Full wwPDB EM Validation Report

Mar 8, 2026 – 11:39 AM UTC

PDB ID	:	7NWH / pdb_00007nwh
EMDB ID	:	EMD-12632
Title	:	Mammalian pre-termination 80S ribosome with eRF1 and eRF3 bound by Blasticidin S.
Authors	:	Powers, K.T.; Yadav, S.K.N.; Bufton, J.C.; Schaffitzel, C.
Deposited on	:	2021-03-16
Resolution	:	4.10 Å(reported)
Based on initial model	:	5LZT

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 (i) 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 (1)) were used in the production of this report:

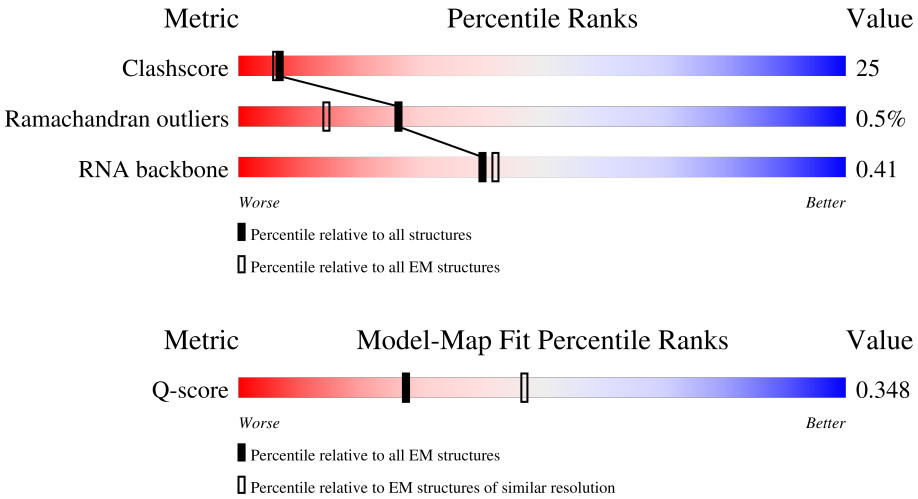
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance

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

The reported resolution of this entry is 4.10 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
RNA backbone	8273	3508	-
Q-score	-	25397	6458 (3.60 - 4.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	249	73% 27%
2	C	378	67% 28%
3	d	108	64% 34%
4	DD	281	47% 33% 47% 19%

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Mol	Chain	Length	Quality of chain
5	dd	56	46% 32% 64%
6	D	296	71% 28%
7	e	129	68% 31%
8	EE	263	20% 63% 36%
9	ee	133	13% 31% 11% 59%
10	b	226	6% 34% 12% 54%
11	E	291	44% 31% 26%
12	f	110	63% 35%
13	FF	204	54% 44% 47% 9%
14	ff	68	62% 50% 49%
15	F	249	63% 27% 10%
16	g	126	7% 63% 28% 10%
17	BB	264	21% 43% 37% 19%
18	GG	263	32% 47% 43% 10%
19	gg	314	69% 46% 54%
20	G	242	5% 62% 33%
21	h	123	76% 23%
22	HH	191	38% 51% 46%
23	hh	15	80% 13% 60% 27%
24	bb	84	32% 67% 32%
25	H	190	68% 32%
26	i	107	10% 75% 21% 5%
27	II	208	25% 59% 38%
28	ii	437	67% 43% 50%
29	I	214	78% 18%

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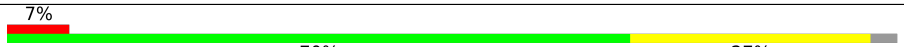
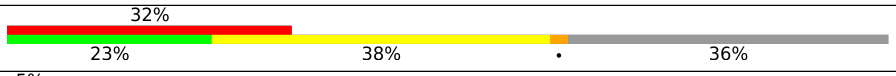
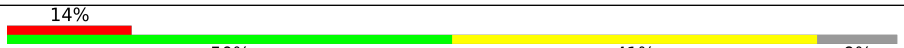
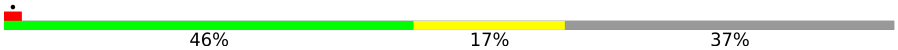
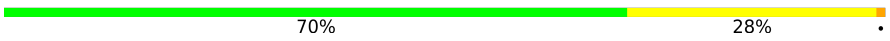
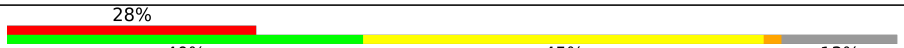
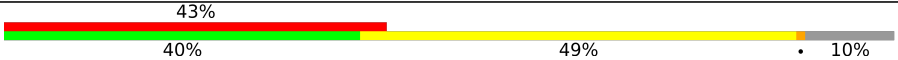
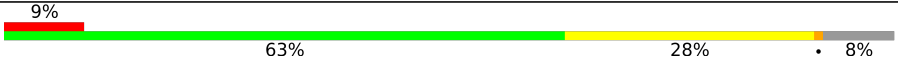
Mol	Chain	Length	Quality of chain
30	j	97	
31	JJ	194	
32	jj	428	
33	J	176	
34	k	70	
35	KK	151	
36	L	211	
37	l	51	
38	LL	158	
39	M	218	
40	m	128	
41	MM	123	
42	N	204	
43	n	25	
44	NN	150	
45	O	203	
46	o	142	
47	OO	156	
48	P	199	
49	p	109	
50	PP	145	
51	Q	188	
52	r	137	
53	QQ	158	
54	R	196	

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Mol	Chain	Length	Quality of chain
55	s	318	39% 29% 32% 38%
56	RR	145	49% 43% 48% 9%
57	S	176	75% 24%
58	t	196	48% 40% 37% 22%
59	SS	152	40% 37% 57% 5%
60	T	160	68% 31%
61	TT	145	46% 44% 52%
62	U	128	56% 21% 23%
63	UU	118	45% 27% 57% 15%
64	V	132	5% 76% 23%
65	VV	83	25% 65% 35%
66	W	134	25% 52% 27% 21%
67	5	3705	25% 53% 17%
68	WW	139	11% 63% 29% 7%
69	X	156	51% 25% 24%
70	7	120	37% 56% 8%
71	XX	142	10% 61% 37%
72	Y	134	75% 25%
73	8	151	26% 58% 17%
74	YY	146	26% 58% 27% 15%
75	Z	136	63% 37%
76	9	1779	10% 23% 54% 18% 5%
77	ZZ	122	37% 26% 35% 39%
78	a	147	68% 31%
79	AA	295	16% 45% 28% 26%

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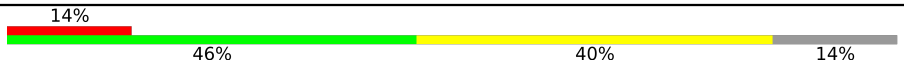
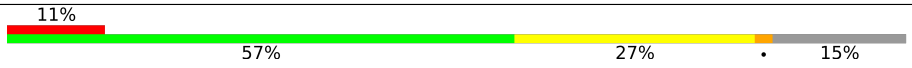
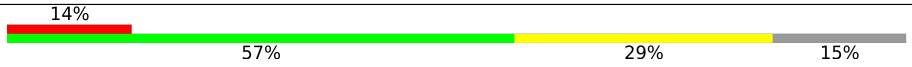
Mol	Chain	Length	Quality of chain
80	aa	117	
81	B	402	
82	c	115	
83	CC	259	
84	cc	69	

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
87	GCP	jj	700	-	-	X	-

2 Entry composition

There are 88 unique types of molecules in this entry. The entry contains 385116 atoms, of which 165738 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 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
1	A	248	3891	1189	1993	389	314	6	0	0

- Molecule 2 is a protein called uL4.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
2	C	362	5936	1812	3053	577	480	14	0	0

- Molecule 3 is a protein called eL31.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
3	d	107	1818	560	930	171	155	2	0	0

- Molecule 4 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
4	DD	228	3632	1126	1864	318	316	8	0	0

- Molecule 5 is a protein called S29.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
5	dd	55	908	286	449	94	74	5	0	0

- Molecule 6 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
6	D	293	4815	1512	2424	438	427	14	0	0

- Molecule 7 is a protein called Ribosomal protein L32.

Mol	Chain	Residues	Atoms						AltConf	Trace
7	e	128	Total	C	H	N	O	S	0	0
			2200	667	1147	216	165	5		

- Molecule 8 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms						AltConf	Trace
8	EE	262	Total	C	H	N	O	S	0	0
			4253	1324	2177	386	358	8		

- Molecule 9 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms						AltConf	Trace
9	ee	55	Total	C	H	N	O	S	0	0
			935	274	492	97	71	1		

- Molecule 10 is a protein called eL29.

Mol	Chain	Residues	Atoms						AltConf	Trace
10	b	104	Total	C	H	N	O	S	0	0
			1768	527	920	189	129	3		

- Molecule 11 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms						AltConf	Trace
11	E	216	Total	C	H	N	O	S	0	0
			3617	1115	1888	329	282	3		

- Molecule 12 is a protein called eL33.

Mol	Chain	Residues	Atoms						AltConf	Trace
12	f	109	Total	C	H	N	O	S	0	0
			1788	555	912	174	143	4		

- Molecule 13 is a protein called Ribosomal protein S5.

Mol	Chain	Residues	Atoms						AltConf	Trace
13	FF	185	Total	C	H	N	O	S	0	0
			2993	921	1522	277	266	7		

- Molecule 14 is a protein called 40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms						AltConf	Trace
14	ff	68	Total	C	H	N	O	S	0	0
			1120	351	565	103	94	7		

- Molecule 15 is a protein called uL30.

Mol	Chain	Residues	Atoms						AltConf	Trace
15	F	225	Total	C	H	N	O	S	0	0
			3870	1205	1995	358	303	9		

- Molecule 16 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms						AltConf	Trace
16	g	114	Total	C	H	N	O	S	0	0
			1905	566	999	187	147	6		

- Molecule 17 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms						AltConf	Trace
17	BB	213	Total	C	H	N	O	S	0	0
			3532	1098	1803	309	308	14		

- Molecule 18 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms						AltConf	Trace
18	GG	237	Total	C	H	N	O	S	0	0
			4005	1200	2082	387	329	7		

- Molecule 19 is a protein called Epididymis tissue sperm binding protein Li 3a.

Mol	Chain	Residues	Atoms						AltConf	Trace
19	gg	313	Total	C	H	N	O	S	0	0
			4830	1535	2394	424	465	12		

- Molecule 20 is a protein called L7a.

Mol	Chain	Residues	Atoms						AltConf	Trace
20	G	233	Total	C	H	N	O	S	0	0
			3906	1199	2027	361	315	4		

- Molecule 21 is a protein called uL29.

Mol	Chain	Residues	Atoms						AltConf	Trace
21	h	122	Total	C	H	N	O	S	0	0
			2160	640	1147	204	168	1		

- Molecule 22 is a protein called S7.

Mol	Chain	Residues	Atoms						AltConf	Trace
22	HH	185	Total	C	H	N	O	S	0	0
			3070	952	1582	271	264	1		

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
23	hh	15	Total	C	H	N	O	P	0	0
			478	142	161	54	106	15		

- Molecule 24 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms						AltConf	Trace
24	bb	83	Total	C	H	N	O	S	0	0
			1323	408	672	121	115	7		

- Molecule 25 is a protein called L9.

Mol	Chain	Residues	Atoms						AltConf	Trace
25	H	190	Total	C	H	N	O	S	0	0
			3113	954	1597	284	272	6		

- Molecule 26 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms						AltConf	Trace
26	i	102	Total	C	H	N	O	S	0	0
			1746	520	916	176	129	5		

- Molecule 27 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms						AltConf	Trace
27	II	206	Total	C	H	N	O	S	0	0
			3459	1058	1773	332	291	5		

- Molecule 28 is a protein called Eukaryotic peptide chain release factor subunit 1.

Mol	Chain	Residues	Atoms						AltConf	Trace
28	ii	419	Total	C	H	N	O	S	0	0
			6638	2104	3331	562	629	12		

- Molecule 29 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms						AltConf	Trace
29	I	205	Total	C	H	N	O	S	0	0
			3376	1056	1712	321	274	13		

- Molecule 30 is a protein called Ribosomal protein L37.

Mol	Chain	Residues	Atoms						AltConf	Trace
30	j	86	Total	C	H	N	O	S	0	0
			1442	434	737	155	111	5		

- Molecule 31 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms						AltConf	Trace
31	JJ	185	Total	C	H	N	O	S	0	0
			3165	969	1640	306	248	2		

- Molecule 32 is a protein called eRF3a.

Mol	Chain	Residues	Atoms						AltConf	Trace
32	jj	428	Total	C	H	N	O	S	0	0
			6787	2144	3419	580	623	21		

- Molecule 33 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms						AltConf	Trace
33	J	170	Total	C	H	N	O	S	0	0
			2761	861	1399	254	241	6		

- Molecule 34 is a protein called L38.

Mol	Chain	Residues	Atoms						AltConf	Trace
34	k	69	Total	C	H	N	O	S	0	0
			1206	366	637	103	99	1		

- Molecule 35 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms						AltConf	Trace
35	KK	96	Total	C	H	N	O	S	0	0
			1646	530	836	143	131	6		

- Molecule 36 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms						AltConf	Trace
36	L	210	Total	C	H	N	O	S	0	0
			3522	1065	1820	354	279	4		

- Molecule 37 is a protein called eL39.

Mol	Chain	Residues	Atoms						AltConf	Trace
37	l	50	Total	C	H	N	O	S	0	0
			927	286	480	96	64	1		

- Molecule 38 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms						AltConf	Trace
38	LL	143	Total	C	H	N	O	S	0	0
			2425	749	1250	222	198	6		

- Molecule 39 is a protein called Ribosomal protein L14.

Mol	Chain	Residues	Atoms						AltConf	Trace
39	M	138	Total	C	H	N	O	S	0	0
			2348	727	1211	221	182	7		

- Molecule 40 is a protein called 60S RIBOSOMAL PROTEIN EL40.

Mol	Chain	Residues	Atoms						AltConf	Trace
40	m	52	Total	C	H	N	O	S	0	0
			894	266	465	90	67	6		

- Molecule 41 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms						AltConf	Trace
41	MM	117	Total	C	H	N	O	S	0	0
			1847	570	939	161	169	8		

- Molecule 42 is a protein called Ribosomal protein L15.

Mol	Chain	Residues	Atoms						AltConf	Trace
42	N	203	Total	C	H	N	O	S	0	0
			3451	1072	1750	359	266	4		

- Molecule 43 is a protein called 60s ribosomal protein l41.

Mol	Chain	Residues	Atoms						AltConf	Trace
43	n	25	Total	C	H	N	O	S	0	0
			525	145	286	64	27	3		

- Molecule 44 is a protein called ribosomal protein uS15.

Mol	Chain	Residues	Atoms						AltConf	Trace
44	NN	149	Total	C	H	N	O	S	0	0
			2491	770	1289	228	203	1		

- Molecule 45 is a protein called 60S RIBOSOMAL PROTEIN UL13.

Mol	Chain	Residues	Atoms						AltConf	Trace
45	O	199	Total	C	H	N	O	S	0	0
			3408	1051	1778	319	255	5		

- Molecule 46 is a protein called eL42.

Mol	Chain	Residues	Atoms						AltConf	Trace
46	o	104	Total	C	H	N	O	S	0	0
			1771	533	920	174	138	6		

- Molecule 47 is a protein called uS11.

Mol	Chain	Residues	Atoms						AltConf	Trace
47	OO	136	Total	C	H	N	O	S	0	0
			2055	621	1039	199	190	6		

- Molecule 48 is a protein called uL22.

Mol	Chain	Residues	Atoms						AltConf	Trace
48	P	153	Total	C	H	N	O	S	0	0
			2516	777	1274	241	215	9		

- Molecule 49 is a protein called ribosomal protein eL43.

Mol	Chain	Residues	Atoms						AltConf	Trace
49	p	91	Total	C	H	N	O	S	0	0
			1466	445	758	136	120	7		

- Molecule 50 is a protein called 40S ribosomal protein uS19.

Mol	Chain	Residues	Atoms						AltConf	Trace
50	PP	120	Total	C	H	N	O	S	0	0
			2042	635	1045	187	168	7		

- Molecule 51 is a protein called eL18.

Mol	Chain	Residues	Atoms						AltConf	Trace
51	Q	187	Total	C	H	N	O	S	0	0
			3149	946	1634	315	250	4		

- Molecule 52 is a protein called eL28.

Mol	Chain	Residues	Atoms						AltConf	Trace
52	r	124	Total	C	H	N	O	S	0	0
			2045	616	1051	205	167	6		

- Molecule 53 is a protein called Ribosomal protein S16.

Mol	Chain	Residues	Atoms						AltConf	Trace
53	QQ	142	Total	C	H	N	O	S	0	0
			2323	717	1195	213	195	3		

- Molecule 54 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms						AltConf	Trace
54	R	180	Total	C	H	N	O	S	0	0
			3172	933	1664	328	238	9		

- Molecule 55 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms						AltConf	Trace
55	s	196	Total	C	H	N	O	S	0	0
			3071	959	1564	263	276	9		

- Molecule 56 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms						AltConf	Trace
56	RR	132	Total	C	H	N	O	S	0	0
			2189	670	1121	199	195	4		

- Molecule 57 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms						AltConf	Trace
57	S	176	Total	C	H	N	O	S	0	0
			2970	930	1508	285	236	11		

- Molecule 58 is a protein called uL12.

Mol	Chain	Residues	Atoms						AltConf	Trace
58	t	153	Total	C	H	N	O	S	0	0
			2375	722	1215	218	217	3		

- Molecule 59 is a protein called 40S ribosomal protein uS13.

Mol	Chain	Residues	Atoms						AltConf	Trace
59	SS	144	Total	C	H	N	O	S	0	0
			2437	746	1247	241	202	1		

- Molecule 60 is a protein called eL21.

Mol	Chain	Residues	Atoms						AltConf	Trace
60	T	159	Total	C	H	N	O	S	0	0
			2665	823	1367	252	217	6		

- Molecule 61 is a protein called eS19.

Mol	Chain	Residues	Atoms						AltConf	Trace
61	TT	141	Total	C	H	N	O	S	0	0
			2229	688	1132	211	195	3		

- Molecule 62 is a protein called L22.

Mol	Chain	Residues	Atoms						AltConf	Trace
62	U	99	Total	C	H	N	O	S	0	0
			1642	519	833	141	147	2		

- Molecule 63 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms						AltConf	Trace
63	UU	100	Total	C	H	N	O	S	0	0
			1657	498	862	152	141	4		

- Molecule 64 is a protein called eL14.

Mol	Chain	Residues	Atoms						AltConf	Trace
64	V	131	Total	C	H	N	O	S	0	0
			2018	618	1039	184	172	5		

- Molecule 65 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms						AltConf	Trace
65	VV	83	Total	C	H	N	O	S	0	0
			1273	393	637	117	121	5		

- Molecule 66 is a protein called 60S ribosomal protein L24-like protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
66	W	106	Total	C	H	N	O	S	0	0
			1752	538	892	174	144	4		

- Molecule 67 is a RNA chain called 28S Ribosomal RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
67	5	3543	Total	C	H	N	O	P	0	0
			114361	33833	38389	13910	24686	3543		

- Molecule 68 is a protein called Ribosomal protein S15a.

Mol	Chain	Residues	Atoms						AltConf	Trace
68	WW	129	Total	C	H	N	O	S	0	0
			2114	659	1080	193	176	6		

- Molecule 69 is a protein called uL23.

Mol	Chain	Residues	Atoms						AltConf	Trace
69	X	118	Total	C	H	N	O	S	0	0
			2007	618	1040	181	167	1		

- Molecule 70 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
70	7	120	Total	C	H	N	O	P	0	0
			3854	1141	1296	456	842	119		

- Molecule 71 is a protein called 40S ribosomal protein uS12.

Mol	Chain	Residues	Atoms						AltConf	Trace
71	XX	141	Total	C	H	N	O	S	0	0
			2263	693	1165	219	183	3		

- Molecule 72 is a protein called Ribosomal protein L26.

Mol	Chain	Residues	Atoms						AltConf	Trace
72	Y	134	Total	C	H	N	O	S	0	0
			2320	700	1205	226	186	3		

- Molecule 73 is a RNA chain called 5.8S Ribosomal RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
73	8	151	Total	C	H	N	O	P	0	0
			4837	1432	1629	564	1062	150		

- Molecule 74 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms						AltConf	Trace
74	YY	124	Total	C	H	N	O	S	0	0
			2094	640	1083	198	168	5		

- Molecule 75 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms						AltConf	Trace
75	Z	135	Total	C	H	N	O	S	0	0
			2289	714	1182	208	182	3		

- Molecule 76 is a RNA chain called 18S Ribosomal RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
76	9	1698	Total	C	H	N	O	P	0	0
			54557	16180	18308	6508	11864	1697		

- Molecule 77 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms						AltConf	Trace
77	ZZ	75	Total	C	H	N	O	S	0	0
			1254	382	656	111	104	1		

- Molecule 78 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms						AltConf	Trace
78	a	147	Total	C	H	N	O	S	0	0
			2372	734	1210	239	185	4		

- Molecule 79 is a protein called 40S_SA_C domain-containing protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
79	AA	217	Total	C	H	N	O	S	0	0
			3418	1086	1708	300	316	8		

- Molecule 80 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms						AltConf	Trace
80	aa	101	Total	C	H	N	O	S	0	0
			1678	507	864	170	132	5		

- Molecule 81 is a protein called uL3.

Mol	Chain	Residues	Atoms						AltConf	Trace
81	B	394	Total	C	H	N	O	S	0	0
			6482	2020	3310	597	542	13		

- Molecule 82 is a protein called eL30.

Mol	Chain	Residues	Atoms						AltConf	Trace
82	c	98	Total	C	H	N	O	S	0	0
			1555	481	794	134	140	6		

- Molecule 83 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms						AltConf	Trace
83	CC	221	Total	C	H	N	O	S	0	0
			3522	1111	1806	295	301	9		

- Molecule 84 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms						AltConf	Trace
84	cc	62	Total	C	H	N	O	S	0	0
			1002	297	514	97	92	2		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
cc	5	HIS	ARG	conflict	UNP G1TIB4

- Molecule 85 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
85	dd	1	Total	Zn	0
			1	1	
85	ff	1	Total	Zn	0
			1	1	
85	g	1	Total	Zn	0
			1	1	
85	j	1	Total	Zn	0
			1	1	
85	m	1	Total	Zn	0
			1	1	
85	o	1	Total	Zn	0
			1	1	
85	p	1	Total	Zn	0
			1	1	
85	aa	1	Total	Zn	0
			1	1	

- Molecule 86 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
86	hh	2	Total	Mg	0
			2	2	
86	j	1	Total	Mg	0
			1	1	
86	jj	1	Total	Mg	0
			1	1	
86	o	1	Total	Mg	0
			1	1	
86	P	1	Total	Mg	0
			1	1	
86	V	1	Total	Mg	0
			1	1	

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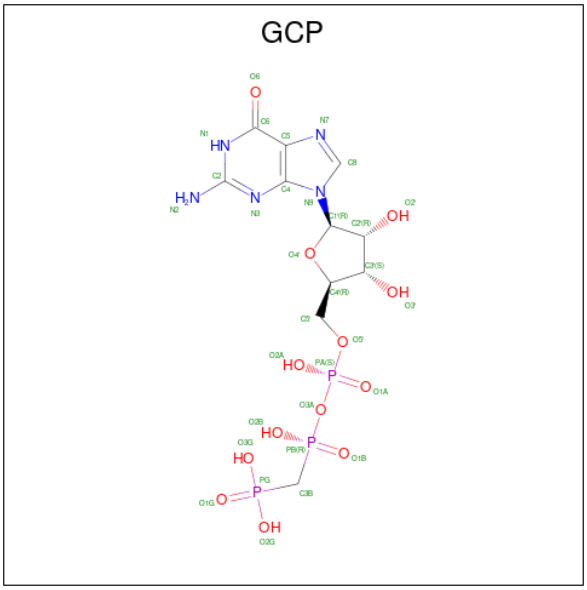
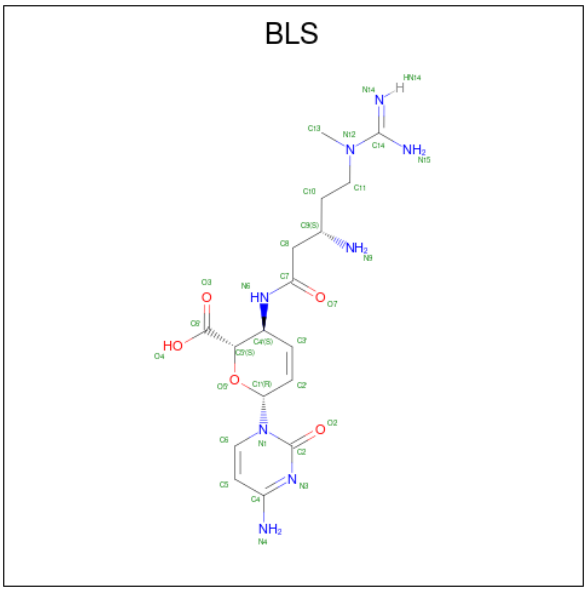
Mol	Chain	Residues	Atoms	AltConf
86	5	189	Total Mg 189 189	0
86	7	4	Total Mg 4 4	0
86	8	10	Total Mg 10 10	0
86	9	70	Total Mg 70 70	0
86	a	1	Total Mg 1 1	0

- Molecule 87 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (CCD ID: GCP) (formula: $C_{11}H_{18}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms	AltConf
87	jj	1	Total C H N O P 46 11 14 5 13 3	0

- Molecule 88 is BLASTICIDIN S (CCD ID: BLS) (formula: $C_{17}H_{26}N_8O_5$) (labeled as "Ligand of Interest" by depositor).



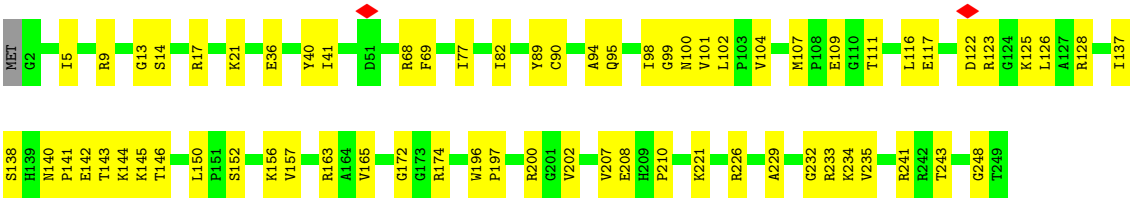
Mol	Chain	Residues	Atoms					AltConf
88	5	1	Total	C	H	N	O	0
			55	17	25	8	5	

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.

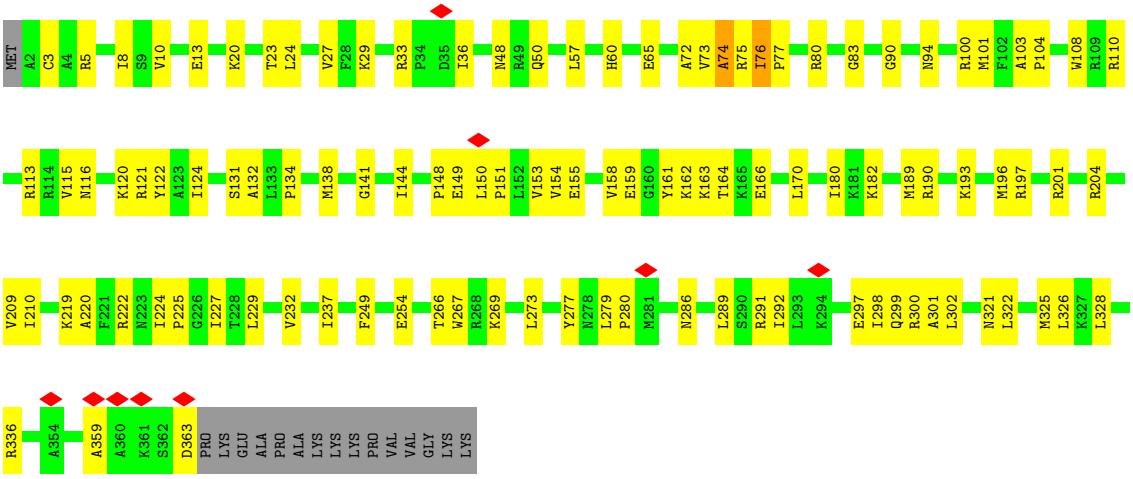
• Molecule 1: 60S ribosomal protein L8

Chain A:



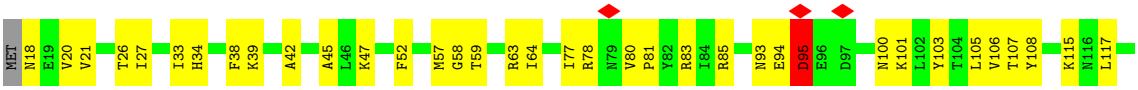
• Molecule 2: uL4

Chain C:



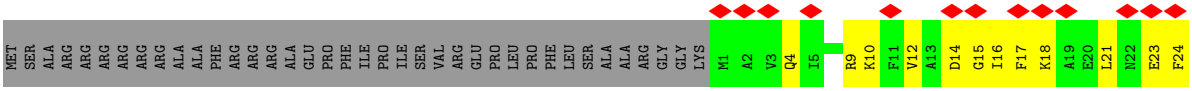
• Molecule 3: eL31

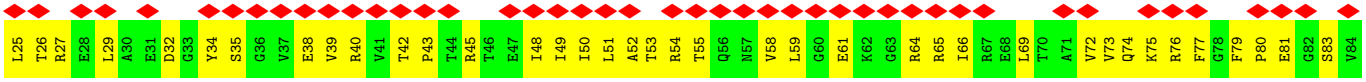
Chain d:

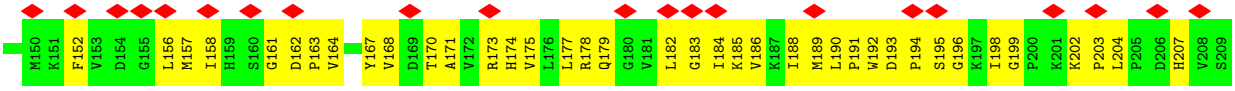


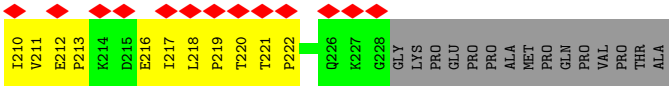
• Molecule 4: 40S ribosomal protein S3

Chain DD:



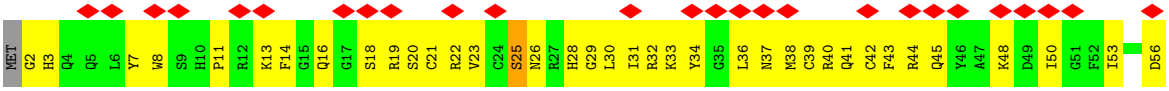






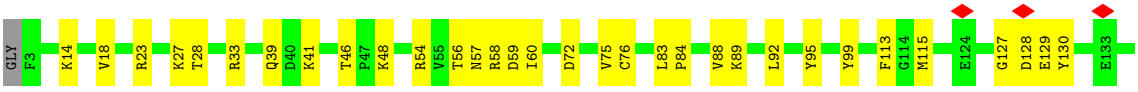
• Molecule 5: S29

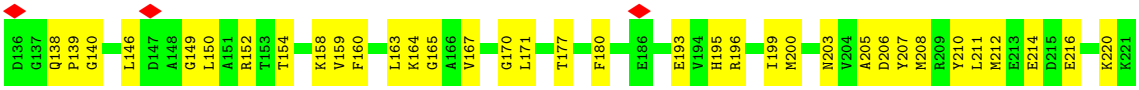
Chain dd:



• Molecule 6: 60S ribosomal protein L5

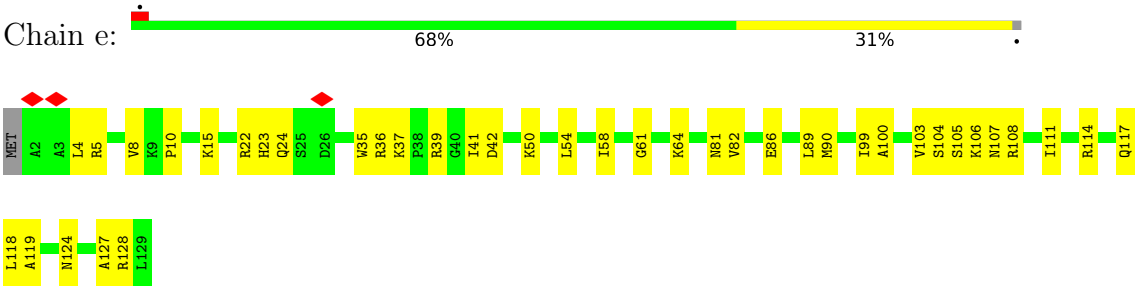
Chain D:





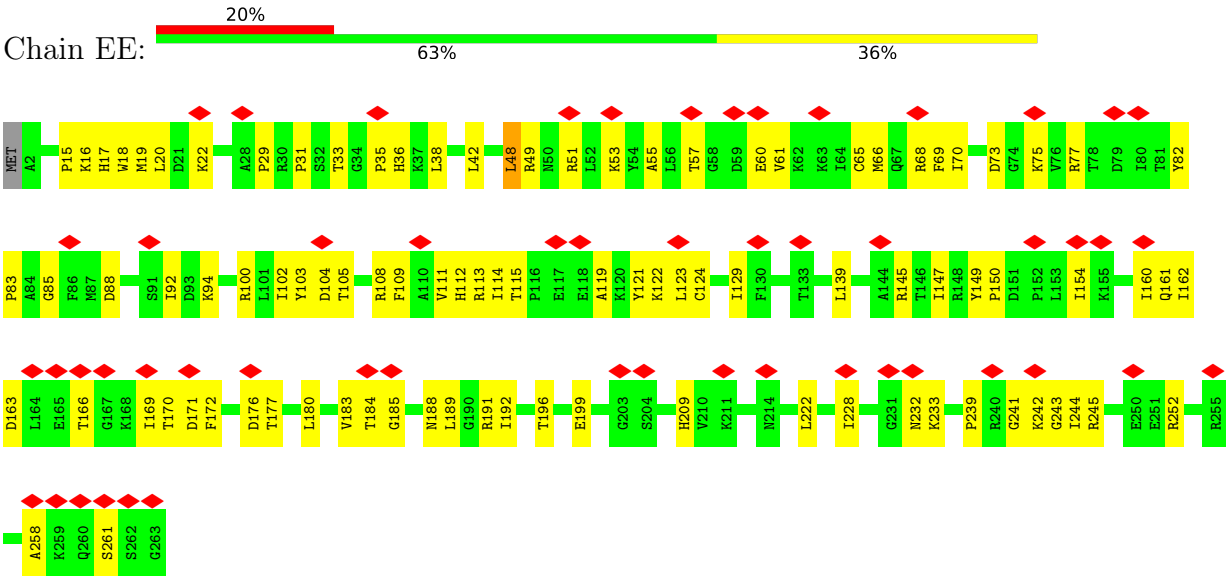
• Molecule 7: Ribosomal protein L32

Chain e:



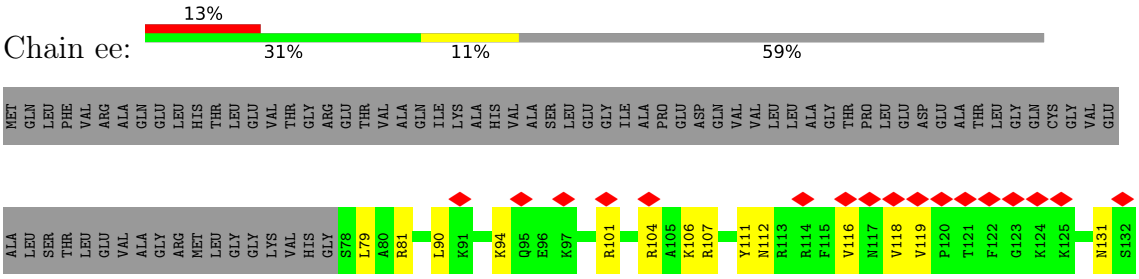
• Molecule 8: 40S ribosomal protein S4

Chain EE:



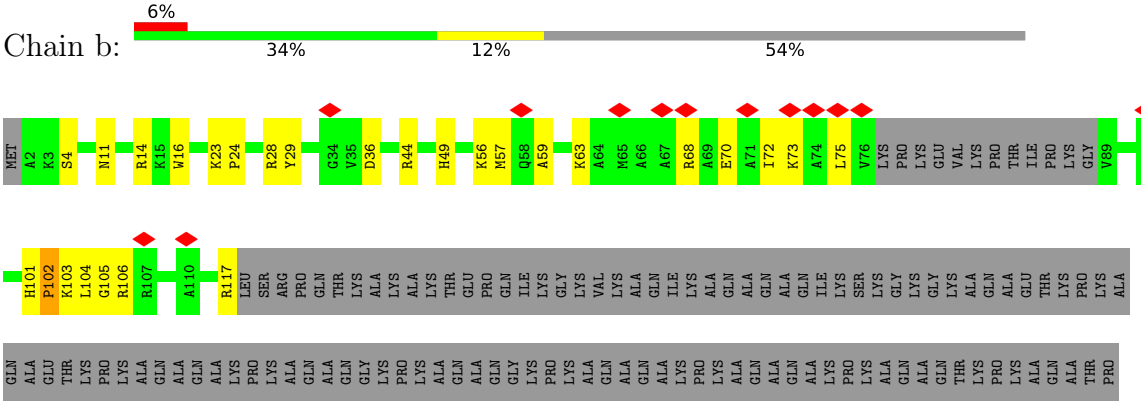
• Molecule 9: 40S ribosomal protein S30

Chain ee:

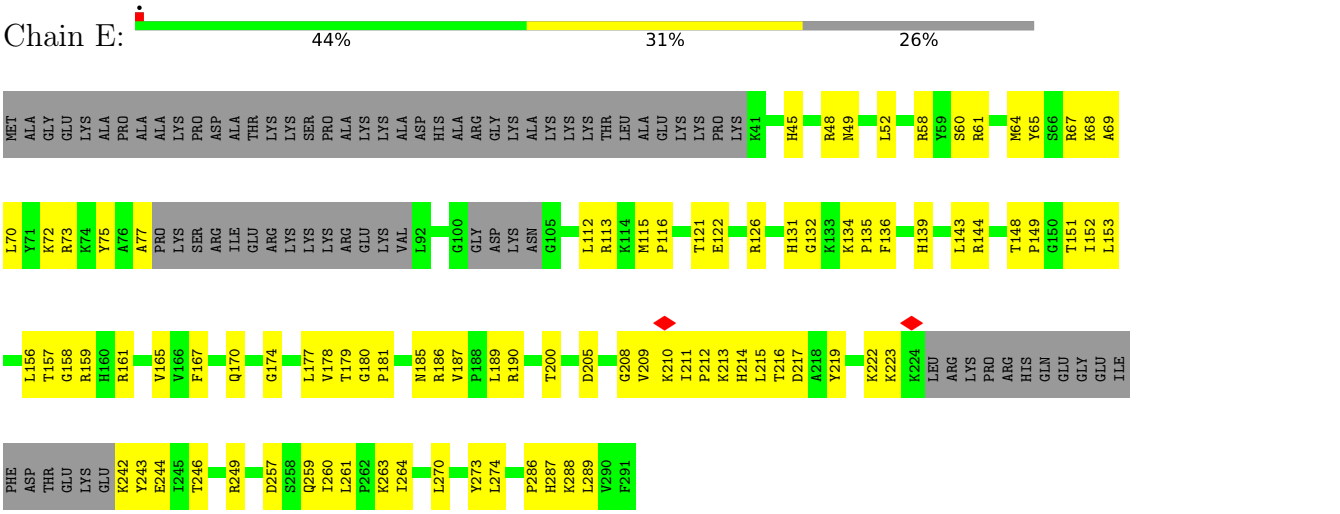


• Molecule 10: eL29

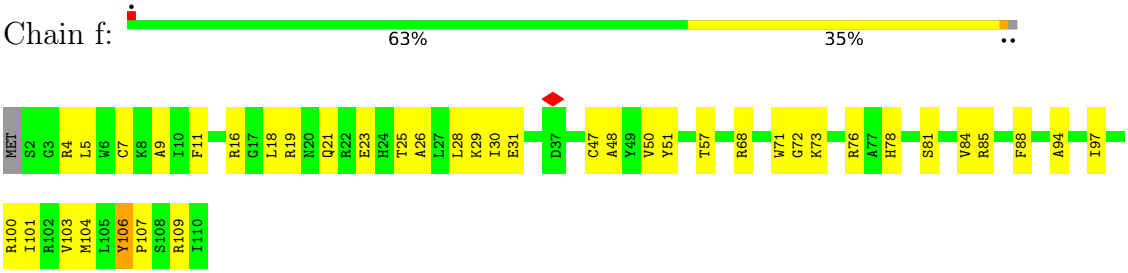
Chain b:



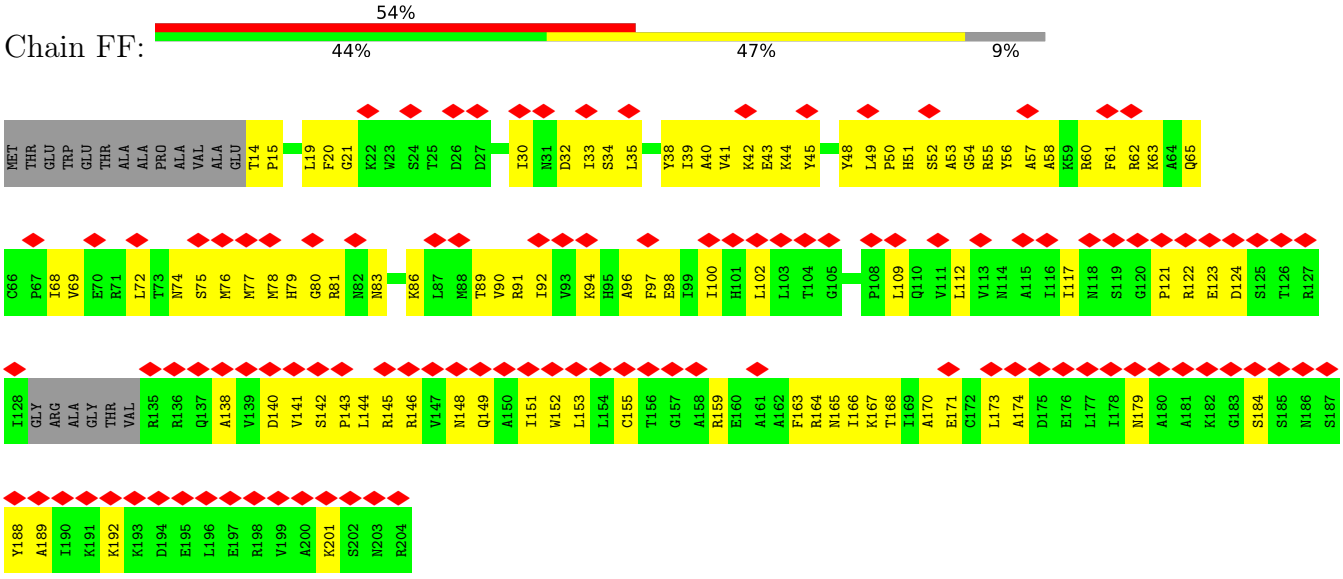
• Molecule 11: 60S ribosomal protein L6



• Molecule 12: eL33

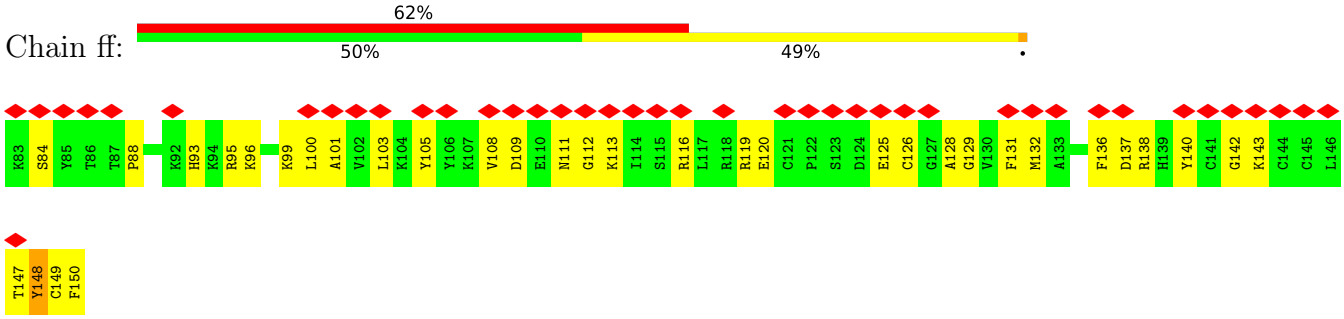


• Molecule 13: Ribosomal protein S5



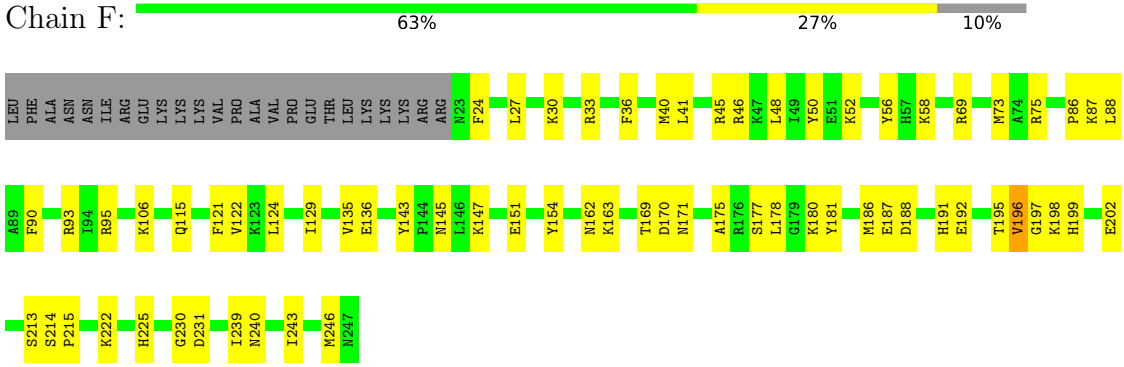
• Molecule 14: 40S ribosomal protein S27a

Chain ff:



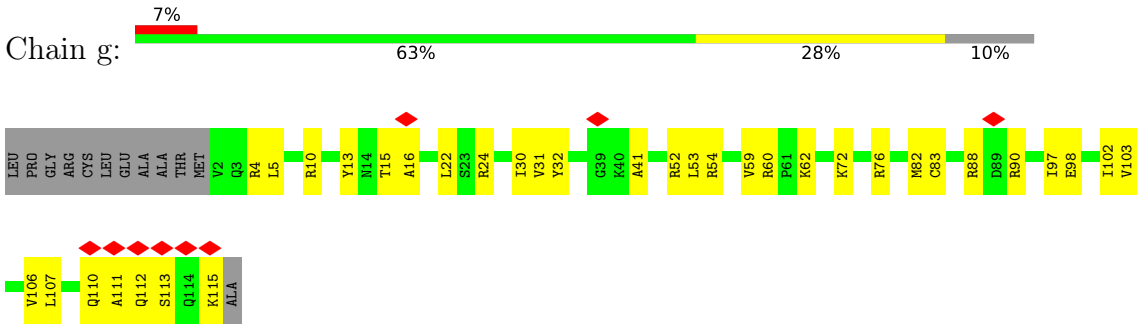
• Molecule 15: uL30

Chain F:



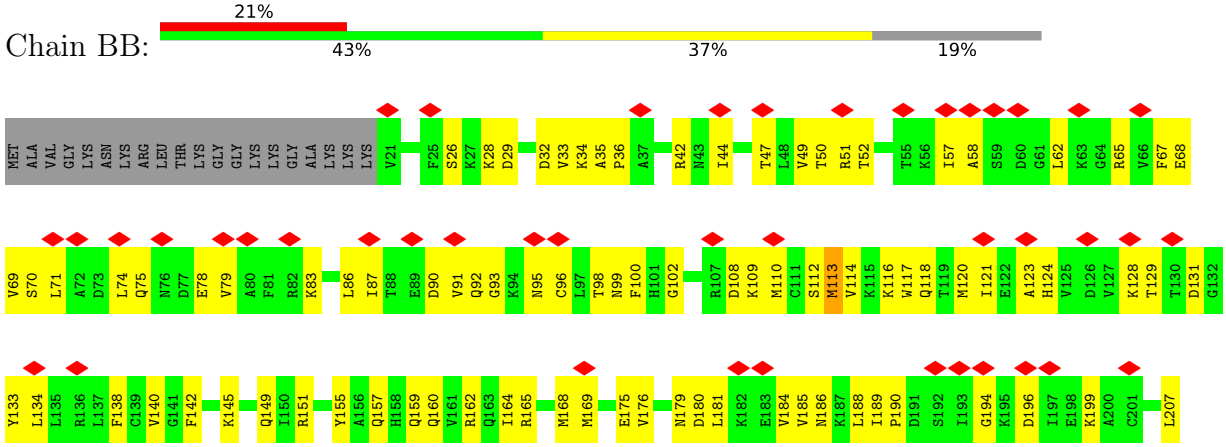
• Molecule 16: 60S ribosomal protein L34

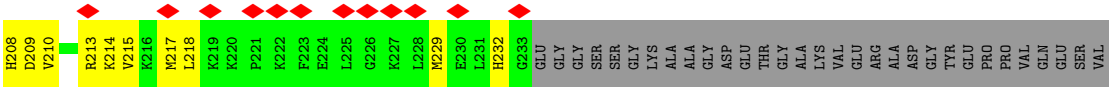
Chain g:



• Molecule 17: 40S ribosomal protein S3a

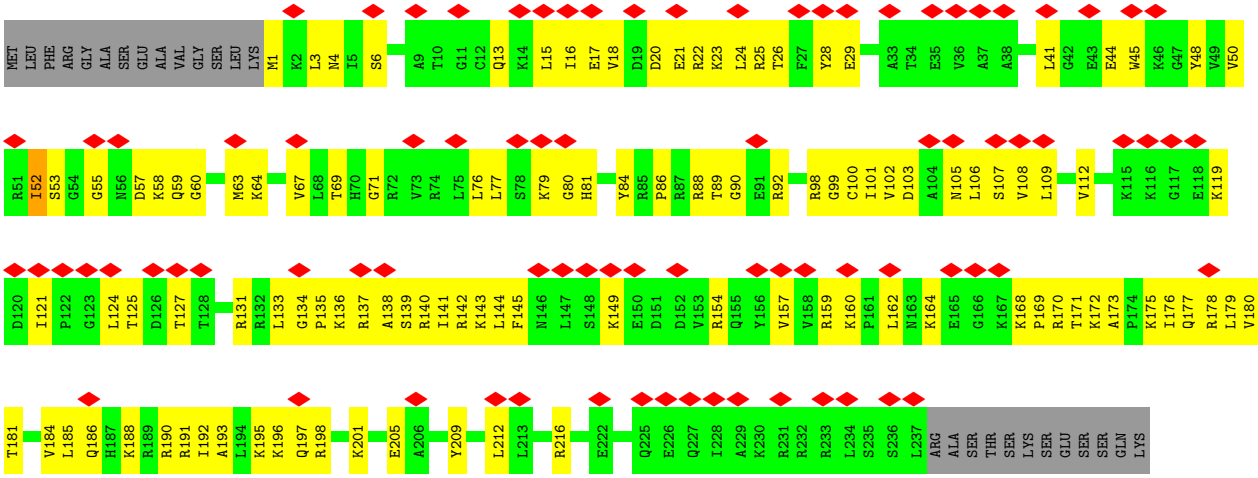
Chain BB:





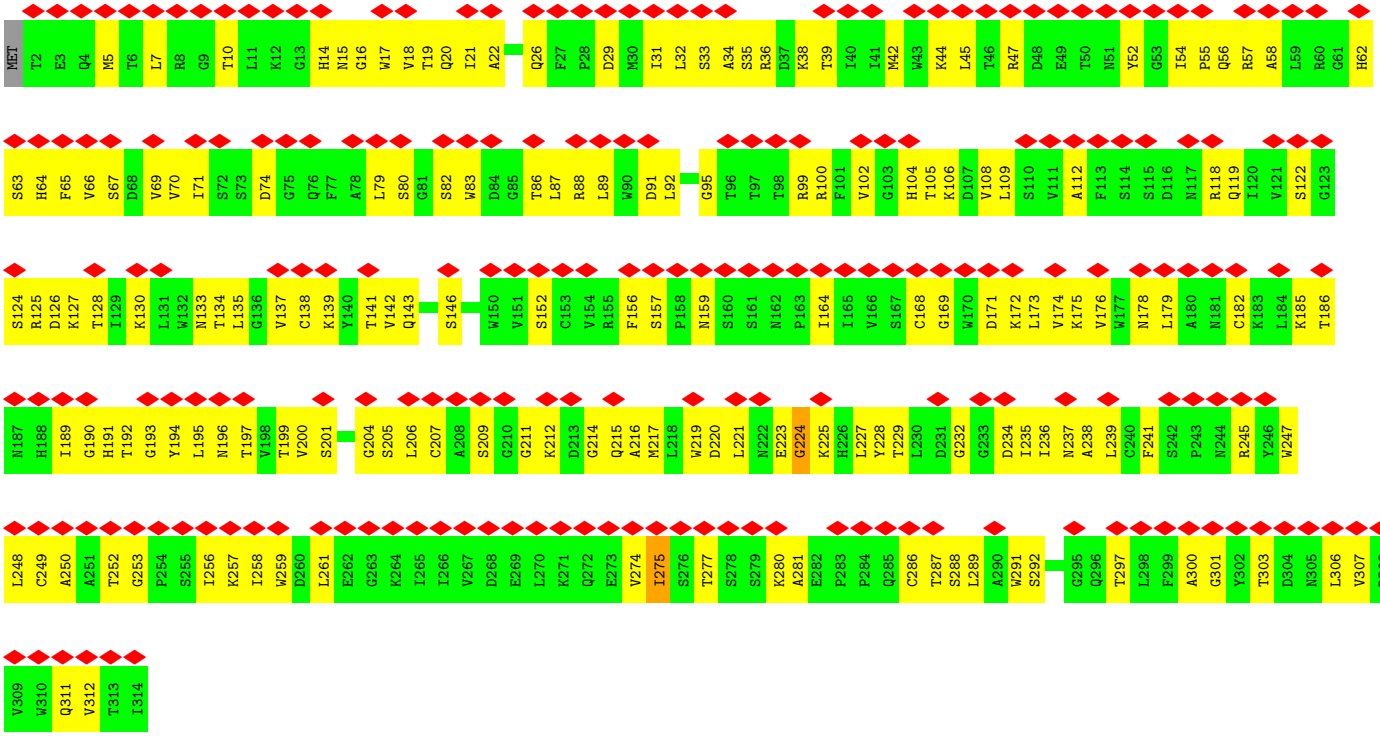
• Molecule 18: 40S ribosomal protein S6

Chain GG:



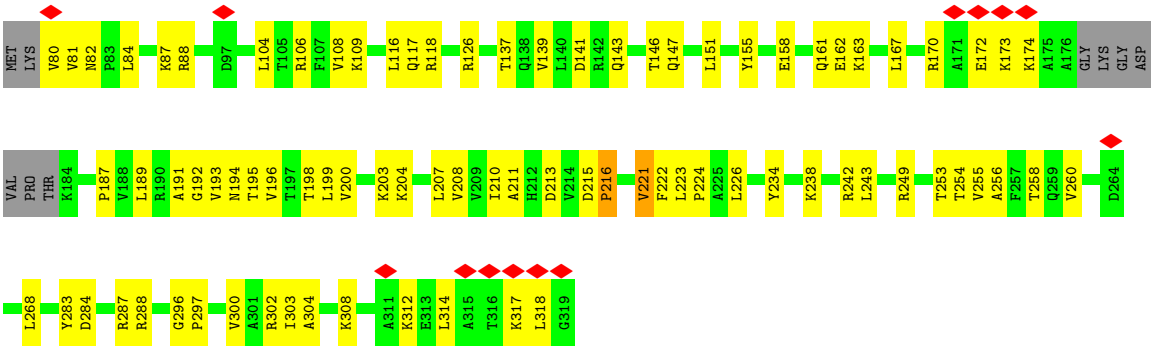
• Molecule 19: Epididymis tissue sperm binding protein Li 3a

Chain gg:



• Molecule 20: L7a

Chain G:

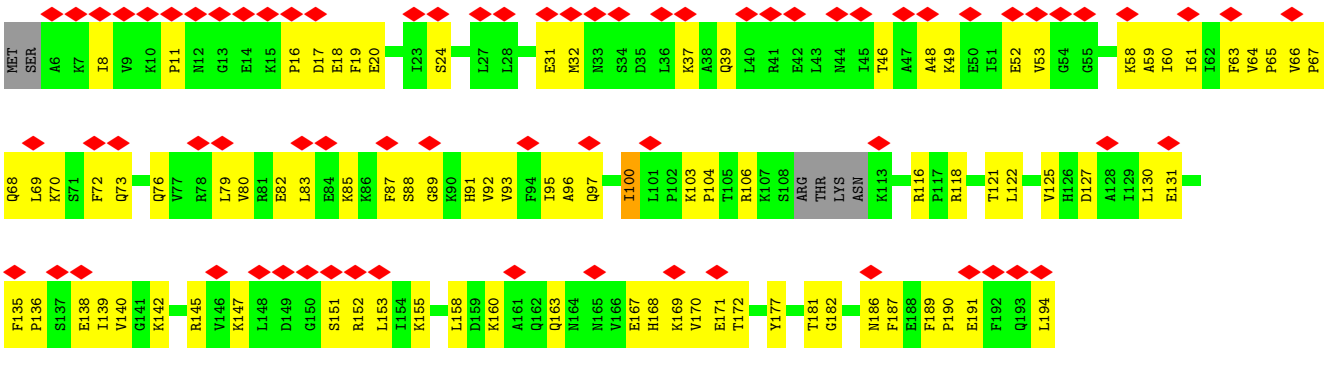


• Molecule 21: uL29

Chain h:

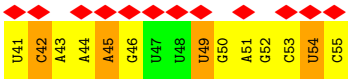
• Molecule 22: S7

Chain HH:



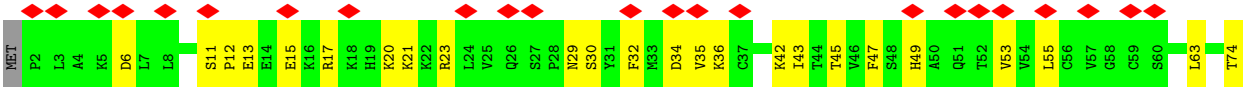
• Molecule 23: mRNA

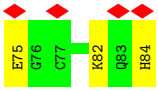
Chain hh:



• Molecule 24: 40S ribosomal protein S27

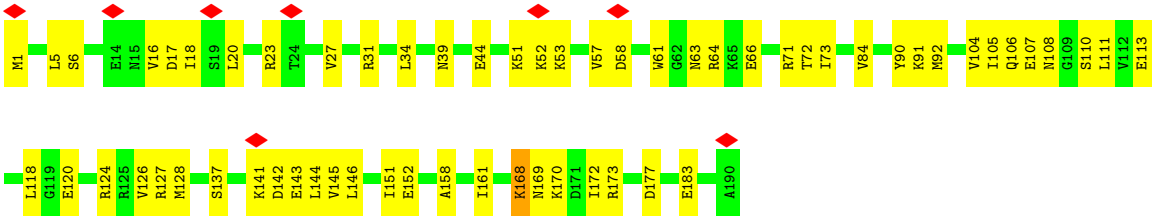
Chain bb:





• Molecule 25: L9

Chain H:

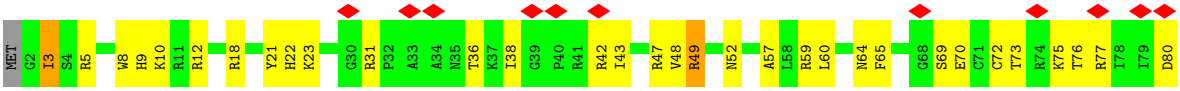


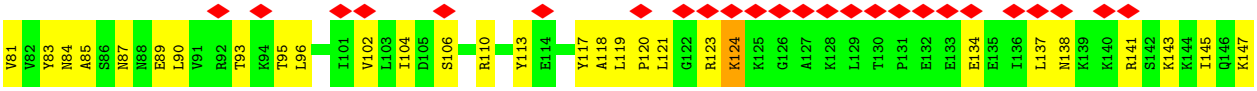
• Molecule 26: 60S ribosomal protein L36

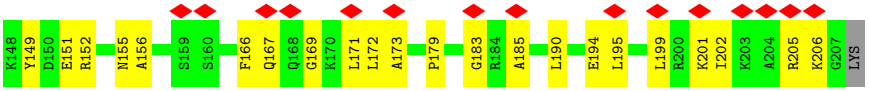
Chain i:

• Molecule 27: 40S ribosomal protein S8

Chain II:

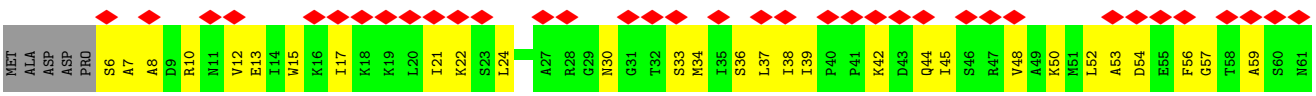


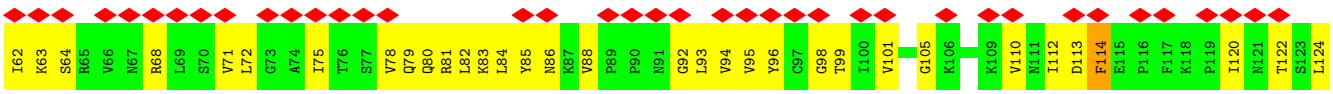


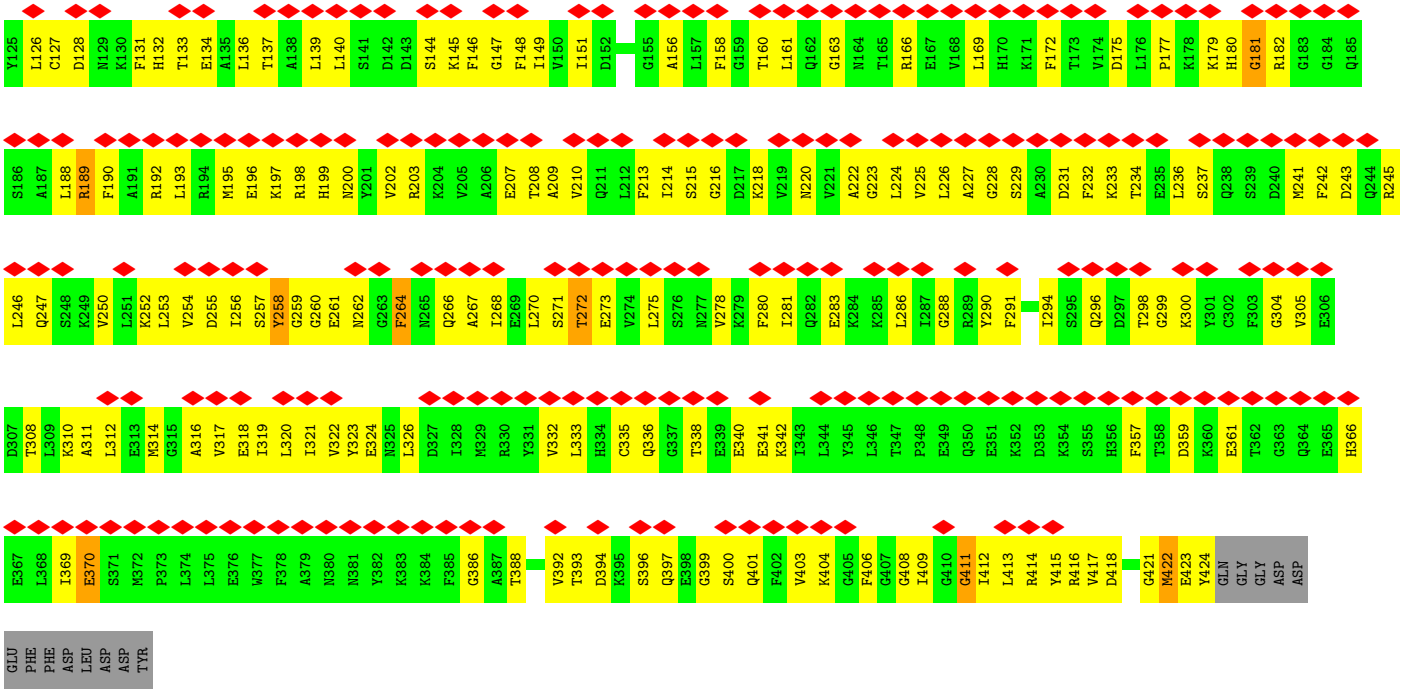


• Molecule 28: Eukaryotic peptide chain release factor subunit 1

Chain ii:

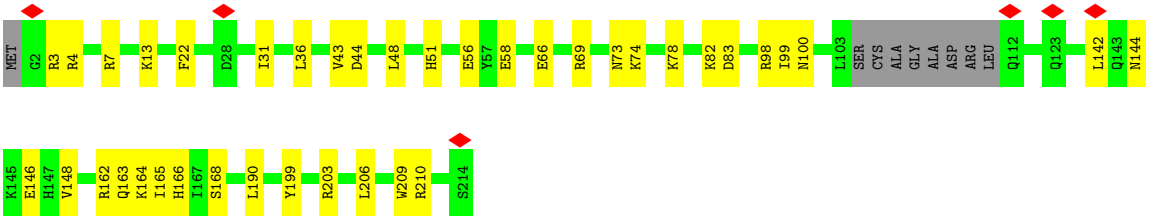






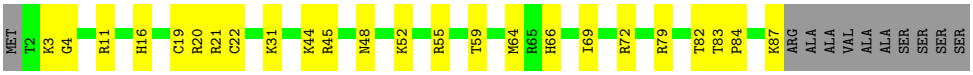
- Molecule 29: 60S ribosomal protein L10

Chain I:



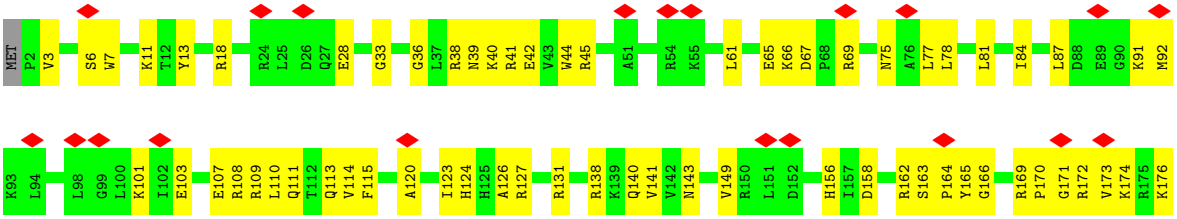
- Molecule 30: Ribosomal protein L37

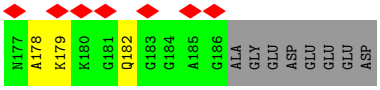
Chain j:



- Molecule 31: 40S ribosomal protein S9

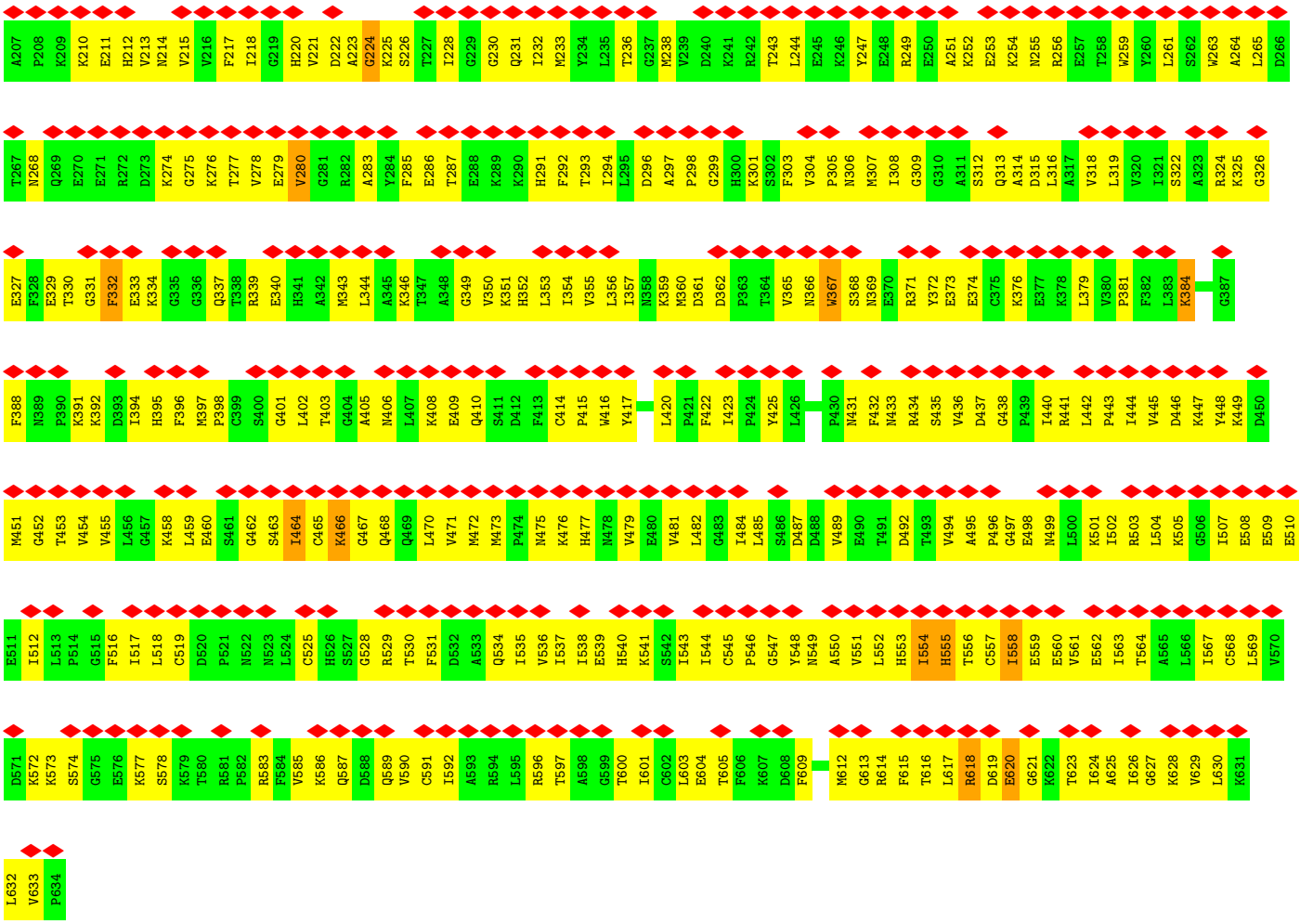
Chain JJ:





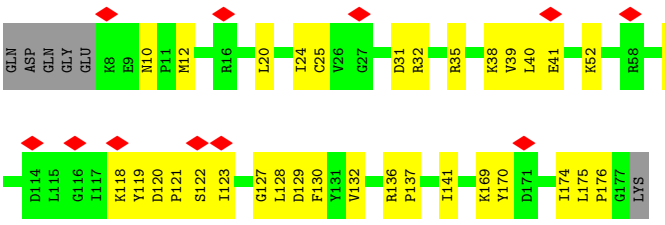
• Molecule 32: eRF3a

Chain jj:



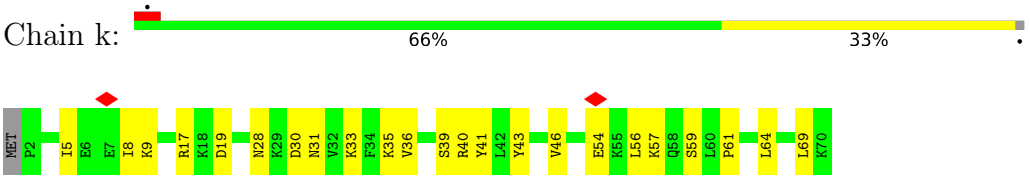
• Molecule 33: 60S ribosomal protein L11

Chain J:



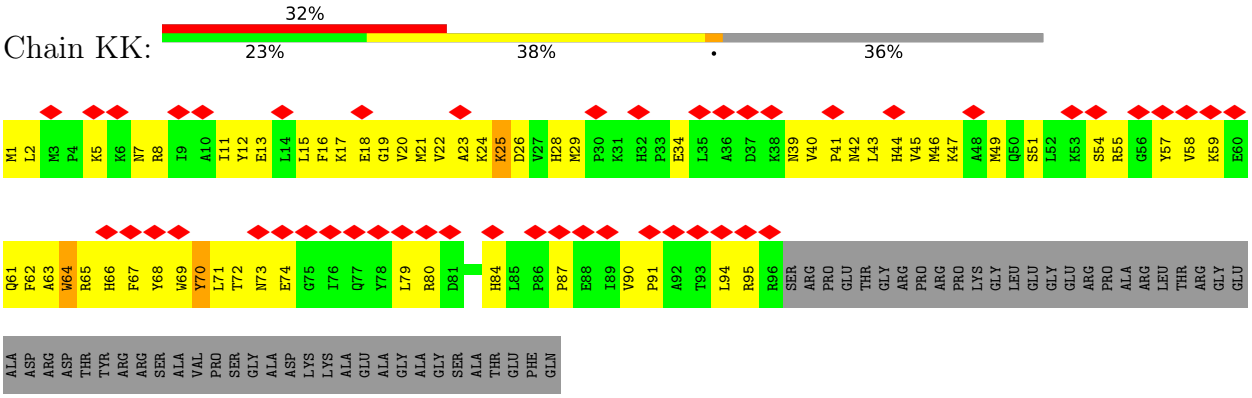
• Molecule 34: L38

Chain k:



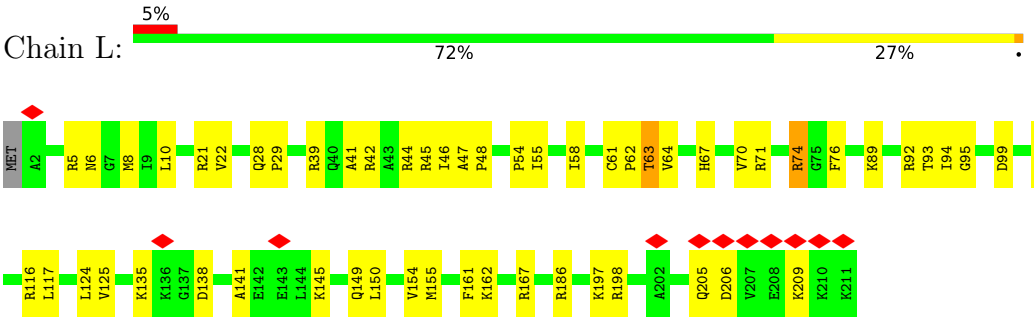
• Molecule 35: 40S ribosomal protein S10

Chain KK:



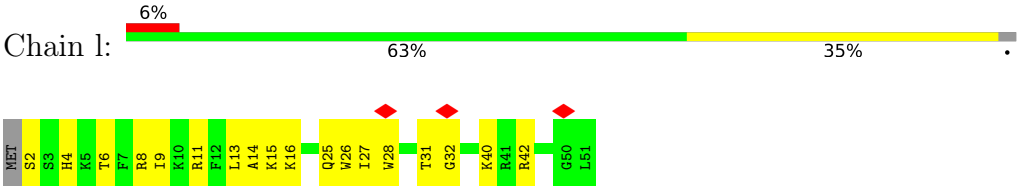
• Molecule 36: 60S ribosomal protein L13

Chain L:



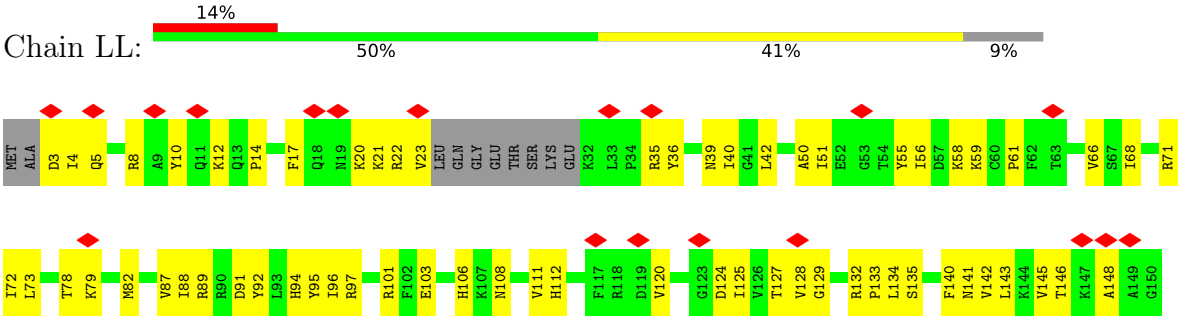
• Molecule 37: eL39

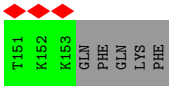
Chain l:



• Molecule 38: 40S ribosomal protein S11

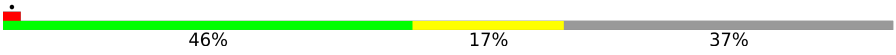
Chain LL:

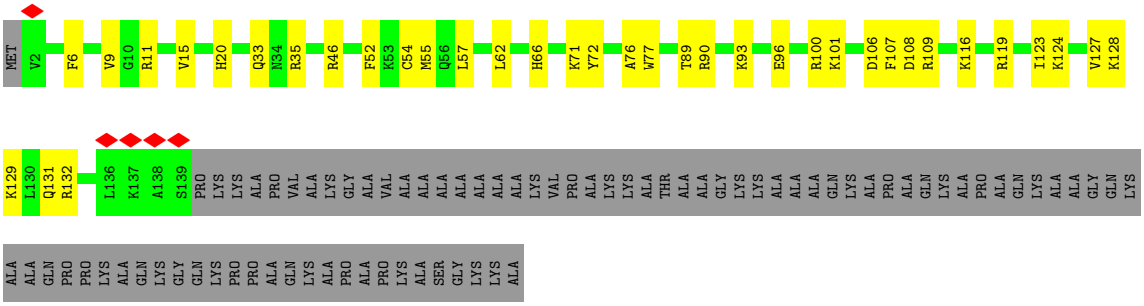




• Molecule 39: Ribosomal protein L14

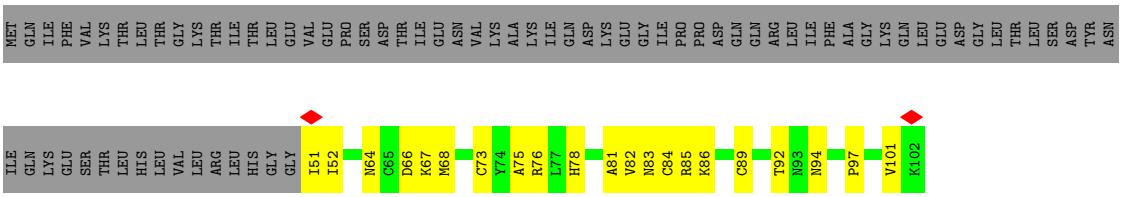
Chain M:





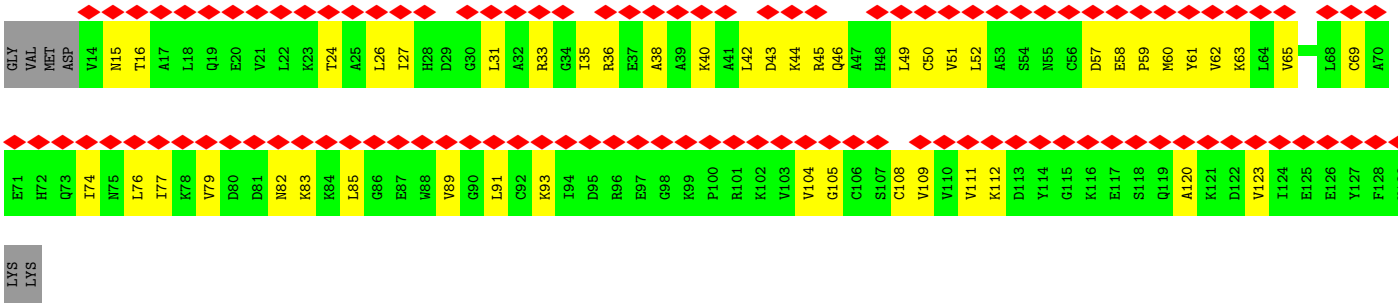
• Molecule 40: 60S RIBOSOMAL PROTEIN EL40

Chain m:



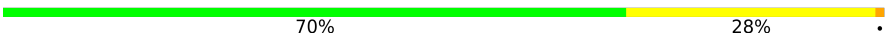
• Molecule 41: 40S ribosomal protein S12

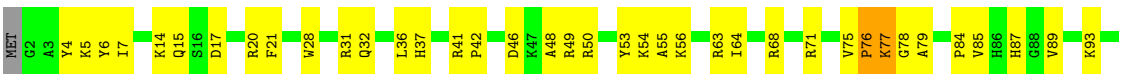
Chain MM:

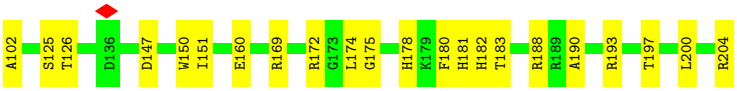


• Molecule 42: Ribosomal protein L15

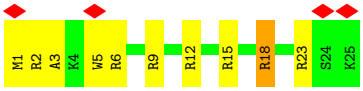
Chain N:



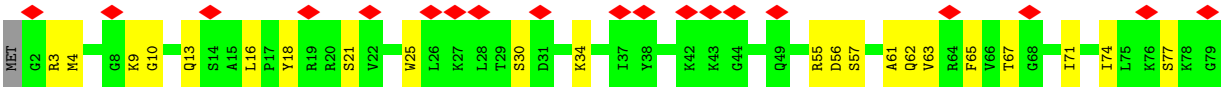




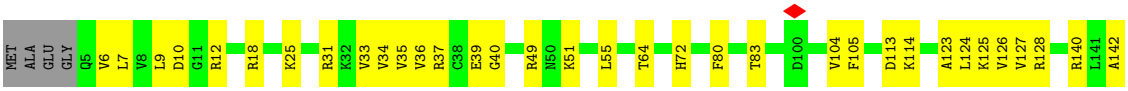
• Molecule 43: 60s ribosomal protein l41

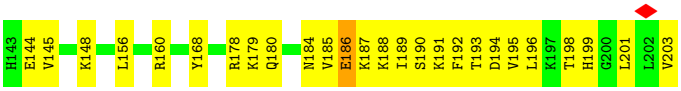


• Molecule 44: ribosomal protein uS15

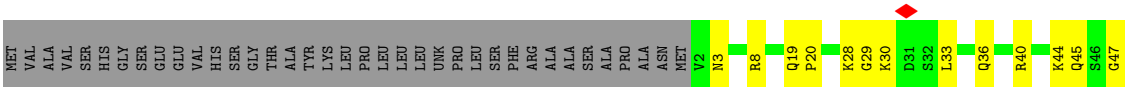


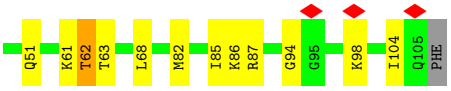
• Molecule 45: 60S RIBOSOMAL PROTEIN UL13





• Molecule 46: eL42

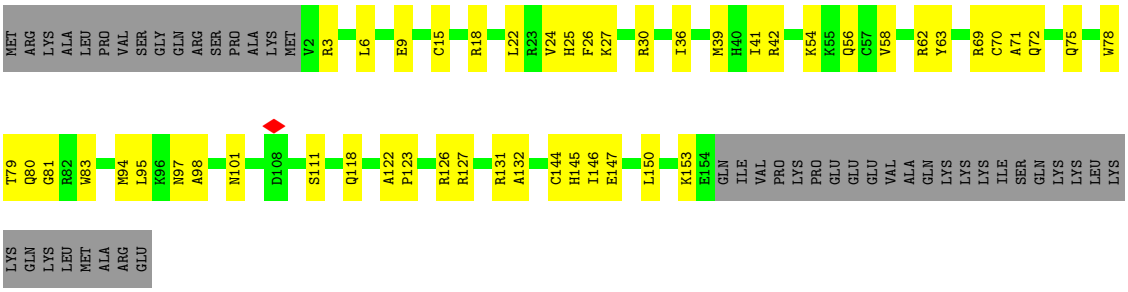




• Molecule 47: uS11

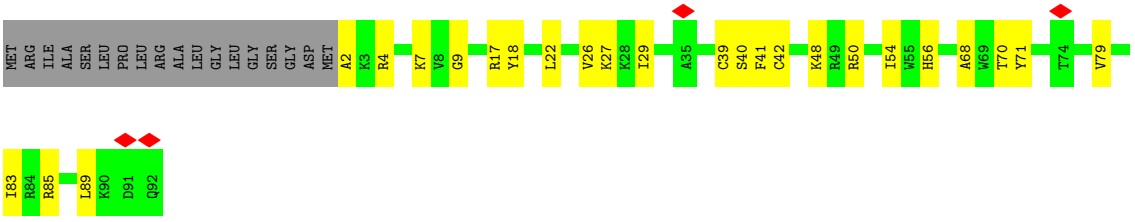
• Molecule 48: uL22

Chain P:



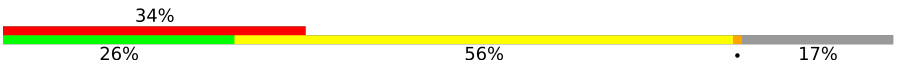
• Molecule 49: ribosomal protein eL43

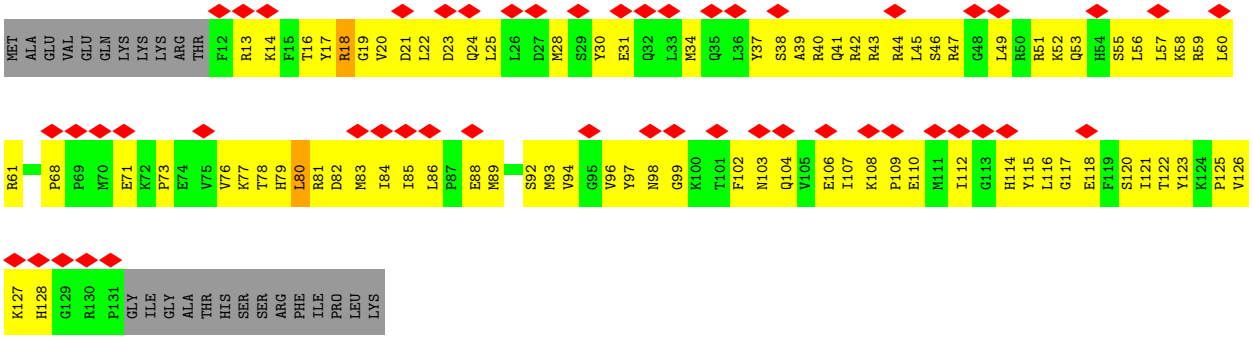
Chain p:



• Molecule 50: 40S ribosomal protein uS19

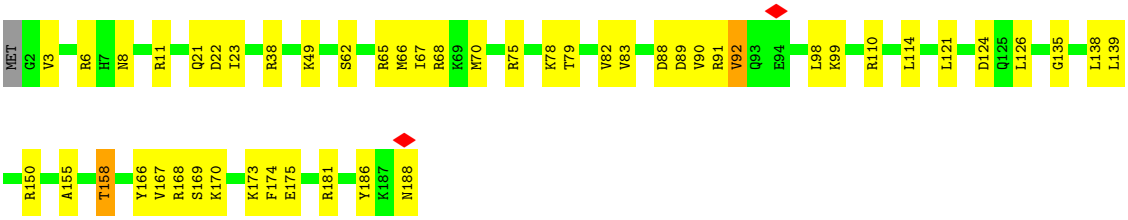
Chain PP:





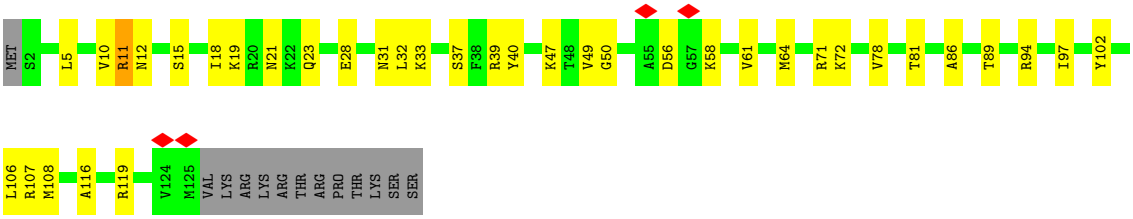
• Molecule 51: eL18

Chain Q:



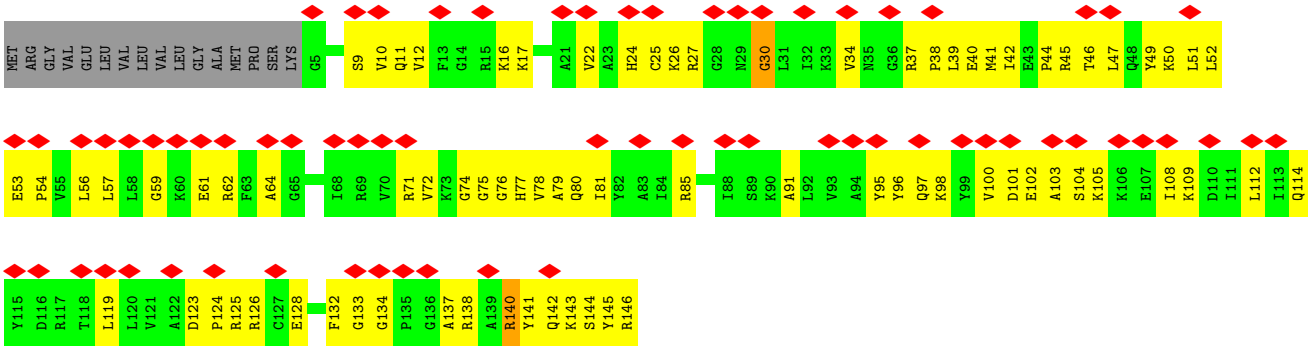
• Molecule 52: eL28

Chain r:



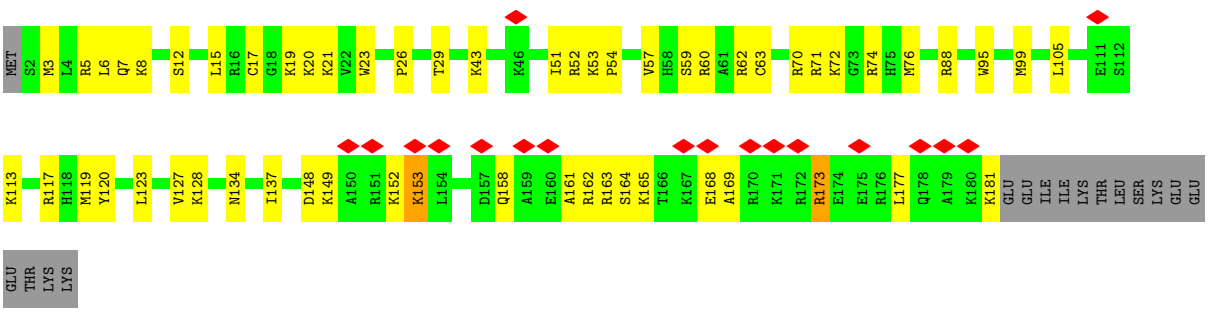
• Molecule 53: Ribosomal protein S16

Chain QQ:



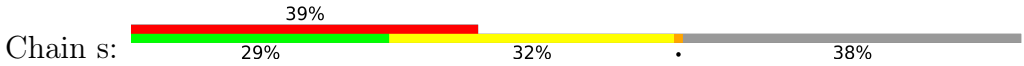
• Molecule 54: 60S ribosomal protein L19

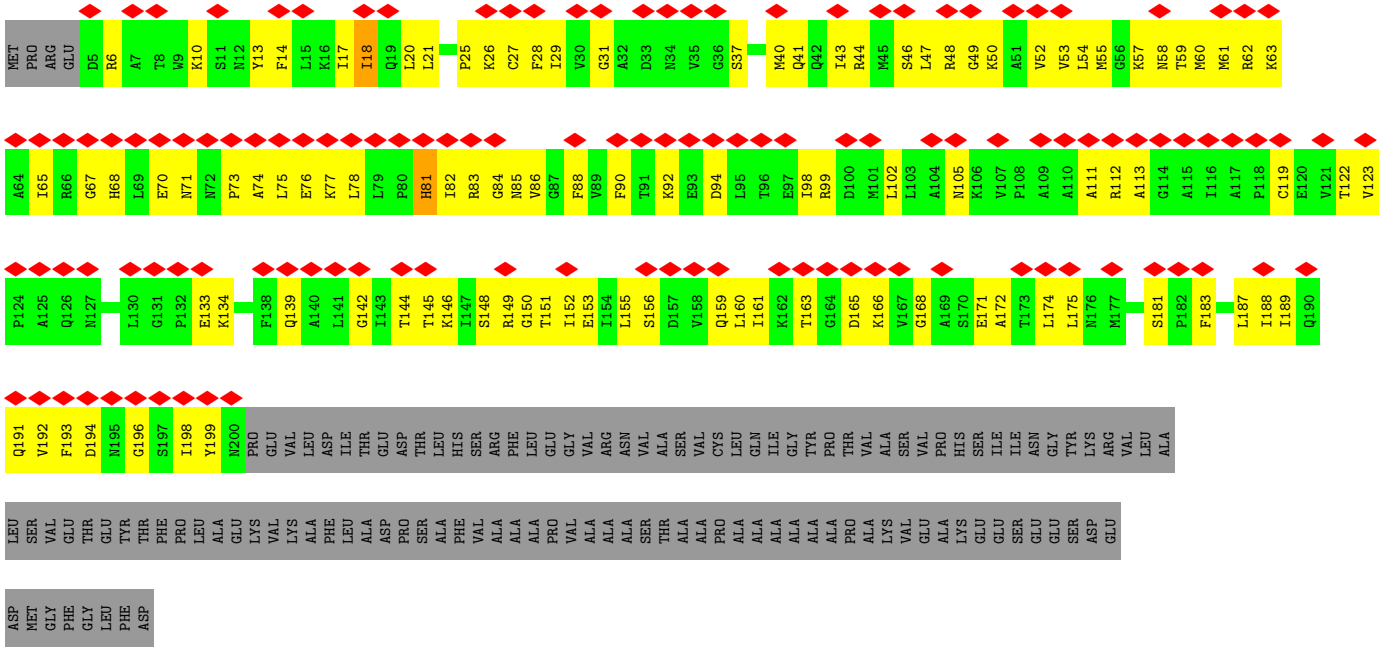
Chain R:



• Molecule 55: 60S acidic ribosomal protein P0

Chain s:



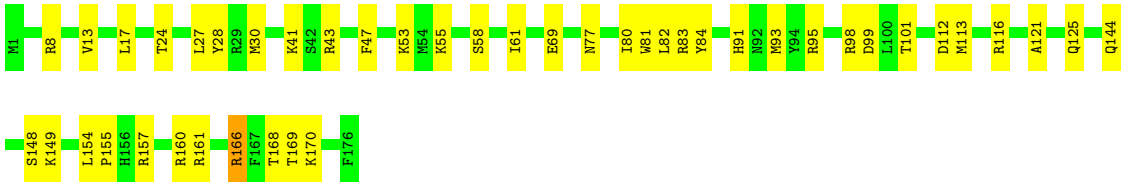


• Molecule 56: 40S ribosomal protein S17

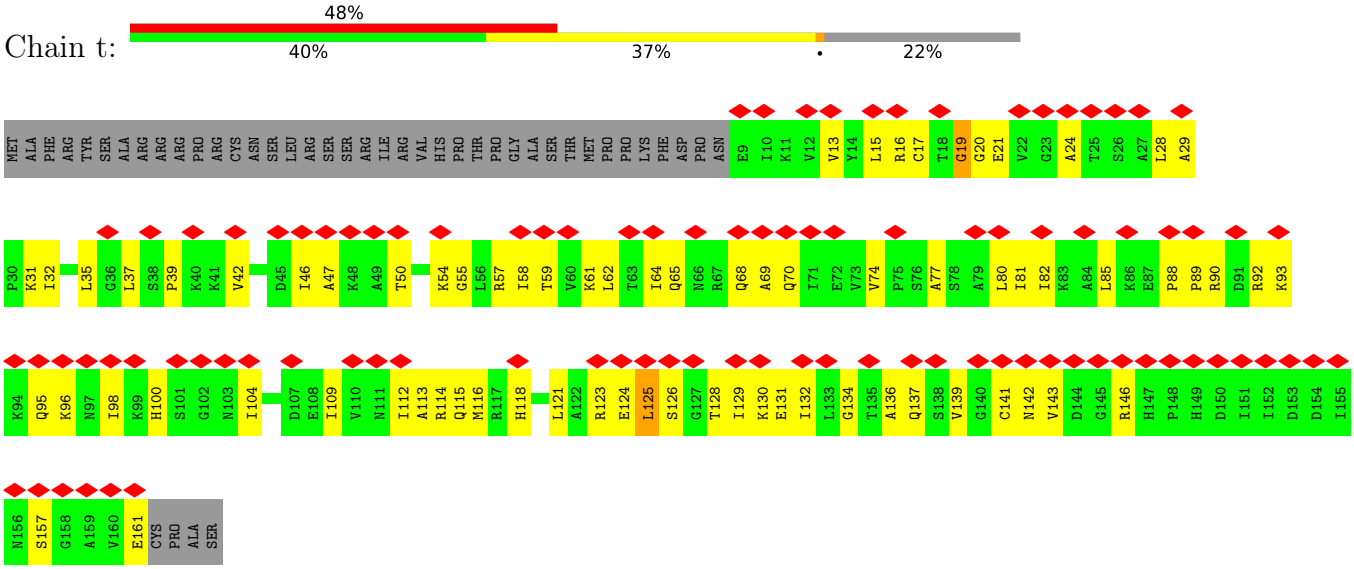
Chain RR:

