:Y:122:ARG:HB3	2.08	0.69
57:c:358:U:H2'	57:c:360:A:H8	1.57	0.69
57:c:472:U:H2'	57:c:473:A:H8	1.58	0.69
57:c:762:A:OP1	67:m:79:ARG:NH1	2.22	0.69
57:c:795:U:H2'	57:c:796:A2M:H8	1.73	0.69
57:c:1498:G:OP1	76:v:75:LYS:NZ	2.24	0.69
60:f:39:THR:O	60:f:42:GLY:N	2.26	0.69
67:m:62:ARG:O	67:m:69:ARG:NH1	2.23	0.69
73:s:37:THR:O	73:s:45:ARG:NH1	2.25	0.69
75:u:88:ARG:NH2	75:u:112:ASP:OD1	2.22	0.69
11:AA:797:U:O2	41:OO:12:ASN:ND2	2.24	0.69
11:AA:2140:U:OP1	11:AA:2141:U:OP2	2.10	0.69
11:AA:2217:U:H2'	11:AA:2218:G:H8	1.58	0.69
11:AA:3020:U:O2'	35:LL:121:LYS:NZ	2.24	0.69
37:MM:109:ASP:HA	37:MM:112:GLN:HB3	1.75	0.69
49:U:62:ARG:HG3	49:U:99:ARG:HH22	1.58	0.69
56:b:30:GLU:HA	56:b:33:GLN:HG2	1.73	0.69
57:c:1512:G:N2	57:c:1518:C:O2	2.20	0.69
1:0:111:LYS:HD3	1:0:114:ARG:HH21	1.57	0.69
11:AA:2101:C:H2'	11:AA:2102:U:C6	2.28	0.69
11:AA:3016:A:H2'	11:AA:3017:A:C8	2.28	0.69
30:J:67:ILE:HD11	30:J:85:GLN:HG3	1.73	0.69
39:NN:82:ARG:HD2	39:NN:112:LEU:HD12	1.75	0.69
57:c:387:A:OP1	66:l:23:LYS:NZ	2.19	0.69
57:c:751:G:H2'	57:c:752:A:C8	2.28	0.69
64:j:148:SER:N	64:j:151:ASP:OD2	2.26	0.69
71:q:84:ARG:HB3	71:q:118:VAL:HG13	1.75	0.69
11:AA:273:A:H2'	11:AA:274:G:H8	1.58	0.68
16:CC:29:U:H5''	41:OO:27:ASP:HB3	1.75	0.68
35:LL:12:VAL:HG13	35:LL:16:VAL:HG23	1.75	0.68
45:QQ:18:VAL:HG23	45:QQ:19:LEU:HD12	1.72	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:481:A:N7	57:c:509:G:N2	2.41	0.68
57:c:1454:G:OP1	72:r:81:ARG:NH2	2.25	0.68
19:E:13:ARG:HD3	19:E:51:VAL:HG23	1.74	0.68
36:M:128:ARG:HH22	41:OO:63:VAL:HB	1.58	0.68
61:g:138:VAL:HG12	61:g:184:ILE:HG12	1.75	0.68
64:j:7:TYR:CZ	64:j:9:VAL:HB	2.28	0.68
66:l:107:THR:HA	66:l:110:ARG:HE	1.58	0.68
11:AA:1493:G:C5	52:X:13:MET:HE1	2.29	0.68
12:Aa:782:GLY:O	12:Aa:786:GLN:N	2.25	0.68
37:MM:39:LYS:HA	37:MM:86:HIS:ND1	2.09	0.68
39:NN:40:LEU:HB2	39:NN:82:ARG:HH22	1.58	0.68
57:c:1225:U:O2'	57:c:1230:A:O2'	2.08	0.68
12:Aa:581:ASN:ND2	12:Aa:699:DDE:O	2.25	0.68
28:I:20:LEU:HD13	28:I:30:ARG:HD3	1.74	0.68
57:c:1615:C:H2'	63:i:81:ARG:HG3	1.75	0.68
67:m:176:ASN:HB3	67:m:180:LYS:NZ	2.08	0.68
11:AA:760:G:H1'	11:AA:771:A:N6	2.07	0.68
12:Aa:220:PHE:HB3	12:Aa:328:LEU:HD13	1.74	0.68
12:Aa:353:ALA:HA	12:Aa:356:LEU:HB2	1.75	0.68
14:BB:7:G:O6	14:BB:114:U:O4	2.10	0.68
15:C:123:THR:OG1	15:C:125:ASP:OD1	2.11	0.68
25:GG:51:ALA:HA	25:GG:103:THR:HG23	1.74	0.68
59:e:54:LEU:HD12	59:e:55:LYS:HG3	1.76	0.68
79:y:43:LYS:HA	79:y:43:LYS:HE3	1.74	0.68
11:AA:707:U:H3	11:AA:712:G:H1	1.40	0.68
11:AA:800:G:H22	25:GG:101:ALA:HA	1.59	0.68
11:AA:2222:A:H2'	11:AA:2223:A:C8	2.29	0.68
11:AA:2568:C:N3	11:AA:2573:G:N1	2.31	0.68
27:HH:154:THR:H	27:HH:179:ARG:HH22	1.41	0.68
57:c:482:U:H2'	57:c:483:A:C8	2.27	0.68
57:c:532:U:OP1	67:m:132:ARG:NH1	2.26	0.68
75:u:42:TYR:HE2	75:u:101:LEU:HD11	1.57	0.68
77:w:36:ASN:O	77:w:40:ASN:ND2	2.23	0.68
8:7:7:LEU:HD11	8:7:313:TRP:HB3	1.75	0.68
11:AA:1328:C:OP1	46:R:73:ARG:NH2	2.27	0.68
11:AA:2785:A:O2'	55:a:38:GLN:NE2	2.23	0.68
12:Aa:714:TYR:HB3	12:Aa:838:TYR:CD2	2.28	0.68
51:W:28:ASN:HB2	51:W:40:GLN:HB3	1.76	0.68
72:r:72:LYS:HD3	72:r:93:VAL:HG11	1.76	0.68
11:AA:1364:C:H2'	11:AA:1365:G:C8	2.29	0.68
11:AA:1523:U:H5'	30:J:113:LEU:HD13	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Z:11:ARG:NH2	57:c:1775:U:OP1	2.25	0.68
57:c:1330:G:N2	61:g:204:ASP:OD2	2.27	0.68
63:i:169:ASN:OD1	63:i:170:GLN:NE2	2.27	0.68
64:j:33:GLY:HA2	64:j:51:LYS:HD2	1.75	0.68
8:7:16:HIS:CE1	8:7:37:SER:HG	2.12	0.68
11:AA:25:U:OP2	50:V:54:LYS:NZ	2.26	0.68
11:AA:353:G:O6	50:V:52:LYS:NZ	2.27	0.68
11:AA:1231:A:O2'	11:AA:1278:A:N6	2.27	0.68
11:AA:2489:C:H3'	11:AA:2490:C:H2'	1.76	0.68
57:c:146:U:H2'	57:c:147:A:H8	1.59	0.68
57:c:647:G:O2'	57:c:688:G:N2	2.27	0.68
57:c:872:G:N1	57:c:955:A:N6	2.42	0.68
11:AA:255:A:H2'	11:AA:256:G:H8	1.57	0.68
11:AA:305:U:O2'	11:AA:306:A:N7	2.25	0.68
11:AA:1362:G:H2'	11:AA:1363:A:C8	2.29	0.68
11:AA:1370:G:H2'	11:AA:1371:G:H8	1.59	0.68
11:AA:2669:G:H2'	11:AA:2670:G:H8	1.58	0.68
23:FF:211:GLN:OE1	23:FF:212:ASN:ND2	2.26	0.68
23:FF:284:ARG:HG2	23:FF:323:MET:HE3	1.76	0.68
57:c:1352:G:H4'	57:c:1375:A:H1'	1.75	0.68
62:h:88:ASP:HB2	62:h:101:LEU:HD12	1.75	0.68
65:k:46:ILE:HD12	65:k:60:ILE:HD12	1.75	0.68
8:7:40:LYS:HB2	8:7:64:HIS:HB3	1.76	0.67
11:AA:358:G:N2	11:AA:361:A:OP2	2.21	0.67
11:AA:786:A:OP1	15:C:146:SER:OG	2.11	0.67
11:AA:1024:G:N2	11:AA:1027:A:OP2	2.28	0.67
11:AA:3267:A:OP1	11:AA:3268:A:N6	2.27	0.67
11:AA:3325:G:H5''	42:P:103:GLY:HA2	1.75	0.67
12:Aa:90:LYS:O	12:Aa:91:GLN:NE2	2.27	0.67
57:c:1022:C:O2'	57:c:1125:A:N1	2.27	0.67
57:c:1788:G:H3'	71:q:132:ARG:HH12	1.59	0.67
63:i:96:SER:HB3	63:i:176:THR:HG21	1.76	0.67
6:5:31:ILE:HD11	6:5:40:ARG:HA	1.75	0.67
37:MM:205:SER:OG	37:MM:208:ASN:ND2	2.26	0.67
57:c:917:U:O2	71:q:41:ARG:NH1	2.24	0.67
70:p:60:VAL:HG23	70:p:66:ILE:HD12	1.76	0.67
11:AA:1862:U:OP1	17:D:70:LYS:NZ	2.26	0.67
11:AA:2164:A:OP1	20:EE:8:GLN:NE2	2.28	0.67
11:AA:2945:G:O2'	11:AA:2948:OMC:OP2	2.13	0.67
57:c:958:U:O2'	70:p:55:ARG:NH1	2.27	0.67
57:c:1034:C:HO2'	79:y:2:THR:N	1.91	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1521:G:O2'	57:c:1523:G:OP2	2.11	0.67
75:u:6:GLN:HE22	75:u:8:GLN:HG2	1.60	0.67
11:AA:21:G:OP1	16:CC:36:G:N1	2.26	0.67
11:AA:283:G:OP2	11:AA:285:A:O2'	2.09	0.67
11:AA:894:G:H4'	11:AA:895:A:H5'	1.77	0.67
11:AA:2185:G:H3'	20:EE:200:ARG:HH21	1.58	0.67
11:AA:3189:G:H1	11:AA:3203:U:H3	1.42	0.67
13:B:126:ARG:HA	13:B:140:GLU:HG3	1.75	0.67
20:EE:28:LYS:HB3	20:EE:123:ARG:HG2	1.76	0.67
40:O:16:LEU:HA	40:O:19:LYS:HE3	1.75	0.67
50:V:21:ARG:NH2	50:V:37:CYS:O	2.26	0.67
57:c:1381:U:H4'	77:w:59:PRO:HG3	1.77	0.67
80:z:107:PHE:CE2	80:z:114:LYS:HG3	2.29	0.67
11:AA:214:G:O6	11:AA:227:G:N2	2.27	0.67
11:AA:2829:U:H5'	37:MM:4:ARG:HH12	1.56	0.67
11:AA:3353:G:H2'	11:AA:3356:G:H2'	1.75	0.67
35:LL:118:LEU:HD11	35:LL:167:VAL:HG12	1.77	0.67
57:c:340:U:H2'	57:c:341:A:H8	1.58	0.67
57:c:406:U:H2'	57:c:407:A:H8	1.59	0.67
57:c:1104:U:OP1	80:z:14:LYS:NZ	2.26	0.67
60:f:49:LYS:NZ	60:f:246:GLU:OE2	2.26	0.67
66:l:74:LYS:HB2	66:l:112:TRP:CZ2	2.25	0.67
1:O:93:ARG:NH2	57:c:525:A:OP2	2.26	0.67
3:2:42:ARG:O	3:2:67:THR:N	2.26	0.67
7:6:18:THR:CB	57:c:562:OMG:CM2	2.68	0.67
11:AA:1517:G:OP1	52:X:41:ARG:NH1	2.28	0.67
11:AA:1530:U:HO2'	16:CC:114:G:HO2'	1.39	0.67
11:AA:1765:U:H2'	11:AA:1766:G:H8	1.57	0.67
32:K:58:VAL:HG11	32:K:63:LYS:HG3	1.77	0.67
57:c:896:U:O2'	71:q:41:ARG:NH2	2.27	0.67
57:c:1542:G:H1'	57:c:1543:A:N7	2.09	0.67
58:d:180:GLU:OE2	58:d:191:ARG:NH2	2.27	0.67
61:g:29:LEU:HB2	61:g:34:TYR:HB2	1.77	0.67
70:p:74:ILE:O	70:p:78:ASN:ND2	2.27	0.67
11:AA:36:C:N4	11:AA:47:C:O2	2.20	0.67
11:AA:600:G:O2'	11:AA:603:A:N6	2.28	0.67
11:AA:659:G:N2	11:AA:1435:A:H62	1.92	0.67
11:AA:815:G:O2'	11:AA:920:A:N7	2.27	0.67
11:AA:974:G:OP1	15:C:16:ARG:NH1	2.28	0.67
16:CC:133:G:OP1	30:J:94:GLN:NE2	2.27	0.67
19:E:43:TYR:HE2	19:E:122:HIS:HE1	1.40	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:H:39:VAL:HG23	26:H:42:SER:HB2	1.77	0.67
57:c:438:A:N3	57:c:465:G:N2	2.43	0.67
57:c:1676:U:OP1	66:l:44:HIS:ND1	2.28	0.67
66:l:78:ILE:HD13	66:l:96:LEU:HD21	1.77	0.67
78:x:38:LYS:HD2	78:x:49:GLU:HB3	1.77	0.67
1:0:40:LEU:HD22	1:0:57:VAL:HG21	1.76	0.67
11:AA:664:U:H3	11:AA:798:G:H1	1.41	0.67
11:AA:1044:U:OP1	37:MM:90:ARG:NH2	2.28	0.67
11:AA:2965:U:H2'	11:AA:2966:G:C2	2.30	0.67
12:Aa:27:HIS:HB2	12:Aa:139:THR:HG22	1.77	0.67
12:Aa:110:ASP:OD1	12:Aa:785:ARG:NH1	2.28	0.67
12:Aa:589:LYS:NZ	12:Aa:591:GLU:OE2	2.27	0.67
24:G:93:ILE:HD11	24:G:105:LEU:HB3	1.77	0.67
45:QQ:105:ARG:HD3	45:QQ:108:ARG:HH22	1.58	0.67
57:c:1253:U:H2'	57:c:1254:U:H6	1.60	0.67
57:c:1265:G:H1	57:c:1444:A:H62	1.42	0.67
57:c:1337:A:H2	57:c:1411:A:H1'	1.59	0.67
11:AA:2413:A:H2'	11:AA:2414:G:H8	1.58	0.67
57:c:96:G:H2'	57:c:97:C:H6	1.59	0.67
57:c:325:G:OP1	69:o:134:THR:OG1	2.11	0.67
57:c:1351:G:H21	57:c:1375:A:H3'	1.59	0.67
57:c:1563:C:H2'	57:c:1564:U:H6	1.59	0.67
63:i:76:ARG:O	63:i:83:ARG:NH1	2.28	0.67
11:AA:59:G:H4'	11:AA:60:A:H4'	1.77	0.67
11:AA:120:G:N2	33:KK:126:SER:O	2.28	0.67
11:AA:911:C:OP1	20:EE:14:SER:OG	2.12	0.67
57:c:480:G:N2	57:c:509:G:H2'	2.09	0.67
57:c:1349:G:N2	57:c:1377:U:O2	2.28	0.67
64:j:21:GLU:HA	64:j:24:ILE:HG22	1.77	0.67
69:o:14:GLN:HB3	69:o:54:ILE:HG13	1.76	0.67
5:4:22:ARG:NH1	57:c:1619:C:O2	2.28	0.66
8:7:203:THR:HG21	8:7:244:ALA:HA	1.76	0.66
11:AA:1887:A:H1'	23:FF:226:PHE:HE2	1.59	0.66
11:AA:2338:C:OP2	23:FF:237:LYS:NZ	2.28	0.66
11:AA:2526:C:H2'	11:AA:2527:G:C8	2.30	0.66
11:AA:2746:A:N6	27:HH:153:THR:HB	2.08	0.66
12:Aa:491:VAL:HA	12:Aa:559:PRO:HD3	1.76	0.66
18:DD:118:ASP:OD1	18:DD:161:ALA:N	2.28	0.66
26:H:81:GLN:O	26:H:98:ASN:ND2	2.27	0.66
35:LL:135:GLU:HB2	35:LL:145:VAL:HB	1.78	0.66
57:c:603:U:H2'	57:c:604:A:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1187:U:O4	57:c:1198:G:O6	2.12	0.66
57:c:1524:A:H2'	57:c:1525:A:C8	2.29	0.66
57:c:1601:G:OP2	76:v:86:ARG:NH2	2.27	0.66
66:l:9:HIS:O	66:l:18:ARG:NH2	2.28	0.66
8:7:131:ILE:HD13	8:7:144:LEU:HB3	1.75	0.66
11:AA:1626:U:H3	11:AA:1817:G:H1	1.41	0.66
11:AA:2129:U:H2'	11:AA:2130:G:C8	2.30	0.66
12:Aa:288:ILE:HG21	12:Aa:320:LEU:HB2	1.77	0.66
21:Ee:133:LEU:O	21:Ee:137:GLN:N	2.28	0.66
57:c:932:U:H5''	59:e:116:LYS:HE3	1.78	0.66
57:c:1595:U:OP2	57:c:1596:C:N4	2.24	0.66
60:f:54:GLU:HA	78:x:12:TYR:CZ	2.30	0.66
77:w:61:LYS:HE3	77:w:63:LEU:HD21	1.76	0.66
79:y:29:PRO:HB2	79:y:58:SER:HB3	1.77	0.66
1:0:105:ARG:NH1	57:c:443:C:OP1	2.29	0.66
11:AA:754:G:H2'	11:AA:755:A:H8	1.59	0.66
11:AA:1421:G:H2'	11:AA:1422:G:H8	1.60	0.66
11:AA:1481:A:O2'	11:AA:1858:A:O2'	2.10	0.66
11:AA:2213:A:H2'	11:AA:2214:A:H8	1.59	0.66
11:AA:2457:G:H1	11:AA:2460:U:H5'	1.59	0.66
11:AA:2557:A:H5'	34:L:135:ARG:HH21	1.61	0.66
11:AA:3044:G:H2'	11:AA:3045:G:H8	1.60	0.66
49:U:44:VAL:HA	49:U:47:ILE:HG12	1.76	0.66
54:Z:6:ARG:HH22	57:c:1113:A:H3'	1.60	0.66
57:c:1390:U:OP1	74:t:5:ARG:NH1	2.27	0.66
11:AA:1236:G:H21	11:AA:1244:A:H5''	1.60	0.66
11:AA:1827:C:H2'	11:AA:1828:A:H8	1.61	0.66
11:AA:1863:G:N1	11:AA:1866:C:OP2	2.24	0.66
11:AA:2767:U:O2'	55:a:30:ALA:O	2.12	0.66
11:AA:2943:G:N2	23:FF:251:CYS:SG	2.68	0.66
45:QQ:39:ALA:HB2	45:QQ:63:ARG:HG3	1.77	0.66
54:Z:1:MET:HE1	57:c:1782:MA6:H4'	1.77	0.66
71:q:80:HIS:HA	71:q:113:GLY:O	1.95	0.66
1:0:81:GLU:HA	1:0:84:LYS:HE3	1.77	0.66
11:AA:726:G:N1	11:AA:743:C:OP2	2.25	0.66
11:AA:1062:A:H5''	11:AA:1063:G:H5'	1.75	0.66
11:AA:1529:A:OP2	11:AA:1592:G:N2	2.27	0.66
12:Aa:568:GLU:OE1	12:Aa:723:LYS:NZ	2.24	0.66
57:c:929:A:H2	59:e:111:ARG:HH22	1.42	0.66
70:p:102:LEU:HD11	70:p:112:LYS:HA	1.77	0.66
10:A:12:LYS:NZ	11:AA:3183:A:OP2	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:21:G:H3'	11:AA:22:G:H8	1.61	0.66
11:AA:164:A:N1	11:AA:258:G:O6	2.28	0.66
11:AA:266:A:OP1	45:QQ:5:LYS:NZ	2.28	0.66
11:AA:675:C:OP1	15:C:105:ARG:NH2	2.28	0.66
11:AA:1147:G:OP2	44:Q:47:ARG:NH2	2.29	0.66
37:MM:41:ALA:O	37:MM:139:ARG:NH2	2.28	0.66
57:c:903:U:H3	71:q:52:ARG:CZ	2.09	0.66
66:l:78:ILE:HD11	66:l:102:VAL:HG11	1.78	0.66
11:AA:655:C:H2'	11:AA:656:A:C8	2.30	0.66
12:Aa:591:GLU:HB2	12:Aa:685:ARG:HB3	1.76	0.66
16:CC:136:G:OP1	30:J:48:SER:OG	2.12	0.66
34:L:84:ARG:NH1	40:O:61:MET:SD	2.69	0.66
57:c:816:G:H2'	57:c:817:A:C8	2.30	0.66
57:c:891:A:H2'	57:c:892:A:H8	1.60	0.66
66:l:67:TRP:HD1	66:l:69:SER:H	1.43	0.66
67:m:10:LYS:NZ	67:m:12:TYR:O	2.27	0.66
11:AA:596:C:O2	25:GG:326:ARG:NH2	2.29	0.66
11:AA:2659:G:H2'	11:AA:2660:G:C8	2.31	0.66
11:AA:3187:A:N1	19:E:171:PHE:HB3	2.11	0.66
12:Aa:82:SER:OG	12:Aa:84:GLU:OE1	2.13	0.66
12:Aa:619:MET:HA	12:Aa:623:TYR:HD1	1.59	0.66
22:F:84:TYR:HD2	38:N:23:LYS:HA	1.61	0.66
57:c:160:C:HO2'	64:j:95:LYS:HZ3	1.43	0.66
11:AA:280:U:O4	55:a:45:ARG:NH2	2.29	0.66
11:AA:1472:U:H2'	11:AA:1473:G:H8	1.61	0.66
11:AA:1591:G:H5'	47:S:16:ARG:HH21	1.61	0.66
57:c:774:A:N6	57:c:786:C:O2	2.27	0.66
4:3:82:LYS:HE2	70:p:25:TRP:CE3	2.31	0.66
11:AA:2703:A:OP2	27:HH:23:ARG:NH2	2.28	0.66
11:AA:3092:C:H2'	26:H:12:ARG:HH22	1.61	0.66
11:AA:3219:G:N1	29:II:162:SER:OG	2.24	0.66
12:Aa:216:HIS:O	12:Aa:325:ARG:NH1	2.28	0.66
57:c:398:G:H5''	66:l:49:ARG:HH12	1.60	0.66
57:c:1240:U:OP1	72:r:77:ARG:NH2	2.29	0.66
59:e:84:ILE:HD13	59:e:103:MET:HG2	1.78	0.66
63:i:197:GLU:OE1	63:i:208:SER:OG	2.07	0.66
64:j:50:PHE:HB3	64:j:111:LEU:HB3	1.78	0.66
73:s:13:LYS:HZ1	73:s:83:GLN:HB2	1.60	0.66
11:AA:1039:U:H2'	11:AA:1040:A:C8	2.26	0.65
11:AA:2941:A:OP2	23:FF:256:HIS:ND1	2.22	0.65
57:c:819:G:N2	57:c:820:U:O2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1667:A:H2'	57:c:1668:G:C8	2.30	0.65
66:l:11:ARG:NH1	66:l:15:GLY:O	2.29	0.65
11:AA:437:G:H1	11:AA:622:A:H61	1.43	0.65
11:AA:831:G:O2'	11:AA:1864:A:N3	2.26	0.65
11:AA:1648:A:H62	11:AA:1807:G:N2	1.94	0.65
11:AA:1667:A:H2'	11:AA:1668:G:H8	1.62	0.65
11:AA:2219:A:H2'	11:AA:2220:A2M:H8	1.76	0.65
11:AA:2338:C:H3'	11:AA:2339:C:H2'	1.78	0.65
11:AA:2521:U:O2'	11:AA:2522:G:N2	2.28	0.65
11:AA:2960:C:H2'	11:AA:2961:G:C8	2.30	0.65
11:AA:2986:U:H2'	11:AA:2987:A:H8	1.60	0.65
11:AA:3037:U:OP1	23:FF:348:ARG:NH1	2.26	0.65
13:B:116:HIS:HB3	13:B:149:VAL:HG22	1.78	0.65
16:CC:63:G:H22	16:CC:97:A:H2	1.43	0.65
25:GG:170:LYS:HG3	25:GG:175:HIS:HB2	1.76	0.65
57:c:329:G:H2'	57:c:330:G:H8	1.61	0.65
63:i:80:LYS:H	63:i:83:ARG:HD2	1.62	0.65
8:7:91:LEU:HB2	8:7:100:TYR:HB2	1.79	0.65
10:A:166:GLU:OE2	10:A:170:LYS:NZ	2.25	0.65
11:AA:600:G:N1	11:AA:602:A:OP2	2.30	0.65
11:AA:2477:G:OP2	11:AA:2481:G:N1	2.24	0.65
11:AA:2653:C:O2'	11:AA:2657:A:N1	2.25	0.65
12:Aa:7:ASP:O	12:Aa:11:SER:N	2.29	0.65
17:D:133:LYS:HD2	17:D:134:HIS:HD2	1.60	0.65
25:GG:65:TRP:O	25:GG:69:ARG:NH1	2.29	0.65
56:b:85:ARG:HG2	56:b:89:MET:HE2	1.77	0.65
57:c:21:U:H4'	67:m:18:PRO:HG3	1.79	0.65
57:c:907:A:O2'	57:c:997:G:O2'	2.12	0.65
57:c:1748:G:H2'	57:c:1749:A:C8	2.30	0.65
61:g:108:LYS:HB3	61:g:113:LEU:HD12	1.76	0.65
67:m:64:GLU:HG2	67:m:65:LYS:HG3	1.79	0.65
67:m:163:PRO:HB3	67:m:168:ARG:HG3	1.79	0.65
76:v:77:ASN:HB3	76:v:96:ALA:H	1.60	0.65
11:AA:174:C:N3	11:AA:245:U:O4	2.29	0.65
11:AA:921:A:N6	11:AA:1846:C:OP2	2.29	0.65
14:BB:109:G:H2'	14:BB:110:G:H8	1.61	0.65
19:E:8:GLN:HB3	19:E:64:ILE:HD11	1.79	0.65
23:FF:371:GLN:N	23:FF:375:GLU:OE2	2.27	0.65
26:H:66:LYS:HD3	26:H:67:PRO:HD2	1.79	0.65
44:Q:63:THR:HA	44:Q:66:LEU:HD12	1.78	0.65
57:c:1142:A:H2'	57:c:1143:A:C8	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:79:VAL:HG12	1:0:83:LYS:NZ	2.11	0.65
8:7:102:ARG:NH1	57:c:1342:C:OP1	2.30	0.65
11:AA:1237:G:C2	11:AA:1251:A:C2	2.84	0.65
11:AA:1720:U:OP2	17:D:120:TYR:OH	2.08	0.65
11:AA:2471:U:O4	11:AA:2473:C:C4	2.49	0.65
11:AA:2786:G:H5'	55:a:38:GLN:CD	2.21	0.65
26:H:53:SER:OG	26:H:56:ASP:OD2	2.15	0.65
5:4:62:GLU:O	5:4:64:ARG:NH1	2.29	0.65
11:AA:171:G:N2	11:AA:248:U:O2	2.30	0.65
12:Aa:823:ARG:NH2	12:Aa:831:GLU:O	2.29	0.65
25:GG:142:VAL:HA	25:GG:145:ILE:HD13	1.78	0.65
28:I:3:VAL:HG11	28:I:12:LYS:HE2	1.78	0.65
33:KK:250:ALA:HA	33:KK:254:ASP:HB2	1.78	0.65
37:MM:43:VAL:HG21	37:MM:197:VAL:HG13	1.78	0.65
45:QQ:35:VAL:HG13	45:QQ:65:ARG:HB3	1.79	0.65
57:c:15:U:O2'	57:c:620:A:N6	2.30	0.65
11:AA:255:A:H2'	11:AA:256:G:C8	2.32	0.65
11:AA:2244:A:H5''	20:EE:243:THR:HB	1.79	0.65
11:AA:3369:G:N2	23:FF:382:THR:O	2.30	0.65
39:NN:23:VAL:HG12	39:NN:25:GLU:H	1.60	0.65
42:P:13:THR:OG1	42:P:72:ARG:NH1	2.28	0.65
57:c:373:G:H5'	69:o:96:LYS:HD3	1.79	0.65
60:f:35:TRP:HE3	60:f:46:LYS:HD2	1.62	0.65
11:AA:177:U:O2	11:AA:241:G:O6	2.14	0.65
12:Aa:520:THR:HG22	12:Aa:530:VAL:HG23	1.79	0.65
54:Z:17:ARG:HB2	54:Z:17:ARG:HH11	1.62	0.65
57:c:1297:G:N1	57:c:1300:A:OP2	2.27	0.65
57:c:1457:C:H4'	75:u:139:LYS:HZ1	1.62	0.65
62:h:9:LEU:HD13	62:h:30:ARG:HA	1.79	0.65
65:k:17:GLU:HG3	65:k:46:ILE:HG12	1.79	0.65
75:u:104:ASN:OD1	75:u:107:SER:OG	2.15	0.65
1:0:34:ASN:OD1	1:0:62:THR:OG1	2.13	0.65
1:0:112:LYS:NZ	57:c:57:G:OP1	2.29	0.65
11:AA:532:A:H61	11:AA:560:G:H1	1.45	0.65
11:AA:1183:C:OP1	19:E:158:LYS:NZ	2.30	0.65
11:AA:2428:U:H2'	11:AA:2429:G:C8	2.32	0.65
11:AA:3222:U:O2	11:AA:3263:G:O6	2.15	0.65
14:BB:108:A:H2'	14:BB:109:G:C8	2.31	0.65
23:FF:93:VAL:HA	23:FF:156:SER:H	1.62	0.65
39:NN:23:VAL:HG21	39:NN:30:LEU:HA	1.77	0.65
45:QQ:106:VAL:HG21	45:QQ:132:VAL:HG11	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Z:17:ARG:HA	54:Z:20:VAL:HG12	1.79	0.65
57:c:67:A:O2'	57:c:69:G:OP1	2.15	0.65
57:c:1183:A:N3	57:c:1210:C:O2'	2.29	0.65
61:g:173:ARG:HE	61:g:174:HIS:H	1.44	0.65
70:p:47:PRO:HA	70:p:50:ILE:HB	1.78	0.65
80:z:14:LYS:HG3	80:z:18:HIS:NE2	2.12	0.65
11:AA:668:G:O6	11:AA:794:U:O4	2.15	0.65
11:AA:1188:U:OP1	11:AA:1210:U:O2'	2.14	0.65
11:AA:1252:A:C2	11:AA:1263:A:H5''	2.32	0.65
11:AA:1252:A:H2	11:AA:1263:A:H5''	1.62	0.65
12:Aa:343:PRO:HG2	12:Aa:348:ALA:HB2	1.79	0.65
27:HH:68:THR:OG1	27:HH:71:GLY:O	2.14	0.65
36:M:76:ASP:OD1	36:M:77:LYS:N	2.30	0.65
57:c:603:U:H2'	57:c:604:A:H8	1.61	0.65
57:c:1550:A:H62	57:c:1562:G:H21	0.67	0.65
58:d:156:VAL:O	78:x:65:SER:OG	2.15	0.65
3:2:44:ILE:HG22	3:2:45:VAL:HG23	1.78	0.64
6:5:28:THR:O	6:5:40:ARG:NH1	2.30	0.64
8:7:174:ASN:HA	8:7:199:ILE:HB	1.77	0.64
11:AA:337:G:H1	16:CC:26:U:H3	1.44	0.64
11:AA:349:A:C4	16:CC:24:G:H1'	2.32	0.64
11:AA:2417:OMU:O2'	11:AA:2966:G:N2	2.29	0.64
57:c:554:C:OP2	67:m:17:ARG:NH1	2.30	0.64
57:c:883:C:H2'	57:c:884:A:C8	2.32	0.64
57:c:891:A:H2'	57:c:892:A:C8	2.32	0.64
73:s:90:VAL:HA	73:s:102:LYS:HE3	1.79	0.64
11:AA:674:G:O2'	25:GG:116:ASN:OD1	2.15	0.64
11:AA:1224:C:H2'	11:AA:1225:A:H8	1.61	0.64
11:AA:3245:A:N7	11:AA:3246:G:N2	2.45	0.64
23:FF:71:GLU:O	26:H:88:ARG:NH1	2.30	0.64
25:GG:3:ARG:NH1	25:GG:4:PRO:O	2.31	0.64
57:c:447:U:O2'	62:h:27:TYR:O	2.15	0.64
57:c:1614:A:OP2	63:i:84:LYS:NZ	2.23	0.64
59:e:141:ALA:HB1	59:e:207:LEU:HD12	1.78	0.64
63:i:112:ARG:HG2	63:i:116:HIS:CE1	2.33	0.64
11:AA:1362:G:H2'	11:AA:1363:A:H8	1.60	0.64
11:AA:1427:U:OP2	36:M:4:ARG:NH1	2.25	0.64
11:AA:1590:G:O3'	47:S:16:ARG:NH2	2.29	0.64
11:AA:1942:U:OP2	17:D:74:ARG:NE	2.29	0.64
11:AA:2579:G:H3'	11:AA:2580:A:H8	1.62	0.64
11:AA:3231:U:H2'	11:AA:3232:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:K:81:GLN:HE21	32:K:82:VAL:H	1.45	0.64
34:L:119:GLU:O	34:L:123:GLN:HG2	1.97	0.64
55:a:8:ARG:CB	55:a:23:HIS:O	2.45	0.64
57:c:868:G:H1	57:c:960:U:H3	1.45	0.64
57:c:1772:C:C4	57:c:1773:4AC:HM73	2.32	0.64
1:O:34:ASN:O	57:c:521:A:O2'	2.15	0.64
11:AA:1482:A:N6	11:AA:1866:C:O2'	2.30	0.64
11:AA:3158:G:O6	11:AA:3292:A:N1	2.29	0.64
14:BB:41:G:H1'	14:BB:44:C:H42	1.62	0.64
35:LL:23:ARG:HG3	35:LL:39:LYS:HA	1.79	0.64
57:c:1149:G:N2	57:c:1766:A:OP1	2.30	0.64
57:c:1586:A:H2	57:c:1611:A:H3'	1.62	0.64
64:j:18:ILE:HG13	64:j:23:ARG:CZ	2.27	0.64
10:A:105:PHE:CD2	10:A:109:PRO:HG3	2.33	0.64
11:AA:126:U:H3	11:AA:142:C:H42	1.46	0.64
11:AA:289:A:H2'	11:AA:290:G:H8	1.63	0.64
11:AA:1095:U:O4	22:F:127:GLN:NE2	2.30	0.64
11:AA:2167:A:O2'	11:AA:2168:A:O4'	2.14	0.64
35:LL:95:ALA:O	53:Y:77:ILE:N	2.30	0.64
44:Q:91:THR:HG23	44:Q:92:TYR:HD1	1.62	0.64
57:c:647:G:N2	57:c:648:G:O6	2.31	0.64
57:c:1156:C:H2'	57:c:1157:A:C8	2.31	0.64
62:h:11:ARG:H	62:h:27:TYR:HA	1.61	0.64
64:j:14:LYS:NZ	64:j:15:THR:O	2.31	0.64
65:k:140:VAL:N	79:y:51:GLU:OE2	2.31	0.64
4:3:20:LYS:NZ	57:c:959:U:OP2	2.31	0.64
11:AA:184:U:H2'	11:AA:185:C:C6	2.32	0.64
11:AA:1921:A:OP2	11:AA:1930:A:N6	2.26	0.64
11:AA:3098:G:OP1	23:FF:279:ASN:ND2	2.29	0.64
12:Aa:158:ASN:OD1	12:Aa:214:GLY:N	2.26	0.64
12:Aa:307:LEU:HD13	12:Aa:312:LYS:HG2	1.80	0.64
21:Ee:126:ALA:O	21:Ee:129:THR:OG1	2.13	0.64
23:FF:68:HIS:CE1	23:FF:69:LYS:HE3	2.32	0.64
45:QQ:84:PRO:O	45:QQ:87:GLN:NE2	2.31	0.64
57:c:284:G:N7	64:j:188:ARG:NH2	2.37	0.64
57:c:867:G:OP2	70:p:3:ARG:NH2	2.31	0.64
57:c:877:G:H1	57:c:951:A:H2	1.45	0.64
58:d:18:LEU:HD11	74:t:100:LEU:HD13	1.80	0.64
60:f:95:ARG:O	60:f:119:LYS:NZ	2.31	0.64
60:f:174:ARG:O	67:m:53:ARG:NH1	2.23	0.64
11:AA:67:A:N6	11:AA:271:C:O2'	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:408:A:N3	11:AA:655:C:O2'	2.26	0.64
11:AA:796:U:H2'	11:AA:797:U:C6	2.32	0.64
11:AA:2521:U:HO2'	11:AA:2522:G:H21	1.43	0.64
11:AA:2727:A:OP2	11:AA:2728:G:N2	2.30	0.64
11:AA:3259:U:O2	43:PP:125:LYS:NZ	2.31	0.64
12:Aa:729:PHE:CG	12:Aa:796:MET:HE3	2.32	0.64
15:C:176:ARG:H	36:M:51:GLY:HA2	1.61	0.64
16:CC:67:U:H2'	16:CC:68:G:H8	1.63	0.64
20:EE:117:GLU:OE1	20:EE:121:GLY:N	2.30	0.64
57:c:145:A:N6	57:c:169:A:OP2	2.30	0.64
57:c:802:G:H21	79:y:107:SER:HB3	1.63	0.64
57:c:1181:U:H2'	57:c:1182:U:C6	2.32	0.64
65:k:70:PHE:O	65:k:74:GLN:HB2	1.97	0.64
75:u:88:ARG:O	75:u:98:TYR:N	2.26	0.64
80:z:50:LYS:HD3	80:z:101:GLU:HG3	1.79	0.64
1:0:79:VAL:HG12	1:0:83:LYS:HZ3	1.61	0.64
6:5:56:ARG:NH2	57:c:1335:U:O2	2.31	0.64
11:AA:64:G:OP2	45:QQ:169:LYS:NZ	2.28	0.64
11:AA:679:U:H1'	11:AA:788:C:H1'	1.78	0.64
11:AA:1921:A:H2'	11:AA:1922:A:H8	1.63	0.64
11:AA:2740:A:N6	11:AA:2752:U:O4	2.29	0.64
36:M:78:LEU:HD23	36:M:118:ILE:HG21	1.78	0.64
57:c:1163:A:N3	57:c:1613:U:O2'	2.27	0.64
57:c:1244:A:O2'	57:c:1245:G:O5'	2.15	0.64
57:c:1331:A:O2'	61:g:204:ASP:OD1	2.15	0.64
57:c:1785:U:H2'	57:c:1786:G:H8	1.61	0.64
65:k:38:LEU:HD23	65:k:41:LEU:HD12	1.79	0.64
11:AA:584:G:H2'	11:AA:585:A:C8	2.33	0.64
11:AA:1054:A:H5''	11:AA:2637:A:H61	1.61	0.64
11:AA:2608:G:OP1	20:EE:2:GLY:N	2.30	0.64
11:AA:3333:G:H22	11:AA:3369:G:H1'	1.63	0.64
12:Aa:149:GLU:OE2	12:Aa:352:ARG:NH1	2.31	0.64
12:Aa:215:LEU:HB2	84:Aa:901:GTP:C5	2.33	0.64
14:BB:43:U:H5''	39:NN:137:ARG:HD2	1.80	0.64
15:C:8:LYS:O	15:C:11:LYS:NZ	2.29	0.64
56:b:46:THR:OG1	56:b:57:CYS:SG	2.55	0.64
57:c:966:A:OP2	70:p:124:ARG:NH2	2.31	0.64
57:c:1215:C:H2'	57:c:1216:C:C6	2.32	0.64
57:c:1374:C:H2'	57:c:1375:A:C8	2.32	0.64
57:c:1473:U:OP1	63:i:190:ILE:N	2.30	0.64
58:d:131:GLN:HA	58:d:134:LYS:HE2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:k:8:ILE:C	65:k:10:SER:H	2.05	0.64
77:w:69:LYS:HD2	77:w:80:GLU:HB2	1.79	0.64
1:0:21:LYS:HB2	1:0:75:VAL:HB	1.80	0.64
11:AA:170:G:H2'	11:AA:171:G:C8	2.33	0.64
11:AA:1264:G:N2	11:AA:1265:U:O4	2.30	0.64
11:AA:1719:G:H5''	17:D:110:ARG:HH12	1.63	0.64
12:Aa:657:HIS:NE2	57:c:1440:C:O2'	2.28	0.64
17:D:92:GLN:O	17:D:96:ILE:HG12	1.98	0.64
33:KK:116:VAL:HG13	33:KK:125:ALA:HB2	1.79	0.64
39:NN:17:LEU:HD21	39:NN:80:LEU:HD11	1.79	0.64
46:R:73:ARG:HE	46:R:82:ARG:HH12	1.44	0.64
57:c:60:U:N3	57:c:63:G:OP1	2.28	0.64
57:c:923:A:H2'	57:c:924:A:C8	2.32	0.64
60:f:57:PHE:HB2	78:x:12:TYR:HE2	1.63	0.64
64:j:198:ALA:HB1	64:j:202:ARG:HH21	1.63	0.64
75:u:69:ILE:HG22	75:u:73:MET:HE2	1.79	0.64
11:AA:122:A:N7	11:AA:146:U:N3	2.46	0.63
11:AA:353:G:N7	50:V:55:ARG:NH1	2.46	0.63
11:AA:2526:C:H2'	11:AA:2527:G:H8	1.63	0.63
11:AA:2660:G:H2'	11:AA:2661:G:H8	1.63	0.63
11:AA:2815:OMG:H2'	11:AA:2870:5MC:HM51	1.79	0.63
12:Aa:385:MET:HA	12:Aa:385:MET:HE3	1.79	0.63
25:GG:194:TYR:HA	32:K:12:ARG:HH21	1.61	0.63
27:HH:181:PRO:HB2	27:HH:198:TYR:CE2	2.34	0.63
37:MM:133:GLN:NE2	37:MM:134:ILE:O	2.31	0.63
39:NN:53:THR:HG23	39:NN:60:ARG:HA	1.80	0.63
45:QQ:124:ASP:OD1	45:QQ:127:TYR:N	2.28	0.63
57:c:523:G:N1	57:c:528:U:OP2	2.30	0.63
60:f:81:MET:HE2	60:f:103:VAL:HG21	1.79	0.63
8:7:195:HIS:CE1	8:7:197:SER:H	2.16	0.63
11:AA:1177:G:OP1	11:AA:1177:G:N2	2.21	0.63
11:AA:1334:U:H5''	31:JJ:206:LYS:HB3	1.81	0.63
11:AA:1493:G:C6	52:X:13:MET:HE1	2.32	0.63
27:HH:268:GLU:HA	27:HH:271:LYS:HE3	1.78	0.63
45:QQ:191:TRP:O	45:QQ:195:ASN:ND2	2.29	0.63
57:c:643:G:H2'	57:c:644:C:C6	2.32	0.63
11:AA:2930:A:O3'	26:H:59:MET:HE1	1.99	0.63
15:C:147:ARG:HB3	15:C:150:VAL:HG23	1.79	0.63
54:Z:18:ARG:NH2	57:c:1126:OMG:OP2	2.30	0.63
57:c:143:G:N2	57:c:171:A:N1	2.36	0.63
57:c:297:U:OP1	62:h:37:LYS:NZ	2.20	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1085:G:N2	57:c:1088:A:OP2	2.23	0.63
57:c:1530:C:H2'	57:c:1531:G:C8	2.33	0.63
57:c:1550:A:P	72:r:42:ARG:HH12	2.22	0.63
62:h:21:ASP:HB3	62:h:24:SER:HB2	1.79	0.63
11:AA:501:A:H2'	11:AA:502:U:C6	2.34	0.63
11:AA:1662:G:N2	11:AA:1787:A:N1	2.46	0.63
11:AA:2341:A:OP2	23:FF:247:ARG:NH1	2.32	0.63
11:AA:2639:G:H2'	11:AA:2640:A2M:H8	1.80	0.63
23:FF:80:ASP:OD2	23:FF:314:TYR:OH	2.14	0.63
30:J:110:VAL:HG22	30:J:124:VAL:HG22	1.78	0.63
43:PP:80:THR:HA	43:PP:83:LYS:HB3	1.80	0.63
57:c:626:U:H5'	57:c:939:A:H1'	1.79	0.63
57:c:1210:C:H2'	57:c:1211:A:H8	1.63	0.63
60:f:45:VAL:HG21	60:f:68:ILE:HG23	1.79	0.63
62:h:62:LYS:HG3	62:h:66:MET:HE3	1.79	0.63
63:i:36:ALA:HB1	63:i:69:PHE:HE1	1.63	0.63
76:v:12:GLN:O	76:v:16:ASN:ND2	2.32	0.63
11:AA:595:G:O2'	11:AA:596:C:O4'	2.13	0.63
11:AA:683:U:OP1	45:QQ:204:LYS:NZ	2.25	0.63
11:AA:2102:U:H2'	11:AA:2103:U:C6	2.33	0.63
18:DD:24:SER:OG	18:DD:89:THR:O	2.17	0.63
29:II:6:ALA:HB2	44:Q:74:PHE:HE1	1.63	0.63
37:MM:54:SER:HB2	37:MM:135:ILE:HD11	1.81	0.63
40:O:62:LEU:O	40:O:64:LYS:NZ	2.32	0.63
57:c:868:G:N2	57:c:960:U:O2	2.27	0.63
58:d:59:LEU:HD11	78:x:79:LEU:HD11	1.81	0.63
66:l:163:GLY:O	66:l:164:ARG:NH1	2.31	0.63
8:7:10:ARG:NH2	8:7:50:ASP:O	2.30	0.63
8:7:147:HIS:HE1	8:7:172:ALA:HA	1.62	0.63
11:AA:874:U:N3	11:AA:2978:U:OP1	2.23	0.63
11:AA:2295:A:H2'	11:AA:2296:A:C8	2.34	0.63
11:AA:2755:C:O2'	22:F:49:GLN:NE2	2.30	0.63
12:Aa:22:MET:N	12:Aa:101:ASN:O	2.27	0.63
12:Aa:32:LYS:HE2	12:Aa:107:GLY:HA3	1.78	0.63
25:GG:311:HIS:CE1	25:GG:314:LYS:HA	2.34	0.63
32:K:59:VAL:HG13	32:K:60:ARG:HG2	1.80	0.63
37:MM:68:ALA:HB2	37:MM:158:LYS:HB2	1.81	0.63
42:P:109:VAL:O	42:P:110:GLU:HG3	1.99	0.63
57:c:591:A:H2'	57:c:592:A:C8	2.33	0.63
57:c:1041:G:H2'	57:c:1042:G:C8	2.34	0.63
57:c:1672:G:H2'	57:c:1673:G:H8	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:f:90:THR:N	60:f:93:GLY:HA2	2.06	0.63
63:i:41:LYS:HG2	63:i:67:PRO:HG2	1.80	0.63
65:k:156:SER:HA	65:k:185:ILE:HD11	1.81	0.63
69:o:36:LYS:NZ	69:o:59:PRO:O	2.32	0.63
11:AA:148:G:OP2	45:QQ:4:TYR:OH	2.13	0.63
11:AA:2471:U:O4	11:AA:2473:C:N3	2.31	0.63
11:AA:2673:A:OP1	39:NN:94:ARG:HG2	1.98	0.63
19:E:137:ARG:HB3	19:E:139:TYR:CE1	2.34	0.63
22:F:83:ARG:HA	38:N:21:ILE:HG23	1.81	0.63
34:L:15:ARG:NH2	47:S:86:LYS:HB2	2.13	0.63
57:c:524:U:O2'	57:c:526:A:N7	2.30	0.63
57:c:591:A:H2'	57:c:592:A:H8	1.64	0.63
57:c:1365:C:H2'	57:c:1366:U:C6	2.34	0.63
57:c:1476:C:H2'	57:c:1477:G:H8	1.63	0.63
62:h:181:VAL:HG11	62:h:195:ILE:HD11	1.81	0.63
75:u:48:LYS:HD2	76:v:50:ALA:HB2	1.81	0.63
5:4:14:LYS:NZ	5:4:15:VAL:O	2.32	0.63
11:AA:595:G:OP1	31:JJ:33:ARG:NH2	2.32	0.63
11:AA:1222:G:C8	18:DD:57:THR:HG21	2.34	0.63
11:AA:2677:G:O6	39:NN:55:ARG:NH2	2.31	0.63
11:AA:2767:U:H3	11:AA:2791:OMG:HN1	1.46	0.63
27:HH:181:PRO:HB2	27:HH:198:TYR:HE2	1.63	0.63
45:QQ:152:CYS:HB2	48:T:92:LEU:HD11	1.80	0.63
57:c:765:G:O4'	67:m:149:ARG:NH2	2.31	0.63
57:c:1146:G:H1'	60:f:89:GLN:HE22	1.64	0.63
57:c:1474:G:OP2	63:i:109:LYS:NZ	2.32	0.63
62:h:11:ARG:N	62:h:27:TYR:HA	2.14	0.63
76:v:38:LYS:HB3	76:v:43:ASN:HB2	1.81	0.63
3:2:43:ASN:HD21	3:2:46:GLU:HB3	1.63	0.63
3:2:87:ARG:O	3:2:92:ARG:NH1	2.32	0.63
11:AA:1249:G:H2'	11:AA:1250:G:H8	1.62	0.63
11:AA:2402:A:H62	25:GG:73:ARG:HH12	1.47	0.63
13:B:59:PRO:HG3	13:B:76:PHE:CG	2.34	0.63
14:BB:89:G:H21	14:BB:92:A:H62	1.46	0.63
23:FF:291:GLU:HG3	23:FF:302:LYS:HD2	1.80	0.63
42:P:19:ARG:HB3	42:P:35:GLU:CD	2.24	0.63
50:V:18:LEU:HA	50:V:25:ARG:HA	1.81	0.63
57:c:1469:A:O2'	57:c:1540:G:N2	2.31	0.63
76:v:63:ARG:NE	76:v:67:MET:HE1	2.11	0.63
8:7:294:TRP:CD2	8:7:298:GLY:HA2	2.33	0.62
11:AA:67:A:O2'	11:AA:315:C:O2	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2216:G:N2	11:AA:2229:A:N1	2.40	0.62
11:AA:2427:U:H2'	11:AA:2428:U:C6	2.34	0.62
11:AA:3184:A:H62	19:E:167:ARG:NH1	1.97	0.62
16:CC:154:C:H2'	16:CC:155:A:C8	2.34	0.62
23:FF:50:LYS:NZ	23:FF:330:GLY:O	2.25	0.62
27:HH:54:ARG:HB2	27:HH:61:ILE:HB	1.80	0.62
31:JJ:90:LYS:HD3	31:JJ:220:PHE:CZ	2.34	0.62
39:NN:11:ASP:O	39:NN:13:LYS:NZ	2.31	0.62
45:QQ:159:ARG:HB2	45:QQ:164:LEU:HB3	1.81	0.62
57:c:1038:U:O4'	79:y:16:ASN:ND2	2.30	0.62
57:c:1316:G:OP1	74:t:7:LYS:N	2.32	0.62
57:c:1524:A:H2'	57:c:1525:A:H8	1.63	0.62
59:e:158:SER:O	59:e:162:ARG:HG2	1.98	0.62
11:AA:2880:U:OP1	26:H:47:ASN:ND2	2.32	0.62
11:AA:3121:U:H1'	11:AA:3122:A:H5''	1.81	0.62
11:AA:3151:U:H5'	11:AA:3152:U:H5'	1.81	0.62
29:II:42:LEU:HD23	29:II:47:PHE:HB2	1.81	0.62
47:S:57:LEU:H	47:S:62:TYR:HE1	1.45	0.62
57:c:538:A:O2'	57:c:541:A2M:H8	1.99	0.62
62:h:180:LEU:HB2	62:h:231:GLN:HA	1.80	0.62
75:u:123:ARG:O	75:u:127:HIS:ND1	2.32	0.62
11:AA:632:G:H2'	11:AA:633:C:C6	2.34	0.62
11:AA:1064:A:H61	11:AA:1092:C:H2'	1.62	0.62
11:AA:2104:A:OP2	17:D:81:ARG:NH2	2.22	0.62
11:AA:2149:A:N1	11:AA:2188:A:H4'	2.13	0.62
11:AA:2714:G:H4'	11:AA:2715:A:H5''	1.80	0.62
11:AA:3110:C:O2'	35:LL:155:SER:OG	2.04	0.62
11:AA:3375:A:O2'	11:AA:3378:C:OP2	2.15	0.62
12:Aa:682:ARG:NH1	12:Aa:683:SER:OG	2.32	0.62
13:B:41:LEU:HD23	13:B:112:LEU:HB2	1.81	0.62
53:Y:105:PRO:HD2	53:Y:107:ALA:HB2	1.81	0.62
57:c:71:A:N1	57:c:72:A:N6	2.42	0.62
57:c:1087:A:H2'	57:c:1088:A:C8	2.34	0.62
57:c:1398:U:H5''	57:c:1400:A:N6	2.13	0.62
57:c:1461:C:H41	75:u:139:LYS:HA	1.64	0.62
10:A:28:LEU:HD11	10:A:88:VAL:HG23	1.81	0.62
11:AA:19:U:H2'	11:AA:20:A:C8	2.34	0.62
11:AA:783:A:H5''	11:AA:784:A:H5''	1.81	0.62
11:AA:1255:C:H2'	11:AA:1256:G:C8	2.34	0.62
11:AA:1806:A:O2'	34:L:135:ARG:NH1	2.33	0.62
11:AA:3192:U:H2'	11:AA:3193:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3230:G:H5''	43:PP:132:LYS:HB3	1.81	0.62
12:Aa:544:ASP:O	12:Aa:549:HIS:N	2.32	0.62
37:MM:208:ASN:HA	37:MM:211:ARG:NH1	2.15	0.62
57:c:872:G:N2	57:c:955:A:N1	2.47	0.62
57:c:1086:A:H2'	57:c:1087:A:C8	2.34	0.62
64:j:30:LYS:HD2	64:j:34:GLN:HG2	1.82	0.62
69:o:108:PRO:HB2	69:o:135:VAL:HG22	1.80	0.62
76:v:15:ILE:HD11	76:v:63:ARG:HH11	1.65	0.62
11:AA:1362:G:H4'	31:JJ:160:ARG:HB3	1.80	0.62
11:AA:1447:G:N7	13:B:25:SER:OG	2.33	0.62
11:AA:1493:G:N2	11:AA:1493:G:OP2	2.32	0.62
11:AA:1496:C:P	11:AA:1497:C:OP2	2.57	0.62
11:AA:2429:G:H2'	11:AA:2430:A:H8	1.64	0.62
11:AA:2648:G:OP1	37:MM:24:ARG:NH2	2.32	0.62
18:DD:122:ARG:NE	18:DD:155:ASP:OD2	2.29	0.62
27:HH:107:ARG:NH1	27:HH:119:TYR:O	2.33	0.62
49:U:37:THR:HA	49:U:40:VAL:HG12	1.80	0.62
57:c:397:A:H5''	66:l:47:ARG:HH21	1.63	0.62
57:c:542:A:H5''	57:c:543:C:H3'	1.81	0.62
57:c:1530:C:H2'	57:c:1531:G:H8	1.64	0.62
62:h:191:ARG:HE	62:h:245:LYS:HD3	1.65	0.62
8:7:9:LEU:HB3	8:7:311:ARG:HH22	1.65	0.62
8:7:135:THR:HG23	8:7:141:LEU:HD21	1.82	0.62
11:AA:1203:A:N6	11:AA:1301:A:OP1	2.30	0.62
11:AA:1709:C:H2'	11:AA:1710:C:C6	2.35	0.62
11:AA:1945:A:H2'	11:AA:1946:A:C8	2.35	0.62
11:AA:2532:U:H2'	11:AA:2533:G:C8	2.33	0.62
11:AA:2698:G:H21	22:F:8:ARG:NH1	1.98	0.62
12:Aa:7:ASP:HA	12:Aa:10:ARG:HB3	1.82	0.62
12:Aa:164:LEU:HD11	12:Aa:174:LEU:HD22	1.82	0.62
31:JJ:135:ALA:HB1	31:JJ:232:ARG:HH21	1.65	0.62
1:0:27:VAL:HG11	1:0:35:VAL:HG21	1.82	0.62
8:7:249:ARG:HB2	8:7:251:TRP:HZ3	1.63	0.62
11:AA:760:G:H1'	11:AA:771:A:H61	1.64	0.62
11:AA:2685:C:H2'	11:AA:2686:A:H8	1.64	0.62
11:AA:2881:C:OP1	23:FF:11:HIS:NE2	2.32	0.62
32:K:119:ILE:HG23	32:K:124:GLY:HA3	1.81	0.62
33:KK:99:PRO:HG2	33:KK:190:VAL:HG13	1.80	0.62
33:KK:140:VAL:HG21	45:QQ:3:ALA:HB2	1.80	0.62
34:L:23:VAL:HG12	34:L:45:GLY:HA3	1.82	0.62
56:b:7:LYS:O	56:b:27:LYS:NZ	2.23	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:560:U:H2'	57:c:561:G:C8	2.35	0.62
57:c:912:U:O2	57:c:914:G:N1	2.33	0.62
8:7:81:LEU:HD11	8:7:115:ILE:HB	1.82	0.62
8:7:251:TRP:HD1	8:7:264:SER:HB2	1.62	0.62
11:AA:896:A:H5'	20:EE:183:GLY:HA2	1.81	0.62
11:AA:2930:A:H2'	11:AA:2931:C:C6	2.35	0.62
11:AA:3313:U:OP1	23:FF:117:ARG:NH2	2.33	0.62
18:DD:188:VAL:HG12	18:DD:189:GLN:HG2	1.81	0.62
20:EE:177:LYS:HB2	56:b:29:LEU:HD13	1.80	0.62
23:FF:217:ALA:O	23:FF:277:SER:OG	2.15	0.62
25:GG:264:SER:OG	25:GG:265:GLU:OE1	2.18	0.62
39:NN:12:LEU:HB3	39:NN:131:MET:HE2	1.82	0.62
58:d:112:THR:O	58:d:113:ARG:HG2	1.99	0.62
60:f:140:ARG:HB2	60:f:222:TYR:CE1	2.34	0.62
65:k:73:VAL:HG12	65:k:77:LEU:HD23	1.80	0.62
75:u:53:ASP:HB3	75:u:56:LYS:HD3	1.81	0.62
7:6:47:VAL:HG23	7:6:49:LEU:HD22	1.81	0.62
11:AA:364:G:O6	50:V:56:ARG:NE	2.29	0.62
11:AA:679:U:H2'	11:AA:680:G:C8	2.35	0.62
11:AA:1131:G:N2	11:AA:2372:A:OP2	2.32	0.62
11:AA:1729:A:O4'	40:O:52:ARG:NH1	2.31	0.62
11:AA:3026:G:N2	11:AA:3029:A:OP2	2.31	0.62
18:DD:29:GLY:N	18:DD:186:THR:O	2.31	0.62
18:DD:128:MET:N	18:DD:149:THR:OG1	2.31	0.62
30:J:115:ARG:HG2	30:J:117:ASN:H	1.65	0.62
37:MM:42:THR:OG1	37:MM:45:GLU:OE1	2.16	0.62
51:W:5:ILE:HD11	51:W:11:PHE:HD1	1.65	0.62
57:c:479:C:H2'	57:c:480:G:H5''	1.82	0.62
57:c:886:U:O2'	71:q:121:VAL:O	2.17	0.62
11:AA:286:U:O2'	45:QQ:179:LYS:O	2.17	0.62
11:AA:664:U:H2'	11:AA:665:A:H8	1.63	0.62
11:AA:1182:A:H2'	11:AA:1183:C:H6	1.63	0.62
11:AA:2914:G:OP2	23:FF:10:ARG:NH1	2.32	0.62
16:CC:47:C:H1'	16:CC:61:A:H2'	1.80	0.62
16:CC:83:C:H41	32:K:52:ARG:HH22	1.48	0.62
30:J:63:ILE:HD11	30:J:84:PHE:CG	2.35	0.62
30:J:109:LYS:HG2	30:J:125:ARG:HB3	1.81	0.62
37:MM:53:VAL:HG22	37:MM:134:ILE:HG12	1.81	0.62
57:c:67:A:N6	57:c:83:G:O2'	2.29	0.62
57:c:694:U:N3	65:k:96:ARG:O	2.26	0.62
57:c:1484:G:H1	57:c:1592:A:H4'	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1607:G:C2	57:c:1608:U:C4	2.87	0.62
57:c:1648:A:H2'	57:c:1649:G:H8	1.65	0.62
63:i:117:THR:HG21	63:i:194:LEU:HD22	1.82	0.62
73:s:66:ARG:NH2	73:s:67:VAL:O	2.31	0.62
2:1:61:SER:HB2	2:1:99:ALA:HB3	1.80	0.61
5:4:58:GLU:HG2	5:4:61:ARG:HG3	1.81	0.61
11:AA:174:C:O2	11:AA:245:U:N3	2.33	0.61
11:AA:207:U:H2'	11:AA:208:C:H6	1.64	0.61
11:AA:516:A:O3'	31:JJ:60:ARG:NH1	2.33	0.61
11:AA:785:G:O6	36:M:77:LYS:NZ	2.28	0.61
11:AA:1505:C:H2'	11:AA:1506:A:H8	1.64	0.61
19:E:80:ARG:HG2	19:E:122:HIS:HB2	1.82	0.61
25:GG:156:LEU:HD12	25:GG:159:ILE:HD12	1.82	0.61
34:L:95:VAL:O	34:L:100:THR:OG1	2.15	0.61
44:Q:41:VAL:HG12	44:Q:49:ASN:HD22	1.64	0.61
57:c:1294:G:O6	57:c:1303:U:O4	2.17	0.61
57:c:1354:G:N3	57:c:1373:C:N4	2.48	0.61
65:k:8:ILE:HG13	65:k:9:LEU:H	1.65	0.61
72:r:126:VAL:O	72:r:127:ARG:HD3	2.00	0.61
4:3:51:GLN:NE2	57:c:958:U:O2	2.33	0.61
11:AA:1323:G:H4'	19:E:1:MET:HA	1.83	0.61
11:AA:2772:C:OP2	55:a:15:LYS:NZ	2.31	0.61
11:AA:2843:U:O4	11:AA:2898:G:N2	2.33	0.61
11:AA:3233:C:H2'	11:AA:3234:A:C8	2.35	0.61
20:EE:6:ARG:NH1	20:EE:199:THR:OG1	2.33	0.61
31:JJ:163:LEU:HA	31:JJ:168:ILE:HD11	1.82	0.61
39:NN:81:GLU:HB3	39:NN:167:TYR:HE1	1.64	0.61
42:P:34:LYS:HB3	42:P:38:LYS:NZ	2.15	0.61
57:c:7:G:N7	60:f:205:ARG:NH1	2.47	0.61
57:c:89:G:N2	57:c:451:A:O2'	2.33	0.61
57:c:96:G:H2'	57:c:97:C:C6	2.35	0.61
57:c:333:A:H2'	57:c:334:G:C8	2.35	0.61
57:c:1185:U:H6	57:c:1456:C:H5''	1.64	0.61
63:i:140:THR:HG21	63:i:210:ALA:HB1	1.82	0.61
65:k:150:GLN:O	65:k:181:ILE:HA	1.98	0.61
78:x:1:MET:HB2	78:x:10:GLU:HB3	1.81	0.61
1:0:37:LYS:NZ	57:c:523:G:OP2	2.28	0.61
8:7:179:LYS:HZ1	8:7:189:GLU:N	1.97	0.61
11:AA:1805:C:H2'	11:AA:1806:A:C8	2.35	0.61
11:AA:2468:A:H5''	11:AA:2470:C:H41	1.63	0.61
11:AA:2533:G:N1	11:AA:2535:A:N1	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:Ee:110:ILE:HD12	21:Ee:113:ALA:HB3	1.82	0.61
25:GG:280:ILE:HG13	25:GG:281:ILE:HG12	1.82	0.61
51:W:17:ARG:NH2	51:W:19:ASP:OD2	2.33	0.61
57:c:1501:C:H41	57:c:1507:G:H21	1.47	0.61
75:u:30:TYR:O	75:u:33:THR:OG1	2.17	0.61
11:AA:585:A:H2'	11:AA:586:C:C6	2.35	0.61
12:Aa:379:MET:HE2	12:Aa:402:ALA:HB3	1.82	0.61
16:CC:49:G:OP2	48:T:48:ARG:NH2	2.34	0.61
35:LL:75:VAL:HA	35:LL:78:MET:SD	2.40	0.61
35:LL:113:GLU:OE1	35:LL:125:ASN:ND2	2.33	0.61
36:M:139:ARG:HH12	36:M:145:VAL:H	1.47	0.61
57:c:78:A:H1'	64:j:174:LYS:HB2	1.83	0.61
57:c:1168:U:H2'	57:c:1169:G:C8	2.35	0.61
64:j:18:ILE:HA	64:j:23:ARG:HH22	1.64	0.61
74:t:41:ILE:HB	74:t:47:ARG:HG2	1.81	0.61
8:7:133:VAL:HG12	8:7:141:LEU:HD12	1.83	0.61
11:AA:612:U:H2'	11:AA:613:G:C8	2.34	0.61
11:AA:631:U:H2'	11:AA:632:G:C8	2.35	0.61
11:AA:2218:G:H2'	11:AA:2219:A:H8	1.66	0.61
12:Aa:10:ARG:NH2	12:Aa:14:ASP:OD1	2.34	0.61
12:Aa:352:ARG:O	12:Aa:356:LEU:N	2.33	0.61
29:II:58:LEU:HD11	29:II:64:LEU:HB2	1.81	0.61
57:c:448:C:O5'	62:h:29:PRO:HG3	2.01	0.61
58:d:184:LEU:HD12	78:x:45:ALA:HB2	1.82	0.61
11:AA:819:U:OP2	50:V:10:LYS:NZ	2.33	0.61
11:AA:1245:A:O2'	11:AA:1273:A:OP1	2.19	0.61
11:AA:1304:A:N6	11:AA:2860:U:O5'	2.33	0.61
11:AA:2618:G:O2'	11:AA:2865:U:OP1	2.16	0.61
12:Aa:215:LEU:HB2	84:Aa:901:GTP:C4	2.36	0.61
32:K:81:GLN:HE21	32:K:82:VAL:N	1.98	0.61
44:Q:20:HIS:HB3	44:Q:35:GLN:NE2	2.15	0.61
57:c:796:A2M:HM'2	57:c:797:G:H5'	1.82	0.61
57:c:1269:OMU:H4'	57:c:1270:G:H5''	1.82	0.61
69:o:73:GLY:HA3	69:o:86:ILE:HD12	1.82	0.61
78:x:56:SER:HB3	78:x:59:VAL:HG23	1.83	0.61
11:AA:625:G:N2	11:AA:1401:A:OP1	2.34	0.61
11:AA:700:C:H2'	11:AA:701:G:C8	2.36	0.61
11:AA:1517:G:OP2	52:X:41:ARG:NH2	2.34	0.61
11:AA:1636:U:H2'	11:AA:1637:A:C4	2.35	0.61
11:AA:2516:U:O2'	11:AA:2595:A:N6	2.33	0.61
11:AA:3050:U:OP1	28:I:17:ARG:NH1	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:EE:149:ARG:HH21	20:EE:155:LYS:HD3	1.65	0.61
40:O:30:THR:HG23	40:O:91:SER:HB2	1.83	0.61
40:O:52:ARG:O	40:O:56:LEU:HD23	2.01	0.61
57:c:1175:U:O2'	57:c:1196:A:N7	2.28	0.61
57:c:1477:G:O2'	76:v:48:GLN:OE1	2.11	0.61
57:c:1523:G:OP1	57:c:1523:G:N2	2.33	0.61
57:c:1623:C:H2'	57:c:1624:C:H6	1.66	0.61
58:d:102:PHE:O	58:d:106:SER:OG	2.15	0.61
62:h:140:VAL:HG22	62:h:146:THR:HG22	1.81	0.61
67:m:161:THR:HG22	67:m:162:SER:H	1.66	0.61
10:A:48:PHE:O	10:A:52:LEU:HG	2.00	0.61
11:AA:99:A:OP2	45:QQ:194:GLN:NE2	2.34	0.61
11:AA:224:C:H2'	11:AA:225:C:C6	2.36	0.61
11:AA:1361:U:H2'	11:AA:1362:G:H8	1.66	0.61
11:AA:2306:C:H4'	11:AA:2307:G:H5'	1.82	0.61
11:AA:2519:A:H2'	11:AA:2520:A:C8	2.36	0.61
11:AA:2525:G:H5''	11:AA:2526:C:H5'	1.82	0.61
11:AA:2957:G:O6	11:AA:2975:U:O4	2.18	0.61
11:AA:3252:G:H2'	11:AA:3253:G:C8	2.32	0.61
12:Aa:227:THR:HA	12:Aa:237:LYS:HE3	1.83	0.61
12:Aa:283:ARG:O	12:Aa:286:THR:OG1	2.16	0.61
12:Aa:317:LYS:O	12:Aa:321:LYS:NZ	2.33	0.61
27:HH:197:SER:O	27:HH:202:GLY:N	2.32	0.61
39:NN:92:ARG:HA	39:NN:172:LEU:HB2	1.83	0.61
51:W:3:ARG:NH2	51:W:52:TYR:OH	2.34	0.61
57:c:1383:G:H2'	57:c:1384:A:C8	2.36	0.61
60:f:176:SER:N	60:f:195:ASP:OD1	2.34	0.61
62:h:100:ARG:HH12	62:h:236:ILE:HB	1.64	0.61
64:j:32:ILE:H	64:j:34:GLN:HE22	1.48	0.61
11:AA:919:U:H5''	11:AA:920:A:H5'	1.83	0.61
11:AA:1310:G:N2	11:AA:2381:G:OP1	2.30	0.61
11:AA:1824:U:O2'	51:W:17:ARG:NH2	2.34	0.61
11:AA:2291:A:H2'	11:AA:2292:U:C6	2.36	0.61
11:AA:2552:C:N4	47:S:98:GLN:OE1	2.34	0.61
12:Aa:203:TYR:HB2	12:Aa:206:ARG:HB2	1.83	0.61
12:Aa:384:LYS:HE2	12:Aa:386:VAL:HG22	1.83	0.61
12:Aa:544:ASP:O	12:Aa:548:ASP:N	2.34	0.61
35:LL:135:GLU:O	35:LL:145:VAL:N	2.34	0.61
36:M:37:GLY:HA2	36:M:41:HIS:HB2	1.81	0.61
57:c:139:C:H41	57:c:281:G:H5''	1.66	0.61
57:c:333:A:OP1	66:l:31:ARG:NH2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:388:G:OP2	57:c:423:G:O2'	2.17	0.61
57:c:871:G:H2'	57:c:872:G:C8	2.36	0.61
57:c:1672:G:H2'	57:c:1673:G:C8	2.35	0.61
73:s:128:LYS:H	73:s:134:ALA:HA	1.66	0.61
4:3:18:LYS:O	4:3:29:ARG:NH2	2.34	0.61
11:AA:1190:A:O2'	11:AA:1193:A:OP2	2.12	0.61
11:AA:2100:A:H2'	11:AA:2101:C:C6	2.36	0.61
11:AA:2608:G:H2'	11:AA:2609:A:H8	1.66	0.61
11:AA:2748:A:H1'	27:HH:36:LEU:HD13	1.83	0.61
16:CC:142:C:H2'	16:CC:143:U:C6	2.36	0.61
19:E:96:ASP:OD1	19:E:97:VAL:N	2.32	0.61
21:Ee:106:LEU:HA	21:Ee:109:ILE:HD12	1.82	0.61
37:MM:193:ASP:OD1	37:MM:194:GLY:N	2.33	0.61
42:P:5:LYS:O	42:P:79:ARG:NH2	2.34	0.61
57:c:1589:C:H2'	57:c:1592:A:H62	1.66	0.61
59:e:48:VAL:HG21	59:e:61:LEU:HD21	1.83	0.61
59:e:72:ASP:OD1	71:q:114:ARG:NH2	2.32	0.61
73:s:35:PRO:HD2	73:s:38:LEU:HB3	1.82	0.61
11:AA:1236:G:N2	11:AA:1244:A:H5''	2.15	0.60
11:AA:1556:C:N4	11:AA:2169:G:O4'	2.33	0.60
11:AA:1721:U:OP2	17:D:103:ARG:NE	2.35	0.60
11:AA:2639:G:O3'	22:F:55:LYS:NZ	2.34	0.60
12:Aa:750:LYS:HB3	12:Aa:776:GLU:HB3	1.83	0.60
16:CC:8:C:H2'	16:CC:9:A:C8	2.33	0.60
36:M:73:LEU:HD22	36:M:109:TYR:HB3	1.84	0.60
42:P:84:ASP:HB2	42:P:86:LYS:HD3	1.83	0.60
45:QQ:159:ARG:NH2	45:QQ:164:LEU:O	2.34	0.60
47:S:8:ARG:CZ	47:S:31:ARG:HH22	2.14	0.60
57:c:485:A:H2'	57:c:503:G:H21	1.66	0.60
57:c:1471:A:H62	57:c:1538:U:H3	1.48	0.60
60:f:106:ASP:OD1	60:f:110:HIS:HB2	2.01	0.60
11:AA:880:G:OP2	13:B:132:ALA:N	2.33	0.60
11:AA:1095:U:O2	22:F:129:LYS:N	2.34	0.60
11:AA:1783:U:H2'	11:AA:1784:G:C8	2.37	0.60
11:AA:2429:G:H2'	11:AA:2430:A:C8	2.36	0.60
11:AA:2669:G:H2'	11:AA:2670:G:C8	2.35	0.60
36:M:82:ILE:O	36:M:87:ARG:NH2	2.34	0.60
51:W:58:ASP:OD2	51:W:61:LYS:N	2.27	0.60
55:a:71:ARG:HG3	55:a:80:ARG:HH21	1.66	0.60
57:c:247:A:H8	69:o:41:GLY:N	1.99	0.60
57:c:297:U:H5''	62:h:37:LYS:HE2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:k:156:SER:OG	65:k:157:LYS:NZ	2.25	0.60
78:x:37:ALA:HA	78:x:50:TYR:CD1	2.36	0.60
6:5:14:TYR:OH	57:c:1555:A:N6	2.31	0.60
11:AA:894:G:N2	11:AA:1660:C:OP1	2.34	0.60
11:AA:2374:C:N4	11:AA:2941:A:O4'	2.34	0.60
11:AA:2412:G:H2'	11:AA:2413:A:H8	1.66	0.60
11:AA:2666:C:OP2	11:AA:2687:G:N1	2.34	0.60
11:AA:2769:A:H2'	11:AA:2770:G:C8	2.36	0.60
12:Aa:176:GLN:O	12:Aa:180:ARG:HG2	2.01	0.60
57:c:126:A:N3	57:c:264:G:O2'	2.33	0.60
57:c:571:G:H5''	80:z:114:LYS:HD3	1.82	0.60
59:e:138:PHE:CG	59:e:214:LYS:HE3	2.37	0.60
69:o:36:LYS:HZ2	69:o:38:ALA:HB2	1.66	0.60
11:AA:2162:U:OP1	20:EE:234:LYS:NZ	2.30	0.60
11:AA:2187:G:O6	20:EE:200:ARG:NH1	2.35	0.60
11:AA:3119:U:H5'	53:Y:105:PRO:HB3	1.83	0.60
13:B:117:ILE:HD13	13:B:148:LEU:HB2	1.82	0.60
18:DD:45:LEU:HD21	18:DD:100:ILE:HD11	1.84	0.60
22:F:88:ARG:NH2	38:N:31:SER:OG	2.34	0.60
34:L:33:SER:OG	34:L:35:SER:O	2.17	0.60
36:M:135:GLU:OE2	41:OO:166:ALA:N	2.34	0.60
36:M:147:LEU:HD21	41:OO:166:ALA:HB1	1.84	0.60
73:s:50:GLU:OE1	73:s:50:GLU:N	2.34	0.60
76:v:30:VAL:HG11	76:v:34:VAL:HG23	1.82	0.60
5:4:45:LYS:HE2	63:i:160:VAL:HG12	1.84	0.60
11:AA:836:A:O2'	56:b:9:GLY:O	2.18	0.60
11:AA:1048:A:H5''	11:AA:1049:C:H5''	1.82	0.60
11:AA:1354:G:H2'	11:AA:1357:G:H4'	1.84	0.60
11:AA:1452:A:N3	11:AA:2346:C:O2'	2.31	0.60
11:AA:1581:C:N4	11:AA:2522:G:OP2	2.35	0.60
11:AA:2106:A:H2'	11:AA:2107:A:H8	1.65	0.60
11:AA:2522:G:N2	11:AA:2524:A:OP1	2.35	0.60
11:AA:2895:G:H5''	53:Y:102:ARG:HH12	1.66	0.60
23:FF:72:VAL:HG12	26:H:88:ARG:HD2	1.82	0.60
32:K:50:ILE:HD13	32:K:80:VAL:HG21	1.84	0.60
57:c:1196:A:OP2	57:c:1464:G:N2	2.35	0.60
11:AA:1213:G:O2'	19:E:90:MET:SD	2.58	0.60
11:AA:2555:G:N2	34:L:135:ARG:O	2.35	0.60
11:AA:3022:G:O2'	11:AA:3031:G:O6	2.17	0.60
25:GG:2:SER:OG	25:GG:3:ARG:N	2.35	0.60
31:JJ:88:ARG:NH2	31:JJ:91:GLY:O	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:PP:35:ILE:HD11	43:PP:44:VAL:HB	1.82	0.60
57:c:792:U:H2'	57:c:793:A:C4	2.36	0.60
57:c:1061:A:H2'	57:c:1062:A:C8	2.36	0.60
57:c:1389:C:O4'	74:t:48:ASN:ND2	2.35	0.60
62:h:35:PRO:HG2	62:h:36:HIS:CE1	2.37	0.60
71:q:106:ALA:HA	71:q:112:ILE:HD11	1.83	0.60
78:x:17:CYS:HB2	78:x:24:ILE:HD11	1.82	0.60
8:7:209:THR:HA	8:7:225:LEU:HB2	1.83	0.60
11:AA:986:U:O2'	31:JJ:125:GLU:OE2	2.15	0.60
11:AA:1310:G:H2'	11:AA:1311:G:H8	1.66	0.60
11:AA:1551:C:O2'	11:AA:2170:U:O2'	2.12	0.60
11:AA:3379:C:H4'	23:FF:315:GLY:HA2	1.82	0.60
14:BB:7:G:H2'	14:BB:8:G:C8	2.36	0.60
29:II:171:PRO:HA	29:II:174:LEU:HB2	1.83	0.60
45:QQ:35:VAL:HG12	45:QQ:36:ILE:HG23	1.83	0.60
46:R:16:TYR:OH	46:R:89:LEU:O	2.20	0.60
53:Y:127:LEU:HD23	53:Y:128:LYS:HG2	1.84	0.60
54:Z:18:ARG:HH12	57:c:1125:A:P	2.25	0.60
57:c:386:G:H2'	57:c:387:A:C8	2.37	0.60
57:c:990:C:H5''	71:q:129:LYS:HB3	1.82	0.60
58:d:41:ARG:CZ	74:t:103:ASP:HB3	2.32	0.60
62:h:126:VAL:HA	62:h:141:THR:HA	1.84	0.60
63:i:44:ASN:OD1	63:i:115:LYS:NZ	2.34	0.60
10:A:60:LYS:HD3	11:AA:1307:G:C2	2.37	0.60
11:AA:911:C:H3'	20:EE:9:ARG:NH1	2.17	0.60
11:AA:1060:U:H2'	11:AA:1061:A:H8	1.66	0.60
11:AA:3295:A:H2'	11:AA:3296:A:C8	2.37	0.60
12:Aa:226:ALA:O	12:Aa:237:LYS:NZ	2.24	0.60
19:E:138:GLN:HB3	35:LL:1:MET:HE1	1.83	0.60
20:EE:65:ASP:OD2	20:EE:68:LYS:N	2.34	0.60
22:F:28:SER:O	22:F:32:LYS:HG3	2.02	0.60
25:GG:92:ASN:OD1	25:GG:100:PHE:N	2.35	0.60
39:NN:32:ARG:NH1	39:NN:120:ILE:O	2.33	0.60
57:c:407:A:H2'	57:c:408:C:H6	1.66	0.60
57:c:605:A:OP2	57:c:606:A:O2'	2.19	0.60
57:c:607:G:OP2	57:c:613:G:N2	2.35	0.60
57:c:960:U:OP2	70:p:55:ARG:NH1	2.34	0.60
57:c:973:A:H2'	57:c:974:A2M:H8	1.82	0.60
64:j:56:ASN:HA	64:j:62:PRO:HA	1.83	0.60
80:z:37:ALA:HA	80:z:41:SER:HB3	1.82	0.60
1:0:29:HIS:HB2	1:0:32:ARG:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:46:GLU:O	10:A:50:ASN:ND2	2.34	0.60
11:AA:80:G:OP1	45:QQ:193:ARG:NH1	2.34	0.60
11:AA:307:A:H2'	11:AA:308:A:H8	1.66	0.60
11:AA:875:G:H2'	11:AA:876:A2M:H8	1.84	0.60
11:AA:1119:C:H2'	11:AA:1120:A:C8	2.35	0.60
11:AA:2561:A:H2'	11:AA:2562:A:H8	1.66	0.60
11:AA:2806:U:H2'	11:AA:2807:U:C6	2.35	0.60
25:GG:138:ARG:O	25:GG:138:ARG:HD3	2.02	0.60
32:K:42:GLN:HG3	32:K:126:LEU:HD23	1.84	0.60
57:c:1732:A:H2'	57:c:1733:C:C6	2.37	0.60
60:f:248:SER:OG	60:f:250:GLN:NE2	2.34	0.60
64:j:25:ARG:HA	64:j:28:PHE:CE2	2.36	0.60
65:k:99:LEU:HD11	65:k:109:VAL:HG11	1.83	0.60
74:t:12:ALA:HB3	74:t:50:ILE:HD12	1.84	0.60
8:7:251:TRP:CD1	8:7:264:SER:HG	2.20	0.60
11:AA:662:U:H2'	11:AA:663:OMC:C6	2.37	0.60
11:AA:1243:G:H1	11:AA:1244:A:H62	1.48	0.60
11:AA:2149:A:C2	11:AA:2188:A:H4'	2.36	0.60
11:AA:2351:U:H2'	11:AA:2352:A:H8	1.67	0.60
11:AA:2835:U:H2'	11:AA:2836:C:O2	2.01	0.60
57:c:1223:A:H2'	57:c:1224:A:H8	1.67	0.60
60:f:140:ARG:HB3	60:f:221:THR:HB	1.84	0.60
63:i:223:SER:HA	71:q:107:ARG:HH12	1.67	0.60
64:j:44:GLU:HG2	64:j:45:PHE:H	1.67	0.60
64:j:126:ASP:OD1	64:j:127:THR:N	2.32	0.60
65:k:154:LEU:HD11	65:k:183:PHE:HD1	1.67	0.60
71:q:16:VAL:HG12	71:q:18:ARG:HG3	1.84	0.60
5:4:47:PRO:HG2	63:i:165:LEU:HB3	1.84	0.59
11:AA:315:C:OP2	49:U:28:TYR:OH	2.20	0.59
11:AA:929:A:H2'	11:AA:930:U:C6	2.36	0.59
11:AA:986:U:H2'	11:AA:987:U:C6	2.37	0.59
11:AA:1290:A:H2'	11:AA:1291:A:C8	2.36	0.59
11:AA:1696:A:H2'	11:AA:1697:A:H8	1.66	0.59
11:AA:2102:U:H2'	11:AA:2103:U:H6	1.66	0.59
11:AA:3301:U:H2'	11:AA:3302:U:C6	2.36	0.59
13:B:88:VAL:O	13:B:92:GLN:HG2	2.02	0.59
18:DD:136:PHE:HD2	18:DD:150:ILE:HG21	1.65	0.59
29:II:4:GLN:OE1	29:II:4:GLN:N	2.34	0.59
40:O:83:LYS:HD3	40:O:85:PHE:CZ	2.37	0.59
46:R:9:VAL:HG23	46:R:100:ILE:HB	1.82	0.59
50:V:25:ARG:NH1	52:X:50:ASN:OD1	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:564:G:N2	57:c:577:G:OP1	2.34	0.59
57:c:1553:G:O6	72:r:40:ARG:NH1	2.35	0.59
57:c:1685:G:H3'	57:c:1717:G:H21	1.67	0.59
11:AA:426:G:H5'	44:Q:50:ILE:HD13	1.84	0.59
11:AA:528:U:O2	11:AA:564:G:N2	2.25	0.59
11:AA:649:A2M:OP2	11:AA:2868:U:O2'	2.21	0.59
11:AA:964:G:OP2	11:AA:1115:G:N1	2.33	0.59
11:AA:1388:U:O2'	44:Q:99:ASN:O	2.20	0.59
11:AA:2533:G:N2	11:AA:2534:G:N7	2.50	0.59
12:Aa:649:GLN:HB2	12:Aa:689:LEU:HA	1.83	0.59
12:Aa:747:LEU:O	12:Aa:752:GLY:N	2.34	0.59
37:MM:113:GLN:HB3	37:MM:116:ARG:HD3	1.84	0.59
57:c:455:C:OP1	62:h:62:LYS:NZ	2.35	0.59
57:c:1170:G:O6	57:c:1469:A:N1	2.35	0.59
57:c:1500:C:O2	57:c:1508:U:N3	2.34	0.59
61:g:142:LEU:O	61:g:143:ARG:NH1	2.35	0.59
62:h:129:VAL:HG22	62:h:139:VAL:HG12	1.83	0.59
67:m:31:ALA:HA	67:m:36:LEU:HD12	1.84	0.59
11:AA:359:U:O2'	50:V:16:HIS:HB2	2.02	0.59
11:AA:1322:U:H2'	11:AA:1323:G:H8	1.66	0.59
11:AA:1756:C:H2'	11:AA:1757:A:H8	1.67	0.59
11:AA:2095:G:H2'	11:AA:2096:A:H8	1.66	0.59
11:AA:2154:U:H2'	11:AA:2155:G:C8	2.37	0.59
11:AA:3375:A:OP2	11:AA:3378:C:N4	2.35	0.59
12:Aa:205:ALA:HB2	12:Aa:245:TRP:HD1	1.66	0.59
12:Aa:404:THR:HA	12:Aa:449:PRO:HA	1.84	0.59
12:Aa:644:ASN:HD22	12:Aa:671:THR:HB	1.67	0.59
14:BB:64:A:H5'	14:BB:65:G:H5''	1.84	0.59
15:C:81:VAL:HG22	15:C:138:LEU:HD23	1.83	0.59
16:CC:85:G:N1	32:K:114:ASP:OD2	2.32	0.59
16:CC:136:G:O3'	30:J:42:ARG:NH1	2.34	0.59
49:U:50:LEU:HB3	49:U:54:GLU:OE2	2.01	0.59
57:c:1223:A:H2'	57:c:1224:A:C8	2.37	0.59
57:c:1501:C:N4	57:c:1507:G:H21	2.00	0.59
58:d:147:THR:HG23	58:d:151:SER:HB2	1.82	0.59
5:4:45:LYS:HG2	63:i:160:VAL:HB	1.84	0.59
10:A:116:LYS:HD3	11:AA:3180:A:H4'	1.85	0.59
11:AA:1447:G:O2'	11:AA:2355:G:O6	2.13	0.59
11:AA:1463:U:H3	11:AA:1467:A:H62	1.50	0.59
11:AA:1925:U:OP2	11:AA:1926:C:N4	2.35	0.59
11:AA:2222:A:O2'	11:AA:2223:A:O5'	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3110:C:HO2'	35:LL:155:SER:HG	1.34	0.59
12:Aa:545:LEU:O	12:Aa:551:GLY:N	2.24	0.59
23:FF:70:ARG:HD2	26:H:88:ARG:NH2	2.15	0.59
57:c:874:C:OP1	59:e:159:SER:OG	2.19	0.59
57:c:1115:U:O2	57:c:1131:A:N7	2.36	0.59
57:c:1287:A:H2'	57:c:1313:A:H4'	1.83	0.59
57:c:1585:U:H5'	73:s:125:GLU:HG2	1.83	0.59
8:7:214:ALA:HB2	8:7:220:ILE:HG13	1.84	0.59
9:8:96:LYS:HE3	9:8:96:LYS:HA	1.84	0.59
11:AA:245:U:H2'	11:AA:246:U:C6	2.38	0.59
11:AA:417:A:H2'	11:AA:418:A:C8	2.38	0.59
11:AA:761:A:H2'	11:AA:762:U:H6	1.67	0.59
11:AA:1411:C:OP1	44:Q:98:HIS:ND1	2.36	0.59
11:AA:1667:A:H2'	11:AA:1668:G:C8	2.37	0.59
11:AA:1897:G:O2'	26:H:16:GLY:O	2.20	0.59
11:AA:2535:A:H2'	11:AA:2536:A:C5	2.37	0.59
11:AA:2909:U:O2'	11:AA:3105:U:O2	2.20	0.59
11:AA:2939:G:H2'	11:AA:2940:A:C8	2.38	0.59
11:AA:3371:G:H2'	11:AA:3372:A:C8	2.38	0.59
29:II:170:LYS:HB3	29:II:172:HIS:CE1	2.37	0.59
39:NN:14:ILE:O	39:NN:14:ILE:HG13	2.03	0.59
43:PP:32:LEU:HD11	43:PP:94:TRP:CD2	2.37	0.59
51:W:42:LYS:HG3	51:W:55:VAL:HG12	1.83	0.59
57:c:1360:A:H1'	57:c:1364:G:N2	2.18	0.59
57:c:1504:G:H2'	57:c:1505:A:C4	2.37	0.59
59:e:82:ARG:H	59:e:105:PHE:HA	1.67	0.59
70:p:127:ARG:HA	70:p:130:ARG:HE	1.68	0.59
74:t:69:ILE:O	74:t:74:GLN:NE2	2.35	0.59
11:AA:514:G:N3	25:GG:341:SER:OG	2.33	0.59
11:AA:2547:A:H2'	11:AA:2548:C:O4'	2.02	0.59
11:AA:3044:G:H2'	11:AA:3045:G:C8	2.37	0.59
12:Aa:612:PHE:O	12:Aa:613:LYS:HG2	2.02	0.59
14:BB:11:A:N7	22:F:20:ARG:NH2	2.46	0.59
19:E:10:ILE:O	19:E:59:VAL:N	2.34	0.59
21:Ee:61:GLN:O	21:Ee:72:SER:N	2.30	0.59
24:G:33:TYR:CZ	24:G:37:LEU:HD11	2.37	0.59
27:HH:107:ARG:NH2	27:HH:116:ASP:O	2.28	0.59
31:JJ:89:ILE:HD11	31:JJ:229:PHE:HB3	1.84	0.59
42:P:11:GLU:HB2	42:P:107:VAL:HG12	1.83	0.59
42:P:52:ALA:HB1	42:P:54:GLU:OE2	2.03	0.59
53:Y:94:SER:N	53:Y:104:PRO:HG3	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:368:U:HO2'	57:c:603:U:HO2'	1.49	0.59
57:c:609:U:O2'	80:z:23:ARG:NH2	2.35	0.59
57:c:875:G:H1	57:c:952:A:H61	1.50	0.59
67:m:162:SER:O	67:m:164:PHE:N	2.32	0.59
11:AA:184:U:H2'	11:AA:185:C:H6	1.68	0.59
11:AA:273:A:H2'	11:AA:274:G:C8	2.37	0.59
11:AA:1495:U:H2'	11:AA:1842:A:C2	2.38	0.59
11:AA:3333:G:N2	11:AA:3369:G:O2'	2.35	0.59
12:Aa:108:HIS:CE1	12:Aa:110:ASP:HB2	2.38	0.59
21:Ee:28:LEU:O	21:Ee:32:ILE:N	2.30	0.59
39:NN:49:LYS:HG3	39:NN:64:LYS:H	1.66	0.59
42:P:75:ILE:HG12	42:P:93:VAL:HG13	1.85	0.59
57:c:643:G:O2'	57:c:644:C:O5'	2.19	0.59
57:c:920:U:H5'	59:e:65:VAL:HB	1.84	0.59
57:c:954:G:H2'	57:c:955:A:C8	2.38	0.59
57:c:1582:U:H1'	57:c:1614:A:C6	2.38	0.59
60:f:35:TRP:NE1	60:f:65:GLU:OE2	2.35	0.59
60:f:57:PHE:HB2	78:x:12:TYR:CE2	2.38	0.59
60:f:97:ARG:HG3	60:f:119:LYS:HZ1	1.68	0.59
11:AA:1765:U:H2'	11:AA:1766:G:C8	2.38	0.59
12:Aa:659:ILE:HD11	12:Aa:705:ILE:HG21	1.84	0.59
17:D:44:LEU:HB3	17:D:49:THR:HB	1.83	0.59
49:U:86:LYS:O	49:U:90:MET:HG2	2.02	0.59
54:Z:1:MET:HE2	54:Z:1:MET:N	2.18	0.59
57:c:765:G:C6	67:m:149:ARG:HG3	2.37	0.59
57:c:961:U:H5'	70:p:71:ILE:HD12	1.84	0.59
57:c:1171:A:H2'	57:c:1172:G:H8	1.65	0.59
70:p:23:PRO:HB2	70:p:25:TRP:CD1	2.38	0.59
70:p:103:GLU:HA	70:p:106:ARG:NH1	2.17	0.59
78:x:2:GLU:OE1	78:x:6:GLY:HA2	2.03	0.59
11:AA:1791:C:H2'	11:AA:1792:C:C6	2.38	0.59
11:AA:2528:G:H2'	11:AA:2529:A:H8	1.68	0.59
12:Aa:13:MET:SD	12:Aa:449:PRO:HD2	2.43	0.59
12:Aa:542:LEU:HA	12:Aa:545:LEU:HD23	1.83	0.59
35:LL:129:ARG:NH1	35:LL:157:ASN:OD1	2.34	0.59
57:c:1146:G:H2'	57:c:1147:A:C8	2.38	0.59
57:c:1181:U:H4'	72:r:127:ARG:NH1	2.18	0.59
57:c:1332:C:OP2	74:t:45:ARG:NH2	2.30	0.59
57:c:1424:A:H2'	57:c:1425:A:H8	1.68	0.59
62:h:85:GLY:N	62:h:88:ASP:OD2	2.25	0.59
65:k:58:LEU:HG	65:k:88:ARG:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:71:CYS:HA	8:7:81:LEU:O	2.03	0.59
11:AA:1106:G:OP1	38:N:22:LYS:NZ	2.33	0.59
11:AA:1259:A:O2'	11:AA:1280:C:O2'	2.15	0.59
11:AA:1863:G:N2	11:AA:1865:A:H3'	2.18	0.59
11:AA:2328:U:H2'	11:AA:2329:C:H6	1.68	0.59
14:BB:121:U:OP2	27:HH:265:TYR:OH	2.21	0.59
16:CC:103:G:OP2	16:CC:105:A:O2'	2.21	0.59
17:D:11:ALA:HB2	17:D:41:ILE:HD11	1.85	0.59
23:FF:28:ARG:HH22	23:FF:30:LYS:HE2	1.67	0.59
23:FF:70:ARG:HH11	26:H:88:ARG:NH2	2.00	0.59
27:HH:153:THR:OG1	27:HH:179:ARG:NH1	2.35	0.59
41:OO:110:ASP:OD1	41:OO:111:ALA:N	2.36	0.59
47:S:15:THR:HG22	47:S:18:ASN:HB2	1.84	0.59
51:W:42:LYS:NZ	51:W:53:THR:OG1	2.36	0.59
57:c:153:G:N7	57:c:162:A:N6	2.51	0.59
57:c:1476:C:H2'	57:c:1477:G:C8	2.37	0.59
73:s:33:GLY:HA2	73:s:66:ARG:HH12	1.68	0.59
1:0:81:GLU:HA	1:0:84:LYS:HG2	1.83	0.58
1:0:105:ARG:NE	57:c:444:C:OP2	2.34	0.58
8:7:224:ASN:ND2	8:7:227:ALA:H	2.01	0.58
10:A:60:LYS:HA	11:AA:1306:G:H4'	1.85	0.58
11:AA:2471:U:C4	11:AA:2473:C:C4	2.90	0.58
12:Aa:287:ALA:HA	12:Aa:292:LYS:HB2	1.85	0.58
25:GG:7:THR:OG1	25:GG:16:THR:O	2.20	0.58
27:HH:262:LYS:HA	27:HH:265:TYR:HB2	1.84	0.58
34:L:84:ARG:NH2	40:O:61:MET:SD	2.76	0.58
57:c:411:C:H3'	57:c:412:A:C8	2.37	0.58
71:q:16:VAL:O	71:q:30:VAL:HA	2.03	0.58
1:0:106:GLN:O	1:0:110:GLN:HG2	2.02	0.58
11:AA:291:C:H5''	45:QQ:68:ARG:HE	1.67	0.58
11:AA:629:U:H2'	11:AA:630:A:C8	2.38	0.58
11:AA:780:A:OP1	15:C:178:ARG:NH2	2.36	0.58
11:AA:1263:A:N6	21:Ee:138:SER:HB3	2.18	0.58
11:AA:1813:A:O2'	11:AA:1816:A:N3	2.29	0.58
12:Aa:19:VAL:HA	12:Aa:99:LEU:HB2	1.85	0.58
14:BB:84:A:H2'	14:BB:85:G:C8	2.38	0.58
15:C:126:GLN:NE2	25:GG:282:SER:HB3	2.18	0.58
28:I:4:GLU:OE2	28:I:30:ARG:HD2	2.03	0.58
34:L:84:ARG:NH2	40:O:58:TYR:O	2.35	0.58
54:Z:4:LYS:HB3	54:Z:5:TRP:HD1	1.68	0.58
57:c:1145:U:O2	60:f:89:GLN:NE2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:m:163:PRO:HD3	67:m:168:ARG:HD2	1.85	0.58
70:p:54:LEU:HB3	70:p:60:VAL:HG13	1.84	0.58
73:s:51:PRO:HA	73:s:109:PHE:HE1	1.67	0.58
11:AA:785:G:H5''	15:C:92:ARG:HH22	1.68	0.58
11:AA:792:G:H5''	36:M:2:PRO:HG3	1.85	0.58
11:AA:899:U:H2'	11:AA:900:G:H8	1.69	0.58
11:AA:1192:C:N4	11:AA:1300:G:OP2	2.36	0.58
11:AA:2527:G:H2'	11:AA:2528:G:H8	1.68	0.58
11:AA:2888:U:O4'	11:AA:2911:A:N6	2.37	0.58
11:AA:3005:A:H1'	11:AA:3006:A:N7	2.18	0.58
11:AA:3037:U:H2'	11:AA:3038:U:C6	2.38	0.58
15:C:157:PRO:HD3	36:M:47:LYS:HG3	1.85	0.58
39:NN:132:ASN:OD1	39:NN:133:ARG:N	2.33	0.58
54:Z:12:ARG:NH2	57:c:1779:U:O4	2.36	0.58
57:c:278:U:H1'	57:c:279:G:C6	2.37	0.58
57:c:328:A:H2'	57:c:329:G:H8	1.67	0.58
57:c:1026:A:H1'	57:c:1790:A:H1'	1.84	0.58
80:z:69:ARG:HB3	80:z:86:PHE:CE1	2.37	0.58
11:AA:2468:A:H4'	11:AA:2488:A:H61	1.68	0.58
11:AA:2615:G:H2'	11:AA:2616:C:C6	2.39	0.58
11:AA:2660:G:H2'	11:AA:2661:G:C8	2.39	0.58
11:AA:2882:U:O2'	23:FF:263:SER:OG	2.19	0.58
12:Aa:108:HIS:CE1	12:Aa:536:LEU:HD11	2.38	0.58
13:B:67:ILE:HG13	13:B:68:GLY:N	2.18	0.58
18:DD:14:LYS:HE2	18:DD:52:LEU:HD22	1.84	0.58
19:E:28:ARG:NH1	25:GG:362:ASP:OD1	2.36	0.58
40:O:42:ILE:HD12	40:O:90:VAL:O	2.04	0.58
41:OO:25:HIS:NE2	45:QQ:198:SER:OG	2.19	0.58
57:c:107:C:OP1	57:c:383:G:O2'	2.18	0.58
57:c:327:U:O4	57:c:328:A:N6	2.36	0.58
60:f:105:GLY:HA3	60:f:111:VAL:HG12	1.85	0.58
73:s:31:VAL:HA	73:s:67:VAL:HB	1.86	0.58
11:AA:412:G:H2'	11:AA:413:U:C6	2.39	0.58
11:AA:754:G:N2	11:AA:778:U:O2	2.36	0.58
11:AA:1237:G:N7	11:AA:1263:A:O2'	2.36	0.58
11:AA:1709:C:H2'	11:AA:1710:C:H6	1.68	0.58
11:AA:1717:U:H3	11:AA:1727:G:H1	0.72	0.58
11:AA:1869:C:H2'	11:AA:1870:C:C6	2.38	0.58
11:AA:2197:OMC:N4	11:AA:2242:A:O5'	2.37	0.58
11:AA:2292:U:H2'	11:AA:2293:C:C6	2.38	0.58
11:AA:3290:G:H2'	11:AA:3291:G:H8	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:180:ARG:NH1	18:DD:137:GLN:O	2.34	0.58
27:HH:121:GLY:HA3	27:HH:168:ASP:O	2.04	0.58
48:T:67:ARG:HG3	48:T:80:LEU:HD11	1.85	0.58
63:i:111:VAL:HA	63:i:114:ILE:HG22	1.86	0.58
69:o:18:HIS:CD2	69:o:34:TRP:CZ3	2.92	0.58
80:z:60:GLU:HA	80:z:68:ILE:HG22	1.86	0.58
10:A:16:VAL:HG11	10:A:43:ILE:HG12	1.84	0.58
10:A:61:ALA:HA	10:A:70:PRO:HD2	1.86	0.58
11:AA:113:C:H2'	11:AA:114:A:C8	2.38	0.58
11:AA:754:G:H1	11:AA:778:U:H3	1.52	0.58
11:AA:1715:A:C5	40:O:84:LEU:HD21	2.38	0.58
11:AA:2407:C:H2'	11:AA:2408:U:H6	1.69	0.58
11:AA:3305:A:O2'	11:AA:3306:U:O4'	2.09	0.58
14:BB:7:G:H2'	14:BB:8:G:H8	1.68	0.58
23:FF:303:LYS:NZ	23:FF:371:GLN:OE1	2.36	0.58
33:KK:249:ARG:O	33:KK:254:ASP:N	2.36	0.58
55:a:12:CYS:O	55:a:18:ARG:HA	2.03	0.58
57:c:1057:U:O2'	57:c:1062:A:N6	2.37	0.58
57:c:1115:U:H2'	57:c:1116:A:H8	1.68	0.58
57:c:1187:U:H2'	57:c:1188:G:C8	2.39	0.58
57:c:1424:A:H2'	57:c:1425:A:C8	2.38	0.58
63:i:83:ARG:HA	63:i:86:GLN:HG3	1.85	0.58
74:t:46:LEU:O	74:t:50:ILE:HG12	2.03	0.58
79:y:81:VAL:HG21	79:y:104:LEU:HD22	1.86	0.58
2:1:46:LYS:HE3	2:1:49:ARG:HB3	1.85	0.58
8:7:129:LYS:HB3	8:7:147:HIS:HB2	1.86	0.58
8:7:246:SER:OG	8:7:297:ASP:O	2.22	0.58
11:AA:1836:C:H2'	11:AA:1837:U:H6	1.67	0.58
11:AA:2412:G:H2'	11:AA:2413:A:C8	2.39	0.58
11:AA:2468:A:H1'	11:AA:2477:G:H1	1.69	0.58
11:AA:2685:C:H2'	11:AA:2686:A:C8	2.38	0.58
12:Aa:77:LEU:HD21	12:Aa:335:LEU:HD11	1.86	0.58
14:BB:63:A:OP1	27:HH:285:ARG:NE	2.36	0.58
17:D:146:LYS:HG2	17:D:150:GLN:NE2	2.19	0.58
23:FF:85:VAL:HA	23:FF:202:THR:HA	1.86	0.58
25:GG:10:SER:OG	25:GG:13:GLY:O	2.17	0.58
37:MM:171:TRP:CE3	37:MM:178:ARG:HG2	2.39	0.58
55:a:38:GLN:OE1	55:a:38:GLN:N	2.37	0.58
57:c:208:U:H4'	66:l:176:SER:HB2	1.85	0.58
57:c:334:G:H2'	57:c:335:U:H6	1.69	0.58
11:AA:407:A:C2	16:CC:17:A:H1'	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1169:A:H4'	31:JJ:219:LYS:HD3	1.86	0.58
11:AA:1222:G:OP1	18:DD:57:THR:OG1	2.21	0.58
11:AA:2761:G:H22	11:AA:2798:C:H4'	1.69	0.58
11:AA:3148:U:H2'	11:AA:3149:G:H8	1.69	0.58
11:AA:3164:C:H2'	11:AA:3165:A:C8	2.39	0.58
11:AA:3170:A:H2'	11:AA:3171:U:C6	2.39	0.58
19:E:79:VAL:HG12	19:E:123:ILE:HA	1.85	0.58
21:Ee:133:LEU:HD22	21:Ee:152:ILE:HD11	1.86	0.58
27:HH:65:ILE:HG12	27:HH:74:VAL:HG22	1.85	0.58
50:V:52:LYS:O	50:V:55:ARG:HG2	2.04	0.58
57:c:330:G:OP2	66:l:172:ARG:NE	2.36	0.58
57:c:460:A:H2	62:h:27:TYR:HH	1.51	0.58
57:c:639:U:OP1	65:k:118:LEU:N	2.27	0.58
57:c:1012:U:H2'	57:c:1013:A:H8	1.69	0.58
57:c:1544:U:H4'	75:u:132:ARG:NH1	2.18	0.58
57:c:1610:G:OP1	63:i:107:LYS:NZ	2.36	0.58
1:0:131:ARG:NH2	57:c:152:U:OP2	2.35	0.58
8:7:209:THR:HG23	8:7:225:LEU:H	1.68	0.58
11:AA:876:A2M:H4'	11:AA:1890:U:H4'	1.86	0.58
11:AA:952:A:OP1	38:N:11:ASN:ND2	2.28	0.58
11:AA:1063:G:O2'	11:AA:1097:G:N2	2.35	0.58
11:AA:1117:G:O6	11:AA:1142:G:N2	2.36	0.58
11:AA:1249:G:H2'	11:AA:1250:G:C8	2.38	0.58
11:AA:1570:U:N3	11:AA:1572:U:H1'	2.18	0.58
11:AA:1641:U:H3'	11:AA:1642:A:H5''	1.86	0.58
11:AA:2186:U:OP2	20:EE:200:ARG:NE	2.35	0.58
11:AA:2244:A:OP1	20:EE:244:GLY:N	2.31	0.58
12:Aa:750:LYS:HE2	12:Aa:776:GLU:HB3	1.86	0.58
12:Aa:760:ARG:HG2	12:Aa:761:PRO:HD2	1.85	0.58
14:BB:108:A:H2'	14:BB:109:G:H8	1.67	0.58
57:c:58:U:H1'	57:c:451:A:H1'	1.84	0.58
57:c:554:C:O2	57:c:555:A:N6	2.30	0.58
57:c:822:U:N3	57:c:852:C:OP2	2.33	0.58
64:j:1:MET:HE2	64:j:107:ALA:HA	1.84	0.58
69:o:57:LYS:HE2	69:o:131:ILE:HB	1.84	0.58
74:t:34:LEU:HD21	74:t:38:ILE:HD12	1.86	0.58
4:3:34:ASP:HB3	4:3:43:ILE:HD12	1.86	0.58
11:AA:1050:U:OP2	22:F:13:TYR:OH	2.17	0.58
11:AA:1687:U:H2'	24:G:70:LYS:HZ1	1.68	0.58
11:AA:3371:G:H2'	11:AA:3372:A:H8	1.69	0.58
12:Aa:506:GLU:O	12:Aa:510:ARG:N	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:Ee:37:LEU:HD13	21:Ee:42:VAL:HG11	1.85	0.58
35:LL:88:TYR:N	35:LL:146:LEU:O	2.27	0.58
46:R:38:PRO:HA	46:R:74:THR:HG21	1.84	0.58
60:f:37:PRO:HB2	60:f:43:ARG:HG2	1.85	0.58
75:u:32:LEU:HD12	75:u:35:ILE:HD13	1.85	0.58
4:3:19:HIS:HD2	4:3:22:LYS:HD2	1.69	0.57
11:AA:177:U:H3	11:AA:239:G:H22	1.52	0.57
11:AA:847:A:OP1	70:p:140:LYS:NZ	2.35	0.57
11:AA:1573:G:H2'	11:AA:1574:C:O4'	2.04	0.57
11:AA:2458:A:O2'	11:AA:2459:A:OP1	2.20	0.57
11:AA:2697:A:H2'	11:AA:2698:G:H8	1.69	0.57
12:Aa:374:PRO:O	12:Aa:404:THR:OG1	2.17	0.57
12:Aa:396:ALA:HB3	12:Aa:456:LEU:HB2	1.85	0.57
21:Ee:82:ILE:HA	21:Ee:85:LEU:HG	1.85	0.57
43:PP:98:SER:HA	43:PP:101:LYS:HB2	1.86	0.57
57:c:480:G:C2	57:c:510:G:C8	2.92	0.57
57:c:694:U:H1'	65:k:97:ARG:NH2	2.19	0.57
57:c:924:A:H2'	57:c:925:G:C8	2.39	0.57
10:A:49:ARG:NH1	11:AA:1190:A:H2	2.02	0.57
11:AA:270:U:H2'	11:AA:271:C:H6	1.68	0.57
11:AA:936:A:OP1	36:M:32:ARG:NH1	2.38	0.57
11:AA:1272:C:H3'	11:AA:1273:A:H8	1.67	0.57
11:AA:1370:G:H2'	11:AA:1371:G:C8	2.38	0.57
11:AA:2684:C:H1'	39:NN:99:THR:HG21	1.86	0.57
12:Aa:182:VAL:HA	12:Aa:185:VAL:HG12	1.84	0.57
12:Aa:728:VAL:N	12:Aa:800:HIS:O	2.21	0.57
17:D:139:VAL:O	17:D:143:ILE:HD12	2.04	0.57
20:EE:116:VAL:HB	20:EE:126:LEU:HB2	1.86	0.57
42:P:14:ILE:HG22	42:P:71:LEU:O	2.05	0.57
57:c:769:A:H2'	57:c:770:A:H8	1.69	0.57
57:c:1510:U:O2'	57:c:1511:U:O4'	2.21	0.57
68:n:9:ASN:O	68:n:13:GLN:NE2	2.37	0.57
78:x:25:LYS:N	78:x:28:ASP:OD2	2.34	0.57
2:1:84:GLU:HA	2:1:89:ILE:HG13	1.86	0.57
8:7:24:ALA:HB3	8:7:34:LEU:HB3	1.84	0.57
11:AA:91:G:O3'	55:a:46:LYS:NZ	2.32	0.57
11:AA:768:C:H2'	11:AA:769:G:C8	2.39	0.57
11:AA:845:G:N2	11:AA:848:A:OP2	2.37	0.57
11:AA:1012:G:H2'	11:AA:1013:G:C8	2.38	0.57
11:AA:1022:U:H3	11:AA:1030:A:H61	1.50	0.57
11:AA:1178:G:C2	46:R:19:SER:HA	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1311:G:H2'	11:AA:1312:C:C6	2.39	0.57
11:AA:1456:A:N7	42:P:26:LYS:NZ	2.37	0.57
11:AA:1534:A:OP2	11:AA:1586:G:N1	2.27	0.57
11:AA:1722:U:OP1	17:D:100:ARG:NE	2.37	0.57
11:AA:2565:U:O2	11:AA:2576:G:N2	2.26	0.57
11:AA:3232:G:H1	11:AA:3255:U:H3	0.69	0.57
12:Aa:786:GLN:NE2	12:Aa:786:GLN:O	2.37	0.57
16:CC:110:C:O2'	16:CC:112:U:OP2	2.16	0.57
28:I:43:ARG:NH1	28:I:43:ARG:HB2	2.18	0.57
33:KK:112:GLU:HG3	33:KK:125:ALA:HB3	1.85	0.57
51:W:40:GLN:NE2	51:W:57:ASN:OD1	2.37	0.57
57:c:438:A:H1'	57:c:465:G:N2	2.19	0.57
57:c:1158:C:O2'	57:c:1581:C:OP2	2.22	0.57
57:c:1601:G:N7	76:v:89:ARG:NH1	2.52	0.57
63:i:51:VAL:HA	63:i:131:GLN:OE1	2.04	0.57
63:i:93:LEU:HD22	63:i:114:ILE:HD13	1.86	0.57
1:O:79:VAL:C	1:O:83:LYS:HZ3	2.12	0.57
11:AA:37:U:O4	45:QQ:83:LYS:NZ	2.37	0.57
11:AA:253:A:H2'	11:AA:254:A:H8	1.68	0.57
11:AA:768:C:H2'	11:AA:769:G:H8	1.69	0.57
11:AA:1497:C:H2'	11:AA:1498:A:H8	1.69	0.57
14:BB:97:A:OP1	19:E:40:ARG:NH2	2.35	0.57
23:FF:95:THR:HG22	23:FF:97:ARG:H	1.69	0.57
25:GG:198:ARG:HD2	32:K:12:ARG:HH12	1.68	0.57
39:NN:30:LEU:HD11	39:NN:47:GLN:HE22	1.70	0.57
40:O:58:TYR:HE1	47:S:97:GLU:HG3	1.67	0.57
46:R:45:LEU:HD11	46:R:73:ARG:HA	1.85	0.57
49:U:47:ILE:HG13	49:U:48:ALA:N	2.20	0.57
57:c:393:C:N4	57:c:400:A:O2'	2.32	0.57
57:c:1204:A:N6	57:c:1555:A:H61	2.01	0.57
57:c:1333:C:H2'	57:c:1334:U:C6	2.40	0.57
57:c:1393:C:H2'	57:c:1394:G:C8	2.39	0.57
58:d:52:LYS:HG2	78:x:82:VAL:HA	1.86	0.57
60:f:139:ILE:HG23	60:f:141:ARG:HD3	1.87	0.57
62:h:68:ARG:HD3	62:h:76:VAL:HG21	1.85	0.57
70:p:103:GLU:HA	70:p:106:ARG:HH12	1.68	0.57
11:AA:1211:U:H2'	11:AA:1212:A:H8	1.68	0.57
11:AA:1228:C:H2'	11:AA:1229:G:H8	1.70	0.57
11:AA:1339:C:H2'	11:AA:1340:G:C8	2.40	0.57
11:AA:1378:U:H2'	11:AA:1379:G:C8	2.37	0.57
11:AA:1459:C:H4'	42:P:51:LEU:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1689:U:OP1	17:D:64:ARG:NH1	2.38	0.57
11:AA:2221:G:O6	49:U:71:LYS:NZ	2.36	0.57
11:AA:2250:G:O6	11:AA:2267:C:N4	2.37	0.57
11:AA:2392:C:O2'	23:FF:266:ARG:NH1	2.26	0.57
11:AA:2618:G:C8	11:AA:2865:U:H5''	2.40	0.57
11:AA:3279:A:N6	46:R:54:ARG:HD3	2.18	0.57
12:Aa:222:ILE:HG13	12:Aa:223:ARG:N	2.18	0.57
19:E:152:LEU:HB3	19:E:172:TYR:CZ	2.40	0.57
31:JJ:81:HIS:HB3	31:JJ:138:TYR:HD2	1.69	0.57
35:LL:12:VAL:HB	35:LL:51:GLN:HA	1.85	0.57
38:N:5:LYS:HD2	38:N:8:THR:OG1	2.04	0.57
40:O:26:GLY:O	40:O:30:THR:OG1	2.07	0.57
54:Z:17:ARG:HB2	54:Z:17:ARG:NH1	2.19	0.57
57:c:519:C:H3'	57:c:520:A:H8	1.68	0.57
57:c:1333:C:H2'	57:c:1334:U:H6	1.69	0.57
58:d:6:THR:OG1	58:d:191:ARG:NH1	2.37	0.57
60:f:140:ARG:HB2	60:f:222:TYR:CD1	2.39	0.57
61:g:28:GLU:OE2	68:n:56:LYS:NZ	2.35	0.57
67:m:64:GLU:OE2	67:m:65:LYS:NZ	2.37	0.57
79:y:41:MET:HE2	79:y:41:MET:HA	1.87	0.57
11:AA:1141:C:H2'	11:AA:1142:G:O4'	2.05	0.57
11:AA:1373:A:OP2	36:M:7:LYS:NZ	2.37	0.57
11:AA:2338:C:OP2	11:AA:2339:C:O2'	2.21	0.57
11:AA:2656:A:H4'	55:a:98:LYS:HD2	1.86	0.57
16:CC:46:G:O2'	16:CC:61:A:N1	2.32	0.57
25:GG:58:HIS:CE1	25:GG:98:ARG:HD3	2.39	0.57
41:OO:29:ALA:HA	41:OO:32:LYS:HE3	1.85	0.57
57:c:12:U:H2'	57:c:13:C:C6	2.39	0.57
57:c:329:G:H2'	57:c:330:G:C8	2.40	0.57
57:c:333:A:OP2	66:l:54:LYS:NZ	2.38	0.57
57:c:693:U:P	57:c:694:U:H5''	2.45	0.57
57:c:931:C:O2'	59:e:118:GLN:O	2.22	0.57
57:c:1453:G:H2'	57:c:1454:G:C8	2.40	0.57
60:f:101:VAL:HG11	60:f:211:LEU:HD12	1.86	0.57
60:f:227:PRO:HA	60:f:230:TRP:CD2	2.39	0.57
65:k:74:GLN:HA	65:k:77:LEU:HG	1.86	0.57
69:o:35:TYR:CE2	69:o:49:ILE:HD12	2.39	0.57
11:AA:90:C:OP1	36:M:59:ARG:NH1	2.35	0.57
11:AA:149:U:H2'	11:AA:150:A:H5''	1.87	0.57
11:AA:195:U:H2'	11:AA:196:G:O4'	2.04	0.57
11:AA:259:C:N4	11:AA:260:C:N4	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:846:A:H2'	11:AA:847:A:C8	2.40	0.57
11:AA:2618:G:N2	11:AA:2644:C:O2'	2.37	0.57
11:AA:2972:G:H2'	11:AA:2973:G:H8	1.68	0.57
11:AA:3208:G:C4	19:E:165:TYR:HD2	2.23	0.57
16:CC:108:C:H2'	16:CC:109:A:O4'	2.05	0.57
18:DD:75:LYS:HE3	18:DD:196:VAL:HG22	1.87	0.57
19:E:13:ARG:O	19:E:22:PRO:HG2	2.05	0.57
20:EE:206:PRO:HG3	20:EE:213:GLY:HA3	1.85	0.57
30:J:77:GLU:HA	30:J:133:LEU:HD21	1.85	0.57
41:OO:57:VAL:O	41:OO:112:ASN:ND2	2.31	0.57
57:c:930:A:OP2	57:c:931:C:N4	2.37	0.57
59:e:140:ILE:HB	59:e:213:ARG:HD2	1.87	0.57
61:g:6:SER:HB3	61:g:9:ARG:HG2	1.85	0.57
71:q:42:VAL:HG23	71:q:46:MET:SD	2.45	0.57
72:r:75:PRO:HA	72:r:93:VAL:HG23	1.85	0.57
75:u:115:ARG:O	75:u:119:ILE:HG12	2.04	0.57
1:0:110:GLN:NE2	57:c:53:G:O3'	2.28	0.57
4:3:19:HIS:NE2	57:c:1071:U:O3'	2.36	0.57
6:5:48:ASN:HA	6:5:52:PHE:HB3	1.87	0.57
8:7:179:LYS:NZ	8:7:180:ALA:O	2.30	0.57
11:AA:115:A:H2'	11:AA:265:A:H2'	1.87	0.57
11:AA:900:G:H1'	11:AA:1589:A:N6	2.20	0.57
11:AA:1065:A:N3	38:N:28:LYS:HG3	2.20	0.57
11:AA:1211:U:H2'	11:AA:1212:A:C8	2.40	0.57
11:AA:1704:A:H2'	11:AA:1705:U:C6	2.40	0.57
11:AA:1883:A:H2'	11:AA:1884:A:H8	1.70	0.57
11:AA:2528:G:H2'	11:AA:2529:A:C8	2.40	0.57
11:AA:2554:A:H2'	47:S:91:ARG:HH22	1.70	0.57
15:C:155:MET:HA	15:C:161:LYS:HB2	1.86	0.57
39:NN:21:ILE:HG13	39:NN:37:LEU:HD23	1.86	0.57
57:c:808:U:O4	57:c:809:A:N6	2.38	0.57
57:c:947:U:H2'	57:c:948:G:C8	2.37	0.57
57:c:1144:U:H2'	57:c:1145:U:C6	2.39	0.57
57:c:1178:G:H2'	57:c:1179:G:H8	1.70	0.57
57:c:1335:U:OP1	77:w:85:ARG:NH1	2.37	0.57
57:c:1468:U:H2'	57:c:1469:A:C8	2.39	0.57
60:f:116:LYS:HG2	60:f:127:ALA:HB3	1.86	0.57
76:v:114:VAL:HG12	76:v:124:ILE:HA	1.86	0.57
8:7:241:PHE:HE2	8:7:288:HIS:HE2	1.51	0.57
11:AA:629:U:H2'	11:AA:630:A:H8	1.70	0.57
11:AA:791:A:H2'	11:AA:792:G:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1155:C:O2'	11:AA:1197:A:N1	2.37	0.57
11:AA:1384:U:H2'	11:AA:1385:C:C6	2.39	0.57
11:AA:1609:C:H2'	11:AA:1610:G:H8	1.70	0.57
11:AA:1914:G:O2'	17:D:82:LYS:O	2.20	0.57
11:AA:2724:OMU:OP2	11:AA:2726:C:N4	2.37	0.57
11:AA:2930:A:H2'	11:AA:2931:C:H6	1.68	0.57
11:AA:3318:G:O2'	11:AA:3319:U:H5''	2.05	0.57
15:C:171:LYS:H	36:M:56:VAL:HG21	1.69	0.57
16:CC:9:A:H2'	16:CC:10:A:C8	2.40	0.57
25:GG:188:ARG:HE	25:GG:197:ARG:HB3	1.69	0.57
57:c:97:C:O2	57:c:425:A:O2'	2.21	0.57
57:c:479:C:H2'	57:c:479:C:O2	2.04	0.57
57:c:1350:U:H2'	57:c:1351:G:H5''	1.87	0.57
57:c:1606:C:O2'	57:c:1607:G:O4'	2.23	0.57
57:c:1738:U:H2'	57:c:1739:C:C6	2.39	0.57
57:c:1740:A:H2'	57:c:1741:U:C6	2.39	0.57
62:h:244:ILE:O	62:h:245:LYS:HG2	2.05	0.57
11:AA:29:C:H1'	45:QQ:162:ARG:HG2	1.86	0.57
11:AA:1222:G:H8	18:DD:57:THR:HG21	1.70	0.57
11:AA:1696:A:H2'	11:AA:1697:A:C8	2.40	0.57
11:AA:2184:U:H2'	11:AA:2185:G:H8	1.70	0.57
11:AA:2338:C:H4'	26:H:48:ARG:HA	1.87	0.57
11:AA:2683:U:H1'	39:NN:128:TYR:CE2	2.40	0.57
11:AA:2732:G:O2'	11:AA:2759:U:OP1	2.23	0.57
11:AA:2896:A:O2'	53:Y:122:ARG:NH2	2.37	0.57
11:AA:2897:A:H2'	11:AA:2899:C:H5''	1.87	0.57
11:AA:3268:A:OP1	29:II:46:ARG:NH2	2.38	0.57
16:CC:40:A:P	50:V:65:ARG:HH22	2.28	0.57
25:GG:182:LEU:HD21	25:GG:223:PRO:HG2	1.87	0.57
40:O:84:LEU:HD23	40:O:84:LEU:H	1.69	0.57
57:c:167:U:OP1	64:j:140:ASN:ND2	2.36	0.57
57:c:398:G:P	66:l:47:ARG:HH22	2.28	0.57
57:c:689:G:H2'	57:c:690:G:C8	2.40	0.57
57:c:939:A:H2'	57:c:940:A:C8	2.39	0.57
57:c:1173:C:N3	57:c:1174:C:N4	2.53	0.57
57:c:1235:C:C2	57:c:1236:A:C8	2.92	0.57
57:c:1410:A:H2'	57:c:1411:A:C8	2.40	0.57
57:c:1584:G:H3'	73:s:124:PRO:HA	1.86	0.57
62:h:104:ASP:OD1	62:h:108:ARG:N	2.30	0.57
73:s:129:PHE:O	73:s:137:ARG:NH1	2.38	0.57
8:7:260:ILE:HD13	8:7:313:TRP:CZ3	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:561:C:H2'	11:AA:562:C:C6	2.40	0.56
11:AA:986:U:H2'	11:AA:987:U:H6	1.70	0.56
11:AA:1111:U:H2'	11:AA:1112:A:H8	1.69	0.56
11:AA:1277:C:H2'	11:AA:1278:A:H8	1.70	0.56
11:AA:2828:G:O3'	37:MM:4:ARG:NH1	2.38	0.56
18:DD:43:LYS:HD2	18:DD:46:ARG:HE	1.70	0.56
29:II:146:ILE:O	29:II:150:LYS:HG2	2.05	0.56
35:LL:160:ASP:OD1	35:LL:161:LEU:N	2.38	0.56
49:U:5:THR:HG23	49:U:12:ASN:HB3	1.86	0.56
54:Z:18:ARG:NH1	57:c:1125:A:OP1	2.37	0.56
57:c:742:U:H4'	65:k:108:GLN:HB3	1.87	0.56
57:c:1344:A:H2'	57:c:1345:A:C8	2.40	0.56
57:c:1586:A:H2'	57:c:1611:A:N7	2.20	0.56
59:e:158:SER:HA	59:e:161:ILE:HB	1.87	0.56
3:2:12:LYS:NZ	57:c:1029:U:OP2	2.36	0.56
3:2:43:ASN:HA	3:2:66:LYS:HG3	1.87	0.56
11:AA:427:C:N4	85:AA:3603:HOH:O	2.38	0.56
11:AA:1688:U:H2'	11:AA:1689:U:C6	2.39	0.56
11:AA:2196:C:H2'	11:AA:2242:A:H61	1.71	0.56
11:AA:3273:A:OP2	29:II:77:ARG:NH2	2.38	0.56
12:Aa:757:GLU:HA	12:Aa:768:VAL:HG12	1.87	0.56
16:CC:9:A:H2'	16:CC:10:A:H8	1.70	0.56
16:CC:67:U:H2'	16:CC:68:G:C8	2.39	0.56
17:D:38:ARG:HA	17:D:41:ILE:HG22	1.87	0.56
21:Ee:129:THR:HA	21:Ee:132:ILE:HG22	1.88	0.56
23:FF:57:VAL:HG13	23:FF:71:GLU:OE1	2.05	0.56
55:a:74:CYS:SG	55:a:79:THR:N	2.78	0.56
57:c:243:G:N1	57:c:251:A:H2	2.03	0.56
57:c:406:U:O2'	64:j:94:ARG:NH1	2.38	0.56
57:c:1035:G:OP2	70:p:9:LYS:NZ	2.28	0.56
57:c:1047:G:H2'	57:c:1048:G:H8	1.70	0.56
57:c:1187:U:O2	57:c:1198:G:N2	2.23	0.56
1:0:55:VAL:HG12	1:0:75:VAL:HG22	1.86	0.56
2:1:61:SER:OG	2:1:63:SER:OG	2.22	0.56
11:AA:373:A:N6	11:AA:394:G:HO2'	2.04	0.56
11:AA:700:C:H2'	11:AA:701:G:H8	1.68	0.56
11:AA:966:U:H2'	11:AA:967:A:C8	2.40	0.56
11:AA:1009:A:H2'	11:AA:1010:G:C8	2.41	0.56
11:AA:1101:G:H2'	11:AA:1102:A:C8	2.40	0.56
11:AA:1182:A:H2'	11:AA:1183:C:C6	2.40	0.56
11:AA:1203:A:N6	11:AA:1300:G:H2'	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1448:U:H2'	11:AA:1449:A2M:H8	1.87	0.56
11:AA:2175:U:H3	20:EE:23:ARG:HB2	1.71	0.56
11:AA:2392:C:H3'	11:AA:2393:G:C8	2.40	0.56
11:AA:3007:U:O4	11:AA:3008:A:N6	2.38	0.56
11:AA:3024:A:OP2	11:AA:3025:C:N4	2.39	0.56
11:AA:3204:C:H2'	11:AA:3205:G:C8	2.40	0.56
11:AA:3281:U:H2'	11:AA:3282:U:C6	2.40	0.56
14:BB:37:G:N2	14:BB:41:G:N3	2.53	0.56
15:C:123:THR:N	15:C:126:GLN:OE1	2.30	0.56
15:C:164:ARG:HD3	41:OO:8:PRO:HD3	1.87	0.56
19:E:14:LEU:H	19:E:56:GLY:HA2	1.70	0.56
25:GG:43:ASN:O	25:GG:43:ASN:ND2	2.26	0.56
33:KK:54:GLU:HA	33:KK:57:ARG:HE	1.70	0.56
42:P:72:ARG:NH2	42:P:105:GLN:O	2.28	0.56
47:S:15:THR:HG23	47:S:17:SER:H	1.69	0.56
48:T:35:LYS:HE3	48:T:41:LEU:HB3	1.87	0.56
48:T:101:THR:HG23	48:T:104:GLN:H	1.70	0.56
57:c:413:U:H2'	57:c:414:OMC:C6	2.40	0.56
57:c:537:G:OP2	67:m:175:ARG:NH1	2.38	0.56
57:c:923:A:H2'	57:c:924:A:H8	1.69	0.56
57:c:992:A:O2'	57:c:1785:U:O2	2.22	0.56
57:c:1266:U:H2'	57:c:1267:G:H8	1.68	0.56
57:c:1303:U:O2'	57:c:1322:A:OP2	2.22	0.56
57:c:1590:G:H2'	57:c:1591:C:C4'	2.35	0.56
57:c:1735:U:H2'	57:c:1736:G:C8	2.40	0.56
59:e:67:GLU:HB2	59:e:85:LYS:NZ	2.20	0.56
59:e:97:LEU:HB3	59:e:231:LEU:HD21	1.87	0.56
60:f:239:PRO:HA	60:f:242:ILE:HG12	1.87	0.56
62:h:141:THR:OG1	62:h:143:ASP:OD1	2.20	0.56
69:o:66:ILE:HD11	69:o:138:ASN:HB2	1.88	0.56
70:p:3:ARG:HB3	70:p:6:SER:HB3	1.85	0.56
10:A:49:ARG:NH2	11:AA:1191:U:OP2	2.33	0.56
16:CC:151:C:O2'	16:CC:153:U:OP2	2.23	0.56
27:HH:183:TRP:HZ2	27:HH:188:GLU:HA	1.71	0.56
33:KK:158:ASP:HB3	33:KK:159:PRO:HD3	1.85	0.56
43:PP:40:ASP:OD1	43:PP:41:GLN:N	2.35	0.56
55:a:71:ARG:HH22	55:a:73:GLU:HB2	1.70	0.56
57:c:7:G:OP2	60:f:205:ARG:NH2	2.39	0.56
57:c:27:U:H2'	57:c:28:A2M:H8	1.88	0.56
57:c:749:U:H2'	57:c:750:U:C6	2.41	0.56
57:c:759:U:H2'	57:c:760:A:H8	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:862:A:O2'	57:c:963:A:N6	2.32	0.56
57:c:892:A:H2'	57:c:893:U:C6	2.39	0.56
57:c:1287:A:O2'	57:c:1313:A:O2'	2.22	0.56
57:c:1603:U:O2'	57:c:1605:G:OP2	2.16	0.56
8:7:104:VAL:HG22	8:7:105:GLY:H	1.70	0.56
8:7:195:HIS:HE1	8:7:197:SER:HB2	1.70	0.56
8:7:253:ALA:HB2	8:7:262:VAL:HG23	1.88	0.56
11:AA:94:G:H2'	11:AA:95:A:C8	2.41	0.56
11:AA:394:G:N1	11:AA:397:A:OP2	2.30	0.56
11:AA:1146:C:H2'	11:AA:1147:G:H8	1.70	0.56
11:AA:1236:G:H1'	21:Ee:16:ARG:NH2	2.20	0.56
11:AA:1945:A:H2'	11:AA:1946:A:H8	1.70	0.56
11:AA:2331:C:H2'	11:AA:2332:A:H8	1.71	0.56
11:AA:2883:U:O4	11:AA:2939:G:O6	2.23	0.56
11:AA:2950:G:OP1	23:FF:241:LYS:NZ	2.37	0.56
12:Aa:515:ASP:O	12:Aa:518:VAL:HG22	2.05	0.56
12:Aa:810:ASP:HB3	12:Aa:813:SER:HB2	1.87	0.56
23:FF:67:PHE:HA	23:FF:70:ARG:HH12	1.71	0.56
25:GG:32:PRO:HA	25:GG:35:VAL:HG12	1.86	0.56
34:L:76:ASN:HB3	34:L:79:HIS:ND1	2.20	0.56
57:c:324:U:OP1	69:o:133:LYS:NZ	2.19	0.56
57:c:328:A:H2'	57:c:329:G:C8	2.41	0.56
57:c:1501:C:H41	57:c:1507:G:N2	2.04	0.56
57:c:1593:A:H2'	57:c:1605:G:H2'	1.87	0.56
63:i:42:LEU:HG	63:i:43:PHE:O	2.06	0.56
64:j:135:PRO:HB2	64:j:141:ILE:HD13	1.87	0.56
67:m:176:ASN:HB3	67:m:180:LYS:HZ2	1.69	0.56
71:q:17:ALA:HB3	71:q:81:VAL:HA	1.87	0.56
6:5:23:VAL:HG22	68:n:61:TRP:CG	2.40	0.56
11:AA:138:U:H2'	11:AA:139:G:H8	1.71	0.56
11:AA:500:C:H5''	29:II:82:ARG:HG3	1.85	0.56
11:AA:1108:U:H2'	11:AA:1109:U:C6	2.41	0.56
11:AA:1229:G:H2'	11:AA:1230:G:H8	1.70	0.56
11:AA:1639:C:H5''	47:S:72:VAL:HG21	1.87	0.56
11:AA:1717:U:O4	11:AA:1727:G:O6	2.23	0.56
11:AA:2217:U:H2'	11:AA:2218:G:C8	2.38	0.56
11:AA:2220:A2M:H2'	11:AA:2221:G:C8	2.40	0.56
11:AA:2228:A:H2'	11:AA:2229:A:C8	2.39	0.56
11:AA:3023:U:H2'	11:AA:3024:A:H8	1.71	0.56
11:AA:3325:G:OP2	42:P:70:ARG:NH2	2.31	0.56
12:Aa:781:THR:O	12:Aa:785:ARG:N	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:F:29:THR:HA	22:F:32:LYS:HZ2	1.71	0.56
23:FF:185:GLY:O	23:FF:191:LYS:NZ	2.38	0.56
25:GG:206:LEU:HD11	25:GG:237:GLN:HB3	1.86	0.56
26:H:18:PRO:HA	26:H:51:ALA:HA	1.87	0.56
32:K:73:VAL:HG23	32:K:80:VAL:HG22	1.85	0.56
57:c:323:A:N3	57:c:346:G:N2	2.54	0.56
57:c:1168:U:O2'	57:c:1465:C:OP1	2.24	0.56
58:d:6:THR:C	58:d:191:ARG:HH12	2.14	0.56
65:k:64:VAL:HG23	65:k:67:LEU:HB2	1.87	0.56
72:r:79:HIS:HD2	72:r:97:TYR:HD2	1.52	0.56
73:s:73:GLY:H	73:s:76:SER:HB3	1.69	0.56
1:0:121:THR:HG22	57:c:85:A:H1'	1.86	0.56
11:AA:278:U:H3	11:AA:287:G:H1	1.51	0.56
11:AA:359:U:N3	11:AA:920:A:C6	2.74	0.56
11:AA:432:G:H2'	11:AA:433:A:H8	1.70	0.56
11:AA:530:G:H2'	11:AA:531:G:H8	1.70	0.56
11:AA:824:C:OP1	20:EE:21:ARG:NE	2.37	0.56
11:AA:911:C:H2'	11:AA:912:G:C8	2.40	0.56
11:AA:1902:G:H2'	11:AA:1903:U:O4'	2.06	0.56
21:Ee:48:LYS:HZ2	21:Ee:51:LYS:HD3	1.71	0.56
23:FF:221:THR:O	23:FF:334:ARG:NH1	2.38	0.56
32:K:111:LEU:HB3	32:K:116:LYS:HE3	1.87	0.56
34:L:104:PRO:HA	34:L:107:ARG:HG3	1.86	0.56
45:QQ:162:ARG:O	45:QQ:172:ARG:NH2	2.38	0.56
55:a:70:LEU:HD21	55:a:91:PHE:HZ	1.70	0.56
57:c:1329:A:H3'	57:c:1330:G:H8	1.70	0.56
57:c:1357:A:N6	57:c:1367:G:O2'	2.31	0.56
57:c:1593:A:H3'	57:c:1605:G:N2	2.21	0.56
58:d:41:ARG:NH2	74:t:106:THR:H	2.03	0.56
59:e:81:PHE:HA	59:e:106:THR:HG23	1.88	0.56
64:j:199:GLN:HA	64:j:202:ARG:HD2	1.88	0.56
66:l:37:LYS:HG2	66:l:59:ARG:HG2	1.87	0.56
80:z:95:PHE:CD2	80:z:135:LEU:HB3	2.40	0.56
9:8:144:CYS:SG	57:c:1235:C:O2'	2.61	0.56
11:AA:299:G:H2'	11:AA:300:G:C8	2.41	0.56
11:AA:1720:U:P	17:D:110:ARG:HH22	2.29	0.56
11:AA:1742:U:H2'	11:AA:1743:G:H8	1.70	0.56
11:AA:2095:G:H2'	11:AA:2096:A:C8	2.39	0.56
11:AA:2417:OMU:H4'	11:AA:2966:G:H21	1.70	0.56
11:AA:2661:G:H2'	11:AA:2662:G:C8	2.38	0.56
11:AA:2781:U:H5''	41:OO:182:ILE:HD13	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3163:A:H2'	11:AA:3164:C:H6	1.68	0.56
12:Aa:688:ILE:HD11	12:Aa:709:MET:HE1	1.86	0.56
23:FF:370:PHE:HD2	23:FF:375:GLU:HG3	1.71	0.56
25:GG:261:VAL:HG12	25:GG:262:TRP:HD1	1.70	0.56
55:a:71:ARG:HH12	55:a:73:GLU:HB2	1.69	0.56
57:c:205:U:H2'	57:c:206:A:H8	1.70	0.56
57:c:1404:C:N4	57:c:1405:G:O6	2.39	0.56
57:c:1753:A:H2'	57:c:1754:A:C8	2.41	0.56
66:l:65:PHE:O	66:l:73:SER:HA	2.05	0.56
80:z:103:LEU:HB3	80:z:126:LYS:HB2	1.88	0.56
1:0:87:PRO:HD2	1:0:90:ARG:NH2	2.20	0.56
3:2:32:LYS:NZ	57:c:930:A:OP1	2.38	0.56
11:AA:118:U:O4	11:AA:148:G:N2	2.36	0.56
11:AA:432:G:H1	11:AA:627:U:H3	1.54	0.56
11:AA:760:G:N2	11:AA:770:G:N3	2.53	0.56
11:AA:2146:C:H2'	11:AA:2147:A:H8	1.71	0.56
11:AA:2331:C:H2'	11:AA:2332:A:C8	2.40	0.56
11:AA:2340:U:OP2	23:FF:237:LYS:NZ	2.27	0.56
11:AA:2895:G:H21	53:Y:100:TYR:HD2	1.53	0.56
11:AA:3023:U:H2'	11:AA:3024:A:C8	2.40	0.56
11:AA:3313:U:O4	11:AA:3314:A:N6	2.39	0.56
13:B:30:ARG:HA	13:B:119:VAL:HG21	1.87	0.56
23:FF:188:ILE:HA	23:FF:191:LYS:HB2	1.87	0.56
32:K:53:ASP:HA	32:K:69:LYS:HE2	1.87	0.56
34:L:18:TYR:HE2	34:L:71:PHE:CG	2.23	0.56
34:L:25:ILE:HD11	34:L:28:PRO:HB3	1.87	0.56
57:c:153:G:O2'	57:c:154:G:O5'	2.18	0.56
57:c:201:G:H2'	57:c:202:A:C8	2.41	0.56
57:c:598:U:H2'	57:c:599:A:H8	1.71	0.56
57:c:877:G:O6	57:c:951:A:N1	2.38	0.56
57:c:1124:A:H2'	57:c:1125:A:C8	2.41	0.56
57:c:1304:G:OP2	57:c:1305:U:O2'	2.18	0.56
11:AA:207:U:H2'	11:AA:208:C:C6	2.41	0.56
11:AA:1643:A:N3	11:AA:1822:C:H1'	2.21	0.56
11:AA:1784:G:H2'	11:AA:1785:U:O4'	2.06	0.56
11:AA:1827:C:H2'	11:AA:1828:A:C8	2.40	0.56
11:AA:2599:U:OP1	45:QQ:70:ASN:ND2	2.39	0.56
11:AA:2684:C:H2'	11:AA:2685:C:C6	2.41	0.56
11:AA:2986:U:H2'	11:AA:2987:A:C8	2.39	0.56
11:AA:3163:A:H2'	11:AA:3164:C:C6	2.40	0.56
14:BB:97:A:H2'	14:BB:98:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:H:109:MET:HE2	26:H:109:MET:HA	1.87	0.56
39:NN:156:LYS:HA	39:NN:159:THR:HG22	1.87	0.56
40:O:52:ARG:HA	40:O:55:GLU:OE1	2.05	0.56
41:OO:42:ARG:O	41:OO:46:ILE:HG12	2.06	0.56
47:S:41:ARG:HE	47:S:50:ALA:HB1	1.70	0.56
53:Y:99:CYS:HB3	53:Y:115:CYS:HB3	1.87	0.56
57:c:257:A:H2'	57:c:258:C:H6	1.71	0.56
57:c:870:C:H2'	57:c:871:G:C8	2.41	0.56
57:c:1061:A:H2'	57:c:1062:A:H8	1.71	0.56
57:c:1535:U:C5	63:i:187:ILE:HA	2.41	0.56
58:d:7:PHE:HE2	78:x:39:VAL:HG11	1.71	0.56
58:d:144:ILE:HG12	58:d:158:VAL:HB	1.88	0.56
62:h:174:LYS:O	62:h:179:LYS:NZ	2.29	0.56
63:i:89:ILE:H	63:i:89:ILE:HD12	1.71	0.56
63:i:164:PRO:O	63:i:168:VAL:HG23	2.06	0.56
64:j:55:GLY:O	64:j:63:MET:N	2.32	0.56
78:x:46:ILE:H	78:x:46:ILE:HD12	1.71	0.56
5:4:22:ARG:NH1	57:c:1161:C:O2'	2.37	0.55
7:6:45:VAL:HG23	7:6:47:VAL:HG13	1.88	0.55
11:AA:571:U:H2'	11:AA:572:A:H8	1.70	0.55
11:AA:1168:U:O4	11:AA:1329:U:O2'	2.22	0.55
11:AA:1269:U:H1'	11:AA:1272:C:H5	1.71	0.55
11:AA:1909:A:H2'	11:AA:1910:A:C8	2.42	0.55
11:AA:2356:A:H5'	13:B:138:LYS:HE3	1.87	0.55
11:AA:2588:U:OP1	33:KK:48:ARG:NH2	2.35	0.55
12:Aa:349:GLN:HE22	12:Aa:401:PHE:HB3	1.71	0.55
18:DD:32:ASN:HB3	18:DD:183:PHE:CE2	2.41	0.55
23:FF:277:SER:HB2	23:FF:280:HIS:NE2	2.20	0.55
26:H:35:TYR:HB2	26:H:63:LYS:HG2	1.86	0.55
37:MM:21:ARG:O	37:MM:24:ARG:NH1	2.39	0.55
37:MM:47:PRO:HD2	37:MM:141:LYS:HA	1.88	0.55
42:P:19:ARG:HB3	42:P:35:GLU:OE1	2.07	0.55
47:S:41:ARG:HG2	47:S:56:THR:HG21	1.87	0.55
57:c:273:G:O6	57:c:283:U:O2	2.24	0.55
57:c:898:A:H62	57:c:914:G:N2	2.05	0.55
58:d:175:TYR:CD1	58:d:199:PRO:HB3	2.41	0.55
59:e:173:THR:HA	59:e:176:VAL:HG22	1.88	0.55
80:z:95:PHE:HD2	80:z:135:LEU:HB3	1.71	0.55
4:3:3:LEU:HG	79:y:22:LYS:HA	1.88	0.55
8:7:82:SER:O	8:7:89:LEU:HD12	2.06	0.55
12:Aa:90:LYS:O	12:Aa:90:LYS:HD2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:412:ARG:HB3	12:Aa:426:LEU:HD11	1.88	0.55
13:B:31:GLU:HG2	13:B:60:PHE:CD1	2.40	0.55
16:CC:21:C:N4	16:CC:22:U:O4	2.39	0.55
19:E:153:PRO:HA	43:PP:12:TRP:HZ3	1.71	0.55
20:EE:46:LYS:HB2	20:EE:60:LYS:HE2	1.88	0.55
20:EE:204:MET:SD	20:EE:209:HIS:HB2	2.47	0.55
24:G:104:ARG:HH21	24:G:106:ALA:HA	1.71	0.55
30:J:68:THR:OG1	48:T:36:LEU:HD21	2.07	0.55
37:MM:176:LEU:HG	37:MM:180:GLU:HG3	1.88	0.55
57:c:250:C:H3'	57:c:251:A:C8	2.40	0.55
57:c:294:C:H2'	57:c:295:A:C8	2.42	0.55
57:c:629:U:H2'	57:c:630:A:H8	1.71	0.55
57:c:759:U:H2'	57:c:760:A:C8	2.40	0.55
57:c:873:U:O4	57:c:954:G:O6	2.24	0.55
57:c:1358:G:C6	57:c:1366:U:N3	2.69	0.55
57:c:1359:C:O3'	76:v:134:ARG:NH2	2.39	0.55
57:c:1432:U:H4'	57:c:1433:G:H5''	1.87	0.55
60:f:165:VAL:HG11	60:f:210:THR:HA	1.87	0.55
63:i:133:VAL:HA	63:i:198:LEU:HD12	1.88	0.55
65:k:82:GLU:O	65:k:86:GLN:NE2	2.37	0.55
75:u:75:ASN:HB3	75:u:78:HIS:ND1	2.21	0.55
8:7:116:ASP:HB3	8:7:121:MET:HB3	1.87	0.55
11:AA:44:U:OP1	45:QQ:85:THR:OG1	2.20	0.55
11:AA:959:C:P	11:AA:2800:G:OP2	2.59	0.55
11:AA:1009:A:H2'	11:AA:1010:G:H8	1.69	0.55
11:AA:1079:A:H5''	27:HH:140:ARG:HG3	1.88	0.55
11:AA:1118:C:H2'	11:AA:1119:C:H6	1.72	0.55
11:AA:1662:G:H2'	11:AA:1663:C:H6	1.71	0.55
11:AA:1747:G:H4'	51:W:53:THR:HG21	1.87	0.55
11:AA:1836:C:H2'	11:AA:1837:U:C6	2.41	0.55
11:AA:2681:U:O3'	39:NN:48:SER:OG	2.15	0.55
11:AA:2746:A:C6	27:HH:153:THR:HB	2.40	0.55
11:AA:2963:C:N4	11:AA:2964:G:O6	2.39	0.55
11:AA:3257:C:H2'	11:AA:3258:U:C6	2.41	0.55
11:AA:3308:C:O2	13:B:69:ARG:NE	2.29	0.55
14:BB:19:C:H2'	14:BB:20:A:C8	2.39	0.55
19:E:12:ARG:HH12	22:F:139:ARG:HH21	1.52	0.55
22:F:30:TYR:CE1	27:HH:34:LYS:HE2	2.41	0.55
23:FF:60:LEU:HD21	23:FF:62:ARG:HB2	1.86	0.55
35:LL:85:GLY:HA3	35:LL:187:ILE:HD12	1.88	0.55
56:b:33:GLN:HE21	56:b:34:HIS:CD2	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:909:U:H2'	57:c:910:C:C6	2.41	0.55
57:c:1358:G:O6	57:c:1366:U:O4	2.24	0.55
60:f:118:ALA:HB3	60:f:124:ALA:HB2	1.87	0.55
65:k:153:LEU:HD12	65:k:186:PRO:HG3	1.88	0.55
10:A:88:VAL:HG11	10:A:99:LEU:HD21	1.89	0.55
11:AA:69:C:OP1	45:QQ:178:HIS:ND1	2.35	0.55
11:AA:715:A:H5''	36:M:115:LYS:HA	1.87	0.55
11:AA:1104:G:H2'	11:AA:1105:A:C8	2.40	0.55
11:AA:1597:C:H2'	11:AA:1598:G:C8	2.41	0.55
11:AA:1921:A:H2'	11:AA:1922:A:C8	2.41	0.55
11:AA:2154:U:H2'	11:AA:2155:G:H8	1.71	0.55
11:AA:2344:U:H2'	11:AA:2345:A:H8	1.71	0.55
11:AA:2371:G:N2	11:AA:2375:G:N7	2.53	0.55
11:AA:2496:C:H2'	11:AA:2497:U:C6	2.41	0.55
12:Aa:81:MET:HA	12:Aa:81:MET:HE2	1.88	0.55
16:CC:89:A:H2'	16:CC:91:C:H6	1.71	0.55
27:HH:154:THR:N	27:HH:179:ARG:HH22	2.03	0.55
43:PP:116:GLU:HA	43:PP:119:GLN:OE1	2.07	0.55
50:V:43:LYS:HE3	50:V:44:THR:O	2.05	0.55
57:c:808:U:H2'	57:c:809:A:H8	1.72	0.55
64:j:31:ARG:HD3	64:j:34:GLN:NE2	2.21	0.55
69:o:37:ASN:OD1	69:o:44:THR:OG1	2.25	0.55
73:s:26:LYS:O	73:s:26:LYS:HD2	2.05	0.55
10:A:22:VAL:HG22	10:A:122:GLN:HE21	1.72	0.55
11:AA:224:C:H2'	11:AA:225:C:H6	1.71	0.55
11:AA:359:U:C4	11:AA:920:A:C6	2.94	0.55
11:AA:1411:C:H2'	11:AA:1412:G:H8	1.71	0.55
11:AA:1810:A:H2'	11:AA:1811:G:H8	1.72	0.55
12:Aa:613:LYS:HA	12:Aa:631:ARG:CZ	2.37	0.55
18:DD:63:ILE:O	18:DD:67:LEU:N	2.39	0.55
33:KK:153:ILE:HB	33:KK:179:ILE:HG22	1.89	0.55
35:LL:111:PHE:HE1	35:LL:127:PRO:HD3	1.71	0.55
37:MM:36:LEU:HD11	37:MM:69:ARG:HH11	1.70	0.55
37:MM:115:MET:HG3	37:MM:115:MET:O	2.07	0.55
40:O:70:PHE:HE2	40:O:76:GLU:HG2	1.70	0.55
56:b:60:CYS:SG	56:b:62:LYS:HD2	2.46	0.55
57:c:12:U:H2'	57:c:13:C:H6	1.71	0.55
57:c:139:C:H5'	64:j:184:LEU:HD21	1.88	0.55
57:c:577:G:H5'	57:c:578:OMU:H5''	1.87	0.55
57:c:822:U:N3	57:c:851:U:H3'	2.21	0.55
57:c:884:A:H2'	57:c:885:G:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1277:G:H2'	57:c:1278:G:C8	2.42	0.55
58:d:175:TYR:CE1	58:d:199:PRO:HB3	2.41	0.55
61:g:106:LYS:HG3	61:g:175:VAL:HG22	1.89	0.55
67:m:136:VAL:HG13	67:m:137:GLY:H	1.71	0.55
2:1:103:ARG:HH12	2:1:105:THR:HG22	1.70	0.55
8:7:179:LYS:HZ3	8:7:180:ALA:H	1.54	0.55
11:AA:21:G:H3'	11:AA:22:G:C8	2.42	0.55
11:AA:434:U:H2'	11:AA:435:C:C6	2.42	0.55
11:AA:671:U:H2'	11:AA:672:A:C8	2.41	0.55
11:AA:1261:G:H1'	11:AA:1278:A:H61	1.71	0.55
11:AA:1340:G:H2'	11:AA:1341:U:C6	2.42	0.55
11:AA:1346:G:O2'	25:GG:307:GLN:NE2	2.39	0.55
12:Aa:378:LEU:HA	12:Aa:402:ALA:O	2.06	0.55
16:CC:85:G:OP2	32:K:113:LYS:NZ	2.29	0.55
21:Ee:12:TYR:OH	21:Ee:14:TYR:OH	2.25	0.55
29:II:31:ARG:NE	46:R:107:ILE:O	2.31	0.55
57:c:1172:G:O2'	57:c:1569:A:N7	2.33	0.55
57:c:1204:A:H3'	57:c:1205:C:C5	2.41	0.55
57:c:1359:C:H5''	76:v:134:ARG:HH12	1.71	0.55
60:f:147:ASN:ND2	78:x:2:GLU:O	2.35	0.55
61:g:209:ILE:O	74:t:20:TYR:OH	2.22	0.55
63:i:196:GLU:O	63:i:200:ASN:ND2	2.40	0.55
73:s:83:GLN:HG2	73:s:87:LYS:NZ	2.22	0.55
11:AA:56:G:N3	45:QQ:162:ARG:NH1	2.55	0.55
11:AA:409:A:H3'	11:AA:410:U:H6	1.72	0.55
11:AA:413:U:H5'	13:B:30:ARG:NH1	2.22	0.55
11:AA:1155:C:OP2	31:JJ:94:LYS:NZ	2.40	0.55
11:AA:2442:G:H1	11:AA:2505:U:H3	1.54	0.55
11:AA:2566:C:H2'	11:AA:2567:C:H6	1.72	0.55
11:AA:2579:G:H3'	11:AA:2580:A:C8	2.42	0.55
11:AA:2745:G:O2'	11:AA:2747:A:N6	2.39	0.55
11:AA:3369:G:N1	23:FF:380:MET:O	2.29	0.55
16:CC:43:A:H2'	16:CC:44:A:H8	1.70	0.55
17:D:110:ARG:HH11	17:D:117:LYS:HZ3	1.54	0.55
23:FF:115:LYS:HA	23:FF:118:PHE:HD2	1.72	0.55
52:X:28:ARG:HA	52:X:33:ASN:CG	2.31	0.55
54:Z:5:TRP:N	54:Z:5:TRP:CD1	2.72	0.55
57:c:1605:G:P	57:c:1605:G:H8	2.29	0.55
66:l:102:VAL:HG23	66:l:104:ILE:HD11	1.88	0.55
73:s:25:GLY:HA3	73:s:64:ASP:HB2	1.88	0.55
7:6:10:ARG:CZ	57:c:567:A:H5''	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:277:G:H2'	11:AA:278:U:C6	2.42	0.55
11:AA:348:A:N3	11:AA:352:A:O2'	2.40	0.55
11:AA:406:G:N2	16:CC:16:G:N3	2.55	0.55
11:AA:504:A:H2'	11:AA:505:G:H8	1.72	0.55
11:AA:920:A:OP1	11:AA:923:C:N4	2.40	0.55
11:AA:1023:C:N3	11:AA:1030:A:N6	2.55	0.55
11:AA:1237:G:C2	11:AA:1251:A:H2	2.23	0.55
11:AA:1611:G:H2'	11:AA:1612:A:H8	1.71	0.55
11:AA:2305:G:OP2	11:AA:2305:G:N2	2.22	0.55
11:AA:2644:C:N3	37:MM:116:ARG:NH2	2.55	0.55
11:AA:2682:C:O2'	39:NN:18:VAL:HG11	2.07	0.55
12:Aa:729:PHE:CE2	12:Aa:774:VAL:HG22	2.41	0.55
13:B:41:LEU:HD12	13:B:42:THR:N	2.21	0.55
21:Ee:61:GLN:HE22	21:Ee:63:LYS:HB2	1.72	0.55
22:F:42:ILE:HD11	22:F:57:TYR:HB3	1.87	0.55
23:FF:360:ASP:OD2	23:FF:364:LYS:NZ	2.30	0.55
25:GG:326:ARG:NH2	31:JJ:165:ASP:OD2	2.40	0.55
27:HH:173:VAL:O	27:HH:175:HIS:ND1	2.22	0.55
29:II:146:ILE:HA	29:II:149:ILE:HG22	1.89	0.55
37:MM:10:ARG:HH11	37:MM:11:TYR:HE1	1.55	0.55
53:Y:102:ARG:HG3	53:Y:102:ARG:O	2.05	0.55
57:c:398:G:H5''	66:l:49:ARG:NH1	2.22	0.55
57:c:406:U:H2'	57:c:407:A:C8	2.40	0.55
57:c:1673:G:C6	57:c:1728:A:N1	2.74	0.55
58:d:36:TYR:CD2	58:d:161:PRO:HG3	2.42	0.55
65:k:53:GLY:HA3	65:k:55:LYS:HE2	1.88	0.55
71:q:42:VAL:HA	71:q:46:MET:HE3	1.89	0.55
73:s:38:LEU:HD11	76:v:10:ALA:H	1.72	0.55
2:1:102:THR:HG22	63:i:123:VAL:HG23	1.88	0.55
11:AA:833:G:H2'	11:AA:834:U:C6	2.41	0.55
11:AA:1372:C:H2'	11:AA:1373:A:H8	1.71	0.55
11:AA:1650:G:OP1	20:EE:68:LYS:NZ	2.26	0.55
11:AA:3163:A:N6	11:AA:3288:G:O6	2.40	0.55
11:AA:3187:A:OP1	35:LL:23:ARG:NH1	2.39	0.55
12:Aa:742:GLY:O	12:Aa:746:VAL:N	2.31	0.55
14:BB:45:A:H2'	14:BB:46:A:C8	2.42	0.55
39:NN:60:ARG:H	39:NN:63:GLU:HG3	1.71	0.55
42:P:8:VAL:HG11	42:P:77:ARG:HH21	1.70	0.55
57:c:69:G:N1	57:c:83:G:H1'	2.22	0.55
70:p:62:GLN:HB2	70:p:65:VAL:HG12	1.89	0.55
76:v:34:VAL:HA	76:v:53:TRP:HE1	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:243:G:H2'	11:AA:244:G:H8	1.71	0.55
11:AA:619:A:O2'	11:AA:620:U:OP2	2.19	0.55
11:AA:1235:U:C2	11:AA:1237:G:H5'	2.42	0.55
11:AA:1687:U:N3	24:G:42:LYS:O	2.40	0.55