• Molecule 57: 60S ribosomal protein L18a

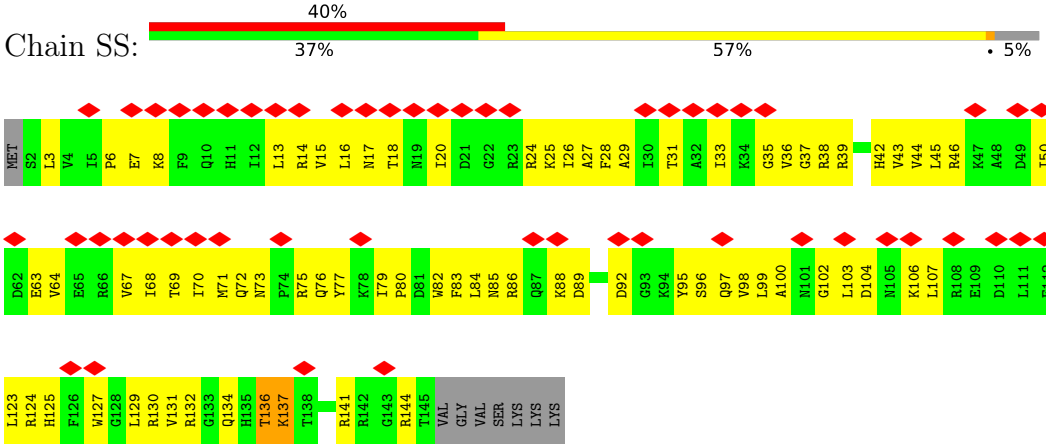
Chain S:



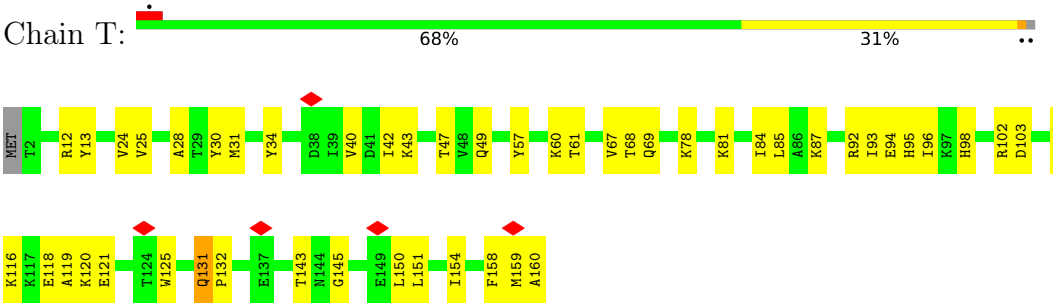
• Molecule 58: uL12



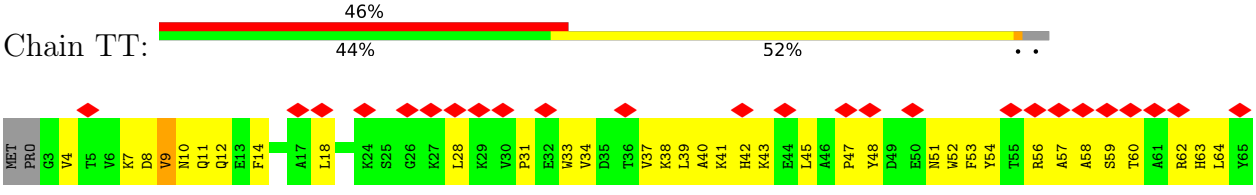
• Molecule 59: 40S ribosomal protein uS13

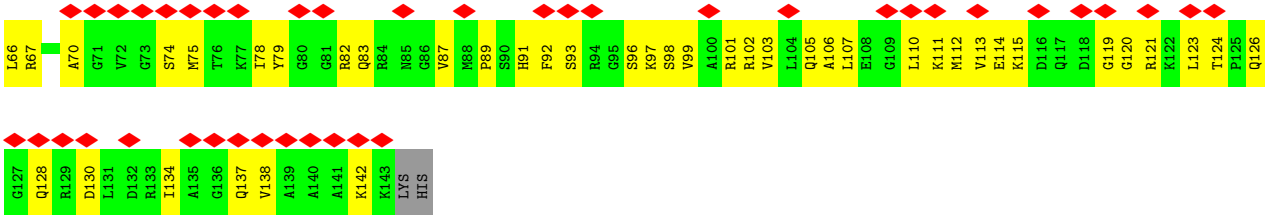


• Molecule 60: eL21



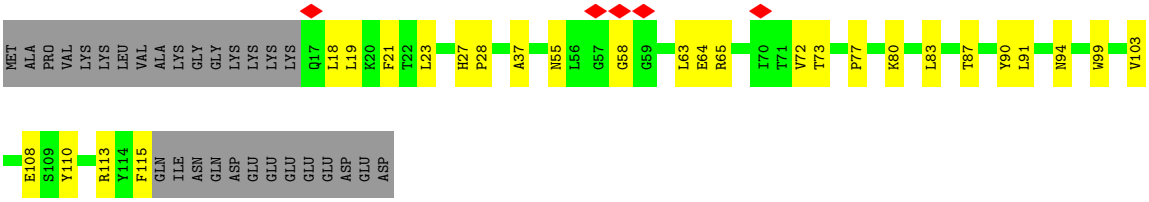
• Molecule 61: eS19





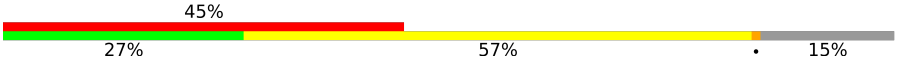
• Molecule 62: L22

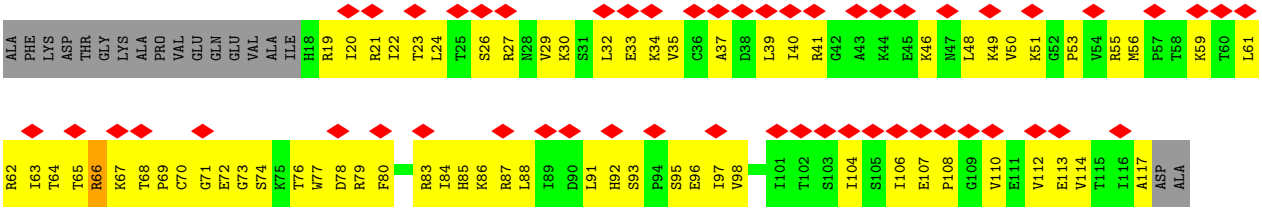
Chain U:



• Molecule 63: 40S ribosomal protein S20

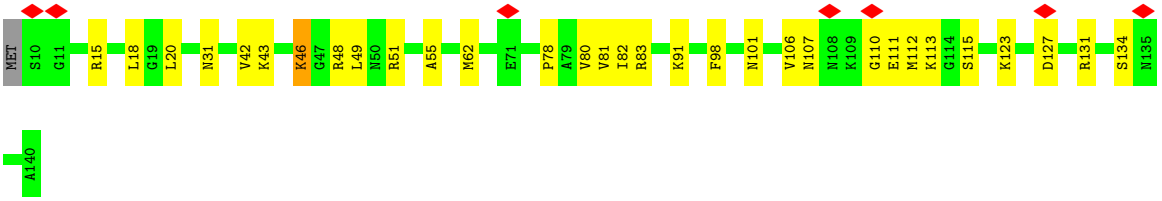
Chain UU:





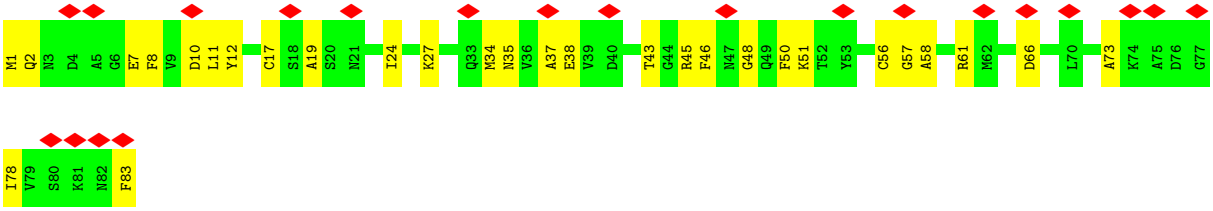
• Molecule 64: eL14

Chain V:



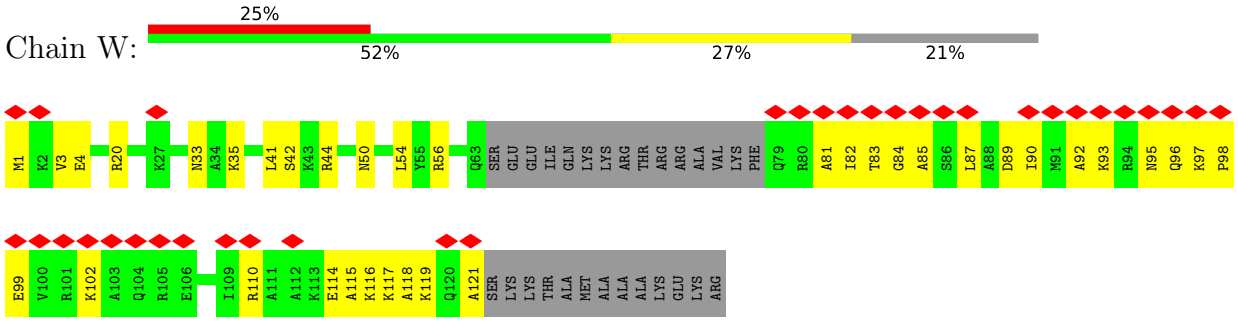
• Molecule 65: 40S ribosomal protein S21

Chain VV:



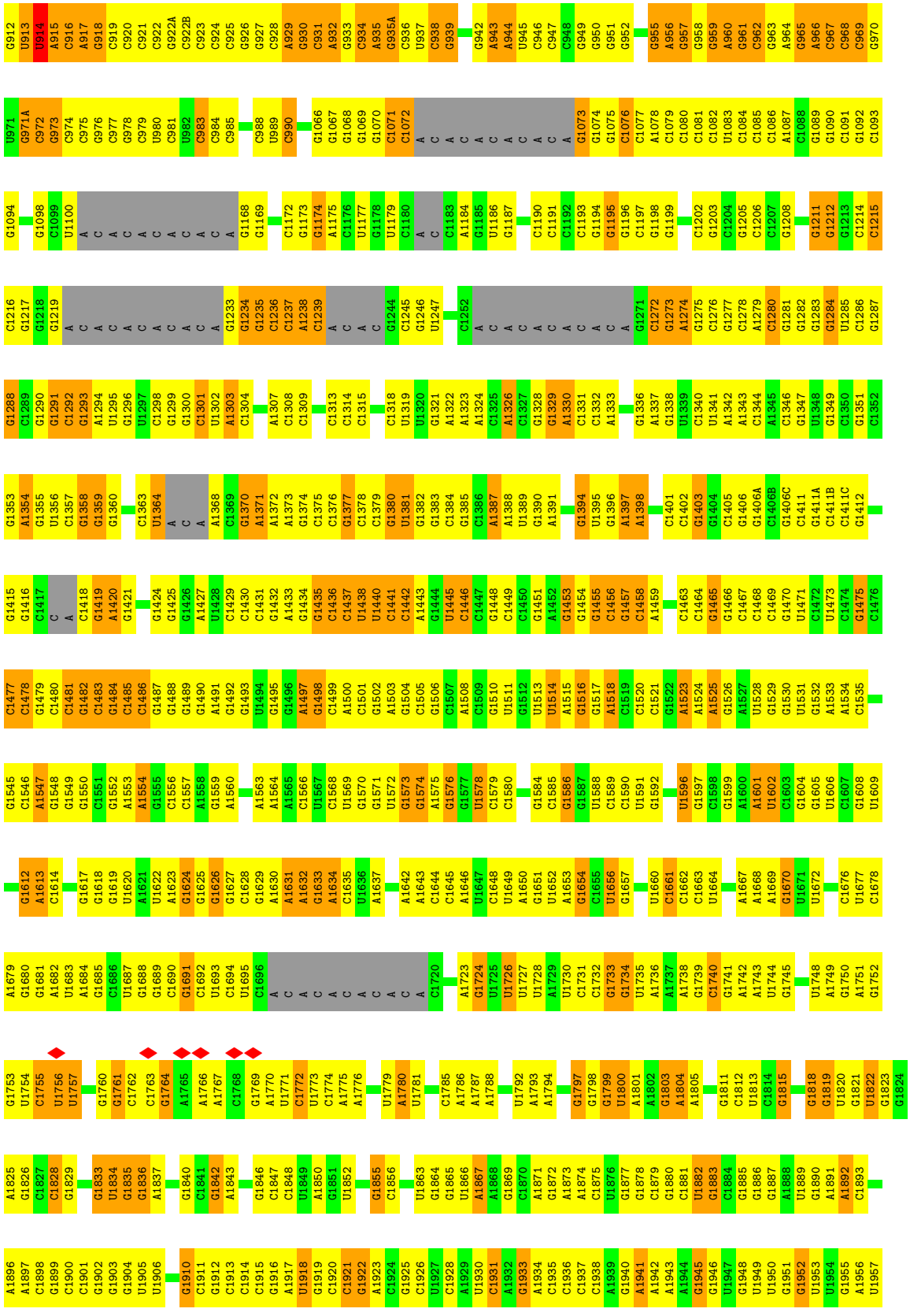
• Molecule 66: 60S ribosomal protein L24-like protein

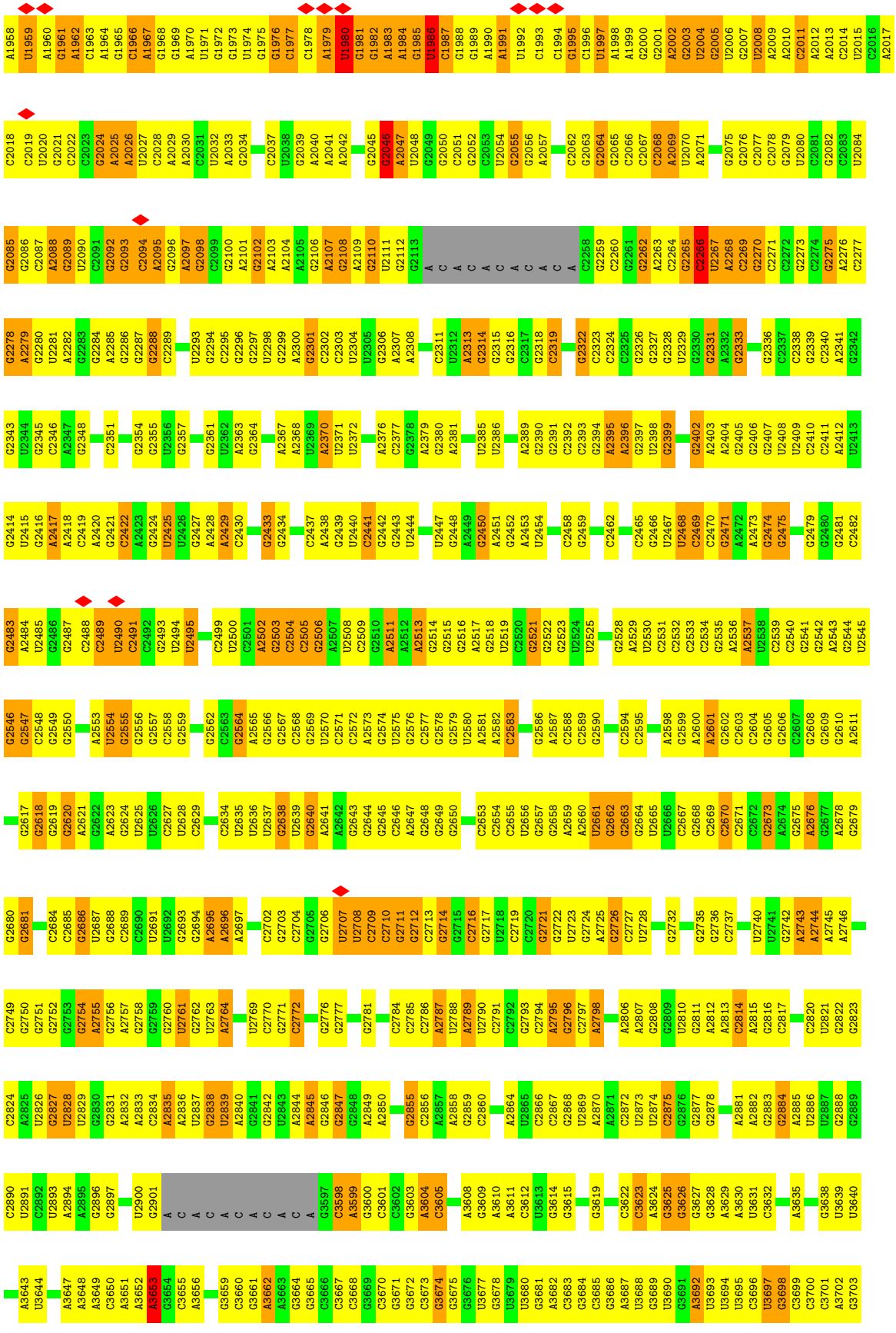
Chain W:

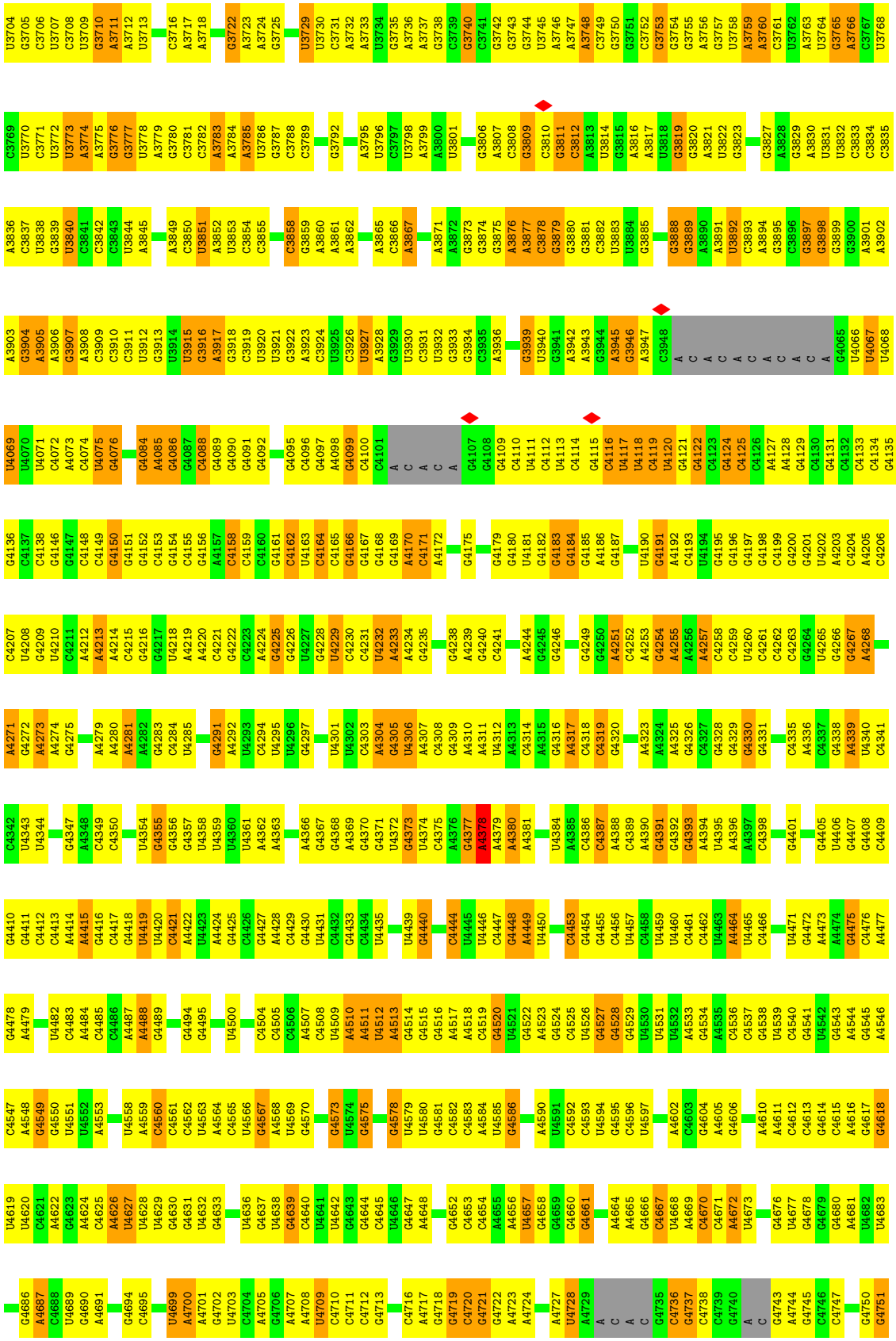


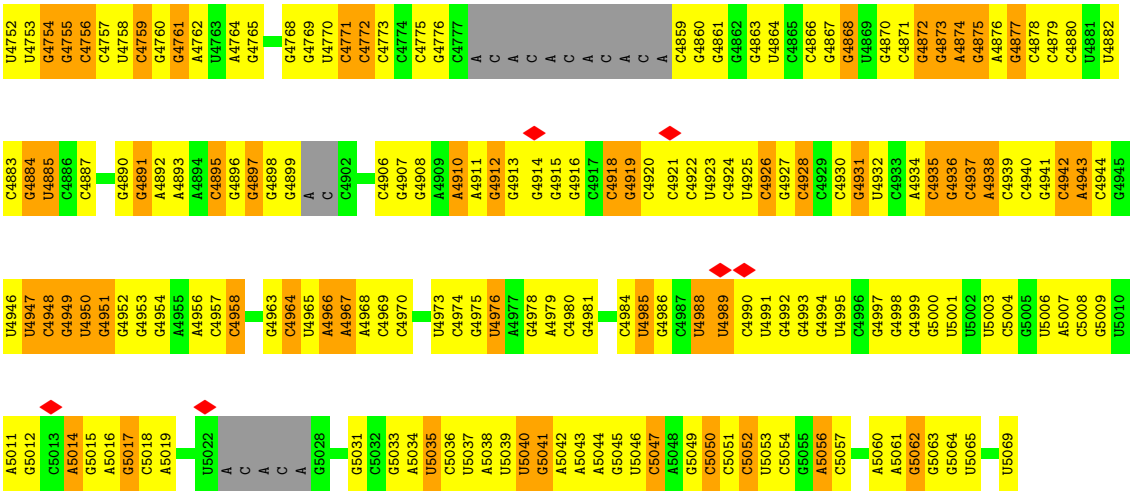
• Molecule 67: 28S Ribosomal RNA

Chain 5:



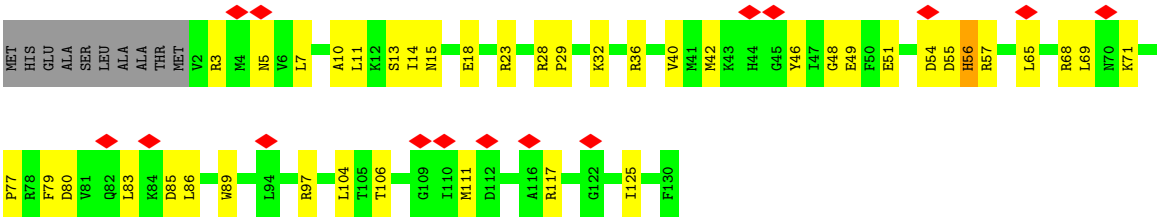






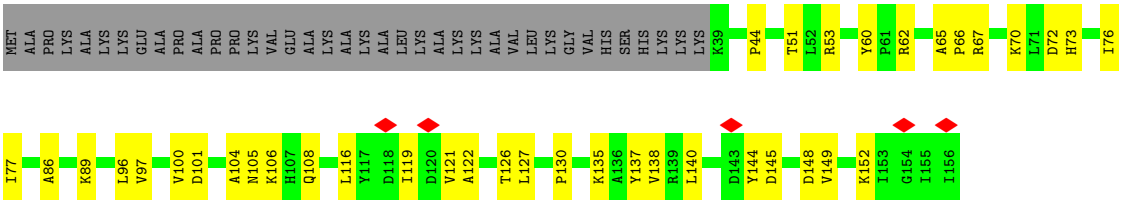
• Molecule 68: Ribosomal protein S15a

Chain WW:



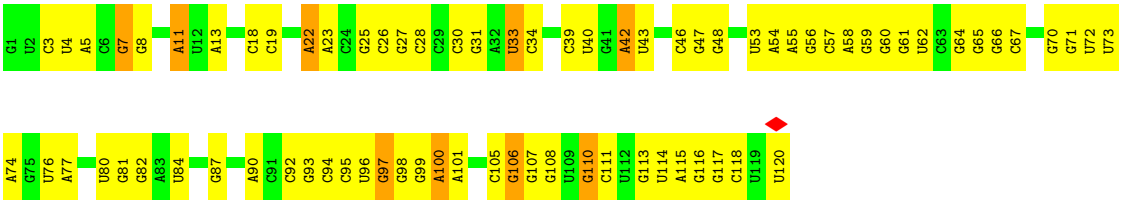
• Molecule 69: uL23

Chain X:



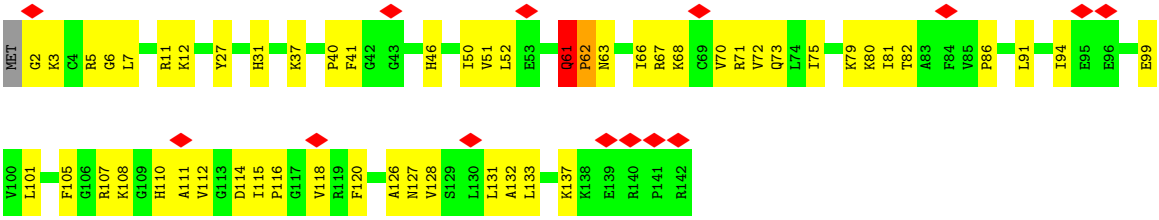
• Molecule 70: 5S Ribosomal RNA

Chain 7:

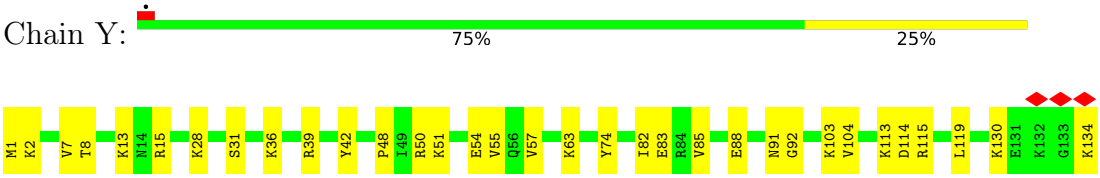


• Molecule 71: 40S ribosomal protein uS12

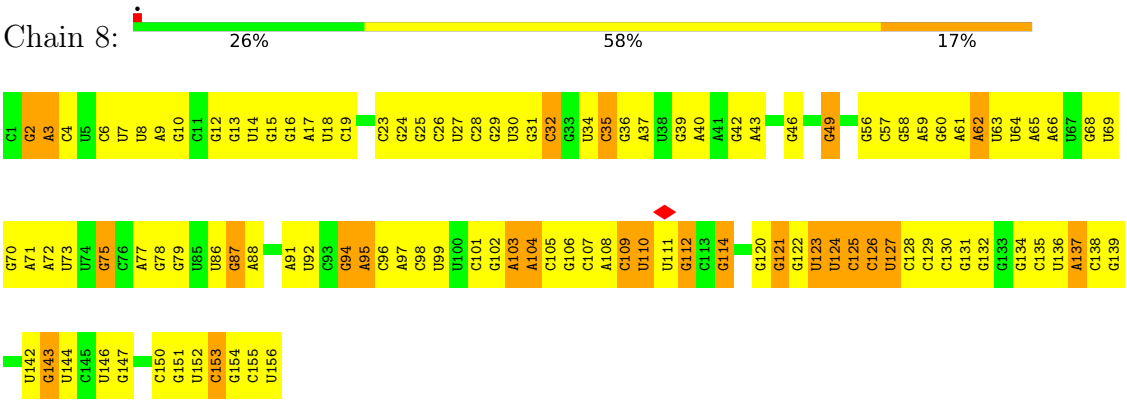
Chain XX:



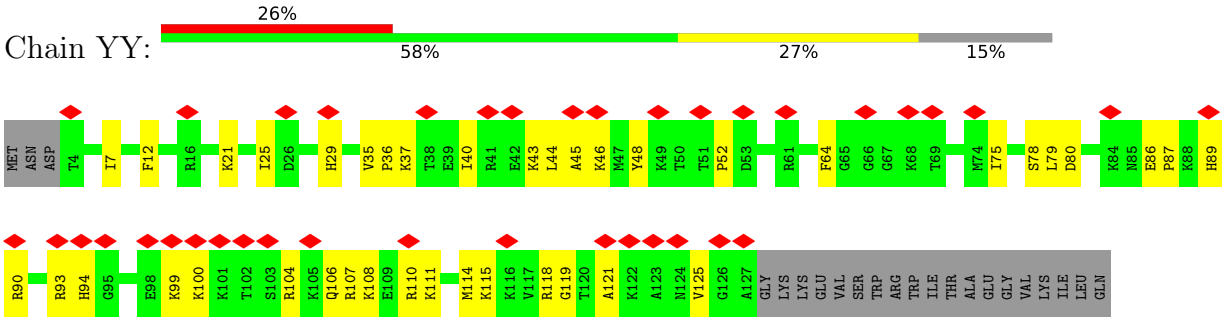
• Molecule 72: Ribosomal protein L26



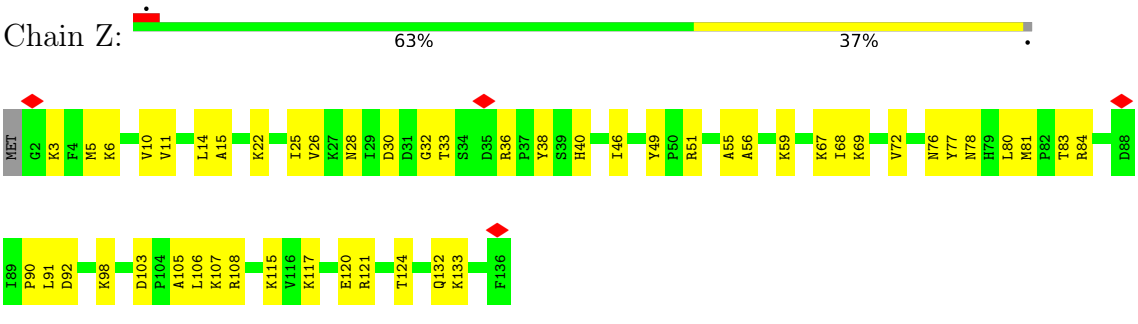
• Molecule 73: 5.8S Ribosomal RNA



• Molecule 74: 40S ribosomal protein S24

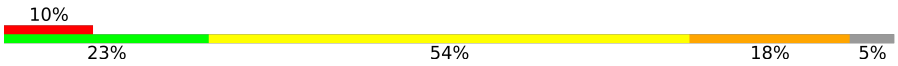


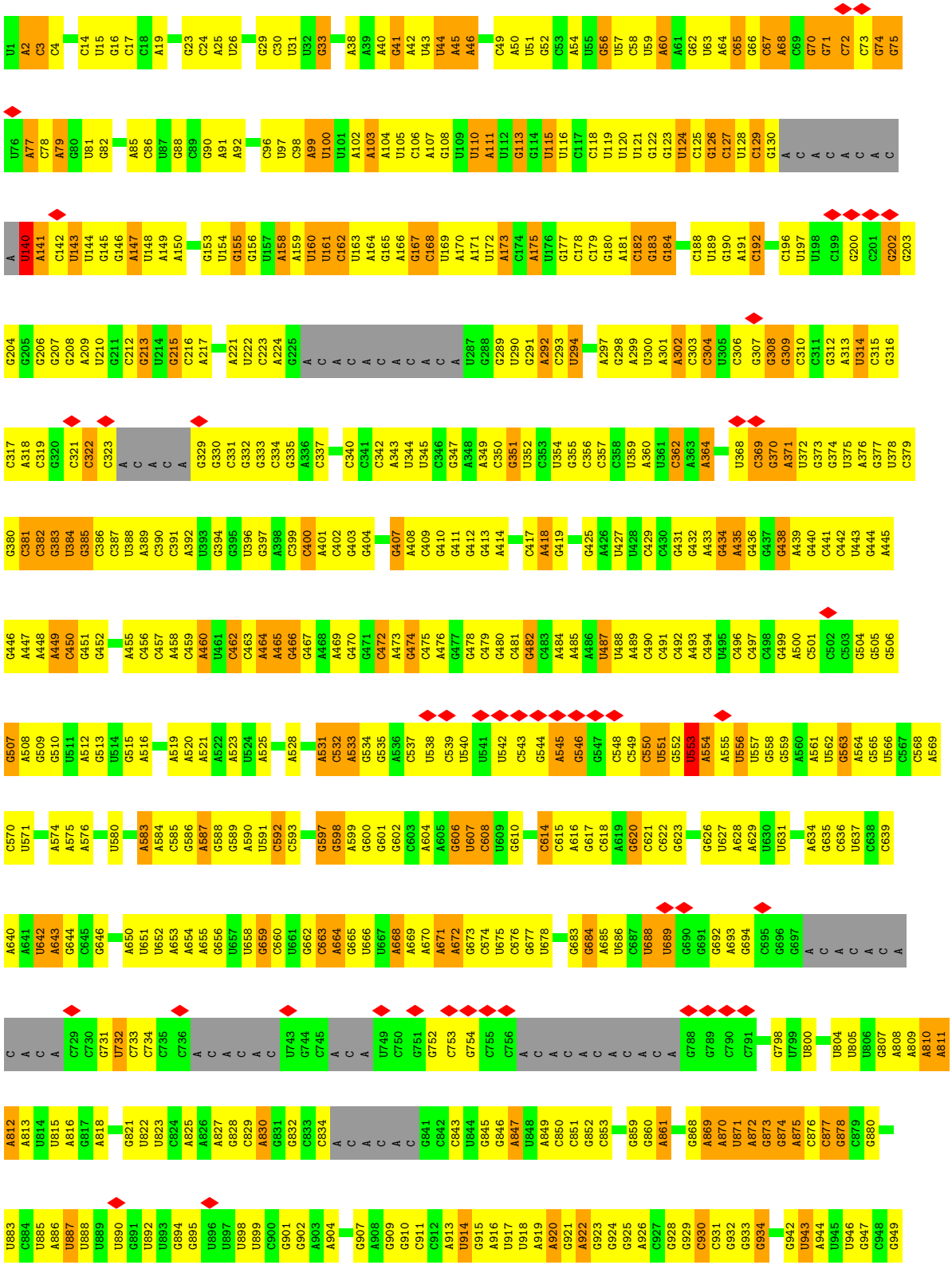
• Molecule 75: 60S ribosomal protein L27

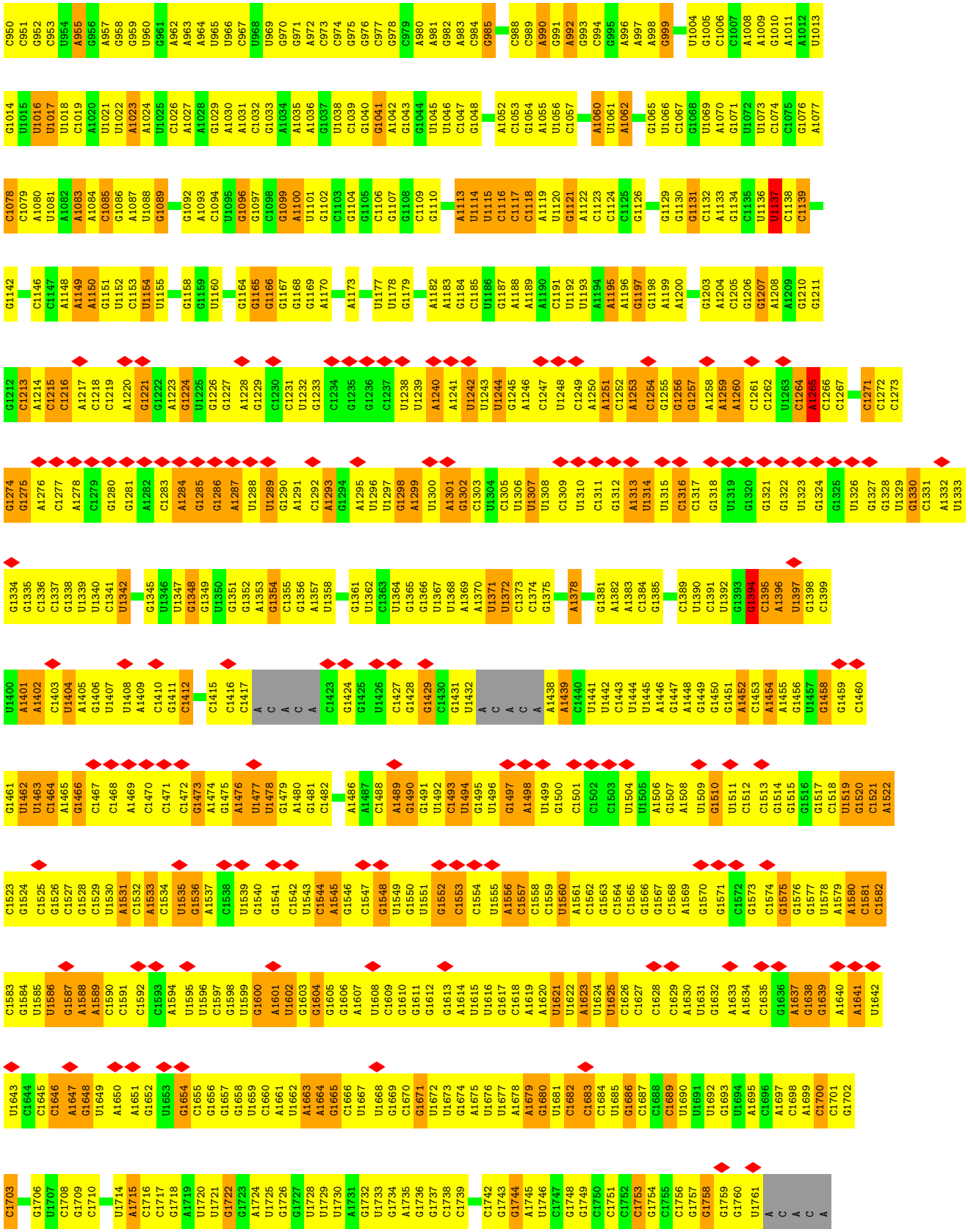


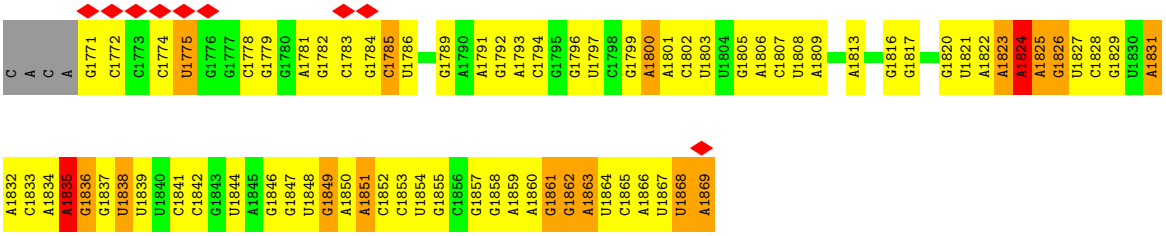
• Molecule 76: 18S Ribosomal RNA

Chain 9:



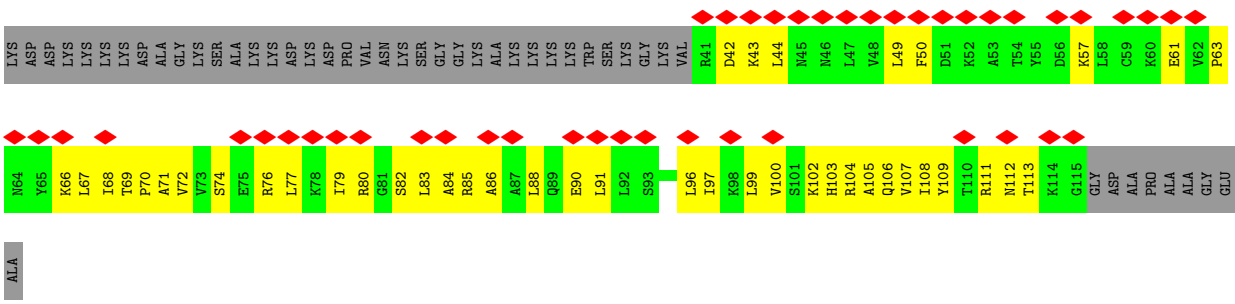






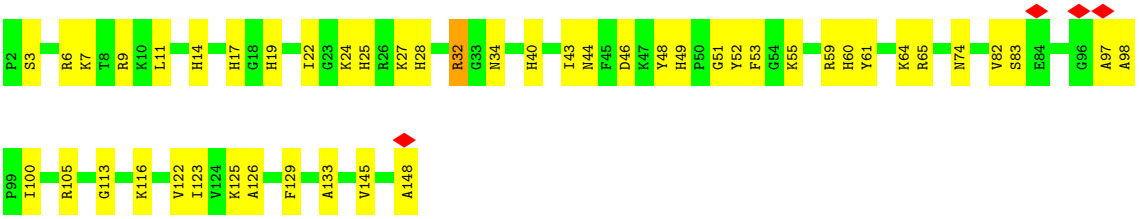
• Molecule 77: 40S ribosomal protein S25

Chain ZZ:



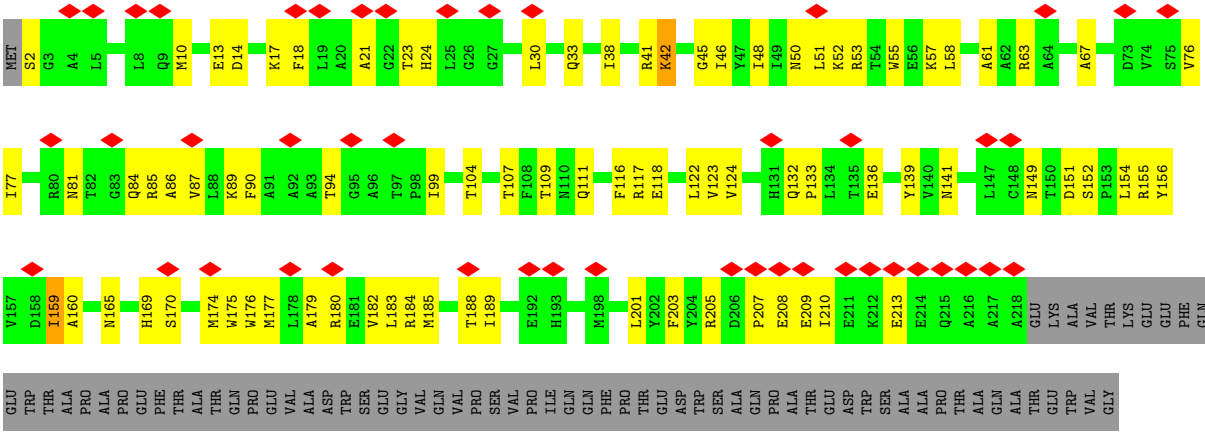
• Molecule 78: 60S ribosomal protein L27a

Chain a:



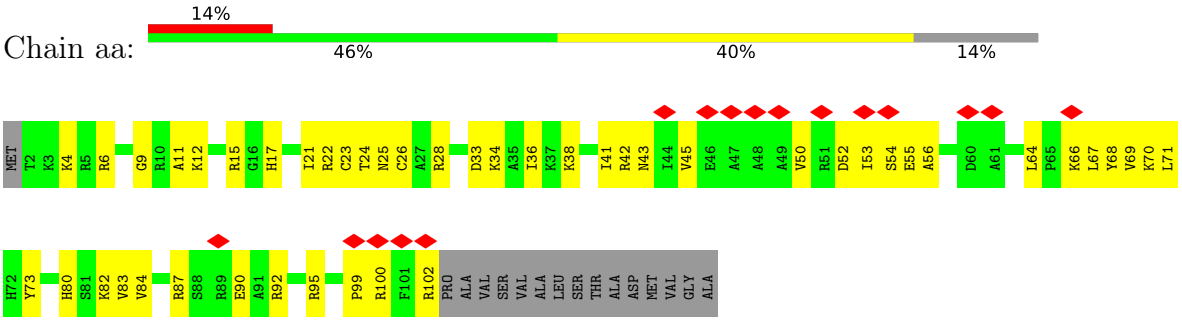
• Molecule 79: 40S_SA_C domain-containing protein

Chain AA:



• Molecule 80: 40S ribosomal protein S26

Chain aa:



• Molecule 81: uL3

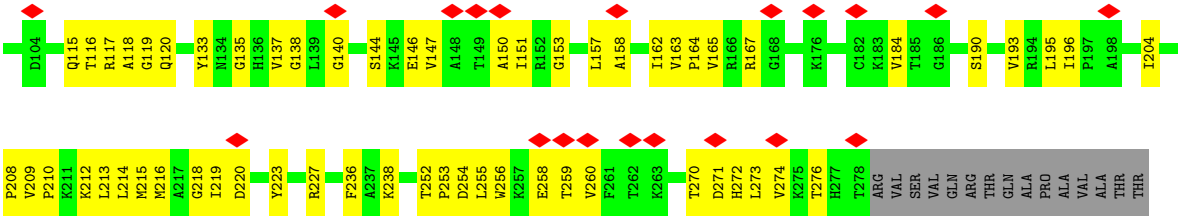
Chain B:

• Molecule 82: eL30

Chain c:

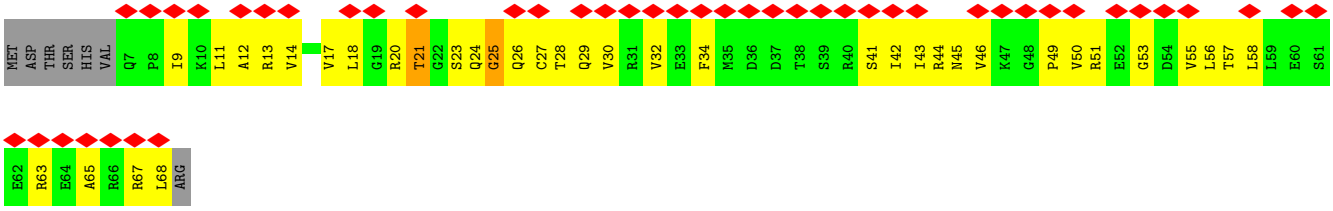
• Molecule 83: 40S ribosomal protein S2

Chain CC:



• Molecule 84: 40S ribosomal protein S28

Chain cc:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	18937	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	41.92	Depositor
Minimum defocus (nm)	400	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	79000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.083	Depositor
Minimum map value	-0.050	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.014	Depositor
Map size (Å)	405.0, 405.0, 405.0	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.35, 1.35, 1.35	Depositor

5 Model quality

5.1 Standard geometry

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

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	A	1.03	0/1936	1.08	0/2596
2	C	1.06	0/2937	1.10	4/3946 (0.1%)
3	d	0.92	0/903	1.11	0/1216
4	DD	0.57	0/1796	1.11	3/2417 (0.1%)
5	dd	0.61	0/470	1.09	1/623 (0.2%)
6	D	0.77	0/2437	0.98	0/3264
7	e	1.11	0/1071	1.07	0/1429
8	EE	0.54	0/2118	0.98	1/2849 (0.0%)
9	ee	0.61	0/447	1.03	1/587 (0.2%)
10	b	0.85	0/861	1.03	0/1138
11	E	0.81	0/1762	1.03	1/2362 (0.0%)
12	f	1.06	1/895 (0.1%)	1.04	0/1198
13	FF	0.53	0/1492	1.05	1/2005 (0.0%)
14	ff	0.53	0/567	1.19	4/753 (0.5%)
15	F	1.11	0/1911	1.08	0/2549
16	g	0.88	0/916	1.06	0/1220
17	BB	0.55	0/1756	0.97	5/2350 (0.2%)
18	GG	0.53	0/1946	1.01	1/2590 (0.0%)
19	gg	0.45	0/2493	0.92	2/3394 (0.1%)
20	G	0.80	0/1910	1.03	1/2569 (0.0%)
21	h	0.88	0/1021	1.04	0/1348
22	HH	0.59	1/1510 (0.1%)	0.98	0/2022
23	hh	0.40	0/353	0.86	0/547
24	bb	0.53	0/665	0.91	0/891
25	H	0.87	0/1535	1.00	1/2063 (0.0%)
26	i	0.83	0/841	1.04	0/1112
27	II	0.57	0/1715	0.98	1/2287 (0.0%)
28	ii	0.55	0/3361	1.10	8/4519 (0.2%)
29	I	0.92	0/1702	1.03	1/2272 (0.0%)
30	j	1.02	0/720	1.12	1/952 (0.1%)
31	JJ	0.64	0/1550	0.92	0/2069
32	jj	0.53	0/3435	1.06	7/4633 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	J	0.73	0/1385	1.02	0/1852
34	k	0.78	0/575	0.98	0/761
35	KK	0.51	0/834	1.01	3/1125 (0.3%)
36	L	0.88	0/1733	1.07	1/2316 (0.0%)
37	l	0.93	0/459	1.07	0/608
38	LL	0.61	0/1195	0.95	0/1597
39	M	0.85	0/1158	1.06	0/1547
40	m	0.86	0/435	0.98	1/575 (0.2%)
41	MM	0.37	0/918	0.77	0/1233
42	N	1.06	0/1746	1.06	0/2338
43	n	0.72	0/240	1.40	1/305 (0.3%)
44	NN	0.61	0/1226	0.96	0/1649
45	O	1.07	0/1662	1.10	0/2222
46	o	0.79	0/864	1.11	1/1140 (0.1%)
47	OO	0.58	0/1029	1.06	3/1380 (0.2%)
48	P	1.00	0/1268	1.05	0/1700
49	p	0.92	0/718	1.00	0/953
50	PP	0.60	0/1017	1.10	1/1358 (0.1%)
51	Q	1.08	1/1539 (0.1%)	1.08	0/2054
52	r	0.95	0/1010	1.08	0/1354
53	QQ	0.53	0/1146	1.03	1/1534 (0.1%)
54	R	0.87	0/1524	1.09	5/2013 (0.2%)
55	s	0.54	0/1530	1.04	3/2064 (0.1%)
56	RR	0.54	0/1082	0.96	1/1452 (0.1%)
57	S	0.98	0/1501	1.00	1/2012 (0.0%)
58	t	0.72	1/1174 (0.1%)	1.03	0/1582
59	SS	0.57	0/1208	1.18	3/1618 (0.2%)
60	T	0.93	0/1326	1.08	2/1770 (0.1%)
61	TT	0.52	0/1115	0.97	1/1493 (0.1%)
62	U	0.71	0/823	0.99	0/1104
63	UU	0.64	0/805	1.18	4/1081 (0.4%)
64	V	1.04	0/993	1.02	2/1332 (0.2%)
65	VV	0.59	0/643	0.84	0/860
66	W	0.79	0/873	1.09	3/1158 (0.3%)
67	5	0.66	0/84975	0.81	24/132516 (0.0%)
68	WW	0.70	0/1051	0.94	0/1406
69	X	0.92	0/984	1.10	0/1323
70	7	0.61	0/2858	0.73	0/4455
71	XX	0.69	0/1116	0.96	0/1490
72	Y	0.93	0/1132	1.09	1/1504 (0.1%)
73	8	0.65	0/3581	0.79	0/5577
74	YY	0.50	0/1028	0.94	1/1366 (0.1%)
75	Z	0.81	0/1130	1.02	1/1507 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	9	0.47	0/40524	0.78	16/63134 (0.0%)
77	ZZ	0.49	0/604	1.00	0/810
78	a	1.09	0/1191	1.04	1/1590 (0.1%)
79	AA	0.58	0/1747	0.90	0/2374
80	aa	0.65	0/828	0.96	0/1109
81	B	0.95	0/3240	1.05	1/4339 (0.0%)
82	c	0.82	0/771	1.19	3/1034 (0.3%)
83	CC	0.68	0/1753	1.02	0/2369
84	cc	0.59	0/490	1.17	2/656 (0.3%)
All	All	0.69	4/234789 (0.0%)	0.90	131/343469 (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
3	d	0	1
53	QQ	0	1
67	5	0	7
71	XX	0	1
76	9	0	1
79	AA	0	1
All	All	0	12

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	t	19	GLY	C-O	-18.00	1.14	1.24
12	f	29	LYS	CA-CB	-8.48	1.38	1.53
22	HH	100	ILE	C-N	6.01	1.46	1.33
51	Q	158	THR	C-N	-5.00	1.27	1.33

All (131) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	FF	19	LEU	N-CA-C	-9.13	92.04	108.02
32	jj	384	LYS	CB-CG-CD	8.13	129.99	111.30
47	OO	122	SER	N-CA-C	7.67	120.72	111.82
28	ii	260	GLY	N-CA-C	7.34	120.50	110.58
20	G	213	ASP	N-CA-C	7.07	122.69	111.81
14	ff	88	PRO	CA-C-N	-7.02	109.91	120.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	ff	88	PRO	C-N-CA	-7.02	109.91	120.94
5	dd	25	SER	N-CA-C	-6.85	103.33	113.40
84	cc	25	GLY	N-CA-C	-6.79	97.08	113.18
28	ii	189	ARG	CG-CD-NE	6.78	126.92	112.00
63	UU	73	GLY	N-CA-C	-6.68	96.99	110.69
2	C	76	ILE	N-CA-C	6.68	115.25	107.84
67	5	3945	A	O3'-P-O5'	6.67	114.00	104.00
67	5	3653	A	C8-N9-C1'	-6.65	107.75	127.70
59	SS	136	THR	N-CA-C	-6.64	104.92	113.16
35	KK	70	TYR	CA-CB-CG	6.60	125.77	113.90
28	ii	422	MET	N-CA-C	6.47	119.78	108.52
67	5	3945	A	P-O3'-C3'	6.46	129.90	120.20
67	5	143	C	O4'-C1'-N1	6.35	118.03	108.50
59	SS	137	LYS	CA-CB-CG	6.33	126.77	114.10
76	9	1775	U	C3'-C2'-O2'	6.27	120.10	110.70
76	9	1638	G	P-O3'-C3'	6.27	129.60	120.20
76	9	1775	U	C1'-C2'-O2'	6.24	117.76	108.40
17	BB	70	SER	N-CA-C	6.23	119.28	110.50
32	jj	618	ARG	N-CA-C	6.19	118.58	108.55
32	jj	416	TRP	N-CA-C	6.14	119.87	112.38
28	ii	134	GLU	N-CA-C	-6.11	104.74	111.82
76	9	1663	A	O3'-P-O5'	-6.06	94.90	104.00
54	R	173	ARG	CA-CB-CG	6.04	126.19	114.10
67	5	1986	U	P-O3'-C3'	6.04	129.27	120.20
76	9	1464	C	C4'-C3'-O3'	-6.04	103.95	113.00
67	5	1573	G	N9-C1'-C2'	6.00	120.99	112.00
27	II	49	ARG	CB-CG-CD	5.97	125.03	111.30
63	UU	65	THR	CA-C-N	5.95	130.01	121.50
63	UU	65	THR	C-N-CA	5.95	130.01	121.50
60	T	145	GLY	N-CA-C	5.92	127.20	113.18
32	jj	554	ILE	N-CA-C	-5.91	99.03	107.77
25	H	168	LYS	CB-CG-CD	5.85	124.75	111.30
76	9	593	C	C4'-C3'-O3'	-5.81	104.28	113.00
78	a	32	ARG	N-CA-C	5.78	119.52	110.32
2	C	189	MET	N-CA-C	5.76	119.31	110.20
56	RR	60	ARG	CA-CB-CG	5.76	125.62	114.10
28	ii	411	GLY	N-CA-C	5.74	118.87	110.38
76	9	553	U	C2'-C3'-O3'	5.74	118.10	109.50
36	L	74	ARG	CB-CG-CD	5.73	124.48	111.30
74	YY	87	PRO	N-CA-C	5.70	120.16	111.15
72	Y	113	LYS	CA-CB-CG	5.67	125.44	114.10
63	UU	66	ARG	N-CA-C	5.65	118.75	109.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	S	121	ALA	N-CA-C	5.64	118.16	111.33
4	DD	96	LEU	CA-C-N	-5.63	112.88	121.66
4	DD	96	LEU	C-N-CA	-5.63	112.88	121.66
55	s	18	ILE	N-CA-C	5.62	116.39	110.72
64	V	46	LYS	CA-CB-CG	-5.62	102.87	114.10
67	5	3653	A	C4-N9-C1'	5.61	143.14	126.30
67	5	39	A	C8-N9-C1'	-5.60	110.90	127.70
76	9	1137	U	C2'-C3'-O3'	5.59	117.88	109.50
67	5	47	A	C4'-C3'-O3'	5.58	117.77	109.40
67	5	2266	C	C4'-C3'-O3'	5.57	117.76	109.40
82	c	43	ALA	N-CA-C	5.57	117.77	109.59
66	W	84	GLY	N-CA-C	5.56	123.65	115.08
75	Z	92	ASP	N-CA-C	5.56	118.08	110.24
66	W	82	ILE	CA-C-N	5.55	128.73	120.95
66	W	82	ILE	C-N-CA	5.55	128.73	120.95
11	E	208	GLY	N-CA-C	5.53	126.28	113.18
81	B	47	LEU	N-CA-C	5.50	117.72	107.99
82	c	39	ARG	CG-CD-NE	5.48	124.05	112.00
17	BB	113	MET	CG-SD-CE	-5.47	88.86	100.90
59	SS	96	SER	N-CA-C	-5.46	100.83	108.96
32	jj	367	TRP	N-CA-C	5.44	118.90	111.39
67	5	4632	U	N1-C1'-C2'	5.44	120.16	112.00
17	BB	165	ARG	CG-CD-NE	5.42	123.91	112.00
9	ee	107	ARG	CB-CG-CD	5.37	123.66	111.30
28	ii	88	VAL	N-CA-C	-5.37	97.28	108.88
17	BB	69	VAL	CA-C-N	5.34	129.32	120.94
17	BB	69	VAL	C-N-CA	5.34	129.32	120.94
76	9	1835	A	C2'-C3'-O3'	5.33	117.50	109.50
76	9	1824	A	C5'-C4'-O4'	5.33	117.09	109.10
54	R	59	SER	N-CA-C	5.31	117.98	110.50
76	9	1394	G	C2'-C3'-O3'	5.31	121.66	113.70
2	C	90	GLY	N-CA-C	5.30	125.74	113.18
82	c	20	LEU	CA-CB-CG	5.29	134.82	116.30
67	5	759	G	O3'-P-O5'	5.29	111.93	104.00
54	R	57	VAL	N-CA-C	5.28	115.90	109.30
76	9	140	U	N1-C1'-C2'	5.28	119.92	112.00
2	C	74	ALA	N-CA-C	5.24	119.16	112.87
67	5	4378	A	O4'-C1'-N9	5.23	116.04	108.20
64	V	46	LYS	CB-CG-CD	5.22	123.31	111.30
32	jj	332	PHE	N-CA-C	5.21	119.74	113.17
35	KK	25	LYS	N-CA-CB	5.21	117.86	110.46
40	m	76	ARG	N-CA-C	5.20	117.20	107.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
76	9	1265	A	O3'-P-O5'	-5.20	96.21	104.00
61	TT	9	VAL	N-CA-C	5.19	116.71	109.55
8	EE	48	LEU	CB-CG-CD1	5.17	126.22	110.70
30	j	16	HIS	N-CA-C	5.17	118.54	110.32
53	QQ	145	TYR	CA-CB-CG	5.16	123.19	113.90
19	gg	139	LYS	CA-C-N	-5.16	112.71	121.85
19	gg	139	LYS	C-N-CA	-5.16	112.71	121.85
67	5	2046	G	C4'-C3'-O3'	5.15	117.12	109.40
54	R	153	LYS	CA-CB-CG	5.15	124.39	114.10
67	5	2319	C	N1-C1'-C2'	5.14	119.72	112.00
46	o	62	THR	N-CA-C	5.12	117.99	111.69
67	5	339	C	N1-C1'-C2'	5.12	119.68	112.00
76	9	1244	U	O5'-C5'-C4'	-5.11	103.83	111.50
47	OO	29	GLY	N-CA-C	-5.11	101.08	113.18
47	OO	98	ARG	CB-CG-CD	5.11	123.05	111.30
67	5	1985	G	P-O3'-C3'	5.09	127.84	120.20
14	ff	148	TYR	CA-C-N	5.09	130.23	120.97
14	ff	148	TYR	C-N-CA	5.09	130.23	120.97
67	5	3858	C	N1-C1'-C2'	5.09	119.63	112.00
35	KK	70	TYR	N-CA-CB	5.08	118.69	110.42
67	5	2847	G	N9-C1'-C2'	5.07	119.61	112.00
29	I	100	ASN	N-CA-C	5.07	117.18	107.75
50	PP	51	ARG	CB-CA-C	-5.07	102.32	110.74
67	5	48	G	C4'-C3'-O3'	5.07	117.00	109.40
4	DD	61	GLU	N-CA-C	5.06	116.94	108.23
18	GG	52	ILE	N-CA-C	5.05	114.46	106.32
84	cc	21	THR	N-CA-C	-5.05	101.77	109.65
76	9	1571	G	O3'-P-O5'	5.05	111.58	104.00
32	jj	366	ASN	N-CA-C	5.04	121.53	110.80
60	T	131	GLN	CA-CB-CG	5.04	124.18	114.10
67	5	2068	C	C4'-C3'-O3'	5.04	116.95	109.40
67	5	1980	U	O3'-P-O5'	-5.03	96.46	104.00
76	9	1663	A	P-O3'-C3'	5.02	127.73	120.20
28	ii	114	PHE	CB-CA-C	-5.02	100.82	109.86
54	R	173	ARG	CB-CG-CD	-5.02	99.76	111.30
67	5	2570	U	C4'-C3'-O3'	-5.02	105.47	113.00
28	ii	264	PHE	CA-CB-CG	5.01	118.81	113.80
55	s	81	HIS	CA-C-N	-5.01	112.95	121.97
55	s	81	HIS	C-N-CA	-5.01	112.95	121.97
43	n	18	ARG	CG-CD-NE	5.01	123.01	112.00
67	5	1995	G	C4'-C3'-O3'	-5.00	105.49	113.00

There are no chirality outliers.

All (12) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
67	5	1081	C	Sidechain
67	5	1576	G	Sidechain
67	5	1632	A	Sidechain
67	5	3623	C	Sidechain
67	5	3653	A	Sidechain
67	5	39	A	Sidechain
67	5	914	U	Sidechain
76	9	140	U	Sidechain
79	AA	42	LYS	Peptide
53	QQ	140	ARG	Peptide
71	XX	61	GLN	Peptide
3	d	95	ASP	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1898	1993	1993	64	0
2	C	2883	3053	3053	105	0
3	d	888	930	930	27	0
4	DD	1768	1864	1866	215	0
5	dd	459	449	450	73	0
6	D	2391	2424	2424	72	0
7	e	1053	1147	1147	36	0
8	EE	2076	2177	2177	77	0
9	ee	443	492	492	15	0
10	b	848	920	920	28	0
11	E	1729	1888	1887	84	0
12	f	876	912	912	32	0
13	FF	1471	1522	1522	148	0
14	ff	555	565	566	49	0
15	F	1875	1995	1995	60	0
16	g	906	999	1002	42	0
17	BB	1729	1803	1803	81	0
18	GG	1923	2082	2089	154	0
19	gg	2436	2394	2393	193	0
20	G	1879	2027	2027	72	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	h	1013	1147	1147	24	0
22	HH	1488	1582	1582	93	0
23	hh	317	161	161	17	0
24	bb	651	672	672	30	0
25	H	1516	1597	1597	45	0
26	i	830	916	916	21	0
27	II	1686	1773	1772	79	0
28	ii	3307	3331	3346	320	0
29	I	1664	1712	1712	31	0
30	j	705	737	738	24	0
31	JJ	1525	1640	1640	71	0
32	jj	3368	3419	3422	377	0
33	J	1362	1399	1399	52	0
34	k	569	637	637	21	0
35	KK	810	836	836	103	0
36	L	1702	1820	1820	61	0
37	l	447	480	480	14	0
38	LL	1175	1250	1249	58	0
39	M	1137	1211	1211	32	0
40	m	429	465	466	13	0
41	MM	908	939	939	55	0
42	N	1701	1750	1749	57	0
43	n	239	286	289	28	0
44	NN	1202	1289	1289	42	0
45	O	1630	1778	1778	53	0
46	o	851	920	923	24	0
47	OO	1016	1039	1039	77	0
48	P	1242	1274	1274	42	0
49	p	708	758	757	22	0
50	PP	997	1045	1045	165	0
51	Q	1515	1634	1634	49	0
52	r	994	1051	1051	38	0
53	QQ	1128	1195	1195	145	0
54	R	1508	1664	1664	60	0
55	s	1507	1564	1564	139	0
56	RR	1068	1121	1121	123	0
57	S	1462	1508	1508	37	0
58	t	1160	1215	1218	113	0
59	SS	1190	1247	1249	164	0
60	T	1298	1367	1366	42	0
61	TT	1097	1132	1132	123	0
62	U	809	833	833	21	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	UU	795	862	862	99	0
64	V	979	1039	1038	32	0
65	VV	636	637	637	26	0
66	W	860	892	903	38	0
67	5	75972	38389	38358	3068	0
68	WW	1034	1080	1080	41	0
69	X	967	1040	1040	33	0
70	7	2558	1296	1296	84	0
71	XX	1098	1165	1167	46	0
72	Y	1115	1205	1205	31	0
73	8	3208	1629	1629	163	0
74	YY	1011	1083	1083	43	0
75	Z	1107	1182	1182	49	0
76	9	36249	18308	18313	1912	0
77	ZZ	598	656	656	68	0
78	a	1162	1210	1209	43	0
79	AA	1710	1708	1708	75	0
80	aa	814	864	866	50	0
81	B	3172	3310	3310	123	0
82	c	761	794	794	39	0
83	CC	1716	1806	1806	65	0
84	cc	488	514	514	75	0
85	aa	1	0	0	0	0
85	dd	1	0	0	0	0
85	ff	1	0	0	0	0
85	g	1	0	0	0	0
85	j	1	0	0	0	0
85	m	1	0	0	0	0
85	o	1	0	0	0	0
85	p	1	0	0	0	0
86	5	189	0	0	0	0
86	7	4	0	0	0	0
86	8	10	0	0	0	0
86	9	70	0	0	0	0
86	P	1	0	0	0	0
86	V	1	0	0	0	0
86	a	1	0	0	0	0
86	hh	2	0	0	0	0
86	j	1	0	0	0	0
86	jj	1	0	0	0	0
86	o	1	0	0	0	0
87	jj	32	14	13	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
88	5	30	25	24	3	0
All	All	219378	165738	165761	9348	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 25.

All (9348) 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)
88:5:5122:BLS:C1'	88:5:5122:BLS:O5'	1.65	1.41
67:5:4771:C:N3	67:5:4864:U:C4	2.12	1.17
76:9:1245:G:O2'	76:9:1492:U:OP1	1.61	1.15
76:9:1620:A:O2'	76:9:1624:U:OP2	1.65	1.14
19:gg:63:SER:OG	76:9:1396:A:O2'	1.64	1.13
84:cc:24:GLN:OE1	84:cc:26:GLN:NE2	1.82	1.13
57:S:93:MET:HE3	57:S:113:MET:HE1	1.30	1.12
23:hh:50:G:N2	28:ii:54:ASP:O	1.80	1.11
26:i:68:ARG:NH1	67:5:3723:A:OP2	1.84	1.11
61:TT:87:VAL:O	76:9:1529:C:O2'	1.68	1.11
44:NN:121:ARG:NH2	76:9:925:G:OP1	1.84	1.10
57:S:55:LYS:NZ	70:7:98:G:OP2	1.84	1.10
54:R:74:ARG:NH2	67:5:2891:U:OP2	1.85	1.10
59:SS:124:ARG:NH1	76:9:1622:U:OP1	1.85	1.09
67:5:1979:A:N6	67:5:1983:A:OP2	1.85	1.09
80:aa:11:ALA:O	80:aa:15:ARG:NH2	1.86	1.08
11:E:205:ASP:O	11:E:263:LYS:NZ	1.87	1.07
57:S:83:ARG:NH2	60:T:154:ILE:O	1.87	1.07
19:gg:57:ARG:NH1	53:QQ:98:LYS:O	1.88	1.06
67:5:1961:G:O2'	67:5:2025:A:N6	1.89	1.06
28:ii:192:ARG:NH2	76:9:51:U:OP1	1.88	1.05
13:FF:86:LYS:NZ	76:9:1675:A:OP1	1.90	1.04
61:TT:102:ARG:NH1	76:9:1565:C:OP1	1.91	1.04
53:QQ:141:TYR:OH	76:9:1668:U:OP1	1.75	1.04
76:9:1330:G:N2	76:9:1334:G:N7	2.06	1.03
58:t:57:ARG:NH2	67:5:1978:C:OP2	1.92	1.03
13:FF:63:LYS:NZ	76:9:1678:A:OP2	1.89	1.03
56:RR:16:ILE:HG22	56:RR:24:LEU:HD11	1.41	1.02
76:9:1441:U:O2	76:9:1443:C:N4	1.93	1.02
4:DD:10:LYS:NZ	4:DD:14:ASP:OD2	1.92	1.02
31:JJ:108:ARG:NH2	31:JJ:149:VAL:O	1.91	1.02
67:5:973:G:N2	67:5:1282:G:N7	2.08	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:J:119:TYR:O	59:SS:14:ARG:NH1	1.93	1.01
67:5:1983:A:O2'	67:5:1986:U:OP2	1.78	1.01
67:5:1998:A:O2'	67:5:2019:C:O3'	1.79	1.01
19:gg:100:ARG:NH2	76:9:1398:G:OP2	1.94	1.00
51:Q:65:ARG:NH2	67:5:1459:A:OP1	1.92	1.00
59:SS:141:ARG:NE	76:9:1524:G:OP2	1.94	1.00
4:DD:64:ARG:NH1	35:KK:73:ASN:OD1	1.95	1.00
76:9:191:A:N6	76:9:208:G:O2'	1.95	1.00
10:b:57:MET:SD	67:5:1828:C:O2'	2.20	0.99
76:9:1214:A:N6	76:9:1682:C:O2	1.95	0.99
67:5:1818:G:O2'	67:5:1819:G:OP1	1.79	0.99
67:5:3697:U:O2'	67:5:3698:G:OP2	1.80	0.99
76:9:491:C:O2	76:9:493:A:N6	1.96	0.99
5:dd:32:ARG:N	76:9:1659:U:OP1	1.94	0.99
67:5:1996:C:O2	67:5:2000:G:O6	1.78	0.98
67:5:1358:G:N7	67:5:1377:G:O6	1.97	0.98
9:ee:131:ASN:ND2	76:9:608:C:O4'	1.97	0.98
21:h:66:LYS:NZ	73:8:97:A:OP2	1.95	0.98
67:5:2574:G:OP2	75:Z:67:LYS:NZ	1.97	0.98
76:9:1403:C:OP2	76:9:1405:A:N6	1.96	0.98
67:5:752:G:O6	67:5:912:G:N2	1.97	0.97
14:ff:116:ARG:NH1	41:MM:43:ASP:OD2	1.98	0.97
14:ff:96:LYS:NZ	76:9:1307:U:OP2	1.98	0.97
13:FF:34:SER:OG	84:cc:57:THR:OG1	1.81	0.97
13:FF:44:LYS:NZ	53:QQ:114:GLN:O	1.95	0.97
31:JJ:131:ARG:NH2	31:JJ:143:ASN:O	1.98	0.97
72:Y:74:TYR:OH	73:8:75:G:OP2	1.82	0.97
48:P:127:ARG:NH2	67:5:2422:C:OP1	1.97	0.97
66:W:119:LYS:NZ	76:9:329:G:N3	2.13	0.97
67:5:1554:A:N7	67:5:1573:G:N2	2.12	0.96
76:9:1533:A:N7	76:9:1600:G:O6	1.98	0.96
67:5:1405:C:O2	67:5:1412:G:N2	1.98	0.96
13:FF:149:GLN:NE2	76:9:1221:G:OP1	1.99	0.96
76:9:1218:C:O2'	84:cc:24:GLN:NE2	1.98	0.96
79:AA:177:MET:SD	79:AA:180:ARG:NH2	2.39	0.96
53:QQ:61:GLU:OE2	53:QQ:62:ARG:NH1	1.98	0.96
67:5:4776:G:N2	67:5:4859:C:O2	1.99	0.96
42:N:50:ARG:NH2	67:5:279:A:OP1	1.98	0.96
48:P:3:ARG:NH1	73:8:12:G:OP1	1.99	0.96
55:s:13:TYR:OH	55:s:55:MET:O	1.84	0.95
67:5:1979:A:O2'	67:5:1988:G:N2	1.99	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B:289:GLN:O	81:B:302:ASN:ND2	1.98	0.95
32:jj:326:GLY:N	32:jj:329:GLU:OE1	1.99	0.95
13:FF:81:ARG:NH2	76:9:1533:A:O2'	1.99	0.95
67:5:217:C:O2'	67:5:218:A:OP2	1.85	0.95
76:9:1599:U:OP1	77:ZZ:80:ARG:NH2	1.99	0.95
28:ii:42:LYS:O	67:5:3761:C:O2'	1.85	0.94
15:F:93:ARG:NH2	15:F:95:ARG:O	2.00	0.94
88:5:5122:BLS:C1'	88:5:5122:BLS:C5'	2.44	0.94
4:DD:185:LYS:NZ	76:9:1336:C:OP2	1.99	0.94
83:CC:115:GLN:NE2	83:CC:119:GLY:O	2.01	0.94
6:D:57:ASN:ND2	70:7:27:G:OP2	2.01	0.94
14:ff:129:GLY:N	41:MM:43:ASP:OD2	2.01	0.94
28:ii:423:GLU:O	67:5:2010:A:N6	2.01	0.94
67:5:3842:C:OP1	81:B:238:LYS:NZ	2.01	0.94
54:R:88:ARG:NH1	67:5:2812:A:OP2	2.02	0.93
10:b:4:SER:OG	67:5:1855:G:OP1	1.86	0.93
76:9:1559:C:O2'	76:9:1583:C:O2	1.87	0.93
67:5:1554:A:C5	67:5:1573:G:N2	2.36	0.93
32:jj:225:LYS:NZ	87:jj:700:GCP:O1B	2.01	0.93
76:9:197:U:O2	76:9:202:G:O6	1.85	0.93
59:SS:55:ARG:NH1	77:ZZ:82:SER:OG	2.01	0.93
67:5:1976:G:N2	67:5:1991:A:O2'	2.02	0.93
67:5:1986:U:O2'	67:5:2008:U:O4	1.87	0.93
67:5:3760:A:N1	76:9:1825:A:O2'	2.01	0.93
67:5:1985:G:O2'	67:5:2003:G:OP2	1.84	0.92
67:5:1961:G:N2	67:5:2025:A:C8	2.38	0.92
81:B:271:GLN:NE2	81:B:272:LYS:O	2.03	0.92
29:I:7:ARG:NH2	67:5:4405:G:OP1	2.01	0.92
53:QQ:140:ARG:NH2	76:9:1338:G:O3'	2.02	0.92
59:SS:85:ASN:OD1	59:SS:97:GLN:NE2	2.02	0.92
67:5:3947:A:O2'	67:5:4067:U:O2	1.86	0.92
76:9:1824:A:O2'	76:9:1825:A:OP1	1.88	0.92
44:NN:55:ARG:NH1	44:NN:56:ASP:OD1	2.03	0.92
59:SS:86:ARG:NH1	76:9:1611:G:O2'	2.02	0.92
76:9:1134:G:OP1	80:aa:6:ARG:NH1	2.02	0.92
76:9:1542:C:N3	76:9:1591:C:N4	2.18	0.92
76:9:1863:A:OP2	80:aa:4:LYS:NZ	2.03	0.91
76:9:1710:C:N3	76:9:1824:A:N6	2.18	0.91
76:9:1601:A:N6	76:9:1635:C:OP2	2.03	0.91
61:TT:74:SER:OG	76:9:1587:G:O6	1.86	0.91
3:d:47:LYS:NZ	67:5:2832:A:OP1	2.03	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:r:86:ALA:O	52:r:89:THR:OG1	1.87	0.91
38:LL:17:PHE:O	38:LL:20:LYS:NZ	2.03	0.91
4:DD:74:GLN:NE2	4:DD:81:GLU:OE1	2.04	0.91
76:9:1217:A:O2'	76:9:1684:C:N3	2.04	0.91
53:QQ:11:GLN:OE1	53:QQ:71:ARG:NH2	2.04	0.90
39:M:71:LYS:NZ	67:5:738(A):C:OP2	2.03	0.90
1:A:17:ARG:NH2	67:5:2450:G:OP1	2.01	0.90
76:9:1253:A:OP2	76:9:1526:G:N2	2.04	0.90
28:ii:63:LYS:NZ	76:9:627:U:OP2	2.03	0.90
39:M:101:LYS:NZ	67:5:4877:G:OP1	2.03	0.90
62:U:80:LYS:NZ	67:5:2621:A:OP1	2.04	0.90
35:KK:72:THR:OG1	35:KK:74:GLU:OE1	1.89	0.90
39:M:35:ARG:NH2	57:S:99:ASP:OD2	2.04	0.90
60:T:47:THR:O	60:T:49:GLN:NE2	2.04	0.90
76:9:1546:G:N3	76:9:1670:C:O2'	2.05	0.90
8:EE:108:ARG:NH1	76:9:846:G:OP2	2.04	0.90
34:k:35:LYS:NZ	67:5:2693:G:OP1	2.05	0.90
67:5:4460:U:OP1	81:B:10:ARG:NH2	2.04	0.90
50:PP:82:ASP:OD2	76:9:1619:A:O2'	1.88	0.90
67:5:1996:C:N3	67:5:2000:G:N1	2.20	0.90
76:9:1265:A:O2'	76:9:1327:G:OP2	1.88	0.90
76:9:1345:G:N7	76:9:1371:U:O2'	2.05	0.90
17:BB:175:GLU:O	17:BB:179:ASN:ND2	2.05	0.89
32:jj:324:ARG:NH1	32:jj:327:GLU:OE1	2.05	0.89
32:jj:362:ASP:CG	87:jj:700:GCP:HN21	1.79	0.89
67:5:3758:U:O2	67:5:3766:A:N6	2.04	0.89
76:9:1601:A:OP1	77:ZZ:43:LYS:NZ	2.05	0.89
50:PP:81:ARG:NH2	50:PP:120:SER:O	2.05	0.89
76:9:1761:U:O2	76:9:1771:G:N2	2.04	0.89
32:jj:351:LYS:NZ	32:jj:431:ASN:OD1	2.06	0.89
67:5:4728:U:OP2	81:B:132:LYS:NZ	2.06	0.89
4:DD:75:LYS:NZ	35:KK:20:VAL:O	2.05	0.89
61:TT:105:GLN:NE2	76:9:1565:C:OP2	2.05	0.89
76:9:1533:A:N7	76:9:1600:G:C6	2.41	0.89
71:XX:137:LYS:NZ	76:9:30:C:O3'	2.07	0.88
76:9:190:G:N2	76:9:209:A:OP2	2.06	0.88
4:DD:98:ALA:O	4:DD:102:ALA:N	2.06	0.88
67:5:1321:G:N2	67:5:4444:C:O2'	2.06	0.88
2:C:20:LYS:NZ	2:C:254:GLU:OE1	2.06	0.88
63:UU:30:LYS:NZ	76:9:1448:A:OP1	2.06	0.88
76:9:115:U:O2'	76:9:381:C:O2	1.91	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:548:TYR:OH	32:jj:619:ASP:OD1	1.92	0.88
50:PP:43:ARG:NE	76:9:1615:U:OP2	2.05	0.88
9:ee:94:LYS:NZ	76:9:636:C:OP2	2.07	0.87
50:PP:40:ARG:NH2	76:9:1615:U:O4	2.07	0.87
54:R:148:ASP:O	54:R:152:LYS:HG2	1.75	0.87
67:5:1301:C:N4	67:5:2316:G:OP2	2.07	0.87
67:5:1959:U:O4	67:5:2025:A:O2'	1.90	0.87
8:EE:75:LYS:NZ	76:9:122:G:OP1	2.07	0.87
5:dd:25:SER:OG	35:KK:65:ARG:NH1	2.07	0.87
13:FF:140:ASP:O	84:cc:46:VAL:HG13	1.73	0.87
67:5:729:G:O2'	67:5:730:G:OP1	1.92	0.87
18:GG:186:GLN:NE2	76:9:333:G:N7	2.22	0.87
16:g:10:ARG:NH1	67:5:2403:A:OP1	2.08	0.87
32:jj:255:ASN:ND2	76:9:464:A:OP1	2.08	0.87
76:9:1214:A:N6	76:9:1682:C:C2	2.40	0.87
76:9:1652:G:O6	76:9:1672:U:O2	1.93	0.87
47:OO:145:GLY:O	80:aa:22:ARG:NH2	2.08	0.87
56:RR:3:ARG:NH2	76:9:1454:A:O4'	2.08	0.87
74:YY:108:LYS:NZ	76:9:506:G:OP1	2.06	0.87
67:5:1358:G:O2'	67:5:1359:G:O5'	1.93	0.87
76:9:1257:G:O6	76:9:1494:U:N3	2.07	0.87
56:RR:89:SER:OG	56:RR:92:ASP:OD2	1.92	0.87
75:Z:5:MET:O	75:Z:28:ASN:ND2	2.08	0.86
76:9:1214:A:N7	76:9:1682:C:N3	2.22	0.86
67:5:4776:G:N1	67:5:4859:C:N3	2.23	0.86
83:CC:60:TRP:O	83:CC:71:LYS:NZ	2.08	0.86
4:DD:178:ARG:O	76:9:628:A:N6	2.09	0.86
6:D:57:ASN:OD1	6:D:58:ARG:N	2.06	0.86
67:5:2578:G:OP1	75:Z:107:LYS:NZ	2.07	0.86
67:5:4254:G:O6	67:5:4257:A:N7	2.07	0.86
76:9:1835:A:O2'	76:9:1836:G:O5'	1.93	0.86
27:II:75:LYS:NZ	76:9:304:C:OP1	2.08	0.86
38:LL:82:MET:SD	76:9:394:G:O2'	2.32	0.86
18:GG:159:ARG:NH2	18:GG:171:THR:OG1	2.09	0.86
19:gg:64:HIS:NE2	76:9:1475:G:O6	2.08	0.86
5:dd:19:ARG:NH2	76:9:1556:A:N1	2.23	0.86
67:5:3661:G:N2	67:5:3681:G:O2'	2.09	0.85
67:5:83:C:O2	67:5:101:A:N6	2.10	0.85
67:5:1980:U:N3	67:5:1982:G:OP2	2.10	0.85
44:NN:4:MET:SD	44:NN:124:ARG:NH1	2.49	0.85
18:GG:190:ARG:NH1	76:9:334:C:OP2	2.09	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:659:G:HO2'	76:9:662:G:HO2'	0.95	0.85
18:GG:4:ASN:ND2	76:9:154:U:O2	2.10	0.85
29:I:162:ARG:NH2	67:5:2033:A:OP1	2.10	0.85
67:5:1526:G:N1	67:5:1649:U:O4	2.10	0.85
17:BB:32:ASP:O	17:BB:96:CYS:N	2.10	0.85
67:5:2573:A:N7	67:5:2761:U:O4	2.09	0.85
56:RR:132:ARG:NH2	76:9:1100:A:O5'	2.10	0.85
67:5:1835:G:O2'	67:5:1836:G:OP2	1.94	0.85
13:FF:117:ILE:O	13:FF:122:ARG:NH2	2.09	0.84
17:BB:26:SER:O	17:BB:51:ARG:NH2	2.10	0.84
67:5:2546:G:O2'	67:5:2547:G:OP1	1.95	0.84
76:9:674:C:O2'	76:9:996:A:O2'	1.76	0.84
27:II:85:ALA:O	38:LL:8:ARG:NH1	2.10	0.84
76:9:1248:U:O4	76:9:1701:C:N4	2.09	0.84
67:5:1520:C:N4	67:5:1521:C:N4	2.25	0.84
67:5:2088:A:O2'	67:5:2089:G:OP2	1.95	0.84
76:9:1546:G:N2	76:9:1670:C:O2	2.10	0.84
76:9:1598:G:N2	76:9:1599:U:O4	2.10	0.84
55:s:44:ARG:NH1	67:5:1996:C:O3'	2.09	0.84
75:Z:3:LYS:O	75:Z:6:LYS:NZ	2.09	0.84
20:G:192:GLY:O	20:G:195:THR:OG1	1.95	0.84
32:jj:254:LYS:O	32:jj:256:ARG:NH1	2.10	0.84
55:s:31:GLY:N	55:s:188:ILE:O	2.10	0.84
1:A:117:GLU:OE2	1:A:123:ARG:N	2.11	0.84
76:9:628:A:OP2	76:9:1501:C:O2'	1.95	0.84
76:9:1368:U:OP1	76:9:1466:G:O2'	1.94	0.84
35:KK:8:ARG:NH2	76:9:1314:U:O3'	2.11	0.84
67:5:500:G:O2'	67:5:504:G:O4'	1.95	0.84
8:EE:22:LYS:NZ	76:9:828:G:OP1	2.10	0.84
28:ii:62:ILE:O	28:ii:68:ARG:NE	2.10	0.84
53:QQ:128:GLU:N	76:9:1649:U:OP1	2.11	0.84
76:9:1548:G:O6	76:9:1584:G:N1	2.10	0.84
76:9:1329:U:O2'	76:9:1332:A:OP2	1.94	0.83
22:HH:160:LYS:NZ	22:HH:191:GLU:OE2	2.10	0.83
5:dd:31:ILE:O	5:dd:37:ASN:N	2.10	0.83
50:PP:81:ARG:NH1	50:PP:120:SER:OG	2.12	0.83
52:r:19:LYS:NZ	67:5:2338:C:OP1	2.10	0.83
76:9:491:C:O2'	76:9:493:A:N7	2.11	0.83
16:g:41:ALA:O	16:g:52:ARG:NH1	2.11	0.83
50:PP:42:ARG:NH1	76:9:1614:A:OP1	2.12	0.83
75:Z:22:LYS:NZ	75:Z:132:GLN:O	2.10	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1220:A:N3	76:9:1677:U:O2'	2.10	0.83
28:ii:319:ILE:HD12	28:ii:412:ILE:HD12	1.59	0.83
32:jj:549:ASN:OD1	32:jj:550:ALA:N	2.11	0.83
67:5:452:A:OP1	67:5:1294:A:N6	2.12	0.83
76:9:472:C:O2'	76:9:474:G:OP1	1.95	0.83
76:9:1659:U:OP2	76:9:1660:C:N4	2.10	0.83
50:PP:39:ALA:N	76:9:1613:G:OP2	2.12	0.83
67:5:67:C:OP2	67:5:312:G:N2	2.11	0.83
1:A:21:LYS:NZ	67:5:2743:A:O2'	2.11	0.83
28:ii:42:LYS:NZ	67:5:3761:C:O2	2.09	0.83
63:UU:87:ARG:NH1	76:9:1447:G:OP1	2.12	0.83
67:5:2579:G:N2	67:5:2583:C:O2	2.12	0.83
76:9:1353:A:OP1	79:AA:139:TYR:OH	1.97	0.82
76:9:1646:C:O2	76:9:1677:U:N3	2.10	0.82
31:JJ:172:ARG:NH1	76:9:587:A:N7	2.26	0.82
39:M:106:ASP:OD1	39:M:107:PHE:N	2.10	0.82
17:BB:71:LEU:HA	17:BB:74:LEU:HD12	1.62	0.82
6:D:33:ARG:NH2	70:7:7:G:O3'	2.11	0.82
44:NN:3:ARG:NH2	44:NN:10:GLY:O	2.13	0.82
76:9:1543:U:O2	76:9:1590:C:N4	2.12	0.82
53:QQ:138:ARG:NH2	76:9:1649:U:O2'	2.13	0.82
43:n:2:ARG:NH2	76:9:1842:C:OP2	2.13	0.82
56:RR:5:ARG:HG3	56:RR:9:VAL:HG11	1.59	0.82
83:CC:167:ARG:NH1	83:CC:218:GLY:O	2.13	0.82
53:QQ:61:GLU:OE1	53:QQ:61:GLU:N	2.12	0.82
67:5:1370:G:O2'	67:5:1371:A:OP2	1.98	0.82
67:5:2659:A:O4'	67:5:2676:A:N6	2.13	0.82
67:5:2856:C:O2	81:B:242:ARG:NH2	2.13	0.82
10:b:44:ARG:NH2	67:5:1465:G:OP1	2.13	0.81
32:jj:434:ARG:NH2	32:jj:498:GLU:OE1	2.12	0.81
55:s:112:ARG:NH1	67:5:1969:G:OP2	2.13	0.81
67:5:1291:G:O2'	67:5:1292:C:OP1	1.97	0.81
76:9:1355:C:O3'	83:CC:238:LYS:NZ	2.14	0.81
7:e:64:LYS:NZ	67:5:2079:G:OP1	2.13	0.81
14:ff:109:ASP:OD1	14:ff:113:LYS:NZ	2.10	0.81
79:AA:14:ASP:OD1	79:AA:17:LYS:NZ	2.13	0.81
32:jj:226:SER:OG	87:jj:700:GCP:O2G	1.97	0.81
68:WW:23:ARG:NH2	68:WW:65:LEU:O	2.12	0.81
39:M:116:LYS:NZ	67:5:4879:C:OP2	2.12	0.81
14:ff:93:HIS:NE2	76:9:1307:U:O4	2.14	0.81
44:NN:127:ARG:NH2	76:9:1023:A:OP2	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1236:C:O2'	67:5:1237:C:O5'	1.97	0.81
25:H:64:ARG:NH1	67:5:1949:U:OP1	2.13	0.81
55:s:6:ARG:NH2	67:5:1957:U:H4'	1.95	0.81
82:c:45:LEU:HD22	82:c:104:ILE:HG21	1.63	0.81
11:E:72:LYS:NZ	67:5:983:C:O2	2.13	0.81
11:E:157:THR:O	11:E:161:ARG:NH1	2.13	0.81
28:ii:257:SER:O	28:ii:259:GLY:N	2.12	0.81
80:aa:23:CYS:SG	80:aa:26:CYS:N	2.53	0.81
50:PP:34:MET:SD	50:PP:46:SER:OG	2.39	0.80
51:Q:188:ASN:ND2	67:5:4307:A:OP1	2.13	0.80
3:d:39:LYS:NZ	67:5:2370:A:N7	2.29	0.80
6:D:140:GLY:O	67:5:1819:G:O2'	1.99	0.80
51:Q:170:LYS:NZ	67:5:1389:U:OP2	2.14	0.80
53:QQ:16:LYS:NZ	53:QQ:123:ASP:OD2	2.13	0.80
76:9:1255:G:OP1	76:9:1256:G:O2'	1.98	0.80
76:9:1616:U:O2'	76:9:1661:A:N3	2.13	0.80
7:e:36:ARG:NH1	67:5:2322:G:OP1	2.14	0.80
12:f:57:THR:HG21	12:f:68:ARG:HE	1.47	0.80
16:g:115:LYS:NZ	67:5:4097:G:OP1	2.14	0.80
42:N:49:ARG:NH2	67:5:114:G:OP1	2.13	0.80
76:9:678:U:OP2	76:9:1026:C:N4	2.14	0.80
76:9:1679:A:O2'	76:9:1680:G:OP2	1.98	0.80
31:JJ:18:ARG:NH2	76:9:3:C:O2	2.14	0.80
23:hh:49:U:O2'	23:hh:50:G:N7	2.14	0.80
29:I:3:ARG:NH2	67:5:4431:U:OP2	2.14	0.80
30:j:19:CYS:SG	30:j:20:ARG:N	2.54	0.80
31:JJ:84:ILE:O	31:JJ:108:ARG:NH1	2.15	0.80
53:QQ:146:ARG:OXT	76:9:1251:A:N6	2.15	0.80
76:9:14:C:OP1	83:CC:190:SER:OG	1.99	0.80
12:f:16:ARG:NH2	12:f:18:LEU:O	2.15	0.80
67:5:1998:A:HO2'	67:5:2019:C:C3'	1.95	0.80
50:PP:108:LYS:NZ	50:PP:110:GLU:OE2	2.15	0.79
78:a:59:ARG:NH2	78:a:61:TYR:OH	2.14	0.79
4:DD:141:LYS:NZ	4:DD:145:GLN:OE1	2.14	0.79
24:bb:45:THR:OG1	44:NN:57:SER:O	2.00	0.79
67:5:1998:A:N3	67:5:2019:C:O2'	2.14	0.79
27:II:10:LYS:O	27:II:18:ARG:NH2	2.15	0.79
67:5:1406(C):G:O6	67:5:1411:C:N4	2.14	0.79
76:9:1355:C:O2'	83:CC:238:LYS:NZ	2.15	0.79
76:9:1519:U:N3	76:9:1622:U:O2'	2.16	0.79
17:BB:155:TYR:OH	76:9:989:C:OP2	1.99	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:24:G:N2	67:5:55:G:O6	2.16	0.79
28:ii:96:TYR:OH	28:ii:132:HIS:O	1.99	0.79
32:jj:482:LEU:N	32:jj:503:ARG:O	2.16	0.79
28:ii:200:ASN:ND2	76:9:478:G:O3'	2.14	0.79
61:TT:120:GLY:N	76:9:1562:C:H4'	1.98	0.79
67:5:64:A:O2'	67:5:65:A:OP2	2.01	0.79
72:Y:2:LYS:NZ	72:Y:7:VAL:O	2.15	0.79
58:t:137:GLN:OE1	58:t:146:ARG:NE	2.15	0.79
65:VV:83:PHE:O	79:AA:53:ARG:NH1	2.15	0.79
59:SS:88:LYS:NZ	76:9:1613:G:OP1	2.12	0.79
61:TT:120:GLY:H	76:9:1562:C:H4'	1.48	0.79
33:J:73:THR:OG1	70:7:39:C:O2	2.01	0.78
51:Q:75:ARG:NH2	67:5:1456:C:O2	2.15	0.78
59:SS:38:ARG:N	76:9:1630:A:OP1	2.16	0.78
50:PP:122:THR:OG1	76:9:1622:U:O4	2.01	0.78
67:5:1377:G:N2	67:5:1380:G:O4'	2.16	0.78
6:D:48:LYS:NZ	67:5:4325:A:O2'	2.12	0.78
28:ii:241:MET:HE2	76:9:480:G:H5"	1.63	0.78
53:QQ:132:PHE:N	76:9:1669:G:OP1	2.16	0.78
76:9:1302:G:N2	76:9:1305:C:OP2	2.16	0.78
7:e:15:LYS:NZ	7:e:61:GLY:O	2.15	0.78
76:9:183:G:O2'	76:9:184:G:O5'	2.02	0.78
76:9:1332:A:N7	76:9:1493:C:N4	2.32	0.78
63:UU:55:ARG:O	76:9:1445:U:O2'	2.00	0.78
14:ff:111:ASN:OD1	14:ff:112:GLY:N	2.17	0.78
36:L:71:ARG:NH2	67:5:75:G:OP1	2.16	0.78
76:9:158:A:N6	76:9:466:G:O6	2.16	0.78
1:A:241:ARG:NH1	67:5:3659:G:OP1	2.16	0.77
29:I:146:GLU:OE2	29:I:146:GLU:N	2.17	0.77
36:L:92:ARG:NH1	67:5:109:G:OP1	2.17	0.77
67:5:4771:C:C4	67:5:4864:U:O4	2.38	0.77
81:B:291:TYR:OH	81:B:315:ASN:ND2	2.17	0.77
15:F:192:GLU:O	15:F:195:THR:O	2.02	0.77
67:5:4980:C:OP2	67:5:4981:G:N2	2.17	0.77
83:CC:82:TYR:OH	83:CC:162:ILE:O	2.00	0.77
60:T:87:LYS:NZ	67:5:4301:U:OP2	2.18	0.77
63:UU:67:LYS:HD3	76:9:1337:C:H5'	1.67	0.77
67:5:2265:G:O2'	67:5:2266:C:OP1	2.02	0.77
77:ZZ:63:PRO:O	77:ZZ:111:ARG:NE	2.17	0.77
36:L:186:ARG:NH1	67:5:1395:U:OP1	2.16	0.77
76:9:1530:U:O2'	76:9:1605:G:O3'	2.02	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4771:C:C2	67:5:4864:U:C4	2.71	0.77
59:SS:59:LEU:HD12	59:SS:63:GLU:OE1	1.84	0.77
76:9:1473:G:N1	76:9:1476:A:OP2	2.18	0.77
18:GG:157:VAL:O	76:9:75:G:N2	2.17	0.77
36:L:205:GLN:NE2	36:L:206:ASP:OD2	2.18	0.77
55:s:181:SER:OG	55:s:183:PHE:O	2.03	0.77
67:5:3796:U:O2'	76:9:1720:U:O2'	2.03	0.77
5:dd:56:ASP:OD1	76:9:1480:A:O2'	2.01	0.76
51:Q:49:LYS:NZ	67:5:1693:U:OP1	2.17	0.76
67:5:2306:G:O2'	67:5:2331:G:N2	2.17	0.76
4:DD:42:THR:OG1	4:DD:45:ARG:O	2.03	0.76
21:h:110:LYS:NZ	67:5:111:C:OP1	2.15	0.76
68:WW:55:ASP:O	68:WW:57:ARG:N	2.18	0.76
28:ii:34:MET:SD	28:ii:99:THR:N	2.58	0.76
5:dd:21:CYS:O	35:KK:65:ARG:NH2	2.18	0.76
17:BB:151:ARG:NH1	76:9:1102:G:OP1	2.19	0.76
33:J:121:PRO:HD3	59:SS:14:ARG:HE	1.51	0.76
54:R:21:LYS:NZ	67:5:2822:G:OP2	2.18	0.76
28:ii:422:MET:HA	67:5:2011:C:H42	1.50	0.76
76:9:520:A:O2'	76:9:825:A:N3	2.18	0.76
80:aa:45:VAL:HG11	80:aa:53:ILE:HD13	1.68	0.76
67:5:2313:A:O2'	67:5:2314:G:OP1	2.03	0.76
28:ii:318:GLU:HG3	67:5:4419:U:C2	2.21	0.76
6:D:276:LYS:NZ	70:7:62:U:O5'	2.19	0.76
53:QQ:50:LYS:O	53:QQ:85:ARG:NH1	2.19	0.76
79:AA:50:ASN:HB3	79:AA:53:ARG:HE	1.51	0.76
32:jj:381:PRO:O	32:jj:384:LYS:HG3	1.86	0.76
18:GG:178:ARG:NH2	76:9:143:U:O2	2.19	0.75
57:S:93:MET:HE3	57:S:113:MET:CE	2.12	0.75
63:UU:95:SER:OG	63:UU:96:GLU:OE1	2.03	0.75
76:9:1214:A:N7	76:9:1682:C:C4	2.54	0.75
51:Q:173:LYS:NZ	67:5:88:A:OP2	2.16	0.75
76:9:1036:A:N3	76:9:1844:U:O2'	2.16	0.75
67:5:2046:G:O2'	67:5:2047:A:OP2	2.05	0.75
76:9:1588:A:N1	76:9:1671:G:N2	2.34	0.75
13:FF:58:ALA:O	76:9:1679:A:N6	2.19	0.75
67:5:1520:C:N4	67:5:1521:C:H41	1.84	0.75
20:G:118:ARG:NH2	73:8:151:G:OP2	2.20	0.75
48:P:62:ARG:NH2	67:5:423:G:OP1	2.19	0.75
56:RR:16:ILE:CG2	56:RR:24:LEU:HD11	2.16	0.75
4:DD:48:ILE:HG23	4:DD:86:LEU:HD12	1.66	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1608:U:O4	76:9:1632:G:N2	2.20	0.75
19:gg:281:ALA:HB2	76:9:1458:G:OP1	1.86	0.75
16:g:60:ARG:NH2	67:5:2516:G:OP1	2.19	0.74
32:jj:327:GLU:OE2	32:jj:359:LYS:NZ	2.13	0.74
67:5:1937:C:N3	67:5:1938:C:N4	2.34	0.74
67:5:4723:A:C2	67:5:4724:A:C6	2.74	0.74
67:5:4771:C:C4	67:5:4864:U:C4	2.74	0.74
76:9:1216:C:N4	76:9:1340:U:OP1	2.20	0.74
4:DD:48:ILE:CG2	4:DD:86:LEU:HD12	2.16	0.74
13:FF:74:ASN:OD1	76:9:1675:A:O2'	2.03	0.74
67:5:1357:C:N4	67:5:1383:G:O6	2.20	0.74
13:FF:68:ILE:HD11	13:FF:109:LEU:HD23	1.70	0.74
58:t:123:ARG:O	58:t:128:THR:OG1	2.05	0.74
61:TT:82:ARG:NE	76:9:1654:G:OP1	2.20	0.74
67:5:1654:G:N2	67:5:1678:C:OP1	2.19	0.74
67:5:4771:C:C2	67:5:4864:U:N3	2.55	0.74
74:YY:110:ARG:NH2	74:YY:114:MET:SD	2.60	0.74
63:UU:67:LYS:HD3	76:9:1337:C:C5'	2.17	0.74
67:5:3701:C:N4	67:5:3746:A:O5'	2.19	0.74
76:9:1215:C:O2	76:9:1220:A:N6	2.19	0.74
6:D:152:ARG:HG3	6:D:154:THR:HG23	1.69	0.74
15:F:75:ARG:NH2	67:5:730:G:OP2	2.20	0.74
27:II:47:ARG:NH1	76:9:446:G:OP2	2.20	0.74
42:N:17:ASP:OD1	42:N:20:ARG:NH2	2.21	0.74
67:5:33:A:N7	67:5:50:C:N4	2.36	0.74
28:ii:312:LEU:HD12	28:ii:317:VAL:HG21	1.70	0.74
55:s:50:LYS:O	55:s:92:LYS:NZ	2.21	0.74
61:TT:121:ARG:NE	76:9:1563:G:OP1	2.21	0.74
68:WW:104:LEU:HD12	68:WW:104:LEU:O	1.88	0.74
32:jj:372:TYR:CE1	32:jj:376:LYS:HD2	2.23	0.73
36:L:5:ARG:NH2	67:5:1850:A:OP2	2.20	0.73
45:O:179:LYS:NZ	67:5:4873:G:O6	2.17	0.73
64:V:46:LYS:NZ	67:5:4509:U:O3'	2.21	0.73
67:5:2833:A:N6	67:5:3853:U:O4	2.21	0.73
76:9:1545:A:N6	76:9:1588:A:O4'	2.21	0.73
25:H:23:ARG:NH2	25:H:39:ASN:O	2.21	0.73
67:5:4771:C:N4	67:5:4863:G:N7	2.36	0.73
18:GG:172:LYS:NZ	76:9:66:G:OP1	2.21	0.73
59:SS:38:ARG:O	59:SS:42:HIS:ND1	2.18	0.73
60:T:109:VAL:HG22	67:5:1803:G:C6	2.24	0.73
67:5:5001:U:OP1	81:B:385:LYS:NZ	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1597:C:N4	76:9:1598:G:O6	2.22	0.73
17:BB:110:MET:HE1	17:BB:140:VAL:HG11	1.71	0.73
19:gg:38:LYS:NZ	76:9:1474:A:N7	2.36	0.73
37:l:2:SER:OG	67:5:2407:G:O6	2.05	0.73
48:P:70:CYS:SG	48:P:71:ALA:N	2.62	0.73
67:5:2793:G:N2	67:5:2797:C:C2	2.57	0.73
67:5:4911:A:OP2	81:B:100:ARG:NH1	2.21	0.73
31:JJ:38:ARG:NH1	31:JJ:42:GLU:OE1	2.22	0.72
31:JJ:174:LYS:N	76:9:561:A:OP2	2.21	0.72
32:jj:555:HIS:NE2	32:jj:612:MET:SD	2.62	0.72
53:QQ:138:ARG:NH1	76:9:1646:C:OP1	2.20	0.72
67:5:4185:G:N2	67:5:4186:A:C4	2.57	0.72
16:g:82:MET:HE1	16:g:90:ARG:NH2	2.04	0.72
21:h:44:LEU:O	21:h:47:ILE:HG22	1.90	0.72
67:5:4465:U:O4'	67:5:4488:A:N6	2.21	0.72
16:g:4:ARG:NH1	67:5:2399:G:N3	2.37	0.72
31:JJ:107:GLU:O	31:JJ:113:GLN:NE2	2.22	0.72
50:PP:115:TYR:HB2	50:PP:118:GLU:HG3	1.70	0.72
67:5:3945:A:N3	67:5:3946:G:O2'	2.21	0.72
67:5:4582:C:N4	67:5:4722:G:O6	2.21	0.72
71:XX:61:GLN:O	71:XX:63:ASN:N	2.21	0.72
23:hh:54:U:OP2	76:9:1489:A:N6	2.23	0.72
32:jj:445:VAL:HG22	32:jj:556:THR:HG22	1.70	0.72
51:Q:11:ARG:NH2	67:5:1689:G:OP1	2.22	0.72
21:h:87:LYS:O	21:h:92:ARG:NH1	2.22	0.72
42:N:14:LYS:NZ	67:5:280:G:OP2	2.16	0.72
51:Q:21:GLN:OE1	67:5:2269:C:N4	2.22	0.72
56:RR:41:ILE:HD13	56:RR:47:ARG:HA	1.71	0.72
4:DD:193:ASP:OD2	4:DD:195:SER:OG	2.08	0.72
26:i:30:ARG:NH2	67:5:278:G:OP2	2.21	0.72
59:SS:25:LYS:NZ	59:SS:52:LEU:O	2.22	0.72
14:ff:138:ARG:NH1	76:9:1293:A:O2'	2.23	0.72
28:ii:124:LEU:HD11	28:ii:126:LEU:HD12	1.71	0.72
67:5:3827:G:O2'	67:5:3829:G:OP2	2.08	0.72
74:YY:86:GLU:OE2	74:YY:90:ARG:NH1	2.22	0.72
10:b:103:LYS:NZ	67:5:2103:A:O2'	2.22	0.72
1:A:156:LYS:NZ	67:5:3662:A:OP2	2.20	0.72
18:GG:17:GLU:N	18:GG:17:GLU:OE2	2.21	0.72
38:LL:101:ARG:NH1	71:XX:6:GLY:O	2.23	0.72
50:PP:30:TYR:OH	50:PP:88:GLU:OE1	2.05	0.72
55:s:77:LYS:O	55:s:81:HIS:ND1	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4420:U:O4	67:5:4475:G:N2	2.22	0.72
18:GG:172:LYS:HD3	76:9:65:C:H4'	1.72	0.71
28:ii:160:THR:HG23	28:ii:169:LEU:HD13	1.71	0.71
67:5:4291:G:H2'	67:5:4328:G:H21	1.55	0.71
2:C:80:ARG:NH1	67:5:1646:A:OP2	2.24	0.71
5:dd:44:ARG:NE	63:UU:78:ASP:OD2	2.23	0.71
35:KK:8:ARG:NE	76:9:1314:U:O2'	2.17	0.71
54:R:70:ARG:NH2	67:5:2811:G:OP1	2.23	0.71
56:RR:48:ASN:ND2	76:9:1453:C:OP1	2.23	0.71
28:ii:21:ILE:HD11	28:ii:136:LEU:HB3	1.71	0.71
67:5:86:U:C5	67:5:97:G:N2	2.58	0.71
67:5:4410:G:C2	67:5:4411:G:C8	2.79	0.71
11:E:115:MET:SD	52:r:94:ARG:NH2	2.63	0.71
61:TT:38:LYS:NZ	61:TT:43:LYS:O	2.19	0.71
76:9:1625:U:O2'	76:9:1662:U:O2'	2.09	0.71
11:E:134:LYS:NZ	67:5:1279:A:OP2	2.24	0.71
18:GG:145:PHE:HD1	66:W:85:ALA:HB1	1.54	0.71
22:HH:16:PRO:HB2	22:HH:20:GLU:HB2	1.71	0.71
64:V:123:LYS:NZ	64:V:127:ASP:OD2	2.24	0.71
38:LL:133:PRO:O	76:9:383:G:O2'	2.09	0.71
76:9:1625:U:HO2'	76:9:1662:U:HO2'	1.36	0.71
4:DD:64:ARG:NH2	35:KK:71:LEU:O	2.23	0.71
28:ii:241:MET:HE1	76:9:481:C:OP2	1.91	0.71
56:RR:24:LEU:HB2	56:RR:58:MET:HE3	1.73	0.71
59:SS:99:LEU:O	59:SS:102:GLY:N	2.24	0.71
48:P:122:ALA:HB2	48:P:145:HIS:CD2	2.26	0.71
67:5:747:A:H4'	67:5:748:G:OP1	1.91	0.71
76:9:1677:U:N3	76:9:1678:A:N7	2.39	0.70
8:EE:16:LYS:NZ	76:9:813:A:OP1	2.24	0.70
39:M:123:ILE:HG21	45:O:178:ARG:NH1	2.06	0.70
67:5:1520:C:C4	67:5:1521:C:N4	2.59	0.70
11:E:244:GLU:OE1	11:E:244:GLU:N	2.24	0.70
15:F:170:ASP:OD1	15:F:171:ASN:N	2.24	0.70
61:TT:63:HIS:CB	61:TT:75:MET:HE1	2.21	0.70
67:5:2475:G:N1	69:X:51:THR:O	2.21	0.70
18:GG:159:ARG:NH2	18:GG:171:THR:O	2.24	0.70
35:KK:25:LYS:H	35:KK:66:HIS:HA	1.56	0.70
55:s:29:ILE:HD13	55:s:81:HIS:HB3	1.73	0.70
67:5:1996:C:O2	67:5:2000:G:C6	2.44	0.70
4:DD:99:ILE:O	4:DD:103:GLU:HB3	1.91	0.70
57:S:112:ASP:OD1	57:S:116:ARG:NH1	2.23	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:TT:70:ALA:CB	61:TT:75:MET:HE2	2.20	0.70
67:5:4124:G:O2'	67:5:4125:C:OP1	2.06	0.70
41:MM:42:LEU:HD23	41:MM:74:ILE:HD13	1.73	0.70
42:N:71:ARG:NH2	67:5:31:U:O3'	2.24	0.70
27:II:12:ARG:HE	27:II:18:ARG:HG3	1.55	0.70
64:V:123:LYS:NZ	64:V:123:LYS:O	2.25	0.70
67:5:1402:C:N4	67:5:1403:G:O6	2.23	0.70
76:9:1233:G:N3	76:9:1252:C:O2'	2.24	0.70
28:ii:189:ARG:NH1	76:9:52:G:H5"	2.07	0.70
67:5:4772:C:N4	67:5:4864:U:O2	2.24	0.70
79:AA:207:PRO:HA	79:AA:210:ILE:HD12	1.73	0.70
32:jj:360:MET:HE3	32:jj:367:TRP:HA	1.74	0.70
68:WW:71:LYS:NZ	76:9:1155:U:O3'	2.24	0.70
76:9:1324:G:N2	76:9:1510:G:O4'	2.23	0.70
19:gg:100:ARG:CZ	76:9:1398:G:OP2	2.39	0.70
66:W:4:GLU:OE2	66:W:20:ARG:NH2	2.25	0.70
76:9:1489:A:H4'	76:9:1490:G:OP2	1.92	0.70
17:BB:35:ALA:O	17:BB:42:ARG:NH1	2.25	0.69
49:p:48:LYS:NZ	67:5:2736:G:OP1	2.25	0.69
67:5:4585:U:O4	67:5:4718:G:N2	2.25	0.69
16:g:110:GLN:O	16:g:113:SER:OG	2.10	0.69
25:H:172:ILE:HD11	40:m:64:ASN:ND2	2.07	0.69
67:5:4627:U:O2'	81:B:373:LYS:NZ	2.24	0.69
11:E:165:VAL:HG11	11:E:178:VAL:HG22	1.74	0.69
54:R:12:SER:OG	54:R:17:CYS:O	2.09	0.69
67:5:1576:G:N2	67:5:1578:U:O2	2.26	0.69
76:9:1253:A:C4	76:9:1666:C:H4'	2.28	0.69
41:MM:57:ASP:O	76:9:1285:G:N2	2.26	0.69
51:Q:88:ASP:OD1	51:Q:89:ASP:N	2.24	0.69
7:e:104:SER:OG	7:e:105:SER:N	2.24	0.69
67:5:1755:C:O2'	67:5:1757:U:OP2	2.09	0.69
79:AA:118:GLU:O	83:CC:65:LYS:NZ	2.25	0.69
4:DD:55:THR:HA	4:DD:58:VAL:HG22	1.75	0.69
67:5:1733:G:O2'	67:5:4214:A:N3	2.24	0.69
67:5:2756:G:O6	75:Z:51:ARG:NH2	2.26	0.69
1:A:128:ARG:HH12	67:5:3681:G:P	2.15	0.69
16:g:22:LEU:HD12	16:g:22:LEU:N	2.08	0.69
18:GG:188:LYS:NZ	76:9:142:C:OP2	2.25	0.69
22:HH:83:LEU:HD21	22:HH:92:VAL:HG21	1.75	0.69
22:HH:147:LYS:NZ	22:HH:152:ARG:O	2.24	0.69
28:ii:145:LYS:HD3	28:ii:160:THR:HG21	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ii:322:VAL:HG13	28:ii:326:LEU:HD11	1.73	0.69
33:J:63:ARG:NE	46:o:104:ILE:O	2.26	0.69
36:L:47:ALA:O	36:L:149:GLN:NE2	2.25	0.69
49:p:2:ALA:N	67:5:1570:G:O6	2.25	0.69
50:PP:81:ARG:NH1	50:PP:120:SER:HG	1.90	0.69
50:PP:81:ARG:NE	76:9:1621:U:O4	2.25	0.69
57:S:77:ASN:OD1	57:S:98:ARG:NH1	2.25	0.69
67:5:4391:G:N2	67:5:4392:G:N3	2.41	0.69
67:5:4567:G:C2	67:5:4568:A:C8	2.81	0.69
67:5:4620:U:OP2	67:5:4670:C:N4	2.24	0.69
76:9:1534:C:O2'	76:9:1599:U:O4	2.11	0.69
15:F:222:LYS:NZ	67:5:1896:A:OP1	2.26	0.69
16:g:15:THR:HG22	16:g:16:ALA:N	2.08	0.69
35:KK:25:LYS:N	35:KK:65:ARG:O	2.26	0.69
55:s:102:LEU:O	55:s:187:LEU:CD1	2.41	0.69
67:5:418:A:C2	67:5:419:A:C5	2.81	0.69
67:5:1779:U:O4	67:5:1780:A:N6	2.26	0.69
67:5:3661:G:N2	67:5:3682:A:OP2	2.26	0.69
67:5:4699:U:N3	67:5:4702:G:N7	2.41	0.69
80:aa:33:ASP:OD2	80:aa:34:LYS:N	2.26	0.69
8:EE:77:ARG:NH1	76:9:122:G:OP1	2.26	0.69
17:BB:186:ASN:HA	17:BB:189:ILE:HD12	1.75	0.69
67:5:1871:A:N6	67:5:1872:G:O6	2.26	0.69
6:D:39:GLN:NE2	6:D:46:THR:O	2.26	0.68
11:E:178:VAL:HG12	11:E:190:ARG:O	1.93	0.68
19:gg:104:HIS:HA	19:gg:130:LYS:HE3	1.75	0.68
32:jj:340:GLU:O	32:jj:343:MET:HG3	1.94	0.68
67:5:1669:A:N3	67:5:1852:U:O2'	2.27	0.68
67:5:2096:G:N3	67:5:2097:A:N6	2.40	0.68
1:A:128:ARG:NH2	67:5:3681:G:OP2	2.27	0.68
27:II:137:LEU:O	27:II:141:ARG:NH1	2.26	0.68
58:t:81:ILE:HD11	58:t:132:ILE:HG22	1.75	0.68
67:5:1969:G:N2	67:5:1999:A:C2	2.61	0.68
76:9:60:A:N3	76:9:316:G:O2'	2.26	0.68
17:BB:92:GLN:OE1	17:BB:93:GLY:N	2.27	0.68
76:9:1253:A:N6	76:9:1665:G:O2'	2.25	0.68
33:J:111:GLU:HA	33:J:127:GLY:HA2	1.76	0.68
59:SS:89:ASP:OD1	59:SS:106:LYS:NZ	2.25	0.68
59:SS:132:ARG:NH2	76:9:1608:U:OP1	2.27	0.68
76:9:1246:A:H4'	76:9:1491:G:OP1	1.93	0.68
32:jj:325:LYS:NZ	32:jj:374:GLU:OE2	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:KK:8:ARG:NH1	35:KK:12:TYR:OH	2.26	0.68
35:KK:15:LEU:HD21	35:KK:71:LEU:CD1	2.23	0.68
53:QQ:140:ARG:HH22	76:9:1338:G:H4'	1.58	0.68
67:5:725:G:C2	67:5:942:G:C2	2.82	0.68
67:5:3652:A:N7	67:5:3653:A:N6	2.41	0.68
13:FF:179:ASN:OD1	13:FF:184:SER:OG	2.06	0.68
76:9:1238:U:H2'	76:9:1239:U:O4'	1.94	0.68
76:9:1473:G:N2	76:9:1476:A:OP2	2.26	0.68
84:cc:18:LEU:HB2	84:cc:29:GLN:O	1.93	0.68
67:5:1983:A:N6	67:5:1987:C:O4'	2.26	0.68
67:5:4936:G:O2'	67:5:4937:C:OP1	2.11	0.68
76:9:74:G:N1	76:9:78:C:OP2	2.24	0.68
79:AA:85:ARG:NE	79:AA:201:LEU:O	2.27	0.68
24:bb:20:LYS:NZ	44:NN:13:GLN:O	2.21	0.68
32:jj:309:GLY:O	32:jj:313:GLN:NE2	2.25	0.68
67:5:113:A:C4	67:5:278:G:N2	2.62	0.68
67:5:1962:A:OP2	67:5:2024:G:N1	2.26	0.68
67:5:2407:G:OP2	67:5:2407:G:N2	2.22	0.68
67:5:4515:G:N2	67:5:4516:G:C4	2.62	0.68
76:9:1096:G:N2	76:9:1136:U:O2	2.25	0.68
8:EE:73:ASP:OD2	8:EE:145:ARG:NH2	2.27	0.67
19:gg:29:ASP:OD1	19:gg:44:LYS:NZ	2.27	0.67
53:QQ:144:SER:O	76:9:1252:C:N4	2.26	0.67
67:5:3876:A:O2'	67:5:3877:A:P	2.52	0.67
2:C:5:ARG:NH1	67:5:491:G:OP1	2.27	0.67
11:E:273:TYR:OH	39:M:106:ASP:OD2	2.12	0.67
22:HH:39:GLN:OE1	22:HH:39:GLN:N	2.27	0.67
32:jj:343:MET:HE3	32:jj:623:THR:HB	1.76	0.67
36:L:124:LEU:HD23	36:L:125:VAL:N	2.08	0.67
58:t:136:ALA:O	58:t:139:VAL:HB	1.94	0.67
59:SS:42:HIS:O	59:SS:46:ARG:HD3	1.94	0.67
76:9:172:U:N3	76:9:337:C:O2'	2.28	0.67
4:DD:95:GLY:HA3	4:DD:126:ILE:HG22	1.76	0.67
35:KK:51:SER:O	35:KK:54:SER:OG	2.12	0.67
58:t:98:ILE:HG23	58:t:98:ILE:O	1.93	0.67
67:5:3920:U:N3	67:5:3921:U:C4	2.63	0.67
13:FF:91:ARG:NH1	77:ZZ:106:GLN:OE1	2.26	0.67
50:PP:60:LEU:HD22	50:PP:92:SER:HB3	1.75	0.67
14:ff:138:ARG:HG3	14:ff:149:CYS:HA	1.75	0.67
32:jj:444:ILE:HD12	32:jj:516:PHE:O	1.95	0.67
38:LL:124:ASP:OD2	38:LL:148:ALA:N	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:2847:G:O6	67:5:3842:C:N4	2.28	0.67
67:5:4414:A:C4	67:5:4427:G:N2	2.63	0.67
76:9:1026:C:OP1	76:9:1089:G:N2	2.28	0.67
19:gg:17:TRP:NE1	19:gg:36:ARG:HE	1.93	0.67
21:h:77:LYS:O	67:5:136:C:N4	2.27	0.67
42:N:76:PRO:O	42:N:77:LYS:O	2.12	0.67
10:b:14:ARG:NH1	67:5:1877:G:OP2	2.28	0.67
41:MM:91:LEU:HD22	76:9:1284:A:C6	2.29	0.67
48:P:75:GLN:NE2	67:5:5065:U:O2'	2.28	0.67
56:RR:10:LYS:NZ	76:9:1465:A:O2'	2.27	0.67
76:9:1374:C:H2'	76:9:1375:G:O4'	1.95	0.67
84:cc:14:VAL:O	84:cc:53:GLY:N	2.27	0.67
28:ii:261:GLU:N	32:jj:560:GLU:OE1	2.28	0.67
32:jj:214:ASN:HB3	32:jj:314:ALA:HA	1.77	0.67
32:jj:362:ASP:OD2	87:jj:700:GCP:N2	2.23	0.67
50:PP:77:LYS:HB2	76:9:1298:G:OP2	1.94	0.67
53:QQ:39:LEU:HA	53:QQ:42:ILE:HD12	1.77	0.67
67:5:3723:A:H2'	67:5:3724:A:C8	2.29	0.67
76:9:602:G:N2	76:9:620:G:N7	2.42	0.67
13:FF:63:LYS:HZ1	76:9:1677:U:H3'	1.58	0.67
50:PP:53:GLN:NE2	50:PP:83:MET:SD	2.68	0.67
57:S:95:ARG:NH1	67:5:1951:G:O3'	2.28	0.67
76:9:1683:C:N3	84:cc:24:GLN:NE2	2.41	0.67
13:FF:86:LYS:O	13:FF:90:VAL:HG23	1.95	0.67
53:QQ:17:LYS:O	53:QQ:126:ARG:CG	2.42	0.67
67:5:1517:G:N2	67:5:1518:A:N1	2.43	0.67
76:9:1648:G:N1	76:9:1675:A:OP2	2.24	0.67
18:GG:137:ARG:NH1	76:9:146:G:O6	2.26	0.66
52:r:21:ASN:O	52:r:23:GLN:NE2	2.27	0.66
67:5:4974:C:O2'	81:B:174:ARG:NH1	2.27	0.66
4:DD:106:ARG:HD2	4:DD:175:VAL:HB	1.77	0.66
4:DD:211:VAL:O	56:RR:19:LYS:NZ	2.27	0.66
18:GG:172:LYS:HE2	76:9:65:C:H5'	1.78	0.66
33:J:35:ARG:HD2	33:J:123:ILE:HA	1.77	0.66
38:LL:106:HIS:ND1	76:9:399:C:O2	2.28	0.66
53:QQ:125:ARG:HA	76:9:1648:G:H5"	1.77	0.66
67:5:1972:G:C6	67:5:1995:G:C6	2.83	0.66
2:C:182:LYS:NZ	67:5:2299:G:OP1	2.28	0.66
4:DD:213:PRO:HD3	56:RR:19:LYS:HD3	1.77	0.66
25:H:126:VAL:HG11	25:H:161:ILE:HG22	1.75	0.66
28:ii:401:GLN:NE2	32:jj:545:CYS:O	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:PP:18:ARG:NE	59:SS:88:LYS:HG2	2.10	0.66
53:QQ:137:ALA:HB3	76:9:1650:A:OP1	1.96	0.66
56:RR:121:GLN:H	56:RR:121:GLN:CD	2.04	0.66
2:C:266:THR:OG1	2:C:267:TRP:N	2.26	0.66
15:F:124:LEU:HD12	15:F:129:ILE:HD11	1.77	0.66
58:t:28:LEU:HB3	58:t:32:ILE:HD12	1.78	0.66
76:9:672:A:N6	76:9:1027:A:OP1	2.29	0.66
8:EE:57:THR:HG1	8:EE:60:GLU:CD	2.02	0.66
8:EE:57:THR:OG1	8:EE:60:GLU:OE2	2.11	0.66
32:jj:440:ILE:HA	32:jj:462:GLY:HA3	1.78	0.66
38:LL:71:ARG:C	38:LL:72:ILE:HD12	2.21	0.66
50:PP:34:MET:C	50:PP:42:ARG:HB2	2.21	0.66
56:RR:129:LYS:NZ	76:9:1126:G:OP2	2.25	0.66
67:5:3717:A:OP2	67:5:3735:G:N2	2.29	0.66
4:DD:96:LEU:CD2	4:DD:191:PRO:HD3	2.25	0.66
28:ii:361:GLU:CD	58:t:21:GLU:HA	2.20	0.66
32:jj:529:ARG:NH2	32:jj:600:THR:OG1	2.28	0.66
67:5:1552:G:N2	67:5:1574:G:O2'	2.27	0.66
68:WW:42:MET:HE2	68:WW:48:GLY:O	1.96	0.66
13:FF:60:ARG:NH2	76:9:1679:A:OP1	2.29	0.66
19:gg:194:TYR:O	19:gg:212:LYS:N	2.27	0.66
67:5:4723:A:H2'	67:5:4724:A:C8	2.31	0.66
76:9:1859:A:C6	76:9:1860:A:N6	2.64	0.66
16:g:4:ARG:NH1	67:5:2399:G:C2	2.64	0.66
34:k:33:LYS:HG2	34:k:46:VAL:HG22	1.76	0.66
60:T:57:TYR:OH	67:5:4301:U:OP1	2.13	0.66
67:5:2003:G:N3	67:5:2003:G:O2'	2.26	0.66
76:9:1648:G:N2	76:9:1649:U:O4	2.27	0.66
76:9:1835:A:HO2'	76:9:1836:G:P	2.19	0.66
4:DD:141:LYS:NZ	76:9:1332:A:O2'	2.26	0.66
28:ii:396:SER:O	28:ii:400:SER:OG	2.14	0.66
67:5:1387:A:C2	67:5:1397:A:C5	2.84	0.66
67:5:4627:U:HO2'	81:B:55:HIS:CE1	2.11	0.66
83:CC:144:SER:HB3	83:CC:150:ALA:HB2	1.76	0.66
19:gg:100:ARG:HH11	76:9:1399:C:P	2.18	0.65
19:gg:112:ALA:HB1	19:gg:156:PHE:CD1	2.30	0.65
36:L:47:ALA:HB3	36:L:48:PRO:HD3	1.77	0.65
61:TT:9:VAL:HG11	61:TT:14:PHE:HD2	1.61	0.65
67:5:1290:G:O4'	67:5:4942:C:N4	2.29	0.65
76:9:1233:G:O4'	76:9:1253:A:H5"	1.95	0.65
76:9:1332:A:C2	76:9:1500:G:H1'	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:cc:29:GLN:NE2	84:cc:45:ASN:OD1	2.28	0.65
22:HH:88:SER:OG	22:HH:89:GLY:N	2.27	0.65
50:PP:37:TYR:OH	50:PP:45:LEU:HD11	1.96	0.65
53:QQ:39:LEU:HD23	53:QQ:42:ILE:HD12	1.78	0.65
67:5:1332:C:C2	67:5:2355:G:N2	2.64	0.65
67:5:1983:A:C6	67:5:1987:C:H5"	2.32	0.65
67:5:3911:C:C2	67:5:4392:G:N2	2.64	0.65
67:5:4629:U:C2	67:5:4630:G:C8	2.84	0.65
76:9:1550:G:N2	76:9:1559:C:O2	2.29	0.65
15:F:33:ARG:NH1	67:5:1272:C:OP2	2.28	0.65
16:g:111:ALA:O	16:g:115:LYS:HG2	1.97	0.65
32:jj:305:PRO:HG3	32:jj:618:ARG:CD	2.26	0.65
63:UU:74:SER:HB2	76:9:1338:G:O4'	1.95	0.65
67:5:1996:C:C2	67:5:2000:G:N1	2.63	0.65
13:FF:14:THR:HG23	13:FF:14:THR:O	1.96	0.65
27:II:9:HIS:NE2	76:9:387:C:OP1	2.26	0.65
32:jj:255:ASN:ND2	76:9:464:A:P	2.69	0.65
50:PP:49:LEU:HD12	50:PP:53:GLN:HE21	1.61	0.65
55:s:102:LEU:O	55:s:187:LEU:HD11	1.97	0.65
67:5:4747:C:O2	67:5:4954:G:N2	2.29	0.65
74:YY:100:LYS:HA	74:YY:100:LYS:HE2	1.77	0.65
42:N:160:GLU:OE1	42:N:160:GLU:N	2.30	0.65
50:PP:44:ARG:NH1	50:PP:44:ARG:O	2.28	0.65
54:R:99:MET:HE1	54:R:127:VAL:HG12	1.78	0.65
59:SS:24:ARG:NH2	76:9:1602:U:O3'	2.30	0.65
67:5:965:G:N2	67:5:2096:G:N3	2.44	0.65
67:5:1336:G:C4	67:5:2346:C:N4	2.65	0.65
67:5:1736:A:C4	67:5:1794:A:N6	2.65	0.65
5:dd:28:HIS:CD2	76:9:1256:G:P	2.90	0.65
7:e:39:ARG:NH1	67:5:1662:C:OP2	2.28	0.65
13:FF:39:ILE:HG22	13:FF:41:VAL:HB	1.79	0.65
47:OO:55:ARG:NH1	76:9:953:C:N3	2.42	0.65
53:QQ:74:GLY:O	53:QQ:80:GLN:NE2	2.30	0.65
67:5:1999:A:C4	67:5:2019:C:H1'	2.32	0.65
4:DD:29:LEU:HB2	4:DD:34:TYR:HB2	1.78	0.65
12:f:28:LEU:HG	12:f:101:ILE:HD11	1.79	0.65
18:GG:21:GLU:OE2	18:GG:21:GLU:N	2.29	0.65
19:gg:56:GLN:O	53:QQ:102:GLU:N	2.30	0.65
40:m:84:CYS:SG	40:m:85:ARG:N	2.70	0.65
50:PP:43:ARG:NH2	76:9:1615:U:O5'	2.19	0.65
53:QQ:17:LYS:NZ	76:9:1674:G:OP2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:2670:C:N4	67:5:2671:C:N4	2.43	0.65
76:9:1324:G:O6	76:9:1504:U:C2	2.50	0.65
76:9:1859:A:N6	76:9:1860:A:N6	2.44	0.65
32:jj:331:GLY:O	32:jj:337:GLN:N	2.29	0.65
67:5:2901:G:O6	67:5:3598:C:N4	2.30	0.65
82:c:45:LEU:HD21	82:c:104:ILE:HG12	1.77	0.65
2:C:8:ILE:HG23	2:C:149:GLU:OE2	1.97	0.65
4:DD:27:ARG:HD2	35:KK:63:ALA:HB2	1.79	0.65
4:DD:29:LEU:O	4:DD:34:TYR:N	2.29	0.65
5:dd:33:LYS:NZ	76:9:1549:U:OP1	2.24	0.65
32:jj:409:GLU:OE1	32:jj:409:GLU:N	2.29	0.65
47:OO:38:ASN:HA	47:OO:69:SER:HB3	1.77	0.65
52:r:10:VAL:O	52:r:12:ASN:N	2.30	0.65
67:5:2306:G:O2'	67:5:2331:G:N1	2.30	0.65
76:9:1588:A:N6	76:9:1672:U:O4'	2.28	0.65
4:DD:98:ALA:HB2	4:DD:188:ILE:HD12	1.79	0.65
28:ii:48:VAL:HG12	28:ii:52:LEU:HD12	1.77	0.65
28:ii:254:VAL:HG11	28:ii:267:ALA:HA	1.79	0.65
28:ii:386:GLY:O	28:ii:414:ARG:NH2	2.28	0.65
50:PP:43:ARG:O	50:PP:47:ARG:HG3	1.96	0.65
67:5:1667:A:N6	67:5:2281:U:OP2	2.30	0.65
81:B:29:VAL:HG11	81:B:32:PHE:CE1	2.32	0.65
83:CC:72:ASP:OD2	83:CC:272:HIS:NE2	2.29	0.65
12:f:19:ARG:NH2	67:5:1889:U:OP1	2.30	0.64
18:GG:138:ALA:CB	18:GG:177:GLN:O	2.45	0.64
55:s:84:GLY:N	67:5:2022:C:OP1	2.27	0.64
61:TT:63:HIS:HB3	61:TT:75:MET:HE1	1.78	0.64
67:5:1190:C:N4	67:5:1191:C:N4	2.45	0.64
76:9:1206:G:N2	76:9:1692:U:O2	2.30	0.64
76:9:1666:C:H2'	76:9:1667:U:O4'	1.97	0.64
1:A:174:ARG:NH2	67:5:3683:C:O2'	2.30	0.64
2:C:162:LYS:O	2:C:163:LYS:HG2	1.98	0.64
2:C:289:LEU:HA	2:C:292:ILE:HD12	1.79	0.64
32:jj:388:PHE:CE2	32:jj:572:LYS:HD3	2.32	0.64
32:jj:395:HIS:NE2	32:jj:417:TYR:OH	2.31	0.64
57:S:93:MET:CE	57:S:113:MET:HE1	2.19	0.64
67:5:4568:A:O3'	81:B:21:ARG:NH2	2.28	0.64
79:AA:57:LYS:NZ	79:AA:160:ALA:O	2.30	0.64
32:jj:468:GLN:HE22	32:jj:470:LEU:HD21	1.60	0.64
67:5:725:G:C4	67:5:942:G:N2	2.66	0.64
67:5:1216:C:N4	67:5:1217:G:C5	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:2088:A:O2'	67:5:2089:G:P	2.55	0.64
67:5:2502:A:O2'	67:5:2503:G:O5'	2.13	0.64
76:9:444:G:N1	76:9:447:A:OP2	2.30	0.64
76:9:1326:U:N3	76:9:1496:U:OP1	2.30	0.64
28:ii:271:SER:O	28:ii:273:GLU:N	2.30	0.64
32:jj:361:ASP:OD2	32:jj:403:THR:N	2.30	0.64
76:9:1533:A:N7	76:9:1602:U:C2	2.65	0.64
81:B:135:LYS:HA	81:B:138:GLN:NE2	2.12	0.64
27:II:3:ILE:O	27:II:3:ILE:HG23	1.96	0.64
46:o:61:LYS:NZ	67:5:4338:G:N7	2.46	0.64
53:QQ:128:GLU:OE2	76:9:1649:U:H5"	1.97	0.64
8:EE:100:ARG:HD2	8:EE:102:ILE:HD11	1.79	0.64
11:E:52:LEU:HD21	11:E:58:ARG:HB2	1.78	0.64
19:gg:62:HIS:CE1	19:gg:82:SER:HB2	2.32	0.64
24:bb:17:ARG:O	24:bb:17:ARG:HG2	1.97	0.64
56:RR:60:ARG:HE	76:9:1464:C:H4'	1.63	0.64
67:5:1190:C:C4	67:5:1191:C:N4	2.64	0.64
67:5:1456:C:N4	67:5:1457:G:C5	2.65	0.64
76:9:197:U:C2	76:9:202:G:O6	2.49	0.64
19:gg:15:ASN:ND2	76:9:1473:G:O5'	2.29	0.64
67:5:971(A):G:O2'	67:5:972:C:O5'	2.15	0.64
29:I:166:HIS:ND1	60:T:160:ALA:OXT	2.30	0.64
31:JJ:164:PRO:HB3	31:JJ:170:PRO:HA	1.79	0.64
67:5:182:G:N2	67:5:255:C:O2	2.30	0.64
67:5:515:C:O2	67:5:647:G:N1	2.30	0.64
67:5:1608:G:N2	67:5:1609:U:C2	2.66	0.64
67:5:1961:G:C2'	67:5:2025:A:N6	2.61	0.64
67:5:2474:G:O2'	67:5:2475:G:P	2.56	0.64
67:5:4361:U:C2	67:5:4362:A:C8	2.86	0.64
67:5:5038:A:C5	67:5:5039:U:C4	2.85	0.64
74:YY:93:ARG:NH2	76:9:574:A:O3'	2.30	0.64
11:E:286:PRO:HA	11:E:289:LEU:CD2	2.26	0.64
22:HH:73:GLN:HA	22:HH:76:GLN:HE21	1.62	0.64
28:ii:321:ILE:O	28:ii:409:ILE:HA	1.97	0.64
67:5:1983:A:H4'	67:5:1984:A:O5'	1.94	0.64
67:5:3697:U:HO2'	67:5:3698:G:P	2.20	0.64
74:YY:106:GLN:OE1	74:YY:106:GLN:N	2.31	0.64
2:C:33:ARG:HD2	2:C:36:ILE:HD12	1.80	0.64
6:D:128:ASP:O	6:D:164:LYS:NZ	2.31	0.64
8:EE:199:GLU:OE1	8:EE:209:HIS:NE2	2.31	0.64
28:ii:247:GLN:HA	28:ii:250:VAL:HG23	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:KK:15:LEU:HD21	35:KK:71:LEU:HD13	1.80	0.64
67:5:1733:G:N2	67:5:1797:G:N3	2.46	0.64
67:5:2473:A:C2	67:5:2506:G:C2	2.86	0.64
67:5:3945:A:H2'	67:5:3946:G:H4'	1.80	0.64
1:A:210:PRO:O	1:A:221:LYS:NZ	2.27	0.63
54:R:62:ARG:NH1	67:5:4645:C:OP2	2.31	0.63
56:RR:10:LYS:NZ	76:9:1465:A:O3'	2.29	0.63
67:5:1533:A:C8	67:5:1622:U:O4	2.52	0.63
67:5:2371:U:N3	67:5:2372:U:C5	2.66	0.63
76:9:375:U:O4	76:9:376:A:N6	2.31	0.63
76:9:1533:A:C5	76:9:1600:G:O6	2.50	0.63
29:I:203:ARG:NH2	70:7:105:C:OP2	2.31	0.63
54:R:71:ARG:NH1	67:5:3605:C:OP2	2.31	0.63
59:SS:44:VAL:HG11	59:SS:67:VAL:HG13	1.78	0.63
67:5:73:A:C2	67:5:74:G:C8	2.86	0.63
67:5:4522:G:O2'	67:5:4525:C:OP2	2.14	0.63
76:9:1250:A:H1'	76:9:1490:G:C4	2.33	0.63
18:GG:143:LYS:NZ	76:9:146:G:OP1	2.32	0.63
32:jj:285:PHE:CE1	32:jj:292:PHE:CD2	2.85	0.63
52:r:33:LYS:NZ	67:5:2265:G:OP1	2.30	0.63
59:SS:99:LEU:O	59:SS:103:LEU:N	2.27	0.63
61:TT:97:LYS:NZ	76:9:1566:G:O6	2.30	0.63
67:5:2639:U:O2	67:5:2694:G:N1	2.32	0.63
69:X:70:LYS:NZ	73:8:60:G:OP1	2.25	0.63
76:9:2:A:O2'	76:9:3:C:OP1	2.13	0.63
2:C:150:LEU:HB3	2:C:151:PRO:HD3	1.80	0.63
31:JJ:18:ARG:NH2	76:9:3:C:C2	2.66	0.63
55:s:192:VAL:HB	55:s:199:TYR:HB2	1.79	0.63
67:5:496:G:C6	67:5:659:G:C6	2.87	0.63
76:9:808:A:H2'	76:9:809:A:O4'	1.98	0.63
4:DD:23:GLU:HG3	4:DD:27:ARG:HE	1.62	0.63
28:ii:264:PHE:O	28:ii:268:ILE:HG13	1.99	0.63
31:JJ:162:ARG:NH2	76:9:583:A:OP1	2.25	0.63
54:R:72:LYS:HD2	54:R:74:ARG:HH11	1.63	0.63
67:5:1530:G:N2	67:5:1531:U:C2	2.66	0.63
67:5:2837:U:OP1	81:B:249:ARG:NH1	2.31	0.63
76:9:1018:U:C2	76:9:1019:C:C5	2.86	0.63
76:9:1226:G:N2	76:9:1639:G:N7	2.46	0.63
81:B:213:GLN:O	81:B:214:ASP:OD1	2.17	0.63
83:CC:147:VAL:HG22	83:CC:151:ILE:HD12	1.80	0.63
18:GG:137:ARG:CZ	76:9:171:A:OP2	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ii:189:ARG:HH12	76:9:52:G:H5”	1.64	0.63
49:p:9:GLY:O	67:5:1553:A:O2’	2.15	0.63
67:5:965:G:N2	67:5:2096:G:O2’	2.30	0.63
67:5:1198:G:H2’	67:5:1199:G:C8	2.33	0.63
67:5:1390:G:N2	67:5:1394:G:C5	2.66	0.63
67:5:1481:C:O2’	67:5:1482:G:O4’	2.08	0.63
67:5:1998:A:N1	67:5:1999:A:N6	2.47	0.63
67:5:4215:C:N4	67:5:4216:G:C5	2.66	0.63
76:9:197:U:O2	76:9:202:G:C6	2.51	0.63
76:9:946:U:N3	76:9:947:G:N7	2.47	0.63
50:PP:106:GLU:OE2	59:SS:118:ARG:NH2	2.30	0.63
53:QQ:125:ARG:HB3	76:9:1648:G:C8	2.33	0.63
76:9:1486:A:N3	83:CC:117:ARG:NH1	2.47	0.63
45:O:113:ASP:OD1	45:O:114:LYS:N	2.32	0.63
53:QQ:47:LEU:HD23	53:QQ:81:ILE:HG21	1.81	0.63
59:SS:8:LYS:HD2	59:SS:8:LYS:O	1.99	0.63
59:SS:15:VAL:CG2	59:SS:68:ILE:HD11	2.29	0.63
67:5:52:G:N2	67:5:53:C:C2	2.67	0.63
67:5:2489:C:O2’	67:5:2491:C:N4	2.32	0.63
76:9:482:G:O2’	76:9:484:A:N6	2.31	0.63
80:aa:71:LEU:HD13	80:aa:73:TYR:OH	1.99	0.63
81:B:352:LEU:HD23	81:B:353:VAL:H	1.64	0.63
81:B:352:LEU:HD23	81:B:353:VAL:N	2.13	0.63
17:BB:196:ASP:HA	17:BB:199:LYS:HD2	1.81	0.63
32:jj:619:ASP:OD2	32:jj:620:GLU:N	2.32	0.63
33:J:25:CYS:O	67:5:4253:A:N6	2.31	0.63
67:5:4115:G:H5”	67:5:4116:C:H5’	1.81	0.63
76:9:1746:U:O4	76:9:1789:G:N2	2.31	0.63
82:c:13:SER:OG	82:c:17:ARG:NH2	2.29	0.63
19:gg:126:ASP:O	19:gg:128:THR:N	2.32	0.62
50:PP:81:ARG:HB3	50:PP:117:GLY:HA3	1.80	0.62
53:QQ:77:HIS:NE2	76:9:1543:U:O2’	2.31	0.62
67:5:2562:G:N2	67:5:2565:A:OP2	2.32	0.62
67:5:3833:C:C2	67:5:3834:C:C5	2.87	0.62
67:5:4771:C:N3	67:5:4864:U:C5	2.67	0.62
4:DD:116:ARG:NH1	83:CC:146:GLU:OE2	2.32	0.62
27:II:49:ARG:HE	76:9:446:G:H5”	1.63	0.62
28:ii:213:PHE:HB3	28:ii:224:LEU:HD12	1.80	0.62
50:PP:126:VAL:HG11	76:9:1521:C:H5’	1.80	0.62
67:5:485:C:O2’	67:5:486:C:OP1	2.18	0.62
67:5:4547:C:OP1	88:5:5122:BLS:N12	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:482:G:N1	76:9:485:A:OP2	2.30	0.62
81:B:291:TYR:CE1	81:B:300:LYS:HB2	2.35	0.62
59:SS:82:TRP:CH2	59:SS:83:PHE:CE2	2.87	0.62
63:UU:32:LEU:HA	63:UU:110:VAL:HG22	1.81	0.62
67:5:423:G:C4	73:8:12:G:N2	2.67	0.62
67:5:3661:G:N1	67:5:3682:A:OP2	2.33	0.62
76:9:1215:C:O2	76:9:1219:C:N4	2.31	0.62
4:DD:27:ARG:O	35:KK:61:GLN:NE2	2.32	0.62
61:TT:70:ALA:HB1	61:TT:75:MET:HE2	1.81	0.62
67:5:99:A:H2'	67:5:100:C:O2	1.98	0.62
67:5:410:A:HO2'	67:5:414:C:HO2'	1.43	0.62
67:5:3754:G:O6	67:5:3771:C:N4	2.33	0.62
73:8:15:G:C2	73:8:16:G:N2	2.68	0.62
76:9:1432:U:O3'	76:9:1438:A:H5"	1.99	0.62
79:AA:77:ILE:HD12	79:AA:122:LEU:HD11	1.80	0.62
28:ii:181:GLY:HA3	28:ii:190:PHE:CZ	2.35	0.62
59:SS:37:GLY:HA3	76:9:1630:A:C5'	2.29	0.62
67:5:1792:U:C5	67:5:1793:A:N7	2.68	0.62
67:5:2695:A:O2'	67:5:2696:A:OP2	2.12	0.62
67:5:4528:G:N2	67:5:4529:G:C4	2.68	0.62
76:9:1213:C:N4	76:9:1682:C:O2'	2.32	0.62
19:gg:104:HIS:NE2	19:gg:122:SER:HB2	2.14	0.62
19:gg:220:ASP:N	19:gg:225:LYS:O	2.31	0.62
20:G:302:ARG:NH1	67:5:4075:U:OP1	2.33	0.62
22:HH:61:ILE:HD11	22:HH:95:ILE:HD12	1.80	0.62
32:jj:479:VAL:HG11	32:jj:518:LEU:HD21	1.80	0.62
50:PP:96:VAL:HG21	50:PP:116:LEU:HB3	1.81	0.62
67:5:112:C:N4	67:5:330:G:O6	2.33	0.62
67:5:134:G:C8	67:5:134:G:H5'	2.34	0.62
67:5:2514:G:N2	67:5:2515:G:C4	2.68	0.62
67:5:4075:U:O2'	67:5:4076:G:P	2.57	0.62
56:RR:17:ILE:HD11	56:RR:54:VAL:O	1.99	0.62
58:t:81:ILE:HD13	58:t:136:ALA:HB2	1.81	0.62
67:5:1999:A:HO2'	67:5:2018:C:C2'	2.08	0.62
67:5:2835:A:C2	67:5:2836:A:N9	2.68	0.62
67:5:3897:G:O2'	67:5:3898:G:OP2	2.17	0.62
72:Y:50:ARG:NH1	73:8:71:A:OP2	2.29	0.62
81:B:150:PHE:O	81:B:154:LYS:HG2	2.00	0.62
32:jj:472:MET:HA	32:jj:518:LEU:HA	1.82	0.62
50:PP:126:VAL:HG21	76:9:1521:C:H4'	1.82	0.62
67:5:950:G:N2	67:5:951:G:C4	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1395:C:O2'	76:9:1396:A:OP1	2.18	0.62
4:DD:106:ARG:NH1	4:DD:174:HIS:O	2.33	0.62
25:H:51:LYS:HB2	25:H:53:LYS:HG3	1.81	0.62
30:j:72:ARG:NH2	73:8:94:G:OP2	2.32	0.62
50:PP:118:GLU:HB3	59:SS:120:HIS:H	1.64	0.62
55:s:29:ILE:HD13	55:s:81:HIS:CB	2.30	0.62
59:SS:75:ARG:HE	59:SS:95:TYR:HB2	1.65	0.62
67:5:1354:A:C5	67:5:1503:A:C2	2.87	0.62
67:5:1964:A:C6	67:5:1965:G:C5	2.88	0.62
67:5:1983:A:N6	67:5:1987:C:H5"	2.15	0.62
2:C:144:ILE:HG23	2:C:144:ILE:O	1.98	0.62
18:GG:197:GLN:OE1	18:GG:201:LYS:NZ	2.32	0.62
27:II:201:LYS:O	27:II:205:ARG:HD2	2.00	0.62
28:ii:241:MET:HE2	76:9:480:G:C5'	2.28	0.62
54:R:149:LYS:O	54:R:153:LYS:CB	2.48	0.62
61:TT:18:LEU:HD23	61:TT:58:ALA:HB1	1.81	0.62
67:5:4391:G:N2	67:5:4392:G:C4	2.68	0.62
67:5:4771:C:N3	67:5:4864:U:O4	2.30	0.62
76:9:178:C:H2'	76:9:179:C:C6	2.35	0.62
76:9:1265:A:HO2'	76:9:1327:G:P	2.21	0.62
20:G:203:LYS:O	20:G:203:LYS:HD3	2.00	0.61
28:ii:210:VAL:O	28:ii:214:ILE:HG22	1.99	0.61
28:ii:312:LEU:CD1	28:ii:317:VAL:HG21	2.30	0.61
56:RR:81:ARG:HH11	79:AA:205:ARG:HB2	1.65	0.61
67:5:260:C:N4	67:5:261:G:O6	2.33	0.61
67:5:1970:A:O2'	67:5:2017:A:N6	2.31	0.61
73:8:94:G:O2'	73:8:95:A:P	2.58	0.61
1:A:196:TRP:HB3	1:A:197:PRO:HD3	1.81	0.61
4:DD:213:PRO:HB3	56:RR:20:TYR:CZ	2.35	0.61
13:FF:53:ALA:O	53:QQ:125:ARG:NH2	2.33	0.61
17:BB:113:MET:HE3	17:BB:209:ASP:HB3	1.82	0.61
23:hh:50:G:O6	23:hh:51:A:N6	2.33	0.61
50:PP:59:ARG:HG2	50:PP:76:VAL:HB	1.82	0.61
59:SS:35:GLY:O	59:SS:85:ASN:ND2	2.32	0.61
59:SS:132:ARG:O	59:SS:132:ARG:HD2	1.99	0.61
67:5:2663:G:N1	67:5:2664:G:C6	2.68	0.61
67:5:4510:A:O2'	67:5:4511:A:O4'	2.18	0.61
67:5:4988:U:OP2	81:B:123:HIS:ND1	2.33	0.61
6:D:127:GLY:O	6:D:164:LYS:NZ	2.30	0.61
13:FF:63:LYS:NZ	76:9:1677:U:H3'	2.15	0.61
22:HH:106:ARG:NH2	76:9:861:A:O2'	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:L:124:LEU:HD23	36:L:124:LEU:C	2.26	0.61
56:RR:48:ASN:HB3	76:9:1453:C:O5'	2.00	0.61
60:T:94:GLU:OE1	60:T:94:GLU:N	2.28	0.61
67:5:2608:G:C4	67:5:2732:G:N2	2.68	0.61
80:aa:23:CYS:SG	80:aa:24:THR:N	2.73	0.61
2:C:29:LYS:NZ	67:5:667:A:O2'	2.34	0.61
11:E:67:ARG:NH1	67:5:1070:G:O5'	2.31	0.61
19:gg:26:GLN:NE2	19:gg:74:ASP:OD2	2.33	0.61
19:gg:55:PRO:C	53:QQ:102:GLU:HB3	2.25	0.61
27:II:110:ARG:HG3	27:II:121:LEU:HB2	1.83	0.61
28:ii:110:VAL:HG22	28:ii:112:ILE:HD11	1.82	0.61
29:I:31:ILE:HG23	29:I:31:ILE:O	1.99	0.61
32:jj:214:ASN:CB	32:jj:314:ALA:HA	2.31	0.61
45:O:185:VAL:O	45:O:187:LYS:N	2.33	0.61
50:PP:40:ARG:NH2	76:9:1624:U:O4	2.33	0.61
53:QQ:41:MET:HE2	61:TT:9:VAL:C	2.26	0.61
63:UU:74:SER:HB3	76:9:1337:C:O2'	1.99	0.61
66:W:119:LYS:HE2	76:9:329:G:H21	1.65	0.61
67:5:1825:A:H2'	67:5:1826:G:O4'	2.00	0.61
82:c:45:LEU:HG	82:c:46:VAL:N	2.16	0.61
11:E:215:LEU:O	11:E:215:LEU:HD12	2.00	0.61
18:GG:15:LEU:HD21	76:9:154:U:O2'	2.00	0.61
32:jj:435:SER:O	32:jj:496:PRO:HG2	2.00	0.61
32:jj:448:TYR:CE1	32:jj:454:VAL:HB	2.35	0.61
45:O:25:LYS:NZ	67:5:1914:C:OP1	2.32	0.61
53:QQ:133:GLY:HA2	53:QQ:141:TYR:CE2	2.34	0.61
55:s:37:SER:HB2	67:5:2000:G:O6	2.01	0.61
58:t:28:LEU:HB2	58:t:39:PRO:HB2	1.83	0.61
67:5:385:A:C5	67:5:386:A:N6	2.68	0.61
69:X:145:ASP:HB2	69:X:148:ASP:CG	2.26	0.61
76:9:1265:A:O3'	76:9:1327:G:OP2	2.18	0.61
76:9:1324:G:O6	76:9:1504:U:O2	2.18	0.61
43:n:5:TRP:NE1	76:9:1851:A:H5'	2.15	0.61
55:s:29:ILE:HD11	55:s:78:LEU:CD2	2.30	0.61
61:TT:40:ALA:HB3	61:TT:43:LYS:HG2	1.81	0.61
67:5:326:C:N4	67:5:327:U:O4	2.32	0.61
67:5:369:G:N2	67:5:373:G:C4	2.68	0.61
67:5:1094:G:C6	67:5:1203:G:C6	2.88	0.61
67:5:2685:C:N4	67:5:2686:G:C8	2.69	0.61
67:5:2849:A:O2'	67:5:2855:G:N7	2.28	0.61
67:5:3945:A:N6	67:5:4067:U:O4	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4453:C:C2	67:5:4529:G:N2	2.68	0.61
76:9:614:C:O2'	76:9:626:G:N2	2.33	0.61
76:9:874:G:O2'	76:9:875:A:OP1	2.18	0.61
76:9:1259:A:N3	76:9:1260:A:H5"	2.15	0.61
19:gg:56:GLN:O	53:QQ:101:ASP:HA	2.01	0.61
28:ii:148:PHE:CZ	28:ii:161:LEU:HD13	2.36	0.61
54:R:149:LYS:O	54:R:153:LYS:HB2	2.00	0.61
67:5:2019:C:C2	67:5:2020:U:C5	2.88	0.61
67:5:2750:G:C2	67:5:2751:G:C4	2.88	0.61
76:9:1531:A:H4'	76:9:1605:G:C5'	2.31	0.61
76:9:1835:A:O2'	76:9:1836:G:P	2.58	0.61
76:9:1839:U:O4	80:aa:28:ARG:NH2	2.34	0.61
8:EE:31:PRO:HG2	8:EE:38:LEU:HD12	1.82	0.61
13:FF:53:ALA:HB1	53:QQ:16:LYS:HZ3	1.64	0.61
45:O:190:SER:O	45:O:193:THR:HG22	2.00	0.61
50:PP:81:ARG:NH1	50:PP:120:SER:O	2.34	0.61
58:t:77:ALA:HB1	58:t:132:ILE:HG23	1.83	0.61
64:V:15:ARG:NH2	67:5:4672:A:OP1	2.33	0.61
67:5:452:A:C6	67:5:1293:G:C2	2.89	0.61
67:5:1517:G:N2	67:5:1518:A:C6	2.69	0.61
67:5:1573:G:C6	67:5:1574:G:N2	2.68	0.61
67:5:1618:G:C2	67:5:1619:G:C8	2.88	0.61
67:5:4683:U:C4	67:5:4707:A:C6	2.89	0.61
81:B:50:LYS:NZ	81:B:339:GLY:O	2.20	0.61
13:FF:34:SER:HG	84:cc:11:LEU:HD21	1.66	0.61
18:GG:138:ALA:HB3	18:GG:177:GLN:O	2.01	0.61
19:gg:100:ARG:HE	76:9:1398:G:H4'	1.66	0.61
19:gg:292:SER:HB2	19:gg:297:THR:OG1	2.00	0.61
20:G:189:LEU:HD22	20:G:255:VAL:CG1	2.30	0.61
28:ii:338:THR:HG22	58:t:95:GLN:HB3	1.82	0.61
67:5:408:A:C2	67:5:410:A:C6	2.88	0.61
76:9:1214:A:C8	76:9:1682:C:N4	2.69	0.61
76:9:1561:A:C6	76:9:1562:C:C4	2.89	0.61
83:CC:153:GLY:O	83:CC:157:LEU:HD23	2.01	0.61
7:e:124:ASN:OD1	7:e:124:ASN:N	2.33	0.61
28:ii:319:ILE:HA	28:ii:388:THR:OG1	2.00	0.61
44:NN:119:GLU:HA	44:NN:122:ILE:HD12	1.83	0.61
50:PP:115:TYR:N	50:PP:118:GLU:OE2	2.32	0.61
61:TT:63:HIS:HD2	61:TT:79:TYR:OH	1.84	0.61
66:W:115:ALA:CB	76:9:329:G:H1'	2.30	0.61
67:5:265:C:O2'	67:5:266:C:OP1	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:8:37:A:N6	73:8:103:A:C4	2.68	0.61
75:Z:33:THR:N	75:Z:36:ARG:O	2.33	0.61
79:AA:122:LEU:HD23	79:AA:123:VAL:N	2.16	0.61
3:d:93:ASN:HB2	3:d:101:LYS:O	2.01	0.60
4:DD:216:GLU:OE2	56:RR:23:ARG:NH2	2.34	0.60
19:gg:238:ALA:CB	19:gg:288:SER:HA	2.31	0.60
67:5:2471:G:C2	67:5:2473:A:C6	2.89	0.60
67:5:3760:A:H62	76:9:1826:G:H4'	1.66	0.60
73:8:29:G:N2	73:8:30:U:C2	2.69	0.60
75:Z:5:MET:HE2	75:Z:77:TYR:CG	2.36	0.60
81:B:49:TYR:OH	81:B:168:MET:SD	2.58	0.60
11:E:222:LYS:NZ	67:5:1290:G:O3'	2.29	0.60
20:G:215:ASP:HB3	20:G:216:PRO:HD3	1.82	0.60
27:II:31:ARG:NH2	76:9:381:C:OP1	2.33	0.60
32:jj:220:HIS:HB3	32:jj:223:ALA:HB2	1.83	0.60
67:5:1811:G:N2	67:5:1812:C:C2	2.69	0.60
67:5:1983:A:O2'	67:5:1984:A:O5'	2.19	0.60
67:5:2284:G:N2	67:5:2285:A:C4	2.69	0.60
77:ZZ:68:ILE:CG2	77:ZZ:88:LEU:HD22	2.31	0.60
17:BB:32:ASP:O	17:BB:95:ASN:HA	2.02	0.60
27:II:10:LYS:NZ	76:9:385:G:O3'	2.32	0.60
67:5:241:G:OP1	72:Y:28:LYS:NZ	2.34	0.60
67:5:1195:G:H2'	67:5:1196:G:C8	2.37	0.60
76:9:1264:C:C5	76:9:1265:A:N6	2.69	0.60
77:ZZ:70:PRO:HG3	77:ZZ:85:ARG:HG2	1.83	0.60
5:dd:31:ILE:HG12	5:dd:38:MET:O	2.02	0.60
13:FF:145:ARG:NH2	76:9:1220:A:O3'	2.33	0.60
17:BB:49:VAL:HG21	17:BB:62:LEU:HB2	1.83	0.60
28:ii:310:LYS:HG3	67:5:1981:G:H22	1.67	0.60
44:NN:124:ARG:NH2	76:9:677:G:OP1	2.34	0.60
60:T:121:GLU:OE1	60:T:121:GLU:N	2.32	0.60
67:5:257:C:H2'	67:5:258:G:C8	2.36	0.60
67:5:1465:G:C2	67:5:1466:G:C8	2.89	0.60
67:5:2663:G:C2	67:5:2664:G:C5	2.90	0.60
74:YY:111:LYS:NZ	76:9:54:A:OP1	2.32	0.60
76:9:1378:A:N6	79:AA:136:GLU:OE2	2.35	0.60
4:DD:95:GLY:HA3	4:DD:126:ILE:CG2	2.30	0.60
14:ff:129:GLY:H	41:MM:43:ASP:CG	2.08	0.60
18:GG:145:PHE:CD1	66:W:85:ALA:HB1	2.34	0.60
19:gg:17:TRP:NE1	19:gg:36:ARG:NE	2.50	0.60
19:gg:223:GLU:O	19:gg:225:LYS:N	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ii:319:ILE:CD1	28:ii:412:ILE:HD12	2.31	0.60
35:KK:59:LYS:O	35:KK:69:TRP:HA	2.01	0.60
67:5:80:C:C2	67:5:104:G:N2	2.69	0.60
67:5:131:C:N4	67:5:138:G:O6	2.34	0.60
67:5:1168:G:N1	67:5:1194:G:C6	2.69	0.60
67:5:1322:A:C6	67:5:1326:A:C8	2.90	0.60
69:X:76:ILE:HG23	69:X:77:ILE:HG13	1.82	0.60
73:8:125:C:H1'	73:8:127:U:OP2	2.01	0.60
6:D:27:LYS:O	6:D:150:LEU:HD11	2.01	0.60
14:ff:125:GLU:O	41:MM:44:LYS:HE2	2.02	0.60
19:gg:119:GLN:NE2	19:gg:133:ASN:OD1	2.33	0.60
22:HH:127:ASP:O	22:HH:131:GLU:HG3	2.02	0.60
28:ii:181:GLY:O	32:jj:448:TYR:CE2	2.54	0.60
32:jj:468:GLN:HE22	32:jj:470:LEU:CD2	2.13	0.60
45:O:18:ARG:NH2	67:5:2054:U:OP1	2.23	0.60
68:WW:10:ALA:O	68:WW:13:SER:OG	2.17	0.60
32:jj:283:ALA:O	32:jj:294:ILE:HG22	2.02	0.60
57:S:27:LEU:HD12	57:S:27:LEU:N	2.16	0.60
67:5:492:U:O2'	67:5:493:G:P	2.59	0.60
67:5:3923:A:N6	67:5:4381:A:N6	2.50	0.60
75:Z:117:LYS:O	75:Z:120:GLU:HG2	2.02	0.60
76:9:110:U:O2'	76:9:111:A:OP1	2.20	0.60
76:9:1568:C:O2	76:9:1627:C:O2'	2.19	0.60
18:GG:136:LYS:HD3	76:9:170:A:O4'	2.02	0.60
28:ii:254:VAL:HG11	28:ii:267:ALA:CB	2.32	0.60
34:k:39:SER:OG	34:k:40:ARG:N	2.32	0.60
35:KK:64:TRP:HB2	35:KK:66:HIS:HD2	1.67	0.60
37:l:16:LYS:O	37:l:42:ARG:NH2	2.34	0.60
43:n:1:MET:N	76:9:1706:G:H5'	2.16	0.60
47:OO:36:SER:OG	47:OO:39:ASP:N	2.33	0.60
50:PP:53:GLN:O	50:PP:56:LEU:HB3	2.02	0.60
61:TT:101:ARG:CZ	76:9:1565:C:C5	2.85	0.60
67:5:4867:G:N1	67:5:4868:G:C5	2.70	0.60
67:5:4877:G:C6	67:5:4878:C:N4	2.70	0.60
71:XX:61:GLN:HB3	71:XX:62:PRO:CD	2.31	0.60
76:9:38:A:N6	76:9:515:G:O6	2.34	0.60
76:9:354:U:N3	76:9:355:G:N7	2.49	0.60
76:9:490:C:O2'	76:9:574:A:N1	2.34	0.60
76:9:1452:A:C5	76:9:1453:C:N4	2.69	0.60
76:9:1858:G:H5"	76:9:1858:G:H8	1.66	0.60
2:C:336:ARG:NH2	67:5:947:C:OP1	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:dd:13:LYS:HD2	76:9:1618:C:OP1	2.02	0.60
18:GG:53:SER:OG	76:9:165:G:O2'	2.20	0.60
50:PP:40:ARG:NH1	76:9:1617:G:O6	2.35	0.60
67:5:3923:A:N7	67:5:4381:A:C6	2.69	0.60
77:ZZ:74:SER:OG	77:ZZ:79:ILE:O	2.19	0.60
84:cc:28:THR:O	84:cc:45:ASN:HA	2.01	0.60
3:d:94:GLU:O	3:d:95:ASP:O	2.20	0.60
6:D:276:LYS:HZ3	70:7:62:U:P	2.25	0.60
6:D:284:LYS:HG2	29:I:209:TRP:CZ3	2.37	0.60
28:ii:416:ARG:O	67:5:2008:U:OP2	2.20	0.60
32:jj:220:HIS:CB	32:jj:223:ALA:HB2	2.32	0.60
32:jj:368:SER:HB3	32:jj:371:ARG:CZ	2.31	0.60
38:LL:132:ARG:HE	76:9:383:G:H4'	1.66	0.60
53:QQ:26:LYS:NZ	53:QQ:27:ARG:O	2.34	0.60
67:5:346:G:OP2	72:Y:13:LYS:NZ	2.33	0.60
67:5:1405:C:H2'	67:5:1406:G:C8	2.36	0.60
67:5:2716:C:C4	67:5:2717:G:N7	2.70	0.60
67:5:3651:A:H2'	67:5:3652:A:O4'	2.02	0.60
67:5:4129:G:O6	67:5:4156:G:N2	2.34	0.60
4:DD:26:THR:HA	4:DD:34:TYR:CD2	2.36	0.59
5:dd:40:ARG:HD2	76:9:1256:G:C8	2.37	0.59
18:GG:138:ALA:HA	18:GG:141:ILE:HD12	1.83	0.59
22:HH:60:ILE:CG2	22:HH:92:VAL:HG23	2.32	0.59
22:HH:69:LEU:HD22	22:HH:96:ALA:HB2	1.84	0.59
22:HH:169:LYS:O	22:HH:172:THR:OG1	2.20	0.59
42:N:64:ILE:CD1	42:N:102:ALA:HB1	2.32	0.59
45:O:196:LEU:O	45:O:201:LEU:N	2.27	0.59
76:9:540:U:O2'	76:9:543:C:N4	2.35	0.59
77:ZZ:99:LEU:HD11	77:ZZ:102:LYS:CG	2.31	0.59
84:cc:44:ARG:NH1	84:cc:58:LEU:HD22	2.17	0.59
6:D:95:TYR:HE1	6:D:199:ILE:HG12	1.67	0.59
15:F:27:LEU:HD12	15:F:27:LEU:N	2.17	0.59
19:gg:55:PRO:O	53:QQ:102:GLU:HB3	2.02	0.59
31:JJ:78:LEU:HD22	31:JJ:92:MET:HB2	1.84	0.59
83:CC:196:ILE:HB	83:CC:223:TYR:HB2	1.84	0.59
2:C:76:ILE:HG22	2:C:77:PRO:HD2	1.84	0.59
5:dd:22:ARG:HA	35:KK:65:ARG:HH21	1.68	0.59
6:D:276:LYS:NZ	70:7:62:U:P	2.76	0.59
28:ii:422:MET:HA	67:5:2011:C:N4	2.17	0.59
30:j:55:ARG:NH2	67:5:364:G:O6	2.35	0.59
39:M:132:ARG:NH2	67:5:4895:C:O2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:UU:56:MET:SD	76:9:1580:A:C8	2.95	0.59
67:5:271:C:N4	67:5:272:U:O4	2.35	0.59
67:5:2420:A:C4	67:5:2427:G:N2	2.71	0.59
67:5:4633:G:N2	67:5:4664:A:OP2	2.33	0.59
19:gg:57:ARG:HG3	19:gg:58:ALA:N	2.18	0.59
28:ii:192:ARG:HD3	76:9:51:U:H5'	1.84	0.59
28:ii:290:TYR:CE2	28:ii:294:ILE:HD11	2.37	0.59
30:j:45:ARG:NH1	67:5:373:G:OP1	2.35	0.59
32:jj:318:VAL:HG22	32:jj:354:ILE:HB	1.84	0.59
53:QQ:78:VAL:HG11	76:9:1674:G:P	2.43	0.59
55:s:29:ILE:HD11	55:s:78:LEU:HD23	1.85	0.59
61:TT:59:SER:OG	76:9:1542:C:OP1	2.20	0.59
67:5:4233:A:C8	67:5:4235:G:C8	2.90	0.59
78:a:125:LYS:HA	78:a:145:VAL:O	2.02	0.59
82:c:20:LEU:O	82:c:24:SER:OG	2.19	0.59
28:ii:33:SER:OG	28:ii:128:ASP:N	2.35	0.59
32:jj:355:VAL:HG11	32:jj:396:PHE:CE2	2.38	0.59
42:N:68:ARG:HD3	42:N:125:SER:O	2.02	0.59
67:5:710:G:C4	67:5:1288:G:N2	2.71	0.59
67:5:1238:A:O2'	67:5:1239:C:OP1	2.21	0.59
67:5:1438:U:O2'	67:5:1440:U:OP2	2.20	0.59
67:5:1554:A:C6	67:5:1573:G:N2	2.70	0.59