11:AA:2345:A:OP1	42:P:24:SER:OG	2.23	0.55
11:AA:3243:A:H4'	23:FF:95:THR:HG23	1.88	0.55
12:Aa:20:ARG:HG3	12:Aa:344:SER:HA	1.89	0.55
23:FF:380:MET:HE1	23:FF:383:LEU:HB2	1.88	0.55
24:G:16:THR:HG22	24:G:64:THR:HG22	1.89	0.55
24:G:87:ASN:CG	24:G:89:LEU:HD23	2.32	0.55
26:H:81:GLN:NE2	26:H:83:LYS:O	2.40	0.55
43:PP:72:LEU:HD11	43:PP:81:VAL:HG22	1.88	0.55
54:Z:11:ARG:NH2	57:c:1127:G:OP1	2.39	0.55
55:a:7:THR:O	55:a:22:GLN:NE2	2.40	0.55
55:a:71:ARG:CZ	55:a:80:ARG:HE	2.20	0.55
57:c:156:A:H2'	57:c:157:A:C4	2.42	0.55
57:c:400:A:H8	66:l:24:LYS:O	1.89	0.55
57:c:1357:A:N7	57:c:1367:G:O2'	2.34	0.55
57:c:1744:A:H2'	57:c:1745:G:O4'	2.07	0.55
59:e:142:PHE:HB2	59:e:209:ASN:HB2	1.88	0.55
60:f:41:LEU:HD13	60:f:61:LEU:HB3	1.89	0.55
9:8:119:ARG:HG2	9:8:139:LEU:HA	1.88	0.54
11:AA:503:C:O5'	29:II:26:ARG:NH2	2.38	0.54
11:AA:898:OMU:O5'	11:AA:898:OMU:H6	2.06	0.54
11:AA:2201:G:OP1	11:AA:2418:G:N2	2.36	0.54
11:AA:2223:A:H2'	11:AA:2224:A:C8	2.42	0.54
11:AA:2999:U:H2'	11:AA:3000:A:H8	1.72	0.54
16:CC:10:A:H2'	16:CC:11:C:C6	2.42	0.54
26:H:35:TYR:CG	26:H:63:LYS:HE2	2.42	0.54
31:JJ:83:LEU:HD11	31:JJ:116:PHE:HB3	1.88	0.54
37:MM:9:TYR:HD2	37:MM:97:LEU:HD13	1.71	0.54
40:O:18:ILE:HG13	40:O:23:TYR:CE1	2.42	0.54
43:PP:124:ARG:O	43:PP:128:ARG:HG2	2.06	0.54
48:T:24:LEU:HA	48:T:27:GLU:HG2	1.88	0.54
57:c:387:A:H2'	57:c:402:C:H5''	1.87	0.54
57:c:1265:G:H1	57:c:1444:A:N6	2.02	0.54
57:c:1612:U:H2'	57:c:1613:U:C6	2.41	0.54
57:c:1628:U:H2'	57:c:1629:G:C8	2.42	0.54
66:l:38:ILE:HA	66:l:60:ILE:O	2.07	0.54
66:l:84:HIS:HE2	66:l:97:THR:HB	1.71	0.54
69:o:18:HIS:CD2	69:o:34:TRP:HZ3	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:w:104:THR:HG22	77:w:116:VAL:HG21	1.89	0.54
4:3:80:ARG:NH1	4:3:80:ARG:HA	2.23	0.54
6:5:10:HIS:H	57:c:1451:C:H5''	1.72	0.54
11:AA:259:C:C4	11:AA:260:C:N4	2.75	0.54
11:AA:1060:U:H2'	11:AA:1061:A:C8	2.42	0.54
11:AA:1416:C:H2'	11:AA:1417:G:C4	2.42	0.54
11:AA:1651:U:H2'	11:AA:1652:G:H8	1.71	0.54
11:AA:3158:G:H1	11:AA:3292:A:H2	1.48	0.54
15:C:177:GLY:O	15:C:186:VAL:N	2.40	0.54
18:DD:165:VAL:HG13	18:DD:169:GLU:HB3	1.89	0.54
21:Ee:59:THR:HG23	21:Ee:74:VAL:HB	1.87	0.54
33:KK:72:PRO:HA	33:KK:233:TRP:CZ3	2.41	0.54
54:Z:11:ARG:O	54:Z:14:LYS:HB2	2.07	0.54
57:c:257:A:H4'	66:l:74:LYS:HD3	1.89	0.54
57:c:903:U:H3	71:q:52:ARG:NH2	2.05	0.54
79:y:114:GLU:O	79:y:117:ARG:HG2	2.05	0.54
1:0:105:ARG:HD3	57:c:443:C:P	2.48	0.54
7:6:55:ARG:HG2	7:6:55:ARG:HH11	1.72	0.54
10:A:170:LYS:N	10:A:170:LYS:HD3	2.22	0.54
11:AA:662:U:H2'	11:AA:663:OMC:H6	1.72	0.54
11:AA:720:A:O2'	11:AA:783:A:O2'	2.20	0.54
11:AA:946:U:H2'	11:AA:947:G:H8	1.72	0.54
11:AA:1868:G:O2'	11:AA:2118:C:O2'	2.21	0.54
11:AA:2106:A:H2'	11:AA:2107:A:C8	2.41	0.54
11:AA:3149:G:H5''	23:FF:133:TYR:HB2	1.90	0.54
13:B:10:ASN:O	13:B:14:SER:OG	2.23	0.54
13:B:67:ILE:HD11	13:B:80:LYS:HB3	1.88	0.54
25:GG:99:MET:SD	25:GG:102:PRO:HA	2.47	0.54
34:L:45:GLY:HA3	34:L:71:PHE:CZ	2.42	0.54
57:c:1202:A:N7	57:c:1456:C:H2'	2.23	0.54
57:c:1304:G:O2'	57:c:1323:C:N4	2.37	0.54
57:c:1383:G:H2'	57:c:1384:A:H8	1.72	0.54
57:c:1454:G:H5'	72:r:81:ARG:NH1	2.18	0.54
57:c:1482:C:H4'	73:s:77:GLN:HE22	1.72	0.54
58:d:135:GLU:HA	58:d:138:TYR:HD2	1.72	0.54
64:j:2:LYS:HG3	64:j:108:VAL:HG23	1.89	0.54
8:7:29:GLN:HG3	8:7:32:LEU:HD12	1.89	0.54
8:7:250:TYR:HE1	8:7:265:LEU:HB2	1.72	0.54
10:A:96:LYS:O	10:A:100:GLU:HG3	2.07	0.54
11:AA:158:G:H2'	11:AA:159:A:C8	2.37	0.54
11:AA:650:OMC:H4'	11:AA:2871:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:749:C:H2'	11:AA:750:G:O4'	2.08	0.54
11:AA:1038:C:H2'	11:AA:1039:U:C6	2.43	0.54
11:AA:1637:A:H5''	34:L:15:ARG:HG3	1.90	0.54
11:AA:1680:G:H2'	11:AA:1681:U:C6	2.41	0.54
11:AA:2407:C:H2'	11:AA:2408:U:C6	2.42	0.54
11:AA:2699:G:H1'	22:F:8:ARG:HH22	1.73	0.54
11:AA:3392:U:H2'	11:AA:3393:U:C6	2.42	0.54
12:Aa:17:THR:O	12:Aa:20:ARG:NH2	2.40	0.54
12:Aa:594:ASP:OD1	12:Aa:595:GLU:N	2.40	0.54
13:B:118:GLN:NE2	13:B:147:GLU:OE2	2.40	0.54
22:F:42:ILE:HG22	22:F:96:ILE:HG22	1.88	0.54
32:K:27:ARG:HG2	32:K:78:PHE:CE1	2.43	0.54
47:S:3:GLN:HB2	47:S:30:LEU:HD13	1.90	0.54
57:c:323:A:OP2	66:l:10:LYS:HD2	2.07	0.54
57:c:817:A:H1'	65:k:110:GLN:NE2	2.23	0.54
57:c:1089:U:O2'	57:c:1093:A:N1	2.37	0.54
59:e:99:ASN:OD1	59:e:100:PHE:N	2.39	0.54
59:e:194:ASN:ND2	59:e:210:ILE:O	2.41	0.54
66:l:6:ASP:N	66:l:6:ASP:OD1	2.40	0.54
69:o:71:LEU:HD11	69:o:88:ARG:CZ	2.37	0.54
73:s:83:GLN:HG2	73:s:87:LYS:HZ2	1.72	0.54
73:s:97:VAL:HG23	73:s:98:ASP:H	1.73	0.54
79:y:6:VAL:HB	79:y:29:PRO:HD2	1.88	0.54
3:2:36:ILE:HG23	3:2:73:TYR:HB2	1.90	0.54
7:6:10:ARG:NH1	57:c:567:A:H5''	2.23	0.54
11:AA:8:C:H2'	11:AA:9:U:C6	2.43	0.54
11:AA:80:G:H2'	11:AA:81:C:H6	1.73	0.54
11:AA:1239:C:O3'	21:Ee:90:ARG:NH2	2.41	0.54
11:AA:1723:A:N1	11:AA:1788:C:O2'	2.33	0.54
11:AA:1785:U:H2'	11:AA:1786:G:C8	2.42	0.54
11:AA:2166:A:O2'	11:AA:2167:A:O5'	2.17	0.54
11:AA:2185:G:OP1	20:EE:202:VAL:N	2.40	0.54
11:AA:2727:A:O2'	11:AA:2729:OMU:OP1	2.25	0.54
11:AA:3066:U:H2'	11:AA:3067:C:C6	2.42	0.54
12:Aa:25:ILE:HD11	12:Aa:127:VAL:HG22	1.87	0.54
13:B:6:ALA:HB2	16:CC:11:C:H1'	1.88	0.54
31:JJ:81:HIS:HB3	31:JJ:138:TYR:CD2	2.43	0.54
55:a:8:ARG:HG2	55:a:72:LEU:HD13	1.88	0.54
57:c:334:G:H2'	57:c:335:U:C6	2.42	0.54
57:c:991:G:H1'	57:c:1014:G:N2	2.23	0.54
57:c:1141:G:H2'	57:c:1142:A:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1391:A:H4'	74:t:28:PHE:HD2	1.72	0.54
57:c:1398:U:H5''	57:c:1400:A:H61	1.71	0.54
57:c:1483:A:O2'	73:s:71:GLY:O	2.20	0.54
59:e:116:LYS:HB3	59:e:117:TRP:CE3	2.42	0.54
69:o:71:LEU:HD21	69:o:88:ARG:HH11	1.70	0.54
1:0:15:ASN:OD1	1:0:20:ARG:NH2	2.40	0.54
11:AA:77:A:H2'	11:AA:78:U:O4'	2.07	0.54
11:AA:673:U:H2'	11:AA:674:G:C8	2.43	0.54
11:AA:1069:C:H2'	11:AA:1070:U:H6	1.73	0.54
11:AA:1098:A:H2'	11:AA:1099:A:H8	1.72	0.54
11:AA:1793:C:OP1	20:EE:177:LYS:NZ	2.27	0.54
11:AA:2109:U:HO2'	11:AA:3363:U:HO2'	1.53	0.54
11:AA:2744:U:H2'	11:AA:2745:G:C8	2.43	0.54
11:AA:3306:U:H5''	23:FF:225:GLY:HA2	1.89	0.54
14:BB:44:C:O3'	27:HH:152:ARG:NH1	2.41	0.54
23:FF:144:ILE:O	23:FF:148:LEU:N	2.39	0.54
25:GG:22:LEU:HD11	25:GG:26:PHE:HB2	1.90	0.54
30:J:107:VAL:HG11	30:J:110:VAL:HG23	1.90	0.54
30:J:117:ASN:HA	52:X:18:LYS:NZ	2.23	0.54
39:NN:117:ASP:OD1	39:NN:119:SER:OG	2.25	0.54
49:U:3:VAL:O	49:U:12:ASN:ND2	2.41	0.54
57:c:139:C:H42	57:c:282:C:P	2.29	0.54
57:c:310:C:OP1	80:z:20:ARG:NH1	2.36	0.54
57:c:448:C:H1'	62:h:27:TYR:CE1	2.42	0.54
57:c:478:A:N3	57:c:479:C:H1'	2.22	0.54
57:c:789:A:H3'	57:c:790:U:H6	1.72	0.54
57:c:875:G:H1	57:c:952:A:N6	2.05	0.54
57:c:1347:U:N3	57:c:1516:A:OP1	2.38	0.54
57:c:1575:G7M:H2'	57:c:1576:A:C8	2.42	0.54
57:c:1625:C:H2'	57:c:1626:U:C6	2.43	0.54
58:d:4:PRO:HD2	58:d:7:PHE:CD2	2.42	0.54
65:k:102:PRO:HD3	65:k:112:ARG:HD2	1.90	0.54
73:s:131:GLY:HA3	73:s:137:ARG:HA	1.88	0.54
10:A:25:LYS:NZ	11:AA:1176:C:OP1	2.33	0.54
10:A:137:THR:HG22	10:A:140:LYS:H	1.73	0.54
11:AA:249:U:O2	11:AA:250:U:N3	2.40	0.54
11:AA:697:A:H2'	11:AA:698:U:C6	2.43	0.54
11:AA:756:U:H2'	11:AA:757:C:H6	1.72	0.54
11:AA:1025:A:H62	72:r:75:PRO:HD3	1.73	0.54
11:AA:1230:G:HO2'	18:DD:35:SER:HG	1.51	0.54
11:AA:1364:C:H2'	11:AA:1365:G:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2555:G:H4'	47:S:88:ARG:HG2	1.88	0.54
11:AA:2713:U:P	55:a:9:LYS:HD2	2.48	0.54
11:AA:2780:A:OP1	41:OO:177:LYS:NZ	2.40	0.54
11:AA:2916:U:H2'	11:AA:2917:G:C8	2.38	0.54
11:AA:3091:A:N3	11:AA:3093:C:O2'	2.38	0.54
11:AA:3362:A:H2'	11:AA:3363:U:O4'	2.08	0.54
23:FF:108:GLU:HB2	23:FF:137:TYR:CD2	2.43	0.54
23:FF:233:TRP:CD1	23:FF:265:ALA:HB1	2.43	0.54
57:c:748:U:O3'	79:y:122:SER:OG	2.25	0.54
57:c:1502:G:O2'	57:c:1504:G:N7	2.34	0.54
57:c:1601:G:C6	76:v:89:ARG:HD2	2.42	0.54
57:c:1648:A:H2'	57:c:1649:G:C8	2.41	0.54
58:d:87:LEU:HD21	74:t:78:ARG:HG3	1.88	0.54
60:f:222:TYR:OH	78:x:12:TYR:HB2	2.08	0.54
62:h:248:ILE:HD12	67:m:71:PHE:HD2	1.72	0.54
69:o:68:GLY:HA3	69:o:127:GLN:HB3	1.88	0.54
70:p:97:SER:O	70:p:100:LYS:HG2	2.08	0.54
75:u:132:ARG:HG2	75:u:145:ARG:HH11	1.72	0.54
80:z:73:ARG:HB3	80:z:82:LYS:HZ2	1.73	0.54
3:2:87:ARG:HD3	57:c:1797:A:N1	2.22	0.54
11:AA:196:G:N2	11:AA:198:A:H3'	2.23	0.54
11:AA:296:A:H3'	11:AA:297:G:N2	2.23	0.54
11:AA:1220:U:H4'	11:AA:1221:A:H3'	1.89	0.54
11:AA:2366:C:H2'	11:AA:2367:A:H8	1.72	0.54
11:AA:2457:G:N2	11:AA:2461:A:OP2	2.41	0.54
11:AA:2704:A:H5''	27:HH:31:TYR:CD2	2.43	0.54
23:FF:6:TYR:HB3	26:H:46:LEU:HD13	1.89	0.54
23:FF:211:GLN:NE2	23:FF:283:TYR:O	2.37	0.54
31:JJ:135:ALA:CB	31:JJ:232:ARG:HH21	2.21	0.54
57:c:106:U:OP1	66:l:8:ARG:NH2	2.35	0.54
57:c:123:G:N3	62:h:146:THR:OG1	2.32	0.54
57:c:168:A:O5'	64:j:137:ARG:HG2	2.07	0.54
57:c:596:C:H2'	57:c:597:G:H8	1.72	0.54
57:c:1168:U:H2'	57:c:1169:G:H8	1.71	0.54
57:c:1181:U:H4'	72:r:127:ARG:HH12	1.73	0.54
57:c:1504:G:H1'	57:c:1564:U:H5''	1.89	0.54
57:c:1585:U:H4'	73:s:134:ALA:HB3	1.89	0.54
57:c:1661:U:H2'	57:c:1662:G:H8	1.73	0.54
59:e:161:ILE:HD13	59:e:164:ILE:HD11	1.90	0.54
60:f:54:GLU:HA	78:x:12:TYR:CE1	2.43	0.54
62:h:193:GLY:HA2	62:h:212:ASP:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:r:118:GLU:HG3	75:u:121:ALA:HB1	1.90	0.54
75:u:29:VAL:HG23	75:u:30:TYR:CD1	2.43	0.54
11:AA:80:G:O6	11:AA:106:A:N6	2.41	0.54
11:AA:598:A:H1'	25:GG:322:GLN:HE22	1.73	0.54
11:AA:775:A:O2'	11:AA:777:U:OP2	2.26	0.54
11:AA:1366:A:H2'	11:AA:1367:G:C8	2.43	0.54
11:AA:1423:C:H2'	11:AA:1424:C:C6	2.42	0.54
11:AA:2185:G:H2'	11:AA:2186:U:H6	1.73	0.54
11:AA:2417:OMU:H4'	11:AA:2966:G:N3	2.22	0.54
11:AA:2457:G:O5'	11:AA:2458:A:H5''	2.08	0.54
11:AA:2590:A:H2'	11:AA:2591:A:C8	2.43	0.54
11:AA:3257:C:H2'	11:AA:3258:U:H6	1.73	0.54
12:Aa:83:ASP:HB2	12:Aa:87:LYS:NZ	2.23	0.54
13:B:67:ILE:HG13	13:B:68:GLY:H	1.73	0.54
21:Ee:101:SER:O	21:Ee:142:ARG:NH2	2.41	0.54
23:FF:49:TYR:O	23:FF:80:ASP:N	2.40	0.54
23:FF:306:THR:HG21	23:FF:316:GLU:HG3	1.90	0.54
27:HH:148:ILE:HG23	27:HH:159:VAL:HG21	1.90	0.54
34:L:70:PRO:HG3	34:L:115:LYS:HB2	1.89	0.54
55:a:23:HIS:NE2	55:a:74:CYS:HB3	2.23	0.54
57:c:760:A:N1	57:c:791:A:N6	2.56	0.54
57:c:982:U:O4	57:c:983:A:N6	2.40	0.54
57:c:1017:U:H2'	57:c:1018:U:C6	2.43	0.54
57:c:1623:C:H2'	57:c:1624:C:C6	2.42	0.54
58:d:103:THR:OG1	58:d:106:SER:OG	2.24	0.54
62:h:36:HIS:ND1	62:h:83:PRO:O	2.41	0.54
66:l:118:GLY:HA3	66:l:143:TRP:CD1	2.43	0.54
1:0:32:ARG:HE	1:0:33:ALA:H	1.56	0.54
8:7:305:TYR:N	8:7:309:VAL:O	2.38	0.54
10:A:49:ARG:HH12	11:AA:1190:A:H2	1.56	0.54
11:AA:165:A:H2'	11:AA:166:C:C6	2.42	0.54
11:AA:900:G:H1'	11:AA:1589:A:H62	1.72	0.54
11:AA:1126:G:OP2	37:MM:14:ASN:ND2	2.39	0.54
11:AA:1713:G:O2'	11:AA:1730:G:N2	2.40	0.54
11:AA:2341:A:P	23:FF:247:ARG:HH12	2.31	0.54
11:AA:2413:A:H2'	11:AA:2414:G:C8	2.42	0.54
11:AA:2504:U:H2'	11:AA:2505:U:C6	2.42	0.54
12:Aa:22:MET:SD	12:Aa:338:ILE:HD12	2.48	0.54
13:B:30:ARG:NH2	13:B:34:GLN:HG3	2.22	0.54
34:L:25:ILE:HA	34:L:43:VAL:HG12	1.90	0.54
35:LL:111:PHE:CE1	35:LL:127:PRO:HD3	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:P:11:GLU:OE1	42:P:74:ARG:NE	2.32	0.54
57:c:1072:C:H2'	57:c:1073:G:C8	2.43	0.54
57:c:1372:U:O2	57:c:1373:C:N4	2.41	0.54
57:c:1530:C:OP2	63:i:112:ARG:NH2	2.41	0.54
62:h:54:TYR:HE2	62:h:95:THR:HG21	1.72	0.54
62:h:191:ARG:NH2	62:h:245:LYS:HD3	2.23	0.54
80:z:87:VAL:HG23	80:z:132:LEU:HD11	1.90	0.54
4:3:19:HIS:O	4:3:23:THR:HG23	2.08	0.53
10:A:143:THR:HG21	10:A:150:GLU:HB2	1.90	0.53
11:AA:275:U:H2'	11:AA:276:U:C6	2.44	0.53
11:AA:435:C:H2'	11:AA:436:A:C8	2.43	0.53
11:AA:571:U:H2'	11:AA:572:A:C8	2.42	0.53
11:AA:595:G:H5''	31:JJ:33:ARG:HH21	1.73	0.53
11:AA:860:G:OP1	56:b:17:ARG:NH1	2.41	0.53
11:AA:911:C:H2'	11:AA:912:G:H8	1.73	0.53
11:AA:1597:C:H4'	47:S:26:PRO:HD2	1.89	0.53
11:AA:2406:C:H42	11:AA:2815:OMG:HN1	1.56	0.53
11:AA:3203:U:H2'	11:AA:3204:C:C6	2.44	0.53
12:Aa:675:PRO:HD3	12:Aa:681:MET:HE3	1.89	0.53
17:D:125:LYS:HZ1	17:D:128:LYS:HD3	1.73	0.53
21:Ee:10:VAL:HA	21:Ee:64:ILE:O	2.08	0.53
21:Ee:25:SER:HA	21:Ee:28:LEU:HB2	1.90	0.53
27:HH:277:LEU:HD12	27:HH:281:GLU:HB3	1.89	0.53
29:II:41:ILE:HG22	29:II:51:ARG:HG2	1.89	0.53
35:LL:90:MET:SD	35:LL:179:ILE:HG22	2.48	0.53
41:OO:28:GLN:HB3	45:QQ:201:ARG:HD3	1.90	0.53
57:c:201:G:H2'	57:c:202:A:H8	1.71	0.53
57:c:333:A:OP1	66:l:49:ARG:N	2.32	0.53
57:c:333:A:C5	66:l:49:ARG:HD3	2.43	0.53
57:c:1335:U:H3	57:c:1336:A:H62	1.56	0.53
61:g:164:VAL:O	61:g:168:ILE:HB	2.08	0.53
76:v:21:PHE:HA	76:v:24:ARG:HE	1.73	0.53
80:z:48:HIS:HB3	80:z:103:LEU:HD21	1.90	0.53
9:8:132:LEU:HD12	9:8:133:ALA:H	1.73	0.53
10:A:38:ALA:HB3	10:A:106:GLU:HA	1.90	0.53
11:AA:182:U:H3	11:AA:234:G:H1	1.56	0.53
11:AA:542:G:H2'	11:AA:543:C:C6	2.42	0.53
11:AA:565:U:H2'	11:AA:566:G:H8	1.72	0.53
11:AA:1361:U:H2'	11:AA:1362:G:C8	2.43	0.53
11:AA:1534:A:H2'	11:AA:1535:A:C8	2.42	0.53
11:AA:1651:U:H2'	11:AA:1652:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1717:U:O2	11:AA:1727:G:N2	2.29	0.53
11:AA:1719:G:OP1	17:D:110:ARG:NH1	2.41	0.53
11:AA:2516:U:P	45:QQ:31:ARG:HH12	2.28	0.53
11:AA:2527:G:H2'	11:AA:2528:G:C8	2.42	0.53
11:AA:2679:A:N1	39:NN:55:ARG:NH2	2.54	0.53
11:AA:2999:U:H2'	11:AA:3000:A:C8	2.43	0.53
12:Aa:407:SER:N	12:Aa:446:ASP:O	2.42	0.53
14:BB:89:G:H21	14:BB:92:A:N6	2.06	0.53
15:C:122:ILE:HB	15:C:126:GLN:HB2	1.90	0.53
20:EE:195:SER:O	20:EE:198:LYS:NZ	2.28	0.53
57:c:38:C:N4	57:c:471:A:H61	2.04	0.53
57:c:116:U:H2'	57:c:117:U:H6	1.73	0.53
57:c:607:G:H21	57:c:614:C:H5''	1.73	0.53
57:c:1625:C:H2'	57:c:1626:U:H6	1.71	0.53
62:h:188:ASN:OD1	62:h:191:ARG:NH1	2.42	0.53
1:0:6:THR:HG22	1:0:28:LEU:HB3	1.89	0.53
8:7:133:VAL:HB	8:7:141:LEU:HB2	1.90	0.53
8:7:198:ASN:OD1	8:7:199:ILE:N	2.36	0.53
11:AA:671:U:H2'	11:AA:672:A:H8	1.72	0.53
11:AA:1444:G:H2'	11:AA:1445:U:O4'	2.08	0.53
11:AA:1508:C:N4	11:AA:1880:U:H4'	2.24	0.53
11:AA:1639:C:H41	34:L:17:ARG:HB2	1.74	0.53
11:AA:2745:G:H21	11:AA:2747:A:H8	1.55	0.53
11:AA:3298:C:C2	11:AA:3299:A:C8	2.97	0.53
13:B:58:ILE:HD12	13:B:84:PRO:HD2	1.90	0.53
18:DD:32:ASN:HB3	18:DD:183:PHE:CD2	2.42	0.53
19:E:125:LYS:NZ	19:E:126:VAL:O	2.41	0.53
25:GG:42:VAL:HG23	25:GG:236:LEU:HD21	1.90	0.53
57:c:555:A:H1'	57:c:590:C:O2'	2.09	0.53
57:c:643:G:HO2'	57:c:644:C:C5'	2.21	0.53
57:c:810:G:N2	65:k:109:VAL:O	2.42	0.53
57:c:1535:U:O2'	57:c:1536:G:N3	2.38	0.53
57:c:1561:U:O2'	57:c:1599:C:O2'	2.21	0.53
57:c:1594:G:P	57:c:1605:G:H21	2.30	0.53
61:g:124:ARG:HA	61:g:127:MET:HE3	1.89	0.53
8:7:23:LEU:HD12	8:7:33:LEU:HD11	1.90	0.53
11:AA:253:A:H2'	11:AA:254:A:C8	2.43	0.53
11:AA:717:C:OP1	11:AA:751:A:O2'	2.25	0.53
11:AA:880:G:N3	11:AA:882:A:N6	2.56	0.53
11:AA:1593:A:OP1	47:S:60:ARG:NH1	2.41	0.53
11:AA:1632:A:N1	11:AA:1644:C:N4	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2513:U:O3'	11:AA:2514:U:H2'	2.09	0.53
11:AA:2585:G:C8	33:KK:48:ARG:HA	2.44	0.53
11:AA:2700:G:H4'	22:F:47:SER:HA	1.90	0.53
11:AA:2729:OMU:H2'	11:AA:2730:G:C8	2.43	0.53
11:AA:3064:U:H2'	11:AA:3065:G:H8	1.74	0.53
12:Aa:381:TYR:CD1	12:Aa:468:THR:HB	2.43	0.53
20:EE:209:HIS:CE1	20:EE:211:HIS:HD2	2.26	0.53
29:II:142:ASP:O	29:II:146:ILE:N	2.35	0.53
46:R:35:VAL:HG11	46:R:41:ALA:HB2	1.90	0.53
57:c:883:C:H2'	57:c:884:A:H8	1.72	0.53
57:c:1354:G:H2'	57:c:1355:C:C6	2.44	0.53
57:c:1490:C:O2	57:c:1491:U:N3	2.41	0.53
57:c:1762:A:H2'	57:c:1763:A:H8	1.72	0.53
59:e:34:ALA:HA	59:e:98:THR:OG1	2.08	0.53
60:f:176:SER:OG	67:m:53:ARG:NH2	2.42	0.53
61:g:105:MET:HE1	61:g:118:ALA:HB3	1.89	0.53
70:p:61:THR:OG1	70:p:62:GLN:OE1	2.20	0.53
3:2:62:TYR:CZ	71:q:114:ARG:HA	2.43	0.53
10:A:34:VAL:HG22	10:A:103:LYS:HB2	1.90	0.53
11:AA:44:U:H1'	55:a:54:THR:HG23	1.89	0.53
11:AA:264:G:H5'	49:U:36:ARG:NH2	2.24	0.53
11:AA:267:G:C4'	45:QQ:50:ARG:HH21	2.21	0.53
11:AA:633:C:O2'	46:R:21:ARG:O	2.27	0.53
11:AA:966:U:H2'	11:AA:967:A:H8	1.72	0.53
11:AA:1093:A:H5''	22:F:116:ARG:HH22	1.72	0.53
11:AA:1513:G:OP1	17:D:5:ARG:NH2	2.42	0.53
11:AA:2737:C:O2'	38:N:36:ASP:OD1	2.22	0.53
11:AA:2775:U:O2'	11:AA:2777:G:N2	2.41	0.53
11:AA:2858:U:O2'	11:AA:2859:U:O4'	2.20	0.53
11:AA:3061:G:H2'	11:AA:3062:G:H8	1.73	0.53
12:Aa:170:SER:O	12:Aa:171:LYS:HD2	2.08	0.53
12:Aa:501:LEU:N	12:Aa:502:PRO:HD2	2.23	0.53
12:Aa:600:ALA:HA	12:Aa:605:ILE:HD12	1.91	0.53
12:Aa:707:PRO:HA	12:Aa:710:ARG:HG2	1.90	0.53
21:Ee:18:VAL:HA	21:Ee:57:LYS:HA	1.90	0.53
25:GG:54:GLU:HG2	25:GG:104:LYS:HZ3	1.73	0.53
33:KK:61:GLN:HA	33:KK:64:ILE:HD12	1.90	0.53
35:LL:87:LYS:HB3	35:LL:187:ILE:HG12	1.90	0.53
56:b:53:GLY:N	56:b:68:ALA:HA	2.23	0.53
57:c:207:U:O2	66:l:178:ARG:NH1	2.36	0.53
57:c:252:U:H2'	57:c:253:A:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1135:U:H2'	57:c:1136:U:C6	2.44	0.53
57:c:1239:U:H2'	57:c:1240:U:C6	2.43	0.53
57:c:1480:G:H2'	57:c:1481:C:N1	2.23	0.53
57:c:1498:G:H2'	57:c:1499:G:C8	2.43	0.53
60:f:180:ALA:HB1	60:f:184:VAL:HG23	1.90	0.53
70:p:40:TYR:CE2	70:p:53:LEU:HD22	2.43	0.53
70:p:65:VAL:HG13	70:p:66:ILE:HG13	1.91	0.53
74:t:76:GLU:O	74:t:80:ARG:HG2	2.08	0.53
3:2:37:LYS:HD2	3:2:70:LYS:HE2	1.90	0.53
8:7:81:LEU:HD21	8:7:122:ILE:HG21	1.89	0.53
8:7:89:LEU:HB3	8:7:103:PHE:CE1	2.44	0.53
8:7:179:LYS:HB3	8:7:181:TRP:CH2	2.43	0.53
8:7:275:ARG:NH1	8:7:277:GLU:OE2	2.42	0.53
10:A:62:THR:HG22	10:A:65:ASN:H	1.73	0.53
11:AA:181:U:H2'	11:AA:182:U:O4'	2.08	0.53
11:AA:357:A:H2'	11:AA:358:G:C8	2.44	0.53
11:AA:432:G:H2'	11:AA:433:A:C8	2.43	0.53
11:AA:436:A:OP2	11:AA:621:A:N6	2.37	0.53
11:AA:987:U:H5'	31:JJ:125:GLU:OE1	2.09	0.53
11:AA:1059:G:N2	22:F:61:THR:OG1	2.37	0.53
12:Aa:98:PHE:CE2	12:Aa:339:VAL:HG13	2.43	0.53
20:EE:5:ILE:HG21	20:EE:210:PRO:HD3	1.89	0.53
20:EE:95:SER:O	20:EE:100:ASN:ND2	2.29	0.53
21:Ee:25:SER:O	21:Ee:29:ALA:N	2.30	0.53
23:FF:198:HIS:HA	23:FF:201:LYS:HE2	1.90	0.53
30:J:66:PRO:HG3	30:J:84:PHE:HE1	1.73	0.53
31:JJ:89:ILE:O	31:JJ:219:LYS:NZ	2.26	0.53
33:KK:157:VAL:HG12	33:KK:159:PRO:HD2	1.91	0.53
41:OO:105:ASN:HB3	41:OO:108:ILE:HG22	1.90	0.53
46:R:46:GLY:H	46:R:71:VAL:HG23	1.73	0.53
46:R:73:ARG:HE	46:R:82:ARG:NH1	2.06	0.53
57:c:16:G:H2'	57:c:17:C:C6	2.43	0.53
57:c:29:U:H2'	57:c:30:G:C8	2.43	0.53
57:c:322:G:O3'	66:l:10:LYS:NZ	2.40	0.53
58:d:41:ARG:NH1	74:t:105:GLN:H	2.06	0.53
62:h:100:ARG:HH22	62:h:118:GLU:CD	2.17	0.53
64:j:139:ASN:HA	64:j:142:ARG:HD2	1.91	0.53
67:m:108:ARG:NH2	67:m:144:PRO:HB2	2.24	0.53
74:t:102:VAL:O	74:t:121:VAL:HA	2.09	0.53
80:z:23:ARG:HG2	80:z:29:TYR:CE2	2.44	0.53
11:AA:27:C:O2'	11:AA:327:A:N3	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:532:A:N6	11:AA:560:G:H1	2.06	0.53
11:AA:540:U:H2'	11:AA:541:U:C6	2.44	0.53
11:AA:2150:G:H4'	56:b:22:LEU:HD21	1.91	0.53
11:AA:2430:A:H2'	11:AA:2431:C:C6	2.44	0.53
11:AA:3066:U:H3	11:AA:3075:G:H1	1.57	0.53
17:D:123:LEU:HD23	17:D:126:GLU:OE2	2.09	0.53
21:Ee:80:LEU:O	21:Ee:83:THR:OG1	2.27	0.53
25:GG:326:ARG:NE	31:JJ:165:ASP:OD1	2.42	0.53
35:LL:171:ASP:HB3	35:LL:174:LYS:HG2	1.90	0.53
46:R:13:HIS:O	46:R:95:GLY:N	2.29	0.53
47:S:104:VAL:O	47:S:107:GLU:HG3	2.08	0.53
55:a:8:ARG:HB3	55:a:23:HIS:HB2	1.91	0.53
57:c:155:U:O2'	57:c:157:A:N6	2.41	0.53
57:c:1149:G:H1'	57:c:1765:A:C4	2.44	0.53
57:c:1429:G:H2'	57:c:1430:U:C6	2.44	0.53
58:d:4:PRO:HB2	58:d:6:THR:HG22	1.89	0.53
60:f:145:GLY:O	79:y:98:GLN:NE2	2.39	0.53
60:f:154:LEU:HD22	60:f:221:THR:HG21	1.90	0.53
11:AA:1118:C:H2'	11:AA:1119:C:C6	2.44	0.53
11:AA:1222:G:N2	11:AA:1285:G:O2'	2.42	0.53
11:AA:1232:C:O2'	18:DD:36:GLN:OE1	2.19	0.53
12:Aa:270:GLU:OE2	12:Aa:271:ARG:NH2	2.42	0.53
12:Aa:576:LEU:HB2	12:Aa:839:TYR:CE1	2.44	0.53
14:BB:47:C:H2'	14:BB:48:U:C6	2.43	0.53
43:PP:85:TRP:NE1	43:PP:91:CYS:SG	2.77	0.53
57:c:340:U:H2'	57:c:341:A:C8	2.42	0.53
57:c:1155:G:H2'	57:c:1156:C:C6	2.44	0.53
57:c:1184:A:H61	72:r:123:TYR:HB3	1.72	0.53
57:c:1343:U:O2	77:w:57:ARG:NH2	2.42	0.53
58:d:183:ARG:NH2	58:d:193:GLN:O	2.42	0.53
77:w:24:ILE:HG23	77:w:116:VAL:HG22	1.90	0.53
11:AA:588:G:H4'	11:AA:589:A:C4	2.44	0.53
11:AA:675:C:O2'	11:AA:679:U:OP1	2.26	0.53
11:AA:998:A:H2'	11:AA:999:G:C8	2.44	0.53
11:AA:1084:A:H2'	11:AA:1085:A:C8	2.43	0.53
11:AA:2569:A:O2'	11:AA:2570:U:H5''	2.08	0.53
11:AA:2719:U:H2'	11:AA:2720:G:H8	1.74	0.53
31:JJ:81:HIS:HE1	31:JJ:83:LEU:HB3	1.74	0.53
33:KK:183:LYS:NZ	33:KK:196:ALA:HB2	2.23	0.53
33:KK:246:MET:HA	33:KK:249:ARG:HG2	1.90	0.53
57:c:294:C:H2'	57:c:295:A:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:635:A:H2'	57:c:636:A:H8	1.72	0.53
57:c:886:U:H2'	57:c:887:A:H8	1.74	0.53
57:c:1470:C:OP1	57:c:1540:G:O2'	2.26	0.53
57:c:1492:A:H4'	57:c:1493:A:H5'	1.91	0.53
57:c:1677:C:OP1	66:l:42:ARG:NH1	2.39	0.53
59:e:29:TRP:HB3	59:e:45:LYS:HZ2	1.74	0.53
59:e:231:LEU:HD23	59:e:231:LEU:H	1.74	0.53
62:h:151:ASP:OD1	64:j:215:ARG:NH2	2.37	0.53
69:o:63:LEU:O	69:o:129:ARG:NH1	2.30	0.53
71:q:14:PHE:HA	71:q:78:ALA:O	2.09	0.53
80:z:23:ARG:HG2	80:z:29:TYR:CD2	2.44	0.53
8:7:294:TRP:HA	8:7:300:THR:O	2.09	0.53
11:AA:209:A:O2'	11:AA:211:A:OP2	2.22	0.53
11:AA:1224:C:H2'	11:AA:1225:A:C8	2.43	0.53
11:AA:1666:G:H2'	11:AA:1667:A:H8	1.73	0.53
11:AA:1780:G:H2'	11:AA:1781:C:C6	2.44	0.53
11:AA:1925:U:H5''	11:AA:1926:C:C5	2.44	0.53
11:AA:2129:U:H2'	11:AA:2130:G:H8	1.73	0.53
11:AA:2933:A:C8	11:AA:3015:G:H5'	2.44	0.53
11:AA:3290:G:H2'	11:AA:3291:G:C8	2.44	0.53
15:C:82:VAL:HB	15:C:139:ILE:HD13	1.91	0.53
25:GG:3:ARG:NH2	25:GG:22:LEU:HB2	2.23	0.53
27:HH:144:VAL:HG23	27:HH:173:VAL:HG12	1.91	0.53
31:JJ:90:LYS:HD3	31:JJ:220:PHE:CE2	2.44	0.53
35:LL:140:VAL:HB	35:LL:143:GLU:HG2	1.91	0.53
39:NN:101:ASN:HB3	39:NN:129:VAL:O	2.08	0.53
40:O:25:LEU:HD11	40:O:90:VAL:HG22	1.90	0.53
57:c:1673:G:N1	57:c:1728:A:C2	2.76	0.53
64:j:18:ILE:HA	64:j:23:ARG:NH2	2.24	0.53
75:u:127:HIS:CE1	75:u:133:VAL:HG21	2.43	0.53
8:7:224:ASN:HD21	8:7:227:ALA:H	1.56	0.52
11:AA:82:C:N3	11:AA:104:G:N1	2.57	0.52
11:AA:289:A:H2'	11:AA:290:G:C8	2.44	0.52
11:AA:359:U:H2'	11:AA:360:G:H5'	1.90	0.52
11:AA:375:A:OP2	32:K:89:LYS:NZ	2.31	0.52
11:AA:576:C:H2'	11:AA:577:C:C6	2.44	0.52
11:AA:879:U:O2'	13:B:131:ARG:NH2	2.42	0.52
11:AA:1523:U:OP2	11:AA:1604:G:O2'	2.18	0.52
11:AA:1617:G:H2'	11:AA:1618:G:C8	2.44	0.52
11:AA:1704:A:H2'	11:AA:1705:U:H6	1.74	0.52
11:AA:2148:U:O2'	20:EE:182:ALA:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2971:A:H4'	11:AA:2972:G:O5'	2.09	0.52
11:AA:3200:G:H2'	11:AA:3201:C:C6	2.44	0.52
11:AA:3395:G:N2	11:AA:3396:U:O4	2.30	0.52
12:Aa:758:GLU:O	12:Aa:767:THR:N	2.40	0.52
39:NN:30:LEU:HD21	39:NN:47:GLN:NE2	2.24	0.52
56:b:37:TYR:HB2	56:b:47:VAL:HB	1.92	0.52
57:c:39:A:N3	57:c:467:G:N2	2.57	0.52
57:c:327:U:H2'	57:c:328:A:C8	2.43	0.52
57:c:1378:U:C2	73:s:8:GLN:HB3	2.44	0.52
57:c:1643:U:O2	57:c:1780:G:N2	2.41	0.52
62:h:151:ASP:OD1	62:h:152:PRO:HD2	2.09	0.52
75:u:128:PHE:HD1	75:u:129:TRP:HD1	1.56	0.52
1:0:44:LEU:HA	1:0:47:VAL:HG12	1.92	0.52
3:2:97:PRO:HB3	57:c:1798:U:C6	2.43	0.52
6:5:46:LYS:HD2	68:n:61:TRP:HZ2	1.74	0.52
10:A:172:ARG:NH1	11:AA:3191:G:OP2	2.43	0.52
11:AA:235:A:H2'	11:AA:236:G:H8	1.74	0.52
11:AA:307:A:O2'	11:AA:2223:A:H1'	2.09	0.52
11:AA:797:U:H2'	11:AA:798:G:C8	2.44	0.52
11:AA:837:A:H3'	11:AA:838:G:H8	1.74	0.52
11:AA:1498:A:H2'	11:AA:1499:C:C6	2.44	0.52
11:AA:2688:U:OP1	27:HH:12:TYR:OH	2.16	0.52
11:AA:2921:OMU:H2'	11:AA:2922:OMG:H5'	1.91	0.52
12:Aa:169:VAL:HB	12:Aa:173:ASP:HB2	1.91	0.52
12:Aa:505:VAL:O	12:Aa:509:LYS:HG2	2.08	0.52
15:C:36:LEU:HB3	15:C:45:ASN:ND2	2.18	0.52
16:CC:4:C:H2'	16:CC:5:U:C6	2.45	0.52
20:EE:31:THR:HB	20:EE:123:ARG:NH2	2.24	0.52
31:JJ:84:VAL:HG23	31:JJ:117:VAL:HB	1.92	0.52
37:MM:72:ALA:O	37:MM:76:MET:HG3	2.08	0.52
57:c:1619:C:H2'	57:c:1620:C:C6	2.44	0.52
57:c:1624:C:H2'	57:c:1625:C:C6	2.44	0.52
62:h:251:GLU:OE1	62:h:255:ARG:NE	2.42	0.52
66:l:39:GLY:O	66:l:59:ARG:HB3	2.08	0.52
73:s:51:PRO:HA	73:s:109:PHE:CE1	2.44	0.52
1:0:29:HIS:ND1	1:0:32:ARG:O	2.40	0.52
2:1:41:ILE:HG22	2:1:42:LEU:HD12	1.92	0.52
8:7:249:ARG:NH2	8:7:298:GLY:O	2.41	0.52
11:AA:140:C:H2'	11:AA:141:C:C6	2.43	0.52
11:AA:254:A:H2'	11:AA:255:A:H8	1.73	0.52
11:AA:381:U:H2'	11:AA:382:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:591:G:O2'	29:II:17:ALA:O	2.27	0.52
11:AA:1271:A:H2'	11:AA:1272:C:O4'	2.07	0.52
11:AA:1747:G:O3'	51:W:42:LYS:NZ	2.33	0.52
11:AA:2117:A:C8	11:AA:3064:U:H1'	2.45	0.52
11:AA:2497:U:H2'	11:AA:2498:U:O4'	2.08	0.52
11:AA:3132:C:H2'	11:AA:3133:C:C6	2.44	0.52
11:AA:3294:A:H5'	23:FF:128:LYS:HG3	1.91	0.52
11:AA:3297:U:O4	23:FF:124:LYS:NZ	2.34	0.52
11:AA:3379:C:H2'	11:AA:3380:U:C6	2.44	0.52
14:BB:7:G:H1	14:BB:114:U:H3	0.68	0.52
22:F:82:ASN:ND2	38:N:19:ASN:OD1	2.42	0.52
32:K:81:GLN:NE2	32:K:82:VAL:H	2.07	0.52
51:W:42:LYS:HD3	51:W:44:LYS:HE3	1.91	0.52
55:a:15:LYS:HG2	55:a:18:ARG:HH21	1.74	0.52
57:c:99:C:H2'	57:c:378:A:H4'	1.91	0.52
57:c:517:U:O4	57:c:518:A:N6	2.40	0.52
57:c:627:C:H2'	57:c:628:G:C8	2.43	0.52
57:c:804:A:C5	79:y:107:SER:HA	2.44	0.52
57:c:866:G:OP1	70:p:2:GLY:N	2.42	0.52
57:c:1103:U:OP2	80:z:7:ARG:N	2.26	0.52
57:c:1160:A:H2'	57:c:1161:C:H6	1.74	0.52
57:c:1368:G:H2'	57:c:1369:U:C2	2.45	0.52
57:c:1563:C:H2'	57:c:1564:U:C6	2.43	0.52
74:t:10:LYS:C	74:t:14:LYS:HZ2	2.16	0.52
79:y:115:GLU:HA	79:y:118:ARG:HG2	1.90	0.52
8:7:178:VAL:HG21	8:7:223:TRP:CZ2	2.45	0.52
11:AA:756:U:H2'	11:AA:757:C:C6	2.43	0.52
11:AA:796:U:H2'	11:AA:797:U:H6	1.73	0.52
11:AA:971:G:OP1	15:C:8:LYS:NZ	2.36	0.52
11:AA:1016:C:H4'	11:AA:1017:C:OP2	2.10	0.52
11:AA:1281:G:H5'	18:DD:55:LYS:HD3	1.91	0.52
11:AA:1339:C:H2'	11:AA:1340:G:H8	1.73	0.52
11:AA:1381:A:H2'	11:AA:1382:G:H8	1.74	0.52
11:AA:1567:U:N3	11:AA:1571:A:H1'	2.21	0.52
11:AA:3279:A:C6	46:R:54:ARG:HD3	2.45	0.52
12:Aa:285:PHE:O	12:Aa:289:MET:HG3	2.09	0.52
15:C:67:ILE:HG23	15:C:81:VAL:HG11	1.90	0.52
42:P:34:LYS:HB3	42:P:38:LYS:HZ1	1.74	0.52
57:c:448:C:H1'	62:h:27:TYR:HE1	1.74	0.52
57:c:639:U:O2	65:k:112:ARG:NH2	2.42	0.52
57:c:953:G:H2'	57:c:954:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1234:A:H2	57:c:1252:C:H42	1.56	0.52
57:c:1547:A:C8	57:c:1566:U:C2	2.97	0.52
57:c:1654:G:H2'	57:c:1745:G:H22	1.74	0.52
58:d:67:ILE:HG21	58:d:73:VAL:HG23	1.91	0.52
62:h:59:ARG:O	62:h:62:LYS:HG2	2.10	0.52
66:l:184:LEU:HB2	66:l:189:LEU:HD13	1.91	0.52
11:AA:331:G:O6	16:CC:33:A:N6	2.41	0.52
11:AA:1071:U:C2	11:AA:1087:G:O6	2.61	0.52
11:AA:1256:G:H2'	11:AA:1257:C:C6	2.44	0.52
11:AA:1505:C:H2'	11:AA:1506:A:C8	2.45	0.52
11:AA:1648:A:N6	11:AA:1807:G:H21	1.98	0.52
11:AA:1665:C:H2'	11:AA:1666:G:H8	1.75	0.52
11:AA:2795:U:OP2	55:a:63:LYS:HG2	2.10	0.52
11:AA:3069:G:C2	11:AA:3070:A:C8	2.98	0.52
12:Aa:4:PHE:O	12:Aa:5:THR:OG1	2.22	0.52
12:Aa:10:ARG:NH2	12:Aa:449:PRO:HD3	2.23	0.52
12:Aa:585:ARG:HH12	12:Aa:842:LEU:HD23	1.73	0.52
12:Aa:727:PRO:O	12:Aa:774:VAL:HG23	2.10	0.52
12:Aa:821:ALA:HA	12:Aa:824:LYS:HE2	1.92	0.52
23:FF:53:MET:HB2	23:FF:332:ARG:NH2	2.25	0.52
24:G:56:VAL:HG22	24:G:65:VAL:HG13	1.91	0.52
28:I:43:ARG:HB2	28:I:43:ARG:HH11	1.75	0.52
32:K:81:GLN:HG2	32:K:96:PRO:HB3	1.91	0.52
35:LL:90:MET:HE1	35:LL:181:VAL:HA	1.92	0.52
45:QQ:94:TYR:O	45:QQ:96:ARG:N	2.41	0.52
57:c:648:G:H3'	57:c:687:G:H21	1.75	0.52
57:c:874:C:H2'	57:c:875:G:C8	2.44	0.52
57:c:1350:U:H2'	57:c:1350:U:O2	2.09	0.52
57:c:1535:U:H1'	57:c:1536:G:C2	2.45	0.52
64:j:184:LEU:O	64:j:187:LYS:HG2	2.09	0.52
72:r:103:ASN:OD1	75:u:120:ARG:NH1	2.42	0.52
8:7:180:ALA:HB3	8:7:189:GLU:HB3	1.90	0.52
10:A:21:SER:OG	11:AA:1174:G:O2'	2.22	0.52
10:A:96:LYS:NZ	10:A:100:GLU:OE2	2.39	0.52
11:AA:165:A:H2'	11:AA:166:C:H6	1.74	0.52
11:AA:712:G:H2'	11:AA:713:U:C6	2.44	0.52
11:AA:1601:U:OP1	17:D:42:ARG:NH2	2.43	0.52
11:AA:1611:G:H2'	11:AA:1612:A:C8	2.44	0.52
11:AA:2176:U:H5'	20:EE:23:ARG:NH2	2.25	0.52
11:AA:2392:C:H2'	11:AA:2393:G:C4	2.44	0.52
12:Aa:187:VAL:HG21	18:DD:133:THR:HG21	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:II:175:LYS:HD2	43:PP:111:ALA:HA	1.92	0.52
33:KK:140:VAL:O	33:KK:144:GLU:N	2.35	0.52
37:MM:140:THR:HG22	37:MM:141:LYS:H	1.75	0.52
47:S:19:LYS:HE2	47:S:37:LYS:HA	1.90	0.52
56:b:87:ARG:NH2	56:b:88:GLU:OE2	2.42	0.52
57:c:77:U:OP2	57:c:80:A:N6	2.43	0.52
57:c:137:U:C2	57:c:141:U:H5'	2.45	0.52
57:c:141:U:H2'	57:c:142:G:C8	2.45	0.52
57:c:257:A:H2'	57:c:258:C:C6	2.44	0.52
8:7:19:TRP:O	8:7:38:ARG:N	2.32	0.52
9:8:141:CYS:SG	9:8:142:GLY:N	2.82	0.52
11:AA:93:C:H5	55:a:42:ARG:HH22	1.57	0.52
11:AA:277:G:H2'	11:AA:278:U:H6	1.73	0.52
11:AA:359:U:C4	11:AA:920:A:N1	2.78	0.52
11:AA:761:A:H2'	11:AA:762:U:C6	2.44	0.52
11:AA:838:G:O6	11:AA:856:G:N2	2.43	0.52
11:AA:1255:C:H4'	21:Ee:130:LYS:HB3	1.90	0.52
11:AA:1327:C:O2'	46:R:76:GLY:HA2	2.09	0.52
11:AA:1506:A:OP1	13:B:127:ARG:NH2	2.43	0.52
11:AA:1682:U:O2	24:G:82:LYS:NZ	2.39	0.52
11:AA:1756:C:H2'	11:AA:1757:A:C8	2.45	0.52
11:AA:1887:A:H1'	23:FF:226:PHE:CD2	2.44	0.52
11:AA:2707:C:H2'	11:AA:2708:C:C6	2.45	0.52
12:Aa:419:VAL:HG12	12:Aa:421:GLY:H	1.74	0.52
12:Aa:429:LYS:NZ	12:Aa:430:ALA:O	2.43	0.52
12:Aa:718:LEU:HA	12:Aa:722:PRO:HG3	1.92	0.52
12:Aa:807:ASP:OD2	12:Aa:810:ASP:N	2.42	0.52
16:CC:78:G:H2'	16:CC:79:A:C8	2.45	0.52
19:E:94:ILE:HD11	19:E:106:LEU:HD12	1.91	0.52
22:F:106:LEU:O	22:F:110:LYS:HG3	2.09	0.52
32:K:40:ARG:NH1	32:K:46:LYS:HE2	2.24	0.52
34:L:18:TYR:HE2	34:L:71:PHE:CD2	2.28	0.52
49:U:90:MET:O	49:U:94:ILE:HG13	2.10	0.52
57:c:17:C:H2'	57:c:18:C:H6	1.75	0.52
57:c:29:U:H2'	57:c:30:G:H8	1.74	0.52
57:c:58:U:O2	57:c:451:A:O2'	2.24	0.52
57:c:595:G:H2'	57:c:596:C:C6	2.45	0.52
57:c:1124:A:H2'	57:c:1125:A:H8	1.75	0.52
57:c:1477:G:C2	57:c:1531:G:C2	2.97	0.52
57:c:1589:C:H2'	57:c:1592:A:N6	2.25	0.52
57:c:1645:G:C6	57:c:1757:G:C6	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:k:140:VAL:HG12	79:y:52:TYR:HB3	1.92	0.52
67:m:138:LYS:HD2	67:m:138:LYS:O	2.09	0.52
72:r:108:ARG:H	72:r:111:MET:HG2	1.74	0.52
73:s:33:GLY:H	73:s:66:ARG:HH22	1.57	0.52
8:7:155:ARG:HA	8:7:155:ARG:NE	2.24	0.52
11:AA:89:A:OP1	15:C:170:ARG:NH2	2.43	0.52
11:AA:1556:C:H2'	11:AA:2169:G:N2	2.24	0.52
11:AA:1921:A:H61	11:AA:1929:G:H2'	1.75	0.52
11:AA:2223:A:OP2	11:AA:2223:A:H8	1.92	0.52
11:AA:2836:C:H41	11:AA:2852:C:N4	2.07	0.52
11:AA:3299:A:P	13:B:72:GLN:HE22	2.33	0.52
11:AA:3347:A:H2'	11:AA:3348:G:C8	2.45	0.52
14:BB:28:C:OP1	39:NN:137:ARG:NH1	2.42	0.52
16:CC:154:C:H2'	16:CC:155:A:H8	1.70	0.52
18:DD:187:VAL:O	18:DD:199:SER:OG	2.28	0.52
20:EE:36:GLU:HB2	20:EE:91:GLY:HA2	1.92	0.52
29:II:31:ARG:HG3	29:II:34:LEU:HD23	1.90	0.52
37:MM:171:TRP:HE3	37:MM:178:ARG:HG2	1.75	0.52
37:MM:177:ASP:HB3	37:MM:180:GLU:HG2	1.90	0.52
41:OO:95:ILE:HD11	41:OO:119:TYR:CE2	2.45	0.52
45:QQ:172:ARG:HD2	45:QQ:174:ILE:HD11	1.92	0.52
57:c:248:U:O2'	69:o:36:LYS:HB2	2.10	0.52
57:c:278:U:O2	57:c:279:G:N1	2.43	0.52
57:c:572:C:H2'	57:c:573:C:C6	2.45	0.52
57:c:1160:A:H2'	57:c:1161:C:C6	2.45	0.52
60:f:56:ILE:HA	60:f:61:LEU:HD12	1.91	0.52
60:f:78:ASP:HB3	60:f:104:VAL:HG12	1.91	0.52
63:i:221:ALA:O	63:i:225:ARG:NE	2.43	0.52
64:j:79:LYS:HZ2	64:j:89:ASP:HA	1.73	0.52
70:p:47:PRO:HG2	70:p:72:MET:SD	2.49	0.52
80:z:73:ARG:NH2	80:z:82:LYS:HG3	2.24	0.52
5:4:45:LYS:HD3	63:i:161:ASP:H	1.75	0.52
10:A:54:TYR:CD2	10:A:145:VAL:HG21	2.45	0.52
11:AA:171:G:O2'	11:AA:172:G:O5'	2.22	0.52
11:AA:435:C:H2'	11:AA:436:A:H8	1.74	0.52
11:AA:498:A:H2'	11:AA:499:G:H8	1.75	0.52
11:AA:591:G:N3	29:II:19:LYS:HG2	2.25	0.52
11:AA:768:C:N4	11:AA:769:G:O6	2.43	0.52
11:AA:2260:U:H2'	11:AA:2261:G:C8	2.45	0.52
11:AA:2344:U:H2'	11:AA:2345:A:C8	2.45	0.52
11:AA:2894:C:P	35:LL:168:ARG:HH11	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3165:A:H2'	11:AA:3166:C:C6	2.45	0.52
12:Aa:353:ALA:O	12:Aa:357:TYR:N	2.43	0.52
14:BB:22:A:H2'	14:BB:23:A:C8	2.45	0.52
16:CC:156:U:OP1	33:KK:84:ARG:NH2	2.43	0.52
20:EE:117:GLU:HG2	20:EE:124:GLY:H	1.74	0.52
23:FF:113:GLU:HA	23:FF:116:ARG:HD2	1.92	0.52
27:HH:286:VAL:HG23	37:MM:206:LEU:HD11	1.92	0.52
37:MM:144:ASN:OD1	37:MM:147:VAL:HB	2.10	0.52
40:O:94:GLU:CD	40:O:96:GLY:H	2.18	0.52
45:QQ:120:TRP:HE1	45:QQ:123:GLN:HB3	1.74	0.52
57:c:315:A:C4	57:c:353:A:N6	2.78	0.52
57:c:817:A:H1'	65:k:110:GLN:HE22	1.75	0.52
57:c:1315:U:H2'	57:c:1316:G:C8	2.45	0.52
57:c:1568:C:OP2	75:u:36:LYS:HD2	2.08	0.52
57:c:1592:A:C4	57:c:1607:G:N2	2.78	0.52
57:c:1734:U:H2'	57:c:1735:U:C6	2.45	0.52
58:d:107:PHE:HB3	58:d:139:VAL:HG11	1.91	0.52
62:h:212:ASP:OD1	62:h:216:ASN:N	2.37	0.52
70:p:91:LEU:HB3	70:p:122:ILE:HG12	1.91	0.52
77:w:28:SER:HB2	77:w:112:VAL:HG13	1.92	0.52
8:7:38:ARG:O	8:7:67:ILE:HG12	2.10	0.52
11:AA:200:C:H41	11:AA:217:U:H2'	1.75	0.52
11:AA:307:A:H2'	11:AA:308:A:C8	2.44	0.52
11:AA:498:A:H2'	11:AA:499:G:C8	2.46	0.52
11:AA:594:U:P	11:AA:609:G:H1	2.33	0.52
11:AA:998:A:H2'	11:AA:999:G:H8	1.75	0.52
11:AA:1478:C:H2'	11:AA:1479:U:H6	1.75	0.52
11:AA:1647:A:OP2	11:AA:1647:A:H8	1.93	0.52
11:AA:2933:A:OP1	11:AA:3015:G:H4'	2.10	0.52
12:Aa:26:ALA:HB2	12:Aa:128:VAL:HB	1.91	0.52
12:Aa:29:ASP:O	12:Aa:159:LYS:NZ	2.33	0.52
12:Aa:740:VAL:HG22	12:Aa:744:TYR:CE1	2.45	0.52
13:B:31:GLU:CD	13:B:60:PHE:HA	2.35	0.52
13:B:84:PRO:O	13:B:88:VAL:HG23	2.10	0.52
15:C:147:ARG:HG2	15:C:149:ALA:H	1.75	0.52
16:CC:137:C:P	30:J:42:ARG:HH12	2.32	0.52
19:E:75:PHE:HE2	19:E:96:ASP:HB3	1.75	0.52
21:Ee:11:LYS:HZ2	21:Ee:13:LEU:HD23	1.75	0.52
23:FF:37:ARG:HH22	23:FF:188:ILE:HD11	1.74	0.52
26:H:31:ALA:HA	26:H:65:GLY:HA3	1.92	0.52
32:K:116:LYS:O	32:K:120:GLN:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:P:78:LYS:HG3	42:P:90:PHE:CE1	2.45	0.52
45:QQ:47:LYS:HE3	45:QQ:51:LEU:HD11	1.91	0.52
47:S:46:ASP:OD2	47:S:88:ARG:NH1	2.40	0.52
49:U:50:LEU:O	49:U:55:ARG:NH2	2.42	0.52
57:c:106:U:P	66:l:8:ARG:HH22	2.33	0.52
57:c:1360:A:H1'	57:c:1364:G:H22	1.74	0.52
59:e:31:ASP:OD1	59:e:45:LYS:NZ	2.38	0.52
59:e:111:ARG:HH21	71:q:121:VAL:HG11	1.75	0.52
61:g:25:PHE:HB3	61:g:29:LEU:HD12	1.92	0.52
67:m:106:GLU:O	67:m:112:GLN:NE2	2.43	0.52
70:p:46:THR:HG22	70:p:49:GLN:OE1	2.10	0.52
76:v:52:GLY:HA2	76:v:55:TYR:HD2	1.75	0.52
77:w:58:LEU:HB2	77:w:88:LYS:HB2	1.91	0.52
79:y:114:GLU:HA	79:y:117:ARG:HD3	1.92	0.52
11:AA:565:U:H2'	11:AA:566:G:C8	2.45	0.51
11:AA:1167:U:O2'	31:JJ:210:PRO:O	2.23	0.51
11:AA:1258:U:OP1	18:DD:42:ARG:NH1	2.44	0.51
11:AA:1498:A:H2'	11:AA:1499:C:H6	1.75	0.51
11:AA:1902:G:C2	11:AA:2336:U:H1'	2.44	0.51
11:AA:2781:U:O3'	41:OO:185:LYS:NZ	2.41	0.51
11:AA:2901:G:H5'	35:LL:174:LYS:HE2	1.91	0.51
12:Aa:352:ARG:O	12:Aa:355:GLN:HG2	2.10	0.51
13:B:22:LEU:HD23	13:B:90:PHE:CD1	2.45	0.51
15:C:30:VAL:O	15:C:34:THR:HG23	2.10	0.51
16:CC:69:U:H2'	16:CC:70:G:O4'	2.11	0.51
17:D:148:ASP:O	17:D:151:ARG:HG2	2.10	0.51
18:DD:31:ASP:OD1	18:DD:83:ASN:ND2	2.36	0.51
19:E:12:ARG:HH22	22:F:139:ARG:HH21	1.58	0.51
39:NN:47:GLN:NE2	39:NN:66:ALA:O	2.43	0.51
50:V:18:LEU:HD22	50:V:25:ARG:HG2	1.92	0.51
53:Y:96:CYS:HB3	53:Y:99:CYS:SG	2.50	0.51
57:c:582:U:OP1	57:c:583:C:N4	2.38	0.51
57:c:1045:C:OP1	59:e:151:LYS:NZ	2.39	0.51
57:c:1541:G:N2	57:c:1570:A:N6	2.20	0.51
58:d:169:SER:O	58:d:173:ILE:HG12	2.11	0.51
62:h:60:GLU:O	62:h:64:ILE:HG12	2.10	0.51
64:j:142:ARG:HH22	64:j:149:LYS:HZ2	1.57	0.51
70:p:104:ARG:HG3	70:p:105:ASN:ND2	2.26	0.51
79:y:105:THR:HG23	79:y:126:LEU:HB2	1.92	0.51
79:y:106:THR:OG1	79:y:109:GLY:O	2.27	0.51
80:z:39:LYS:HG3	80:z:40:SER:H	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5:12:ARG:NH1	57:c:1450:U:H5''	2.25	0.51
7:6:17:GLN:C	7:6:18:THR:CG2	2.81	0.51
11:AA:112:U:O3'	45:QQ:147:ARG:NH1	2.43	0.51
11:AA:279:U:H2'	11:AA:280:U:H6	1.75	0.51
11:AA:938:C:OP2	36:M:26:ARG:NH1	2.43	0.51
11:AA:1044:U:H1'	37:MM:92:HIS:ND1	2.25	0.51
11:AA:1110:U:H2'	11:AA:1111:U:C6	2.45	0.51
11:AA:1152:G:OP2	11:AA:1152:G:N2	2.43	0.51
11:AA:1290:A:H2'	11:AA:1291:A:H8	1.75	0.51
11:AA:1478:C:H2'	11:AA:1479:U:C6	2.44	0.51
11:AA:2203:U:H2'	11:AA:2204:C:C6	2.45	0.51
11:AA:2436:U:H4'	33:KK:70:LYS:HD2	1.93	0.51
11:AA:2984:C:H2'	11:AA:2985:C:C6	2.46	0.51
11:AA:3084:C:H2'	11:AA:3085:G:O4'	2.10	0.51
12:Aa:696:ASP:O	12:Aa:700:ARG:HG2	2.09	0.51
14:BB:116:C:H2'	14:BB:117:A:C8	2.44	0.51
16:CC:43:A:H2'	16:CC:44:A:C8	2.44	0.51
17:D:134:HIS:CE1	17:D:136:ARG:HB3	2.45	0.51
57:c:782:U:H4'	57:c:783:G:O5'	2.09	0.51
57:c:790:U:H2'	57:c:791:A:C8	2.44	0.51
57:c:1336:A:H2	57:c:1416:G:C6	2.29	0.51
57:c:1426:C:H3'	57:c:1427:A:H4'	1.91	0.51
57:c:1590:G:H2'	57:c:1591:C:H4'	1.92	0.51
61:g:28:GLU:HG2	68:n:58:GLN:NE2	2.21	0.51
62:h:89:VAL:HG22	62:h:100:ARG:HE	1.75	0.51
72:r:93:VAL:HG12	72:r:106:GLU:HA	1.91	0.51
75:u:73:MET:HB3	75:u:101:LEU:HD12	1.92	0.51
11:AA:308:A:H1'	11:AA:2222:A:C2	2.45	0.51
11:AA:869:G:N1	11:AA:891:G:O6	2.44	0.51
11:AA:992:A:H61	11:AA:1057:A:N6	2.04	0.51
11:AA:993:G:N3	11:AA:2637:A:H2'	2.25	0.51
11:AA:1242:G:H2'	11:AA:1243:G:C8	2.46	0.51
11:AA:1303:A:N7	11:AA:2887:A:N6	2.58	0.51
11:AA:1753:G:H2'	11:AA:1754:G:H8	1.75	0.51
11:AA:2566:C:H2'	11:AA:2567:C:C6	2.45	0.51
11:AA:2664:C:H2'	11:AA:2665:U:C6	2.45	0.51
11:AA:2697:A:H2'	11:AA:2698:G:C8	2.44	0.51
11:AA:2718:U:H2'	11:AA:2719:U:C6	2.45	0.51
11:AA:2767:U:H2'	11:AA:2768:U:H6	1.76	0.51
11:AA:3099:C:H2'	11:AA:3100:U:C6	2.46	0.51
12:Aa:578:LYS:HD3	12:Aa:585:ARG:HH11	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:600:ALA:HB1	12:Aa:605:ILE:HB	1.93	0.51
23:FF:115:LYS:HB3	23:FF:122:TRP:HZ3	1.75	0.51
31:JJ:82:LYS:O	31:JJ:119:VAL:N	2.27	0.51
57:c:1681:A:N6	57:c:1720:G:O2'	2.25	0.51
57:c:1685:G:N3	57:c:1717:G:H2'	2.25	0.51
62:h:207:LEU:HD23	62:h:221:ARG:HA	1.93	0.51
1:0:82:ALA:O	1:0:86:GLU:HG2	2.09	0.51
2:1:55:PRO:O	2:1:56:THR:HG22	2.11	0.51
2:1:100:ILE:HG13	2:1:100:ILE:O	2.11	0.51
10:A:59:ARG:NH2	11:AA:1307:G:OP1	2.43	0.51
11:AA:284:A:OP2	55:a:41:ARG:NE	2.44	0.51
11:AA:356:C:H2'	11:AA:357:A:H8	1.76	0.51
11:AA:695:C:OP1	25:GG:119:ARG:NE	2.31	0.51
11:AA:734:C:H3'	11:AA:735:A:C8	2.46	0.51
11:AA:797:U:H2'	11:AA:798:G:H8	1.75	0.51
11:AA:861:C:OP1	11:AA:2133:U:O2'	2.23	0.51
11:AA:1683:A:N6	11:AA:3070:A:H61	2.09	0.51
11:AA:1881:A:H2'	11:AA:1882:G:H8	1.75	0.51
11:AA:2295:A:C5	26:H:37:ILE:HB	2.44	0.51
11:AA:3220:G:C6	11:AA:3266:G:N1	2.79	0.51
12:Aa:485:VAL:HG21	12:Aa:533:THR:HG23	1.91	0.51
12:Aa:653:VAL:HG13	12:Aa:656:LEU:HB2	1.92	0.51
16:CC:14:C:H2'	16:CC:15:G:C8	2.46	0.51
29:II:4:GLN:NE2	44:Q:75:LEU:O	2.41	0.51
30:J:113:LEU:HD12	30:J:114:VAL:H	1.74	0.51
41:OO:63:VAL:HA	41:OO:66:ASN:CG	2.35	0.51
43:PP:23:ILE:HA	43:PP:63:VAL:HG23	1.93	0.51
48:T:74:LYS:HD3	48:T:75:TYR:N	2.25	0.51
57:c:931:C:H5''	59:e:116:LYS:HG3	1.91	0.51
57:c:1183:A:N6	72:r:122:THR:O	2.43	0.51
57:c:1302:U:C2	57:c:1303:U:C5	2.98	0.51
57:c:1735:U:H2'	57:c:1736:G:H8	1.75	0.51
60:f:35:TRP:CE3	60:f:46:LYS:HD2	2.44	0.51
62:h:248:ILE:HD12	67:m:71:PHE:CD2	2.45	0.51
63:i:159:ALA:HB2	63:i:224:ASN:ND2	2.24	0.51
66:l:62:THR:HG23	66:l:76:THR:O	2.11	0.51
73:s:33:GLY:N	73:s:66:ARG:HH22	2.08	0.51
75:u:29:VAL:O	75:u:33:THR:HG23	2.09	0.51
8:7:22:SER:OG	8:7:69:GLN:O	2.18	0.51
11:AA:201:A:H2'	11:AA:202:G:C8	2.46	0.51
11:AA:532:A:H2'	11:AA:555:U:O4	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:790:U:OP1	25:GG:112:LYS:NZ	2.27	0.51
11:AA:1019:G:H2'	11:AA:1020:G:C8	2.46	0.51
11:AA:1130:A:H61	37:MM:115:MET:HE3	1.74	0.51
11:AA:1685:C:H2'	11:AA:1686:U:C6	2.45	0.51
11:AA:2372:A:H5''	11:AA:2373:A:C8	2.45	0.51
11:AA:2404:A:N7	11:AA:2872:A:N6	2.58	0.51
11:AA:2432:A:H2	45:QQ:125:SER:HG	1.57	0.51
11:AA:3323:A:O3'	42:P:19:ARG:NH2	2.40	0.51
23:FF:180:GLU:OE1	23:FF:180:GLU:N	2.44	0.51
24:G:50:LEU:HD22	24:G:54:VAL:HB	1.91	0.51
28:I:42:GLN:HB3	28:I:44:LYS:HE2	1.92	0.51
37:MM:140:THR:HG22	37:MM:141:LYS:N	2.25	0.51
57:c:63:G:C6	57:c:64:U:C4	2.99	0.51
57:c:216:U:O4	57:c:242:U:H2'	2.11	0.51
57:c:247:A:C8	69:o:42:PHE:N	2.75	0.51
57:c:358:U:H2'	57:c:360:A:C8	2.44	0.51
57:c:400:A:P	66:l:25:ARG:HD3	2.51	0.51
57:c:625:C:O2'	57:c:939:A:N3	2.31	0.51
57:c:1470:C:H5''	57:c:1471:A:C8	2.46	0.51
57:c:1652:C:H2'	57:c:1653:C:H6	1.75	0.51
57:c:1677:C:H2'	57:c:1678:A:O4'	2.10	0.51
62:h:126:VAL:HG12	62:h:158:ASP:O	2.10	0.51
75:u:7:GLU:OE1	75:u:10:SER:OG	2.27	0.51
77:w:96:PRO:HG2	77:w:99:ILE:HG12	1.92	0.51
1:0:105:ARG:HG3	1:0:108:ARG:HH22	1.74	0.51
10:A:83:ALA:O	10:A:87:MET:HG3	2.11	0.51
11:AA:30:G:O2'	45:QQ:96:ARG:NH2	2.43	0.51
11:AA:62:A:H3'	11:AA:63:A:H8	1.75	0.51
11:AA:239:G:H2'	11:AA:240:U:C6	2.45	0.51
11:AA:279:U:H2'	11:AA:280:U:C6	2.46	0.51
11:AA:299:G:H2'	11:AA:300:G:H8	1.76	0.51
11:AA:928:C:H2'	11:AA:929:A:H8	1.76	0.51
11:AA:1033:U:O2'	11:AA:1034:U:OP1	2.26	0.51
11:AA:1282:G:H5'	18:DD:56:ASN:OD1	2.10	0.51
11:AA:1886:A:O4'	11:AA:3307:A:H5'	2.10	0.51
11:AA:3053:G:H2'	11:AA:3054:U:C6	2.46	0.51
11:AA:3138:U:O4	11:AA:3139:A:N6	2.44	0.51
13:B:39:TRP:O	13:B:114:VAL:HG12	2.10	0.51
14:BB:28:C:H5''	39:NN:137:ARG:HB3	1.92	0.51
14:BB:117:A:H2'	14:BB:118:A:H8	1.76	0.51
18:DD:46:ARG:CZ	21:Ee:123:ARG:HH21	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:DD:72:ASP:OD1	18:DD:73:PHE:N	2.43	0.51
35:LL:122:LYS:HD3	35:LL:124:ARG:HE	1.75	0.51
39:NN:7:ASN:OD1	39:NN:10:ARG:NH2	2.43	0.51
43:PP:132:LYS:HA	43:PP:135:LEU:HB2	1.93	0.51
44:Q:105:ARG:O	44:Q:109:LEU:HD23	2.11	0.51
47:S:105:VAL:HG23	47:S:108:GLN:HE21	1.75	0.51
57:c:31:C:O2'	57:c:547:U:OP1	2.27	0.51
57:c:38:C:H42	57:c:471:A:H61	1.58	0.51
57:c:297:U:H5''	62:h:37:LYS:CE	2.40	0.51
57:c:331:A:H2'	57:c:332:U:C6	2.45	0.51
57:c:332:U:H5''	66:l:31:ARG:CZ	2.40	0.51
57:c:946:U:H2'	57:c:947:U:C6	2.46	0.51
57:c:1114:G:H1'	57:c:1115:U:H5	1.75	0.51
57:c:1472:C:H2'	57:c:1535:U:O4	2.09	0.51
57:c:1685:G:H21	57:c:1717:G:C2'	2.23	0.51
59:e:81:PHE:O	59:e:82:ARG:HG2	2.11	0.51
59:e:128:LYS:HD2	59:e:129:THR:O	2.10	0.51
62:h:118:GLU:HG2	62:h:121:TYR:HE1	1.74	0.51
62:h:246:LEU:HB3	62:h:250:GLU:HG3	1.91	0.51
74:t:13:SER:O	74:t:16:LEU:HG	2.10	0.51
77:w:62:VAL:HG22	77:w:85:ARG:HD3	1.93	0.51
4:3:20:LYS:HB3	4:3:29:ARG:HG2	1.92	0.51
8:7:300:THR:HG23	8:7:313:TRP:O	2.11	0.51
10:A:49:ARG:NH2	11:AA:1190:A:H3'	2.26	0.51
11:AA:171:G:O6	11:AA:248:U:O4	2.28	0.51
11:AA:243:G:H2'	11:AA:244:G:C8	2.45	0.51
11:AA:294:U:O2'	11:AA:295:A:O4'	2.28	0.51
11:AA:625:G:H2'	11:AA:626:U:C6	2.46	0.51
11:AA:1150:A:N7	11:AA:1310:G:H5'	2.26	0.51
11:AA:1263:A:C6	21:Ee:138:SER:HB3	2.46	0.51
11:AA:1334:U:OP1	31:JJ:206:LYS:NZ	2.40	0.51
11:AA:3022:G:H22	11:AA:3031:G:H3'	1.76	0.51
12:Aa:515:ASP:HB3	12:Aa:518:VAL:HG13	1.92	0.51
17:D:92:GLN:HE21	17:D:96:ILE:HD11	1.75	0.51
20:EE:189:TYR:HA	20:EE:192:LYS:NZ	2.26	0.51
23:FF:14:LEU:HA	23:FF:17:LEU:HD13	1.91	0.51
54:Z:13:LEU:HG	54:Z:17:ARG:HE	1.76	0.51
56:b:39:CYS:HB2	56:b:57:CYS:SG	2.51	0.51
57:c:11:A:N1	57:c:1143:A:H2	2.09	0.51
57:c:388:G:O6	57:c:410:A:N6	2.44	0.51
57:c:614:C:H2'	57:c:615:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:769:A:H2'	57:c:770:A:C8	2.46	0.51
57:c:899:G:H2'	57:c:900:A:H8	1.76	0.51
57:c:919:A:OP1	71:q:18:ARG:NH2	2.44	0.51
61:g:168:ILE:HD11	61:g:189:MET:HG3	1.92	0.51
64:j:31:ARG:HD3	64:j:34:GLN:HE22	1.75	0.51
77:w:22:ILE:HD13	77:w:100:VAL:HG13	1.93	0.51
11:AA:710:A:H2'	11:AA:711:A:C8	2.45	0.51
11:AA:1022:U:H2'	11:AA:1023:C:C6	2.46	0.51
11:AA:1157:G:H2'	11:AA:1158:A:O4'	2.10	0.51
11:AA:1258:U:N3	11:AA:1261:G:OP2	2.29	0.51
11:AA:1419:A:N7	25:GG:187:LEU:HD21	2.25	0.51
11:AA:1808:G:O2'	11:AA:1809:A:OP2	2.26	0.51
11:AA:2196:C:O2'	11:AA:2270:A:H1'	2.11	0.51
12:Aa:27:HIS:HB3	12:Aa:30:HIS:ND1	2.25	0.51
12:Aa:278:LEU:HA	12:Aa:281:ILE:HD12	1.91	0.51
16:CC:119:C:H2'	16:CC:120:C:C6	2.46	0.51
23:FF:139:GLN:OE1	23:FF:139:GLN:N	2.43	0.51
23:FF:190:GLU:HA	23:FF:193:ASP:HB2	1.93	0.51
27:HH:85:ARG:NH1	27:HH:86:TYR:OH	2.43	0.51
29:II:47:PHE:HB3	29:II:50:LYS:HG3	1.91	0.51
35:LL:88:TYR:HB2	35:LL:146:LEU:HB2	1.93	0.51
36:M:47:LYS:HD3	36:M:48:TYR:HE1	1.76	0.51
55:a:27:GLN:OE1	55:a:28:TYR:N	2.44	0.51
57:c:15:U:H2'	57:c:16:G:O4'	2.10	0.51
57:c:141:U:H2'	57:c:142:G:H8	1.76	0.51
57:c:216:U:C4	57:c:242:U:H2'	2.46	0.51
57:c:1319:A:H2'	57:c:1320:U:O4'	2.11	0.51
57:c:1360:A:C2	57:c:1361:U:H1'	2.46	0.51
57:c:1615:C:H2'	63:i:81:ARG:CG	2.41	0.51
58:d:123:VAL:HG21	58:d:129:ASP:HB2	1.92	0.51
79:y:11:LEU:HD11	79:y:37:PHE:HE2	1.75	0.51
1:0:105:ARG:O	1:0:109:LYS:HD3	2.11	0.51
3:2:65:PRO:C	3:2:66:LYS:HD3	2.36	0.51
5:4:45:LYS:HD3	63:i:161:ASP:N	2.25	0.51
8:7:248:ASN:OD1	8:7:249:ARG:N	2.44	0.51
11:AA:284:A:H5''	11:AA:285:A:H5'	1.93	0.51
11:AA:833:G:H2'	11:AA:834:U:H6	1.75	0.51
11:AA:928:C:H2'	11:AA:929:A:C8	2.45	0.51
11:AA:1240:A:H2	11:AA:1248:C:H41	1.59	0.51
11:AA:2501:U:O2'	11:AA:2502:A:OP1	2.23	0.51
11:AA:3152:U:OP2	11:AA:3158:G:N2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3273:A:P	29:II:77:ARG:HH22	2.34	0.51
11:AA:3305:A:H2'	11:AA:3306:U:C2	2.45	0.51
17:D:130:ASN:O	17:D:132:PHE:N	2.44	0.51
19:E:43:TYR:CE2	19:E:122:HIS:HE1	2.26	0.51
20:EE:108:PRO:O	20:EE:111:THR:OG1	2.24	0.51
22:F:84:TYR:CD2	38:N:23:LYS:HA	2.45	0.51
25:GG:131:VAL:HG11	25:GG:134:LEU:HD23	1.93	0.51
30:J:103:TYR:O	30:J:105:VAL:HG23	2.10	0.51
39:NN:19:LEU:HB2	39:NN:69:VAL:HG12	1.92	0.51
40:O:25:LEU:HD12	40:O:87:VAL:HB	1.93	0.51
45:QQ:192:LYS:O	45:QQ:196:THR:HG23	2.10	0.51
48:T:57:VAL:O	48:T:60:GLU:HG3	2.11	0.51
49:U:88:GLU:HA	49:U:91:ASN:ND2	2.26	0.51
57:c:97:C:H2'	57:c:98:U:C6	2.45	0.51
57:c:107:C:H5''	57:c:383:G:O2'	2.11	0.51
57:c:114:C:C2	57:c:248:U:C2	2.99	0.51
57:c:1454:G:H4'	72:r:122:THR:HG21	1.92	0.51
57:c:1481:C:H1'	57:c:1482:C:H5	1.76	0.51
57:c:1739:C:H2'	57:c:1740:A:H8	1.76	0.51
62:h:152:PRO:HG2	64:j:215:ARG:NH1	2.26	0.51
69:o:85:VAL:HG22	69:o:108:PRO:HA	1.93	0.51
70:p:88:LEU:O	70:p:92:ILE:HG12	2.11	0.51
70:p:101:HIS:HA	70:p:104:ARG:CZ	2.41	0.51
75:u:48:LYS:HB2	76:v:35:ASP:CG	2.36	0.51
76:v:66:TYR:HD1	76:v:124:ILE:HD13	1.76	0.51
1:0:98:GLU:HG3	1:0:99:LYS:H	1.74	0.51
9:8:94:LYS:NZ	57:c:1249:U:OP2	2.31	0.51
11:AA:638:C:H2'	11:AA:639:G:C8	2.45	0.51
11:AA:840:C:H4'	17:D:125:LYS:HZ1	1.76	0.51
11:AA:1539:A:H2'	11:AA:1540:U:O4'	2.11	0.51
11:AA:2256:A2M:N3	11:AA:2256:A2M:HM'2	2.25	0.51
11:AA:2452:G:H3'	11:AA:2462:A:C8	2.46	0.51
11:AA:2585:G:O2'	11:AA:2586:G:H5''	2.10	0.51
11:AA:2876:C:H2'	11:AA:2877:G:O4'	2.11	0.51
11:AA:2946:A2M:H5''	11:AA:2947:G:H5'	1.92	0.51
11:AA:3111:U:H2'	11:AA:3112:G:O4'	2.10	0.51
12:Aa:300:LEU:HD22	12:Aa:305:ILE:HD11	1.92	0.51
12:Aa:823:ARG:HH22	12:Aa:833:PRO:HD3	1.75	0.51
13:B:86:LYS:HG2	13:B:90:PHE:HE2	1.75	0.51
15:C:57:ILE:HB	15:C:147:ARG:HH12	1.75	0.51
25:GG:53:SER:OG	25:GG:55:LYS:NZ	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:GG:261:VAL:HG12	25:GG:262:TRP:CD1	2.46	0.51
27:HH:126:GLU:HA	27:HH:196:ARG:CZ	2.40	0.51
53:Y:103:LEU:HB3	53:Y:111:ARG:CZ	2.41	0.51
57:c:600:U:H2'	57:c:601:A:H8	1.76	0.51
57:c:862:A:HO2'	57:c:963:A:H61	1.58	0.51
57:c:865:A:O5'	79:y:3:ARG:NH2	2.44	0.51
57:c:1214:U:O3'	57:c:1246:C:H4'	2.11	0.51
63:i:46:TRP:CH2	63:i:118:LEU:HB3	2.46	0.51
64:j:98:ARG:HE	64:j:105:ASP:HB3	1.75	0.51
64:j:193:LEU:HA	64:j:196:ARG:HD2	1.93	0.51
5:4:37:SER:O	5:4:38:ARG:HD2	2.11	0.50
11:AA:201:A:H2'	11:AA:202:G:H8	1.76	0.50
11:AA:203:G:H2'	11:AA:204:A:H8	1.76	0.50
11:AA:1165:A:H2'	11:AA:1166:G:C8	2.46	0.50
11:AA:1216:C:H2'	11:AA:1217:A:O4'	2.11	0.50
11:AA:1639:C:N4	34:L:17:ARG:HB2	2.26	0.50
11:AA:2206:G:O4'	11:AA:2208:A:N6	2.43	0.50
11:AA:2406:C:H1'	11:AA:2819:A:C4	2.46	0.50
11:AA:3049:A:H5'	23:FF:53:MET:HB3	1.92	0.50
11:AA:3131:U:H2'	11:AA:3132:C:C6	2.46	0.50
25:GG:3:ARG:HD3	25:GG:4:PRO:O	2.11	0.50
25:GG:193:LYS:O	25:GG:198:ARG:HG2	2.12	0.50
25:GG:321:LYS:HA	25:GG:324:LEU:HB3	1.93	0.50
26:H:127:PRO:O	26:H:131:SER:N	2.36	0.50
33:KK:151:VAL:HG21	33:KK:170:CYS:SG	2.51	0.50
47:S:44:CYS:SG	47:S:81:CYS:N	2.80	0.50
57:c:142:G:OP2	64:j:139:ASN:ND2	2.43	0.50
57:c:961:U:H2'	57:c:962:C:H6	1.76	0.50
57:c:1142:A:H2'	57:c:1143:A:H8	1.74	0.50
57:c:1229:G:H22	57:c:1255:G:HO2'	1.58	0.50
57:c:1234:A:H2	57:c:1252:C:N4	2.09	0.50
57:c:1333:C:O4'	61:g:162:GLN:HG3	2.11	0.50
57:c:1587:A:H1'	63:i:104:ASN:ND2	2.25	0.50
57:c:1654:G:H2'	57:c:1745:G:N2	2.26	0.50
61:g:123:VAL:O	61:g:127:MET:HG3	2.11	0.50
65:k:31:SER:HB2	65:k:34:LEU:HB3	1.91	0.50
80:z:24:TRP:HA	80:z:29:TYR:CD2	2.47	0.50
80:z:24:TRP:HA	80:z:29:TYR:HD2	1.75	0.50
4:3:3:LEU:HB2	78:x:64:GLU:OE2	2.11	0.50
11:AA:260:C:H2'	11:AA:261:U:C6	2.45	0.50
11:AA:1049:C:H2'	11:AA:1050:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1413:G:H2'	11:AA:1414:G:H8	1.75	0.50
11:AA:1910:A:H2'	11:AA:1911:A:C8	2.46	0.50
11:AA:2251:G:H2'	11:AA:2252:A:H8	1.76	0.50
11:AA:2417:OMU:H2'	11:AA:2419:A:OP2	2.12	0.50
11:AA:2500:A:O2'	11:AA:2501:U:OP1	2.24	0.50
11:AA:2632:G:O6	11:AA:2647:A:N6	2.45	0.50
11:AA:2965:U:H2'	11:AA:2966:G:N3	2.26	0.50
11:AA:3049:A:C8	23:FF:53:MET:HE2	2.46	0.50
12:Aa:115:VAL:O	12:Aa:119:LEU:N	2.36	0.50
13:B:3:ARG:NH2	16:CC:11:C:O3'	2.43	0.50
19:E:79:VAL:HG23	19:E:90:MET:HB2	1.92	0.50
21:Ee:117:ARG:HA	21:Ee:120:SER:HB2	1.93	0.50
22:F:126:VAL:HG23	22:F:127:GLN:H	1.76	0.50
23:FF:216:ASP:OD1	23:FF:278:ILE:HG13	2.11	0.50
30:J:46:TYR:CD1	48:T:75:TYR:HB3	2.46	0.50
35:LL:91:ARG:HD2	35:LL:143:GLU:HB3	1.93	0.50
40:O:9:SER:OG	40:O:10:ILE:N	2.44	0.50
57:c:249:U:H5	69:o:35:TYR:HA	1.75	0.50
57:c:332:U:OP1	66:l:31:ARG:HD2	2.12	0.50
57:c:817:A:C4	57:c:818:C:C5	2.99	0.50
57:c:868:G:H5''	70:p:91:LEU:HD21	1.92	0.50
57:c:894:U:H2'	57:c:895:G:C8	2.46	0.50
57:c:1172:G:O2'	57:c:1543:A:O2'	2.26	0.50
57:c:1250:U:H2'	57:c:1251:U:C4	2.46	0.50
57:c:1392:U:H2'	57:c:1393:C:C6	2.46	0.50
59:e:67:GLU:OE2	59:e:83:LYS:HB3	2.11	0.50
67:m:83:VAL:HG12	67:m:85:VAL:HG13	1.94	0.50
11:AA:346:C:N4	11:AA:349:A:OP2	2.23	0.50
11:AA:530:G:H2'	11:AA:531:G:C8	2.46	0.50
11:AA:1128:U:H2'	11:AA:1129:A:C8	2.46	0.50
11:AA:1489:A:OP1	47:S:10:ARG:NH1	2.44	0.50
11:AA:2390:A:N6	11:AA:2990:G:C6	2.80	0.50
11:AA:2806:U:H2'	11:AA:2807:U:H6	1.76	0.50
11:AA:3268:A:H1'	29:II:75:PRO:HG3	1.93	0.50
14:BB:23:A:H2'	14:BB:24:A:C8	2.47	0.50
29:II:131:LYS:HG3	29:II:133:GLU:HG3	1.92	0.50
39:NN:29:ARG:HG3	39:NN:123:PHE:CE1	2.42	0.50
42:P:20:LEU:HD11	42:P:28:ARG:HG2	1.93	0.50
47:S:58:ARG:HB2	47:S:61:GLN:HG2	1.93	0.50
57:c:156:A:H2'	57:c:157:A:N9	2.26	0.50
57:c:247:A:H8	69:o:41:GLY:H	1.57	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:870:C:H2'	57:c:871:G:H8	1.75	0.50
57:c:1216:C:O2	57:c:1217:A:O2'	2.26	0.50
57:c:1390:U:P	74:t:5:ARG:HH12	2.35	0.50
57:c:1639:OMC:H2'	57:c:1640:C:O4'	2.12	0.50
60:f:59:HIS:CE1	60:f:238:SER:HA	2.46	0.50
63:i:208:SER:HB3	63:i:211:ILE:HD13	1.93	0.50
64:j:74:LYS:HZ1	64:j:95:LYS:HA	1.76	0.50
66:l:42:ARG:CZ	66:l:59:ARG:HH12	2.25	0.50
1:0:113:ASN:HD22	57:c:54:C:P	2.35	0.50
2:1:73:GLY:N	57:c:1534:G:O2'	2.44	0.50
6:5:43:PHE:O	6:5:47:ALA:CB	2.51	0.50
9:8:132:LEU:HD11	9:8:138:ARG:HB2	1.92	0.50
10:A:115:LYS:HD2	11:AA:3178:A:H2'	1.93	0.50
11:AA:14:U:O2	16:CC:136:G:O2'	2.28	0.50
11:AA:118:U:O2	11:AA:121:A:H5''	2.12	0.50
11:AA:634:C:H2'	11:AA:635:G:H8	1.76	0.50
11:AA:999:G:H2'	11:AA:1000:C:C6	2.46	0.50
11:AA:1340:G:H2'	11:AA:1341:U:H6	1.77	0.50
11:AA:1729:A:OP1	40:O:88:GLY:N	2.43	0.50
11:AA:1925:U:O2'	11:AA:1927:G:N7	2.42	0.50
11:AA:2283:G:H1'	11:AA:2285:C:H41	1.76	0.50
11:AA:2295:A:C6	26:H:37:ILE:HB	2.47	0.50
11:AA:2303:A:P	54:Z:23:ARG:HH21	2.35	0.50
11:AA:2308:C:H5''	11:AA:2309:A:H2'	1.93	0.50
11:AA:2466:G:H5'	11:AA:2490:C:H41	1.76	0.50
11:AA:3042:U:OP2	11:AA:3092:C:N4	2.44	0.50
11:AA:3192:U:H2'	11:AA:3193:C:H6	1.76	0.50
12:Aa:343:PRO:HB2	12:Aa:347:THR:HG23	1.93	0.50
12:Aa:651:LYS:HG2	12:Aa:652:ALA:H	1.76	0.50
14:BB:45:A:H2'	14:BB:46:A:H8	1.77	0.50
18:DD:109:ALA:HB2	18:DD:180:PRO:HD2	1.92	0.50
35:LL:12:VAL:O	35:LL:51:GLN:HG2	2.12	0.50
37:MM:72:ALA:HB2	37:MM:155:ALA:HB2	1.94	0.50
37:MM:176:LEU:HD21	37:MM:184:LYS:HD2	1.92	0.50
40:O:17:VAL:HG11	40:O:92:ILE:HD12	1.94	0.50
57:c:443:C:N3	57:c:462:G:N1	2.59	0.50
57:c:1374:C:H2'	57:c:1375:A:H8	1.75	0.50
57:c:1465:C:H5''	73:s:139:GLN:NE2	2.23	0.50
63:i:183:ALA:N	63:i:193:THR:HG21	2.27	0.50
65:k:71:HIS:HB3	65:k:131:PHE:CZ	2.46	0.50
66:l:37:LYS:CG	66:l:59:ARG:HG2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:m:152:SER:O	67:m:156:ILE:HG12	2.11	0.50
10:A:196:ALA:O	43:PP:108:ARG:NE	2.38	0.50
11:AA:356:C:H2'	11:AA:357:A:C8	2.46	0.50
11:AA:561:C:OP1	43:PP:77:ARG:HG2	2.11	0.50
11:AA:2152:A:H2'	11:AA:2153:U:H6	1.76	0.50
11:AA:2204:C:H2'	11:AA:2205:U:O4'	2.11	0.50
11:AA:2477:G:H2'	11:AA:2477:G:N3	2.26	0.50
11:AA:2693:C:H5''	11:AA:2694:A:H5''	1.93	0.50
11:AA:2749:G:H2'	11:AA:2750:U:C6	2.47	0.50
11:AA:3165:A:H2'	11:AA:3166:C:H6	1.77	0.50
11:AA:3251:U:H2'	11:AA:3252:G:C8	2.46	0.50
11:AA:3295:A:H2'	11:AA:3296:A:H8	1.76	0.50
11:AA:3353:G:H2'	11:AA:3356:G:C2'	2.40	0.50
12:Aa:118:ALA:O	12:Aa:121:VAL:HG12	2.11	0.50
16:CC:150:G:N1	16:CC:152:G:O6	2.44	0.50
17:D:10:LEU:HD12	17:D:38:ARG:HG3	1.94	0.50
24:G:104:ARG:NH2	24:G:106:ALA:HA	2.26	0.50
57:c:477:A:H2'	57:c:478:A:C8	2.39	0.50
59:e:161:ILE:HA	59:e:164:ILE:HG12	1.94	0.50
60:f:53:ILE:HG13	60:f:56:ILE:HD11	1.93	0.50
62:h:129:VAL:HG21	62:h:154:ILE:HG22	1.92	0.50
7:6:31:LYS:C	7:6:31:LYS:HD2	2.36	0.50
11:AA:37:U:OP1	11:AA:934:G:N2	2.44	0.50
11:AA:1106:G:H5''	38:N:25:LYS:HZ1	1.77	0.50
11:AA:1690:C:P	17:D:64:ARG:HH22	2.35	0.50
11:AA:2235:C:H2'	11:AA:2236:G:H8	1.75	0.50
11:AA:2519:A:H2'	11:AA:2520:A:H8	1.75	0.50
11:AA:2883:U:O2	11:AA:2939:G:N2	2.31	0.50
17:D:62:ARG:NH1	17:D:62:ARG:HB2	2.26	0.50
17:D:138:LEU:O	17:D:142:ILE:HG12	2.12	0.50
39:NN:131:MET:HB3	39:NN:154:THR:HG21	1.92	0.50
45:QQ:73:ARG:NH1	45:QQ:86:ASN:O	2.45	0.50
57:c:617:U:H2'	57:c:618:U:C6	2.47	0.50
57:c:800:U:H2'	57:c:801:G:C8	2.46	0.50
57:c:1278:G:H2'	57:c:1279:C:O4'	2.11	0.50
57:c:1301:U:OP1	60:f:95:ARG:NH2	2.44	0.50
58:d:127:ARG:HH22	58:d:150:ASP:CG	2.20	0.50
60:f:40:LYS:O	60:f:44:LEU:HG	2.12	0.50
60:f:142:GLY:N	60:f:153:SER:O	2.22	0.50
64:j:137:ARG:HB2	64:j:140:ASN:HB2	1.94	0.50
3:2:87:ARG:HD2	3:2:91:ASP:OD1	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:21:LEU:HB3	57:c:864:U:O2	2.12	0.50
5:4:16:LEU:HB2	5:4:27:GLN:HB2	1.93	0.50
7:6:12:GLY:O	7:6:16:SER:OG	2.22	0.50
11:AA:74:G:H2'	11:AA:75:G:H8	1.77	0.50
11:AA:326:U:OP2	41:OO:31:LYS:NZ	2.26	0.50
11:AA:870:G:N2	11:AA:871:U:O4	2.34	0.50
11:AA:884:A:N7	11:AA:2139:A:C4	2.80	0.50
11:AA:1348:U:H2'	15:C:31:LYS:NZ	2.26	0.50
11:AA:2220:A2M:H2'	11:AA:2221:G:H8	1.77	0.50
11:AA:2258:U:O4	57:c:1646:C:H4'	2.11	0.50
11:AA:2877:G:H2'	11:AA:2878:G:H8	1.77	0.50
11:AA:2891:U:O2'	11:AA:3014:U:OP1	2.19	0.50
12:Aa:736:PRO:HG3	12:Aa:791:GLN:HB3	1.92	0.50
13:B:3:ARG:HH21	16:CC:12:A:P	2.35	0.50
15:C:6:THR:HG22	31:JJ:104:GLN:HE21	1.77	0.50
16:CC:37:A:C6	16:CC:104:A:C5	2.99	0.50
17:D:176:ARG:HH12	57:c:852:C:H5'	1.77	0.50
23:FF:139:GLN:HG2	23:FF:140:ASP:N	2.26	0.50
29:II:82:ARG:HH21	46:R:104:PRO:HB2	1.75	0.50
50:V:65:ARG:HH11	50:V:66:TYR:HB2	1.75	0.50
57:c:407:A:H2'	57:c:408:C:C6	2.45	0.50
57:c:1429:G:N3	77:w:72:ASN:ND2	2.60	0.50
59:e:127:VAL:HG21	59:e:176:VAL:HG21	1.93	0.50
61:g:64:ARG:HA	61:g:67:ASN:ND2	2.27	0.50
61:g:164:VAL:HA	61:g:168:ILE:HG13	1.94	0.50
64:j:57:ASP:OD2	64:j:72:ARG:NH2	2.38	0.50
65:k:4:PRO:HA	65:k:25:VAL:HG21	1.93	0.50
67:m:163:PRO:HG3	67:m:170:GLY:HA2	1.93	0.50
70:p:114:ARG:HA	70:p:117:LEU:HD12	1.94	0.50
3:2:4:LYS:HZ3	57:c:1629:G:H5''	1.77	0.50
4:3:40:CYS:O	4:3:41:LEU:HG	2.11	0.50
11:AA:1126:G:P	37:MM:14:ASN:HD21	2.35	0.50
11:AA:1383:G:OP1	25:GG:203:ARG:HD3	2.12	0.50
11:AA:2101:C:O2'	11:AA:2102:U:OP1	2.25	0.50
11:AA:2291:A:H2'	11:AA:2292:U:H6	1.76	0.50
11:AA:2546:C:N3	11:AA:2547:A:N6	2.60	0.50
11:AA:2629:U:O2'	11:AA:2758:A:O2'	2.22	0.50
11:AA:2638:C:C2	11:AA:2639:G:C8	3.00	0.50
11:AA:2843:U:O2	11:AA:2843:U:H2'	2.12	0.50
14:BB:55:A:O2'	39:NN:152:HIS:ND1	2.44	0.50
16:CC:51:G:O2'	16:CC:52:A:OP2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:II:58:LEU:HD23	29:II:103:VAL:HG22	1.93	0.50
32:K:60:ARG:HB2	32:K:103:LYS:HD2	1.94	0.50
43:PP:48:GLY:HA3	43:PP:53:VAL:HB	1.94	0.50
44:Q:82:LEU:HD11	44:Q:112:ALA:HB2	1.93	0.50
50:V:27:PHE:HA	50:V:34:CYS:HA	1.94	0.50
57:c:43:A:H2'	57:c:44:U:C6	2.47	0.50
57:c:394:C:N4	57:c:401:A:H62	2.03	0.50
57:c:1626:U:H2'	57:c:1627:U:C6	2.46	0.50
57:c:1647:U:H2'	57:c:1648:A:C8	2.47	0.50
57:c:1737:G:H2'	57:c:1738:U:H6	1.76	0.50
62:h:100:ARG:HB2	62:h:114:ILE:HD13	1.94	0.50
63:i:80:LYS:HB2	63:i:83:ARG:HE	1.76	0.50
64:j:137:ARG:NH2	64:j:176:GLN:O	2.45	0.50
66:l:113:PHE:CE2	66:l:119:GLN:HB3	2.47	0.50
66:l:172:ARG:CZ	66:l:175:GLN:HG3	2.42	0.50
11:AA:68:C:H41	11:AA:315:C:P	2.35	0.50
11:AA:428:A:H2'	11:AA:429:U:C6	2.47	0.50
11:AA:550:A:H2'	11:AA:551:A:C8	2.47	0.50
11:AA:869:G:C2	11:AA:891:G:C6	3.00	0.50
11:AA:1359:C:H2'	11:AA:1360:C:H6	1.76	0.50
11:AA:1475:A:H4'	42:P:57:GLN:HG3	1.94	0.50
11:AA:1666:G:H2'	11:AA:1667:A:C8	2.46	0.50
11:AA:2199:G:H2'	11:AA:2200:U:C6	2.46	0.50
11:AA:2615:G:H2'	11:AA:2616:C:H6	1.76	0.50
11:AA:2880:U:O2	23:FF:250:ALA:HB3	2.11	0.50
12:Aa:130:ASP:CG	12:Aa:159:LYS:HD2	2.37	0.50
12:Aa:185:VAL:HA	12:Aa:188:ILE:HD12	1.94	0.50
25:GG:222:VAL:HG23	25:GG:225:VAL:HB	1.94	0.50
27:HH:146:LEU:HD12	27:HH:147:ASP:N	2.27	0.50
28:I:47:ARG:HH12	28:I:59:HIS:CD2	2.30	0.50
29:II:142:ASP:OD1	29:II:143:LYS:N	2.45	0.50
32:K:69:LYS:HD3	32:K:70:ILE:O	2.12	0.50
34:L:85:TYR:HE2	34:L:129:TRP:CD2	2.30	0.50
35:LL:41:ILE:HD11	35:LL:67:ALA:HB1	1.93	0.50
44:Q:34:LYS:NZ	44:Q:52:GLN:OE1	2.45	0.50
49:U:47:ILE:HG13	49:U:48:ALA:H	1.76	0.50
57:c:157:A:O2'	57:c:158:U:H5'	2.12	0.50
57:c:356:G:H2'	57:c:357:G:C8	2.47	0.50
57:c:1294:G:O2'	57:c:1321:A:N1	2.43	0.50
57:c:1328:G:H3'	57:c:1329:A:H8	1.76	0.50
57:c:1336:A:O2'	57:c:1337:A:O4'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1760:G:H1'	57:c:1781:MA6:H2	1.92	0.50
60:f:168:ARG:HG2	60:f:170:ILE:HD11	1.94	0.50
65:k:150:GLN:HB3	65:k:181:ILE:HG22	1.93	0.50
66:l:103:GLN:OE1	66:l:164:ARG:HD2	2.10	0.50
72:r:77:ARG:HA	72:r:95:GLY:O	2.12	0.50
73:s:13:LYS:CD	73:s:79:TYR:HB3	2.41	0.50
79:y:72:CYS:HB3	79:y:129:VAL:HG23	1.93	0.50
80:z:13:ARG:HG2	80:z:16:ARG:HE	1.77	0.50
11:AA:32:U:H3	11:AA:52:A:H61	1.60	0.49
11:AA:63:A:H2'	11:AA:64:G:C8	2.47	0.49
11:AA:66:A:H1'	45:QQ:176:LYS:HD3	1.94	0.49
11:AA:266:A:C8	49:U:30:LYS:HE2	2.47	0.49
11:AA:549:U:H2'	11:AA:550:A:C8	2.47	0.49
11:AA:1194:G:H2'	11:AA:1195:A:C8	2.47	0.49
11:AA:1655:G:N2	11:AA:1801:U:O4	2.45	0.49
11:AA:2157:G:H4'	11:AA:2158:A:H5'	1.94	0.49
11:AA:2598:G:C6	11:AA:2599:U:C4	3.00	0.49
11:AA:2623:G:C5	11:AA:2624:G:C5	2.99	0.49
12:Aa:85:ASP:CG	12:Aa:223:ARG:HH12	2.20	0.49
12:Aa:155:VAL:O	12:Aa:209:VAL:HA	2.11	0.49
21:Ee:65:GLN:HG2	21:Ee:65:GLN:O	2.12	0.49
24:G:57:THR:OG1	24:G:64:THR:OG1	2.29	0.49
57:c:178:U:O3'	57:c:179:A:H8	1.95	0.49
57:c:372:G:N2	57:c:613:G:H1	2.10	0.49
57:c:614:C:H2'	57:c:615:A:C8	2.47	0.49
57:c:992:A:H2	57:c:1012:U:H3	1.60	0.49
57:c:1266:U:H2'	57:c:1267:G:C8	2.46	0.49
57:c:1593:A:H3'	57:c:1605:G:H21	1.77	0.49
57:c:1685:G:H21	57:c:1717:G:H3'	1.77	0.49
60:f:164:SER:O	60:f:202:GLY:HA3	2.12	0.49
61:g:74:GLN:HE21	61:g:82:GLY:H	1.60	0.49
62:h:173:ILE:HD11	62:h:235:TYR:HE2	1.75	0.49
64:j:22:HIS:O	64:j:25:ARG:NH2	2.45	0.49
64:j:180:THR:HG22	64:j:182:GLN:H	1.76	0.49
65:k:96:ARG:CD	65:k:124:LYS:HZ2	2.23	0.49
66:l:67:TRP:NE1	66:l:70:GLU:OE1	2.45	0.49
67:m:52:ILE:HD11	67:m:76:LEU:HD11	1.93	0.49
67:m:108:ARG:NH1	67:m:145:SER:HB3	2.27	0.49
73:s:123:ARG:NH1	73:s:124:PRO:O	2.45	0.49
76:v:30:VAL:HG22	76:v:54:PHE:HB3	1.93	0.49
4:3:30:SER:OG	57:c:959:U:OP1	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:27:GLN:NE2	5:4:43:ASN:OD1	2.45	0.49
11:AA:715:A:OP1	36:M:133:LEU:HB3	2.12	0.49
11:AA:1364:C:H5''	15:C:3:ILE:HD12	1.94	0.49
11:AA:2193:U:H5'	11:AA:2194:G:H5'	1.94	0.49
12:Aa:159:LYS:HG2	84:Aa:901:GTP:C6	2.47	0.49
14:BB:46:A:H2'	14:BB:47:C:C6	2.46	0.49
15:C:54:LEU:HD22	15:C:58:ASN:HB3	1.93	0.49
16:CC:155:A:C6	16:CC:156:U:C2	3.00	0.49
19:E:9:VAL:HG13	19:E:61:ILE:HG22	1.93	0.49
35:LL:90:MET:HB3	35:LL:144:ILE:HG12	1.94	0.49
39:NN:35:LYS:HA	39:NN:38:GLU:HB3	1.94	0.49
50:V:52:LYS:HA	50:V:55:ARG:CD	2.42	0.49
57:c:30:G:H2'	57:c:31:C:C6	2.47	0.49
57:c:742:U:H1'	65:k:107:ARG:HG3	1.94	0.49
57:c:1048:G:O2'	57:c:1049:U:H5'	2.12	0.49
57:c:1781:MA6:H8	57:c:1781:MA6:O5'	2.11	0.49
58:d:93:THR:HB	58:d:185:ARG:HH22	1.77	0.49
59:e:24:PHE:HZ	71:q:39:ILE:HG13	1.76	0.49
68:n:68:LEU:HD23	68:n:68:LEU:H	1.77	0.49
6:5:13:ARG:HG3	6:5:14:TYR:CD1	2.47	0.49
7:6:40:TYR:HD1	7:6:44:PHE:HD2	1.60	0.49
8:7:247:PRO:HG2	8:7:297:ASP:HA	1.93	0.49
11:AA:637:C:C2	11:AA:638:C:C5	3.00	0.49
11:AA:897:U:H2'	11:AA:898:OMU:C6	2.42	0.49
11:AA:903:U:H2'	11:AA:904:A:H8	1.77	0.49
11:AA:1034:U:H2'	11:AA:1035:G:O4'	2.12	0.49
11:AA:2198:A:C5	11:AA:2199:G:C8	3.00	0.49
11:AA:2255:A:O2'	57:c:1757:G:O2'	2.24	0.49
11:AA:2427:U:H2'	11:AA:2428:U:H6	1.74	0.49
11:AA:2651:G:O2'	11:AA:2796:G:O6	2.29	0.49
11:AA:3097:C:H2'	11:AA:3098:G:H8	1.77	0.49
11:AA:3190:C:H2'	11:AA:3191:G:C8	2.43	0.49
11:AA:3242:G:N7	23:FF:150:ARG:NH1	2.56	0.49
12:Aa:563:TYR:O	12:Aa:564:ARG:HD2	2.11	0.49
12:Aa:760:ARG:HH11	12:Aa:763:THR:HG23	1.76	0.49
14:BB:66:A:H2'	14:BB:67:G:O4'	2.10	0.49
14:BB:92:A:O2'	37:MM:57:LEU:O	2.29	0.49
19:E:149:LYS:HD2	43:PP:16:GLU:HG2	1.94	0.49
23:FF:232:ARG:NH1	23:FF:266:ARG:O	2.45	0.49
25:GG:3:ARG:NE	25:GG:22:LEU:HB2	2.28	0.49
27:HH:181:PRO:O	27:HH:190:ILE:HD11	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:K:81:GLN:OE1	32:K:97:ILE:N	2.45	0.49
35:LL:93:VAL:HG22	53:Y:82:LEU:HD21	1.94	0.49
35:LL:129:ARG:HG3	35:LL:157:ASN:HD21	1.77	0.49
37:MM:52:LEU:O	37:MM:135:ILE:N	2.36	0.49
45:QQ:65:ARG:HG3	45:QQ:129:TYR:CE1	2.46	0.49
57:c:68:A:N3	64:j:160:ARG:NH2	2.60	0.49
57:c:125:U:OP1	64:j:201:GLN:NE2	2.45	0.49
57:c:156:A:C2	57:c:415:C:H1'	2.46	0.49
57:c:320:U:H3'	57:c:321:C:H2'	1.94	0.49
57:c:953:G:H2'	57:c:954:G:H8	1.77	0.49
57:c:1148:C:H2'	57:c:1149:G:C8	2.41	0.49
57:c:1579:U:H2'	57:c:1580:C:C6	2.47	0.49
59:e:191:GLU:HG3	59:e:194:ASN:HB2	1.94	0.49
62:h:9:LEU:O	62:h:27:TYR:HB2	2.12	0.49
65:k:26:GLU:O	65:k:30:SER:OG	2.26	0.49
74:t:102:VAL:HB	74:t:106:THR:HB	1.93	0.49
77:w:24:ILE:HG12	77:w:116:VAL:HG13	1.94	0.49
80:z:44:GLY:H	80:z:78:LYS:HZ2	1.58	0.49
11:AA:288:C:H2'	11:AA:289:A:C8	2.48	0.49
11:AA:422:A:N1	11:AA:2362:C:O2'	2.45	0.49
11:AA:597:G:H2'	11:AA:598:A:H8	1.77	0.49
11:AA:980:A:H2'	11:AA:981:U:C2	2.47	0.49
11:AA:1085:A:H2'	11:AA:1086:C:C6	2.47	0.49
11:AA:1170:A:H2'	11:AA:1171:G:O4'	2.12	0.49
11:AA:1668:G:H2'	11:AA:1669:C:H6	1.75	0.49
11:AA:2174:G:P	20:EE:193:ARG:HH21	2.34	0.49
11:AA:2561:A:N3	33:KK:32:LYS:HD2	2.28	0.49
12:Aa:150:ARG:NH1	12:Aa:354:GLU:OE2	2.44	0.49
12:Aa:248:SER:HA	12:Aa:259:ASN:HA	1.94	0.49
14:BB:5:G:OP1	39:NN:143:ARG:NH2	2.35	0.49
16:CC:119:C:H2'	16:CC:120:C:H6	1.77	0.49
27:HH:126:GLU:HG2	27:HH:196:ARG:NH2	2.28	0.49
35:LL:93:VAL:HG22	53:Y:82:LEU:HD11	1.94	0.49
35:LL:112:ILE:HG22	35:LL:126:VAL:O	2.12	0.49
37:MM:97:LEU:HD11	37:MM:126:ALA:HB2	1.95	0.49
57:c:160:C:H2'	57:c:161:U:O4'	2.12	0.49
57:c:651:G:H8	57:c:651:G:O5'	1.94	0.49
57:c:882:U:H2'	57:c:883:C:C6	2.46	0.49
57:c:922:G:H2'	57:c:923:A:C8	2.47	0.49
57:c:1173:C:H2'	57:c:1174:C:C5	2.46	0.49
57:c:1366:U:H2'	57:c:1367:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1480:G:H2'	57:c:1481:C:C2	2.47	0.49
57:c:1601:G:C5	76:v:89:ARG:HD2	2.47	0.49
57:c:1685:G:H21	57:c:1717:G:H2'	1.76	0.49
64:j:79:LYS:HZ1	64:j:90:GLY:H	1.61	0.49
64:j:137:ARG:NH2	64:j:177:ARG:HB2	2.28	0.49
70:p:123:HIS:O	70:p:127:ARG:HG2	2.13	0.49
1:0:92:VAL:HG22	1:0:98:GLU:HA	1.95	0.49
8:7:312:VAL:O	8:7:313:TRP:HD1	1.96	0.49
10:A:73:PHE:CD2	10:A:78:ARG:HB3	2.48	0.49
10:A:108:ILE:HD12	10:A:160:ARG:CZ	2.43	0.49
11:AA:559:A:C5	11:AA:560:G:HI'	2.47	0.49
11:AA:1105:A:H2'	11:AA:1106:G:C8	2.48	0.49
11:AA:1138:U:H2'	11:AA:1139:G:C8	2.48	0.49
11:AA:1647:A:H2'	11:AA:1648:A:C8	2.47	0.49
11:AA:2833:A:C6	11:AA:2856:G:C6	3.01	0.49
11:AA:2840:C:H2'	11:AA:2841:G:O4'	2.13	0.49
12:Aa:565:GLU:OE2	12:Aa:679:GLU:HB2	2.12	0.49
14:BB:110:G:OP1	27:HH:282:ARG:NH2	2.45	0.49
17:D:62:ARG:HB2	17:D:62:ARG:HH11	1.78	0.49
17:D:146:LYS:C	17:D:150:GLN:HE21	2.21	0.49
28:I:6:ASP:OD2	28:I:32:GLN:HG2	2.12	0.49
30:J:27:ARG:HH11	33:KK:52:TRP:HH2	1.59	0.49
37:MM:75:TYR:O	37:MM:79:VAL:HG12	2.13	0.49
39:NN:11:ASP:CG	39:NN:13:LYS:HZ2	2.18	0.49
41:OO:83:ALA:HA	41:OO:117:LYS:HE3	1.94	0.49
43:PP:44:VAL:HG23	43:PP:46:ILE:HD11	1.94	0.49
43:PP:50:LYS:HZ1	43:PP:82:SER:HB2	1.77	0.49
57:c:82:U:H2'	57:c:83:G:O4'	2.11	0.49
57:c:472:U:OP1	67:m:11:THR:OG1	2.24	0.49
57:c:572:C:P	80:z:114:LYS:HB2	2.52	0.49
57:c:888:U:H2'	57:c:889:U:C6	2.48	0.49
57:c:918:U:H2'	57:c:919:A:H8	1.76	0.49
57:c:997:G:H2'	57:c:998:A:C8	2.43	0.49
57:c:1141:G:H2'	57:c:1142:A:C8	2.48	0.49
57:c:1337:A:N6	57:c:1387:G:H22	2.10	0.49
57:c:1357:A:O2'	76:v:126:GLU:HG3	2.12	0.49
57:c:1686:C:H41	57:c:1716:C:H4'	1.78	0.49
63:i:41:LYS:NZ	63:i:42:LEU:O	2.33	0.49
70:p:98:VAL:HB	70:p:115:LEU:HD13	1.95	0.49
74:t:21:TYR:CD2	74:t:22:PRO:HD3	2.47	0.49
1:0:56:SER:HB2	1:0:74:LEU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:33:LEU:HA	4:3:80:ARG:O	2.13	0.49
11:AA:269:G:OP2	45:QQ:44:ARG:NH1	2.45	0.49
11:AA:536:U:C2	11:AA:537:A:C8	3.00	0.49
11:AA:567:G:H2'	11:AA:568:G:C8	2.47	0.49
11:AA:590:G:C2	11:AA:610:G:H2'	2.48	0.49
11:AA:1225:A:C4	11:AA:1226:G:C8	3.01	0.49
11:AA:1679:A:H2'	11:AA:1680:G:H8	1.77	0.49
11:AA:2184:U:H2'	11:AA:2185:G:C8	2.48	0.49
11:AA:2517:U:H2'	11:AA:2518:C:C6	2.46	0.49
11:AA:2723:U:H2'	11:AA:2724:OMU:C6	2.43	0.49
11:AA:3222:U:H1'	11:AA:3264:G:H22	1.78	0.49
11:AA:3308:C:N3	13:B:69:ARG:NH2	2.46	0.49
12:Aa:27:HIS:ND1	12:Aa:138:GLN:HB3	2.27	0.49
12:Aa:120:ARG:HH22	12:Aa:481:MET:HA	1.76	0.49
12:Aa:822:ALA:HA	12:Aa:825:ARG:HG2	1.94	0.49
14:BB:47:C:H2'	14:BB:48:U:H6	1.77	0.49
16:CC:27:U:H2'	16:CC:28:C:H6	1.76	0.49
17:D:20:ARG:HG3	17:D:21:LYS:HG3	1.95	0.49
17:D:45:VAL:HG22	17:D:50:ILE:HB	1.95	0.49
18:DD:30:VAL:HG23	18:DD:83:ASN:HB3	1.94	0.49
24:G:19:VAL:HG12	24:G:105:LEU:HD12	1.95	0.49
25:GG:266:THR:HG23	25:GG:267:VAL:HG23	1.94	0.49
26:H:30:GLY:O	26:H:66:LYS:N	2.46	0.49
26:H:95:PHE:HE2	26:H:117:PRO:HB2	1.76	0.49
37:MM:52:LEU:HB3	37:MM:136:PHE:HB2	1.94	0.49
42:P:101:ALA:HA	42:P:104:LEU:HD12	1.95	0.49
46:R:73:ARG:NE	46:R:82:ARG:HH12	2.09	0.49
57:c:98:U:H2'	57:c:99:C:C6	2.48	0.49
57:c:107:C:OP1	57:c:384:G:H5'	2.13	0.49
57:c:873:U:H3	57:c:954:G:H1	1.58	0.49
57:c:1367:G:H2'	57:c:1368:G:C8	2.46	0.49
57:c:1403:C:H2'	57:c:1404:C:H6	1.77	0.49
57:c:1652:C:H2'	57:c:1653:C:C6	2.48	0.49
59:e:127:VAL:HG21	59:e:176:VAL:HG11	1.93	0.49
66:l:143:TRP:HE3	66:l:143:TRP:H	1.60	0.49
10:A:32:LYS:HG2	10:A:101:ARG:HG3	1.92	0.49
11:AA:818:C:O2'	50:V:7:SER:HB2	2.12	0.49
11:AA:930:U:H2'	11:AA:931:C:C6	2.48	0.49
11:AA:1004:U:C2	11:AA:1005:G:C8	3.00	0.49
11:AA:1062:A:H4'	22:F:105:PHE:CZ	2.47	0.49
11:AA:1593:A:O2'	11:AA:1594:A:O4'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1920:U:O2'	11:AA:1932:A:N7	2.42	0.49
11:AA:2545:C:H2'	11:AA:2546:C:C6	2.47	0.49
11:AA:3205:G:OP2	11:AA:3206:C:N4	2.46	0.49
15:C:150:VAL:HA	15:C:153:PHE:CD2	2.48	0.49
19:E:36:ILE:HD13	31:JJ:224:ILE:HB	1.94	0.49
22:F:92:ARG:HB3	22:F:94:GLU:OE1	2.12	0.49
23:FF:168:LYS:C	23:FF:319:ASN:HD21	2.20	0.49
23:FF:358:TRP:CG	28:I:1:MET:HE1	2.47	0.49
25:GG:230:VAL:HA	25:GG:233:LEU:HD21	1.95	0.49
36:M:77:LYS:O	36:M:79:TRP:N	2.45	0.49
45:QQ:106:VAL:HG11	45:QQ:132:VAL:HG11	1.95	0.49
45:QQ:115:VAL:HB	45:QQ:160:GLU:HG2	1.94	0.49
45:QQ:122:ASN:OD1	45:QQ:123:GLN:N	2.45	0.49
49:U:51:SER:O	49:U:54:GLU:HG3	2.12	0.49
57:c:59:C:O2'	57:c:60:U:OP2	2.30	0.49
57:c:95:G:H21	57:c:460:A:H5''	1.77	0.49
57:c:521:A:H2	57:c:532:U:H3	1.55	0.49
57:c:1415:U:H2'	57:c:1416:G:N7	2.27	0.49
57:c:1477:G:H2'	57:c:1478:G:C8	2.48	0.49
59:e:66:VAL:HG12	71:q:34:SER:HA	1.94	0.49
70:p:146:ALA:O	70:p:150:VAL:HG22	2.12	0.49
74:t:84:TYR:CD2	74:t:85:VAL:HG23	2.48	0.49
3:2:6:ALA:HB2	57:c:1796:C:H42	1.78	0.49
3:2:43:ASN:ND2	3:2:46:GLU:HB3	2.26	0.49
11:AA:63:A:H5''	45:QQ:174:ILE:HD13	1.93	0.49
11:AA:359:U:C2'	11:AA:360:G:H5'	2.43	0.49
11:AA:604:G:H2'	11:AA:605:U:C6	2.48	0.49
11:AA:1033:U:H2'	11:AA:1034:U:C6	2.48	0.49
11:AA:1157:G:O2'	11:AA:1169:A:N3	2.43	0.49
11:AA:2655:U:H1'	11:AA:2656:A:C2	2.47	0.49
11:AA:2980:U:H2'	11:AA:2981:U:C6	2.48	0.49
11:AA:2989:U:H2'	11:AA:2990:G:O4'	2.12	0.49
11:AA:3179:U:O4	11:AA:3208:G:N2	2.46	0.49
12:Aa:243:ARG:O	12:Aa:243:ARG:NH1	2.36	0.49
20:EE:32:LEU:HD13	20:EE:163:ARG:HE	1.78	0.49
35:LL:90:MET:HE2	35:LL:90:MET:HA	1.95	0.49
36:M:77:LYS:C	36:M:79:TRP:H	2.20	0.49
39:NN:59:ILE:HG12	39:NN:65:ILE:HG21	1.95	0.49
44:Q:80:LYS:O	44:Q:84:THR:HG23	2.12	0.49
45:QQ:140:LYS:HD3	45:QQ:143:ARG:HD3	1.95	0.49
57:c:77:U:O2'	57:c:78:A:OP2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:485:A:N7	57:c:504:U:C2	2.81	0.49
57:c:541:A2M:OP2	57:c:541:A2M:H4'	2.12	0.49
57:c:1047:G:H2'	57:c:1048:G:C8	2.47	0.49
57:c:1406:A:H2'	57:c:1407:U:C6	2.47	0.49
57:c:1533:C:H4'	57:c:1539:G:N1	2.28	0.49
60:f:140:ARG:NE	60:f:141:ARG:O	2.31	0.49
62:h:35:PRO:HD2	62:h:83:PRO:HG2	1.95	0.49
76:v:53:TRP:HZ3	76:v:100:ILE:HD12	1.78	0.49
2:1:98:GLN:HG3	63:i:116:HIS:CG	2.48	0.49
8:7:276:PRO:HG3	8:7:305:TYR:CE2	2.48	0.49
10:A:193:GLN:O	10:A:197:LEU:HG	2.13	0.49
11:AA:101:G:N2	11:AA:101:G:OP2	2.45	0.49
11:AA:200:C:N4	11:AA:217:U:H2'	2.28	0.49
11:AA:358:G:H21	11:AA:360:G:H8	1.61	0.49
11:AA:585:A:H2'	11:AA:586:C:H6	1.77	0.49
11:AA:837:A:OP2	56:b:4:ARG:NH2	2.37	0.49
11:AA:1295:G:H2'	11:AA:1296:C:C6	2.48	0.49
11:AA:1529:A:OP1	11:AA:1592:G:N1	2.28	0.49
11:AA:2149:A:OP1	20:EE:196:TRP:NE1	2.24	0.49
11:AA:2483:G:C6	11:AA:2486:A:H2'	2.48	0.49
11:AA:2671:A:H2'	11:AA:2672:G:O4'	2.12	0.49
11:AA:3066:U:H2'	11:AA:3067:C:H6	1.77	0.49
11:AA:3212:C:H2'	11:AA:3213:A:C8	2.48	0.49
11:AA:3384:U:H2'	11:AA:3385:U:C6	2.47	0.49
12:Aa:18:ASN:O	12:Aa:99:LEU:N	2.45	0.49
12:Aa:587:TYR:HB2	12:Aa:690:ASP:HB2	1.94	0.49
12:Aa:783:GLU:HA	12:Aa:786:GLN:HB3	1.94	0.49
13:B:26:PHE:HA	13:B:144:SER:OG	2.13	0.49
14:BB:119:U:H2'	14:BB:120:C:C6	2.47	0.49
17:D:98:ARG:NH1	17:D:101:VAL:HG11	2.28	0.49
22:F:93:VAL:HA	22:F:96:ILE:HG12	1.95	0.49
25:GG:184:SER:CB	25:GG:202:ARG:HG2	2.42	0.49
34:L:4:PHE:CE2	40:O:62:LEU:HD13	2.48	0.49
57:c:90:C:O2'	57:c:451:A:H5''	2.13	0.49
57:c:918:U:H2'	57:c:919:A:C8	2.48	0.49
57:c:1079:U:H2'	57:c:1080:U:C6	2.48	0.49
57:c:1147:A:H2'	57:c:1148:C:C6	2.48	0.49
57:c:1303:U:C4	57:c:1304:G:C6	3.00	0.49
57:c:1507:G:H2'	57:c:1508:U:C5	2.48	0.49
58:d:131:GLN:HG2	58:d:132:ALA:N	2.28	0.49
59:e:105:PHE:HD2	59:e:109:LYS:HZ1	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:e:137:ILE:HD11	59:e:212:VAL:HG13	1.94	0.49
63:i:148:ARG:CZ	63:i:157:ARG:HD3	2.43	0.49
65:k:64:VAL:HG23	65:k:67:LEU:CB	2.43	0.49
66:l:67:TRP:CD1	66:l:70:GLU:H	2.31	0.49
77:w:38:SER:HA	77:w:41:ILE:HG22	1.93	0.49
78:x:4:ASP:O	78:x:5:LYS:HG2	2.13	0.49
1:0:28:LEU:HD23	1:0:30:PRO:HD3	1.94	0.49
11:AA:659:G:H21	11:AA:1435:A:N6	2.03	0.49
11:AA:1386:A:H5''	25:GG:141:ARG:NH2	2.27	0.49
11:AA:1574:C:H3'	11:AA:1575:A:H8	1.76	0.49
11:AA:2130:G:N2	11:AA:2132:C:H5'	2.27	0.49
11:AA:2423:U:H2'	11:AA:2424:A:C8	2.48	0.49
11:AA:2500:A:H2'	11:AA:2501:U:C6	2.47	0.49
11:AA:2590:A:H2'	11:AA:2591:A:H8	1.77	0.49
11:AA:3151:U:OP1	23:FF:128:LYS:NZ	2.44	0.49
11:AA:3292:A:H2'	11:AA:3293:U:C6	2.47	0.49
14:BB:44:C:OP2	39:NN:137:ARG:NE	2.45	0.49
14:BB:70:U:H2'	14:BB:71:G:C8	2.47	0.49
15:C:145:ASN:O	15:C:145:ASN:ND2	2.46	0.49
16:CC:26:U:H2'	16:CC:27:U:H6	1.77	0.49
27:HH:109:THR:HG22	27:HH:113:LEU:HD12	1.94	0.49
36:M:96:LYS:HA	36:M:122:PRO:HG3	1.95	0.49
37:MM:147:VAL:O	37:MM:151:GLY:N	2.39	0.49
40:O:58:TYR:CE1	47:S:97:GLU:HG3	2.47	0.49
57:c:186:C:H3'	66:l:142:LYS:HE3	1.94	0.49
57:c:1177:C:C2	57:c:1178:G:C8	3.01	0.49
57:c:1741:U:H2'	57:c:1742:U:C6	2.48	0.49
61:g:6:SER:OG	61:g:7:LYS:N	2.43	0.49
61:g:140:GLY:HA3	61:g:182:LEU:HG	1.94	0.49
63:i:149:VAL:HG21	63:i:158:GLN:HG3	1.94	0.49
4:3:35:VAL:HG12	4:3:79:PHE:HB3	1.95	0.48
11:AA:155:G:H21	49:U:26:ILE:HD11	1.78	0.48
11:AA:217:U:O3'	32:K:100:HIS:NE2	2.45	0.48
11:AA:294:U:OP1	45:QQ:15:GLN:NE2	2.46	0.48
11:AA:812:G:H2'	11:AA:813:G:H8	1.77	0.48
11:AA:1324:U:H2'	11:AA:1325:U:C6	2.48	0.48
11:AA:2176:U:OP2	20:EE:128:ARG:NH2	2.45	0.48
11:AA:2267:C:C4	11:AA:2268:U:C4	3.01	0.48
11:AA:2480:A:H3'	11:AA:2481:G:H2'	1.95	0.48
11:AA:2770:G:N2	11:AA:2789:U:C2	2.81	0.48
13:B:28:ASN:O	13:B:32:THR:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BB:48:U:H1'	27:HH:222:LEU:HD12	1.95	0.48
19:E:77:VAL:HG22	19:E:126:VAL:HG22	1.95	0.48
29:II:41:ILE:O	29:II:41:ILE:HG13	2.12	0.48
33:KK:178:ALA:HB2	33:KK:218:ILE:HG21	1.94	0.48
39:NN:10:ARG:O	39:NN:133:ARG:NH2	2.46	0.48
48:T:30:GLU:HG3	48:T:34:GLN:OE1	2.12	0.48
57:c:915:A:N3	57:c:915:A:H2'	2.26	0.48
57:c:1181:U:O2'	72:r:126:VAL:HG13	2.13	0.48
57:c:1335:U:O4	57:c:1336:A:N6	2.46	0.48
57:c:1527:C:H2'	57:c:1528:U:O2	2.13	0.48
58:d:122:ILE:HA	58:d:144:ILE:O	2.13	0.48
59:e:70:LEU:HD12	59:e:84:ILE:HD11	1.95	0.48
59:e:180:THR:H	59:e:183:GLN:CD	2.21	0.48
65:k:51:VAL:HG23	65:k:55:LYS:HE3	1.93	0.48
65:k:114:ARG:O	65:k:117:THR:OG1	2.29	0.48
76:v:9:VAL:HG21	76:v:13:ASP:HB2	1.95	0.48
80:z:73:ARG:HB3	80:z:82:LYS:NZ	2.27	0.48
8:7:48:THR:H	8:7:55:GLY:HA2	1.77	0.48
8:7:267:PRO:HD2	8:7:269:TYR:HE1	1.76	0.48
11:AA:87:U:H2'	11:AA:88:A:C8	2.49	0.48
11:AA:340:C:N4	11:AA:341:G:O6	2.46	0.48
11:AA:412:G:H2'	11:AA:413:U:H6	1.77	0.48
11:AA:718:G:N2	11:AA:721:G:O2'	2.46	0.48
11:AA:821:U:H2'	11:AA:822:G:H8	1.77	0.48
11:AA:995:U:H2'	11:AA:996:A:H8	1.79	0.48
11:AA:1288:U:H2'	11:AA:1289:G:C8	2.40	0.48
11:AA:2816:G:O2'	11:AA:2869:U:OP2	2.28	0.48
16:CC:97:A:OP1	48:T:63:ARG:NH2	2.39	0.48
21:Ee:150:ASP:O	21:Ee:154:GLY:N	2.29	0.48
32:K:40:ARG:HH11	32:K:46:LYS:HE2	1.78	0.48
37:MM:208:ASN:O	37:MM:212:GLU:HG2	2.12	0.48
54:Z:4:LYS:HB3	54:Z:5:TRP:CD1	2.47	0.48
57:c:32:U:H2'	57:c:33:U:O4'	2.14	0.48
57:c:414:OMC:HM22	57:c:414:OMC:H1'	1.55	0.48
57:c:551:G:H2'	57:c:552:G:C8	2.48	0.48
57:c:610:G:OP2	80:z:19:ARG:NH1	2.46	0.48
57:c:689:G:N1	57:c:690:G:C6	2.81	0.48
57:c:749:U:OP1	79:y:82:LYS:NZ	2.29	0.48
57:c:878:G:H2'	57:c:879:G:H8	1.77	0.48
58:d:57:LEU:HD11	58:d:173:ILE:HG23	1.94	0.48
60:f:148:LEU:HD21	67:m:95:TYR:CZ	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:h:55:ALA:HB1	62:h:60:GLU:HG3	1.96	0.48
67:m:148:VAL:HG23	67:m:152:SER:HB2	1.95	0.48
80:z:18:HIS:O	80:z:22:ASN:ND2	2.31	0.48
3:2:82:ARG:NH2	57:c:1153:G:H5''	2.29	0.48
11:AA:66:A:N6	11:AA:76:G:H1'	2.28	0.48
11:AA:176:G:C2	11:AA:243:G:C5	3.01	0.48
11:AA:608:A:OP1	25:GG:315:LYS:NZ	2.34	0.48
11:AA:805:OMG:H2'	11:AA:936:A:H61	1.78	0.48
11:AA:904:A:H2'	11:AA:905:U:C6	2.48	0.48
11:AA:1012:G:H2'	11:AA:1013:G:H8	1.77	0.48
11:AA:1034:U:C4	11:AA:1035:G:C5	3.01	0.48
11:AA:1178:G:N3	11:AA:1328:C:O2'	2.46	0.48
11:AA:1240:A:N6	11:AA:1244:A:O2'	2.46	0.48
11:AA:1461:A:H2'	11:AA:1462:A:H8	1.78	0.48
11:AA:1546:A:H5''	45:QQ:105:ARG:NH2	2.23	0.48
11:AA:1927:G:C8	56:b:16:VAL:HG12	2.47	0.48
11:AA:2431:C:H2'	11:AA:2432:A:C8	2.48	0.48
11:AA:2853:A:OP1	37:MM:63:GLU:HG3	2.14	0.48
12:Aa:190:SER:HB3	12:Aa:201:GLN:HE22	1.78	0.48
12:Aa:405:VAL:N	12:Aa:448:CYS:O	2.27	0.48
14:BB:14:U:H2'	14:BB:15:C:C6	2.48	0.48
14:BB:14:U:H2'	14:BB:15:C:H6	1.78	0.48
15:C:39:ARG:CZ	25:GG:302:ALA:HB2	2.43	0.48
24:G:58:GLU:OE1	24:G:63:VAL:HG22	2.12	0.48
25:GG:23:PRO:HD3	25:GG:255:PHE:CZ	2.48	0.48
25:GG:311:HIS:HE1	25:GG:314:LYS:HA	1.78	0.48
27:HH:64:ILE:HG21	27:HH:75:LEU:HD23	1.94	0.48
33:KK:190:VAL:O	33:KK:190:VAL:HG12	2.13	0.48
35:LL:90:MET:HB3	35:LL:144:ILE:CG1	2.43	0.48
37:MM:57:LEU:HD23	37:MM:57:LEU:H	1.77	0.48
39:NN:49:LYS:HG2	39:NN:62:ASN:HA	1.95	0.48
47:S:43:LYS:HZ2	47:S:50:ALA:HB2	1.78	0.48
48:T:44:ILE:HG13	48:T:48:ARG:HE	1.78	0.48
53:Y:91:CYS:HA	53:Y:124:LYS:NZ	2.28	0.48
56:b:29:LEU:HD21	56:b:69:TYR:CG	2.48	0.48
57:c:304:U:H2'	57:c:305:C:C6	2.48	0.48
57:c:349:U:OP2	69:o:106:ASN:ND2	2.46	0.48
57:c:577:G:C5'	57:c:578:OMU:H5''	2.43	0.48
57:c:689:G:C6	57:c:690:G:C6	3.01	0.48
57:c:862:A:H5'	79:y:57:ARG:NH2	2.28	0.48
57:c:1054:U:H2'	57:c:1055:U:C6	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1219:A:OP2	57:c:1264:G:N2	2.41	0.48
57:c:1310:U:H2'	57:c:1311:U:C6	2.48	0.48
57:c:1568:C:H42	75:u:40:ARG:HH21	1.61	0.48
58:d:168:HIS:HA	58:d:203:PHE:CE1	2.48	0.48
73:s:15:SER:HB3	73:s:72:GLY:HA2	1.95	0.48
1:0:37:LYS:NZ	57:c:522:U:O5'	2.35	0.48
3:2:26:CYS:SG	3:2:28:LYS:NZ	2.81	0.48
11:AA:88:A:O2'	36:M:60:TYR:O	2.20	0.48
11:AA:244:G:C2	11:AA:245:U:C4	3.01	0.48
11:AA:1237:G:C2	11:AA:1238:C:C5	3.01	0.48
11:AA:1398:U:OP1	16:CC:9:A:OP1	2.31	0.48
11:AA:1803:C:H2'	11:AA:1804:A:C8	2.48	0.48
11:AA:1832:C:O2'	16:CC:113:U:OP1	2.23	0.48
12:Aa:377:ASP:N	12:Aa:377:ASP:OD1	2.45	0.48
16:CC:11:C:H2'	16:CC:12:A:H8	1.77	0.48
19:E:43:TYR:CE2	19:E:47:LYS:HD2	2.49	0.48
20:EE:177:LYS:HD3	56:b:69:TYR:CZ	2.48	0.48
25:GG:64:SER:HA	25:GG:75:PRO:HA	1.95	0.48
27:HH:116:ASP:OD1	27:HH:117:GLU:N	2.47	0.48
27:HH:119:TYR:CZ	27:HH:141:PRO:HB3	2.48	0.48
32:K:43:TYR:HA	32:K:125:LYS:O	2.14	0.48
57:c:204:G:H2'	57:c:205:U:O4'	2.14	0.48
57:c:906:A:H2	57:c:998:A:H1'	1.79	0.48
57:c:959:U:H1'	70:p:62:GLN:HE22	1.78	0.48
57:c:1011:G:H2'	57:c:1012:U:C5	2.49	0.48
57:c:1410:A:O2'	57:c:1411:A:OP1	2.30	0.48
57:c:1509:C:C2	57:c:1510:U:O2	2.67	0.48
57:c:1565:C:H2'	57:c:1565:C:O2	2.13	0.48
64:j:3:LEU:HD23	64:j:109:LEU:HB3	1.95	0.48
72:r:64:LYS:NZ	72:r:90:ILE:O	2.31	0.48
75:u:6:GLN:NE2	75:u:8:GLN:HG2	2.27	0.48
80:z:131:SER:HB2	80:z:134:ALA:HB3	1.95	0.48
4:3:76:GLY:O	4:3:77:THR:OG1	2.25	0.48
8:7:11:GLY:O	8:7:311:ARG:NH1	2.45	0.48
8:7:272:ASP:OD1	8:7:272:ASP:N	2.44	0.48
11:AA:1393:A:N6	11:AA:1417:G:H1'	2.28	0.48
11:AA:1680:G:H2'	11:AA:1681:U:H6	1.77	0.48
11:AA:2363:A:H2'	11:AA:2364:G:C8	2.48	0.48
11:AA:2829:U:C2	11:AA:2830:G:C8	3.01	0.48
11:AA:2947:G:N3	23:FF:250:ALA:HB1	2.29	0.48
11:AA:3003:G:C6	11:AA:3146:G:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3051:U:N3	11:AA:3052:G:N7	2.62	0.48
12:Aa:541:CYS:SG	12:Aa:542:LEU:N	2.86	0.48
12:Aa:711:ARG:HE	12:Aa:838:TYR:HA	1.79	0.48
13:B:4:TYR:CE2	13:B:16:SER:HB3	2.48	0.48
16:CC:88:A:H2'	16:CC:89:A:C8	2.49	0.48
23:FF:183:LEU:O	23:FF:191:LYS:NZ	2.34	0.48
27:HH:178:ASN:HA	27:HH:183:TRP:CZ3	2.48	0.48
35:LL:7:GLU:HB3	35:LL:56:ALA:HB2	1.95	0.48
42:P:46:THR:OG1	42:P:89:LEU:O	2.25	0.48
43:PP:18:GLY:HA3	43:PP:70:PHE:O	2.12	0.48
55:a:3:ASN:HA	55:a:92:GLU:O	2.14	0.48
57:c:127:G:H1'	57:c:178:U:H2'	1.96	0.48
57:c:902:G:N7	71:q:24:ASN:ND2	2.61	0.48
57:c:1335:U:O2'	57:c:1336:A:OP1	2.28	0.48
59:e:70:LEU:HD13	59:e:82:ARG:HE	1.79	0.48
59:e:82:ARG:NH2	59:e:188:LEU:HG	2.29	0.48
64:j:204:ALA:O	64:j:207:GLU:HG3	2.14	0.48
66:l:14:THR:HG23	66:l:16:ALA:H	1.79	0.48
70:p:52:VAL:HG13	70:p:55:ARG:HH21	1.79	0.48
80:z:42:PRO:HG3	80:z:81:LYS:HD2	1.96	0.48
6:5:24:CYS:SG	6:5:26:SER:OG	2.71	0.48
8:7:23:LEU:HD22	8:7:291:SER:HB2	1.95	0.48
8:7:45:TRP:HB3	8:7:57:PRO:HA	1.96	0.48
11:AA:129:U:H2'	11:AA:130:A:C8	2.48	0.48
11:AA:1013:G:H2'	11:AA:1014:U:C6	2.48	0.48
11:AA:1040:A:N3	37:MM:198:LYS:NZ	2.49	0.48
11:AA:1084:A:H5''	22:F:35:LYS:CE	2.44	0.48
11:AA:1272:C:H3'	11:AA:1273:A:C8	2.48	0.48
11:AA:1299:U:H2'	11:AA:1300:G:O4'	2.14	0.48
11:AA:1428:A:OP2	36:M:3:SER:N	2.35	0.48
11:AA:2516:U:H3	11:AA:2591:A:H2	1.61	0.48
11:AA:2735:U:H2'	11:AA:2736:A:C8	2.49	0.48
11:AA:3000:A:C6	11:AA:3149:G:C6	3.02	0.48
12:Aa:83:ASP:HB2	12:Aa:87:LYS:HZ2	1.79	0.48
17:D:66:HIS:CD2	17:D:75:HIS:HD2	2.31	0.48
18:DD:119:ILE:HG22	18:DD:159:VAL:HG12	1.95	0.48
19:E:81:TYR:CE1	19:E:88:HIS:HB2	2.49	0.48
21:Ee:15:LEU:O	21:Ee:59:THR:HA	2.13	0.48
22:F:17:ARG:HG3	22:F:17:ARG:O	2.13	0.48
23:FF:106:TRP:H	23:FF:133:TYR:HH	1.56	0.48
47:S:105:VAL:HA	47:S:108:GLN:HG3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:T:29:ALA:O	48:T:33:VAL:HG23	2.13	0.48
57:c:44:U:H5''	57:c:45:U:H2'	1.95	0.48
57:c:154:G:H8	57:c:154:G:OP2	1.97	0.48
57:c:576:G:H22	80:z:67:ALA:HB2	1.78	0.48
57:c:987:G:N2	57:c:1013:A:OP1	2.46	0.48
57:c:1372:U:H2'	57:c:1373:C:C5	2.48	0.48
57:c:1624:C:H2'	57:c:1625:C:H6	1.78	0.48
57:c:1726:G:H2'	57:c:1727:G:H8	1.77	0.48
57:c:1773:4AC:N4	57:c:1788:G:O6	2.27	0.48
62:h:164:LEU:O	62:h:164:LEU:HD23	2.14	0.48
62:h:201:HIS:CE1	62:h:207:LEU:HD12	2.48	0.48
63:i:176:THR:HG23	63:i:180:ARG:HH12	1.78	0.48
65:k:62:VAL:HG12	65:k:64:VAL:H	1.77	0.48
65:k:97:ARG:HB3	65:k:116:ARG:NH1	2.28	0.48
73:s:128:LYS:HB2	73:s:134:ALA:O	2.13	0.48
2:1:83:LEU:HB3	2:1:89:ILE:HD11	1.96	0.48
3:2:22:ARG:HH11	3:2:29:SER:HB2	1.77	0.48
6:5:46:LYS:HE3	68:n:61:TRP:HE1	1.79	0.48
10:A:89:SER:O	10:A:95:GLY:HA3	2.14	0.48
11:AA:86:G:O6	41:OO:13:HIS:HB2	2.13	0.48
11:AA:280:U:N3	11:AA:283:G:OP1	2.42	0.48
11:AA:821:U:H2'	11:AA:822:G:C8	2.49	0.48
11:AA:888:A:H2'	11:AA:889:U:C6	2.49	0.48
11:AA:908:OMG:H5''	11:AA:908:OMG:C8	2.48	0.48
11:AA:966:U:P	36:M:44:ASN:HD21	2.36	0.48
11:AA:1136:A:H2'	11:AA:1137:C:C6	2.48	0.48
11:AA:1662:G:H2'	11:AA:1663:C:C6	2.48	0.48
11:AA:1719:G:H5''	17:D:110:ARG:NH1	2.29	0.48
11:AA:2158:A:N7	11:AA:2160:G:C2	2.82	0.48
11:AA:2319:U:OP1	54:Z:25:LYS:NZ	2.41	0.48
11:AA:2535:A:H2'	11:AA:2536:A:C4	2.48	0.48
11:AA:3113:A:H2'	11:AA:3114:A:O4'	2.14	0.48
11:AA:3176:G:C6	11:AA:3213:A:C2	3.01	0.48
12:Aa:291:PHE:CE1	12:Aa:315:GLU:HG3	2.49	0.48
23:FF:373:PRO:HA	23:FF:376:LYS:HG2	1.95	0.48
29:II:52:VAL:HA	29:II:67:GLY:O	2.14	0.48
32:K:57:LEU:HB3	32:K:105:VAL:HG23	1.96	0.48
43:PP:50:LYS:NZ	43:PP:82:SER:HB2	2.29	0.48
56:b:30:GLU:OE2	56:b:31:ILE:HG13	2.13	0.48
57:c:58:U:H3	57:c:89:G:H1	1.59	0.48
57:c:153:G:C6	57:c:161:U:O2	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:285:G:OP2	64:j:189:HIS:NE2	2.47	0.48
57:c:864:U:OP1	79:y:28:ARG:NH1	2.47	0.48
57:c:1175:U:N3	57:c:1176:G:N7	2.62	0.48
57:c:1201:G:H21	57:c:1599:C:H2'	1.78	0.48
57:c:1241:G:H2'	57:c:1242:A:C8	2.49	0.48
57:c:1287:A:H4'	57:c:1288:G:H5'	1.95	0.48
57:c:1336:A:N6	57:c:1417:A:C6	2.81	0.48
57:c:1590:G:O2'	57:c:1591:C:O3'	2.28	0.48
57:c:1724:U:H2'	57:c:1725:U:C6	2.49	0.48
58:d:139:VAL:HG23	60:f:64:LYS:HZ1	1.79	0.48
61:g:190:ARG:HH12	61:g:195:SER:HB2	1.78	0.48
70:p:94:LYS:HG2	70:p:118:ILE:HD13	1.95	0.48
76:v:86:ARG:HG2	76:v:89:ARG:NH2	2.28	0.48
8:7:62:LYS:HD3	8:7:63:GLY:N	2.29	0.48
10:A:197:LEU:HA	43:PP:108:ARG:NH2	2.29	0.48
11:AA:147:U:C5	33:KK:183:LYS:HE2	2.49	0.48
11:AA:527:A:C6	11:AA:566:G:C6	3.01	0.48
11:AA:1165:A:N6	11:AA:1335:C:H42	2.12	0.48
11:AA:1824:U:H5''	51:W:3:ARG:HH22	1.78	0.48
11:AA:2347:OMU:H2'	11:AA:2348:A:O4'	2.12	0.48
12:Aa:83:ASP:HA	12:Aa:86:VAL:HG22	1.96	0.48
12:Aa:644:ASN:OD1	12:Aa:684:VAL:HG22	2.14	0.48
16:CC:82:U:C2	16:CC:85:G:H4'	2.49	0.48
18:DD:41:VAL:HG21	18:DD:185:LEU:HD13	1.96	0.48
19:E:78:TRP:O	19:E:124:LEU:HB2	2.13	0.48
21:Ee:96:LYS:NZ	21:Ee:97:ASN:HB2	2.28	0.48
22:F:29:THR:HA	22:F:32:LYS:NZ	2.29	0.48
27:HH:247:ILE:HG13	27:HH:248:ARG:N	2.28	0.48
29:II:136:GLU:HA	29:II:139:LYS:HE2	1.96	0.48
37:MM:9:TYR:CD2	37:MM:97:LEU:HD13	2.48	0.48
41:OO:63:VAL:HA	41:OO:66:ASN:HB3	1.94	0.48
57:c:311:U:OP1	80:z:24:TRP:NE1	2.46	0.48
57:c:598:U:H2'	57:c:599:A:C8	2.49	0.48
57:c:1026:A:N3	57:c:1790:A:O2'	2.37	0.48
57:c:1424:A:O2'	57:c:1425:A:OP1	2.28	0.48
57:c:1439:C:H2'	57:c:1440:C:C6	2.49	0.48
57:c:1741:U:H2'	57:c:1742:U:H6	1.79	0.48
58:d:148:ASP:OD1	58:d:149:LEU:N	2.45	0.48
63:i:63:GLN:NE2	63:i:86:GLN:O	2.47	0.48
80:z:109:ARG:HG2	80:z:112:LYS:HG3	1.95	0.48
7:6:40:TYR:CD1	7:6:44:PHE:HD2	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:64:HIS:CE1	8:7:84:SER:HB2	2.49	0.48
8:7:211:ILE:HG22	8:7:223:TRP:HB2	1.96	0.48
11:AA:336:A:OP2	32:K:9:SER:OG	2.31	0.48
11:AA:529:A:C6	11:AA:564:G:C6	3.02	0.48
11:AA:656:A:H2'	11:AA:657:A:C8	2.49	0.48
11:AA:763:G:H2'	11:AA:764:U:O4'	2.14	0.48
11:AA:1026:A:H2'	11:AA:1026:A:OP2	2.14	0.48
11:AA:1203:A:H2'	11:AA:1204:A:H8	1.79	0.48
11:AA:1261:G:OP2	11:AA:1261:G:N2	2.46	0.48
11:AA:1266:G:C2	11:AA:1276:U:H1'	2.48	0.48
11:AA:1282:G:O2'	18:DD:83:ASN:OD1	2.17	0.48
11:AA:1640:G:H2'	11:AA:1641:U:C6	2.49	0.48
11:AA:1939:G:H2'	11:AA:1940:G:H8	1.79	0.48
11:AA:2097:U:H2'	11:AA:2098:C:C6	2.48	0.48
11:AA:2275:A:C2	11:AA:2276:G:H1'	2.49	0.48
11:AA:2767:U:H2'	11:AA:2768:U:C6	2.48	0.48
11:AA:2936:A:H2'	11:AA:2937:G:C8	2.49	0.48
12:Aa:772:LEU:HD12	12:Aa:773:PRO:HD2	1.96	0.48
16:CC:7:U:H2'	16:CC:8:C:C6	2.49	0.48
16:CC:139:U:H2'	16:CC:140:G:H8	1.79	0.48
19:E:26:ARG:NH1	22:F:150:THR:OG1	2.46	0.48
29:II:135:VAL:HG12	29:II:139:LYS:NZ	2.29	0.48
30:J:46:TYR:HD1	48:T:75:TYR:HB3	1.79	0.48
32:K:85:VAL:HG12	32:K:97:ILE:HD11	1.95	0.48
48:T:44:ILE:HA	48:T:47:VAL:HG22	1.95	0.48
57:c:799:A:H4'	62:h:201:HIS:NE2	2.29	0.48
57:c:1241:G:H21	57:c:1241:G:P	2.37	0.48
57:c:1344:A:H2'	57:c:1345:A:H8	1.78	0.48
57:c:1419:G:H2'	57:c:1420:C:O4'	2.14	0.48
57:c:1464:G:H2'	57:c:1464:G:N3	2.29	0.48
57:c:1546:G:OP2	75:u:134:ARG:NH2	2.47	0.48
58:d:41:ARG:HH22	74:t:103:ASP:C	2.21	0.48
60:f:156:THR:HG21	60:f:224:PHE:CD1	2.49	0.48
62:h:9:LEU:HB2	62:h:30:ARG:HB2	1.94	0.48
62:h:71:LYS:HB3	62:h:91:THR:HG23	1.96	0.48
62:h:188:ASN:HB3	62:h:191:ARG:HD3	1.95	0.48
62:h:228:ILE:O	62:h:235:TYR:N	2.47	0.48
69:o:130:PRO:HA	69:o:136:ARG:HG3	1.95	0.48
70:p:102:LEU:HD12	70:p:115:LEU:HD23	1.95	0.48
72:r:76:VAL:O	72:r:94:VAL:HA	2.14	0.48
11:AA:8:C:H2'	11:AA:9:U:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:609:G:H8	25:GG:310:THR:HA	1.79	0.48
11:AA:822:G:H1'	20:EE:15:ILE:HG13	1.96	0.48
11:AA:856:G:H22	56:b:4:ARG:CZ	2.27	0.48
11:AA:1179:A:N3	11:AA:1328:C:H1'	2.29	0.48
11:AA:1334:U:H2'	11:AA:1335:C:C6	2.49	0.48
11:AA:1639:C:OP2	47:S:74:ARG:NH1	2.47	0.48
11:AA:2203:U:O2	11:AA:2239:G:N2	2.47	0.48
11:AA:2561:A:H2'	11:AA:2562:A:C8	2.48	0.48
11:AA:2620:G:C4	11:AA:2621:G:C8	3.02	0.48
11:AA:3133:C:H2'	11:AA:3134:A:H8	1.78	0.48
12:Aa:633:ILE:HG23	12:Aa:645:LEU:HD11	1.96	0.48
12:Aa:730:LEU:N	12:Aa:797:VAL:O	2.46	0.48
21:Ee:137:GLN:HE22	21:Ee:149:HIS:HB2	1.78	0.48
26:H:128:ARG:HH12	26:H:132:ASN:CG	2.22	0.48
28:I:4:GLU:HB2	28:I:30:ARG:NH1	2.28	0.48
29:II:39:VAL:HB	29:II:89:THR:OG1	2.14	0.48
30:J:117:ASN:HA	52:X:18:LYS:HZ1	1.78	0.48
31:JJ:131:GLU:OE2	31:JJ:222:HIS:NE2	2.47	0.48
37:MM:89:VAL:HG13	37:MM:136:PHE:HE1	1.79	0.48
41:OO:57:VAL:HG22	41:OO:69:VAL:HG22	1.96	0.48
41:OO:185:LYS:O	41:OO:188:ARG:HG2	2.14	0.48
43:PP:72:LEU:HD23	43:PP:73:PRO:O	2.14	0.48
44:Q:82:LEU:HD12	44:Q:108:ILE:HG23	1.96	0.48
45:QQ:68:ARG:HD3	45:QQ:125:SER:O	2.13	0.48
49:U:59:ASP:O	49:U:63:ASN:ND2	2.47	0.48
57:c:427:C:O2'	57:c:459:G:N3	2.41	0.48
57:c:749:U:H2'	57:c:750:U:H6	1.77	0.48
57:c:1355:C:H2'	57:c:1369:U:O2	2.13	0.48
57:c:1359:C:H2'	57:c:1360:A:O4'	2.14	0.48
57:c:1386:G:H2'	57:c:1387:G:C8	2.49	0.48
57:c:1456:C:O5'	57:c:1457:C:H5''	2.14	0.48
57:c:1550:A:N6	57:c:1562:G:N2	2.12	0.48
58:d:126:PRO:HG2	58:d:151:SER:HB3	1.95	0.48
59:e:138:PHE:CD1	59:e:214:LYS:HE3	2.48	0.48
60:f:201:ASN:OD1	60:f:202:GLY:N	2.46	0.48
62:h:125:LYS:O	62:h:142:HIS:N	2.47	0.48
63:i:220:VAL:O	63:i:224:ASN:ND2	2.44	0.48
67:m:41:GLU:HG2	67:m:44:ARG:HH21	1.78	0.48
73:s:86:ALA:O	73:s:90:VAL:HG23	2.14	0.48
76:v:70:GLN:H	76:v:70:GLN:CD	2.21	0.48