67:5:2069:A:N6	67:5:2071:A:C4	2.71	0.59
67:5:2403:A:C6	67:5:2404:A:C5	2.91	0.59
67:5:4343:U:C2	67:5:4370:G:N2	2.70	0.59
73:8:108:A:C2	73:8:112:G:C6	2.91	0.59
81:B:287:ILE:HG22	81:B:331:VAL:HG12	1.85	0.59
11:E:52:LEU:CD2	11:E:58:ARG:HB2	2.32	0.59
32:jj:554:ILE:O	32:jj:557:CYS:O	2.20	0.59
35:KK:43:LEU:O	35:KK:47:LYS:HG2	2.02	0.59
42:N:169:ARG:HH12	67:5:63:G:P	2.26	0.59
49:p:70:THR:HG22	49:p:71:TYR:N	2.17	0.59
67:5:1668:A:C4	67:5:2282:A:N1	2.70	0.59
67:5:1687:U:C2	67:5:1850:A:N6	2.71	0.59
67:5:2504:C:H2'	67:5:2505:C:C2	2.37	0.59
67:5:3819:G:C2	67:5:3820:G:N7	2.70	0.59
67:5:4273:A:H2'	67:5:4274:A:C8	2.38	0.59
76:9:183:G:O2'	76:9:183:G:N3	2.33	0.59
76:9:1265:A:O2'	76:9:1327:G:P	2.59	0.59
1:A:125:LYS:NZ	67:5:3681:G:O6	2.34	0.59
17:BB:108:ASP:OD2	80:aa:66:LYS:N	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ii:80:GLN:HA	28:ii:83:LYS:HG3	1.83	0.59
46:o:62:THR:HG23	46:o:63:THR:N	2.18	0.59
67:5:1681:G:C2	67:5:1682:A:C4	2.91	0.59
67:5:2363:A:C2	67:5:3860:A:C4	2.91	0.59
67:5:2590:G:C4	67:5:2754:G:N2	2.70	0.59
67:5:4563:U:C2	67:5:4564:A:C8	2.91	0.59
76:9:1868:U:O2'	76:9:1869:A:OP1	2.18	0.59
2:C:227:ILE:HD12	2:C:227:ILE:N	2.17	0.59
5:dd:3:HIS:CE1	76:9:1274:G:H1	2.21	0.59
56:RR:60:ARG:NE	76:9:1464:C:H4'	2.18	0.59
67:5:3829:G:N1	67:5:3830:A:C5	2.71	0.59
67:5:4136:G:N1	67:5:4149:C:N3	2.50	0.59
76:9:1220:A:H1'	76:9:1677:U:O2'	2.03	0.59
76:9:1532:C:O5'	76:9:1532:C:H6	1.86	0.59
76:9:1550:G:C2	76:9:1579:A:C2	2.91	0.59
76:9:1550:G:O6	76:9:1583:C:N4	2.36	0.59
84:cc:45:ASN:OD1	84:cc:65:ALA:HB3	2.02	0.59
19:gg:83:TRP:CH2	56:RR:29:HIS:HB3	2.38	0.59
28:ii:6:SER:O	28:ii:10:ARG:HG2	2.03	0.59
32:jj:440:ILE:HB	32:jj:463:SER:O	2.02	0.59
35:KK:20:VAL:HG23	35:KK:70:TYR:HA	1.85	0.59
42:N:4:TYR:HA	42:N:7:ILE:HD12	1.85	0.59
51:Q:23:ILE:HD12	52:r:5:LEU:HD12	1.83	0.59
53:QQ:12:VAL:O	53:QQ:22:VAL:HA	2.03	0.59
63:UU:24:LEU:CD2	63:UU:112:VAL:HG22	2.33	0.59
71:XX:40:PRO:HG3	71:XX:79:LYS:HD3	1.83	0.59
76:9:1033:G:N2	76:9:1080:A:O2'	2.31	0.59
79:AA:50:ASN:HD22	79:AA:53:ARG:CD	2.16	0.59
15:F:52:LYS:NZ	15:F:188:ASP:OD2	2.35	0.59
18:GG:145:PHE:CZ	66:W:89:ASP:HB3	2.38	0.59
28:ii:181:GLY:HA2	32:jj:448:TYR:CD2	2.38	0.59
28:ii:252:LYS:HE2	28:ii:254:VAL:HG22	1.84	0.59
32:jj:318:VAL:HG13	32:jj:356:LEU:HD13	1.84	0.59
50:PP:34:MET:HG2	50:PP:45:LEU:HB2	1.84	0.59
53:QQ:10:VAL:HB	53:QQ:25:CYS:HB2	1.85	0.59
58:t:82:ILE:HD11	58:t:139:VAL:HG13	1.83	0.59
59:SS:67:VAL:HG12	59:SS:71:MET:SD	2.43	0.59
67:5:725:G:N3	67:5:942:G:N2	2.50	0.59
67:5:1238:A:O2'	67:5:1239:C:P	2.61	0.59
67:5:3765:G:O2'	67:5:3766:A:N7	2.36	0.59
69:X:60:TYR:CD1	69:X:62:ARG:NH2	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:XX:82:THR:O	71:XX:118:VAL:HG13	2.02	0.59
18:GG:67:VAL:HG13	18:GG:100:CYS:H	1.68	0.58
28:ii:33:SER:C	28:ii:34:MET:HE2	2.28	0.58
28:ii:203:ARG:HG3	76:9:480:G:OP2	2.02	0.58
32:jj:322:SER:OG	32:jj:359:LYS:HD2	2.03	0.58
36:L:55:ILE:HG22	36:L:154:VAL:HG13	1.85	0.58
53:QQ:143:LYS:NZ	76:9:1249:C:O2'	2.31	0.58
54:R:149:LYS:HA	54:R:152:LYS:HG2	1.85	0.58
67:5:94:A:N6	67:5:95:G:N3	2.51	0.58
76:9:1330:G:N2	76:9:1335:G:C6	2.70	0.58
19:gg:38:LYS:HE2	76:9:1474:A:N7	2.18	0.58
19:gg:100:ARG:NE	76:9:1398:G:H4'	2.17	0.58
28:ii:288:GLY:HA2	28:ii:291:PHE:CD1	2.38	0.58
28:ii:414:ARG:HD3	67:5:4420:U:C1'	2.33	0.58
32:jj:487:ASP:O	32:jj:501:LYS:NZ	2.35	0.58
32:jj:553:HIS:CG	32:jj:558:ILE:HD13	2.37	0.58
56:RR:44:LYS:HZ3	76:9:1450:G:H3'	1.68	0.58
60:T:159:MET:N	60:T:159:MET:SD	2.76	0.58
63:UU:69:PRO:CD	76:9:1336:C:O2	2.51	0.58
67:5:394:G:N2	67:5:398:A:C6	2.71	0.58
67:5:1358:G:N7	67:5:1377:G:C6	2.69	0.58
67:5:1516:G:N2	67:5:1518:A:N6	2.51	0.58
67:5:4254:G:C6	67:5:4257:A:N7	2.70	0.58
76:9:622:C:C4	76:9:623:G:H1'	2.37	0.58
76:9:853:C:O4'	76:9:853:C:O2	2.20	0.58
76:9:1264:C:C4	76:9:1265:A:N6	2.71	0.58
76:9:1616:U:H4'	76:9:1661:A:O2'	2.02	0.58
4:DD:32:ASP:OD2	4:DD:65:ARG:NH2	2.35	0.58
13:FF:76:MET:HA	13:FF:155:CYS:SG	2.43	0.58
19:gg:29:ASP:HB2	19:gg:45:LEU:O	2.03	0.58
28:ii:399:GLY:O	28:ii:403:VAL:HG23	2.04	0.58
32:jj:305:PRO:HG3	32:jj:618:ARG:NE	2.18	0.58
32:jj:346:LYS:O	32:jj:614:ARG:HD3	2.04	0.58
32:jj:536:VAL:HA	32:jj:590:VAL:HG13	1.86	0.58
32:jj:550:ALA:HB1	32:jj:618:ARG:H	1.67	0.58
37:l:15:LYS:NZ	73:8:46:G:OP2	2.31	0.58
58:t:115:GLN:NE2	58:t:116:MET:SD	2.73	0.58
61:TT:92:PHE:N	76:9:1655:C:OP1	2.37	0.58
63:UU:70:CYS:HB3	76:9:1492:U:C1'	2.32	0.58
67:5:3916:G:C2	67:5:3917:A:C4	2.90	0.58
67:5:4680:G:N2	67:5:4681:A:C2	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:141:LYS:HG3	4:DD:141:LYS:O	2.03	0.58
12:f:109:ARG:O	12:f:109:ARG:HD3	2.03	0.58
17:BB:65:ARG:O	17:BB:87:ILE:HG13	2.03	0.58
19:gg:38:LYS:CE	76:9:1474:A:N7	2.67	0.58
28:ii:192:ARG:CD	76:9:51:U:H5'	2.33	0.58
31:JJ:176:LYS:HE3	76:9:587:A:OP1	2.04	0.58
32:jj:553:HIS:CD2	32:jj:558:ILE:HD13	2.38	0.58
38:LL:125:ILE:O	38:LL:146:THR:OG1	2.12	0.58
47:OO:20:GLN:HG2	47:OO:27:VAL:HG23	1.85	0.58
50:PP:76:VAL:O	50:PP:94:VAL:HA	2.04	0.58
56:RR:5:ARG:HB2	56:RR:10:LYS:HE2	1.84	0.58
67:5:497:G:C2	67:5:499:G:C8	2.91	0.58
67:5:4089:G:C4	67:5:4161:G:N2	2.71	0.58
67:5:4918:C:H2'	67:5:4919:G:O4'	2.04	0.58
76:9:1402:A:N6	76:9:1441:U:O2'	2.36	0.58
76:9:1416:C:C4	76:9:1417:C:N4	2.72	0.58
77:ZZ:99:LEU:HG	77:ZZ:109:TYR:CD1	2.39	0.58
79:AA:13:GLU:O	79:AA:17:LYS:HG3	2.02	0.58
83:CC:58:LYS:HD3	83:CC:58:LYS:C	2.28	0.58
3:d:78:ARG:HH21	67:5:4654:C:P	2.27	0.58
18:GG:162:LEU:N	18:GG:170:ARG:O	2.36	0.58
22:HH:106:ARG:NH2	76:9:861:A:C4	2.72	0.58
28:ii:147:GLY:HA3	28:ii:213:PHE:HE1	1.68	0.58
50:PP:85:ILE:O	50:PP:112:ILE:HA	2.03	0.58
67:5:1322:A:C8	67:5:3876:A:N6	2.71	0.58
67:5:1570:G:C6	67:5:1571:G:N7	2.72	0.58
67:5:2039:G:C6	67:5:2040:A:N6	2.72	0.58
67:5:3704:U:C2	67:5:3705:G:C8	2.91	0.58
67:5:4630:G:C2	67:5:4631:G:C8	2.92	0.58
31:JJ:75:ASN:HA	31:JJ:78:LEU:HD12	1.85	0.58
54:R:148:ASP:O	54:R:152:LYS:CG	2.51	0.58
58:t:13:VAL:HG22	58:t:62:LEU:HB2	1.85	0.58
58:t:17:CYS:O	58:t:57:ARG:HA	2.03	0.58
67:5:2833:A:N7	67:5:2834:C:N4	2.52	0.58
67:5:4753:U:C2	67:5:4947:U:C4	2.91	0.58
76:9:1218:C:H1'	76:9:1683:C:H42	1.69	0.58
81:B:254:ILE:HG23	81:B:266:VAL:HG11	1.84	0.58
4:DD:23:GLU:OE1	4:DD:27:ARG:NH2	2.36	0.58
4:DD:98:ALA:HB1	4:DD:186:VAL:HG11	1.85	0.58
19:gg:21:ILE:HD11	19:gg:307:VAL:HG22	1.85	0.58
32:jj:552:LEU:HD23	32:jj:601:ILE:HD13	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:M:6:PHE:O	39:M:11:ARG:NE	2.36	0.58
55:s:17:ILE:HG13	55:s:21:LEU:CD1	2.34	0.58
56:RR:17:ILE:HA	56:RR:24:LEU:HD12	1.86	0.58
57:S:80:ILE:HG22	57:S:82:LEU:CD2	2.34	0.58
67:5:1190:C:N3	67:5:1191:C:C4	2.71	0.58
67:5:3672:G:C6	67:5:3674:G:H1'	2.38	0.58
67:5:4179:G:H21	67:5:4180:G:H1'	1.69	0.58
76:9:874:G:C2	76:9:875:A:C8	2.92	0.58
76:9:1518:C:O2	76:9:1518:C:O5'	2.22	0.58
78:a:126:ALA:HB3	78:a:129:PHE:CZ	2.38	0.58
2:C:50:GLN:OE1	67:5:1371:A:N6	2.37	0.58
18:GG:3:LEU:CD2	18:GG:109:LEU:HB2	2.34	0.58
19:gg:38:LYS:HE3	19:gg:64:HIS:HA	1.85	0.58
19:gg:42:MET:SD	19:gg:57:ARG:HB3	2.44	0.58
25:H:173:ARG:HE	40:m:101:VAL:HB	1.67	0.58
28:ii:226:LEU:HB2	28:ii:253:LEU:HD23	1.86	0.58
28:ii:320:LEU:HD21	28:ii:409:ILE:HD11	1.85	0.58
31:JJ:42:GLU:OE2	31:JJ:45:ARG:NH2	2.35	0.58
32:jj:440:ILE:HG22	32:jj:463:SER:H	1.68	0.58
50:PP:40:ARG:NH2	76:9:1616:U:O4	2.37	0.58
58:t:59:THR:O	58:t:74:VAL:HB	2.04	0.58
67:5:438:G:C6	67:5:439:G:C5	2.92	0.58
67:5:1333:A:C4	67:5:2354:G:N2	2.71	0.58
67:5:2815:A:C6	67:5:2816:G:C6	2.92	0.58
67:5:2844:A:N6	67:5:3845:A:N6	2.50	0.58
67:5:3753:G:O6	67:5:3776:G:N2	2.37	0.58
67:5:4638:U:C2	67:5:4639:G:C2	2.91	0.58
70:7:30:C:C4	70:7:48:G:N1	2.71	0.58
76:9:532:C:O2'	76:9:533:A:OP1	2.19	0.58
76:9:1213:C:H41	76:9:1682:C:H2'	1.69	0.58
76:9:1215:C:N3	76:9:1220:A:N1	2.52	0.58
1:A:150:LEU:HD13	67:5:3661:G:C5	2.38	0.58
9:ee:79:LEU:HD23	9:ee:79:LEU:H	1.69	0.58
13:FF:92:ILE:HD11	76:9:1535:U:O4'	2.03	0.58
19:gg:83:TRP:HH2	56:RR:29:HIS:HB3	1.68	0.58
32:jj:509:GLU:O	32:jj:512:ILE:HG22	2.04	0.58
50:PP:81:ARG:CZ	50:PP:120:SER:O	2.52	0.58
59:SS:6:PRO:HD3	77:ZZ:49:LEU:CD1	2.33	0.58
67:5:1847:C:C2	67:5:1848:C:C5	2.92	0.58
67:5:2318:G:N2	67:5:2322:G:C4	2.72	0.58
67:5:2403:A:N6	67:5:2404:A:C6	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:2452:G:N2	67:5:2508:U:C4	2.72	0.58
67:5:4339:A:C2	67:5:4340:U:C6	2.92	0.58
67:5:4367:G:C2	67:5:4368:G:C8	2.92	0.58
67:5:4527:G:OP1	81:B:243:LYS:NZ	2.32	0.58
67:5:4727:A:N6	67:5:4728:U:O2	2.36	0.58
72:Y:114:ASP:OD2	72:Y:115:ARG:N	2.37	0.58
76:9:1415:C:H2'	76:9:1416:C:C6	2.38	0.58
79:AA:104:THR:O	79:AA:107:THR:HG23	2.03	0.58
5:dd:26:ASN:HD21	5:dd:39:CYS:CB	2.16	0.58
6:D:222:GLN:O	70:7:48:G:O2'	2.22	0.58
20:G:207:LEU:HD23	20:G:208:VAL:N	2.18	0.58
28:ii:394:ASP:HB3	28:ii:403:VAL:HG11	1.86	0.58
28:ii:414:ARG:HD3	67:5:4420:U:H1'	1.86	0.58
31:JJ:163:SER:OG	31:JJ:166:GLY:N	2.35	0.58
36:L:186:ARG:HH12	67:5:1395:U:P	2.27	0.58
42:N:84:PRO:HA	42:N:87:HIS:ND1	2.18	0.58
67:5:209:U:C4	67:5:233:U:C5	2.92	0.58
67:5:1632:A:N6	67:5:1634:A:C5	2.72	0.58
67:5:1672:U:O4	67:5:1684:A:C6	2.56	0.58
67:5:1987:C:C5	67:5:1988:G:C8	2.92	0.58
67:5:2408:U:O4'	67:5:2409:U:C5	2.57	0.58
67:5:4974:C:N4	67:5:4975:G:O6	2.36	0.58
71:XX:105:PHE:HD2	71:XX:112:VAL:HG21	1.68	0.58
76:9:1859:A:N1	76:9:1860:A:C6	2.71	0.58
84:cc:14:VAL:HG13	84:cc:30:VAL:CG1	2.34	0.58
84:cc:28:THR:HG21	84:cc:50:VAL:HB	1.85	0.58
5:dd:38:MET:HE2	5:dd:43:PHE:N	2.19	0.57
25:H:144:LEU:HD12	25:H:144:LEU:N	2.19	0.57
28:ii:81:ARG:HE	28:ii:113:ASP:CG	2.12	0.57
32:jj:220:HIS:O	32:jj:225:LYS:NZ	2.36	0.57
33:J:10:ASN:OD1	33:J:12:MET:HG2	2.04	0.57
47:OO:75:MET:HB2	47:OO:114:SER:HB2	1.86	0.57
67:5:22:G:N2	73:8:35:C:C2	2.72	0.57
67:5:39:A:N7	67:5:1654:G:N7	2.52	0.57
67:5:3891:A:N6	67:5:3892:U:C4	2.72	0.57
67:5:4416:G:C2	67:5:4417:C:C5	2.91	0.57
77:ZZ:99:LEU:HD11	77:ZZ:102:LYS:HG2	1.86	0.57
18:GG:134:GLY:O	76:9:65:C:N4	2.37	0.57
42:N:75:VAL:O	42:N:76:PRO:O	2.22	0.57
58:t:123:ARG:HG3	58:t:124:GLU:N	2.18	0.57
59:SS:15:VAL:HG21	59:SS:20:ILE:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:144:G:C2	67:5:145:G:C8	2.92	0.57
67:5:1198:G:C2	67:5:1199:G:C6	2.93	0.57
67:5:2502:A:H4'	67:5:2503:G:OP1	2.02	0.57
67:5:4626:A:OP2	81:B:224:LYS:NZ	2.36	0.57
2:C:180:ILE:HD12	2:C:180:ILE:N	2.19	0.57
11:E:246:THR:OG1	11:E:249:ARG:HB2	2.04	0.57
22:HH:167:GLU:O	22:HH:170:VAL:HG13	2.04	0.57
26:i:68:ARG:HH11	67:5:3723:A:P	2.26	0.57
32:jj:283:ALA:HB3	32:jj:294:ILE:HG23	1.85	0.57
46:o:86:LYS:NZ	67:5:4331:G:O6	2.37	0.57
51:Q:92:VAL:O	51:Q:92:VAL:HG13	2.04	0.57
53:QQ:80:GLN:NE2	76:9:1544:C:O2'	2.34	0.57
54:R:51:ILE:HG22	54:R:52:ARG:N	2.19	0.57
55:s:82:ILE:HD11	55:s:88:PHE:CZ	2.39	0.57
59:SS:132:ARG:NH1	76:9:1608:U:OP2	2.37	0.57
67:5:239:C:HO2'	72:Y:31:SER:HG	1.52	0.57
67:5:1691:G:C6	67:5:1846:G:C6	2.92	0.57
67:5:2578:G:N1	67:5:2579:G:C6	2.72	0.57
76:9:1218:C:H2'	76:9:1219:C:H6	1.68	0.57
18:GG:76:LEU:HD23	18:GG:76:LEU:H	1.69	0.57
32:jj:218:ILE:HD11	32:jj:319:LEU:HD11	1.87	0.57
38:LL:39:ASN:O	38:LL:39:ASN:OD1	2.22	0.57
50:PP:45:LEU:HD21	50:PP:86:LEU:CD2	2.34	0.57
50:PP:79:HIS:ND1	76:9:1514:G:H1'	2.19	0.57
52:r:32:LEU:N	52:r:32:LEU:HD23	2.19	0.57
54:R:60:ARG:NH1	54:R:63:CYS:SG	2.78	0.57
56:RR:119:VAL:HG13	56:RR:119:VAL:O	2.04	0.57
57:S:84:TYR:CE1	57:S:91:HIS:HB2	2.38	0.57
67:5:1322:A:C5	67:5:3876:A:C6	2.93	0.57
67:5:1976:G:OP1	67:5:1976:G:C8	2.58	0.57
67:5:2465:C:H1'	67:5:3672:G:H22	1.68	0.57
67:5:3839:G:N2	67:5:3844:U:C4	2.72	0.57
67:5:4573:G:N2	67:5:4722:G:OP2	2.38	0.57
76:9:537:C:C2	76:9:538:U:C5	2.93	0.57
76:9:1085:C:N4	76:9:1087:A:C4	2.73	0.57
81:B:17:LEU:C	81:B:17:LEU:HD12	2.29	0.57
31:JJ:103:GLU:OE1	31:JJ:103:GLU:N	2.35	0.57
33:J:39:VAL:CG2	33:J:123:ILE:HG21	2.33	0.57
35:KK:5:LYS:HZ2	35:KK:8:ARG:HD2	1.68	0.57
35:KK:45:VAL:O	35:KK:49:MET:HG2	2.04	0.57
67:5:478:G:C4	67:5:677:G:N2	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1951:G:N2	67:5:1952:G:H1'	2.19	0.57
67:5:1969:G:C2	67:5:1999:A:C2	2.93	0.57
67:5:1979:A:H61	67:5:1982:G:H3'	1.69	0.57
74:YY:93:ARG:NE	76:9:575:A:OP1	2.36	0.57
76:9:917:U:C2	76:9:918:U:C5	2.92	0.57
76:9:1368:U:H1'	76:9:1372:U:C2	2.38	0.57
76:9:1685:U:C4	76:9:1686:G:N7	2.72	0.57
81:B:278:THR:HG22	81:B:278:THR:O	2.04	0.57
2:C:164:THR:HG22	2:C:220:ALA:O	2.04	0.57
13:FF:89:THR:HA	13:FF:92:ILE:HD12	1.86	0.57
14:ff:105:TYR:CD2	41:MM:36:ARG:NH1	2.73	0.57
14:ff:138:ARG:NH2	76:9:1293:A:O2'	2.37	0.57
18:GG:140:ARG:NH2	76:9:146:G:C5	2.73	0.57
28:ii:45:ILE:HD12	28:ii:86:ASN:O	2.03	0.57
42:N:93:LYS:HD2	42:N:93:LYS:N	2.19	0.57
43:n:1:MET:SD	43:n:9:ARG:NH2	2.77	0.57
55:s:28:PHE:CE2	55:s:99:ARG:HB2	2.40	0.57
57:S:166:ARG:NH1	67:5:1919:G:C4	2.72	0.57
61:TT:51:ASN:HB2	61:TT:54:TYR:CD1	2.39	0.57
61:TT:107:LEU:HA	61:TT:110:LEU:CD2	2.35	0.57
62:U:18:LEU:HD11	62:U:73:THR:HG22	1.87	0.57
67:5:164:G:H2'	67:5:165:A:C8	2.39	0.57
67:5:966:A:H62	67:5:2096:G:H2'	1.69	0.57
67:5:1479:G:H2'	67:5:1480:C:C6	2.40	0.57
67:5:1691:G:C2	67:5:1692:C:C6	2.93	0.57
67:5:1998:A:O5'	67:5:1998:A:H8	1.88	0.57
67:5:3939:G:HO2'	67:5:4076:G:H1	1.51	0.57
67:5:4244:A:C2	67:5:4267:G:C5	2.92	0.57
76:9:1228:A:O2'	76:9:1634:A:H1'	2.04	0.57
4:DD:26:THR:HA	4:DD:34:TYR:CE2	2.40	0.57
9:ee:111:TYR:CD2	31:JJ:33:GLY:HA3	2.40	0.57
10:b:16:TRP:CE2	60:T:81:LYS:O	2.57	0.57
11:E:216:THR:OG1	11:E:217:ASP:N	2.37	0.57
13:FF:50:PRO:HB3	13:FF:69:VAL:HG12	1.87	0.57
17:BB:189:ILE:HB	17:BB:190:PRO:HD3	1.85	0.57
18:GG:135:PRO:HG2	18:GG:144:LEU:HD22	1.85	0.57
18:GG:139:SER:OG	18:GG:178:ARG:HG2	2.04	0.57
19:gg:199:THR:HG1	19:gg:241:PHE:HD2	1.52	0.57
53:QQ:125:ARG:HA	76:9:1648:G:C5'	2.34	0.57
63:UU:21:ARG:NH2	76:9:1404:U:O5'	2.37	0.57
67:5:82:U:O2	67:5:102:G:N2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:457:G:C6	67:5:458:C:C4	2.92	0.57
67:5:4232:U:H1'	67:5:4233:A:OP2	2.04	0.57
71:XX:108:LYS:HE2	76:9:650:A:OP2	2.04	0.57
73:8:15:G:C6	73:8:16:G:N1	2.72	0.57
82:c:45:LEU:HB2	82:c:105:ILE:CG2	2.34	0.57
11:E:52:LEU:HD21	11:E:58:ARG:HD3	1.86	0.57
18:GG:13:GLN:NE2	76:9:153:G:N3	2.53	0.57
38:LL:79:LYS:NZ	76:9:396:U:OP2	2.36	0.57
42:N:172:ARG:NH1	67:5:62:A:OP1	2.38	0.57
57:S:69:GLU:HG2	57:S:101:THR:HG22	1.85	0.57
67:5:30:C:N4	67:5:31:U:O4	2.38	0.57
67:5:3783:A:C2	67:5:3792:G:C6	2.93	0.57
67:5:4906:C:N4	67:5:4916:G:O6	2.38	0.57
73:8:102:G:C6	73:8:104:A:N6	2.73	0.57
75:Z:14:LEU:HD13	75:Z:81:MET:HB2	1.85	0.57
76:9:733:C:C5	76:9:734:C:H5	2.23	0.57
79:AA:122:LEU:CD2	79:AA:124:VAL:HG23	2.35	0.57
2:C:154:VAL:HG12	2:C:155:GLU:N	2.19	0.57
4:DD:213:PRO:HD3	56:RR:19:LYS:CE	2.35	0.57
19:gg:112:ALA:HB1	19:gg:156:PHE:HD1	1.67	0.57
20:G:283:TYR:CE2	20:G:287:ARG:HD2	2.39	0.57
31:JJ:174:LYS:HB2	76:9:561:A:OP2	2.05	0.57
32:jj:559:GLU:HB3	32:jj:601:ILE:HD12	1.87	0.57
44:NN:127:ARG:HA	44:NN:130:LYS:HE2	1.87	0.57
47:OO:67:ASP:O	47:OO:73:ALA:HB2	2.05	0.57
64:V:48:ARG:HB3	64:V:51:ARG:HD3	1.87	0.57
67:5:280:G:C4	67:5:305:A:N6	2.73	0.57
67:5:1754:U:H2'	67:5:1755:C:C6	2.39	0.57
67:5:2459:G:N2	67:5:2462:C:OP2	2.38	0.57
67:5:2811:G:N1	67:5:2814:C:OP2	2.34	0.57
67:5:3759:A:OP2	67:5:3765:G:N1	2.33	0.57
76:9:1009:A:C2	76:9:1010:G:C4	2.93	0.57
76:9:1566:G:N2	76:9:1569:A:N7	2.53	0.57
82:c:11:LEU:HD21	82:c:75:SER:HB3	1.87	0.57
4:DD:157:MET:HE1	4:DD:189:MET:H	1.70	0.57
6:D:278:ASP:OD2	6:D:282:GLN:NE2	2.37	0.57
14:ff:100:LEU:HD12	14:ff:100:LEU:N	2.20	0.57
20:G:222:PHE:CE2	42:N:6:TYR:CG	2.93	0.57
28:ii:262:ASN:N	32:jj:560:GLU:OE1	2.38	0.57
31:JJ:172:ARG:NH2	76:9:563:G:N7	2.53	0.57
55:s:57:LYS:NZ	67:5:1962:A:O5'	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:W:110:ARG:NH1	66:W:114:GLU:HB2	2.20	0.57
67:5:189:G:C4	67:5:253:G:N2	2.73	0.57
67:5:1278:C:C4	67:5:1279:A:C5	2.92	0.57
67:5:1979:A:C2'	67:5:1988:G:H22	2.17	0.57
67:5:4627:U:C6	81:B:53:MET:HE2	2.39	0.57
71:XX:27:TYR:CE2	71:XX:31:HIS:CE1	2.93	0.57
76:9:688:U:O2'	76:9:689:U:OP2	2.19	0.57
76:9:1328:G:H2'	76:9:1329:U:O4'	2.04	0.57
76:9:1486:A:O2'	83:CC:118:ALA:HB2	2.04	0.57
14:ff:95:ARG:NH2	76:9:1290:G:O6	2.38	0.56
17:BB:134:LEU:CD2	17:BB:218:LEU:HD12	2.35	0.56
28:ii:21:ILE:HD13	28:ii:137:THR:HG23	1.86	0.56
53:QQ:22:VAL:HG11	53:QQ:71:ARG:NH2	2.20	0.56
62:U:99:TRP:O	62:U:115:PHE:CD2	2.58	0.56
65:VV:17:CYS:HB2	65:VV:24:ILE:HD11	1.86	0.56
66:W:92:ALA:O	66:W:96:GLN:HG3	2.05	0.56
67:5:330:G:C2	67:5:331:G:C8	2.93	0.56
67:5:968:C:O2'	67:5:969:C:O4'	2.22	0.56
67:5:1653:A:OP2	78:a:27:LYS:NZ	2.36	0.56
67:5:1664:U:C2	67:5:2286:G:N2	2.73	0.56
67:5:2404:A:C6	67:5:2405:G:C4	2.92	0.56
67:5:3760:A:N6	76:9:1825:A:O2'	2.38	0.56
73:8:95:A:C5	73:8:96:C:C5	2.93	0.56
76:9:1597:C:OP2	77:ZZ:85:ARG:NH1	2.32	0.56
77:ZZ:99:LEU:HG	77:ZZ:109:TYR:CE1	2.39	0.56
5:dd:31:ILE:N	5:dd:38:MET:O	2.34	0.56
6:D:59:ASP:OD1	6:D:60:ILE:N	2.38	0.56
11:E:264:ILE:HD12	11:E:270:LEU:HD23	1.87	0.56
16:g:111:ALA:O	16:g:115:LYS:CG	2.52	0.56
19:gg:118:ARG:O	19:gg:134:THR:HG23	2.05	0.56
28:ii:181:GLY:HA3	28:ii:190:PHE:CE2	2.40	0.56
29:I:4:ARG:NH2	29:I:99:ILE:HD13	2.20	0.56
53:QQ:125:ARG:HG2	76:9:1648:G:H5"	1.86	0.56
54:R:181:LYS:HD2	54:R:181:LYS:N	2.20	0.56
55:s:98:ILE:HG22	55:s:102:LEU:HD12	1.87	0.56
60:T:102:ARG:NH1	67:5:1801:A:O2'	2.27	0.56
61:TT:57:ALA:O	61:TT:107:LEU:HD11	2.05	0.56
67:5:1066:G:N2	67:5:1067:G:H1'	2.20	0.56
67:5:1834:U:O2'	67:5:1835:G:P	2.62	0.56
67:5:3945:A:H2'	67:5:3946:G:C4'	2.34	0.56
67:5:4596:C:C4	67:5:4597:U:C4	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:145:G:C6	76:9:175:A:C6	2.94	0.56
76:9:297:A:C2	76:9:298:G:C8	2.92	0.56
76:9:412:G:N2	76:9:429:C:C2	2.73	0.56
1:A:234:LYS:NZ	67:5:3667:C:OP2	2.29	0.56
5:dd:43:PHE:CZ	63:UU:63:ILE:HG21	2.41	0.56
14:ff:103:LEU:HD21	41:MM:60:MET:HG2	1.88	0.56
17:BB:109:LYS:HE3	17:BB:113:MET:SD	2.46	0.56
19:gg:191:HIS:ND1	19:gg:192:THR:O	2.35	0.56
19:gg:277:THR:HB	19:gg:281:ALA:HB3	1.86	0.56
22:HH:145:ARG:NH2	68:WW:51:GLU:OE2	2.33	0.56
31:JJ:174:LYS:HB2	76:9:561:A:P	2.45	0.56
32:jj:232:ILE:HD12	32:jj:285:PHE:CE1	2.40	0.56
32:jj:604:GLU:HG3	32:jj:612:MET:HB3	1.85	0.56
39:M:100:ARG:HD3	45:O:198:THR:O	2.04	0.56
44:NN:107:LYS:O	44:NN:109:LYS:N	2.37	0.56
45:O:113:ASP:OD1	45:O:114:LYS:HG3	2.05	0.56
48:P:118:GLN:HB3	48:P:147:GLU:OE2	2.04	0.56
49:p:29:ILE:HD12	49:p:29:ILE:N	2.20	0.56
50:PP:82:ASP:CG	76:9:1619:A:HO2'	2.07	0.56
55:s:14:PHE:HA	55:s:17:ILE:HG22	1.85	0.56
58:t:61:LYS:HG3	58:t:74:VAL:CG2	2.36	0.56
67:5:30:C:C4	67:5:31:U:C4	2.94	0.56
67:5:385:A:N3	67:5:386:A:C5	2.73	0.56
67:5:749:G:N2	67:5:912:G:O2'	2.33	0.56
67:5:750:U:H2'	67:5:751:G:O4'	2.05	0.56
67:5:1089:G:C4	67:5:1208:G:N2	2.73	0.56
67:5:1733:G:C4	67:5:4214:A:C2	2.93	0.56
67:5:1985:G:C2	67:5:1986:U:C4	2.93	0.56
67:5:2605:G:C4	67:5:2735:G:N2	2.73	0.56
67:5:2658:G:C4	67:5:2675:G:N2	2.73	0.56
67:5:3809:G:OP2	67:5:3809:G:N2	2.33	0.56
67:5:4119:C:O2'	67:5:4120:U:OP1	2.21	0.56
67:5:4170:A:O2'	67:5:4171:C:P	2.64	0.56
72:Y:103:LYS:C	72:Y:104:VAL:HG23	2.30	0.56
73:8:70:G:C4	73:8:87:G:N2	2.73	0.56
73:8:106:G:C4	73:8:114:G:C6	2.92	0.56
76:9:59:U:N3	76:9:62:G:OP1	2.32	0.56
76:9:97:U:H2'	76:9:98:C:C6	2.40	0.56
76:9:656:G:OP2	76:9:662:G:N2	2.38	0.56
76:9:943:U:C2	76:9:944:A:C8	2.93	0.56
76:9:1226:G:H8	76:9:1226:G:O5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1708:C:N4	76:9:1709:G:O6	2.37	0.56
79:AA:50:ASN:HD22	79:AA:53:ARG:HD3	1.70	0.56
2:C:80:ARG:NH2	67:5:1645:C:OP1	2.38	0.56
2:C:237:ILE:HD12	2:C:237:ILE:N	2.19	0.56
8:EE:161:GLN:O	8:EE:170:THR:OG1	2.14	0.56
19:gg:36:ARG:O	19:gg:65:PHE:CD1	2.58	0.56
19:gg:207:CYS:SG	19:gg:219:TRP:HB2	2.46	0.56
22:HH:61:ILE:CD1	22:HH:95:ILE:HD12	2.36	0.56
28:ii:149:ILE:HG22	28:ii:151:ILE:HD11	1.87	0.56
31:JJ:45:ARG:NH1	76:9:521:A:OP1	2.38	0.56
32:jj:243:THR:HG22	32:jj:247:TYR:CE2	2.40	0.56
35:KK:7:ASN:O	35:KK:11:ILE:HG12	2.05	0.56
36:L:103:ARG:NH2	67:5:75:G:H1	2.04	0.56
44:NN:9:LYS:NZ	76:9:1092:G:OP2	2.31	0.56
67:5:959:G:C6	67:5:2263:A:C4	2.94	0.56
67:5:1896:A:O5’	67:5:1896:A:H8	1.87	0.56
67:5:3845:A:OP2	81:B:249:ARG:NH2	2.37	0.56
67:5:4208:U:O4	67:5:4225:G:N1	2.38	0.56
1:A:101:VAL:CG2	1:A:165:VAL:HG12	2.35	0.56
14:ff:100:LEU:HD11	76:9:1285:G:H1’	1.88	0.56
22:HH:17:ASP:OD2	22:HH:18:GLU:N	2.39	0.56
22:HH:46:THR:HG23	22:HH:65:PRO:HD3	1.87	0.56
28:ii:254:VAL:HG11	28:ii:267:ALA:CA	2.35	0.56
36:L:116:ARG:NH1	36:L:155:MET:O	2.38	0.56
51:Q:150:ARG:CZ	67:5:1498:G:OP1	2.53	0.56
53:QQ:17:LYS:HD2	53:QQ:79:ALA:CB	2.36	0.56
53:QQ:140:ARG:CZ	76:9:1338:G:O3’	2.52	0.56
61:TT:59:SER:OG	76:9:1542:C:P	2.64	0.56
67:5:59:A:C8	67:5:338:A:N6	2.74	0.56
67:5:99:A:C2	67:5:100:C:C4	2.93	0.56
67:5:1190:C:C4	67:5:1191:C:C4	2.92	0.56
67:5:1597:G:N3	67:5:1599:G:O6	2.38	0.56
67:5:1901:C:N4	67:5:2076:G:O6	2.39	0.56
67:5:2514:G:C2	67:5:2515:G:C8	2.94	0.56
67:5:4618:G:C2	67:5:4619:U:C5	2.94	0.56
71:XX:67:ARG:HG3	71:XX:115:ILE:HG23	1.87	0.56
76:9:442:C:N3	76:9:452:G:N2	2.54	0.56
76:9:830:A:C2	76:9:845:G:C2	2.94	0.56
76:9:1218:C:O2	84:cc:24:GLN:HG2	2.05	0.56
76:9:1734:G:O2’	76:9:1800:A:N6	2.39	0.56
2:C:210:ILE:N	2:C:210:ILE:HD12	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:213:PRO:HD3	56:RR:19:LYS:CD	2.35	0.56
27:II:42:ARG:HE	27:II:59:ARG:HD2	1.70	0.56
32:jj:280:VAL:HB	32:jj:298:PRO:HD3	1.88	0.56
44:NN:74:ILE:O	44:NN:77:SER:OG	2.16	0.56
47:OO:66:ARG:HB3	76:9:962:A:O3'	2.06	0.56
55:s:139:GLN:OE1	55:s:145:THR:OG1	2.13	0.56
58:t:46:ILE:O	58:t:50:THR:HG23	2.06	0.56
59:SS:3:LEU:HA	77:ZZ:49:LEU:HD22	1.87	0.56
63:UU:70:CYS:SG	63:UU:72:GLU:N	2.78	0.56
67:5:34:A:C2	67:5:35:U:C6	2.94	0.56
67:5:222:C:N3	67:5:236:G:N2	2.53	0.56
67:5:460:C:N3	67:5:697:G:N1	2.53	0.56
67:5:2440:U:O2'	67:5:2441:C:OP1	2.23	0.56
67:5:3752:C:N4	67:5:3777:G:N2	2.53	0.56
76:9:1197:G:N2	76:9:1198:G:C4	2.73	0.56
76:9:1332:A:C5	76:9:1493:C:N4	2.73	0.56
83:CC:65:LYS:HG3	83:CC:273:LEU:HD13	1.87	0.56
21:h:70:ARG:NH1	67:5:134:G:O6	2.38	0.56
27:II:195:LEU:O	27:II:199:LEU:HD23	2.05	0.56
32:jj:279:GLU:HA	32:jj:306:ASN:ND2	2.20	0.56
48:P:69:ARG:HH12	67:5:3893:C:H1'	1.70	0.56
50:PP:59:ARG:HH22	50:PP:77:LYS:H	1.53	0.56
55:s:148:SER:N	55:s:151:THR:O	2.39	0.56
56:RR:41:ILE:HG21	56:RR:47:ARG:N	2.21	0.56
59:SS:144:ARG:NH1	76:9:1522:A:OP1	2.35	0.56
67:5:205:C:N4	67:5:211:G:C6	2.74	0.56
67:5:725:G:N3	67:5:942:G:C2	2.74	0.56
67:5:934:C:N4	67:5:935(A):G:C2	2.73	0.56
67:5:989:U:C4	67:5:990:C:N4	2.74	0.56
67:5:1466:G:C2	67:5:1467:C:C6	2.94	0.56
67:5:4875:G:N7	67:5:4877:G:N2	2.54	0.56
69:X:100:VAL:HG12	69:X:101:ASP:N	2.21	0.56
76:9:1233:G:O4'	76:9:1253:A:C5'	2.54	0.56
76:9:1532:C:H3'	76:9:1637:A:H62	1.71	0.56
77:ZZ:69:THR:OG1	77:ZZ:72:VAL:HG23	2.05	0.56
6:D:207:TYR:CE1	70:7:33:U:C6	2.93	0.56
7:e:39:ARG:HH11	67:5:1662:C:P	2.28	0.56
18:GG:188:LYS:HG3	18:GG:191:ARG:HH12	1.70	0.56
24:bb:20:LYS:HG3	24:bb:21:LYS:HG2	1.88	0.56
32:jj:215:VAL:HG12	32:jj:292:PHE:CE2	2.41	0.56
32:jj:605:THR:HG22	32:jj:630:LEU:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:k:69:LEU:HD11	67:5:2696:A:C2	2.40	0.56
47:OO:79:GLN:HG3	47:OO:118:ALA:HB1	1.88	0.56
61:TT:63:HIS:ND1	61:TT:66:LEU:HD12	2.21	0.56
67:5:504:G:C2	67:5:505:G:C5	2.94	0.56
67:5:1169:G:C2	67:5:1193:C:C2	2.94	0.56
67:5:1487:G:C2	67:5:1488:G:C4	2.94	0.56
76:9:1453:C:N3	76:9:1476:A:N1	2.53	0.56
76:9:1533:A:C8	76:9:1600:G:N1	2.72	0.56
1:A:36:GLU:HB3	1:A:163:ARG:NH2	2.20	0.56
4:DD:40:ARG:HG3	63:UU:108:PRO:HG3	1.86	0.56
18:GG:149:LYS:HB3	76:9:143:U:OP2	2.05	0.56
19:gg:109:LEU:HD11	19:gg:125:ARG:CZ	2.36	0.56
21:h:116:LEU:HD23	21:h:116:LEU:H	1.71	0.56
26:i:68:ARG:NH1	67:5:3723:A:P	2.78	0.56
28:ii:17:ILE:HG22	28:ii:21:ILE:CD1	2.36	0.56
28:ii:318:GLU:CG	67:5:4419:U:C2	2.88	0.56
32:jj:388:PHE:CZ	32:jj:572:LYS:HB3	2.41	0.56
61:TT:33:TRP:HE3	61:TT:37:VAL:HB	1.71	0.56
67:5:714:G:C4	67:5:955:G:N2	2.73	0.56
67:5:1351:G:C6	67:5:1506:G:N1	2.74	0.56
67:5:2573:A:N6	67:5:2761:U:C2	2.73	0.56
67:5:4719:G:C6	67:5:4721:G:C4	2.94	0.56
76:9:1257:G:H4'	76:9:1258:A:C5'	2.36	0.56
76:9:1261:C:C5	76:9:1262:C:C5	2.94	0.56
76:9:1356:G:H2'	76:9:1357:A:C8	2.41	0.56
82:c:11:LEU:O	82:c:15:ASN:OD1	2.24	0.56
19:gg:21:ILE:HG23	19:gg:33:SER:OG	2.06	0.56
32:jj:466:LYS:O	32:jj:468:GLN:N	2.39	0.56
32:jj:559:GLU:CB	32:jj:601:ILE:HD12	2.36	0.56
32:jj:603:LEU:C	32:jj:632:LEU:HD21	2.31	0.56
35:KK:16:PHE:O	35:KK:91:PRO:HG3	2.06	0.56
48:P:78:TRP:CD1	48:P:79:THR:H	2.23	0.56
55:s:31:GLY:O	55:s:187:LEU:HA	2.05	0.56
55:s:57:LYS:HD2	67:5:1962:A:OP1	2.05	0.56
56:RR:82:ASP:OD1	79:AA:89:LYS:NZ	2.39	0.56
61:TT:123:LEU:HD21	61:TT:128:GLN:CA	2.36	0.56
67:5:1440:U:H2'	67:5:1441:C:C6	2.41	0.56
67:5:1629:G:C2	67:5:1631:A:C2	2.94	0.56
67:5:1803:G:O2'	67:5:1836:G:N2	2.39	0.56
81:B:139:ASP:OD1	81:B:141:ALA:N	2.39	0.56
2:C:138:MET:O	2:C:141:GLY:N	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:FF:140:ASP:HB2	84:cc:44:ARG:HH12	1.71	0.55
14:ff:138:ARG:CZ	76:9:1293:A:O2'	2.55	0.55
20:G:253:THR:HG23	67:5:150:U:OP1	2.06	0.55
28:ii:21:ILE:HG21	28:ii:137:THR:HG23	1.87	0.55
28:ii:82:LEU:O	28:ii:85:TYR:O	2.24	0.55
50:PP:17:TYR:O	50:PP:18:ARG:C	2.49	0.55
56:RR:6:THR:OG1	56:RR:9:VAL:HG23	2.05	0.55
58:t:19:GLY:HA2	58:t:58:ILE:CD1	2.35	0.55
67:5:282:C:C5	67:5:283:G:N7	2.75	0.55
67:5:1442:C:C2	67:5:1443:A:C8	2.93	0.55
67:5:2079:G:N2	67:5:2080:U:C2	2.74	0.55
67:5:2544:G:C6	67:5:2545:U:C4	2.94	0.55
67:5:3760:A:C6	76:9:1825:A:O2'	2.57	0.55
67:5:5038:A:C6	67:5:5039:U:C4	2.94	0.55
68:WW:28:ARG:NH2	76:9:922:A:OP1	2.40	0.55
72:Y:48:PRO:O	72:Y:115:ARG:NH2	2.39	0.55
75:Z:83:THR:OG1	75:Z:84:ARG:N	2.39	0.55
76:9:532:C:HO2'	76:9:533:A:P	2.27	0.55
76:9:929:G:H2'	76:9:930:C:O4'	2.06	0.55
77:ZZ:76:ARG:HB3	77:ZZ:77:LEU:HD12	1.88	0.55
4:DD:49:ILE:HA	4:DD:87:TYR:O	2.06	0.55
13:FF:148:ASN:O	13:FF:151:ILE:HG22	2.05	0.55
16:g:15:THR:HG22	16:g:16:ALA:H	1.69	0.55
19:gg:127:LYS:HB3	19:gg:146:SER:HB2	1.88	0.55
28:ii:37:LEU:CD2	28:ii:39:ILE:CG1	2.84	0.55
32:jj:617:LEU:HB3	32:jj:624:ILE:HB	1.88	0.55
35:KK:90:VAL:HG23	35:KK:95:ARG:HB2	1.87	0.55
42:N:46:ASP:OD2	42:N:50:ARG:NH1	2.40	0.55
42:N:182:HIS:ND1	42:N:183:THR:HG23	2.21	0.55
55:s:40:MET:HE3	55:s:44:ARG:CZ	2.36	0.55
63:UU:86:LYS:HE3	63:UU:88:LEU:HD23	1.88	0.55
67:5:2438:A:O2'	67:5:2440:U:OP2	2.13	0.55
67:5:2695:A:C5	67:5:2697:A:C5	2.95	0.55
67:5:3924:C:H1'	67:5:4380:A:C2	2.41	0.55
67:5:4618:G:N2	67:5:4619:U:C2	2.75	0.55
68:WW:85:ASP:OD2	68:WW:89:TRP:NE1	2.39	0.55
70:7:77:A:C4	70:7:100:A:N6	2.74	0.55
2:C:149:GLU:OE1	52:r:71:ARG:NE	2.40	0.55
19:gg:106:LYS:HD2	19:gg:126:ASP:N	2.21	0.55
27:II:106:SER:HG	27:II:169:GLY:C	2.13	0.55
28:ii:39:ILE:HD12	28:ii:93:LEU:HD23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:JJ:87:LEU:HD11	31:JJ:91:LYS:HG3	1.88	0.55
32:jj:464:ILE:HD13	32:jj:470:LEU:HD11	1.87	0.55
32:jj:482:LEU:HD21	32:jj:505:LYS:HB3	1.88	0.55
32:jj:554:ILE:O	32:jj:555:HIS:C	2.49	0.55
41:MM:42:LEU:CD2	41:MM:74:ILE:HD13	2.36	0.55
50:PP:30:TYR:OH	50:PP:88:GLU:HB3	2.06	0.55
52:r:39:ARG:NH1	67:5:2266:C:O2'	2.39	0.55
54:R:169:ALA:O	54:R:173:ARG:HB2	2.06	0.55
56:RR:73:LEU:O	56:RR:77:GLU:OE1	2.24	0.55
67:5:1842:G:N2	67:5:1843:A:C4	2.75	0.55
67:5:1984:A:H2'	67:5:2010:A:O2'	2.07	0.55
67:5:2648:G:C2	67:5:2649:G:C5	2.95	0.55
67:5:2670:C:N3	67:5:2671:C:C4	2.74	0.55
67:5:2833:A:C4	67:5:2834:C:C5	2.94	0.55
67:5:3820:G:N1	67:5:3821:A:C5	2.74	0.55
67:5:4233:A:N7	67:5:4292:A:N6	2.53	0.55
68:WW:55:ASP:HB2	68:WW:57:ARG:HE	1.69	0.55
75:Z:121:ARG:O	75:Z:124:THR:OG1	2.24	0.55
76:9:1550:G:O2'	76:9:1558:C:O2	2.16	0.55
76:9:1561:A:C5	76:9:1562:C:C5	2.94	0.55
76:9:1778:C:C4	76:9:1779:G:N7	2.75	0.55
80:aa:53:ILE:O	80:aa:56:ALA:N	2.39	0.55
81:B:248:LEU:HD12	81:B:249:ARG:N	2.21	0.55
4:DD:157:MET:HA	4:DD:189:MET:SD	2.46	0.55
12:f:104:MET:HG2	12:f:106:TYR:CE2	2.41	0.55
18:GG:137:ARG:CZ	18:GG:140:ARG:HE	2.19	0.55
18:GG:137:ARG:HB2	76:9:171:A:OP1	2.07	0.55
19:gg:205:SER:O	19:gg:221:LEU:N	2.19	0.55
20:G:314:LEU:O	20:G:318:LEU:HD23	2.07	0.55
27:II:21:TYR:CZ	27:II:22:HIS:CD2	2.94	0.55
28:ii:416:ARG:O	67:5:2008:U:P	2.64	0.55
55:s:44:ARG:NH1	67:5:1997:U:P	2.79	0.55
56:RR:26:ASN:O	56:RR:55:THR:HB	2.06	0.55
63:UU:71:GLY:O	76:9:1254:C:O2'	2.24	0.55
67:5:34:A:C2	67:5:35:U:C5	2.95	0.55
67:5:158:A:N1	67:5:276:C:O2'	2.37	0.55
67:5:284:G:N1	67:5:285:G:C6	2.75	0.55
67:5:353:A:C4	67:5:379:G:N7	2.74	0.55
67:5:442:G:C2	67:5:443:G:C4	2.95	0.55
67:5:1433:A:N6	67:5:1434:G:N3	2.54	0.55
67:5:2005:G:N1	67:5:2015:U:H1'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4292:A:C2	67:5:4330:G:C6	2.94	0.55
67:5:4617:G:OP2	81:B:62:ARG:NH2	2.39	0.55
67:5:4647:G:C2	67:5:4648:A:C8	2.94	0.55
68:WW:28:ARG:NH2	76:9:922:A:P	2.80	0.55
73:8:17:A:C5	73:8:18:U:C5	2.94	0.55
76:9:964:A:N3	76:9:1054:G:O2'	2.30	0.55
77:ZZ:68:ILE:HD12	77:ZZ:111:ARG:N	2.21	0.55
6:D:206:ASP:OD1	6:D:207:TYR:N	2.40	0.55
17:BB:47:THR:HG1	17:BB:67:PHE:HZ	1.55	0.55
28:ii:39:ILE:HD12	28:ii:82:LEU:HD21	1.89	0.55
28:ii:322:VAL:O	28:ii:392:VAL:HG22	2.06	0.55
32:jj:247:TYR:CE2	32:jj:264:ALA:HA	2.41	0.55
53:QQ:47:LEU:CD2	53:QQ:81:ILE:HG21	2.36	0.55
64:V:15:ARG:NH2	67:5:4670:C:O2'	2.40	0.55
67:5:82:U:O2	67:5:102:G:C2	2.60	0.55
67:5:161:G:C2	67:5:162:A:C5	2.94	0.55
67:5:1069:G:C6	67:5:1070:G:C5	2.94	0.55
67:5:1618:G:N3	67:5:1619:G:C8	2.74	0.55
67:5:2559:G:C6	67:5:2569:G:C6	2.95	0.55
67:5:2576:G:C6	67:5:2588:C:C4	2.94	0.55
67:5:3907:G:N2	67:5:3909:C:C5	2.75	0.55
76:9:1330:G:C2	76:9:1335:G:C6	2.94	0.55
76:9:1714:U:H2'	76:9:1715:A:C8	2.42	0.55
84:cc:20:ARG:HE	84:cc:28:THR:CG2	2.20	0.55
1:A:101:VAL:HG22	1:A:165:VAL:HG12	1.87	0.55
8:EE:122:LYS:HE3	8:EE:162:ILE:HD11	1.88	0.55
15:F:88:LEU:HA	15:F:124:LEU:HD23	1.88	0.55
19:gg:201:SER:OG	19:gg:206:LEU:O	2.21	0.55
32:jj:277:THR:HG23	32:jj:298:PRO:HA	1.88	0.55
53:QQ:50:LYS:NZ	53:QQ:53:GLU:OE2	2.33	0.55
53:QQ:140:ARG:NH2	76:9:1338:G:H4'	2.20	0.55
56:RR:28:PHE:HE1	56:RR:48:ASN:O	1.90	0.55
59:SS:76:GLN:OE1	59:SS:76:GLN:N	2.39	0.55
60:T:93:ILE:HA	60:T:96:ILE:HD12	1.87	0.55
60:T:102:ARG:NH1	67:5:1801:A:O3'	2.39	0.55
63:UU:21:ARG:NH2	76:9:1404:U:P	2.80	0.55
63:UU:76:THR:HG21	76:9:1337:C:O3'	2.07	0.55
67:5:1302:U:C5	67:5:1303:A:C5	2.95	0.55
67:5:2285:A:C2	67:5:2286:G:C4	2.94	0.55
67:5:2579:G:N1	67:5:2583:C:N3	2.54	0.55
67:5:4205:A:C5	67:5:4375:C:N4	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1214:A:H2'	76:9:1217:A:N7	2.22	0.55
76:9:1614:A:H2'	76:9:1615:U:C6	2.41	0.55
76:9:1646:C:O2	76:9:1677:U:C2	2.60	0.55
2:C:148:PRO:O	52:r:72:LYS:HG2	2.06	0.55
4:DD:109:LEU:HD22	4:DD:115:VAL:HG22	1.88	0.55
18:GG:22:ARG:O	18:GG:25:ARG:HG3	2.07	0.55
27:II:155:ASN:ND2	38:LL:23:VAL:O	2.40	0.55
28:ii:48:VAL:CG1	28:ii:52:LEU:HD12	2.37	0.55
35:KK:39:ASN:O	35:KK:40:VAL:C	2.49	0.55
47:OO:72:TYR:CZ	47:OO:76:LEU:HD11	2.42	0.55
58:t:20:GLY:HA2	58:t:47:ALA:O	2.06	0.55
59:SS:125:HIS:CE1	76:9:1610:G:H5"	2.41	0.55
67:5:166:C:O2	67:5:270:U:O2	2.25	0.55
67:5:2539:C:H2'	67:5:2540:C:H6	1.71	0.55
67:5:3829:G:C2	67:5:3830:A:C8	2.94	0.55
67:5:4114:C:H2'	67:5:4115:G:O4'	2.07	0.55
67:5:4753:U:O2'	67:5:4946:U:N3	2.40	0.55
67:5:4979:A:C5	67:5:4980:C:C5	2.95	0.55
74:YY:104:ARG:NH1	76:9:491:C:C5	2.75	0.55
76:9:1548:G:O4'	76:9:1548:G:N3	2.38	0.55
2:C:3:CYS:SG	67:5:492:U:H2'	2.47	0.55
4:DD:21:LEU:HD22	4:DD:39:VAL:CG2	2.36	0.55
8:EE:222:LEU:O	8:EE:222:LEU:HD23	2.06	0.55
9:ee:104:ARG:HD2	31:JJ:36:GLY:O	2.06	0.55
14:ff:103:LEU:HD11	41:MM:60:MET:HB3	1.89	0.55
18:GG:188:LYS:HA	18:GG:191:ARG:NH1	2.21	0.55
20:G:88:ARG:HB2	67:5:4128:A:H1'	1.88	0.55
21:h:86:LYS:HG3	21:h:86:LYS:O	2.07	0.55
28:ii:37:LEU:CD2	28:ii:39:ILE:HG12	2.36	0.55
28:ii:189:ARG:NH1	76:9:52:G:C5'	2.69	0.55
32:jj:332:PHE:HE2	32:jj:379:LEU:CD2	2.20	0.55
32:jj:466:LYS:HE2	32:jj:482:LEU:O	2.07	0.55
35:KK:16:PHE:CE1	35:KK:91:PRO:HD3	2.42	0.55
67:5:145:G:C2	67:5:146:G:C4	2.95	0.55
67:5:1998:A:N3	67:5:2020:U:O4'	2.39	0.55
67:5:2393:C:N4	67:5:2394:G:C2	2.75	0.55
76:9:852:G:H3'	76:9:853:C:O2	2.07	0.55
4:DD:218:LEU:HB2	19:gg:192:THR:HG22	1.88	0.55
13:FF:166:ILE:C	77:ZZ:71:ALA:HB1	2.31	0.55
14:ff:142:GLY:HA3	76:9:1309:C:O2'	2.07	0.55
18:GG:64:LYS:O	18:GG:67:VAL:HG12	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:gg:104:HIS:NE2	19:gg:122:SER:CB	2.69	0.55
28:ii:415:TYR:OH	67:5:2009:A:OP2	2.12	0.55
52:r:61:VAL:HG12	52:r:81:THR:OG1	2.07	0.55
55:s:77:LYS:HG3	55:s:81:HIS:HE1	1.72	0.55
56:RR:24:LEU:HD22	56:RR:54:VAL:CG1	2.37	0.55
58:t:42:VAL:HG12	58:t:46:ILE:HD11	1.89	0.55
58:t:121:LEU:O	67:5:1973:G:H4'	2.07	0.55
61:TT:87:VAL:HB	76:9:1606:G:H5"	1.89	0.55
67:5:278:G:C6	67:5:330:G:N7	2.74	0.55
67:5:1440:U:O2'	67:5:1441:C:OP1	2.23	0.55
67:5:1912:G:C6	67:5:2057:A:C2	2.94	0.55
67:5:2345:G:N7	78:a:9:ARG:NH1	2.54	0.55
67:5:2503:G:H1'	67:5:4084:G:C2	2.42	0.55
67:5:4068:U:C4	67:5:4069:U:C2	2.95	0.55
67:5:4568:A:H4'	81:B:21:ARG:NH2	2.22	0.55
67:5:4622:A:C2	67:5:4676:G:C2	2.95	0.55
76:9:377:G:C2	76:9:378:U:C6	2.95	0.55
76:9:1287:A:N7	76:9:1312:G:N2	2.54	0.55
76:9:1456:G:C2	76:9:1471:C:C2	2.95	0.55
76:9:1490:G:OP1	76:9:1491:G:OP2	2.25	0.55
76:9:1533:A:N7	76:9:1602:U:O2	2.40	0.55
81:B:77:THR:C	81:B:78:ILE:HD12	2.32	0.55
5:dd:23:VAL:HG22	35:KK:64:TRP:CE3	2.41	0.55
5:dd:33:LYS:N	76:9:1659:U:OP1	2.40	0.55
18:GG:138:ALA:HB3	18:GG:178:ARG:HB3	1.89	0.55
30:j:19:CYS:SG	30:j:21:ARG:N	2.80	0.55
32:jj:441:ARG:HG2	32:jj:525:CYS:SG	2.47	0.55
50:PP:30:TYR:OH	50:PP:88:GLU:CD	2.50	0.55
53:QQ:133:GLY:O	53:QQ:141:TYR:N	2.40	0.55
56:RR:48:ASN:ND2	76:9:1452:A:H5"	2.22	0.55
59:SS:131:VAL:HG23	76:9:1622:U:OP2	2.06	0.55
61:TT:28:LEU:HD12	61:TT:54:TYR:CE2	2.42	0.55
67:5:311:G:N2	67:5:312:G:C4	2.76	0.55
67:5:1996:C:N4	67:5:2000:G:N2	2.55	0.55
67:5:2529:A:N6	67:5:2532:C:C2	2.75	0.55
67:5:4723:A:C2	67:5:4724:A:C5	2.95	0.55
67:5:4906:C:N3	67:5:4916:G:N1	2.55	0.55
70:7:87:G:N2	70:7:90:A:OP2	2.40	0.55
76:9:183:G:N3	76:9:183:G:C2'	2.69	0.55
76:9:977:C:C4	76:9:978:G:N7	2.74	0.55
76:9:1052:A:C2	76:9:1053:C:C2	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:aa:9:GLY:O	80:aa:34:LYS:HG3	2.07	0.55
4:DD:25:LEU:HB3	4:DD:34:TYR:CE1	2.42	0.54
4:DD:146:ARG:NH1	23:hh:54:U:C2	2.76	0.54
4:DD:167:TYR:OH	4:DD:204:LEU:HD23	2.07	0.54
5:dd:19:ARG:NH1	5:dd:32:ARG:HD2	2.22	0.54
5:dd:29:GLY:O	5:dd:39:CYS:HA	2.07	0.54
5:dd:32:ARG:CA	76:9:1659:U:OP1	2.55	0.54
11:E:159:ARG:NH2	67:5:4939:C:N3	2.54	0.54
12:f:50:VAL:HG12	12:f:51:TYR:N	2.21	0.54
19:gg:280:LYS:O	76:9:1458:G:OP1	2.25	0.54
30:j:11:ARG:NH1	67:5:2793:G:OP1	2.40	0.54
33:J:121:PRO:HG2	59:SS:14:ARG:HB3	1.89	0.54
45:O:7:LEU:HD12	45:O:31:ARG:CG	2.37	0.54
47:OO:98:ARG:NH1	47:OO:99:ALA:O	2.40	0.54
54:R:149:LYS:HA	54:R:152:LYS:CG	2.37	0.54
55:s:113:ALA:HB2	55:s:172:ALA:CB	2.37	0.54
60:T:92:ARG:HG2	60:T:94:GLU:OE1	2.06	0.54
67:5:358:C:O2	67:5:364:G:N2	2.40	0.54
67:5:410:A:O2'	67:5:414:C:O2'	2.20	0.54
67:5:1548:G:C6	67:5:1549:G:C5	2.95	0.54
67:5:1612:G:N2	67:5:1614:C:C4	2.75	0.54
76:9:872:A:O2'	76:9:873:G:OP1	2.22	0.54
76:9:1271:C:O3'	76:9:1303:C:H4'	2.07	0.54
76:9:1847:G:O6	76:9:1853:C:N4	2.40	0.54
79:AA:23:THR:HG22	79:AA:170:SER:HB2	1.89	0.54
83:CC:140:GLY:N	83:CC:158:ALA:HB2	2.23	0.54
2:C:219:LYS:HZ3	2:C:222:ARG:HH12	1.54	0.54
4:DD:219:PRO:HD2	19:gg:172:LYS:HZ2	1.73	0.54
15:F:213:SER:OG	15:F:214:SER:N	2.39	0.54
16:g:97:ILE:HG21	67:5:4122:G:O6	2.08	0.54
28:ii:231:ASP:OD2	32:jj:274:LYS:NZ	2.40	0.54
28:ii:338:THR:O	58:t:96:LYS:NZ	2.34	0.54
32:jj:218:ILE:HD11	32:jj:319:LEU:CD1	2.37	0.54
38:LL:72:ILE:HD12	38:LL:72:ILE:N	2.22	0.54
60:T:116:LYS:O	60:T:120:LYS:HB2	2.07	0.54
67:5:2412:A:C4	67:5:2433:G:N2	2.76	0.54
76:9:563:G:N7	76:9:586:G:N2	2.55	0.54
76:9:1259:A:N6	76:9:1519:U:OP1	2.38	0.54
18:GG:25:ARG:HD2	18:GG:26:THR:N	2.23	0.54
28:ii:323:TYR:CE1	28:ii:393:THR:HA	2.43	0.54
40:m:82:VAL:HG23	40:m:83:ASN:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:MM:43:ASP:O	41:MM:45:ARG:NH2	2.39	0.54
45:O:7:LEU:HD12	45:O:31:ARG:HG3	1.88	0.54
45:O:64:THR:HG21	81:B:261:ARG:HB2	1.89	0.54
52:r:18:ILE:O	52:r:18:ILE:HG23	2.06	0.54
56:RR:4:VAL:HB	76:9:1370:A:H62	1.73	0.54
56:RR:28:PHE:HA	56:RR:55:THR:HG21	1.89	0.54
59:SS:72:GLN:HA	59:SS:97:GLN:HB3	1.90	0.54
61:TT:37:VAL:HG21	61:TT:99:VAL:CG1	2.37	0.54
62:U:72:VAL:CG2	62:U:72:VAL:O	2.55	0.54
67:5:1576:G:N2	67:5:1578:U:C2	2.75	0.54
67:5:1945:G:N2	67:5:1946:G:C4	2.76	0.54
67:5:2447:U:N3	67:5:2448:G:N7	2.56	0.54
67:5:4112:C:H2'	67:5:4113:U:C6	2.43	0.54
75:Z:36:ARG:NH1	75:Z:38:TYR:OH	2.41	0.54
76:9:909:G:C2	76:9:910:G:C5	2.95	0.54
76:9:1548:G:O6	76:9:1584:G:C2	2.60	0.54
78:a:19:HIS:CG	78:a:25:HIS:HB2	2.42	0.54
84:cc:20:ARG:HD3	84:cc:25:GLY:O	2.08	0.54
4:DD:192:TRP:NE1	4:DD:202:LYS:O	2.40	0.54
10:b:49:HIS:NE2	67:5:1815:G:O6	2.30	0.54
13:FF:148:ASN:ND2	76:9:1677:U:OP1	2.40	0.54
18:GG:172:LYS:CE	76:9:65:C:H5'	2.37	0.54
19:gg:232:GLY:O	19:gg:252:THR:HB	2.08	0.54
22:HH:61:ILE:HD11	22:HH:95:ILE:HB	1.89	0.54
27:II:60:LEU:HD23	27:II:185:ALA:HB2	1.89	0.54
28:ii:56:PHE:HD1	28:ii:75:ILE:HG21	1.71	0.54
32:jj:454:VAL:CG2	32:jj:503:ARG:HE	2.21	0.54
32:jj:539:GLU:HB3	32:jj:623:THR:O	2.06	0.54
57:S:166:ARG:NH1	67:5:1919:G:C2	2.76	0.54
59:SS:82:TRP:CD2	76:9:1567:G:C2	2.96	0.54
67:5:284:G:C2	67:5:285:G:C5	2.96	0.54
67:5:1322:A:C5	67:5:1326:A:N7	2.75	0.54
67:5:1420:A:N7	78:a:116:LYS:NZ	2.52	0.54
67:5:1800:U:N3	67:5:1801:A:N7	2.55	0.54
67:5:1902:G:C4	67:5:2075:G:N2	2.76	0.54
67:5:2868:G:N2	67:5:2869:U:C2	2.75	0.54
67:5:4209:G:O6	67:5:4224:A:N6	2.40	0.54
73:8:12:G:C6	73:8:13:G:N7	2.76	0.54
73:8:154:G:C6	73:8:155:C:N4	2.76	0.54
76:9:1324:G:H21	76:9:1510:G:C1'	2.20	0.54
76:9:1354:G:N2	76:9:1357:A:OP2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:EE:48:LEU:CD2	8:EE:61:VAL:HG22	2.36	0.54
13:FF:148:ASN:CG	76:9:1677:U:OP1	2.51	0.54
27:II:147:LYS:O	27:II:151:GLU:HG2	2.06	0.54
28:ii:271:SER:O	28:ii:272:THR:C	2.50	0.54
31:JJ:111:GLN:OE1	31:JJ:127:ARG:HB2	2.08	0.54
32:jj:255:ASN:C	32:jj:256:ARG:HD2	2.33	0.54
32:jj:443:PRO:HB2	32:jj:556:THR:CG2	2.37	0.54
32:jj:473:MET:N	32:jj:517:ILE:O	2.41	0.54
33:J:119:TYR:CE2	33:J:121:PRO:HA	2.42	0.54
35:KK:51:SER:HA	76:9:1276:A:O2'	2.07	0.54
47:OO:34:PHE:HB3	47:OO:41:PHE:HB2	1.89	0.54
50:PP:81:ARG:NH1	50:PP:98:ASN:OD1	2.40	0.54
53:QQ:138:ARG:HH22	76:9:1646:C:H5"	1.72	0.54
56:RR:60:ARG:HD2	76:9:1464:C:O3'	2.07	0.54
59:SS:31:THR:HG21	59:SS:38:ARG:HA	1.90	0.54
67:5:164:G:H2'	67:5:165:A:H8	1.72	0.54
67:5:1962:A:P	67:5:2024:G:H1	2.30	0.54
67:5:2314:G:C2	67:5:2315:G:C8	2.94	0.54
67:5:3700:C:H1'	67:5:3775:A:H8	1.72	0.54
67:5:3742:G:C2	67:5:3743:G:C8	2.96	0.54
68:WW:14:ILE:HG13	68:WW:15:ASN:N	2.21	0.54
76:9:290:U:O2'	76:9:292:A:N7	2.38	0.54
76:9:302:A:C2	76:9:303:C:C6	2.96	0.54
76:9:362:C:C2	76:9:403:G:C2	2.95	0.54
76:9:1253:A:C5	76:9:1666:C:H4'	2.43	0.54
76:9:1261:C:O2'	76:9:1515:G:OP2	2.23	0.54
76:9:1478:U:C4	76:9:1479:G:N7	2.76	0.54
76:9:1664:A:H4'	76:9:1665:G:OP1	2.06	0.54
77:ZZ:88:LEU:O	77:ZZ:97:ILE:HD11	2.07	0.54
77:ZZ:99:LEU:HD11	77:ZZ:102:LYS:CD	2.38	0.54
2:C:100:ARG:CZ	67:5:1650:A:C2	2.91	0.54
26:i:76:ARG:NH1	67:5:304:C:H4'	2.23	0.54
28:ii:92:GLY:HA3	28:ii:120:ILE:HG12	1.90	0.54
28:ii:418:ASP:OD2	28:ii:421:GLY:HA3	2.07	0.54
31:JJ:110:LEU:O	31:JJ:114:VAL:HG23	2.08	0.54
43:n:1:MET:HE2	43:n:9:ARG:NH2	2.22	0.54
47:OO:37:PHE:CZ	47:OO:109:GLY:HA2	2.43	0.54
47:OO:103:ASN:OD1	47:OO:104:ARG:HG3	2.07	0.54
52:r:106:LEU:N	52:r:106:LEU:CD2	2.71	0.54
54:R:21:LYS:HZ3	67:5:2822:G:P	2.30	0.54
67:5:341:G:C2	67:5:342:G:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1971:U:C4	67:5:2000:G:O2'	2.60	0.54
67:5:2421:G:N2	67:5:2828:U:C6	2.76	0.54
67:5:2573:A:N7	67:5:2761:U:C4	2.76	0.54
67:5:2619:G:C2	67:5:2620:G:C8	2.95	0.54
67:5:2811:G:H21	67:5:2815:A:H62	1.56	0.54
67:5:2835:A:C2	67:5:2836:A:C8	2.96	0.54
68:WW:49:GLU:HG3	68:WW:49:GLU:O	2.08	0.54
76:9:610:G:O6	76:9:634:A:N6	2.41	0.54
76:9:870:A:C4	76:9:916:A:C2	2.96	0.54
76:9:973:C:C4	76:9:974:C:C5	2.95	0.54
76:9:1683:C:C1'	84:cc:23:SER:HB2	2.38	0.54
81:B:203:GLN:HG3	81:B:204:GLN:N	2.22	0.54
83:CC:209:VAL:HB	83:CC:210:PRO:CD	2.38	0.54
4:DD:161:GLY:O	4:DD:164:VAL:HG12	2.08	0.54
8:EE:16:LYS:CE	76:9:813:A:OP1	2.56	0.54
13:FF:98:GLU:O	13:FF:102:LEU:HG	2.08	0.54
18:GG:60:GLY:HA2	76:9:156:G:O2'	2.08	0.54
19:gg:109:LEU:HD11	19:gg:125:ARG:HG3	1.90	0.54
32:jj:388:PHE:CZ	32:jj:572:LYS:HD3	2.43	0.54
39:M:54:CYS:SG	39:M:55:MET:N	2.80	0.54
44:NN:103:GLU:O	44:NN:106:ARG:NH2	2.40	0.54
54:R:173:ARG:O	54:R:177:LEU:HD13	2.07	0.54
61:TT:10:ASN:HB2	61:TT:142:LYS:HE3	1.89	0.54
61:TT:56:ARG:HD3	76:9:1541:G:OP1	2.08	0.54
62:U:72:VAL:O	62:U:72:VAL:HG23	2.08	0.54
67:5:370:U:C4	67:5:1637:A:C5	2.96	0.54
67:5:1980:U:H2'	67:5:1981:G:H2'	1.88	0.54
76:9:534:G:C2	76:9:535:G:C5	2.95	0.54
76:9:693:A:H61	76:9:734:C:N4	2.06	0.54
28:ii:42:LYS:C	67:5:3761:C:O2'	2.51	0.54
28:ii:257:SER:C	28:ii:258:TYR:CG	2.86	0.54
28:ii:299:GLY:O	28:ii:416:ARG:HA	2.08	0.54
32:jj:210:LYS:HB2	32:jj:291:HIS:CD2	2.43	0.54
42:N:36:LEU:HD23	42:N:36:LEU:O	2.08	0.54
47:OO:37:PHE:CE2	47:OO:109:GLY:HA2	2.42	0.54
50:PP:34:MET:CA	50:PP:42:ARG:HB2	2.37	0.54
55:s:187:LEU:HD12	55:s:187:LEU:O	2.07	0.54
56:RR:20:TYR:CD1	56:RR:23:ARG:NE	2.75	0.54
63:UU:59:LYS:O	63:UU:83:ARG:HA	2.08	0.54
63:UU:66:ARG:HD2	63:UU:76:THR:O	2.07	0.54
67:5:245:C:O4'	67:5:245:C:O2	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:713:C:N4	67:5:1284:G:O6	2.41	0.54
67:5:1873:A:C2	67:5:1874:A:C8	2.96	0.54
67:5:2628:U:N3	67:5:2629:C:C5	2.76	0.54
67:5:4111:U:C4	67:5:4112:C:N4	2.76	0.54
67:5:4166:G:C2	67:5:4167:G:C8	2.95	0.54
67:5:4585:U:C4	67:5:4718:G:N2	2.76	0.54
76:9:1241:A:O2'	76:9:1266:C:O2	2.20	0.54
14:ff:99:LYS:O	14:ff:99:LYS:HD2	2.06	0.54
16:g:59:VAL:HG22	16:g:60:ARG:N	2.23	0.54
24:bb:84:HIS:HB3	44:NN:25:TRP:CZ3	2.42	0.54
32:jj:436:VAL:HG12	32:jj:437:ASP:N	2.23	0.54
50:PP:24:GLN:O	50:PP:28:MET:HB2	2.07	0.54
55:s:10:LYS:HG2	55:s:60:MET:CE	2.38	0.54
56:RR:53:TYR:CE2	56:RR:57:LEU:HD11	2.43	0.54
63:UU:66:ARG:HB2	76:9:1256:G:C8	2.43	0.54
63:UU:78:ASP:CG	63:UU:80:PHE:CZ	2.86	0.54
66:W:50:ASN:HD21	67:5:5006:U:H2'	1.72	0.54
67:5:438:G:C6	67:5:439:G:C6	2.95	0.54
67:5:1968:G:N1	67:5:1969:G:C5	2.75	0.54
67:5:4393:G:C2	67:5:4446:U:O4	2.61	0.54
67:5:4566:U:C2	67:5:4567:G:C8	2.95	0.54
70:7:30:C:N4	70:7:48:G:O6	2.41	0.54
76:9:389:A:C6	76:9:390:C:N4	2.76	0.54
4:DD:96:LEU:HD21	4:DD:191:PRO:HD3	1.89	0.54
19:gg:86:THR:HG21	76:9:1398:G:O2'	2.06	0.54
22:HH:60:ILE:HG21	22:HH:92:VAL:HG23	1.88	0.54
28:ii:37:LEU:HD21	28:ii:39:ILE:HG12	1.90	0.54
32:jj:276:LYS:O	32:jj:278:VAL:HG13	2.08	0.54
33:J:128:LEU:HD11	33:J:130:PHE:CE1	2.43	0.54
35:KK:65:ARG:H	35:KK:66:HIS:CD2	2.25	0.54
53:QQ:17:LYS:O	53:QQ:126:ARG:HG2	2.07	0.54
53:QQ:47:LEU:O	53:QQ:51:LEU:HG	2.08	0.54
54:R:162:ARG:HA	54:R:165:LYS:HE2	1.90	0.54
55:s:161:ILE:HG23	55:s:165:ASP:HB3	1.89	0.54
58:t:123:ARG:HB2	67:5:1995:G:H4'	1.89	0.54
63:UU:30:LYS:O	63:UU:34:LYS:HG2	2.07	0.54
67:5:360:A:C2	73:8:24:G:C4	2.96	0.54
67:5:488:G:C6	67:5:489:C:N4	2.75	0.54
67:5:1169:G:C6	67:5:1193:C:N3	2.76	0.54
67:5:1302:U:C6	67:5:1303:A:N7	2.76	0.54
67:5:1733:G:C2	67:5:1797:G:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1873:A:C2	67:5:1874:A:N7	2.76	0.54
67:5:1996:C:N4	67:5:2000:G:H22	2.06	0.54
67:5:2294:G:O6	67:5:2341:A:N6	2.41	0.54
67:5:2402:G:C2	67:5:2403:A:C8	2.96	0.54
67:5:3743:G:N2	67:5:3744:G:H1'	2.22	0.54
67:5:3920:U:C4	67:5:3921:U:O4	2.60	0.54
67:5:4067:U:H2'	67:5:4068:U:C6	2.42	0.54
67:5:4465:U:O4	67:5:4487:A:C4	2.61	0.54
76:9:56:G:C4	76:9:90:G:N2	2.76	0.54
76:9:354:U:C4	76:9:355:G:N7	2.76	0.54
76:9:642:U:O2'	76:9:643:A:O5'	2.13	0.54
76:9:1086:G:OP2	80:aa:12:LYS:NZ	2.37	0.54
76:9:1330:G:C8	76:9:1492:U:H3'	2.43	0.54
77:ZZ:102:LYS:HA	77:ZZ:107:VAL:HA	1.90	0.54
78:a:28:HIS:NE2	78:a:32:ARG:NH2	2.56	0.54
81:B:151:SER:HA	81:B:154:LYS:HG2	1.90	0.54
84:cc:32:VAL:O	84:cc:41:SER:HA	2.08	0.54
4:DD:34:TYR:CE2	4:DD:99:ILE:HD12	2.43	0.53
6:D:23:ARG:NH2	67:5:4280:A:C5	2.76	0.53
16:g:98:GLU:O	16:g:102:ILE:HD12	2.08	0.53
28:ii:229:SER:O	28:ii:232:PHE:HD2	1.90	0.53
31:JJ:169:ARG:HH12	76:9:584:A:P	2.31	0.53
32:jj:259:TRP:HZ3	87:jj:700:GCP:O2A	1.92	0.53
55:s:112:ARG:HG2	67:5:1968:G:H5"	1.90	0.53
59:SS:26:ILE:HG23	59:SS:59:LEU:CD1	2.38	0.53
67:5:304:C:N4	67:5:305:A:C2	2.76	0.53
67:5:1445:U:O2'	67:5:1446:C:P	2.66	0.53
67:5:1732:C:C2	67:5:1798:G:N2	2.76	0.53
67:5:2727:C:C2	67:5:2728:U:C5	2.96	0.53
67:5:4439:U:C4	67:5:4440:G:N7	2.76	0.53
67:5:4604:G:H8	67:5:4604:G:O5'	1.91	0.53
67:5:4773:C:N3	67:5:4863:G:C6	2.76	0.53
76:9:493:A:C2	76:9:494:C:C5	2.95	0.53
78:a:98:ALA:HB1	78:a:122:VAL:HA	1.89	0.53
81:B:293:ILE:HA	81:B:298:LEU:HA	1.90	0.53
2:C:115:VAL:HG12	2:C:116:ASN:N	2.22	0.53
4:DD:179:GLN:O	76:9:628:A:N1	2.41	0.53
5:dd:41:GLN:O	5:dd:45:GLN:HG2	2.08	0.53
13:FF:167:LYS:HA	77:ZZ:71:ALA:HB1	1.90	0.53
15:F:46:ARG:NH1	67:5:976:G:H5"	2.23	0.53
19:gg:179:LEU:O	19:gg:182:CYS:SG	2.67	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:HH:130:LEU:HD13	22:HH:177:TYR:CZ	2.43	0.53
27:II:80:ASP:OD2	27:II:81:VAL:N	2.42	0.53
42:N:172:ARG:O	42:N:188:ARG:NH2	2.41	0.53
45:O:9:LEU:N	45:O:9:LEU:HD12	2.23	0.53
48:P:111:SER:O	48:P:153:LYS:N	2.32	0.53
50:PP:79:HIS:HA	50:PP:97:TYR:CB	2.39	0.53
58:t:123:ARG:NH2	67:5:1996:C:OP1	2.41	0.53
67:5:755:C:H2'	67:5:756:G:O4'	2.08	0.53
67:5:1388:A:H2'	67:5:1389:U:O4'	2.09	0.53
67:5:1559:G:N1	67:5:1560:A:C5	2.76	0.53
67:5:1879:C:N4	67:5:1880:G:C6	2.77	0.53
67:5:1965:G:H2'	67:5:1966:C:C6	2.43	0.53
67:5:2663:G:N2	67:5:2664:G:C4	2.77	0.53
67:5:2877:G:O6	67:5:2878:G:C2	2.61	0.53
67:5:3692:A:H62	67:5:3823:G:H21	1.56	0.53
67:5:3771:C:H2'	67:5:3772:U:C6	2.43	0.53
67:5:4075:U:O2'	67:5:4076:G:O5'	2.23	0.53
76:9:659:G:O2'	76:9:662:G:O2'	1.87	0.53
79:AA:169:HIS:ND1	79:AA:203:PHE:CE2	2.77	0.53
84:cc:14:VAL:HG22	84:cc:30:VAL:HG11	1.90	0.53
1:A:234:LYS:C	1:A:235:VAL:HG23	2.33	0.53
2:C:273:LEU:N	2:C:273:LEU:HD12	2.23	0.53
4:DD:185:LYS:HE2	76:9:1335:G:H5"	1.90	0.53
5:dd:30:LEU:O	76:9:1659:U:H5'	2.08	0.53
12:f:94:ALA:O	12:f:97:ILE:HG12	2.08	0.53
17:BB:116:LYS:NZ	76:9:990:A:OP1	2.41	0.53
28:ii:96:TYR:HB3	28:ii:131:PHE:CD1	2.43	0.53
28:ii:316:ALA:C	28:ii:414:ARG:HG3	2.33	0.53
32:jj:354:ILE:CD1	32:jj:422:PHE:HE1	2.21	0.53
35:KK:12:TYR:O	35:KK:79:LEU:HD22	2.08	0.53
39:M:52:PHE:HA	39:M:55:MET:SD	2.49	0.53
50:PP:23:ASP:OD1	50:PP:24:GLN:N	2.42	0.53
55:s:61:MET:HG2	55:s:82:ILE:HD13	1.89	0.53
67:5:4:G:C6	73:8:154:G:C6	2.97	0.53
67:5:417:G:N2	73:8:16:G:C4	2.76	0.53
67:5:966:A:O4'	67:5:968:C:N4	2.42	0.53
67:5:1086:C:C2	67:5:1087:A:C8	2.97	0.53
67:5:1172:C:C4	67:5:1173:G:N7	2.76	0.53
67:5:1986:U:H5	67:5:2011:C:OP2	1.91	0.53
67:5:2307:A:C2	67:5:2308:A:N9	2.76	0.53
67:5:3819:G:N2	67:5:3820:G:C5	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4308:C:H2'	67:5:4309:G:O4'	2.08	0.53
67:5:4680:G:C2	67:5:4681:A:C5	2.96	0.53
76:9:1129:G:C6	76:9:1130:G:O6	2.61	0.53
76:9:1332:A:H62	76:9:1493:C:N4	2.06	0.53
76:9:1368:U:OP1	76:9:1467:C:O4'	2.26	0.53
76:9:1566:G:N2	76:9:1569:A:C5	2.76	0.53
76:9:1579:A:H1'	76:9:1582:C:N4	2.23	0.53
76:9:1590:C:C5	76:9:1591:C:C5	2.96	0.53
1:A:128:ARG:NH1	67:5:3681:G:P	2.81	0.53
4:DD:9:ARG:HH12	76:9:1552:G:H21	1.56	0.53
4:DD:202:LYS:CG	4:DD:203:PRO:HD2	2.39	0.53
19:gg:91:ASP:O	19:gg:95:GLY:N	2.42	0.53
26:i:2:ALA:HB2	67:5:1481:C:O4'	2.08	0.53
35:KK:13:GLU:O	35:KK:17:LYS:HG2	2.08	0.53
43:n:2:ARG:NH1	76:9:1841:C:P	2.81	0.53
50:PP:76:VAL:HG22	50:PP:93:MET:O	2.07	0.53
50:PP:82:ASP:HA	50:PP:115:TYR:CD2	2.43	0.53
52:r:107:ARG:NH1	67:5:2263:A:OP1	2.41	0.53
59:SS:37:GLY:HA3	76:9:1630:A:H5'	1.90	0.53
63:UU:71:GLY:HA3	76:9:1255:G:O4'	2.07	0.53
66:W:99:GLU:OE2	66:W:102:LYS:NZ	2.42	0.53
67:5:146:G:C2	67:5:147:A:C8	2.96	0.53
67:5:221:C:C2	67:5:237:G:N2	2.77	0.53
67:5:1332:C:H2'	67:5:1333:A:H8	1.74	0.53
67:5:4367:G:N2	67:5:4368:G:C4	2.77	0.53
67:5:4875:G:C5	67:5:4877:G:C2	2.96	0.53
76:9:464:A:H5'	76:9:465:A:N7	2.23	0.53
76:9:1122:A:C6	76:9:1123:C:C5	2.97	0.53
76:9:1264:C:H4'	76:9:1265:A:O4'	2.09	0.53
76:9:1649:U:C5	76:9:1674:G:N2	2.76	0.53
4:DD:132:LYS:NZ	4:DD:204:LEU:HD21	2.23	0.53
13:FF:76:MET:SD	13:FF:173:LEU:CD1	2.97	0.53
18:GG:52:ILE:O	18:GG:52:ILE:HG23	2.07	0.53
18:GG:67:VAL:HG11	18:GG:99:GLY:HA2	1.90	0.53
32:jj:255:ASN:ND2	76:9:463:C:H5"	2.24	0.53
58:t:113:ALA:HA	58:t:132:ILE:CD1	2.38	0.53
67:5:1358:G:H4'	67:5:1359:G:OP1	2.07	0.53
67:5:1440:U:O2'	67:5:1441:C:P	2.66	0.53
67:5:1999:A:C2	67:5:2019:C:H1'	2.43	0.53
67:5:2784:C:N4	67:5:2785:C:H41	2.06	0.53
67:5:4311:A:O2'	67:5:4312:U:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4356:G:C6	67:5:4357:G:N7	2.77	0.53
73:8:6:C:C2	73:8:7:U:C5	2.97	0.53
76:9:388:U:C2	76:9:389:A:C8	2.96	0.53
76:9:1335:G:N2	76:9:1492:U:O2	2.42	0.53
81:B:22:SER:OG	81:B:24:ARG:HG2	2.08	0.53
81:B:337:VAL:HG21	81:B:345:LEU:HD21	1.91	0.53
83:CC:120:GLN:N	83:CC:120:GLN:OE1	2.42	0.53
2:C:266:THR:HG23	2:C:269:LYS:H	1.72	0.53
4:DD:50:ILE:HD11	4:DD:69:LEU:HD13	1.90	0.53
4:DD:75:LYS:NZ	35:KK:21:MET:SD	2.69	0.53
4:DD:158:ILE:HG12	4:DD:189:MET:SD	2.48	0.53
10:b:102:PRO:O	10:b:103:LYS:C	2.51	0.53
18:GG:142:ARG:HH12	18:GG:178:ARG:HB3	1.72	0.53
22:HH:70:LYS:O	22:HH:73:GLN:HG2	2.09	0.53
32:jj:309:GLY:O	32:jj:313:GLN:HG3	2.09	0.53
32:jj:459:LEU:O	32:jj:497:GLY:N	2.32	0.53
41:MM:15:ASN:OD1	41:MM:16:THR:N	2.42	0.53
48:P:56:GLN:HA	48:P:72:GLN:OE1	2.09	0.53
50:PP:47:ARG:NH1	76:9:1617:G:N7	2.56	0.53
50:PP:77:LYS:HD3	50:PP:102:PHE:CG	2.44	0.53
55:s:10:LYS:HD3	67:5:1961:G:OP1	2.08	0.53
61:TT:33:TRP:HH2	61:TT:98:SER:C	2.17	0.53
61:TT:87:VAL:HA	76:9:1530:U:H5'	1.91	0.53
67:5:1274:A:N6	67:5:1275:G:C5	2.77	0.53
67:5:2590:G:C2	67:5:2754:G:N3	2.76	0.53
67:5:4919:G:H2'	67:5:4920:C:O4'	2.08	0.53
68:WW:7:LEU:O	68:WW:11:LEU:HG	2.08	0.53
74:YY:99:LYS:HE2	76:9:574:A:O2'	2.09	0.53
76:9:1240:A:O2'	76:9:1267:C:O3'	2.24	0.53
76:9:1328:G:H2'	76:9:1329:U:C6	2.44	0.53
2:C:124:ILE:CG1	2:C:237:ILE:HD11	2.38	0.53
2:C:166:GLU:O	2:C:170:LEU:HD23	2.09	0.53
2:C:273:LEU:N	2:C:273:LEU:CD1	2.71	0.53
11:E:157:THR:HG23	11:E:158:GLY:N	2.24	0.53
25:H:20:LEU:N	25:H:20:LEU:HD23	2.24	0.53
32:jj:215:VAL:HG12	32:jj:292:PHE:CZ	2.43	0.53
50:PP:89:MET:O	50:PP:107:ILE:HD11	2.09	0.53
55:s:146:LYS:O	55:s:152:ILE:HA	2.09	0.53
56:RR:17:ILE:HG12	56:RR:24:LEU:HD13	1.89	0.53
57:S:166:ARG:O	57:S:166:ARG:HG2	2.09	0.53
67:5:758:G:C2	67:5:906:C:C2	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1089:G:N1	67:5:1090:G:C5	2.77	0.53
67:5:2599:G:C6	67:5:2600:A:C6	2.97	0.53
75:Z:103:ASP:OD1	75:Z:105:ALA:N	2.41	0.53
76:9:553:U:O2'	76:9:554:A:P	2.67	0.53
76:9:925:G:C2	76:9:926:A:C8	2.97	0.53
76:9:1240:A:C8	76:9:1267:C:O2'	2.55	0.53
76:9:1793:A:C2	76:9:1794:C:C5	2.96	0.53
79:AA:207:PRO:CA	79:AA:210:ILE:HD12	2.39	0.53
80:aa:95:ARG:HG2	80:aa:95:ARG:O	2.08	0.53
81:B:78:ILE:HD12	81:B:78:ILE:N	2.24	0.53
84:cc:14:VAL:HG13	84:cc:30:VAL:HG13	1.91	0.53
9:ee:81:ARG:NH2	71:XX:66:ILE:HD12	2.23	0.53
19:gg:234:ASP:O	19:gg:235:ILE:C	2.51	0.53
20:G:143:GLN:O	20:G:146:THR:HG22	2.08	0.53
22:HH:17:ASP:N	22:HH:20:GLU:OE1	2.37	0.53
28:ii:323:TYR:CD1	28:ii:393:THR:HA	2.44	0.53
31:JJ:87:LEU:CD2	31:JJ:92:MET:HA	2.39	0.53
45:O:72:HIS:N	67:5:4586:G:OP1	2.41	0.53
53:QQ:128:GLU:HB2	76:9:1649:U:OP1	2.09	0.53
66:W:3:VAL:HG23	66:W:3:VAL:O	2.08	0.53
67:5:760:G:C6	67:5:904:C:N4	2.77	0.53
67:5:1624:G:C4	67:5:1626:G:C2	2.97	0.53
67:5:1648:C:C4	67:5:1649:U:C4	2.96	0.53
67:5:1662:C:C2	67:5:2288:G:N2	2.77	0.53
67:5:1694:C:C4	67:5:1695:U:C5	2.96	0.53
67:5:1971:U:N3	67:5:2000:G:H2'	2.24	0.53
67:5:2109:A:N6	67:5:2110:G:C4	2.77	0.53
67:5:2573:A:N6	67:5:2761:U:N3	2.56	0.53
67:5:2581:A:H2'	67:5:2582:A:C8	2.43	0.53
67:5:2882:A:C8	67:5:2883:G:C8	2.97	0.53
67:5:3770:U:H2'	67:5:3771:C:H6	1.73	0.53
67:5:3861:A:C2	67:5:3862:A:C5	2.97	0.53
67:5:3945:A:C2	67:5:3946:G:O2'	2.62	0.53
67:5:4192:A:C6	67:5:4193:C:N4	2.76	0.53
67:5:4967:A:N6	67:5:4968:A:N6	2.56	0.53
73:8:71:A:C4	73:8:88:A:C5	2.97	0.53
76:9:1253:A:O2'	76:9:1667:U:OP1	2.27	0.53
76:9:1255:G:N2	76:9:1494:U:O2'	2.42	0.53
76:9:1330:G:H2'	76:9:1492:U:C5	2.43	0.53
76:9:1710:C:C2	76:9:1824:A:N6	2.77	0.53
76:9:1852:C:H6	76:9:1852:C:H5"	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:ZZ:99:LEU:HD23	77:ZZ:100:VAL:N	2.24	0.53
17:BB:121:ILE:HG21	17:BB:164:ILE:HG21	1.90	0.53
19:gg:191:HIS:CD2	19:gg:195:LEU:HD21	2.44	0.53
21:h:80:PRO:HA	69:X:60:TYR:HE2	1.74	0.53
28:ii:335:CYS:HB2	58:t:93:LYS:CD	2.39	0.53
28:ii:340:GLU:HB2	58:t:93:LYS:HD3	1.90	0.53
33:J:119:TYR:CE2	59:SS:17:ASN:HA	2.44	0.53
47:OO:38:ASN:HA	47:OO:69:SER:CB	2.39	0.53
50:PP:34:MET:HG2	50:PP:45:LEU:HD12	1.91	0.53
50:PP:104:GLN:O	50:PP:104:GLN:HG2	2.09	0.53
51:Q:168:ARG:HH21	67:5:86:U:P	2.32	0.53
56:RR:5:ARG:HG3	56:RR:9:VAL:CG1	2.34	0.53
61:TT:107:LEU:C	61:TT:113:VAL:HG22	2.33	0.53
61:TT:115:LYS:CG	61:TT:115:LYS:O	2.57	0.53
67:5:1755:C:N3	67:5:1757:U:O4	2.42	0.53
67:5:1762:C:O5'	67:5:1762:C:H6	1.91	0.53
67:5:1846:G:H2'	67:5:1847:C:H6	1.74	0.53
67:5:2724:G:N2	67:5:2726:G:C5	2.77	0.53
67:5:3659:G:C6	67:5:3660:C:C4	2.97	0.53
67:5:4489:G:O6	67:5:4708:A:N6	2.41	0.53
73:8:131:G:N2	73:8:132:G:N3	2.57	0.53
76:9:377:G:C2	76:9:378:U:C5	2.97	0.53
76:9:942:G:C4	76:9:985:G:N2	2.76	0.53
76:9:1427:C:C2	76:9:1429:G:N7	2.76	0.53
81:B:347:LEU:N	81:B:347:LEU:HD12	2.23	0.53
83:CC:93:ILE:O	83:CC:96:PHE:HB3	2.09	0.53
6:D:56:THR:HG22	6:D:57:ASN:H	1.73	0.53
7:e:58:ILE:CD1	67:5:2319:C:C4	2.92	0.53
10:b:117:ARG:NH2	67:5:1272:C:OP1	2.41	0.53
11:E:215:LEU:HD12	11:E:215:LEU:C	2.34	0.53
19:gg:58:ALA:HB2	53:QQ:102:GLU:OE1	2.07	0.53
28:ii:423:GLU:O	28:ii:424:TYR:HB2	2.08	0.53
43:n:5:TRP:CE2	76:9:1852:C:C5	2.96	0.53
44:NN:4:MET:HG3	76:9:1024:A:OP1	2.09	0.53
50:PP:118:GLU:OE1	59:SS:119:ALA:HB1	2.09	0.53
51:Q:91:ARG:HH11	67:5:1501:C:H1'	1.74	0.53
55:s:63:LYS:HB2	67:5:1960:A:H5'	1.91	0.53
67:5:1940:G:O6	67:5:4435:U:OP1	2.27	0.53
67:5:1985:G:O3'	67:5:2003:G:OP2	2.26	0.53
67:5:2439:G:C6	67:5:2440:U:C4	2.97	0.53
67:5:3677:U:C4	67:5:3678:G:C6	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:3693:U:C4	67:5:3694:U:C5	2.97	0.53
67:5:3895:G:N2	67:5:4566:U:C2	2.77	0.53
69:X:66:PRO:HB3	73:8:134:G:H5'	1.91	0.53
76:9:1243:U:O4	76:9:1494:U:C5	2.62	0.53
7:e:50:LYS:NZ	67:5:1885:G:OP1	2.36	0.52
11:E:260:ILE:HG13	11:E:261:LEU:N	2.24	0.52
23:hh:44:A:OP1	76:9:1838:U:OP2	2.27	0.52
24:bb:49:HIS:CD2	76:9:1014:G:HO2'	2.27	0.52
27:II:113:TYR:CE1	27:II:117:TYR:HB2	2.45	0.52
28:ii:149:ILE:CD1	28:ii:209:ALA:HB2	2.39	0.52
28:ii:193:LEU:CD1	76:9:488:U:H3	2.22	0.52
28:ii:311:ALA:O	28:ii:314:MET:HG2	2.09	0.52
32:jj:224:GLY:HA2	87:jj:700:GCP:PA	2.48	0.52
32:jj:255:ASN:ND2	76:9:463:C:O3'	2.41	0.52
32:jj:446:ASP:O	32:jj:455:VAL:HA	2.10	0.52
37:l:31:THR:HG23	37:l:32:GLY:N	2.25	0.52
50:PP:128:HIS:CE1	76:9:1522:A:H5"	2.43	0.52
53:QQ:143:LYS:HE2	76:9:1249:C:O3'	2.09	0.52
55:s:6:ARG:HH21	67:5:1957:U:H4'	1.72	0.52
55:s:55:MET:HB2	67:5:1998:A:OP1	2.10	0.52
59:SS:121:ARG:NH2	76:9:1611:G:OP1	2.42	0.52
67:5:86:U:O4	67:5:98:A:N7	2.42	0.52
67:5:180:C:C2	67:5:181:C:C5	2.97	0.52
67:5:710:G:N3	67:5:1288:G:N2	2.57	0.52
67:5:1842:G:N1	67:5:1843:A:C5	2.77	0.52
67:5:2450:G:N1	67:5:2451:A:C5	2.77	0.52
67:5:5006:U:O4	67:5:5041:G:H1'	2.09	0.52
76:9:1231:C:C4	76:9:1528:G:C2	2.97	0.52
76:9:1301:A:O2'	76:9:1303:C:OP1	2.24	0.52
76:9:1341:C:OP2	76:9:1687:C:H4'	2.09	0.52
77:ZZ:99:LEU:HD21	77:ZZ:102:LYS:N	2.25	0.52
2:C:8:ILE:HD12	2:C:149:GLU:OE1	2.09	0.52
4:DD:141:LYS:HE2	4:DD:145:GLN:O	2.09	0.52
13:FF:60:ARG:HA	76:9:1679:A:C2	2.45	0.52
19:gg:104:HIS:CG	19:gg:108:VAL:HG22	2.44	0.52
22:HH:46:THR:HG1	22:HH:63:PHE:C	2.16	0.52
34:k:33:LYS:NZ	67:5:2695:A:OP2	2.35	0.52
34:k:61:PRO:HG2	34:k:64:LEU:HB2	1.92	0.52
41:MM:26:LEU:HD13	41:MM:31:LEU:HD21	1.90	0.52
41:MM:104:VAL:HG21	76:9:1283:C:C6	2.44	0.52
47:OO:37:PHE:HE1	47:OO:107:THR:O	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:OO:95:ILE:HD11	47:OO:126:ILE:HD12	1.91	0.52
50:PP:77:LYS:HB2	76:9:1298:G:P	2.50	0.52
53:QQ:39:LEU:HD23	53:QQ:42:ILE:CD1	2.39	0.52
55:s:134:LYS:N	55:s:134:LYS:HD2	2.25	0.52
56:RR:3:ARG:NH2	76:9:1454:A:O5'	2.42	0.52
64:V:91:LYS:HE2	64:V:91:LYS:HA	1.90	0.52
65:VV:45:ARG:HA	79:AA:185:MET:O	2.09	0.52
67:5:1480:C:H2'	67:5:1483:C:H42	1.73	0.52
67:5:1604:G:N1	67:5:1605:G:C6	2.77	0.52
67:5:1771:U:H2'	67:5:1772:C:C6	2.43	0.52
67:5:1863:U:C2	67:5:1872:G:N2	2.77	0.52
67:5:1922:G:N2	67:5:2063:G:C4	2.77	0.52
67:5:2301:G:N2	67:5:2302:C:C2	2.77	0.52
67:5:2381:A:C2	67:5:2425:U:C5	2.96	0.52
67:5:2553:A:O4'	67:5:2553:A:N3	2.42	0.52
69:X:105:ASN:OD1	69:X:108:GLN:NE2	2.42	0.52
76:9:1341:C:H4'	76:9:1342:U:O5'	2.08	0.52
76:9:1683:C:H1'	84:cc:23:SER:HB2	1.90	0.52
76:9:1746:U:C4	76:9:1789:G:N2	2.78	0.52
81:B:248:LEU:CD1	81:B:249:ARG:HG3	2.39	0.52
84:cc:29:GLN:HA	84:cc:45:ASN:HA	1.89	0.52
11:E:126:ARG:NH2	67:5:959:G:C6	2.76	0.52
13:FF:63:LYS:HD2	13:FF:144:LEU:HD11	1.92	0.52
14:ff:103:LEU:CG	41:MM:60:MET:HB3	2.38	0.52
15:F:162:ASN:C	15:F:163:LYS:HG3	2.34	0.52
18:GG:103:ASP:O	18:GG:106:LEU:HD12	2.09	0.52
19:gg:16:GLY:O	19:gg:35:SER:OG	2.27	0.52
19:gg:245:ARG:NH2	19:gg:312:VAL:HG11	2.25	0.52
22:HH:158:LEU:O	22:HH:190:PRO:HD2	2.09	0.52
32:jj:381:PRO:HA	32:jj:384:LYS:HG2	1.91	0.52
35:KK:26:ASP:OD1	35:KK:28:HIS:CE1	2.63	0.52
44:NN:34:LYS:NZ	44:NN:74:ILE:HG23	2.25	0.52
47:OO:41:PHE:HZ	76:9:973:C:HO2'	1.54	0.52
53:QQ:140:ARG:CZ	76:9:1339:U:OP1	2.58	0.52
55:s:85:ASN:HA	67:5:2021:G:C5'	2.39	0.52
63:UU:30:LYS:NZ	76:9:1448:A:P	2.83	0.52
67:5:94:A:C5	67:5:95:G:H1'	2.43	0.52
67:5:710:G:N3	67:5:1288:G:C2	2.78	0.52
67:5:1355:G:C6	67:5:1385:G:N1	2.77	0.52
67:5:1464:C:C2	67:5:1465:G:C8	2.98	0.52
67:5:1883:G:C4	67:5:1898:C:N4	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:2005:G:C6	67:5:2006:U:C5	2.98	0.52
67:5:2750:G:N2	67:5:2751:G:C4	2.76	0.52
67:5:3936:A:C6	67:5:4175:G:C6	2.98	0.52
76:9:545:A:N6	76:9:546:G:O6	2.42	0.52
76:9:1029:G:C2	76:9:1030:A:C8	2.98	0.52
76:9:1288:U:C2	76:9:1289:U:C5	2.98	0.52
79:AA:109:THR:O	79:AA:111:GLN:OE1	2.28	0.52
5:dd:29:GLY:HA2	76:9:1256:G:C2	2.45	0.52
8:EE:75:LYS:HZ2	76:9:122:G:P	2.26	0.52
13:FF:121:PRO:O	13:FF:146:ARG:HG3	2.10	0.52
16:g:13:TYR:CD1	67:5:2513:A:C2	2.97	0.52
19:gg:57:ARG:HG3	19:gg:58:ALA:H	1.74	0.52
27:II:23:LYS:NZ	76:9:439:A:OP2	2.33	0.52
28:ii:203:ARG:HG3	76:9:480:G:P	2.50	0.52
32:jj:280:VAL:HG23	32:jj:297:ALA:HA	1.90	0.52
32:jj:376:LYS:HE3	32:jj:396:PHE:CD1	2.43	0.52
53:QQ:37:ARG:NE	61:TT:7:LYS:O	2.43	0.52
59:SS:55:ARG:HH12	77:ZZ:83:LEU:N	2.07	0.52
59:SS:137:LYS:HD2	76:9:1520:G:OP2	2.10	0.52
67:5:301:G:C6	67:5:302:C:N4	2.78	0.52
67:5:1174:G:C2	67:5:1175:A:C8	2.97	0.52
67:5:1433:A:C6	67:5:1434:G:H1'	2.44	0.52
67:5:1545:G:N1	67:5:1546:C:N4	2.58	0.52
67:5:1684:A:C4	67:5:1685:G:C8	2.97	0.52
67:5:1980:U:O2	67:5:1982:G:C8	2.62	0.52
67:5:2532:C:C2	67:5:2533:C:C5	2.97	0.52
67:5:3779:A:N3	67:5:3816:A:N6	2.57	0.52
67:5:4448:G:H5"	67:5:4449:A:H5'	1.92	0.52
67:5:4541:G:N2	67:5:4545:G:C5	2.77	0.52
67:5:4630:G:N3	67:5:4631:G:C8	2.78	0.52
69:X:96:LEU:HB2	69:X:138:VAL:HB	1.89	0.52
76:9:1250:A:O3'	76:9:1490:G:N3	2.42	0.52
76:9:1328:G:C5	76:9:1329:U:C4	2.96	0.52
76:9:1566:G:C2	76:9:1569:A:N7	2.77	0.52
81:B:49:TYR:OH	81:B:168:MET:HE1	2.10	0.52
4:DD:43:PRO:O	4:DD:45:ARG:N	2.40	0.52
12:f:47:CYS:SG	12:f:72:GLY:C	2.93	0.52
18:GG:142:ARG:NH2	18:GG:178:ARG:O	2.42	0.52
19:gg:16:GLY:HA3	19:gg:36:ARG:HB2	1.90	0.52
32:jj:568:CYS:SG	32:jj:578:SER:OG	2.67	0.52
33:J:62:ILE:HG21	33:J:68:ILE:HD11	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:n:15:ARG:HH21	43:n:15:ARG:HG2	1.74	0.52
50:PP:93:MET:SD	50:PP:106:GLU:HB3	2.49	0.52
59:SS:71:MET:O	59:SS:97:GLN:HB2	2.10	0.52
61:TT:91:HIS:CE1	76:9:1664:A:O3'	2.63	0.52
67:5:28:C:C2	67:5:55:G:N2	2.78	0.52
67:5:127:G:C4	67:5:128:C:C5	2.98	0.52
67:5:957:G:N7	67:5:958:G:C6	2.78	0.52
67:5:1245:C:C4	67:5:1246:G:N7	2.78	0.52
67:5:2389:A:C2	67:5:2390:G:C4	2.97	0.52
67:5:2474:G:O2'	67:5:2475:G:O5'	2.28	0.52
67:5:2553:A:H1'	67:5:2554:U:O4'	2.10	0.52
67:5:2580:U:OP1	75:Z:36:ARG:NH2	2.39	0.52
67:5:2832:A:C6	67:5:2833:A:N7	2.77	0.52
67:5:3909:C:C5	67:5:3910:C:C5	2.98	0.52
67:5:4523:A:C5	67:5:4559:A:C6	2.98	0.52
67:5:4771:C:N3	67:5:4863:G:C6	2.77	0.52
72:Y:42:TYR:CG	72:Y:119:LEU:HD23	2.44	0.52
75:Z:77:TYR:HB3	82:c:39:ARG:HD2	1.92	0.52
76:9:54:A:C5	76:9:451:G:N2	2.78	0.52
76:9:1534:C:C2'	76:9:1599:U:O4	2.58	0.52
2:C:110:ARG:CZ	2:C:113:ARG:NH1	2.72	0.52
2:C:110:ARG:HA	42:N:204:ARG:HH22	1.75	0.52
4:DD:98:ALA:O	4:DD:102:ALA:HB3	2.09	0.52
6:D:158:LYS:CE	70:7:46:C:OP1	2.57	0.52
13:FF:52:SER:HA	53:QQ:50:LYS:CE	2.39	0.52
48:P:78:TRP:CD1	48:P:79:THR:N	2.78	0.52
49:p:4:ARG:NH1	67:5:1554:A:OP2	2.42	0.52
50:PP:97:TYR:CD1	50:PP:102:PHE:CZ	2.98	0.52
55:s:146:LYS:O	55:s:153:GLU:N	2.35	0.52
56:RR:16:ILE:HG22	56:RR:24:LEU:CD1	2.29	0.52
58:t:37:LEU:HD22	58:t:69:ALA:H	1.74	0.52
58:t:77:ALA:CB	58:t:132:ILE:HG12	2.39	0.52
59:SS:15:VAL:HG22	59:SS:68:ILE:HD11	1.92	0.52
59:SS:130:ARG:HB2	59:SS:136:THR:HG23	1.92	0.52
61:TT:75:MET:O	61:TT:79:TYR:CD2	2.63	0.52
67:5:64:A:N7	67:5:109:G:C6	2.78	0.52
67:5:71:C:N4	67:5:73:A:C4	2.78	0.52
67:5:100:C:O2	67:5:100:C:O4'	2.24	0.52
67:5:707:C:C2	67:5:1291:G:N2	2.78	0.52
67:5:746:A:O2'	67:5:747:A:OP2	2.21	0.52
67:5:4111:U:H2'	67:5:4112:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4133:C:N3	67:5:4152:G:C6	2.78	0.52
67:5:4613:C:C4	67:5:4614:G:C8	2.98	0.52
67:5:4771:C:O2	67:5:4864:U:N3	2.42	0.52
68:WW:68:ARG:HD3	83:CC:256:TRP:CE2	2.45	0.52
73:8:13:G:C2	73:8:14:U:C5	2.98	0.52
76:9:1121:G:C2	76:9:1122:A:C8	2.97	0.52
76:9:1213:C:H41	76:9:1682:C:C2'	2.23	0.52
79:AA:176:TRP:HZ3	79:AA:177:MET:HE2	1.74	0.52
3:d:26:THR:HG23	3:d:26:THR:O	2.10	0.52
4:DD:12:VAL:HG21	5:dd:34:TYR:O	2.10	0.52
4:DD:175:VAL:CG1	4:DD:182:LEU:HB2	2.40	0.52
19:gg:297:THR:HG22	19:gg:311:GLN:OE1	2.09	0.52
24:bb:42:LYS:N	24:bb:42:LYS:HD2	2.24	0.52
28:ii:37:LEU:HD13	28:ii:78:VAL:HG21	1.92	0.52
32:jj:304:VAL:N	32:jj:305:PRO:CD	2.73	0.52
46:o:85:ILE:CG2	46:o:86:LYS:N	2.72	0.52
50:PP:102:PHE:CZ	76:9:1298:G:OP1	2.62	0.52
55:s:37:SER:CB	67:5:2000:G:O6	2.57	0.52
58:t:114:ARG:HG3	58:t:118:HIS:CD2	2.44	0.52
60:T:143:THR:O	60:T:143:THR:HG23	2.09	0.52
64:V:112:MET:HG2	64:V:113:LYS:N	2.24	0.52
67:5:95:G:C2	67:5:96:U:C6	2.97	0.52
67:5:289:C:C4	67:5:290:U:C4	2.97	0.52
67:5:964:A:H2'	67:5:965:G:O4'	2.09	0.52
67:5:1483:C:O4'	67:5:1483:C:O2	2.27	0.52
67:5:2600:A:O4'	67:5:2601:A:C2	2.63	0.52
67:5:2810:U:O4	67:5:2811:G:C2	2.63	0.52
67:5:4195:G:N2	67:5:4222:G:OP1	2.37	0.52
74:YY:89:HIS:HB2	74:YY:93:ARG:HH22	1.74	0.52
75:Z:103:ASP:CG	75:Z:106:LEU:HD13	2.35	0.52
76:9:460:A:C6	76:9:470:G:C6	2.97	0.52
76:9:926:A:N6	76:9:1017:U:C4	2.78	0.52
76:9:1113:A:C6	76:9:1114:U:C4	2.98	0.52
76:9:1536:G:C2	76:9:1537:A:C5	2.98	0.52
77:ZZ:67:LEU:HD12	77:ZZ:67:LEU:N	2.24	0.52
82:c:45:LEU:CD2	82:c:104:ILE:HG12	2.39	0.52
4:DD:48:ILE:HG21	4:DD:86:LEU:HD12	1.92	0.52
4:DD:96:LEU:HD23	4:DD:190:LEU:HA	1.91	0.52
13:FF:30:ILE:HD11	13:FF:42:LYS:HD2	1.92	0.52
28:ii:98:GLY:C	28:ii:110:VAL:HG12	2.35	0.52
28:ii:254:VAL:HG11	28:ii:267:ALA:HB1	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:j:79:ARG:NH2	73:8:94:G:N1	2.57	0.52
32:jj:285:PHE:O	32:jj:292:PHE:HB3	2.09	0.52
32:jj:585:VAL:CG2	32:jj:589:GLN:HB2	2.40	0.52
35:KK:19:GLY:O	35:KK:71:LEU:CB	2.58	0.52
38:LL:42:LEU:HD21	76:9:291:G:N3	2.25	0.52
46:o:44:LYS:NZ	67:5:91:G:OP1	2.41	0.52
50:PP:81:ARG:HB3	50:PP:117:GLY:CA	2.40	0.52
55:s:18:ILE:HD12	55:s:68:HIS:CE1	2.44	0.52
55:s:43:ILE:HD13	55:s:187:LEU:HD21	1.91	0.52
57:S:30:MET:HE1	57:S:47:PHE:CD1	2.44	0.52
61:TT:107:LEU:HD23	61:TT:110:LEU:HD21	1.92	0.52
63:UU:40:ILE:HD11	63:UU:53:PRO:HB3	1.92	0.52
64:V:48:ARG:HB3	64:V:51:ARG:CD	2.39	0.52
67:5:382:G:N2	67:5:384:A:H3'	2.24	0.52
67:5:493:G:C6	67:5:494:C:C4	2.97	0.52
67:5:1190:C:H2'	67:5:1191:C:C6	2.44	0.52
67:5:1985:G:C2'	67:5:2003:G:OP2	2.57	0.52
67:5:2025:A:N3	67:5:2026:A:H1'	2.25	0.52
67:5:2268:A:N3	67:5:2270:G:N1	2.58	0.52
67:5:2542:G:C5	67:5:2543:A:N7	2.78	0.52
67:5:2635:U:C4	67:5:2636:U:C4	2.97	0.52
67:5:3724:A:N6	67:5:3725:G:C6	2.78	0.52
69:X:60:TYR:CE1	69:X:62:ARG:NH2	2.78	0.52
73:8:29:G:C2	73:8:30:U:C6	2.98	0.52
73:8:64:U:C2	73:8:65:A:C8	2.97	0.52
76:9:351:G:H2'	76:9:351:G:N3	2.25	0.52
76:9:460:A:C6	76:9:470:G:N1	2.78	0.52
76:9:469:A:C2	76:9:470:G:C8	2.98	0.52
76:9:875:A:C6	76:9:876:C:C4	2.97	0.52
76:9:1271:C:C5	76:9:1272:C:C5	2.97	0.52
76:9:1560:U:O2'	76:9:1583:C:H4'	2.10	0.52
76:9:1676:U:H2'	76:9:1677:U:O4'	2.10	0.52
80:aa:102:ARG:C	80:aa:102:ARG:HD3	2.35	0.52
7:e:103:VAL:O	7:e:108:ARG:NH2	2.42	0.52
13:FF:68:ILE:HD11	13:FF:109:LEU:CD2	2.39	0.52
15:F:115:GLN:HG3	51:Q:3:VAL:HG22	1.90	0.52
18:GG:154:ARG:NE	76:9:77:A:N7	2.57	0.52
20:G:308:LYS:O	20:G:312:LYS:HB2	2.10	0.52
27:II:69:SER:HB2	38:LL:21:LYS:HE2	1.92	0.52
28:ii:319:ILE:HD12	28:ii:412:ILE:CD1	2.35	0.52
32:jj:255:ASN:OD1	76:9:464:A:N7	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:J:119:TYR:CZ	33:J:121:PRO:HA	2.45	0.52
34:k:56:LEU:HD23	34:k:56:LEU:C	2.34	0.52
41:MM:51:VAL:CG1	41:MM:109:VAL:HB	2.39	0.52
56:RR:17:ILE:HG12	56:RR:24:LEU:CD1	2.40	0.52
59:SS:117:ILE:O	59:SS:118:ARG:HB2	2.09	0.52
61:TT:60:THR:HG23	61:TT:75:MET:HG3	1.91	0.52
61:TT:63:HIS:HB2	61:TT:75:MET:HE1	1.91	0.52
66:W:115:ALA:O	66:W:119:LYS:HG3	2.10	0.52
67:5:106:A:H8	67:5:106:A:O5'	1.92	0.52
67:5:1356:U:C2	67:5:1357:C:C5	2.98	0.52
67:5:1681:G:N2	67:5:1682:A:C4	2.78	0.52
67:5:1842:G:C2	67:5:1843:A:C4	2.97	0.52
67:5:2045:G:N2	67:5:2046:G:O6	2.41	0.52
67:5:2599:G:N1	67:5:2600:A:N6	2.58	0.52
67:5:2888:G:C2	67:5:3614:G:C2	2.98	0.52
67:5:4205:A:C4	67:5:4375:C:N4	2.78	0.52
70:7:40:U:C4	70:7:42:A:N6	2.78	0.52
76:9:309:G:O2'	76:9:310:C:O5'	2.28	0.52
76:9:322:C:H42	76:9:329:G:N2	2.08	0.52
76:9:1117:C:O2'	76:9:1118:C:O4'	2.27	0.52
76:9:1473:G:C2	76:9:1476:A:OP2	2.62	0.52
76:9:1531:A:H4'	76:9:1605:G:H5'	1.91	0.52
79:AA:85:ARG:CZ	79:AA:201:LEU:O	2.58	0.52
81:B:287:ILE:HG13	81:B:287:ILE:O	2.09	0.52
82:c:54:ALA:HA	82:c:57:LYS:HE2	1.91	0.52
1:A:200:ARG:NE	67:5:3651:A:OP1	2.41	0.52
9:ee:112:ASN:HA	9:ee:116:VAL:HG12	1.91	0.52
32:jj:215:VAL:HA	32:jj:316:LEU:O	2.10	0.52
32:jj:304:VAL:HG12	32:jj:308:ILE:HD11	1.92	0.52
36:L:167:ARG:O	78:a:97:ALA:HB1	2.10	0.52
48:P:15:CYS:SG	48:P:150:LEU:HD12	2.50	0.52
61:TT:89:PRO:HG2	76:9:1665:G:OP2	2.10	0.52
63:UU:67:LYS:O	76:9:1336:C:O2'	2.28	0.52
64:V:83:ARG:HD2	64:V:98:PHE:CD2	2.45	0.52
67:5:167:C:C2	67:5:269:G:C2	2.98	0.52
67:5:1068:G:C2	67:5:1069:G:C5	2.97	0.52
67:5:1723:A:C2	67:5:1840:G:C2	2.98	0.52
67:5:1961:G:H2'	67:5:2024:G:N2	2.25	0.52
67:5:2109:A:C6	67:5:2110:G:C4	2.98	0.52
67:5:2874:U:OP2	67:5:2875:C:N4	2.40	0.52
67:5:3638:G:C2	67:5:3651:A:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:3865:A:C6	67:5:3866:C:C4	2.98	0.52
67:5:3913:G:N2	67:5:3915:U:C2	2.78	0.52
67:5:4897:G:N2	67:5:4923:U:O2	2.39	0.52
68:WW:55:ASP:OD2	68:WW:57:ARG:HB2	2.10	0.52
76:9:66:G:C5	76:9:68:A:C8	2.98	0.52
76:9:107:A:N6	76:9:355:G:O6	2.43	0.52
76:9:196:C:C2	76:9:204:G:C2	2.98	0.52
76:9:222:U:C2	76:9:223:C:C5	2.98	0.52
76:9:1683:C:N1	84:cc:23:SER:HB2	2.24	0.52
4:DD:54:ARG:O	4:DD:58:VAL:HG13	2.10	0.51
4:DD:55:THR:HA	4:DD:58:VAL:CG2	2.38	0.51
10:b:70:GLU:HA	10:b:73:LYS:HD2	1.92	0.51
13:FF:33:ILE:HG23	84:cc:11:LEU:CD1	2.40	0.51
18:GG:55:GLY:H	18:GG:109:LEU:HD23	1.75	0.51
18:GG:67:VAL:CG1	18:GG:99:GLY:HA2	2.41	0.51
20:G:126:ARG:NH1	20:G:296:GLY:N	2.58	0.51
26:i:63:VAL:HG12	26:i:63:VAL:O	2.10	0.51
29:I:164:LYS:HD3	29:I:165:ILE:H	1.74	0.51
32:jj:346:LYS:O	32:jj:614:ARG:NH1	2.43	0.51
32:jj:539:GLU:O	32:jj:623:THR:O	2.28	0.51
38:LL:61:PRO:HA	38:LL:66:VAL:HG13	1.92	0.51
46:o:45:GLN:HE22	46:o:51:GLN:HA	1.74	0.51
50:PP:121:ILE:CD1	50:PP:125:PRO:HD3	2.40	0.51
58:t:42:VAL:HG12	58:t:46:ILE:CD1	2.40	0.51
67:5:39:A:C2	78:a:40:HIS:CE1	2.98	0.51
67:5:469:C:OP2	67:5:684:G:N2	2.40	0.51
67:5:2363:A:C2	67:5:3860:A:C5	2.98	0.51
67:5:2833:A:C5	67:5:2834:C:C4	2.98	0.51
67:5:3710:G:N2	67:5:3740:G:O6	2.43	0.51
72:Y:57:VAL:HG23	72:Y:63:LYS:HA	1.90	0.51
76:9:376:A:C4	76:9:377:G:C8	2.99	0.51
76:9:411:G:C2	76:9:412:G:C4	2.98	0.51
76:9:732:U:N3	76:9:733:C:N4	2.58	0.51
76:9:1087:A:N6	76:9:1861:G:C5	2.78	0.51
76:9:1255:G:C8	76:9:1257:G:C8	2.98	0.51
78:a:11:LEU:HA	78:a:14:HIS:HD2	1.75	0.51
4:DD:25:LEU:HB3	4:DD:34:TYR:HE1	1.76	0.51
4:DD:123:LEU:HA	4:DD:126:ILE:HD11	1.92	0.51
5:dd:23:VAL:O	35:KK:65:ARG:HG3	2.10	0.51
8:EE:114:ILE:CD1	8:EE:119:ALA:HB2	2.41	0.51
18:GG:180:VAL:CG1	18:GG:185:LEU:HD21	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:gg:21:ILE:HG21	19:gg:31:ILE:HD11	1.92	0.51
23:hh:53:C:O2'	23:hh:54:U:O5'	2.27	0.51
26:i:8:ALA:O	26:i:13:LYS:HD2	2.09	0.51
28:ii:146:PHE:HD1	28:ii:223:GLY:HA3	1.74	0.51
32:jj:220:HIS:HA	32:jj:337:GLN:OE1	2.11	0.51
35:KK:15:LEU:HD23	35:KK:79:LEU:HD11	1.92	0.51
35:KK:84:HIS:HB2	41:MM:27:ILE:HG23	1.92	0.51
50:PP:118:GLU:HG2	59:SS:120:HIS:HB3	1.91	0.51
63:UU:40:ILE:HD13	63:UU:53:PRO:HD3	1.91	0.51
67:5:1387:A:N6	78:a:74:ASN:OD1	2.42	0.51
67:5:1547:A:N6	67:5:1548:G:N3	2.59	0.51
67:5:1797:G:N2	67:5:1798:G:C4	2.78	0.51
67:5:2525:U:C2	67:5:2528:G:N1	2.78	0.51
67:5:2839:U:O4	67:5:2840:A:N6	2.42	0.51
67:5:3655:C:C4	67:5:3656:A:N7	2.78	0.51
67:5:4192:A:C4	67:5:4193:C:C5	2.98	0.51
67:5:4262:C:C2	67:5:4263:C:C5	2.98	0.51
67:5:4279:A:C5	67:5:4281:A:N6	2.79	0.51
67:5:4415:A:N7	67:5:4416:G:C8	2.78	0.51
67:5:4415:A:C2	67:5:4428:A:C4	2.97	0.51
67:5:4907:G:N1	67:5:4913:G:C2	2.78	0.51
67:5:5038:A:C2	67:5:5039:U:C2	2.98	0.51
70:7:117:G:C2	70:7:118:C:C6	2.98	0.51
76:9:192:C:C4	76:9:208:G:N2	2.78	0.51
76:9:369:C:H1'	76:9:370:G:OP1	2.10	0.51
76:9:658:U:O4	76:9:1165:G:H2'	2.10	0.51
76:9:664:A:H1'	76:9:1164:G:N2	2.26	0.51
76:9:1168:G:N2	76:9:1192:U:C2	2.78	0.51
76:9:1219:C:H2'	76:9:1220:A:C8	2.45	0.51
76:9:1548:G:C6	76:9:1586:U:C2	2.98	0.51
77:ZZ:103:HIS:CE1	77:ZZ:104:ARG:HE	2.27	0.51
80:aa:23:CYS:HB3	80:aa:28:ARG:H	1.76	0.51
82:c:45:LEU:HD23	82:c:96:ILE:HD12	1.93	0.51
83:CC:215:MET:O	83:CC:218:GLY:N	2.41	0.51
3:d:57:MET:O	3:d:59:THR:N	2.43	0.51
10:b:11:ASN:OD1	10:b:14:ARG:NH2	2.41	0.51
18:GG:212:LEU:O	18:GG:216:ARG:HG2	2.10	0.51
19:gg:19:THR:OG1	19:gg:66:VAL:O	2.24	0.51
28:ii:42:LYS:HB3	67:5:3761:C:O2'	2.11	0.51
28:ii:226:LEU:HD23	28:ii:236:LEU:CD2	2.41	0.51
30:j:19:CYS:HB3	30:j:22:CYS:SG	2.50	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:JJ:115:PHE:CG	31:JJ:123:ILE:HG22	2.45	0.51
31:JJ:120:ALA:CB	31:JJ:126:ALA:HB2	2.40	0.51
37:l:8:ARG:HA	37:l:11:ARG:HH12	1.76	0.51
43:n:5:TRP:CZ2	76:9:1852:C:C6	2.98	0.51
47:OO:93:LEU:HD11	47:OO:124:MET:HE2	1.92	0.51
56:RR:20:TYR:HB3	56:RR:23:ARG:HD2	1.92	0.51
61:TT:123:LEU:CD2	61:TT:128:GLN:HB2	2.41	0.51
67:5:478:G:C2	67:5:677:G:C2	2.99	0.51
67:5:496:G:O6	67:5:659:G:C6	2.64	0.51
67:5:496:G:O6	67:5:659:G:O6	2.28	0.51
67:5:1454:G:N2	67:5:1455:G:C4	2.79	0.51
67:5:1576:G:C2	67:5:1578:U:C2	2.98	0.51
67:5:1608:G:N1	67:5:1609:U:C4	2.78	0.51
71:XX:2:GLY:O	71:XX:5:ARG:NH2	2.43	0.51
72:Y:88:GLU:OE2	72:Y:92:GLY:HA2	2.11	0.51
76:9:141:A:C2	76:9:177:G:N2	2.74	0.51
76:9:216:C:C4	76:9:217:A:N7	2.78	0.51
76:9:1010:G:N2	76:9:1011:A:C6	2.78	0.51
76:9:1083:A:O2'	76:9:1084:A:OP1	2.22	0.51
76:9:1461:G:N2	76:9:1464:C:H5"	2.25	0.51
76:9:1749:G:N2	76:9:1786:U:H1'	2.26	0.51
78:a:100:ILE:HG12	78:a:123:ILE:HB	1.92	0.51
82:c:70:GLY:HA3	82:c:105:ILE:HA	1.92	0.51
2:C:13:GLU:OE2	2:C:161:TYR:OH	2.16	0.51
15:F:195:THR:O	15:F:197:GLY:N	2.42	0.51
17:BB:194:GLY:O	17:BB:210:VAL:HG11	2.10	0.51
18:GG:58:LYS:HG3	18:GG:59:GLN:HE22	1.75	0.51
18:GG:193:ALA:O	18:GG:196:LYS:HB2	2.10	0.51
31:JJ:6:SER:OG	31:JJ:7:TRP:N	2.41	0.51
31:JJ:28:GLU:OE1	31:JJ:40:LYS:NZ	2.40	0.51
32:jj:221:VAL:HA	32:jj:299:GLY:O	2.11	0.51
32:jj:339:ARG:NH2	32:jj:539:GLU:HB2	2.25	0.51
53:QQ:12:VAL:HG11	53:QQ:91:ALA:N	2.26	0.51
55:s:44:ARG:HG2	67:5:1997:U:OP1	2.11	0.51
58:t:61:LYS:HG3	58:t:74:VAL:HG21	1.93	0.51
60:T:34:TYR:CE1	60:T:98:HIS:CE1	2.98	0.51
67:5:663:G:N2	67:5:664:G:C4	2.78	0.51
67:5:1277:G:N2	67:5:1278:C:C6	2.78	0.51
67:5:1338:G:N2	78:a:17:HIS:CG	2.79	0.51
67:5:2644:G:C6	67:5:2645:G:N7	2.79	0.51
67:5:3662:A:C4	67:5:3664:G:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:3724:A:C6	67:5:3725:G:C6	2.98	0.51
70:7:22:A:C6	70:7:23:A:C6	2.98	0.51
72:Y:54:GLU:OE1	72:Y:54:GLU:N	2.44	0.51
76:9:45:A:N1	76:9:480:G:O2'	2.39	0.51
76:9:874:G:N2	76:9:875:A:C8	2.78	0.51
76:9:1115:U:O2'	76:9:1116:C:P	2.69	0.51
79:AA:207:PRO:HA	79:AA:210:ILE:HB	1.93	0.51
84:cc:13:ARG:NH2	84:cc:55:VAL:HG23	2.25	0.51
7:e:114:ARG:NH1	7:e:117:GLN:OE1	2.44	0.51
13:FF:77:MET:CG	13:FF:77:MET:O	2.59	0.51
16:g:54:ARG:HH21	67:5:2653:C:P	2.33	0.51
19:gg:249:CYS:SG	19:gg:289:LEU:HD12	2.51	0.51
28:ii:193:LEU:HD21	28:ii:197:LYS:HZ2	1.74	0.51
28:ii:193:LEU:HD21	28:ii:197:LYS:NZ	2.26	0.51
32:jj:540:HIS:N	32:jj:541:LYS:HA	2.24	0.51
66:W:41:LEU:HD12	66:W:42:SER:N	2.25	0.51
67:5:38:A:H8	67:5:38:A:O5'	1.93	0.51
67:5:1478:C:C2	67:5:1488:G:N2	2.78	0.51
67:5:1568:C:C2	67:5:1569:U:C5	2.99	0.51
67:5:2438:A:C6	67:5:2531:C:C6	2.98	0.51
67:5:2511:A:C2	67:5:2514:G:C8	2.98	0.51
67:5:2650:G:N2	67:5:2684:C:C2	2.79	0.51
67:5:3920:U:O4	67:5:3921:U:O4	2.29	0.51
72:Y:115:ARG:O	72:Y:119:LEU:HD13	2.10	0.51
73:8:131:G:C2	73:8:132:G:C4	2.98	0.51
76:9:1010:G:H2'	76:9:1011:A:H8	1.75	0.51
76:9:1245:G:C6	76:9:1255:G:C6	2.99	0.51
76:9:1332:A:N6	76:9:1493:C:N4	2.58	0.51
80:aa:38:LYS:O	80:aa:71:LEU:N	2.43	0.51
82:c:17:ARG:HA	82:c:20:LEU:HD23	1.92	0.51
1:A:200:ARG:HG3	67:5:3651:A:OP1	2.10	0.51
2:C:321:ASN:ND2	67:5:1280:C:O2'	2.43	0.51
4:DD:73:VAL:HG21	4:DD:86:LEU:HD11	1.93	0.51
4:DD:177:LEU:N	4:DD:177:LEU:HD12	2.24	0.51
13:FF:52:SER:HA	53:QQ:50:LYS:HE3	1.92	0.51
13:FF:91:ARG:HA	13:FF:94:LYS:HE3	1.92	0.51
19:gg:138:CYS:SG	19:gg:141:THR:OG1	2.69	0.51
22:HH:135:PHE:HB3	22:HH:136:PRO:HD3	1.92	0.51
24:bb:6:ASP:OD1	24:bb:6:ASP:O	2.27	0.51
27:II:12:ARG:HE	27:II:18:ARG:CG	2.23	0.51
36:L:46:ILE:O	36:L:46:ILE:HG13	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:LL:12:LYS:NZ	38:LL:14:PRO:HA	2.25	0.51
45:O:160:ARG:NH2	67:5:4760:G:OP1	2.44	0.51
46:o:3:ASN:OD1	46:o:94:GLY:N	2.44	0.51
47:OO:71:PRO:O	47:OO:114:SER:CB	2.57	0.51
50:PP:34:MET:O	50:PP:42:ARG:CB	2.59	0.51
50:PP:79:HIS:CG	76:9:1514:G:HO2'	2.27	0.51
50:PP:98:ASN:OD1	50:PP:120:SER:HB2	2.11	0.51
51:Q:82:VAL:HG12	51:Q:83:VAL:N	2.24	0.51
54:R:53:LYS:HB3	54:R:54:PRO:HD2	1.91	0.51
56:RR:21:TYR:CE1	56:RR:61:ILE:HG21	2.45	0.51
61:TT:39:LEU:CD2	76:9:1540:G:H5'	2.40	0.51
61:TT:57:ALA:C	61:TT:107:LEU:HD11	2.36	0.51
67:5:731:G:C6	67:5:932:A:C4	2.99	0.51
67:5:1092:G:H2'	67:5:1093:C:H6	1.75	0.51
67:5:1332:C:H2'	67:5:1333:A:C8	2.45	0.51
67:5:1559:G:N2	67:5:1560:A:C4	2.79	0.51
67:5:1899:G:C6	67:5:1900:C:N4	2.78	0.51
67:5:3753:G:N1	67:5:3754:G:C5	2.79	0.51
67:5:3933:G:C2	67:5:3934:G:C8	2.99	0.51
67:5:4949:G:O4'	67:5:4949:G:N3	2.39	0.51
71:XX:68:LYS:HG2	71:XX:91:LEU:HD22	1.92	0.51
76:9:389:A:H2'	76:9:390:C:H6	1.74	0.51
76:9:958:G:C6	76:9:959:G:C6	2.98	0.51
76:9:1134:G:P	80:aa:6:ARG:HH12	2.33	0.51
76:9:1640:A:N7	76:9:1641:A:C8	2.78	0.51
79:AA:76:VAL:HG12	79:AA:87:VAL:HG12	1.92	0.51
4:DD:184:ILE:HG22	4:DD:186:VAL:HG23	1.92	0.51
4:DD:218:LEU:HD12	4:DD:218:LEU:O	2.11	0.51
7:e:86:GLU:OE1	7:e:86:GLU:N	2.44	0.51
13:FF:52:SER:O	13:FF:53:ALA:C	2.54	0.51
13:FF:74:ASN:ND2	76:9:1676:U:OP1	2.43	0.51
28:ii:36:SER:HB2	28:ii:124:LEU:HD21	1.92	0.51
28:ii:314:MET:CE	67:5:2009:A:H5'	2.41	0.51
28:ii:397:GLN:NE2	28:ii:401:GLN:OE1	2.44	0.51
33:J:127:GLY:HA3	67:5:4251:A:C6	2.45	0.51
35:KK:15:LEU:HD11	35:KK:71:LEU:HD22	1.93	0.51
53:QQ:46:THR:OG1	76:9:1592:C:H5"	2.10	0.51
53:QQ:51:LEU:HD21	53:QQ:81:ILE:HG23	1.92	0.51
54:R:149:LYS:HA	54:R:152:LYS:HD3	1.92	0.51
56:RR:48:ASN:CB	76:9:1453:C:O5'	2.59	0.51
56:RR:81:ARG:O	56:RR:84:TYR:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:T:118:GLU:HG3	60:T:119:ALA:N	2.26	0.51
63:UU:74:SER:CB	76:9:1338:G:C4'	2.89	0.51
66:W:97:LYS:HE3	76:9:1759:G:H5"	1.93	0.51
67:5:710:G:C2	67:5:1288:G:C2	2.99	0.51
67:5:909:G:C6	67:5:910:G:N7	2.79	0.51
67:5:1445:U:O2'	67:5:1446:C:OP1	2.28	0.51
67:5:1813:U:C2	67:5:1826:G:N2	2.77	0.51
67:5:1975:G:H4'	67:5:1984:A:H1'	1.91	0.51
67:5:3891:A:N1	67:5:3892:U:C2	2.78	0.51
67:5:4201:G:C2	67:5:4221:C:N4	2.79	0.51
67:5:4525:C:C2	67:5:4526:U:C6	2.99	0.51
67:5:4628:U:C2	67:5:4629:U:C5	2.99	0.51
68:WW:83:LEU:N	68:WW:83:LEU:HD22	2.26	0.51
76:9:122:G:C6	76:9:343:A:C6	2.99	0.51
76:9:349:A:H2'	76:9:350:C:C6	2.46	0.51
76:9:388:U:N3	76:9:389:A:N7	2.59	0.51
76:9:1182:A:N7	76:9:1183:A:H1'	2.26	0.51
76:9:1588:A:N1	76:9:1671:G:C2	2.79	0.51
4:DD:29:LEU:HB2	4:DD:34:TYR:CB	2.41	0.51
4:DD:74:GLN:HG3	4:DD:79:PHE:HB2	1.92	0.51
4:DD:184:ILE:CG2	4:DD:186:VAL:HG23	2.40	0.51
4:DD:217:ILE:HG13	4:DD:217:ILE:O	2.10	0.51
11:E:151:THR:HG22	11:E:152:ILE:N	2.26	0.51
17:BB:110:MET:O	17:BB:114:VAL:HG23	2.11	0.51
19:gg:135:LEU:HD22	19:gg:137:VAL:HG13	1.92	0.51
19:gg:239:LEU:HD23	19:gg:250:ALA:HA	1.92	0.51
24:bb:21:LYS:NZ	76:9:921:G:OP2	2.32	0.51
26:i:33:LEU:HD23	26:i:33:LEU:C	2.35	0.51
29:I:66:GLU:OE2	29:I:69:ARG:NH1	2.44	0.51
31:JJ:123:ILE:HG13	31:JJ:124:HIS:N	2.26	0.51
32:jj:292:PHE:CE2	32:jj:293:THR:O	2.63	0.51
32:jj:298:PRO:CD	32:jj:307:MET:HG3	2.41	0.51
32:jj:543:ILE:HD13	32:jj:586:LYS:HA	1.93	0.51
33:J:68:ILE:HG22	33:J:69:ALA:N	2.25	0.51
44:NN:124:ARG:O	44:NN:127:ARG:HG2	2.10	0.51
47:OO:103:ASN:HB3	47:OO:139:SER:OG	2.11	0.51
54:R:7:GLN:OE1	54:R:7:GLN:N	2.42	0.51
55:s:59:THR:HB	67:5:1961:G:C8	2.46	0.51
55:s:144:THR:HG1	55:s:156:SER:H	1.56	0.51
60:T:95:HIS:C	60:T:96:ILE:HG13	2.36	0.51
62:U:80:LYS:O	62:U:83:LEU:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:475:G:C2	67:5:476:G:C4	2.98	0.51
67:5:720:G:C2	67:5:721:G:C4	2.99	0.51
67:5:1523:A:C8	67:5:1653:A:N1	2.79	0.51
67:5:1818:G:H2'	67:5:1820:U:OP2	2.11	0.51
67:5:3722:G:N2	67:5:3732:A:C4	2.78	0.51
67:5:4626:A:N6	67:5:4669:A:OP2	2.43	0.51
68:WW:56:HIS:O	68:WW:57:ARG:HG3	2.10	0.51
76:9:38:A:N6	76:9:515:G:C6	2.78	0.51
76:9:1411:G:C6	76:9:1412:C:C4	2.99	0.51
79:AA:58:LEU:HD12	79:AA:174:MET:HE1	1.93	0.51
81:B:295:ASP:HB3	81:B:297:LYS:HZ3	1.75	0.51
4:DD:126:ILE:O	4:DD:129:SER:OG	2.12	0.51
11:E:136:PHE:HA	11:E:139:HIS:ND1	2.26	0.51
16:g:62:LYS:HE3	67:5:2517:A:H5'	1.92	0.51
17:BB:121:ILE:HG21	17:BB:164:ILE:CG2	2.39	0.51
20:G:189:LEU:HD22	20:G:255:VAL:HG13	1.93	0.51
22:HH:60:ILE:CG2	22:HH:92:VAL:HA	2.41	0.51
23:hh:50:G:C6	23:hh:51:A:N7	2.79	0.51
28:ii:422:MET:O	28:ii:423:GLU:C	2.54	0.51
32:jj:555:HIS:CD2	32:jj:612:MET:HA	2.46	0.51
33:J:101:ASP:OD2	33:J:102:THR:N	2.44	0.51
50:PP:81:ARG:CB	76:9:1621:U:O4	2.59	0.51
50:PP:128:HIS:NE2	76:9:1522:A:H5"	2.26	0.51
59:SS:132:ARG:HB3	59:SS:134:GLN:OE1	2.10	0.51
61:TT:37:VAL:HG11	61:TT:99:VAL:HG12	1.93	0.51
61:TT:48:TYR:N	76:9:1539:U:O2'	2.41	0.51
67:5:460:C:C2	67:5:697:G:N1	2.78	0.51
67:5:1626:G:N7	67:5:1642:A:H2	2.09	0.51
67:5:1990:A:C6	67:5:1991:A:C4	2.99	0.51
67:5:2328:G:C6	67:5:2329:U:C4	2.99	0.51
67:5:3639:U:C4	67:5:3640:U:C5	2.98	0.51
67:5:3639:U:N3	67:5:3640:U:C5	2.79	0.51
67:5:3773:U:O2	67:5:3775:A:C2	2.64	0.51
67:5:3903:A:C6	67:5:3904:G:N7	2.78	0.51
67:5:4185:G:C2	67:5:4186:A:C8	2.98	0.51
67:5:4361:U:C4	67:5:4362:A:N7	2.79	0.51
67:5:4513:A:C2	67:5:4514:G:C5	2.99	0.51
76:9:102:A:C6	76:9:357:C:C5	2.99	0.51
76:9:171:A:C4	76:9:173:A:C8	2.98	0.51
76:9:992:A:C2	76:9:993:G:C8	2.99	0.51
76:9:1398:G:C2	76:9:1399:C:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1460:C:N4	76:9:1461:G:O6	2.44	0.51
82:c:14:ILE:HG22	82:c:18:LEU:HD13	1.92	0.51
83:CC:135:GLY:O	83:CC:164:PRO:HA	2.11	0.51
5:dd:38:MET:HE2	5:dd:42:CYS:C	2.35	0.51
11:E:49:ASN:HB3	11:E:64:MET:CE	2.40	0.51
14:ff:128:ALA:HB3	41:MM:43:ASP:OD2	2.11	0.51
15:F:86:PRO:HG3	15:F:143:TYR:CZ	2.46	0.51
18:GG:143:LYS:HB2	76:9:145:G:OP1	2.10	0.51
19:gg:89:LEU:HB3	19:gg:99:ARG:O	2.11	0.51
22:HH:8:ILE:HD11	22:HH:16:PRO:HG3	1.92	0.51
22:HH:153:LEU:CD2	22:HH:155:LYS:HE3	2.41	0.51
28:ii:44:GLN:O	28:ii:48:VAL:HG23	2.11	0.51
29:I:7:ARG:HH22	67:5:4405:G:P	2.33	0.51
32:jj:298:PRO:HD2	32:jj:307:MET:HG3	1.92	0.51
32:jj:454:VAL:HG22	32:jj:503:ARG:HB2	1.93	0.51
32:jj:561:VAL:HA	32:jj:597:THR:HA	1.91	0.51
48:P:78:TRP:HD1	48:P:80:GLN:H	1.59	0.51
50:PP:34:MET:HE1	50:PP:46:SER:HA	1.93	0.51
50:PP:114:HIS:CE1	59:SS:117:ILE:CD1	2.94	0.51
60:T:34:TYR:HE2	60:T:93:ILE:HG23	1.76	0.51
64:V:107:ASN:C	64:V:107:ASN:OD1	2.53	0.51
65:VV:17:CYS:SG	65:VV:19:ALA:N	2.81	0.51
67:5:346:G:OP1	72:Y:8:THR:OG1	2.27	0.51
67:5:746:A:O2'	67:5:747:A:H8	1.94	0.51
67:5:1092:G:C6	67:5:1093:C:N4	2.79	0.51
67:5:1846:G:C4	67:5:1847:C:C5	2.99	0.51
67:5:1933:G:H8	67:5:1933:G:O5'	1.94	0.51
67:5:1980:U:C4	67:5:1982:G:OP2	2.63	0.51
67:5:2756:G:N1	67:5:2757:A:C6	2.79	0.51
67:5:3731:C:C2	67:5:3732:A:C8	2.98	0.51
67:5:4533:A:H2'	67:5:4534:G:H5'	1.92	0.51
67:5:4750:G:C2	67:5:4751:G:C5	2.99	0.51
67:5:4942:C:H3'	67:5:4942:C:O2	2.11	0.51
70:7:55:A:C5	70:7:56:G:C8	2.98	0.51
73:8:42:G:N2	73:8:43:A:C4	2.79	0.51
75:Z:11:VAL:HG11	75:Z:80:LEU:HD22	1.92	0.51
76:9:1099:G:C6	76:9:1100:A:N7	2.79	0.51
76:9:1179:G:N2	76:9:1182:A:OP2	2.44	0.51
76:9:1242:U:C6	76:9:1517:G:H1'	2.45	0.51
76:9:1567:G:C2	76:9:1568:C:N4	2.79	0.51
80:aa:90:GLU:OE1	80:aa:90:GLU:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:c:44:LYS:HD2	82:c:97:ILE:O	2.11	0.51
4:DD:92:ALA:O	4:DD:93:THR:CG2	2.59	0.50
4:DD:220:THR:HG23	4:DD:221:THR:N	2.25	0.50
5:dd:14:PHE:O	5:dd:18:SER:HB3	2.11	0.50
8:EE:252:ARG:HD2	8:EE:252:ARG:C	2.36	0.50
20:G:255:VAL:HG12	20:G:256:ALA:N	2.24	0.50
22:HH:70:LYS:HA	22:HH:73:GLN:NE2	2.26	0.50
28:ii:305:VAL:HG12	28:ii:409:ILE:HG21	1.93	0.50
32:jj:367:TRP:CZ3	32:jj:398:PRO:HB2	2.46	0.50
34:k:40:ARG:NE	34:k:41:TYR:OH	2.44	0.50
36:L:197:LYS:NZ	67:5:4359:U:OP1	2.38	0.50
37:l:2:SER:N	67:5:2406:G:N7	2.60	0.50
39:M:108:ASP:HB3	45:O:199:HIS:CE1	2.46	0.50
53:QQ:38:PRO:O	53:QQ:42:ILE:HG13	2.11	0.50
55:s:98:ILE:HG22	55:s:102:LEU:CD1	2.40	0.50
62:U:55:ASN:O	62:U:58:GLY:N	2.42	0.50
63:UU:27:ARG:HA	63:UU:84:ILE:HD12	1.93	0.50
63:UU:35:VAL:HG22	63:UU:107:GLU:OE1	2.11	0.50
67:5:482:G:C2	67:5:673:C:C2	2.98	0.50
67:5:930:G:HO2'	67:5:931:C:P	2.33	0.50
67:5:1302:U:C5	67:5:1303:A:N7	2.79	0.50
67:5:1454:G:C2	67:5:1455:G:C8	2.99	0.50
67:5:1499:C:C4	67:5:1500:A:C5	2.99	0.50
67:5:1505:C:N4	67:5:1506:G:O6	2.44	0.50
67:5:1769:G:C2	67:5:1770:A:H1'	2.46	0.50
67:5:1931:C:N4	67:5:2040:A:O2'	2.44	0.50
67:5:2406:G:C6	67:5:2785:C:N4	2.79	0.50
67:5:2411:C:C2	67:5:2434:G:N2	2.79	0.50
67:5:2438:A:C2	67:5:2441:C:C5	2.99	0.50
67:5:2756:G:C2	67:5:2757:A:C5	2.99	0.50
69:X:127:LEU:HD12	69:X:127:LEU:C	2.36	0.50
76:9:118:C:C5	76:9:119:U:C6	2.99	0.50
76:9:183:G:N2	76:9:184:G:C8	2.80	0.50
76:9:1004:U:C2	76:9:1005:G:C8	2.99	0.50
76:9:1196:A:C5	76:9:1197:G:C8	2.99	0.50
76:9:1338:G:H2'	76:9:1339:U:C6	2.45	0.50
76:9:1368:U:H5"	76:9:1467:C:H5'	1.92	0.50
81:B:24:ARG:HB3	81:B:28:LYS:NZ	2.26	0.50
4:DD:96:LEU:HD11	4:DD:131:ALA:HB2	1.93	0.50
8:EE:188:ASN:HB3	8:EE:191:ARG:HG3	1.93	0.50
13:FF:76:MET:SD	13:FF:173:LEU:HD11	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:FF:122:ARG:HA	13:FF:146:ARG:HD2	1.94	0.50
20:G:139:VAL:HG21	20:G:238:LYS:HE3	1.93	0.50
27:II:8:TRP:HA	27:II:18:ARG:NE	2.26	0.50
28:ii:424:TYR:HD1	67:5:2009:A:H61	1.59	0.50
30:j:84:PRO:HD3	73:8:94:G:C6	2.46	0.50
31:JJ:140:GLN:HE21	31:JJ:141:VAL:N	2.09	0.50
33:J:32:ARG:HD2	33:J:35:ARG:NH1	2.25	0.50
33:J:141:ILE:HD11	70:7:55:A:H2	1.77	0.50
35:KK:15:LEU:CD1	35:KK:71:LEU:HD22	2.41	0.50
35:KK:43:LEU:C	35:KK:43:LEU:HD12	2.36	0.50
51:Q:150:ARG:NH1	67:5:1498:G:OP1	2.45	0.50
55:s:21:LEU:HD21	55:s:90:PHE:CZ	2.46	0.50
58:t:47:ALA:O	58:t:50:THR:OG1	2.28	0.50
59:SS:15:VAL:CG2	59:SS:20:ILE:HD11	2.40	0.50
65:VV:46:PHE:CE2	65:VV:48:GLY:HA2	2.46	0.50
67:5:457:G:C2	67:5:458:C:C2	2.99	0.50
67:5:1740:C:N3	67:5:1785:C:N4	2.59	0.50
67:5:1818:G:O2'	67:5:1819:G:P	2.70	0.50
67:5:2085:G:C2	67:5:2086:G:C8	2.99	0.50
67:5:3889:G:C2	67:5:4720:C:N4	2.79	0.50
67:5:3923:A:C6	67:5:4381:A:N6	2.80	0.50
67:5:4754:G:C2	67:5:4755:G:C8	2.98	0.50
67:5:4906:C:C2	67:5:4916:G:C2	2.99	0.50
70:7:56:G:C8	70:7:57:C:C5	2.98	0.50
76:9:683:G:N2	76:9:1023:A:C4	2.80	0.50
76:9:1004:U:N3	76:9:1005:G:N7	2.59	0.50
76:9:1295:A:H3'	76:9:1296:U:H5	1.75	0.50
76:9:1640:A:C6	76:9:1641:A:H1'	2.46	0.50
2:C:80:ARG:NH2	67:5:1645:C:P	2.84	0.50
4:DD:76:ARG:HA	35:KK:34:GLU:OE2	2.10	0.50
4:DD:122:VAL:O	4:DD:126:ILE:HG12	2.11	0.50
4:DD:183:GLY:HA2	76:9:1334:G:O2'	2.11	0.50
17:BB:159:GLN:HG3	76:9:931:C:OP1	2.11	0.50
18:GG:175:LYS:HD3	76:9:64:A:P	2.51	0.50
24:bb:42:LYS:N	24:bb:42:LYS:CD	2.75	0.50
32:jj:238:MET:O	32:jj:238:MET:HG2	2.10	0.50
32:jj:277:THR:N	87:jj:700:GCP:O3G	2.44	0.50
33:J:120:ASP:HB3	33:J:123:ILE:HB	1.92	0.50
34:k:61:PRO:HG2	34:k:64:LEU:CB	2.41	0.50
47:OO:138:ASP:HB3	76:9:984:C:O2'	2.10	0.50
55:s:99:ARG:HG3	55:s:189:ILE:CD1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:RR:102:THR:HA	56:RR:105:MET:HG2	1.94	0.50
59:SS:124:ARG:HH21	59:SS:130:ARG:C	2.20	0.50
67:5:98:A:C2	67:5:99:A:C4	3.00	0.50
67:5:417:G:N2	73:8:16:G:N9	2.59	0.50
67:5:972:C:O2'	67:5:973:G:OP2	2.21	0.50
67:5:976:G:N2	67:5:977:C:C2	2.80	0.50
67:5:1168:G:C2	67:5:1194:G:C6	3.00	0.50
67:5:1427:A:C4	67:5:1458:C:N4	2.80	0.50
67:5:2000:G:H4'	67:5:2017:A:C2	2.46	0.50
67:5:3920:U:C4	67:5:3921:U:C4	2.99	0.50
67:5:4942:C:H4'	67:5:4943:A:OP1	2.11	0.50
76:9:997:A:C2	76:9:998:A:C8	2.99	0.50
76:9:1662:U:C5	76:9:1663:A:C5	2.99	0.50
78:a:82:VAL:HG12	78:a:83:SER:N	2.25	0.50
82:c:51:ASN:C	82:c:51:ASN:OD1	2.54	0.50
2:C:229:LEU:HD22	2:C:229:LEU:N	2.26	0.50
6:D:193:GLU:OE2	6:D:196:ARG:HD3	2.12	0.50
10:b:56:LYS:NZ	67:5:1813:U:OP1	2.43	0.50
10:b:59:ALA:O	10:b:63:LYS:HG2	2.12	0.50
14:ff:108:VAL:HB	41:MM:60:MET:CE	2.41	0.50
18:GG:18:VAL:HG11	18:GG:24:LEU:HD21	1.93	0.50
18:GG:41:LEU:HD22	18:GG:45:TRP:HD1	1.76	0.50
22:HH:79:LEU:HD23	22:HH:83:LEU:HB2	1.93	0.50
25:H:72:THR:HG23	25:H:73:ILE:N	2.26	0.50
32:jj:307:MET:HE2	32:jj:344:LEU:HD11	1.94	0.50
38:LL:142:VAL:C	38:LL:143:LEU:HD12	2.36	0.50
47:OO:30:VAL:HG23	47:OO:94:HIS:HB2	1.93	0.50
56:RR:91:LEU:O	56:RR:93:GLN:HG3	2.11	0.50
63:UU:67:LYS:HD3	76:9:1337:C:H5"	1.91	0.50
67:5:370:U:C4	67:5:1637:A:C6	3.00	0.50
67:5:2311:C:N3	67:5:2328:G:N1	2.60	0.50
67:5:2815:A:C2	67:5:2816:G:C4	2.99	0.50
67:5:3931:C:C4	67:5:3932:U:C5	3.00	0.50
67:5:4716:C:OP2	81:B:30:LYS:NZ	2.43	0.50
67:5:4771:C:H2'	67:5:4772:C:C5	2.47	0.50
67:5:4941:G:C2	67:5:4942:C:C5	2.99	0.50
71:XX:107:ARG:HH22	76:9:19:A:H5"	1.74	0.50
73:8:56:G:C2	73:8:62:A:C5	3.00	0.50
76:9:1478:U:H2'	76:9:1479:G:O4'	2.11	0.50
76:9:1550:G:N3	76:9:1559:C:H1'	2.27	0.50
80:aa:100:ARG:O	80:aa:100:ARG:CG	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:105:LEU:HD12	3:d:106:VAL:N	2.27	0.50
8:EE:149:TYR:CD2	18:GG:205:GLU:HG2	2.46	0.50
12:f:47:CYS:SG	12:f:73:LYS:N	2.84	0.50
19:gg:261:LEU:HD22	19:gg:261:LEU:N	2.27	0.50
22:HH:68:GLN:O	22:HH:72:PHE:HD2	1.94	0.50
28:ii:17:ILE:HG22	28:ii:21:ILE:HD11	1.92	0.50
28:ii:21:ILE:HD11	28:ii:136:LEU:CB	2.40	0.50
28:ii:148:PHE:CD2	28:ii:225:VAL:HB	2.46	0.50
28:ii:158:PHE:CZ	28:ii:208:THR:HG21	2.46	0.50
28:ii:228:GLY:O	28:ii:255:ASP:HA	2.12	0.50
32:jj:255:ASN:HD21	76:9:464:A:P	2.32	0.50
32:jj:551:VAL:HG23	32:jj:618:ARG:HB3	1.92	0.50
50:PP:85:ILE:HG21	50:PP:107:ILE:HB	1.92	0.50
52:r:21:ASN:HB2	52:r:23:GLN:NE2	2.26	0.50
58:t:116:MET:CG	58:t:132:ILE:HD11	2.41	0.50
61:TT:10:ASN:CB	61:TT:142:LYS:HE3	2.41	0.50
67:5:71:C:N4	67:5:73:A:C5	2.79	0.50
67:5:646:G:C2	67:5:647:G:C5	2.99	0.50
67:5:1198:G:N1	67:5:1199:G:O6	2.44	0.50
67:5:1445:U:N3	67:5:1446:C:C5	2.80	0.50
67:5:2372:U:O4	67:5:2389:A:N6	2.45	0.50
67:5:3700:C:C4	67:5:3746:A:C5	2.99	0.50
67:5:4303:C:O5’	67:5:4303:C:O2	2.29	0.50
67:5:4948:C:H2’	67:5:4949:G:N2	2.27	0.50
68:WW:5:ASN:ND2	76:9:1158:G:O2’	2.45	0.50
75:Z:10:VAL:O	75:Z:83:THR:HG22	2.12	0.50
76:9:190:G:H2’	76:9:208:G:C2	2.47	0.50
76:9:869:A:C2	76:9:915:G:H1’	2.47	0.50
76:9:880:G:C6	76:9:907:G:C6	3.00	0.50
76:9:1029:G:C6	76:9:1030:A:N7	2.80	0.50
76:9:1474:A:C8	76:9:1475:G:N2	2.80	0.50
76:9:1517:G:OP1	76:9:1622:U:N3	2.44	0.50
79:AA:85:ARG:NH2	79:AA:201:LEU:O	2.44	0.50
81:B:95:THR:HB	81:B:96:PRO:HD2	1.94	0.50
2:C:76:ILE:CG2	2:C:77:PRO:HD2	2.40	0.50
4:DD:55:THR:O	4:DD:59:LEU:CD1	2.59	0.50
4:DD:74:GLN:OE1	4:DD:81:GLU:HA	2.12	0.50
15:F:106:LYS:HZ1	67:5:1724:G:P	2.35	0.50
17:BB:52:THR:HG22	17:BB:57:ILE:HA	1.94	0.50
17:BB:86:LEU:HB3	17:BB:98:THR:HB	1.93	0.50
17:BB:100:PHE:CE1	17:BB:185:VAL:HG22	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BB:159:GLN:OE1	17:BB:162:ARG:NH1	2.43	0.50
19:gg:215:GLN:N	19:gg:236:ILE:HD11	2.27	0.50
22:HH:103:LYS:HG3	22:HH:104:PRO:HD2	1.92	0.50
27:II:57:ALA:HB2	27:II:183:GLY:HA2	1.93	0.50
32:jj:305:PRO:HG3	32:jj:618:ARG:HD3	1.94	0.50
41:MM:49:LEU:HD12	41:MM:50:CYS:H	1.77	0.50
47:OO:120:ALA:HB2	80:aa:53:ILE:HG12	1.94	0.50
47:OO:138:ASP:HB2	76:9:984:C:O2	2.12	0.50
55:s:68:HIS:CG	55:s:75:LEU:HD22	2.46	0.50
67:5:169:A:C2	67:5:267:G:C2	3.00	0.50
67:5:225:G:C5	67:5:243:A:C2	2.99	0.50
67:5:469:C:OP2	67:5:684:G:N1	2.43	0.50
67:5:1990:A:H3'	67:5:1991:A:H5"	1.93	0.50
67:5:2410:C:C2	67:5:2411:C:C5	3.00	0.50
67:5:2511:A:H61	67:5:2743:A:H61	1.59	0.50
67:5:2617:G:N1	67:5:2618:G:C5	2.80	0.50
67:5:3610:A:C2	67:5:3611:A:C5	2.99	0.50
67:5:3770:U:C2	67:5:3771:C:C5	2.98	0.50
67:5:3827:G:N2	67:5:3829:G:C4	2.80	0.50
67:5:4550:G:C2	67:5:4551:U:C6	2.99	0.50
70:7:107:G:N1	70:7:108:G:C5	2.79	0.50
73:8:31:G:C6	73:8:32:C:C4	2.99	0.50
73:8:123:U:C5	73:8:124:U:C2	2.99	0.50
76:9:1398:G:C2	76:9:1399:C:C6	3.00	0.50
81:B:151:SER:HA	81:B:154:LYS:CG	2.42	0.50
81:B:234:ARG:NH1	81:B:270:GLY:C	2.70	0.50
83:CC:258:GLU:OE2	83:CC:259:THR:O	2.30	0.50
4:DD:93:THR:HG22	4:DD:198:ILE:CG2	2.42	0.50
8:EE:129:ILE:HD12	8:EE:129:ILE:N	2.27	0.50
10:b:101:HIS:HB2	67:5:2103:A:N6	2.27	0.50
18:GG:134:GLY:O	18:GG:135:PRO:C	2.55	0.50
19:gg:88:ARG:NH2	76:9:1397:U:H3'	2.26	0.50
27:II:65:PHE:CD1	27:II:76:THR:HG23	2.47	0.50
28:ii:254:VAL:HG13	28:ii:270:LEU:HD22	1.93	0.50
28:ii:258:TYR:CD1	32:jj:618:ARG:HD2	2.47	0.50
28:ii:413:LEU:CD1	28:ii:417:VAL:HG22	2.41	0.50
30:j:79:ARG:CZ	73:8:94:G:C6	2.95	0.50
32:jj:446:ASP:O	32:jj:455:VAL:HG12	2.11	0.50
34:k:54:GLU:OE2	34:k:57:LYS:NZ	2.44	0.50
35:KK:7:ASN:O	35:KK:8:ARG:C	2.51	0.50
42:N:78:GLY:O	42:N:79:ALA:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:O:80:PHE:O	45:O:83:THR:HG22	2.12	0.50
46:o:33:LEU:O	46:o:33:LEU:HD23	2.12	0.50
48:P:69:ARG:NH2	67:5:4980:C:N3	2.59	0.50
49:p:50:ARG:NH1	49:p:56:HIS:CG	2.79	0.50
50:PP:76:VAL:O	50:PP:76:VAL:HG23	2.11	0.50
54:R:128:LYS:NZ	67:5:2668:G:H5"	2.27	0.50
64:V:82:ILE:HG22	64:V:83:ARG:N	2.26	0.50
65:VV:35:ASN:O	79:AA:67:ALA:CB	2.60	0.50
67:5:416:U:H5	67:5:417:G:C5	2.29	0.50
67:5:1430:C:N3	67:5:1431:C:C5	2.79	0.50
67:5:1524:A:N3	67:5:1524:A:O4'	2.44	0.50
67:5:1586:G:C6	67:5:1608:G:O6	2.65	0.50
67:5:1877:G:C2	67:5:1878:G:C4	2.99	0.50
67:5:2371:U:C2	67:5:2372:U:C5	2.99	0.50
67:5:2458:C:H2'	67:5:2459:G:O4'	2.12	0.50
67:5:2787:A:N3	67:5:2787:A:C2'	2.75	0.50
67:5:3854:C:C4	67:5:3855:C:C5	2.99	0.50
67:5:3916:G:C6	67:5:4388:A:C6	2.99	0.50
67:5:4158:C:C2	67:5:4159:C:C5	2.99	0.50
67:5:4197:G:C6	67:5:4198:G:C5	3.00	0.50
67:5:4386:C:C4	67:5:4387:C:H1'	2.47	0.50
67:5:4456:C:C4	67:5:4457:U:C5	2.99	0.50
67:5:4494:G:C6	67:5:4507:A:N1	2.80	0.50
67:5:4622:A:C4	67:5:4676:G:N2	2.80	0.50
67:5:4966:A:N1	67:5:4967:A:C6	2.80	0.50
67:5:5040:U:O2'	67:5:5041:G:OP2	2.27	0.50
71:XX:11:ARG:HG3	71:XX:12:LYS:N	2.27	0.50
71:XX:41:PHE:CE1	71:XX:120:PHE:HE1	2.30	0.50
75:Z:105:ALA:HA	75:Z:108:ARG:HE	1.76	0.50
76:9:167:G:C6	76:9:168:C:C5	3.00	0.50
76:9:480:G:H8	76:9:480:G:O5'	1.94	0.50
76:9:1295:A:H3'	76:9:1296:U:C5	2.46	0.50
76:9:1395:C:C4	76:9:1451:G:C2	3.00	0.50
76:9:1624:U:O2	76:9:1624:U:O4'	2.30	0.50
76:9:1849:G:H5"	76:9:1849:G:H8	1.76	0.50
83:CC:116:THR:OG1	83:CC:118:ALA:N	2.44	0.50
4:DD:21:LEU:HD22	4:DD:39:VAL:HG21	1.93	0.50
4:DD:106:ARG:HA	4:DD:109:LEU:HD12	1.93	0.50
13:FF:92:ILE:HD11	76:9:1535:U:C1'	2.41	0.50
28:ii:96:TYR:HB3	28:ii:131:PHE:CE1	2.47	0.50
32:jj:464:ILE:HD13	32:jj:470:LEU:CD1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:k:56:LEU:O	34:k:59:SER:N	2.38	0.50
35:KK:15:LEU:HG	35:KK:71:LEU:HD22	1.93	0.50
40:m:82:VAL:HG23	40:m:83:ASN:H	1.75	0.50
43:n:5:TRP:NE1	76:9:1852:C:C5	2.80	0.50
45:O:39:GLU:OE1	45:O:39:GLU:N	2.40	0.50
51:Q:181:ARG:NH1	67:5:1391:A:OP1	2.45	0.50
57:S:95:ARG:NH1	67:5:1952:G:P	2.85	0.50
58:t:85:LEU:CD1	58:t:100:HIS:HB3	2.42	0.50
63:UU:29:VAL:HG22	63:UU:85:HIS:CD2	2.47	0.50
67:5:15:A:C6	73:8:143:G:C2	2.99	0.50
67:5:46:U:OP2	67:5:47:A:O2'	2.22	0.50
67:5:475:G:N2	67:5:476:G:C4	2.79	0.50
67:5:1368:A:N3	72:Y:1:MET:HE2	2.26	0.50
67:5:1874:A:O4'	67:5:4213:A:N6	2.44	0.50
67:5:1886:G:C6	67:5:1887:G:C5	2.99	0.50
67:5:1996:C:C2	67:5:2000:G:C6	3.00	0.50
67:5:2712:G:C6	67:5:2713:C:C4	3.00	0.50
67:5:3710:G:OP1	76:9:970:G:O6	2.30	0.50
67:5:3798:U:C2	67:5:3801:U:C5	3.00	0.50
67:5:3907:G:N2	67:5:3909:C:C4	2.80	0.50
67:5:4294:C:C4	67:5:4295:U:C5	2.99	0.50
69:X:96:LEU:HD11	69:X:140:LEU:HD11	1.93	0.50
76:9:389:A:C4	76:9:390:C:C5	3.00	0.50
76:9:1264:C:OP2	76:9:1326:U:C5	2.65	0.50
76:9:1382:A:C2	76:9:1383:A:C8	2.99	0.50
76:9:1520:G:H4'	76:9:1521:C:OP2	2.12	0.50
76:9:1664:A:C4	76:9:1666:C:C4	2.99	0.50
76:9:1834:A:C2	76:9:1836:G:C2	3.00	0.50
81:B:299:ILE:HD12	81:B:299:ILE:N	2.26	0.50
2:C:60:HIS:CE1	2:C:100:ARG:HH11	2.29	0.50
5:dd:34:TYR:OH	63:UU:61:LEU:HD22	2.11	0.50
8:EE:69:PHE:CZ	8:EE:94:LYS:HE3	2.46	0.50
8:EE:192:ILE:HD12	8:EE:242:LYS:C	2.36	0.50
18:GG:44:GLU:O	18:GG:119:LYS:HG3	2.12	0.50
20:G:163:LYS:O	20:G:167:LEU:CD1	2.60	0.50
22:HH:70:LYS:O	22:HH:73:GLN:CG	2.60	0.50
27:II:84:ASN:ND2	27:II:90:LEU:HD12	2.27	0.50
27:II:110:ARG:HG3	27:II:121:LEU:CB	2.40	0.50
28:ii:82:LEU:HA	28:ii:85:TYR:HB2	1.94	0.50
32:jj:283:ALA:HB3	32:jj:294:ILE:CG2	2.42	0.50
33:J:175:LEU:HD12	33:J:176:PRO:HD2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:O:156:LEU:HD12	67:5:4910:A:C4	2.46	0.50
47:OO:71:PRO:O	47:OO:114:SER:OG	2.25	0.50
53:QQ:40:GLU:O	53:QQ:45:ARG:NH2	2.45	0.50
55:s:77:LYS:HG3	55:s:81:HIS:CE1	2.46	0.50
55:s:188:ILE:O	55:s:188:ILE:HG13	2.12	0.50
58:t:92:ARG:NH2	67:5:1982:G:P	2.85	0.50
64:V:42:VAL:HG12	64:V:43:LYS:N	2.26	0.50
67:5:729:G:HO2'	67:5:730:G:P	2.30	0.50
67:5:746:A:C2	67:5:747:A:C5	3.00	0.50
67:5:1547:A:N6	67:5:1548:G:C2	2.79	0.50
67:5:1559:G:C2	67:5:1560:A:C4	3.00	0.50
67:5:1627:G:C5	67:5:1628:C:C4	3.00	0.50
67:5:1764:G:C8	67:5:1769:G:O6	2.65	0.50
67:5:1878:G:N2	67:5:1879:C:C2	2.80	0.50
67:5:2266:C:O2'	67:5:2267:U:OP2	2.25	0.50
67:5:2391:G:N2	67:5:2392:C:C2	2.80	0.50
67:5:2471:G:C5	67:5:2473:A:N6	2.80	0.50
67:5:2471:G:C6	67:5:2473:A:N6	2.80	0.50
67:5:2541:G:C4	67:5:2776:G:N2	2.80	0.50
67:5:2679:G:C2	67:5:2680:G:C4	3.00	0.50
67:5:4075:U:O2'	67:5:4076:G:OP1	2.30	0.50
67:5:4465:U:C6	67:5:4488:A:N6	2.80	0.50
67:5:4537:C:N4	67:5:4550:G:O6	2.45	0.50
67:5:4936:G:HO2'	67:5:4937:C:P	2.34	0.50
67:5:5003:U:H2'	67:5:5004:C:C6	2.47	0.50
70:7:13:A:C6	70:7:110:G:C2	2.99	0.50
71:XX:99:GLU:OE1	71:XX:99:GLU:N	2.34	0.50
73:8:56:G:N1	73:8:62:A:C6	2.80	0.50
73:8:120:G:N1	73:8:121:G:C5	2.79	0.50
76:9:71:G:N7	76:9:79:A:N7	2.59	0.50
76:9:1231:C:N4	76:9:1527:C:H41	2.09	0.50
76:9:1309:C:N4	76:9:1310:U:O4	2.45	0.50
76:9:1348:G:O6	76:9:1381:G:N2	2.43	0.50
81:B:73:VAL:C	81:B:74:GLU:HG3	2.37	0.50
4:DD:12:VAL:HG21	5:dd:34:TYR:CB	2.42	0.49
5:dd:21:CYS:N	5:dd:30:LEU:HD21	2.26	0.49
8:EE:70:ILE:HG22	8:EE:92:ILE:HG12	1.94	0.49
13:FF:164:ARG:NH2	76:9:1600:G:N2	2.60	0.49
15:F:58:LYS:NZ	67:5:1215:C:OP2	2.30	0.49
16:g:72:LYS:NZ	67:5:2749:C:O3'	2.45	0.49
18:GG:41:LEU:HD22	18:GG:45:TRP:CD1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:II:5:ARG:NH2	76:9:384:U:O4	2.39	0.49
28:ii:226:LEU:HD13	28:ii:253:LEU:CD2	2.42	0.49
28:ii:252:LYS:HE2	28:ii:254:VAL:CG2	2.42	0.49
32:jj:324:ARG:NH2	87:jj:700:GCP:N2	2.60	0.49
35:KK:24:LYS:HG2	35:KK:26:ASP:HB2	1.93	0.49
36:L:89:LYS:O	36:L:92:ARG:HB3	2.11	0.49
36:L:94:ILE:HD12	36:L:124:LEU:CD1	2.42	0.49
42:N:48:ALA:HB1	42:N:53:TYR:CB	2.42	0.49
47:OO:50:LYS:HG3	76:9:976:G:H1'	1.93	0.49
47:OO:120:ALA:O	80:aa:56:ALA:HB2	2.11	0.49
50:PP:31:GLU:O	50:PP:34:MET:HB2	2.11	0.49
51:Q:173:LYS:HG3	51:Q:174:PHE:CE2	2.47	0.49
55:s:59:THR:HA	55:s:62:ARG:HD2	1.94	0.49
59:SS:26:ILE:HG23	59:SS:59:LEU:HD13	1.93	0.49
61:TT:107:LEU:HA	61:TT:110:LEU:HD21	1.94	0.49
65:VV:12:TYR:O	65:VV:12:TYR:CG	2.64	0.49
67:5:99:A:N1	67:5:100:C:N4	2.60	0.49
67:5:173:C:H2'	67:5:174:C:H6	1.77	0.49
67:5:1377:G:N2	67:5:1380:G:N9	2.59	0.49
67:5:1599:G:N2	67:5:1602:U:C6	2.80	0.49
67:5:1627:G:C6	67:5:1628:C:C4	3.00	0.49
67:5:1669:A:C2	67:5:1670:G:C4	3.00	0.49
67:5:2005:G:C6	67:5:2006:U:C4	3.00	0.49
67:5:2837:U:C4	67:5:2838:G:C8	3.00	0.49
67:5:3893:C:H2'	67:5:3894:A:H8	1.77	0.49
67:5:3946:G:H2'	67:5:3947:A:O4'	2.12	0.49
67:5:4073:A:C2	67:5:4074:C:C6	3.00	0.49
67:5:4131:G:C2	67:5:4154:G:C2	3.00	0.49
67:5:4271:A:OP1	67:5:4272:G:N2	2.45	0.49
67:5:4484:A:C2	67:5:4485:C:C5	2.99	0.49
76:9:102:A:C5	76:9:357:C:C4	3.00	0.49
76:9:180:G:H3'	76:9:181:A:C8	2.47	0.49
76:9:830:A:C2	76:9:845:G:N1	2.80	0.49
81:B:39:LYS:HG3	81:B:40:PRO:HD2	1.94	0.49
83:CC:140:GLY:CA	83:CC:158:ALA:HB2	2.42	0.49
84:cc:20:ARG:NH1	84:cc:26:GLN:HA	2.27	0.49
84:cc:21:THR:HG22	84:cc:68:LEU:CD2	2.42	0.49
3:d:77:ILE:CG2	3:d:78:ARG:N	2.75	0.49
5:dd:25:SER:HA	35:KK:65:ARG:CZ	2.41	0.49
11:E:67:ARG:HH22	67:5:1070:G:P	2.34	0.49
13:FF:122:ARG:O	13:FF:140:ASP:CG	2.54	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:GG:175:LYS:HD3	76:9:64:A:OP1	2.12	0.49
32:jj:485:LEU:O	32:jj:487:ASP:N	2.45	0.49
32:jj:597:THR:HG21	32:jj:601:ILE:HG21	1.94	0.49
33:J:121:PRO:CD	59:SS:14:ARG:HE	2.23	0.49
39:M:129:LYS:HA	39:M:132:ARG:HG2	1.94	0.49
50:PP:56:LEU:HD22	50:PP:78:THR:HG21	1.94	0.49
50:PP:79:HIS:HA	50:PP:97:TYR:HB3	1.94	0.49
61:TT:9:VAL:HG11	61:TT:14:PHE:CD2	2.45	0.49
63:UU:22:ILE:HG12	63:UU:114:VAL:HG22	1.92	0.49
67:5:95:G:OP1	78:a:34:ASN:ND2	2.45	0.49
67:5:162:A:H2'	67:5:163:A:H8	1.77	0.49
67:5:485:C:O2'	67:5:486:C:P	2.70	0.49
67:5:1278:C:C5	67:5:1279:A:N7	2.80	0.49
67:5:1882:U:C4	67:5:2279:A:C2	3.00	0.49
67:5:1910:G:N2	67:5:1911:C:C2	2.81	0.49
67:5:2578:G:C6	67:5:2579:G:C6	3.00	0.49
67:5:3723:A:N1	67:5:3724:A:C6	2.81	0.49
67:5:3729:U:H2'	67:5:3730:U:O4'	2.12	0.49
67:5:3782:C:N3	67:5:3811:G:N2	2.60	0.49
67:5:3933:G:N2	67:5:3934:G:C4	2.80	0.49
67:5:4410:G:C6	67:5:4433:G:C6	3.00	0.49
67:5:4947:U:O2'	67:5:4948:C:OP1	2.27	0.49
70:7:92:C:H2'	70:7:93:G:H8	1.77	0.49
74:YY:37:LYS:HE2	76:9:571:U:H5"	1.93	0.49
75:Z:76:ASN:HB3	75:Z:78:ASN:OD1	2.11	0.49
76:9:501:C:O2	76:9:501:C:H2'	2.11	0.49
76:9:1040:G:N1	76:9:1041:G:C5	2.80	0.49
76:9:1469:A:C6	76:9:1470:C:C4	3.00	0.49
76:9:1545:A:C2	76:9:1588:A:C5	3.00	0.49
76:9:1679:A:H4'	76:9:1680:G:O5'	2.10	0.49
76:9:1681:U:C1'	84:cc:24:GLN:O	2.60	0.49
76:9:1784:G:C6	76:9:1785:C:C4	3.01	0.49
80:aa:15:ARG:N	80:aa:15:ARG:HD3	2.27	0.49
80:aa:41:ILE:HB	80:aa:68:TYR:CD1	2.47	0.49
4:DD:76:ARG:HB2	35:KK:22:VAL:HG21	1.94	0.49
7:e:35:TRP:C	7:e:36:ARG:HG2	2.38	0.49
14:ff:140:TYR:HB2	14:ff:147:THR:HG23	1.94	0.49
17:BB:71:LEU:HD22	17:BB:78:GLU:HB3	1.94	0.49
18:GG:102:VAL:HG13	18:GG:106:LEU:CD1	2.42	0.49
19:gg:5:MET:SD	19:gg:312:VAL:HG22	2.51	0.49
20:G:104:LEU:HD11	67:5:4086:G:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:G:196:VAL:O	20:G:200:VAL:HG23	2.12	0.49
21:h:121:VAL:HG12	21:h:122:LYS:O	2.12	0.49
22:HH:53:VAL:HG11	22:HH:59:ALA:HB3	1.94	0.49
23:hh:42:C:H3'	47:OO:151:LEU:HD12	1.94	0.49
27:II:106:SER:OG	27:II:169:GLY:C	2.55	0.49
28:ii:404:LYS:HD2	32:jj:546:PRO:HB2	1.94	0.49
32:jj:553:HIS:O	32:jj:615:PHE:HA	2.12	0.49
32:jj:562:GLU:O	32:jj:596:ARG:N	2.38	0.49
36:L:42:ARG:HG3	36:L:45:ARG:HH12	1.77	0.49
36:L:62:PRO:C	36:L:63:THR:HG23	2.37	0.49
45:O:140:ARG:NH1	45:O:144:GLU:OE1	2.45	0.49
45:O:156:LEU:HD12	67:5:4910:A:C5	2.47	0.49
53:QQ:39:LEU:HD13	53:QQ:52:LEU:HD21	1.94	0.49
56:RR:71:ILE:HB	56:RR:74:GLN:HG3	1.94	0.49
59:SS:70:ILE:HG23	59:SS:77:TYR:HB3	1.94	0.49
67:5:1100:U:N3	67:5:1168:G:N7	2.61	0.49
67:5:1446:C:H42	67:5:2108:G:H22	1.61	0.49
67:5:2640:G:N2	67:5:2641:A:C5	2.80	0.49
67:5:4568:A:C2	67:5:4569:U:C5	3.00	0.49
68:WW:32:LYS:O	68:WW:36:ARG:HG2	2.13	0.49
76:9:149:A:N7	76:9:169:U:O2	2.45	0.49
76:9:364:A:C6	76:9:397:G:C2	3.01	0.49
76:9:439:A:C6	76:9:455:A:N6	2.79	0.49
76:9:504:G:N2	76:9:505:G:C4	2.79	0.49
76:9:1009:A:C6	76:9:1010:G:C5	3.01	0.49
76:9:1261:C:C4	76:9:1262:C:C4	3.00	0.49
76:9:1533:A:C8	76:9:1602:U:N3	2.81	0.49
76:9:1566:G:C2	76:9:1568:C:C5	3.00	0.49
76:9:1589:A:H2'	76:9:1590:C:O4'	2.12	0.49
76:9:1626:C:H2'	76:9:1627:C:O4'	2.12	0.49
76:9:1693:G:N2	76:9:1834:A:H8	2.11	0.49
80:aa:23:CYS:SG	80:aa:25:ASN:N	2.85	0.49
82:c:45:LEU:O	82:c:95:SER:HA	2.12	0.49
83:CC:165:VAL:HG23	83:CC:165:VAL:O	2.10	0.49
4:DD:34:TYR:O	4:DD:100:ALA:HA	2.13	0.49
4:DD:72:VAL:HG23	35:KK:20:VAL:HG11	1.93	0.49
4:DD:93:THR:HG23	4:DD:93:THR:O	2.12	0.49
8:EE:191:ARG:HA	8:EE:243:GLY:O	2.12	0.49
11:E:77:ALA:CB	67:5:1273:G:O2'	2.59	0.49
11:E:287:HIS:CG	11:E:288:LYS:N	2.80	0.49
17:BB:128:LYS:HE3	17:BB:133:TYR:C	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:gg:209:SER:OG	19:gg:217:MET:HB2	2.13	0.49
19:gg:237:ASN:CB	19:gg:287:THR:HA	2.42	0.49
28:ii:257:SER:O	28:ii:258:TYR:CD2	2.64	0.49
29:I:22:PHE:CE2	67:5:1788:A:C5	3.00	0.49
32:jj:539:GLU:O	32:jj:624:ILE:HA	2.12	0.49
35:KK:25:LYS:HD2	35:KK:67:PHE:CE2	2.46	0.49
36:L:41:ALA:HA	36:L:44:ARG:CZ	2.42	0.49
40:m:92:THR:CG2	40:m:94:ASN:H	2.25	0.49
47:OO:20:GLN:HG2	47:OO:27:VAL:CG2	2.42	0.49
47:OO:116:LEU:O	47:OO:119:LEU:HG	2.12	0.49
55:s:59:THR:OG1	67:5:1961:G:H5"	2.11	0.49
56:RR:53:TYR:HE1	76:9:1466:G:P	2.36	0.49
58:t:16:ARG:HE	58:t:57:ARG:HD2	1.76	0.49
58:t:137:GLN:HB3	67:5:1992:U:OP1	2.12	0.49
59:SS:26:ILE:HG12	59:SS:56:ALA:HA	1.94	0.49
67:5:408:A:C2	67:5:410:A:C5	3.00	0.49
67:5:1074:G:C2	67:5:1238:A:N1	2.81	0.49
67:5:1197:C:H2'	67:5:1198:G:C8	2.46	0.49
67:5:1291:G:HO2'	67:5:1292:C:P	2.28	0.49
67:5:1443:A:C2	67:5:2112:G:C4	3.00	0.49
67:5:1914:C:N3	67:5:2050:G:N1	2.60	0.49
67:5:1998:A:C2	67:5:1999:A:N6	2.80	0.49
67:5:2293:U:N3	67:5:2294:G:N7	2.60	0.49
67:5:2494:U:C2	67:5:2495:U:C5	3.00	0.49
67:5:2660:A:C6	67:5:2662:G:C4	3.00	0.49
67:5:4133:C:N3	67:5:4152:G:N1	2.61	0.49
67:5:4171:C:C4	67:5:4172:A:C2	3.00	0.49
67:5:4209:G:C6	67:5:4210:U:C4	3.00	0.49
67:5:4665:A:C6	67:5:4666:G:C4	3.01	0.49
69:X:135:LYS:HD2	69:X:137:TYR:CZ	2.47	0.49
76:9:519:A:C2	76:9:520:A:C8	3.00	0.49
76:9:1224:G:H2'	76:9:1224:G:N3	2.27	0.49
76:9:1315:U:C5	76:9:1316:C:C5	3.01	0.49
76:9:1547:C:OP2	76:9:1586:U:O4	2.30	0.49
76:9:1566:G:N2	76:9:1568:C:C6	2.80	0.49
76:9:1821:U:N3	76:9:1822:A:N7	2.60	0.49
79:AA:188:THR:OG1	79:AA:189:ILE:N	2.45	0.49
81:B:55:HIS:ND1	81:B:369:ASP:OD2	2.41	0.49
2:C:74:ALA:O	2:C:75:ARG:HB3	2.13	0.49
4:DD:212:GLU:HG3	4:DD:213:PRO:HD2	1.94	0.49
18:GG:191:ARG:HG3	18:GG:192:ILE:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:gg:29:ASP:HA	19:gg:45:LEU:HD12	1.94	0.49
19:gg:171:ASP:OD2	19:gg:175:LYS:NZ	2.44	0.49
31:JJ:170:PRO:HB2	31:JJ:174:LYS:HB3	1.93	0.49
32:jj:462:GLY:O	32:jj:496:PRO:HB3	2.12	0.49
32:jj:615:PHE:CZ	32:jj:627:GLY:HA3	2.48	0.49
33:J:63:ARG:NH2	46:o:104:ILE:O	2.46	0.49
36:L:64:VAL:HA	36:L:67:HIS:HD2	1.78	0.49
43:n:18:ARG:NH2	76:9:1182:A:OP1	2.45	0.49
53:QQ:75:GLY:HA2	76:9:1672:U:OP1	2.12	0.49
57:S:69:GLU:OE2	57:S:69:GLU:HA	2.12	0.49
57:S:83:ARG:HH11	57:S:125:GLN:NE2	2.09	0.49
65:VV:50:PHE:O	65:VV:51:LYS:HD3	2.12	0.49
67:5:385:A:C2	67:5:386:A:C6	3.00	0.49
67:5:708:G:C2	67:5:709:C:C6	3.00	0.49
67:5:1473:U:C2	67:5:1492:G:N2	2.81	0.49
67:5:1941:A:H2	67:5:1942:A:N7	2.11	0.49
67:5:2275:G:C2	67:5:2276:A:C5	3.01	0.49
67:5:2439:G:C2	67:5:2440:U:C6	3.01	0.49
67:5:2521:G:N2	67:5:2522:G:C4	2.81	0.49
67:5:3702:A:C6	67:5:3774:A:C2	3.00	0.49
67:5:3723:A:C6	67:5:3724:A:N6	2.81	0.49
67:5:4391:G:H21	67:5:4392:G:H1'	1.78	0.49
67:5:4708:A:H2	67:5:4709:U:O4'	1.95	0.49
73:8:24:G:C2	73:8:25:G:C8	3.00	0.49
76:9:528:A:C6	76:9:558:G:C6	2.99	0.49
76:9:873:G:O2'	76:9:874:G:P	2.69	0.49
76:9:1092:G:C2	76:9:1158:G:C6	2.99	0.49
76:9:1198:G:N1	76:9:1199:A:C6	2.81	0.49
76:9:1518:C:H3'	76:9:1519:U:H5"	1.94	0.49
76:9:1546:G:N1	76:9:1655:C:O2'	2.35	0.49
76:9:1832:A:OP1	76:9:1837:G:OP1	2.29	0.49
79:AA:122:LEU:HD21	79:AA:124:VAL:HG23	1.92	0.49
1:A:248:GLY:HA2	76:9:1069:U:H5"	1.95	0.49
2:C:298:ILE:O	2:C:301:ALA:N	2.45	0.49
2:C:325:MET:HE1	15:F:154:TYR:CZ	2.47	0.49
4:DD:158:ILE:HG12	4:DD:189:MET:CE	2.42	0.49
17:BB:62:LEU:HD21	17:BB:96:CYS:SG	2.52	0.49
19:gg:100:ARG:HD3	76:9:1398:G:P	2.53	0.49
19:gg:195:LEU:HA	19:gg:211:GLY:CA	2.43	0.49
22:HH:64:VAL:CG1	22:HH:65:PRO:HD2	2.43	0.49
28:ii:288:GLY:HA2	28:ii:291:PHE:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:368:SER:CB	32:jj:371:ARG:NH2	2.75	0.49
37:l:6:THR:OG1	37:l:9:ILE:HD12	2.13	0.49
38:LL:88:ILE:O	38:LL:108:ASN:HA	2.12	0.49
39:M:93:LYS:O	39:M:96:GLU:HG3	2.13	0.49
45:O:10:ASP:OD2	45:O:37:ARG:NH1	2.46	0.49
56:RR:26:ASN:OD1	56:RR:27:ASP:N	2.45	0.49
56:RR:28:PHE:CE1	56:RR:51:ALA:HB3	2.47	0.49
58:t:95:GLN:O	67:5:1979:A:OP1	2.29	0.49
59:SS:28:PHE:CZ	61:TT:45:LEU:HD21	2.47	0.49
67:5:39:A:N3	78:a:40:HIS:CE1	2.80	0.49
67:5:222:C:N4	67:5:236:G:N1	2.61	0.49
67:5:235:A:C5	67:5:238:C:N4	2.81	0.49
67:5:338:A:C5	67:5:339:C:C5	3.00	0.49
67:5:650:C:C2	67:5:651:C:C5	3.01	0.49
67:5:663:G:C2	67:5:664:G:C5	3.01	0.49
67:5:1205:G:N2	67:5:1206:C:C2	2.81	0.49
67:5:1323:A:C2	67:5:3879:G:C2	3.01	0.49
67:5:1883:G:H1'	67:5:1898:C:H42	1.76	0.49
67:5:1983:A:O2'	67:5:1984:A:C5'	2.61	0.49
67:5:2832:A:C2	67:5:3854:C:C2	3.01	0.49
67:5:4477:A:C2	67:5:4478:G:C8	3.00	0.49
67:5:4719:G:O6	67:5:4721:G:C2	2.66	0.49
67:5:4776:G:N2	67:5:4859:C:C2	2.72	0.49
67:5:4776:G:O6	67:5:4859:C:N4	2.41	0.49
76:9:43:U:OP2	76:9:485:A:N6	2.46	0.49
76:9:616:A:N6	76:9:617:G:C5	2.81	0.49
76:9:1060:A:C5	76:9:1062:A:C6	3.01	0.49
76:9:1291:A:H2'	76:9:1292:C:H5	1.77	0.49
76:9:1656:G:C2	76:9:1657:G:C5	3.01	0.49
76:9:1734:G:N1	76:9:1799:G:C6	2.81	0.49
83:CC:208:PRO:O	83:CC:212:LYS:HB2	2.13	0.49
1:A:146:THR:O	1:A:157:VAL:HA	2.12	0.49
2:C:297:GLU:OE2	2:C:300:ARG:NH2	2.46	0.49
16:g:103:VAL:O	16:g:107:LEU:HD23	2.13	0.49
22:HH:49:LYS:HB2	22:HH:61:ILE:HG22	1.95	0.49
22:HH:158:LEU:HB2	22:HH:189:PHE:CD2	2.48	0.49
24:bb:34:ASP:HB3	24:bb:43:ILE:HG21	1.95	0.49
25:H:91:LYS:HD2	25:H:183:GLU:HB3	1.94	0.49
35:KK:1:MET:CE	35:KK:47:LYS:HG3	2.42	0.49
38:LL:124:ASP:HB3	38:LL:146:THR:O	2.13	0.49
39:M:128:LYS:HG3	39:M:131:GLN:HE21	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:m:92:THR:HG22	40:m:94:ASN:N	2.26	0.49
64:V:15:ARG:NH1	67:5:4673:U:OP2	2.46	0.49
65:VV:73:ALA:HB1	65:VV:78:ILE:HB	1.94	0.49
67:5:1092:G:H2'	67:5:1093:C:C6	2.48	0.49
67:5:1456:C:N4	67:5:1457:G:C4	2.81	0.49
67:5:1515:A:N1	67:5:1516:G:C5	2.81	0.49
67:5:1515:A:C6	67:5:1516:G:C5	3.00	0.49
67:5:1545:G:C2	67:5:1546:C:C4	3.00	0.49
67:5:3660:C:H2'	67:5:3682:A:H61	1.77	0.49
67:5:3731:C:N3	67:5:3732:A:N7	2.60	0.49
67:5:3737:A:N6	67:5:3738:G:C2	2.81	0.49
67:5:4384:U:O2'	67:5:4386:C:OP1	2.25	0.49
67:5:4466:C:C4	67:5:4513:A:N7	2.80	0.49
67:5:4638:U:N3	67:5:4639:G:N1	2.61	0.49
67:5:5036:C:C2	67:5:5037:U:C5	3.00	0.49
73:8:13:G:C2	73:8:14:U:C6	3.00	0.49
76:9:375:U:N3	76:9:376:A:N7	2.61	0.49
76:9:455:A:H2'	76:9:456:C:C6	2.47	0.49
76:9:614:C:C2'	76:9:626:G:H21	2.26	0.49
76:9:804:U:C2	76:9:805:U:C5	3.01	0.49
76:9:949:G:C6	76:9:950:C:C4	3.00	0.49
76:9:1264:C:H4'	76:9:1265:A:O5'	2.13	0.49
76:9:1389:C:C2	76:9:1390:U:C5	3.00	0.49
76:9:1496:U:C2	76:9:1498:A:H5"	2.47	0.49
76:9:1717:C:N4	76:9:1718:G:C2	2.81	0.49
83:CC:273:LEU:O	83:CC:276:THR:HG22	2.13	0.49
4:DD:95:GLY:CA	4:DD:126:ILE:HG22	2.42	0.49
6:D:267:ASN:OD1	6:D:268:ARG:N	2.46	0.49
15:F:69:ARG:HB2	15:F:69:ARG:CZ	2.43	0.49
22:HH:8:ILE:HG21	22:HH:24:SER:HB3	1.94	0.49
26:i:37:THR:OG1	42:N:5:LYS:NZ	2.46	0.49
28:ii:163:GLY:O	28:ii:280:PHE:HB2	2.12	0.49
28:ii:394:ASP:HB3	28:ii:403:VAL:HG21	1.94	0.49
31:JJ:115:PHE:CB	31:JJ:123:ILE:HG22	2.43	0.49
32:jj:312:SER:OG	32:jj:555:HIS:HA	2.13	0.49
32:jj:443:PRO:HD2	32:jj:458:LYS:O	2.12	0.49
44:NN:139:TRP:CZ3	44:NN:141:TYR:N	2.80	0.49
47:OO:55:ARG:NH2	76:9:973:C:N3	2.60	0.49
47:OO:90:ILE:O	47:OO:124:MET:HE1	2.13	0.49
53:QQ:41:MET:HE1	61:TT:7:LYS:O	2.13	0.49
58:t:37:LEU:HD13	58:t:68:GLN:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SS:82:TRP:CE2	76:9:1567:G:C2	3.01	0.49
63:UU:74:SER:HB2	76:9:1338:G:C4'	2.42	0.49
67:5:353:A:C2	67:5:379:G:C8	3.01	0.49
67:5:981:C:N4	67:5:1275:G:N1	2.60	0.49
67:5:1073:G:N2	67:5:1239:C:C2	2.81	0.49
67:5:1529:G:H21	67:5:1530:G:H1'	1.78	0.49
67:5:1618:G:C4	67:5:1619:G:C8	3.00	0.49
67:5:1684:A:C5	67:5:1685:G:N7	2.80	0.49
67:5:4170:A:HO2'	67:5:4171:C:P	2.36	0.49
71:XX:131:LEU:HD23	71:XX:132:ALA:N	2.27	0.49
76:9:141:A:H2'	76:9:178:C:N3	2.27	0.49
76:9:302:A:C6	76:9:303:C:C5	3.01	0.49
76:9:828:G:C6	76:9:829:C:C4	3.01	0.49
76:9:1474:A:C5	76:9:1475:G:C2	3.01	0.49
1:A:226:ARG:HG3	1:A:229:ALA:HB2	1.94	0.49
2:C:210:ILE:CG2	2:C:232:VAL:HG22	2.42	0.49
4:DD:59:LEU:HG	4:DD:66:ILE:HD12	1.95	0.49
11:E:148:THR:HB	11:E:149:PRO:HD2	1.95	0.49
13:FF:50:PRO:HG2	13:FF:90:VAL:HG13	1.94	0.49
18:GG:16:ILE:HD12	18:GG:16:ILE:N	2.28	0.49
18:GG:57:ASP:OD1	18:GG:58:LYS:N	2.44	0.49
18:GG:198:ARG:NH2	76:9:126:G:OP1	2.46	0.49
19:gg:7:LEU:HD21	19:gg:10:THR:HG23	1.94	0.49
22:HH:100:ILE:HD11	22:HH:122:LEU:CA	2.43	0.49
26:i:18:THR:O	36:L:107:THR:OG1	2.25	0.49
28:ii:110:VAL:CG2	28:ii:112:ILE:HD11	2.42	0.49
28:ii:226:LEU:HD23	28:ii:236:LEU:HD23	1.95	0.49
47:OO:37:PHE:CD2	47:OO:110:PRO:HD3	2.48	0.49
48:P:9:GLU:OE1	48:P:9:GLU:N	2.40	0.49
50:PP:84:ILE:HA	50:PP:114:HIS:O	2.13	0.49
50:PP:114:HIS:HB3	50:PP:118:GLU:OE2	2.12	0.49
53:QQ:30:GLY:N	53:QQ:64:ALA:O	2.46	0.49
53:QQ:132:PHE:HB3	76:9:1669:G:P	2.52	0.49
58:t:15:LEU:HD12	58:t:62:LEU:HD11	1.95	0.49
58:t:130:LYS:CB	67:5:1994:C:H4'	2.42	0.49
59:SS:80:PRO:HG2	59:SS:83:PHE:HD2	1.78	0.49
61:TT:57:ALA:HA	61:TT:103:VAL:HG13	1.95	0.49
62:U:90:TYR:CZ	62:U:94:ASN:ND2	2.81	0.49
63:UU:69:PRO:HG3	76:9:1336:C:H1'	1.94	0.49
64:V:107:ASN:OD1	64:V:110:GLY:N	2.29	0.49
67:5:21:G:C5	73:8:36:G:N2	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:33:A:N6	67:5:34:A:N6	2.60	0.49
67:5:1308:C:H2'	67:5:1309:C:C6	2.48	0.49
67:5:1454:G:N2	67:5:1455:G:N9	2.61	0.49
67:5:2069:A:N6	67:5:2071:A:N3	2.61	0.49
67:5:2315:G:N1	67:5:2316:G:C4	2.81	0.49
67:5:2555:G:C6	67:5:2556:G:N7	2.81	0.49
67:5:3754:G:C6	67:5:3771:C:N4	2.81	0.49
67:5:4119:C:O2'	67:5:4120:U:P	2.71	0.49
67:5:4639:G:C5	67:5:4640:C:C5	3.01	0.49
67:5:4979:A:C6	67:5:4980:C:C4	3.00	0.49
67:5:5038:A:H2'	67:5:5039:U:C6	2.48	0.49
69:X:72:ASP:OD2	69:X:73:HIS:N	2.45	0.49
70:7:107:G:C2	70:7:108:G:C8	3.01	0.49
72:Y:82:ILE:HG22	72:Y:83:GLU:N	2.28	0.49
72:Y:85:VAL:HG23	72:Y:85:VAL:O	2.13	0.49
73:8:155:C:H2'	73:8:156:U:O4'	2.13	0.49
76:9:107:A:H2'	76:9:108:G:C8	2.48	0.49
76:9:488:U:O2	76:9:488:U:O4'	2.31	0.49
76:9:639:C:H2'	76:9:640:A:H8	1.78	0.49
76:9:859:G:C6	76:9:860:G:N7	2.81	0.49
76:9:1536:G:H2'	76:9:1537:A:H8	1.77	0.49
76:9:1642:U:H2'	76:9:1643:U:C6	2.48	0.49
76:9:1732:G:C6	76:9:1733:U:C4	3.01	0.49