1:0:34:ASN:ND2	57:c:532:U:O2	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6:41:THR:HA	7:6:45:VAL:HG13	1.96	0.47
11:AA:29:C:OP1	45:QQ:189:LYS:HB2	2.14	0.47
11:AA:1023:C:H2'	11:AA:1024:G:O4'	2.13	0.47
11:AA:1197:A:N3	11:AA:1197:A:H2'	2.28	0.47
11:AA:1234:G:H2'	11:AA:1235:U:C5	2.49	0.47
11:AA:1246:G:N2	11:AA:1264:G:O2'	2.46	0.47
11:AA:1664:G:C5	11:AA:1786:G:C2	3.02	0.47
11:AA:2351:U:H5''	13:B:83:TRP:HZ3	1.79	0.47
11:AA:2831:G:H2'	11:AA:2832:C:C6	2.48	0.47
11:AA:3047:U:O2'	23:FF:53:MET:SD	2.71	0.47
11:AA:3094:A:H2'	11:AA:3095:U:C6	2.49	0.47
11:AA:3378:C:H2'	11:AA:3379:C:H6	1.78	0.47
12:Aa:249:PHE:HA	12:Aa:271:ARG:HA	1.95	0.47
12:Aa:411:VAL:HG21	12:Aa:469:LEU:HD23	1.95	0.47
12:Aa:488:VAL:HG23	12:Aa:489:VAL:HG13	1.96	0.47
12:Aa:544:ASP:C	12:Aa:549:HIS:H	2.22	0.47
13:B:57:ALA:HB2	13:B:83:TRP:CE2	2.49	0.47
14:BB:43:U:H2'	14:BB:44:C:O4'	2.14	0.47
14:BB:91:G:H2'	14:BB:92:A:C8	2.49	0.47
19:E:15:PRO:HB3	19:E:21:GLU:H	1.79	0.47
31:JJ:156:ILE:C	31:JJ:158:LYS:H	2.21	0.47
32:K:111:LEU:HD12	32:K:116:LYS:HG3	1.96	0.47
33:KK:47:SER:HA	33:KK:50:VAL:HG23	1.96	0.47
39:NN:106:ILE:N	39:NN:125:MET:O	2.36	0.47
55:a:12:CYS:HB2	55:a:23:HIS:CE1	2.48	0.47
57:c:17:C:H2'	57:c:18:C:C6	2.49	0.47
57:c:162:A:H2'	57:c:163:G:C4	2.49	0.47
57:c:472:U:H2'	57:c:473:A:C8	2.43	0.47
57:c:906:A:C2	57:c:998:A:H1'	2.48	0.47
57:c:922:G:H2'	57:c:923:A:H8	1.79	0.47
57:c:928:U:O2'	57:c:945:U:H5'	2.14	0.47
57:c:1036:A:H2'	57:c:1037:C:H6	1.78	0.47
57:c:1479:A:H2'	57:c:1480:G:H8	1.78	0.47
57:c:1582:U:O2'	57:c:1614:A:N1	2.38	0.47
57:c:1590:G:H2'	57:c:1591:C:O4'	2.14	0.47
57:c:1603:U:H5''	73:s:138:PHE:CE1	2.49	0.47
57:c:1725:U:H2'	57:c:1726:G:C8	2.49	0.47
59:e:137:ILE:CD1	59:e:215:VAL:HG22	2.44	0.47
62:h:208:VAL:HG13	62:h:210:ILE:HD11	1.96	0.47
64:j:176:GLN:OE1	64:j:183:ARG:NH2	2.47	0.47
73:s:114:ARG:O	73:s:115:THR:HG22	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:t:24:LEU:HB2	74:t:34:LEU:HD13	1.96	0.47
76:v:85:SER:HA	76:v:91:TYR:HD1	1.79	0.47
78:x:40:ASP:CG	78:x:46:ILE:HD11	2.39	0.47
11:AA:74:G:H5''	41:OO:104:ARG:HD2	1.95	0.47
11:AA:125:C:H2'	11:AA:126:U:H6	1.80	0.47
11:AA:238:A:H2'	11:AA:239:G:C8	2.49	0.47
11:AA:357:A:H2'	11:AA:358:G:H8	1.78	0.47
11:AA:913:A:O2'	11:AA:2147:A:O4'	2.30	0.47
11:AA:1269:U:O2'	11:AA:1271:A:N7	2.36	0.47
11:AA:1529:A:P	11:AA:1592:G:H22	2.35	0.47
11:AA:1614:C:H2'	11:AA:1615:C:H6	1.79	0.47
11:AA:1637:A:H2'	11:AA:1638:A:C4	2.49	0.47
11:AA:2615:G:C6	11:AA:2616:C:N4	2.82	0.47
11:AA:2976:A:H2'	11:AA:2977:G:O4'	2.13	0.47
11:AA:3103:A:H2'	11:AA:3104:U:O4'	2.14	0.47
11:AA:3188:G:C2	11:AA:3205:G:N1	2.82	0.47
12:Aa:413:ILE:HG21	12:Aa:463:LEU:HD11	1.96	0.47
12:Aa:648:ASP:OD1	12:Aa:650:THR:OG1	2.27	0.47
14:BB:4:U:H2'	14:BB:5:G:C8	2.49	0.47
16:CC:11:C:H2'	16:CC:12:A:C8	2.50	0.47
16:CC:77:A:H2'	16:CC:78:G:C8	2.48	0.47
25:GG:283:THR:OG1	25:GG:285:ASP:OD1	2.26	0.47
27:HH:183:TRP:CZ2	27:HH:188:GLU:HA	2.47	0.47
31:JJ:132:PRO:HA	31:JJ:229:PHE:CD1	2.49	0.47
37:MM:29:SER:HB2	37:MM:125:LEU:HD12	1.97	0.47
43:PP:37:GLU:HG2	43:PP:38:ILE:H	1.78	0.47
49:U:87:VAL:HA	49:U:90:MET:HG2	1.96	0.47
57:c:206:A:H2'	57:c:207:U:C6	2.49	0.47
57:c:1364:G:C2	57:c:1365:C:N4	2.80	0.47
57:c:1619:C:H2'	57:c:1620:C:H6	1.79	0.47
59:e:179:SER:HB2	59:e:184:LEU:HG	1.95	0.47
63:i:142:PRO:O	63:i:167:ARG:HG2	2.13	0.47
70:p:132:VAL:HG23	70:p:134:VAL:HG23	1.95	0.47
73:s:51:PRO:HB3	73:s:116:LEU:HD21	1.96	0.47
8:7:175:ASP:HB3	8:7:177:MET:HG2	1.96	0.47
10:A:197:LEU:HA	43:PP:108:ARG:HH21	1.79	0.47
11:AA:30:G:OP1	45:QQ:172:ARG:HD3	2.14	0.47
11:AA:80:G:H2'	11:AA:81:C:C6	2.48	0.47
11:AA:197:G:H8	11:AA:197:G:OP1	1.97	0.47
11:AA:929:A:H2'	11:AA:930:U:H6	1.79	0.47
11:AA:1063:G:C8	22:F:105:PHE:HZ	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1103:A:N7	11:AA:1363:A:O2'	2.44	0.47
11:AA:1616:U:H2'	11:AA:1617:G:C8	2.50	0.47
11:AA:1619:A:H2'	11:AA:1620:U:O4'	2.13	0.47
11:AA:2634:UR3:OP2	11:AA:2635:A:O2'	2.29	0.47
11:AA:2762:A:C2	11:AA:2763:U:C6	3.03	0.47
12:Aa:25:ILE:O	12:Aa:127:VAL:HA	2.15	0.47
13:B:114:VAL:HG21	13:B:117:ILE:HD11	1.96	0.47
19:E:46:GLN:HG2	19:E:51:VAL:O	2.14	0.47
23:FF:214:MET:CE	23:FF:279:ASN:HA	2.44	0.47
52:X:21:ARG:NH2	52:X:24:PRO:HG3	2.29	0.47
57:c:247:A:C5	69:o:42:PHE:HB2	2.49	0.47
57:c:329:G:H5''	66:l:98:LYS:HG3	1.96	0.47
57:c:340:U:O4	57:c:341:A:N6	2.46	0.47
57:c:424:C:O2	57:c:427:C:N4	2.38	0.47
57:c:865:A:H2'	57:c:866:G:O4'	2.12	0.47
57:c:1113:A:N1	57:c:1131:A:H5''	2.29	0.47
57:c:1236:A:N6	57:c:1250:U:H1'	2.24	0.47
57:c:1353:U:C2	57:c:1354:G:C6	3.01	0.47
57:c:1726:G:H2'	57:c:1727:G:C8	2.49	0.47
57:c:1785:U:H2'	57:c:1786:G:C8	2.47	0.47
61:g:116:ARG:NE	61:g:120:TYR:HE2	2.13	0.47
61:g:173:ARG:NE	61:g:174:HIS:H	2.12	0.47
62:h:44:LEU:HD23	62:h:82:TYR:HB3	1.96	0.47
4:3:19:HIS:CE1	57:c:1071:U:O2'	2.67	0.47
11:AA:324:A:H2'	11:AA:325:A:C8	2.49	0.47
11:AA:649:A2M:HM'3	11:AA:649:A2M:H1'	1.65	0.47
11:AA:1016:C:O3'	11:AA:1017:C:H4'	2.13	0.47
11:AA:1025:A:H2'	11:AA:1025:A:N3	2.29	0.47
11:AA:1153:A:H2'	11:AA:1154:A:C8	2.49	0.47
11:AA:1372:C:H2'	11:AA:1373:A:C8	2.49	0.47
11:AA:1412:G:OP1	44:Q:105:ARG:NH2	2.25	0.47
11:AA:2523:A:H5''	33:KK:51:LYS:HD2	1.95	0.47
11:AA:2729:OMU:H2'	11:AA:2730:G:H8	1.78	0.47
11:AA:2905:U:H2'	11:AA:2906:C:H6	1.79	0.47
11:AA:3208:G:C5	19:E:165:TYR:HD2	2.32	0.47
12:Aa:183:GLU:O	12:Aa:187:VAL:HG23	2.13	0.47
14:BB:114:U:H2'	14:BB:115:G:C8	2.43	0.47
14:BB:116:C:H2'	14:BB:117:A:H8	1.77	0.47
21:Ee:61:GLN:OE1	21:Ee:72:SER:OG	2.23	0.47
21:Ee:117:ARG:HH12	21:Ee:164:GLU:HG3	1.78	0.47
25:GG:300:ARG:NH1	25:GG:301:PRO:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:M:128:ARG:HG2	36:M:149:ALA:HA	1.96	0.47
39:NN:17:LEU:HG	39:NN:129:VAL:HG13	1.95	0.47
44:Q:12:LYS:NZ	44:Q:58:GLY:O	2.41	0.47
47:S:19:LYS:HG3	47:S:35:VAL:HG13	1.96	0.47
54:Z:4:LYS:NZ	57:c:1774:G:N7	2.61	0.47
57:c:97:C:H1'	57:c:426:G:H5'	1.96	0.47
57:c:293:U:H2'	57:c:294:C:C6	2.49	0.47
57:c:472:U:O2'	57:c:769:A:N3	2.47	0.47
57:c:473:A:H2'	57:c:474:A:O4'	2.14	0.47
57:c:648:G:H21	57:c:687:G:H3'	1.79	0.47
57:c:1161:C:H1'	57:c:1619:C:N3	2.29	0.47
57:c:1277:G:H2'	57:c:1278:G:H8	1.79	0.47
57:c:1468:U:H2'	57:c:1469:A:H8	1.79	0.47
57:c:1479:A:H2'	57:c:1480:G:C8	2.50	0.47
57:c:1586:A:N3	57:c:1612:U:C4	2.82	0.47
61:g:168:ILE:HD13	61:g:189:MET:HA	1.97	0.47
62:h:196:VAL:HG22	62:h:211:LYS:HB2	1.95	0.47
73:s:78:VAL:O	73:s:81:ILE:HG12	2.15	0.47
10:A:51:LYS:HG2	10:A:55:HIS:NE2	2.29	0.47
11:AA:633:C:H2'	11:AA:634:C:C6	2.49	0.47
11:AA:751:A:C6	11:AA:752:C:C4	3.02	0.47
11:AA:978:G:O2'	11:AA:980:A:N3	2.47	0.47
11:AA:1048:A:C5	37:MM:22:TYR:HD2	2.32	0.47
11:AA:1112:A:N3	11:AA:1370:G:O2'	2.41	0.47
11:AA:1346:G:H1'	25:GG:307:GLN:CD	2.40	0.47
11:AA:1606:U:O4'	47:S:8:ARG:NH2	2.48	0.47
11:AA:1609:C:H2'	11:AA:1610:G:C8	2.49	0.47
11:AA:2583:C:H2'	11:AA:2584:G:C8	2.49	0.47
11:AA:2723:U:H2'	11:AA:2724:OMU:H6	1.97	0.47
11:AA:2857:C:H2'	11:AA:2858:U:C6	2.50	0.47
11:AA:2953:U:H2'	11:AA:2954:U:H2'	1.96	0.47
11:AA:3006:A:H2'	11:AA:3007:U:O4'	2.14	0.47
11:AA:3223:A:C5	11:AA:3263:G:C6	3.02	0.47
12:Aa:75:ILE:O	12:Aa:101:ASN:HA	2.14	0.47
14:BB:11:A:N6	27:HH:16:PHE:O	2.48	0.47
18:DD:36:GLN:HA	18:DD:39:HIS:CD2	2.49	0.47
18:DD:79:PHE:HB3	18:DD:189:GLN:HG3	1.97	0.47
19:E:81:TYR:CE2	19:E:83:SER:HB3	2.49	0.47
30:J:58:ASP:OD1	30:J:61:LYS:HG2	2.14	0.47
31:JJ:103:LEU:HD12	31:JJ:108:LEU:HB2	1.97	0.47
33:KK:145:ASN:HB3	33:KK:147:LYS:NZ	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:NN:19:LEU:O	39:NN:69:VAL:N	2.44	0.47
56:b:32:GLN:O	56:b:37:TYR:OH	2.23	0.47
57:c:164:A:H2'	57:c:165:G:C8	2.49	0.47
57:c:327:U:H2'	57:c:328:A:H8	1.78	0.47
57:c:479:C:O2	57:c:480:G:C8	2.68	0.47
57:c:641:G:N2	65:k:177:THR:O	2.47	0.47
57:c:1036:A:H2'	57:c:1037:C:C6	2.50	0.47
57:c:1244:A:O2'	57:c:1246:C:N3	2.47	0.47
57:c:1391:A:H2'	57:c:1392:U:C6	2.48	0.47
57:c:1453:G:H2'	57:c:1454:G:H8	1.78	0.47
57:c:1480:G:O5'	76:v:63:ARG:NH2	2.46	0.47
57:c:1544:U:C4	57:c:1545:A:C4	3.02	0.47
57:c:1660:A:H2'	57:c:1661:U:C6	2.49	0.47
57:c:1661:U:H2'	57:c:1662:G:C8	2.49	0.47
59:e:114:VAL:HA	59:e:142:PHE:CZ	2.49	0.47
59:e:179:SER:HA	59:e:183:GLN:NE2	2.29	0.47
65:k:142:TYR:O	79:y:42:GLN:NE2	2.32	0.47
72:r:79:HIS:CD2	72:r:97:TYR:HD2	2.31	0.47
74:t:20:TYR:HA	74:t:23:LYS:NZ	2.30	0.47
79:y:69:LEU:HD11	79:y:72:CYS:HB3	1.96	0.47
80:z:14:LYS:HE2	80:z:18:HIS:HE1	1.80	0.47
3:2:41:ILE:HG13	3:2:68:TYR:CE2	2.50	0.47
7:6:10:ARG:HH21	80:z:70:LYS:HE2	1.80	0.47
10:A:54:TYR:CE2	10:A:145:VAL:HG11	2.49	0.47
11:AA:695:C:H5''	25:GG:271:LYS:HG2	1.97	0.47
11:AA:858:A:H2'	11:AA:859:G:C8	2.50	0.47
11:AA:1073:U:H1'	38:N:50:THR:OG1	2.14	0.47
11:AA:1106:G:H2'	11:AA:1107:C:H6	1.78	0.47
11:AA:2199:G:H2'	11:AA:2200:U:H6	1.78	0.47
11:AA:2578:U:H2'	11:AA:2579:G:O4'	2.14	0.47
12:Aa:365:ASN:ND2	12:Aa:377:ASP:OD2	2.47	0.47
12:Aa:460:ASP:HA	12:Aa:463:LEU:HD13	1.96	0.47
22:F:91:LEU:HD23	22:F:91:LEU:HA	1.78	0.47
34:L:36:HIS:HB3	34:L:38:PHE:CE1	2.49	0.47
35:LL:136:PHE:CD1	35:LL:144:ILE:HG22	2.50	0.47
37:MM:200:LEU:HB2	37:MM:213:PHE:CD2	2.49	0.47
41:OO:160:GLN:HA	41:OO:160:GLN:OE1	2.14	0.47
42:P:7:VAL:HA	42:P:77:ARG:O	2.15	0.47
48:T:31:LEU:HD12	48:T:35:LYS:NZ	2.29	0.47
51:W:26:LYS:HB3	51:W:44:LYS:HZ1	1.79	0.47
57:c:14:C:H2'	57:c:15:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:123:G:C6	57:c:295:A:N1	2.82	0.47
57:c:293:U:H2'	57:c:294:C:H6	1.79	0.47
57:c:610:G:O2'	57:c:613:G:O3'	2.33	0.47
57:c:1091:A:H4'	57:c:1092:A:O4'	2.14	0.47
57:c:1187:U:H2'	57:c:1188:G:H8	1.80	0.47
57:c:1236:A:C4	57:c:1237:G:C8	3.02	0.47
57:c:1318:G:H2'	57:c:1319:A:C8	2.49	0.47
57:c:1335:U:C2	57:c:1336:A:N7	2.83	0.47
62:h:54:TYR:CE2	62:h:95:THR:HG21	2.49	0.47
62:h:59:ARG:HG3	62:h:60:GLU:N	2.29	0.47
66:l:193:LEU:O	66:l:197:THR:OG1	2.26	0.47
71:q:81:VAL:HG23	71:q:115:ILE:HA	1.96	0.47
74:t:41:ILE:HB	74:t:47:ARG:CG	2.43	0.47
3:2:23:CYS:HB3	3:2:27:SER:N	2.29	0.47
7:6:28:LYS:NZ	57:c:542:A:OP1	2.33	0.47
8:7:87:LYS:HB3	8:7:106:HIS:HB2	1.96	0.47
8:7:205:SER:HB3	8:7:210:LEU:HB2	1.97	0.47
10:A:105:PHE:HD2	10:A:109:PRO:HG3	1.76	0.47
11:AA:123:A:N6	11:AA:150:A:N7	2.63	0.47
11:AA:127:G:H2'	11:AA:128:G:C8	2.50	0.47
11:AA:259:C:N4	11:AA:260:C:H41	2.11	0.47
11:AA:301:G:H2'	11:AA:302:U:C6	2.49	0.47
11:AA:372:A:OP1	11:AA:395:A:N6	2.48	0.47
11:AA:393:U:H2'	11:AA:394:G:O4'	2.15	0.47
11:AA:657:A:H2'	11:AA:658:G:H8	1.80	0.47
11:AA:750:G:C2	11:AA:751:A:C8	3.03	0.47
11:AA:874:U:H5'	11:AA:875:G:OP1	2.14	0.47
11:AA:936:A:P	36:M:32:ARG:HH12	2.38	0.47
11:AA:1215:U:H2'	11:AA:1216:C:C6	2.50	0.47
11:AA:1405:U:P	44:Q:64:LYS:HE2	2.54	0.47
11:AA:1531:C:H2'	11:AA:1532:C:C6	2.50	0.47
11:AA:1532:C:H2'	11:AA:1533:U:C6	2.49	0.47
11:AA:1572:U:H2'	11:AA:1573:G:H8	1.79	0.47
11:AA:1619:A:O2'	16:CC:125:U:O4	2.31	0.47
11:AA:1639:C:P	47:S:74:ARG:HH12	2.37	0.47
11:AA:1679:A:OP1	24:G:94:ARG:HD2	2.14	0.47
11:AA:1782:U:C4	11:AA:1783:U:C4	3.03	0.47
11:AA:1861:G:O2'	11:AA:3066:U:OP1	2.33	0.47
11:AA:2173:U:H5''	20:EE:18:SER:OG	2.15	0.47
11:AA:2928:C:H2'	11:AA:2929:C:H6	1.80	0.47
11:AA:3047:U:H4'	23:FF:50:LYS:HZ1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3113:A:C2	11:AA:3114:A:H1'	2.49	0.47
11:AA:3158:G:N1	11:AA:3292:A:C2	2.79	0.47
11:AA:3187:A:C6	19:E:171:PHE:HB3	2.50	0.47
11:AA:3301:U:H2'	11:AA:3302:U:H6	1.77	0.47
11:AA:3385:U:H2'	11:AA:3386:G:H8	1.80	0.47
13:B:111:LYS:HE2	13:B:152:GLU:OE1	2.15	0.47
14:BB:22:A:H2'	14:BB:23:A:H8	1.79	0.47
16:CC:15:G:H2'	16:CC:16:G:C8	2.50	0.47
16:CC:143:U:H2'	16:CC:144:G:C8	2.50	0.47
21:Ee:12:TYR:CE1	21:Ee:61:GLN:HG2	2.50	0.47
21:Ee:142:ARG:HD3	21:Ee:145:PHE:HD1	1.80	0.47
23:FF:46:PHE:CZ	23:FF:205:VAL:HB	2.50	0.47
23:FF:53:MET:HB2	23:FF:332:ARG:HH22	1.79	0.47
26:H:66:LYS:HB3	26:H:69:LEU:HD12	1.97	0.47
32:K:55:GLU:HG2	32:K:69:LYS:HA	1.97	0.47
32:K:86:THR:HG22	32:K:96:PRO:HA	1.97	0.47
34:L:84:ARG:CZ	40:O:61:MET:SD	3.02	0.47
37:MM:205:SER:HB2	37:MM:207:GLU:CD	2.39	0.47
39:NN:84:LEU:O	39:NN:88:GLU:N	2.47	0.47
47:S:46:ASP:HB2	47:S:80:ARG:HG3	1.95	0.47
57:c:116:U:H2'	57:c:117:U:C6	2.49	0.47
57:c:292:U:H2'	57:c:293:U:C6	2.50	0.47
57:c:351:C:OP1	57:c:630:A:O2'	2.24	0.47
57:c:448:C:H2'	57:c:449:C:H6	1.79	0.47
57:c:469:C:H42	67:m:6:ARG:HH22	1.62	0.47
57:c:612:U:OP2	80:z:5:LYS:NZ	2.37	0.47
57:c:620:A:H2'	57:c:621:A:C8	2.50	0.47
57:c:649:U:H2'	57:c:650:U:C6	2.50	0.47
57:c:804:A:H2'	57:c:805:U:O4'	2.14	0.47
57:c:862:A:H8	70:p:64:ARG:NH1	2.12	0.47
57:c:894:U:C2	57:c:895:G:N7	2.82	0.47
57:c:1169:G:N3	57:c:1575:G7M:HN72	2.28	0.47
57:c:1173:C:H2'	57:c:1174:C:C6	2.50	0.47
57:c:1544:U:H2'	57:c:1545:A:O4'	2.14	0.47
57:c:1626:U:H2'	57:c:1627:U:H6	1.80	0.47
58:d:157:ASP:OD1	58:d:158:VAL:N	2.48	0.47
61:g:25:PHE:O	61:g:29:LEU:HB2	2.14	0.47
61:g:65:ARG:O	61:g:69:LEU:HD23	2.14	0.47
64:j:5:ILE:HG13	64:j:111:LEU:HD12	1.97	0.47
65:k:120:ALA:HA	65:k:123:ASP:OD2	2.15	0.47
67:m:76:LEU:O	67:m:80:LEU:HD23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:r:17:TYR:CZ	72:r:38:PRO:HD3	2.50	0.47
72:r:111:MET:HA	72:r:111:MET:HE3	1.97	0.47
74:t:86:PRO:O	74:t:88:VAL:HG13	2.15	0.47
76:v:102:ARG:NH2	76:v:103:LYS:HE3	2.30	0.47
80:z:61:SER:HB2	80:z:116:ASP:HB2	1.96	0.47
1:0:123:LYS:O	1:0:127:LYS:HG2	2.15	0.47
3:2:65:PRO:HD2	71:q:115:ILE:HG23	1.96	0.47
8:7:19:TRP:HB3	8:7:38:ARG:HB3	1.95	0.47
11:AA:66:A:H61	11:AA:76:G:H1'	1.80	0.47
11:AA:610:G:C8	25:GG:312:VAL:HG21	2.49	0.47
11:AA:617:G:H2'	11:AA:618:C:C6	2.50	0.47
11:AA:926:A:H2'	11:AA:927:C:C6	2.50	0.47
11:AA:968:G:N3	38:N:15:LYS:NZ	2.63	0.47
11:AA:1715:A:N7	40:O:84:LEU:HD21	2.30	0.47
11:AA:1802:C:H2'	11:AA:1803:C:C6	2.50	0.47
11:AA:2225:U:H4'	55:a:36:PHE:CE2	2.50	0.47
11:AA:2419:A:H2'	11:AA:2420:C:C6	2.50	0.47
11:AA:2453:U:C6	11:AA:2461:A:H5''	2.50	0.47
11:AA:2847:A:C8	11:AA:2898:G:N7	2.82	0.47
11:AA:3129:A:H2'	11:AA:3130:A:H5''	1.97	0.47
11:AA:3291:G:H2'	11:AA:3292:A:C8	2.49	0.47
14:BB:89:G:N2	14:BB:92:A:H62	2.11	0.47
16:CC:145:U:H2'	16:CC:146:U:C6	2.49	0.47
18:DD:139:LEU:HD21	18:DD:168:SER:O	2.15	0.47
21:Ee:90:ARG:HH11	21:Ee:98:VAL:HB	1.79	0.47
27:HH:104:LEU:HD11	27:HH:108:ARG:NH2	2.30	0.47
29:II:82:ARG:HE	46:R:104:PRO:HB2	1.79	0.47
32:K:53:ASP:HB3	32:K:110:HIS:CG	2.49	0.47
36:M:129:PHE:HA	41:OO:170:LEU:HD21	1.96	0.47
39:NN:12:LEU:C	39:NN:13:LYS:HD3	2.40	0.47
57:c:213:A:N6	57:c:214:G:C8	2.83	0.47
57:c:289:U:H2'	57:c:290:G:C8	2.49	0.47
57:c:350:U:O2'	57:c:970:A:N1	2.42	0.47
57:c:384:G:H2'	57:c:385:A:C8	2.49	0.47
57:c:561:G:C6	57:c:562:OMG:N7	2.83	0.47
57:c:626:U:H2'	57:c:627:C:H6	1.80	0.47
57:c:871:G:C6	57:c:957:G:N1	2.82	0.47
57:c:937:C:H2'	57:c:938:G:C8	2.49	0.47
57:c:1014:G:H2'	57:c:1015:U:O4'	2.14	0.47
57:c:1238:A:H2'	57:c:1239:U:C6	2.50	0.47
59:e:219:LYS:HD3	59:e:220:GLN:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:g:72:LEU:HD22	61:g:75:LYS:HE2	1.97	0.47
65:k:141:ARG:HD2	79:y:51:GLU:OE1	2.15	0.47
72:r:114:HIS:HB2	72:r:119:PHE:CE1	2.49	0.47
74:t:56:HIS:O	74:t:59:LYS:HG3	2.14	0.47
1:0:109:LYS:O	1:0:112:LYS:HG3	2.15	0.47
2:1:89:ILE:HB	2:1:101:TYR:HB3	1.96	0.47
3:2:49:ALA:HB1	3:2:52:ASP:CG	2.40	0.47
11:AA:35:A:O2'	11:AA:809:G:N3	2.48	0.47
11:AA:333:G:C6	16:CC:31:G:C6	3.02	0.47
11:AA:371:G:N2	11:AA:373:A:H3'	2.29	0.47
11:AA:501:A:C5'	29:II:28:GLN:HE22	2.28	0.47
11:AA:610:G:N1	11:AA:1337:A:OP1	2.40	0.47
11:AA:639:G:P	44:Q:37:GLY:HA3	2.55	0.47
11:AA:1019:G:H2'	11:AA:1020:G:H8	1.78	0.47
11:AA:1110:U:H2'	11:AA:1111:U:C5	2.50	0.47
11:AA:1126:G:OP1	37:MM:98:ARG:NH2	2.48	0.47
11:AA:1307:G:H1'	11:AA:1308:A:C4	2.50	0.47
11:AA:1410:U:H2'	11:AA:1411:C:C6	2.50	0.47
11:AA:1597:C:H2'	11:AA:1598:G:H8	1.79	0.47
11:AA:2515:A:O3'	45:QQ:31:ARG:NH2	2.39	0.47
11:AA:2856:G:H2'	11:AA:2857:C:C6	2.49	0.47
11:AA:2944:U:H1'	23:FF:251:CYS:SG	2.54	0.47
11:AA:3187:A:H2	19:E:169:SER:HB2	1.79	0.47
11:AA:3338:C:H2'	11:AA:3339:A:C8	2.50	0.47
12:Aa:120:ARG:HG2	12:Aa:481:MET:HE1	1.96	0.47
12:Aa:307:LEU:HD23	12:Aa:326:LYS:HZ1	1.79	0.47
12:Aa:447:ASP:N	12:Aa:447:ASP:OD1	2.44	0.47
14:BB:20:A:H2'	14:BB:21:G:H8	1.80	0.47
20:EE:149:ARG:HD2	20:EE:153:GLY:HA2	1.96	0.47
22:F:8:ARG:HH11	22:F:8:ARG:HG2	1.79	0.47
25:GG:26:PHE:CD1	25:GG:127:ALA:HA	2.50	0.47
25:GG:192:GLY:HA2	25:GG:195:ARG:HB2	1.96	0.47
26:H:96:GLU:HG3	28:I:21:PHE:CZ	2.49	0.47
31:JJ:173:LEU:HD22	31:JJ:176:TYR:HD2	1.79	0.47
42:P:7:VAL:HG22	42:P:78:LYS:HA	1.97	0.47
43:PP:102:LYS:O	43:PP:106:ARG:N	2.41	0.47
43:PP:124:ARG:O	43:PP:127:LYS:HG2	2.14	0.47
48:T:28:LEU:O	48:T:32:LYS:HG2	2.13	0.47
56:b:52:ALA:HB1	56:b:68:ALA:HB1	1.97	0.47
57:c:69:G:H1	57:c:83:G:H1'	1.80	0.47
57:c:143:G:O2'	57:c:145:A:O2'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:153:G:O6	57:c:161:U:O2	2.33	0.47
57:c:381:C:H2'	57:c:382:C:C6	2.50	0.47
57:c:393:C:H3'	57:c:400:A:C2	2.50	0.47
57:c:538:A:O2'	57:c:541:A2M:H1'	2.15	0.47
57:c:1173:C:OP1	75:u:132:ARG:NH2	2.37	0.47
57:c:1252:C:H2'	57:c:1253:U:C6	2.49	0.47
57:c:1497:U:N3	57:c:1512:G:N7	2.62	0.47
57:c:1783:C:H2'	57:c:1784:C:C6	2.50	0.47
59:e:131:ASP:OD1	59:e:131:ASP:N	2.48	0.47
64:j:48:TYR:HE1	64:j:116:LYS:HG3	1.80	0.47
6:5:17:GLY:HA2	6:5:27:HIS:CE1	2.50	0.47
10:A:40:GLU:O	10:A:40:GLU:HG3	2.15	0.47
11:AA:11:A:H2'	11:AA:12:A:C8	2.49	0.47
11:AA:127:G:H2'	11:AA:128:G:H8	1.78	0.47
11:AA:157:A:H2'	11:AA:158:G:O4'	2.15	0.47
11:AA:407:A:N7	16:CC:15:G:N2	2.63	0.47
11:AA:673:U:H2'	11:AA:674:G:H8	1.80	0.47
11:AA:696:C:OP1	25:GG:272:VAL:N	2.40	0.47
11:AA:1018:G:C6	11:AA:1019:G:H1'	2.50	0.47
11:AA:1165:A:H2'	11:AA:1166:G:H8	1.79	0.47
11:AA:2176:U:H5'	20:EE:23:ARG:HH22	1.80	0.47
11:AA:2469:G:N1	11:AA:2477:G:H1'	2.29	0.47
11:AA:2711:C:H2'	11:AA:2712:U:O4'	2.15	0.47
11:AA:3166:C:H2'	11:AA:3167:A:C8	2.49	0.47
11:AA:3241:G:C2	11:AA:3247:G:C6	3.03	0.47
12:Aa:644:ASN:ND2	12:Aa:681:MET:HB2	2.30	0.47
23:FF:214:MET:HE1	23:FF:279:ASN:HA	1.97	0.47
23:FF:298:PHE:CD1	23:FF:357:LYS:HG2	2.50	0.47
24:G:42:LYS:NZ	24:G:47:VAL:HB	2.30	0.47
27:HH:33:ARG:NH2	27:HH:72:ASP:OD1	2.48	0.47
31:JJ:160:ARG:HA	31:JJ:203:TRP:HZ3	1.74	0.47
35:LL:4:ILE:H	35:LL:4:ILE:HD12	1.80	0.47
40:O:52:ARG:O	40:O:55:GLU:HG2	2.14	0.47
43:PP:49:PRO:HB3	43:PP:78:THR:HG23	1.96	0.47
57:c:214:G:H2'	57:c:253:A:C5	2.49	0.47
57:c:580:A:C6	57:c:583:C:C2	3.03	0.47
57:c:1325:A:OP1	74:t:11:ARG:NH1	2.47	0.47
57:c:1543:A:C2	57:c:1544:U:C4	3.03	0.47
57:c:1753:A:H2'	57:c:1754:A:H8	1.78	0.47
59:e:30:PHE:CD2	59:e:94:LYS:HA	2.50	0.47
59:e:97:LEU:HB3	59:e:231:LEU:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:f:149:GLY:O	60:f:174:ARG:NH2	2.48	0.47
62:h:42:LEU:HD22	62:h:109:PHE:CG	2.50	0.47
62:h:51:ARG:NE	62:h:51:ARG:HA	2.30	0.47
63:i:48:PHE:CE2	63:i:67:PRO:HB3	2.49	0.47
63:i:110:ALA:HA	63:i:113:ILE:HD12	1.97	0.47
63:i:147:THR:O	63:i:157:ARG:HA	2.15	0.47
72:r:83:MET:HE2	72:r:83:MET:HB3	1.74	0.47
73:s:57:LEU:HD12	73:s:57:LEU:H	1.80	0.47
77:w:28:SER:OG	77:w:111:GLY:O	2.31	0.47
77:w:53:LYS:HB2	77:w:92:ASP:OD1	2.15	0.47
1:0:7:ILE:HG23	1:0:27:VAL:HG22	1.97	0.46
1:0:110:GLN:OE1	57:c:54:C:H5'	2.15	0.46
8:7:72:THR:HB	8:7:81:LEU:HD12	1.96	0.46
8:7:248:ASN:OD1	8:7:249:ARG:HG2	2.15	0.46
11:AA:312:C:H2'	11:AA:313:A:C8	2.50	0.46
11:AA:632:G:H2'	11:AA:633:C:H6	1.77	0.46
11:AA:754:G:H2'	11:AA:755:A:C8	2.45	0.46
11:AA:1207:G:O2'	11:AA:1209:G:OP2	2.22	0.46
11:AA:1870:C:H5''	11:AA:3076:C:O2'	2.14	0.46
11:AA:2241:U:HO2'	20:EE:243:THR:H	1.62	0.46
11:AA:2714:G:H8	11:AA:2751:G:H2'	1.80	0.46
11:AA:2815:OMG:HM21	11:AA:2817:A:H2'	1.96	0.46
11:AA:2936:A:H2'	11:AA:2937:G:H8	1.80	0.46
11:AA:3232:G:N2	11:AA:3255:U:O2	2.30	0.46
11:AA:3267:A:H2'	29:II:69:PHE:CE1	2.50	0.46
11:AA:3303:G:C6	11:AA:3305:A:C2	3.03	0.46
14:BB:7:G:C8	27:HH:22:ARG:HD2	2.50	0.46
18:DD:37:GLN:O	18:DD:40:GLU:HG2	2.15	0.46
32:K:56:VAL:HG21	32:K:104:LEU:HD13	1.97	0.46
39:NN:36:VAL:HG21	39:NN:123:PHE:CD2	2.49	0.46
43:PP:93:LYS:HE2	43:PP:93:LYS:HB3	1.77	0.46
57:c:372:G:H21	57:c:613:G:H1	1.61	0.46
57:c:628:G:N1	57:c:970:A:OP2	2.38	0.46
57:c:990:C:H4'	71:q:129:LYS:HA	1.96	0.46
57:c:1044:U:H2'	57:c:1045:C:C6	2.50	0.46
57:c:1218:G:N2	57:c:1444:A:OP2	2.48	0.46
57:c:1354:G:O2'	57:c:1355:C:O4'	2.30	0.46
57:c:1550:A:C5	57:c:1562:G:N2	2.83	0.46
57:c:1611:A:O2'	63:i:98:MET:HG3	2.16	0.46
62:h:196:VAL:HG21	62:h:217:THR:HG23	1.96	0.46
69:o:109:VAL:HG22	69:o:137:PHE:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:y:27:ILE:HG13	79:y:61:ILE:HB	1.97	0.46
80:z:53:VAL:HG12	80:z:100:ASP:H	1.79	0.46
5:4:45:LYS:HB2	63:i:161:ASP:O	2.16	0.46
11:AA:38:U:OP1	11:AA:935:U:O2'	2.24	0.46
11:AA:183:G:C6	11:AA:234:G:C6	3.03	0.46
11:AA:574:U:H2'	11:AA:575:G:H8	1.80	0.46
11:AA:727:G:H2'	11:AA:728:G:O4'	2.15	0.46
11:AA:895:A:HO2'	11:AA:896:A:P	2.38	0.46
11:AA:1413:G:H2'	11:AA:1414:G:C8	2.50	0.46
11:AA:1493:G:C4	52:X:13:MET:HE1	2.50	0.46
11:AA:1650:G:C6	11:AA:1806:A:N6	2.83	0.46
11:AA:1833:G:H5''	52:X:10:LYS:HD2	1.96	0.46
11:AA:2107:A:H2'	11:AA:2108:C:C6	2.51	0.46
11:AA:2198:A:N1	11:AA:2270:A:N6	2.64	0.46
11:AA:2527:G:O2'	33:KK:245:LYS:NZ	2.42	0.46
11:AA:2640:A2M:H8	11:AA:2640:A2M:O5'	2.15	0.46
11:AA:2640:A2M:H2'	11:AA:2641:U:C6	2.50	0.46
11:AA:2999:U:O2	11:AA:3149:G:N2	2.37	0.46
11:AA:3109:G:O4'	35:LL:163:GLN:NE2	2.47	0.46
18:DD:107:ALA:O	18:DD:179:SER:HB2	2.15	0.46
45:QQ:115:VAL:N	45:QQ:160:GLU:OE2	2.41	0.46
57:c:292:U:H2'	57:c:293:U:H6	1.79	0.46
57:c:551:G:H5'	57:c:581:U:O2	2.15	0.46
57:c:875:G:OP2	59:e:158:SER:OG	2.33	0.46
57:c:1267:G:H2'	57:c:1268:G:C8	2.50	0.46
57:c:1302:U:H2'	57:c:1303:U:H6	1.80	0.46
57:c:1336:A:C2	57:c:1416:G:C6	3.03	0.46
57:c:1533:C:H4'	57:c:1539:G:C6	2.50	0.46
57:c:1563:C:O2'	57:c:1564:U:H5'	2.14	0.46
57:c:1593:A:H8	57:c:1606:C:O5'	1.99	0.46
57:c:1662:G:H2'	57:c:1663:G:H8	1.78	0.46
57:c:1672:G:C2	57:c:1673:G:C5	3.03	0.46
59:e:117:TRP:HD1	59:e:153:HIS:HB3	1.78	0.46
59:e:197:ILE:HB	59:e:210:ILE:HG21	1.96	0.46
60:f:126:ARG:O	60:f:130:ILE:HG12	2.15	0.46
61:g:35:SER:OG	61:g:51:ARG:O	2.20	0.46
62:h:100:ARG:NH1	62:h:236:ILE:HB	2.29	0.46
63:i:166:ARG:O	63:i:170:GLN:NE2	2.48	0.46
66:l:72:ILE:HB	66:l:112:TRP:CZ3	2.50	0.46
10:A:190:VAL:O	10:A:194:LEU:HD23	2.15	0.46
11:AA:837:A:N6	11:AA:856:G:HI'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:847:A:H2'	11:AA:848:A:O4'	2.15	0.46
11:AA:869:G:H2'	11:AA:870:G:C8	2.49	0.46
11:AA:876:A2M:H2'	11:AA:877:C:C6	2.51	0.46
11:AA:1088:U:H2'	11:AA:1089:G:O4'	2.15	0.46
11:AA:1178:G:O2'	46:R:75:HIS:NE2	2.44	0.46
11:AA:1237:G:O2'	21:Ee:138:SER:OG	2.20	0.46
11:AA:1310:G:N1	11:AA:1311:G:C6	2.82	0.46
11:AA:1359:C:H2'	11:AA:1360:C:C6	2.50	0.46
11:AA:2532:U:H2'	11:AA:2533:G:H8	1.76	0.46
11:AA:2648:G:P	37:MM:24:ARG:HH22	2.38	0.46
11:AA:2904:U:H2'	11:AA:2905:U:H6	1.80	0.46
15:C:176:ARG:N	36:M:51:GLY:HA2	2.30	0.46
16:CC:149:A:H2'	16:CC:150:G:C8	2.50	0.46
36:M:36:GLY:HA3	36:M:40:HIS:NE2	2.31	0.46
37:MM:36:LEU:HD13	37:MM:73:ASN:ND2	2.30	0.46
37:MM:60:LEU:O	37:MM:127:ALA:N	2.41	0.46
39:NN:82:ARG:O	39:NN:85:LYS:HG2	2.15	0.46
40:O:51:LEU:HD21	47:S:90:ILE:HD11	1.96	0.46
41:OO:119:TYR:O	41:OO:123:ILE:HG23	2.15	0.46
41:OO:128:ARG:HH21	48:T:114:ARG:NH2	2.13	0.46
47:S:46:ASP:CG	47:S:80:ARG:HE	2.24	0.46
49:U:73:ALA:O	49:U:77:LEU:HB2	2.15	0.46
57:c:56:U:OP1	57:c:403:G:N1	2.46	0.46
57:c:289:U:C2	57:c:290:G:C8	3.03	0.46
57:c:629:U:H5''	70:p:127:ARG:HH12	1.80	0.46
57:c:754:A:H5''	57:c:755:A:H5'	1.96	0.46
57:c:756:A:C2	57:c:757:A:H1'	2.51	0.46
57:c:1770:U:H2'	57:c:1771:U:H6	1.80	0.46
59:e:30:PHE:CE2	59:e:94:LYS:HA	2.51	0.46
60:f:139:ILE:HD11	60:f:154:LEU:HD21	1.96	0.46
63:i:120:ILE:HA	63:i:123:VAL:HG12	1.96	0.46
65:k:23:ALA:O	65:k:27:LEU:HG	2.16	0.46
65:k:28:GLU:O	65:k:35:LYS:HB2	2.15	0.46
72:r:98:ASN:HB3	72:r:122:THR:HA	1.96	0.46
77:w:61:LYS:HB3	77:w:86:ILE:HG23	1.98	0.46
3:2:20:PRO:HA	3:2:31:PRO:HA	1.96	0.46
6:5:36:LEU:O	6:5:38:ILE:HG13	2.14	0.46
8:7:294:TRP:CG	8:7:298:GLY:HA2	2.50	0.46
10:A:74:ARG:HD2	10:A:146:GLY:C	2.41	0.46
11:AA:548:G:H2'	11:AA:549:U:H6	1.80	0.46
11:AA:578:A:H5''	11:AA:579:G:H5'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:952:A:H4'	11:AA:968:G:N2	2.30	0.46
11:AA:1100:U:OP2	31:JJ:196:LYS:NZ	2.38	0.46
11:AA:1137:C:H2'	11:AA:1138:U:H6	1.80	0.46
11:AA:1470:U:H2'	11:AA:1471:U:C6	2.50	0.46
11:AA:1895:A:O2'	11:AA:3053:G:H4'	2.15	0.46
11:AA:2225:U:H2'	11:AA:2226:U:H6	1.81	0.46
11:AA:2556:C:OP1	47:S:88:ARG:NH2	2.49	0.46
11:AA:2760:C:H5	55:a:87:ARG:HD2	1.80	0.46
11:AA:3197:G:C2	11:AA:3199:G:C4	3.04	0.46
11:AA:3200:G:H2'	11:AA:3201:C:H6	1.80	0.46
11:AA:3239:G:C2	11:AA:3249:C:C2	3.04	0.46
11:AA:3353:G:H8	11:AA:3356:G:H2'	1.80	0.46
12:Aa:719:LEU:HD12	12:Aa:835:TRP:HB2	1.97	0.46
12:Aa:767:THR:O	12:Aa:769:LYS:NZ	2.41	0.46
15:C:16:ARG:HH22	15:C:20:LYS:HD2	1.80	0.46
15:C:83:VAL:O	15:C:103:ALA:HA	2.16	0.46
17:D:110:ARG:HD3	17:D:117:LYS:NZ	2.30	0.46
17:D:169:ALA:O	17:D:172:ARG:HG2	2.15	0.46
19:E:5:LYS:HB3	19:E:5:LYS:HE3	1.77	0.46
19:E:19:VAL:O	19:E:19:VAL:HG13	2.16	0.46
20:EE:179:LEU:HD12	20:EE:181:LYS:H	1.80	0.46
21:Ee:28:LEU:O	21:Ee:32:ILE:HG22	2.15	0.46
25:GG:43:ASN:HD22	25:GG:43:ASN:C	2.16	0.46
33:KK:156:ASP:OD1	33:KK:156:ASP:N	2.48	0.46
36:M:75:LEU:HD22	36:M:116:GLY:O	2.15	0.46
39:NN:12:LEU:HG	39:NN:133:ARG:NH2	2.30	0.46
39:NN:87:LYS:O	39:NN:90:GLN:HG2	2.15	0.46
41:OO:18:TRP:CD1	41:OO:18:TRP:H	2.33	0.46
42:P:59:ILE:HG23	42:P:60:TRP:HD1	1.80	0.46
45:QQ:142:ILE:HG22	45:QQ:152:CYS:SG	2.55	0.46
53:Y:94:SER:H	53:Y:104:PRO:HG3	1.77	0.46
57:c:90:C:H2'	57:c:91:G:O4'	2.14	0.46
57:c:604:A:H2'	57:c:605:A:O4'	2.15	0.46
57:c:1166:A:H5''	63:i:101:GLY:HA3	1.98	0.46
57:c:1196:A:C8	57:c:1602:C:H4'	2.51	0.46
57:c:1454:G:P	72:r:81:ARG:HH22	2.38	0.46
57:c:1473:U:P	63:i:190:ILE:H	2.37	0.46
57:c:1552:U:H2'	57:c:1553:G:H8	1.81	0.46
57:c:1740:A:H2'	57:c:1741:U:H6	1.80	0.46
59:e:121:ILE:CD1	59:e:161:ILE:HD12	2.45	0.46
60:f:162:CYS:HB3	60:f:209:ASN:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:g:74:GLN:NE2	61:g:82:GLY:H	2.13	0.46
6:5:47:ALA:O	6:5:50:ILE:HG12	2.15	0.46
7:6:31:LYS:HE2	57:c:476:U:C2	2.51	0.46
11:AA:174:C:H2'	11:AA:175:C:C6	2.51	0.46
11:AA:549:U:H2'	11:AA:550:A:H8	1.81	0.46
11:AA:685:G:H2'	11:AA:686:G:C8	2.50	0.46
11:AA:1421:G:H2'	11:AA:1422:G:C8	2.46	0.46
11:AA:2631:U:H2'	11:AA:2632:G:C8	2.51	0.46
11:AA:2662:G:H2'	11:AA:2663:G:C8	2.49	0.46
11:AA:2754:G:O2'	11:AA:2755:C:OP1	2.32	0.46
11:AA:3375:A:H2'	11:AA:3378:C:C5	2.51	0.46
12:Aa:136:CYS:HB2	12:Aa:139:THR:HG23	1.98	0.46
14:BB:1:G:H2'	14:BB:2:G:H8	1.81	0.46
23:FF:84:VAL:O	23:FF:203:VAL:N	2.38	0.46
23:FF:148:LEU:O	23:FF:152:LYS:HG2	2.16	0.46
27:HH:258:LYS:HD3	27:HH:258:LYS:HA	1.72	0.46
34:L:26:VAL:HG11	34:L:96:VAL:HB	1.98	0.46
35:LL:102:ASN:HB2	35:LL:113:GLU:HB3	1.97	0.46
35:LL:150:SER:OG	35:LL:153:ASP:HB2	2.15	0.46
39:NN:160:VAL:O	39:NN:164:LYS:HE3	2.15	0.46
43:PP:32:LEU:HD11	43:PP:94:TRP:CG	2.50	0.46
45:QQ:4:TYR:HA	45:QQ:7:LEU:HD12	1.96	0.46
49:U:56:ARG:HH12	49:U:60:LEU:HD12	1.80	0.46
57:c:5:U:OP2	60:f:204:THR:HG23	2.16	0.46
57:c:888:U:H4'	71:q:126:THR:HG21	1.97	0.46
57:c:899:G:H2'	57:c:900:A:C8	2.51	0.46
57:c:1071:U:H2'	57:c:1072:C:C6	2.51	0.46
57:c:1681:A:N3	57:c:1721:A:N6	2.62	0.46
60:f:144:TRP:CE2	60:f:173:PRO:HG3	2.49	0.46
63:i:159:ALA:HB2	63:i:224:ASN:CG	2.40	0.46
69:o:71:LEU:HD12	69:o:72:THR:N	2.22	0.46
77:w:25:THR:OG1	77:w:115:GLU:HG3	2.16	0.46
2:1:92:ILE:HB	2:1:100:ILE:HD12	1.98	0.46
11:AA:135:C:O2	48:T:93:THR:OG1	2.33	0.46
11:AA:197:G:N2	11:AA:372:A:N7	2.64	0.46
11:AA:1158:A:OP1	31:JJ:91:GLY:N	2.42	0.46
11:AA:1246:G:H2'	11:AA:1247:U:C6	2.50	0.46
11:AA:1558:A:OP2	33:KK:57:ARG:NH2	2.49	0.46
11:AA:1647:A:C6	11:AA:1809:A:C8	3.04	0.46
11:AA:1658:G:H2'	11:AA:1659:U:C6	2.51	0.46
11:AA:1804:A:H2'	11:AA:1805:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2593:A:H4'	11:AA:2594:C:H5'	1.97	0.46
11:AA:2618:G:H5''	37:MM:116:ARG:HG2	1.98	0.46
11:AA:3191:G:C6	11:AA:3192:U:C4	3.03	0.46
11:AA:3332:U:OP1	28:I:35:LYS:HD3	2.15	0.46
11:AA:3384:U:H2'	11:AA:3385:U:H6	1.79	0.46
12:Aa:31:GLY:HA2	84:Aa:901:GTP:H5'	1.97	0.46
12:Aa:209:VAL:C	12:Aa:337:MET:HE1	2.41	0.46
12:Aa:656:LEU:C	12:Aa:660:LYS:HZ2	2.23	0.46
12:Aa:740:VAL:HG22	12:Aa:744:TYR:HE1	1.81	0.46
15:C:48:VAL:O	15:C:52:LEU:HD23	2.14	0.46
23:FF:166:ILE:HD12	23:FF:173:GLN:HB3	1.97	0.46
25:GG:25:VAL:HA	25:GG:276:LEU:HD21	1.96	0.46
25:GG:318:LEU:HD11	31:JJ:146:GLN:HG2	1.97	0.46
31:JJ:176:TYR:CG	31:JJ:197:GLN:NE2	2.84	0.46
39:NN:40:LEU:HD23	39:NN:40:LEU:H	1.81	0.46
40:O:78:GLY:HA2	40:O:81:VAL:HG12	1.98	0.46
45:QQ:113:LEU:HB2	45:QQ:134:LEU:HD23	1.98	0.46
57:c:130:C:O2'	57:c:131:C:OP1	2.32	0.46
57:c:1049:U:H2'	57:c:1050:G:O4'	2.16	0.46
57:c:1144:U:H2'	57:c:1145:U:H6	1.79	0.46
57:c:1430:U:O2'	57:c:1433:G:OP2	2.29	0.46
57:c:1523:G:H21	57:c:1523:G:P	2.38	0.46
58:d:183:ARG:HB3	58:d:191:ARG:HG2	1.96	0.46
59:e:29:TRP:O	59:e:94:LYS:HD2	2.15	0.46
62:h:123:LEU:HD23	62:h:226:PHE:CE1	2.50	0.46
63:i:168:VAL:O	63:i:172:ILE:HG13	2.16	0.46
66:l:105:ASP:HA	66:l:164:ARG:NH1	2.31	0.46
69:o:94:ILE:O	69:o:94:ILE:HG13	2.16	0.46
77:w:97:VAL:O	77:w:101:LYS:HG2	2.16	0.46
4:3:21:LEU:HD23	70:p:15:ALA:HB2	1.97	0.46
5:4:42:ARG:HG3	5:4:56:LEU:HD11	1.97	0.46
10:A:124:LEU:HG	10:A:126:VAL:HG12	1.97	0.46
11:AA:188:U:H2'	11:AA:223:U:O2'	2.15	0.46
11:AA:283:G:O6	11:AA:304:G:H1'	2.16	0.46
11:AA:504:A:H2'	11:AA:505:G:C8	2.51	0.46
11:AA:597:G:H2'	11:AA:598:A:C8	2.50	0.46
11:AA:640:U:H2'	11:AA:641:C:C6	2.51	0.46
11:AA:856:G:H22	56:b:4:ARG:NH1	2.14	0.46
11:AA:951:A:OP2	11:AA:1367:G:N2	2.47	0.46
11:AA:952:A:C2	11:AA:1114:U:H4'	2.50	0.46
11:AA:1134:G:O2'	11:AA:2642:A:N3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1416:C:H2'	11:AA:1417:G:N9	2.31	0.46
11:AA:2196:C:H2'	11:AA:2242:A:N6	2.31	0.46
11:AA:2281:A2M:H8	11:AA:2281:A2M:H2'	1.76	0.46
11:AA:2426:U:H2'	11:AA:2427:U:C6	2.50	0.46
11:AA:2434:U:H5'	45:QQ:24:ARG:NH1	2.31	0.46
11:AA:3065:G:H2'	11:AA:3066:U:C6	2.51	0.46
12:Aa:30:HIS:CG	12:Aa:130:ASP:HB2	2.51	0.46
12:Aa:32:LYS:NZ	84:Aa:901:GTP:O3B	2.49	0.46
12:Aa:565:GLU:N	12:Aa:565:GLU:OE1	2.49	0.46
14:BB:117:A:H2'	14:BB:118:A:C8	2.49	0.46
17:D:81:ARG:HG2	17:D:88:ARG:CZ	2.46	0.46
27:HH:287:ALA:HA	27:HH:290:ILE:HG22	1.97	0.46
35:LL:124:ARG:HG2	35:LL:164:ILE:HD12	1.97	0.46
37:MM:53:VAL:HG22	37:MM:134:ILE:HA	1.97	0.46
39:NN:104:PHE:N	39:NN:127:PHE:O	2.38	0.46
42:P:50:ARG:HH22	42:P:80:ASN:ND2	2.14	0.46
43:PP:134:ALA:O	43:PP:138:ALA:N	2.30	0.46
57:c:86:A:H1'	57:c:148:A:H1'	1.97	0.46
57:c:123:G:O2'	62:h:146:THR:O	2.26	0.46
57:c:154:G:H1'	64:j:60:GLY:HA3	1.96	0.46
57:c:525:A:O2'	57:c:526:A:OP1	2.31	0.46
57:c:999:U:H2'	57:c:1000:C:C6	2.50	0.46
57:c:1287:A:O3'	57:c:1288:G:H8	1.99	0.46
57:c:1739:C:C2	57:c:1740:A:C8	3.03	0.46
59:e:176:VAL:HA	59:e:179:SER:OG	2.16	0.46
63:i:81:ARG:HD3	63:i:82:PHE:CZ	2.50	0.46
66:l:121:LEU:HD23	66:l:160:PHE:HD2	1.81	0.46
67:m:17:ARG:HH21	67:m:20:GLU:HA	1.80	0.46
79:y:90:THR:HA	79:y:94:LEU:HD13	1.98	0.46
80:z:131:SER:HB2	80:z:134:ALA:CB	2.46	0.46
4:3:11:THR:HG22	78:x:86:SER:HB3	1.97	0.46
6:5:22:ARG:HB3	6:5:38:ILE:HG12	1.96	0.46
8:7:221:MET:HA	8:7:232:TYR:O	2.16	0.46
11:AA:49:A:H62	45:QQ:187:ARG:HD2	1.81	0.46
11:AA:287:G:H5'	45:QQ:179:LYS:O	2.16	0.46
11:AA:372:A:H2'	11:AA:373:A:O4'	2.16	0.46
11:AA:611:A:O2'	11:AA:612:U:H5''	2.16	0.46
11:AA:700:C:OP1	41:OO:64:LYS:NZ	2.49	0.46
11:AA:1008:U:O4	11:AA:1043:C:N4	2.49	0.46
11:AA:1499:C:H2'	11:AA:1500:G:C8	2.50	0.46
11:AA:1822:C:H2'	11:AA:1823:A:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1907:C:O2	23:FF:240:ARG:NH2	2.49	0.46
11:AA:2256:A2M:C4	12:Aa:703:GLY:HA2	2.46	0.46
11:AA:2340:U:H2'	11:AA:2341:A:C8	2.50	0.46
11:AA:2485:A:H3'	11:AA:2486:A:H5''	1.97	0.46
11:AA:2651:G:H5''	11:AA:2652:U:O4'	2.16	0.46
11:AA:2947:G:H2'	11:AA:2948:OMC:H6	1.81	0.46
11:AA:3019:U:H2'	11:AA:3020:U:O4'	2.16	0.46
11:AA:3049:A:H5''	23:FF:364:LYS:HD2	1.98	0.46
12:Aa:656:LEU:O	12:Aa:659:ILE:HG22	2.16	0.46
12:Aa:751:ARG:NH2	12:Aa:776:GLU:OE2	2.49	0.46
16:CC:25:G:H2'	16:CC:26:U:H6	1.81	0.46
20:EE:24:GLN:O	20:EE:24:GLN:NE2	2.41	0.46
22:F:106:LEU:C	22:F:110:LYS:HZ2	2.24	0.46
26:H:15:LEU:HD13	26:H:51:ALA:HB3	1.98	0.46
29:II:158:TYR:HD1	43:PP:118:PHE:CG	2.33	0.46
35:LL:129:ARG:H	35:LL:157:ASN:ND2	2.14	0.46
40:O:51:LEU:HD13	47:S:91:ARG:HD3	1.98	0.46
44:Q:97:ALA:HB3	44:Q:100:ILE:HG12	1.98	0.46
49:U:77:LEU:HD11	49:U:86:LYS:HD3	1.98	0.46
57:c:247:A:H5'	69:o:39:GLY:HA2	1.97	0.46
57:c:510:G:H2'	57:c:511:A:O4'	2.16	0.46
57:c:553:G:H3'	57:c:554:C:H2'	1.96	0.46
57:c:752:A:H5''	62:h:187:ARG:HB3	1.98	0.46
57:c:1471:A:H2	57:c:1474:G:N3	2.13	0.46
63:i:61:TYR:CE1	63:i:164:PRO:HB2	2.51	0.46
69:o:33:ARG:NH2	69:o:53:TYR:O	2.34	0.46
71:q:29:HIS:NE2	71:q:38:THR:HB	2.30	0.46
72:r:37:ALA:O	72:r:42:ARG:NE	2.36	0.46
76:v:138:GLN:O	76:v:141:GLU:HG3	2.15	0.46
79:y:29:PRO:HB2	79:y:58:SER:CB	2.46	0.46
1:O:23:PHE:O	1:O:73:GLY:N	2.45	0.46
3:2:70:LYS:NZ	57:c:931:C:OP2	2.48	0.46
8:7:206:PRO:HG2	8:7:247:PRO:HB3	1.98	0.46
11:AA:75:G:H3'	11:AA:76:G:H8	1.80	0.46
11:AA:96:G:O2'	41:OO:15:ARG:NH2	2.49	0.46
11:AA:323:A:H2'	11:AA:324:A:C8	2.51	0.46
11:AA:516:A:C6	11:AA:575:G:C6	3.04	0.46
11:AA:589:A:N6	11:AA:610:G:H1'	2.31	0.46
11:AA:725:G:C6	11:AA:746:A:C6	3.04	0.46
11:AA:949:C:O2'	11:AA:971:G:OP1	2.30	0.46
11:AA:1269:U:H1'	11:AA:1272:C:C5	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1281:G:OP1	18:DD:55:LYS:HE2	2.16	0.46
11:AA:1423:C:O2'	29:II:5:LYS:HE3	2.15	0.46
11:AA:1841:A:O2'	11:AA:1842:A:H5''	2.16	0.46
11:AA:2218:G:H2'	11:AA:2219:A:C8	2.49	0.46
11:AA:2219:A:H2'	11:AA:2220:A2M:C8	2.43	0.46
11:AA:2597:U:H2'	11:AA:2598:G:H8	1.81	0.46
11:AA:2631:U:H2'	11:AA:2632:G:H8	1.81	0.46
11:AA:3034:C:H42	35:LL:121:LYS:HG2	1.81	0.46
11:AA:3091:A:H8	11:AA:3091:A:O5'	1.99	0.46
11:AA:3153:U:H4'	11:AA:3155:U:O4	2.16	0.46
11:AA:3392:U:H2'	11:AA:3393:U:H6	1.81	0.46
12:Aa:211:PHE:HB2	12:Aa:220:PHE:CZ	2.51	0.46
12:Aa:413:ILE:HG13	12:Aa:469:LEU:HG	1.97	0.46
12:Aa:542:LEU:O	12:Aa:545:LEU:N	2.49	0.46
12:Aa:676:ILE:HD11	12:Aa:718:LEU:HD11	1.97	0.46
14:BB:44:C:H2'	14:BB:45:A:H8	1.79	0.46
14:BB:70:U:H2'	14:BB:71:G:H8	1.81	0.46
16:CC:55:U:C2	16:CC:56:G:C8	3.04	0.46
25:GG:30:ILE:HG22	25:GG:32:PRO:HD3	1.97	0.46
34:L:85:TYR:HE2	34:L:129:TRP:CG	2.34	0.46
37:MM:44:ASP:OD1	37:MM:185:ARG:NH2	2.49	0.46
37:MM:182:LEU:O	37:MM:186:GLU:HG3	2.16	0.46
39:NN:49:LYS:HG3	39:NN:64:LYS:N	2.31	0.46
39:NN:92:ARG:HH11	39:NN:172:LEU:HB3	1.79	0.46
41:OO:118:GLU:O	41:OO:121:SER:OG	2.32	0.46
45:QQ:190:THR:HG23	45:QQ:193:ARG:NH2	2.30	0.46
48:T:84:LYS:HZ2	48:T:88:LEU:HD13	1.80	0.46
57:c:480:G:C6	57:c:509:G:C6	3.03	0.46
57:c:629:U:H2'	57:c:630:A:C8	2.50	0.46
57:c:629:U:C2	57:c:630:A:C8	3.04	0.46
57:c:635:A:H2'	57:c:636:A:C8	2.51	0.46
57:c:960:U:H2'	57:c:961:U:C6	2.50	0.46
57:c:1128:C:H2'	57:c:1129:U:C6	2.50	0.46
57:c:1172:G:H2'	57:c:1173:C:C6	2.50	0.46
57:c:1233:G:H2'	57:c:1234:A:O4'	2.15	0.46
57:c:1241:G:H1'	72:r:79:HIS:HB2	1.97	0.46
57:c:1365:C:HO2'	73:s:30:LYS:NZ	2.14	0.46
60:f:56:ILE:HG13	60:f:57:PHE:N	2.31	0.46
62:h:127:LYS:HD3	62:h:127:LYS:HA	1.70	0.46
63:i:76:ARG:HG2	73:s:122:ARG:HD2	1.97	0.46
63:i:99:MET:O	63:i:103:ASN:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:l:98:LYS:HB2	66:l:172:ARG:HG2	1.98	0.46
70:p:126:ALA:O	70:p:130:ARG:HG3	2.16	0.46
72:r:17:TYR:CD2	72:r:18:ARG:HG2	2.51	0.46
72:r:18:ARG:NH2	72:r:37:ALA:O	2.49	0.46
6:5:8:PHE:O	57:c:1450:U:O2'	2.33	0.46
8:7:294:TRP:CE3	8:7:298:GLY:HA2	2.51	0.46
10:A:149:TYR:CD2	23:FF:96:PRO:HA	2.50	0.46
11:AA:288:C:H4'	45:QQ:171:SER:O	2.16	0.46
11:AA:361:A:N3	11:AA:814:U:H1'	2.31	0.46
11:AA:1106:G:H2'	11:AA:1107:C:C6	2.51	0.46
11:AA:1301:A:H4'	11:AA:1302:A:H5''	1.97	0.46
11:AA:1546:A:H2'	11:AA:1547:G:O4'	2.16	0.46
11:AA:1742:U:H2'	11:AA:1743:G:C8	2.51	0.46
11:AA:2148:U:H2'	11:AA:2149:A:C8	2.51	0.46
11:AA:2452:G:C4	11:AA:2462:A:H2'	2.51	0.46
11:AA:2769:A:H2'	11:AA:2770:G:H8	1.77	0.46
11:AA:2800:G:O6	36:M:42:ARG:NH1	2.32	0.46
11:AA:2895:G:H5''	53:Y:102:ARG:NH1	2.29	0.46
11:AA:2902:A:H2'	11:AA:2903:A:O4'	2.15	0.46
11:AA:3003:G:OP1	23:FF:26:ARG:NH1	2.44	0.46
11:AA:3122:A:C2	11:AA:3123:A:C8	3.04	0.46
11:AA:3299:A:H2	11:AA:3315:G:H22	1.64	0.46
12:Aa:373:ASP:OD1	12:Aa:373:ASP:N	2.49	0.46
12:Aa:588:LEU:HD11	12:Aa:716:GLY:HA3	1.97	0.46
15:C:155:MET:SD	15:C:156:GLY:N	2.89	0.46
17:D:102:LEU:O	17:D:106:LEU:HD23	2.16	0.46
19:E:30:PHE:CG	19:E:103:VAL:HG21	2.51	0.46
20:EE:190:ARG:NH2	20:EE:191:LEU:HD11	2.31	0.46
21:Ee:37:LEU:HD23	21:Ee:37:LEU:HA	1.79	0.46
23:FF:289:ASP:OD1	23:FF:289:ASP:N	2.49	0.46
26:H:19:VAL:HG23	26:H:50:PRO:O	2.15	0.46
31:JJ:89:ILE:HB	31:JJ:219:LYS:HE3	1.96	0.46
32:K:83:ASP:O	32:K:84:LYS:HG2	2.16	0.46
37:MM:45:GLU:OE1	37:MM:45:GLU:N	2.48	0.46
40:O:50:VAL:HG13	40:O:53:LYS:HE2	1.98	0.46
44:Q:86:THR:HG22	44:Q:115:LEU:HD13	1.97	0.46
46:R:13:HIS:HA	46:R:30:ILE:HD13	1.96	0.46
46:R:18:ARG:HA	46:R:23:ASN:HA	1.98	0.46
51:W:10:GLN:O	51:W:14:LEU:HD23	2.15	0.46
57:c:153:G:C5	57:c:162:A:N6	2.84	0.46
57:c:170:U:H3	57:c:289:U:HO2'	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:640:U:H2'	57:c:641:G:O4'	2.16	0.46
57:c:878:G:H2'	57:c:879:G:C8	2.51	0.46
57:c:937:C:H2'	57:c:938:G:H8	1.80	0.46
57:c:1132:A:H2'	57:c:1133:A:H8	1.79	0.46
57:c:1545:A:H2'	57:c:1567:U:O2	2.15	0.46
60:f:76:LEU:HD23	60:f:133:LYS:HE2	1.97	0.46
62:h:35:PRO:HG2	62:h:36:HIS:ND1	2.31	0.46
63:i:45:LYS:HB3	63:i:46:TRP:CE2	2.50	0.46
67:m:52:ILE:HD11	67:m:80:LEU:HD21	1.98	0.46
67:m:176:ASN:HB3	67:m:180:LYS:HZ3	1.81	0.46
68:n:54:TYR:HA	68:n:69:THR:HB	1.98	0.46
73:s:98:ASP:N	73:s:98:ASP:OD1	2.48	0.46
80:z:37:ALA:O	80:z:44:GLY:HA2	2.16	0.46
3:2:10:ARG:HB3	3:2:34:LYS:HG3	1.98	0.45
8:7:44:SER:OG	8:7:59:ARG:HB2	2.16	0.45
11:AA:86:G:O2'	11:AA:98:G:O6	2.27	0.45
11:AA:301:G:H2'	11:AA:302:U:H6	1.80	0.45
11:AA:359:U:C4	11:AA:920:A:C2	3.04	0.45
11:AA:767:U:H4'	41:OO:186:ARG:NH1	2.24	0.45
11:AA:971:G:H2'	11:AA:972:A:C8	2.52	0.45
11:AA:1205:A:C6	11:AA:1206:G:C5	3.04	0.45
11:AA:1464:G:N2	11:AA:1467:A:OP2	2.48	0.45
11:AA:1591:G:OP1	47:S:16:ARG:HB2	2.17	0.45
11:AA:2133:U:O4	11:AA:2147:A:H2	1.98	0.45
11:AA:2255:A:HO2'	57:c:1757:G:HO2'	1.60	0.45
11:AA:2304:C:H3'	11:AA:2305:G:N2	2.30	0.45
11:AA:2597:U:H2'	11:AA:2598:G:C8	2.51	0.45
11:AA:2917:G:C6	11:AA:2918:G:C5	3.04	0.45
11:AA:3007:U:H2'	11:AA:3008:A:C8	2.51	0.45
11:AA:3092:C:H2'	26:H:12:ARG:NH2	2.30	0.45
11:AA:3121:U:H4'	11:AA:3122:A:OP1	2.14	0.45
12:Aa:1:MET:HB3	12:Aa:78:TYR:CD2	2.51	0.45
23:FF:165:GLN:HG3	23:FF:168:LYS:HG3	1.98	0.45
25:GG:184:SER:HB2	25:GG:202:ARG:HG2	1.98	0.45
31:JJ:232:ARG:NH1	31:JJ:232:ARG:HB2	2.31	0.45
33:KK:183:LYS:HZ2	33:KK:194:THR:CB	2.24	0.45
39:NN:104:PHE:HE2	39:NN:106:ILE:HD11	1.80	0.45
43:PP:70:PHE:CE1	43:PP:72:LEU:HB2	2.50	0.45
49:U:34:SER:O	49:U:37:THR:N	2.48	0.45
57:c:26:A:O2'	57:c:27:U:H5''	2.16	0.45
57:c:53:G:H2'	57:c:54:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:127:G:N7	57:c:180:A:N6	2.64	0.45
57:c:808:U:H2'	57:c:809:A:C8	2.49	0.45
57:c:930:A:H1'	59:e:111:ARG:HH11	1.81	0.45
57:c:1035:G:O4'	79:y:2:THR:N	2.49	0.45
57:c:1205:C:H2'	57:c:1206:U:C2	2.51	0.45
57:c:1484:G:N1	57:c:1592:A:H4'	2.30	0.45
57:c:1678:A:OP2	66:l:42:ARG:NH1	2.40	0.45
58:d:28:ASN:HA	58:d:46:HIS:CD2	2.51	0.45
59:e:170:GLU:HA	59:e:173:THR:HG22	1.98	0.45
61:g:105:MET:HE3	61:g:109:LEU:HD21	1.97	0.45
62:h:36:HIS:NE2	62:h:88:ASP:OD2	2.48	0.45
64:j:137:ARG:O	64:j:141:ILE:HG12	2.16	0.45
65:k:4:PRO:N	65:k:7:LYS:HB2	2.31	0.45
65:k:139:ARG:HB3	79:y:51:GLU:OE2	2.16	0.45
66:l:76:THR:HG22	66:l:77:ARG:N	2.31	0.45
66:l:79:ALA:HB3	66:l:103:GLN:O	2.16	0.45
66:l:121:LEU:HD23	66:l:160:PHE:CD2	2.51	0.45
70:p:113:PHE:CE2	70:p:117:LEU:HD11	2.50	0.45
77:w:39:SER:HA	77:w:42:VAL:HG22	1.97	0.45
2:1:59:TYR:OH	63:i:192:GLU:OE2	2.32	0.45
3:2:76:SER:OG	57:c:1793:G:N2	2.49	0.45
4:3:82:LYS:HD2	4:3:82:LYS:HA	1.76	0.45
7:6:14:VAL:O	7:6:18:THR:CG2	2.62	0.45
10:A:20:ALA:HA	10:A:23:VAL:HG12	1.97	0.45
11:AA:235:A:H2'	11:AA:236:G:C8	2.50	0.45
11:AA:370:U:H2'	11:AA:371:G:O4'	2.16	0.45
11:AA:411:U:H2'	11:AA:412:G:H8	1.81	0.45
11:AA:1218:U:O2	11:AA:1223:A:O2'	2.27	0.45
11:AA:1229:G:H2'	11:AA:1230:G:C8	2.49	0.45
11:AA:1413:G:C2	11:AA:1414:G:C5	3.04	0.45
11:AA:2432:A:H2'	11:AA:2433:U:O4'	2.17	0.45
11:AA:2611:U:H2'	11:AA:2612:U:C6	2.51	0.45
11:AA:2881:C:H2'	11:AA:2882:U:C6	2.51	0.45
12:Aa:180:ARG:HH22	18:DD:137:GLN:C	2.25	0.45
12:Aa:316:GLY:C	12:Aa:318:ALA:H	2.23	0.45
15:C:44:PHE:CD2	15:C:134:GLY:HA3	2.51	0.45
15:C:126:GLN:HE21	25:GG:282:SER:HB3	1.80	0.45
17:D:69:SER:HA	17:D:72:GLU:HG2	1.98	0.45
23:FF:147:GLU:OE1	23:FF:150:ARG:HD3	2.16	0.45
23:FF:284:ARG:HD3	23:FF:356:LEU:HD12	1.98	0.45
25:GG:22:LEU:HD21	25:GG:26:PHE:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:LL:188:THR:OG1	35:LL:191:LEU:O	2.33	0.45
37:MM:13:LYS:HE2	37:MM:13:LYS:HB3	1.81	0.45
41:OO:63:VAL:HA	41:OO:66:ASN:CB	2.46	0.45
41:OO:182:ILE:HA	41:OO:185:LYS:HG2	1.97	0.45
49:U:34:SER:HB3	49:U:37:THR:OG1	2.16	0.45
50:V:10:LYS:HD2	50:V:10:LYS:O	2.16	0.45
50:V:64:MET:O	50:V:65:ARG:HD3	2.16	0.45
57:c:30:G:C6	57:c:597:G:C6	3.04	0.45
57:c:385:A:H2'	57:c:386:G:C8	2.51	0.45
57:c:811:A:H2	57:c:816:G:H21	1.64	0.45
57:c:818:C:H2'	57:c:819:G:N9	2.31	0.45
57:c:869:A:H1'	70:p:48:SER:OG	2.16	0.45
57:c:966:A:H2'	57:c:967:A:C8	2.51	0.45
57:c:1237:G:H2'	57:c:1249:U:H3	1.81	0.45
57:c:1292:G:H2'	57:c:1293:U:C6	2.51	0.45
57:c:1316:G:H2'	57:c:1317:C:H6	1.81	0.45
57:c:1349:G:H2'	57:c:1350:U:H4'	1.98	0.45
57:c:1565:C:H2'	57:c:1566:U:H5''	1.98	0.45
57:c:1591:C:P	76:v:92:LYS:HG2	2.56	0.45
57:c:1673:G:H1	57:c:1728:A:H2	1.61	0.45
75:u:127:HIS:NE2	75:u:133:VAL:HG21	2.32	0.45
76:v:61:VAL:O	76:v:65:ILE:HG13	2.17	0.45
8:7:91:LEU:CB	8:7:100:TYR:HB2	2.46	0.45
11:AA:39:A:H61	11:AA:42:C:H3'	1.79	0.45
11:AA:510:G:C6	11:AA:582:G:C5	3.05	0.45
11:AA:646:A:H2'	11:AA:647:A:O4'	2.16	0.45
11:AA:954:U:OP1	38:N:5:LYS:NZ	2.43	0.45
11:AA:1174:G:C6	11:AA:1175:C:N4	2.85	0.45
11:AA:1537:A:H2'	11:AA:1538:G:O4'	2.16	0.45
11:AA:1687:U:H2'	24:G:70:LYS:NZ	2.31	0.45
11:AA:2102:U:C2	11:AA:2103:U:C5	3.05	0.45
11:AA:2681:U:H4'	39:NN:66:ALA:HB3	1.97	0.45
11:AA:2765:C:H2'	11:AA:2766:U:H6	1.80	0.45
11:AA:3004:C:OP1	23:FF:159:ARG:NH2	2.42	0.45
12:Aa:251:ASN:CG	12:Aa:269:LEU:HD22	2.41	0.45
12:Aa:397:PHE:CD2	12:Aa:437:MET:HE2	2.51	0.45
15:C:35:PHE:CE1	15:C:39:ARG:HD3	2.51	0.45
18:DD:132:LYS:HA	18:DD:135:PHE:HD2	1.81	0.45
23:FF:28:ARG:NH2	23:FF:30:LYS:HE2	2.30	0.45
23:FF:114:VAL:HA	23:FF:176:ALA:HB3	1.98	0.45
26:H:37:ILE:HD11	26:H:73:VAL:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:KK:98:ARG:HB3	33:KK:191:ASN:HD21	1.81	0.45
57:c:448:C:H2'	57:c:449:C:C6	2.50	0.45
57:c:449:C:H2'	57:c:450:U:C6	2.52	0.45
57:c:466:U:C4	57:c:467:G:C5	3.05	0.45
57:c:512:A:H2'	57:c:513:U:C6	2.51	0.45
57:c:1155:G:H2'	57:c:1156:C:H6	1.79	0.45
57:c:1207:C:N4	57:c:1456:C:O2	2.49	0.45
57:c:1270:G:H2'	57:c:1271:OMG:H8	1.82	0.45
57:c:1351:G:H2'	57:c:1375:A:H2'	1.98	0.45
57:c:1365:C:H2'	57:c:1366:U:H6	1.76	0.45
65:k:93:LEU:HD21	65:k:129:LEU:HD23	1.97	0.45
67:m:35:GLY:O	67:m:110:GLN:NE2	2.40	0.45
69:o:99:ARG:HH22	80:z:7:ARG:CZ	2.29	0.45
70:p:99:ARG:HG3	70:p:115:LEU:HD21	1.98	0.45
73:s:98:ASP:OD2	73:s:101:SER:OG	2.28	0.45
6:5:17:GLY:HA2	6:5:27:HIS:HE1	1.80	0.45
8:7:2:ALA:N	8:7:271:VAL:O	2.50	0.45
8:7:294:TRP:CZ3	8:7:301:LEU:HB3	2.51	0.45
11:AA:68:C:O3'	45:QQ:177:GLY:HA2	2.17	0.45
11:AA:413:U:H2'	11:AA:414:U:C6	2.51	0.45
11:AA:537:A:C4	11:AA:538:G:C8	3.04	0.45
11:AA:1080:A:H5'	27:HH:139:PRO:HB3	1.97	0.45
11:AA:1100:U:H2'	11:AA:1101:G:C8	2.51	0.45
11:AA:1146:C:H2'	11:AA:1147:G:C8	2.51	0.45
11:AA:1394:A:H4'	11:AA:1420:C:H4'	1.99	0.45
11:AA:1731:A:H2'	11:AA:1732:U:O4'	2.17	0.45
11:AA:1757:A:H2'	11:AA:1758:G:H8	1.81	0.45
11:AA:1825:G:H5'	51:W:17:ARG:NH2	2.31	0.45
11:AA:1918:C:H2'	11:AA:1919:G:O4'	2.15	0.45
11:AA:2101:C:HO2'	11:AA:2102:U:P	2.40	0.45
11:AA:2217:U:C2	11:AA:2218:G:C8	3.05	0.45
11:AA:2408:U:C2	11:AA:2409:G:C8	3.04	0.45
11:AA:2469:G:H2'	11:AA:2474:G:C2	2.52	0.45
11:AA:2581:U:H2'	11:AA:2582:C:C6	2.51	0.45
11:AA:2991:A:P	23:FF:20:LYS:HG3	2.57	0.45
11:AA:3115:C:O2'	11:AA:3117:C:N4	2.46	0.45
11:AA:3211:C:H2'	11:AA:3212:C:H6	1.82	0.45
11:AA:3221:C:H2'	11:AA:3222:U:O4'	2.16	0.45
11:AA:3254:G:H2'	11:AA:3255:U:H6	1.82	0.45
11:AA:3266:G:C6	11:AA:3267:A:C6	3.04	0.45
11:AA:3332:U:OP2	28:I:35:LYS:NZ	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3369:G:C6	23:FF:380:MET:HG2	2.51	0.45
12:Aa:380:LEU:HA	12:Aa:400:VAL:HA	1.98	0.45
12:Aa:385:MET:HE1	12:Aa:396:ALA:HB2	1.99	0.45
12:Aa:490:GLN:HG3	12:Aa:531:ALA:HA	1.97	0.45
13:B:86:LYS:HG2	13:B:90:PHE:CE2	2.50	0.45
14:BB:53:U:H1'	39:NN:9:MET:HE1	1.98	0.45
16:CC:139:U:H2'	16:CC:140:G:C8	2.52	0.45
21:Ee:13:LEU:HG	21:Ee:62:LEU:HB3	1.97	0.45
21:Ee:19:GLY:O	21:Ee:54:LYS:HA	2.17	0.45
21:Ee:61:GLN:HB3	21:Ee:72:SER:OG	2.17	0.45
23:FF:89:VAL:HG23	23:FF:160:VAL:HG22	1.98	0.45
25:GG:140:HIS:O	25:GG:142:VAL:HG22	2.17	0.45
41:OO:77:LEU:H	41:OO:77:LEU:HD12	1.82	0.45
57:c:66:U:C5	64:j:173:PRO:HB3	2.51	0.45
57:c:537:G:H8	67:m:175:ARG:HH12	1.62	0.45
57:c:926:A:H2'	57:c:927:C:C6	2.51	0.45
57:c:1082:C:H2'	57:c:1083:G:H5'	1.99	0.45
57:c:1158:C:H4'	57:c:1160:A:N7	2.32	0.45
57:c:1340:U:C2	57:c:1378:U:H5'	2.51	0.45
57:c:1366:U:C2	57:c:1367:G:C8	3.04	0.45
57:c:1403:C:H2'	57:c:1404:C:C6	2.51	0.45
57:c:1685:G:H3'	57:c:1717:G:N3	2.31	0.45
58:d:41:ARG:NH2	74:t:103:ASP:HB3	2.31	0.45
60:f:156:THR:HG22	79:y:99:PHE:CZ	2.51	0.45
63:i:130:ILE:HA	63:i:133:VAL:HG12	1.98	0.45
69:o:4:GLU:OE2	69:o:113:PRO:HB3	2.17	0.45
69:o:35:TYR:CZ	69:o:49:ILE:HD12	2.51	0.45
70:p:5:HIS:HB3	70:p:117:LEU:HD22	1.98	0.45
70:p:40:TYR:HE2	70:p:53:LEU:HD22	1.80	0.45
73:s:56:GLY:HA3	73:s:59:LYS:HE3	1.99	0.45
11:AA:264:G:H5'	49:U:36:ARG:HH22	1.82	0.45
11:AA:817:A2M:HM'3	11:AA:920:A:C2	2.52	0.45
11:AA:1076:C:H2'	11:AA:1077:U:H6	1.82	0.45
11:AA:1251:A:H2'	11:AA:1252:A:C8	2.52	0.45
11:AA:1532:C:O2'	11:AA:1800:A:O4'	2.26	0.45
11:AA:1693:C:O2'	11:AA:1772:U:O2'	2.29	0.45
11:AA:2128:C:C4	11:AA:2129:U:C4	3.05	0.45
11:AA:2131:A:N7	11:AA:2188:A:H1'	2.32	0.45
11:AA:2905:U:H2'	11:AA:2906:C:C6	2.51	0.45
11:AA:2918:G:C2	11:AA:2919:A:N7	2.85	0.45
11:AA:2939:G:H2'	11:AA:2940:A:H8	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:3008:A:N6	11:AA:3139:A:H61	2.15	0.45
11:AA:3236:U:H1'	11:AA:3252:G:N2	2.31	0.45
12:Aa:577:SER:HB3	12:Aa:712:ALA:HB2	1.99	0.45
12:Aa:591:GLU:HB3	12:Aa:685:ARG:HH11	1.82	0.45
13:B:116:HIS:HB3	13:B:149:VAL:CG2	2.47	0.45
14:BB:8:G:OP2	27:HH:30:TYR:OH	2.23	0.45
17:D:125:LYS:NZ	17:D:128:LYS:HD3	2.31	0.45
34:L:22:LYS:NZ	34:L:129:TRP:O	2.43	0.45
42:P:34:LYS:HA	42:P:37:LYS:HD2	1.99	0.45
51:W:44:LYS:HB3	51:W:51:LEU:HD21	1.99	0.45
57:c:60:U:H2'	57:c:61:A:H3'	1.96	0.45
57:c:207:U:H2'	57:c:208:U:C6	2.51	0.45
57:c:968:U:H2'	57:c:969:C:O4'	2.16	0.45
57:c:1052:U:H2'	57:c:1053:G:H5'	1.97	0.45
57:c:1064:G:C4	57:c:1065:A:C8	3.05	0.45
57:c:1087:A:H5'	57:c:1298:U:C5	2.51	0.45
57:c:1106:U:H2'	57:c:1107:G:C8	2.52	0.45
57:c:1271:OMG:H1'	57:c:1271:OMG:HM23	1.59	0.45
57:c:1296:A:H2'	57:c:1297:G:O4'	2.17	0.45
57:c:1438:G:H2'	57:c:1439:C:O4'	2.16	0.45
57:c:1439:C:H2'	57:c:1440:C:H6	1.81	0.45
57:c:1457:C:H4'	75:u:139:LYS:NZ	2.30	0.45
57:c:1480:G:H2'	57:c:1481:C:C6	2.51	0.45
57:c:1523:G:H8	76:v:64:HIS:HE2	1.63	0.45
57:c:1605:G:H4'	77:w:66:SER:HB2	1.98	0.45
57:c:1681:A:OP1	57:c:1681:A:H4'	2.17	0.45
63:i:52:GLU:H	63:i:131:GLN:NE2	2.15	0.45
63:i:188:LYS:HG3	63:i:193:THR:HG23	1.97	0.45
63:i:212:LYS:HA	63:i:212:LYS:HD2	1.82	0.45
66:l:101:ILE:HG13	66:l:192:TYR:CE2	2.52	0.45
69:o:99:ARG:HD3	80:z:9:LEU:HA	1.99	0.45
71:q:25:ASP:N	71:q:55:SER:HB3	2.32	0.45
74:t:85:VAL:HG12	74:t:88:VAL:HG21	1.98	0.45
77:w:52:LYS:HB3	77:w:93:LEU:HB3	1.99	0.45
2:1:60:VAL:HA	2:1:64:VAL:HG21	1.99	0.45
3:2:39:MET:HE1	3:2:68:TYR:HB3	1.97	0.45
4:3:65:THR:HG22	4:3:72:LYS:HB2	1.99	0.45
11:AA:180:C:H2'	11:AA:181:U:H6	1.81	0.45
11:AA:534:U:O2	19:E:146:LYS:HA	2.16	0.45
11:AA:590:G:C2	29:II:19:LYS:HD2	2.51	0.45
11:AA:708:G:N2	11:AA:710:A:H3'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:790:U:H5''	25:GG:112:LYS:HE3	1.97	0.45
11:AA:1052:U:H2'	11:AA:1053:A:O4'	2.17	0.45
11:AA:1095:U:O2	22:F:128:LEU:N	2.48	0.45
11:AA:1175:C:H2'	11:AA:1176:C:O4'	2.16	0.45
11:AA:1243:G:N2	11:AA:1271:A:H5'	2.31	0.45
11:AA:1632:A:H2'	11:AA:1633:C:C6	2.52	0.45
11:AA:2160:G:H2'	11:AA:2161:G:C8	2.45	0.45
11:AA:2328:U:H2'	11:AA:2329:C:C6	2.49	0.45
11:AA:2406:C:H2'	11:AA:2407:C:H6	1.81	0.45
11:AA:2421:OMU:C5'	55:a:53:GLN:HE22	2.29	0.45
11:AA:2980:U:H2'	11:AA:2981:U:H6	1.80	0.45
11:AA:2990:G:OP1	23:FF:19:ARG:N	2.49	0.45
12:Aa:149:GLU:OE1	12:Aa:151:ILE:HD11	2.17	0.45
12:Aa:388:THR:CG2	12:Aa:393:ARG:HB2	2.44	0.45
24:G:43:VAL:HG12	24:G:44:GLU:HG2	1.99	0.45
25:GG:3:ARG:CZ	25:GG:22:LEU:HB2	2.47	0.45
33:KK:163:VAL:HA	33:KK:166:LEU:HD13	1.97	0.45
34:L:56:LYS:HD3	34:L:56:LYS:HA	1.77	0.45
37:MM:34:TYR:HE2	37:MM:92:HIS:CD2	2.34	0.45
44:Q:78:ASN:C	44:Q:108:ILE:HD11	2.42	0.45
47:S:37:LYS:HE3	47:S:37:LYS:HB3	1.64	0.45
55:a:17:CYS:SG	55:a:77:CYS:CB	2.84	0.45
56:b:46:THR:HB	56:b:58:SER:OG	2.17	0.45
57:c:320:U:H2'	57:c:321:C:H2'	1.98	0.45
57:c:330:G:H2'	57:c:331:A:C8	2.52	0.45
57:c:649:U:C4	57:c:650:U:C4	3.05	0.45
57:c:683:C:H2'	57:c:684:A:O4'	2.17	0.45
57:c:890:C:H2'	57:c:891:A:H8	1.82	0.45
57:c:1108:G:H4'	57:c:1109:G:H5''	1.99	0.45
57:c:1128:C:H2'	57:c:1129:U:H6	1.81	0.45
57:c:1552:U:H2'	57:c:1553:G:C8	2.52	0.45
57:c:1770:U:H2'	57:c:1771:U:C6	2.51	0.45
61:g:8:LYS:HD2	61:g:9:ARG:N	2.32	0.45
64:j:79:LYS:NZ	64:j:90:GLY:H	2.15	0.45
80:z:24:TRP:CZ3	80:z:30:LYS:HD2	2.52	0.45
2:1:86:GLU:O	2:1:86:GLU:HG2	2.16	0.45
4:3:3:LEU:HA	79:y:22:LYS:HD3	1.98	0.45
5:4:57:MET:SD	5:4:57:MET:N	2.86	0.45
8:7:127:ARG:C	8:7:129:LYS:H	2.24	0.45
8:7:260:ILE:HD13	8:7:313:TRP:HZ3	1.82	0.45
11:AA:276:U:H2'	11:AA:277:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:551:A:H2'	11:AA:552:G:H8	1.82	0.45
11:AA:639:G:N1	11:AA:651:G:C6	2.84	0.45
11:AA:1107:C:H2'	11:AA:1108:U:H6	1.82	0.45
11:AA:1240:A:H1'	21:Ee:96:LYS:HE2	1.98	0.45
11:AA:1258:U:OP2	21:Ee:123:ARG:NH1	2.49	0.45
11:AA:1445:U:H3'	11:AA:1446:A:H8	1.81	0.45
11:AA:1630:U:O2'	11:AA:1631:C:O4'	2.35	0.45
11:AA:1634:G:C6	11:AA:1640:G:C6	3.04	0.45
11:AA:2419:A:H2'	11:AA:2420:C:H6	1.82	0.45
11:AA:2422:C:N3	11:AA:2609:A:N6	2.65	0.45
11:AA:2654:C:N3	11:AA:2754:G:N1	2.64	0.45
11:AA:2699:G:H2'	11:AA:2700:G:C8	2.52	0.45
11:AA:2756:C:H2'	11:AA:2757:U:C6	2.52	0.45
11:AA:2824:G:H2'	11:AA:2825:C:H6	1.82	0.45
11:AA:2992:U:H2'	11:AA:2993:G:O4'	2.17	0.45
11:AA:3042:U:H4'	26:H:45:ARG:NE	2.31	0.45
11:AA:3316:A:N6	23:FF:124:LYS:O	2.50	0.45
12:Aa:113:SER:OG	12:Aa:517:CYS:HB3	2.16	0.45
12:Aa:170:SER:C	12:Aa:171:LYS:HD2	2.41	0.45
12:Aa:438:MET:HB3	12:Aa:441:PHE:O	2.16	0.45
12:Aa:493:VAL:HG23	12:Aa:554:LEU:HD13	1.98	0.45
12:Aa:596:GLU:HG3	12:Aa:623:TYR:HD2	1.81	0.45
13:B:41:LEU:HD21	13:B:109:ALA:O	2.17	0.45
13:B:131:ARG:HB2	13:B:135:ARG:HB2	1.98	0.45
16:CC:48:A:O2'	16:CC:50:C:OP2	2.32	0.45
19:E:12:ARG:HH22	22:F:139:ARG:NH2	2.15	0.45
24:G:33:TYR:O	24:G:37:LEU:HG	2.17	0.45
25:GG:142:VAL:CA	25:GG:145:ILE:HD13	2.45	0.45
25:GG:316:ASN:HD22	25:GG:319:LYS:HE3	1.81	0.45
45:QQ:43:THR:OG1	45:QQ:131:GLU:OE2	2.31	0.45
57:c:854:U:O4	57:c:855:A:N6	2.45	0.45
57:c:949:C:H2'	57:c:950:C:C6	2.51	0.45
57:c:1382:A:H1'	77:w:57:ARG:HD3	1.99	0.45
57:c:1425:A:H2'	57:c:1426:C:C6	2.52	0.45
57:c:1603:U:H5''	73:s:138:PHE:HE1	1.81	0.45
59:e:144:ARG:HD3	59:e:208:GLN:HG2	1.98	0.45
61:g:167:PHE:O	61:g:168:ILE:HG12	2.17	0.45
75:u:36:LYS:HA	75:u:36:LYS:HD3	1.74	0.45
80:z:54:LEU:HD13	80:z:82:LYS:NZ	2.31	0.45
4:3:19:HIS:NE2	57:c:1072:C:P	2.90	0.45
7:6:55:ARG:HG2	7:6:55:ARG:NH1	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:33:LEU:HD13	8:7:302:PHE:CD2	2.52	0.45
8:7:42:LEU:HD11	8:7:82:SER:OG	2.17	0.45
11:AA:57:A:H5'	45:QQ:157:LYS:HD2	1.99	0.45
11:AA:585:A:O3'	46:R:70:LYS:NZ	2.49	0.45
11:AA:996:A:H1'	11:AA:1054:A:N6	2.32	0.45
11:AA:1010:G:H5''	37:MM:40:LYS:NZ	2.31	0.45
11:AA:1555:U:O4	11:AA:1557:A:N6	2.41	0.45
11:AA:1795:U:OP2	20:EE:52:SER:HA	2.17	0.45
11:AA:2466:G:H5'	11:AA:2490:C:N4	2.32	0.45
11:AA:2699:G:H1'	22:F:8:ARG:NH2	2.31	0.45
11:AA:2948:OMC:HM23	11:AA:2948:OMC:H1'	1.63	0.45
12:Aa:120:ARG:HA	12:Aa:149:GLU:OE1	2.17	0.45
17:D:101:VAL:HA	17:D:104:ARG:HG2	1.98	0.45
19:E:11:GLY:N	19:E:41:TYR:OH	2.49	0.45
22:F:79:MET:N	22:F:79:MET:SD	2.89	0.45
32:K:43:TYR:O	32:K:124:GLY:HA2	2.16	0.45
36:M:73:LEU:HB3	36:M:109:TYR:CD2	2.51	0.45
36:M:84:GLU:HA	36:M:87:ARG:NH1	2.32	0.45
37:MM:38:LYS:HB2	37:MM:83:ASP:HA	1.98	0.45
37:MM:150:GLU:OE2	37:MM:153:ARG:NH2	2.45	0.45
38:N:32:LEU:O	38:N:40:ARG:NH1	2.50	0.45
44:Q:79:VAL:HG13	44:Q:111:ARG:HG2	1.98	0.45
45:QQ:115:VAL:HB	45:QQ:160:GLU:CG	2.47	0.45
47:S:20:ILE:HG22	47:S:34:HIS:HA	1.98	0.45
51:W:74:LYS:HD2	51:W:74:LYS:HA	1.80	0.45
57:c:14:C:OP2	60:f:203:LYS:HD2	2.16	0.45
57:c:303:U:O3'	69:o:136:ARG:NH1	2.49	0.45
57:c:621:A:O2'	57:c:1106:U:O2'	2.22	0.45
57:c:791:A:H2'	57:c:792:U:C6	2.51	0.45
57:c:927:C:H1'	71:q:124:ASP:O	2.16	0.45
57:c:975:C:H2'	57:c:976:G:O4'	2.16	0.45
57:c:1015:U:H5''	57:c:1016:C:OP2	2.17	0.45
57:c:1216:C:C2	57:c:1444:A:C2	3.05	0.45
57:c:1243:G:H5''	57:c:1244:A:H3'	1.97	0.45
58:d:23:HIS:HA	58:d:48:ILE:HB	1.98	0.45
58:d:41:ARG:HB3	58:d:45:VAL:O	2.16	0.45
60:f:53:ILE:HG12	60:f:57:PHE:CD2	2.52	0.45
61:g:106:LYS:O	61:g:110:LEU:HD23	2.17	0.45
61:g:164:VAL:HA	61:g:168:ILE:CG1	2.47	0.45
62:h:99:PHE:HE1	62:h:113:ARG:HD3	1.81	0.45
63:i:134:VAL:O	63:i:138:THR:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:j:67:VAL:HG21	64:j:99:GLY:HA2	1.99	0.45
64:j:78:THR:HG22	64:j:92:ARG:HD3	1.99	0.45
64:j:116:LYS:HZ3	64:j:120:GLU:HA	1.82	0.45
64:j:147:LEU:HD23	64:j:147:LEU:H	1.82	0.45
64:j:153:VAL:O	64:j:153:VAL:HG13	2.16	0.45
65:k:143:LEU:HD12	65:k:147:ASN:HD21	1.82	0.45
70:p:99:ARG:NH1	70:p:141:TYR:OH	2.47	0.45
73:s:63:ILE:HB	73:s:65:ILE:HD11	1.99	0.45
74:t:77:GLU:HB2	74:t:81:LYS:HE3	1.99	0.45
1:0:3:ASP:OD1	1:0:4:ALA:N	2.49	0.45
2:1:66:VAL:HA	2:1:71:ILE:O	2.16	0.45
8:7:20:VAL:HA	8:7:37:SER:HA	1.99	0.45
8:7:33:LEU:HD23	8:7:35:SER:N	2.32	0.45
8:7:131:ILE:HG22	8:7:131:ILE:O	2.16	0.45
8:7:212:ALA:HB1	8:7:220:ILE:HG23	1.98	0.45
10:A:110:PRO:HA	10:A:113:ASP:OD2	2.17	0.45
11:AA:164:A:C2	11:AA:258:G:C2	3.05	0.45
11:AA:287:G:N2	45:QQ:95:GLN:HE22	2.15	0.45
11:AA:529:A:H2'	11:AA:530:G:C8	2.52	0.45
11:AA:815:G:O3'	11:AA:920:A:N6	2.50	0.45
11:AA:1009:A:O3'	37:MM:39:LYS:NZ	2.35	0.45
11:AA:1219:C:N3	11:AA:1287:A:N6	2.65	0.45
11:AA:1254:C:H4'	21:Ee:137:GLN:NE2	2.32	0.45
11:AA:1712:G:N2	11:AA:1733:G:C6	2.84	0.45
11:AA:1904:C:O2'	11:AA:1905:G:OP1	2.31	0.45
11:AA:2273:G:H22	11:AA:2311:G:H3'	1.81	0.45
11:AA:2724:OMU:OP1	22:F:78:LYS:NZ	2.39	0.45
11:AA:3317:U:O4'	11:AA:3318:G:N2	2.50	0.45
15:C:175:ALA:O	15:C:182:LYS:HB2	2.17	0.45
23:FF:311:PHE:N	23:FF:315:GLY:O	2.49	0.45
25:GG:198:ARG:HD2	32:K:12:ARG:NH1	2.32	0.45
27:HH:108:ARG:NE	27:HH:253:PHE:HB2	2.32	0.45
28:I:20:LEU:HD11	28:I:28:ILE:HG23	1.99	0.45
32:K:19:TYR:CE2	32:K:30:LEU:HD21	2.51	0.45
33:KK:81:THR:HG21	33:KK:181:LYS:HD3	1.99	0.45
33:KK:162:LEU:HA	45:QQ:7:LEU:HD21	1.98	0.45
39:NN:15:GLU:HG2	39:NN:16:LYS:N	2.32	0.45
55:a:71:ARG:NH1	55:a:73:GLU:HB2	2.32	0.45
57:c:119:A:H2'	57:c:120:U:O4'	2.16	0.45
57:c:127:G:N7	57:c:180:A:C6	2.84	0.45
57:c:153:G:O3'	64:j:2:LYS:NZ	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:399:A:H2'	66:l:26:LYS:HE3	1.98	0.45
57:c:502:U:H2'	57:c:503:G:C8	2.52	0.45
57:c:1541:G:H2'	57:c:1542:G:C4	2.52	0.45
57:c:1546:G:P	75:u:134:ARG:HH12	2.36	0.45
57:c:1647:U:H2'	57:c:1648:A:H8	1.81	0.45
62:h:103:TYR:HB2	62:h:190:GLY:HA2	1.97	0.45
63:i:222:LYS:O	71:q:107:ARG:NH1	2.50	0.45
65:k:122:HIS:O	65:k:125:ILE:HG22	2.16	0.45
73:s:93:HIS:HA	73:s:97:VAL:HG22	1.99	0.45
4:3:35:VAL:HB	4:3:77:THR:HG21	1.99	0.45
11:AA:176:G:H2'	11:AA:177:U:O4'	2.16	0.45
11:AA:412:G:O2'	13:B:30:ARG:NH1	2.50	0.45
11:AA:677:A:H2'	11:AA:785:G:O6	2.17	0.45
11:AA:912:G:N7	20:EE:9:ARG:NH2	2.65	0.45
11:AA:1069:C:H2'	11:AA:1070:U:C6	2.50	0.45
11:AA:1215:U:H2'	11:AA:1216:C:H6	1.82	0.45
11:AA:1443:G:C2	11:AA:1444:G:C5	3.05	0.45
11:AA:1473:G:H2'	11:AA:1474:A:H8	1.82	0.45
11:AA:1618:G:H2'	11:AA:1619:A:C8	2.52	0.45
11:AA:2421:OMU:HM23	11:AA:2421:OMU:H1'	1.56	0.45
11:AA:2935:U:O4	26:H:44:SER:OG	2.25	0.45
11:AA:3158:G:C6	11:AA:3292:A:N1	2.85	0.45
12:Aa:183:GLU:CD	18:DD:143:THR:H	2.24	0.45
12:Aa:578:LYS:HD3	12:Aa:585:ARG:NH1	2.32	0.45
12:Aa:654:GLN:HA	57:c:1271:OMG:HM21	1.98	0.45
14:BB:11:A:OP2	27:HH:17:GLN:NE2	2.31	0.45
16:CC:97:A:H2'	16:CC:98:U:C6	2.52	0.45
25:GG:54:GLU:HG2	25:GG:104:LYS:NZ	2.31	0.45
25:GG:212:ASP:OD1	25:GG:215:ILE:N	2.50	0.45
25:GG:359:LEU:HD23	25:GG:360:LYS:NZ	2.32	0.45
31:JJ:160:ARG:O	31:JJ:160:ARG:HG2	2.17	0.45
36:M:144:VAL:HB	41:OO:161:ASP:HB2	1.99	0.45
40:O:74:ASN:OD1	40:O:75:ASN:N	2.50	0.45
49:U:60:LEU:HD22	49:U:69:ALA:HA	1.99	0.45
57:c:783:G:C4	57:c:784:C:C5	3.05	0.45
57:c:1442:U:H2'	57:c:1443:U:H5'	1.99	0.45
59:e:88:VAL:HA	59:e:98:THR:HG22	1.99	0.45
62:h:73:ASP:HA	62:h:164:LEU:HD21	1.99	0.45
64:j:58:LYS:HG2	64:j:105:ASP:OD1	2.17	0.45
65:k:52:ALA:C	65:k:54:GLY:H	2.25	0.45
65:k:61:PHE:CD1	65:k:93:LEU:HB2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:l:10:LYS:HG3	69:o:133:LYS:HE3	1.99	0.45
72:r:37:ALA:HB1	72:r:38:PRO:HD2	1.99	0.45
73:s:33:GLY:CA	73:s:66:ARG:HH12	2.30	0.45
75:u:23:ASP:OD2	75:u:26:ILE:HG13	2.17	0.45
4:3:47:PHE:CE2	70:p:55:ARG:HD2	2.52	0.44
11:AA:26:A:N3	11:AA:328:U:O2'	2.45	0.44
11:AA:347:G:O6	50:V:55:ARG:NH2	2.46	0.44
11:AA:398:A:O2'	11:AA:1416:C:OP1	2.26	0.44
11:AA:687:U:OP2	41:OO:36:ARG:NH2	2.50	0.44
11:AA:1396:C:H2'	11:AA:1397:C:C6	2.52	0.44
11:AA:1729:A:N6	56:b:41:PHE:O	2.42	0.44
11:AA:2677:G:H2'	11:AA:2679:A:OP2	2.17	0.44
11:AA:2719:U:O2'	11:AA:2720:G:O4'	2.35	0.44
11:AA:2965:U:H2'	11:AA:2966:G:C4	2.52	0.44
11:AA:3332:U:H2'	11:AA:3333:G:O4'	2.17	0.44
11:AA:3366:G:H2'	11:AA:3367:C:O4'	2.17	0.44
12:Aa:349:GLN:HE22	12:Aa:401:PHE:CB	2.29	0.44
13:B:20:SER:HB3	13:B:21:TYR:CD2	2.52	0.44
13:B:87:SER:O	13:B:91:VAL:HG23	2.16	0.44
14:BB:65:G:OP1	37:MM:203:LYS:HG2	2.17	0.44
18:DD:24:SER:HB2	18:DD:192:ASP:OD1	2.16	0.44
21:Ee:56:ILE:HD13	21:Ee:83:THR:HG22	1.98	0.44
23:FF:148:LEU:HD22	23:FF:196:ARG:NH1	2.32	0.44
30:J:75:LYS:HB3	30:J:81:ILE:HB	1.98	0.44
31:JJ:140:SER:O	31:JJ:143:THR:OG1	2.32	0.44
36:M:34:MET:HE2	36:M:34:MET:HB2	1.90	0.44
37:MM:51:HIS:ND1	37:MM:134:ILE:HG21	2.32	0.44
45:QQ:22:LEU:O	45:QQ:26:ARG:N	2.34	0.44
50:V:14:LYS:HE3	50:V:14:LYS:HB3	1.59	0.44
54:Z:5:TRP:HD1	54:Z:5:TRP:N	2.12	0.44
55:a:77:CYS:SG	55:a:79:THR:OG1	2.67	0.44
56:b:28:LYS:O	56:b:32:GLN:HG2	2.16	0.44
57:c:250:C:H2'	57:c:251:A:N9	2.31	0.44
57:c:481:A:C8	57:c:509:G:N2	2.85	0.44
57:c:648:G:N2	57:c:687:G:C4	2.85	0.44
57:c:787:G:OP1	62:h:255:ARG:NH1	2.50	0.44
57:c:872:G:C6	57:c:955:A:N6	2.85	0.44
57:c:1045:C:H2'	57:c:1046:G:C8	2.51	0.44
57:c:1176:G:H1'	57:c:1464:G:H22	1.82	0.44
57:c:1302:U:C2	57:c:1303:U:H5	2.33	0.44
57:c:1368:G:H2'	57:c:1369:U:N3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1475:A:O2'	57:c:1540:G:OP1	2.32	0.44
57:c:1591:C:O2'	57:c:1593:A:OP2	2.32	0.44
57:c:1752:U:H2'	57:c:1753:A:H8	1.82	0.44
59:e:136:ARG:HG2	59:e:214:LYS:HZ1	1.82	0.44
61:g:72:LEU:O	61:g:75:LYS:HG3	2.17	0.44
62:h:251:GLU:O	62:h:255:ARG:HG3	2.17	0.44
63:i:162:VAL:HG13	63:i:166:ARG:HB3	1.99	0.44
64:j:98:ARG:HH11	64:j:99:GLY:H	1.64	0.44
65:k:79:ARG:O	65:k:82:GLU:HG3	2.17	0.44
66:l:167:ALA:HA	66:l:184:LEU:HG	1.98	0.44
67:m:25:ASP:OD1	67:m:26:ALA:N	2.51	0.44
67:m:136:VAL:HG13	67:m:137:GLY:N	2.32	0.44
69:o:19:ILE:HD11	69:o:34:TRP:CE3	2.52	0.44
1:0:62:THR:HB	57:c:531:C:H6	1.82	0.44
2:1:77:ARG:HH21	57:c:1532:U:P	2.40	0.44
11:AA:121:A:H1'	33:KK:100:GLU:OE2	2.17	0.44
11:AA:548:G:H2'	11:AA:549:U:C6	2.51	0.44
11:AA:609:G:O2'	25:GG:312:VAL:HG22	2.17	0.44
11:AA:651:G:C6	11:AA:652:G:C6	3.05	0.44
11:AA:663:OMC:HM23	11:AA:663:OMC:H1'	1.71	0.44
11:AA:1180:A:C6	11:AA:1182:A:C5	3.04	0.44
11:AA:1242:G:H1'	12:Aa:757:GLU:OE1	2.18	0.44
11:AA:1461:A:H2'	11:AA:1462:A:C8	2.53	0.44
11:AA:1505:C:OP1	13:B:127:ARG:NH1	2.50	0.44
11:AA:2256:A2M:N3	12:Aa:703:GLY:HA2	2.33	0.44
11:AA:3006:A:C2	11:AA:3141:A:C4	3.06	0.44
12:Aa:94:ASP:N	12:Aa:94:ASP:OD1	2.48	0.44
16:CC:112:U:P	52:X:8:ARG:HH12	2.40	0.44
25:GG:207:VAL:O	25:GG:227:THR:HA	2.17	0.44
26:H:36:ILE:HD12	26:H:58:VAL:HG21	1.99	0.44
27:HH:162:ALA:O	27:HH:166:ALA:N	2.43	0.44
33:KK:165:PHE:CE2	45:QQ:6:TYR:HD2	2.36	0.44
39:NN:55:ARG:HH11	39:NN:56:THR:HG21	1.82	0.44
41:OO:145:PHE:HZ	48:T:118:ILE:HD11	1.80	0.44
45:QQ:54:LYS:HB3	45:QQ:59:PHE:CZ	2.52	0.44
57:c:53:G:H2'	57:c:54:C:H6	1.82	0.44
57:c:213:A:H62	57:c:214:G:H8	1.65	0.44
57:c:382:C:H2'	57:c:383:G:H8	1.83	0.44
57:c:556:A:H1'	57:c:590:C:H1'	1.98	0.44
57:c:957:G:C5	57:c:958:U:C4	3.05	0.44
57:c:1103:U:P	80:z:7:ARG:H	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1370:U:H4'	57:c:1371:A:H5''	1.98	0.44
57:c:1546:G:N2	57:c:1566:U:C2	2.85	0.44
57:c:1685:G:N3	57:c:1685:G:H2'	2.32	0.44
58:d:121:VAL:HG23	58:d:141:ILE:HG21	1.98	0.44
59:e:194:ASN:ND2	59:e:211:HIS:HA	2.26	0.44
65:k:154:LEU:HD11	65:k:183:PHE:CD1	2.49	0.44
73:s:9:THR:HG22	73:s:20:ALA:HB3	1.99	0.44
75:u:89:GLN:HA	75:u:97:ASP:HA	1.99	0.44
79:y:31:SER:H	79:y:34:ILE:HD12	1.82	0.44
8:7:31:ASN:HA	8:7:47:LEU:HD12	1.99	0.44
8:7:169:ILE:HG22	8:7:170:ILE:N	2.32	0.44
11:AA:36:C:O2	11:AA:934:G:O2'	2.35	0.44
11:AA:206:G:H2'	11:AA:207:U:H6	1.83	0.44
11:AA:431:U:OP1	46:R:53:TYR:OH	2.31	0.44
11:AA:585:A:H5''	46:R:70:LYS:HZ2	1.82	0.44
11:AA:614:C:H2'	11:AA:615:U:C6	2.52	0.44
11:AA:645:1MA:H1'	11:AA:647:A:OP2	2.17	0.44
11:AA:685:G:H2'	11:AA:686:G:H8	1.82	0.44
11:AA:685:G:P	41:OO:35:ARG:HH21	2.38	0.44
11:AA:787:G:H2'	11:AA:788:C:C6	2.52	0.44
11:AA:869:G:C6	11:AA:891:G:O6	2.71	0.44
11:AA:1488:G:C2	11:AA:1489:A:C8	3.05	0.44
11:AA:2168:A:H5'	45:QQ:67:ARG:HH22	1.80	0.44
11:AA:2368:A:H2'	11:AA:2369:G:H8	1.83	0.44
11:AA:2431:C:H2'	11:AA:2432:A:H8	1.81	0.44
11:AA:3333:G:N2	11:AA:3369:G:H1'	2.30	0.44
14:BB:22:A:C4	14:BB:23:A:C8	3.04	0.44
16:CC:2:A:H3'	16:CC:3:A:H8	1.83	0.44
22:F:56:PHE:O	22:F:60:LYS:NZ	2.51	0.44
23:FF:45:SER:OG	23:FF:181:ILE:HD12	2.17	0.44
36:M:147:LEU:HD11	41:OO:170:LEU:HD11	2.00	0.44
39:NN:10:ARG:C	39:NN:133:ARG:HH21	2.25	0.44
57:c:77:U:H4'	57:c:78:A:O5'	2.16	0.44
57:c:175:G:H1'	57:c:266:A:N6	2.32	0.44
57:c:325:G:C6	57:c:344:A:C6	3.06	0.44
57:c:407:A:H5'	64:j:94:ARG:NH1	2.32	0.44
57:c:409:C:N4	57:c:410:A:H62	2.15	0.44
57:c:514:G:C5	57:c:537:G:N2	2.86	0.44
57:c:907:A:H2'	57:c:908:U:H6	1.83	0.44
57:c:1477:G:O2'	76:v:47:PRO:HA	2.17	0.44
59:e:48:VAL:HG12	59:e:64:ARG:NH2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:m:109:LEU:HD12	67:m:109:LEU:HA	1.88	0.44
69:o:35:TYR:CE2	69:o:49:ILE:HG23	2.52	0.44
69:o:45:PRO:HB2	69:o:47:THR:HG22	2.00	0.44
71:q:44:GLY:HA2	71:q:63:ALA:HB2	1.99	0.44
3:2:44:ILE:HD13	3:2:67:THR:HG23	2.00	0.44
6:5:19:ARG:NH2	57:c:1597:A:OP1	2.50	0.44
10:A:66:LYS:HD3	11:AA:3009:G:OP1	2.18	0.44
11:AA:140:C:H2'	11:AA:141:C:H6	1.81	0.44
11:AA:160:G:H1	11:AA:261:U:H3	1.65	0.44
11:AA:276:U:H2'	11:AA:277:G:H8	1.82	0.44
11:AA:291:C:H5''	45:QQ:68:ARG:NE	2.32	0.44
11:AA:394:G:N2	11:AA:397:A:H5'	2.29	0.44
11:AA:668:G:H4'	15:C:164:ARG:HE	1.82	0.44
11:AA:895:A:O2'	11:AA:896:A:OP2	2.34	0.44
11:AA:1092:C:O2'	22:F:116:ARG:NH2	2.51	0.44
11:AA:1108:U:H2'	11:AA:1109:U:H6	1.78	0.44
11:AA:1343:A:C6	11:AA:1362:G:C6	3.06	0.44
11:AA:1597:C:N4	11:AA:1598:G:O6	2.50	0.44
11:AA:1807:G:OP1	34:L:133:LYS:NZ	2.28	0.44
11:AA:1937:U:H2'	11:AA:1938:U:C6	2.53	0.44
11:AA:2432:A:N1	11:AA:2598:G:C6	2.85	0.44
11:AA:2562:A:H3'	11:AA:2563:G:H8	1.82	0.44
11:AA:2724:OMU:HM23	11:AA:2724:OMU:H1'	1.56	0.44
11:AA:2768:U:O2	55:a:82:GLN:NE2	2.38	0.44
11:AA:2783:U:H3'	11:AA:2784:G:H8	1.82	0.44
11:AA:2864:A:H5'	37:MM:102:MET:SD	2.57	0.44
11:AA:3051:U:C2	11:AA:3052:G:C8	3.05	0.44
11:AA:3108:G:C6	11:AA:3109:G:N7	2.86	0.44
12:Aa:27:HIS:CE1	12:Aa:138:GLN:HB3	2.53	0.44
12:Aa:694:HIS:O	12:Aa:700:ARG:HD3	2.18	0.44
14:BB:16:U:H2'	14:BB:17:A:C8	2.52	0.44
19:E:4:PHE:CD1	19:E:104:GLU:HB2	2.52	0.44
19:E:41:TYR:O	19:E:45:LEU:HD23	2.17	0.44
27:HH:39:GLN:OE1	27:HH:40:HIS:N	2.50	0.44
27:HH:94:ASN:HD21	27:HH:204:VAL:HG21	1.82	0.44
27:HH:173:VAL:O	27:HH:173:VAL:HG23	2.18	0.44
28:I:6:ASP:OD2	28:I:11:ALA:HB3	2.17	0.44
30:J:88:MET:HA	30:J:120:LYS:HE3	1.99	0.44
31:JJ:40:LYS:NZ	31:JJ:170:GLU:OE2	2.36	0.44
33:KK:183:LYS:HZ3	33:KK:196:ALA:HB2	1.82	0.44
39:NN:103:GLY:HA3	39:NN:128:TYR:HA	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:O:9:SER:O	40:O:12:GLN:HG2	2.17	0.44
42:P:16:LEU:O	42:P:20:LEU:HB3	2.17	0.44
43:PP:20:VAL:HG21	43:PP:90:VAL:HG11	1.99	0.44
43:PP:55:ARG:HH21	43:PP:77:ARG:HA	1.82	0.44
45:QQ:124:ASP:OD1	45:QQ:126:THR:N	2.49	0.44
49:U:62:ARG:HG3	49:U:99:ARG:NH2	2.29	0.44
52:X:42:ARG:NH1	52:X:49:MET:SD	2.90	0.44
57:c:445:A:H61	57:c:462:G:H1'	1.82	0.44
57:c:1345:A:H2'	57:c:1348:A:N7	2.32	0.44
57:c:1594:G:O4'	57:c:1605:G:H1'	2.18	0.44
57:c:1780:G:H2'	57:c:1781:MA6:H8	1.98	0.44
57:c:1786:G:H2'	57:c:1787:C:C6	2.51	0.44
59:e:132:ASP:OD2	59:e:221:PRO:HB3	2.18	0.44
62:h:252:ARG:NH2	62:h:253:ASP:OD1	2.35	0.44
63:i:128:ASN:ND2	63:i:131:GLN:HG2	2.18	0.44
64:j:199:GLN:O	64:j:203:GLU:HG2	2.17	0.44
70:p:32:SER:HA	70:p:35:GLU:CD	2.43	0.44
73:s:39:VAL:HG13	73:s:41:PRO:HD3	1.99	0.44
75:u:61:LEU:O	75:u:62:THR:HG23	2.18	0.44
75:u:87:ASN:OD1	75:u:88:ARG:N	2.50	0.44
78:x:37:ALA:HA	78:x:50:TYR:HD1	1.83	0.44
79:y:37:PHE:CE1	79:y:103:ILE:HD12	2.53	0.44
4:3:64:CYS:HB2	4:3:72:LYS:O	2.18	0.44
8:7:36:ALA:HA	8:7:42:LEU:HD23	2.00	0.44
11:AA:92:G:C6	11:AA:94:G:N2	2.86	0.44
11:AA:270:U:H2'	11:AA:271:C:C6	2.51	0.44
11:AA:994:G:N2	11:AA:995:U:O4	2.50	0.44
11:AA:1018:G:O6	11:AA:1035:G:H1'	2.18	0.44
11:AA:1185:C:O2	19:E:108:GLN:HG2	2.18	0.44
11:AA:1443:G:H2'	11:AA:1444:G:C8	2.53	0.44
11:AA:1447:G:H22	11:AA:2355:G:H3'	1.81	0.44
11:AA:1658:G:H2'	11:AA:1659:U:O4'	2.17	0.44
11:AA:1672:U:H3	11:AA:1775:G:H1	1.66	0.44
11:AA:2284:C:H2'	11:AA:2285:C:O4'	2.18	0.44
11:AA:2568:C:O2'	11:AA:2569:A:O5'	2.33	0.44
11:AA:2577:C:H2'	11:AA:2578:U:C6	2.53	0.44
11:AA:2656:A:C5	11:AA:2658:G:C8	3.05	0.44
11:AA:2685:C:H4'	39:NN:153:LYS:NZ	2.32	0.44
11:AA:2846:U:H4'	11:AA:2849:C:H41	1.81	0.44
11:AA:3047:U:O2'	11:AA:3048:A:H5'	2.18	0.44
12:Aa:113:SER:HB2	12:Aa:516:PRO:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:511:LEU:HD11	12:Aa:520:THR:HG21	2.00	0.44
12:Aa:576:LEU:HD21	12:Aa:587:TYR:OH	2.18	0.44
12:Aa:617:ARG:HE	12:Aa:631:ARG:NH1	2.16	0.44
14:BB:4:U:H2'	14:BB:5:G:H8	1.82	0.44
14:BB:8:G:O6	27:HH:21:ARG:NH2	2.50	0.44
14:BB:42:A:C6	14:BB:43:U:C4	3.06	0.44
14:BB:46:A:H2'	14:BB:47:C:H6	1.83	0.44
20:EE:100:ASN:O	20:EE:166:ILE:HD12	2.18	0.44
20:EE:248:GLY:CA	57:c:1012:U:H5''	2.47	0.44
21:Ee:48:LYS:O	21:Ee:51:LYS:HG3	2.18	0.44
21:Ee:64:ILE:HA	21:Ee:68:GLN:O	2.18	0.44
23:FF:92:TYR:C	23:FF:155:ALA:HA	2.43	0.44
25:GG:3:ARG:HH21	25:GG:22:LEU:HB2	1.82	0.44
25:GG:47:ARG:HD2	25:GG:109:TRP:HE3	1.82	0.44
27:HH:25:GLU:O	39:NN:144:CYS:HA	2.18	0.44
29:II:37:GLY:HA2	29:II:93:VAL:HG11	2.00	0.44
29:II:80:ASN:HB3	29:II:83:TYR:CD2	2.53	0.44
33:KK:34:PHE:CE1	33:KK:42:PRO:HD3	2.52	0.44
36:M:128:ARG:NE	36:M:149:ALA:O	2.40	0.44
40:O:22:LYS:HE2	40:O:94:GLU:HB2	2.00	0.44
41:OO:61:PRO:O	41:OO:62:THR:OG1	2.36	0.44
57:c:329:G:C4	57:c:330:G:C8	3.05	0.44
57:c:791:A:C5	57:c:792:U:C4	3.06	0.44
57:c:1018:U:O4	57:c:1019:A:N6	2.51	0.44
57:c:1183:A:O2'	57:c:1210:C:H4'	2.18	0.44
57:c:1274:C:C5	57:c:1427:A:H2'	2.53	0.44
57:c:1301:U:H5'	60:f:88:LYS:HD2	2.00	0.44
57:c:1358:G:O2'	76:v:129:GLN:HB3	2.18	0.44
59:e:85:LYS:N	59:e:102:GLY:O	2.30	0.44
59:e:107:THR:HA	59:e:110:LEU:HG	1.99	0.44
64:j:88:ARG:HB3	64:j:91:GLU:HB2	1.99	0.44
66:l:3:ILE:O	66:l:30:GLY:N	2.39	0.44
67:m:110:GLN:NE2	67:m:126:ARG:HB2	2.33	0.44
75:u:47:CYS:O	75:u:52:VAL:HG22	2.18	0.44
75:u:49:LYS:HE2	76:v:36:ILE:HD11	2.00	0.44
79:y:100:GLY:HA2	79:y:130:TYR:HB3	1.99	0.44
80:z:39:LYS:HG3	80:z:40:SER:N	2.32	0.44
4:3:36:LYS:HA	4:3:43:ILE:HG22	1.98	0.44
7:6:18:THR:CB	57:c:562:OMG:HM22	2.45	0.44
11:AA:62:A:C5	11:AA:63:A:C5	3.06	0.44
11:AA:631:U:H2'	11:AA:632:G:H8	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1172:G:H2'	11:AA:1173:U:C6	2.53	0.44
11:AA:1390:A:N6	11:AA:1418:A:O2'	2.50	0.44
11:AA:1427:U:H2'	11:AA:1428:A:C8	2.51	0.44
11:AA:1812:G:N7	34:L:64:LYS:NZ	2.45	0.44
11:AA:1919:G:H2'	11:AA:1920:U:C6	2.53	0.44
11:AA:1941:C:H2'	11:AA:1942:U:C6	2.53	0.44
11:AA:2146:C:H2'	11:AA:2147:A:C8	2.51	0.44
11:AA:2325:G:O6	11:AA:2326:A:N6	2.50	0.44
11:AA:2416:U:H1'	11:AA:2967:A:H1'	2.00	0.44
11:AA:2458:A:HO2'	11:AA:2459:A:P	2.41	0.44
11:AA:2858:U:H2'	11:AA:2859:U:C6	2.53	0.44
11:AA:3050:U:H5''	28:I:17:ARG:NH1	2.32	0.44
11:AA:3116:G:H5'	11:AA:3117:C:C5	2.53	0.44
11:AA:3191:G:C6	11:AA:3202:G:C6	3.05	0.44
11:AA:3335:A:N7	11:AA:3370:A:O2'	2.44	0.44
11:AA:3352:U:O3'	11:AA:3356:G:N2	2.51	0.44
12:Aa:18:ASN:ND2	12:Aa:97:SER:O	2.39	0.44
16:CC:51:G:H4'	52:X:21:ARG:HH12	1.83	0.44
18:DD:126:THR:HG21	18:DD:136:PHE:HE2	1.81	0.44
21:Ee:28:LEU:C	21:Ee:32:ILE:HG22	2.43	0.44
26:H:121:GLU:O	26:H:125:LEU:HG	2.18	0.44
27:HH:96:ALA:HA	27:HH:99:TYR:HD2	1.83	0.44
27:HH:216:GLU:O	27:HH:220:SER:N	2.51	0.44
29:II:94:GLU:HA	29:II:94:GLU:OE2	2.18	0.44
30:J:115:ARG:HD3	30:J:117:ASN:HD22	1.81	0.44
31:JJ:81:HIS:CE1	31:JJ:83:LEU:HB3	2.52	0.44
32:K:54:ASP:OD2	32:K:115:ARG:NH2	2.37	0.44
34:L:38:PHE:O	34:L:40:HIS:ND1	2.44	0.44
36:M:38:GLN:HB2	36:M:53:PHE:HE2	1.82	0.44
39:NN:78:GLU:OE2	39:NN:82:ARG:NE	2.50	0.44
39:NN:132:ASN:HA	39:NN:154:THR:OG1	2.17	0.44
43:PP:45:LEU:C	43:PP:46:ILE:HD13	2.42	0.44
49:U:56:ARG:NH2	49:U:72:VAL:HG21	2.33	0.44
57:c:346:G:H2'	57:c:347:G:H8	1.82	0.44
57:c:420:A2M:H2'	57:c:421:A:C8	2.53	0.44
57:c:454:U:H4'	62:h:62:LYS:HZ2	1.82	0.44
57:c:787:G:H2'	57:c:788:A:C4	2.53	0.44
57:c:1060:U:HO2'	57:c:1061:A:C4'	2.31	0.44
57:c:1543:A:C2	57:c:1569:A:C2	3.06	0.44
57:c:1685:G:H21	57:c:1717:G:C3'	2.30	0.44
61:g:97:SER:OG	61:g:100:ALA:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:g:163:PRO:HB3	61:g:167:PHE:CZ	2.53	0.44
62:h:120:SER:O	62:h:164:LEU:HB3	2.18	0.44
65:k:99:LEU:HD22	65:k:112:ARG:HG3	1.99	0.44
67:m:26:ALA:O	67:m:30:LEU:HD23	2.17	0.44
71:q:92:LYS:NZ	71:q:122:PRO:HD3	2.33	0.44
74:t:34:LEU:CD2	74:t:38:ILE:HD12	2.47	0.44
76:v:131:ASP:OD1	76:v:132:LEU:N	2.51	0.44
1:0:99:LYS:NZ	57:c:525:A:O2'	2.45	0.44
8:7:69:GLN:HG2	8:7:85:TRP:NE1	2.32	0.44
8:7:89:LEU:HD23	8:7:103:PHE:HZ	1.82	0.44
8:7:179:LYS:HE3	8:7:188:ILE:HG22	2.00	0.44
8:7:251:TRP:CD1	8:7:264:SER:HB2	2.49	0.44
11:AA:17:G:H5''	30:J:46:TYR:HE1	1.82	0.44
11:AA:260:C:H2'	11:AA:261:U:H6	1.83	0.44
11:AA:879:U:H4'	13:B:132:ALA:HB3	2.00	0.44
11:AA:994:G:N2	11:AA:1053:A:H2'	2.33	0.44
11:AA:1037:C:H3'	11:AA:1038:C:C5	2.53	0.44
11:AA:1315:U:H4'	11:AA:1317:A:O4'	2.17	0.44
11:AA:1366:A:H2'	11:AA:1367:G:H8	1.81	0.44
11:AA:1697:A:H2'	11:AA:1698:C:O4'	2.18	0.44
11:AA:1856:C:C2	11:AA:1857:C:C5	3.05	0.44
11:AA:2198:A:C5	11:AA:2270:A:N7	2.85	0.44
11:AA:2337:OMC:H1'	11:AA:2337:OMC:HM23	1.52	0.44
11:AA:2352:A:H2'	11:AA:2353:G:H8	1.83	0.44
11:AA:2399:A:C2	11:AA:2981:U:C2	3.06	0.44
11:AA:2796:G:OP2	11:AA:2797:C:O2'	2.21	0.44
11:AA:2895:G:O2'	53:Y:100:TYR:O	2.35	0.44
11:AA:3169:U:OP2	46:R:56:SER:OG	2.35	0.44
12:Aa:180:ARG:NH2	18:DD:137:GLN:HB3	2.32	0.44
12:Aa:438:MET:O	12:Aa:440:ARG:N	2.49	0.44
13:B:118:GLN:HE22	16:CC:12:A:H1'	1.83	0.44
14:BB:19:C:C2	14:BB:61:G:N2	2.85	0.44
14:BB:77:G:N2	14:BB:102:A:OP2	2.36	0.44
15:C:86:THR:HA	15:C:105:ARG:O	2.17	0.44
22:F:65:TYR:N	22:F:73:GLY:O	2.42	0.44
29:II:135:VAL:HG12	29:II:139:LYS:HZ3	1.83	0.44
36:M:87:ARG:HG2	36:M:91:LEU:HD23	1.99	0.44
39:NN:57:PHE:HB2	39:NN:59:ILE:HG13	1.98	0.44
53:Y:78:ILE:HG23	53:Y:82:LEU:HD23	1.99	0.44
53:Y:124:LYS:O	53:Y:126:LYS:NZ	2.41	0.44
55:a:11:TYR:CE2	55:a:13:LYS:HG2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:448:C:H1'	62:h:27:TYR:OH	2.17	0.44
57:c:1178:G:H2'	57:c:1179:G:C8	2.52	0.44
57:c:1326:A:OP2	74:t:7:LYS:NZ	2.29	0.44
57:c:1391:A:N7	57:c:1412:G:C6	2.86	0.44
57:c:1477:G:C2	57:c:1478:G:C5	3.05	0.44
57:c:1504:G:N3	57:c:1564:U:H4'	2.33	0.44
58:d:71:GLU:OE1	58:d:71:GLU:N	2.51	0.44
58:d:182:LEU:HA	58:d:185:ARG:HG2	1.99	0.44
60:f:87:GLN:HE22	60:f:96:THR:HB	1.82	0.44
63:i:121:ILE:HG12	63:i:195:ALA:HA	1.99	0.44
64:j:211:LEU:O	64:j:214:LYS:HG3	2.17	0.44
75:u:12:GLN:O	75:u:24:GLY:HA3	2.17	0.44
1:0:20:ARG:HG2	1:0:21:LYS:N	2.33	0.44
1:0:76:TYR:HB3	1:0:81:GLU:OE2	2.16	0.44
3:2:56:ALA:HA	71:q:111:ARG:CZ	2.47	0.44
6:5:19:ARG:HG2	6:5:32:ARG:HD2	1.98	0.44
7:6:56:MET:CE	57:c:556:A:H4'	2.48	0.44
8:7:249:ARG:HD2	8:7:251:TRP:CE3	2.53	0.44
10:A:70:PRO:HG2	10:A:72:HIS:CE1	2.52	0.44
11:AA:212:G:C8	25:GG:223:PRO:HG3	2.53	0.44
11:AA:213:A:N6	11:AA:228:U:O4'	2.51	0.44
11:AA:265:A:P	11:AA:265:A:H8	2.40	0.44
11:AA:420:G:O2'	11:AA:2384:A:N3	2.38	0.44
11:AA:732:C:H2'	11:AA:733:G:O4'	2.18	0.44
11:AA:837:A:H61	11:AA:856:G:H1'	1.83	0.44
11:AA:1084:A:H5''	22:F:35:LYS:HE2	2.00	0.44
11:AA:1112:A:C6	11:AA:1113:G:C6	3.06	0.44
11:AA:1128:U:N3	11:AA:2828:G:O4'	2.51	0.44
11:AA:1724:U:OP1	17:D:128:LYS:NZ	2.48	0.44
11:AA:1880:U:C4	11:AA:1881:A:N7	2.86	0.44
11:AA:1939:G:H2'	11:AA:1940:G:C8	2.53	0.44
11:AA:2192:C:H2'	11:AA:2193:U:H6	1.82	0.44
11:AA:2393:G:C2'	11:AA:2982:A:H61	2.31	0.44
11:AA:2608:G:C2	11:AA:2609:A:N7	2.86	0.44
11:AA:2656:A:C8	11:AA:2658:G:C8	3.06	0.44
11:AA:2790:A:H2	55:a:82:GLN:NE2	2.15	0.44
11:AA:2793:OMG:HM23	11:AA:2793:OMG:H1'	1.63	0.44
11:AA:2928:C:H2'	11:AA:2929:C:C6	2.53	0.44
11:AA:2949:U:H2'	11:AA:2950:G:C4	2.53	0.44
11:AA:3099:C:H4'	23:FF:343:TYR:OH	2.18	0.44
11:AA:3150:A:O2'	11:AA:3294:A:O2'	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:718:LEU:HD13	12:Aa:722:PRO:HG2	2.00	0.44
15:C:110:ALA:O	15:C:114:ILE:HG12	2.17	0.44
20:EE:204:MET:HG2	20:EE:208:ASP:HB2	1.99	0.44
23:FF:160:VAL:O	23:FF:180:GLU:HA	2.17	0.44
26:H:90:GLY:HA3	28:I:16:GLY:HA2	1.99	0.44
31:JJ:96:PRO:HB2	31:JJ:99:PRO:HD2	1.99	0.44
32:K:59:VAL:HG12	32:K:103:LYS:O	2.18	0.44
39:NN:36:VAL:HG21	39:NN:123:PHE:HD2	1.81	0.44
42:P:74:ARG:O	42:P:94:GLU:N	2.38	0.44
50:V:66:TYR:O	50:V:70:VAL:HG13	2.18	0.44
52:X:27:ILE:HG23	52:X:30:ARG:NE	2.33	0.44
54:Z:1:MET:HE2	54:Z:1:MET:H2	1.83	0.44
54:Z:13:LEU:HG	54:Z:17:ARG:HH21	1.83	0.44
57:c:12:U:HO2'	57:c:1299:G:HO2'	1.47	0.44
57:c:164:A:C8	57:c:165:G:N7	2.85	0.44
57:c:214:G:H2'	57:c:253:A:C6	2.52	0.44
57:c:215:A:N1	57:c:242:U:H1'	2.33	0.44
57:c:243:G:N1	57:c:251:A:C2	2.84	0.44
57:c:562:OMG:H2'	57:c:562:OMG:N3	2.32	0.44
57:c:755:A:H2'	57:c:756:A:O4'	2.18	0.44
57:c:906:A:OP2	71:q:52:ARG:HG2	2.18	0.44
57:c:1115:U:H2'	57:c:1116:A:C8	2.51	0.44
57:c:1170:G:C6	57:c:1574:G:C5	3.06	0.44
57:c:1208:A:H4'	57:c:1270:G:OP2	2.17	0.44
57:c:1231:U:H4'	57:c:1259:U:N3	2.33	0.44
57:c:1359:C:H5''	76:v:134:ARG:NH1	2.32	0.44
57:c:1525:A:O3'	76:v:83:ALA:HB2	2.17	0.44
57:c:1532:U:C4	57:c:1533:C:C5	3.05	0.44
57:c:1685:G:N2	57:c:1718:G:OP2	2.50	0.44
58:d:55:GLU:HB3	78:x:79:LEU:HD22	1.99	0.44
58:d:79:ARG:HD2	58:d:125:ASP:CB	2.48	0.44
58:d:134:LYS:O	58:d:137:SER:OG	2.21	0.44
59:e:146:GLN:HG3	59:e:147:ALA:H	1.83	0.44
61:g:133:GLY:C	61:g:189:MET:HE2	2.43	0.44
63:i:76:ARG:CG	73:s:122:ARG:HD2	2.48	0.44
63:i:175:LEU:HD22	63:i:198:LEU:HD22	1.99	0.44
63:i:193:THR:O	63:i:197:GLU:HG2	2.17	0.44
64:j:69:LEU:HD12	64:j:73:ILE:HD13	1.99	0.44
66:l:106:ALA:HB3	66:l:110:ARG:NH2	2.33	0.44
68:n:7:ASP:OD1	68:n:7:ASP:N	2.51	0.44
70:p:92:ILE:HD13	70:p:122:ILE:HD13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:q:20:TYR:CE2	71:q:86:THR:HA	2.53	0.44
80:z:34:LEU:HB3	80:z:39:LYS:HZ1	1.83	0.44
4:3:19:HIS:CD2	4:3:22:LYS:HD2	2.51	0.44
8:7:42:LEU:HD21	8:7:71:CYS:SG	2.58	0.44
8:7:179:LYS:HG3	8:7:180:ALA:N	2.32	0.44
11:AA:29:C:O2'	45:QQ:172:ARG:NH1	2.50	0.44
11:AA:112:U:H4'	45:QQ:147:ARG:HH12	1.83	0.44
11:AA:144:A:H3'	11:AA:145:G:H8	1.83	0.44
11:AA:546:C:C5	11:AA:547:G:H1'	2.52	0.44
11:AA:550:A:H2'	11:AA:551:A:H8	1.83	0.44
11:AA:634:C:H5'	46:R:21:ARG:O	2.18	0.44
11:AA:958:C:OP1	11:AA:2799:A:H3'	2.18	0.44
11:AA:1203:A:H2'	11:AA:1204:A:C8	2.53	0.44
11:AA:1385:C:H41	25:GG:202:ARG:HH12	1.66	0.44
11:AA:1522:U:O2'	30:J:113:LEU:HD11	2.18	0.44
11:AA:1596:C:H2'	11:AA:1597:C:C6	2.53	0.44
11:AA:1719:G:H2'	11:AA:1720:U:C6	2.53	0.44
11:AA:2128:C:H4'	11:AA:2280:A2M:HM'1	2.00	0.44
11:AA:2158:A:C8	11:AA:2160:G:C4	3.06	0.44
11:AA:2185:G:H2'	11:AA:2186:U:C6	2.51	0.44
11:AA:2266:U:H2'	11:AA:2267:C:C6	2.52	0.44
11:AA:2301:U:H2'	11:AA:2302:G:C8	2.53	0.44
11:AA:2526:C:OP1	20:EE:37:ARG:NH1	2.36	0.44
11:AA:2921:OMU:HM23	11:AA:2921:OMU:H1'	1.71	0.44
11:AA:3030:G:H3'	11:AA:3031:G:C8	2.52	0.44
11:AA:3047:U:H4'	23:FF:50:LYS:NZ	2.33	0.44
11:AA:3160:U:H5''	11:AA:3396:U:H3'	2.00	0.44
12:Aa:73:THR:O	12:Aa:103:ILE:HA	2.18	0.44
12:Aa:190:SER:HB3	12:Aa:201:GLN:NE2	2.33	0.44
12:Aa:223:ARG:HD2	12:Aa:336:GLU:OE2	2.18	0.44
12:Aa:264:ALA:HB2	12:Aa:269:LEU:HD23	2.00	0.44
13:B:4:TYR:CZ	13:B:16:SER:HB3	2.53	0.44
14:BB:82:G:H2'	14:BB:83:U:C6	2.53	0.44
16:CC:71:A:H4'	16:CC:72:A:O5'	2.18	0.44
22:F:111:ALA:O	22:F:115:LYS:HG2	2.17	0.44
25:GG:36:HIS:O	25:GG:40:THR:HG23	2.18	0.44
25:GG:188:ARG:NE	25:GG:197:ARG:HB3	2.32	0.44
25:GG:264:SER:OG	25:GG:265:GLU:N	2.51	0.44
31:JJ:90:LYS:HG3	31:JJ:91:GLY:O	2.18	0.44
33:KK:142:LEU:HB3	33:KK:147:LYS:HB2	1.99	0.44
51:W:42:LYS:HB3	51:W:44:LYS:NZ	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:X:10:LYS:HA	52:X:13:MET:HG3	2.00	0.44
55:a:74:CYS:SG	55:a:78:LYS:N	2.91	0.44
57:c:367:A:H2'	57:c:368:U:O4'	2.18	0.44
57:c:389:G:P	57:c:425:A:H61	2.41	0.44
57:c:875:G:N2	57:c:952:A:N1	2.62	0.44
57:c:1230:A:C5	57:c:1231:U:H1'	2.53	0.44
57:c:1328:G:OP1	61:g:159:HIS:N	2.45	0.44
62:h:112:HIS:CG	62:h:239:PRO:HA	2.52	0.44
65:k:135:ILE:HG12	65:k:152:VAL:HG11	1.99	0.44
69:o:101:GLU:OE2	69:o:103:ARG:NE	2.50	0.44
71:q:53:ASP:O	71:q:59:ALA:HB3	2.18	0.44
79:y:102:VAL:HG13	79:y:113:HIS:HB3	2.00	0.44
2:1:66:VAL:HG23	2:1:72:GLY:HA2	1.99	0.43
4:3:31:TYR:CD2	4:3:81:ARG:HG2	2.53	0.43
11:AA:128:G:H2'	11:AA:129:U:O4'	2.17	0.43
11:AA:237:G:H2'	11:AA:238:A:H8	1.83	0.43
11:AA:254:A:H2'	11:AA:255:A:C8	2.52	0.43
11:AA:385:A:H2'	11:AA:386:A:C8	2.53	0.43
11:AA:676:G:H4'	11:AA:678:G:H4'	2.00	0.43
11:AA:1185:C:OP1	43:PP:42:LYS:HD3	2.18	0.43
11:AA:1342:C:H5''	15:C:12:ARG:HG2	2.00	0.43
11:AA:1513:G:C4	11:AA:1515:A:C8	3.05	0.43
11:AA:1521:G:O6	52:X:17:LYS:NZ	2.51	0.43
11:AA:1668:G:H2'	11:AA:1669:C:C6	2.53	0.43
11:AA:2184:U:C2	11:AA:2185:G:C8	3.06	0.43
11:AA:2541:U:H6	11:AA:2541:U:H2'	1.67	0.43
11:AA:2554:A:H3'	47:S:91:ARG:HH12	1.83	0.43
11:AA:2828:G:O2'	37:MM:4:ARG:NH1	2.50	0.43
11:AA:3013:U:H2'	11:AA:3014:U:C6	2.52	0.43
11:AA:3184:A:N7	19:E:167:ARG:NH2	2.66	0.43
16:CC:1:A:C6	16:CC:2:A:N7	2.86	0.43
16:CC:40:A:H61	16:CC:104:A:H5'	1.83	0.43
22:F:19:PHE:CE1	22:F:20:ARG:HG3	2.53	0.43
23:FF:256:HIS:HA	23:FF:257:PRO:C	2.43	0.43
25:GG:22:LEU:HD11	25:GG:26:PHE:HD2	1.83	0.43
25:GG:106:TRP:HB3	41:OO:24:VAL:HG21	2.00	0.43
27:HH:148:ILE:HG22	27:HH:151:GLN:HB2	1.98	0.43
29:II:20:LYS:HA	29:II:20:LYS:HD3	1.85	0.43
29:II:172:HIS:CE1	29:II:173:MET:HE1	2.53	0.43
31:JJ:114:GLY:O	31:JJ:204:PRO:HA	2.17	0.43
31:JJ:124:LEU:HD23	31:JJ:124:LEU:HA	1.88	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:M:77:LYS:C	36:M:79:TRP:N	2.76	0.43
40:O:38:LYS:HG3	40:O:38:LYS:O	2.18	0.43
44:Q:19:ARG:HB2	44:Q:32:TRP:HA	1.99	0.43
49:U:56:ARG:HH22	49:U:60:LEU:HD13	1.83	0.43
57:c:212:U:O2	57:c:214:G:N1	2.51	0.43
57:c:774:A:C5	57:c:775:G:H1'	2.53	0.43
57:c:1213:G:H2'	57:c:1214:U:C4'	2.48	0.43
57:c:1540:G:C6	57:c:1541:G:C6	3.06	0.43
58:d:168:HIS:O	58:d:203:PHE:HE1	2.01	0.43
59:e:105:PHE:HE2	59:e:211:HIS:CD2	2.36	0.43
60:f:133:LYS:HA	60:f:136:VAL:HG23	2.00	0.43
63:i:99:MET:SD	63:i:100:ASN:HB2	2.58	0.43
70:p:39:LYS:O	70:p:43:LYS:HE2	2.18	0.43
70:p:50:ILE:O	70:p:54:LEU:HG	2.18	0.43
70:p:103:GLU:HG3	70:p:106:ARG:HH22	1.83	0.43
74:t:25:THR:O	74:t:31:ASN:ND2	2.50	0.43
4:3:20:LYS:HG3	4:3:21:LEU:N	2.34	0.43
5:4:48:VAL:HG23	63:i:163:SER:HB2	1.99	0.43
8:7:9:LEU:HB3	8:7:311:ARG:NH2	2.31	0.43
8:7:241:PHE:HE2	8:7:288:HIS:NE2	2.16	0.43
10:A:50:ASN:HA	10:A:53:LYS:HG2	2.00	0.43
10:A:109:PRO:HG2	10:A:112:TYR:HB2	2.00	0.43
11:AA:180:C:H2'	11:AA:181:U:C6	2.53	0.43
11:AA:717:C:H2'	11:AA:718:G:O4'	2.18	0.43
11:AA:1016:C:H5''	11:AA:1017:C:O5'	2.18	0.43
11:AA:1127:G:N2	11:AA:1130:A:OP2	2.51	0.43
11:AA:2330:C:C2	11:AA:2331:C:C5	3.06	0.43
11:AA:3034:C:C2	35:LL:120:ASP:HB3	2.53	0.43
12:Aa:165:LEU:HA	12:Aa:168:GLN:NE2	2.33	0.43
12:Aa:369:ILE:HG13	12:Aa:379:MET:HE3	2.01	0.43
14:BB:44:C:H4'	27:HH:152:ARG:CZ	2.47	0.43
15:C:16:ARG:NH2	15:C:20:LYS:HB2	2.33	0.43
16:CC:2:A:C4	16:CC:3:A:C8	3.07	0.43
16:CC:17:A:H2'	16:CC:18:U:H6	1.82	0.43
18:DD:8:LYS:HE2	18:DD:58:MET:HE3	2.00	0.43
20:EE:20:THR:HA	20:EE:23:ARG:HG3	2.00	0.43
21:Ee:143:VAL:HG22	21:Ee:148:PRO:HG3	2.00	0.43
31:JJ:110:ARG:HG2	31:JJ:111:ILE:N	2.34	0.43
42:P:15:ASN:HA	42:P:70:ARG:HE	1.82	0.43
44:Q:94:ALA:O	44:Q:119:VAL:HA	2.19	0.43
57:c:17:C:O2'	57:c:1137:A:N1	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:384:G:H2'	57:c:385:A:H8	1.82	0.43
57:c:586:G:H2'	57:c:587:C:C6	2.52	0.43
57:c:611:U:O2'	80:z:7:ARG:NH2	2.49	0.43
57:c:778:G:H1	57:c:781:U:H3	1.65	0.43
57:c:1081:A:H2	57:c:1082:C:H41	1.65	0.43
57:c:1293:U:H2'	57:c:1294:G:O4'	2.18	0.43
57:c:1345:A:H2'	57:c:1348:A:C5	2.53	0.43
57:c:1428:OMG:HM23	57:c:1428:OMG:H1'	1.59	0.43
57:c:1649:G:H2'	57:c:1650:U:H6	1.82	0.43
58:d:70:PRO:HB2	58:d:94:GLY:HA3	2.00	0.43
58:d:105:GLY:H	58:d:135:GLU:CD	2.25	0.43
60:f:35:TRP:CZ3	60:f:37:PRO:HB3	2.53	0.43
62:h:99:PHE:CE1	62:h:113:ARG:HD3	2.52	0.43
63:i:133:VAL:O	63:i:137:ILE:HG12	2.18	0.43
64:j:69:LEU:O	64:j:99:GLY:HA3	2.18	0.43
69:o:19:ILE:HD13	69:o:19:ILE:HA	1.76	0.43
76:v:34:VAL:HG13	76:v:50:ALA:O	2.18	0.43
77:w:62:VAL:HG13	77:w:85:ARG:HG2	2.00	0.43
7:6:10:ARG:O	7:6:10:ARG:HG2	2.19	0.43
8:7:290:VAL:HG22	8:7:304:GLY:O	2.19	0.43
8:7:295:SER:HB3	8:7:300:THR:HB	2.00	0.43
9:8:133:ALA:HB2	57:c:1252:C:H5'	1.99	0.43
11:AA:308:A:H1'	11:AA:2222:A:H2	1.83	0.43
11:AA:340:C:H2'	11:AA:341:G:C8	2.54	0.43
11:AA:856:G:P	17:D:92:GLN:HE22	2.40	0.43
11:AA:1666:G:C4	11:AA:1784:G:N2	2.86	0.43
11:AA:1782:U:H2'	11:AA:1783:U:C6	2.53	0.43
11:AA:2153:U:H2'	11:AA:2154:U:H6	1.83	0.43
11:AA:2515:A:N1	11:AA:2594:C:N4	2.64	0.43
11:AA:2736:A:H2'	11:AA:2737:C:O4'	2.19	0.43
11:AA:3152:U:P	11:AA:3395:G:H1	2.42	0.43
12:Aa:273:PHE:O	12:Aa:277:ILE:HG22	2.17	0.43
12:Aa:352:ARG:O	12:Aa:356:LEU:HG	2.19	0.43
12:Aa:384:LYS:HB2	12:Aa:397:PHE:HB3	2.00	0.43
12:Aa:523:SER:OG	12:Aa:524:GLU:N	2.51	0.43
16:CC:57:C:H4'	16:CC:63:G:N7	2.32	0.43
17:D:102:LEU:HD22	17:D:138:LEU:HD22	1.99	0.43
18:DD:11:TYR:HE1	18:DD:52:LEU:HD11	1.83	0.43
18:DD:45:LEU:HD12	18:DD:49:ALA:HB3	1.99	0.43
21:Ee:137:GLN:NE2	21:Ee:149:HIS:HB2	2.33	0.43
25:GG:104:LYS:HD3	25:GG:106:TRP:CH2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:HH:159:VAL:HG13	27:HH:160:PHE:HD1	1.84	0.43
35:LL:21:LYS:HG3	35:LL:22:SER:H	1.82	0.43
36:M:73:LEU:HD13	36:M:109:TYR:HD2	1.82	0.43
39:NN:75:LYS:HD2	39:NN:75:LYS:HA	1.75	0.43
41:OO:47:ALA:HB1	48:T:115:LYS:HE3	1.99	0.43
45:QQ:99:ARG:NH2	45:QQ:166:ALA:HB3	2.33	0.43
45:QQ:139:HIS:O	45:QQ:143:ARG:HG3	2.18	0.43
46:R:13:HIS:ND1	46:R:93:THR:HG23	2.33	0.43
57:c:536:C:C4	57:c:537:G:C5	3.06	0.43
57:c:621:A:H2	57:c:1107:G:N3	2.16	0.43
57:c:994:G:H2'	57:c:995:A:O4'	2.18	0.43
57:c:1132:A:H2'	57:c:1133:A:C8	2.53	0.43
57:c:1210:C:H2'	57:c:1211:A:C8	2.47	0.43
57:c:1286:U:H2'	57:c:1287:A:H8	1.84	0.43
57:c:1501:C:N4	57:c:1507:G:C2	2.86	0.43
60:f:59:HIS:ND1	60:f:239:PRO:HD3	2.34	0.43
60:f:207:LEU:HA	60:f:210:THR:HG22	2.00	0.43
62:h:11:ARG:O	62:h:12:LEU:HB2	2.18	0.43
63:i:66:GLN:HA	63:i:67:PRO:HD3	1.79	0.43
65:k:72:LYS:HE2	65:k:72:LYS:HB2	1.68	0.43
70:p:85:PRO:HG2	70:p:129:TYR:CE2	2.53	0.43
73:s:129:PHE:HB3	77:w:79:TRP:CE3	2.53	0.43
74:t:92:ASP:N	74:t:92:ASP:OD1	2.50	0.43
79:y:101:TYR:HA	79:y:113:HIS:CE1	2.53	0.43
80:z:43:PHE:O	80:z:45:GLY:N	2.49	0.43
3:2:52:ASP:OD1	3:2:53:LEU:N	2.52	0.43
4:3:19:HIS:HB2	4:3:22:LYS:H	1.83	0.43
8:7:23:LEU:HD11	8:7:293:ALA:HB3	2.00	0.43
8:7:33:LEU:O	8:7:44:SER:HA	2.18	0.43
10:A:109:PRO:HB2	10:A:111:PRO:HD2	2.00	0.43
11:AA:382:U:H2'	11:AA:383:G:C8	2.54	0.43
11:AA:564:G:C6	11:AA:565:U:C4	3.05	0.43
11:AA:582:G:H2'	11:AA:583:G:H8	1.83	0.43
11:AA:1602:A:O2'	11:AA:1603:A:O4'	2.32	0.43
11:AA:1637:A:H1'	11:AA:1709:C:O2'	2.17	0.43
11:AA:1658:G:O4'	11:AA:1796:G:H2'	2.18	0.43
11:AA:2640:A2M:HM'3	11:AA:2640:A2M:H1'	1.59	0.43
11:AA:3077:A:N6	11:AA:3080:G:C5	2.86	0.43
11:AA:3090:U:H2'	11:AA:3091:A:C8	2.53	0.43
11:AA:3151:U:H4'	11:AA:3294:A:H1'	1.99	0.43
11:AA:3211:C:H2'	11:AA:3212:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:503:LYS:HZ3	12:Aa:550:ALA:HB1	1.83	0.43
12:Aa:659:ILE:O	12:Aa:659:ILE:HG13	2.18	0.43
12:Aa:823:ARG:HH12	12:Aa:833:PRO:CD	2.31	0.43
13:B:41:LEU:CD2	13:B:112:LEU:HB2	2.48	0.43
16:CC:25:G:H2'	16:CC:26:U:C6	2.54	0.43
18:DD:9:ALA:HA	18:DD:12:PHE:HB2	1.99	0.43
18:DD:123:ALA:HA	18:DD:152:ILE:HB	2.00	0.43
22:F:38:ASP:OD1	22:F:64:VAL:HB	2.18	0.43
22:F:53:PRO:HB3	22:F:91:LEU:HD21	2.00	0.43
25:GG:3:ARG:HE	25:GG:22:LEU:N	2.08	0.43
25:GG:311:HIS:NE2	31:JJ:164:SER:HB3	2.33	0.43
27:HH:40:HIS:HB3	27:HH:43:LYS:HE2	2.00	0.43
29:II:164:SER:OG	29:II:166:LYS:NZ	2.32	0.43
33:KK:73:PRO:HD3	33:KK:233:TRP:CZ3	2.53	0.43
34:L:41:ALA:HB2	34:L:77:TYR:HE1	1.84	0.43
36:M:45:MET:HA	36:M:49:HIS:HB2	1.99	0.43
39:NN:76:ALA:O	39:NN:79:ILE:HG12	2.17	0.43
39:NN:131:MET:HE3	39:NN:132:ASN:H	1.84	0.43
45:QQ:146:ALA:HA	45:QQ:149:ASN:ND2	2.33	0.43
52:X:9:ILE:O	52:X:13:MET:HG2	2.18	0.43
57:c:333:A:P	66:l:49:ARG:H	2.41	0.43
57:c:636:A:N1	57:c:861:U:C4	2.87	0.43
57:c:641:G:O2'	65:k:178:GLY:O	2.26	0.43
57:c:743:U:H2'	57:c:744:U:C6	2.53	0.43
57:c:906:A:H8	71:q:52:ARG:NH2	2.17	0.43
57:c:953:G:H4'	70:p:114:ARG:NH1	2.33	0.43
57:c:1074:G:H2'	57:c:1075:C:C6	2.54	0.43
57:c:1188:G:H2'	57:c:1189:A:C8	2.54	0.43
57:c:1237:G:H2'	57:c:1237:G:N3	2.34	0.43
57:c:1244:A:H2'	57:c:1244:A:N3	2.34	0.43
57:c:1360:A:H2'	57:c:1361:U:H4'	2.00	0.43
57:c:1391:A:H2'	57:c:1392:U:H6	1.83	0.43
57:c:1772:C:N4	57:c:1773:4AC:HM73	2.34	0.43
61:g:11:LEU:HD22	77:w:86:ILE:HD12	2.01	0.43
66:l:70:GLU:OE2	69:o:24:LYS:NZ	2.51	0.43
67:m:54:ARG:NE	67:m:57:ARG:HH21	2.09	0.43
69:o:29:LYS:HE3	69:o:31:THR:HB	2.00	0.43
69:o:112:SER:HB3	69:o:115:PHE:CE2	2.53	0.43