81:B:141:ALA:HA	81:B:144:ARG:HD2	1.94	0.49
82:c:45:LEU:HD22	82:c:104:ILE:CG2	2.39	0.49
84:cc:27:CYS:HA	84:cc:46:VAL:O	2.13	0.49
4:DD:27:ARG:HD3	35:KK:62:PHE:O	2.13	0.49
4:DD:99:ILE:HB	4:DD:173:ARG:NH2	2.28	0.49
4:DD:210:ILE:HG21	56:RR:15:VAL:HG11	1.95	0.49
4:DD:213:PRO:HB3	56:RR:20:TYR:CE2	2.48	0.49
8:EE:171:ASP:OD1	8:EE:172:PHE:N	2.46	0.49
13:FF:61:PHE:CE1	84:cc:51:ARG:NH1	2.81	0.49
14:ff:95:ARG:HH22	76:9:1291:A:N6	2.10	0.49
28:ii:192:ARG:HD3	76:9:50:A:O2'	2.12	0.49
28:ii:340:GLU:HB2	58:t:93:LYS:CG	2.42	0.49
35:KK:2:LEU:O	35:KK:2:LEU:HG	2.13	0.49
35:KK:15:LEU:CG	35:KK:71:LEU:HD22	2.42	0.49
35:KK:80:ARG:NH2	35:KK:87:PRO:HA	2.28	0.49
43:n:1:MET:HE3	43:n:5:TRP:CG	2.48	0.49
50:PP:52:LYS:HE3	50:PP:80:LEU:HD11	1.95	0.49
54:R:117:ARG:NH1	67:5:2663:G:H4'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SS:86:ARG:NH1	76:9:1611:G:HO2'	2.07	0.49
61:TT:98:SER:HA	61:TT:101:ARG:NH2	2.28	0.49
67:5:21:G:C6	73:8:36:G:C2	3.01	0.49
67:5:42:A:C6	67:5:4380:A:C6	3.01	0.49
67:5:222:C:H2'	67:5:223:G:O4'	2.12	0.49
67:5:271:C:C4	67:5:272:U:C5	3.01	0.49
67:5:353:A:C6	67:5:379:G:C5	3.01	0.49
67:5:963:G:H2'	67:5:964:A:C8	2.48	0.49
67:5:1375:C:C2	67:5:1376:C:C5	3.01	0.49
67:5:1432:G:N3	67:5:1451:G:N1	2.61	0.49
67:5:1804:A:C5	67:5:1833:G:C2	3.00	0.49
67:5:1818:G:C2'	67:5:1819:G:H5'	2.42	0.49
67:5:3682:A:H1'	67:5:3684:G:C6	2.47	0.49
67:5:3732:A:H2'	67:5:3733:A:C8	2.48	0.49
67:5:4171:C:N4	67:5:4172:A:C6	2.81	0.49
67:5:4393:G:C6	67:5:4447:C:C2	3.01	0.49
67:5:4877:G:C4	67:5:4878:C:C5	3.01	0.49
68:WW:54:ASP:O	68:WW:54:ASP:OD1	2.31	0.49
74:YY:107:ARG:HA	74:YY:107:ARG:HE	1.77	0.49
76:9:610:G:C6	76:9:634:A:C6	3.00	0.49
76:9:1243:U:O4	76:9:1494:U:C4	2.65	0.49
82:c:13:SER:OG	82:c:17:ARG:NE	2.42	0.49
1:A:128:ARG:CZ	67:5:3681:G:OP2	2.61	0.48
5:dd:7:TYR:CZ	35:KK:43:LEU:HD22	2.47	0.48
8:EE:163:ASP:HB3	8:EE:166:THR:HG22	1.95	0.48
8:EE:180:LEU:HB3	8:EE:228:ILE:HG13	1.95	0.48
14:ff:140:TYR:CE1	76:9:1292:C:C2	3.00	0.48
15:F:181:TYR:CZ	15:F:202:GLU:OE2	2.66	0.48
15:F:231:ASP:OD1	15:F:231:ASP:N	2.42	0.48
17:BB:65:ARG:HH12	47:OO:51:GLU:HB2	1.77	0.48
19:gg:64:HIS:CD2	76:9:1475:G:O6	2.66	0.48
19:gg:287:THR:HG22	19:gg:301:GLY:O	2.13	0.48
21:h:9:LEU:HD23	21:h:12:LYS:HE2	1.94	0.48
28:ii:196:GLU:CD	76:9:50:A:C4	2.91	0.48
28:ii:199:HIS:O	28:ii:202:VAL:HB	2.13	0.48
28:ii:397:GLN:O	28:ii:401:GLN:HG3	2.13	0.48
28:ii:414:ARG:HD3	67:5:4420:U:O2'	2.13	0.48
32:jj:443:PRO:C	32:jj:556:THR:HG21	2.38	0.48
32:jj:465:CYS:O	32:jj:466:LYS:C	2.55	0.48
33:J:136:ARG:HG2	33:J:137:PRO:HD2	1.95	0.48
35:KK:12:TYR:OH	35:KK:55:ARG:NH2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:L:8:MET:O	36:L:10:LEU:HD22	2.13	0.48
38:LL:40:ILE:HD11	38:LL:68:ILE:HG12	1.94	0.48
50:PP:77:LYS:HD3	50:PP:102:PHE:CD1	2.47	0.48
53:QQ:78:VAL:HB	76:9:1673:U:H5"	1.94	0.48
53:QQ:95:TYR:HD2	53:QQ:96:TYR:CD1	2.30	0.48
53:QQ:138:ARG:HG3	76:9:1645:C:H5"	1.93	0.48
54:R:164:SER:O	54:R:168:GLU:HG2	2.13	0.48
54:R:181:LYS:N	54:R:181:LYS:CD	2.76	0.48
55:s:168:GLY:O	55:s:172:ALA:HB2	2.12	0.48
59:SS:15:VAL:O	59:SS:18:THR:HB	2.13	0.48
59:SS:124:ARG:CZ	76:9:1622:U:OP1	2.57	0.48
67:5:482:G:C6	67:5:485:C:C4	3.01	0.48
67:5:1236:C:HO2'	67:5:1237:C:P	2.31	0.48
67:5:1424:G:C6	67:5:1425:G:C5	3.01	0.48
67:5:1572:U:C2	67:5:1573:G:C8	3.00	0.48
67:5:1672:U:C4	67:5:1684:A:C2	3.01	0.48
67:5:1797:G:N2	67:5:1798:G:N3	2.61	0.48
67:5:2567:G:C6	67:5:2568:C:C4	3.01	0.48
67:5:2655:C:C2	67:5:2656:U:C5	3.01	0.48
67:5:3782:C:C2	67:5:3811:G:N2	2.81	0.48
67:5:4179:G:N2	67:5:4180:G:H1'	2.28	0.48
73:8:58:G:N2	73:8:99:U:C2	2.80	0.48
76:9:29:G:C6	76:9:646:G:C6	3.01	0.48
76:9:321:C:H2'	76:9:322:C:O4'	2.13	0.48
28:ii:161:LEU:HD22	28:ii:275:LEU:HD21	1.95	0.48
28:ii:198:ARG:O	28:ii:202:VAL:HG23	2.12	0.48
28:ii:318:GLU:HG3	67:5:4419:U:N1	2.28	0.48
28:ii:396:SER:O	28:ii:400:SER:CB	2.62	0.48
33:J:83:LEU:HD23	33:J:83:LEU:C	2.39	0.48
34:k:5:ILE:HD11	34:k:43:TYR:HB3	1.95	0.48
35:KK:16:PHE:O	35:KK:91:PRO:HB3	2.12	0.48
36:L:61:CYS:SG	36:L:62:PRO:HD2	2.52	0.48
36:L:103:ARG:NH2	67:5:326:C:OP1	2.43	0.48
50:PP:55:SER:OG	76:9:1299:A:H5"	2.13	0.48
54:R:76:MET:HG3	54:R:76:MET:O	2.13	0.48
54:R:163:ARG:HD3	76:9:871:U:H3	1.77	0.48
58:t:85:LEU:HD13	58:t:100:HIS:HB3	1.95	0.48
63:UU:74:SER:HB3	76:9:1338:G:H5'	1.95	0.48
66:W:56:ARG:NH2	67:5:5041:G:C2	2.81	0.48
67:5:38:A:C2	67:5:41:C:C4	3.01	0.48
67:5:181:C:H42	67:5:255:C:N4	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1803:G:C6	67:5:1836:G:C5	3.01	0.48
67:5:1834:U:HO2'	67:5:1835:G:P	2.35	0.48
67:5:2063:G:C2	67:5:2064:G:C4	3.01	0.48
67:5:2639:U:O2	67:5:2694:G:C6	2.66	0.48
67:5:2815:A:H2'	67:5:2816:G:C8	2.48	0.48
67:5:3648:A:C4	67:5:3785:A:N6	2.81	0.48
67:5:3698:G:N2	67:5:3699:C:C2	2.81	0.48
67:5:3704:U:N3	67:5:3705:G:N7	2.61	0.48
67:5:3894:A:C2	67:5:3895:G:C4	3.01	0.48
67:5:4411:G:N2	67:5:4412:C:C2	2.80	0.48
76:9:910:G:C6	76:9:911:C:C4	3.01	0.48
76:9:1040:G:C2	76:9:1041:G:C4	3.01	0.48
76:9:1265:A:O3'	76:9:1327:G:P	2.72	0.48
76:9:1332:A:C2	76:9:1500:G:N3	2.81	0.48
76:9:1471:C:C4	76:9:1472:C:C4	3.01	0.48
76:9:1626:C:O2'	76:9:1627:C:H5'	2.13	0.48
76:9:1647:A:N1	76:9:1675:A:H5"	2.28	0.48
76:9:1683:C:C2	84:cc:23:SER:HB2	2.47	0.48
76:9:1796:G:C2	76:9:1797:U:C2	3.01	0.48
4:DD:116:ARG:HD3	4:DD:152:PHE:CE1	2.48	0.48
5:dd:40:ARG:NH2	5:dd:41:GLN:NE2	2.60	0.48
7:e:89:LEU:C	7:e:89:LEU:HD12	2.38	0.48
10:b:23:LYS:HB3	10:b:24:PRO:HD2	1.95	0.48
18:GG:149:LYS:HD3	76:9:143:U:OP1	2.14	0.48
19:gg:220:ASP:HB3	19:gg:223:GLU:O	2.14	0.48
26:i:20:ASN:ND2	36:L:110:LEU:HD23	2.28	0.48
28:ii:192:ARG:HA	28:ii:195:MET:HG2	1.95	0.48
28:ii:200:ASN:OD1	76:9:479:C:H5'	2.12	0.48
29:I:190:LEU:HD23	29:I:199:TYR:HA	1.95	0.48
34:k:56:LEU:HD23	34:k:56:LEU:O	2.13	0.48
53:QQ:96:TYR:HD2	53:QQ:104:SER:CB	2.26	0.48
53:QQ:138:ARG:HG2	76:9:1650:A:OP1	2.13	0.48
55:s:82:ILE:O	55:s:83:ARG:HG2	2.14	0.48
58:t:13:VAL:CG2	58:t:62:LEU:HB2	2.43	0.48
61:TT:78:ILE:HB	76:9:1587:G:O2'	2.13	0.48
62:U:103:VAL:HG21	62:U:113:ARG:HD3	1.95	0.48
63:UU:35:VAL:HB	63:UU:110:VAL:HG21	1.95	0.48
67:5:19:G:C2	73:8:139:G:C2	3.00	0.48
67:5:423:G:C6	67:5:424:U:C4	3.02	0.48
67:5:1197:C:N4	67:5:1198:G:O6	2.45	0.48
67:5:1363:C:C4	67:5:1364:U:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1864:G:C6	67:5:1871:A:N1	2.81	0.48
67:5:1912:G:C5	67:5:2057:A:C2	3.02	0.48
67:5:2093:G:C2	67:5:2095:A:C6	3.00	0.48
67:5:2536:A:C2	67:5:2537:A:C8	3.02	0.48
67:5:2654:C:C2	67:5:2681:G:N2	2.82	0.48
67:5:2663:G:N2	67:5:2664:G:N3	2.61	0.48
67:5:4240:G:N2	67:5:4285:U:C2	2.81	0.48
67:5:4319:C:N3	67:5:4320:G:N7	2.61	0.48
67:5:4583:C:N4	67:5:4718:G:C4	2.81	0.48
67:5:4672:A:C6	67:5:4673:U:C4	3.01	0.48
76:9:374:G:N1	76:9:391:C:C4	2.81	0.48
76:9:894:G:C2	76:9:895:G:C5	3.01	0.48
76:9:1042:A:C6	76:9:1043:G:C5	3.01	0.48
76:9:1396:A:O2'	76:9:1397:U:OP1	2.30	0.48
76:9:1402:A:C2	76:9:1405:A:C2	3.02	0.48
76:9:1455:A:C5	76:9:1476:A:N1	2.81	0.48
76:9:1664:A:C2	76:9:1666:C:C6	3.01	0.48
76:9:1735:A:H2'	76:9:1736:G:O4'	2.14	0.48
82:c:45:LEU:CD2	82:c:96:ILE:HD12	2.44	0.48
82:c:45:LEU:HD13	82:c:104:ILE:HG23	1.95	0.48
1:A:94:ALA:HB1	1:A:100:ASN:OD1	2.13	0.48
2:C:227:ILE:HD12	2:C:227:ILE:H	1.79	0.48
6:D:203:ASN:O	6:D:206:ASP:OD1	2.31	0.48
10:b:44:ARG:HH22	67:5:1465:G:P	2.36	0.48
13:FF:164:ARG:HD2	76:9:1533:A:P	2.53	0.48
14:ff:103:LEU:CD2	41:MM:60:MET:HG2	2.43	0.48
14:ff:119:ARG:HB3	14:ff:132:MET:SD	2.54	0.48
18:GG:15:LEU:CD2	76:9:154:U:O2'	2.61	0.48
19:gg:47:ARG:HA	19:gg:52:TYR:CD2	2.48	0.48
19:gg:277:THR:HB	19:gg:281:ALA:CB	2.43	0.48
19:gg:289:LEU:O	19:gg:289:LEU:HD23	2.14	0.48
22:HH:19:PHE:CE1	22:HH:87:PHE:CE1	3.01	0.48
22:HH:83:LEU:CD2	22:HH:92:VAL:HG21	2.41	0.48
28:ii:33:SER:OG	28:ii:127:CYS:C	2.56	0.48
32:jj:308:ILE:HD12	32:jj:308:ILE:N	2.27	0.48
33:J:169:LYS:HG3	33:J:170:TYR:CD2	2.48	0.48
36:L:135:LYS:HB2	36:L:138:ASP:OD2	2.13	0.48
39:M:119:ARG:NH2	45:O:189:ILE:HD12	2.28	0.48
50:PP:18:ARG:HD2	59:SS:89:ASP:O	2.12	0.48
58:t:88:PRO:O	58:t:90:ARG:HD3	2.14	0.48
59:SS:44:VAL:HG21	59:SS:71:MET:HG3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:TT:9:VAL:HG12	61:TT:10:ASN:O	2.14	0.48
61:TT:57:ALA:CA	61:TT:107:LEU:HD11	2.43	0.48
67:5:39:A:N7	67:5:1654:G:C5	2.81	0.48
67:5:40:G:C6	67:5:41:C:C4	3.01	0.48
67:5:480:C:O2'	67:5:481:G:P	2.72	0.48
67:5:1672:U:C4	67:5:1684:A:N1	2.82	0.48
67:5:2338:C:C4	67:5:2339:G:N7	2.81	0.48
67:5:2823:G:C6	67:5:2824:C:C4	3.02	0.48
67:5:3717:A:H2'	67:5:3718:A:C8	2.48	0.48
67:5:3783:A:C2	67:5:3792:G:C5	3.02	0.48
67:5:4180:G:C2	67:5:4181:U:C2	3.01	0.48
67:5:4768:G:C6	67:5:4769:G:N7	2.82	0.48
72:Y:15:ARG:NH2	73:8:23:C:OP1	2.34	0.48
73:8:8:U:H2'	73:8:9:A:H8	1.77	0.48
73:8:42:G:C2	73:8:43:A:C4	3.01	0.48
73:8:72:A:C2	73:8:73:U:C5	3.02	0.48
74:YY:48:TYR:CE2	74:YY:75:ILE:HD11	2.48	0.48
76:9:40:A:N6	76:9:515:G:N2	2.60	0.48
76:9:221:A:N6	76:9:301:A:N6	2.61	0.48
76:9:607:U:O2'	76:9:608:C:OP1	2.28	0.48
76:9:1214:A:C5	76:9:1682:C:N3	2.81	0.48
76:9:1238:U:C4	76:9:1239:U:C4	3.02	0.48
76:9:1298:G:O6	76:9:1513:C:O2	2.31	0.48
76:9:1375:G:O2'	76:9:1462:U:O4	2.25	0.48
76:9:1563:G:C6	76:9:1573:G:C6	3.01	0.48
81:B:84:MET:HE1	81:B:183:ILE:HD11	1.95	0.48
82:c:21:VAL:O	82:c:25:GLY:N	2.46	0.48
2:C:132:ALA:O	2:C:150:LEU:HD13	2.13	0.48
13:FF:97:PHE:HZ	13:FF:112:LEU:CD1	2.26	0.48
17:BB:75:GLN:OE1	17:BB:78:GLU:HB2	2.13	0.48
17:BB:117:TRP:HA	17:BB:155:TYR:CE1	2.48	0.48
19:gg:83:TRP:HZ3	76:9:1452:A:OP1	1.96	0.48
20:G:300:VAL:O	20:G:303:ILE:HG22	2.13	0.48
25:H:57:VAL:O	25:H:57:VAL:HG22	2.13	0.48
28:ii:63:LYS:HD3	76:9:627:U:H2'	1.94	0.48
28:ii:79:GLN:O	28:ii:83:LYS:HG3	2.14	0.48
28:ii:291:PHE:CE2	32:jj:541:LYS:HE3	2.49	0.48
32:jj:223:ALA:O	32:jj:225:LYS:HD3	2.14	0.48
32:jj:230:GLY:HA3	32:jj:261:LEU:HB3	1.94	0.48
32:jj:552:LEU:O	32:jj:558:ILE:HD12	2.12	0.48
35:KK:23:ALA:HB3	35:KK:69:TRP:HZ3	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:N:54:LYS:O	42:N:56:LYS:N	2.47	0.48
42:N:175:GLY:HA3	42:N:180:PHE:CD2	2.49	0.48
44:NN:16:LEU:HD13	44:NN:65:PHE:CZ	2.47	0.48
47:OO:98:ARG:HD3	47:OO:99:ALA:O	2.14	0.48
49:p:4:ARG:NH2	67:5:1573:G:O6	2.46	0.48
50:PP:19:GLY:CA	59:SS:92:ASP:O	2.61	0.48
55:s:20:LEU:HD13	55:s:52:VAL:HG11	1.96	0.48
55:s:47:LEU:CD2	55:s:50:LYS:HE3	2.42	0.48
57:S:161:ARG:HG3	57:S:161:ARG:O	2.13	0.48
58:t:15:LEU:HD12	58:t:62:LEU:CD1	2.44	0.48
58:t:109:ILE:HD12	58:t:143:VAL:HG11	1.95	0.48
61:TT:28:LEU:HD23	61:TT:110:LEU:CD2	2.42	0.48
63:UU:70:CYS:HB3	76:9:1492:U:O2'	2.13	0.48
66:W:98:PRO:O	66:W:102:LYS:HG3	2.14	0.48
67:5:64:A:O2'	67:5:65:A:P	2.71	0.48
67:5:686:A:C8	67:5:688:U:C4	3.01	0.48
67:5:1925:G:C2	67:5:1926:C:C5	3.02	0.48
67:5:1991:A:H4'	67:5:1991:A:OP1	2.13	0.48
67:5:2475:G:N2	69:X:51:THR:O	2.44	0.48
67:5:2649:G:N1	67:5:2650:G:C5	2.82	0.48
67:5:3867:A:C2	67:5:3880:G:C2	3.01	0.48
67:5:4111:U:N3	67:5:4112:C:C4	2.80	0.48
67:5:4614:G:C6	67:5:4615:C:C4	3.01	0.48
67:5:4719:G:H4'	67:5:4720:C:OP1	2.13	0.48
73:8:137:A:C6	73:8:138:C:N4	2.81	0.48
76:9:1217:A:H2'	76:9:1218:C:O4'	2.13	0.48
76:9:1218:C:H2'	76:9:1219:C:C6	2.48	0.48
76:9:1240:A:C2	76:9:1241:A:C6	3.02	0.48
76:9:1391:C:C2	76:9:1392:U:C5	3.01	0.48
76:9:1594:A:N7	77:ZZ:104:ARG:HB3	2.27	0.48
76:9:1681:U:H2'	76:9:1682:C:C6	2.48	0.48
82:c:45:LEU:HB3	82:c:96:ILE:HB	1.94	0.48
83:CC:78:LEU:H	83:CC:78:LEU:CD2	2.26	0.48
84:cc:29:GLN:NE2	84:cc:67:ARG:HB2	2.29	0.48
4:DD:35:SER:OG	4:DD:97:CYS:SG	2.55	0.48
5:dd:29:GLY:HA2	76:9:1256:G:N1	2.28	0.48
6:D:170:GLY:C	6:D:171:LEU:HD12	2.38	0.48
11:E:112:LEU:HD12	11:E:113:ARG:H	1.78	0.48
11:E:223:LYS:N	11:E:223:LYS:HD2	2.28	0.48
18:GG:134:GLY:HA2	66:W:83:THR:HG22	1.94	0.48
18:GG:162:LEU:O	18:GG:169:PRO:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:h:89:ARG:NH1	73:8:36:G:C6	2.82	0.48
23:hh:50:G:H22	28:ii:57:GLY:CA	2.26	0.48
29:I:74:LYS:HG3	29:I:78:LYS:HE3	1.95	0.48
32:jj:225:LYS:CE	87:jj:700:GCP:O1B	2.61	0.48
32:jj:249:ARG:HD3	76:9:159:A:OP1	2.13	0.48
32:jj:315:ASP:O	32:jj:350:VAL:HA	2.12	0.48
38:LL:35:ARG:HD3	38:LL:51:ILE:O	2.14	0.48
41:MM:46:GLN:OE1	41:MM:112:LYS:NZ	2.38	0.48
44:NN:30:SER:HB2	44:NN:67:THR:HG22	1.94	0.48
49:p:26:VAL:O	49:p:27:LYS:C	2.56	0.48
52:r:58:LYS:CD	52:r:58:LYS:N	2.75	0.48
53:QQ:125:ARG:HG2	76:9:1648:G:OP2	2.13	0.48
55:s:17:ILE:O	55:s:21:LEU:HD12	2.12	0.48
56:RR:21:TYR:CE1	56:RR:58:MET:SD	3.06	0.48
58:t:109:ILE:HD11	58:t:143:VAL:HG22	1.96	0.48
58:t:113:ALA:HA	58:t:132:ILE:HD12	1.96	0.48
59:SS:15:VAL:HB	59:SS:33:ILE:HG12	1.95	0.48
59:SS:56:ALA:O	59:SS:59:LEU:CD2	2.61	0.48
63:UU:70:CYS:HB3	76:9:1492:U:C4'	2.44	0.48
66:W:85:ALA:HB3	66:W:90:ILE:HD11	1.95	0.48
67:5:670:G:C4	67:5:671:G:C8	3.01	0.48
67:5:1634:A:C2	67:5:1635:C:C6	3.02	0.48
67:5:1933:G:H2'	67:5:1934:A:C8	2.49	0.48
67:5:2263:A:C6	67:5:2264:C:C4	3.02	0.48
67:5:2474:G:N2	67:5:2502:A:C5	2.81	0.48
67:5:2541:G:C2	67:5:2542:G:C5	3.01	0.48
67:5:3898:G:N2	67:5:3899:G:C4	2.82	0.48
67:5:4208:U:C4	67:5:4225:G:C2	3.02	0.48
70:7:30:C:N4	70:7:48:G:C6	2.82	0.48
73:8:65:A:C2	73:8:95:A:C6	3.02	0.48
73:8:142:U:H2'	73:8:143:G:O4'	2.13	0.48
76:9:44:U:O2	76:9:481:C:O2'	2.29	0.48
76:9:57:U:OP1	76:9:504:G:O2'	2.32	0.48
76:9:70:G:O2'	76:9:79:A:N6	2.46	0.48
76:9:146:G:O2'	76:9:147:A:O5'	2.26	0.48
76:9:460:A:N6	76:9:470:G:O6	2.47	0.48
76:9:823:U:O2	76:9:823:U:O4'	2.30	0.48
76:9:1536:G:H2'	76:9:1537:A:C8	2.49	0.48
76:9:1547:C:O2	76:9:1656:G:H1'	2.14	0.48
76:9:1575:G:N1	76:9:1576:G:C5	2.81	0.48
77:ZZ:91:LEU:HB3	77:ZZ:96:LEU:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:38:GLU:HB3	4:DD:49:ILE:HB	1.95	0.48
4:DD:156:LEU:HD13	76:9:1383:A:O3'	2.13	0.48
5:dd:8:TRP:CZ2	35:KK:28:HIS:HB2	2.49	0.48
8:EE:15:PRO:HB2	8:EE:17:HIS:CD2	2.49	0.48
8:EE:185:GLY:N	8:EE:189:LEU:HD13	2.29	0.48
11:E:152:ILE:O	11:E:200:THR:OG1	2.30	0.48
19:gg:14:HIS:ND1	19:gg:35:SER:HB2	2.29	0.48
19:gg:239:LEU:C	19:gg:289:LEU:HD21	2.38	0.48
19:gg:253:GLY:O	19:gg:286:CYS:N	2.35	0.48
22:HH:46:THR:HG23	22:HH:65:PRO:CD	2.42	0.48
27:II:172:LEU:HD22	27:II:195:LEU:HD11	1.96	0.48
31:JJ:169:ARG:NH2	76:9:584:A:OP2	2.40	0.48
33:J:38:LYS:O	33:J:41:GLU:HB3	2.14	0.48
46:o:61:LYS:HE2	67:5:4373:G:N7	2.28	0.48
53:QQ:61:GLU:HG2	53:QQ:62:ARG:HD2	1.96	0.48
56:RR:10:LYS:HD3	56:RR:53:TYR:OH	2.13	0.48
57:S:8:ARG:N	57:S:8:ARG:HD2	2.28	0.48
59:SS:56:ALA:HA	59:SS:59:LEU:HD22	1.95	0.48
65:VV:38:GLU:OE1	65:VV:38:GLU:HA	2.14	0.48
67:5:744:G:N2	67:5:921:C:C2	2.82	0.48
67:5:1292:C:N4	67:5:1293:G:O6	2.46	0.48
67:5:1448:G:C4	67:5:1449:C:C5	3.01	0.48
67:5:1553:A:N1	67:5:1573:G:N2	2.62	0.48
67:5:1899:G:N1	67:5:2078:C:C4	2.82	0.48
67:5:2306:G:O2'	67:5:2331:G:C2	2.65	0.48
67:5:2605:G:C2	67:5:2606:G:C4	3.02	0.48
67:5:2608:G:C6	67:5:2732:G:N1	2.82	0.48
67:5:2703:G:N2	67:5:2704:C:C2	2.81	0.48
67:5:3927:U:C5	67:5:4182:G:N2	2.82	0.48
67:5:4985:U:O2	67:5:4986:G:C8	2.67	0.48
70:7:31:G:N3	70:7:47:G:C2	2.81	0.48
70:7:42:A:C2	70:7:43:U:C6	3.02	0.48
73:8:97:A:O5'	73:8:97:A:H8	1.96	0.48
76:9:504:G:C2	76:9:505:G:C4	3.02	0.48
76:9:1085:C:N4	76:9:1087:A:N3	2.62	0.48
76:9:1096:G:C6	76:9:1137:U:O4	2.67	0.48
76:9:1330:G:N7	76:9:1493:C:H5'	2.29	0.48
76:9:1391:C:N3	76:9:1392:U:C5	2.82	0.48
76:9:1806:A:C6	76:9:1807:C:C4	3.01	0.48
79:AA:85:ARG:HD3	79:AA:203:PHE:O	2.14	0.48
79:AA:179:ALA:O	79:AA:182:VAL:HG22	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:aa:45:VAL:CG2	80:aa:64:LEU:HD13	2.43	0.48
2:C:158:VAL:O	2:C:159:GLU:C	2.57	0.48
2:C:204:ARG:HG3	67:5:2298:U:P	2.54	0.48
4:DD:42:THR:OG1	4:DD:45:ARG:HG3	2.12	0.48
4:DD:183:GLY:HA3	76:9:1334:G:H4'	1.94	0.48
4:DD:219:PRO:HB3	19:gg:189:ILE:CG2	2.44	0.48
9:ee:118:VAL:HG12	9:ee:119:VAL:N	2.29	0.48
16:g:4:ARG:HD2	67:5:2399:G:N2	2.29	0.48
20:G:223:LEU:HD23	20:G:223:LEU:C	2.38	0.48
28:ii:370:GLU:HA	28:ii:370:GLU:OE1	2.14	0.48
32:jj:293:THR:HG21	32:jj:499:ASN:ND2	2.29	0.48
41:MM:24:THR:HA	41:MM:27:ILE:HD12	1.96	0.48
41:MM:49:LEU:HD11	41:MM:77:ILE:HG12	1.96	0.48
42:N:28:TRP:HA	42:N:31:ARG:NH1	2.28	0.48
47:OO:72:TYR:HA	47:OO:75:MET:HE2	1.96	0.48
50:PP:97:TYR:CZ	50:PP:99:GLY:O	2.66	0.48
52:r:106:LEU:N	52:r:106:LEU:HD22	2.28	0.48
54:R:99:MET:CE	54:R:127:VAL:HG12	2.44	0.48
56:RR:21:TYR:CE1	56:RR:61:ILE:CG2	2.97	0.48
56:RR:48:ASN:HD21	76:9:1452:A:H5"	1.78	0.48
61:TT:105:GLN:HG2	76:9:1564:C:OP1	2.13	0.48
62:U:23:LEU:HD23	62:U:110:TYR:HB2	1.95	0.48
63:UU:62:ARG:NH2	76:9:1548:G:OP2	2.47	0.48
67:5:27:C:C2	67:5:56:A:C6	3.02	0.48
67:5:520:U:N3	67:5:642:G:N2	2.61	0.48
67:5:644:G:C2	67:5:645:G:C4	3.02	0.48
67:5:1443:A:C4	67:5:2112:G:C2	3.02	0.48
67:5:1969:G:H2'	67:5:1970:A:H5'	1.95	0.48
67:5:2706:G:C2	67:5:2710:C:N4	2.82	0.48
67:5:2820:C:N3	67:5:2821:U:C5	2.82	0.48
67:5:2883:G:C2	67:5:2884:G:C8	3.02	0.48
67:5:3659:G:C6	67:5:3660:C:N4	2.82	0.48
67:5:3873:G:H2'	67:5:3874:G:C8	2.49	0.48
67:5:3908:A:H62	67:5:4449:A:H62	1.62	0.48
67:5:4581:G:N2	67:5:4723:A:C5	2.81	0.48
76:9:671:A:C6	76:9:1089:G:C8	3.01	0.48
76:9:1093:A:C6	76:9:1094:C:C4	3.02	0.48
76:9:1313:A:H4'	76:9:1314:U:OP1	2.13	0.48
76:9:1511:U:C2	76:9:1512:C:C5	3.02	0.48
76:9:1548:G:N2	76:9:1586:U:O4	2.46	0.48
76:9:1578:U:H5'	76:9:1579:A:N3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1824:A:HO2'	76:9:1825:A:P	2.26	0.48
77:ZZ:57:LYS:HE2	77:ZZ:61:GLU:HB3	1.95	0.48
77:ZZ:70:PRO:HB3	77:ZZ:85:ARG:N	2.28	0.48
79:AA:23:THR:HG22	79:AA:170:SER:CB	2.44	0.48
82:c:107:SER:O	82:c:107:SER:OG	2.28	0.48
4:DD:35:SER:HB3	4:DD:51:LEU:C	2.38	0.48
5:dd:8:TRP:CH2	35:KK:28:HIS:HB3	2.49	0.48
13:FF:92:ILE:CD1	76:9:1535:U:C6	2.96	0.48
13:FF:166:ILE:HG22	77:ZZ:71:ALA:CB	2.44	0.48
14:ff:105:TYR:CE1	76:9:1309:C:OP1	2.67	0.48
16:g:41:ALA:HB3	16:g:52:ARG:HD3	1.96	0.48
18:GG:133:LEU:CD1	76:9:168:C:O2	2.62	0.48
20:G:234:TYR:O	20:G:234:TYR:CG	2.67	0.48
22:HH:140:VAL:HG13	22:HH:194:LEU:HD11	1.95	0.48
24:bb:49:HIS:NE2	76:9:1014:G:O2'	2.45	0.48
27:II:93:THR:O	27:II:95:THR:HG22	2.14	0.48
27:II:137:LEU:O	27:II:141:ARG:CZ	2.61	0.48
28:ii:193:LEU:CD1	76:9:488:U:N3	2.77	0.48
32:jj:252:LYS:CG	76:9:158:A:H4'	2.43	0.48
32:jj:432:PHE:CD2	32:jj:433:ASN:N	2.82	0.48
36:L:39:ARG:NH2	67:5:106:A:OP1	2.41	0.48
42:N:178:HIS:HA	42:N:181:HIS:NE2	2.29	0.48
45:O:113:ASP:OD1	45:O:113:ASP:C	2.56	0.48
50:PP:121:ILE:HD12	50:PP:125:PRO:HD3	1.94	0.48
55:s:57:LYS:HB3	55:s:60:MET:HB2	1.96	0.48
55:s:70:GLU:OE2	55:s:71:ASN:CG	2.57	0.48
57:S:17:LEU:HG	57:S:58:SER:O	2.14	0.48
59:SS:44:VAL:HG22	59:SS:79:ILE:HD11	1.96	0.48
60:T:109:VAL:HG22	67:5:1803:G:N1	2.28	0.48
64:V:18:LEU:HD12	64:V:18:LEU:O	2.13	0.48
64:V:31:ASN:ND2	64:V:115:SER:OG	2.47	0.48
67:5:338:A:C4	67:5:339:C:C5	3.02	0.48
67:5:989:U:O4	67:5:990:C:N4	2.47	0.48
67:5:1323:A:C5	67:5:1324:A:C8	3.01	0.48
67:5:1516:G:C5	67:5:1518:A:C8	3.02	0.48
67:5:1828:C:C4	67:5:1829:G:N7	2.82	0.48
67:5:2092:G:N2	67:5:2262:G:C2	2.82	0.48
67:5:2453:A:C5	67:5:2454:U:C5	3.02	0.48
67:5:4204:C:O2'	67:5:4375:C:OP2	2.30	0.48
69:X:86:ALA:HB1	69:X:97:VAL:HG21	1.96	0.48
74:YY:79:LEU:HG	74:YY:80:ASP:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:56:G:C6	76:9:90:G:N1	2.82	0.48
76:9:444:G:N2	76:9:446:G:H3'	2.28	0.48
76:9:554:A:C2	76:9:556:U:C4	3.01	0.48
76:9:693:A:N1	76:9:694:G:C6	2.82	0.48
76:9:1005:G:C6	76:9:1006:C:N4	2.82	0.48
76:9:1367:U:H2'	76:9:1368:U:C6	2.48	0.48
78:a:22:ILE:O	78:a:24:LYS:HD2	2.13	0.48
81:B:14:LEU:HA	81:B:17:LEU:HD23	1.96	0.48
81:B:381:THR:OG1	81:B:382:VAL:N	2.47	0.48
2:C:190:ARG:HH22	67:5:2296:G:P	2.35	0.48
4:DD:116:ARG:HD3	4:DD:152:PHE:CZ	2.48	0.48
5:dd:20:SER:C	5:dd:30:LEU:HD21	2.39	0.48
6:D:212:MET:HG3	6:D:216:GLU:OE2	2.14	0.48
14:ff:93:HIS:HB2	76:9:1302:G:N2	2.29	0.48
19:gg:238:ALA:CB	19:gg:289:LEU:HD22	2.44	0.48
20:G:204:LYS:HE3	20:G:258:THR:HB	1.95	0.48
26:i:76:ARG:HH11	67:5:304:C:C3'	2.24	0.48
28:ii:213:PHE:CB	28:ii:224:LEU:HD12	2.42	0.48
31:JJ:65:GLU:C	31:JJ:66:LYS:HG2	2.39	0.48
32:jj:443:PRO:HB2	32:jj:556:THR:OG1	2.14	0.48
32:jj:557:CYS:SG	32:jj:601:ILE:HG13	2.54	0.48
49:p:39:CYS:HB3	49:p:42:CYS:SG	2.54	0.48
50:PP:16:THR:HG22	50:PP:21:ASP:OD1	2.14	0.48
54:R:95:TRP:O	54:R:99:MET:HG2	2.14	0.48
56:RR:41:ILE:CD1	56:RR:47:ARG:HA	2.43	0.48
61:TT:31:PRO:HG3	61:TT:102:ARG:CG	2.44	0.48
63:UU:48:LEU:HD22	63:UU:93:SER:CB	2.44	0.48
67:5:127:G:C5	67:5:128:C:C5	3.02	0.48
67:5:1074:G:C2	67:5:1238:A:C2	3.02	0.48
67:5:1942:A:C2	67:5:1943:A:C5	3.02	0.48
67:5:1958:A:C6	67:5:2026:A:N6	2.82	0.48
67:5:1979:A:C6	67:5:1980:U:O2	2.67	0.48
67:5:2379:A:N1	67:5:2380:G:N2	2.62	0.48
67:5:3662:A:O4'	67:5:3664:G:C8	2.67	0.48
67:5:3782:C:H2'	67:5:3783:A:H5"	1.96	0.48
67:5:3788:C:C4	67:5:3789:C:N4	2.82	0.48
67:5:3871:A:C5	67:5:3885:G:N2	2.82	0.48
67:5:4215:C:N4	67:5:4216:G:C6	2.82	0.48
67:5:4461:C:H1'	67:5:4516:G:H22	1.79	0.48
69:X:119:ILE:O	69:X:119:ILE:HG23	2.14	0.48
73:8:143:G:C2	73:8:144:U:C6	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:38:A:C6	76:9:515:G:C6	3.01	0.48
76:9:832:G:C2	76:9:843:C:C2	3.02	0.48
76:9:1368:U:H1'	76:9:1372:U:O2	2.14	0.48
76:9:1552:G:C5	76:9:1557:C:N4	2.82	0.48
76:9:1664:A:C2	76:9:1666:C:C5	3.02	0.48
76:9:1864:U:O4	80:aa:9:GLY:HA3	2.14	0.48
81:B:294:LYS:HD3	81:B:295:ASP:HB2	1.96	0.48
5:dd:44:ARG:NH2	63:UU:78:ASP:OD1	2.47	0.47
6:D:158:LYS:HE2	70:7:46:C:OP1	2.14	0.47
11:E:77:ALA:HB2	67:5:1273:G:O2'	2.13	0.47
13:FF:96:ALA:HB2	13:FF:170:ALA:O	2.14	0.47
14:ff:136:PHE:CE2	14:ff:137:ASP:HB2	2.48	0.47
17:BB:71:LEU:HD13	17:BB:79:VAL:O	2.14	0.47
22:HH:103:LYS:HG2	22:HH:104:PRO:N	2.29	0.47
23:hh:41:U:O2	80:aa:25:ASN:ND2	2.47	0.47
25:H:110:SER:O	25:H:128:MET:HB2	2.14	0.47
28:ii:262:ASN:HD22	32:jj:550:ALA:C	2.22	0.47
32:jj:215:VAL:CG1	32:jj:292:PHE:HZ	2.27	0.47
32:jj:221:VAL:HG12	32:jj:299:GLY:O	2.14	0.47
35:KK:16:PHE:HD1	35:KK:17:LYS:HE2	1.78	0.47
41:MM:52:LEU:HD21	41:MM:62:VAL:HG23	1.95	0.47
43:n:1:MET:H3	76:9:1706:G:H5'	1.79	0.47
50:PP:82:ASP:OD2	76:9:1619:A:H4'	2.13	0.47
50:PP:82:ASP:CG	50:PP:82:ASP:O	2.54	0.47
53:QQ:12:VAL:HG21	53:QQ:91:ALA:HA	1.96	0.47
55:s:82:ILE:HD11	55:s:88:PHE:CE2	2.48	0.47
56:RR:5:ARG:NH2	76:9:1466:G:OP1	2.32	0.47
59:SS:124:ARG:NH2	59:SS:130:ARG:O	2.47	0.47
67:5:1279:A:C2	67:5:1281:G:C6	3.02	0.47
67:5:1669:A:N6	67:5:1670:G:C6	2.82	0.47
67:5:2444:U:HO2'	73:8:112:G:HO2'	1.61	0.47
67:5:2549:G:N2	67:5:2771:G:C4	2.82	0.47
67:5:2557:G:C6	67:5:2558:C:C4	3.02	0.47
67:5:2670:C:C4	67:5:2671:C:N4	2.81	0.47
67:5:2900:U:H2'	67:5:2901:G:C8	2.49	0.47
67:5:3693:U:C5	67:5:3694:U:C5	3.01	0.47
67:5:3833:C:H2'	67:5:3834:C:H6	1.79	0.47
67:5:3945:A:C2'	67:5:3946:G:H4'	2.44	0.47
67:5:4089:G:C2	67:5:4161:G:N2	2.82	0.47
67:5:4371:G:O2'	67:5:4372:U:OP2	2.25	0.47
67:5:4759:C:O4'	67:5:4759:C:O2	2.25	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4770:U:H5"	67:5:4771:C:P	2.53	0.47
73:8:7:U:C2	73:8:8:U:C5	3.02	0.47
73:8:69:U:C4	73:8:70:G:C2	3.01	0.47
74:YY:25:ILE:HD13	74:YY:44:LEU:HD21	1.95	0.47
76:9:441:C:H2'	76:9:442:C:C6	2.49	0.47
76:9:1096:G:C2	76:9:1097:G:C4	3.02	0.47
76:9:1226:G:N7	76:9:1227:G:N7	2.62	0.47
76:9:1275:G:C5	76:9:1506:A:C6	3.01	0.47
76:9:1396:A:O2'	76:9:1397:U:P	2.72	0.47
76:9:1681:U:H1'	84:cc:24:GLN:O	2.14	0.47
1:A:248:GLY:HA2	76:9:1069:U:H4'	1.96	0.47
2:C:33:ARG:NH1	51:Q:22:ASP:HB2	2.29	0.47
2:C:193:LYS:O	2:C:196:MET:HG2	2.15	0.47
4:DD:130:GLY:O	4:DD:191:PRO:HG3	2.13	0.47
5:dd:2:GLY:CA	76:9:1291:A:OP1	2.62	0.47
7:e:82:VAL:HG22	7:e:111:ILE:HD13	1.95	0.47
18:GG:58:LYS:HA	18:GG:107:SER:HB2	1.95	0.47
28:ii:322:VAL:HG22	28:ii:409:ILE:HG13	1.96	0.47
32:jj:307:MET:CE	32:jj:344:LEU:CD1	2.92	0.47
32:jj:561:VAL:HG22	32:jj:562:GLU:N	2.29	0.47
33:J:119:TYR:CD2	59:SS:17:ASN:HA	2.50	0.47
42:N:190:ALA:HA	42:N:193:ARG:NH2	2.29	0.47
47:OO:33:ILE:O	47:OO:97:LEU:HD12	2.13	0.47
48:P:126:ARG:HG3	48:P:126:ARG:O	2.13	0.47
50:PP:34:MET:HB3	50:PP:42:ARG:HB2	1.96	0.47
53:QQ:46:THR:HG21	76:9:1592:C:OP1	2.14	0.47
55:s:26:LYS:HD2	55:s:194:ASP:OD2	2.14	0.47
59:SS:69:THR:HG23	59:SS:77:TYR:CZ	2.50	0.47
60:T:118:GLU:HG3	60:T:119:ALA:H	1.79	0.47
60:T:150:LEU:HD12	60:T:151:LEU:N	2.29	0.47
67:5:70:A:OP2	78:a:64:LYS:NZ	2.34	0.47
67:5:757:G:O2'	67:5:758:G:P	2.72	0.47
67:5:937:U:O4	67:5:938:C:N4	2.47	0.47
67:5:959:G:N1	67:5:2263:A:C5	2.82	0.47
67:5:1168:G:C2	67:5:1194:G:N1	2.83	0.47
67:5:1318:C:C5	67:5:1319:U:C2	3.02	0.47
67:5:1769:G:H2'	67:5:1770:A:O4'	2.14	0.47
67:5:2602:G:C5	67:5:2742:G:C6	3.01	0.47
67:5:2604:C:C2	67:5:2605:G:C8	3.02	0.47
67:5:2663:G:C2	67:5:2664:G:C4	3.02	0.47
67:5:4202:U:O2	67:5:4204:C:C5	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:85:A:C2	76:9:86:C:C5	3.02	0.47
76:9:946:U:C2	76:9:947:G:C8	3.02	0.47
76:9:955:A:C2	76:9:972:A:C4	3.01	0.47
76:9:1286:G:C2	76:9:1312:G:C5	3.02	0.47
76:9:1833:C:C4	76:9:1836:G:C6	3.02	0.47
76:9:1858:G:O6	76:9:1859:A:N6	2.47	0.47
80:aa:100:ARG:O	80:aa:100:ARG:HG3	2.13	0.47
81:B:213:GLN:C	81:B:214:ASP:OD1	2.57	0.47
81:B:292:LEU:HD23	81:B:292:LEU:N	2.28	0.47
81:B:333:LEU:HD12	81:B:333:LEU:N	2.28	0.47
83:CC:70:VAL:HG11	83:CC:93:ILE:HG12	1.97	0.47
84:cc:9:ILE:CG2	84:cc:57:THR:HG23	2.45	0.47
1:A:202:VAL:HG23	67:5:3689:G:OP1	2.13	0.47
4:DD:45:ARG:HA	4:DD:83:SER:O	2.15	0.47
6:D:99:TYR:CE2	6:D:165:GLY:HA2	2.49	0.47
11:E:126:ARG:HG2	67:5:959:G:C5	2.50	0.47
13:FF:63:LYS:HG3	76:9:1677:U:OP2	2.14	0.47
13:FF:163:PHE:HZ	76:9:1637:A:C5	2.31	0.47
17:BB:90:ASP:OD1	17:BB:91:VAL:N	2.48	0.47
19:gg:69:VAL:HG23	19:gg:80:SER:HB3	1.97	0.47
21:h:18:LEU:HD23	21:h:18:LEU:C	2.39	0.47
22:HH:131:GLU:HG2	22:HH:139:ILE:HD12	1.95	0.47
27:II:123:ARG:O	27:II:124:LYS:C	2.58	0.47
28:ii:229:SER:HB3	28:ii:256:ILE:O	2.14	0.47
31:JJ:87:LEU:HG	31:JJ:91:LYS:HB3	1.96	0.47
33:J:83:LEU:HD21	33:J:87:LEU:HD11	1.95	0.47
34:k:17:ARG:NH2	67:5:2772:C:O2'	2.47	0.47
34:k:36:VAL:HG13	34:k:36:VAL:O	2.13	0.47
47:OO:146:ARG:HG3	76:9:1857:G:OP2	2.14	0.47
48:P:95:LEU:O	48:P:98:ALA:HB3	2.14	0.47
49:p:85:ARG:O	49:p:89:LEU:HD12	2.14	0.47
50:PP:17:TYR:N	50:PP:20:VAL:O	2.46	0.47
50:PP:30:TYR:O	50:PP:34:MET:HG3	2.13	0.47
52:r:15:SER:HB2	67:5:2298:U:O2'	2.14	0.47
52:r:97:ILE:HG23	52:r:102:TYR:O	2.13	0.47
53:QQ:125:ARG:CB	76:9:1648:G:H5"	2.44	0.47
55:s:17:ILE:HG13	55:s:21:LEU:HD11	1.96	0.47
55:s:67:GLY:O	55:s:70:GLU:HG3	2.13	0.47
59:SS:16:LEU:CD1	59:SS:99:LEU:HD12	2.44	0.47
59:SS:26:ILE:HG13	59:SS:55:ARG:C	2.39	0.47
67:5:95:G:C6	67:5:96:U:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:431:G:C2	67:5:3889:G:C5	3.02	0.47
67:5:909:G:N1	67:5:910:G:C5	2.82	0.47
67:5:974:C:C2	67:5:1282:G:C6	3.03	0.47
67:5:1680:G:C2	67:5:1681:G:C8	3.02	0.47
67:5:1733:G:N1	67:5:1797:G:C2	2.81	0.47
67:5:1961:G:H2'	67:5:2024:G:C2	2.49	0.47
67:5:2368:A:N7	67:5:2827:G:C2	2.82	0.47
67:5:3717:A:H2'	67:5:3718:A:H8	1.78	0.47
67:5:3820:G:C6	67:5:3821:A:N7	2.82	0.47
67:5:4528:G:N2	67:5:4529:G:N3	2.63	0.47
67:5:4630:G:C2	67:5:4669:A:C2	3.01	0.47
67:5:4743:G:C6	67:5:4744:A:C5	3.03	0.47
68:WW:79:PHE:O	68:WW:125:ILE:HG22	2.13	0.47
70:7:77:A:N3	70:7:100:A:C6	2.82	0.47
76:9:537:C:N3	76:9:538:U:C4	2.83	0.47
76:9:614:C:C5	76:9:626:G:C4	3.02	0.47
76:9:878:G:C6	76:9:909:G:C6	3.02	0.47
76:9:1048:G:N2	76:9:1071:G:O6	2.46	0.47
76:9:1199:A:C6	76:9:1200:A:C6	3.02	0.47
76:9:1228:A:N1	76:9:1229:G:C6	2.82	0.47
76:9:1600:G:OP2	77:ZZ:43:LYS:HA	2.14	0.47
76:9:1724:A:C6	76:9:1725:U:C4	3.03	0.47
79:AA:99:ILE:HG12	79:AA:117:ARG:NH1	2.29	0.47
2:C:27:VAL:HG12	2:C:279:LEU:HD21	1.96	0.47
11:E:151:THR:CG2	11:E:152:ILE:N	2.77	0.47
13:FF:63:LYS:CD	13:FF:144:LEU:HD11	2.44	0.47
15:F:239:ILE:CG2	15:F:240:ASN:N	2.78	0.47
17:BB:50:THR:O	17:BB:58:ALA:HB2	2.14	0.47
18:GG:136:LYS:O	18:GG:141:ILE:HD11	2.13	0.47
18:GG:140:ARG:NH2	76:9:147:A:N7	2.63	0.47
19:gg:67:SER:HB3	19:gg:83:TRP:CD1	2.50	0.47
25:H:31:ARG:HB2	25:H:84:VAL:O	2.13	0.47
28:ii:156:ALA:HB3	28:ii:172:PHE:CE2	2.49	0.47
31:JJ:158:ASP:N	31:JJ:158:ASP:OD1	2.47	0.47
32:jj:484:ILE:HG22	32:jj:502:ILE:HG22	1.96	0.47
87:jj:700:GCP:O2A	87:jj:700:GCP:H3B2	2.14	0.47
35:KK:84:HIS:CB	41:MM:27:ILE:HG12	2.44	0.47
38:LL:55:TYR:O	38:LL:56:ILE:HG23	2.14	0.47
41:MM:35:ILE:HD13	41:MM:61:TYR:OH	2.14	0.47
42:N:174:LEU:O	42:N:174:LEU:HD12	2.14	0.47
50:PP:96:VAL:CG2	50:PP:116:LEU:HB3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:QQ:62:ARG:HG2	53:QQ:108:ILE:HD11	1.96	0.47
54:R:95:TRP:CD1	67:5:2667:C:HO2'	2.32	0.47
56:RR:57:LEU:HD23	56:RR:60:ARG:CD	2.44	0.47
59:SS:125:HIS:NE2	76:9:1610:G:C5'	2.77	0.47
62:U:23:LEU:HD11	62:U:83:LEU:HD11	1.96	0.47
65:VV:10:ASP:OD1	65:VV:10:ASP:O	2.32	0.47
67:5:222:C:C4	67:5:236:G:N2	2.82	0.47
67:5:498:C:H4'	67:5:499:G:O5'	2.14	0.47
67:5:1358:G:HO2'	67:5:1359:G:P	2.34	0.47
67:5:1445:U:HO2'	67:5:1446:C:P	2.35	0.47
67:5:1466:G:N3	67:5:1467:C:C6	2.83	0.47
67:5:1525:A:H2'	67:5:1525:A:N3	2.30	0.47
67:5:1617:G:N3	67:5:1618:G:C8	2.82	0.47
67:5:2278:G:O2'	67:5:2279:A:OP1	2.27	0.47
67:5:2367:A:H1'	67:5:2798:A:C6	2.50	0.47
67:5:2644:G:C6	67:5:2645:G:C5	3.02	0.47
67:5:2771:G:C6	67:5:2772:C:C4	3.02	0.47
67:5:3772:U:H2'	67:5:3773:U:C6	2.49	0.47
67:5:3782:C:C5	67:5:3809:G:C6	3.03	0.47
67:5:3788:C:C5	67:5:3812:C:C6	3.02	0.47
67:5:4220:A:N6	67:5:4222:G:C4	2.83	0.47
67:5:4361:U:N3	67:5:4362:A:N7	2.62	0.47
67:5:4517:A:N6	67:5:4520:G:C4	2.82	0.47
70:7:77:A:C2	70:7:100:A:C5	3.01	0.47
71:XX:52:LEU:HG	71:XX:71:ARG:O	2.14	0.47
72:Y:130:LYS:O	72:Y:134:LYS:HG3	2.14	0.47
76:9:413:G:N2	76:9:414:A:C4	2.82	0.47
76:9:449:A:C2	76:9:452:G:C8	3.02	0.47
76:9:535:G:N1	76:9:550:C:C2	2.82	0.47
76:9:561:A:H2'	76:9:562:U:C6	2.49	0.47
76:9:1066:U:C4	76:9:1067:C:C5	3.02	0.47
76:9:1390:U:N3	76:9:1391:C:C5	2.82	0.47
76:9:1558:C:H2'	76:9:1559:C:H6	1.79	0.47
77:ZZ:86:ALA:O	77:ZZ:90:GLU:HG3	2.13	0.47
79:AA:10:MET:HE1	79:AA:18:PHE:CD2	2.49	0.47
80:aa:69:VAL:HG12	80:aa:70:LYS:N	2.29	0.47
4:DD:76:ARG:HG2	35:KK:34:GLU:OE2	2.14	0.47
4:DD:177:LEU:HD22	4:DD:182:LEU:HD13	1.96	0.47
12:f:11:PHE:C	12:f:11:PHE:CD1	2.91	0.47
13:FF:167:LYS:N	77:ZZ:71:ALA:HB1	2.29	0.47
18:GG:124:LEU:N	18:GG:124:LEU:HD12	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:gg:128:THR:HA	19:gg:142:VAL:O	2.14	0.47
28:ii:290:TYR:CD2	28:ii:294:ILE:HD11	2.49	0.47
28:ii:296:GLN:HA	28:ii:296:GLN:OE1	2.15	0.47
32:jj:318:VAL:HA	32:jj:354:ILE:HB	1.96	0.47
32:jj:333:GLU:HA	32:jj:333:GLU:OE1	2.14	0.47
32:jj:388:PHE:HE2	32:jj:572:LYS:HD3	1.79	0.47
52:r:47:LYS:HB3	52:r:102:TYR:CZ	2.49	0.47
53:QQ:76:GLY:HA3	76:9:1672:U:O3'	2.14	0.47
53:QQ:143:LYS:HE2	76:9:1249:C:O2'	2.14	0.47
54:R:120:TYR:OH	67:5:2665:U:OP2	2.27	0.47
54:R:149:LYS:O	54:R:153:LYS:HB3	2.15	0.47
56:RR:52:GLY:O	56:RR:55:THR:OG1	2.32	0.47
59:SS:39:ARG:CZ	61:TT:38:LYS:HB2	2.45	0.47
59:SS:70:ILE:HA	59:SS:77:TYR:CD2	2.49	0.47
61:TT:42:HIS:HB2	61:TT:83:GLN:HG3	1.95	0.47
62:U:21:PHE:HD1	62:U:108:GLU:HA	1.79	0.47
62:U:87:THR:O	62:U:91:LEU:CD1	2.63	0.47
63:UU:72:GLU:HB2	76:9:1491:G:O2'	2.14	0.47
67:5:113:A:H2'	67:5:114:G:O4'	2.15	0.47
67:5:156:G:N2	67:5:157:U:O4	2.48	0.47
67:5:324:A:C6	67:5:325:U:C4	3.02	0.47
67:5:433:A:C2	67:5:434:A:C4	3.02	0.47
67:5:1233:G:C2	67:5:1234:G:C5	3.03	0.47
67:5:1278:C:N4	67:5:1279:A:C6	2.83	0.47
67:5:1579:C:C2	67:5:1580:C:C5	3.02	0.47
67:5:1925:G:C2	67:5:1926:C:C6	3.03	0.47
67:5:2285:A:N1	67:5:2286:G:C5	2.83	0.47
67:5:2521:G:C2	67:5:2522:G:C4	3.02	0.47
67:5:3689:G:C5	67:5:3690:U:C5	3.03	0.47
67:5:3788:C:N4	67:5:3812:C:O4'	2.48	0.47
67:5:3871:A:C6	67:5:3885:G:C2	3.02	0.47
67:5:4186:A:C2	67:5:4187:G:C5	3.03	0.47
67:5:4998:G:C6	67:5:4999:G:C5	3.02	0.47
70:7:31:G:N1	70:7:47:G:C6	2.83	0.47
72:Y:8:THR:HG21	72:Y:13:LYS:HD2	1.96	0.47
74:YY:36:PRO:O	74:YY:40:ILE:HG12	2.14	0.47
75:Z:46:ILE:HG13	75:Z:46:ILE:O	2.15	0.47
76:9:1131:G:C2	76:9:1132:C:C4	3.03	0.47
76:9:1277:C:C2	76:9:1278:A:C8	3.03	0.47
76:9:1292:C:N4	76:9:1293:A:H2	2.12	0.47
76:9:1348:G:C8	76:9:1349:G:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1351:G:C4	76:9:1352:G:C8	3.03	0.47
76:9:1384:C:C2	76:9:1385:G:C8	3.02	0.47
76:9:1550:G:C6	76:9:1583:C:N3	2.83	0.47
76:9:1683:C:N4	84:cc:24:GLN:HG3	2.28	0.47
76:9:1852:C:N4	76:9:1853:C:H41	2.12	0.47
76:9:1859:A:C6	76:9:1860:A:C6	3.02	0.47
5:dd:29:GLY:HA2	76:9:1256:G:N2	2.30	0.47
7:e:41:ILE:HG13	7:e:42:ASP:N	2.28	0.47
13:FF:201:LYS:C	13:FF:201:LYS:HD3	2.39	0.47
18:GG:1:MET:HG3	18:GG:107:SER:C	2.40	0.47
19:gg:54:ILE:CG1	53:QQ:103:ALA:HB2	2.44	0.47
19:gg:257:LYS:HD2	19:gg:259:TRP:CZ2	2.50	0.47
20:G:222:PHE:HD1	20:G:222:PHE:H	1.62	0.47
21:h:70:ARG:CZ	67:5:134:G:O6	2.63	0.47
21:h:119:TYR:OH	36:L:95:GLY:HA3	2.14	0.47
22:HH:118:ARG:NH2	76:9:686:U:O2	2.47	0.47
26:i:20:ASN:ND2	36:L:110:LEU:CD2	2.78	0.47
27:II:64:ASN:OD1	76:9:303:C:H4'	2.13	0.47
28:ii:207:GLU:HA	28:ii:210:VAL:HG12	1.96	0.47
32:jj:301:LYS:HE3	32:jj:621:GLY:O	2.14	0.47
32:jj:444:ILE:O	32:jj:556:THR:HB	2.14	0.47
33:J:20:LEU:HD13	33:J:132:VAL:HG22	1.95	0.47
34:k:17:ARG:CZ	67:5:2772:C:O2'	2.61	0.47
36:L:28:GLN:CB	36:L:29:PRO:CD	2.92	0.47
38:LL:5:GLN:NE2	38:LL:10:TYR:CE1	2.83	0.47
41:MM:108:CYS:SG	41:MM:109:VAL:N	2.87	0.47
55:s:59:THR:CB	67:5:1961:G:C8	2.98	0.47
56:RR:53:TYR:HE1	76:9:1466:G:OP2	1.96	0.47
56:RR:102:THR:HA	56:RR:105:MET:CG	2.44	0.47
59:SS:70:ILE:HG22	59:SS:79:ILE:HD11	1.97	0.47
59:SS:134:GLN:CG	76:9:1231:C:OP1	2.63	0.47
66:W:118:ALA:HA	76:9:323:C:C5	2.49	0.47
67:5:164:G:C2	67:5:165:A:C4	3.03	0.47
67:5:211:G:C2	67:5:212:A:C8	3.02	0.47
67:5:274:C:C2	67:5:275:C:C5	3.03	0.47
67:5:353:A:C2	67:5:360:A:C8	3.02	0.47
67:5:961:G:C6	67:5:962:C:N4	2.82	0.47
67:5:1205:G:N1	67:5:1206:C:C4	2.83	0.47
67:5:1377:G:N2	67:5:1380:G:C8	2.82	0.47
67:5:1435:G:C6	67:5:1436:C:N4	2.83	0.47
67:5:1475:G:N2	67:5:1490:G:C5	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1871:A:N6	67:5:1872:G:C6	2.81	0.47
67:5:2340:C:N3	67:5:2341:A:N7	2.62	0.47
67:5:2873:U:N3	67:5:2875:C:O2	2.48	0.47
67:5:3779:A:N7	67:5:3780:G:C8	2.83	0.47
67:5:4947:U:HO2'	67:5:4948:C:P	2.38	0.47
71:XX:137:LYS:NZ	76:9:31:U:P	2.87	0.47
76:9:460:A:C2	76:9:470:G:C2	3.02	0.47
76:9:585:C:N4	76:9:586:G:C5	2.83	0.47
76:9:600:G:C2	76:9:601:G:C8	3.03	0.47
76:9:1192:U:C4	76:9:1193:U:C4	3.03	0.47
76:9:1240:A:H2'	76:9:1267:C:O2'	2.14	0.47
76:9:1315:U:O2	76:9:1315:U:O4'	2.32	0.47
76:9:1473:G:N2	76:9:1476:A:C8	2.83	0.47
76:9:1679:A:H4'	76:9:1680:G:C5'	2.44	0.47
81:B:90:VAL:CG2	81:B:104:THR:OG1	2.63	0.47
81:B:240:LEU:HD22	81:B:240:LEU:N	2.29	0.47
83:CC:70:VAL:HG11	83:CC:93:ILE:HG23	1.95	0.47
83:CC:133:TYR:HA	83:CC:216:MET:O	2.14	0.47
83:CC:167:ARG:NH1	83:CC:218:GLY:C	2.73	0.47
83:CC:255:LEU:HD22	83:CC:255:LEU:N	2.29	0.47
4:DD:27:ARG:CD	35:KK:63:ALA:HB2	2.43	0.47
4:DD:94:ARG:HG3	4:DD:95:GLY:N	2.30	0.47
4:DD:192:TRP:CH2	4:DD:194:PRO:HG3	2.50	0.47
7:e:54:LEU:N	7:e:54:LEU:CD1	2.78	0.47
8:EE:36:HIS:HB2	8:EE:83:PRO:HB2	1.96	0.47
8:EE:68:ARG:HB3	8:EE:68:ARG:CZ	2.44	0.47
11:E:69:ALA:O	11:E:73:ARG:HG3	2.14	0.47
11:E:209:VAL:HB	11:E:259:GLN:OE1	2.15	0.47
13:FF:60:ARG:NH2	76:9:1679:A:P	2.88	0.47
13:FF:79:HIS:NE2	76:9:1637:A:O2'	2.46	0.47
13:FF:79:HIS:HD2	76:9:1637:A:N3	2.12	0.47
13:FF:153:LEU:HB3	13:FF:189:ALA:CB	2.45	0.47
16:g:5:LEU:C	16:g:5:LEU:HD12	2.39	0.47
16:g:5:LEU:HD12	16:g:5:LEU:O	2.15	0.47
16:g:54:ARG:NH2	67:5:2653:C:OP1	2.48	0.47
17:BB:129:THR:HG22	17:BB:176:VAL:HG12	1.95	0.47
17:BB:138:PHE:HB2	17:BB:214:LYS:HB3	1.96	0.47
18:GG:84:TYR:CE2	18:GG:86:PRO:HB3	2.50	0.47
18:GG:172:LYS:CD	76:9:65:C:H5'	2.45	0.47
18:GG:176:ILE:HD12	76:9:77:A:C4	2.50	0.47
19:gg:36:ARG:O	19:gg:65:PHE:CG	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:H:120:GLU:OE2	25:H:124:ARG:NH2	2.46	0.47
27:II:120:PRO:O	27:II:121:LEU:HD22	2.13	0.47
28:ii:216:GLY:HA3	71:XX:73:GLN:CD	2.40	0.47
32:jj:213:VAL:HG13	32:jj:292:PHE:CD1	2.50	0.47
32:jj:232:ILE:HD12	32:jj:285:PHE:CD1	2.50	0.47
32:jj:617:LEU:HB3	32:jj:624:ILE:CG2	2.44	0.47
33:J:128:LEU:HD12	33:J:129:ASP:N	2.29	0.47
35:KK:16:PHE:HB2	35:KK:79:LEU:HD13	1.97	0.47
38:LL:61:PRO:HA	38:LL:66:VAL:CG1	2.44	0.47
39:M:46:ARG:NH1	67:5:935:A:C8	2.83	0.47
41:MM:58:GLU:HB3	41:MM:61:TYR:HB3	1.97	0.47
43:n:5:TRP:HZ2	76:9:1852:C:N1	2.12	0.47
46:o:86:LYS:NZ	67:5:4331:G:N7	2.63	0.47
47:OO:30:VAL:HG13	47:OO:45:THR:OG1	2.15	0.47
47:OO:43:HIS:HA	47:OO:55:ARG:HG3	1.96	0.47
48:P:97:ASN:O	48:P:101:ASN:ND2	2.47	0.47
50:PP:68:PRO:HG2	50:PP:71:GLU:OE1	2.14	0.47
50:PP:110:GLU:HB3	59:SS:117:ILE:CG2	2.44	0.47
51:Q:138:LEU:C	51:Q:139:LEU:HG	2.40	0.47
51:Q:167:VAL:HG12	51:Q:169:SER:H	1.79	0.47
53:QQ:105:LYS:HE2	53:QQ:109:LYS:HD2	1.96	0.47
54:R:23:TRP:HB2	54:R:53:LYS:HE3	1.96	0.47
55:s:84:GLY:O	67:5:2021:G:H5"	2.15	0.47
56:RR:5:ARG:HD3	76:9:1466:G:OP1	2.14	0.47
56:RR:10:LYS:HG2	56:RR:53:TYR:CE2	2.49	0.47
58:t:134:GLY:HA3	67:5:1993:C:H1'	1.97	0.47
59:SS:114:LEU:HB3	59:SS:122:GLY:HA3	1.97	0.47
61:TT:57:ALA:HB1	61:TT:107:LEU:HD11	1.95	0.47
61:TT:82:ARG:CZ	76:9:1654:G:OP1	2.63	0.47
61:TT:105:GLN:NE2	76:9:1564:C:H5"	2.30	0.47
61:TT:110:LEU:O	61:TT:110:LEU:HD23	2.14	0.47
63:UU:37:ALA:O	63:UU:41:ARG:HD3	2.15	0.47
67:5:34:A:N3	67:5:35:U:C6	2.83	0.47
67:5:48:G:H1'	67:5:49:U:OP2	2.14	0.47
67:5:67:C:P	67:5:312:G:N2	2.87	0.47
67:5:511:C:C2	67:5:649:A:C2	3.02	0.47
67:5:737:C:C2	67:5:927:G:C2	3.02	0.47
67:5:975:C:N4	67:5:1281:G:H21	2.13	0.47
67:5:1279:A:C2	67:5:1281:G:C2	3.02	0.47
67:5:1307:A:H2'	67:5:1308:C:H6	1.79	0.47
67:5:1382:G:C4	67:5:1383:G:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1455:G:N2	67:5:1456:C:C2	2.83	0.47
67:5:1479:G:C6	67:5:1480:C:N4	2.83	0.47
67:5:2046:G:HO2'	67:5:2047:A:P	2.35	0.47
67:5:2293:U:C2	67:5:2294:G:C8	3.03	0.47
67:5:2385:U:C2	67:5:2386:U:C5	3.02	0.47
67:5:2438:A:C6	67:5:2531:C:C5	3.03	0.47
67:5:2562:G:C4	67:5:2564:G:OP2	2.67	0.47
67:5:2789:A:C6	67:5:2796:G:N2	2.82	0.47
67:5:2845:A:C2	67:5:2846:G:C8	3.03	0.47
67:5:3659:G:C6	67:5:3686:G:N1	2.82	0.47
67:5:3808:C:C5	67:5:3809:G:C6	3.02	0.47
67:5:3923:A:C2	67:5:3924:C:C5	3.02	0.47
67:5:4167:G:C2	67:5:4168:G:N9	2.82	0.47
67:5:4408:G:C6	67:5:4409:C:C4	3.03	0.47
67:5:4775:C:N3	67:5:4776:G:N7	2.63	0.47
75:Z:68:ILE:CG2	75:Z:69:LYS:N	2.78	0.47
76:9:224:A:C2	76:9:298:G:C2	3.03	0.47
76:9:379:C:C4	76:9:380:G:C6	3.03	0.47
76:9:653:A:H2'	76:9:654:A:O4'	2.14	0.47
76:9:693:A:C2	76:9:694:G:C5	3.02	0.47
76:9:875:A:C5	76:9:876:C:C5	3.03	0.47
76:9:1079:C:N4	76:9:1080:A:N6	2.63	0.47
76:9:1199:A:H2'	76:9:1200:A:O4'	2.14	0.47
76:9:1332:A:H2	76:9:1500:G:H1'	1.76	0.47
76:9:1411:G:C6	76:9:1431:G:O6	2.68	0.47
76:9:1656:G:C2	76:9:1657:G:N7	2.83	0.47
76:9:1827:U:C4	76:9:1828:C:N4	2.83	0.47
76:9:1863:A:H2'	76:9:1863:A:N3	2.29	0.47
77:ZZ:91:LEU:HD23	77:ZZ:96:LEU:CD1	2.44	0.47
77:ZZ:102:LYS:CB	77:ZZ:107:VAL:HG13	2.45	0.47
79:AA:24:HIS:HB2	79:AA:48:ILE:HG23	1.96	0.47
79:AA:77:ILE:CD1	79:AA:122:LEU:HD11	2.45	0.47
83:CC:140:GLY:HA3	83:CC:158:ALA:HB2	1.97	0.47
83:CC:210:PRO:HD3	83:CC:236:PHE:HE2	1.80	0.47
84:cc:24:GLN:HB2	84:cc:26:GLN:HB3	1.95	0.47
84:cc:44:ARG:HG3	84:cc:65:ALA:H	1.80	0.47
4:DD:4:GLN:O	76:9:1578:U:C2	2.67	0.47
4:DD:27:ARG:NH1	35:KK:62:PHE:O	2.48	0.47
6:D:164:LYS:HG2	6:D:195:HIS:CE1	2.50	0.47
7:e:4:LEU:N	7:e:4:LEU:CD2	2.78	0.47
12:f:48:ALA:HB2	12:f:71:TRP:CZ3	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:FF:96:ALA:HB3	13:FF:173:LEU:HD22	1.96	0.47
15:F:239:ILE:HG23	15:F:240:ASN:N	2.29	0.47
18:GG:79:LYS:HE3	18:GG:89:THR:HA	1.96	0.47
28:ii:258:TYR:CE2	28:ii:262:ASN:OD1	2.68	0.47
32:jj:265:LEU:HD22	32:jj:265:LEU:N	2.30	0.47
32:jj:334:LYS:HG3	32:jj:339:ARG:NH1	2.30	0.47
34:k:8:ILE:HG13	34:k:9:LYS:N	2.29	0.47
35:KK:51:SER:HB3	76:9:1277:C:OP1	2.15	0.47
36:L:5:ARG:O	36:L:6:ASN:HB2	2.14	0.47
52:r:58:LYS:N	52:r:58:LYS:HD2	2.30	0.47
56:RR:5:ARG:NH2	56:RR:53:TYR:HD1	2.12	0.47
59:SS:71:MET:O	59:SS:97:GLN:CB	2.62	0.47
61:TT:102:ARG:NH2	61:TT:105:GLN:OE1	2.47	0.47
67:5:170:C:H2'	67:5:171:U:C6	2.49	0.47
67:5:373:G:C2	67:5:374:G:C8	3.02	0.47
67:5:376:A:N1	67:5:377:A:C5	2.83	0.47
67:5:385:A:C6	67:5:387:G:C4	3.02	0.47
67:5:406:C:O2'	67:5:407:A:OP1	2.30	0.47
67:5:648:G:C2	67:5:649:A:C8	3.03	0.47
67:5:1446:C:N4	67:5:2108:G:H22	2.13	0.47
67:5:1448:G:C6	67:5:1449:C:C4	3.03	0.47
67:5:1985:G:N1	67:5:1986:U:C4	2.82	0.47
67:5:1998:A:C4	67:5:2019:C:O2'	2.67	0.47
67:5:2020:U:N3	67:5:2021:G:N7	2.63	0.47
67:5:2109:A:N6	67:5:2110:G:C5	2.83	0.47
67:5:2533:C:C2	67:5:2534:C:C5	3.02	0.47
67:5:3625:G:O2'	67:5:3626:G:P	2.72	0.47
67:5:3694:U:H2'	67:5:3695:U:O4'	2.15	0.47
67:5:3753:G:C6	67:5:3754:G:N7	2.83	0.47
67:5:3827:G:C2	67:5:3829:G:C5	3.03	0.47
67:5:4459:U:H2'	67:5:4460:U:C6	2.49	0.47
67:5:4892:A:C6	67:5:4893:A:C5	3.03	0.47
67:5:4926:C:N3	67:5:4927:G:C5	2.83	0.47
70:7:23:A:H2	70:7:118:C:H1'	1.80	0.47
70:7:70:G:N3	70:7:106:G:C2	2.83	0.47
74:YY:118:ARG:HG3	74:YY:119:GLY:N	2.29	0.47
76:9:40:A:C6	76:9:515:G:N2	2.82	0.47
76:9:388:U:H2'	76:9:389:A:H8	1.78	0.47
76:9:1524:G:H2'	76:9:1525:C:C6	2.50	0.47
83:CC:72:ASP:OD2	83:CC:272:HIS:CE1	2.67	0.47
2:C:108:TRP:HB2	42:N:200:LEU:HD13	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:51:LEU:HD12	4:DD:51:LEU:N	2.29	0.47
12:f:57:THR:HG21	12:f:68:ARG:NE	2.23	0.47
13:FF:123:GLU:HA	13:FF:140:ASP:HA	1.97	0.47
13:FF:141:VAL:HA	84:cc:46:VAL:HG13	1.97	0.47
16:g:88:ARG:HH21	75:Z:15:ALA:HB2	1.79	0.47
20:G:210:ILE:HG12	20:G:254:THR:HG22	1.97	0.47
28:ii:406:PHE:CE2	32:jj:583:ARG:HG2	2.50	0.47
32:jj:367:TRP:CE3	32:jj:414:CYS:HB2	2.50	0.47
33:J:91:GLU:HG3	33:J:93:GLU:HG2	1.95	0.47
37:l:40:LYS:HZ3	67:5:365:U:HO2'	1.60	0.47
41:MM:93:LYS:HG3	41:MM:93:LYS:O	2.14	0.47
42:N:172:ARG:NH2	67:5:62:A:H5'	2.30	0.47
49:p:17:ARG:C	49:p:18:TYR:CG	2.93	0.47
52:r:49:VAL:HG12	52:r:50:GLY:N	2.29	0.47
53:QQ:140:ARG:O	53:QQ:141:TYR:C	2.58	0.47
54:R:113:LYS:HD2	54:R:113:LYS:O	2.14	0.47
56:RR:98:VAL:CG2	56:RR:102:THR:OG1	2.63	0.47
59:SS:64:VAL:O	59:SS:68:ILE:HD12	2.14	0.47
67:5:42:A:N6	67:5:4380:A:C6	2.83	0.47
67:5:406:C:HO2'	67:5:407:A:P	2.38	0.47
67:5:957:G:O6	67:5:958:G:N1	2.48	0.47
67:5:1398:A:N7	67:5:1420:A:C5	2.83	0.47
67:5:1406(C):G:N1	67:5:1411(A):G:C2	2.83	0.47
67:5:1885:G:C2	67:5:1886:G:C4	3.03	0.47
67:5:2019:C:N3	67:5:2020:U:C5	2.83	0.47
67:5:2025:A:H1'	67:5:2026:A:H1'	1.96	0.47
67:5:2517:A:N1	67:5:2518:G:N2	2.63	0.47
67:5:2745:A:C2	67:5:2746:A:C5	3.03	0.47
67:5:2787:A:N3	67:5:2787:A:O2'	2.43	0.47
67:5:2831:G:C6	67:5:2832:A:N7	2.83	0.47
67:5:3911:C:H2'	67:5:3912:U:C6	2.50	0.47
67:5:3916:G:N2	67:5:3917:A:N3	2.63	0.47
67:5:4152:G:C2	67:5:4153:C:C4	3.03	0.47
67:5:4344:U:C2	67:5:4369:A:C2	3.03	0.47
67:5:4525:C:C4	67:5:4526:U:C5	3.02	0.47
67:5:4565:C:N3	67:5:4566:U:C5	2.82	0.47
68:WW:77:PRO:HG2	68:WW:79:PHE:CZ	2.50	0.47
70:7:93:G:C2	70:7:94:C:C6	3.03	0.47
73:8:65:A:C4	73:8:95:A:N1	2.83	0.47
73:8:146:U:C2	73:8:147:G:C8	3.03	0.47
74:YY:35:VAL:HG21	74:YY:40:ILE:HD11	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:962:A:N6	76:9:963:A:C6	2.83	0.47
76:9:1247:C:C2	76:9:1251:A:C4	3.02	0.47
76:9:1753:C:C2	76:9:1754:G:N7	2.83	0.47
80:aa:45:VAL:CG1	80:aa:53:ILE:HD13	2.40	0.47
4:DD:213:PRO:HD3	56:RR:19:LYS:HE2	1.97	0.47
6:D:267:ASN:HD21	70:7:59:G:C1'	2.28	0.47
7:e:4:LEU:N	7:e:4:LEU:HD22	2.30	0.47
11:E:126:ARG:NH2	67:5:959:G:O6	2.48	0.47
13:FF:51:HIS:HB2	13:FF:90:VAL:HG21	1.96	0.47
13:FF:54:GLY:HA2	13:FF:56:TYR:CD2	2.50	0.47
13:FF:86:LYS:HA	13:FF:89:THR:HG22	1.96	0.47
18:GG:154:ARG:HG2	76:9:77:A:C8	2.50	0.47
20:G:249:ARG:NH1	67:5:149:A:C4	2.83	0.47
26:i:4:ARG:HG2	67:5:1481:C:N4	2.30	0.47
27:II:145:ILE:HG12	27:II:149:TYR:CE2	2.50	0.47
28:ii:224:LEU:CD2	28:ii:226:LEU:CD1	2.93	0.47
28:ii:422:MET:HG2	67:5:2011:C:H41	1.80	0.47
31:JJ:40:LYS:HB3	31:JJ:44:TRP:CZ2	2.50	0.47
32:jj:541:LYS:HB2	32:jj:587:GLN:CD	2.39	0.47
36:L:58:ILE:HG23	36:L:70:VAL:CG1	2.45	0.47
36:L:161:PHE:HB3	78:a:105:ARG:NH2	2.30	0.47
41:MM:52:LEU:CD1	41:MM:65:VAL:HG11	2.45	0.47
43:n:5:TRP:NE1	76:9:1852:C:C6	2.84	0.47
49:p:7:LYS:HE3	67:5:2875:C:H3'	1.97	0.47
50:PP:34:MET:O	50:PP:42:ARG:HB2	2.14	0.47
50:PP:49:LEU:HD12	50:PP:53:GLN:NE2	2.29	0.47
52:r:107:ARG:NH2	67:5:2263:A:OP1	2.48	0.47
55:s:13:TYR:CD2	55:s:60:MET:SD	3.08	0.47
55:s:57:LYS:CE	67:5:1962:A:O5'	2.63	0.47
55:s:59:THR:HG23	67:5:2024:G:O6	2.14	0.47
56:RR:45:LYS:HD3	76:9:1453:C:OP2	2.15	0.47
61:TT:62:ARG:O	61:TT:66:LEU:HG	2.15	0.47
62:U:18:LEU:HD11	62:U:73:THR:CG2	2.45	0.47
65:VV:58:ALA:HA	65:VV:61:ARG:HH11	1.80	0.47
67:5:87:A:O2'	78:a:60:HIS:O	2.31	0.47
67:5:1604:G:C6	67:5:1605:G:C6	3.03	0.47
67:5:2079:G:C4	67:5:2278:G:N2	2.82	0.47
67:5:2649:G:C2	67:5:2650:G:C4	3.02	0.47
67:5:2757:A:C6	67:5:2758:G:C6	3.03	0.47
67:5:2845:A:C6	67:5:4671:C:C5	3.03	0.47
67:5:3820:G:C6	67:5:3821:A:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4095:G:C2	67:5:4096:C:C4	3.03	0.47
67:5:4461:C:O2	67:5:4516:G:C2	2.68	0.47
67:5:4523:A:C2	67:5:4558:U:C2	3.03	0.47
67:5:4537:C:H2'	67:5:4538:G:C8	2.50	0.47
67:5:4611:A:C2	67:5:4612:C:C5	3.03	0.47
70:7:71:G:C6	70:7:72:U:C4	3.03	0.47
74:YY:44:LEU:HD23	74:YY:48:TYR:HE2	1.79	0.47
76:9:42:A:N3	76:9:42:A:H2'	2.30	0.47
76:9:166:A:C6	76:9:167:G:N7	2.83	0.47
76:9:1096:G:N2	76:9:1097:G:C4	2.83	0.47
76:9:1243:U:O4'	76:9:1266:C:O4'	2.32	0.47
76:9:1265:A:O2'	76:9:1326:U:O3'	2.33	0.47
76:9:1352:G:C6	76:9:1353:A:N7	2.83	0.47
76:9:1401:A:N6	76:9:1444:U:O4	2.48	0.47
76:9:1822:A:C6	76:9:1823:A:N1	2.82	0.47
5:dd:32:ARG:NH2	76:9:1660:C:H3'	2.31	0.46
6:D:41:LYS:HG2	60:T:69:GLN:O	2.15	0.46
10:b:36:ASP:N	10:b:36:ASP:OD1	2.48	0.46
13:FF:74:ASN:CG	76:9:1675:A:O2'	2.57	0.46
14:ff:100:LEU:N	14:ff:100:LEU:CD1	2.77	0.46
18:GG:58:LYS:CA	18:GG:107:SER:HB2	2.45	0.46
19:gg:152:SER:HB3	19:gg:169:GLY:HA2	1.97	0.46
20:G:198:THR:HG23	20:G:199:LEU:N	2.30	0.46
21:h:114:TYR:CE1	36:L:89:LYS:HB2	2.49	0.46
22:HH:11:PRO:HG3	22:HH:97:GLN:NE2	2.30	0.46
24:bb:15:GLU:O	24:bb:23:ARG:HG2	2.14	0.46
26:i:15:HIS:HD2	26:i:17:VAL:HG23	1.80	0.46
29:I:51:HIS:CD2	29:I:168:SER:HB2	2.50	0.46
32:jj:252:LYS:HD2	76:9:464:A:N6	2.30	0.46
32:jj:313:GLN:O	32:jj:458:LYS:HD2	2.15	0.46
32:jj:484:ILE:HG22	32:jj:501:LYS:O	2.14	0.46
41:MM:61:TYR:CD1	41:MM:61:TYR:C	2.94	0.46
44:NN:16:LEU:CD2	44:NN:65:PHE:HE2	2.28	0.46
47:OO:120:ALA:HB2	80:aa:53:ILE:CG1	2.45	0.46
55:s:6:ARG:HG2	55:s:10:LYS:HE3	1.97	0.46
57:S:81:TRP:C	57:S:82:LEU:HD22	2.40	0.46
63:UU:66:ARG:HH21	63:UU:68:THR:CB	2.28	0.46
66:W:95:ASN:HB3	76:9:1758:G:H4'	1.96	0.46
67:5:126:C:C2	67:5:127:G:C8	3.03	0.46
67:5:331:G:C2	67:5:332:C:C6	3.03	0.46
67:5:444:G:C6	67:5:445:U:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:460:C:C2	67:5:697:G:C2	3.03	0.46
67:5:1588:U:N3	67:5:1589:C:C5	2.83	0.46
67:5:1691:G:C6	67:5:1692:C:C4	3.03	0.46
67:5:1885:G:C2	67:5:1886:G:N9	2.83	0.46
67:5:1968:G:C4	67:5:1969:G:C8	3.04	0.46
67:5:1986:U:H2'	67:5:2008:U:H5	1.81	0.46
67:5:2005:G:C5	67:5:2006:U:C5	3.03	0.46
67:5:2406:G:O6	67:5:2785:C:N4	2.49	0.46
67:5:2840:A:N1	67:5:3849:A:C6	2.83	0.46
67:5:2868:G:N1	67:5:2869:U:C4	2.83	0.46
67:5:3780:G:C6	67:5:3781:C:C4	3.03	0.46
67:5:4566:U:N3	67:5:4567:G:N7	2.63	0.46
67:5:4669:A:N6	67:5:4672:A:C5	2.83	0.46
67:5:4672:A:C6	67:5:4673:U:C5	3.03	0.46
67:5:4770:U:N3	67:5:4864:U:O4	2.48	0.46
67:5:4771:C:H3'	67:5:4773:C:H41	1.80	0.46
67:5:5003:U:C4	67:5:5004:C:N4	2.84	0.46
67:5:5019:A:C6	67:5:5031:G:C6	3.03	0.46
73:8:94:G:O2'	73:8:95:A:OP1	2.28	0.46
76:9:378:U:C4	76:9:379:C:C4	3.03	0.46
76:9:671:A:N6	76:9:1089:G:N7	2.62	0.46
76:9:1214:A:C6	76:9:1686:G:N1	2.83	0.46
76:9:1232:U:N3	76:9:1527:C:N4	2.63	0.46
76:9:1239:U:HO2'	76:9:1240:A:H2	1.62	0.46
76:9:1519:U:C2	76:9:1622:U:H1'	2.50	0.46
76:9:1590:C:C4	76:9:1591:C:C6	3.04	0.46
2:C:134:PRO:HA	2:C:150:LEU:HD11	1.95	0.46
11:E:222:LYS:NZ	67:5:1291:G:OP1	2.48	0.46
11:E:264:ILE:HD11	11:E:274:LEU:HD11	1.97	0.46
12:f:81:SER:CB	67:5:1918:U:OP1	2.63	0.46
13:FF:166:ILE:HG22	77:ZZ:71:ALA:HB2	1.97	0.46
13:FF:168:THR:HG21	77:ZZ:106:GLN:HG3	1.98	0.46
18:GG:20:ASP:HB3	18:GG:23:LYS:HD2	1.98	0.46
18:GG:136:LYS:H	76:9:170:A:P	2.38	0.46
18:GG:138:ALA:HB2	18:GG:177:GLN:O	2.14	0.46
18:GG:197:GLN:O	18:GG:201:LYS:HD3	2.15	0.46
19:gg:38:LYS:HE3	19:gg:63:SER:O	2.13	0.46
20:G:210:ILE:HG22	20:G:211:ALA:N	2.30	0.46
20:G:284:ASP:O	20:G:288:ARG:HG2	2.15	0.46
24:bb:74:THR:HG22	24:bb:75:GLU:N	2.30	0.46
28:ii:262:ASN:OD1	32:jj:560:GLU:OE1	2.32	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ii:394:ASP:O	28:ii:400:SER:CB	2.64	0.46
42:N:174:LEU:HD12	42:N:174:LEU:C	2.40	0.46
43:n:1:MET:HE3	43:n:5:TRP:CB	2.45	0.46
45:O:168:TYR:CE2	67:5:4759:C:C2	3.03	0.46
47:OO:42:VAL:CB	47:OO:81:VAL:HG11	2.45	0.46
53:QQ:54:PRO:HA	53:QQ:57:LEU:HD12	1.97	0.46
53:QQ:76:GLY:CA	76:9:1672:U:H5"	2.44	0.46
53:QQ:133:GLY:HA2	53:QQ:141:TYR:CZ	2.51	0.46
54:R:8:LYS:HG2	54:R:19:LYS:HB2	1.96	0.46
55:s:71:ASN:OD1	55:s:71:ASN:N	2.37	0.46
57:S:168:THR:HG23	57:S:169:THR:N	2.29	0.46
58:t:81:ILE:HD11	58:t:132:ILE:CG2	2.45	0.46
58:t:123:ARG:CB	67:5:1995:G:H4'	2.45	0.46
59:SS:16:LEU:HD22	59:SS:99:LEU:HG	1.96	0.46
59:SS:104:ASP:O	59:SS:107:LEU:HB3	2.16	0.46
66:W:50:ASN:ND2	67:5:5006:U:H2'	2.30	0.46
67:5:1234:G:C2	67:5:1235:G:C5	3.03	0.46
67:5:1571:G:C2	67:5:1572:U:C6	3.03	0.46
67:5:1662:C:C4	67:5:2288:G:N2	2.83	0.46
67:5:1917:A:N3	67:5:2067:C:H1'	2.30	0.46
67:5:2481:G:C2	67:5:2482:C:C2	3.04	0.46
67:5:2893:U:C4	67:5:2894:A:N7	2.84	0.46
67:5:3599:A:C6	67:5:3600:G:C6	3.04	0.46
67:5:3600:G:N2	67:5:3601:C:C2	2.83	0.46
67:5:4769:G:C2	67:5:4866:C:C2	3.03	0.46
67:5:5056:A:C6	67:5:5057:C:C4	3.04	0.46
68:WW:28:ARG:HH22	76:9:922:A:P	2.39	0.46
68:WW:55:ASP:OD2	68:WW:57:ARG:CB	2.64	0.46
74:YY:12:PHE:CZ	74:YY:21:LYS:HB3	2.50	0.46
75:Z:5:MET:HE2	75:Z:77:TYR:CD2	2.51	0.46
76:9:551:U:C2	76:9:552:G:C8	3.03	0.46
76:9:692:G:C6	76:9:693:A:N6	2.83	0.46
76:9:1040:G:C4	76:9:1076:G:N2	2.83	0.46
76:9:1203:G:C2	76:9:1204:A:C4	3.03	0.46
76:9:1332:A:N6	76:9:1493:C:C4	2.82	0.46
76:9:1454:A:H2	76:9:1476:A:H1'	1.79	0.46
76:9:1658:G:OP1	76:9:1660:C:N4	2.42	0.46
76:9:1664:A:N3	76:9:1666:C:C5	2.83	0.46
76:9:1831:A:C2	76:9:1832:A:C8	3.03	0.46
76:9:1833:C:C4	76:9:1836:G:C5	3.03	0.46
78:a:43:ILE:O	78:a:44:ASN:C	2.58	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B:231:VAL:HG13	81:B:232:THR:N	2.28	0.46
82:c:45:LEU:HB2	82:c:105:ILE:HG22	1.97	0.46
84:cc:14:VAL:O	84:cc:53:GLY:HA2	2.15	0.46
4:DD:59:LEU:HD11	4:DD:88:ALA:HB3	1.96	0.46
4:DD:92:ALA:O	4:DD:93:THR:HG22	2.16	0.46
8:EE:42:LEU:HD23	8:EE:42:LEU:C	2.40	0.46
11:E:165:VAL:CG1	11:E:178:VAL:HG22	2.43	0.46
11:E:257:ASP:OD1	11:E:261:LEU:HD13	2.15	0.46
13:FF:51:HIS:O	53:QQ:50:LYS:HE2	2.15	0.46
13:FF:83:ASN:OD1	76:9:1651:A:O2'	2.33	0.46
16:g:112:GLN:HA	16:g:115:LYS:HB2	1.97	0.46
17:BB:28:LYS:HA	17:BB:50:THR:HA	1.96	0.46
17:BB:120:MET:HG3	17:BB:142:PHE:CE2	2.51	0.46
17:BB:124:HIS:O	17:BB:169:MET:HE2	2.15	0.46
19:gg:83:TRP:HZ3	56:RR:32:LYS:HZ1	1.62	0.46
22:HH:142:LYS:HB2	68:WW:54:ASP:OD2	2.14	0.46
24:bb:30:SER:OG	76:9:1016:U:O2	2.34	0.46
25:H:104:VAL:HG13	25:H:113:GLU:HB2	1.97	0.46
27:II:36:THR:HG21	27:II:179:PRO:HB2	1.97	0.46
27:II:77:ARG:HB3	27:II:77:ARG:CZ	2.46	0.46
27:II:120:PRO:C	27:II:121:LEU:HD22	2.40	0.46
27:II:143:LYS:HD2	27:II:143:LYS:N	2.29	0.46
28:ii:38:ILE:HG21	28:ii:122:THR:OG1	2.16	0.46
28:ii:310:LYS:HG3	67:5:1981:G:N2	2.30	0.46
29:I:4:ARG:NH2	29:I:99:ILE:CD1	2.78	0.46
30:j:52:LYS:HE3	67:5:364:G:O6	2.16	0.46
31:JJ:67:ASP:OD2	31:JJ:69:ARG:HB3	2.16	0.46
32:jj:228:ILE:HA	32:jj:231:GLN:OE1	2.15	0.46
32:jj:362:ASP:OD1	87:jj:700:GCP:N2	2.47	0.46
36:L:161:PHE:CB	78:a:105:ARG:CZ	2.92	0.46
38:LL:78:THR:HG22	38:LL:87:VAL:O	2.16	0.46
38:LL:96:ILE:HG22	38:LL:97:ARG:N	2.31	0.46
40:m:78:HIS:CE1	40:m:81:ALA:HB2	2.50	0.46
48:P:131:ARG:NE	67:5:1596:U:O2'	2.38	0.46
50:PP:22:LEU:O	50:PP:22:LEU:HG	2.14	0.46
50:PP:38:SER:HA	76:9:1613:G:P	2.55	0.46
55:s:144:THR:CB	55:s:155:LEU:HB2	2.46	0.46
55:s:144:THR:HB	55:s:155:LEU:HB2	1.97	0.46
56:RR:100:PRO:O	56:RR:104:GLU:HG2	2.16	0.46
58:t:109:ILE:HD11	58:t:143:VAL:CG2	2.45	0.46
59:SS:136:THR:C	76:9:1521:C:H2'	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:TT:96:SER:HB3	61:TT:99:VAL:CG2	2.45	0.46
66:W:95:ASN:HB3	76:9:1758:G:C4'	2.45	0.46
67:5:959:G:C5	67:5:2263:A:C2	3.04	0.46
67:5:1424:G:N1	67:5:1425:G:C5	2.83	0.46
67:5:1617:G:C2	67:5:1618:G:C8	3.03	0.46
67:5:1760:G:C6	67:5:1761:G:C5	3.03	0.46
67:5:1863:U:C4	67:5:1872:G:N1	2.84	0.46
67:5:1968:G:C6	67:5:1969:G:C5	3.03	0.46
67:5:2541:G:C6	67:5:2776:G:N1	2.83	0.46
67:5:2744:A:N1	67:5:2745:A:C6	2.84	0.46
67:5:2882:A:N7	67:5:2883:G:C8	2.83	0.46
67:5:3627:G:N1	67:5:3628:G:C5	2.83	0.46
67:5:3698:G:C2	67:5:3699:C:C6	3.03	0.46
67:5:3770:U:H2'	67:5:3771:C:C6	2.50	0.46
67:5:3773:U:N3	67:5:3776:G:C6	2.83	0.46
67:5:4119:C:O2	67:5:4119:C:O4'	2.32	0.46
67:5:4251:A:C5	67:5:4252:C:C4	3.04	0.46
67:5:4477:A:N3	67:5:4478:G:C8	2.83	0.46
67:5:4877:G:N1	67:5:4878:C:C4	2.84	0.46
67:5:4978:G:HO2'	67:5:4981:G:H22	1.64	0.46
76:9:85:A:H2'	76:9:86:C:H6	1.81	0.46
76:9:166:A:C5	76:9:167:G:N7	2.84	0.46
76:9:388:U:C2	76:9:389:A:N7	2.84	0.46
76:9:432:G:H2'	76:9:433:A:C8	2.51	0.46
76:9:460:A:N1	76:9:470:G:C6	2.84	0.46
76:9:1038:U:C2	76:9:1039:C:C5	3.04	0.46
76:9:1062:A:N3	76:9:1838:U:O4	2.49	0.46
76:9:1259:A:C2	76:9:1260:A:H5"	2.50	0.46
76:9:1264:C:N3	76:9:1517:G:O6	2.49	0.46
76:9:1588:A:N1	76:9:1671:G:N3	2.63	0.46
76:9:1821:U:C4	76:9:1822:A:N7	2.83	0.46
77:ZZ:99:LEU:HD23	77:ZZ:99:LEU:C	2.40	0.46
77:ZZ:112:ASN:O	77:ZZ:113:THR:C	2.58	0.46
79:AA:18:PHE:HB3	79:AA:51:LEU:HD13	1.95	0.46
79:AA:24:HIS:O	79:AA:48:ILE:HA	2.16	0.46
80:aa:52:ASP:O	80:aa:55:GLU:HB2	2.14	0.46
81:B:202:GLU:O	81:B:202:GLU:CD	2.58	0.46
81:B:332:MET:HE2	81:B:332:MET:HB3	1.84	0.46
1:A:248:GLY:HA2	76:9:1069:U:C5'	2.45	0.46
2:C:110:ARG:HG3	42:N:204:ARG:NH1	2.31	0.46
2:C:292:ILE:HD11	51:Q:124:ASP:OD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:83:LEU:HB3	6:D:88:VAL:HB	1.97	0.46
11:E:60:SER:O	11:E:64:MET:HG2	2.16	0.46
11:E:65:TYR:CD2	11:E:70:LEU:HD12	2.50	0.46
11:E:156:LEU:O	11:E:161:ARG:HG3	2.15	0.46
12:f:11:PHE:CE2	12:f:97:ILE:HD13	2.51	0.46
13:FF:146:ARG:HH12	84:cc:56:LEU:HA	1.81	0.46
13:FF:168:THR:CG2	77:ZZ:106:GLN:HG3	2.45	0.46
17:BB:28:LYS:HD3	17:BB:50:THR:HA	1.97	0.46
17:BB:33:VAL:HA	17:BB:96:CYS:HB2	1.96	0.46
18:GG:45:TRP:HA	18:GG:45:TRP:CE3	2.51	0.46
19:gg:104:HIS:CG	19:gg:108:VAL:CG2	2.99	0.46
19:gg:196:ASN:HB3	19:gg:236:ILE:O	2.15	0.46
25:H:158:ALA:O	25:H:161:ILE:HG12	2.16	0.46
28:ii:147:GLY:HA3	28:ii:213:PHE:CE1	2.48	0.46
30:j:48:ASN:HB2	67:5:52:G:OP1	2.15	0.46
32:jj:308:ILE:CD1	32:jj:344:LEU:HD21	2.46	0.46
33:J:169:LYS:HG3	33:J:170:TYR:CE2	2.50	0.46
45:O:142:ALA:HA	45:O:145:VAL:HG12	1.98	0.46
47:OO:34:PHE:CE1	47:OO:98:ARG:HD3	2.51	0.46
47:OO:98:ARG:NH1	47:OO:100:THR:O	2.49	0.46
50:PP:18:ARG:CD	59:SS:88:LYS:HG2	2.46	0.46
51:Q:6:ARG:NH2	51:Q:8:ASN:HD22	2.13	0.46
55:s:41:GLN:HG2	67:5:1996:C:O4’	2.15	0.46
56:RR:60:ARG:CD	76:9:1464:C:O3’	2.64	0.46
58:t:104:ILE:O	58:t:143:VAL:HG13	2.15	0.46
59:SS:39:ARG:O	59:SS:43:VAL:HG23	2.16	0.46
59:SS:80:PRO:O	59:SS:84:LEU:HG	2.16	0.46
59:SS:141:ARG:HA	76:9:1523:C:OP1	2.15	0.46
59:SS:144:ARG:NH1	76:9:1522:A:P	2.87	0.46
60:T:95:HIS:C	60:T:96:ILE:CG1	2.88	0.46
63:UU:66:ARG:HB2	76:9:1256:G:H8	1.80	0.46
67:5:721:G:N1	67:5:722:G:C5	2.84	0.46
67:5:757:G:HO2’	67:5:758:G:P	2.39	0.46
67:5:974:C:C4	67:5:975:C:C4	3.03	0.46
67:5:1169:G:C6	67:5:1193:C:C4	3.04	0.46
67:5:1455:G:O2’	67:5:1456:C:OP1	2.32	0.46
67:5:1877:G:N2	67:5:1878:G:H1’	2.30	0.46
67:5:1972:G:N1	67:5:1995:G:C6	2.84	0.46
67:5:2111:U:N3	67:5:2112:G:N7	2.64	0.46
67:5:2275:G:C2	67:5:2276:A:C4	3.03	0.46
67:5:2296:G:N1	67:5:2297:G:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:2438:A:N6	67:5:2531:C:C5	2.84	0.46
67:5:2643:G:O6	67:5:2691:U:O4	2.33	0.46
67:5:2750:G:H2'	67:5:2751:G:O4'	2.15	0.46
67:5:3923:A:C2	67:5:3924:C:C4	3.04	0.46