72:r:65:LEU:HD23	72:r:65:LEU:H	1.83	0.43
79:y:15:ASN:O	79:y:19:LYS:HG2	2.18	0.43
80:z:87:VAL:HG13	80:z:87:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:81:GLU:O	1:0:84:LYS:HG2	2.18	0.43
1:0:131:ARG:HH12	57:c:152:U:H5'	1.83	0.43
2:1:49:ARG:O	2:1:53:GLU:HB3	2.18	0.43
4:3:32:PHE:CZ	70:p:61:THR:HG22	2.53	0.43
8:7:115:ILE:HD11	8:7:119:ALA:HA	1.99	0.43
8:7:178:VAL:HG23	8:7:194:GLY:HA2	1.99	0.43
10:A:14:HIS:CE1	10:A:124:LEU:HD13	2.54	0.43
11:AA:31:C:H2'	11:AA:32:U:O4'	2.19	0.43
11:AA:40:A:O2'	11:AA:937:G:O6	2.17	0.43
11:AA:182:U:H2'	11:AA:183:G:H8	1.84	0.43
11:AA:406:G:N2	16:CC:16:G:C4	2.86	0.43
11:AA:522:A:C2	11:AA:523:A:H1'	2.54	0.43
11:AA:852:U:C5	56:b:2:ALA:HB2	2.54	0.43
11:AA:904:A:H2'	11:AA:905:U:H6	1.84	0.43
11:AA:1014:U:H3'	11:AA:1015:U:C5'	2.49	0.43
11:AA:1129:A:N3	11:AA:2826:U:O2'	2.38	0.43
11:AA:1594:A:N3	11:AA:1615:C:H1'	2.33	0.43
11:AA:1942:U:H2'	11:AA:1943:C:O4'	2.19	0.43
11:AA:2292:U:H2'	11:AA:2293:C:H6	1.83	0.43
11:AA:2423:U:H1'	11:AA:2608:G:N2	2.34	0.43
11:AA:3064:U:H2'	11:AA:3065:G:C8	2.53	0.43
12:Aa:85:ASP:HA	12:Aa:223:ARG:HH22	1.83	0.43
12:Aa:755:VAL:HG23	12:Aa:770:ALA:HA	2.00	0.43
15:C:51:ALA:HA	15:C:54:LEU:HG	2.00	0.43
20:EE:8:GLN:HE22	20:EE:231:SER:HB3	1.82	0.43
26:H:55:GLY:HA2	26:H:122:CYS:SG	2.58	0.43
26:H:128:ARG:HA	26:H:128:ARG:HD2	1.85	0.43
27:HH:126:GLU:HG2	27:HH:196:ARG:HH21	1.83	0.43
40:O:34:LEU:HD22	40:O:59:TYR:HB3	2.00	0.43
41:OO:53:LEU:HD23	41:OO:96:ALA:HB2	2.00	0.43
51:W:30:LYS:HB2	51:W:38:PHE:CE1	2.53	0.43
55:a:54:THR:HG22	55:a:54:THR:O	2.18	0.43
55:a:73:GLU:HA	55:a:79:THR:O	2.18	0.43
57:c:52:U:H2'	57:c:53:G:C8	2.53	0.43
57:c:156:A:N3	57:c:415:C:H1'	2.34	0.43
57:c:254:A:H2'	57:c:255:U:C6	2.53	0.43
57:c:461:G:H2'	57:c:462:G:H8	1.83	0.43
57:c:926:A:H2'	57:c:927:C:H6	1.83	0.43
57:c:1053:G:C2	57:c:1067:C:C2	3.06	0.43
57:c:1273:G:H4'	57:c:1274:C:O5'	2.17	0.43
57:c:1501:C:N4	57:c:1507:G:N2	2.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1504:G:N2	57:c:1564:U:O2'	2.52	0.43
57:c:1719:A:C2	57:c:1720:G:H1'	2.53	0.43
57:c:1793:G:H1'	57:c:1794:A:H2'	2.00	0.43
58:d:63:ILE:O	58:d:67:ILE:HG12	2.18	0.43
61:g:173:ARG:HE	61:g:174:HIS:N	2.15	0.43
62:h:162:ILE:HG22	62:h:164:LEU:H	1.83	0.43
63:i:36:ALA:HB3	73:s:53:LEU:HD13	1.99	0.43
64:j:78:THR:O	64:j:81:VAL:HG12	2.18	0.43
64:j:89:ASP:OD1	64:j:89:ASP:N	2.50	0.43
65:k:139:ARG:HB2	65:k:151:LYS:HG2	2.01	0.43
66:l:192:TYR:HE1	69:o:13:PHE:HB2	1.83	0.43
80:z:34:LEU:HB3	80:z:39:LYS:NZ	2.34	0.43
5:4:27:GLN:HG3	5:4:65:ARG:NH1	2.33	0.43
8:7:34:LEU:HG	8:7:34:LEU:O	2.19	0.43
11:AA:30:G:C6	11:AA:55:G:C6	3.07	0.43
11:AA:428:A:H2'	11:AA:429:U:H6	1.82	0.43
11:AA:725:G:H2'	11:AA:726:G:O4'	2.18	0.43
11:AA:802:C:H2'	11:AA:803:C:C6	2.54	0.43
11:AA:1529:A:H2'	11:AA:1530:U:O4'	2.18	0.43
11:AA:1635:G:N1	11:AA:1639:C:N3	2.66	0.43
11:AA:1787:A:H2'	11:AA:1788:C:O4'	2.18	0.43
11:AA:1807:G:H2'	11:AA:1808:G:C4	2.54	0.43
11:AA:2211:U:N3	11:AA:2234:G:N1	2.66	0.43
11:AA:2419:A:C5	11:AA:2804:A:C5	3.07	0.43
11:AA:2500:A:H2'	11:AA:2501:U:C5	2.53	0.43
11:AA:2683:U:H1'	39:NN:128:TYR:HE2	1.81	0.43
11:AA:2714:G:C8	11:AA:2751:G:H2'	2.53	0.43
11:AA:2899:C:O2'	11:AA:2901:G:OP2	2.34	0.43
11:AA:3065:G:H2'	11:AA:3066:U:H6	1.83	0.43
11:AA:3277:U:H5''	11:AA:3278:C:H5	1.83	0.43
12:Aa:218:TRP:HB3	12:Aa:325:ARG:HA	2.00	0.43
12:Aa:285:PHE:O	12:Aa:289:MET:N	2.37	0.43
12:Aa:485:VAL:HG22	12:Aa:486:SER:H	1.83	0.43
12:Aa:738:GLN:NE2	12:Aa:791:GLN:OE1	2.36	0.43
14:BB:60:G:H2'	14:BB:61:G:C8	2.54	0.43
18:DD:98:ASN:O	18:DD:102:SER:N	2.52	0.43
25:GG:42:VAL:HG21	25:GG:235:LEU:HD23	2.01	0.43
25:GG:205:PRO:HB3	25:GG:247:PHE:CD2	2.53	0.43
27:HH:127:GLY:O	27:HH:192:PRO:HA	2.18	0.43
28:I:46:PRO:O	28:I:55:PHE:HB2	2.19	0.43
31:JJ:106:LEU:HA	31:JJ:106:LEU:HD23	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:K:114:ASP:OD1	32:K:115:ARG:N	2.51	0.43
36:M:128:ARG:HA	36:M:148:ILE:O	2.19	0.43
43:PP:25:LYS:HE2	43:PP:25:LYS:HB2	1.89	0.43
45:QQ:78:GLY:HA2	45:QQ:89:VAL:HG21	2.01	0.43
46:R:38:PRO:CA	46:R:74:THR:HG21	2.49	0.43
56:b:59:CYS:C	56:b:61:LYS:H	2.26	0.43
57:c:50:C:OP1	57:c:423:G:N2	2.51	0.43
57:c:85:A:C4	57:c:86:A:C8	3.06	0.43
57:c:299:A:C4	57:c:300:A:C8	3.07	0.43
57:c:480:G:H3'	57:c:509:G:N2	2.30	0.43
57:c:484:C:H2'	57:c:485:A:H5''	1.99	0.43
57:c:510:G:C6	57:c:511:A:C5	3.06	0.43
57:c:789:A:OP1	62:h:108:ARG:NH1	2.52	0.43
57:c:878:G:O2'	70:p:108:ASP:OD1	2.24	0.43
57:c:1057:U:O2'	57:c:1061:A:N6	2.48	0.43
57:c:1069:A:OP1	58:d:28:ASN:ND2	2.51	0.43
57:c:1178:G:C4	57:c:1179:G:C8	3.06	0.43
57:c:1323:C:H2'	57:c:1324:G:C8	2.53	0.43
57:c:1633:A:OP2	57:c:1633:A:H8	2.02	0.43
62:h:77:ARG:HD3	62:h:77:ARG:HA	1.57	0.43
73:s:44:LEU:HB3	73:s:47:LYS:HE3	1.99	0.43
75:u:23:ASP:OD2	75:u:25:ASN:HB2	2.18	0.43
1:0:128:LYS:HD3	1:0:128:LYS:HA	1.78	0.43
10:A:49:ARG:NH1	11:AA:1190:A:C2	2.85	0.43
10:A:189:ASP:N	10:A:189:ASP:OD1	2.51	0.43
11:AA:237:G:C2	11:AA:238:A:C5	3.07	0.43
11:AA:351:A:N3	16:CC:53:A:O2'	2.37	0.43
11:AA:353:G:H22	11:AA:365:A:P	2.41	0.43
11:AA:525:C:H2'	11:AA:526:C:C6	2.54	0.43
11:AA:1113:G:C5	11:AA:1114:U:C4	3.07	0.43
11:AA:1116:G:N2	11:AA:2817:A:O4'	2.52	0.43
11:AA:1558:A:H1'	30:J:34:LEU:HD22	2.01	0.43
11:AA:1831:U:H2'	11:AA:1832:C:C6	2.53	0.43
11:AA:1856:C:H2'	11:AA:1857:C:C6	2.53	0.43
11:AA:2526:C:C2	11:AA:2527:G:C8	3.07	0.43
11:AA:2573:G:N1	11:AA:2574:G:C5	2.87	0.43
11:AA:2765:C:C4	11:AA:2766:U:C4	3.06	0.43
14:BB:20:A:H2'	14:BB:21:G:C8	2.54	0.43
16:CC:65:A:OP1	48:T:49:LYS:NZ	2.46	0.43
19:E:43:TYR:HE2	19:E:122:HIS:CE1	2.29	0.43
20:EE:45:VAL:HG23	20:EE:88:ILE:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:FF:204:ALA:O	23:FF:207:SER:OG	2.32	0.43
28:I:12:LYS:NZ	28:I:14:TYR:CZ	2.86	0.43
33:KK:64:ILE:O	33:KK:68:ARG:HG2	2.19	0.43
53:Y:99:CYS:SG	53:Y:115:CYS:HB3	2.58	0.43
57:c:210:A:H61	57:c:257:A:N6	2.17	0.43
57:c:450:U:O4	57:c:451:A:N6	2.51	0.43
57:c:485:A:H2'	57:c:503:G:N2	2.31	0.43
57:c:592:A:OP1	67:m:24:LEU:HD11	2.19	0.43
57:c:632:U:OP2	69:o:102:LYS:NZ	2.32	0.43
57:c:898:A:N6	57:c:914:G:N2	2.66	0.43
57:c:1087:A:H5'	57:c:1298:U:C4	2.53	0.43
57:c:1181:U:H2'	57:c:1182:U:C5	2.54	0.43
57:c:1405:G:H2'	57:c:1406:A:C8	2.53	0.43
57:c:1415:U:H2'	57:c:1416:G:C8	2.53	0.43
57:c:1473:U:P	63:i:190:ILE:HG22	2.59	0.43
57:c:1586:A:H3'	57:c:1611:A:H62	1.83	0.43
57:c:1721:A:H2'	57:c:1722:A:C8	2.54	0.43
58:d:136:ALA:HB1	58:d:141:ILE:HB	2.01	0.43
59:e:144:ARG:HD3	59:e:208:GLN:CG	2.49	0.43
59:e:219:LYS:HD3	59:e:220:GLN:H	1.84	0.43
61:g:123:VAL:HG12	61:g:127:MET:HE2	2.01	0.43
61:g:126:VAL:HG11	61:g:134:CYS:HB2	2.00	0.43
62:h:121:TYR:OH	62:h:235:TYR:O	2.36	0.43
62:h:123:LEU:HD12	62:h:161:LYS:HA	2.01	0.43
64:j:21:GLU:O	64:j:25:ARG:HG3	2.18	0.43
64:j:48:TYR:CE1	64:j:116:LYS:HG3	2.54	0.43
67:m:151:ASP:O	67:m:155:HIS:ND1	2.52	0.43
70:p:54:LEU:HB3	70:p:60:VAL:CG1	2.48	0.43
74:t:74:GLN:OE1	74:t:74:GLN:N	2.51	0.43
75:u:6:GLN:HE22	75:u:8:GLN:CG	2.30	0.43
79:y:7:LEU:HD13	79:y:126:LEU:HD11	2.00	0.43
4:3:33:LEU:HD23	4:3:79:PHE:CD2	2.54	0.43
7:6:14:VAL:HB	57:c:567:A:H1'	2.00	0.43
11:AA:46:U:H2'	11:AA:47:C:C6	2.54	0.43
11:AA:302:U:H2'	11:AA:303:G:C8	2.53	0.43
11:AA:535:G:N1	11:AA:555:U:C4	2.87	0.43
11:AA:641:C:OP2	36:M:21:ARG:NH1	2.52	0.43
11:AA:655:C:P	44:Q:27:ARG:HB3	2.59	0.43
11:AA:900:G:C4	11:AA:901:G:C8	3.07	0.43
11:AA:1576:G:H3'	11:AA:1577:G:C8	2.54	0.43
11:AA:1908:A:H2'	11:AA:1909:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2325:G:H2'	11:AA:2326:A:H8	1.82	0.43
11:AA:2406:C:H2'	11:AA:2407:C:C6	2.53	0.43
11:AA:2658:G:C2	11:AA:2659:G:C8	3.07	0.43
11:AA:2844:C:O2'	11:AA:2845:A:H5'	2.19	0.43
11:AA:3120:C:N4	53:Y:103:LEU:HD11	2.34	0.43
12:Aa:216:HIS:CG	12:Aa:321:LYS:HG2	2.54	0.43
12:Aa:381:TYR:HD1	12:Aa:468:THR:HB	1.82	0.43
12:Aa:456:LEU:HB3	12:Aa:459:ILE:HD11	2.00	0.43
12:Aa:584:ASN:OD1	12:Aa:694:HIS:N	2.43	0.43
15:C:44:PHE:CE1	15:C:139:ILE:HD11	2.53	0.43
16:CC:79:A:H2'	16:CC:80:A:C8	2.54	0.43
18:DD:191:TYR:HA	18:DD:196:VAL:HG12	2.01	0.43
21:Ee:107:ASP:O	21:Ee:110:ILE:HG22	2.19	0.43
22:F:6:GLY:N	22:F:9:SER:OG	2.50	0.43
23:FF:108:GLU:HB2	23:FF:137:TYR:CE2	2.53	0.43
23:FF:221:THR:HG22	23:FF:329:PRO:HB3	2.01	0.43
29:II:166:LYS:N	29:II:169:ASP:OD2	2.47	0.43
29:II:172:HIS:HD2	46:R:44:TYR:CZ	2.37	0.43
31:JJ:90:LYS:HD3	31:JJ:220:PHE:HZ	1.83	0.43
39:NN:15:GLU:O	39:NN:72:ARG:HD3	2.19	0.43
45:QQ:70:ASN:HB3	45:QQ:92:LEU:O	2.18	0.43
48:T:31:LEU:HD12	48:T:35:LYS:HZ2	1.83	0.43
57:c:5:U:H2'	57:c:6:G:H8	1.84	0.43
57:c:86:A:H2'	57:c:87:C:H6	1.82	0.43
57:c:445:A:O4'	57:c:525:A:H5'	2.19	0.43
57:c:799:A:H4'	62:h:201:HIS:CE1	2.54	0.43
57:c:894:U:O5'	57:c:894:U:H6	2.02	0.43
57:c:994:G:OP1	57:c:1778:G:O2'	2.36	0.43
57:c:1001:A:O2'	57:c:1002:G:P	2.77	0.43
57:c:1009:U:H2'	57:c:1010:C:H6	1.83	0.43
57:c:1123:C:H2'	57:c:1124:A:O4'	2.18	0.43
57:c:1202:A:H62	57:c:1457:C:P	2.42	0.43
57:c:1378:U:HO2'	73:s:10:PHE:HD1	1.63	0.43
57:c:1470:C:H5''	57:c:1471:A:H8	1.83	0.43
57:c:1590:G:N2	57:c:1593:A:O5'	2.51	0.43
57:c:1687:U:O2	57:c:1715:G:H2'	2.19	0.43
59:e:119:THR:H	59:e:143:THR:HG1	1.58	0.43
59:e:120:LEU:O	59:e:121:ILE:HD13	2.18	0.43
60:f:53:ILE:HG12	60:f:57:PHE:HD2	1.84	0.43
62:h:157:ASN:HB3	62:h:175:PHE:CD2	2.54	0.43
63:i:148:ARG:HH12	63:i:157:ARG:HB2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:k:21:ALA:O	65:k:25:VAL:HG23	2.19	0.43
66:l:66:SER:HA	66:l:73:SER:HA	2.00	0.43
69:o:129:ARG:O	69:o:131:ILE:HG23	2.18	0.43
1:0:105:ARG:HH21	57:c:444:C:P	2.42	0.43
8:7:26:SER:OG	8:7:75:ALA:O	2.28	0.43
11:AA:143:G:C2	11:AA:144:A:C8	3.07	0.43
11:AA:176:G:C2	11:AA:177:U:H1'	2.53	0.43
11:AA:221:A:O2'	11:AA:223:U:OP2	2.35	0.43
11:AA:1310:G:C2	11:AA:1311:G:C5	3.07	0.43
11:AA:1688:U:H2'	11:AA:1689:U:H6	1.82	0.43
11:AA:1840:U:H4'	11:AA:1841:A:H5''	2.01	0.43
11:AA:2113:A:N7	11:AA:2114:C:C4	2.87	0.43
11:AA:2203:U:H5''	20:EE:227:ARG:NH2	2.33	0.43
11:AA:2568:C:N4	11:AA:2574:G:O6	2.52	0.43
11:AA:2745:G:N2	11:AA:2747:A:H8	2.15	0.43
11:AA:3102:G:H2'	11:AA:3103:A:H8	1.83	0.43
11:AA:3283:U:H2'	11:AA:3284:G:C8	2.54	0.43
13:B:60:PHE:CE1	13:B:82:ARG:HB3	2.54	0.43
15:C:8:LYS:HB3	15:C:11:LYS:HE3	2.00	0.43
15:C:63:SER:HB2	15:C:90:ASP:OD2	2.18	0.43
15:C:83:VAL:HG22	15:C:140:LEU:HB2	2.00	0.43
21:Ee:75:PRO:CB	21:Ee:80:LEU:HD11	2.49	0.43
25:GG:142:VAL:HG11	25:GG:247:PHE:CE1	2.54	0.43
35:LL:141:LYS:HZ3	35:LL:142:ASP:H	1.67	0.43
42:P:11:GLU:HB2	42:P:107:VAL:CG1	2.48	0.43
52:X:23:LEU:HD23	52:X:28:ARG:CZ	2.49	0.43
57:c:420:A2M:H1'	57:c:420:A2M:HM'3	1.62	0.43
57:c:463:U:H2'	57:c:464:A:H8	1.83	0.43
57:c:753:A:OP2	62:h:187:ARG:N	2.52	0.43
57:c:957:G:H2'	57:c:958:U:C6	2.54	0.43
57:c:965:U:H1'	70:p:128:TYR:CD2	2.53	0.43
57:c:997:G:C6	57:c:1008:G:C6	3.07	0.43
57:c:1152:A:H2'	57:c:1153:G:H8	1.84	0.43
57:c:1170:G:C2	57:c:1171:A:C8	3.07	0.43
57:c:1284:C:OP1	57:c:1623:C:O2'	2.27	0.43
57:c:1324:G:H5'	58:d:113:ARG:HH11	1.84	0.43
57:c:1355:C:N4	57:c:1369:U:O4	2.52	0.43
57:c:1624:C:C2	57:c:1625:C:C5	3.07	0.43
57:c:1752:U:H2'	57:c:1753:A:C8	2.53	0.43
59:e:67:GLU:HB2	59:e:85:LYS:HZ1	1.82	0.43
59:e:82:ARG:HB3	59:e:105:PHE:CE1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:e:114:VAL:HG22	59:e:142:PHE:HZ	1.83	0.43
61:g:137:VAL:HG12	61:g:185:LYS:HB2	2.01	0.43
61:g:198:GLY:O	61:g:200:LYS:HD2	2.19	0.43
62:h:62:LYS:O	62:h:66:MET:HG2	2.19	0.43
74:t:75:GLU:HB3	74:t:78:ARG:HH21	1.83	0.43
80:z:85:ALA:HB2	80:z:104:LEU:HD11	2.01	0.43
5:4:11:LYS:HZ3	5:4:31:GLU:HB3	1.84	0.43
8:7:66:HIS:O	8:7:67:ILE:HG13	2.19	0.43
9:8:94:LYS:HE3	57:c:1248:C:H5'	2.00	0.43
10:A:34:VAL:HG11	10:A:112:TYR:CD2	2.53	0.43
11:AA:136:G:C2	11:AA:137:G:C5	3.06	0.43
11:AA:138:U:H2'	11:AA:139:G:C8	2.52	0.43
11:AA:197:G:N2	11:AA:372:A:C8	2.87	0.43
11:AA:296:A:H3'	11:AA:297:G:H21	1.83	0.43
11:AA:330:G:H22	16:CC:33:A:H2	1.66	0.43
11:AA:527:A:N6	11:AA:566:G:O6	2.51	0.43
11:AA:567:G:OP1	25:GG:350:LYS:NZ	2.29	0.43
11:AA:810:A:H2'	11:AA:811:U:C6	2.54	0.43
11:AA:1010:G:H5''	37:MM:40:LYS:HZ3	1.84	0.43
11:AA:1255:C:O2	21:Ee:131:GLU:HG2	2.18	0.43
11:AA:1497:C:O2'	11:AA:1602:A:H1'	2.19	0.43
11:AA:1799:A:H2'	11:AA:1800:A:H8	1.84	0.43
11:AA:1833:G:O2'	52:X:3:ALA:O	2.35	0.43
11:AA:2111:G:H4'	28:I:48:ARG:HD3	2.01	0.43
11:AA:2250:G:H2'	11:AA:2251:G:H8	1.84	0.43
11:AA:2347:OMU:H3'	11:AA:2348:A:H8	1.84	0.43
12:Aa:437:MET:SD	12:Aa:437:MET:N	2.82	0.43
12:Aa:511:LEU:HD22	12:Aa:545:LEU:HD21	2.01	0.43
15:C:36:LEU:HD23	15:C:36:LEU:HA	1.87	0.43
15:C:39:ARG:O	25:GG:300:ARG:HG2	2.19	0.43
22:F:17:ARG:NH1	22:F:23:GLY:O	2.44	0.43
22:F:31:LEU:HD21	27:HH:67:SER:HB3	2.01	0.43
30:J:115:ARG:HG3	30:J:116:PRO:HD2	1.99	0.43
30:J:134:ASP:OD1	30:J:135:ILE:N	2.52	0.43
31:JJ:116:PHE:CE1	31:JJ:144:ILE:HG12	2.54	0.43
32:K:51:ARG:HG2	32:K:52:ARG:H	1.84	0.43
33:KK:195:SER:OG	33:KK:197:VAL:O	2.30	0.43
37:MM:9:TYR:CE2	37:MM:97:LEU:HB3	2.54	0.43
37:MM:53:VAL:HG21	37:MM:166:ILE:HD11	2.00	0.43
45:QQ:105:ARG:CD	45:QQ:108:ARG:HH22	2.29	0.43
45:QQ:118:SER:HB3	45:QQ:132:VAL:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:U:54:GLU:O	49:U:58:ILE:HG12	2.19	0.43
56:b:29:LEU:HD23	56:b:29:LEU:O	2.18	0.43
57:c:119:A:C4	57:c:397:A:N1	2.87	0.43
57:c:121:U:H2'	57:c:122:U:C6	2.54	0.43
57:c:180:A:C5	57:c:181:A:C8	3.06	0.43
57:c:213:A:N6	57:c:214:G:H8	2.17	0.43
57:c:480:G:N2	57:c:510:G:C8	2.87	0.43
57:c:589:C:H2'	57:c:590:C:C6	2.54	0.43
57:c:922:G:C2	57:c:923:A:C5	3.06	0.43
57:c:1000:C:H2'	57:c:1001:A:H3'	2.01	0.43
60:f:103:VAL:HG12	60:f:113:LEU:HD13	2.00	0.43
61:g:63:GLY:O	61:g:66:ILE:HG22	2.19	0.43
62:h:87:MET:HG3	62:h:87:MET:O	2.19	0.43
63:i:137:ILE:HD13	63:i:175:LEU:HD12	2.01	0.43
65:k:5:GLN:CD	65:k:13:PRO:HB3	2.43	0.43
66:l:57:ALA:HB1	66:l:60:ILE:HD11	2.00	0.43
1:0:99:LYS:HE2	1:0:99:LYS:HB2	1.90	0.42
3:2:33:ASP:OD1	3:2:33:ASP:N	2.52	0.42
6:5:12:ARG:O	6:5:18:SER:HB3	2.19	0.42
7:6:40:TYR:CD2	67:m:32:GLY:HA3	2.54	0.42
11:AA:20:A:N1	16:CC:140:G:C6	2.87	0.42
11:AA:35:A:H2'	11:AA:36:C:H6	1.84	0.42
11:AA:102:C:H4'	41:OO:62:THR:HG21	2.01	0.42
11:AA:137:G:H2'	11:AA:138:U:C6	2.54	0.42
11:AA:197:G:N2	11:AA:372:A:C5	2.87	0.42
11:AA:383:G:N2	11:AA:386:A:OP2	2.33	0.42
11:AA:768:C:N4	11:AA:769:G:C6	2.86	0.42
11:AA:816:A:N1	11:AA:919:U:H1'	2.34	0.42
11:AA:817:A2M:HM'2	11:AA:818:C:H6	1.83	0.42
11:AA:951:A:N7	11:AA:1368:U:N3	2.67	0.42
11:AA:1087:G:C2	11:AA:1088:U:C6	3.07	0.42
11:AA:1224:C:C2	11:AA:1225:A:C8	3.07	0.42
11:AA:1240:A:N6	11:AA:1244:A:HO2'	2.16	0.42
11:AA:1673:G:C5	11:AA:1775:G:C2	3.07	0.42
11:AA:2386:A:N6	11:AA:2994:A:N7	2.67	0.42
11:AA:2415:C:OP1	20:EE:2:GLY:HA3	2.19	0.42
11:AA:2492:C:H2'	11:AA:2493:U:O4'	2.19	0.42
11:AA:2612:U:H2'	11:AA:2613:U:O4'	2.19	0.42
11:AA:3050:U:H2'	11:AA:3051:U:C6	2.54	0.42
12:Aa:221:THR:HG21	12:Aa:336:GLU:OE1	2.19	0.42
12:Aa:511:LEU:HB3	12:Aa:549:HIS:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:593:ILE:HA	12:Aa:685:ARG:NH2	2.34	0.42
12:Aa:599:LEU:O	12:Aa:603:ASN:ND2	2.51	0.42
12:Aa:659:ILE:HD11	12:Aa:705:ILE:HG13	2.01	0.42
12:Aa:749:LYS:HA	12:Aa:749:LYS:HD2	1.64	0.42
14:BB:64:A:H8	37:MM:204:GLY:O	2.02	0.42
16:CC:14:C:C4	16:CC:15:G:C6	3.07	0.42
16:CC:132:G:H2'	16:CC:133:G:H8	1.84	0.42
18:DD:7:LYS:HA	18:DD:10:GLU:HB2	2.01	0.42
18:DD:141:VAL:O	18:DD:143:THR:HG23	2.18	0.42
19:E:96:ASP:OD2	19:E:102:ALA:N	2.52	0.42
27:HH:127:GLY:HA3	27:HH:192:PRO:O	2.19	0.42
33:KK:98:ARG:HG2	33:KK:189:LEU:O	2.19	0.42
34:L:5:LEU:HD23	34:L:5:LEU:HA	1.89	0.42
43:PP:56:GLN:HE22	43:PP:58:ILE:HB	1.83	0.42
51:W:26:LYS:NZ	51:W:27:ILE:O	2.51	0.42
53:Y:95:VAL:HG13	53:Y:100:TYR:HA	2.01	0.42
57:c:331:A:OP1	66:l:34:ALA:N	2.52	0.42
57:c:481:A:H2'	57:c:482:U:O4'	2.18	0.42
57:c:648:G:H5'	57:c:649:U:OP1	2.19	0.42
57:c:1234:A:H3'	57:c:1245:G:N7	2.34	0.42
57:c:1302:U:H2'	57:c:1303:U:C6	2.53	0.42
57:c:1316:G:H2'	57:c:1317:C:C6	2.54	0.42
57:c:1395:G:C2	57:c:1396:U:C2	3.08	0.42
57:c:1471:A:C6	57:c:1540:G:H5'	2.54	0.42
58:d:183:ARG:HG2	58:d:188:LEU:HB2	1.99	0.42
64:j:1:MET:HB2	64:j:18:ILE:O	2.19	0.42
66:l:8:ARG:C	66:l:18:ARG:HH21	2.26	0.42
66:l:85:PRO:HA	69:o:11:ARG:HH21	1.84	0.42
66:l:107:THR:O	66:l:110:ARG:HG2	2.18	0.42
71:q:47:LYS:HD2	71:q:47:LYS:HA	1.67	0.42
75:u:106:GLU:O	75:u:110:ARG:HG2	2.19	0.42
78:x:62:ARG:HA	78:x:62:ARG:HD2	1.85	0.42
79:y:41:MET:HE1	79:y:129:VAL:HG11	2.01	0.42
80:z:56:LYS:HG2	80:z:93:LEU:HD11	2.00	0.42
11:AA:31:C:OP2	45:QQ:188:ARG:NH1	2.48	0.42
11:AA:52:A:H1'	11:AA:811:U:O2'	2.20	0.42
11:AA:187:A:H2'	11:AA:188:U:C6	2.54	0.42
11:AA:561:C:H2'	11:AA:562:C:H6	1.84	0.42
11:AA:637:C:C4	11:AA:2361:A:C5	3.07	0.42
11:AA:1117:G:H2'	11:AA:1118:C:H6	1.84	0.42
11:AA:1377:G:H2'	11:AA:1378:U:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1393:A:H61	11:AA:1417:G:H1'	1.85	0.42
11:AA:1782:U:H2'	11:AA:1783:U:O4'	2.19	0.42
11:AA:1929:G:H4'	11:AA:2321:A:H5''	2.00	0.42
11:AA:2309:A:N3	11:AA:2961:G:O2'	2.37	0.42
11:AA:2471:U:C5	11:AA:2473:C:N3	2.86	0.42
11:AA:2500:A:HO2'	11:AA:2501:U:P	2.41	0.42
11:AA:2533:G:C2	11:AA:2547:A:N1	2.87	0.42
11:AA:2807:U:O2'	11:AA:2809:C:OP1	2.28	0.42
11:AA:3375:A:H2'	11:AA:3378:C:H5	1.84	0.42
12:Aa:230:ALA:H	12:Aa:237:LYS:NZ	2.17	0.42
12:Aa:249:PHE:HB2	12:Aa:258:THR:HG23	2.02	0.42
12:Aa:365:ASN:ND2	12:Aa:379:MET:SD	2.86	0.42
12:Aa:653:VAL:CG1	12:Aa:656:LEU:HB2	2.48	0.42
14:BB:64:A:C6	37:MM:202:LYS:HA	2.54	0.42
15:C:148:GLU:O	15:C:151:ARG:HG2	2.18	0.42
23:FF:283:TYR:O	23:FF:284:ARG:HD2	2.18	0.42
26:H:130:ALA:O	26:H:133:SER:OG	2.33	0.42
33:KK:48:ARG:HD3	33:KK:49:TYR:CZ	2.54	0.42
39:NN:98:ALA:HA	39:NN:156:LYS:HD2	2.00	0.42
40:O:10:ILE:HD12	40:O:10:ILE:H	1.83	0.42
43:PP:84:LYS:HA	43:PP:87:ALA:HB3	2.00	0.42
47:S:39:ALA:HB2	47:S:58:ARG:HD2	2.01	0.42
57:c:4:C:H5''	60:f:204:THR:HG21	2.00	0.42
57:c:97:C:H2'	57:c:98:U:H6	1.83	0.42
57:c:214:G:C2	57:c:253:A:N6	2.88	0.42
57:c:289:U:H2'	57:c:290:G:H8	1.82	0.42
57:c:784:C:H2'	57:c:785:U:C6	2.55	0.42
57:c:876:G:C2	57:c:944:A:C5	3.06	0.42
57:c:961:U:C5'	70:p:71:ILE:HD12	2.47	0.42
57:c:981:U:H1'	57:c:1123:C:H42	1.83	0.42
57:c:1483:A:C2	57:c:1608:U:H1'	2.54	0.42
57:c:1563:C:C2'	57:c:1564:U:H5'	2.49	0.42
57:c:1585:U:OP2	57:c:1610:G:N1	2.52	0.42
60:f:154:LEU:HA	60:f:154:LEU:HD23	1.84	0.42
61:g:114:ALA:HB3	61:g:117:ARG:HB3	2.01	0.42
62:h:52:LEU:HB3	62:h:54:TYR:HD1	1.84	0.42
64:j:31:ARG:HH11	64:j:32:ILE:H	1.65	0.42
64:j:218:GLU:N	64:j:218:GLU:OE1	2.51	0.42
72:r:40:ARG:HA	72:r:40:ARG:HD3	1.82	0.42
1:0:42:GLU:O	1:0:46:GLU:HG3	2.18	0.42
8:7:169:ILE:HG22	8:7:170:ILE:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:48:PHE:CZ	10:A:52:LEU:HD21	2.55	0.42
11:AA:196:G:H22	11:AA:198:A:H3'	1.83	0.42
11:AA:197:G:C6	11:AA:395:A:C5	3.07	0.42
11:AA:406:G:O2'	11:AA:407:A:OP2	2.34	0.42
11:AA:630:A:H2'	11:AA:631:U:C6	2.54	0.42
11:AA:1459:C:H2'	11:AA:1460:A:H8	1.85	0.42
11:AA:2765:C:H2'	11:AA:2766:U:C6	2.54	0.42
11:AA:2923:U:H2'	11:AA:2924:U:C6	2.54	0.42
11:AA:3232:G:C6	11:AA:3256:G:C6	3.07	0.42
11:AA:3240:C:H2'	11:AA:3241:G:H8	1.85	0.42
12:Aa:415:GLY:H	12:Aa:418:TYR:HB2	1.84	0.42
12:Aa:450:ALA:O	12:Aa:452:ASN:ND2	2.52	0.42
12:Aa:798:PHE:HZ	12:Aa:801:TRP:CH2	2.36	0.42
14:BB:58:C:H2'	14:BB:59:U:C6	2.53	0.42
15:C:6:THR:HG22	31:JJ:104:GLN:NE2	2.33	0.42
18:DD:32:ASN:O	18:DD:183:PHE:HD2	2.02	0.42
18:DD:43:LYS:HD2	18:DD:46:ARG:NE	2.35	0.42
20:EE:54:ARG:HH12	20:EE:56:ALA:HB3	1.83	0.42
23:FF:21:ARG:HE	23:FF:269:GLN:HG2	1.84	0.42
23:FF:187:SER:HB3	23:FF:190:GLU:HG2	2.02	0.42
30:J:58:ASP:O	30:J:62:VAL:HG23	2.18	0.42
30:J:63:ILE:HD11	30:J:84:PHE:CD1	2.54	0.42
33:KK:246:MET:O	33:KK:250:ALA:N	2.49	0.42
35:LL:136:PHE:HD1	35:LL:144:ILE:HG22	1.83	0.42
36:M:45:MET:O	36:M:49:HIS:C	2.62	0.42
37:MM:99:ILE:HG22	37:MM:123:HIS:HB2	2.00	0.42
39:NN:91:LEU:HD22	39:NN:95:ASN:OD1	2.19	0.42
39:NN:95:ASN:ND2	39:NN:103:GLY:O	2.52	0.42
40:O:77:LEU:HD21	40:O:90:VAL:HG23	2.01	0.42
41:OO:6:ASN:O	41:OO:7:LEU:HD12	2.19	0.42
42:P:11:GLU:OE1	42:P:74:ARG:HB2	2.19	0.42
43:PP:35:ILE:HD12	43:PP:45:LEU:O	2.20	0.42
50:V:64:MET:C	50:V:66:TYR:H	2.19	0.42
56:b:42:CYS:O	56:b:44:LYS:HG3	2.19	0.42
57:c:124:A:H2'	57:c:125:U:C6	2.55	0.42
57:c:183:U:H2'	57:c:184:C:H6	1.84	0.42
57:c:525:A:HO2'	57:c:526:A:P	2.43	0.42
57:c:886:U:H2'	57:c:887:A:C8	2.53	0.42
57:c:900:A:H2'	57:c:901:G:C8	2.55	0.42
57:c:1161:C:H2'	57:c:1162:C:C6	2.53	0.42
57:c:1204:A:H5''	57:c:1205:C:OP2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1424:A:HO2'	57:c:1425:A:P	2.41	0.42
57:c:1500:C:H5	76:v:73:VAL:HG21	1.84	0.42
57:c:1649:G:H2'	57:c:1650:U:C6	2.54	0.42
57:c:1668:G:H2'	57:c:1669:U:O4'	2.19	0.42
57:c:1718:G:H2'	57:c:1719:A:C8	2.54	0.42
57:c:1783:C:H2'	57:c:1784:C:H6	1.84	0.42
59:e:51:SER:HB3	59:e:57:ALA:HB2	2.02	0.42
61:g:32:GLU:N	61:g:32:GLU:OE1	2.52	0.42
63:i:108:LEU:HA	63:i:111:VAL:HG12	2.00	0.42
65:k:75:THR:O	65:k:79:ARG:NH1	2.52	0.42
73:s:47:LYS:HZ3	73:s:82:ARG:HD2	1.83	0.42
77:w:56:VAL:O	77:w:89:ARG:HA	2.19	0.42
79:y:115:GLU:HA	79:y:118:ARG:CG	2.49	0.42
1:0:11:LYS:NZ	57:c:776:G:O6	2.31	0.42
1:0:105:ARG:HG3	1:0:108:ARG:NH2	2.34	0.42
3:2:23:CYS:HB3	3:2:27:SER:H	1.84	0.42
7:6:19:PRO:HD3	57:c:562:OMG:O2'	2.18	0.42
8:7:89:LEU:HD11	8:7:113:VAL:HG21	2.01	0.42
11:AA:284:A:H4'	11:AA:285:A:N3	2.35	0.42
11:AA:702:C:C2	11:AA:703:G:C8	3.07	0.42
11:AA:815:G:H21	11:AA:920:A:P	2.42	0.42
11:AA:1536:G:C6	11:AA:1586:G:C2	3.07	0.42
11:AA:2185:G:H3'	20:EE:200:ARG:NH2	2.29	0.42
11:AA:2517:U:H2'	11:AA:2518:C:H6	1.84	0.42
11:AA:2615:G:C4	11:AA:2616:C:C5	3.08	0.42
11:AA:2623:G:C4	11:AA:2624:G:C8	3.08	0.42
11:AA:2834:G:H2'	11:AA:2835:U:C6	2.54	0.42
11:AA:3227:A:H2'	11:AA:3228:C:C6	2.55	0.42
11:AA:3297:U:H2'	11:AA:3298:C:H6	1.84	0.42
12:Aa:315:GLU:O	12:Aa:319:LEU:N	2.44	0.42
16:CC:60:U:O2'	16:CC:61:A:H5'	2.19	0.42
16:CC:89:A:H5''	16:CC:90:U:OP2	2.18	0.42
17:D:23:TRP:HB3	17:D:51:VAL:HB	2.00	0.42
19:E:12:ARG:NH1	22:F:139:ARG:HH21	2.17	0.42
23:FF:292:ALA:HB1	23:FF:295:ALA:HB3	2.01	0.42
25:GG:75:PRO:HG2	25:GG:89:ALA:O	2.19	0.42
25:GG:181:VAL:CG1	25:GG:223:PRO:HB2	2.50	0.42
25:GG:285:ASP:OD1	25:GG:285:ASP:N	2.47	0.42
25:GG:317:PRO:HG2	31:JJ:149:TYR:HB3	2.01	0.42
26:H:109:MET:HB3	26:H:128:ARG:NH2	2.34	0.42
27:HH:232:ASP:HB3	27:HH:235:SER:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:II:175:LYS:O	43:PP:117:ARG:NH1	2.47	0.42
31:JJ:135:ALA:HB1	31:JJ:232:ARG:HE	1.85	0.42
45:QQ:33:LYS:O	45:QQ:65:ARG:NH2	2.53	0.42
47:S:57:LEU:N	47:S:62:TYR:HE1	2.12	0.42
55:a:71:ARG:NH2	55:a:73:GLU:HB2	2.32	0.42
57:c:30:G:H2'	57:c:31:C:H6	1.84	0.42
57:c:183:U:H2'	57:c:184:C:C6	2.55	0.42
57:c:207:U:C2	57:c:208:U:C5	3.07	0.42
57:c:466:U:H2'	57:c:467:G:O4'	2.19	0.42
57:c:606:A:H1'	57:c:609:U:OP1	2.19	0.42
57:c:821:U:C4	57:c:852:C:N4	2.87	0.42
57:c:978:A:H2'	57:c:979:A:H8	1.84	0.42
57:c:991:G:H1'	57:c:1014:G:H22	1.84	0.42
57:c:1009:U:H2'	57:c:1010:C:C6	2.54	0.42
57:c:1150:G:N2	57:c:1768:G:H2'	2.34	0.42
59:e:176:VAL:C	59:e:178:GLY:H	2.26	0.42
60:f:81:MET:HG3	60:f:211:LEU:CD1	2.50	0.42
62:h:157:ASN:HB3	62:h:175:PHE:CE2	2.54	0.42
63:i:41:LYS:HD2	63:i:42:LEU:H	1.85	0.42
63:i:128:ASN:HB3	63:i:131:GLN:HB2	2.00	0.42
64:j:55:GLY:O	64:j:63:MET:HG3	2.19	0.42
65:k:5:GLN:HB2	65:k:18:LEU:HD13	2.00	0.42
65:k:50:ASP:HA	65:k:56:LYS:HD3	2.01	0.42
65:k:60:ILE:HB	65:k:92:PHE:CD1	2.54	0.42
65:k:118:LEU:O	65:k:121:VAL:HG22	2.20	0.42
66:l:67:TRP:CD1	66:l:69:SER:HB2	2.54	0.42
69:o:55:ASP:HB2	69:o:82:ARG:HH12	1.84	0.42
71:q:24:ASN:O	71:q:54:GLU:HB2	2.18	0.42
79:y:114:GLU:O	79:y:118:ARG:HG2	2.19	0.42
1:0:7:ILE:HG21	1:0:44:LEU:HD21	2.02	0.42
2:1:73:GLY:HA3	57:c:1534:G:N3	2.34	0.42
4:3:28:PRO:HB3	57:c:959:U:OP1	2.20	0.42
7:6:11:ALA:O	80:z:91:GLY:HA3	2.20	0.42
8:7:101:GLN:HG3	8:7:103:PHE:HD2	1.83	0.42
11:AA:16:A:H4'	30:J:45:LYS:HE3	2.02	0.42
11:AA:174:C:C2	11:AA:245:U:N3	2.80	0.42
11:AA:185:C:N4	11:AA:232:G:O6	2.53	0.42
11:AA:713:U:O2'	11:AA:754:G:OP1	2.37	0.42
11:AA:747:A:H2'	11:AA:748:U:C6	2.55	0.42
11:AA:793:C:H2'	11:AA:794:U:H6	1.84	0.42
11:AA:802:C:C2	11:AA:803:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:816:A:O2'	11:AA:905:U:O4	2.32	0.42
11:AA:860:G:H1'	11:AA:896:A:OP1	2.19	0.42
11:AA:1164:G:H2'	11:AA:1165:A:H8	1.83	0.42
11:AA:1244:A:OP1	21:Ee:16:ARG:HD2	2.19	0.42
11:AA:1415:U:H2'	11:AA:1416:C:O4'	2.20	0.42
11:AA:1614:C:H2'	11:AA:1615:C:C6	2.54	0.42
11:AA:2155:G:C6	11:AA:2182:A:N1	2.87	0.42
11:AA:2230:C:H2'	11:AA:2231:C:C6	2.54	0.42
11:AA:2476:C:H3'	11:AA:2477:G:H4'	2.02	0.42
11:AA:3237:U:C2	11:AA:3251:U:C2	3.07	0.42
11:AA:3281:U:O2'	11:AA:3282:U:O4'	2.30	0.42
11:AA:3324:C:P	42:P:19:ARG:HH22	2.41	0.42
12:Aa:83:ASP:OD1	12:Aa:84:GLU:N	2.51	0.42
12:Aa:392:GLY:HA2	12:Aa:510:ARG:CZ	2.50	0.42
13:B:18:ARG:HD2	13:B:147:GLU:HB3	2.01	0.42
16:CC:83:C:N4	32:K:52:ARG:HH22	2.13	0.42
16:CC:155:A:H2'	16:CC:156:U:O4'	2.19	0.42
17:D:123:LEU:HA	17:D:126:GLU:HG2	2.01	0.42
18:DD:76:LEU:HD13	18:DD:196:VAL:HB	2.01	0.42
18:DD:136:PHE:CD2	18:DD:150:ILE:HG21	2.49	0.42
21:Ee:11:LYS:HZ2	21:Ee:13:LEU:HB3	1.85	0.42
26:H:22:ILE:HA	26:H:34:LEU:O	2.18	0.42
26:H:26:ALA:O	26:H:115:THR:HG22	2.19	0.42
31:JJ:48:ASN:ND2	31:JJ:182:ASP:OD2	2.52	0.42
34:L:38:PHE:CE2	34:L:40:HIS:HB3	2.54	0.42
35:LL:129:ARG:H	35:LL:157:ASN:HD21	1.68	0.42
39:NN:81:GLU:HB3	39:NN:167:TYR:CE1	2.50	0.42
40:O:53:LYS:O	40:O:57:GLU:OE1	2.38	0.42
54:Z:2:ARG:NH2	54:Z:5:TRP:CE2	2.87	0.42
57:c:45:U:O2'	57:c:46:A:O5'	2.35	0.42
57:c:512:A:O2'	67:m:133:HIS:NE2	2.47	0.42
57:c:648:G:N3	57:c:687:G:N3	2.68	0.42
57:c:789:A:H2	67:m:71:PHE:HE2	1.67	0.42
57:c:972:G:O6	57:c:973:A:N6	2.53	0.42
57:c:1010:C:H2'	57:c:1011:G:O4'	2.19	0.42
57:c:1301:U:H2'	57:c:1302:U:C6	2.54	0.42
57:c:1398:U:H2'	57:c:1400:A:N1	2.34	0.42
57:c:1627:U:H2'	57:c:1628:U:O4'	2.19	0.42
57:c:1718:G:H2'	57:c:1719:A:H8	1.83	0.42
59:e:92:GLN:HE22	59:e:97:LEU:HD21	1.84	0.42
59:e:125:VAL:HG12	59:e:127:VAL:HG13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:f:81:MET:HG3	60:f:211:LEU:HD11	2.02	0.42
65:k:123:ASP:OD1	65:k:124:LYS:N	2.52	0.42
75:u:41:ARG:O	75:u:45:LEU:HD13	2.20	0.42
75:u:134:ARG:HB2	75:u:136:GLN:HE22	1.84	0.42
3:2:12:LYS:HG2	3:2:15:ARG:HB2	2.00	0.42
3:2:44:ILE:HG12	3:2:65:PRO:C	2.45	0.42
8:7:24:ALA:O	8:7:33:LEU:HG	2.19	0.42
8:7:117:LYS:HE2	8:7:118:LYS:HZ3	1.84	0.42
10:A:12:LYS:HG3	10:A:40:GLU:HG2	2.01	0.42
10:A:43:ILE:O	10:A:136:THR:HG22	2.19	0.42
11:AA:67:A:N1	11:AA:300:G:O2'	2.40	0.42
11:AA:87:U:H2'	11:AA:88:A:H8	1.84	0.42
11:AA:289:A:C2	11:AA:290:G:C5	3.07	0.42
11:AA:805:OMG:H1'	11:AA:805:OMG:HM23	1.62	0.42
11:AA:1343:A:OP1	15:C:13:SER:N	2.40	0.42
11:AA:2295:A:C5	11:AA:2296:A:C6	3.08	0.42
11:AA:2828:G:C4	11:AA:2829:U:C6	3.08	0.42
11:AA:3008:A:H2'	11:AA:3009:G:H8	1.85	0.42
11:AA:3153:U:H4'	11:AA:3155:U:C4	2.54	0.42
12:Aa:20:ARG:N	12:Aa:99:LEU:O	2.33	0.42
12:Aa:189:VAL:HG23	12:Aa:201:GLN:NE2	2.34	0.42
12:Aa:243:ARG:NH1	12:Aa:248:SER:HB3	2.35	0.42
12:Aa:300:LEU:HA	12:Aa:303:LEU:HB3	2.01	0.42
14:BB:76:A:N1	14:BB:102:A:H5''	2.34	0.42
16:CC:27:U:H2'	16:CC:28:C:C6	2.54	0.42
16:CC:32:C:H2'	16:CC:33:A:C8	2.54	0.42
16:CC:36:G:P	48:T:86:ARG:H	2.43	0.42
16:CC:55:U:N3	16:CC:56:G:N7	2.67	0.42
23:FF:108:GLU:HB2	23:FF:137:TYR:HD2	1.84	0.42
24:G:58:GLU:HG3	24:G:60:GLY:H	1.84	0.42
27:HH:83:LEU:HB3	27:HH:88:ILE:CG2	2.50	0.42
31:JJ:160:ARG:HA	31:JJ:203:TRP:CH2	2.55	0.42
32:K:119:ILE:CG2	32:K:124:GLY:HA3	2.48	0.42
34:L:122:HIS:HB2	34:L:131:PHE:CD2	2.55	0.42
35:LL:132:VAL:HA	35:LL:147:SER:O	2.19	0.42
40:O:30:THR:HG21	40:O:42:ILE:HD11	2.01	0.42
40:O:77:LEU:HD21	40:O:90:VAL:CG2	2.49	0.42
48:T:84:LYS:NZ	48:T:88:LEU:HD13	2.34	0.42
57:c:126:A:H61	57:c:291:G:C2'	2.32	0.42
57:c:432:G:C5	57:c:433:C:C4	3.07	0.42
57:c:939:A:H2'	57:c:940:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:979:A:O2'	57:c:1786:G:N2	2.53	0.42
57:c:1037:C:O2'	79:y:16:ASN:ND2	2.53	0.42
57:c:1149:G:C6	57:c:1629:G:N1	2.88	0.42
57:c:1182:U:H5''	57:c:1183:A:OP2	2.20	0.42
57:c:1388:A:H5'	74:t:48:ASN:ND2	2.34	0.42
57:c:1548:G:OP1	75:u:90:ASN:HB2	2.20	0.42
57:c:1615:C:P	63:i:81:ARG:HE	2.41	0.42
63:i:106:LYS:HB3	63:i:109:LYS:HB3	2.01	0.42
65:k:24:PHE:CZ	65:k:38:LEU:HB3	2.55	0.42
69:o:13:PHE:CE2	69:o:15:LYS:HB2	2.55	0.42
69:o:71:LEU:HD21	69:o:88:ARG:NH1	2.34	0.42
70:p:98:VAL:HG12	70:p:115:LEU:HD22	2.02	0.42
75:u:70:VAL:HA	75:u:73:MET:HE3	2.02	0.42
76:v:15:ILE:HD11	76:v:63:ARG:HD3	2.02	0.42
77:w:107:THR:HG21	77:w:114:VAL:HG21	2.01	0.42
5:4:12:VAL:HG23	5:4:28:VAL:HB	2.02	0.42
11:AA:303:G:C2	11:AA:313:A:C2	3.07	0.42
11:AA:776:U:O2	11:AA:2720:G:N2	2.53	0.42
11:AA:1148:G:HO2'	11:AA:1171:G:HO2'	1.51	0.42
11:AA:1251:A:C2	11:AA:1252:A:C5	3.08	0.42
11:AA:1268:G:N1	11:AA:1269:U:O4	2.52	0.42
11:AA:1284:C:H2'	11:AA:1285:G:C8	2.54	0.42
11:AA:2103:U:H2'	11:AA:2104:A:H8	1.84	0.42
11:AA:2430:A:H2'	11:AA:2431:C:H6	1.83	0.42
11:AA:2655:U:O5'	55:a:98:LYS:NZ	2.53	0.42
11:AA:2674:A:C2	39:NN:124:GLY:HA3	2.55	0.42
11:AA:2689:A:H2'	11:AA:2689:A:N3	2.35	0.42
11:AA:2722:U:H2'	11:AA:2723:U:C6	2.54	0.42
11:AA:2836:C:H41	11:AA:2852:C:H42	1.68	0.42
11:AA:2836:C:O2'	37:MM:154:ARG:NH1	2.53	0.42
11:AA:3108:G:O3'	35:LL:166:ARG:NH1	2.51	0.42
11:AA:3166:C:H2'	11:AA:3167:A:H8	1.83	0.42
12:Aa:725:GLN:HG2	12:Aa:803:THR:HA	2.02	0.42
12:Aa:819:VAL:O	12:Aa:823:ARG:HG2	2.19	0.42
13:B:30:ARG:HA	13:B:119:VAL:CG2	2.50	0.42
15:C:39:ARG:NH2	25:GG:300:ARG:O	2.28	0.42
16:CC:1:A:C5	16:CC:2:A:C8	3.08	0.42
16:CC:142:C:H2'	16:CC:143:U:H6	1.84	0.42
17:D:159:ALA:O	17:D:163:ARG:HG2	2.20	0.42
18:DD:168:SER:O	18:DD:171:SER:OG	2.29	0.42
23:FF:46:PHE:CE2	23:FF:81:THR:HB	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:FF:332:ARG:O	23:FF:333:LYS:HG2	2.20	0.42
25:GG:138:ARG:HH21	25:GG:240:PRO:HG2	1.85	0.42
25:GG:187:LEU:HD23	25:GG:187:LEU:H	1.85	0.42
31:JJ:158:LYS:C	31:JJ:160:ARG:H	2.22	0.42
37:MM:200:LEU:HB2	37:MM:213:PHE:CG	2.55	0.42
45:QQ:53:TYR:HB2	45:QQ:133:ILE:HD13	2.02	0.42
48:T:9:LEU:HD23	48:T:57:VAL:HG21	2.01	0.42
49:U:77:LEU:CD1	49:U:86:LYS:HD3	2.49	0.42
51:W:22:THR:HA	51:W:74:LYS:HB3	2.01	0.42
57:c:126:A:H61	57:c:291:G:H2'	1.84	0.42
57:c:519:C:C4	57:c:534:A:N7	2.88	0.42
57:c:869:A:H2'	57:c:870:C:O4'	2.20	0.42
57:c:1184:A:N6	72:r:123:TYR:HB3	2.34	0.42
57:c:1368:G:OP2	57:c:1368:G:H8	2.03	0.42
57:c:1456:C:OP2	57:c:1457:C:H2'	2.19	0.42
57:c:1569:A:H3'	57:c:1569:A:N3	2.35	0.42
62:h:98:ASN:O	62:h:114:ILE:HG12	2.20	0.42
65:k:10:SER:OG	65:k:44:LYS:HA	2.19	0.42
65:k:89:HIS:ND1	65:k:165:LYS:HE2	2.35	0.42
65:k:122:HIS:HA	65:k:125:ILE:HG22	2.01	0.42
70:p:60:VAL:HG13	70:p:60:VAL:O	2.20	0.42
71:q:87:GLY:C	71:q:92:LYS:HZ3	2.27	0.42
76:v:72:GLY:O	76:v:76:LEU:HG	2.19	0.42
79:y:82:LYS:HZ2	79:y:83:ILE:HB	1.85	0.42
6:5:22:ARG:HH12	61:g:16:VAL:HG21	1.84	0.42
10:A:16:VAL:CG1	10:A:43:ILE:HG12	2.48	0.42
11:AA:412:G:C6	16:CC:12:A:N1	2.87	0.42
11:AA:748:U:H5''	38:N:31:SER:HA	2.02	0.42
11:AA:799:G:HO2'	41:OO:18:TRP:HE1	1.66	0.42
11:AA:804:C:N4	11:AA:940:G:O6	2.48	0.42
11:AA:806:A:N7	11:AA:935:U:O4	2.52	0.42
11:AA:807:A2M:HM'3	11:AA:807:A2M:H1'	1.75	0.42
11:AA:812:G:H2'	11:AA:813:G:C8	2.55	0.42
11:AA:848:A:C5	11:AA:849:C:H1'	2.55	0.42
11:AA:1529:A:P	11:AA:1592:G:H1	2.40	0.42
11:AA:1544:G:N1	11:AA:1550:C:C2	2.88	0.42
11:AA:1544:G:H2'	11:AA:1545:A:C8	2.55	0.42
11:AA:1646:G:H22	11:AA:1808:G:H1'	1.85	0.42
11:AA:1904:C:HO2'	11:AA:1905:G:P	2.43	0.42
11:AA:2279:A:H2'	11:AA:2288:OMG:O6	2.20	0.42
11:AA:2379:U:H2'	11:AA:2380:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2475:G:H3'	11:AA:2476:C:C6	2.55	0.42
11:AA:2787:G:H2'	11:AA:2788:C:H6	1.85	0.42
11:AA:2896:A:OP2	53:Y:102:ARG:NH2	2.52	0.42
11:AA:2990:G:O2'	23:FF:269:GLN:OE1	2.17	0.42
11:AA:2991:A:OP1	23:FF:20:LYS:HG3	2.20	0.42
11:AA:3141:A:N6	11:AA:3144:G:N3	2.68	0.42
11:AA:3206:C:H2'	43:PP:99:TRP:CH2	2.55	0.42
12:Aa:88:GLU:O	12:Aa:340:LEU:HD11	2.19	0.42
12:Aa:363:ASP:OD1	12:Aa:363:ASP:N	2.53	0.42
12:Aa:575:ALA:HB3	12:Aa:588:LEU:HG	2.02	0.42
12:Aa:657:HIS:HA	12:Aa:660:LYS:NZ	2.34	0.42
14:BB:71:G:H2'	14:BB:72:A:H8	1.84	0.42
16:CC:14:C:H2'	16:CC:15:G:O4'	2.20	0.42
18:DD:43:LYS:HA	18:DD:46:ARG:HE	1.85	0.42
21:Ee:64:ILE:HD13	21:Ee:68:GLN:C	2.45	0.42
22:F:39:ILE:HG22	22:F:99:SER:HB3	2.01	0.42
23:FF:217:ALA:HA	23:FF:338:LEU:HD13	2.02	0.42
23:FF:306:THR:HG22	23:FF:310:GLY:HA2	2.01	0.42
31:JJ:182:ASP:HA	31:JJ:185:ILE:HB	2.01	0.42
33:KK:164:VAL:O	33:KK:167:PRO:HD2	2.19	0.42
35:LL:21:LYS:HA	35:LL:21:LYS:HD2	1.66	0.42
36:M:130:VAL:O	41:OO:167:PHE:HD1	2.03	0.42
41:OO:88:ALA:O	41:OO:92:THR:HG23	2.20	0.42
48:T:38:ARG:NH1	48:T:38:ARG:HB2	2.34	0.42
51:W:54:LEU:HD23	51:W:55:VAL:N	2.35	0.42
55:a:35:LEU:HD12	55:a:36:PHE:N	2.24	0.42
57:c:249:U:C2	69:o:34:TRP:CH2	3.08	0.42
57:c:480:G:N1	57:c:510:G:N7	2.67	0.42
57:c:617:U:H4'	57:c:1030:A:H2'	2.01	0.42
57:c:1031:U:H4'	57:c:1032:G:OP2	2.19	0.42
57:c:1675:C:H2'	57:c:1676:U:O4'	2.19	0.42
63:i:117:THR:O	63:i:121:ILE:HG13	2.19	0.42
63:i:136:ALA:HB1	63:i:201:ALA:HB3	2.00	0.42
63:i:209:TYR:CZ	63:i:213:LYS:HG3	2.55	0.42
67:m:59:LEU:HD21	67:m:73:GLY:HA2	2.02	0.42
68:n:58:GLN:O	68:n:65:TYR:N	2.53	0.42
72:r:57:MET:N	72:r:57:MET:SD	2.93	0.42
74:t:35:CYS:O	74:t:39:ALA:HB3	2.20	0.42
75:u:88:ARG:HD2	75:u:88:ARG:HA	1.75	0.42
80:z:8:GLY:O	80:z:11:SER:OG	2.24	0.42
8:7:114:ASP:OD2	8:7:156:VAL:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:223:TRP:HA	8:7:229:LYS:O	2.19	0.42
10:A:43:ILE:HD11	10:A:138:LEU:HD13	2.01	0.42
10:A:145:VAL:O	10:A:145:VAL:HG22	2.20	0.42
11:AA:20:A:C6	16:CC:140:G:C6	3.08	0.42
11:AA:85:A:N1	11:AA:99:A:H5''	2.35	0.42
11:AA:424:G:O2'	44:Q:23:ASP:OD2	2.35	0.42
11:AA:574:U:H2'	11:AA:575:G:C8	2.55	0.42
11:AA:584:G:H5''	46:R:46:GLY:HA3	2.02	0.42
11:AA:650:OMC:H2'	11:AA:651:G:C8	2.55	0.42
11:AA:760:G:C2	11:AA:770:G:C2	3.07	0.42
11:AA:762:U:H2'	11:AA:763:G:O4'	2.20	0.42
11:AA:825:U:H2'	11:AA:826:G:O4'	2.19	0.42
11:AA:931:C:H2'	11:AA:932:U:C5	2.55	0.42
11:AA:1125:U:H4'	11:AA:2634:UR3:O2'	2.19	0.42
11:AA:1715:A:H2'	11:AA:1715:A:N3	2.35	0.42
11:AA:1927:G:OP1	56:b:6:LYS:N	2.52	0.42
11:AA:1935:G:H2'	11:AA:1936:A:H8	1.83	0.42
11:AA:2180:G:H2'	11:AA:2181:C:C6	2.54	0.42
11:AA:2203:U:H5''	20:EE:227:ARG:CZ	2.50	0.42
11:AA:2288:OMG:H2'	11:AA:2289:U:C6	2.55	0.42
11:AA:2561:A:H62	11:AA:2580:A:H62	1.67	0.42
11:AA:2794:G:H5''	55:a:61:LYS:NZ	2.35	0.42
11:AA:3039:C:H2'	11:AA:3040:A:O4'	2.20	0.42
12:Aa:278:LEU:HD23	12:Aa:281:ILE:HD12	2.02	0.42
15:C:172:PHE:O	15:C:174:ARG:HG3	2.20	0.42
19:E:20:PRO:HB2	19:E:21:GLU:CD	2.45	0.42
19:E:125:LYS:NZ	19:E:127:ALA:HB2	2.35	0.42
21:Ee:75:PRO:HB2	21:Ee:80:LEU:HD11	2.02	0.42
25:GG:76:ARG:HB3	25:GG:86:GLY:HA2	2.02	0.42
33:KK:152:LEU:HA	33:KK:178:ALA:O	2.19	0.42
35:LL:38:LEU:O	35:LL:41:ILE:HG22	2.20	0.42
37:MM:169:LYS:HG3	37:MM:177:ASP:OD1	2.20	0.42
48:T:48:ARG:O	48:T:51:ILE:HG22	2.20	0.42
48:T:105:ARG:HA	48:T:105:ARG:HD2	1.65	0.42
49:U:50:LEU:HD12	49:U:54:GLU:CD	2.45	0.42
55:a:8:ARG:HB2	55:a:25:VAL:CG2	2.49	0.42
55:a:71:ARG:NH1	55:a:80:ARG:HG2	2.34	0.42
57:c:298:C:H5''	62:h:38:LEU:HB2	2.02	0.42
57:c:339:C:H2'	57:c:340:U:C6	2.55	0.42
57:c:454:U:C6	62:h:66:MET:SD	3.13	0.42
57:c:627:C:H2'	57:c:628:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1037:C:H2'	57:c:1038:U:C6	2.54	0.42
57:c:1278:G:H5''	61:g:185:LYS:HE2	2.02	0.42
57:c:1358:G:N1	57:c:1366:U:C2	2.87	0.42
57:c:1585:U:H5'	73:s:125:GLU:CG	2.49	0.42
57:c:1609:U:C4	57:c:1610:G:C4	3.07	0.42
61:g:29:LEU:CB	61:g:34:TYR:HB2	2.48	0.42
62:h:103:TYR:HE1	62:h:109:PHE:CZ	2.38	0.42
62:h:127:LYS:HG2	62:h:142:HIS:HA	2.01	0.42
64:j:79:LYS:HZ1	64:j:90:GLY:N	2.17	0.42
69:o:17:PRO:HB2	69:o:18:HIS:ND1	2.35	0.42
71:q:118:VAL:HG22	71:q:118:VAL:O	2.19	0.42
72:r:114:HIS:HB2	72:r:119:PHE:CZ	2.55	0.42
74:t:24:LEU:CB	74:t:34:LEU:HD13	2.50	0.42
75:u:35:ILE:O	75:u:38:VAL:HG22	2.19	0.42
78:x:71:ARG:HG3	78:x:83:TRP:CH2	2.54	0.42
80:z:79:ASN:CG	80:z:81:LYS:HG3	2.45	0.42
1:0:119:PHE:CZ	64:j:85:ARG:HD3	2.55	0.42
4:3:54:VAL:HG12	4:3:64:CYS:SG	2.60	0.42
8:7:114:ASP:HB3	8:7:155:ARG:HH22	1.85	0.42
10:A:27:LEU:HG	10:A:33:ILE:HD13	2.01	0.42
10:A:42:ASN:ND2	10:A:125:ARG:HG3	2.35	0.42
10:A:48:PHE:HE2	11:AA:1191:U:C2	2.38	0.42
11:AA:261:U:H2'	11:AA:262:U:C6	2.54	0.42
11:AA:988:U:C2	11:AA:989:A:C8	3.08	0.42
11:AA:1225:A:H2'	11:AA:1226:G:O4'	2.19	0.42
11:AA:1521:G:P	30:J:115:ARG:HH22	2.41	0.42
11:AA:1562:C:O2'	11:AA:1563:C:O5'	2.28	0.42
11:AA:1694:U:C4	11:AA:1695:U:C4	3.07	0.42
11:AA:1887:A:N6	11:AA:2348:A:O2'	2.53	0.42
11:AA:2139:A:C4	50:V:3:LYS:HE2	2.54	0.42
11:AA:2189:U:C2	11:AA:2190:U:C5	3.08	0.42
11:AA:2623:G:C6	11:AA:2624:G:C5	3.07	0.42
11:AA:2678:A:O2'	11:AA:2679:A:O4'	2.20	0.42
11:AA:2730:G:H4'	15:C:184:PHE:CD1	2.55	0.42
11:AA:2989:U:C4	11:AA:2990:G:C8	3.08	0.42
12:Aa:146:ALA:HA	12:Aa:151:ILE:HD12	2.01	0.42
12:Aa:609:ARG:HD2	12:Aa:609:ARG:H	1.84	0.42
13:B:31:GLU:CD	13:B:61:ARG:H	2.27	0.42
13:B:138:LYS:HD3	13:B:140:GLU:OE2	2.20	0.42
14:BB:93:C:H2'	14:BB:94:C:H6	1.85	0.42
15:C:31:LYS:C	15:C:31:LYS:HD3	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CC:10:A:H2'	16:CC:11:C:H6	1.84	0.42
19:E:52:LYS:HG3	19:E:55:SER:H	1.85	0.42
20:EE:117:GLU:CD	20:EE:163:ARG:HB2	2.44	0.42
20:EE:168:VAL:HG23	56:b:79:VAL:HG21	2.00	0.42
21:Ee:96:LYS:HZ2	21:Ee:97:ASN:HB2	1.84	0.42
31:JJ:169:ILE:H	31:JJ:169:ILE:HD12	1.85	0.42
31:JJ:170:GLU:HG3	31:JJ:179:LEU:HD22	2.02	0.42
34:L:19:ALA:HB1	47:S:89:ILE:CD1	2.50	0.42
40:O:18:ILE:HD12	40:O:81:VAL:HG22	2.01	0.42
45:QQ:99:ARG:CZ	45:QQ:167:THR:HB	2.50	0.42
47:S:39:ALA:HA	47:S:58:ARG:HH11	1.85	0.42
52:X:10:LYS:O	52:X:13:MET:HB2	2.20	0.42
57:c:56:U:O4	57:c:92:A:H4'	2.19	0.42
57:c:297:U:H2'	57:c:298:C:C6	2.55	0.42
57:c:338:C:H2'	57:c:339:C:C6	2.55	0.42
57:c:388:G:C6	57:c:410:A:C6	3.07	0.42
57:c:389:G:H2'	57:c:390:G:O4'	2.19	0.42
57:c:517:U:H2'	57:c:518:A:C8	2.54	0.42
57:c:789:A:H3'	57:c:790:U:C6	2.54	0.42
57:c:812:A:N6	57:c:859:A:O4'	2.53	0.42
57:c:949:C:H2'	57:c:950:C:O4'	2.20	0.42
57:c:1204:A:H62	57:c:1555:A:H61	1.68	0.42
57:c:1275:A:N1	57:c:1438:G:C4	2.88	0.42
57:c:1280:4AC:O2'	77:w:70:THR:HG22	2.19	0.42
57:c:1294:G:C2	57:c:1322:A:C6	3.08	0.42
57:c:1388:A:C6	57:c:1411:A:C8	3.08	0.42
57:c:1477:G:N1	57:c:1478:G:C6	2.88	0.42
57:c:1557:U:H5''	57:c:1559:A:O2'	2.19	0.42
57:c:1658:G:H2'	57:c:1659:A:H8	1.85	0.42
57:c:1663:G:N2	57:c:1738:U:O2	2.39	0.42
58:d:105:GLY:N	58:d:135:GLU:OE2	2.43	0.42
62:h:8:HIS:N	62:h:30:ARG:HH12	2.17	0.42
63:i:201:ALA:HA	63:i:211:ILE:HD11	2.01	0.42
65:k:35:LYS:O	65:k:39:ARG:HG3	2.20	0.42
75:u:33:THR:HA	75:u:38:VAL:HG23	2.02	0.42
80:z:138:GLU:N	80:z:138:GLU:OE1	2.52	0.42
2:l:39:ALA:HB1	2:l:70:LYS:O	2.20	0.41
7:6:35:TYR:O	7:6:39:LEU:HG	2.20	0.41
8:7:147:HIS:CD2	8:7:151:VAL:HG22	2.55	0.41
11:AA:59:G:H2'	16:CC:33:A:H2'	2.01	0.41
11:AA:121:A:N6	33:KK:126:SER:HB2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:123:A:N1	11:AA:150:A:C8	2.88	0.41
11:AA:139:G:H2'	11:AA:140:C:C6	2.55	0.41
11:AA:357:A:N6	11:AA:363:G:C6	2.88	0.41
11:AA:624:G:C2	11:AA:625:G:C8	3.08	0.41
11:AA:694:C:H2'	11:AA:695:C:H6	1.84	0.41
11:AA:782:U:H2'	11:AA:783:A:C8	2.55	0.41
11:AA:793:C:H2'	11:AA:794:U:C6	2.54	0.41
11:AA:929:A:H1'	50:V:49:TRP:CE3	2.55	0.41
11:AA:1061:A:H2'	11:AA:1062:A:C8	2.55	0.41
11:AA:1254:C:C2	11:AA:1255:C:C5	3.08	0.41
11:AA:1294:A:OP1	19:E:85:SER:HB3	2.20	0.41
11:AA:2122:G:C6	11:AA:2332:A:N1	2.88	0.41
11:AA:2225:U:H4'	55:a:36:PHE:HE2	1.85	0.41
11:AA:2291:A:C6	11:AA:2302:G:C6	3.08	0.41
11:AA:2386:A:N7	11:AA:2994:A:N6	2.68	0.41
11:AA:2565:U:H2'	11:AA:2566:C:C6	2.55	0.41
11:AA:2577:C:H2'	11:AA:2578:U:H6	1.85	0.41
11:AA:2732:G:H2'	11:AA:2733:A:C8	2.55	0.41
11:AA:2769:A:O2'	55:a:80:ARG:O	2.29	0.41
11:AA:2917:G:OP1	26:H:47:ASN:N	2.41	0.41
11:AA:3096:C:H2'	11:AA:3097:C:C6	2.54	0.41
12:Aa:25:ILE:HG21	12:Aa:119:LEU:HD21	2.02	0.41
12:Aa:116:THR:HG21	12:Aa:483:PHE:HB3	2.01	0.41
12:Aa:314:LEU:HD12	12:Aa:314:LEU:HA	1.87	0.41
12:Aa:386:VAL:HG12	12:Aa:387:PRO:O	2.20	0.41
12:Aa:453:ILE:C	12:Aa:454:ILE:HD13	2.45	0.41
16:CC:13:A:C4	16:CC:14:C:C5	3.08	0.41
21:Ee:85:LEU:HD22	21:Ee:102:GLY:HA3	2.02	0.41
25:GG:27:SER:O	25:GG:279:HIS:NE2	2.47	0.41
25:GG:321:LYS:H	25:GG:321:LYS:HG2	1.73	0.41
27:HH:32:GLN:O	27:HH:36:LEU:HD23	2.20	0.41
27:HH:154:THR:O	27:HH:179:ARG:NH2	2.53	0.41
27:HH:155:THR:HG23	27:HH:179:ARG:O	2.20	0.41
27:HH:285:ARG:C	27:HH:289:LYS:HZ3	2.27	0.41
37:MM:54:SER:OG	37:MM:56:GLU:O	2.37	0.41
42:P:102:LYS:HA	42:P:102:LYS:HD3	1.79	0.41
43:PP:42:LYS:C	43:PP:60:LEU:HD23	2.45	0.41
46:R:16:TYR:CZ	46:R:91:ALA:HB2	2.55	0.41
52:X:17:LYS:HD3	52:X:18:LYS:NZ	2.35	0.41
57:c:84:A:C4	57:c:85:A:C8	3.07	0.41
57:c:247:A:C4	69:o:42:PHE:O	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:362:G:C6	57:c:383:G:C6	3.08	0.41
57:c:485:A:N6	57:c:504:U:C5	2.88	0.41
57:c:511:A:H5'	67:m:173:ALA:HA	2.01	0.41
57:c:648:G:H2'	57:c:687:G:N3	2.35	0.41
57:c:789:A:C2	57:c:790:U:H1'	2.54	0.41
57:c:1202:A:C8	57:c:1456:C:H2'	2.55	0.41
57:c:1212:G:C6	57:c:1213:G:N7	2.88	0.41
57:c:1317:C:O2'	57:c:1400:A:H1'	2.19	0.41
57:c:1589:C:P	63:i:102:ARG:HH22	2.43	0.41
57:c:1731:A:H2'	57:c:1732:A:O4'	2.20	0.41
58:d:183:ARG:HD3	58:d:191:ARG:HG2	2.01	0.41
59:e:121:ILE:HD11	59:e:161:ILE:HD12	2.02	0.41
59:e:220:GLN:N	59:e:220:GLN:OE1	2.53	0.41
61:g:107:PHE:O	61:g:111:ASN:ND2	2.53	0.41
64:j:56:ASN:HB3	64:j:60:GLY:C	2.45	0.41
80:z:127:VAL:O	80:z:130:VAL:HG12	2.20	0.41
3:2:6:ALA:N	57:c:1796:C:N3	2.54	0.41
7:6:40:TYR:CG	67:m:32:GLY:HA3	2.55	0.41
8:7:211:ILE:CG2	8:7:223:TRP:HB2	2.49	0.41
8:7:249:ARG:HB2	8:7:251:TRP:CE3	2.55	0.41
9:8:98:VAL:O	9:8:100:LEU:N	2.54	0.41
11:AA:80:G:C6	11:AA:106:A:C6	3.08	0.41
11:AA:217:U:O2	32:K:103:LYS:NZ	2.53	0.41
11:AA:390:G:C4	11:AA:391:A:C8	3.08	0.41
11:AA:676:G:C2	11:AA:787:G:C6	3.08	0.41
11:AA:676:G:O6	15:C:86:THR:HG21	2.20	0.41
11:AA:832:G:C6	11:AA:863:C:C4	3.08	0.41
11:AA:1381:A:H2'	11:AA:1382:G:C8	2.54	0.41
11:AA:1448:U:H5''	13:B:66:SER:O	2.20	0.41
11:AA:1560:G:H2'	11:AA:1561:G:C8	2.55	0.41
11:AA:1624:G:O6	11:AA:1819:U:O2	2.38	0.41
11:AA:1944:U:O2'	66:l:88:ASN:ND2	2.52	0.41
11:AA:2433:U:H2'	11:AA:2434:U:C5	2.54	0.41
11:AA:2656:A:N7	11:AA:2658:G:C8	2.88	0.41
11:AA:2745:G:HO2'	11:AA:2747:A:N6	2.18	0.41
11:AA:2749:G:OP1	27:HH:48:LYS:NZ	2.52	0.41
11:AA:3027:A:C6	12:Aa:785:ARG:HB3	2.54	0.41
11:AA:3222:U:H1'	11:AA:3264:G:N2	2.34	0.41
11:AA:3222:U:C2	11:AA:3264:G:N1	2.88	0.41
11:AA:3372:A:C6	11:AA:3373:U:C4	3.07	0.41
12:Aa:485:VAL:HG22	12:Aa:486:SER:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Aa:682:ARG:NH2	12:Aa:725:GLN:OE1	2.54	0.41
13:B:48:LEU:HD13	13:B:88:VAL:HG13	2.01	0.41
14:BB:39:C:H4'	39:NN:44:THR:OG1	2.21	0.41
14:BB:69:C:H2'	14:BB:70:U:C6	2.54	0.41
16:CC:92:A:C6	16:CC:93:U:C4	3.08	0.41
20:EE:246:LEU:HD12	20:EE:246:LEU:O	2.20	0.41
23:FF:159:ARG:HB3	23:FF:180:GLU:HB3	2.01	0.41
23:FF:261:MET:O	23:FF:264:VAL:HG12	2.19	0.41
31:JJ:127:LEU:HD13	31:JJ:136:TYR:CE2	2.55	0.41
45:QQ:49:ARG:HA	45:QQ:53:TYR:O	2.19	0.41
49:U:58:ILE:HA	49:U:61:ILE:HG22	2.01	0.41
56:b:81:SER:OG	56:b:84:ARG:NH2	2.53	0.41
57:c:14:C:H5'	60:f:164:SER:HB3	2.02	0.41
57:c:79:C:N3	64:j:174:LYS:HD2	2.35	0.41
57:c:248:U:C4	57:c:250:C:H1'	2.55	0.41
57:c:251:A:H8	57:c:251:A:O5'	2.03	0.41
57:c:329:G:H5''	66:l:98:LYS:CG	2.50	0.41
57:c:332:U:P	66:l:56:ARG:HH22	2.44	0.41
57:c:342:C:H2'	57:c:343:C:C6	2.55	0.41
57:c:516:G:C6	57:c:537:G:C2	3.08	0.41
57:c:1069:A:N6	57:c:1070:C:C4	2.88	0.41
57:c:1072:C:H2'	57:c:1073:G:H8	1.85	0.41
57:c:1322:A:H2'	57:c:1323:C:C6	2.54	0.41
57:c:1426:C:O2'	57:c:1428:OMG:H8	2.03	0.41
57:c:1430:U:H1'	77:w:72:ASN:HB3	2.01	0.41
57:c:1536:G:N3	57:c:1536:G:H2'	2.35	0.41
57:c:1541:G:H1	57:c:1571:C:N4	2.18	0.41
57:c:1685:G:H3'	57:c:1717:G:N2	2.33	0.41
62:h:176:ASP:O	62:h:179:LYS:HG2	2.20	0.41
64:j:44:GLU:HG2	64:j:45:PHE:N	2.34	0.41
65:k:45:SER:HB3	65:k:61:PHE:HD2	1.86	0.41
72:r:86:VAL:HB	72:r:87:PRO:HD2	2.02	0.41
3:2:12:LYS:HB2	3:2:33:ASP:OD2	2.19	0.41
6:5:15:GLY:O	6:5:19:ARG:NH1	2.53	0.41
6:5:23:VAL:HG22	68:n:61:TRP:CD1	2.56	0.41
8:7:8:VAL:HG21	8:7:316:MET:SD	2.60	0.41
10:A:49:ARG:HH21	11:AA:1190:A:H3'	1.85	0.41
11:AA:384:A:H2'	11:AA:385:A:C8	2.55	0.41
11:AA:412:G:H4'	13:B:30:ARG:HD3	2.02	0.41
11:AA:517:G:O2'	11:AA:518:G:H5'	2.19	0.41
11:AA:683:U:H2'	11:AA:684:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:782:U:H2'	11:AA:783:A:O4'	2.20	0.41
11:AA:850:U:H2'	11:AA:851:C:H6	1.85	0.41
11:AA:1007:U:H2'	11:AA:1008:U:C5	2.55	0.41
11:AA:1022:U:H2'	11:AA:1023:C:H6	1.85	0.41
11:AA:1281:G:P	18:DD:55:LYS:HE2	2.60	0.41
11:AA:1553:U:H4'	11:AA:1554:U:H5'	2.00	0.41
11:AA:1674:G:C6	11:AA:1675:G:C5	3.09	0.41
11:AA:1689:U:H2'	11:AA:1690:C:C6	2.54	0.41
11:AA:1935:G:H2'	11:AA:1936:A:C8	2.54	0.41
11:AA:2199:G:C6	11:AA:2200:U:C4	3.08	0.41
11:AA:2216:G:OP1	49:U:75:LYS:NZ	2.37	0.41
11:AA:2262:A:O2'	57:c:1780:G:N3	2.50	0.41
11:AA:2407:C:C2	11:AA:2408:U:C5	3.09	0.41
11:AA:2549:G:N2	11:AA:2549:G:OP2	2.53	0.41
11:AA:3255:U:H2'	11:AA:3256:G:H8	1.84	0.41
12:Aa:77:LEU:HD23	12:Aa:335:LEU:HD21	2.01	0.41
12:Aa:159:LYS:HA	84:Aa:901:GTP:N1	2.35	0.41
12:Aa:432:GLN:HB3	12:Aa:457:VAL:O	2.21	0.41
12:Aa:733:ILE:HG22	12:Aa:735:CYS:HB3	2.02	0.41
12:Aa:766:PHE:HB3	12:Aa:768:VAL:HG13	2.02	0.41
14:BB:9:C:OP1	22:F:26:HIS:HB3	2.20	0.41
14:BB:49:G:OP1	27:HH:90:HIS:HB3	2.20	0.41
16:CC:58:G:O6	50:V:63:ARG:NH2	2.53	0.41
17:D:8:LYS:HB2	17:D:24:LEU:HD11	2.01	0.41
18:DD:25:LEU:HG	18:DD:191:TYR:CD1	2.55	0.41
23:FF:339:ARG:HG2	23:FF:340:LYS:N	2.35	0.41
25:GG:126:ILE:HG13	25:GG:238:LEU:HD13	2.01	0.41
30:J:59:SER:O	30:J:63:ILE:HG22	2.20	0.41
33:KK:115:ALA:O	33:KK:118:GLU:HG3	2.20	0.41
33:KK:155:ASN:OD1	33:KK:181:LYS:HA	2.20	0.41
39:NN:32:ARG:O	39:NN:36:VAL:HG23	2.20	0.41
42:P:12:TYR:HE1	42:P:106:THR:HB	1.85	0.41
43:PP:128:ARG:HA	43:PP:128:ARG:HD3	1.86	0.41
45:QQ:67:ARG:HD3	45:QQ:127:TYR:CZ	2.55	0.41
57:c:320:U:OP1	57:c:322:G:H5''	2.20	0.41
57:c:647:G:N2	57:c:688:G:O6	2.34	0.41
57:c:760:A:C6	57:c:791:A:N6	2.88	0.41
57:c:933:A:O5'	59:e:116:LYS:NZ	2.50	0.41
57:c:1450:U:C2	57:c:1451:C:C5	3.08	0.41
57:c:1584:G:N2	57:c:1611:A:OP2	2.53	0.41
57:c:1590:G:N1	57:c:1593:A:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1718:G:C2	57:c:1719:A:C4	3.08	0.41
58:d:55:GLU:OE2	78:x:80:LYS:NZ	2.33	0.41
60:f:102:VAL:HG11	60:f:129:ILE:HA	2.02	0.41
61:g:161:GLY:O	61:g:164:VAL:HG22	2.19	0.41
62:h:132:GLY:N	62:h:136:VAL:O	2.38	0.41
62:h:191:ARG:NE	62:h:245:LYS:HD3	2.34	0.41
63:i:76:ARG:HH22	73:s:121:SER:H	1.69	0.41
69:o:102:LYS:O	80:z:13:ARG:NH2	2.34	0.41
76:v:22:LEU:HD23	76:v:55:TYR:HD1	1.85	0.41
79:y:30:SER:HB2	79:y:61:ILE:HG13	2.01	0.41
3:2:51:ARG:HD2	5:4:61:ARG:CZ	2.50	0.41
8:7:33:LEU:HD22	8:7:45:TRP:CZ2	2.56	0.41
8:7:176:LYS:HB2	8:7:195:HIS:HB3	2.02	0.41
8:7:250:TYR:CE1	8:7:265:LEU:HD12	2.56	0.41
10:A:74:ARG:NH1	10:A:146:GLY:O	2.53	0.41
11:AA:11:A:C6	16:CC:148:G:C6	3.09	0.41
11:AA:68:C:H2'	11:AA:69:C:C6	2.56	0.41
11:AA:77:A:H5'	41:OO:100:ARG:NH2	2.36	0.41
11:AA:533:A:O3'	11:AA:534:U:H3'	2.20	0.41
11:AA:640:U:P	36:M:21:ARG:HH22	2.42	0.41
11:AA:854:G:C6	11:AA:855:U:C4	3.08	0.41
11:AA:891:G:C6	11:AA:892:U:N3	2.88	0.41
11:AA:996:A:C2	11:AA:997:A:H1'	2.56	0.41
11:AA:1255:C:H1'	21:Ee:131:GLU:HA	2.01	0.41
11:AA:1258:U:H4'	18:DD:42:ARG:NH1	2.35	0.41
11:AA:1429:G:C5	25:GG:99:MET:HE1	2.54	0.41
11:AA:1439:U:H2'	11:AA:1440:G:C8	2.56	0.41
11:AA:1519:G:H2'	11:AA:1520:G:C8	2.55	0.41
11:AA:1652:G:H2'	11:AA:1653:G:H8	1.86	0.41
11:AA:2440:G:N2	11:AA:2508:U:C2	2.88	0.41
11:AA:2556:C:H2'	11:AA:2557:A:C8	2.56	0.41
11:AA:2769:A:H5''	55:a:80:ARG:CZ	2.50	0.41
11:AA:2959:OMC:HM23	11:AA:2959:OMC:H1'	1.62	0.41
11:AA:3106:A:H2'	11:AA:3107:U:O4'	2.20	0.41
11:AA:3174:A:C6	11:AA:3279:A:O4'	2.73	0.41
11:AA:3205:G:C4	19:E:171:PHE:CE1	3.07	0.41
12:Aa:164:LEU:HB3	12:Aa:285:PHE:HE2	1.85	0.41
12:Aa:230:ALA:H	12:Aa:237:LYS:HZ1	1.69	0.41
12:Aa:691:VAL:HG22	12:Aa:693:LEU:HG	2.01	0.41
14:BB:11:A:O2'	14:BB:13:A:H2'	2.20	0.41
14:BB:66:A:OP1	37:MM:203:LYS:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CC:77:A:H2'	16:CC:78:G:H8	1.86	0.41
16:CC:146:U:H2'	16:CC:147:U:C6	2.56	0.41
18:DD:18:TYR:CD1	18:DD:50:VAL:HG21	2.55	0.41
18:DD:143:THR:HB	18:DD:150:ILE:HG23	2.03	0.41
20:EE:5:ILE:HG22	20:EE:209:HIS:HA	2.02	0.41
23:FF:95:THR:HB	23:FF:98:GLY:O	2.20	0.41
23:FF:370:PHE:CD2	23:FF:376:LYS:HD2	2.55	0.41
27:HH:66:SER:OG	27:HH:73:VAL:O	2.32	0.41
29:II:172:HIS:HD2	46:R:44:TYR:OH	2.03	0.41
30:J:105:VAL:HG22	30:J:130:TYR:CD2	2.55	0.41
38:N:25:LYS:HA	38:N:25:LYS:HD3	1.79	0.41
43:PP:19:ARG:HH11	43:PP:69:THR:HB	1.84	0.41
43:PP:92:GLU:H	43:PP:92:GLU:CD	2.26	0.41
44:Q:22:SER:HA	44:Q:28:VAL:HG13	2.02	0.41
49:U:68:ARG:HD2	49:U:68:ARG:HA	1.85	0.41
57:c:52:U:C2	57:c:53:G:N7	2.89	0.41
57:c:394:C:H42	57:c:401:A:N6	2.08	0.41
57:c:648:G:N2	57:c:687:G:H3'	2.34	0.41
57:c:691:C:H2'	57:c:692:C:N1	2.36	0.41
57:c:932:U:OP2	59:e:155:TYR:OH	2.39	0.41
57:c:1187:U:H3	57:c:1198:G:H1	0.64	0.41
57:c:1366:U:H2'	57:c:1367:G:H8	1.83	0.41
57:c:1559:A:C5	75:u:134:ARG:HG2	2.55	0.41
57:c:1571:C:H2'	57:c:1572:OMG:C8	2.56	0.41
58:d:22:THR:O	58:d:48:ILE:HD13	2.20	0.41
58:d:24:LEU:HD23	58:d:24:LEU:HA	1.89	0.41
59:e:24:PHE:CZ	71:q:39:ILE:HG13	2.55	0.41
60:f:140:ARG:HB2	60:f:222:TYR:HE1	1.83	0.41
63:i:162:VAL:CG1	63:i:166:ARG:HB3	2.50	0.41
64:j:46:LYS:HD2	64:j:118:GLU:OE1	2.20	0.41
66:l:3:ILE:HG22	66:l:30:GLY:HA3	2.03	0.41
66:l:36:THR:O	66:l:96:LEU:N	2.54	0.41
67:m:15:PRO:HG2	67:m:23:ARG:CZ	2.50	0.41
3:2:4:LYS:NZ	57:c:1629:G:H5''	2.35	0.41
3:2:30:ILE:CD1	3:2:74:CYS:HA	2.50	0.41
6:5:25:SER:OG	68:n:62:GLN:OE1	2.39	0.41
7:6:18:THR:CA	57:c:562:OMG:HM21	2.50	0.41
11:AA:1004:U:H2'	11:AA:1005:G:O4'	2.20	0.41
11:AA:1144:U:H4'	11:AA:1145:G:O4'	2.20	0.41
11:AA:1203:A:N3	11:AA:2855:U:O2'	2.52	0.41
11:AA:1447:G:OP1	13:B:65:SER:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1528:G:C6	11:AA:1529:A:N6	2.88	0.41
11:AA:2164:A:H3'	11:AA:2165:G:H8	1.86	0.41
11:AA:2340:U:H5''	23:FF:237:LYS:HD3	2.02	0.41
11:AA:2505:U:H2'	11:AA:2506:U:C6	2.54	0.41
11:AA:2632:G:H2'	11:AA:2633:U:C6	2.55	0.41
11:AA:3160:U:H2'	11:AA:3161:C:C6	2.55	0.41
11:AA:3280:U:O2'	11:AA:3281:U:H6	2.03	0.41
11:AA:3353:G:C8	11:AA:3356:G:H2'	2.55	0.41
11:AA:3375:A:H4'	42:P:18:LYS:HG3	2.03	0.41
12:Aa:494:GLU:HG3	12:Aa:555:LYS:HE3	2.03	0.41
12:Aa:627:VAL:O	12:Aa:631:ARG:HG2	2.20	0.41
15:C:39:ARG:HB3	25:GG:299:ILE:HD11	2.02	0.41
15:C:98:LYS:HG3	15:C:119:GLY:HA2	2.02	0.41
15:C:177:GLY:C	15:C:186:VAL:H	2.28	0.41
16:CC:26:U:H2'	16:CC:27:U:C6	2.54	0.41
16:CC:95:G:OP1	50:V:76:ASN:ND2	2.47	0.41
20:EE:66:PRO:HG2	20:EE:67:TYR:CE2	2.56	0.41
20:EE:247:ARG:HB3	57:c:1012:U:H4'	2.02	0.41
22:F:44:ALA:HB2	22:F:53:PRO:HG2	2.03	0.41
22:F:57:TYR:CD2	22:F:89:LEU:HD11	2.56	0.41
31:JJ:138:TYR:HD1	31:JJ:233:GLU:HA	1.86	0.41
32:K:73:VAL:HG13	32:K:73:VAL:O	2.20	0.41
33:KK:147:LYS:O	33:KK:149:LYS:NZ	2.46	0.41
36:M:45:MET:HG3	36:M:53:PHE:CE1	2.54	0.41
39:NN:51:ARG:HE	39:NN:51:ARG:HB3	1.79	0.41
42:P:85:ALA:HB1	42:P:88:PRO:HD3	2.02	0.41
45:QQ:16:SER:OG	45:QQ:19:LEU:HD13	2.21	0.41
57:c:69:G:H1	57:c:82:U:H3	1.67	0.41
57:c:115:G:H5'	69:o:129:ARG:HD3	2.02	0.41
57:c:331:A:OP2	66:l:175:GLN:NE2	2.49	0.41
57:c:422:G:H2'	57:c:423:G:C8	2.55	0.41
57:c:485:A:C2'	57:c:503:G:H21	2.31	0.41
57:c:554:C:H4'	67:m:19:TYR:HB2	2.01	0.41
57:c:620:A:O2'	57:c:621:A:O4'	2.29	0.41
57:c:939:A:OP1	70:p:114:ARG:NH2	2.54	0.41
57:c:1147:A:H8	57:c:1147:A:O5'	2.03	0.41
57:c:1350:U:O2	57:c:1351:G:C8	2.73	0.41
57:c:1395:G:N2	57:c:1404:C:C2	2.89	0.41
57:c:1459:C:H2'	75:u:138:THR:HG21	2.01	0.41
57:c:1587:A:H8	57:c:1587:A:O5'	2.04	0.41
57:c:1662:G:H2'	57:c:1663:G:C8	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1684:U:O2'	57:c:1685:G:H8	2.03	0.41
57:c:1736:G:C4	57:c:1737:G:C8	3.08	0.41
59:e:70:LEU:HA	59:e:73:LEU:HB2	2.03	0.41
61:g:96:LEU:HA	61:g:96:LEU:HD23	1.89	0.41
63:i:98:MET:HE1	63:i:105:GLY:O	2.20	0.41
63:i:213:LYS:O	63:i:217:LEU:HG	2.21	0.41
70:p:125:LEU:HD13	70:p:125:LEU:HA	1.92	0.41
77:w:24:ILE:HG12	77:w:116:VAL:HG22	2.02	0.41
79:y:24:GLN:HA	79:y:63:VAL:O	2.19	0.41
80:z:104:LEU:HD21	80:z:122:PHE:HB3	2.00	0.41
1:0:121:THR:OG1	57:c:149:C:OP1	2.27	0.41
2:1:71:ILE:HD11	2:1:76:ALA:HA	2.03	0.41
3:2:44:ILE:HD13	3:2:67:THR:CG2	2.51	0.41
5:4:22:ARG:HG3	57:c:1619:C:C2	2.54	0.41
8:7:60:SER:N	73:s:99:GLU:HG2	2.35	0.41
10:A:143:THR:HG21	10:A:150:GLU:OE1	2.21	0.41
11:AA:188:U:H1'	11:AA:208:C:H1'	2.02	0.41
11:AA:400:G:H4'	11:AA:401:U:H5''	2.02	0.41
11:AA:740:G:H2'	11:AA:741:U:C6	2.55	0.41
11:AA:1018:G:C2	11:AA:1019:G:H1'	2.54	0.41
11:AA:1241:U:OP2	21:Ee:92:ARG:NE	2.44	0.41
11:AA:1243:G:C2	11:AA:1244:A:N7	2.88	0.41
11:AA:1831:U:H2'	11:AA:1832:C:H6	1.85	0.41
11:AA:2352:A:H2'	11:AA:2353:G:C8	2.56	0.41
11:AA:2508:U:H2'	11:AA:2509:U:C6	2.55	0.41
11:AA:3005:A:C8	11:AA:3140:G:N1	2.89	0.41
11:AA:3034:C:O2	35:LL:122:LYS:HB3	2.21	0.41
11:AA:3097:C:H2'	11:AA:3098:G:C8	2.54	0.41
11:AA:3174:A:H2'	11:AA:3175:U:O4'	2.20	0.41
14:BB:7:G:N1	14:BB:114:U:N3	2.25	0.41
14:BB:55:A:H1'	39:NN:10:ARG:HG3	2.03	0.41
14:BB:100:C:H2'	14:BB:101:G:O4'	2.20	0.41
16:CC:133:G:H2'	16:CC:134:G:H8	1.86	0.41
17:D:130:ASN:CG	17:D:131:ALA:H	2.24	0.41
19:E:79:VAL:CG2	19:E:90:MET:HB2	2.51	0.41
23:FF:62:ARG:HH21	23:FF:349:LYS:HG3	1.84	0.41
24:G:56:VAL:HG13	24:G:65:VAL:HG22	2.03	0.41
47:S:58:ARG:HD2	47:S:58:ARG:HA	1.74	0.41
47:S:76:TYR:OH	47:S:88:ARG:NH2	2.54	0.41
50:V:68:LYS:HG3	50:V:69:HIS:CD2	2.55	0.41
57:c:400:A:H5''	66:l:24:LYS:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:525:A:C4	57:c:526:A:C8	3.08	0.41
57:c:648:G:C3'	57:c:687:G:H21	2.34	0.41
57:c:651:G:N2	57:c:684:A:H1'	2.36	0.41
57:c:889:U:H2'	57:c:890:C:O4'	2.21	0.41
57:c:1216:C:H1'	57:c:1217:A:H2'	2.03	0.41
57:c:1262:U:C2	57:c:1263:G:C8	3.08	0.41
57:c:1593:A:C8	57:c:1605:G:H3'	2.55	0.41
59:e:129:THR:N	59:e:133:TYR:O	2.33	0.41
59:e:214:LYS:HD2	59:e:214:LYS:C	2.45	0.41
60:f:161:LYS:HD2	60:f:166:THR:HG22	2.03	0.41
62:h:123:LEU:HD23	62:h:226:PHE:HE1	1.84	0.41
62:h:211:LYS:HA	62:h:216:ASN:O	2.20	0.41
65:k:135:ILE:HG23	65:k:152:VAL:HG13	2.02	0.41
76:v:108:LEU:HB3	76:v:114:VAL:HG22	2.03	0.41
80:z:14:LYS:HG3	80:z:18:HIS:CE1	2.56	0.41
1:0:30:PRO:HA	1:0:67:GLY:HA2	2.03	0.41
1:0:92:VAL:HG13	1:0:98:GLU:OE2	2.20	0.41
5:4:58:GLU:OE1	63:i:225:ARG:NH1	2.54	0.41
10:A:15:LEU:HD21	11:AA:1315:U:OP1	2.21	0.41
11:AA:150:A:OP1	45:QQ:54:LYS:NZ	2.52	0.41
11:AA:304:G:OP2	11:AA:2778:G:P	2.76	0.41
11:AA:411:U:H2'	11:AA:412:G:C8	2.54	0.41
11:AA:768:C:OP1	41:OO:186:ARG:NH2	2.54	0.41
11:AA:960:U:H4'	11:AA:963:G:C2	2.55	0.41
11:AA:987:U:H5'	31:JJ:125:GLU:CD	2.44	0.41
11:AA:1084:A:OP1	22:F:35:LYS:NZ	2.30	0.41
11:AA:1174:G:H2'	11:AA:1175:C:C6	2.55	0.41
11:AA:1760:A:C6	11:AA:1766:G:C6	3.09	0.41
11:AA:2122:G:H2'	11:AA:2123:G:O4'	2.20	0.41
11:AA:2634:UR3:H6	11:AA:2634:UR3:O5'	2.20	0.41
11:AA:2692:A:H8	11:AA:2692:A:O5'	2.03	0.41
11:AA:2816:G:C8	11:AA:2869:U:H3'	2.56	0.41
11:AA:2830:G:H1'	11:AA:2861:U:C2	2.56	0.41
11:AA:2831:G:H2'	11:AA:2832:C:H6	1.85	0.41
12:Aa:1:MET:N	12:Aa:78:TYR:HB3	2.36	0.41
12:Aa:172:GLU:O	12:Aa:176:GLN:N	2.41	0.41
12:Aa:739:ALA:HB1	12:Aa:788:THR:HG22	2.03	0.41
14:BB:12:U:O3'	14:BB:111:U:H1'	2.20	0.41
14:BB:74:C:H2'	14:BB:75:G:C8	2.55	0.41
25:GG:44:LYS:HG2	25:GG:109:TRP:O	2.21	0.41
27:HH:94:ASN:OD1	27:HH:95:TRP:N	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:II:157:GLN:OE1	29:II:157:GLN:N	2.33	0.41
31:JJ:150:LYS:HB3	31:JJ:244:ASN:HD21	1.85	0.41
40:O:45:ALA:HB2	40:O:77:LEU:HD13	2.02	0.41
44:Q:17:PHE:O	44:Q:32:TRP:HB2	2.20	0.41
46:R:13:HIS:CE1	46:R:89:LEU:HG	2.55	0.41
54:Z:10:THR:HG21	57:c:1115:U:H5''	2.02	0.41
55:a:68:VAL:CG2	55:a:85:LEU:HB2	2.51	0.41
57:c:254:A:O2'	57:c:255:U:O4'	2.39	0.41
57:c:432:G:H2'	57:c:433:C:C6	2.56	0.41
57:c:480:G:H5'	57:c:481:A:P	2.61	0.41
57:c:756:A:H1'	62:h:12:LEU:O	2.21	0.41
57:c:781:U:O2'	57:c:783:G:H5''	2.21	0.41
57:c:930:A:H1'	59:e:111:ARG:NH1	2.35	0.41
57:c:936:G:H2'	57:c:937:C:H6	1.85	0.41
57:c:1174:C:C4	57:c:1175:U:C4	3.08	0.41
57:c:1478:G:H3'	57:c:1479:A:C8	2.56	0.41
57:c:1604:U:O3'	57:c:1605:G:H8	2.04	0.41
57:c:1757:G:C6	57:c:1758:U:C4	3.09	0.41
57:c:1787:C:OP1	71:q:131:GLY:HA2	2.20	0.41
58:d:53:THR:O	58:d:57:LEU:HD23	2.21	0.41
58:d:76:ILE:HG23	58:d:123:VAL:HG23	2.03	0.41
59:e:68:VAL:HG23	59:e:84:ILE:HB	2.03	0.41
66:l:104:ILE:O	66:l:164:ARG:HA	2.21	0.41
67:m:115:LYS:HD3	67:m:115:LYS:HA	1.83	0.41
69:o:53:TYR:OH	69:o:114:ALA:HB2	2.21	0.41
75:u:62:THR:OG1	75:u:65:GLU:HB3	2.20	0.41
80:z:54:LEU:HD13	80:z:82:LYS:HZ3	1.86	0.41
3:2:15:ARG:NH2	57:c:936:G:N7	2.68	0.41
5:4:35:ASP:OD1	5:4:38:ARG:HD3	2.20	0.41
8:7:209:THR:HG22	8:7:224:ASN:HB2	2.03	0.41
11:AA:19:U:H2'	11:AA:20:A:H8	1.84	0.41
11:AA:58:G:OP1	45:QQ:154:PRO:HB2	2.21	0.41
11:AA:59:G:C4'	11:AA:60:A:H4'	2.49	0.41
11:AA:377:A:H1'	11:AA:392:G:C2	2.56	0.41
11:AA:501:A:H4'	29:II:28:GLN:NE2	2.35	0.41
11:AA:676:G:H4'	11:AA:678:G:O3'	2.20	0.41
11:AA:677:A:N6	11:AA:785:G:O2'	2.53	0.41
11:AA:912:G:C2	11:AA:914:A:C2	3.09	0.41
11:AA:1251:A:H2'	11:AA:1252:A:H8	1.86	0.41
11:AA:1423:C:H2'	11:AA:1424:C:H6	1.82	0.41
11:AA:1784:G:C6	11:AA:1785:U:C2	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1808:G:HO2'	11:AA:1809:A:P	2.42	0.41
11:AA:1841:A:C5	11:AA:1848:G:C2	3.09	0.41
11:AA:2153:U:H2'	11:AA:2154:U:C6	2.56	0.41
11:AA:2298:U:H5	11:AA:2926:A:C2	2.39	0.41
11:AA:2453:U:OP1	11:AA:2462:A:H8	2.03	0.41
11:AA:2519:A:N6	11:AA:2589:G:O6	2.54	0.41
11:AA:2562:A:C4	11:AA:2563:G:C8	3.09	0.41
11:AA:3091:A:O2'	11:AA:3093:C:H2'	2.21	0.41
11:AA:3212:C:H2'	11:AA:3213:A:H8	1.86	0.41
11:AA:3329:U:H2'	11:AA:3330:A:O4'	2.21	0.41
12:Aa:388:THR:HG23	12:Aa:390:ASP:H	1.86	0.41
12:Aa:485:VAL:HA	12:Aa:793:PHE:HE2	1.86	0.41
13:B:120:ASN:OD1	13:B:145:HIS:HB2	2.20	0.41
20:EE:117:GLU:HG2	20:EE:124:GLY:N	2.35	0.41
23:FF:218:ILE:HB	23:FF:337:THR:OG1	2.21	0.41
25:GG:157:GLU:OE2	25:GG:210:ALA:HB3	2.20	0.41
25:GG:226:GLU:OE1	25:GG:246:ARG:NH1	2.40	0.41
25:GG:335:ALA:O	25:GG:338:LYS:HD2	2.21	0.41
26:H:71:LYS:C	26:H:72:LYS:HD3	2.45	0.41
29:II:154:LEU:HA	29:II:157:GLN:NE2	2.36	0.41
31:JJ:210:PRO:HA	31:JJ:242:SER:O	2.20	0.41
34:L:54:THR:HG23	34:L:56:LYS:H	1.86	0.41
39:NN:111:ASP:C	39:NN:112:LEU:HD22	2.45	0.41
40:O:66:LYS:HD2	40:O:66:LYS:HA	1.64	0.41
41:OO:62:THR:O	41:OO:64:LYS:N	2.54	0.41
44:Q:120:THR:C	44:Q:122:PRO:HD3	2.45	0.41
47:S:17:SER:O	47:S:34:HIS:NE2	2.48	0.41
57:c:100:A2M:OP2	57:c:361:C:OP2	2.39	0.41
57:c:330:G:P	66:l:172:ARG:HE	2.43	0.41
57:c:378:A:C6	57:c:379:U:C4	3.09	0.41
57:c:511:A:H3'	67:m:172:VAL:HG13	2.02	0.41
57:c:606:A:H4'	57:c:607:G:H3'	2.02	0.41
57:c:760:A:H2'	57:c:761:G:O4'	2.20	0.41
57:c:812:A:C2	57:c:859:A:C5	3.09	0.41
57:c:1006:C:O2'	71:q:136:ARG:HG3	2.21	0.41
57:c:1174:C:N4	57:c:1466:G:N1	2.68	0.41
57:c:1660:A:H2'	57:c:1661:U:H6	1.86	0.41
63:i:98:MET:HE1	63:i:105:GLY:C	2.45	0.41
65:k:51:VAL:HG11	65:k:168:SER:HA	2.03	0.41
69:o:45:PRO:O	69:o:49:ILE:HG12	2.20	0.41
74:t:14:LYS:HA	74:t:17:ILE:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:u:28:ILE:H	75:u:28:ILE:HD12	1.85	0.41
5:4:57:MET:HE1	63:i:144:GLU:OE1	2.21	0.41
8:7:154:VAL:O	8:7:155:ARG:HD2	2.20	0.41
8:7:264:SER:O	8:7:268:GLN:HA	2.20	0.41
11:AA:40:A:C8	11:AA:937:G:C6	3.09	0.41
11:AA:61:A:C2	11:AA:62:A:H1'	2.56	0.41
11:AA:107:A:H8	11:AA:107:A:O5'	2.04	0.41
11:AA:135:C:H1'	48:T:93:THR:OG1	2.21	0.41
11:AA:189:G:O3'	11:AA:190:U:H4'	2.20	0.41
11:AA:281:G:C6	11:AA:282:G:C6	3.08	0.41
11:AA:290:G:H2'	11:AA:291:C:C6	2.56	0.41
11:AA:306:A:C2	11:AA:2784:G:H1'	2.56	0.41
11:AA:331:G:N2	16:CC:34:U:O4	2.53	0.41
11:AA:601:U:HO2'	11:AA:602:A:P	2.42	0.41
11:AA:620:U:O2	11:AA:620:U:H2'	2.20	0.41
11:AA:657:A:H2'	11:AA:658:G:C8	2.56	0.41
11:AA:789:A:H2'	11:AA:790:U:C6	2.56	0.41
11:AA:794:U:H2'	11:AA:795:G:O4'	2.20	0.41
11:AA:822:G:H2'	11:AA:823:C:H6	1.86	0.41
11:AA:912:G:N1	20:EE:208:ASP:OD1	2.23	0.41
11:AA:1050:U:O2'	11:AA:1051:U:H6	2.04	0.41
11:AA:1064:A:C5	11:AA:1096:U:C4	3.08	0.41
11:AA:1294:A:O2'	11:AA:1295:G:H5''	2.20	0.41
11:AA:1323:G:H2'	11:AA:1324:U:C6	2.56	0.41
11:AA:1340:G:C2	11:AA:1365:G:C2	3.09	0.41
11:AA:1425:U:O3'	25:GG:36:HIS:NE2	2.54	0.41
11:AA:1486:G:N2	47:S:6:THR:HG22	2.31	0.41
11:AA:1559:A:H5''	30:J:34:LEU:HD23	2.02	0.41
11:AA:1652:G:C2	11:AA:1804:A:C2	3.09	0.41
11:AA:1667:A:C4	11:AA:1668:G:C8	3.08	0.41
11:AA:1699:A:C6	11:AA:1747:G:C6	3.08	0.41
11:AA:1753:G:H2'	11:AA:1754:G:C8	2.54	0.41
11:AA:1897:G:O4'	26:H:83:LYS:HD3	2.21	0.41
11:AA:2291:A:N1	11:AA:2302:G:C6	2.88	0.41
11:AA:2315:G:H2'	11:AA:2316:G:H8	1.86	0.41
11:AA:2368:A:H2'	11:AA:2369:G:C8	2.55	0.41
11:AA:2522:G:H2'	11:AA:2522:G:N3	2.36	0.41
11:AA:2548:C:H5''	11:AA:2549:G:OP1	2.21	0.41
11:AA:2623:G:H3'	11:AA:2624:G:H8	1.86	0.41
11:AA:2680:A:H5''	39:NN:52:TYR:CE2	2.56	0.41
11:AA:2696:A:H2'	11:AA:2697:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2722:U:O2'	22:F:88:ARG:O	2.38	0.41
11:AA:2761:G:N7	55:a:63:LYS:NZ	2.67	0.41
11:AA:2813:A:H2'	11:AA:2814:G:O4'	2.21	0.41
11:AA:2828:G:H5'	37:MM:8:CYS:SG	2.61	0.41
11:AA:2942:C:OP1	11:AA:2943:G:H5''	2.21	0.41
11:AA:2978:U:O2'	11:AA:2979:U:H5'	2.20	0.41
11:AA:3012:A:C6	11:AA:3013:U:C4	3.09	0.41
11:AA:3218:A:H5''	11:AA:3219:G:C4	2.56	0.41
11:AA:3230:G:H2'	11:AA:3231:U:C6	2.55	0.41
11:AA:3280:U:O2'	11:AA:3281:U:H5'	2.21	0.41
11:AA:3306:U:OP1	23:FF:225:GLY:N	2.52	0.41
11:AA:3361:G:H2'	11:AA:3362:A:C2	2.56	0.41
11:AA:3385:U:H2'	11:AA:3386:G:C8	2.56	0.41
12:Aa:247:ASP:OD1	12:Aa:247:ASP:N	2.52	0.41
12:Aa:335:LEU:HD23	12:Aa:335:LEU:HA	1.89	0.41
12:Aa:487:PRO:HG3	12:Aa:519:LEU:HD23	2.03	0.41
12:Aa:591:GLU:CB	12:Aa:685:ARG:HH11	2.34	0.41
12:Aa:653:VAL:HG11	12:Aa:691:VAL:HG11	2.02	0.41
12:Aa:669:TRP:CD1	12:Aa:710:ARG:HH11	2.39	0.41
13:B:43:LYS:HG3	13:B:46:LYS:HE3	2.02	0.41
14:BB:47:C:OP2	27:HH:158:ARG:HD3	2.21	0.41
14:BB:58:C:H2'	14:BB:59:U:H6	1.86	0.41
14:BB:84:A:O2'	14:BB:85:G:O4'	2.37	0.41
16:CC:44:A:C2	16:CC:101:U:C2	3.08	0.41
16:CC:89:A:H8	16:CC:89:A:O5'	2.03	0.41
18:DD:101:VAL:O	18:DD:104:ARG:NE	2.50	0.41
19:E:44:PHE:HE1	19:E:122:HIS:ND1	2.18	0.41
20:EE:73:GLU:O	20:EE:73:GLU:HG2	2.19	0.41
20:EE:250:GLN:O	20:EE:251:LYS:HG2	2.20	0.41
23:FF:261:MET:HE2	23:FF:261:MET:HB2	1.94	0.41
25:GG:3:ARG:HE	25:GG:22:LEU:HB2	1.85	0.41
25:GG:26:PHE:HD1	25:GG:127:ALA:HA	1.86	0.41
27:HH:17:GLN:NE2	27:HH:18:THR:O	2.53	0.41
27:HH:52:VAL:HG13	27:HH:54:ARG:CZ	2.51	0.41
27:HH:150:LEU:HD21	39:NN:142:LYS:HG3	2.03	0.41
27:HH:177:GLU:OE2	27:HH:190:ILE:HB	2.21	0.41
27:HH:194:LEU:O	27:HH:197:SER:HB3	2.21	0.41
29:II:6:ALA:HB2	44:Q:74:PHE:CE1	2.51	0.41
29:II:51:ARG:HD2	29:II:161:ALA:O	2.20	0.41
30:J:63:ILE:HD12	30:J:86:VAL:HG12	2.03	0.41
30:J:73:MET:HE3	30:J:141:TYR:CD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:J:102:LEU:C	30:J:103:TYR:HD1	2.29	0.41
31:JJ:155:LYS:HB2	31:JJ:203:TRP:HE1	1.86	0.41
32:K:21:THR:O	32:K:21:THR:HG22	2.21	0.41
33:KK:89:GLU:HA	33:KK:92:LYS:HG2	2.03	0.41
37:MM:30:LYS:HG2	37:MM:63:GLU:HA	2.03	0.41
37:MM:112:GLN:HG3	37:MM:114:GLY:H	1.86	0.41
41:OO:56:PRO:O	41:OO:72:GLY:N	2.34	0.41
42:P:18:LYS:HB3	42:P:18:LYS:HE3	1.89	0.41
42:P:56:ASN:HA	42:P:59:ILE:HG22	2.03	0.41
46:R:38:PRO:HB3	46:R:74:THR:HG21	2.03	0.41
49:U:43:LEU:O	49:U:46:GLU:HG3	2.21	0.41
50:V:5:THR:N	50:V:6:PRO:HD2	2.36	0.41
52:X:27:ILE:HG23	52:X:30:ARG:CZ	2.51	0.41
55:a:8:ARG:HD2	55:a:8:ARG:HA	1.76	0.41
56:b:86:LEU:HD23	56:b:89:MET:HE3	2.02	0.41
57:c:49:C:H2'	57:c:50:C:O4'	2.20	0.41
57:c:106:U:C4	57:c:107:C:C4	3.09	0.41
57:c:163:G:C6	57:c:164:A:N1	2.89	0.41
57:c:213:A:N7	57:c:254:A:N3	2.69	0.41
57:c:275:C:C4	57:c:276:C:C4	3.09	0.41
57:c:279:G:C6	57:c:281:G:N7	2.89	0.41
57:c:336:G:H4'	69:o:131:ILE:C	2.46	0.41
57:c:538:A:N3	57:c:541:A2M:HM'3	2.36	0.41
57:c:648:G:C2'	57:c:687:G:H21	2.33	0.41
57:c:648:G:N7	57:c:688:G:C4	2.88	0.41
57:c:803:A:O2'	65:k:104:ARG:NH2	2.54	0.41
57:c:812:A:H62	57:c:858:G:H2'	1.86	0.41
57:c:900:A:H1'	57:c:915:A:H2	1.84	0.41
57:c:1068:C:H2'	57:c:1069:A:H8	1.86	0.41
57:c:1074:G:H2'	57:c:1075:C:H6	1.86	0.41
57:c:1211:A:H1'	72:r:99:GLY:O	2.21	0.41
57:c:1223:A:N1	57:c:1263:G:C2	2.88	0.41
57:c:1327:C:C4	57:c:1328:G:N7	2.88	0.41
57:c:1330:G:H3'	57:c:1331:A:H8	1.86	0.41
57:c:1452:U:H2'	57:c:1453:G:O4'	2.21	0.41
57:c:1466:G:H2'	57:c:1467:C:C6	2.56	0.41
57:c:1484:G:O6	57:c:1592:A:H4'	2.21	0.41
57:c:1558:U:O4	72:r:122:THR:HG23	2.21	0.41
57:c:1562:G:C2	57:c:1563:C:C2	3.09	0.41
57:c:1585:U:OP1	73:s:125:GLU:N	2.54	0.41
57:c:1586:A:H5''	73:s:136:SER:OG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:1607:G:N1	57:c:1608:U:O4	2.54	0.41
59:e:78:ASP:OD1	59:e:78:ASP:N	2.52	0.41
59:e:194:ASN:OD1	59:e:210:ILE:HG22	2.21	0.41
62:h:136:VAL:HG11	62:h:148:ARG:NH2	2.36	0.41
63:i:61:TYR:HE2	63:i:165:LEU:HB2	1.86	0.41
64:j:16:PHE:CD1	64:j:17:GLU:N	2.87	0.41
64:j:64:LYS:NZ	64:j:82:SER:OG	2.32	0.41
65:k:109:VAL:HG12	65:k:110:GLN:N	2.36	0.41
71:q:20:TYR:HB2	71:q:84:ARG:CZ	2.51	0.41
73:s:34:SER:HB3	73:s:38:LEU:HB3	2.03	0.41
73:s:97:VAL:HG23	73:s:98:ASP:N	2.35	0.41
74:t:41:ILE:HG21	74:t:46:LEU:HB3	2.03	0.41
76:v:86:ARG:HG2	76:v:89:ARG:HH21	1.85	0.41
78:x:36:VAL:HB	78:x:51:VAL:HG12	2.03	0.41
8:7:87:LYS:HD2	8:7:108:SER:HA	2.03	0.41
10:A:110:PRO:N	10:A:111:PRO:HD2	2.35	0.41
11:AA:99:A:O2'	11:AA:281:G:O6	2.38	0.41
11:AA:341:G:C6	25:GG:194:TYR:HE2	2.39	0.41
11:AA:633:C:H2'	11:AA:634:C:H6	1.83	0.41
11:AA:637:C:N4	11:AA:2361:A:N7	2.69	0.41
11:AA:679:U:H2'	11:AA:680:G:H8	1.79	0.41
11:AA:694:C:H2'	11:AA:695:C:C6	2.55	0.41
11:AA:836:A:O2'	56:b:10:ILE:HA	2.21	0.41
11:AA:921:A:OP1	11:AA:921:A:H3'	2.21	0.41
11:AA:1161:G:O3'	44:Q:54:LYS:NZ	2.33	0.41
11:AA:1277:C:C2	11:AA:1278:A:C8	3.09	0.41
11:AA:1489:A:OP2	11:AA:1838:G:N1	2.36	0.41
11:AA:2186:U:H5	20:EE:200:ARG:NH2	2.19	0.41
11:AA:2320:A:C6	11:AA:2321:A:C5	3.09	0.41
11:AA:2366:C:H2'	11:AA:2367:A:C8	2.53	0.41
11:AA:2376:G:O2'	11:AA:2377:G:H5'	2.21	0.41
11:AA:2660:G:H1'	11:AA:2744:U:H1'	2.02	0.41
11:AA:3008:A:N6	11:AA:3139:A:N6	2.69	0.41
11:AA:3058:U:O4	42:P:65:LYS:NZ	2.53	0.41
11:AA:3146:G:C2	11:AA:3147:G:C5	3.09	0.41
11:AA:3334:U:H4'	11:AA:3335:A:H5'	2.03	0.41
12:Aa:219:ALA:O	12:Aa:328:LEU:HB3	2.21	0.41
12:Aa:399:ARG:HG2	12:Aa:401:PHE:CE1	2.56	0.41
14:BB:94:C:H2'	14:BB:95:A:C8	2.56	0.41
16:CC:11:C:C2	16:CC:12:A:C8	3.08	0.41
16:CC:49:G:H8	16:CC:49:G:OP1	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:E:107:TYR:HE1	19:E:121:ILE:HB	1.86	0.41
21:Ee:133:LEU:HD21	21:Ee:148:PRO:CB	2.51	0.41
22:F:126:VAL:HG23	22:F:127:GLN:N	2.36	0.41
23:FF:83:PRO:HD2	23:FF:168:LYS:NZ	2.36	0.41
24:G:77:LYS:HB2	24:G:95:PHE:CE1	2.55	0.41
27:HH:64:ILE:HD13	27:HH:64:ILE:HA	1.89	0.41
31:JJ:47:ARG:HG2	31:JJ:51:TYR:CE2	2.55	0.41
31:JJ:110:ARG:NH1	31:JJ:206:LYS:HG2	2.36	0.41
39:NN:33:ALA:HB2	39:NN:123:PHE:CE1	2.56	0.41
41:OO:108:ILE:HD12	41:OO:108:ILE:HA	1.92	0.41
46:R:16:TYR:OH	46:R:91:ALA:HB2	2.21	0.41
48:T:54:VAL:O	48:T:58:ILE:HG13	2.21	0.41
57:c:14:C:OP2	60:f:206:THR:OG1	2.23	0.41
57:c:86:A:H2'	57:c:87:C:C6	2.56	0.41
57:c:99:C:OP2	57:c:378:A:O2'	2.32	0.41
57:c:269:G:C6	57:c:287:G:C2	3.09	0.41
57:c:351:C:C5	57:c:631:G:H5''	2.55	0.41
57:c:388:G:O3'	57:c:425:A:N6	2.54	0.41
57:c:606:A:C8	57:c:608:U:H2'	2.56	0.41
57:c:1204:A:N3	57:c:1204:A:H2'	2.36	0.41
57:c:1220:C:H42	57:c:1264:G:H1'	1.85	0.41
57:c:1224:A:C6	57:c:1261:G:N1	2.89	0.41
57:c:1232:U:H2'	57:c:1233:G:C8	2.56	0.41
57:c:1290:U:H2'	57:c:1291:G:H21	1.86	0.41
57:c:1546:G:C8	57:c:1567:U:N3	2.89	0.41
57:c:1590:G:C5	57:c:1592:A:C6	3.09	0.41
57:c:1767:G:OP1	57:c:1770:U:H4'	2.21	0.41
60:f:153:SER:OG	60:f:171:PRO:HA	2.19	0.41
60:f:156:THR:HG22	79:y:99:PHE:HZ	1.85	0.41
62:h:59:ARG:NH1	62:h:60:GLU:HB3	2.36	0.41
67:m:16:LYS:HA	67:m:16:LYS:HD2	1.96	0.41
73:s:86:ALA:HB2	73:s:116:LEU:HG	2.03	0.41
76:v:124:ILE:HD11	76:v:132:LEU:HD12	2.02	0.41
80:z:100:ASP:OD1	80:z:101:GLU:N	2.49	0.41
1:0:83:LYS:HE2	1:0:83:LYS:HB2	1.85	0.40
10:A:13:GLY:HA2	10:A:42:ASN:HB2	2.03	0.40
11:AA:44:U:H2'	11:AA:45:A:O4'	2.21	0.40
11:AA:157:A:N7	49:U:26:ILE:HD12	2.36	0.40
11:AA:302:U:H2'	11:AA:303:G:H8	1.86	0.40
11:AA:579:G:H2'	11:AA:580:C:H6	1.85	0.40
11:AA:595:G:H2'	11:AA:596:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:744:A:OP1	15:C:66:ARG:NH1	2.52	0.40
11:AA:850:U:H2'	11:AA:851:C:C6	2.56	0.40
11:AA:982:C:H2'	11:AA:983:A:C8	2.56	0.40
11:AA:987:U:C2	11:AA:988:U:C5	3.08	0.40
11:AA:1137:C:H2'	11:AA:1138:U:C6	2.55	0.40
11:AA:1514:G:C6	11:AA:1841:A:C5	3.09	0.40
11:AA:1757:A:H2'	11:AA:1758:G:C8	2.56	0.40
11:AA:1949:G:OP1	17:D:104:ARG:HD2	2.21	0.40
11:AA:2157:G:C5	20:EE:150:LEU:HD23	2.56	0.40
11:AA:2223:A:OP1	49:U:71:LYS:HE2	2.21	0.40
11:AA:2392:C:O2	23:FF:266:ARG:NH2	2.53	0.40
11:AA:2429:G:C4	11:AA:2430:A:C8	3.10	0.40
11:AA:2530:G:C2	11:AA:2581:U:C4	3.09	0.40
11:AA:2552:C:H5	47:S:98:GLN:HG2	1.86	0.40
11:AA:2599:U:H5''	45:QQ:70:ASN:HD21	1.86	0.40
11:AA:2603:G:C6	11:AA:2604:U:C4	3.08	0.40
11:AA:2782:U:H5'	41:OO:185:LYS:NZ	2.36	0.40
11:AA:2877:G:H2'	11:AA:2878:G:C8	2.54	0.40
11:AA:2894:C:O2'	11:AA:3107:U:O2'	2.15	0.40
11:AA:2984:C:C2	11:AA:2985:C:C5	3.09	0.40
11:AA:3296:A:OP1	23:FF:120:LYS:N	2.51	0.40
11:AA:3375:A:P	11:AA:3378:C:H41	2.44	0.40
12:Aa:27:HIS:HA	12:Aa:138:GLN:OE1	2.20	0.40
12:Aa:110:ASP:O	12:Aa:537:HIS:ND1	2.54	0.40
12:Aa:538:LEU:HA	12:Aa:541:CYS:SG	2.62	0.40
16:CC:66:A:H2'	16:CC:67:U:H6	1.86	0.40
16:CC:104:A:C8	16:CC:105:A:C8	3.09	0.40
19:E:78:TRP:HD1	19:E:125:LYS:HB3	1.86	0.40
19:E:156:VAL:HG23	19:E:156:VAL:O	2.21	0.40
23:FF:180:GLU:O	23:FF:181:ILE:HD13	2.21	0.40
28:I:6:ASP:HB2	28:I:10:GLY:N	2.36	0.40
29:II:133:GLU:OE2	29:II:134:ARG:HG3	2.21	0.40
29:II:165:LEU:HD21	29:II:169:ASP:HB2	2.04	0.40
31:JJ:180:SER:H	31:JJ:183:ASP:HB3	1.86	0.40
33:KK:65:LEU:HD23	33:KK:65:LEU:HA	1.76	0.40
36:M:47:LYS:HD3	36:M:48:TYR:CE1	2.57	0.40
36:M:103:ASP:OD2	41:OO:67:ARG:NH2	2.54	0.40
39:NN:53:THR:HG22	39:NN:53:THR:O	2.21	0.40
45:QQ:84:PRO:HA	45:QQ:87:GLN:OE1	2.21	0.40
46:R:29:LEU:HD13	46:R:75:HIS:CD2	2.56	0.40
48:T:9:LEU:HD21	48:T:54:VAL:HG22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:a:9:LYS:HB3	55:a:22:GLN:OE1	2.21	0.40
57:c:93:A:O2'	62:h:3:ARG:O	2.33	0.40
57:c:158:U:H3'	57:c:159:U:H5''	2.04	0.40
57:c:287:G:C2	57:c:288:A:C8	3.10	0.40
57:c:351:C:H5	57:c:631:G:H5''	1.85	0.40
57:c:480:G:OP1	67:m:120:LYS:HD3	2.21	0.40
57:c:686:C:O2	57:c:687:G:C5	2.74	0.40
57:c:805:U:O4	65:k:104:ARG:NH2	2.34	0.40
57:c:881:A:H2'	57:c:882:U:O4'	2.21	0.40
57:c:895:G:N2	57:c:918:U:C4	2.89	0.40
57:c:974:A2M:HM'2	57:c:975:C:O4'	2.21	0.40
57:c:1346:A:OP2	57:c:1348:A:N6	2.43	0.40
57:c:1452:U:C4	57:c:1453:G:N7	2.89	0.40
57:c:1466:G:OP2	73:s:139:GLN:NE2	2.53	0.40
57:c:1664:C:H2'	57:c:1665:U:O4'	2.21	0.40
57:c:1683:C:N3	57:c:1684:U:H1'	2.36	0.40
58:d:110:TYR:O	58:d:110:TYR:CG	2.74	0.40
59:e:22:ASP:OD1	59:e:24:PHE:HB2	2.21	0.40
59:e:142:PHE:O	59:e:207:LEU:HA	2.21	0.40
65:k:102:PRO:HD3	65:k:112:ARG:CD	2.51	0.40
66:l:101:ILE:HG13	66:l:192:TYR:HE2	1.85	0.40
69:o:59:PRO:HD2	69:o:112:SER:HB2	2.02	0.40
70:p:26:PHE:CZ	70:p:66:ILE:HD13	2.56	0.40
74:t:20:TYR:HA	74:t:23:LYS:HZ2	1.86	0.40
75:u:107:SER:HA	75:u:110:ARG:NE	2.36	0.40
76:v:134:ARG:HA	76:v:134:ARG:NE	2.36	0.40
2:1:46:LYS:O	2:1:48:ASP:N	2.54	0.40
8:7:307:ASP:OD1	8:7:307:ASP:N	2.46	0.40
11:AA:416:A:H2'	11:AA:417:A:C8	2.56	0.40
11:AA:590:G:N7	11:AA:591:G:C6	2.89	0.40
11:AA:644:G:H1'	11:AA:1153:A:H61	1.85	0.40
11:AA:797:U:C2	11:AA:798:G:C8	3.09	0.40
11:AA:1164:G:H2'	11:AA:1165:A:C8	2.56	0.40
11:AA:1346:G:C2	11:AA:1359:C:C2	3.10	0.40
11:AA:1576:G:H3'	11:AA:1577:G:H8	1.86	0.40
11:AA:1795:U:C4	56:b:51:ALA:HA	2.56	0.40
11:AA:1940:G:H5''	17:D:75:HIS:CE1	2.56	0.40
11:AA:2101:C:C2	11:AA:2102:U:C5	3.10	0.40
11:AA:2177:G:P	20:EE:54:ARG:HH21	2.43	0.40
11:AA:2284:C:N4	11:AA:2308:C:O4'	2.54	0.40
11:AA:2294:U:H5	26:H:71:LYS:HZ2	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2537:U:H2'	11:AA:2538:U:C6	2.57	0.40
11:AA:2629:U:O4	22:F:2:GLY:N	2.55	0.40
11:AA:2717:U:C2	11:AA:2718:U:C5	3.09	0.40
11:AA:2724:OMU:H6	11:AA:2724:OMU:O5'	2.21	0.40
11:AA:2780:A:H2'	11:AA:2781:U:C6	2.57	0.40
11:AA:2786:G:N2	11:AA:2787:G:H1'	2.36	0.40
11:AA:3201:C:H2'	11:AA:3202:G:H8	1.86	0.40
11:AA:3350:C:C2	11:AA:3353:G:N2	2.89	0.40
12:Aa:7:ASP:OD1	12:Aa:8:GLN:N	2.54	0.40
12:Aa:296:ILE:O	12:Aa:300:LEU:HG	2.20	0.40
12:Aa:468:THR:C	12:Aa:469:LEU:HD12	2.45	0.40
12:Aa:733:ILE:O	12:Aa:767:THR:HA	2.20	0.40
13:B:108:ASP:O	13:B:112:LEU:HG	2.21	0.40
14:BB:14:U:C4	14:BB:67:G:N2	2.89	0.40
14:BB:44:C:O2'	27:HH:152:ARG:HD2	2.22	0.40
14:BB:112:G:H2'	14:BB:113:C:C6	2.56	0.40
19:E:78:TRP:CD1	19:E:125:LYS:HB3	2.55	0.40
20:EE:103:PRO:HA	20:EE:162:ALA:O	2.21	0.40
20:EE:204:MET:HG2	20:EE:205:ASN:H	1.86	0.40
22:F:136:ARG:HG2	31:JJ:80:GLN:HG3	2.02	0.40
23:FF:37:ARG:HD3	23:FF:186:GLY:HA2	2.04	0.40
30:J:27:ARG:NH1	33:KK:52:TRP:HH2	2.18	0.40
31:JJ:210:PRO:HD3	31:JJ:243:MET:SD	2.61	0.40
36:M:73:LEU:HD23	36:M:111:LYS:O	2.21	0.40
39:NN:89:TYR:HE2	39:NN:167:TYR:HD1	1.69	0.40
40:O:10:ILE:HG21	40:O:68:TYR:CE2	2.56	0.40
40:O:13:LYS:HB3	40:O:100:ILE:HD13	2.03	0.40
40:O:59:TYR:HA	40:O:62:LEU:HD12	2.03	0.40
42:P:94:GLU:HG3	42:P:95:PRO:HD2	2.03	0.40
49:U:41:ARG:HA	49:U:44:VAL:HG12	2.03	0.40
51:W:24:THR:HG22	51:W:44:LYS:HB2	2.02	0.40
57:c:460:A:H2	62:h:27:TYR:CE2	2.40	0.40
57:c:536:C:H3'	67:m:175:ARG:CZ	2.51	0.40
57:c:567:A:OP2	80:z:67:ALA:HB1	2.21	0.40
57:c:590:C:H2'	57:c:591:A:C8	2.45	0.40
57:c:689:G:C6	57:c:690:G:O6	2.74	0.40
57:c:760:A:C2	57:c:791:A:C6	3.09	0.40
57:c:1094:G:H2'	57:c:1095:U:C6	2.55	0.40
57:c:1458:G:OP1	75:u:137:HIS:HA	2.21	0.40
57:c:1591:C:O2'	57:c:1591:C:O2	2.39	0.40
57:c:1633:A:H2	60:f:89:GLN:NE2	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:d:88:LYS:HG3	58:d:201:LEU:O	2.20	0.40
60:f:53:ILE:O	60:f:56:ILE:HG12	2.21	0.40
60:f:140:ARG:HG3	60:f:155:ALA:HB2	2.03	0.40
62:h:117:GLU:OE1	62:h:117:GLU:N	2.48	0.40
63:i:61:TYR:CE2	63:i:165:LEU:HB2	2.56	0.40
63:i:190:ILE:HA	63:i:193:THR:OG1	2.22	0.40
64:j:46:LYS:HB2	64:j:118:GLU:CD	2.46	0.40
65:k:11:GLN:OE1	65:k:12:ALA:HB2	2.21	0.40
65:k:67:LEU:HD12	65:k:70:PHE:HB2	2.03	0.40
69:o:5:LEU:HD23	69:o:5:LEU:O	2.21	0.40
69:o:85:VAL:HA	69:o:108:PRO:HA	2.03	0.40
72:r:79:HIS:HD2	72:r:97:TYR:CD2	2.34	0.40
72:r:126:VAL:C	72:r:127:ARG:HD3	2.46	0.40
74:t:75:GLU:HB3	74:t:78:ARG:NH2	2.36	0.40
1:0:104:SER:HB3	1:0:107:GLN:HG2	2.03	0.40
6:5:49:ASP:OD2	61:g:22:ASN:ND2	2.51	0.40
10:A:128:ARG:NH2	11:AA:1317:A:H4'	2.36	0.40
11:AA:5:G:N1	16:CC:155:A:C6	2.88	0.40
11:AA:193:C:H2'	11:AA:194:U:C6	2.56	0.40
11:AA:362:U:P	50:V:45:ARG:HH22	2.45	0.40
11:AA:693:A:H4'	25:GG:234:ASN:OD1	2.21	0.40
11:AA:727:G:O6	11:AA:742:G:O2'	2.23	0.40
11:AA:908:OMG:H5'	45:QQ:81:TYR:OH	2.21	0.40
11:AA:1021:G:C6	11:AA:1022:U:C4	3.10	0.40
11:AA:1186:G:OP2	43:PP:42:LYS:NZ	2.31	0.40
11:AA:1235:U:H4'	11:AA:1236:G:H5'	2.04	0.40
11:AA:1237:G:O6	11:AA:1251:A:C6	2.74	0.40
11:AA:1326:A:H2'	11:AA:1327:C:O4'	2.21	0.40
11:AA:1348:U:H4'	11:AA:1349:G:OP1	2.20	0.40
11:AA:1666:G:C6	11:AA:1784:G:N1	2.90	0.40
11:AA:1883:A:H2'	11:AA:1884:A:C8	2.53	0.40
11:AA:2277:C:OP1	54:Z:19:LYS:NZ	2.49	0.40
11:AA:2614:G:C6	11:AA:2615:G:C5	3.10	0.40
11:AA:3012:A:OP2	11:AA:3099:C:H5	2.05	0.40
11:AA:3164:C:H2'	11:AA:3165:A:H8	1.86	0.40
12:Aa:431:ILE:HD13	12:Aa:456:LEU:HD12	2.03	0.40
12:Aa:571:SER:HB3	12:Aa:589:LYS:HD2	2.02	0.40
12:Aa:699:DDE:HAB3	12:Aa:699:DDE:HAU3	1.78	0.40
12:Aa:704:GLN:O	12:Aa:708:THR:OG1	2.39	0.40
12:Aa:732:GLU:HA	12:Aa:768:VAL:O	2.22	0.40
16:CC:130:C:H2'	16:CC:131:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:D:115:ILE:HG23	17:D:119:LEU:HD23	2.04	0.40
20:EE:42:ARG:HG3	20:EE:89:TYR:HE1	1.85	0.40
22:F:82:ASN:ND2	38:N:16:ALA:HA	2.36	0.40
23:FF:68:HIS:CD2	23:FF:69:LYS:HG2	2.57	0.40
23:FF:119:TYR:OH	23:FF:129:ALA:N	2.54	0.40
25:GG:93:MET:HE3	25:GG:93:MET:HB3	1.94	0.40
26:H:25:CYS:SG	26:H:31:ALA:HB3	2.61	0.40
26:H:96:GLU:HG3	28:I:21:PHE:HZ	1.87	0.40
26:H:127:PRO:HA	26:H:130:ALA:HB3	2.03	0.40
33:KK:112:GLU:O	33:KK:116:VAL:HG22	2.22	0.40
37:MM:51:HIS:CD2	37:MM:168:SER:HB2	2.56	0.40
39:NN:16:LYS:HE3	39:NN:130:VAL:HG21	2.02	0.40
48:T:77:PRO:O	48:T:81:ARG:HG3	2.21	0.40
50:V:68:LYS:HG3	50:V:69:HIS:HD2	1.85	0.40
56:b:14:TYR:O	56:b:17:ARG:HG2	2.21	0.40
56:b:17:ARG:HG3	56:b:18:TYR:CD2	2.55	0.40
57:c:41:A:H2'	57:c:438:A:N7	2.35	0.40
57:c:250:C:C3'	57:c:251:A:C8	3.04	0.40
57:c:269:G:N7	64:j:186:ARG:NH2	2.68	0.40
57:c:389:G:C2	57:c:409:C:C2	3.09	0.40
57:c:871:G:C6	57:c:957:G:C6	3.10	0.40
57:c:915:A:C5	57:c:916:U:C4	3.08	0.40
57:c:1174:C:H2'	57:c:1175:U:C6	2.56	0.40
57:c:1209:C:H2'	57:c:1210:C:C6	2.55	0.40
57:c:1219:A:H2'	57:c:1220:C:O4'	2.21	0.40
57:c:1332:C:P	74:t:45:ARG:HH21	2.40	0.40
57:c:1385:G:C4	57:c:1386:G:C8	3.10	0.40
57:c:1523:G:H1'	76:v:79:LEU:HD13	2.03	0.40
57:c:1658:G:H2'	57:c:1659:A:C8	2.57	0.40
57:c:1686:C:O5'	57:c:1717:G:H1'	2.21	0.40
58:d:20:ALA:O	58:d:21:ASN:OD1	2.38	0.40
58:d:103:THR:O	58:d:106:SER:OG	2.40	0.40
58:d:143:VAL:N	58:d:157:ASP:OD2	2.53	0.40
66:l:12:SER:HB3	66:l:18:ARG:NH1	2.36	0.40
66:l:121:LEU:HD21	66:l:157:GLU:HB3	2.03	0.40
75:u:66:LEU:O	75:u:70:VAL:HG23	2.22	0.40
76:v:85:SER:C	76:v:87:GLY:H	2.27	0.40
1:0:40:LEU:O	1:0:44:LEU:HD23	2.21	0.40
7:6:10:ARG:HH21	80:z:70:LYS:CE	2.34	0.40
7:6:50:VAL:HG13	7:6:53:LYS:O	2.22	0.40
8:7:245:PHE:HD1	8:7:252:LEU:HD13	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:245:PHE:HE1	8:7:252:LEU:HD22	1.86	0.40
10:A:143:THR:CG2	10:A:150:GLU:HB2	2.51	0.40
11:AA:286:U:C2	11:AA:287:G:C8	3.10	0.40
11:AA:553:U:H2'	11:AA:554:A:O4'	2.21	0.40
11:AA:617:G:H2'	11:AA:618:C:H6	1.86	0.40
11:AA:677:A:H4'	11:AA:678:G:H5'	2.03	0.40
11:AA:1054:A:C6	11:AA:1055:A:C5	3.10	0.40
11:AA:1419:A:N7	25:GG:187:LEU:HD11	2.36	0.40
11:AA:1543:G:O2'	11:AA:2168:A:O2'	2.36	0.40
11:AA:1888:OMU:OP1	23:FF:247:ARG:NE	2.49	0.40
11:AA:1921:A:N6	11:AA:1929:G:H2'	2.36	0.40
11:AA:2500:A:O2'	11:AA:2501:U:P	2.79	0.40
11:AA:2565:U:H2'	11:AA:2566:C:H6	1.86	0.40
11:AA:2743:A:H2'	11:AA:2744:U:C6	2.56	0.40
11:AA:2787:G:C4	11:AA:2788:C:C5	3.09	0.40
11:AA:2931:C:H2'	11:AA:2932:U:O4'	2.21	0.40
11:AA:3008:A:H61	11:AA:3139:A:N6	2.19	0.40
11:AA:3024:A:H3'	11:AA:3025:C:H6	1.87	0.40
11:AA:3037:U:H5''	23:FF:348:ARG:NH2	2.36	0.40
11:AA:3050:U:H2'	11:AA:3051:U:H6	1.85	0.40
12:Aa:108:HIS:HB3	12:Aa:111:PHE:CD2	2.56	0.40
12:Aa:585:ARG:H	12:Aa:692:THR:HB	1.85	0.40
16:CC:94:C:H5''	50:V:76:ASN:ND2	2.36	0.40
18:DD:36:GLN:HA	18:DD:39:HIS:HD2	1.87	0.40
21:Ee:45:ASP:OD2	21:Ee:69:ALA:HB3	2.22	0.40
23:FF:211:GLN:OE1	23:FF:212:ASN:N	2.54	0.40
23:FF:332:ARG:HA	23:FF:332:ARG:HD3	1.95	0.40
23:FF:358:TRP:CD1	28:I:1:MET:HE1	2.57	0.40
23:FF:372:THR:HG22	23:FF:375:GLU:HG2	2.03	0.40
25:GG:8:VAL:HG21	25:GG:252:GLU:HG3	2.03	0.40
25:GG:22:LEU:HD11	25:GG:26:PHE:CD2	2.57	0.40
29:II:41:ILE:HG12	29:II:85:ILE:HB	2.03	0.40
34:L:84:ARG:CZ	40:O:62:LEU:HG	2.51	0.40
37:MM:150:GLU:CD	37:MM:153:ARG:HH21	2.27	0.40
39:NN:15:GLU:OE2	39:NN:130:VAL:HG12	2.21	0.40
40:O:42:ILE:HG22	40:O:67:VAL:HA	2.03	0.40
45:QQ:20:ARG:HA	45:QQ:23:GLN:HG3	2.03	0.40
45:QQ:23:GLN:NE2	45:QQ:24:ARG:HG2	2.36	0.40
45:QQ:27:VAL:HB	45:QQ:122:ASN:HD21	1.86	0.40
45:QQ:140:LYS:HD3	45:QQ:140:LYS:HA	1.89	0.40
57:c:253:A:P	62:h:133:LYS:HA	2.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:c:387:A:H5''	57:c:402:C:H5	1.85	0.40
57:c:464:A:H4'	57:c:527:A:C2	2.57	0.40
57:c:600:U:C2	57:c:601:A:C8	3.09	0.40
57:c:623:A:N6	57:c:970:A:OP1	2.47	0.40
57:c:972:G:C6	57:c:973:A:N7	2.89	0.40
57:c:987:G:OP2	57:c:987:G:H8	2.03	0.40
57:c:991:G:O2'	57:c:992:A:H5''	2.22	0.40
57:c:1351:G:H21	57:c:1375:A:C3'	2.33	0.40
57:c:1467:C:O2'	76:v:88:VAL:O	2.27	0.40
59:e:138:PHE:HD2	59:e:213:ARG:NH1	2.19	0.40
62:h:101:LEU:HD23	62:h:101:LEU:HA	1.94	0.40
63:i:128:ASN:O	63:i:131:GLN:N	2.54	0.40
73:s:59:LYS:HG2	73:s:60:PHE:CZ	2.56	0.40
74:t:22:PRO:HD2	74:t:23:LYS:HD2	2.02	0.40
75:u:14:ILE:HD12	75:u:14:ILE:H	1.86	0.40
78:x:20:THR:HG22	78:x:22:ARG:HG3	2.02	0.40
79:y:86:ILE:O	79:y:90:THR:HG23	2.22	0.40
1:0:100:VAL:HG13	1:0:102:LYS:HG3	2.04	0.40
11:AA:7:C:H2'	11:AA:8:C:C6	2.57	0.40
11:AA:509:U:O4	11:AA:582:G:O6	2.40	0.40
11:AA:562:C:H2'	11:AA:563:U:C6	2.57	0.40
11:AA:1013:G:H2'	11:AA:1014:U:H6	1.86	0.40
11:AA:1255:C:H5''	21:Ee:152:ILE:HG21	2.04	0.40
11:AA:1459:C:H2'	11:AA:1460:A:C8	2.57	0.40
11:AA:1481:A:O2'	11:AA:1859:A:OP2	2.33	0.40
11:AA:1650:G:C6	11:AA:1651:U:C4	3.10	0.40
11:AA:1703:U:H1'	11:AA:1743:G:C2	2.57	0.40
11:AA:1917:C:H2'	11:AA:1918:C:H6	1.87	0.40
11:AA:1944:U:C2	11:AA:2105:G:C2	3.10	0.40
11:AA:2294:U:O2'	11:AA:2296:A:N7	2.44	0.40
11:AA:2356:A:H5'	13:B:138:LYS:CE	2.51	0.40
11:AA:2445:A:H1'	11:AA:2503:G:N2	2.37	0.40
11:AA:2653:C:OP1	55:a:89:LYS:HB2	2.22	0.40
11:AA:2714:G:H5'	11:AA:2716:U:C6	2.56	0.40
11:AA:2724:OMU:H4'	22:F:54:HIS:ND1	2.36	0.40
11:AA:2794:G:OP1	55:a:61:LYS:NZ	2.54	0.40
11:AA:2829:U:N3	11:AA:2830:G:N7	2.69	0.40
11:AA:3069:G:C6	11:AA:3070:A:N7	2.90	0.40
11:AA:3322:A:H2'	11:AA:3323:A:C8	2.57	0.40
11:AA:3339:A:N1	11:AA:3366:G:C6	2.90	0.40
12:Aa:413:ILE:H	12:Aa:413:ILE:HD12	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:B:31:GLU:HA	13:B:34:GLN:OE1	2.21	0.40
16:CC:133:G:H2'	16:CC:134:G:C8	2.56	0.40
18:DD:19:LEU:HD22	18:DD:70:LEU:HD13	2.03	0.40
22:F:40:VAL:HG23	22:F:97:LYS:O	2.22	0.40
23:FF:68:HIS:CE1	23:FF:69:LYS:HG2	2.57	0.40
23:FF:108:GLU:HG2	23:FF:109:HIS:CD2	2.57	0.40
25:GG:118:LYS:O	25:GG:122:THR:OG1	2.23	0.40
31:JJ:158:LYS:C	31:JJ:160:ARG:N	2.78	0.40
31:JJ:195:PHE:O	31:JJ:199:ASN:N	2.37	0.40
34:L:76:ASN:OD1	34:L:77:TYR:N	2.55	0.40
34:L:117:ALA:O	34:L:120:GLU:HG3	2.21	0.40
42:P:85:ALA:O	42:P:86:LYS:HG2	2.21	0.40
51:W:70:PRO:HA	51:W:71:PRO:HD3	1.97	0.40
55:a:97:LYS:O	55:a:99:GLN:OE1	2.39	0.40
57:c:79:C:H3'	57:c:80:A:H5'	2.03	0.40
57:c:245:U:H3	57:c:248:U:P	2.44	0.40
57:c:247:A:C5'	69:o:39:GLY:HA2	2.50	0.40
57:c:249:U:H4'	57:c:250:C:OP2	2.22	0.40
57:c:320:U:C2'	57:c:321:C:H2'	2.52	0.40
57:c:333:A:C6	57:c:334:G:C6	3.10	0.40
57:c:759:U:C2	57:c:760:A:C8	3.10	0.40
57:c:865:A:C6	57:c:866:G:C4	3.09	0.40
57:c:884:A:H2'	57:c:885:G:H8	1.84	0.40
57:c:1134:C:H2'	57:c:1135:U:C6	2.57	0.40
57:c:1146:G:C2	57:c:1147:A:C4	3.10	0.40
57:c:1206:U:C5	57:c:1207:C:C6	3.10	0.40
57:c:1211:A:O2'	72:r:99:GLY:O	2.32	0.40
57:c:1328:G:H3'	57:c:1329:A:C8	2.56	0.40
57:c:1332:C:H2'	57:c:1333:C:C6	2.55	0.40
57:c:1344:A:O3'	77:w:54:GLY:HA3	2.22	0.40
57:c:1551:U:H6	57:c:1551:U:O5'	2.04	0.40
59:e:133:TYR:CD2	59:e:181:LEU:HD22	2.56	0.40
62:h:59:ARG:HG3	62:h:60:GLU:H	1.85	0.40
63:i:223:SER:HA	71:q:107:ARG:NH1	2.35	0.40
69:o:36:LYS:HG3	69:o:60:PHE:O	2.21	0.40
69:o:39:GLY:O	69:o:40:LEU:HB2	2.21	0.40
71:q:21:ALA:O	71:q:95:GLY:N	2.35	0.40
71:q:46:MET:O	71:q:49:LYS:NZ	2.54	0.40
74:t:79:GLU:HG3	74:t:80:ARG:HH21	1.87	0.40
80:z:116:ASP:OD1	80:z:116:ASP:N	2.41	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
1	0	132/135 (98%)	126 (96%)	6 (4%)	0	100	100
2	1	68/108 (63%)	61 (90%)	7 (10%)	0	100	100
3	2	95/119 (80%)	90 (95%)	5 (5%)	0	100	100
4	3	79/82 (96%)	73 (92%)	6 (8%)	0	100	100
5	4	61/67 (91%)	59 (97%)	2 (3%)	0	100	100
6	5	47/56 (84%)	45 (96%)	2 (4%)	0	100	100
7	6	51/63 (81%)	48 (94%)	3 (6%)	0	100	100
8	7	316/319 (99%)	298 (94%)	18 (6%)	0	100	100
9	8	32/152 (21%)	19 (59%)	13 (41%)	0	100	100
10	A	195/199 (98%)	193 (99%)	2 (1%)	0	100	100
12	Aa	811/842 (96%)	794 (98%)	17 (2%)	0	100	100
13	B	152/184 (83%)	152 (100%)	0	0	100	100
15	C	183/186 (98%)	182 (100%)	1 (0%)	0	100	100
17	D	174/189 (92%)	170 (98%)	4 (2%)	0	100	100
18	DD	195/312 (62%)	192 (98%)	3 (2%)	0	100	100
19	E	170/172 (99%)	166 (98%)	4 (2%)	0	100	100
20	EE	250/254 (98%)	248 (99%)	2 (1%)	0	100	100
21	Ee	156/165 (94%)	148 (95%)	8 (5%)	0	100	100
22	F	157/160 (98%)	155 (99%)	2 (1%)	0	100	100
23	FF	384/387 (99%)	373 (97%)	11 (3%)	0	100	100
24	G	95/121 (78%)	95 (100%)	0	0	100	100
25	GG	359/362 (99%)	350 (98%)	9 (2%)	0	100	100
26	H	127/137 (93%)	127 (100%)	0	0	100	100
27	HH	294/297 (99%)	285 (97%)	9 (3%)	0	100	100
28	I	61/155 (39%)	61 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	II	151/176 (86%)	150 (99%)	1 (1%)	0	100	100
30	J	118/142 (83%)	114 (97%)	4 (3%)	0	100	100
31	JJ	220/244 (90%)	212 (96%)	7 (3%)	1 (0%)	25	58
32	K	124/127 (98%)	123 (99%)	1 (1%)	0	100	100
33	KK	231/256 (90%)	226 (98%)	5 (2%)	0	100	100
34	L	133/136 (98%)	129 (97%)	3 (2%)	1 (1%)	16	49
35	LL	189/191 (99%)	184 (97%)	5 (3%)	0	100	100
36	M	146/149 (98%)	141 (97%)	5 (3%)	0	100	100
37	MM	213/221 (96%)	207 (97%)	6 (3%)	0	100	100
38	N	56/59 (95%)	54 (96%)	2 (4%)	0	100	100
39	NN	167/174 (96%)	159 (95%)	8 (5%)	0	100	100
40	O	95/105 (90%)	95 (100%)	0	0	100	100
41	OO	191/199 (96%)	180 (94%)	10 (5%)	1 (0%)	25	58
42	P	107/113 (95%)	105 (98%)	2 (2%)	0	100	100
43	PP	134/138 (97%)	131 (98%)	3 (2%)	0	100	100
44	Q	125/130 (96%)	123 (98%)	2 (2%)	0	100	100
45	QQ	201/204 (98%)	196 (98%)	5 (2%)	0	100	100
46	R	104/107 (97%)	103 (99%)	1 (1%)	0	100	100
47	S	107/121 (88%)	107 (100%)	0	0	100	100
48	T	117/120 (98%)	115 (98%)	2 (2%)	0	100	100
49	U	97/100 (97%)	91 (94%)	6 (6%)	0	100	100
50	V	82/88 (93%)	79 (96%)	2 (2%)	1 (1%)	11	40
51	W	75/78 (96%)	72 (96%)	3 (4%)	0	100	100
52	X	48/51 (94%)	47 (98%)	1 (2%)	0	100	100
53	Y	50/128 (39%)	47 (94%)	2 (4%)	1 (2%)	6	32
54	Z	23/25 (92%)	23 (100%)	0	0	100	100
55	a	100/106 (94%)	97 (97%)	3 (3%)	0	100	100
56	b	89/92 (97%)	88 (99%)	1 (1%)	0	100	100
58	d	204/252 (81%)	193 (95%)	11 (5%)	0	100	100
59	e	210/255 (82%)	196 (93%)	14 (7%)	0	100	100
60	f	215/254 (85%)	201 (94%)	14 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
61	g	177/240 (74%)	170 (96%)	7 (4%)	0	100	100
62	h	256/261 (98%)	244 (95%)	12 (5%)	0	100	100
63	i	195/225 (87%)	186 (95%)	9 (5%)	0	100	100
64	j	217/236 (92%)	217 (100%)	0	0	100	100
65	k	182/190 (96%)	172 (94%)	10 (6%)	0	100	100
66	l	180/200 (90%)	169 (94%)	11 (6%)	0	100	100
67	m	183/197 (93%)	175 (96%)	8 (4%)	0	100	100
68	n	29/105 (28%)	29 (100%)	0	0	100	100
69	o	140/156 (90%)	133 (95%)	7 (5%)	0	100	100
70	p	148/151 (98%)	145 (98%)	3 (2%)	0	100	100
71	q	125/137 (91%)	119 (95%)	6 (5%)	0	100	100
72	r	85/142 (60%)	80 (94%)	5 (6%)	0	100	100
73	s	134/143 (94%)	126 (94%)	8 (6%)	0	100	100
74	t	119/136 (88%)	114 (96%)	5 (4%)	0	100	100
75	u	143/146 (98%)	134 (94%)	9 (6%)	0	100	100
76	v	141/144 (98%)	137 (97%)	4 (3%)	0	100	100
77	w	98/121 (81%)	98 (100%)	0	0	100	100
78	x	85/87 (98%)	81 (95%)	4 (5%)	0	100	100
79	y	127/130 (98%)	125 (98%)	2 (2%)	0	100	100
80	z	142/145 (98%)	132 (93%)	10 (7%)	0	100	100
All	All	11672/13056 (89%)	11284 (97%)	383 (3%)	5 (0%)	100	100

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
31	JJ	159	GLN
50	V	65	ARG
34	L	102	GLU
53	Y	105	PRO
41	OO	63	VAL

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	
1	0	112/113 (99%)	112 (100%)	0	100	100
2	1	61/89 (68%)	61 (100%)	0	100	100
3	2	83/101 (82%)	83 (100%)	0	100	100
4	3	70/71 (99%)	70 (100%)	0	100	100
5	4	56/60 (93%)	56 (100%)	0	100	100
6	5	43/49 (88%)	43 (100%)	0	100	100
7	6	46/54 (85%)	46 (100%)	0	100	100
8	7	259/262 (99%)	259 (100%)	0	100	100
9	8	30/135 (22%)	30 (100%)	0	100	100
10	A	160/162 (99%)	159 (99%)	1 (1%)	84	88
12	Aa	694/714 (97%)	694 (100%)	0	100	100
13	B	125/146 (86%)	125 (100%)	0	100	100
15	C	150/151 (99%)	150 (100%)	0	100	100
17	D	143/154 (93%)	143 (100%)	0	100	100
18	DD	167/254 (66%)	167 (100%)	0	100	100
19	E	156/156 (100%)	156 (100%)	0	100	100
20	EE	193/196 (98%)	193 (100%)	0	100	100
21	Ee	129/136 (95%)	129 (100%)	0	100	100
22	F	136/137 (99%)	136 (100%)	0	100	100
23	FF	320/323 (99%)	319 (100%)	1 (0%)	91	92
24	G	84/107 (78%)	84 (100%)	0	100	100
25	GG	288/289 (100%)	287 (100%)	1 (0%)	91	92
26	H	101/105 (96%)	101 (100%)	0	100	100
27	HH	244/245 (100%)	244 (100%)	0	100	100
28	I	55/129 (43%)	55 (100%)	0	100	100
29	II	133/153 (87%)	133 (100%)	0	100	100
30	J	104/118 (88%)	104 (100%)	0	100	100
31	JJ	186/205 (91%)	186 (100%)	0	100	100
32	K	109/110 (99%)	109 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	KK	187/208 (90%)	187 (100%)	0	100	100
34	L	115/116 (99%)	115 (100%)	0	100	100
35	LL	171/171 (100%)	171 (100%)	0	100	100
36	M	118/119 (99%)	118 (100%)	0	100	100
37	MM	184/187 (98%)	184 (100%)	0	100	100
38	N	46/47 (98%)	46 (100%)	0	100	100
39	NN	147/150 (98%)	147 (100%)	0	100	100
40	O	81/88 (92%)	81 (100%)	0	100	100
41	OO	154/159 (97%)	154 (100%)	0	100	100
42	P	94/97 (97%)	94 (100%)	0	100	100
43	PP	107/109 (98%)	107 (100%)	0	100	100
44	Q	109/111 (98%)	109 (100%)	0	100	100
45	QQ	175/176 (99%)	175 (100%)	0	100	100
46	R	90/91 (99%)	90 (100%)	0	100	100
47	S	94/103 (91%)	94 (100%)	0	100	100
48	T	104/105 (99%)	103 (99%)	1 (1%)	73	80
49	U	81/82 (99%)	81 (100%)	0	100	100
50	V	69/71 (97%)	69 (100%)	0	100	100
51	W	68/69 (99%)	68 (100%)	0	100	100
52	X	45/46 (98%)	45 (100%)	0	100	100
53	Y	47/116 (40%)	47 (100%)	0	100	100
54	Z	23/23 (100%)	23 (100%)	0	100	100
55	a	87/91 (96%)	87 (100%)	0	100	100
56	b	71/72 (99%)	71 (100%)	0	100	100
58	d	165/210 (79%)	165 (100%)	0	100	100
59	e	189/224 (84%)	189 (100%)	0	100	100
60	f	176/205 (86%)	176 (100%)	0	100	100
61	g	145/195 (74%)	145 (100%)	0	100	100
62	h	220/222 (99%)	220 (100%)	0	100	100
63	i	172/191 (90%)	172 (100%)	0	100	100
64	j	188/201 (94%)	188 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
65	k	165/170 (97%)	165 (100%)	0	100	100
66	l	146/161 (91%)	146 (100%)	0	100	100
67	m	158/166 (95%)	158 (100%)	0	100	100
68	n	32/98 (33%)	32 (100%)	0	100	100
69	o	127/137 (93%)	127 (100%)	0	100	100
70	p	127/128 (99%)	127 (100%)	0	100	100
71	q	81/105 (77%)	81 (100%)	0	100	100
72	r	77/118 (65%)	77 (100%)	0	100	100
73	s	113/119 (95%)	113 (100%)	0	100	100
74	t	105/124 (85%)	105 (100%)	0	100	100
75	u	128/129 (99%)	128 (100%)	0	100	100
76	v	115/116 (99%)	115 (100%)	0	100	100
77	w	94/114 (82%)	94 (100%)	0	100	100
78	x	74/74 (100%)	74 (100%)	0	100	100
79	y	110/111 (99%)	110 (100%)	0	100	100
80	z	119/120 (99%)	119 (100%)	0	100	100
All	All	9930/10969 (90%)	9926 (100%)	4 (0%)	100	100