67:5:4393:G:N1	67:5:4446:U:O4	2.48	0.46
67:5:4968:A:C4	67:5:4969:C:C5	3.03	0.46
67:5:5000:G:N1	67:5:5051:C:C4	2.84	0.46
70:7:5:A:C6	70:7:115:A:N1	2.84	0.46
76:9:359:U:C2	76:9:404:G:N1	2.83	0.46
76:9:812:A:C4	76:9:813:A:C8	3.03	0.46
76:9:894:G:N1	76:9:895:G:C6	2.83	0.46
76:9:909:G:N1	76:9:910:G:C6	2.83	0.46
76:9:923:G:N2	76:9:1022:U:C4	2.84	0.46
76:9:997:A:C2	76:9:998:A:N7	2.84	0.46
76:9:1118:C:H2'	76:9:1119:A:C8	2.51	0.46
76:9:1561:A:C4	76:9:1562:C:C5	3.03	0.46
76:9:1686:G:H2'	76:9:1687:C:O4'	2.15	0.46
76:9:1715:A:C2	76:9:1716:C:C6	3.04	0.46
76:9:1742:C:C2	76:9:1743:G:C8	3.03	0.46
79:AA:86:ALA:HB1	79:AA:175:TRP:CD1	2.51	0.46
81:B:340:THR:HG22	81:B:343:ARG:CZ	2.45	0.46
83:CC:255:LEU:N	83:CC:255:LEU:CD2	2.78	0.46
4:DD:9:ARG:O	4:DD:12:VAL:HG22	2.15	0.46
4:DD:27:ARG:HB3	35:KK:61:GLN:CG	2.46	0.46
4:DD:105:LEU:HD21	4:DD:119:CYS:HA	1.97	0.46
5:dd:11:PRO:HG2	76:9:1618:C:C6	2.51	0.46
15:F:41:LEU:O	15:F:41:LEU:HD23	2.15	0.46
18:GG:138:ALA:O	18:GG:142:ARG:HG3	2.15	0.46
19:gg:32:LEU:HD13	19:gg:92:LEU:HD11	1.98	0.46
28:ii:188:LEU:C	28:ii:189:ARG:HD3	2.41	0.46
28:ii:200:ASN:CG	76:9:478:G:O3'	2.59	0.46
36:L:71:ARG:NH2	67:5:74:G:O3'	2.48	0.46
37:l:25:GLN:HA	37:l:28:TRP:CD1	2.51	0.46
38:LL:42:LEU:CD2	76:9:291:G:N3	2.79	0.46
44:NN:141:TYR:CE1	44:NN:146:ALA:HB2	2.51	0.46
46:o:98:LYS:HE3	67:5:4234:A:OP1	2.15	0.46
47:OO:119:LEU:C	47:OO:119:LEU:HD12	2.40	0.46
50:PP:82:ASP:CG	76:9:1619:A:O2'	2.55	0.46
51:Q:38:ARG:HG3	51:Q:38:ARG:O	2.14	0.46
51:Q:155:ALA:O	51:Q:158:THR:HB	2.15	0.46
55:s:65:ILE:CD1	55:s:75:LEU:HD23	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:s:94:ASP:O	55:s:98:ILE:HD12	2.15	0.46
57:S:13:VAL:HA	57:S:28:TYR:O	2.15	0.46
58:t:123:ARG:CG	58:t:124:GLU:N	2.78	0.46
60:T:42:ILE:HG22	60:T:43:LYS:N	2.31	0.46
60:T:103:ASP:O	60:T:107:LYS:HG2	2.15	0.46
61:TT:12:GLN:HG2	76:9:1594:A:O4'	2.15	0.46
61:TT:97:LYS:N	76:9:1568:C:OP1	2.37	0.46
67:5:344:A:C2	73:8:31:G:C2	3.04	0.46
67:5:385:A:H4'	67:5:386:A:OP1	2.15	0.46
67:5:446:C:C2	67:5:447:C:C5	3.04	0.46
67:5:1186:U:C4	67:5:1187:G:N1	2.84	0.46
67:5:1322:A:N6	67:5:3876:A:C2	2.84	0.46
67:5:1499:C:N4	67:5:1500:A:C6	2.83	0.46
67:5:1767:A:N6	67:5:1769:G:C5	2.84	0.46
67:5:2301:G:C2	67:5:2302:C:C5	3.04	0.46
67:5:2437:C:H42	69:X:89:LYS:NZ	2.13	0.46
67:5:3694:U:C4	67:5:3695:U:C5	3.04	0.46
67:5:4406:U:C2	67:5:4407:G:C8	3.04	0.46
67:5:4459:U:H2'	67:5:4460:U:H6	1.80	0.46
67:5:4537:C:H2'	67:5:4538:G:H8	1.80	0.46
67:5:4578:G:C6	67:5:4579:U:C5	3.04	0.46
67:5:4930:C:C4	67:5:4931:G:N7	2.83	0.46
70:7:74:A:N6	70:7:101:A:OP2	2.48	0.46
73:8:103:A:H3'	73:8:103:A:H8	1.80	0.46
75:Z:30:ASP:OD2	75:Z:30:ASP:N	2.48	0.46
76:9:92:A:N1	76:9:446:G:C6	2.84	0.46
76:9:597:G:N1	76:9:640:A:C6	2.84	0.46
76:9:1131:G:C2	76:9:1132:C:C5	3.03	0.46
76:9:1203:G:H2'	76:9:1204:A:C8	2.51	0.46
11:E:185:ASN:O	11:E:186:ARG:HB3	2.16	0.46
13:FF:63:LYS:HD2	13:FF:144:LEU:HD21	1.98	0.46
14:ff:95:ARG:NH2	76:9:1291:A:N6	2.64	0.46
18:GG:164:LYS:N	76:9:67:C:H41	2.14	0.46
20:G:221:VAL:O	20:G:224:PRO:HD2	2.16	0.46
22:HH:92:VAL:O	22:HH:93:VAL:HG13	2.14	0.46
25:H:52:LYS:N	25:H:52:LYS:HD2	2.30	0.46
28:ii:64:SER:O	28:ii:68:ARG:CB	2.62	0.46
28:ii:193:LEU:HD13	76:9:488:U:H3	1.80	0.46
28:ii:322:VAL:C	28:ii:392:VAL:HG22	2.41	0.46
32:jj:247:TYR:CZ	32:jj:264:ALA:HA	2.51	0.46
32:jj:443:PRO:HA	32:jj:517:ILE:HG22	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:531:PHE:CD2	32:jj:629:VAL:HG23	2.51	0.46
35:KK:16:PHE:HD2	35:KK:79:LEU:HB2	1.79	0.46
36:L:141:ALA:O	36:L:145:LYS:HG3	2.15	0.46
40:m:73:CYS:SG	40:m:75:ALA:HB2	2.56	0.46
50:PP:60:LEU:CD1	50:PP:89:MET:HG3	2.46	0.46
53:QQ:77:HIS:CE1	76:9:1543:U:HO2'	2.33	0.46
53:QQ:132:PHE:HB3	76:9:1668:U:O3'	2.16	0.46
55:s:74:ALA:O	55:s:193:PHE:CZ	2.69	0.46
55:s:85:ASN:HA	67:5:2021:G:H5'	1.98	0.46
55:s:112:ARG:HD2	67:5:1969:G:P	2.55	0.46
59:SS:26:ILE:CG2	59:SS:59:LEU:HD13	2.46	0.46
65:VV:2:GLN:CG	65:VV:7:GLU:C	2.89	0.46
67:5:78:U:N3	67:5:79:C:C5	2.84	0.46
67:5:285:G:N2	67:5:303:C:C2	2.84	0.46
67:5:364:G:O2'	67:5:365:U:P	2.73	0.46
67:5:418:A:C2	67:5:419:A:C4	3.04	0.46
67:5:1394:G:C6	67:5:1395:U:C4	3.03	0.46
67:5:1499:C:N4	67:5:1500:A:C2	2.83	0.46
67:5:1619:G:C6	67:5:1620:U:C5	3.04	0.46
67:5:1632:A:C6	67:5:1634:A:C8	3.04	0.46
67:5:2542:G:O6	67:5:2543:A:N6	2.49	0.46
67:5:3763:A:C6	67:5:3764:U:N3	2.84	0.46
67:5:3773:U:O2'	67:5:3774:A:N7	2.47	0.46
67:5:3823:G:H8	67:5:3823:G:O5'	1.99	0.46
67:5:3927:U:C6	67:5:4182:G:N2	2.84	0.46
67:5:4136:G:C2	67:5:4149:C:C2	3.04	0.46
68:WW:36:ARG:O	68:WW:40:VAL:HG23	2.15	0.46
70:7:31:G:C6	70:7:47:G:C6	3.04	0.46
72:Y:50:ARG:NH2	73:8:71:A:H2'	2.30	0.46
72:Y:91:ASN:OD1	72:Y:92:GLY:N	2.49	0.46
75:Z:49:TYR:CE2	75:Z:133:LYS:HA	2.50	0.46
76:9:501:C:O2	76:9:501:C:C2'	2.64	0.46
76:9:553:U:O2'	76:9:554:A:OP1	2.31	0.46
76:9:932:G:C2'	76:9:934:G:OP2	2.64	0.46
76:9:1055:A:C2	76:9:1056:U:C4	3.04	0.46
76:9:1330:G:C2	76:9:1334:G:N7	2.83	0.46
76:9:1488:C:N3	76:9:1490:G:O6	2.48	0.46
76:9:1514:G:H2'	76:9:1515:G:O4'	2.15	0.46
76:9:1666:C:C4	76:9:1667:U:N3	2.84	0.46
81:B:56:ILE:HG22	81:B:74:GLU:HB2	1.98	0.46
81:B:294:LYS:O	81:B:297:LYS:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:9:ARG:NH2	67:5:1629:G:OP2	2.37	0.46
1:A:104:VAL:O	1:A:107:MET:HG2	2.15	0.46
2:C:33:ARG:HH12	51:Q:22:ASP:HB2	1.81	0.46
4:DD:9:ARG:HH12	76:9:1552:G:N2	2.13	0.46
4:DD:21:LEU:CD2	4:DD:39:VAL:CG2	2.94	0.46
4:DD:98:ALA:O	4:DD:102:ALA:CB	2.64	0.46
8:EE:258:ALA:HA	8:EE:261:SER:OG	2.16	0.46
13:FF:142:SER:OG	13:FF:143:PRO:HD2	2.15	0.46
17:BB:32:ASP:HB2	17:BB:95:ASN:OD1	2.16	0.46
18:GG:17:GLU:N	18:GG:17:GLU:CD	2.74	0.46
19:gg:274:VAL:O	19:gg:275:ILE:C	2.59	0.46
20:G:304:ALA:HB1	20:G:308:LYS:HE2	1.98	0.46
28:ii:158:PHE:CZ	28:ii:208:THR:CG2	2.99	0.46
28:ii:291:PHE:C	28:ii:291:PHE:CD2	2.93	0.46
28:ii:416:ARG:HH12	28:ii:418:ASP:CG	2.24	0.46
32:jj:408:LYS:NZ	32:jj:423:ILE:HD12	2.31	0.46
32:jj:538:ILE:HD11	32:jj:623:THR:HB	1.97	0.46
41:MM:49:LEU:HD12	41:MM:50:CYS:N	2.30	0.46
50:PP:128:HIS:HE2	76:9:1522:A:P	2.39	0.46
53:QQ:125:ARG:CA	76:9:1648:G:H5”	2.43	0.46
53:QQ:143:LYS:CE	76:9:1249:C:O2’	2.64	0.46
55:s:10:LYS:HG2	55:s:60:MET:HE1	1.97	0.46
55:s:61:MET:HG2	55:s:82:ILE:CD1	2.45	0.46
55:s:84:GLY:C	67:5:2021:G:H4’	2.41	0.46
55:s:85:ASN:N	67:5:2021:G:H4’	2.31	0.46
59:SS:46:ARG:NH1	59:SS:52:LEU:HD23	2.30	0.46
59:SS:50:ILE:HD11	59:SS:63:GLU:OE2	2.15	0.46
61:TT:110:LEU:O	61:TT:112:MET:N	2.47	0.46
64:V:111:GLU:CD	64:V:112:MET:O	2.58	0.46
67:5:338:A:C6	67:5:339:C:N4	2.84	0.46
67:5:1098:G:N3	67:5:1198:G:N2	2.64	0.46
67:5:1619:G:C6	67:5:1620:U:C4	3.04	0.46
67:5:2442:G:C2	67:5:2443:G:C8	3.03	0.46
67:5:2650:G:C2	67:5:2684:C:C2	3.04	0.46
67:5:2795:A:C5	67:5:2797:C:C5	3.04	0.46
67:5:3706:C:H2’	67:5:3707:U:O4’	2.16	0.46
67:5:3709:U:C5	67:5:3742:G:C2	3.04	0.46
67:5:4638:U:H2’	67:5:4639:G:N3	2.31	0.46
67:5:4680:G:N1	67:5:4681:A:C6	2.84	0.46
67:5:4773:C:C2	67:5:4863:G:N1	2.84	0.46
70:7:65:G:C6	70:7:66:G:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:XX:107:ARG:NH2	76:9:19:A:H5”	2.30	0.46
73:8:103:A:N7	73:8:104:A:C8	2.84	0.46
76:9:33:G:C5	76:9:523:A:N6	2.84	0.46
76:9:181:A:O5’	76:9:182:C:H3’	2.15	0.46
76:9:344:U:H2’	76:9:345:U:C6	2.51	0.46
76:9:1139:C:O2	76:9:1139:C:O4’	2.33	0.46
76:9:1261:C:P	76:9:1518:C:H41	2.39	0.46
76:9:1271:C:O2’	76:9:1303:C:C5’	2.64	0.46
76:9:1277:C:N3	76:9:1278:A:N7	2.64	0.46
76:9:1401:A:C6	76:9:1402:A:N6	2.84	0.46
76:9:1416:C:N3	76:9:1417:C:N4	2.64	0.46
76:9:1550:G:C6	76:9:1579:A:C4	3.04	0.46
76:9:1620:A:C2	76:9:1624:U:O4’	2.68	0.46
76:9:1717:C:N4	76:9:1718:G:N1	2.64	0.46
76:9:1816:G:C2	76:9:1817:G:C4	3.03	0.46
77:ZZ:63:PRO:O	77:ZZ:111:ARG:CD	2.64	0.46
78:a:43:ILE:O	78:a:46:ASP:N	2.48	0.46
79:AA:2:SER:HB2	79:AA:63:ARG:NH1	2.31	0.46
82:c:104:ILE:HG23	82:c:105:ILE:N	2.30	0.46
83:CC:252:THR:HG22	83:CC:254:ASP:H	1.80	0.46
8:EE:104:ASP:OD2	8:EE:105:THR:N	2.49	0.46
8:EE:232:ASN:C	8:EE:233:LYS:HD2	2.41	0.46
13:FF:77:MET:HE1	76:9:1675:A:H1’	1.97	0.46
13:FF:124:ASP:O	13:FF:138:ALA:HA	2.16	0.46
15:F:187:GLU:OE2	67:5:943:A:N6	2.39	0.46
17:BB:213:ARG:HD2	17:BB:213:ARG:C	2.41	0.46
18:GG:50:VAL:HG13	18:GG:112:VAL:C	2.41	0.46
18:GG:79:LYS:HE3	18:GG:90:GLY:H	1.81	0.46
18:GG:121:ILE:O	18:GG:125:THR:OG1	2.32	0.46
22:HH:49:LYS:O	22:HH:60:ILE:HG13	2.16	0.46
22:HH:76:GLN:HG3	22:HH:80:VAL:HG23	1.96	0.46
22:HH:147:LYS:HE3	22:HH:152:ARG:C	2.41	0.46
25:H:111:LEU:HD12	25:H:127:ARG:NH2	2.31	0.46
27:II:110:ARG:HD2	27:II:121:LEU:O	2.16	0.46
28:ii:7:ALA:HA	28:ii:10:ARG:HG2	1.97	0.46
28:ii:59:ALA:O	28:ii:72:LEU:HD21	2.16	0.46
28:ii:278:VAL:HG12	28:ii:280:PHE:H	1.79	0.46
28:ii:424:TYR:OH	58:t:31:LYS:HE3	2.16	0.46
32:jj:224:GLY:HA2	87:jj:700:GCP:O1A	2.15	0.46
32:jj:604:GLU:HG3	32:jj:612:MET:CB	2.46	0.46
41:MM:38:ALA:O	41:MM:42:LEU:HD13	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:N:37:HIS:CE1	42:N:63:ARG:HH11	2.34	0.46
56:RR:38:ILE:HD13	56:RR:38:ILE:N	2.29	0.46
58:t:19:GLY:HA2	58:t:58:ILE:HD13	1.96	0.46
58:t:57:ARG:HH22	67:5:1978:C:H5"	1.81	0.46
59:SS:36:VAL:CG1	59:SS:71:MET:HE3	2.45	0.46
61:TT:11:GLN:O	61:TT:14:PHE:HB3	2.16	0.46
63:UU:64:THR:HG22	63:UU:78:ASP:O	2.15	0.46
67:5:120:A:N6	67:5:149:A:C4	2.84	0.46
67:5:500:G:C2	67:5:504:G:C4	3.03	0.46
67:5:1293:G:O4'	67:5:1293:G:N3	2.49	0.46
67:5:1453:G:C2	67:5:1454:G:C8	3.04	0.46
67:5:1592:G:N1	67:5:1604:G:C6	2.83	0.46
67:5:1740:C:C2	67:5:1785:C:N4	2.83	0.46
67:5:1866:U:O4	67:5:1867:A:N1	2.48	0.46
67:5:2000:G:H4'	67:5:2017:A:H2	1.81	0.46
67:5:2762:G:C2	67:5:2764:A:C5	3.04	0.46
67:5:3647:A:N7	67:5:3649:A:C5	2.83	0.46
67:5:3704:U:C4	67:5:3705:G:N7	2.84	0.46
67:5:3760:A:H62	76:9:1826:G:C4'	2.28	0.46
67:5:4424:A:C6	67:5:4425:G:C4	3.04	0.46
67:5:4541:G:C2	67:5:4545:G:C6	3.03	0.46
67:5:4627:U:C2	67:5:4628:U:C6	3.04	0.46
76:9:314:U:N3	76:9:315:C:C5	2.83	0.46
76:9:1065:G:N2	76:9:1066:U:C2	2.84	0.46
76:9:1261:C:N4	76:9:1262:C:C4	2.84	0.46
76:9:1404:U:C2	76:9:1581:C:C4	3.04	0.46
76:9:1759:G:N1	76:9:1774:C:N3	2.64	0.46
78:a:100:ILE:HG21	78:a:125:LYS:HE2	1.97	0.46
84:cc:17:VAL:O	84:cc:17:VAL:HG13	2.15	0.46
2:C:298:ILE:O	2:C:299:GLN:C	2.57	0.46
4:DD:53:THR:CG2	4:DD:94:ARG:HB2	2.46	0.46
4:DD:196:GLY:HA2	4:DD:199:GLY:O	2.15	0.46
6:D:207:TYR:CZ	6:D:211:LEU:HD11	2.51	0.46
8:EE:77:ARG:HH22	76:9:121:U:H4'	1.81	0.46
13:FF:78:MET:HG2	13:FF:79:HIS:H	1.81	0.46
13:FF:141:VAL:O	84:cc:56:LEU:HD11	2.16	0.46
13:FF:149:GLN:NE2	76:9:1221:G:P	2.88	0.46
13:FF:168:THR:HG21	77:ZZ:106:GLN:CG	2.46	0.46
17:BB:71:LEU:CD2	17:BB:78:GLU:HB3	2.46	0.46
18:GG:15:LEU:N	18:GG:15:LEU:HD23	2.31	0.46
25:H:72:THR:CG2	25:H:73:ILE:N	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ii:189:ARG:HD3	28:ii:189:ARG:N	2.31	0.46
32:jj:252:LYS:HD2	76:9:464:A:C6	2.51	0.46
32:jj:609:PHE:HB3	32:jj:612:MET:HG2	1.98	0.46
35:KK:84:HIS:HB3	41:MM:27:ILE:HG12	1.97	0.46
48:P:25:HIS:CE1	67:5:3858:C:P	3.09	0.46
48:P:58:VAL:O	48:P:81:GLY:HA2	2.16	0.46
54:R:149:LYS:HB3	54:R:153:LYS:HE2	1.98	0.46
55:s:191:GLN:HB3	55:s:198:ILE:HD11	1.98	0.46
58:t:104:ILE:O	58:t:143:VAL:HA	2.16	0.46
63:UU:69:PRO:HG2	76:9:1492:U:O2	2.16	0.46
67:5:29:G:C4	67:5:54:G:N2	2.84	0.46
67:5:98:A:C6	67:5:99:A:C5	3.03	0.46
67:5:247:G:C6	67:5:248:C:C4	3.04	0.46
67:5:485:C:HO2'	67:5:486:C:P	2.38	0.46
67:5:504:G:O2'	67:5:505:G:P	2.74	0.46
67:5:910:G:N1	67:5:911:U:C4	2.84	0.46
67:5:934:C:C6	67:5:935(A):G:O4'	2.69	0.46
67:5:1662:C:C2	67:5:1663:C:C5	3.04	0.46
67:5:1906:U:O4	67:5:2069:A:N7	2.49	0.46
67:5:2438:A:N6	67:5:2531:C:C4	2.84	0.46
67:5:2440:U:HO2'	67:5:2441:C:P	2.39	0.46
67:5:2648:G:N2	67:5:2649:G:C4	2.84	0.46
67:5:4254:G:O6	67:5:4257:A:C5	2.67	0.46
67:5:4260:U:H2'	67:5:4261:C:C6	2.51	0.46
67:5:4464:A:H5'	67:5:4464:A:N3	2.31	0.46
67:5:4617:G:P	81:B:62:ARG:NH2	2.89	0.46
67:5:4680:G:C2	67:5:4681:A:C6	3.04	0.46
67:5:4699:U:H4'	67:5:4700:A:OP1	2.16	0.46
71:XX:61:GLN:HB3	71:XX:62:PRO:HD2	1.98	0.46
73:8:102:G:OP2	73:8:104:A:O2'	2.34	0.46
76:9:599:A:C2	76:9:606:G:C2	3.04	0.46
76:9:849:A:C4	76:9:850:C:C5	3.04	0.46
76:9:886:A:N1	76:9:901:G:H1'	2.30	0.46
76:9:955:A:H2'	76:9:969:U:O4	2.15	0.46
76:9:1151:G:C6	76:9:1152:U:C4	3.04	0.46
76:9:1173:A:N1	76:9:1188:A:C8	2.83	0.46
76:9:1217:A:C6	76:9:1218:C:C4	3.04	0.46
76:9:1264:C:P	76:9:1326:U:C5	3.09	0.46
76:9:1558:C:H2'	76:9:1559:C:C6	2.51	0.46
76:9:1743:G:H21	76:9:1791:A:H62	1.64	0.46
2:C:237:ILE:HD12	2:C:237:ILE:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:54:ARG:NH2	6:D:149:GLY:HA3	2.30	0.46
6:D:95:TYR:OH	6:D:195:HIS:NE2	2.47	0.46
15:F:215:PRO:HA	15:F:246:MET:HA	1.98	0.46
17:BB:157:GLN:N	17:BB:160:GLN:OE1	2.39	0.46
18:GG:67:VAL:CG1	18:GG:100:CYS:H	2.29	0.46
23:hh:45:A:H2'	76:9:1207:G:N1	2.31	0.46
25:H:71:ARG:NH2	67:5:4695:C:OP1	2.48	0.46
25:H:168:LYS:O	25:H:170:LYS:HG2	2.16	0.46
28:ii:188:LEU:HD22	28:ii:189:ARG:HD2	1.96	0.46
32:jj:454:VAL:HA	32:jj:503:ARG:HA	1.97	0.46
32:jj:618:ARG:HB2	32:jj:618:ARG:CZ	2.45	0.46
48:P:146:ILE:HG22	48:P:147:GLU:N	2.30	0.46
55:s:13:TYR:CZ	55:s:54:LEU:HD11	2.51	0.46
55:s:43:ILE:O	55:s:46:SER:OG	2.25	0.46
55:s:123:VAL:HG21	55:s:160:LEU:HD12	1.97	0.46
64:V:123:LYS:HZ1	64:V:127:ASP:HB3	1.81	0.46
67:5:221:C:C2	67:5:222:C:C5	3.04	0.46
67:5:721:G:C2	67:5:722:G:C4	3.03	0.46
67:5:930:G:O2'	67:5:931:C:OP1	2.29	0.46
67:5:961:G:C6	67:5:971(A):G:C2	3.04	0.46
67:5:1547:A:N6	67:5:1548:G:C4	2.84	0.46
67:5:1570:G:C4	67:5:1571:G:C8	3.04	0.46
67:5:1660:U:O2	67:5:2345:G:H2'	2.15	0.46
67:5:1937:C:C4	67:5:1938:C:N4	2.84	0.46
67:5:2440:U:N3	67:5:2519:U:C5	2.84	0.46
67:5:2574:G:OP2	75:Z:67:LYS:CE	2.63	0.46
67:5:2602:G:C6	67:5:2603:C:C4	3.03	0.46
67:5:3697:U:O2'	67:5:3698:G:P	2.72	0.46
67:5:3926:C:N3	67:5:3927:U:C5	2.84	0.46
67:5:4138:C:O2	67:5:4146:G:N1	2.44	0.46
67:5:4179:G:H2'	67:5:4180:G:O4'	2.16	0.46
67:5:4516:G:OP2	81:B:3:HIS:HD2	1.99	0.46
67:5:4534:G:C6	67:5:4553:A:C2	3.04	0.46
67:5:4579:U:H2'	67:5:4580:U:O4'	2.15	0.46
67:5:4884:G:H2'	67:5:4885:U:O4'	2.16	0.46
70:7:66:G:C5	70:7:67:C:C4	3.04	0.46
70:7:80:U:C2	70:7:97:G:N2	2.84	0.46
70:7:100:A:C2	70:7:101:A:C8	3.04	0.46
70:7:110:G:C6	70:7:111:C:N4	2.84	0.46
71:XX:94:ILE:CG2	71:XX:94:ILE:O	2.64	0.46
73:8:154:G:C6	73:8:155:C:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Z:10:VAL:HG12	75:Z:11:VAL:N	2.31	0.46
75:Z:55:ALA:O	75:Z:56:ALA:HB3	2.16	0.46
76:9:463:C:C2	76:9:467:G:N1	2.84	0.46
76:9:996:A:H2'	76:9:997:A:C8	2.51	0.46
76:9:1053:C:H2'	76:9:1054:G:H8	1.80	0.46
76:9:1309:C:C4	76:9:1310:U:C5	3.04	0.46
76:9:1406:G:N2	76:9:1441:U:O2	2.49	0.46
76:9:1550:G:H4'	76:9:1558:C:O2'	2.16	0.46
76:9:1608:U:C4	76:9:1632:G:N2	2.83	0.46
76:9:1649:U:C4	76:9:1674:G:N2	2.83	0.46
76:9:1683:C:C2	84:cc:24:GLN:NE2	2.84	0.46
82:c:45:LEU:CB	82:c:105:ILE:HG22	2.46	0.46
1:A:69:PHE:CE2	67:5:4125:C:C5	3.03	0.45
1:A:122:ASP:OD2	1:A:125:LYS:HD3	2.16	0.45
2:C:76:ILE:HG22	2:C:77:PRO:CD	2.45	0.45
4:DD:16:ILE:HD11	5:dd:36:LEU:HA	1.97	0.45
4:DD:17:PHE:CD2	4:DD:18:LYS:HD3	2.51	0.45
4:DD:29:LEU:HB2	4:DD:34:TYR:CA	2.47	0.45
5:dd:23:VAL:HG13	35:KK:64:TRP:CG	2.52	0.45
8:EE:147:ILE:HD13	8:EE:169:ILE:HG23	1.97	0.45
15:F:88:LEU:C	15:F:88:LEU:HD23	2.41	0.45
17:BB:131:ASP:OD2	17:BB:181:LEU:HB2	2.16	0.45
17:BB:180:ASP:OD1	17:BB:180:ASP:C	2.59	0.45
18:GG:135:PRO:HD2	18:GG:144:LEU:HD22	1.98	0.45
18:GG:154:ARG:NE	76:9:77:A:C8	2.85	0.45
19:gg:29:ASP:O	19:gg:44:LYS:NZ	2.44	0.45
19:gg:176:VAL:O	19:gg:185:LYS:N	2.46	0.45
19:gg:214:GLY:HA2	19:gg:236:ILE:HG13	1.98	0.45
24:bb:29:ASN:OD1	24:bb:29:ASN:O	2.34	0.45
28:ii:64:SER:O	28:ii:68:ARG:HB2	2.15	0.45
28:ii:146:PHE:CD1	28:ii:223:GLY:HA3	2.51	0.45
28:ii:149:ILE:CG2	28:ii:151:ILE:HD11	2.46	0.45
35:KK:42:ASN:OD1	35:KK:46:MET:SD	2.75	0.45
35:KK:72:THR:CB	35:KK:74:GLU:OE1	2.63	0.45
36:L:41:ALA:HA	36:L:44:ARG:NH2	2.31	0.45
38:LL:73:LEU:O	38:LL:127:THR:HG23	2.16	0.45
47:OO:67:ASP:O	47:OO:73:ALA:CB	2.64	0.45
53:QQ:78:VAL:HG11	76:9:1674:G:OP1	2.16	0.45
55:s:6:ARG:NH1	55:s:6:ARG:HB2	2.31	0.45
55:s:17:ILE:HG13	55:s:21:LEU:HD12	1.97	0.45
55:s:47:LEU:HD22	55:s:50:LYS:HE3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:s:111:ALA:CB	55:s:175:LEU:HD13	2.46	0.45
55:s:144:THR:OG1	55:s:155:LEU:HB2	2.16	0.45
56:RR:16:ILE:HD13	56:RR:35:CYS:SG	2.56	0.45
58:t:35:LEU:N	58:t:35:LEU:HD12	2.30	0.45
63:UU:71:GLY:C	76:9:1254:C:HO2'	2.23	0.45
63:UU:72:GLU:O	76:9:1491:G:N3	2.48	0.45
66:W:42:SER:HB3	66:W:44:ARG:NH1	2.32	0.45
67:5:395:A:C5	67:5:2379:A:C2	3.04	0.45
67:5:1490:G:C2	67:5:1491:A:C4	3.04	0.45
67:5:1601:A:C8	67:5:3643:A:C8	3.05	0.45
67:5:1812:C:C2	67:5:1813:U:C5	3.05	0.45
67:5:2450:G:C2	67:5:2451:A:C4	3.04	0.45
67:5:2579:G:N2	67:5:2583:C:C2	2.73	0.45
67:5:2617:G:C2	67:5:2618:G:C4	3.04	0.45
67:5:2638:G:N2	67:5:2639:U:C5	2.84	0.45
67:5:3873:G:N2	67:5:3883:U:C2	2.85	0.45
67:5:4180:G:N2	67:5:4181:U:C2	2.85	0.45
67:5:4523:A:N3	67:5:4558:U:N3	2.64	0.45
67:5:4644:G:C2	67:5:4654:C:N3	2.82	0.45
67:5:4872:G:N2	67:5:4874:A:N6	2.65	0.45
68:WW:14:ILE:CG1	68:WW:15:ASN:N	2.78	0.45
73:8:37:A:C6	73:8:103:A:C2	3.04	0.45
75:Z:68:ILE:O	75:Z:115:LYS:HE2	2.15	0.45
76:9:222:U:N3	76:9:223:C:C5	2.84	0.45
76:9:389:A:H2'	76:9:390:C:C6	2.51	0.45
76:9:685:A:C6	76:9:686:U:C4	3.04	0.45
76:9:917:U:N3	76:9:918:U:C5	2.84	0.45
76:9:1245:G:H5'	76:9:1329:U:OP1	2.16	0.45
76:9:1246:A:H4'	76:9:1491:G:H5"	1.97	0.45
76:9:1309:C:N3	76:9:1310:U:C5	2.84	0.45
76:9:1312:G:H1'	76:9:1313:A:N7	2.32	0.45
76:9:1548:G:N1	76:9:1586:U:N3	2.64	0.45
76:9:1808:U:H2'	76:9:1809:A:H8	1.80	0.45
79:AA:41:ARG:HG2	79:AA:42:LYS:N	2.30	0.45
81:B:24:ARG:HD3	81:B:28:LYS:HG2	1.98	0.45
81:B:135:LYS:HD3	81:B:138:GLN:HE21	1.81	0.45
81:B:333:LEU:N	81:B:333:LEU:CD1	2.79	0.45
84:cc:13:ARG:O	84:cc:32:VAL:HA	2.16	0.45
1:A:13:GLY:C	1:A:14:SER:HG	2.23	0.45
1:A:107:MET:SD	1:A:111:THR:HG21	2.57	0.45
1:A:200:ARG:HE	67:5:3651:A:P	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:121:ARG:HB3	2:C:277:TYR:OH	2.16	0.45
4:DD:35:SER:HA	4:DD:100:ALA:HB2	1.98	0.45
4:DD:49:ILE:HG23	4:DD:89:GLU:HB2	1.98	0.45
6:D:72:ASP:OD1	6:D:72:ASP:N	2.49	0.45
7:e:118:LEU:O	7:e:119:ALA:HB3	2.16	0.45
11:E:65:TYR:CE1	11:E:70:LEU:HB2	2.51	0.45
18:GG:15:LEU:HD11	76:9:155:G:O5'	2.16	0.45
18:GG:79:LYS:HA	18:GG:86:PRO:HG3	1.98	0.45
18:GG:136:LYS:HB3	76:9:170:A:H4'	1.98	0.45
19:gg:38:LYS:HG2	19:gg:64:HIS:O	2.16	0.45
19:gg:207:CYS:SG	19:gg:221:LEU:HD11	2.57	0.45
31:JJ:101:LYS:HE2	31:JJ:103:GLU:HB2	1.98	0.45
32:jj:308:ILE:HG21	32:jj:553:HIS:HB3	1.97	0.45
32:jj:563:ILE:O	32:jj:563:ILE:HG13	2.16	0.45
44:NN:62:GLN:HB2	44:NN:65:PHE:CD2	2.51	0.45
45:O:192:PHE:O	45:O:195:VAL:HG22	2.16	0.45
45:O:203:VAL:OXT	67:5:4872:G:N2	2.49	0.45
50:PP:127:LYS:HD2	50:PP:127:LYS:HA	1.86	0.45
58:t:77:ALA:HB2	58:t:132:ILE:HG12	1.98	0.45
59:SS:43:VAL:HG21	59:SS:83:PHE:CD1	2.50	0.45
61:TT:97:LYS:O	61:TT:98:SER:C	2.57	0.45
61:TT:98:SER:HB2	76:9:1567:G:H5"	1.97	0.45
67:5:19:G:C4	73:8:139:G:N2	2.84	0.45
67:5:932:A:C2	67:5:939:G:C8	3.04	0.45
67:5:965:G:N2	67:5:2096:G:C4	2.84	0.45
67:5:1406(A):G:N2	67:5:1411(C):C:C2	2.84	0.45
67:5:1517:G:C2	67:5:1650:A:N6	2.84	0.45
67:5:1634:A:C6	67:5:1635:C:C5	3.05	0.45
67:5:1996:C:O5'	67:5:1996:C:H6	1.99	0.45
67:5:2063:G:N1	67:5:2064:G:C5	2.84	0.45
67:5:3764:U:H2'	67:5:3765:G:O4'	2.16	0.45
67:5:4462:C:N4	67:5:4515:G:C6	2.85	0.45
67:5:4510:A:O2'	67:5:4511:A:C5'	2.65	0.45
67:5:4743:G:C2	67:5:4958:C:C2	3.04	0.45
67:5:4751:G:C5	67:5:4752:U:C5	3.04	0.45
73:8:128:C:C5	73:8:129:C:C5	3.04	0.45
73:8:131:G:N2	73:8:132:G:C4	2.84	0.45
76:9:113:G:C2	76:9:292:A:C6	3.05	0.45
76:9:497:C:C2	76:9:506:G:N2	2.85	0.45
76:9:601:G:C6	76:9:602:G:C6	3.04	0.45
76:9:1046:U:H2'	76:9:1047:C:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1056:U:C4	76:9:1057:C:C5	3.04	0.45
76:9:1689:C:H2'	76:9:1690:U:H6	1.81	0.45
79:AA:90:PHE:O	79:AA:94:THR:OG1	2.33	0.45
81:B:286:LYS:HD2	81:B:365:LEU:CD1	2.46	0.45
83:CC:162:ILE:O	83:CC:162:ILE:HG13	2.16	0.45
2:C:75:ARG:C	2:C:76:ILE:HD13	2.40	0.45
2:C:144:ILE:HD11	2:C:249:PHE:CE1	2.52	0.45
4:DD:34:TYR:O	4:DD:100:ALA:CA	2.65	0.45
13:FF:63:LYS:HD3	76:9:1677:U:P	2.56	0.45
19:gg:238:ALA:HB2	19:gg:288:SER:HA	1.97	0.45
24:bb:11:SER:OG	24:bb:12:PRO:HD2	2.16	0.45
31:JJ:178:ALA:O	31:JJ:182:GLN:HG2	2.17	0.45
32:jj:398:PRO:O	32:jj:406:ASN:CB	2.64	0.45
36:L:76:PHE:CE2	36:L:117:LEU:HG	2.51	0.45
45:O:185:VAL:O	45:O:186:GLU:C	2.58	0.45
50:PP:40:ARG:NH1	76:9:1616:U:O4	2.47	0.45
50:PP:78:THR:HA	76:9:1298:G:H4'	1.99	0.45
53:QQ:34:VAL:HB	53:QQ:42:ILE:HG21	1.98	0.45
55:s:27:CYS:SG	55:s:28:PHE:N	2.88	0.45
58:t:16:ARG:HG2	58:t:57:ARG:HD3	1.99	0.45
58:t:32:ILE:HG12	58:t:64:ILE:CD1	2.46	0.45
67:5:59:A:C4	67:5:60:A:C8	3.04	0.45
67:5:161:G:H2'	67:5:162:A:H8	1.80	0.45
67:5:729:G:O2'	67:5:730:G:P	2.73	0.45
67:5:758:G:C2	67:5:906:C:N3	2.84	0.45
67:5:1168:G:N3	67:5:1194:G:C2	2.85	0.45
67:5:1398:A:N7	67:5:1420:A:C6	2.85	0.45
67:5:1608:G:C2	67:5:1609:U:C4	3.04	0.45
67:5:1661:C:H1'	67:5:2345:G:N2	2.31	0.45
67:5:1946:G:N2	67:5:2037:C:C2	2.84	0.45
67:5:1977:C:N3	67:5:1990:A:H2	2.15	0.45
67:5:2032:U:H2'	67:5:2033:A:O4'	2.16	0.45
67:5:2270:G:C4	67:5:2271:C:C5	3.04	0.45
67:5:2514:G:N3	67:5:2515:G:C8	2.85	0.45
67:5:2574:G:P	75:Z:67:LYS:HE2	2.57	0.45
67:5:3902:A:N1	67:5:4523:A:C6	2.84	0.45
67:5:4494:G:C6	67:5:4507:A:C6	3.03	0.45
67:5:4994:G:N2	67:5:4995:U:C2	2.84	0.45
67:5:4998:G:N1	67:5:4999:G:C5	2.84	0.45
67:5:5016:A:C5	67:5:5034:A:N6	2.84	0.45
73:8:3:A:C5	73:8:4:C:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1054:G:N2	76:9:1065:G:H1'	2.32	0.45
76:9:1188:A:C6	76:9:1189:A:C5	3.04	0.45
76:9:1486:A:O3'	83:CC:118:ALA:HB1	2.17	0.45
76:9:1744:G:C2	76:9:1789:G:C6	3.04	0.45
76:9:1822:A:C4	76:9:1823:A:C2	3.04	0.45
77:ZZ:99:LEU:HD21	77:ZZ:102:LYS:H	1.80	0.45
79:AA:10:MET:HE1	79:AA:18:PHE:CG	2.51	0.45
79:AA:52:LYS:O	79:AA:55:TRP:HB3	2.16	0.45
80:aa:45:VAL:CG1	80:aa:53:ILE:CD1	2.95	0.45
81:B:62:ARG:HG3	81:B:65:SER:OG	2.16	0.45
2:C:131:SER:O	2:C:150:LEU:HD22	2.17	0.45
2:C:149:GLU:HG3	2:C:150:LEU:N	2.32	0.45
7:e:35:TRP:O	7:e:36:ARG:HG2	2.17	0.45
8:EE:183:VAL:HG11	8:EE:188:ASN:HB2	1.97	0.45
8:EE:252:ARG:HH22	31:JJ:75:ASN:HD22	1.63	0.45
13:FF:96:ALA:CB	13:FF:173:LEU:HD22	2.47	0.45
16:g:54:ARG:NH2	67:5:2653:C:P	2.90	0.45
18:GG:45:TRP:CH2	18:GG:121:ILE:HB	2.51	0.45
18:GG:131:ARG:HD3	76:9:168:C:OP1	2.17	0.45
18:GG:145:PHE:HE2	66:W:93:LYS:NZ	2.15	0.45
19:gg:102:VAL:HG12	76:9:1398:G:O2'	2.16	0.45
24:bb:45:THR:O	44:NN:56:ASP:O	2.33	0.45
30:j:79:ARG:NH2	73:8:94:G:C6	2.85	0.45
35:KK:41:PRO:O	35:KK:44:HIS:N	2.48	0.45
36:L:198:ARG:NH2	67:5:1485:C:C5	2.85	0.45
39:M:128:LYS:HA	39:M:131:GLN:HG2	1.99	0.45
42:N:36:LEU:HD23	42:N:36:LEU:C	2.40	0.45
43:n:5:TRP:CZ2	76:9:1852:C:C5	3.04	0.45
44:NN:117:LEU:HD22	76:9:676:C:H4'	1.98	0.45
50:PP:82:ASP:HA	50:PP:115:TYR:HD2	1.80	0.45
53:QQ:17:LYS:O	53:QQ:126:ARG:HG3	2.14	0.45
60:T:57:TYR:HA	60:T:60:LYS:HG3	1.97	0.45
61:TT:119:GLY:CA	76:9:1562:C:H4'	2.46	0.45
63:UU:77:TRP:CH2	76:9:1667:U:O2'	2.70	0.45
65:VV:37:ALA:N	79:AA:67:ALA:HB2	2.31	0.45
67:5:297:U:C2	67:5:298:G:C8	3.05	0.45
67:5:338:A:C6	67:5:339:C:C4	3.03	0.45
67:5:423:G:C2	67:5:424:U:C2	3.04	0.45
67:5:456:C:H2'	67:5:457:G:H8	1.82	0.45
67:5:475:G:C6	67:5:680:G:C6	3.04	0.45
67:5:1235:G:C4	67:5:1236:C:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1550:G:C2	67:5:1579:C:C2	3.04	0.45
67:5:1592:G:C6	67:5:1604:G:C6	3.05	0.45
67:5:1605:G:C6	67:5:1606:U:C4	3.04	0.45
67:5:2265:G:O2'	67:5:2266:C:P	2.75	0.45
67:5:3630:A:N6	67:5:3832:U:O4	2.49	0.45
67:5:3652:A:C5	67:5:3653:A:N6	2.84	0.45
67:5:3754:G:C4	67:5:3755:G:C8	3.04	0.45
67:5:3939:G:C2	67:5:3940:U:C6	3.05	0.45
67:5:4167:G:N1	67:5:4168:G:C5	2.85	0.45
67:5:4482:U:N3	67:5:4483:C:C5	2.84	0.45
67:5:4712:C:C2	67:5:4713:G:C8	3.04	0.45
67:5:4776:G:N2	67:5:4860:G:C8	2.84	0.45
67:5:4908:G:C2	67:5:4912:G:C2	3.05	0.45
73:8:2:G:C6	73:8:3:A:C5	3.05	0.45
73:8:13:G:N1	73:8:14:U:C4	2.85	0.45
73:8:103:A:N6	73:8:104:A:C6	2.85	0.45
76:9:413:G:C5	76:9:425:G:N2	2.84	0.45
76:9:955:A:C8	76:9:969:U:C5	3.05	0.45
76:9:1228:A:C6	76:9:1229:G:O6	2.69	0.45
76:9:1395:C:H2'	76:9:1396:A:O4'	2.16	0.45
76:9:1545:A:C2	76:9:1588:A:C4	3.05	0.45
76:9:1659:U:OP2	76:9:1660:C:C4	2.69	0.45
76:9:1678:A:OP1	84:cc:49:PRO:HG3	2.16	0.45
80:aa:45:VAL:HG11	80:aa:53:ILE:CD1	2.41	0.45
83:CC:82:TYR:CE2	83:CC:164:PRO:HD3	2.51	0.45
84:cc:14:VAL:O	84:cc:53:GLY:CA	2.64	0.45
2:C:286:ASN:O	51:Q:124:ASP:OD2	2.35	0.45
5:dd:56:ASP:O	63:UU:79:ARG:HG2	2.17	0.45
9:ee:90:LEU:N	9:ee:90:LEU:HD23	2.31	0.45
11:E:180:GLY:O	11:E:187:VAL:O	2.35	0.45
12:f:78:HIS:HB2	12:f:85:ARG:HG3	1.99	0.45
13:FF:20:PHE:HE1	13:FF:48:TYR:CD1	2.34	0.45
15:F:90:PHE:CE2	15:F:243:ILE:HD11	2.52	0.45
18:GG:140:ARG:NH2	76:9:147:A:C8	2.85	0.45
19:gg:303:THR:O	19:gg:303:THR:HG22	2.17	0.45
20:G:163:LYS:O	20:G:167:LEU:HD13	2.16	0.45
22:HH:181:THR:OG1	22:HH:182:GLY:N	2.49	0.45
23:hh:42:C:H2'	47:OO:151:LEU:HD12	1.98	0.45
25:H:90:TYR:O	25:H:92:MET:HE3	2.16	0.45
27:II:134:GLU:OE1	27:II:134:GLU:HA	2.15	0.45
27:II:172:LEU:HD22	27:II:195:LEU:CD1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ii:233:LYS:HD2	28:ii:254:VAL:N	2.32	0.45
28:ii:333:LEU:HD23	28:ii:366:HIS:CE1	2.52	0.45
28:ii:359:ASP:O	28:ii:361:GLU:OE1	2.34	0.45
31:JJ:172:ARG:NH2	76:9:563:G:C8	2.84	0.45
32:jj:391:LYS:HG3	32:jj:392:LYS:N	2.32	0.45
32:jj:546:PRO:HB3	32:jj:564:THR:O	2.16	0.45
33:J:38:LYS:HG2	33:J:41:GLU:OE2	2.17	0.45
44:NN:149:LEU:N	44:NN:149:LEU:HD12	2.31	0.45
50:PP:17:TYR:CD1	50:PP:18:ARG:HG2	2.51	0.45
56:RR:17:ILE:HG23	56:RR:58:MET:CE	2.47	0.45
61:TT:37:VAL:HG21	61:TT:99:VAL:HG13	1.98	0.45
63:UU:35:VAL:CG2	63:UU:110:VAL:HG21	2.46	0.45
63:UU:50:VAL:HB	63:UU:91:LEU:HD23	1.98	0.45
63:UU:74:SER:CB	76:9:1338:G:O4’	2.64	0.45
66:W:81:ALA:CB	66:W:87:LEU:HD11	2.47	0.45
67:5:65:A:N6	67:5:74:G:H22	2.15	0.45
67:5:112:C:N4	67:5:330:G:C6	2.85	0.45
67:5:115:C:O2	67:5:115:C:O4’	2.29	0.45
67:5:164:G:C2	67:5:165:A:C5	3.05	0.45
67:5:330:G:N2	67:5:331:G:N9	2.64	0.45
67:5:505:G:C6	67:5:506:C:C4	3.04	0.45
67:5:1211:G:C6	67:5:1212:G:N7	2.85	0.45
67:5:1382:G:C6	67:5:1383:G:N7	2.84	0.45
67:5:1573:G:C5	67:5:1574:G:N2	2.85	0.45
67:5:1612:G:N2	67:5:1614:C:C5	2.85	0.45
67:5:1764:G:C2	67:5:1766:A:OP2	2.69	0.45
67:5:2094:C:O2	67:5:2094:C:O4’	2.34	0.45
67:5:2645:G:C6	67:5:2646:C:C4	3.04	0.45
67:5:3879:G:O2’	67:5:3881:G:OP2	2.31	0.45
67:5:3909:C:C5	67:5:3910:C:H5	2.35	0.45
67:5:4259:C:N3	67:5:4260:U:C5	2.85	0.45
67:5:4411:G:C2	67:5:4412:C:C6	3.04	0.45
67:5:4736:C:O2’	67:5:4737:G:H5’	2.16	0.45
71:XX:110:HIS:ND1	71:XX:111:ALA:O	2.50	0.45
73:8:91:A:C6	73:8:92:U:C4	3.04	0.45
73:8:129:C:C2	73:8:130:C:C5	3.05	0.45
74:YY:43:LYS:HA	74:YY:46:LYS:HG2	1.97	0.45
76:9:212:C:C4	76:9:213:G:N7	2.85	0.45
76:9:480:G:H2’	76:9:481:C:C6	2.52	0.45
76:9:666:U:C4	76:9:1150:A:C5	3.04	0.45
76:9:888:U:O4	76:9:898:U:O4	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1018:U:H2'	76:9:1019:C:H6	1.81	0.45
76:9:1197:G:C2	76:9:1198:G:C8	3.05	0.45
76:9:1330:G:N2	76:9:1334:G:C8	2.80	0.45
76:9:1631:U:O4	76:9:1632:G:C2	2.69	0.45
76:9:1648:G:O2'	76:9:1649:U:P	2.75	0.45
76:9:1832:A:C6	76:9:1833:C:C4	3.05	0.45
83:CC:147:VAL:CG2	83:CC:151:ILE:HD12	2.46	0.45
1:A:109:GLU:OE2	76:9:980:A:OP1	2.34	0.45
1:A:233:ARG:O	1:A:235:VAL:N	2.50	0.45
2:C:297:GLU:O	2:C:300:ARG:HB3	2.16	0.45
2:C:359:ALA:O	2:C:363:ASP:HB3	2.17	0.45
3:d:80:VAL:HG12	3:d:81:PRO:N	2.32	0.45
3:d:83:ARG:NH1	67:5:4997:G:OP1	2.49	0.45
4:DD:9:ARG:NH2	76:9:1550:G:OP1	2.50	0.45
4:DD:15:GLY:HA3	5:dd:50:ILE:HG23	1.97	0.45
7:e:23:HIS:O	7:e:24:GLN:HB2	2.15	0.45
7:e:90:MET:HA	7:e:90:MET:HE3	1.98	0.45
8:EE:42:LEU:HD11	8:EE:51:ARG:NH2	2.32	0.45
15:F:75:ARG:NE	67:5:730:G:OP2	2.48	0.45
18:GG:80:GLY:O	18:GG:81:HIS:CD2	2.69	0.45
21:h:67:GLU:C	21:h:67:GLU:CD	2.85	0.45
22:HH:53:VAL:HG11	22:HH:59:ALA:CB	2.47	0.45
28:ii:36:SER:O	28:ii:124:LEU:HD23	2.17	0.45
28:ii:424:TYR:HB2	67:5:2010:A:N6	2.31	0.45
31:JJ:3:VAL:HA	76:9:510:G:OP1	2.16	0.45
32:jj:279:GLU:O	32:jj:280:VAL:C	2.59	0.45
32:jj:463:SER:O	32:jj:464:ILE:HG13	2.17	0.45
32:jj:554:ILE:CD1	32:jj:615:PHE:HB3	2.46	0.45
36:L:54:PRO:HB3	36:L:95:GLY:C	2.41	0.45
36:L:71:ARG:NH2	67:5:75:G:P	2.90	0.45
41:MM:104:VAL:HG22	76:9:1284:A:OP2	2.17	0.45
45:O:49:ARG:HD2	67:5:1930:U:OP2	2.15	0.45
46:o:62:THR:CG2	46:o:63:THR:N	2.80	0.45
50:PP:110:GLU:HB2	59:SS:117:ILE:HG22	1.99	0.45
51:Q:38:ARG:HH21	67:5:2088:A:P	2.39	0.45
51:Q:66:MET:O	51:Q:70:MET:HG2	2.17	0.45
53:QQ:137:ALA:CB	76:9:1650:A:OP1	2.64	0.45
56:RR:10:LYS:HZ3	76:9:1465:A:H4'	1.81	0.45
56:RR:13:ALA:HB1	56:RR:57:LEU:HD12	1.98	0.45
56:RR:28:PHE:CA	56:RR:55:THR:HG21	2.46	0.45
58:t:37:LEU:HB2	58:t:68:GLN:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:t:104:ILE:HG22	58:t:109:ILE:HG13	1.97	0.45
59:SS:13:LEU:HB2	59:SS:20:ILE:HB	1.98	0.45
59:SS:25:LYS:CE	59:SS:52:LEU:O	2.64	0.45
61:TT:9:VAL:HG12	61:TT:10:ASN:C	2.42	0.45
61:TT:130:ASP:O	61:TT:134:ILE:HG12	2.16	0.45
67:5:160:G:N1	67:5:161:G:C5	2.83	0.45
67:5:708:G:N2	67:5:709:C:C2	2.85	0.45
67:5:745:G:N2	67:5:920:C:C2	2.85	0.45
67:5:930:G:O2'	67:5:931:C:P	2.74	0.45
67:5:1169:G:N1	67:5:1193:C:C2	2.84	0.45
67:5:1372:A:C6	67:5:1373:A:C4	3.04	0.45
67:5:1945:G:N2	67:5:1946:G:N3	2.65	0.45
67:5:1968:G:N2	67:5:1999:A:H61	2.14	0.45
67:5:1980:U:O2	67:5:1982:G:H8	1.99	0.45
67:5:1987:C:C6	67:5:1988:G:C8	3.05	0.45
67:5:2293:U:C4	67:5:2294:G:N7	2.85	0.45
67:5:2419:C:C2	67:5:2420:A:C8	3.04	0.45
67:5:2578:G:N2	67:5:2579:G:C2	2.85	0.45
67:5:3911:C:H2'	67:5:3912:U:H6	1.82	0.45
67:5:4134:C:O2	67:5:4151:G:N2	2.49	0.45
67:5:4619:U:C4	67:5:4620:U:C4	3.04	0.45
67:5:4953:G:N2	67:5:4954:G:C2	2.85	0.45
74:YY:108:LYS:NZ	76:9:506:G:H5"	2.31	0.45
74:YY:121:ALA:O	74:YY:125:VAL:HG23	2.16	0.45
76:9:149:A:N7	76:9:169:U:C2	2.84	0.45
76:9:300:U:H2'	76:9:301:A:H8	1.82	0.45
76:9:438:G:N3	76:9:438:G:H5"	2.32	0.45
76:9:988:C:C5	76:9:989:C:C5	3.04	0.45
76:9:1177:U:N3	76:9:1178:U:C5	2.85	0.45
76:9:1184:G:C5	76:9:1185:C:C5	3.04	0.45
76:9:1247:C:N3	76:9:1251:A:N3	2.64	0.45
76:9:1266:C:H2'	76:9:1267:C:O4'	2.17	0.45
76:9:1273:C:O2'	76:9:1275:G:H5"	2.17	0.45
76:9:1408:U:N3	76:9:1409:A:N7	2.65	0.45
76:9:1566:G:C2	76:9:1568:C:C6	3.05	0.45
76:9:1666:C:C4	76:9:1667:U:C4	3.04	0.45
76:9:1700:C:C4	76:9:1834:A:N6	2.84	0.45
79:AA:58:LEU:O	79:AA:61:ALA:HB3	2.17	0.45
81:B:166:THR:HG22	81:B:167:GLN:N	2.31	0.45
83:CC:137:VAL:O	83:CC:162:ILE:HA	2.17	0.45
1:A:150:LEU:CD1	67:5:3661:G:C8	3.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:152:SER:OG	67:5:3661:G:N7	2.47	0.45
3:d:27:ILE:HD11	3:d:52:PHE:CE2	2.52	0.45
4:DD:34:TYR:O	4:DD:100:ALA:HB2	2.17	0.45
4:DD:69:LEU:HB3	4:DD:86:LEU:CD2	2.46	0.45
4:DD:96:LEU:HD23	4:DD:190:LEU:HD12	1.99	0.45
4:DD:222:PRO:HA	19:gg:189:ILE:O	2.17	0.45
6:D:216:GLU:HG3	6:D:220:LYS:HE3	1.98	0.45
7:e:90:MET:HE1	11:E:121:THR:HG22	1.99	0.45
7:e:127:ALA:O	67:5:2327:G:OP1	2.33	0.45
8:EE:122:LYS:CE	8:EE:162:ILE:HD11	2.47	0.45
10:b:28:ARG:O	10:b:29:TYR:HB2	2.17	0.45
19:gg:65:PHE:CZ	76:9:1452:A:N7	2.85	0.45
19:gg:88:ARG:HG2	19:gg:100:ARG:HG3	1.99	0.45
22:HH:46:THR:OG1	22:HH:63:PHE:C	2.58	0.45
22:HH:147:LYS:HD2	22:HH:151:SER:O	2.16	0.45
27:II:194:GLU:HG3	38:LL:10:TYR:CG	2.52	0.45
28:ii:226:LEU:HD13	28:ii:253:LEU:HD23	1.97	0.45
28:ii:406:PHE:CZ	32:jj:583:ARG:O	2.70	0.45
32:jj:236:THR:HG21	32:jj:285:PHE:HB2	1.98	0.45
32:jj:322:SER:HB2	32:jj:359:LYS:HE3	1.98	0.45
32:jj:410:GLN:NE2	32:jj:415:PRO:HA	2.32	0.45
32:jj:438:GLY:H	32:jj:462:GLY:HA2	1.80	0.45
32:jj:609:PHE:HB3	32:jj:612:MET:CG	2.47	0.45
51:Q:67:ILE:HD13	51:Q:98:LEU:HD21	1.99	0.45
55:s:99:ARG:HG3	55:s:189:ILE:HD12	1.99	0.45
56:RR:126:MET:HE3	76:9:1124:C:O2'	2.17	0.45
63:UU:26:SER:O	63:UU:84:ILE:HD12	2.16	0.45
67:5:125:C:O2'	67:5:126:C:O5'	2.32	0.45
67:5:1424:G:C6	67:5:1425:G:N7	2.85	0.45
67:5:1683:U:N3	67:5:1684:A:N7	2.64	0.45
67:5:1956:A:N1	67:5:2028:C:N3	2.65	0.45
67:5:2039:G:N1	67:5:2040:A:N6	2.64	0.45
67:5:2379:A:N1	67:5:2380:G:C2	2.85	0.45
67:5:2514:G:C2	67:5:2515:G:C5	3.05	0.45
67:5:2544:G:H21	73:8:126:C:H5'	1.82	0.45
67:5:2680:G:N2	67:5:2681:G:H1'	2.31	0.45
67:5:3773:U:C2'	67:5:3774:A:N7	2.80	0.45
67:5:3888:G:O2'	67:5:3889:G:OP1	2.33	0.45
67:5:4110:C:N3	67:5:4111:U:C4	2.84	0.45
67:5:4911:A:OP1	81:B:97:ARG:NH2	2.49	0.45
67:5:4931:G:C6	67:5:4932:U:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:128:U:C6	76:9:215:G:H1'	2.52	0.45
76:9:298:G:C2	76:9:299:A:C8	3.04	0.45
76:9:1468:C:H2'	76:9:1469:A:O4'	2.17	0.45
76:9:1506:A:C8	76:9:1508:A:N7	2.85	0.45
76:9:1702:G:H2'	76:9:1703:C:O4'	2.17	0.45
76:9:1722:G:C2	76:9:1813:A:C6	3.04	0.45
76:9:1808:U:H2'	76:9:1809:A:C8	2.51	0.45
79:AA:10:MET:HE2	79:AA:14:ASP:C	2.42	0.45
82:c:55:LEU:HD23	82:c:55:LEU:C	2.41	0.45
83:CC:260:VAL:HG13	83:CC:260:VAL:O	2.15	0.45
4:DD:12:VAL:HG21	5:dd:34:TYR:HB2	1.98	0.45
16:g:15:THR:CG2	16:g:16:ALA:N	2.77	0.45
19:gg:215:GLN:HB2	19:gg:217:MET:HE3	1.98	0.45
20:G:207:LEU:HD23	20:G:207:LEU:C	2.42	0.45
20:G:211:ALA:HB2	20:G:243:LEU:HD23	1.98	0.45
22:HH:16:PRO:HB2	22:HH:20:GLU:CB	2.43	0.45
24:bb:20:LYS:HG3	24:bb:21:LYS:N	2.31	0.45
29:I:144:ASN:O	29:I:148:VAL:HG23	2.17	0.45
32:jj:211:GLU:HG3	32:jj:434:ARG:HH11	1.81	0.45
32:jj:304:VAL:HG12	32:jj:308:ILE:CD1	2.47	0.45
32:jj:362:ASP:HB2	32:jj:365:VAL:HG12	1.99	0.45
32:jj:454:VAL:HG22	32:jj:503:ARG:HE	1.81	0.45
32:jj:494:VAL:HG22	32:jj:495:ALA:O	2.16	0.45
32:jj:577:LYS:HZ3	32:jj:592:ILE:HD11	1.82	0.45
33:J:62:ILE:CG2	33:J:68:ILE:HD11	2.46	0.45
49:p:41:PHE:N	49:p:41:PHE:CD1	2.83	0.45
50:PP:45:LEU:HD21	50:PP:86:LEU:HD22	1.98	0.45
51:Q:186:TYR:CD1	51:Q:186:TYR:C	2.93	0.45
52:r:33:LYS:NZ	67:5:2265:G:P	2.90	0.45
52:r:116:ALA:O	52:r:119:ARG:HB3	2.17	0.45
53:QQ:72:VAL:HG11	53:QQ:80:GLN:HB3	1.98	0.45
53:QQ:126:ARG:O	76:9:1648:G:H3'	2.17	0.45
56:RR:7:LYS:HB3	76:9:1373:C:OP1	2.17	0.45
56:RR:98:VAL:O	56:RR:119:VAL:HA	2.16	0.45
58:t:80:LEU:HB3	58:t:112:ILE:HD12	1.97	0.45
59:SS:124:ARG:NH2	59:SS:129:LEU:HB2	2.32	0.45
61:TT:63:HIS:CD2	76:9:1542:C:OP1	2.70	0.45
63:UU:67:LYS:CD	76:9:1337:C:H5'	2.44	0.45
63:UU:69:PRO:CG	76:9:1336:C:H1'	2.47	0.45
67:5:22:G:C2	73:8:35:C:N3	2.85	0.45
67:5:40:G:H1'	67:5:4378:A:H61	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:384:A:C2	67:5:386:A:C1'	3.00	0.45
67:5:385:A:N6	67:5:387:G:C6	2.85	0.45
67:5:703:G:N2	67:5:704:C:H6	2.15	0.45
67:5:1092:G:C6	67:5:1205:G:C6	3.05	0.45
67:5:1195:G:C6	67:5:1196:G:C6	3.05	0.45
67:5:1349:G:O6	67:5:1508:A:N6	2.50	0.45
67:5:1584:G:C6	67:5:1585:C:C4	3.05	0.45
67:5:1626:G:C6	67:5:1627:G:N7	2.85	0.45
67:5:1643:A:C4	67:5:1644:C:C5	3.05	0.45
67:5:1726:U:N3	67:5:1727:U:C5	2.85	0.45
67:5:1968:G:C2	67:5:1969:G:C4	3.05	0.45
67:5:2033:A:C6	67:5:2034:G:N7	2.85	0.45
67:5:2042:A:C6	67:5:4464:A:C6	3.05	0.45
67:5:2396:A:N6	67:5:2814:C:O2	2.50	0.45
67:5:2640:G:N2	67:5:2641:A:C4	2.84	0.45
67:5:2870:A:C6	67:5:2881:A:C6	3.05	0.45
67:5:2872:C:N4	67:5:2878:G:N2	2.65	0.45
67:5:4208:U:C4	67:5:4225:G:N1	2.85	0.45
67:5:4618:G:C2	67:5:4619:U:C4	3.05	0.45
67:5:4689:U:C5	67:5:4690:G:N7	2.85	0.45
73:8:37:A:C8	73:8:39:G:N2	2.85	0.45
74:YY:78:SER:OG	74:YY:79:LEU:N	2.49	0.45
76:9:66:G:C6	76:9:68:A:C8	3.05	0.45
76:9:113:G:C2	76:9:292:A:N6	2.85	0.45
76:9:141:A:N6	76:9:177:G:H1'	2.32	0.45
76:9:659:G:N2	76:9:663:C:C4	2.84	0.45
76:9:874:G:HO2'	76:9:875:A:P	2.40	0.45
76:9:887:U:O2	76:9:887:U:O4'	2.33	0.45
76:9:910:G:C6	76:9:911:C:N4	2.85	0.45
76:9:999:G:P	80:aa:17:HIS:HB2	2.57	0.45
76:9:1170:A:N6	76:9:1189:A:C5	2.85	0.45
82:c:45:LEU:CD1	82:c:105:ILE:HG22	2.46	0.45
4:DD:109:LEU:CD2	4:DD:115:VAL:HA	2.46	0.45
4:DD:141:LYS:HB2	4:DD:146:ARG:O	2.16	0.45
12:f:72:GLY:HA3	12:f:88:PHE:CD2	2.52	0.45
13:FF:38:TYR:HE2	84:cc:13:ARG:NH2	2.15	0.45
13:FF:140:ASP:HB3	84:cc:56:LEU:HD23	1.99	0.45
13:FF:167:LYS:NZ	13:FF:171:GLU:HG2	2.31	0.45
15:F:30:LYS:HZ1	67:5:2107:A:HO2'	1.58	0.45
15:F:177:SER:C	15:F:178:LEU:HD12	2.42	0.45
18:GG:145:PHE:CE2	66:W:93:LYS:NZ	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:GG:159:ARG:NH2	18:GG:171:THR:CB	2.79	0.45
19:gg:241:PHE:HD1	19:gg:247:TRP:O	2.00	0.45
21:h:123:ALA:HB2	36:L:150:LEU:HD13	1.99	0.45
24:bb:53:VAL:O	24:bb:55:LEU:HD12	2.17	0.45
27:II:83:TYR:OH	27:II:205:ARG:NE	2.43	0.45
27:II:194:GLU:OE1	27:II:194:GLU:N	2.50	0.45
28:ii:179:LYS:HG3	32:jj:268:ASN:ND2	2.31	0.45
30:j:44:LYS:NZ	67:5:23:C:OP1	2.43	0.45
32:jj:528:GLY:HA3	32:jj:633:VAL:O	2.16	0.45
45:O:126:VAL:HG13	45:O:127:VAL:N	2.31	0.45
46:o:36:GLN:HE21	46:o:40:ARG:NH1	2.15	0.45
49:p:70:THR:CG2	49:p:71:TYR:N	2.80	0.45
50:PP:20:VAL:HG13	50:PP:24:GLN:HB3	1.99	0.45
50:PP:103:ASN:CG	50:PP:120:SER:HB3	2.41	0.45
50:PP:126:VAL:CG1	76:9:1521:C:H5'	2.47	0.45
52:r:10:VAL:O	52:r:11:ARG:C	2.60	0.45
54:R:162:ARG:NH2	76:9:873:G:N7	2.64	0.45
55:s:21:LEU:HB2	55:s:68:HIS:CE1	2.52	0.45
55:s:73:PRO:O	55:s:76:GLU:HG2	2.16	0.45
56:RR:24:LEU:HD22	56:RR:54:VAL:HG11	1.98	0.45
56:RR:28:PHE:CE2	76:9:1453:C:H1'	2.51	0.45
58:t:96:LYS:H	58:t:96:LYS:HD3	1.82	0.45
59:SS:24:ARG:HB3	59:SS:29:ALA:HB2	1.99	0.45
61:TT:28:LEU:CD1	61:TT:54:TYR:CD2	3.00	0.45
61:TT:63:HIS:HD2	61:TT:79:TYR:CZ	2.35	0.45
66:W:119:LYS:O	76:9:322:C:O2'	2.22	0.45
67:5:38:A:C2	67:5:41:C:C5	3.04	0.45
67:5:311:G:N2	67:5:312:G:C5	2.85	0.45
67:5:385:A:C2	67:5:386:A:C5	3.04	0.45
67:5:1086:C:H2'	67:5:1087:A:H8	1.81	0.45
67:5:1314:C:C2	67:5:1315:C:C5	3.05	0.45
67:5:1466:G:C6	67:5:1467:C:C4	3.05	0.45
67:5:1689:G:C6	67:5:1690:C:C4	3.05	0.45
67:5:1799:G:C6	67:5:1800:U:C4	3.05	0.45
67:5:1803:G:C2	67:5:1836:G:C6	3.04	0.45
67:5:1983:A:C2	67:5:2010:A:H5'	2.51	0.45
67:5:1999:A:N3	67:5:2019:C:H1'	2.32	0.45
67:5:2469:C:H5	67:5:2471:G:O6	2.00	0.45
67:5:2521:G:C2	67:5:2522:G:C5	3.05	0.45
67:5:4478:G:H2'	67:5:4479:A:O4'	2.17	0.45
67:5:4771:C:O2	67:5:4864:U:C2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:7:3:C:H2'	70:7:4:U:H6	1.80	0.45
70:7:117:G:C2	70:7:118:C:C5	3.05	0.45
72:Y:55:VAL:HB	72:Y:104:VAL:HG13	1.99	0.45
73:8:135:C:C2	73:8:136:U:C5	3.05	0.45
76:9:62:G:N2	76:9:63:U:H1'	2.32	0.45
76:9:810:A:H3'	76:9:811:A:H5'	1.99	0.45
76:9:1005:G:C4	76:9:1006:C:C5	3.05	0.45
76:9:1288:U:H2'	76:9:1289:U:C6	2.52	0.45
76:9:1365:G:C2	76:9:1366:G:C8	3.05	0.45
76:9:1595:U:C2	76:9:1596:U:C6	3.05	0.45
76:9:1597:C:H4'	76:9:1603:G:C6	2.52	0.45
77:ZZ:50:PHE:HZ	77:ZZ:79:ILE:HD13	1.81	0.45
79:AA:30:LEU:HD13	79:AA:38:ILE:HD11	1.99	0.45
81:B:286:LYS:HB3	81:B:332:MET:CE	2.47	0.45
83:CC:78:LEU:H	83:CC:78:LEU:HD23	1.81	0.45
83:CC:81:ILE:HG23	83:CC:86:LEU:HB2	1.99	0.45
2:C:302:LEU:HA	2:C:302:LEU:HD23	1.70	0.45
4:DD:161:GLY:N	76:9:1482:C:O2'	2.50	0.45
6:D:83:LEU:N	6:D:84:PRO:CD	2.79	0.45
6:D:152:ARG:O	6:D:154:THR:N	2.49	0.45
8:EE:121:TYR:CE2	8:EE:161:GLN:HG3	2.52	0.45
10:b:96:LEU:HB3	15:F:48:LEU:HD13	1.99	0.45
13:FF:142:SER:CB	84:cc:49:PRO:O	2.64	0.45
18:GG:79:LYS:CE	18:GG:90:GLY:H	2.30	0.45
19:gg:211:GLY:H	19:gg:236:ILE:HD12	1.82	0.45
28:ii:262:ASN:ND2	32:jj:550:ALA:C	2.75	0.45
28:ii:304:GLY:O	28:ii:308:THR:CB	2.65	0.45
28:ii:335:CYS:HB2	58:t:93:LYS:HD2	1.99	0.45
28:ii:414:ARG:CZ	67:5:4420:U:H4'	2.47	0.45
32:jj:530:THR:OG1	32:jj:596:ARG:NH1	2.50	0.45
32:jj:535:ILE:O	32:jj:590:VAL:HG13	2.17	0.45
32:jj:603:LEU:O	32:jj:632:LEU:HD11	2.16	0.45
36:L:124:LEU:C	36:L:124:LEU:CD2	2.90	0.45
39:M:9:VAL:HG21	39:M:66:HIS:HA	1.99	0.45
44:NN:114:ARG:NH1	76:9:996:A:OP1	2.50	0.45
47:OO:66:ARG:HB2	76:9:962:A:H5"	1.99	0.45
54:R:149:LYS:HG2	54:R:153:LYS:HZ1	1.82	0.45
55:s:59:THR:OG1	67:5:1961:G:H3'	2.17	0.45
56:RR:63:ARG:NH2	76:9:1463:U:O2'	2.50	0.45
58:t:29:ALA:HB2	58:t:39:PRO:HG3	1.99	0.45
59:SS:82:TRP:CE2	76:9:1567:G:N2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4:G:C2	67:5:5:A:C5	3.05	0.45
67:5:48:G:O2'	67:5:49:U:OP2	2.29	0.45
67:5:376:A:N6	67:5:377:A:N6	2.65	0.45
67:5:500:G:O2'	67:5:504:G:C4'	2.65	0.45
67:5:1211:G:C2	67:5:1212:G:C8	3.05	0.45
67:5:1235:G:C6	67:5:1236:C:N4	2.85	0.45
67:5:1351:G:C6	67:5:1506:G:C6	3.05	0.45
67:5:1499:C:N4	67:5:1500:A:N1	2.65	0.45
67:5:1528:U:C2	67:5:1529:G:C8	3.05	0.45
67:5:2097:A:C2'	67:5:2097:A:N3	2.79	0.45
67:5:2844:A:N6	67:5:3845:A:C6	2.85	0.45
67:5:3603:G:N2	67:5:3604:A:C4	2.85	0.45
67:5:3664:G:C2	67:5:3665:G:N7	2.85	0.45
67:5:3871:A:C4	67:5:3885:G:N2	2.85	0.45
67:5:3902:A:C2	67:5:4523:A:C6	3.05	0.45
67:5:3920:U:N3	67:5:3921:U:C5	2.85	0.45
67:5:3936:A:N6	67:5:4175:G:O6	2.50	0.45
67:5:4339:A:N3	67:5:4340:U:C6	2.85	0.45
67:5:4602:A:N1	67:5:4610:A:C4	2.85	0.45
67:5:4664:A:C5	67:5:4665:A:C8	3.04	0.45
67:5:4899:G:N1	67:5:4922:C:C4	2.85	0.45
67:5:4949:G:C5	67:5:4951:G:C8	3.04	0.45
73:8:6:C:H2'	73:8:7:U:H6	1.82	0.45
74:YY:25:ILE:CD1	74:YY:44:LEU:HD21	2.46	0.45
75:Z:106:LEU:HD12	75:Z:106:LEU:N	2.30	0.45
76:9:41:G:C8	76:9:485:A:C8	3.05	0.45
76:9:64:A:C5	76:9:82:G:C2	3.05	0.45
76:9:537:C:N3	76:9:538:U:C5	2.84	0.45
76:9:1033:G:C6	76:9:1080:A:C5	3.05	0.45
76:9:1411:G:C5	76:9:1412:C:C5	3.05	0.45
76:9:1478:U:C4	76:9:1479:G:C5	3.05	0.45
76:9:1685:U:N3	76:9:1686:G:N7	2.65	0.45
76:9:1718:G:N2	76:9:1816:G:C6	2.85	0.45
81:B:90:VAL:HG23	81:B:104:THR:OG1	2.17	0.45
81:B:122:TRP:CE2	81:B:127:LYS:HE3	2.52	0.45
82:c:13:SER:O	82:c:17:ARG:HG3	2.17	0.45
84:cc:24:GLN:O	84:cc:25:GLY:C	2.56	0.45
6:D:113:PHE:HB2	6:D:115:MET:HE2	1.99	0.44
6:D:129:GLU:OE2	6:D:130:TYR:N	2.50	0.44
8:EE:121:TYR:HE2	8:EE:161:GLN:HG3	1.80	0.44
11:E:136:PHE:HA	11:E:139:HIS:CE1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:E:180:GLY:O	11:E:181:PRO:C	2.60	0.44
12:f:76:ARG:NH2	12:f:85:ARG:NH2	2.65	0.44
30:j:87:LYS:HD2	73:8:68:G:OP2	2.17	0.44
32:jj:224:GLY:N	87:jj:700:GCP:O3A	2.50	0.44
33:J:94:LEU:O	33:J:174:ILE:HA	2.18	0.44
33:J:118:LYS:HD2	59:SS:14:ARG:HH22	1.82	0.44
34:k:28:ASN:O	34:k:31:ASN:O	2.36	0.44
35:KK:63:ALA:HB3	35:KK:68:TYR:OH	2.17	0.44
35:KK:67:PHE:O	35:KK:68:TYR:CD2	2.70	0.44
36:L:92:ARG:HH22	67:5:108:A:H4'	1.81	0.44
48:P:54:LYS:HA	48:P:83:TRP:CD1	2.52	0.44
50:PP:40:ARG:NH2	76:9:1624:U:C4	2.84	0.44
56:RR:28:PHE:HD2	56:RR:29:HIS:CD2	2.35	0.44
59:SS:68:ILE:O	59:SS:72:GLN:HG3	2.17	0.44
59:SS:130:ARG:CZ	76:9:1608:U:H4'	2.48	0.44
59:SS:130:ARG:HD3	76:9:1609:C:OP1	2.17	0.44
61:TT:101:ARG:HG2	61:TT:105:GLN:NE2	2.32	0.44
63:UU:48:LEU:HD13	63:UU:93:SER:HB3	1.99	0.44
63:UU:67:LYS:HD3	76:9:1337:C:OP1	2.15	0.44
65:VV:43:THR:HG22	65:VV:45:ARG:HG3	1.98	0.44
67:5:224:U:O2	67:5:224:U:O4'	2.34	0.44
67:5:331:G:C2	67:5:332:C:C5	3.05	0.44
67:5:454:U:H3	67:5:702:U:H3	1.64	0.44
67:5:932:A:C6	67:5:939:G:C4	3.05	0.44
67:5:988:C:C2	67:5:989:U:C5	3.05	0.44
67:5:1233:G:C2	67:5:1234:G:C4	3.05	0.44
67:5:1343:A:C6	67:5:1344:C:C4	3.05	0.44
67:5:1477:C:O2'	67:5:1478:C:OP1	2.32	0.44
67:5:1834:U:O2'	67:5:1835:G:OP1	2.34	0.44
67:5:1985:G:C3'	67:5:2003:G:OP2	2.65	0.44
67:5:2039:G:C6	67:5:2040:A:C6	3.05	0.44
67:5:2275:G:N2	67:5:2276:A:C4	2.86	0.44
67:5:2403:A:N1	67:5:2404:A:C4	2.85	0.44
67:5:2442:G:N1	67:5:2443:G:C5	2.85	0.44
67:5:2442:G:C4	67:5:2781:G:N2	2.85	0.44
67:5:2822:G:C2	67:5:2823:G:C4	3.05	0.44
67:5:2849:A:C2	67:5:2855:G:C8	3.05	0.44
67:5:2890:C:C2	67:5:2891:U:C5	3.05	0.44
67:5:3795:A:C6	67:5:3796:U:C4	3.05	0.44
67:5:4099:G:N2	67:5:4109:G:H22	2.14	0.44
67:5:4192:A:H2'	67:5:4193:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4536:C:N3	67:5:4537:C:C5	2.85	0.44
67:5:4538:G:C6	67:5:4539:U:C4	3.04	0.44
67:5:5051:C:C2	67:5:5052:C:C5	3.05	0.44
72:Y:50:ARG:HB2	72:Y:115:ARG:NH2	2.32	0.44
73:8:122:G:C2'	73:8:128:C:H42	2.28	0.44
74:YY:108:LYS:HZ3	76:9:506:G:P	2.31	0.44
75:Z:3:LYS:NZ	82:c:40:GLN:O	2.37	0.44
76:9:97:U:C4	76:9:98:C:N4	2.85	0.44
76:9:542:U:C5	76:9:543:C:C4	3.05	0.44
76:9:1231:C:H42	76:9:1527:C:H41	1.65	0.44
76:9:1366:G:C2	76:9:1367:U:H1'	2.52	0.44
76:9:1512:C:H2'	76:9:1513:C:H6	1.81	0.44
76:9:1683:C:H1'	84:cc:23:SER:CB	2.47	0.44
76:9:1683:C:C6	84:cc:23:SER:O	2.70	0.44
76:9:1825:A:OP1	76:9:1825:A:H8	2.00	0.44
76:9:1827:U:C2	76:9:1828:C:C5	3.05	0.44
77:ZZ:74:SER:HA	77:ZZ:79:ILE:HG13	1.99	0.44
78:a:59:ARG:NH1	78:a:59:ARG:HB2	2.32	0.44
80:aa:36:ILE:HD12	80:aa:36:ILE:N	2.32	0.44
80:aa:42:ARG:O	80:aa:67:LEU:HB3	2.17	0.44
81:B:294:LYS:HD3	81:B:294:LYS:C	2.41	0.44
83:CC:68:ARG:HB3	83:CC:273:LEU:CD2	2.47	0.44
4:DD:99:ILE:HG23	4:DD:171:ALA:HB2	1.99	0.44
4:DD:193:ASP:OD1	4:DD:198:ILE:HG12	2.17	0.44
7:e:5:ARG:NH2	67:5:705:G:OP2	2.50	0.44
8:EE:122:LYS:O	8:EE:162:ILE:HG13	2.18	0.44
8:EE:129:ILE:HG13	8:EE:139:LEU:HD21	1.99	0.44
11:E:144:ARG:H	11:E:144:ARG:HD2	1.82	0.44
13:FF:100:ILE:HG13	13:FF:174:ALA:HA	1.98	0.44
17:BB:29:ASP:OD2	17:BB:58:ALA:HB1	2.16	0.44
17:BB:185:VAL:O	17:BB:189:ILE:HG13	2.16	0.44
18:GG:69:THR:HG22	18:GG:71:GLY:H	1.82	0.44
19:gg:79:LEU:HD12	19:gg:88:ARG:C	2.41	0.44
20:G:193:VAL:HG23	20:G:194:ASN:N	2.31	0.44
20:G:223:LEU:HB3	20:G:224:PRO:HD3	1.97	0.44
25:H:106:GLN:HB2	25:H:111:LEU:HD22	1.98	0.44
27:II:87:ASN:OD1	27:II:89:GLU:HG3	2.18	0.44
28:ii:94:VAL:CG1	28:ii:96:TYR:CE2	3.00	0.44
28:ii:290:TYR:HD1	28:ii:412:ILE:CG1	2.31	0.44
28:ii:403:VAL:HA	28:ii:408:GLY:CA	2.48	0.44
32:jj:327:GLU:O	32:jj:330:THR:OG1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:536:VAL:HG13	32:jj:626:ILE:HB	1.99	0.44
37:l:26:TRP:CZ3	73:8:75:G:C2	3.06	0.44
45:O:191:LYS:O	45:O:194:ASP:HB2	2.17	0.44
46:o:19:GLN:HB3	46:o:20:PRO:HD2	1.99	0.44
47:OO:133:THR:O	47:OO:133:THR:HG23	2.17	0.44
48:P:30:ARG:HH21	67:5:424:U:P	2.41	0.44
56:RR:7:LYS:N	76:9:1373:C:OP1	2.45	0.44
56:RR:104:GLU:O	56:RR:108:LEU:HD13	2.18	0.44
58:t:125:LEU:HD23	58:t:129:ILE:HD12	1.98	0.44
60:T:69:GLN:OE1	60:T:69:GLN:N	2.47	0.44
61:TT:42:HIS:NE2	61:TT:43:LYS:HE3	2.32	0.44
61:TT:114:GLU:HB2	61:TT:124:THR:HG22	1.99	0.44
65:VV:11:LEU:HG	65:VV:12:TYR:HD1	1.83	0.44
67:5:344:A:N1	73:8:31:G:C6	2.85	0.44
67:5:681:G:C6	67:5:682:G:C5	3.04	0.44
67:5:750:U:C2	67:5:751:G:C8	3.05	0.44
67:5:1202:C:C4	67:5:1203:G:N7	2.85	0.44
67:5:1285:U:H2'	67:5:1286:C:H6	1.81	0.44
67:5:1604:G:C2	67:5:1605:G:C4	3.05	0.44
67:5:1733:G:N1	67:5:1797:G:N1	2.65	0.44
67:5:2417:A:C4	67:5:2418:A:C8	3.05	0.44
67:5:2636:U:N3	67:5:2637:U:C5	2.86	0.44
67:5:2670:C:C4	67:5:2671:C:C4	3.05	0.44
67:5:3688:U:C2	67:5:3689:G:C8	3.06	0.44
67:5:3807:A:O2'	76:9:1816:G:O2'	2.32	0.44
67:5:3930:U:O4	67:5:3931:C:N4	2.50	0.44
67:5:4254:G:O2'	67:5:4255:A:OP1	2.28	0.44
67:5:4508:C:N3	67:5:4512:U:H5	2.15	0.44
67:5:4605:A:C6	67:5:4606:G:C2	3.05	0.44
67:5:4629:U:N3	67:5:4630:G:N7	2.64	0.44
67:5:4926:C:N4	67:5:4927:G:N7	2.65	0.44
69:X:135:LYS:HD2	69:X:137:TYR:CE2	2.52	0.44
70:7:39:C:C4	70:7:40:U:C4	3.05	0.44
73:8:126:C:O2'	73:8:127:U:C4	2.70	0.44
76:9:1048:G:N2	76:9:1071:G:C6	2.85	0.44
76:9:1210:G:C2	76:9:1690:U:C2	3.05	0.44
76:9:1244:U:C2	76:9:1494:U:O4	2.69	0.44
76:9:1415:C:C4	76:9:1416:C:N4	2.85	0.44
76:9:1550:G:O2'	76:9:1558:C:O2'	2.33	0.44
76:9:1553:C:O2'	76:9:1554:C:O4'	2.35	0.44
76:9:1595:U:C4	76:9:1596:U:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1613:G:C6	76:9:1614:A:C5	3.06	0.44
76:9:1802:C:C2	76:9:1803:U:C5	3.05	0.44
77:ZZ:91:LEU:HD23	77:ZZ:96:LEU:HD12	2.00	0.44
83:CC:204:ILE:HG13	83:CC:220:ASP:O	2.17	0.44
4:DD:162:ASP:N	4:DD:163:PRO:CD	2.80	0.44
4:DD:204:LEU:HB2	4:DD:207:HIS:CB	2.47	0.44
6:D:196:ARG:O	6:D:200:MET:HG2	2.18	0.44
8:EE:112:HIS:CD2	8:EE:239:PRO:HA	2.53	0.44
8:EE:122:LYS:HE3	8:EE:124:CYS:SG	2.58	0.44
13:FF:32:ASP:HB2	13:FF:117:ILE:CD1	2.47	0.44
13:FF:48:TYR:CD1	53:QQ:49:TYR:CD2	3.06	0.44
13:FF:83:ASN:O	76:9:1652:G:H1'	2.16	0.44
15:F:36:PHE:CZ	15:F:40:MET:HE3	2.52	0.44
19:gg:18:VAL:HG11	19:gg:21:ILE:HD11	1.99	0.44
19:gg:55:PRO:HB2	53:QQ:102:GLU:OE2	2.18	0.44
20:G:147:GLN:O	20:G:151:LEU:HD13	2.18	0.44
20:G:314:LEU:HD23	20:G:317:LYS:HD2	1.99	0.44
22:HH:66:VAL:N	22:HH:67:PRO:CD	2.80	0.44
22:HH:138:GLU:OE2	44:NN:21:SER:OG	2.28	0.44
27:II:106:SER:HB3	27:II:166:PHE:CD1	2.53	0.44
28:ii:322:VAL:CG1	28:ii:326:LEU:HD11	2.43	0.44
32:jj:357:ILE:HD11	32:jj:396:PHE:CD2	2.53	0.44
32:jj:534:GLN:HG3	32:jj:592:ILE:CD1	2.47	0.44
36:L:205:GLN:NE2	36:L:206:ASP:CG	2.74	0.44
41:MM:40:LYS:HE2	76:9:1310:U:H5'	1.99	0.44
42:N:147:ASP:O	42:N:150:TRP:CD1	2.70	0.44
43:n:5:TRP:O	43:n:9:ARG:HB2	2.17	0.44
47:OO:28:PHE:HB2	47:OO:47:LEU:HD21	2.00	0.44
50:PP:57:LEU:HA	50:PP:60:LEU:HD12	2.00	0.44
53:QQ:30:GLY:CA	53:QQ:64:ALA:O	2.65	0.44
53:QQ:132:PHE:HB3	76:9:1669:G:OP1	2.17	0.44
55:s:26:LYS:HG3	55:s:193:PHE:O	2.17	0.44
56:RR:5:ARG:NH2	56:RR:53:TYR:CD1	2.86	0.44
56:RR:17:ILE:HG21	56:RR:61:ILE:HD12	1.99	0.44
56:RR:28:PHE:CB	76:9:1455:A:H5'	2.48	0.44
58:t:96:LYS:HD3	58:t:96:LYS:N	2.32	0.44
59:SS:28:PHE:O	59:SS:31:THR:OG1	2.28	0.44
64:V:42:VAL:HG22	64:V:55:ALA:HB2	1.99	0.44
65:VV:66:ASP:OD1	65:VV:66:ASP:C	2.60	0.44
66:W:97:LYS:HE3	76:9:1759:G:OP1	2.17	0.44
67:5:1:C:N4	67:5:2:G:C6	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:307:A:H3'	67:5:308:G:N2	2.33	0.44
67:5:365:U:C4	67:5:375:G:N2	2.85	0.44
67:5:750:U:C1'	67:5:917:A:C5	3.00	0.44
67:5:750:U:H1'	67:5:917:A:C5	2.52	0.44
67:5:909:G:C2	67:5:910:G:C8	3.06	0.44
67:5:1083:U:O2	67:5:1084:C:C5	2.71	0.44
67:5:1090:G:C6	67:5:1091:C:C4	3.05	0.44
67:5:1216:C:N4	67:5:1217:G:C6	2.85	0.44
67:5:1989:G:N2	67:5:1990:A:C2	2.85	0.44
67:5:2088:A:H4'	67:5:2089:G:H3'	1.99	0.44
67:5:2489:C:OP1	67:5:2490:U:C5	2.70	0.44
67:5:3649:A:C2	67:5:3650:C:C6	3.05	0.44
67:5:4068:U:O4	67:5:4069:U:N3	2.51	0.44
67:5:4136:G:O6	67:5:4149:C:N4	2.50	0.44
67:5:4410:G:N3	67:5:4411:G:C8	2.86	0.44
67:5:4419:U:H2'	67:5:4420:U:C5'	2.48	0.44
67:5:4482:U:C2	67:5:4483:C:C5	3.04	0.44
70:7:66:G:C4	70:7:67:C:C5	3.06	0.44
74:YY:93:ARG:NH2	76:9:574:A:H5"	2.32	0.44
76:9:617:G:C2	76:9:618:C:C6	3.06	0.44
76:9:635:G:C6	76:9:636:C:C4	3.05	0.44
76:9:873:G:HO2'	76:9:874:G:P	2.40	0.44
76:9:1073:U:C2	76:9:1074:C:C5	3.06	0.44
76:9:1648:G:H1'	76:9:1649:U:H5	1.82	0.44
77:ZZ:63:PRO:O	77:ZZ:111:ARG:HB2	2.16	0.44
78:a:3:SER:HA	78:a:6:ARG:HH11	1.81	0.44
83:CC:76:LYS:O	83:CC:97:PHE:HE1	2.00	0.44
83:CC:258:GLU:CD	83:CC:259:THR:N	2.75	0.44
2:C:65:GLU:OE1	2:C:65:GLU:HA	2.18	0.44
11:E:75:TYR:CD2	67:5:1273:G:N1	2.86	0.44
11:E:286:PRO:HA	11:E:289:LEU:HD22	1.97	0.44
13:FF:60:ARG:HD2	76:9:1679:A:H3'	2.00	0.44
15:F:27:LEU:N	15:F:27:LEU:CD1	2.79	0.44
22:HH:91:HIS:NE2	22:HH:169:LYS:HE2	2.33	0.44
25:H:141:LYS:HG3	25:H:142:ASP:H	1.82	0.44
25:H:169:ASN:OD1	25:H:169:ASN:O	2.36	0.44
28:ii:318:GLU:HG3	67:5:4419:U:H1'	2.00	0.44
28:ii:414:ARG:NH1	67:5:4420:U:C4'	2.80	0.44
30:j:79:ARG:CZ	73:8:94:G:C5	3.01	0.44
32:jj:220:HIS:H	32:jj:223:ALA:HB3	1.83	0.44
32:jj:403:THR:HG23	32:jj:405:ALA:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:466:LYS:HB2	32:jj:492:ASP:O	2.17	0.44
32:jj:537:ILE:HA	32:jj:625:ALA:CB	2.47	0.44
32:jj:573:LYS:HD3	55:s:150:GLY:H	1.82	0.44
35:KK:19:GLY:O	35:KK:71:LEU:HB3	2.18	0.44
43:n:5:TRP:O	43:n:9:ARG:CB	2.65	0.44
48:P:25:HIS:HE1	67:5:3858:C:P	2.40	0.44
52:r:28:GLU:HB2	52:r:31:ASN:ND2	2.33	0.44
52:r:78:VAL:HG13	52:r:78:VAL:O	2.17	0.44
54:R:105:LEU:HD23	54:R:105:LEU:C	2.42	0.44
55:s:113:ALA:HB2	55:s:172:ALA:HB2	1.98	0.44
56:RR:114:LEU:HD12	56:RR:117:LEU:HD11	2.00	0.44
59:SS:80:PRO:HG2	59:SS:83:PHE:CD2	2.52	0.44
63:UU:46:LYS:HE2	63:UU:97:ILE:HG23	2.00	0.44
63:UU:69:PRO:HD3	76:9:1336:C:H1’	1.99	0.44
63:UU:95:SER:O	63:UU:98:VAL:HG22	2.17	0.44
64:V:48:ARG:HD2	64:V:51:ARG:HD2	1.99	0.44
67:5:15:A:N6	73:8:143:G:N1	2.64	0.44
67:5:353:A:C5	67:5:379:G:C5	3.05	0.44
67:5:385:A:N6	67:5:387:G:C2	2.86	0.44
67:5:478:G:C6	67:5:677:G:N1	2.84	0.44
67:5:652:G:C6	67:5:653:C:C4	3.06	0.44
67:5:682:G:C6	67:5:683:C:C4	3.05	0.44
67:5:950:G:N2	67:5:951:G:C5	2.85	0.44
67:5:1211:G:C4	67:5:1212:G:C8	3.06	0.44
67:5:1495:G:O5’	67:5:1495:G:H8	2.01	0.44
67:5:1510:G:C6	67:5:1511:U:C4	3.05	0.44
67:5:1835:G:H4’	67:5:1836:G:O5’	2.18	0.44
67:5:1951:G:C2	67:5:2033:A:C2	3.05	0.44
67:5:2744:A:C6	67:5:2745:A:N6	2.86	0.44
67:5:3610:A:N1	67:5:3611:A:C5	2.86	0.44
67:5:4090:G:N1	67:5:4091:G:C5	2.86	0.44
67:5:4428:A:C5	67:5:4429:C:C5	3.06	0.44
67:5:4455:G:C6	67:5:4456:C:C5	3.05	0.44
67:5:4540:C:C2	67:5:4546:A:C2	3.05	0.44
67:5:4669:A:C5	67:5:4672:A:N7	2.86	0.44
67:5:4719:G:O2’	67:5:4720:C:O5’	2.26	0.44
67:5:4880:C:O4’	67:5:4880:C:O2	2.34	0.44
67:5:4908:G:C4	67:5:4913:G:N2	2.86	0.44
67:5:4951:G:C2	67:5:4952:G:C8	3.05	0.44
70:7:27:G:C6	70:7:28:C:C4	3.05	0.44
73:8:40:A:N6	73:8:103:A:N3	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:8:102:G:N1	73:8:104:A:N6	2.66	0.44
73:8:153:C:N3	73:8:154:G:N7	2.65	0.44
76:9:144:U:N1	76:9:313:A:C6	2.85	0.44
76:9:387:C:N3	76:9:388:U:C5	2.86	0.44
76:9:664:A:C2	76:9:665:G:C8	3.06	0.44
76:9:827:A:C6	76:9:828:G:C5	3.06	0.44
76:9:1099:G:C2	76:9:1100:A:C8	3.06	0.44
76:9:1204:A:H2'	76:9:1205:C:H6	1.83	0.44
76:9:1493:C:H1'	76:9:1499:U:H3	1.82	0.44
76:9:1778:C:N4	76:9:1779:G:N7	2.65	0.44
82:c:104:ILE:HG23	82:c:105:ILE:HG23	1.99	0.44
1:A:117:GLU:OE2	1:A:123:ARG:CA	2.65	0.44
2:C:72:ALA:O	2:C:73:VAL:HG13	2.18	0.44
4:DD:109:LEU:CD2	4:DD:115:VAL:HG13	2.48	0.44
4:DD:175:VAL:HG13	4:DD:182:LEU:HB2	2.00	0.44
6:D:33:ARG:HH22	70:7:8:G:P	2.37	0.44
8:EE:33:THR:HG22	76:9:345:U:O2'	2.16	0.44
10:b:102:PRO:O	10:b:105:GLY:N	2.51	0.44
11:E:177:LEU:HD11	11:E:189:LEU:HD22	1.99	0.44
11:E:242:LYS:HD3	11:E:243:TYR:H	1.82	0.44
13:FF:51:HIS:CE1	76:9:1674:G:OP1	2.70	0.44
13:FF:62:ARG:HA	13:FF:65:GLN:NE2	2.32	0.44
13:FF:141:VAL:HA	84:cc:46:VAL:CG1	2.47	0.44
14:ff:105:TYR:HB3	14:ff:131:PHE:CD1	2.53	0.44
19:gg:83:TRP:HH2	56:RR:29:HIS:HD1	1.65	0.44
27:II:38:ILE:CG1	27:II:96:LEU:HD21	2.47	0.44
27:II:48:VAL:HG23	27:II:49:ARG:N	2.33	0.44
28:ii:63:LYS:CE	76:9:627:U:OP2	2.65	0.44
32:jj:215:VAL:CG1	32:jj:292:PHE:CZ	3.00	0.44
32:jj:218:ILE:CG2	32:jj:297:ALA:HB3	2.48	0.44
32:jj:225:LYS:HD3	32:jj:225:LYS:N	2.32	0.44
32:jj:481:VAL:O	32:jj:481:VAL:HG23	2.16	0.44
38:LL:35:ARG:CD	38:LL:51:ILE:O	2.66	0.44
40:m:86:LYS:HB2	40:m:89:CYS:SG	2.58	0.44
42:N:182:HIS:CE1	42:N:183:THR:HG23	2.52	0.44
45:O:12:ARG:HA	45:O:40:GLY:HA3	2.00	0.44
51:Q:49:LYS:HZ3	67:5:1693:U:P	2.34	0.44
51:Q:175:GLU:O	67:5:1497:A:N6	2.50	0.44
56:RR:28:PHE:N	56:RR:55:THR:HG21	2.32	0.44
58:t:98:ILE:O	58:t:98:ILE:CG2	2.62	0.44
59:SS:27:ALA:HB1	59:SS:42:HIS:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:TT:28:LEU:HG	61:TT:110:LEU:HD13	1.99	0.44
61:TT:42:HIS:CD2	61:TT:43:LYS:HE3	2.53	0.44
61:TT:111:LYS:HB2	61:TT:126:GLN:NE2	2.32	0.44
67:5:86:U:HO2'	78:a:65:ARG:HH12	1.63	0.44
67:5:111:C:N3	67:5:112:C:C5	2.85	0.44
67:5:394:G:N2	67:5:398:A:C5	2.85	0.44
67:5:448:G:C6	67:5:450:G:N7	2.86	0.44
67:5:478:G:C2	67:5:479:G:C5	3.05	0.44
67:5:1202:C:N3	67:5:1203:G:N7	2.64	0.44
67:5:1526:G:C6	67:5:1649:U:O4	2.69	0.44
67:5:1669:A:C6	67:5:1670:G:C5	3.06	0.44
67:5:1669:A:C6	67:5:1670:G:C6	3.05	0.44
67:5:1726:U:C2	67:5:1727:U:C5	3.06	0.44
67:5:1762:C:N4	67:5:1764:G:N1	2.65	0.44
67:5:1949:U:C2	67:5:1950:U:C5	3.05	0.44
67:5:1991:A:N3	67:5:1991:A:O4'	2.51	0.44
67:5:3610:A:N1	67:5:3611:A:C6	2.86	0.44
67:5:3939:G:C6	67:5:3940:U:C5	3.05	0.44
67:5:4155:C:N4	67:5:4156:G:C2	2.86	0.44
69:X:119:ILE:HD13	69:X:140:LEU:HD22	1.99	0.44
70:7:3:C:C2	70:7:4:U:C5	3.06	0.44
70:7:26:C:N4	70:7:27:G:C5	2.85	0.44
74:YY:29:HIS:O	74:YY:29:HIS:CG	2.68	0.44
76:9:102:A:C8	76:9:408:A:N1	2.86	0.44
76:9:376:A:C2	76:9:377:G:C4	3.05	0.44
76:9:531:A:C6	76:9:532:C:C4	3.05	0.44
76:9:1031:A:C6	76:9:1032:C:C4	3.05	0.44
76:9:1169:G:N2	76:9:1191:C:N4	2.66	0.44
76:9:1228:A:H2'	76:9:1229:G:C8	2.53	0.44
76:9:1260:A:O3'	76:9:1518:C:N4	2.50	0.44
76:9:1366:G:C2	76:9:1374:C:C2	3.06	0.44
76:9:1535:U:O2	76:9:1535:U:H2'	2.18	0.44
76:9:1626:C:C2	76:9:1627:C:C6	3.05	0.44
81:B:76:VAL:HA	81:B:333:LEU:O	2.17	0.44
81:B:141:ALA:O	81:B:145:GLN:OE1	2.35	0.44