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
10	A	14	HIS
23	FF	104	THR
25	GG	43	ASN
48	T	108	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (106) such sidechains are listed below:

Mol	Chain	Res	Type
2	1	38	HIS
3	2	43	ASN
4	3	26	GLN
5	4	27	GLN
8	7	64	HIS
8	7	147	HIS

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Mol	Chain	Res	Type
8	7	187	GLN
8	7	224	ASN
10	A	122	GLN
12	Aa	41	GLN
12	Aa	476	HIS
12	Aa	644	ASN
12	Aa	800	HIS
13	B	137	ASN
15	C	15	HIS
15	C	45	ASN
15	C	58	ASN
17	D	58	HIS
17	D	75	HIS
17	D	150	GLN
18	DD	37	GLN
18	DD	56	ASN
20	EE	211	HIS
21	Ee	100	HIS
22	F	54	HIS
23	FF	109	HIS
23	FF	165	GLN
23	FF	212	ASN
24	G	101	ASN
25	GG	59	GLN
25	GG	307	GLN
25	GG	311	HIS
25	GG	316	ASN
26	H	98	ASN
29	II	172	HIS
30	J	85	GLN
31	JJ	93	ASN
31	JJ	104	GLN
31	JJ	166	ASN
31	JJ	194	HIS
31	JJ	197	GLN
31	JJ	209	ASN
33	KK	138	HIS
33	KK	240	ASN
34	L	78	ASN
35	LL	64	HIS
35	LL	77	ASN
35	LL	157	ASN

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Mol	Chain	Res	Type
35	LL	183	HIS
36	M	62	HIS
36	M	64	GLN
37	MM	59	GLN
37	MM	113	GLN
37	MM	208	ASN
39	NN	47	GLN
41	OO	6	ASN
41	OO	12	ASN
41	OO	28	GLN
41	OO	162	ASN
42	P	17	HIS
44	Q	31	ASN
44	Q	49	ASN
44	Q	88	HIS
46	R	17	GLN
46	R	24	ASN
46	R	26	ASN
47	S	33	GLN
47	S	52	GLN
47	S	108	GLN
48	T	99	GLN
48	T	108	GLN
49	U	12	ASN
56	b	33	GLN
58	d	23	HIS
58	d	33	GLN
61	g	74	GLN
61	g	111	ASN
61	g	179	GLN
62	h	216	ASN
62	h	259	GLN
63	i	128	ASN
63	i	131	GLN
63	i	170	GLN
63	i	200	ASN
64	j	199	GLN
65	k	110	GLN
66	l	52	ASN
66	l	64	ASN
68	n	58	GLN
70	p	69	ASN

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Mol	Chain	Res	Type
70	p	78	ASN
71	q	24	ASN
71	q	80	HIS
72	r	82	ASN
73	s	77	GLN
73	s	139	GLN
74	t	48	ASN
75	u	6	GLN
75	u	8	GLN
76	v	16	ASN
76	v	43	ASN
76	v	101	ASN
79	y	16	ASN
79	y	120	HIS
80	z	18	HIS
80	z	99	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
11	AA	3193/3396 (94%)	636 (19%)	21 (0%)
14	BB	120/121 (99%)	18 (15%)	1 (0%)
16	CC	157/158 (99%)	28 (17%)	1 (0%)
57	c	1598/1800 (88%)	472 (29%)	0
All	All	5068/5475 (92%)	1154 (22%)	23 (0%)

All (1154) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
11	AA	4	U
11	AA	6	A
11	AA	12	A
11	AA	14	U
11	AA	26	A
11	AA	40	A
11	AA	43	A
11	AA	49	A
11	AA	60	A
11	AA	63	A
11	AA	65	A
11	AA	66	A

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Mol	Chain	Res	Type
11	AA	73	C
11	AA	77	A
11	AA	85	A
11	AA	92	G
11	AA	96	G
11	AA	109	A
11	AA	110	G
11	AA	111	C
11	AA	113	C
11	AA	116	A
11	AA	118	U
11	AA	120	G
11	AA	122	A
11	AA	135	C
11	AA	136	G
11	AA	142	C
11	AA	150	A
11	AA	156	G
11	AA	157	A
11	AA	162	G
11	AA	165	A
11	AA	170	G
11	AA	172	G
11	AA	173	G
11	AA	182	U
11	AA	190	U
11	AA	191	U
11	AA	200	C
11	AA	212	G
11	AA	219	A
11	AA	220	G
11	AA	227	G
11	AA	243	G
11	AA	247	C
11	AA	248	U
11	AA	249	U
11	AA	252	U
11	AA	253	A
11	AA	263	C
11	AA	266	A
11	AA	268	A
11	AA	269	G

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Mol	Chain	Res	Type
11	AA	286	U
11	AA	295	A
11	AA	305	U
11	AA	315	C
11	AA	321	C
11	AA	329	U
11	AA	346	C
11	AA	360	G
11	AA	362	U
11	AA	374	A
11	AA	376	G
11	AA	397	A
11	AA	398	A
11	AA	399	A
11	AA	401	U
11	AA	402	A
11	AA	403	C
11	AA	420	G
11	AA	421	G
11	AA	422	A
11	AA	502	U
11	AA	503	C
11	AA	519	A
11	AA	520	U
11	AA	521	A
11	AA	532	A
11	AA	534	U
11	AA	543	C
11	AA	552	G
11	AA	556	U
11	AA	557	A
11	AA	558	U
11	AA	559	A
11	AA	589	A
11	AA	592	A
11	AA	597	G
11	AA	601	U
11	AA	602	A
11	AA	603	A
11	AA	604	G
11	AA	607	A
11	AA	611	A

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Mol	Chain	Res	Type
11	AA	612	U
11	AA	620	U
11	AA	621	A
11	AA	636	C
11	AA	637	C
11	AA	638	C
11	AA	645	1MA
11	AA	649	A2M
11	AA	655	C
11	AA	660	A
11	AA	662	U
11	AA	667	C
11	AA	677	A
11	AA	678	G
11	AA	681	U
11	AA	690	A
11	AA	691	A
11	AA	705	A
11	AA	719	U
11	AA	737	G
11	AA	750	G
11	AA	758	C
11	AA	761	A
11	AA	766	U
11	AA	767	U
11	AA	780	A
11	AA	781	G
11	AA	784	A
11	AA	785	G
11	AA	786	A
11	AA	790	U
11	AA	799	G
11	AA	806	A
11	AA	807	A2M
11	AA	816	A
11	AA	817	A2M
11	AA	826	G
11	AA	830	A
11	AA	835	G
11	AA	849	C
11	AA	857	G
11	AA	861	C

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Mol	Chain	Res	Type
11	AA	874	U
11	AA	875	G
11	AA	879	U
11	AA	880	G
11	AA	890	C
11	AA	896	A
11	AA	907	G
11	AA	908	OMG
11	AA	910	G
11	AA	914	A
11	AA	916	G
11	AA	917	A
11	AA	921	A
11	AA	923	C
11	AA	924	G
11	AA	926	A
11	AA	937	G
11	AA	939	U
11	AA	943	U
11	AA	944	C
11	AA	953	G
11	AA	959	C
11	AA	960	U
11	AA	961	C
11	AA	962	A
11	AA	974	G
11	AA	979	U
11	AA	980	A
11	AA	981	U
11	AA	984	G
11	AA	988	U
11	AA	1000	C
11	AA	1006	A
11	AA	1013	G
11	AA	1015	U
11	AA	1017	C
11	AA	1018	G
11	AA	1025	A
11	AA	1026	A
11	AA	1027	A
11	AA	1028	U
11	AA	1034	U

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Mol	Chain	Res	Type
11	AA	1036	A
11	AA	1037	C
11	AA	1038	C
11	AA	1045	C
11	AA	1047	A
11	AA	1064	A
11	AA	1072	G
11	AA	1075	A
11	AA	1081	U
11	AA	1087	G
11	AA	1096	U
11	AA	1097	G
11	AA	1098	A
11	AA	1103	A
11	AA	1111	U
11	AA	1117	G
11	AA	1131	G
11	AA	1140	G
11	AA	1143	A
11	AA	1155	C
11	AA	1159	A
11	AA	1177	G
11	AA	1178	G
11	AA	1179	A
11	AA	1180	A
11	AA	1181	U
11	AA	1182	A
11	AA	1191	U
11	AA	1193	A
11	AA	1196	C
11	AA	1201	C
11	AA	1208	U
11	AA	1209	G
11	AA	1221	A
11	AA	1222	G
11	AA	1235	U
11	AA	1236	G
11	AA	1237	G
11	AA	1240	A
11	AA	1244	A
11	AA	1245	A
11	AA	1246	G

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Mol	Chain	Res	Type
11	AA	1253	U
11	AA	1258	U
11	AA	1260	A
11	AA	1263	A
11	AA	1265	U
11	AA	1272	C
11	AA	1286	A
11	AA	1287	A
11	AA	1294	A
11	AA	1302	A
11	AA	1307	G
11	AA	1308	A
11	AA	1325	U
11	AA	1330	A
11	AA	1332	A
11	AA	1345	G
11	AA	1348	U
11	AA	1349	G
11	AA	1352	A
11	AA	1355	A
11	AA	1357	G
11	AA	1363	A
11	AA	1366	A
11	AA	1367	G
11	AA	1386	A
11	AA	1392	G
11	AA	1399	A
11	AA	1400	G
11	AA	1408	G
11	AA	1417	G
11	AA	1418	A
11	AA	1425	U
11	AA	1434	G
11	AA	1436	U
11	AA	1437	OMC
11	AA	1443	G
11	AA	1446	A
11	AA	1450	OMG
11	AA	1455	U
11	AA	1469	C
11	AA	1483	G
11	AA	1484	U

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Mol	Chain	Res	Type
11	AA	1487	G
11	AA	1495	U
11	AA	1508	C
11	AA	1510	G
11	AA	1514	G
11	AA	1523	U
11	AA	1525	G
11	AA	1527	C
11	AA	1528	G
11	AA	1539	A
11	AA	1542	G
11	AA	1556	C
11	AA	1558	A
11	AA	1560	G
11	AA	1561	G
11	AA	1562	C
11	AA	1563	C
11	AA	1568	U
11	AA	1569	U
11	AA	1570	U
11	AA	1571	A
11	AA	1573	G
11	AA	1575	A
11	AA	1578	C
11	AA	1579	C
11	AA	1581	C
11	AA	1582	C
11	AA	1583	A
11	AA	1587	A
11	AA	1589	A
11	AA	1593	A
11	AA	1605	A
11	AA	1621	A
11	AA	1629	U
11	AA	1630	U
11	AA	1631	C
11	AA	1637	A
11	AA	1638	A
11	AA	1642	A
11	AA	1643	A
11	AA	1645	U
11	AA	1647	A

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Mol	Chain	Res	Type
11	AA	1657	C
11	AA	1683	A
11	AA	1688	U
11	AA	1694	U
11	AA	1724	U
11	AA	1741	A
11	AA	1750	A
11	AA	1751	G
11	AA	1756	C
11	AA	1759	C
11	AA	1762	C
11	AA	1763	U
11	AA	1765	U
11	AA	1767	C
11	AA	1769	G
11	AA	1773	C
11	AA	1797	A
11	AA	1808	G
11	AA	1814	A
11	AA	1815	U
11	AA	1816	A
11	AA	1817	G
11	AA	1820	U
11	AA	1821	U
11	AA	1835	A
11	AA	1842	A
11	AA	1848	G
11	AA	1850	A
11	AA	1854	C
11	AA	1866	C
11	AA	1878	G
11	AA	1879	A
11	AA	1880	U
11	AA	1893	A
11	AA	1905	G
11	AA	1906	G
11	AA	1912	U
11	AA	1935	G
11	AA	1943	C
11	AA	1948	G
11	AA	2101	C
11	AA	2102	U

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Mol	Chain	Res	Type
11	AA	2111	G
11	AA	2112	U
11	AA	2114	C
11	AA	2122	G
11	AA	2131	A
11	AA	2132	C
11	AA	2155	G
11	AA	2158	A
11	AA	2165	G
11	AA	2167	A
11	AA	2168	A
11	AA	2169	G
11	AA	2170	U
11	AA	2171	G
11	AA	2176	U
11	AA	2188	A
11	AA	2194	G
11	AA	2205	U
11	AA	2206	G
11	AA	2208	A
11	AA	2210	G
11	AA	2213	A
11	AA	2223	A
11	AA	2225	U
11	AA	2244	A
11	AA	2249	G
11	AA	2256	A2M
11	AA	2257	C
11	AA	2258	U
11	AA	2262	A
11	AA	2265	C
11	AA	2272	G
11	AA	2273	G
11	AA	2280	A2M
11	AA	2281	A2M
11	AA	2282	U
11	AA	2286	U
11	AA	2297	U
11	AA	2298	U
11	AA	2307	G
11	AA	2309	A
11	AA	2313	A

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Mol	Chain	Res	Type
11	AA	2315	G
11	AA	2320	A
11	AA	2336	U
11	AA	2337	OMC
11	AA	2355	G
11	AA	2363	A
11	AA	2373	A
11	AA	2374	C
11	AA	2375	G
11	AA	2383	C
11	AA	2388	U
11	AA	2393	G
11	AA	2397	A
11	AA	2402	A
11	AA	2403	G
11	AA	2404	A
11	AA	2411	U
11	AA	2418	G
11	AA	2419	A
11	AA	2434	U
11	AA	2435	G
11	AA	2440	G
11	AA	2447	A
11	AA	2448	G
11	AA	2453	U
11	AA	2454	G
11	AA	2458	A
11	AA	2459	A
11	AA	2460	U
11	AA	2461	A
11	AA	2462	A
11	AA	2463	G
11	AA	2464	U
11	AA	2465	G
11	AA	2466	G
11	AA	2468	A
11	AA	2470	C
11	AA	2472	U
11	AA	2474	G
11	AA	2475	G
11	AA	2476	C
11	AA	2477	G

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Mol	Chain	Res	Type
11	AA	2478	C
11	AA	2480	A
11	AA	2481	G
11	AA	2486	A
11	AA	2487	U
11	AA	2488	A
11	AA	2489	C
11	AA	2490	C
11	AA	2491	A
11	AA	2492	C
11	AA	2494	A
11	AA	2496	C
11	AA	2501	U
11	AA	2502	A
11	AA	2503	G
11	AA	2511	A
11	AA	2514	U
11	AA	2515	A
11	AA	2522	G
11	AA	2523	A
11	AA	2524	A
11	AA	2525	G
11	AA	2526	C
11	AA	2529	A
11	AA	2532	U
11	AA	2539	C
11	AA	2540	A
11	AA	2541	U
11	AA	2542	U
11	AA	2547	A
11	AA	2549	G
11	AA	2552	C
11	AA	2554	A
11	AA	2555	G
11	AA	2560	C
11	AA	2561	A
11	AA	2569	A
11	AA	2570	U
11	AA	2571	U
11	AA	2572	C
11	AA	2573	G
11	AA	2585	G

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Mol	Chain	Res	Type
11	AA	2587	U
11	AA	2593	A
11	AA	2594	C
11	AA	2602	G
11	AA	2606	G
11	AA	2607	G
11	AA	2614	G
11	AA	2617	U
11	AA	2648	G
11	AA	2652	U
11	AA	2656	A
11	AA	2657	A
11	AA	2672	G
11	AA	2674	A
11	AA	2677	G
11	AA	2678	A
11	AA	2680	A
11	AA	2681	U
11	AA	2689	A
11	AA	2691	A
11	AA	2696	A
11	AA	2704	A
11	AA	2713	U
11	AA	2714	G
11	AA	2728	G
11	AA	2729	OMU
11	AA	2737	C
11	AA	2747	A
11	AA	2753	G
11	AA	2762	A
11	AA	2772	C
11	AA	2777	G
11	AA	2780	A
11	AA	2786	G
11	AA	2795	U
11	AA	2796	G
11	AA	2799	A
11	AA	2800	G
11	AA	2801	A
11	AA	2802	A
11	AA	2803	A
11	AA	2804	A

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Mol	Chain	Res	Type
11	AA	2808	A
11	AA	2810	C
11	AA	2817	A
11	AA	2834	G
11	AA	2842	U
11	AA	2844	C
11	AA	2845	A
11	AA	2858	U
11	AA	2860	U
11	AA	2861	U
11	AA	2867	C
11	AA	2872	A
11	AA	2875	U
11	AA	2887	A
11	AA	2894	C
11	AA	2899	C
11	AA	2900	A
11	AA	2918	G
11	AA	2922	OMG
11	AA	2923	U
11	AA	2934	A
11	AA	2935	U
11	AA	2936	A
11	AA	2938	G
11	AA	2941	A
11	AA	2945	G
11	AA	2946	A2M
11	AA	2947	G
11	AA	2951	G
11	AA	2966	G
11	AA	2971	A
11	AA	2972	G
11	AA	2983	C
11	AA	2990	G
11	AA	2996	U
11	AA	2997	G
11	AA	3003	G
11	AA	3005	A
11	AA	3012	A
11	AA	3023	U
11	AA	3030	G
11	AA	3055	U

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Mol	Chain	Res	Type
11	AA	3056	U
11	AA	3059	G
11	AA	3069	G
11	AA	3074	G
11	AA	3078	U
11	AA	3080	G
11	AA	3091	A
11	AA	3092	C
11	AA	3093	C
11	AA	3094	A
11	AA	3101	G
11	AA	3104	U
11	AA	3109	G
11	AA	3116	G
11	AA	3117	C
11	AA	3122	A
11	AA	3130	A
11	AA	3131	U
11	AA	3139	A
11	AA	3142	A
11	AA	3143	C
11	AA	3151	U
11	AA	3153	U
11	AA	3154	C
11	AA	3155	U
11	AA	3156	U
11	AA	3157	U
11	AA	3168	A
11	AA	3170	A
11	AA	3172	A
11	AA	3173	G
11	AA	3176	G
11	AA	3179	U
11	AA	3181	C
11	AA	3186	A
11	AA	3187	A
11	AA	3196	U
11	AA	3205	G
11	AA	3207	U
11	AA	3217	C
11	AA	3218	A
11	AA	3219	G

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Mol	Chain	Res	Type
11	AA	3230	G
11	AA	3238	G
11	AA	3244	A
11	AA	3246	G
11	AA	3247	G
11	AA	3260	G
11	AA	3263	G
11	AA	3273	A
11	AA	3275	U
11	AA	3276	G
11	AA	3277	U
11	AA	3281	U
11	AA	3288	G
11	AA	3294	A
11	AA	3304	U
11	AA	3307	A
11	AA	3313	U
11	AA	3316	A
11	AA	3320	A
11	AA	3334	U
11	AA	3335	A
11	AA	3341	U
11	AA	3345	G
11	AA	3348	G
11	AA	3349	C
11	AA	3350	C
11	AA	3351	U
11	AA	3352	U
11	AA	3353	G
11	AA	3358	U
11	AA	3359	A
11	AA	3369	G
11	AA	3378	C
11	AA	3389	U
11	AA	3390	G
11	AA	3396	U
14	BB	7	G
14	BB	11	A
14	BB	29	C
14	BB	33	U
14	BB	41	G
14	BB	42	A

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Mol	Chain	Res	Type
14	BB	45	A
14	BB	47	C
14	BB	52	G
14	BB	54	U
14	BB	55	A
14	BB	65	G
14	BB	73	C
14	BB	74	C
14	BB	76	A
14	BB	93	C
14	BB	112	G
14	BB	121	U
16	CC	23	U
16	CC	34	U
16	CC	35	C
16	CC	37	A
16	CC	39	G
16	CC	51	G
16	CC	52	A
16	CC	59	A
16	CC	62	C
16	CC	63	G
16	CC	82	U
16	CC	83	C
16	CC	84	C
16	CC	85	G
16	CC	86	U
16	CC	87	G
16	CC	90	U
16	CC	91	C
16	CC	95	G
16	CC	100	U
16	CC	102	U
16	CC	104	A
16	CC	106	C
16	CC	113	U
16	CC	125	U
16	CC	126	A
16	CC	138	A
16	CC	158	U
57	c	2	A
57	c	4	C

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Mol	Chain	Res	Type
57	c	26	A
57	c	28	A2M
57	c	34	G
57	c	42	G
57	c	43	A
57	c	45	U
57	c	47	A
57	c	50	C
57	c	61	A
57	c	63	G
57	c	67	A
57	c	68	A
57	c	69	G
57	c	72	A
57	c	78	A
57	c	80	A
57	c	94	U
57	c	111	U
57	c	114	C
57	c	115	G
57	c	116	U
57	c	127	G
57	c	131	C
57	c	137	U
57	c	140	A
57	c	146	U
57	c	152	U
57	c	154	G
57	c	165	G
57	c	166	C
57	c	168	A
57	c	170	U
57	c	178	U
57	c	184	C
57	c	204	G
57	c	212	U
57	c	213	A
57	c	214	G
57	c	246	G
57	c	247	A
57	c	248	U
57	c	249	U

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Mol	Chain	Res	Type
57	c	253	A
57	c	254	A
57	c	256	A
57	c	257	A
57	c	258	C
57	c	260	U
57	c	261	U
57	c	262	U
57	c	265	A
57	c	267	U
57	c	272	U
57	c	277	U
57	c	278	U
57	c	279	G
57	c	280	U
57	c	283	U
57	c	285	G
57	c	287	G
57	c	299	A
57	c	302	U
57	c	313	U
57	c	314	C
57	c	316	A
57	c	320	U
57	c	321	C
57	c	322	G
57	c	333	A
57	c	337	G
57	c	359	A
57	c	361	C
57	c	373	G
57	c	378	A
57	c	400	A
57	c	401	A
57	c	402	C
57	c	404	G
57	c	414	OMC
57	c	417	A
57	c	420	A2M
57	c	423	G
57	c	424	C
57	c	426	G

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Mol	Chain	Res	Type
57	c	428	A
57	c	434	G
57	c	435	C
57	c	439	U
57	c	444	C
57	c	448	C
57	c	454	U
57	c	455	C
57	c	460	A
57	c	468	A
57	c	475	A
57	c	477	A
57	c	479	C
57	c	481	A
57	c	484	C
57	c	485	A
57	c	503	G
57	c	504	U
57	c	506	A
57	c	507	U
57	c	508	U
57	c	511	A
57	c	514	G
57	c	515	A
57	c	518	A
57	c	520	A
57	c	524	U
57	c	525	A
57	c	526	A
57	c	527	A
57	c	538	A
57	c	539	G
57	c	541	A2M
57	c	542	A
57	c	545	A
57	c	551	G
57	c	555	A
57	c	557	G
57	c	559	C
57	c	562	OMG
57	c	563	U
57	c	565	C

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Mol	Chain	Res	Type
57	c	566	C
57	c	568	G
57	c	577	G
57	c	578	OMU
57	c	579	A
57	c	582	U
57	c	594	A
57	c	611	U
57	c	617	U
57	c	619	A2M
57	c	620	A
57	c	623	A
57	c	624	G
57	c	639	U
57	c	643	G
57	c	644	C
57	c	645	C
57	c	649	U
57	c	650	U
57	c	651	G
57	c	686	C
57	c	687	G
57	c	688	G
57	c	691	C
57	c	692	C
57	c	695	U
57	c	696	C
57	c	743	U
57	c	745	U
57	c	753	A
57	c	760	A
57	c	763	G
57	c	765	G
57	c	766	U
57	c	775	G
57	c	778	G
57	c	780	A
57	c	781	U
57	c	782	U
57	c	783	G
57	c	784	C
57	c	789	A

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Mol	Chain	Res	Type
57	c	793	A
57	c	794	U
57	c	795	U
57	c	803	A
57	c	806	A
57	c	809	A
57	c	810	G
57	c	812	A
57	c	814	A
57	c	819	G
57	c	820	U
57	c	852	C
57	c	853	G
57	c	854	U
57	c	856	A
57	c	859	A
57	c	861	U
57	c	862	A
57	c	863	A
57	c	873	U
57	c	895	G
57	c	896	U
57	c	897	C
57	c	898	A
57	c	906	A
57	c	913	G
57	c	914	G
57	c	915	A
57	c	916	U
57	c	918	U
57	c	919	A
57	c	933	A
57	c	935	U
57	c	945	U
57	c	951	A
57	c	960	U
57	c	966	A
57	c	970	A
57	c	987	G
57	c	988	A
57	c	992	A
57	c	996	U

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Mol	Chain	Res	Type
57	c	999	U
57	c	1000	C
57	c	1001	A
57	c	1002	G
57	c	1004	U
57	c	1026	A
57	c	1027	A
57	c	1028	C
57	c	1031	U
57	c	1039	A
57	c	1041	G
57	c	1043	A
57	c	1049	U
57	c	1052	U
57	c	1053	G
57	c	1059	U
57	c	1060	U
57	c	1061	A
57	c	1063	U
57	c	1070	C
57	c	1072	C
57	c	1076	A
57	c	1081	A
57	c	1082	C
57	c	1083	G
57	c	1092	A
57	c	1093	A
57	c	1097	U
57	c	1098	U
57	c	1100	G
57	c	1111	G
57	c	1113	A
57	c	1138	A
57	c	1146	G
57	c	1150	G
57	c	1158	C
57	c	1162	C
57	c	1164	G
57	c	1167	G
57	c	1171	A
57	c	1174	C
57	c	1182	U

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Mol	Chain	Res	Type
57	c	1183	A
57	c	1185	U
57	c	1187	U
57	c	1191	B8N
57	c	1192	C
57	c	1194	A
57	c	1196	A
57	c	1199	G
57	c	1200	G
57	c	1201	G
57	c	1202	A
57	c	1203	A
57	c	1204	A
57	c	1205	C
57	c	1207	C
57	c	1212	G
57	c	1214	U
57	c	1217	A
57	c	1218	G
57	c	1221	A
57	c	1222	C
57	c	1223	A
57	c	1225	U
57	c	1226	A
57	c	1227	A
57	c	1228	G
57	c	1229	G
57	c	1230	A
57	c	1237	G
57	c	1238	A
57	c	1241	G
57	c	1243	G
57	c	1244	A
57	c	1245	G
57	c	1246	C
57	c	1248	C
57	c	1249	U
57	c	1250	U
57	c	1251	U
57	c	1252	C
57	c	1256	A
57	c	1257	U

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Mol	Chain	Res	Type
57	c	1258	U
57	c	1259	U
57	c	1261	G
57	c	1270	G
57	c	1274	C
57	c	1276	U
57	c	1280	4AC
57	c	1284	C
57	c	1285	U
57	c	1297	G
57	c	1305	U
57	c	1307	U
57	c	1314	U
57	c	1315	U
57	c	1316	G
57	c	1321	A
57	c	1324	G
57	c	1325	A
57	c	1335	U
57	c	1336	A
57	c	1338	C
57	c	1339	C
57	c	1340	U
57	c	1341	A
57	c	1345	A
57	c	1346	A
57	c	1347	U
57	c	1350	U
57	c	1352	G
57	c	1353	U
57	c	1355	C
57	c	1356	U
57	c	1357	A
57	c	1358	G
57	c	1361	U
57	c	1362	U
57	c	1363	U
57	c	1364	G
57	c	1365	C
57	c	1368	G
57	c	1369	U
57	c	1370	U

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Mol	Chain	Res	Type
57	c	1371	A
57	c	1372	U
57	c	1373	C
57	c	1374	C
57	c	1375	A
57	c	1376	C
57	c	1377	U
57	c	1378	U
57	c	1380	U
57	c	1388	A
57	c	1390	U
57	c	1397	U
57	c	1398	U
57	c	1402	G
57	c	1405	G
57	c	1408	G
57	c	1410	A
57	c	1411	A
57	c	1412	G
57	c	1413	U
57	c	1414	U
57	c	1415	U
57	c	1421	A
57	c	1425	A
57	c	1427	A
57	c	1428	OMG
57	c	1432	U
57	c	1433	G
57	c	1436	A
57	c	1444	A
57	c	1445	G
57	c	1447	C
57	c	1453	G
57	c	1457	C
57	c	1458	G
57	c	1459	C
57	c	1463	C
57	c	1464	G
57	c	1466	G
57	c	1468	U
57	c	1474	G
57	c	1477	G

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Mol	Chain	Res	Type
57	c	1478	G
57	c	1480	G
57	c	1482	C
57	c	1483	A
57	c	1488	G
57	c	1489	U
57	c	1490	C
57	c	1491	U
57	c	1492	A
57	c	1496	U
57	c	1500	C
57	c	1505	A
57	c	1506	G
57	c	1515	A
57	c	1516	A
57	c	1518	C
57	c	1524	A
57	c	1525	A
57	c	1527	C
57	c	1531	G
57	c	1535	U
57	c	1536	G
57	c	1537	C
57	c	1540	G
57	c	1542	G
57	c	1546	G
57	c	1548	G
57	c	1556	A
57	c	1557	U
57	c	1559	A
57	c	1561	U
57	c	1564	U
57	c	1565	C
57	c	1567	U
57	c	1568	C
57	c	1570	A
57	c	1572	OMG
57	c	1573	A
57	c	1583	A
57	c	1591	C
57	c	1592	A
57	c	1594	G

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Mol	Chain	Res	Type
57	c	1596	C
57	c	1600	A
57	c	1601	G
57	c	1602	C
57	c	1603	U
57	c	1604	U
57	c	1605	G
57	c	1606	C
57	c	1607	G
57	c	1609	U
57	c	1611	A
57	c	1614	A
57	c	1616	G
57	c	1618	C
57	c	1619	C
57	c	1631	A
57	c	1633	A
57	c	1634	C
57	c	1635	A
57	c	1642	G
57	c	1651	A
57	c	1657	U
57	c	1658	G
57	c	1678	A
57	c	1680	G
57	c	1681	A
57	c	1683	C
57	c	1684	U
57	c	1685	G
57	c	1686	C
57	c	1687	U
57	c	1717	G
57	c	1730	A
57	c	1756	A
57	c	1757	G
57	c	1760	G
57	c	1762	A
57	c	1766	A
57	c	1769	U
57	c	1770	U
57	c	1780	G
57	c	1782	MA6

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Mol	Chain	Res	Type
57	c	1783	C
57	c	1792	G
57	c	1793	G
57	c	1794	A
57	c	1795	U
57	c	1796	C
57	c	1798	U
57	c	1799	U

All (23) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
11	AA	601	U
11	AA	619	A
11	AA	916	G
11	AA	978	G
11	AA	1016	C
11	AA	1033	U
11	AA	1348	U
11	AA	1562	C
11	AA	1904	C
11	AA	2101	C
11	AA	2167	A
11	AA	2418	G
11	AA	2458	A
11	AA	2467	G
11	AA	2490	C
11	AA	2500	A
11	AA	2501	U
11	AA	2570	U
11	AA	2971	A
11	AA	3121	U
11	AA	3206	C
14	BB	72	A
16	CC	89	A

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

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

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
57	OMG	c	1271	57	18,26,27	1.14	2 (11%)	19,38,41	0.79	0
11	OMG	AA	908	11	18,26,27	1.20	2 (11%)	19,38,41	0.83	1 (5%)
11	A2M	AA	1449	11,82	18,25,26	3.63	8 (44%)	18,36,39	3.42	4 (22%)
11	OMG	AA	1450	11	18,26,27	1.14	2 (11%)	19,38,41	0.80	1 (5%)
11	A2M	AA	2946	11,82	18,25,26	3.62	8 (44%)	18,36,39	3.31	4 (22%)
11	OMU	AA	2347	11	19,22,23	3.00	8 (42%)	26,31,34	1.75	4 (15%)
57	A2M	c	541	57	18,25,26	3.62	8 (44%)	18,36,39	3.29	4 (22%)
57	OMG	c	562	57	18,26,27	1.24	2 (11%)	19,38,41	0.80	0
11	5MC	AA	2278	11,82	18,22,23	0.59	0	26,32,35	0.67	0
11	OMG	AA	2793	11	18,26,27	1.21	2 (11%)	19,38,41	0.76	1 (5%)
11	OMU	AA	2921	11	19,22,23	3.00	8 (42%)	26,31,34	1.71	5 (19%)
11	OMC	AA	2948	11	19,22,23	0.61	0	26,31,34	1.03	2 (7%)
11	OMG	AA	2619	11	18,26,27	1.16	2 (11%)	19,38,41	0.82	1 (5%)
11	OMC	AA	2959	11	19,22,23	0.55	0	26,31,34	0.68	0
57	A2M	c	619	57,82	18,25,26	3.69	9 (50%)	18,36,39	3.39	4 (22%)
11	OMG	AA	805	11	18,26,27	1.16	2 (11%)	19,38,41	0.83	1 (5%)
11	OMG	AA	2815	11	18,26,27	1.15	2 (11%)	19,38,41	0.88	1 (5%)
57	B8N	c	1191	57	24,29,30	3.07	8 (33%)	29,42,45	1.72	5 (17%)
57	A2M	c	974	57	18,25,26	3.62	8 (44%)	18,36,39	3.43	4 (22%)
11	A2M	AA	649	11	18,25,26	3.62	8 (44%)	18,36,39	3.33	4 (22%)
11	UR3	AA	2634	11	19,22,23	2.76	7 (36%)	26,32,35	1.25	1 (3%)
12	DDE	Aa	699	12	14,20,21	1.02	1 (7%)	14,28,30	1.17	2 (14%)
57	OMC	c	1639	57,82	19,22,23	0.56	0	26,31,34	0.67	0
57	OMG	c	1126	57	18,26,27	1.20	2 (11%)	19,38,41	0.77	1 (5%)
11	OMU	AA	1888	11	19,22,23	3.03	8 (42%)	26,31,34	1.72	5 (19%)
57	OMU	c	578	57	19,22,23	3.06	8 (42%)	26,31,34	1.69	5 (19%)
57	OMC	c	1007	57	19,22,23	0.55	0	26,31,34	0.70	0
11	A2M	AA	2640	11	18,25,26	3.58	8 (44%)	18,36,39	3.42	4 (22%)
11	A2M	AA	2256	11	18,25,26	3.58	8 (44%)	18,36,39	3.57	5 (27%)
11	OMG	AA	2791	11	18,26,27	1.19	2 (11%)	19,38,41	0.83	1 (5%)
57	OMC	c	414	57	19,22,23	0.62	0	26,31,34	1.08	2 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
11	A2M	AA	817	11,82	18,25,26	3.63	8 (44%)	18,36,39	3.55	4 (22%)
57	A2M	c	796	57	18,25,26	3.64	8 (44%)	18,36,39	3.39	3 (16%)
11	OMC	AA	650	11	19,22,23	0.55	0	26,31,34	0.80	1 (3%)
57	A2M	c	436	57	18,25,26	3.61	8 (44%)	18,36,39	3.37	4 (22%)
57	4AC	c	1280	57	21,24,25	3.54	10 (47%)	29,34,37	1.77	7 (24%)
57	OMG	c	1428	57	18,26,27	1.14	2 (11%)	19,38,41	0.82	1 (5%)
57	OMG	c	1572	57	18,26,27	1.17	2 (11%)	19,38,41	0.87	1 (5%)
11	A2M	AA	807	11	18,25,26	3.61	8 (44%)	18,36,39	3.36	4 (22%)
11	1MA	AA	645	11,82	16,25,26	0.92	2 (12%)	18,37,40	1.03	1 (5%)
57	MA6	c	1782	57	18,26,27	1.03	2 (11%)	19,38,41	3.50	2 (10%)
11	OMU	AA	2417	11	19,22,23	2.99	8 (42%)	26,31,34	1.72	5 (19%)
57	G7M	c	1575	57	20,26,27	2.46	7 (35%)	17,39,42	1.15	1 (5%)
11	OMC	AA	2197	11,83	19,22,23	0.54	0	26,31,34	0.66	0
11	A2M	AA	2281	11	18,25,26	3.69	9 (50%)	18,36,39	3.41	4 (22%)
11	OMC	AA	2337	11	19,22,23	0.60	0	26,31,34	0.80	1 (3%)
57	A2M	c	420	57	18,25,26	3.60	8 (44%)	18,36,39	3.41	3 (16%)
57	OMU	c	1269	57	19,22,23	3.12	8 (42%)	26,31,34	1.67	5 (19%)
57	4AC	c	1773	57	21,24,25	3.47	10 (47%)	29,34,37	1.61	5 (17%)
11	A2M	AA	2280	11	18,25,26	3.63	8 (44%)	18,36,39	3.34	4 (22%)
11	A2M	AA	1133	11,82	18,25,26	3.64	8 (44%)	18,36,39	3.32	3 (16%)
11	OMU	AA	2421	11	19,22,23	3.02	8 (42%)	26,31,34	1.70	5 (19%)
11	OMU	AA	2724	11	19,22,23	3.02	8 (42%)	26,31,34	1.75	5 (19%)
11	OMG	AA	2288	11	18,26,27	1.18	2 (11%)	19,38,41	0.79	1 (5%)
11	A2M	AA	876	11	18,25,26	3.62	9 (50%)	18,36,39	3.40	4 (22%)
11	OMU	AA	898	11	19,22,23	3.04	8 (42%)	26,31,34	1.72	5 (19%)
11	OMG	AA	2922	11	18,26,27	1.15	2 (11%)	19,38,41	0.87	1 (5%)
11	1MA	AA	2142	11,82	16,25,26	0.95	2 (12%)	18,37,40	1.10	2 (11%)
11	OMC	AA	1437	11,82	19,22,23	0.62	0	26,31,34	1.34	2 (7%)
11	OMU	AA	2729	11	19,22,23	3.01	8 (42%)	26,31,34	1.74	4 (15%)
57	A2M	c	100	57,82	18,25,26	3.63	8 (44%)	18,36,39	3.31	3 (16%)
11	5MC	AA	2870	11,83	18,22,23	0.65	0	26,32,35	0.59	0
11	A2M	AA	2220	11	18,25,26	3.59	8 (44%)	18,36,39	3.45	4 (22%)
57	MA6	c	1781	57	18,26,27	1.05	2 (11%)	19,38,41	3.46	2 (10%)
11	OMG	AA	867	11,83	18,26,27	1.16	2 (11%)	19,38,41	0.90	2 (10%)
11	OMC	AA	663	11	19,22,23	0.57	0	26,31,34	0.70	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
57	A2M	c	28	57	18,25,26	3.62	9 (50%)	18,36,39	3.36	4 (22%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	OMG	c	1271	57	-	1/5/27/28	0/3/3/3
11	OMG	AA	908	11	-	3/5/27/28	0/3/3/3
11	A2M	AA	1449	11,82	-	0/5/27/28	0/3/3/3
11	OMG	AA	1450	11	-	3/5/27/28	0/3/3/3
11	A2M	AA	2946	11,82	-	3/5/27/28	0/3/3/3
11	OMU	AA	2347	11	-	1/9/27/28	0/2/2/2
57	A2M	c	541	57	-	3/5/27/28	0/3/3/3
57	OMG	c	562	57	-	2/5/27/28	0/3/3/3
11	5MC	AA	2278	11,82	-	2/7/25/26	0/2/2/2
11	OMG	AA	2793	11	-	1/5/27/28	0/3/3/3
11	OMU	AA	2921	11	-	1/9/27/28	0/2/2/2
11	OMC	AA	2948	11	-	4/9/27/28	0/2/2/2
11	OMG	AA	2619	11	-	0/5/27/28	0/3/3/3
11	OMC	AA	2959	11	-	1/9/27/28	0/2/2/2
57	A2M	c	619	57,82	-	2/5/27/28	0/3/3/3
11	OMG	AA	805	11	-	1/5/27/28	0/3/3/3
11	OMG	AA	2815	11	-	1/5/27/28	0/3/3/3
57	B8N	c	1191	57	-	7/16/34/35	0/2/2/2
57	A2M	c	974	57	-	0/5/27/28	0/3/3/3
11	A2M	AA	649	11	-	1/5/27/28	0/3/3/3
11	UR3	AA	2634	11	-	0/7/25/26	0/2/2/2
12	DDE	Aa	699	12	-	12/20/21/23	0/1/1/1
57	OMC	c	1639	57,82	-	0/9/27/28	0/2/2/2
57	OMG	c	1126	57	-	1/5/27/28	0/3/3/3
11	OMU	AA	1888	11	-	0/9/27/28	0/2/2/2
57	OMU	c	578	57	-	0/9/27/28	0/2/2/2
57	OMC	c	1007	57	-	0/9/27/28	0/2/2/2
11	A2M	AA	2640	11	-	1/5/27/28	0/3/3/3
11	A2M	AA	2256	11	-	3/5/27/28	0/3/3/3
11	OMG	AA	2791	11	-	0/5/27/28	0/3/3/3
57	OMC	c	414	57	-	3/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
11	A2M	AA	817	11,82	-	2/5/27/28	0/3/3/3
57	A2M	c	796	57	-	1/5/27/28	0/3/3/3
11	OMC	AA	650	11	-	1/9/27/28	0/2/2/2
57	A2M	c	436	57	-	0/5/27/28	0/3/3/3
57	4AC	c	1280	57	-	6/11/29/30	0/2/2/2
57	OMG	c	1428	57	-	3/5/27/28	0/3/3/3
57	OMG	c	1572	57	-	3/5/27/28	0/3/3/3
11	A2M	AA	807	11	-	4/5/27/28	0/3/3/3
11	1MA	AA	645	11,82	-	2/3/25/26	0/3/3/3
57	MA6	c	1782	57	-	1/7/29/30	0/3/3/3
11	OMU	AA	2417	11	-	0/9/27/28	0/2/2/2
57	G7M	c	1575	57	-	2/3/25/26	0/3/3/3
11	OMC	AA	2197	11,83	-	2/9/27/28	0/2/2/2
11	A2M	AA	2281	11	-	3/5/27/28	0/3/3/3
11	OMC	AA	2337	11	-	3/9/27/28	0/2/2/2
57	A2M	c	420	57	-	3/5/27/28	0/3/3/3
57	OMU	c	1269	57	-	5/9/27/28	0/2/2/2
57	4AC	c	1773	57	-	3/11/29/30	0/2/2/2
11	A2M	AA	2280	11	-	2/5/27/28	0/3/3/3
11	A2M	AA	1133	11,82	-	0/5/27/28	0/3/3/3
11	OMU	AA	2421	11	-	1/9/27/28	0/2/2/2
11	OMU	AA	2724	11	-	1/9/27/28	0/2/2/2
11	OMG	AA	2288	11	-	0/5/27/28	0/3/3/3
11	A2M	AA	876	11	-	0/5/27/28	0/3/3/3
11	OMU	AA	898	11	-	2/9/27/28	0/2/2/2
11	OMG	AA	2922	11	-	2/5/27/28	0/3/3/3
11	1MA	AA	2142	11,82	-	0/3/25/26	0/3/3/3
11	OMC	AA	1437	11,82	-	5/9/27/28	0/2/2/2
11	OMU	AA	2729	11	-	1/9/27/28	0/2/2/2
57	A2M	c	100	57,82	-	0/5/27/28	0/3/3/3
11	5MC	AA	2870	11,83	-	5/7/25/26	0/2/2/2
11	A2M	AA	2220	11	-	1/5/27/28	0/3/3/3
57	MA6	c	1781	57	-	0/7/29/30	0/3/3/3
11	OMG	AA	867	11,83	-	0/5/27/28	0/3/3/3
11	OMC	AA	663	11	-	1/9/27/28	0/2/2/2
57	A2M	c	28	57	-	3/5/27/28	0/3/3/3

All (325) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	c	28	A2M	C3'-C4'	-9.16	1.29	1.53
11	AA	1133	A2M	C3'-C4'	-8.99	1.30	1.53
11	AA	1449	A2M	C3'-C4'	-8.99	1.30	1.53
57	c	619	A2M	C3'-C4'	-8.95	1.30	1.53
57	c	974	A2M	C3'-C4'	-8.94	1.30	1.53
57	c	796	A2M	C3'-C4'	-8.92	1.30	1.53
11	AA	2946	A2M	C3'-C4'	-8.89	1.30	1.53
11	AA	2280	A2M	C3'-C4'	-8.89	1.30	1.53
11	AA	876	A2M	C3'-C4'	-8.88	1.30	1.53
57	c	541	A2M	C3'-C4'	-8.86	1.30	1.53
11	AA	2220	A2M	C3'-C4'	-8.81	1.30	1.53
57	c	420	A2M	C3'-C4'	-8.80	1.30	1.53
57	c	100	A2M	C3'-C4'	-8.79	1.30	1.53
57	c	436	A2M	C3'-C4'	-8.79	1.30	1.53
11	AA	2640	A2M	C3'-C4'	-8.76	1.30	1.53
11	AA	649	A2M	C3'-C4'	-8.75	1.30	1.53
11	AA	807	A2M	C3'-C4'	-8.75	1.30	1.53
11	AA	817	A2M	C3'-C4'	-8.66	1.30	1.53
11	AA	2281	A2M	C3'-C4'	-8.58	1.31	1.53
11	AA	2256	A2M	C3'-C4'	-8.40	1.31	1.53
11	AA	2281	A2M	O4'-C1'	-8.00	1.29	1.41
57	c	1191	B8N	C6-N1	7.87	1.56	1.36
57	c	1191	B8N	C4-N3	-7.85	1.25	1.40
11	AA	817	A2M	O4'-C4'	7.71	1.62	1.45
57	c	619	A2M	O4'-C1'	-7.69	1.30	1.41
57	c	100	A2M	O4'-C4'	7.69	1.62	1.45
11	AA	2946	A2M	O4'-C4'	7.69	1.62	1.45
57	c	420	A2M	O4'-C4'	7.66	1.62	1.45
57	c	796	A2M	O4'-C4'	7.64	1.62	1.45
57	c	436	A2M	O4'-C4'	7.63	1.62	1.45
11	AA	2280	A2M	O4'-C4'	7.62	1.62	1.45
11	AA	2220	A2M	O4'-C4'	7.61	1.62	1.45
11	AA	649	A2M	O4'-C1'	-7.57	1.30	1.41
57	c	974	A2M	O4'-C4'	7.56	1.61	1.45
11	AA	2281	A2M	O4'-C4'	7.56	1.61	1.45
11	AA	807	A2M	O4'-C4'	7.55	1.61	1.45
11	AA	2256	A2M	O4'-C4'	7.54	1.61	1.45
11	AA	2256	A2M	O4'-C1'	-7.52	1.30	1.41
11	AA	1133	A2M	O4'-C4'	7.51	1.61	1.45
11	AA	2640	A2M	O4'-C4'	7.50	1.61	1.45
11	AA	876	A2M	O4'-C4'	7.48	1.61	1.45
57	c	541	A2M	O4'-C4'	7.45	1.61	1.45
57	c	28	A2M	O4'-C4'	7.44	1.61	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AA	1449	A2M	O4'-C4'	7.43	1.61	1.45
57	c	1269	OMU	C2-N1	7.41	1.50	1.38
11	AA	649	A2M	O4'-C4'	7.40	1.61	1.45
11	AA	817	A2M	O4'-C1'	-7.38	1.30	1.41
57	c	619	A2M	O4'-C4'	7.37	1.61	1.45
57	c	1280	4AC	C4-N3	7.33	1.45	1.32
57	c	541	A2M	O4'-C1'	-7.29	1.30	1.41
11	AA	1449	A2M	O4'-C1'	-7.27	1.30	1.41
11	AA	1133	A2M	O4'-C1'	-7.27	1.30	1.41
11	AA	807	A2M	O4'-C1'	-7.26	1.30	1.41
11	AA	2280	A2M	O4'-C1'	-7.25	1.31	1.41
57	c	796	A2M	O4'-C1'	-7.23	1.31	1.41
11	AA	876	A2M	O4'-C1'	-7.21	1.31	1.41
57	c	100	A2M	O4'-C1'	-7.20	1.31	1.41
11	AA	2347	OMU	C2-N1	7.17	1.50	1.38
57	c	1773	4AC	C4-N3	7.17	1.45	1.32
57	c	974	A2M	O4'-C1'	-7.14	1.31	1.41
57	c	436	A2M	O4'-C1'	-7.10	1.31	1.41
11	AA	2640	A2M	O4'-C1'	-7.10	1.31	1.41
57	c	578	OMU	C2-N1	7.09	1.49	1.38
11	AA	2724	OMU	C2-N1	7.09	1.49	1.38
11	AA	1888	OMU	C2-N1	7.07	1.49	1.38
11	AA	2220	A2M	O4'-C1'	-7.06	1.31	1.41
57	c	420	A2M	O4'-C1'	-7.05	1.31	1.41
11	AA	2421	OMU	C2-N1	7.03	1.49	1.38
11	AA	898	OMU	C2-N1	7.02	1.49	1.38
11	AA	2729	OMU	C2-N1	7.02	1.49	1.38
57	c	1269	OMU	C2-N3	7.00	1.50	1.38
57	c	28	A2M	O4'-C1'	-6.99	1.31	1.41
11	AA	2946	A2M	O4'-C1'	-6.98	1.31	1.41
11	AA	2417	OMU	C2-N1	6.89	1.49	1.38
57	c	1773	4AC	C6-C5	6.87	1.51	1.35
57	c	578	OMU	C2-N3	6.86	1.50	1.38
11	AA	898	OMU	C2-N3	6.84	1.50	1.38
11	AA	2921	OMU	C2-N1	6.82	1.49	1.38
11	AA	2724	OMU	C2-N3	6.78	1.50	1.38
11	AA	2921	OMU	C2-N3	6.77	1.50	1.38
11	AA	2421	OMU	C2-N3	6.70	1.49	1.38
11	AA	1888	OMU	C2-N3	6.67	1.49	1.38
11	AA	2417	OMU	C2-N3	6.65	1.49	1.38
57	c	1280	4AC	C6-C5	6.62	1.50	1.35
11	AA	2729	OMU	C2-N3	6.61	1.49	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AA	2634	UR3	C6-C5	6.56	1.50	1.35
11	AA	2347	OMU	C2-N3	6.54	1.49	1.38
11	AA	2634	UR3	C2-N1	6.48	1.47	1.38
57	c	1191	B8N	C2-N1	5.86	1.56	1.39
57	c	1280	4AC	C7-N4	5.78	1.47	1.37
57	c	578	OMU	C6-C5	5.74	1.48	1.35
57	c	1269	OMU	C6-C5	5.73	1.48	1.35
11	AA	898	OMU	C6-C5	5.72	1.48	1.35
11	AA	2921	OMU	C6-C5	5.67	1.48	1.35
11	AA	1888	OMU	C6-C5	5.65	1.48	1.35
11	AA	2729	OMU	C6-C5	5.64	1.48	1.35
11	AA	2421	OMU	C6-C5	5.59	1.48	1.35
11	AA	2417	OMU	C6-C5	5.58	1.48	1.35
11	AA	2347	OMU	C6-C5	5.55	1.48	1.35
11	AA	2724	OMU	C6-C5	5.54	1.47	1.35
57	c	1280	4AC	C2-N1	5.51	1.51	1.40
57	c	1575	G7M	C2-N3	5.49	1.46	1.33
11	AA	2634	UR3	C2-N3	5.49	1.49	1.39
57	c	1773	4AC	C7-N4	5.47	1.47	1.37
57	c	1191	B8N	C6-C5	5.32	1.42	1.34
57	c	1280	4AC	C2-N3	5.18	1.46	1.36
57	c	1280	4AC	C4-N4	5.09	1.47	1.39
57	c	1773	4AC	C4-N4	5.07	1.47	1.39
57	c	1773	4AC	C2-N3	5.01	1.46	1.36
57	c	1773	4AC	C2-N1	4.99	1.50	1.40
57	c	1575	G7M	C4-N3	4.97	1.49	1.37
57	c	1575	G7M	C2-N2	4.77	1.45	1.34
57	c	1269	OMU	C4-N3	4.38	1.46	1.38
57	c	578	OMU	C4-N3	4.32	1.46	1.38
11	AA	1888	OMU	C4-N3	4.25	1.46	1.38
57	c	1280	4AC	CM7-C7	4.24	1.59	1.50
11	AA	2417	OMU	C4-N3	4.22	1.46	1.38
11	AA	2729	OMU	C4-N3	4.20	1.46	1.38
11	AA	2421	OMU	C4-N3	4.16	1.46	1.38
11	AA	898	OMU	C4-N3	4.12	1.45	1.38
11	AA	2921	OMU	C4-N3	4.08	1.45	1.38
11	AA	2724	OMU	C4-N3	4.08	1.45	1.38
57	c	1773	4AC	CM7-C7	4.08	1.59	1.50
57	c	1773	4AC	C5-C4	4.05	1.49	1.40
11	AA	2347	OMU	C4-N3	3.99	1.45	1.38
57	c	1280	4AC	C5-C4	3.97	1.49	1.40
57	c	1575	G7M	C6-N1	3.62	1.43	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	c	1191	B8N	C1'-C5	3.58	1.58	1.50
57	c	1575	G7M	C5-C6	3.29	1.53	1.45
57	c	562	OMG	C8-N7	-3.23	1.29	1.35
11	AA	2634	UR3	C6-N1	3.18	1.45	1.38
11	AA	2220	A2M	C6-N6	3.16	1.45	1.34
57	c	420	A2M	C6-N6	3.15	1.45	1.34
11	AA	2281	A2M	C6-N6	3.15	1.45	1.34
11	AA	876	A2M	C6-N6	3.14	1.45	1.34
57	c	541	A2M	C6-N6	3.14	1.45	1.34
57	c	28	A2M	C6-N6	3.13	1.45	1.34
11	AA	807	A2M	C6-N6	3.13	1.45	1.34
11	AA	2640	A2M	C6-N6	3.13	1.45	1.34
11	AA	649	A2M	C6-N6	3.13	1.45	1.34
57	c	619	A2M	C6-N6	3.12	1.45	1.34
11	AA	2256	A2M	O3'-C3'	3.12	1.50	1.43
57	c	619	A2M	O3'-C3'	3.12	1.50	1.43
11	AA	1449	A2M	C6-N6	3.12	1.45	1.34
11	AA	2256	A2M	C6-N6	3.11	1.45	1.34
57	c	100	A2M	C6-N6	3.10	1.45	1.34
11	AA	2280	A2M	C6-N6	3.10	1.45	1.34
11	AA	1133	A2M	C6-N6	3.10	1.45	1.34
57	c	796	A2M	C6-N6	3.10	1.45	1.34
57	c	436	A2M	C6-N6	3.09	1.45	1.34
57	c	541	A2M	O3'-C3'	3.09	1.50	1.43
11	AA	2946	A2M	C6-N6	3.08	1.45	1.34
11	AA	2724	OMU	O4-C4	-3.06	1.18	1.24
11	AA	817	A2M	C6-N6	3.04	1.45	1.34
57	c	1269	OMU	C6-N1	3.03	1.45	1.38
11	AA	2417	OMU	O4-C4	-3.01	1.18	1.24
11	AA	2347	OMU	O4-C4	-3.00	1.18	1.24
11	AA	1888	OMU	O4-C4	-2.99	1.18	1.24
57	c	974	A2M	C6-N6	2.99	1.45	1.34
11	AA	2421	OMU	O4-C4	-2.99	1.18	1.24
11	AA	898	OMU	O4-C4	-2.98	1.18	1.24
57	c	436	A2M	O3'-C3'	2.98	1.50	1.43
11	AA	908	OMG	C8-N7	-2.97	1.30	1.35
11	AA	807	A2M	O3'-C3'	2.97	1.50	1.43
11	AA	2921	OMU	O4-C4	-2.97	1.18	1.24
57	c	1428	OMG	C8-N7	-2.96	1.30	1.35
57	c	1572	OMG	C8-N7	-2.96	1.30	1.35
11	AA	2288	OMG	C8-N7	-2.93	1.30	1.35
11	AA	2729	OMU	O4-C4	-2.93	1.18	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AA	817	A2M	O2'-C2'	-2.90	1.35	1.42
57	c	420	A2M	O3'-C3'	2.90	1.49	1.43
57	c	578	OMU	O4-C4	-2.88	1.18	1.24
11	AA	649	A2M	O3'-C3'	2.88	1.49	1.43
11	AA	2793	OMG	C8-N7	-2.87	1.30	1.35
57	c	974	A2M	C5-C4	-2.87	1.33	1.40
57	c	1126	OMG	C8-N7	-2.86	1.30	1.35
11	AA	2281	A2M	C5-C4	-2.86	1.33	1.40
11	AA	2791	OMG	C8-N7	-2.85	1.30	1.35
11	AA	876	A2M	C5-C4	-2.85	1.33	1.40
11	AA	1133	A2M	C5-C4	-2.84	1.33	1.40
57	c	100	A2M	O3'-C3'	2.83	1.49	1.43
57	c	1269	OMU	O4-C4	-2.83	1.19	1.24
11	AA	2421	OMU	C6-N1	2.82	1.44	1.38
11	AA	2619	OMG	C8-N7	-2.82	1.30	1.35
11	AA	2946	A2M	C5-C4	-2.82	1.33	1.40
57	c	796	A2M	C5-C4	-2.82	1.33	1.40
57	c	578	OMU	C6-N1	2.81	1.44	1.38
11	AA	2220	A2M	O3'-C3'	2.81	1.49	1.43
57	c	420	A2M	C5-C4	-2.81	1.33	1.40
57	c	1575	G7M	C2-N1	2.81	1.44	1.37
57	c	619	A2M	C5-C4	-2.81	1.33	1.40
11	AA	2347	OMU	C6-N1	2.80	1.44	1.38
11	AA	1888	OMU	C6-N1	2.80	1.44	1.38
11	AA	2640	A2M	O3'-C3'	2.79	1.49	1.43
57	c	974	A2M	O3'-C3'	2.79	1.49	1.43
11	AA	1450	OMG	C8-N7	-2.79	1.30	1.35
57	c	796	A2M	O3'-C3'	2.79	1.49	1.43
11	AA	2921	OMU	C6-N1	2.78	1.44	1.38
11	AA	2815	OMG	C8-N7	-2.78	1.30	1.35
57	c	100	A2M	C5-C4	-2.78	1.33	1.40
11	AA	2280	A2M	O3'-C3'	2.77	1.49	1.43
11	AA	2281	A2M	O3'-C3'	2.77	1.49	1.43
11	AA	807	A2M	C5-C4	-2.77	1.33	1.40
57	c	562	OMG	C5-C6	-2.77	1.41	1.47
57	c	974	A2M	O2'-C2'	-2.77	1.35	1.42
11	AA	817	A2M	C5-C4	-2.76	1.33	1.40
11	AA	2946	A2M	O3'-C3'	2.76	1.49	1.43
11	AA	2281	A2M	O2'-C2'	-2.75	1.35	1.42
11	AA	867	OMG	C8-N7	-2.75	1.30	1.35
11	AA	1133	A2M	O2'-C2'	-2.75	1.35	1.42
11	AA	898	OMU	C6-N1	2.74	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AA	2417	OMU	C6-N1	2.74	1.44	1.38
11	AA	2729	OMU	C6-N1	2.74	1.44	1.38
11	AA	1449	A2M	O3'-C3'	2.74	1.49	1.43
57	c	796	A2M	O2'-C2'	-2.74	1.35	1.42
11	AA	2640	A2M	C5-C4	-2.74	1.33	1.40
11	AA	2922	OMG	C8-N7	-2.73	1.30	1.35
11	AA	817	A2M	O3'-C3'	2.73	1.49	1.43
11	AA	876	A2M	O3'-C3'	2.72	1.49	1.43
11	AA	2256	A2M	C5-C4	-2.72	1.33	1.40
11	AA	805	OMG	C8-N7	-2.72	1.30	1.35
11	AA	649	A2M	C5-C4	-2.71	1.33	1.40
57	c	28	A2M	O3'-C3'	2.71	1.49	1.43
11	AA	2946	A2M	O2'-C2'	-2.70	1.35	1.42
11	AA	1449	A2M	O2'-C2'	-2.70	1.35	1.42
57	c	1271	OMG	C8-N7	-2.70	1.30	1.35
57	c	28	A2M	C5-C4	-2.70	1.33	1.40
57	c	619	A2M	O2'-C2'	-2.70	1.35	1.42
11	AA	2724	OMU	C6-N1	2.69	1.44	1.38
11	AA	2793	OMG	C5-C6	-2.69	1.41	1.47
57	c	100	A2M	O2'-C2'	-2.69	1.35	1.42
57	c	541	A2M	C5-C4	-2.68	1.33	1.40
11	AA	2280	A2M	C5-C4	-2.68	1.33	1.40
11	AA	2288	OMG	C5-C6	-2.67	1.42	1.47
11	AA	1449	A2M	C5-C4	-2.67	1.33	1.40
11	AA	876	A2M	O2'-C2'	-2.67	1.35	1.42
57	c	1782	MA6	C5-C4	-2.66	1.33	1.40
57	c	1781	MA6	C5-C4	-2.66	1.33	1.40
57	c	436	A2M	O2'-C2'	-2.65	1.35	1.42
11	AA	2791	OMG	C5-C6	-2.64	1.42	1.47
11	AA	2220	A2M	C5-C4	-2.64	1.33	1.40
11	AA	2280	A2M	O2'-C2'	-2.63	1.35	1.42
11	AA	908	OMG	C5-C6	-2.61	1.42	1.47
11	AA	807	A2M	O2'-C2'	-2.61	1.35	1.42
57	c	436	A2M	C5-C4	-2.60	1.34	1.40
57	c	28	A2M	O2'-C2'	-2.59	1.36	1.42
11	AA	649	A2M	O2'-C2'	-2.59	1.36	1.42
11	AA	1133	A2M	O3'-C3'	2.59	1.49	1.43
57	c	541	A2M	O2'-C2'	-2.58	1.36	1.42
57	c	1126	OMG	C5-C6	-2.58	1.42	1.47
11	AA	2142	1MA	C8-N7	-2.58	1.30	1.35
57	c	1572	OMG	C5-C6	-2.57	1.42	1.47
57	c	420	A2M	O2'-C2'	-2.56	1.36	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	c	1773	4AC	C6-N1	2.53	1.44	1.38
57	c	1428	OMG	C5-C6	-2.53	1.42	1.47
11	AA	805	OMG	C5-C6	-2.52	1.42	1.47
11	AA	2640	A2M	O2'-C2'	-2.52	1.36	1.42
57	c	1271	OMG	C5-C6	-2.51	1.42	1.47
11	AA	867	OMG	C5-C6	-2.51	1.42	1.47
11	AA	2619	OMG	C5-C6	-2.50	1.42	1.47
57	c	1782	MA6	C2-N3	2.49	1.36	1.32
11	AA	2347	OMU	O2-C2	-2.48	1.18	1.23
57	c	578	OMU	C5-C4	2.48	1.49	1.43
11	AA	898	OMU	O2-C2	-2.47	1.18	1.23
11	AA	2220	A2M	O2'-C2'	-2.47	1.36	1.42
11	AA	2729	OMU	O2-C2	-2.46	1.18	1.23
11	AA	2724	OMU	O2-C2	-2.45	1.18	1.23
11	AA	1450	OMG	C5-C6	-2.45	1.42	1.47
11	AA	2729	OMU	C5-C4	2.44	1.49	1.43
57	c	1781	MA6	C2-N3	2.42	1.36	1.32
57	c	1280	4AC	C6-N1	2.42	1.43	1.38
11	AA	2815	OMG	C5-C6	-2.41	1.42	1.47
11	AA	2922	OMG	C5-C6	-2.40	1.42	1.47
57	c	1269	OMU	C5-C4	2.40	1.48	1.43
11	AA	2417	OMU	O2-C2	-2.39	1.18	1.23
11	AA	2421	OMU	O2-C2	-2.39	1.18	1.23
11	AA	2921	OMU	O2-C2	-2.38	1.18	1.23
11	AA	645	1MA	C5-C4	-2.36	1.37	1.43
11	AA	2921	OMU	C5-C4	2.36	1.48	1.43
11	AA	1888	OMU	C5-C4	2.34	1.48	1.43
11	AA	2421	OMU	C5-C4	2.33	1.48	1.43
11	AA	1888	OMU	O2-C2	-2.33	1.18	1.23
11	AA	898	OMU	C5-C4	2.31	1.48	1.43
57	c	1773	4AC	O7-C7	-2.31	1.18	1.23
11	AA	2347	OMU	C5-C4	2.30	1.48	1.43
57	c	1280	4AC	O7-C7	-2.30	1.18	1.23
11	AA	2142	1MA	C5-C4	-2.28	1.37	1.43
57	c	578	OMU	O2-C2	-2.25	1.18	1.23
11	AA	2417	OMU	C5-C4	2.25	1.48	1.43
12	Aa	699	DDE	CD2-NE2	2.24	1.39	1.36
57	c	1269	OMU	O2-C2	-2.23	1.19	1.23
57	c	436	A2M	C2-N3	2.22	1.35	1.32
11	AA	645	1MA	C8-N7	-2.19	1.31	1.35
11	AA	2724	OMU	C5-C4	2.18	1.48	1.43
57	c	796	A2M	C2-N3	2.18	1.35	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AA	2640	A2M	C2-N3	2.17	1.35	1.32
57	c	541	A2M	C2-N3	2.16	1.35	1.32
57	c	28	A2M	O5'-C5'	-2.16	1.39	1.44
57	c	420	A2M	C2-N3	2.16	1.35	1.32
11	AA	2256	A2M	O2'-C2'	-2.16	1.37	1.42
57	c	619	A2M	O5'-C5'	-2.15	1.39	1.44
11	AA	2220	A2M	C2-N3	2.14	1.35	1.32
11	AA	2256	A2M	C2-N3	2.14	1.35	1.32
11	AA	2280	A2M	C2-N3	2.13	1.35	1.32
11	AA	2281	A2M	C2-N3	2.13	1.35	1.32
11	AA	2946	A2M	C2-N3	2.13	1.35	1.32
57	c	28	A2M	C2-N3	2.12	1.35	1.32
57	c	100	A2M	C2-N3	2.12	1.35	1.32
11	AA	1449	A2M	C2-N3	2.12	1.35	1.32
11	AA	649	A2M	C2-N3	2.11	1.35	1.32
57	c	1575	G7M	O6-C6	-2.11	1.19	1.23
11	AA	2634	UR3	C5-C4	2.10	1.49	1.43
57	c	619	A2M	C2-N3	2.10	1.35	1.32
11	AA	876	A2M	C2-N3	2.09	1.35	1.32
11	AA	2281	A2M	O5'-C5'	-2.09	1.39	1.44
11	AA	817	A2M	C2-N3	2.08	1.35	1.32
57	c	1191	B8N	O4-C4	-2.07	1.18	1.23
11	AA	1133	A2M	O5'-C5'	-2.05	1.39	1.44
57	c	974	A2M	C2-N3	2.05	1.35	1.32
11	AA	2634	UR3	O2-C2	-2.04	1.18	1.22
11	AA	2634	UR3	C4-N3	2.03	1.45	1.40
11	AA	876	A2M	O5'-C5'	-2.03	1.39	1.44
11	AA	807	A2M	C2-N3	2.03	1.35	1.32
57	c	1191	B8N	O2-C2	-2.00	1.18	1.22
57	c	1191	B8N	C32-C31	2.00	1.56	1.52

All (175) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	c	1782	MA6	N1-C6-N6	-14.09	102.23	117.06
57	c	1781	MA6	N1-C6-N6	-13.88	102.45	117.06
11	AA	817	A2M	C5-C6-N6	11.00	137.07	120.35
11	AA	2256	A2M	C5-C6-N6	10.75	136.68	120.35
11	AA	1449	A2M	C5-C6-N6	10.72	136.64	120.35
57	c	420	A2M	C5-C6-N6	10.71	136.62	120.35
57	c	974	A2M	C5-C6-N6	10.70	136.62	120.35
11	AA	2220	A2M	C5-C6-N6	10.63	136.51	120.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	807	A2M	C5-C6-N6	10.58	136.43	120.35
11	AA	2640	A2M	C5-C6-N6	10.56	136.40	120.35
57	c	796	A2M	C5-C6-N6	10.55	136.38	120.35
57	c	436	A2M	C5-C6-N6	10.53	136.36	120.35
57	c	619	A2M	C5-C6-N6	10.53	136.36	120.35
11	AA	1133	A2M	C5-C6-N6	10.44	136.22	120.35
57	c	28	A2M	C5-C6-N6	10.43	136.21	120.35
11	AA	876	A2M	C5-C6-N6	10.43	136.21	120.35
11	AA	649	A2M	C5-C6-N6	10.41	136.18	120.35
57	c	100	A2M	C5-C6-N6	10.34	136.07	120.35
11	AA	2281	A2M	C5-C6-N6	10.32	136.04	120.35
57	c	541	A2M	C5-C6-N6	10.29	135.99	120.35
11	AA	2946	A2M	C5-C6-N6	10.29	135.99	120.35
11	AA	2280	A2M	C5-C6-N6	10.22	135.88	120.35
11	AA	817	A2M	N6-C6-N1	-7.59	102.83	118.57
11	AA	2256	A2M	N6-C6-N1	-7.50	103.01	118.57
57	c	974	A2M	N6-C6-N1	-7.45	103.12	118.57
11	AA	2220	A2M	N6-C6-N1	-7.34	103.34	118.57
57	c	420	A2M	N6-C6-N1	-7.32	103.38	118.57
57	c	796	A2M	N6-C6-N1	-7.31	103.40	118.57
11	AA	1449	A2M	N6-C6-N1	-7.29	103.45	118.57
11	AA	876	A2M	N6-C6-N1	-7.21	103.61	118.57
11	AA	807	A2M	N6-C6-N1	-7.20	103.62	118.57
11	AA	2640	A2M	N6-C6-N1	-7.20	103.64	118.57
57	c	619	A2M	N6-C6-N1	-7.19	103.65	118.57
57	c	436	A2M	N6-C6-N1	-7.17	103.69	118.57
57	c	100	A2M	N6-C6-N1	-7.12	103.79	118.57
11	AA	2946	A2M	N6-C6-N1	-7.11	103.81	118.57
57	c	28	A2M	N6-C6-N1	-7.06	103.91	118.57
11	AA	2281	A2M	N6-C6-N1	-7.06	103.91	118.57
11	AA	649	A2M	N6-C6-N1	-7.06	103.92	118.57
11	AA	1133	A2M	N6-C6-N1	-7.05	103.95	118.57
11	AA	2280	A2M	N6-C6-N1	-7.00	104.04	118.57
57	c	541	A2M	N6-C6-N1	-6.97	104.10	118.57
57	c	1280	4AC	CM7-C7-N4	5.87	125.45	115.29
11	AA	2256	A2M	N3-C2-N1	-5.77	119.66	128.68
57	c	796	A2M	N3-C2-N1	-5.75	119.69	128.68
57	c	1773	4AC	CM7-C7-N4	5.72	125.19	115.29
11	AA	2220	A2M	N3-C2-N1	-5.62	119.89	128.68
11	AA	1133	A2M	N3-C2-N1	-5.62	119.90	128.68
57	c	974	A2M	N3-C2-N1	-5.61	119.90	128.68
57	c	28	A2M	N3-C2-N1	-5.61	119.90	128.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	c	100	A2M	N3-C2-N1	-5.60	119.93	128.68
57	c	420	A2M	N3-C2-N1	-5.57	119.97	128.68
11	AA	876	A2M	N3-C2-N1	-5.56	119.99	128.68
11	AA	2946	A2M	N3-C2-N1	-5.54	120.01	128.68
11	AA	2281	A2M	N3-C2-N1	-5.53	120.04	128.68
57	c	541	A2M	N3-C2-N1	-5.51	120.06	128.68
11	AA	649	A2M	N3-C2-N1	-5.49	120.11	128.68
57	c	1781	MA6	N3-C2-N1	-5.47	120.13	128.68
11	AA	2640	A2M	N3-C2-N1	-5.46	120.14	128.68
11	AA	2280	A2M	N3-C2-N1	-5.46	120.14	128.68
57	c	619	A2M	N3-C2-N1	-5.45	120.15	128.68
11	AA	817	A2M	N3-C2-N1	-5.41	120.22	128.68
11	AA	2729	OMU	C4-N3-C2	-5.40	119.46	126.58
57	c	1782	MA6	N3-C2-N1	-5.38	120.28	128.68
11	AA	2347	OMU	C4-N3-C2	-5.34	119.53	126.58
57	c	436	A2M	N3-C2-N1	-5.34	120.33	128.68
11	AA	1449	A2M	N3-C2-N1	-5.33	120.35	128.68
11	AA	1888	OMU	C4-N3-C2	-5.28	119.62	126.58
11	AA	2417	OMU	C4-N3-C2	-5.28	119.62	126.58
11	AA	2921	OMU	C4-N3-C2	-5.26	119.64	126.58
11	AA	807	A2M	N3-C2-N1	-5.26	120.46	128.68
57	c	578	OMU	C4-N3-C2	-5.25	119.66	126.58
11	AA	2724	OMU	C4-N3-C2	-5.21	119.71	126.58
11	AA	2421	OMU	C4-N3-C2	-5.20	119.72	126.58
57	c	1191	B8N	C5-C4-N3	5.18	125.77	116.17
11	AA	898	OMU	C4-N3-C2	-5.16	119.77	126.58
11	AA	2634	UR3	C4-N3-C2	-4.82	120.02	124.56
57	c	1269	OMU	C4-N3-C2	-4.79	120.26	126.58
57	c	1191	B8N	C4-N3-C2	-4.58	119.67	125.46
11	AA	1437	OMC	C1'-N1-C2	4.33	128.08	118.42
11	AA	898	OMU	N3-C2-N1	4.18	120.44	114.89
11	AA	2921	OMU	N3-C2-N1	3.97	120.16	114.89
11	AA	2347	OMU	N3-C2-N1	3.95	120.13	114.89
11	AA	2724	OMU	N3-C2-N1	3.85	120.00	114.89
11	AA	2729	OMU	N3-C2-N1	3.78	119.91	114.89
57	c	578	OMU	N3-C2-N1	3.69	119.79	114.89
11	AA	2421	OMU	N3-C2-N1	3.67	119.77	114.89
11	AA	1888	OMU	N3-C2-N1	3.58	119.64	114.89
11	AA	2417	OMU	N3-C2-N1	3.54	119.58	114.89
57	c	1269	OMU	N3-C2-N1	3.52	119.56	114.89
11	AA	2417	OMU	C5-C4-N3	3.47	120.03	114.84
11	AA	2421	OMU	C5-C4-N3	3.45	120.00	114.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	2729	OMU	C5-C4-N3	3.44	119.98	114.84
11	AA	2347	OMU	C5-C4-N3	3.42	119.96	114.84
11	AA	1888	OMU	C5-C4-N3	3.42	119.95	114.84
11	AA	2724	OMU	C5-C4-N3	3.39	119.91	114.84
11	AA	1437	OMC	C1'-N1-C6	-3.25	113.74	120.84
57	c	578	OMU	C5-C4-N3	3.24	119.69	114.84
11	AA	2921	OMU	C5-C4-N3	3.18	119.59	114.84
11	AA	2417	OMU	O4-C4-C5	-3.17	119.58	125.16
57	c	1269	OMU	C5-C4-N3	3.17	119.58	114.84
57	c	414	OMC	C1'-N1-C2	3.17	125.49	118.42
11	AA	2948	OMC	C1'-N1-C2	3.15	125.45	118.42
11	AA	898	OMU	C5-C4-N3	3.05	119.40	114.84
11	AA	2729	OMU	O4-C4-C5	-3.03	119.82	125.16
11	AA	2724	OMU	O4-C4-C5	-3.03	119.83	125.16
11	AA	2421	OMU	O4-C4-C5	-3.01	119.86	125.16
57	c	1575	G7M	C2-N1-C6	-2.95	119.67	125.10
57	c	1191	B8N	N3-C2-N1	2.93	120.90	116.76
11	AA	2347	OMU	O4-C4-C5	-2.92	120.02	125.16
11	AA	2281	A2M	O4'-C1'-C2'	-2.90	101.55	106.59
11	AA	1888	OMU	O4-C4-C5	-2.89	120.08	125.16
57	c	1269	OMU	O4-C4-C5	-2.87	120.12	125.16
57	c	1191	B8N	O4-C4-N3	-2.86	115.12	119.98
57	c	1773	4AC	O7-C7-N4	-2.86	117.19	121.82
57	c	1280	4AC	O7-C7-N4	-2.83	117.23	121.82
57	c	1280	4AC	C6-C5-C4	2.82	120.42	116.96
57	c	578	OMU	O4-C4-C5	-2.82	120.20	125.16
11	AA	2921	OMU	O4-C4-C5	-2.79	120.26	125.16
11	AA	898	OMU	O4-C4-C5	-2.71	120.39	125.16
57	c	414	OMC	C1'-N1-C6	-2.66	115.04	120.84
11	AA	876	A2M	C1'-N9-C4	2.63	131.26	126.64
11	AA	2256	A2M	O4'-C1'-C2'	-2.63	102.03	106.59
11	AA	1449	A2M	C1'-N9-C4	2.57	131.15	126.64
57	c	1773	4AC	C5-C4-N3	-2.56	118.47	122.59
57	c	1280	4AC	O7-C7-CM7	-2.55	117.32	122.06
11	AA	867	OMG	O6-C6-C5	2.55	129.35	124.37
57	c	1280	4AC	C5-C4-N3	-2.55	118.50	122.59
11	AA	2921	OMU	O2-C2-N1	-2.51	119.45	122.79
11	AA	2948	OMC	C1'-N1-C6	-2.51	115.38	120.84
57	c	1280	4AC	O2-C2-N3	-2.47	118.32	122.33
11	AA	898	OMU	O2-C2-N1	-2.45	119.53	122.79
11	AA	2337	OMC	C1'-N1-C2	2.45	123.88	118.42
57	c	541	A2M	C1'-N9-C4	2.42	130.90	126.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	2922	OMG	O6-C6-C5	2.42	129.10	124.37
11	AA	2724	OMU	C1'-N1-C2	2.42	121.95	117.57
12	Aa	699	DDE	CAU-CBW-CBI	-2.41	106.43	111.20
11	AA	2256	A2M	O2'-C2'-C1'	2.40	113.84	109.09
57	c	1773	4AC	O7-C7-CM7	-2.39	117.62	122.06
57	c	1773	4AC	C6-C5-C4	2.38	119.87	116.96
57	c	1280	4AC	C1'-N1-C2	2.35	123.67	118.42
11	AA	2280	A2M	C1'-N9-C4	2.33	130.74	126.64
57	c	436	A2M	C1'-N9-C4	2.31	130.71	126.64
11	AA	2288	OMG	O6-C6-C5	2.31	128.89	124.37
57	c	1269	OMU	C1'-N1-C2	2.30	121.73	117.57
57	c	28	A2M	C1'-N9-C4	2.29	130.66	126.64
11	AA	805	OMG	O6-C6-C5	2.28	128.82	124.37
57	c	1428	OMG	O6-C6-C5	2.27	128.80	124.37
11	AA	2619	OMG	O6-C6-C5	2.26	128.79	124.37
11	AA	2220	A2M	C1'-N9-C4	2.26	130.61	126.64
11	AA	2815	OMG	O6-C6-C5	2.26	128.78	124.37
11	AA	908	OMG	O6-C6-C5	2.25	128.77	124.37
11	AA	2142	1MA	N1-C6-N6	2.22	125.42	119.77
57	c	1572	OMG	O6-C6-C5	2.21	128.69	124.37
11	AA	817	A2M	O4'-C1'-C2'	-2.19	102.78	106.59
11	AA	645	1MA	N1-C6-N6	2.18	125.31	119.77
11	AA	2142	1MA	C5-C6-N1	-2.18	110.65	113.90
11	AA	807	A2M	C1'-N9-C4	2.17	130.46	126.64
11	AA	2417	OMU	O2-C2-N1	-2.16	119.92	122.79
11	AA	2421	OMU	O2-C2-N1	-2.14	119.94	122.79
12	Aa	699	DDE	CBW-CBI-NAD	2.13	118.00	115.28
11	AA	2640	A2M	C1'-N9-C4	2.13	130.39	126.64
11	AA	1450	OMG	O6-C6-C5	2.13	128.53	124.37
11	AA	649	A2M	C1'-N9-C4	2.11	130.35	126.64
11	AA	2946	A2M	C1'-N9-C4	2.11	130.34	126.64
57	c	974	A2M	C1'-N9-C4	2.10	130.34	126.64
11	AA	2791	OMG	O6-C6-C5	2.09	128.45	124.37
57	c	578	OMU	O2-C2-N1	-2.07	120.03	122.79
57	c	1191	B8N	C31-N3-C2	2.07	120.77	117.67
11	AA	2793	OMG	O6-C6-C5	2.04	128.36	124.37
11	AA	650	OMC	C1'-N1-C2	2.03	122.94	118.42
57	c	619	A2M	C1'-N9-C4	2.02	130.20	126.64
11	AA	1888	OMU	O2-C2-N1	-2.01	120.11	122.79
57	c	1126	OMG	O6-C6-C5	2.01	128.30	124.37
11	AA	867	OMG	C5-C6-N1	-2.00	110.42	113.95

There are no chirality outliers.

All (125) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
11	AA	649	A2M	C1'-C2'-O2'-CM'
11	AA	663	OMC	C1'-C2'-O2'-CM2
11	AA	805	OMG	C1'-C2'-O2'-CM2
11	AA	807	A2M	C1'-C2'-O2'-CM'
11	AA	898	OMU	C1'-C2'-O2'-CM2
11	AA	908	OMG	C3'-C4'-C5'-O5'
11	AA	1437	OMC	C3'-C4'-C5'-O5'
11	AA	1450	OMG	C3'-C4'-C5'-O5'
11	AA	2220	A2M	C1'-C2'-O2'-CM'
11	AA	2256	A2M	C1'-C2'-O2'-CM'
11	AA	2280	A2M	O4'-C4'-C5'-O5'
11	AA	2337	OMC	C1'-C2'-O2'-CM2
11	AA	2337	OMC	C3'-C4'-C5'-O5'
11	AA	2421	OMU	C1'-C2'-O2'-CM2
11	AA	2640	A2M	C1'-C2'-O2'-CM'
11	AA	2724	OMU	C1'-C2'-O2'-CM2
11	AA	2729	OMU	C1'-C2'-O2'-CM2
11	AA	2793	OMG	C1'-C2'-O2'-CM2
11	AA	2870	5MC	C2'-C1'-N1-C2
11	AA	2870	5MC	C2'-C1'-N1-C6
11	AA	2921	OMU	C1'-C2'-O2'-CM2
11	AA	2922	OMG	C3'-C4'-C5'-O5'
11	AA	2946	A2M	C1'-C2'-O2'-CM'
11	AA	2948	OMC	C1'-C2'-O2'-CM2
11	AA	2959	OMC	C1'-C2'-O2'-CM2
12	Aa	699	DDE	CA-CB-CG-ND1
12	Aa	699	DDE	CA-CB-CG-CD2
12	Aa	699	DDE	CAU-CAT-CE1-NE2
12	Aa	699	DDE	CBI-CBW-NCB-CAB
12	Aa	699	DDE	CBI-CBW-NCB-CAC
12	Aa	699	DDE	CBI-CBW-NCB-CAA
12	Aa	699	DDE	CAU-CBW-NCB-CAB
12	Aa	699	DDE	CAU-CBW-NCB-CAC
12	Aa	699	DDE	CAU-CBW-NCB-CAA
12	Aa	699	DDE	CAT-CAU-CBW-NCB
12	Aa	699	DDE	CE1-CAT-CAU-CBW
57	c	28	A2M	C3'-C4'-C5'-O5'
57	c	414	OMC	C1'-C2'-O2'-CM2
57	c	414	OMC	O4'-C4'-C5'-O5'
57	c	420	A2M	O4'-C4'-C5'-O5'
57	c	420	A2M	C1'-C2'-O2'-CM'
57	c	541	A2M	C4'-C5'-O5'-P

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Mol	Chain	Res	Type	Atoms
57	c	541	A2M	O4'-C4'-C5'-O5'
57	c	541	A2M	C3'-C4'-C5'-O5'
57	c	562	OMG	O4'-C4'-C5'-O5'
57	c	562	OMG	C3'-C4'-C5'-O5'
57	c	619	A2M	O4'-C4'-C5'-O5'
57	c	1191	B8N	O4'-C4'-C5'-O5'
57	c	1191	B8N	C3'-C4'-C5'-O5'
57	c	1191	B8N	C2'-C1'-C5-C6
57	c	1191	B8N	C31-C32-C33-C34
57	c	1191	B8N	C31-C32-C33-N34
57	c	1271	OMG	C1'-C2'-O2'-CM2
57	c	1428	OMG	C1'-C2'-O2'-CM2
57	c	1572	OMG	O4'-C4'-C5'-O5'
11	AA	807	A2M	C3'-C4'-C5'-O5'
11	AA	1450	OMG	O4'-C4'-C5'-O5'
11	AA	2280	A2M	C3'-C4'-C5'-O5'
11	AA	2337	OMC	O4'-C4'-C5'-O5'
11	AA	2946	A2M	O4'-C4'-C5'-O5'
57	c	28	A2M	O4'-C4'-C5'-O5'
57	c	414	OMC	C3'-C4'-C5'-O5'
57	c	619	A2M	C3'-C4'-C5'-O5'
57	c	1572	OMG	C3'-C4'-C5'-O5'
12	Aa	699	DDE	CAT-CAU-CBW-CBI
11	AA	645	1MA	O4'-C4'-C5'-O5'
11	AA	645	1MA	C3'-C4'-C5'-O5'
11	AA	807	A2M	O4'-C4'-C5'-O5'
11	AA	908	OMG	O4'-C4'-C5'-O5'
11	AA	2278	5MC	O4'-C4'-C5'-O5'
11	AA	2922	OMG	O4'-C4'-C5'-O5'
11	AA	2946	A2M	C3'-C4'-C5'-O5'
57	c	420	A2M	C3'-C4'-C5'-O5'
57	c	1428	OMG	O4'-C4'-C5'-O5'
57	c	1269	OMU	C3'-C2'-O2'-CM2
11	AA	1437	OMC	C2'-C1'-N1-C2
57	c	1428	OMG	C3'-C4'-C5'-O5'
11	AA	1437	OMC	O4'-C4'-C5'-O5'
11	AA	1437	OMC	C2'-C1'-N1-C6
11	AA	2278	5MC	C3'-C4'-C5'-O5'
57	c	1280	4AC	O7-C7-N4-C4
57	c	1280	4AC	CM7-C7-N4-C4
57	c	1773	4AC	O7-C7-N4-C4
57	c	1773	4AC	CM7-C7-N4-C4

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Mol	Chain	Res	Type	Atoms
11	AA	908	OMG	C4'-C5'-O5'-P
11	AA	2256	A2M	C4'-C5'-O5'-P
57	c	1280	4AC	C4'-C5'-O5'-P
57	c	1575	G7M	O4'-C4'-C5'-O5'
57	c	1191	B8N	N3-C31-C32-C33
57	c	1782	MA6	C4'-C5'-O5'-P
11	AA	2281	A2M	O4'-C4'-C5'-O5'
11	AA	807	A2M	C4'-C5'-O5'-P
11	AA	1450	OMG	C4'-C5'-O5'-P
57	c	1572	OMG	C4'-C5'-O5'-P
11	AA	2870	5MC	O4'-C1'-N1-C6
57	c	1269	OMU	O4'-C1'-N1-C6
11	AA	2870	5MC	O4'-C1'-N1-C2
57	c	1280	4AC	C2'-C1'-N1-C6
11	AA	2281	A2M	C3'-C2'-O2'-CM'
11	AA	817	A2M	C4'-C5'-O5'-P
57	c	1280	4AC	C2'-C1'-N1-C2
57	c	1269	OMU	C2'-C1'-N1-C6
11	AA	2870	5MC	C4'-C5'-O5'-P
11	AA	2197	OMC	C2'-C1'-N1-C6
57	c	796	A2M	O4'-C4'-C5'-O5'
11	AA	2948	OMC	C2'-C1'-N1-C6
11	AA	2197	OMC	O4'-C1'-N1-C6
57	c	1269	OMU	C2'-C1'-N1-C2
11	AA	650	OMC	O4'-C4'-C5'-O5'
57	c	1280	4AC	C3'-C4'-C5'-O5'
57	c	1191	B8N	O4'-C1'-C5-C6
11	AA	1437	OMC	C4'-C5'-O5'-P
57	c	1269	OMU	O4'-C1'-N1-C2
11	AA	817	A2M	O4'-C4'-C5'-O5'
11	AA	2256	A2M	O4'-C4'-C5'-O5'
11	AA	2948	OMC	O4'-C4'-C5'-O5'
57	c	1126	OMG	C3'-C4'-C5'-O5'
11	AA	2347	OMU	C2'-C1'-N1-C2
11	AA	2948	OMC	C2'-C1'-N1-C2
11	AA	2815	OMG	C3'-C2'-O2'-CM2
11	AA	2281	A2M	C3'-C4'-C5'-O5'
57	c	1575	G7M	C3'-C4'-C5'-O5'
57	c	1773	4AC	C2'-C1'-N1-C2
57	c	28	A2M	C4'-C5'-O5'-P
11	AA	898	OMU	C3'-C4'-C5'-O5'

There are no ring outliers.

58 monomers are involved in 129 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	c	1271	OMG	3	0
11	AA	908	OMG	3	0
11	AA	1449	A2M	1	0
11	AA	2946	A2M	1	0
11	AA	2347	OMU	2	0
57	c	541	A2M	4	0
57	c	562	OMG	11	0
11	AA	2793	OMG	1	0
11	AA	2921	OMU	2	0
11	AA	2948	OMC	3	0
11	AA	2959	OMC	1	0
11	AA	805	OMG	2	0
11	AA	2815	OMG	3	0
57	c	974	A2M	2	0
11	AA	649	A2M	2	0
11	AA	2634	UR3	3	0
12	Aa	699	DDE	3	0
57	c	1639	OMC	1	0
57	c	1126	OMG	1	0
11	AA	1888	OMU	1	0
57	c	578	OMU	2	0
11	AA	2640	A2M	4	0
11	AA	2256	A2M	3	0
11	AA	2791	OMG	1	0
57	c	414	OMC	2	0
11	AA	817	A2M	2	0
57	c	796	A2M	2	0
11	AA	650	OMC	2	0
57	c	436	A2M	1	0
57	c	1280	4AC	1	0
57	c	1428	OMG	3	0
57	c	1572	OMG	1	0
11	AA	807	A2M	1	0
11	AA	645	1MA	2	0
57	c	1782	MA6	1	0
11	AA	2417	OMU	4	0
57	c	1575	G7M	2	0
11	AA	2197	OMC	1	0
11	AA	2281	A2M	1	0
11	AA	2337	OMC	1	0
57	c	420	A2M	2	0
57	c	1269	OMU	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	c	1773	4AC	4	0
11	AA	2280	A2M	1	0
11	AA	1133	A2M	1	0
11	AA	2421	OMU	2	0
11	AA	2724	OMU	8	0
11	AA	2288	OMG	2	0
11	AA	876	A2M	3	0
11	AA	898	OMU	2	0
11	AA	2922	OMG	1	0
11	AA	2729	OMU	3	0
57	c	100	A2M	1	0
11	AA	2870	5MC	1	0
11	AA	2220	A2M	4	0
57	c	1781	MA6	3	0
11	AA	663	OMC	3	0
57	c	28	A2M	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 172 ligands modelled in this entry, 171 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
84	GTP	Aa	901	82	26,34,34	0.99	1 (3%)	32,54,54	1.59	5 (15%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
84	GTP	Aa	901	82	-	3/18/38/38	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	Aa	901	GTP	C6-N1	-2.97	1.33	1.37

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	Aa	901	GTP	PB-O3B-PG	-4.43	117.61	132.83
84	Aa	901	GTP	PA-O3A-PB	-4.25	118.25	132.83
84	Aa	901	GTP	C3'-C2'-C1'	3.25	105.86	100.98
84	Aa	901	GTP	C5-C6-N1	2.17	117.79	113.95
84	Aa	901	GTP	C8-N7-C5	2.09	106.97	102.99

There are no chirality outliers.

All (3) torsion outliers are listed below:

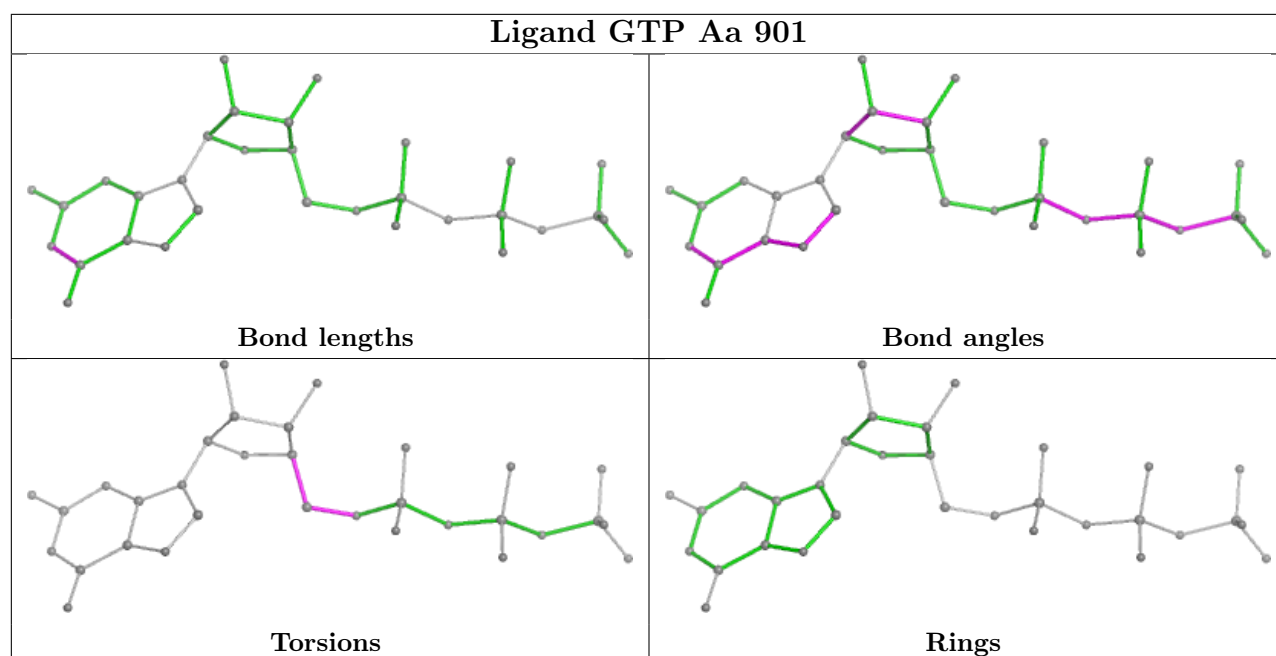
Mol	Chain	Res	Type	Atoms
84	Aa	901	GTP	O4'-C4'-C5'-O5'
84	Aa	901	GTP	C3'-C4'-C5'-O5'
84	Aa	901	GTP	C4'-C5'-O5'-PA

There are no ring outliers.

1 monomer is involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	Aa	901	GTP	7	0

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



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

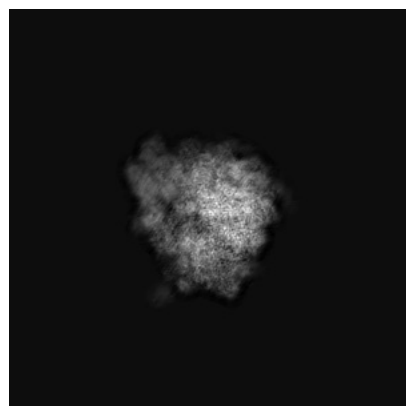
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-16729. These allow visual inspection of the internal detail of the map and identification of artifacts.

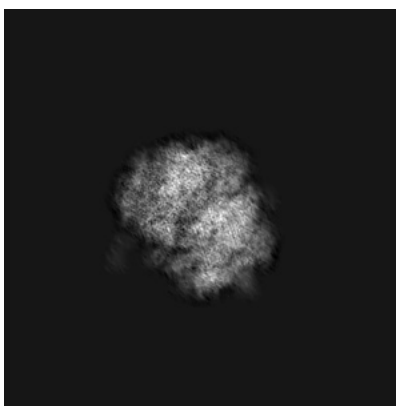
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

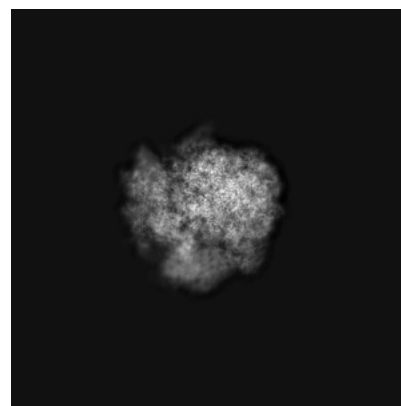
6.1.1 Primary map



X

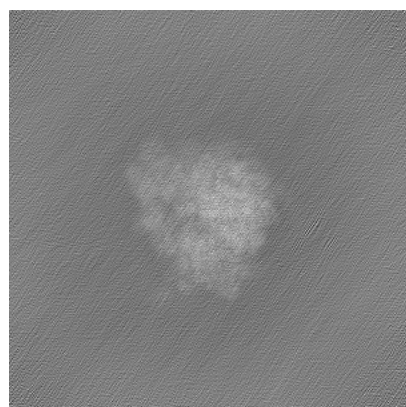


Y

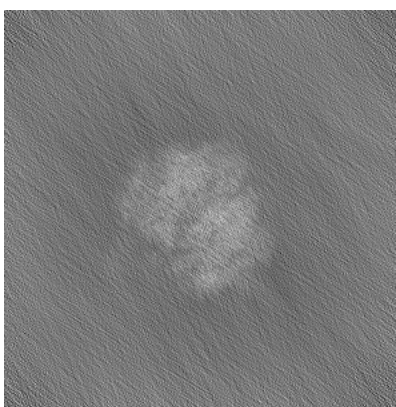


Z

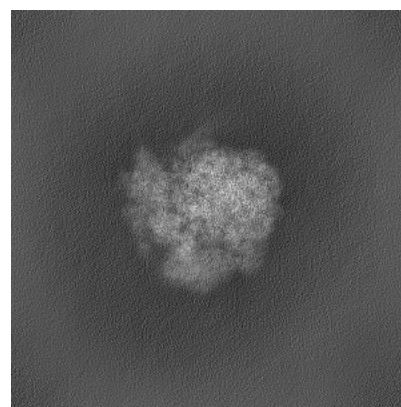
6.1.2 Raw map



X



Y

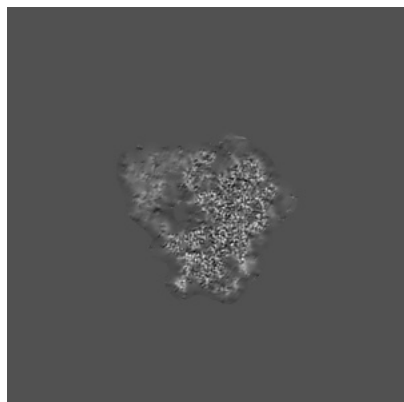


Z

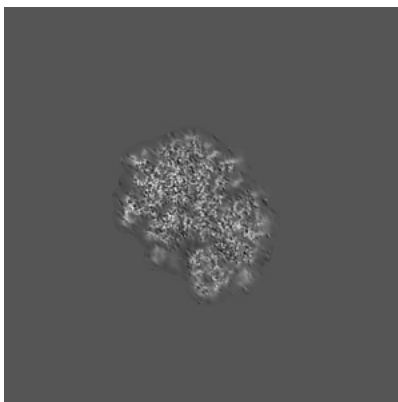
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 220

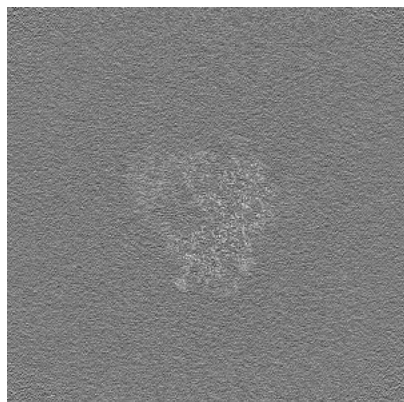


Y Index: 220

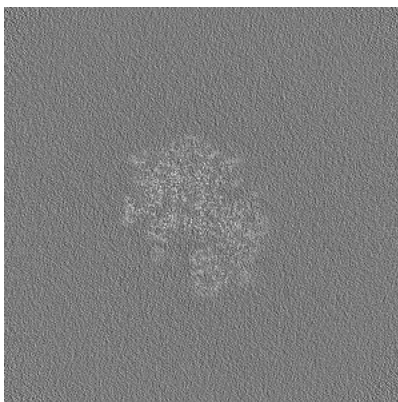


Z Index: 220

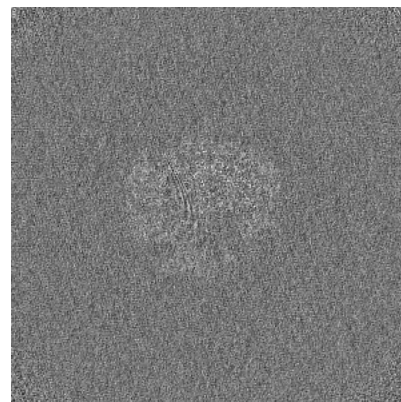
6.2.2 Raw map



X Index: 220



Y Index: 220

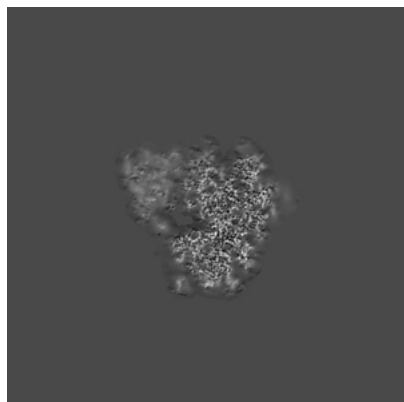


Z Index: 220

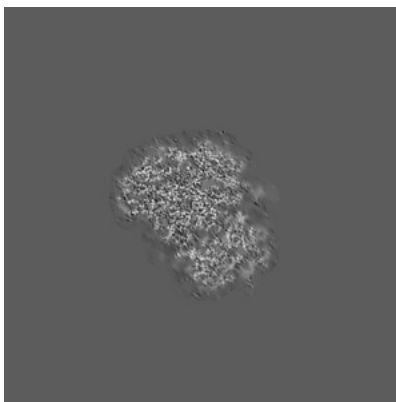
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

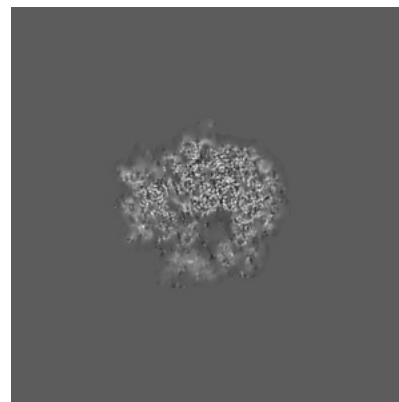
6.3.1 Primary map



X Index: 214

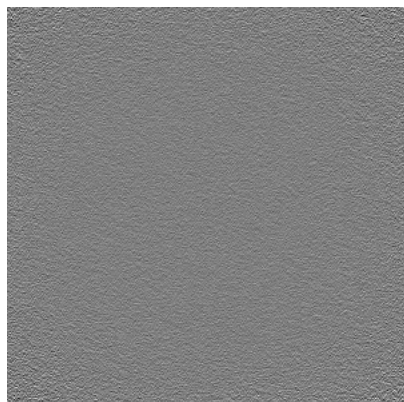


Y Index: 230

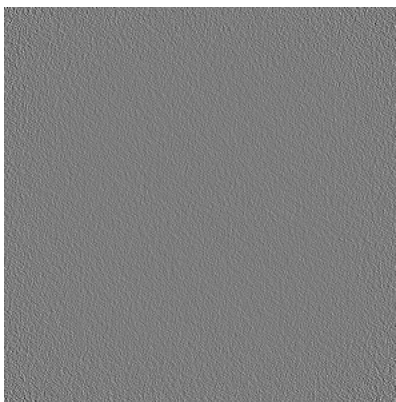


Z Index: 216

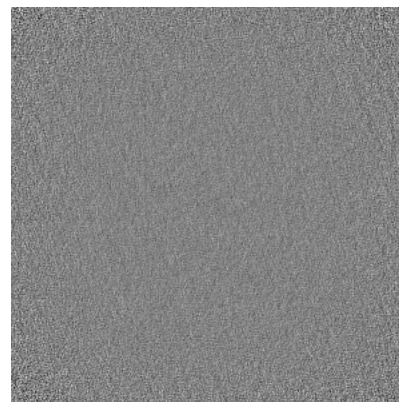
6.3.2 Raw map



X Index: 0



Y Index: 0

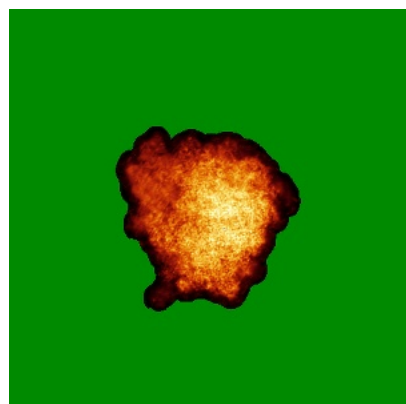


Z Index: 0

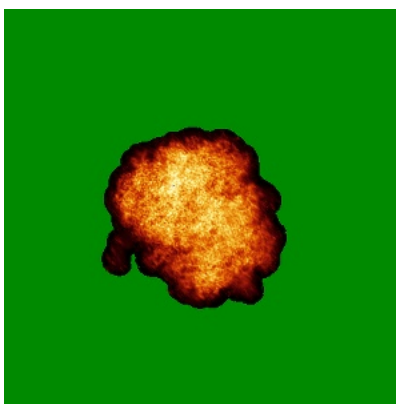
The images above show the largest variance slices of the map in three orthogonal directions.

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

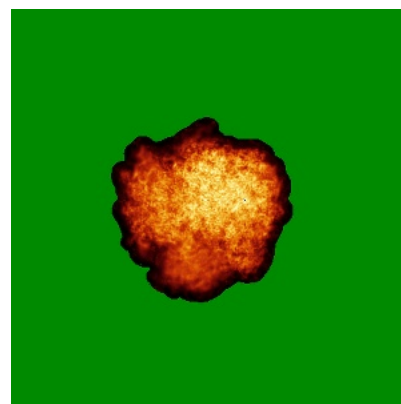
6.4.1 Primary map



X

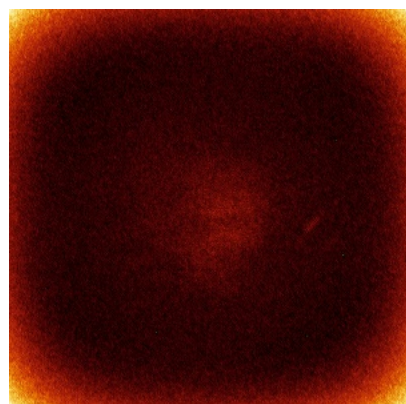


Y

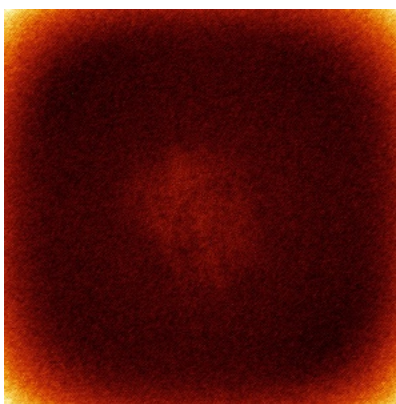


Z

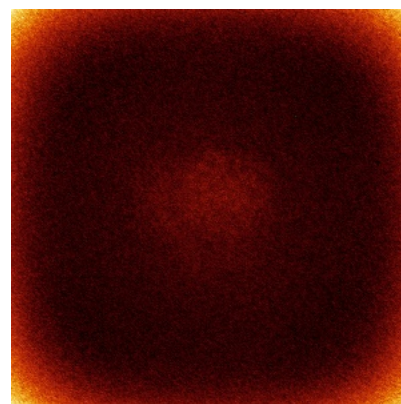
6.4.2 Raw map



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.

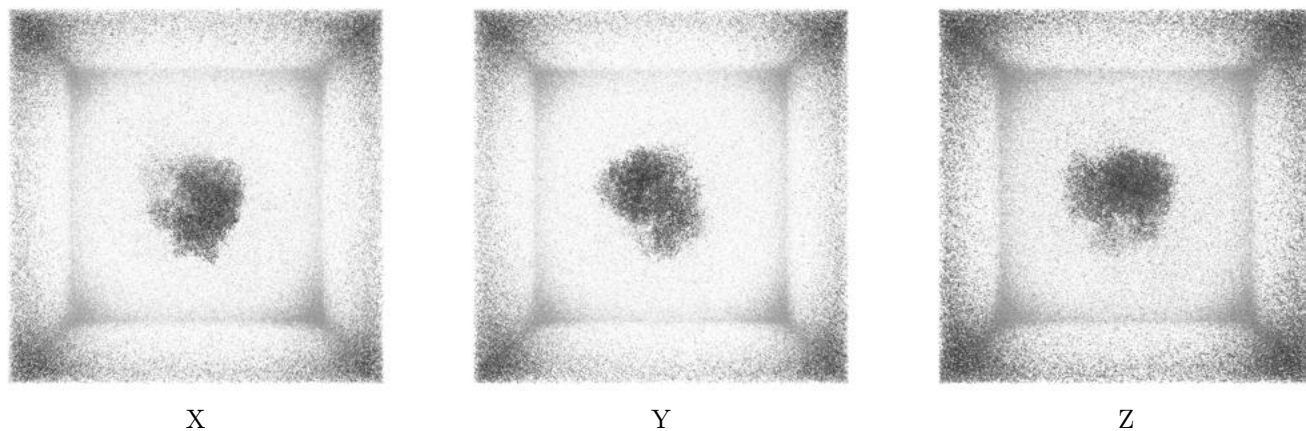
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.2. 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



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

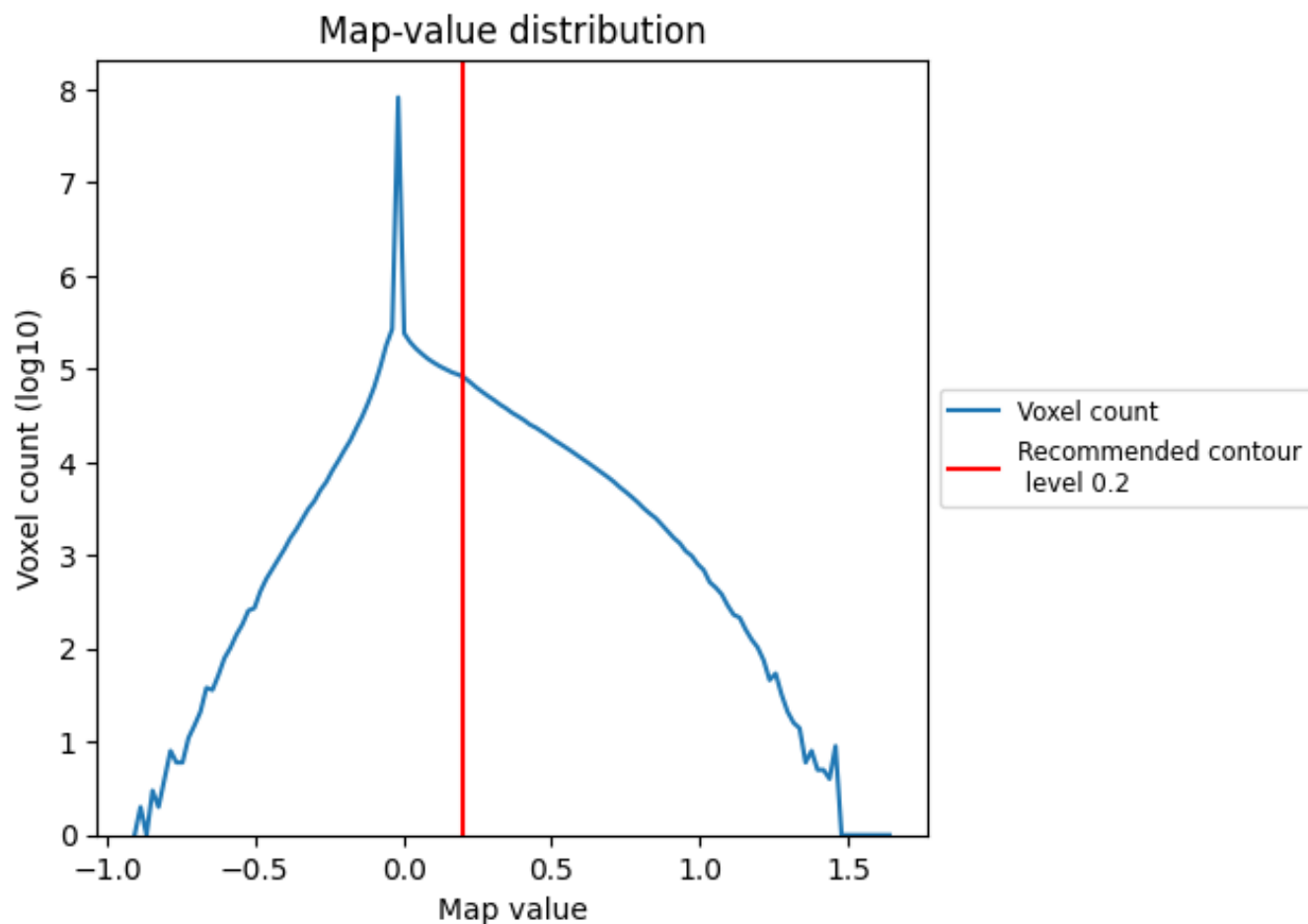
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

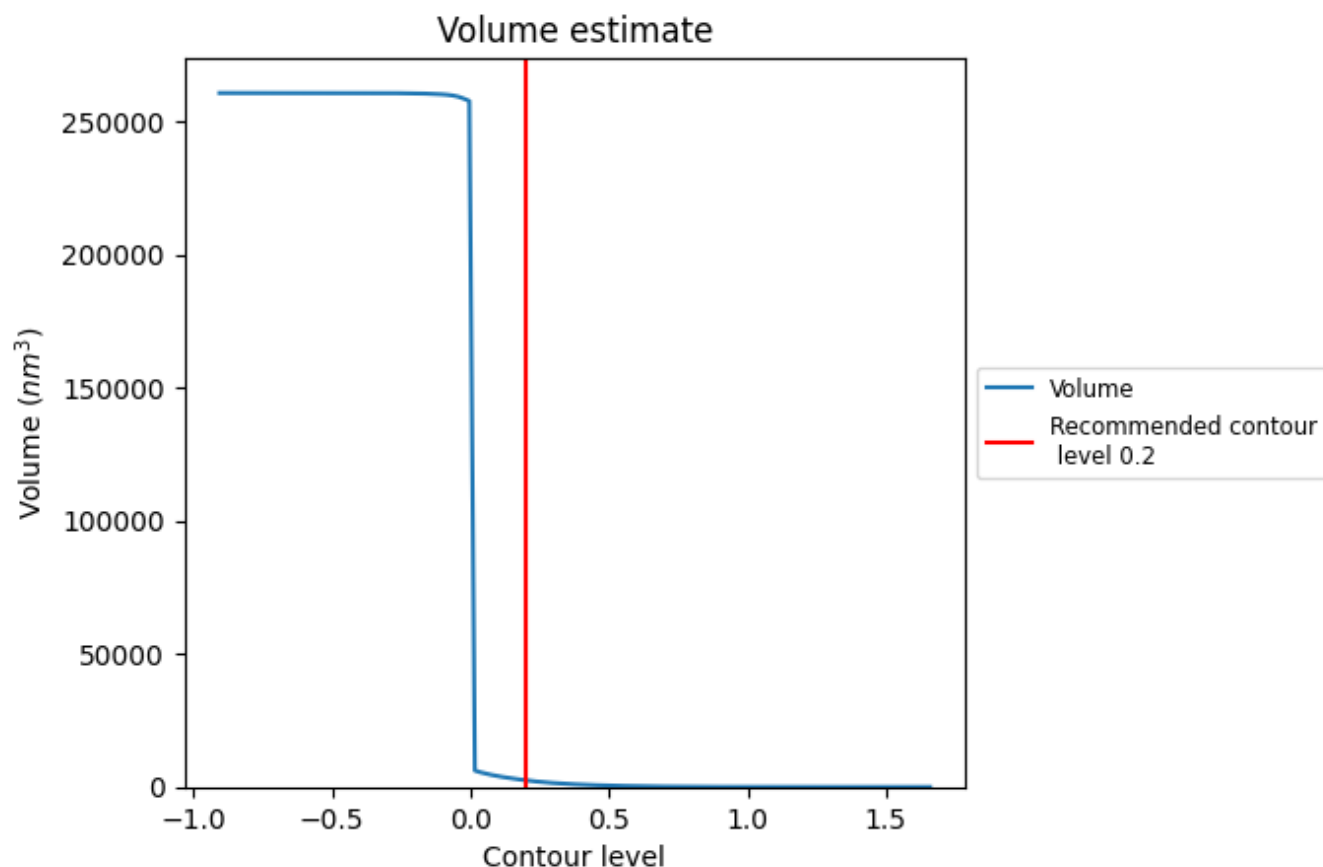
This section contains the results of statistical analysis of the map.

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.

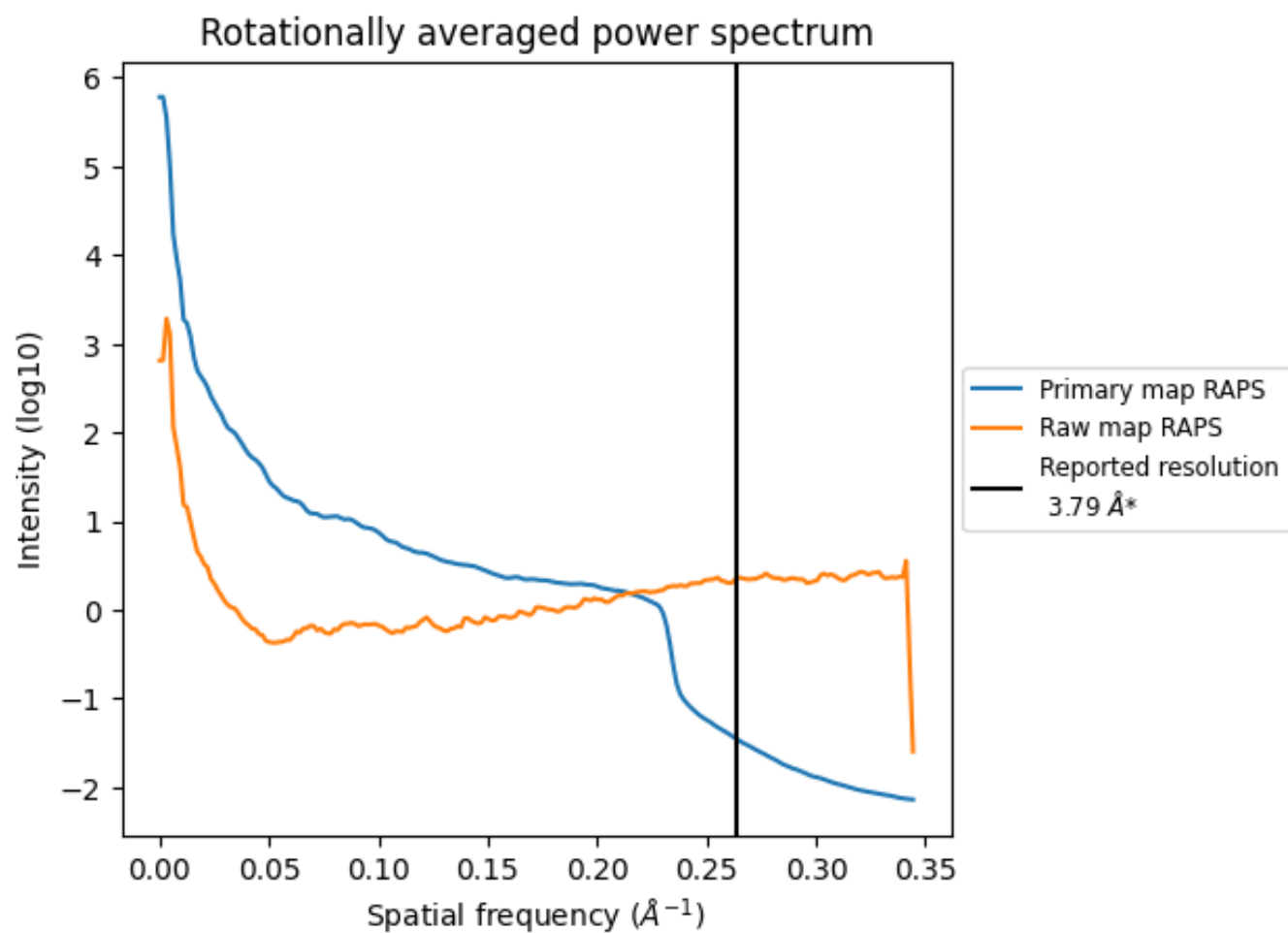
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2503 nm³; this corresponds to an approximate mass of 2261 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 ⓘ

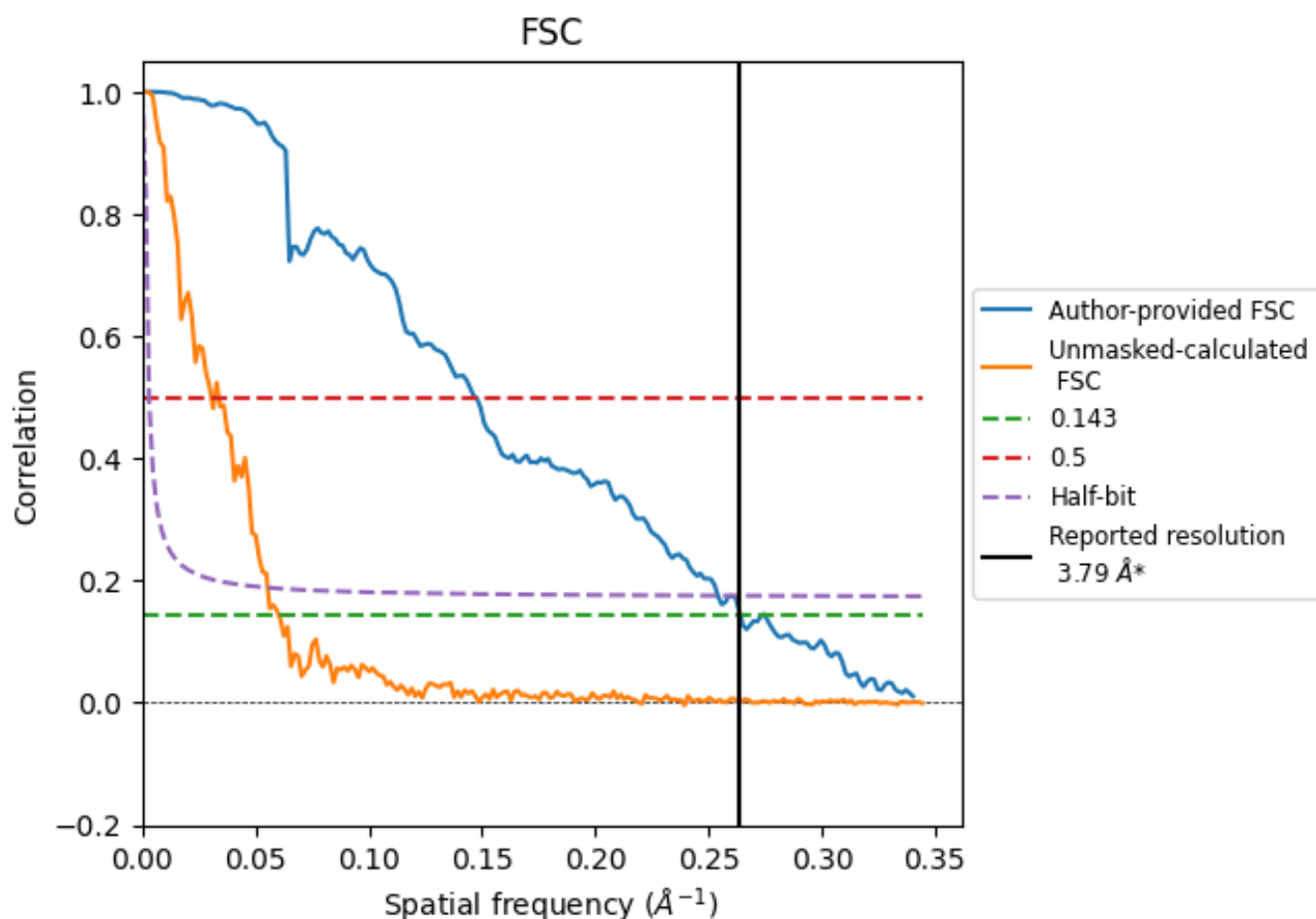


*Reported resolution corresponds to spatial frequency of 0.264 Å⁻¹

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 0.264 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

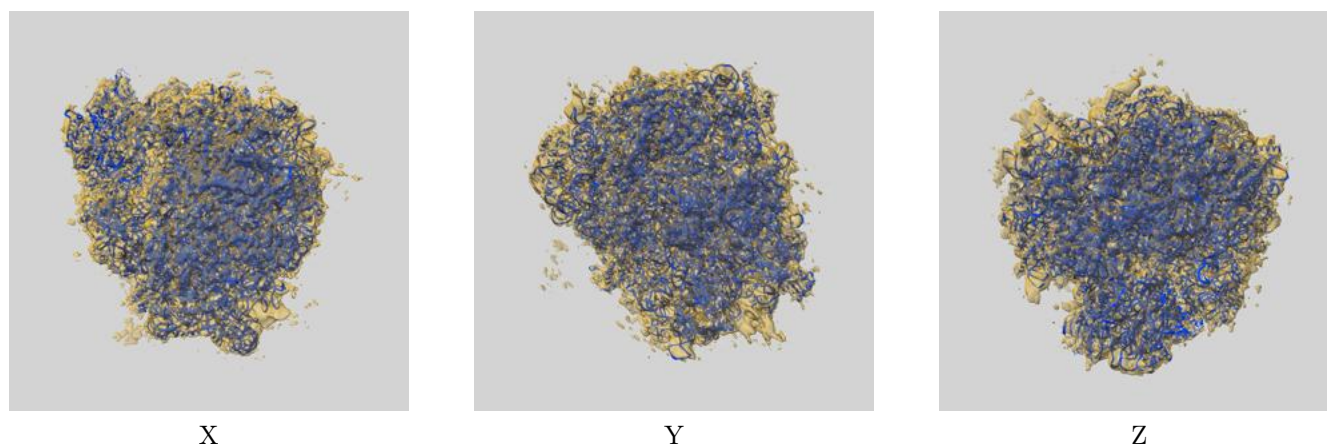
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.79	-	-
Author-provided FSC curve	3.79	6.79	3.93
Unmasked-calculated*	16.58	32.79	18.05

*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 16.58 differs from the reported value 3.79 by more than 10 %

9 Map-model fit [i](#)

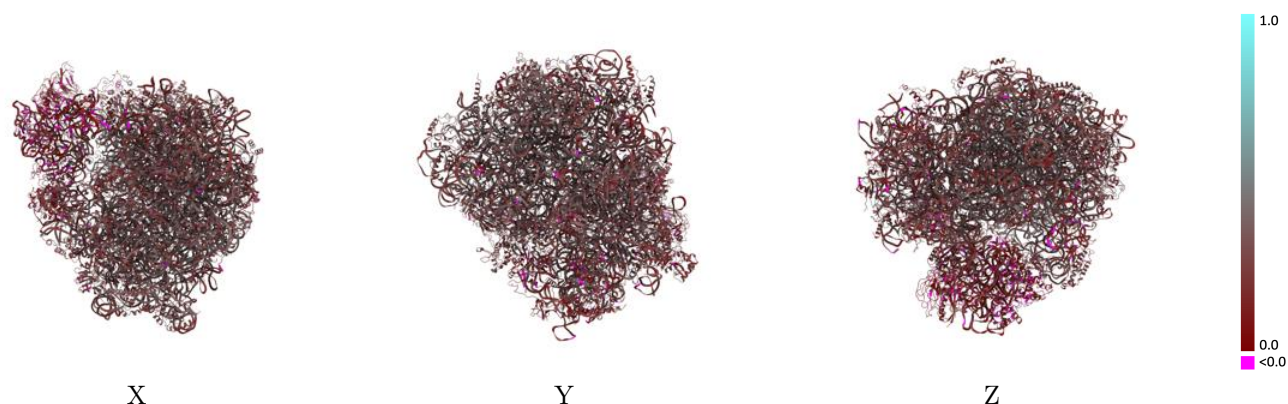
This section contains information regarding the fit between EMDB map EMD-16729 and PDB model 8CMJ. Per-residue inclusion information can be found in section 3 on page 21.

9.1 Map-model overlay [i](#)



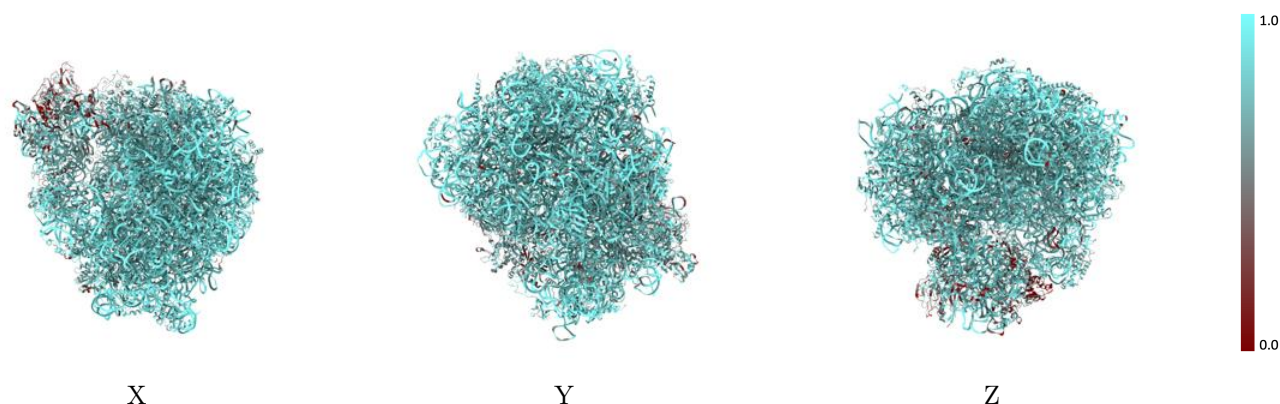
The images above show the 3D surface view of the map at the recommended contour level 0.2 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



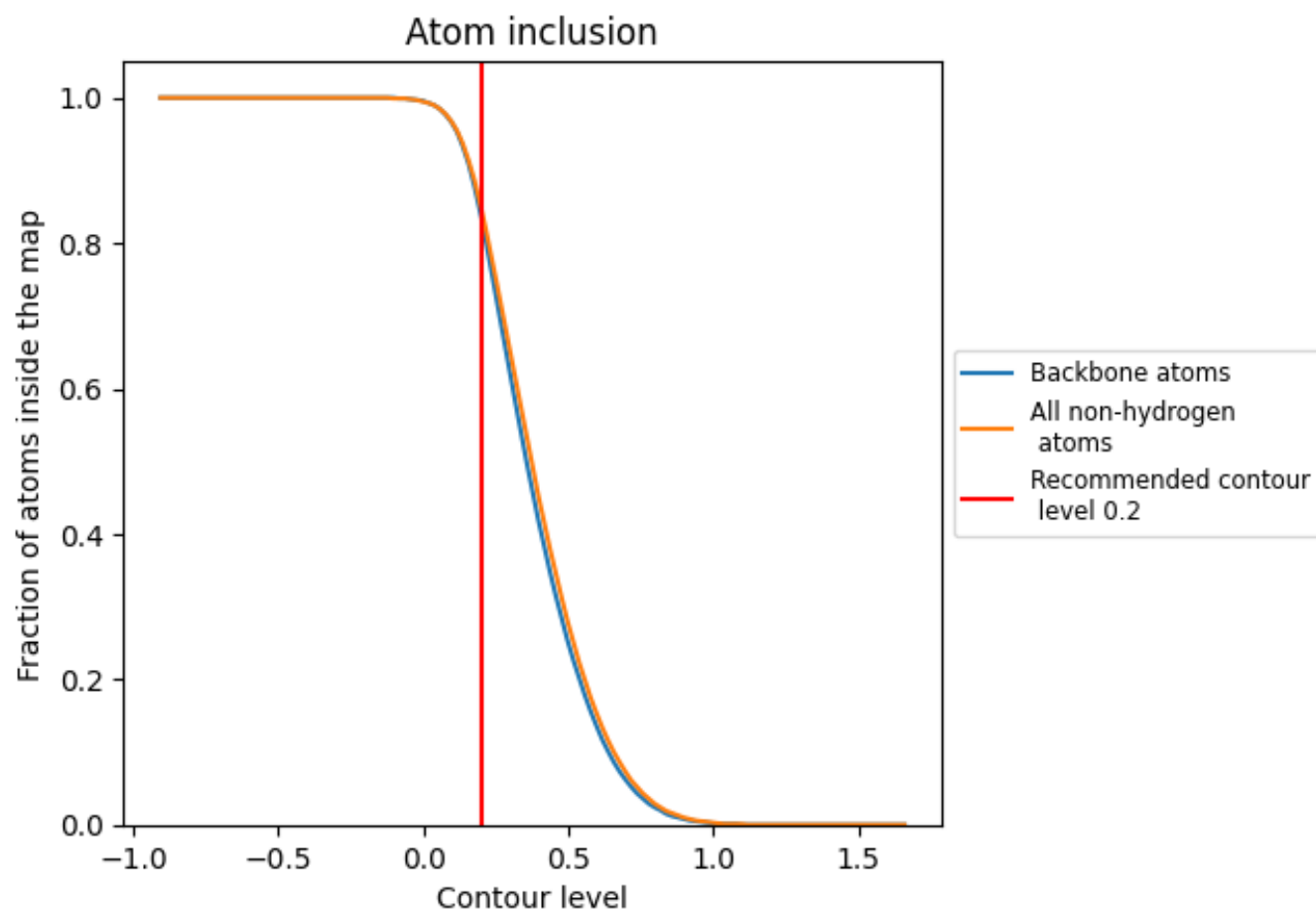
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.2).

9.4 Atom inclusion [i](#)



At the recommended contour level, 84% of all backbone atoms, 85% 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 (0.2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8480	 0.2900
0	 0.7450	 0.2500
1	 0.0510	 0.0910
2	 0.8390	 0.3270
3	 0.7820	 0.2570
4	 0.5600	 0.1500
5	 0.9150	 0.1740
6	 0.8470	 0.2580
7	 0.4470	 0.1480
8	 0.5110	 0.1560
A	 0.8380	 0.3320
AA	 0.9300	 0.3220
Aa	 0.6130	 0.2200
B	 0.8350	 0.3460
BB	 0.9730	 0.3180
C	 0.8510	 0.3340
CC	 0.9650	 0.3420
D	 0.8250	 0.3270
DD	 0.5870	 0.2330
E	 0.8420	 0.3340
EE	 0.7580	 0.3230
Ee	 0.5350	 0.1950
F	 0.8620	 0.3300
FF	 0.8330	 0.3250
G	 0.8370	 0.2670
GG	 0.8600	 0.3380
H	 0.7560	 0.3570
HH	 0.8040	 0.2650
I	 0.7520	 0.3140
II	 0.8680	 0.3250
J	 0.8470	 0.3380
JJ	 0.8680	 0.3410
K	 0.8570	 0.3280
KK	 0.8380	 0.2840
L	 0.8520	 0.2830



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Chain	Atom inclusion	Q-score
LL	 0.7520	 0.2990
M	 0.8580	 0.3280
MM	 0.8000	 0.3190
N	 0.7850	 0.2990
NN	 0.8190	 0.2470
O	 0.7520	 0.2950
OO	 0.8550	 0.2980
P	 0.8220	 0.3320
PP	 0.8500	 0.3310
Q	 0.8560	 0.3480
QQ	 0.8450	 0.2980
R	 0.8850	 0.3380
S	 0.8780	 0.3460
T	 0.8710	 0.2960
U	 0.8360	 0.2770
V	 0.9090	 0.3420
W	 0.7800	 0.2880
X	 0.8510	 0.3390
Y	 0.7330	 0.2920
Z	 0.6930	 0.2920
a	 0.7760	 0.2710
b	 0.7340	 0.3100
c	 0.9160	 0.2670
d	 0.6900	 0.2470
e	 0.7530	 0.2620
f	 0.8370	 0.3010
g	 0.7630	 0.2070
h	 0.8170	 0.2710
i	 0.5210	 0.1250
j	 0.7570	 0.2060
k	 0.6680	 0.2520
l	 0.6870	 0.2300
m	 0.8620	 0.2960
n	 0.8690	 0.2260
o	 0.7520	 0.2930
p	 0.7770	 0.2830
q	 0.8260	 0.2950
r	 0.5480	 0.1400
s	 0.6360	 0.1740
t	 0.6280	 0.2250
u	 0.5220	 0.1490
v	 0.6450	 0.1410

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Chain	Atom inclusion	Q-score
w	 0.8000	 0.2000
x	 0.8520	 0.3030
y	 0.7520	 0.2820
z	 0.7380	 0.3130