83:CC:193:VAL:HG21	83:CC:236:PHE:CE1	2.53	0.44
2:C:108:TRP:HB2	42:N:200:LEU:CD1	2.48	0.44
2:C:154:VAL:CG1	2:C:155:GLU:N	2.80	0.44
2:C:322:LEU:HD23	2:C:322:LEU:C	2.42	0.44
3:d:38:PHE:O	3:d:78:ARG:HG2	2.17	0.44
3:d:117:LEU:N	3:d:117:LEU:CD2	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:110:LEU:HD13	4:DD:175:VAL:HG22	2.00	0.44
5:dd:14:PHE:C	5:dd:18:SER:OG	2.61	0.44
6:D:290:ALA:O	6:D:293:ARG:HB3	2.17	0.44
8:EE:29:PRO:O	8:EE:31:PRO:HD3	2.17	0.44
8:EE:61:VAL:O	8:EE:65:CYS:SG	2.75	0.44
10:b:57:MET:SD	67:5:1828:C:C2'	3.05	0.44
11:E:287:HIS:CE1	11:E:288:LYS:HB2	2.53	0.44
14:ff:119:ARG:HD3	14:ff:132:MET:SD	2.58	0.44
19:gg:249:CYS:HB2	19:gg:291:TRP:CZ2	2.53	0.44
25:H:1:MET:HE3	57:S:144:GLN:NE2	2.32	0.44
25:H:144:LEU:N	25:H:144:LEU:CD1	2.80	0.44
28:ii:137:THR:HA	28:ii:140:LEU:HD12	1.99	0.44
28:ii:175:ASP:HB2	32:jj:510:GLU:HG2	1.98	0.44
28:ii:266:GLN:HG3	32:jj:620:GLU:HG2	1.99	0.44
31:JJ:39:ASN:OD1	31:JJ:39:ASN:C	2.60	0.44
31:JJ:165:TYR:HE1	76:9:561:A:H5'	1.82	0.44
32:jj:274:LYS:HB3	32:jj:276:LYS:HG2	2.00	0.44
32:jj:305:PRO:HB3	32:jj:553:HIS:CE1	2.52	0.44
32:jj:305:PRO:HA	32:jj:308:ILE:HD13	2.00	0.44
32:jj:447:LYS:HE3	32:jj:512:ILE:HG21	1.99	0.44
38:LL:36:TYR:CZ	76:9:294:U:H5	2.36	0.44
38:LL:111:VAL:CG1	38:LL:142:VAL:HG23	2.48	0.44
46:o:63:THR:O	46:o:87:ARG:NH1	2.51	0.44
47:OO:147:ARG:HB3	47:OO:150:ARG:HH11	1.82	0.44
54:R:3:MET:SD	54:R:5:ARG:HD2	2.58	0.44
54:R:20:LYS:HB2	67:5:2823:G:OP2	2.18	0.44
56:RR:24:LEU:CB	56:RR:58:MET:HE3	2.46	0.44
58:t:54:LYS:HD2	58:t:89:PRO:CG	2.47	0.44
59:SS:73:ASN:HB3	59:SS:76:GLN:HB2	2.00	0.44
62:U:63:LEU:HD23	62:U:64:GLU:N	2.32	0.44
63:UU:23:THR:OG1	63:UU:113:GLU:HB2	2.18	0.44
64:V:82:ILE:HD13	64:V:82:ILE:HA	1.72	0.44
67:5:442:G:N1	67:5:443:G:C5	2.86	0.44
67:5:1346:C:H2'	67:5:1347:G:H8	1.81	0.44
67:5:1466:G:C5	67:5:1467:C:C5	3.06	0.44
67:5:1547:A:N7	67:5:1548:G:C8	2.86	0.44
67:5:1669:A:C2	67:5:1852:U:O2'	2.70	0.44
67:5:1688:G:C2	67:5:1689:G:C4	3.05	0.44
67:5:1818:G:C8	67:5:1822:U:N3	2.85	0.44
67:5:1911:C:N3	67:5:1918:U:C4	2.86	0.44
67:5:1983:A:H2	67:5:2010:A:H5'	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:2071:A:C8	67:5:2071:A:O5'	2.70	0.44
67:5:2499:C:C4	67:5:2500:U:C4	3.05	0.44
67:5:2866:C:N3	67:5:2867:C:C5	2.85	0.44
67:5:3771:C:C4	67:5:3772:U:C4	3.06	0.44
67:5:4133:C:C2	67:5:4152:G:C2	3.06	0.44
67:5:4368:G:N1	67:5:4369:A:C4	2.86	0.44
67:5:4419:U:H2'	67:5:4420:U:H5'	1.98	0.44
67:5:4743:G:C6	67:5:4958:C:C4	3.06	0.44
72:Y:50:ARG:HG2	72:Y:51:LYS:N	2.33	0.44
73:8:65:A:C4	73:8:66:A:C8	3.05	0.44
74:YY:94:HIS:CD2	74:YY:94:HIS:C	2.95	0.44
76:9:110:U:O2'	76:9:111:A:P	2.76	0.44
76:9:499:G:N7	76:9:501:C:C5	2.85	0.44
76:9:509:G:H2'	76:9:510:G:O4'	2.17	0.44
76:9:1085:C:C4	76:9:1087:A:C4	3.06	0.44
76:9:1255:G:C2	76:9:1494:U:C2	3.05	0.44
76:9:1394:G:O2'	76:9:1395:C:OP1	2.32	0.44
76:9:1405:A:H2'	76:9:1406:G:O4'	2.17	0.44
76:9:1480:A:C6	76:9:1481:G:C5	3.06	0.44
81:B:347:LEU:N	81:B:347:LEU:CD1	2.81	0.44
81:B:382:VAL:HG23	81:B:383:GLU:N	2.32	0.44
4:DD:76:ARG:HA	35:KK:34:GLU:CD	2.42	0.44
4:DD:157:MET:O	76:9:1384:C:H4'	2.17	0.44
8:EE:196:THR:HG22	8:EE:209:HIS:O	2.18	0.44
9:ee:104:ARG:HE	31:JJ:124:HIS:HD2	1.65	0.44
11:E:135:PRO:O	11:E:139:HIS:CD2	2.71	0.44
13:FF:78:MET:O	13:FF:79:HIS:HB2	2.18	0.44
15:F:24:PHE:HE2	67:5:965:G:C4	2.36	0.44
15:F:75:ARG:CZ	67:5:730:G:OP2	2.66	0.44
16:g:82:MET:HG2	16:g:83:CYS:N	2.32	0.44
17:BB:129:THR:HG22	17:BB:176:VAL:CG1	2.48	0.44
18:GG:162:LEU:O	18:GG:170:ARG:N	2.38	0.44
19:gg:105:THR:OG1	19:gg:126:ASP:CG	2.61	0.44
20:G:195:THR:O	20:G:198:THR:HG22	2.18	0.44
27:II:113:TYR:CZ	27:II:117:TYR:CD2	3.06	0.44
28:ii:113:ASP:O	28:ii:114:PHE:CD1	2.70	0.44
28:ii:359:ASP:O	28:ii:361:GLU:N	2.48	0.44
35:KK:55:ARG:CD	35:KK:57:TYR:HE2	2.31	0.44
39:M:15:VAL:HG11	39:M:20:HIS:O	2.18	0.44
45:O:6:VAL:HG23	45:O:6:VAL:O	2.18	0.44
47:OO:74:ALA:CB	47:OO:111:GLY:CA	2.95	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:p:40:SER:OG	49:p:41:PHE:CD1	2.71	0.44
50:PP:77:LYS:HE2	50:PP:102:PHE:HB2	1.99	0.44
54:R:15:LEU:CD2	54:R:52:ARG:HB3	2.47	0.44
54:R:163:ARG:NE	76:9:871:U:O2	2.51	0.44
59:SS:131:VAL:O	76:9:1623:A:O4'	2.35	0.44
60:T:28:ALA:HA	60:T:31:MET:HG2	1.99	0.44
65:VV:56:CYS:SG	65:VV:57:GLY:N	2.91	0.44
67:5:108:A:C4	67:5:334:A:C6	3.05	0.44
67:5:170:C:H3'	67:5:171:U:C6	2.53	0.44
67:5:220:C:C2	67:5:221:C:C5	3.06	0.44
67:5:922(A):G:C6	67:5:922(B):C:N4	2.85	0.44
67:5:1381:U:O2	67:5:1381:U:O4'	2.34	0.44
67:5:1465:G:N3	67:5:1466:G:C8	2.85	0.44
67:5:1584:G:C5	67:5:1585:C:C5	3.06	0.44
67:5:1734:G:N2	67:5:1793:A:C4	2.85	0.44
67:5:1964:A:C5	67:5:1965:G:C8	3.06	0.44
67:5:1989:G:N1	67:5:1990:A:C6	2.86	0.44
67:5:2011:C:C4	67:5:2012:A:C8	3.05	0.44
67:5:2376:A:C2	67:5:2377:C:C4	3.06	0.44
67:5:2540:C:C2	67:5:2541:G:C8	3.06	0.44
67:5:3702:A:C5	67:5:3703:G:C8	3.06	0.44
67:5:3707:U:H2'	67:5:3708:C:C6	2.52	0.44
67:5:4567:G:N2	67:5:4568:A:C1'	2.81	0.44
67:5:4583:C:O2'	67:5:4584:A:OP2	2.33	0.44
67:5:4652:G:N2	67:5:4653:C:C2	2.86	0.44
70:7:82:G:N2	70:7:95:C:C2	2.86	0.44
74:YY:104:ARG:HB3	76:9:491:C:OP2	2.17	0.44
74:YY:114:MET:HG2	74:YY:125:VAL:HG11	2.00	0.44
76:9:97:U:N3	76:9:98:C:N4	2.65	0.44
76:9:179:C:C5	76:9:180:G:N7	2.85	0.44
76:9:598:G:N1	76:9:639:C:C4	2.86	0.44
76:9:1077:A:N6	76:9:1078:C:C5	2.86	0.44
76:9:1154:U:O4	83:CC:227:ARG:HD2	2.18	0.44
76:9:1759:G:O6	76:9:1774:C:N4	2.51	0.44
77:ZZ:42:ASP:OD1	77:ZZ:43:LYS:N	2.51	0.44
78:a:24:LYS:HD2	78:a:24:LYS:H	1.83	0.44
79:AA:179:ALA:O	79:AA:182:VAL:CG2	2.66	0.44
80:aa:53:ILE:O	80:aa:56:ALA:HB3	2.18	0.44
1:A:77:ILE:HD13	1:A:128:ARG:HB2	1.98	0.44
1:A:82:ILE:HD13	1:A:82:ILE:HA	1.91	0.44
4:DD:12:VAL:HB	5:dd:36:LEU:HD13	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:80:PRO:HD2	4:DD:83:SER:HB3	2.00	0.44
4:DD:202:LYS:HG2	4:DD:203:PRO:HD2	2.00	0.44
6:D:210:TYR:O	6:D:214:GLU:HG3	2.17	0.44
11:E:143:LEU:HG	11:E:144:ARG:N	2.32	0.44
11:E:216:THR:O	11:E:219:TYR:HB3	2.17	0.44
13:FF:40:ALA:HB1	13:FF:45:TYR:CZ	2.53	0.44
13:FF:48:TYR:CE2	53:QQ:56:LEU:HD13	2.53	0.44
13:FF:100:ILE:HG13	13:FF:174:ALA:HB1	1.99	0.44
16:g:97:ILE:HD13	67:5:4120:U:C4	2.53	0.44
17:BB:78:GLU:HG3	17:BB:79:VAL:N	2.33	0.44
24:bb:32:PHE:HE2	44:NN:55:ARG:O	1.99	0.44
27:II:118:ALA:O	27:II:138:ASN:ND2	2.51	0.44
28:ii:237:SER:CB	28:ii:253:LEU:HD11	2.47	0.44
31:JJ:87:LEU:HD21	31:JJ:92:MET:HA	1.99	0.44
32:jj:434:ARG:O	32:jj:435:SER:HB2	2.17	0.44
32:jj:455:VAL:HG23	32:jj:502:ILE:HG13	1.98	0.44
36:L:205:GLN:OE1	36:L:209:LYS:HD2	2.17	0.44
39:M:57:LEU:H	39:M:57:LEU:CD2	2.31	0.44
42:N:28:TRP:HA	42:N:31:ARG:HH12	1.83	0.44
42:N:172:ARG:C	42:N:188:ARG:NH2	2.76	0.44
50:PP:44:ARG:HD2	50:PP:84:ILE:CD1	2.48	0.44
50:PP:79:HIS:CE1	76:9:1514:G:H1'	2.52	0.44
53:QQ:142:GLN:OE1	76:9:1527:C:H5"	2.17	0.44
55:s:13:TYR:CZ	55:s:55:MET:O	2.69	0.44
56:RR:71:ILE:HG22	56:RR:73:LEU:H	1.83	0.44
58:t:142:ASN:OD1	58:t:146:ARG:CD	2.66	0.44
59:SS:25:LYS:HE2	59:SS:52:LEU:O	2.18	0.44
59:SS:27:ALA:HA	59:SS:45:LEU:HD11	1.98	0.44
59:SS:136:THR:OG1	76:9:1521:C:OP2	2.35	0.44
62:U:19:LEU:CD1	62:U:77:PRO:HA	2.48	0.44
62:U:27:HIS:N	62:U:28:PRO:HD2	2.32	0.44
63:UU:48:LEU:HD11	63:UU:91:LEU:HD22	2.00	0.44
63:UU:49:LYS:HB3	63:UU:92:HIS:HB2	2.00	0.44
63:UU:62:ARG:HA	63:UU:80:PHE:O	2.17	0.44
63:UU:67:LYS:CD	76:9:1337:C:C5'	2.93	0.44
67:5:153:G:C2	67:5:154:G:C5	3.06	0.44
67:5:158:A:H5"	67:5:159:C:C6	2.53	0.44
67:5:169:A:N1	67:5:267:G:C2	2.86	0.44
67:5:170:C:O3'	67:5:171:U:O4'	2.29	0.44
67:5:173:C:C2	67:5:174:C:C5	3.06	0.44
67:5:197:A:C2	67:5:225:G:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:408:A:N6	67:5:411:G:C6	2.86	0.44
67:5:488:G:C4	67:5:489:C:C5	3.06	0.44
67:5:1246:G:H2'	67:5:1247:U:C6	2.53	0.44
67:5:1299:G:C6	67:5:1300:G:C5	3.05	0.44
67:5:1383:G:C4	67:5:1384:C:C5	3.06	0.44
67:5:1490:G:N1	67:5:1491:A:C5	2.86	0.44
67:5:1529:G:C6	67:5:1646:A:N1	2.86	0.44
67:5:1627:G:C5	67:5:1628:C:C5	3.06	0.44
67:5:2541:G:N1	67:5:2542:G:C5	2.86	0.44
67:5:2608:G:C2	67:5:2732:G:C2	3.06	0.44
67:5:2736:G:N1	67:5:2737:C:C4	2.86	0.44
67:5:2786:C:H4'	67:5:2787:A:C8	2.52	0.44
67:5:3661:G:N1	67:5:3682:A:C8	2.86	0.44
67:5:3685:C:H2'	67:5:3686:G:O4'	2.18	0.44
67:5:4595:G:N1	67:5:4616:A:C6	2.86	0.44
67:5:4622:A:C6	67:5:4676:G:N1	2.85	0.44
67:5:4761:G:N1	67:5:4762:A:C5	2.86	0.44
67:5:4875:G:C5	67:5:4877:G:N2	2.86	0.44
73:8:103:A:N7	73:8:104:A:N9	2.65	0.44
76:9:105:U:C5	76:9:106:C:C5	3.05	0.44
76:9:314:U:O2	76:9:314:U:H2'	2.17	0.44
76:9:401:A:C8	76:9:402:C:C5	3.06	0.44
76:9:1260:A:N6	76:9:1619:A:C6	2.85	0.44
76:9:1322:G:H2'	76:9:1323:U:O4'	2.17	0.44
76:9:1364:U:O2	76:9:1364:U:O4'	2.36	0.44
76:9:1567:G:N7	76:9:1628:C:H5'	2.33	0.44
76:9:1640:A:C8	76:9:1641:A:C8	3.06	0.44
76:9:1754:G:O6	76:9:1779:G:C6	2.71	0.44
81:B:17:LEU:N	81:B:18:PRO:CD	2.80	0.44
81:B:142:GLY:O	81:B:146:LEU:HD13	2.18	0.44
3:d:18:ASN:O	3:d:21:VAL:HG21	2.17	0.44
4:DD:219:PRO:O	19:gg:190:GLY:O	2.35	0.44
6:D:14:LYS:HE2	70:7:67:C:OP1	2.17	0.44
9:ee:112:ASN:CA	9:ee:116:VAL:HG12	2.48	0.44
11:E:45:HIS:CD2	11:E:48:ARG:NH2	2.86	0.44
11:E:61:ARG:HA	11:E:64:MET:HB2	2.00	0.44
12:f:100:ARG:HA	12:f:100:ARG:NE	2.33	0.44
13:FF:145:ARG:NE	76:9:1220:A:O2'	2.51	0.44
14:ff:147:THR:OG1	76:9:1292:C:H1'	2.18	0.44
17:BB:123:ALA:HB3	17:BB:168:MET:SD	2.57	0.44
22:HH:100:ILE:O	22:HH:100:ILE:CG2	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:hh:45:A:C2	76:9:1207:G:C4	3.06	0.44
25:H:151:ILE:HG23	25:H:152:GLU:N	2.32	0.44
28:ii:39:ILE:CD1	28:ii:82:LEU:HD21	2.48	0.44
28:ii:53:ALA:O	28:ii:56:PHE:HB3	2.17	0.44
28:ii:136:LEU:HA	28:ii:139:LEU:HD12	1.99	0.44
28:ii:286:LEU:HD21	28:ii:319:ILE:HG21	2.00	0.44
31:JJ:176:LYS:CE	76:9:587:A:OP1	2.65	0.44
32:jj:350:VAL:CG1	32:jj:352:HIS:O	2.65	0.44
32:jj:442:LEU:HD23	32:jj:442:LEU:C	2.43	0.44
36:L:162:LYS:O	36:L:162:LYS:HG3	2.17	0.44
46:o:30:LYS:O	46:o:30:LYS:HG3	2.17	0.44
50:PP:22:LEU:HA	50:PP:25:LEU:HD12	1.99	0.44
52:r:64:MET:O	52:r:78:VAL:HG12	2.17	0.44
55:s:83:ARG:O	55:s:86:VAL:HG21	2.18	0.44
58:t:104:ILE:HB	58:t:143:VAL:HA	1.99	0.44
59:SS:15:VAL:HG13	59:SS:68:ILE:HD13	2.00	0.44
63:UU:19:ARG:O	63:UU:117:ALA:C	2.61	0.44
66:W:116:LYS:HE2	76:9:330:G:O2’	2.17	0.44
67:5:71:C:N4	67:5:73:A:C8	2.86	0.44
67:5:450:G:C5	67:5:451:C:C5	3.06	0.44
67:5:453:G:C5	67:5:705:G:C8	3.06	0.44
67:5:512:U:H1’	67:5:648:G:N2	2.33	0.44
67:5:744:G:C2	67:5:921:C:N3	2.86	0.44
67:5:1323:A:C5	67:5:1324:A:N7	2.85	0.44
67:5:1613:A:H3’	67:5:1614:C:H5’	1.99	0.44
67:5:1629:G:O5’	67:5:1629:G:H8	2.01	0.44
67:5:1988:G:C6	67:5:1989:G:C4	3.06	0.44
67:5:2027:U:H2’	67:5:2028:C:C6	2.53	0.44
67:5:2082:G:N1	67:5:2275:G:C6	2.86	0.44
67:5:2304:U:C6	67:5:2306:G:N2	2.86	0.44
67:5:2404:A:N6	67:5:2405:G:C2	2.86	0.44
67:5:2414:G:C6	67:5:2415:U:C4	3.06	0.44
67:5:2541:G:N3	67:5:2542:G:C8	2.86	0.44
67:5:2555:G:C2	67:5:2573:A:N3	2.86	0.44
67:5:4196:G:C6	67:5:4197:G:C6	3.06	0.44
67:5:4259:C:C2	67:5:4260:U:C5	3.06	0.44
67:5:4413:C:H5	67:5:4430:G:N1	2.16	0.44
67:5:4595:G:C2	67:5:4616:A:C2	3.06	0.44
67:5:4880:C:O2	67:5:4880:C:O5’	2.36	0.44
67:5:4884:G:C2	67:5:4936:G:C4	3.06	0.44
70:7:80:U:C4	70:7:97:G:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:8:29:G:N2	73:8:30:U:N1	2.66	0.44
73:8:70:G:C4	73:8:87:G:C2	3.06	0.44
73:8:95:A:C5	73:8:96:C:C4	3.05	0.44
73:8:95:A:C4	73:8:96:C:C5	3.06	0.44
76:9:15:U:H4'	76:9:668:A:N6	2.32	0.44
76:9:463:C:N3	76:9:467:G:C6	2.86	0.44
76:9:469:A:N1	76:9:470:G:N7	2.66	0.44
76:9:561:A:C2	76:9:562:U:C4	3.06	0.44
76:9:1069:U:H2'	76:9:1070:A:H8	1.83	0.44
76:9:1104:G:N1	76:9:1129:G:C6	2.86	0.44
76:9:1151:G:C5	76:9:1152:U:C5	3.06	0.44
76:9:1210:G:N2	76:9:1690:U:C2	2.86	0.44
76:9:1217:A:C5	76:9:1218:C:C5	3.06	0.44
76:9:1231:C:C4	76:9:1527:C:N4	2.85	0.44
76:9:1244:U:O5'	76:9:1244:U:H6	2.01	0.44
76:9:1599:U:H3'	77:ZZ:44:LEU:HB2	2.00	0.44
76:9:1748:G:C6	76:9:1749:G:C5	3.06	0.44
76:9:1781:A:C2	76:9:1782:G:O6	2.70	0.44
81:B:234:ARG:NH2	81:B:269:ALA:C	2.76	0.44
81:B:248:LEU:HD12	81:B:249:ARG:HG3	1.98	0.44
1:A:95:GLN:HB2	67:5:4118:U:O4	2.18	0.43
8:EE:18:TRP:C	8:EE:19:MET:HG3	2.42	0.43
13:FF:57:ALA:HB2	76:9:1676:U:OP2	2.18	0.43
17:BB:229:MET:O	17:BB:232:HIS:C	2.61	0.43
22:HH:49:LYS:HB2	22:HH:61:ILE:CG2	2.47	0.43
22:HH:100:ILE:HD11	22:HH:122:LEU:HA	1.98	0.43
22:HH:116:ARG:NH2	22:HH:121:THR:HA	2.32	0.43
25:H:137:SER:OG	25:H:143:GLU:HG2	2.18	0.43
25:H:145:VAL:C	25:H:146:LEU:HD23	2.42	0.43
26:i:34:THR:HG22	26:i:35:LYS:N	2.33	0.43
31:JJ:176:LYS:NZ	76:9:587:A:OP1	2.50	0.43
32:jj:254:LYS:NZ	76:9:462:C:H4'	2.33	0.43
32:jj:298:PRO:HG2	32:jj:306:ASN:HB2	2.00	0.43
32:jj:368:SER:HB3	32:jj:371:ARG:NH2	2.32	0.43
32:jj:448:TYR:CZ	32:jj:454:VAL:HB	2.53	0.43
37:l:14:ALA:HB2	69:X:130:PRO:O	2.18	0.43
38:LL:96:ILE:CG2	38:LL:97:ARG:N	2.80	0.43
47:OO:59:GLY:HA3	76:9:957:A:P	2.58	0.43
53:QQ:125:ARG:CB	76:9:1648:G:C8	3.00	0.43
54:R:117:ARG:HH11	67:5:2663:G:H4'	1.82	0.43
56:RR:4:VAL:HG21	76:9:1368:U:O3'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:RR:53:TYR:CE1	76:9:1466:G:P	3.11	0.43
58:t:81:ILE:CG2	58:t:104:ILE:HG12	2.48	0.43
58:t:81:ILE:CD1	58:t:136:ALA:HB2	2.48	0.43
61:TT:83:GLN:HB2	61:TT:93:SER:HB2	2.00	0.43
63:UU:66:ARG:HA	63:UU:76:THR:O	2.18	0.43
63:UU:67:LYS:HB3	76:9:1337:C:H5'	2.00	0.43
64:V:62:MET:HE1	64:V:78:PRO:HG3	2.00	0.43
64:V:106:VAL:HG12	64:V:107:ASN:O	2.18	0.43
67:5:167:C:C2	67:5:269:G:N2	2.86	0.43
67:5:203:U:N3	67:5:213:G:N1	2.66	0.43
67:5:734:G:C2	67:5:735:G:C8	3.06	0.43
67:5:962:C:H2'	67:5:963:G:O4'	2.18	0.43
67:5:966:A:H4'	67:5:967:C:O5'	2.17	0.43
67:5:1277:G:C2	67:5:1278:C:C6	3.06	0.43
67:5:1643:A:C5	67:5:1644:C:C5	3.06	0.43
67:5:1877:G:C2	67:5:1878:G:N9	2.86	0.43
67:5:2406:G:H21	67:5:2409:U:H3	1.65	0.43
67:5:2466:G:H8	67:5:2466:G:O5'	2.01	0.43
67:5:2576:G:N1	67:5:2577:C:C4	2.86	0.43
67:5:2835:A:C2	67:5:2836:A:C1'	3.00	0.43
67:5:3661:G:C2	67:5:3682:A:OP2	2.71	0.43
67:5:4089:G:C2	67:5:4161:G:C2	3.05	0.43
67:5:4089:G:N3	67:5:4161:G:N2	2.66	0.43
67:5:4166:G:N2	67:5:4167:G:C4	2.86	0.43
67:5:4624:A:C6	67:5:4625:C:C4	3.06	0.43
67:5:4628:U:N3	67:5:4629:U:C5	2.86	0.43
67:5:4997:G:N2	67:5:4998:G:H1'	2.33	0.43
68:WW:3:ARG:CZ	68:WW:28:ARG:HH12	2.30	0.43
68:WW:97:ARG:HG2	68:WW:97:ARG:HH11	1.82	0.43
71:XX:52:LEU:HD11	71:XX:71:ARG:HB3	1.99	0.43
73:8:42:G:C2	73:8:43:A:N9	2.86	0.43
76:9:49:C:C2	76:9:472:C:N4	2.85	0.43
76:9:97:U:C2	76:9:98:C:C5	3.05	0.43
76:9:160:U:H2'	76:9:162:C:H5'	2.00	0.43
76:9:351:G:C2	76:9:352:U:C6	3.06	0.43
76:9:602:G:N2	76:9:621:C:C4	2.86	0.43
76:9:951:C:N4	76:9:952:G:O6	2.50	0.43
76:9:1198:G:N1	76:9:1199:A:C5	2.86	0.43
76:9:1332:A:C6	76:9:1333:U:C6	3.06	0.43
76:9:1401:A:H2'	76:9:1402:A:C8	2.53	0.43
76:9:1581:C:OP2	76:9:1582:C:C5	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1606:G:N2	76:9:1632:G:O2'	2.36	0.43
76:9:1742:C:C4	76:9:1743:G:C5	3.06	0.43
80:aa:21:ILE:HD13	80:aa:21:ILE:HA	1.80	0.43
84:cc:18:LEU:HD12	84:cc:29:GLN:HG2	2.00	0.43
1:A:5:ILE:HG22	1:A:208:GLU:O	2.17	0.43
4:DD:105:LEU:HD11	4:DD:118:ALA:HB1	2.01	0.43
6:D:92:LEU:N	6:D:92:LEU:HD12	2.33	0.43
13:FF:61:PHE:O	13:FF:65:GLN:NE2	2.51	0.43
13:FF:97:PHE:CZ	13:FF:112:LEU:HD12	2.53	0.43
13:FF:166:ILE:HD13	77:ZZ:74:SER:OG	2.18	0.43
14:ff:105:TYR:O	14:ff:131:PHE:CZ	2.71	0.43
17:BB:217:MET:O	17:BB:218:LEU:HD23	2.19	0.43
18:GG:121:ILE:CG2	18:GG:124:LEU:HB2	2.48	0.43
19:gg:220:ASP:O	19:gg:224:GLY:HA2	2.18	0.43
20:G:161:GLN:HG3	67:5:143:C:O2	2.18	0.43
26:i:25:ARG:HH12	67:5:159:C:H4'	1.82	0.43
28:ii:8:ALA:O	28:ii:12:VAL:HG23	2.18	0.43
28:ii:68:ARG:HG2	28:ii:72:LEU:CD1	2.48	0.43
32:jj:210:LYS:HD2	32:jj:291:HIS:HD2	1.84	0.43
32:jj:222:ASP:OD2	32:jj:275:GLY:O	2.36	0.43
32:jj:453:THR:O	32:jj:503:ARG:HA	2.18	0.43
38:LL:35:ARG:NE	38:LL:50:ALA:O	2.51	0.43
45:O:36:VAL:HG22	45:O:37:ARG:N	2.33	0.43
45:O:185:VAL:O	45:O:185:VAL:HG12	2.18	0.43
47:OO:23:GLU:HA	47:OO:23:GLU:OE2	2.17	0.43
48:P:36:ILE:HG13	48:P:39:MET:HE2	2.00	0.43
51:Q:78:LYS:HE2	51:Q:135:GLY:HA2	2.00	0.43
53:QQ:128:GLU:CB	76:9:1649:U:OP1	2.66	0.43
55:s:13:TYR:CG	55:s:60:MET:SD	3.11	0.43
56:RR:4:VAL:HG21	76:9:1368:U:O2'	2.17	0.43
57:S:24:THR:HG23	57:S:24:THR:O	2.18	0.43
58:t:92:ARG:NH2	67:5:1982:G:OP2	2.51	0.43
59:SS:37:GLY:HA3	76:9:1630:A:H5"	2.00	0.43
59:SS:70:ILE:HG23	59:SS:77:TYR:CB	2.48	0.43
61:TT:14:PHE:CE1	61:TT:62:ARG:NE	2.87	0.43
67:5:144:G:N1	67:5:145:G:C5	2.86	0.43
67:5:389:A:N7	67:5:390:C:C5	2.86	0.43
67:5:462:G:C6	67:5:463:A:C6	3.06	0.43
67:5:751:G:C2	67:5:915:A:C5	3.06	0.43
67:5:1274:A:N6	67:5:1275:G:N7	2.66	0.43
67:5:1281:G:O5'	67:5:1281:G:H8	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1455:G:O2'	67:5:1456:C:P	2.76	0.43
67:5:1470:G:C4	67:5:1495:G:N2	2.86	0.43
67:5:1520:C:C4	67:5:1521:C:C5	3.05	0.43
67:5:1998:A:C1'	67:5:2019:C:O2'	2.66	0.43
67:5:2303:C:N4	67:5:2333:G:O6	2.51	0.43
67:5:2639:U:C2	67:5:2694:G:C2	3.06	0.43
67:5:2866:C:C4	67:5:2867:C:C5	3.05	0.43
67:5:3604:A:N6	67:5:3605:C:N4	2.66	0.43
67:5:3928:A:C6	67:5:4184:G:C2	3.06	0.43
67:5:4419:U:C4	67:5:4420:U:C4	3.06	0.43
67:5:4970:C:C2	67:5:5064:G:N2	2.86	0.43
69:X:106:LYS:HE2	69:X:126:THR:HG23	1.99	0.43
70:7:76:U:C4	70:7:99:G:N2	2.86	0.43
71:XX:107:ARG:HG3	71:XX:112:VAL:HG22	2.00	0.43
73:8:13:G:N2	73:8:14:U:C2	2.86	0.43
76:9:456:C:O2'	76:9:1801:A:H4'	2.18	0.43
76:9:538:U:H2'	76:9:539:C:O4'	2.18	0.43
76:9:901:G:N1	76:9:902:G:C5	2.86	0.43
76:9:1169:G:C8	76:9:1170:A:C8	3.06	0.43
76:9:1330:G:C6	76:9:1334:G:O6	2.71	0.43
76:9:1473:G:C2	76:9:1475:G:H5"	2.54	0.43
76:9:1528:G:N1	76:9:1529:C:C4	2.86	0.43
76:9:1559:C:C5	76:9:1560:U:C5	3.06	0.43
79:AA:132:GLN:O	79:AA:136:GLU:HG2	2.16	0.43
79:AA:155:ARG:HG3	79:AA:156:TYR:CD2	2.53	0.43
81:B:48:GLY:CA	81:B:81:THR:HG22	2.47	0.43
81:B:167:GLN:NE2	81:B:204:GLN:HE22	2.15	0.43
81:B:322:HIS:O	81:B:342:LYS:HE3	2.18	0.43
83:CC:213:LEU:O	83:CC:216:MET:N	2.50	0.43
2:C:101:MET:HE2	67:5:2343:G:C4	2.53	0.43
2:C:110:ARG:HA	42:N:204:ARG:NH2	2.33	0.43
2:C:120:LYS:CD	67:5:1374:G:OP1	2.66	0.43
3:d:115:LYS:N	3:d:117:LEU:HD23	2.33	0.43
4:DD:93:THR:HG21	4:DD:198:ILE:HB	2.00	0.43
5:dd:14:PHE:C	5:dd:14:PHE:CD1	2.95	0.43
11:E:121:THR:O	11:E:122:GLU:HG2	2.18	0.43
13:FF:63:LYS:HE2	76:9:1677:U:C6	2.54	0.43
13:FF:164:ARG:HH22	76:9:1600:G:N2	2.16	0.43
15:F:24:PHE:CE2	67:5:965:G:C2	3.07	0.43
15:F:33:ARG:HD2	67:5:1438:U:O4	2.18	0.43
19:gg:83:TRP:CZ3	76:9:1452:A:OP1	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:gg:197:THR:HG21	19:gg:239:LEU:N	2.34	0.43
22:HH:61:ILE:O	22:HH:61:ILE:HG23	2.18	0.43
22:HH:168:HIS:CE1	22:HH:169:LYS:HG3	2.52	0.43
28:ii:342:LYS:HZ3	58:t:93:LYS:HE2	1.83	0.43
32:jj:574:SER:OG	55:s:149:ARG:HB3	2.18	0.43
34:k:40:ARG:HG2	34:k:41:TYR:CE2	2.53	0.43
36:L:47:ALA:HB3	36:L:48:PRO:CD	2.46	0.43
42:N:15:GLN:HE21	67:5:280:G:H1	1.66	0.43
45:O:9:LEU:N	45:O:9:LEU:CD1	2.81	0.43
45:O:168:TYR:CE2	67:5:4759:C:C4	3.06	0.43
47:OO:100:THR:HG22	47:OO:104:ARG:HH11	1.83	0.43
47:OO:103:ASN:OD1	47:OO:104:ARG:N	2.51	0.43
47:OO:117:ARG:O	47:OO:120:ALA:HB3	2.18	0.43
50:PP:97:TYR:OH	50:PP:99:GLY:O	2.32	0.43
53:QQ:140:ARG:CZ	76:9:1339:U:P	3.06	0.43
55:s:14:PHE:CD2	67:5:1960:A:N3	2.87	0.43
58:t:81:ILE:HG21	58:t:104:ILE:HD13	2.01	0.43
62:U:87:THR:O	62:U:91:LEU:HD13	2.19	0.43
63:UU:24:LEU:HD22	63:UU:112:VAL:HG22	1.99	0.43
67:5:265:C:O2	67:5:266:C:N4	2.52	0.43
67:5:370:U:N3	67:5:1637:A:N6	2.66	0.43
67:5:452:A:N6	67:5:1293:G:C2	2.86	0.43
67:5:741:C:H2'	67:5:742:G:O4'	2.18	0.43
67:5:1085:C:N3	67:5:1086:C:C5	2.86	0.43
67:5:1590:C:C4	67:5:1592:G:N7	2.86	0.43
67:5:1740:C:C4	67:5:1785:C:N4	2.86	0.43
67:5:1886:G:N1	67:5:1887:G:C5	2.86	0.43
67:5:1979:A:C2	67:5:1988:G:C6	3.06	0.43
67:5:2277:C:C2'	67:5:2278:G:O5'	2.67	0.43
67:5:2326:G:C4	67:5:2327:G:C8	3.06	0.43
67:5:3627:G:C2	67:5:3628:G:C8	3.07	0.43
67:5:3630:A:N1	67:5:3832:U:C4	2.87	0.43
67:5:3782:C:C4	67:5:3811:G:N2	2.87	0.43
67:5:3850:C:C4	67:5:3851:U:C5	3.06	0.43
67:5:3893:C:H2'	67:5:3894:A:C8	2.53	0.43
67:5:3933:G:C2	67:5:3934:G:C5	3.06	0.43
67:5:4075:U:HO2'	67:5:4076:G:P	2.39	0.43
67:5:4231:C:N3	67:5:4331:G:N1	2.65	0.43
67:5:4246:G:N1	67:5:4263:C:C4	2.87	0.43
67:5:4525:C:H2'	67:5:4526:U:O4'	2.19	0.43
67:5:4665:A:C6	67:5:4666:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4773:C:N3	67:5:4863:G:N1	2.66	0.43
70:7:33:U:N3	70:7:34:C:C4	2.86	0.43
76:9:119:U:N3	76:9:120:U:C5	2.86	0.43
76:9:300:U:C2	76:9:301:A:C8	3.06	0.43
76:9:427:U:O2	76:9:427:U:O4'	2.36	0.43
76:9:464:A:H5'	76:9:465:A:C8	2.54	0.43
76:9:551:U:C4	76:9:552:G:N7	2.86	0.43
76:9:1248:U:H2'	76:9:1249:C:O4'	2.19	0.43
76:9:1265:A:N3	76:9:1266:C:C6	2.86	0.43
76:9:1338:G:H2'	76:9:1339:U:H6	1.84	0.43
76:9:1534:C:N3	76:9:1598:G:C4	2.86	0.43
76:9:1603:G:H3'	76:9:1604:G:H5'	2.00	0.43
76:9:1664:A:C5	76:9:1666:C:C4	3.07	0.43
76:9:1734:G:H1'	76:9:1800:A:N6	2.32	0.43
76:9:1826:G:C4	76:9:1827:U:C5	3.06	0.43
84:cc:11:LEU:HA	84:cc:56:LEU:O	2.18	0.43
84:cc:12:ALA:HB1	84:cc:32:VAL:HB	1.99	0.43
84:cc:24:GLN:H	84:cc:26:GLN:HE21	1.66	0.43
7:e:64:LYS:HZ3	67:5:2079:G:P	2.36	0.43
12:f:25:THR:HG22	12:f:26:ALA:N	2.33	0.43
12:f:76:ARG:NE	12:f:85:ARG:HE	2.15	0.43
13:FF:40:ALA:HB1	13:FF:45:TYR:CE2	2.53	0.43
14:ff:120:GLU:HB3	14:ff:128:ALA:HA	2.00	0.43
14:ff:126:CYS:SG	14:ff:143:LYS:NZ	2.85	0.43
17:BB:100:PHE:CD2	17:BB:217:MET:CG	3.01	0.43
19:gg:216:ALA:O	19:gg:229:THR:HA	2.18	0.43
22:HH:170:VAL:HG23	22:HH:171:GLU:N	2.32	0.43
25:H:169:ASN:O	25:H:170:LYS:HD3	2.19	0.43
27:II:70:GLU:HB2	27:II:72:CYS:SG	2.58	0.43
27:II:85:ALA:HB1	38:LL:8:ARG:CB	2.48	0.43
27:II:124:LYS:HA	27:II:167:GLN:HG3	2.00	0.43
28:ii:22:LYS:C	28:ii:22:LYS:HD3	2.42	0.43
28:ii:85:TYR:OH	28:ii:114:PHE:N	2.52	0.43
28:ii:192:ARG:HB3	76:9:50:A:O2'	2.18	0.43
31:JJ:61:LEU:HD12	31:JJ:61:LEU:O	2.18	0.43
32:jj:214:ASN:HD21	32:jj:499:ASN:ND2	2.16	0.43
32:jj:297:ALA:HB1	32:jj:307:MET:HA	2.01	0.43
32:jj:315:ASP:OD1	32:jj:349:GLY:O	2.36	0.43
32:jj:369:ASN:OD1	32:jj:373:GLU:HG3	2.18	0.43
32:jj:472:MET:HE3	32:jj:516:PHE:HD2	1.83	0.43
32:jj:534:GLN:HA	32:jj:592:ILE:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:543:ILE:CD1	32:jj:586:LYS:HA	2.48	0.43
35:KK:15:LEU:HD21	35:KK:71:LEU:HD11	1.99	0.43
35:KK:40:VAL:HG23	35:KK:40:VAL:O	2.19	0.43
37:l:13:LEU:HD23	37:l:13:LEU:HA	1.83	0.43
39:M:93:LYS:O	39:M:96:GLU:OE2	2.37	0.43
49:p:29:ILE:N	49:p:29:ILE:CD1	2.81	0.43
49:p:54:ILE:O	49:p:54:ILE:HG23	2.18	0.43
53:QQ:53:GLU:O	53:QQ:57:LEU:HG	2.18	0.43
56:RR:28:PHE:HZ	56:RR:48:ASN:OD1	2.01	0.43
59:SS:37:GLY:HA3	76:9:1630:A:OP1	2.18	0.43
66:W:115:ALA:HB3	76:9:329:G:H1'	1.99	0.43
67:5:46:U:C5	67:5:47:A:C5	3.07	0.43
67:5:81:C:C4	67:5:82:U:C4	3.06	0.43
67:5:127:G:H2'	67:5:128:C:H6	1.83	0.43
67:5:150:U:H4'	67:5:151:G:OP2	2.19	0.43
67:5:182:G:C6	67:5:254:G:C6	3.06	0.43
67:5:389:A:C5	67:5:390:C:C6	3.06	0.43
67:5:504:G:HO2'	67:5:505:G:P	2.41	0.43
67:5:643:C:C4	67:5:644:G:N7	2.86	0.43
67:5:1299:G:C4	67:5:1300:G:C8	3.06	0.43
67:5:2004:U:C4	67:5:2005:G:N7	2.86	0.43
67:5:2623:A:N1	67:5:2634:C:C4	2.87	0.43
67:5:2639:U:C2'	67:5:2640:G:OP2	2.66	0.43
67:5:2657:G:N2	67:5:2678:A:C6	2.86	0.43
67:5:4151:G:C6	67:5:4152:G:N7	2.86	0.43
67:5:4209:G:C6	67:5:4224:A:C6	3.06	0.43
67:5:4240:G:C6	67:5:4241:C:C4	3.07	0.43
67:5:4388:A:C6	67:5:4389:C:N4	2.87	0.43
67:5:4414:A:C4	67:5:4427:G:C2	3.07	0.43
67:5:4461:C:H1'	67:5:4516:G:N2	2.33	0.43
69:X:116:LEU:N	69:X:116:LEU:HD12	2.33	0.43
73:8:12:G:C5	73:8:13:G:N7	2.86	0.43
73:8:15:G:N1	73:8:16:G:N2	2.66	0.43
73:8:49:G:C6	73:8:77:A:N1	2.87	0.43
73:8:71:A:H1'	73:8:88:A:C2	2.54	0.43
73:8:154:G:C4	73:8:155:C:C5	3.06	0.43
76:9:91:A:H8	76:9:91:A:O5'	2.01	0.43
76:9:390:C:C2	76:9:391:C:C5	3.07	0.43
76:9:1142:G:N2	76:9:1146:C:C4	2.86	0.43
76:9:1302:G:O6	76:9:1307:U:C4	2.72	0.43
76:9:1500:G:C5	76:9:1501:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1559:C:N4	76:9:1560:U:N3	2.66	0.43
76:9:1577:G:H2'	76:9:1578:U:H5'	2.01	0.43
76:9:1681:U:O4'	84:cc:24:GLN:O	2.36	0.43
76:9:1832:A:OP2	76:9:1837:G:OP2	2.36	0.43
76:9:1833:C:N3	76:9:1836:G:C6	2.87	0.43
78:a:48:TYR:C	78:a:49:HIS:CG	2.96	0.43
80:aa:87:ARG:NH2	80:aa:92:ARG:HA	2.32	0.43
83:CC:271:ASP:HA	83:CC:274:VAL:CG2	2.48	0.43
2:C:94:ASN:ND2	67:5:1336:G:O2'	2.51	0.43
4:DD:52:ALA:C	4:DD:91:VAL:HG23	2.43	0.43
4:DD:157:MET:HE1	4:DD:189:MET:N	2.32	0.43
5:dd:23:VAL:HG22	35:KK:64:TRP:CZ3	2.54	0.43
5:dd:30:LEU:O	76:9:1659:U:C5'	2.66	0.43
7:e:99:ILE:HB	7:e:124:ASN:HD21	1.84	0.43
8:EE:150:PRO:HB2	8:EE:154:ILE:HD12	2.01	0.43
9:ee:101:ARG:O	9:ee:106:LYS:HD2	2.18	0.43
11:E:179:THR:OG1	11:E:189:LEU:HD23	2.18	0.43
13:FF:89:THR:O	13:FF:92:ILE:HB	2.19	0.43
15:F:87:LYS:HB3	15:F:196:VAL:HG21	2.00	0.43
19:gg:55:PRO:HB2	53:QQ:102:GLU:HB3	1.99	0.43
19:gg:248:LEU:O	19:gg:258:ILE:HA	2.18	0.43
22:HH:122:LEU:HD13	76:9:688:U:O2	2.18	0.43
25:H:34:LEU:HD12	25:H:84:VAL:HG23	2.00	0.43
32:jj:551:VAL:HB	32:jj:558:ILE:HD11	1.99	0.43
36:L:21:ARG:HB3	42:N:197:THR:HG22	2.01	0.43
38:LL:55:TYR:CD1	38:LL:55:TYR:C	2.96	0.43
38:LL:89:ARG:NH2	76:9:399:C:N3	2.65	0.43
41:MM:51:VAL:CG2	41:MM:79:VAL:HG23	2.48	0.43
41:MM:69:CYS:HB2	41:MM:76:LEU:HD11	2.00	0.43
42:N:75:VAL:O	67:5:3670:C:H5'	2.19	0.43
44:NN:120:SER:O	44:NN:124:ARG:HD2	2.18	0.43
48:P:41:ILE:HG23	48:P:42:ARG:N	2.34	0.43
50:PP:59:ARG:HE	76:9:1297:U:H5	1.66	0.43
51:Q:99:LYS:HE2	51:Q:121:LEU:HD11	2.00	0.43
53:QQ:11:GLN:CD	53:QQ:71:ARG:HH22	2.26	0.43
55:s:10:LYS:CD	67:5:1961:G:OP1	2.67	0.43
55:s:29:ILE:HG22	55:s:86:VAL:HG13	1.99	0.43
55:s:54:LEU:HG	55:s:55:MET:N	2.32	0.43
56:RR:21:TYR:CD1	56:RR:58:MET:HE1	2.54	0.43
56:RR:41:ILE:HD13	56:RR:50:ILE:HD12	2.01	0.43
58:t:37:LEU:HD23	58:t:42:VAL:CG2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:TT:12:GLN:HG2	76:9:1594:A:C1'	2.48	0.43
67:5:207:G:C4	67:5:406:C:C5	3.06	0.43
67:5:457:G:C5	67:5:458:C:C5	3.07	0.43
67:5:483:G:N7	67:5:484:U:O4	2.52	0.43
67:5:1520:C:N3	67:5:1521:C:C4	2.87	0.43
67:5:1604:G:C2	67:5:1605:G:C5	3.07	0.43
67:5:1873:A:N3	67:5:1874:A:C8	2.87	0.43
67:5:1912:G:C6	67:5:1913:C:N4	2.86	0.43
67:5:1952:G:C2	67:5:1953:U:C5	3.06	0.43
67:5:3865:A:C2	67:5:3866:C:C6	3.07	0.43
67:5:4339:A:C8	67:5:4377:G:C6	3.07	0.43
67:5:4717:A:N6	67:5:4718:G:C2	2.87	0.43
67:5:4884:G:C6	67:5:4936:G:C6	3.07	0.43
67:5:4907:G:N2	67:5:4913:G:N3	2.65	0.43
76:9:46:A:N6	76:9:99:A:C5	2.86	0.43
76:9:390:C:N3	76:9:391:C:C5	2.87	0.43
76:9:533:A:C2	76:9:534:G:C4	3.07	0.43
76:9:888:U:O4	76:9:899:U:O4	2.36	0.43
76:9:1040:G:C6	76:9:1041:G:C5	3.07	0.43
76:9:1796:G:C6	76:9:1797:U:C4	3.06	0.43
78:a:51:GLY:O	78:a:52:TYR:C	2.60	0.43
84:cc:12:ALA:HB2	84:cc:34:PHE:CE1	2.54	0.43
4:DD:55:THR:O	4:DD:59:LEU:HD13	2.19	0.43
6:D:159:VAL:HG23	6:D:160:PHE:N	2.34	0.43
6:D:177:THR:HA	6:D:180:PHE:CD2	2.53	0.43
6:D:210:TYR:CE2	6:D:214:GLU:OE1	2.71	0.43
8:EE:51:ARG:HH12	8:EE:109:PHE:HB2	1.83	0.43
13:FF:57:ALA:O	76:9:1677:U:O4	2.37	0.43
14:ff:138:ARG:HH12	76:9:1293:A:C1'	2.31	0.43
16:g:54:ARG:NH2	67:5:2653:C:O5'	2.51	0.43
22:HH:158:LEU:HB2	22:HH:189:PHE:CE2	2.52	0.43
25:H:118:LEU:HD21	25:H:177:ASP:OD2	2.17	0.43
27:II:104:ILE:HG13	27:II:171:LEU:HB2	1.99	0.43
28:ii:13:GLU:O	28:ii:17:ILE:HD12	2.19	0.43
28:ii:226:LEU:HB2	28:ii:253:LEU:CD2	2.49	0.43
28:ii:286:LEU:HD11	28:ii:319:ILE:HD13	1.99	0.43
28:ii:332:VAL:O	28:ii:332:VAL:HG13	2.18	0.43
28:ii:340:GLU:HB2	58:t:93:LYS:CD	2.49	0.43
31:JJ:18:ARG:CZ	76:9:3:C:O2	2.65	0.43
31:JJ:109:ARG:HH21	31:JJ:111:GLN:HE21	1.66	0.43
32:jj:253:GLU:HG3	76:9:158:A:C2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:343:MET:HG3	32:jj:344:LEU:N	2.33	0.43
32:jj:555:HIS:HE2	32:jj:612:MET:CE	2.31	0.43
33:J:35:ARG:HD2	33:J:122:SER:O	2.18	0.43
33:J:35:ARG:HB3	33:J:123:ILE:HG23	2.01	0.43
35:KK:45:VAL:O	35:KK:49:MET:CG	2.67	0.43
45:O:51:LYS:HE2	45:O:55:LEU:HD11	2.00	0.43
48:P:22:LEU:CD1	48:P:146:ILE:HD12	2.48	0.43
50:PP:81:ARG:HB2	76:9:1621:U:O4	2.18	0.43
51:Q:68:ARG:NH2	67:5:1501:C:H5	2.15	0.43
52:r:37:SER:OG	67:5:2267:U:OP1	2.34	0.43
54:R:43:LYS:NZ	67:5:2709:C:OP2	2.51	0.43
59:SS:15:VAL:HG21	59:SS:68:ILE:HD11	1.99	0.43
59:SS:136:THR:O	76:9:1521:C:O2'	2.26	0.43
66:W:83:THR:CB	76:9:169:U:OP1	2.67	0.43
67:5:22:G:N1	73:8:35:C:C4	2.87	0.43
67:5:219:G:H2'	67:5:219:G:N3	2.34	0.43
67:5:249:C:N3	67:5:250:C:C5	2.86	0.43
67:5:381:U:O2	67:5:410:A:H2	2.01	0.43
67:5:475:G:C2	67:5:476:G:C5	3.06	0.43
67:5:517:C:C2	67:5:645:G:N2	2.87	0.43
67:5:691:C:N4	67:5:692:A:H62	2.17	0.43
67:5:735:G:C4	67:5:736:C:C5	3.07	0.43
67:5:950:G:C2	67:5:951:G:C8	3.06	0.43
67:5:963:G:H2'	67:5:964:A:H8	1.83	0.43
67:5:1468:C:C2	67:5:1469:C:C5	3.06	0.43
67:5:1604:G:N2	67:5:1605:G:C2	2.87	0.43
67:5:1738:A:N1	67:5:1739:G:C5	2.86	0.43
67:5:1915:C:O2	67:5:1915:C:O5'	2.36	0.43
67:5:1955:G:N1	67:5:2029:A:C6	2.86	0.43
67:5:1991:A:H8	67:5:2002:A:C2	2.36	0.43
67:5:2020:U:C4	67:5:2021:G:N7	2.86	0.43
67:5:2029:A:H2'	67:5:2030:A:C8	2.54	0.43
67:5:2539:C:H2'	67:5:2540:C:C6	2.51	0.43
67:5:2751:G:C2	67:5:2752:G:C5	3.07	0.43
67:5:3664:G:H2'	67:5:3665:G:H8	1.82	0.43
67:5:3717:A:N6	67:5:3736:A:C4	2.87	0.43
67:5:3827:G:C2	67:5:3829:G:N7	2.86	0.43
67:5:4562:C:C4	67:5:4563:U:C4	3.06	0.43
67:5:4595:G:C6	67:5:4616:A:C6	3.06	0.43
67:5:4610:A:C6	67:5:4611:A:C5	3.07	0.43
67:5:4906:C:C2	67:5:4916:G:N1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:XX:41:PHE:CE1	71:XX:120:PHE:CE1	3.07	0.43
76:9:674:C:N4	76:9:675:U:O4	2.52	0.43
76:9:982:G:C2	76:9:983:A:C5	3.06	0.43
76:9:1056:U:H2'	76:9:1057:C:O4'	2.18	0.43
76:9:1616:U:O3'	76:9:1661:A:O2'	2.22	0.43
76:9:1657:G:C2	76:9:1658:G:C5	3.07	0.43
76:9:1681:U:H4'	84:cc:25:GLY:HA3	2.01	0.43
76:9:1685:U:C2	76:9:1686:G:C8	3.07	0.43
77:ZZ:106:GLN:NE2	77:ZZ:108:ILE:HD11	2.33	0.43
83:CC:214:LEU:HD22	83:CC:219:ILE:HD12	1.99	0.43
84:cc:13:ARG:CZ	84:cc:55:VAL:CG2	2.96	0.43
2:C:101:MET:CE	67:5:2343:G:C4	3.02	0.43
3:d:33:ILE:O	3:d:34:HIS:C	2.61	0.43
4:DD:26:THR:HG23	4:DD:173:ARG:NH2	2.33	0.43
4:DD:35:SER:HB3	4:DD:51:LEU:O	2.18	0.43
5:dd:21:CYS:SG	5:dd:23:VAL:HB	2.58	0.43
5:dd:22:ARG:C	35:KK:65:ARG:HD2	2.44	0.43
6:D:170:GLY:O	6:D:171:LEU:HD12	2.19	0.43
8:EE:48:LEU:O	8:EE:53:LYS:N	2.52	0.43
8:EE:184:THR:O	8:EE:184:THR:OG1	2.33	0.43
14:ff:84:SER:OG	28:ii:105:GLY:O	2.29	0.43
17:BB:68:GLU:CD	17:BB:83:LYS:HE2	2.44	0.43
19:gg:118:ARG:HE	19:gg:134:THR:CG2	2.32	0.43
19:gg:157:SER:HB2	19:gg:164:ILE:HG13	2.00	0.43
20:G:226:LEU:HD23	20:G:226:LEU:C	2.44	0.43
24:bb:82:LYS:HD2	44:NN:25:TRP:CZ2	2.53	0.43
28:ii:81:ARG:O	28:ii:84:LEU:HB2	2.18	0.43
28:ii:188:LEU:CD2	28:ii:189:ARG:CD	2.96	0.43
28:ii:243:ASP:O	28:ii:246:LEU:HB3	2.19	0.43
28:ii:280:PHE:HA	28:ii:283:GLU:OE1	2.19	0.43
32:jj:220:HIS:HB2	32:jj:223:ALA:HB2	2.01	0.43
32:jj:251:ALA:HB2	32:jj:263:TRP:CZ3	2.54	0.43
32:jj:361:ASP:HB3	32:jj:367:TRP:HE1	1.83	0.43
32:jj:372:TYR:CE1	32:jj:376:LYS:CD	2.98	0.43
32:jj:477:HIS:CE1	32:jj:508:GLU:HG2	2.54	0.43
32:jj:494:VAL:HG23	32:jj:498:GLU:OE2	2.19	0.43
32:jj:616:THR:HG22	32:jj:617:LEU:N	2.33	0.43
35:KK:63:ALA:O	35:KK:64:TRP:HB2	2.17	0.43
38:LL:95:TYR:CZ	38:LL:96:ILE:O	2.72	0.43
39:M:72:TYR:CZ	67:5:918:G:H5'	2.53	0.43
45:O:35:VAL:HG12	45:O:36:VAL:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:OO:150:ARG:NH1	76:9:1855:G:OP2	2.52	0.43
50:PP:128:HIS:CE1	76:9:1521:C:O3'	2.72	0.43
54:R:168:GLU:HG3	54:R:169:ALA:N	2.34	0.43
55:s:14:PHE:CE1	55:s:60:MET:HG3	2.53	0.43
57:S:43:ARG:HA	57:S:43:ARG:HD2	1.79	0.43
64:V:48:ARG:NH2	64:V:49:LEU:HB3	2.34	0.43
64:V:91:LYS:HA	64:V:91:LYS:CE	2.48	0.43
66:W:54:LEU:HD12	66:W:54:LEU:N	2.34	0.43
67:5:29:G:C6	67:5:30:C:C4	3.06	0.43
67:5:189:G:C6	67:5:253:G:N1	2.86	0.43
67:5:202:C:C4	67:5:214:G:N1	2.87	0.43
67:5:441:G:N3	67:5:442:G:C8	2.86	0.43
67:5:446:C:N3	67:5:447:C:C5	2.87	0.43
67:5:447:C:C4	67:5:1300:G:N1	2.87	0.43
67:5:726:G:C4	67:5:727:C:C5	3.06	0.43
67:5:735:G:C6	67:5:929:A:N6	2.87	0.43
67:5:1070:G:C6	67:5:1071:C:N4	2.87	0.43
67:5:1330:A:C2	67:5:1331:C:C5	3.06	0.43
67:5:1597:G:N3	67:5:1599:G:C6	2.86	0.43
67:5:1634:A:C5	67:5:1635:C:C5	3.06	0.43
67:5:1691:G:N2	67:5:1692:C:H1'	2.32	0.43
67:5:1733:G:N2	67:5:1797:G:C2	2.86	0.43
67:5:1811:G:C2	67:5:1812:C:C4	3.06	0.43
67:5:1877:G:C4	67:5:1878:G:C8	3.06	0.43
67:5:1969:G:C6	67:5:1970:A:C4	3.07	0.43
67:5:2299:G:C6	67:5:2336:G:O6	2.72	0.43
67:5:2487:G:O6	67:5:2489:C:H1'	2.18	0.43
67:5:2661:U:O2'	67:5:2662:G:P	2.77	0.43
67:5:2695:A:C5	67:5:2697:A:C6	3.06	0.43
67:5:2703:G:C2	67:5:2714:G:C2	3.07	0.43
67:5:3680:U:N3	67:5:3681:G:N7	2.67	0.43
67:5:3936:A:C6	67:5:4175:G:N1	2.87	0.43
67:5:3946:G:H1	67:5:4066:U:H3	1.67	0.43
67:5:4205:A:C2	67:5:4206:C:H1'	2.54	0.43
67:5:4251:A:C6	67:5:4252:C:C4	3.07	0.43
67:5:4408:G:N2	67:5:4409:C:C2	2.86	0.43
67:5:4453:C:N4	67:5:4454:G:C5	2.87	0.43
67:5:4543:G:C6	67:5:4544:A:N6	2.87	0.43
67:5:4976:U:O3'	81:B:343:ARG:NH2	2.52	0.43
68:WW:77:PRO:HD2	68:WW:79:PHE:CE2	2.53	0.43
72:Y:36:LYS:HD3	72:Y:39:ARG:NH2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:81:U:C4	76:9:82:G:C5	3.07	0.43
76:9:91:A:OP1	76:9:446:G:N2	2.43	0.43
76:9:103:A:N6	76:9:356:C:O5'	2.51	0.43
76:9:140:U:O4	76:9:141:A:N6	2.51	0.43
76:9:952:G:N2	76:9:975:G:C4	2.87	0.43
76:9:1354:G:N1	76:9:1358:U:C4	2.87	0.43
76:9:1805:G:C2	76:9:1806:A:C4	3.07	0.43
76:9:1854:U:C2	76:9:1855:G:C8	3.07	0.43
77:ZZ:74:SER:HA	77:ZZ:79:ILE:CG1	2.49	0.43
77:ZZ:99:LEU:HD11	77:ZZ:102:LYS:HD3	2.00	0.43
79:AA:149:ASN:HB2	79:AA:165:ASN:HD21	1.82	0.43
80:aa:80:HIS:O	80:aa:82:LYS:HG3	2.18	0.43
84:cc:44:ARG:HG2	84:cc:45:ASN:N	2.33	0.43
1:A:128:ARG:NH1	67:5:3681:G:O5'	2.29	0.43
3:d:26:THR:HB	3:d:85:ARG:HD3	2.01	0.43
3:d:124:GLU:CD	3:d:124:GLU:H	2.27	0.43
4:DD:69:LEU:HB3	4:DD:86:LEU:HD22	2.01	0.43
8:EE:57:THR:OG1	8:EE:60:GLU:CD	2.60	0.43
11:E:68:LYS:O	11:E:69:ALA:HB3	2.19	0.43
11:E:186:ARG:NH1	67:5:4936:G:OP2	2.46	0.43
12:f:30:ILE:HG22	12:f:31:GLU:N	2.34	0.43
12:f:50:VAL:CG1	12:f:51:TYR:N	2.82	0.43
15:F:135:VAL:O	15:F:136:GLU:C	2.62	0.43
18:GG:170:ARG:NH2	76:9:72:C:H41	2.16	0.43
18:GG:170:ARG:NH1	76:9:70:G:C2	2.86	0.43
18:GG:173:ALA:HB3	76:9:77:A:O2'	2.19	0.43
18:GG:193:ALA:HA	18:GG:196:LYS:HD2	2.01	0.43
19:gg:29:ASP:HA	19:gg:45:LEU:HB2	2.01	0.43
19:gg:106:LYS:HB2	19:gg:124:SER:OG	2.18	0.43
19:gg:196:ASN:CB	19:gg:236:ILE:O	2.67	0.43
26:i:23:LYS:HG3	26:i:24:PRO:HD2	2.01	0.43
28:ii:59:ALA:C	28:ii:72:LEU:HD21	2.43	0.43
28:ii:275:LEU:O	28:ii:281:ILE:HB	2.18	0.43
28:ii:290:TYR:HE1	28:ii:411:GLY:C	2.26	0.43
28:ii:298:THR:HG22	28:ii:300:LYS:HG2	2.01	0.43
28:ii:311:ALA:HA	28:ii:314:MET:HG2	2.01	0.43
28:ii:340:GLU:HG3	58:t:93:LYS:HB3	2.00	0.43
31:JJ:87:LEU:HD23	31:JJ:92:MET:HA	1.99	0.43
32:jj:462:GLY:O	32:jj:496:PRO:HD3	2.18	0.43
32:jj:479:VAL:CG1	32:jj:518:LEU:HD21	2.46	0.43
34:k:17:ARG:HD2	34:k:19:ASP:OD1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:KK:18:GLU:OE1	35:KK:18:GLU:N	2.52	0.43
35:KK:58:VAL:CG2	35:KK:69:TRP:CD1	3.01	0.43
42:N:64:ILE:HD11	42:N:102:ALA:HB1	2.01	0.43
49:p:79:VAL:O	49:p:83:ILE:HG12	2.18	0.43
52:r:107:ARG:NH1	52:r:108:MET:SD	2.91	0.43
54:R:6:LEU:C	54:R:6:LEU:HD23	2.43	0.43
57:S:160:ARG:HB2	67:5:1921:C:O2	2.18	0.43
58:t:92:ARG:HH21	67:5:1982:G:P	2.42	0.43
58:t:126:SER:O	58:t:130:LYS:HD2	2.19	0.43
59:SS:70:ILE:HA	59:SS:77:TYR:CG	2.54	0.43
66:W:1:MET:CE	66:W:3:VAL:HG13	2.49	0.43
67:5:245:C:O2'	67:5:246:G:P	2.77	0.43
67:5:311:G:C2	67:5:312:G:C8	3.06	0.43
67:5:431:G:C4	67:5:3888:G:N2	2.87	0.43
67:5:740:G:H2'	67:5:741:C:C6	2.54	0.43
67:5:1318:C:N4	67:5:1319:U:O2	2.52	0.43
67:5:1353:G:N2	67:5:1504:G:C6	2.87	0.43
67:5:1411(B):C:H2'	67:5:1411(C):C:C6	2.53	0.43
67:5:1956:A:C6	67:5:1957:U:C5	3.06	0.43
67:5:1988:G:C6	67:5:1989:G:C5	3.06	0.43
67:5:2268:A:H4'	67:5:2269:C:H5'	2.00	0.43
67:5:2361:G:N2	67:5:3860:A:OP2	2.51	0.43
67:5:2659:A:C5	67:5:2673:G:C6	3.06	0.43
67:5:2900:U:C2	67:5:2901:G:N7	2.87	0.43
67:5:3717:A:N6	67:5:3736:A:C5	2.86	0.43
67:5:3923:A:C6	67:5:3924:C:N4	2.87	0.43
67:5:3923:A:C4	67:5:3924:C:C5	3.07	0.43
67:5:3923:A:C5	67:5:4381:A:C6	3.06	0.43
67:5:4504:C:N4	67:5:4505:C:N4	2.67	0.43
67:5:4617:G:P	81:B:62:ARG:HH21	2.42	0.43
67:5:5042:A:N6	67:5:5043:A:N6	2.67	0.43
68:WW:106:THR:OG1	68:WW:111:MET:HE3	2.19	0.43
69:X:100:VAL:CG1	69:X:101:ASP:N	2.82	0.43
71:XX:7:LEU:O	71:XX:7:LEU:HD23	2.19	0.43
71:XX:81:ILE:CG2	71:XX:120:PHE:CD2	3.02	0.43
73:8:8:U:H2'	73:8:9:A:C8	2.53	0.43
76:9:118:C:O2	76:9:445:A:C6	2.72	0.43
76:9:731:G:C2	76:9:732:U:O2	2.72	0.43
76:9:910:G:C5	76:9:911:C:C4	3.07	0.43
76:9:966:U:C2	76:9:967:C:C5	3.06	0.43
76:9:1033:G:C2	76:9:1080:A:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1519:U:O2	76:9:1622:U:O3'	2.36	0.43
76:9:1612:G:C2	76:9:1613:G:C8	3.07	0.43
78:a:24:LYS:H	78:a:24:LYS:CD	2.31	0.43
78:a:113:GLY:CA	78:a:133:ALA:HB2	2.49	0.43
82:c:44:LYS:O	82:c:105:ILE:HG21	2.19	0.43
84:cc:12:ALA:HB1	84:cc:32:VAL:CG2	2.49	0.43
2:C:8:ILE:HD13	52:r:71:ARG:HH11	1.84	0.43
3:d:64:ILE:O	3:d:64:ILE:HG23	2.19	0.43
13:FF:140:ASP:OD2	84:cc:56:LEU:HG	2.18	0.43
14:ff:138:ARG:HB2	14:ff:150:PHE:HD1	1.84	0.43
15:F:147:LYS:O	15:F:151:GLU:HG2	2.19	0.43
16:g:97:ILE:HG21	67:5:4122:G:C6	2.54	0.43
18:GG:1:MET:CE	18:GG:109:LEU:HG	2.49	0.43
18:GG:135:PRO:HA	76:9:170:A:OP1	2.18	0.43
19:gg:17:TRP:H	19:gg:36:ARG:HG3	1.84	0.43
20:G:242:ARG:HD2	20:G:242:ARG:C	2.43	0.43
22:HH:106:ARG:HH21	76:9:861:A:C2'	2.32	0.43
25:H:23:ARG:HH11	67:5:4764:A:C2'	2.32	0.43
27:II:85:ALA:CB	38:LL:8:ARG:HB3	2.49	0.43
28:ii:294:ILE:O	32:jj:586:LYS:CE	2.67	0.43
28:ii:394:ASP:CB	28:ii:403:VAL:HG11	2.48	0.43
32:jj:436:VAL:CG1	32:jj:437:ASP:N	2.81	0.43
32:jj:441:ARG:O	32:jj:459:LEU:CD2	2.67	0.43
35:KK:63:ALA:HB3	35:KK:68:TYR:CE1	2.54	0.43
38:LL:3:ASP:OD1	38:LL:4:ILE:HG12	2.18	0.43
39:M:62:LEU:HD21	39:M:77:TRP:HA	2.01	0.43
41:MM:59:PRO:O	41:MM:63:LYS:HE3	2.19	0.43
41:MM:82:ASN:O	41:MM:105:GLY:HA2	2.18	0.43
47:OO:74:ALA:CB	47:OO:111:GLY:HA2	2.49	0.43
47:OO:86:LYS:O	47:OO:89:GLY:N	2.47	0.43
50:PP:85:ILE:HG23	50:PP:107:ILE:HD13	2.01	0.43
50:PP:114:HIS:CE1	59:SS:117:ILE:HD11	2.53	0.43
51:Q:79:THR:HG23	51:Q:79:THR:O	2.19	0.43
53:QQ:10:VAL:O	53:QQ:24:HIS:HA	2.18	0.43
57:S:170:LYS:O	57:S:170:LYS:HG3	2.19	0.43
58:t:123:ARG:HD2	58:t:124:GLU:H	1.84	0.43
58:t:161:GLU:N	58:t:161:GLU:OE2	2.51	0.43
59:SS:134:GLN:CB	76:9:1231:C:OP1	2.66	0.43
61:TT:59:SER:HB2	76:9:1541:G:H5"	2.01	0.43
61:TT:92:PHE:CA	76:9:1655:C:OP1	2.66	0.43
63:UU:51:LYS:HE2	76:9:1402:A:H4'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:42:A:C6	67:5:4380:A:N1	2.87	0.43
67:5:44:A:C6	67:5:45:U:C4	3.07	0.43
67:5:124:C:C2	67:5:125:C:C5	3.07	0.43
67:5:324:A:C5	67:5:325:U:C5	3.07	0.43
67:5:384:A:N6	67:5:386:A:N3	2.67	0.43
67:5:486:C:C2	67:5:671:G:C2	3.06	0.43
67:5:492:U:HO2'	67:5:493:G:P	2.40	0.43
67:5:919:C:C4	67:5:920:C:C5	3.07	0.43
67:5:961:G:C4	67:5:962:C:C5	3.07	0.43
67:5:1174:G:N2	67:5:1175:A:C4	2.86	0.43
67:5:1388:A:C5	67:5:1396:G:N2	2.86	0.43
67:5:1405:C:H2'	67:5:1406:G:H8	1.82	0.43
67:5:1424:G:C5	67:5:1425:G:N7	2.87	0.43
67:5:1559:G:C2	67:5:1560:A:C5	3.07	0.43
67:5:1682:A:C2'	67:5:1683:U:H5'	2.49	0.43
67:5:1684:A:C6	67:5:1685:G:C5	3.07	0.43
67:5:1743:A:C5	67:5:1744:U:C5	3.06	0.43
67:5:1952:G:N2	67:5:1953:U:C2	2.87	0.43
67:5:1990:A:C2'	67:5:1991:A:OP1	2.67	0.43
67:5:2275:G:N1	67:5:2276:A:C6	2.87	0.43
67:5:2307:A:C2	67:5:2308:A:C4	3.07	0.43
67:5:2395:A:C8	67:5:2397:G:C6	3.07	0.43
67:5:2438:A:C5	67:5:2441:C:N4	2.87	0.43
67:5:2659:A:C2	67:5:2676:A:C8	3.07	0.43
67:5:3608:A:C6	67:5:3609:G:C5	3.07	0.43
67:5:3729:U:O2	67:5:3730:U:C2	2.71	0.43
67:5:3832:U:H2'	67:5:3833:C:H6	1.83	0.43
67:5:4133:C:N4	67:5:4152:G:O6	2.51	0.43
67:5:4310:A:C2	67:5:4311:A:C8	3.07	0.43
67:5:4411:G:N2	67:5:4412:C:N1	2.67	0.43
67:5:4465:U:C4	67:5:4487:A:C4	3.07	0.43
67:5:4672:A:C5	67:5:4673:U:C5	3.07	0.43
67:5:4773:C:N4	67:5:4863:G:O6	2.51	0.43
67:5:4963:G:C6	67:5:4964:C:C5	3.07	0.43
69:X:67:ARG:CZ	73:8:98:C:OP1	2.67	0.43
71:XX:80:LYS:C	71:XX:81:ILE:HG13	2.44	0.43
71:XX:99:GLU:O	71:XX:99:GLU:HG2	2.19	0.43
73:8:124:U:H4'	73:8:125:C:O5'	2.19	0.43
74:YY:45:ALA:CB	74:YY:52:PRO:HB3	2.49	0.43
76:9:148:U:H3'	76:9:169:U:O4	2.19	0.43
76:9:413:G:C6	76:9:425:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:845:G:H2'	76:9:846:G:O4'	2.18	0.43
76:9:1253:A:O2'	76:9:1254:C:P	2.76	0.43
76:9:1332:A:N6	76:9:1333:U:C4	2.87	0.43
76:9:1519:U:H3	76:9:1623:A:P	2.42	0.43
76:9:1525:C:H2'	76:9:1526:G:C8	2.54	0.43
79:AA:141:ASN:OD1	79:AA:141:ASN:N	2.52	0.43
1:A:140:ASN:HB3	1:A:145:LYS:O	2.19	0.43
2:C:291:ARG:NH1	67:5:666:G:C2	2.87	0.43
3:d:42:ALA:O	3:d:45:ALA:HB3	2.18	0.43
5:dd:8:TRP:CH2	35:KK:28:HIS:CB	3.02	0.43
6:D:164:LYS:HG2	6:D:195:HIS:HE1	1.84	0.43
12:f:7:CYS:O	12:f:103:VAL:HG22	2.18	0.43
13:FF:166:ILE:HA	76:9:1598:G:H21	1.84	0.43
14:ff:103:LEU:CD1	41:MM:60:MET:HB3	2.48	0.43
17:BB:145:LYS:HG3	17:BB:149:GLN:OE1	2.18	0.43
19:gg:173:LEU:HB2	19:gg:175:LYS:NZ	2.34	0.43
20:G:108:VAL:HG13	69:X:44:PRO:O	2.19	0.43
22:HH:116:ARG:HG3	22:HH:116:ARG:O	2.19	0.43
24:bb:34:ASP:O	24:bb:36:LYS:NZ	2.52	0.43
26:i:7:MET:C	78:a:148:ALA:HB2	2.44	0.43
27:II:102:VAL:CG2	27:II:173:ALA:HB3	2.49	0.43
28:ii:24:LEU:HD13	28:ii:133:THR:CG2	2.49	0.43
28:ii:196:GLU:OE2	76:9:50:A:C5	2.71	0.43
29:I:82:LYS:HG3	29:I:83:ASP:OD1	2.19	0.43
32:jj:332:PHE:CD1	32:jj:332:PHE:N	2.86	0.43
32:jj:529:ARG:HB2	32:jj:596:ARG:NH1	2.34	0.43
32:jj:534:GLN:O	32:jj:628:LYS:HB3	2.19	0.43
34:k:30:ASP:O	34:k:31:ASN:CG	2.61	0.43
38:LL:120:VAL:O	38:LL:120:VAL:HG23	2.18	0.43
53:QQ:16:LYS:HE3	53:QQ:17:LYS:HG3	2.01	0.43
55:s:28:PHE:HE2	55:s:99:ARG:HD2	1.84	0.43
55:s:60:MET:HB2	67:5:1961:G:OP2	2.18	0.43
55:s:83:ARG:O	55:s:86:VAL:CG2	2.66	0.43
55:s:83:ARG:HA	67:5:2022:C:OP1	2.19	0.43
55:s:193:PHE:CE1	55:s:196:GLY:HA2	2.54	0.43
58:t:55:GLY:HA2	58:t:90:ARG:O	2.19	0.43
58:t:80:LEU:HB3	58:t:112:ILE:CD1	2.49	0.43
58:t:109:ILE:HD12	58:t:143:VAL:CG1	2.49	0.43
59:SS:16:LEU:CD2	59:SS:99:LEU:HG	2.49	0.43
59:SS:50:ILE:CD1	59:SS:63:GLU:OE2	2.67	0.43
67:5:389:A:C8	67:5:390:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:455:C:N3	67:5:456:C:C5	2.86	0.43
67:5:1484:G:N2	67:5:1486:C:N4	2.67	0.43
67:5:1545:G:C2	67:5:1546:C:N4	2.87	0.43
67:5:2578:G:OP1	75:Z:107:LYS:CE	2.66	0.43
67:5:2654:C:N3	67:5:2681:G:C2	2.87	0.43
67:5:2755:A:N7	67:5:2756:G:C8	2.87	0.43
67:5:3700:C:C4	67:5:3746:A:C6	3.07	0.43
67:5:3757:G:N1	67:5:3768:U:N3	2.67	0.43
67:5:3820:G:O6	67:5:3821:A:N6	2.52	0.43
67:5:4412:C:C4	67:5:4413:C:N4	2.87	0.43
67:5:4668:U:OP1	81:B:226:LYS:HD3	2.19	0.43
67:5:4896:G:C2	67:5:4897:G:C8	3.07	0.43
68:WW:125:ILE:O	68:WW:125:ILE:HG23	2.17	0.43
70:7:116:G:C2	70:7:117:G:C8	3.06	0.43
71:XX:50:ILE:CD1	71:XX:75:ILE:HD11	2.49	0.43
74:YY:114:MET:CG	74:YY:125:VAL:HG11	2.49	0.43
76:9:85:A:N3	76:9:86:C:C6	2.87	0.43
76:9:126:G:O2'	76:9:127:C:OP1	2.27	0.43
76:9:129:C:N3	76:9:182:C:C2	2.86	0.43
76:9:155:G:C4	76:9:164:A:N1	2.87	0.43
76:9:291:G:C6	76:9:292:A:C6	3.07	0.43
76:9:504:G:N2	76:9:505:G:N3	2.67	0.43
76:9:870:A:H4'	76:9:871:U:O5'	2.19	0.43
76:9:918:U:C4	76:9:919:A:C2	3.07	0.43
76:9:1035:A:N6	76:9:1081:U:C2	2.87	0.43
76:9:1198:G:C6	76:9:1199:A:C6	3.07	0.43
76:9:1460:C:N4	76:9:1461:G:C6	2.87	0.43
76:9:1625:U:N3	76:9:1626:C:C5	2.87	0.43
76:9:1734:G:H1'	76:9:1800:A:H61	1.84	0.43
76:9:1757:G:O6	76:9:1775:U:O2	2.36	0.43
77:ZZ:102:LYS:HB2	77:ZZ:107:VAL:HG22	1.99	0.43
78:a:59:ARG:NH2	78:a:61:TYR:CE1	2.86	0.43
82:c:67:ALA:O	82:c:68:LYS:HB2	2.19	0.43
2:C:57:LEU:HD22	2:C:57:LEU:N	2.34	0.42
4:DD:48:ILE:O	4:DD:86:LEU:HA	2.18	0.42
4:DD:185:LYS:HG3	76:9:1335:G:OP1	2.19	0.42
8:EE:85:GLY:C	8:EE:88:ASP:OD2	2.62	0.42
10:b:106:ARG:NE	67:5:1437:C:N4	2.67	0.42
12:f:103:VAL:O	12:f:103:VAL:HG23	2.18	0.42
16:g:53:LEU:HD12	16:g:53:LEU:N	2.33	0.42
19:gg:257:LYS:HG2	19:gg:259:TRP:NE1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:G:109:LYS:HD2	67:5:4085:A:C5	2.54	0.42
22:HH:130:LEU:HD13	22:HH:177:TYR:CE1	2.54	0.42
24:bb:20:LYS:CG	24:bb:21:LYS:N	2.82	0.42
27:II:48:VAL:HG22	27:II:52:ASN:HB2	2.01	0.42
28:ii:231:ASP:HB3	28:ii:234:THR:CG2	2.49	0.42
28:ii:316:ALA:O	28:ii:413:LEU:HA	2.19	0.42
32:jj:212:HIS:HE1	32:jj:487:ASP:HB2	1.84	0.42
32:jj:280:VAL:CA	32:jj:298:PRO:HD3	2.49	0.42
32:jj:531:PHE:CD1	32:jj:603:LEU:HD13	2.54	0.42
36:L:99:ASP:N	36:L:99:ASP:OD1	2.52	0.42
46:o:8:ARG:NH2	67:5:4232:U:O4	2.49	0.42
46:o:28:LYS:HG2	46:o:29:GLY:O	2.19	0.42
47:OO:66:ARG:HB3	76:9:963:A:P	2.59	0.42
51:Q:110:ARG:O	51:Q:114:LEU:HG	2.19	0.42
53:QQ:77:HIS:NE2	76:9:1544:C:C6	2.87	0.42
54:R:158:GLN:O	54:R:161:ALA:HB3	2.18	0.42
55:s:28:PHE:CE1	55:s:192:VAL:HG13	2.53	0.42
55:s:31:GLY:O	55:s:188:ILE:N	2.46	0.42
58:t:24:ALA:H	58:t:92:ARG:HG2	1.83	0.42
67:5:4:G:N1	73:8:154:G:C6	2.86	0.42
67:5:25:A:C4	67:5:26:C:C5	3.07	0.42
67:5:59:A:N7	67:5:337:U:O4	2.51	0.42
67:5:64:A:N7	67:5:109:G:O6	2.53	0.42
67:5:85:G:O2'	67:5:97:G:O6	2.37	0.42
67:5:120:A:N6	67:5:149:A:C8	2.87	0.42
67:5:145:G:N1	67:5:146:G:C5	2.87	0.42
67:5:671:G:H2'	67:5:672:C:C6	2.54	0.42
67:5:1556:C:N3	67:5:1557:C:C5	2.87	0.42
67:5:1811:G:C2	67:5:1812:C:C5	3.07	0.42
67:5:2294:G:C6	67:5:2341:A:C6	3.06	0.42
67:5:2589:C:C2	67:5:2590:G:C8	3.06	0.42
67:5:2594:C:C2	67:5:2595:C:C5	3.07	0.42
67:5:2619:G:C6	67:5:2620:G:N7	2.87	0.42
67:5:2727:C:N3	67:5:2728:U:C4	2.87	0.42
67:5:3631:U:N3	67:5:3632:C:C5	2.86	0.42
67:5:3752:C:H41	67:5:3777:G:N2	2.16	0.42
67:5:3898:G:C2	67:5:3899:G:C4	3.07	0.42
67:5:4393:G:C4	67:5:4446:U:C5	3.07	0.42
67:5:4453:C:C4	67:5:4454:G:N7	2.87	0.42
67:5:4702:G:N2	67:5:4703:U:H1'	2.34	0.42
67:5:4989:U:O2	67:5:4989:U:O4'	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:8:60:G:O2'	73:8:61:A:H5'	2.18	0.42
76:9:382:C:C4	76:9:383:G:O6	2.72	0.42
76:9:850:C:C5	76:9:851:C:C4	3.07	0.42
76:9:870:A:H62	76:9:915:G:H2'	1.83	0.42
76:9:1073:U:N3	76:9:1074:C:C5	2.87	0.42
76:9:1115:U:O2'	76:9:1116:C:OP2	2.36	0.42
76:9:1219:C:N4	76:9:1220:A:N6	2.68	0.42
76:9:1332:A:N1	76:9:1500:G:C4	2.87	0.42
76:9:1356:G:C6	76:9:1357:A:C6	3.07	0.42
76:9:1524:G:H2'	76:9:1525:C:H6	1.83	0.42
76:9:1550:G:O2'	76:9:1558:C:C2'	2.67	0.42
76:9:1625:U:C2	76:9:1626:C:C5	3.07	0.42
76:9:1842:C:C2	76:9:1858:G:N2	2.87	0.42
76:9:1863:A:N3	76:9:1863:A:C2'	2.82	0.42
80:aa:83:VAL:HG12	80:aa:84:VAL:HG13	2.00	0.42
81:B:200:ARG:HD3	81:B:200:ARG:HA	1.86	0.42
2:C:209:VAL:C	2:C:210:ILE:HD12	2.44	0.42
5:dd:26:ASN:OD1	5:dd:26:ASN:C	2.62	0.42
6:D:193:GLU:O	6:D:196:ARG:HB3	2.19	0.42
8:EE:105:THR:OG1	8:EE:245:ARG:HA	2.19	0.42
11:E:131:HIS:CG	11:E:132:GLY:N	2.87	0.42
13:FF:140:ASP:O	84:cc:56:LEU:HD21	2.19	0.42
15:F:56:TYR:CE1	15:F:191:HIS:CD2	3.06	0.42
15:F:106:LYS:NZ	67:5:1724:G:P	2.92	0.42
18:GG:137:ARG:NH2	18:GG:140:ARG:HE	2.18	0.42
19:gg:195:LEU:HA	19:gg:211:GLY:HA3	2.00	0.42
19:gg:227:LEU:HB3	19:gg:228:TYR:CD2	2.54	0.42
22:HH:11:PRO:HG3	22:HH:97:GLN:HE22	1.84	0.42
24:bb:11:SER:OG	24:bb:13:GLU:HG2	2.18	0.42
24:bb:32:PHE:CZ	24:bb:47:PHE:HD1	2.37	0.42
28:ii:63:LYS:CD	76:9:627:U:H2'	2.49	0.42
28:ii:213:PHE:CG	28:ii:224:LEU:HD12	2.54	0.42
28:ii:361:GLU:HG2	58:t:21:GLU:HA	2.00	0.42
29:I:163:GLN:OE1	29:I:163:GLN:N	2.52	0.42
32:jj:381:PRO:HA	32:jj:384:LYS:CG	2.47	0.42
32:jj:451:MET:HE3	76:9:489:A:H4'	2.02	0.42
32:jj:460:GLU:CB	32:jj:612:MET:SD	3.07	0.42
32:jj:507:ILE:HG23	32:jj:508:GLU:N	2.34	0.42
35:KK:26:ASP:HB3	35:KK:29:MET:CG	2.49	0.42
42:N:41:ARG:HB2	42:N:42:PRO:HD2	2.01	0.42
43:n:5:TRP:CZ2	76:9:1852:C:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:P:25:HIS:HE1	67:5:3858:C:O5'	2.01	0.42
50:PP:94:VAL:CG1	50:PP:116:LEU:HD22	2.49	0.42
51:Q:88:ASP:OD1	51:Q:88:ASP:C	2.61	0.42
56:RR:21:TYR:HE1	56:RR:61:ILE:HB	1.84	0.42
57:S:149:LYS:HD3	57:S:149:LYS:N	2.34	0.42
58:t:62:LEU:HA	58:t:70:GLN:O	2.19	0.42
58:t:100:HIS:HD2	58:t:139:VAL:O	2.01	0.42
58:t:121:LEU:HB3	67:5:1973:G:H4'	2.00	0.42
59:SS:7:GLU:H	59:SS:7:GLU:CD	2.27	0.42
59:SS:26:ILE:HA	59:SS:56:ALA:HB2	2.00	0.42
61:TT:12:GLN:NE2	76:9:1594:A:C4	2.87	0.42
61:TT:134:ILE:O	61:TT:138:VAL:HG22	2.19	0.42
63:UU:20:ILE:HD13	63:UU:98:VAL:HG21	2.01	0.42
67:5:217:C:O2'	67:5:218:A:P	2.74	0.42
67:5:251:C:N3	67:5:252:C:C5	2.88	0.42
67:5:488:G:C6	67:5:489:C:C4	3.07	0.42
67:5:505:G:C6	67:5:506:C:N4	2.87	0.42
67:5:1089:G:C6	67:5:1090:G:N7	2.86	0.42
67:5:1168:G:C2	67:5:1194:G:C2	3.08	0.42
67:5:1533:A:N7	67:5:1622:U:O4	2.52	0.42
67:5:2005:G:C2	67:5:2015:U:H1'	2.54	0.42
67:5:2523:G:N2	67:5:2533:C:C2	2.87	0.42
67:5:2617:G:C6	67:5:2618:G:N7	2.86	0.42
67:5:2623:A:N6	67:5:2634:C:N4	2.67	0.42
67:5:2649:G:C2	67:5:2650:G:C5	3.07	0.42
67:5:2680:G:C2	67:5:2681:G:H1'	2.54	0.42
67:5:2833:A:N9	67:5:2834:C:C5	2.87	0.42
67:5:3627:G:N2	67:5:3628:G:C4	2.86	0.42
67:5:3723:A:C2	67:5:3724:A:C6	3.07	0.42
67:5:3889:G:C4	67:5:4720:C:C5	3.08	0.42
67:5:3918:G:N2	67:5:3919:C:H1'	2.34	0.42
67:5:4291:G:C4	67:5:4328:G:N2	2.87	0.42
67:5:4919:G:H5"	67:5:4919:G:H8	1.84	0.42
67:5:4973:U:O2	67:5:4986:G:C6	2.72	0.42
67:5:5015:G:C2	67:5:5035:U:N3	2.87	0.42
67:5:5050:C:C2	67:5:5051:C:C5	3.07	0.42
71:XX:81:ILE:HG23	71:XX:120:PHE:CD2	2.53	0.42
73:8:142:U:C4	73:8:143:G:N7	2.87	0.42
74:YY:93:ARG:HH22	76:9:574:A:H5"	1.84	0.42
76:9:316:G:C6	76:9:317:C:N4	2.87	0.42
76:9:354:U:C2	76:9:355:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:436:G:OP1	76:9:450:C:C5	2.72	0.42
76:9:540:U:C2	76:9:542:U:OP2	2.72	0.42
76:9:1013:U:O4	76:9:1014:G:O6	2.36	0.42
76:9:1017:U:H2'	76:9:1018:U:C6	2.54	0.42
76:9:1060:A:C4	76:9:1062:A:N6	2.87	0.42
76:9:1229:G:H1'	76:9:1633:A:C2	2.55	0.42
76:9:1259:A:N6	76:9:1518:C:H2'	2.35	0.42
76:9:1264:C:C6	76:9:1265:A:C6	3.06	0.42
76:9:1347:U:C2	76:9:1348:G:C2	3.07	0.42
76:9:1524:G:N2	76:9:1525:C:C2	2.88	0.42
76:9:1686:G:C6	76:9:1687:C:C4	3.07	0.42
79:AA:149:ASN:HB2	79:AA:165:ASN:ND2	2.35	0.42
81:B:291:TYR:CZ	81:B:300:LYS:HB2	2.53	0.42
84:cc:29:GLN:HG2	84:cc:43:ILE:CG2	2.48	0.42
1:A:89:TYR:CZ	67:5:4118:U:C6	3.07	0.42
2:C:74:ALA:O	2:C:75:ARG:CB	2.65	0.42
2:C:100:ARG:NH2	67:5:1650:A:C2	2.87	0.42
4:DD:40:ARG:HG2	4:DD:42:THR:HG23	2.00	0.42
4:DD:164:VAL:O	4:DD:168:VAL:HG12	2.20	0.42
5:dd:33:LYS:CE	76:9:1549:U:H5"	2.48	0.42
6:D:266:TRP:NE1	70:7:22:A:C5	2.87	0.42
10:b:14:ARG:NH1	67:5:1877:G:P	2.92	0.42
12:f:76:ARG:NH2	12:f:85:ARG:HH21	2.17	0.42
13:FF:171:GLU:CG	77:ZZ:67:LEU:HD23	2.49	0.42
17:BB:124:HIS:HB3	17:BB:138:PHE:CD1	2.55	0.42
18:GG:149:LYS:HD3	76:9:143:U:P	2.59	0.42
19:gg:29:ASP:CA	19:gg:45:LEU:HB2	2.49	0.42
19:gg:197:THR:HG21	19:gg:238:ALA:HA	2.01	0.42
19:gg:236:ILE:CG2	19:gg:239:LEU:HD21	2.49	0.42
19:gg:249:CYS:SG	19:gg:256:ILE:CG2	3.07	0.42
20:G:137:THR:O	20:G:139:VAL:HG13	2.20	0.42
24:bb:45:THR:OG1	24:bb:45:THR:O	2.36	0.42
28:ii:357:PHE:C	28:ii:366:HIS:HB3	2.45	0.42
30:j:20:ARG:NH1	73:8:101:C:H4'	2.34	0.42
31:JJ:179:LYS:NZ	76:9:585:C:H5'	2.34	0.42
32:jj:255:ASN:HD21	76:9:463:C:C3'	2.32	0.42
32:jj:368:SER:HB2	32:jj:371:ARG:NH2	2.33	0.42
32:jj:613:GLY:HA2	32:jj:629:VAL:HG11	2.01	0.42
32:jj:619:ASP:O	32:jj:620:GLU:O	2.35	0.42
36:L:92:ARG:HH12	67:5:108:A:H4'	1.84	0.42
41:MM:82:ASN:OD1	41:MM:83:LYS:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:NN:61:ALA:HB1	76:9:1016:U:O2'	2.19	0.42
55:s:119:CYS:HA	55:s:163:THR:HG22	2.00	0.42
59:SS:98:VAL:C	59:SS:99:LEU:HD22	2.44	0.42
61:TT:28:LEU:HA	61:TT:110:LEU:HD13	2.00	0.42
62:U:37:ALA:HB2	62:U:65:ARG:HH11	1.85	0.42
67:5:398:A:N6	67:5:399:G:C5	2.87	0.42
67:5:465:G:H2'	67:5:466:A:C8	2.55	0.42
67:5:984:C:C4	67:5:985:C:C5	3.07	0.42
67:5:1080:C:N3	67:5:1219:G:N2	2.67	0.42
67:5:1292:C:N4	67:5:1293:G:C6	2.88	0.42
67:5:1313:C:N4	67:5:1323:A:N7	2.66	0.42
67:5:1323:A:C6	67:5:1324:A:C5	3.07	0.42
67:5:1330:A:C2	67:5:2357:G:C5	3.08	0.42
67:5:1651:G:C2	67:5:1652:U:C4	3.07	0.42
67:5:1656:U:C4	67:5:1657:G:N7	2.88	0.42
67:5:1774:C:C4	67:5:1775:A:N7	2.87	0.42
67:5:1885:G:C2	67:5:1886:G:C8	3.08	0.42
67:5:2027:U:H2'	67:5:2028:C:H6	1.84	0.42
67:5:2050:G:C6	67:5:2051:C:C4	3.07	0.42
67:5:2098:G:C6	67:5:2107:A:C5	3.07	0.42
67:5:2280:G:O5'	67:5:2280:G:H8	2.02	0.42
67:5:2508:U:C2	67:5:2509:C:C5	3.07	0.42
67:5:2859:G:C6	67:5:2860:C:N4	2.87	0.42
67:5:3770:U:C4	67:5:3771:C:N4	2.88	0.42
67:5:3928:A:N6	67:5:4184:G:C6	2.87	0.42
67:5:4244:A:C6	67:5:4267:G:C6	3.07	0.42
67:5:4362:A:C2	67:5:4363:A:C4	3.07	0.42
67:5:4691:A:C2	67:5:4700:A:C4	3.07	0.42
67:5:4702:G:C2	67:5:4703:U:C6	3.07	0.42
67:5:4755:G:N2	67:5:4756:C:H1'	2.34	0.42
67:5:4975:G:N2	67:5:4984:C:C2	2.87	0.42
67:5:4992:G:C2	67:5:5060:A:C2	3.07	0.42
67:5:5062:G:C2	67:5:5063:G:C8	3.08	0.42
76:9:88:G:C2	76:9:500:A:C5	3.07	0.42
76:9:407:G:H3'	76:9:408:A:C5'	2.49	0.42
76:9:431:G:C2	76:9:432:G:N9	2.87	0.42
76:9:434:G:H2'	76:9:435:A:C8	2.54	0.42
76:9:478:G:C6	76:9:479:C:C4	3.07	0.42
76:9:628:A:C2	76:9:1501:C:H4'	2.54	0.42
76:9:1275:G:C6	76:9:1506:A:C5	3.08	0.42
76:9:1481:G:H2'	76:9:1482:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1685:U:N3	76:9:1686:G:C5	2.87	0.42
76:9:1849:G:C2	76:9:1850:A:C5	3.07	0.42
79:AA:33:GLN:OE1	79:AA:154:LEU:HD12	2.19	0.42
81:B:231:VAL:CG1	81:B:232:THR:N	2.82	0.42
83:CC:270:THR:O	83:CC:274:VAL:HG22	2.19	0.42
4:DD:183:GLY:CA	76:9:1334:G:H4'	2.50	0.42
6:D:18:VAL:HG11	70:7:11:A:C8	2.54	0.42
12:f:5:LEU:HD13	12:f:5:LEU:HA	1.56	0.42
13:FF:75:SER:O	13:FF:155:CYS:SG	2.76	0.42
15:F:50:TYR:CD1	15:F:50:TYR:C	2.96	0.42
19:gg:118:ARG:HH21	19:gg:134:THR:HG21	1.84	0.42
19:gg:135:LEU:O	19:gg:135:LEU:HD23	2.20	0.42
19:gg:256:ILE:HD11	19:gg:300:ALA:CB	2.49	0.42
20:G:302:ARG:HH21	67:5:4074:C:H5"	1.85	0.42
22:HH:70:LYS:HA	22:HH:73:GLN:HG2	2.01	0.42
22:HH:163:GLN:O	22:HH:167:GLU:HB2	2.20	0.42
25:H:5:LEU:HD12	25:H:6:SER:N	2.34	0.42
25:H:18:ILE:HG22	25:H:27:VAL:HG22	2.01	0.42
27:II:10:LYS:HB2	76:9:371:A:OP2	2.19	0.42
28:ii:312:LEU:HD13	28:ii:320:LEU:HD12	2.01	0.42
32:jj:294:ILE:HG13	32:jj:296:ASP:OD1	2.20	0.42
32:jj:435:SER:C	32:jj:496:PRO:HG2	2.44	0.42
35:KK:59:LYS:HD2	35:KK:70:TYR:CD1	2.54	0.42
41:MM:120:ALA:O	41:MM:123:VAL:HG12	2.19	0.42
48:P:122:ALA:HB1	48:P:123:PRO:HD2	2.02	0.42
50:PP:60:LEU:HD13	50:PP:89:MET:HG3	2.01	0.42
50:PP:94:VAL:HG11	50:PP:116:LEU:CD2	2.49	0.42
53:QQ:44:PRO:HD2	53:QQ:81:ILE:HD11	2.01	0.42
53:QQ:140:ARG:NE	76:9:1339:U:OP1	2.53	0.42
58:t:82:ILE:O	58:t:85:LEU:HB2	2.18	0.42
59:SS:73:ASN:HB3	59:SS:76:GLN:CD	2.44	0.42
61:TT:14:PHE:CZ	61:TT:62:ARG:HD3	2.55	0.42
61:TT:18:LEU:HD23	61:TT:58:ALA:CB	2.49	0.42
63:UU:35:VAL:HG13	63:UU:106:ILE:HA	2.00	0.42
67:5:95:G:N2	67:5:96:U:H1'	2.34	0.42
67:5:323:C:H1'	67:5:4355:G:N2	2.35	0.42
67:5:330:G:N2	67:5:331:G:C4	2.87	0.42
67:5:370:U:O4	67:5:1637:A:N7	2.52	0.42
67:5:461:G:C6	67:5:695:G:C6	3.07	0.42
67:5:493:G:N1	67:5:662:C:N3	2.68	0.42
67:5:497:G:N3	67:5:499:G:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1068:G:N1	67:5:1069:G:C5	2.88	0.42
67:5:1554:A:N7	67:5:1573:G:C2	2.83	0.42
67:5:1584:G:C6	67:5:1585:C:C5	3.08	0.42
67:5:1764:G:O6	67:5:1767:A:OP2	2.38	0.42
67:5:1962:A:C2	67:5:2027:U:H1'	2.55	0.42
67:5:2322:G:C6	67:5:2323:C:C4	3.08	0.42
67:5:2368:A:C5	67:5:2827:G:C6	3.07	0.42
67:5:2429:A:C2	67:5:2430:C:C6	3.08	0.42
67:5:2608:G:C2	67:5:2609:G:C8	3.07	0.42
67:5:2722:G:C6	67:5:2723:U:C4	3.07	0.42
67:5:2750:G:C2	67:5:2751:G:N9	2.87	0.42
67:5:2816:G:C5	67:5:2817:C:C5	3.07	0.42
67:5:2885:A:C6	67:5:2886:U:C4	3.08	0.42
67:5:3650:C:H2'	67:5:3651:A:O4'	2.20	0.42
67:5:3656:A:O4'	67:5:3747:A:C2	2.73	0.42
67:5:3903:A:C5	67:5:3904:G:N7	2.88	0.42
67:5:3916:G:C6	67:5:3917:A:C6	3.07	0.42
67:5:4271:A:C5	67:5:4272:G:C6	3.07	0.42
67:5:4602:A:C2	67:5:4610:A:C2	3.07	0.42
67:5:4884:G:C4	67:5:4936:G:C2	3.07	0.42
67:5:4988:U:C4	67:5:5060:A:C6	3.07	0.42
73:8:17:A:C5	73:8:18:U:C6	3.08	0.42
76:9:478:G:N1	76:9:479:C:C4	2.87	0.42
76:9:509:G:C2	76:9:510:G:C4	3.08	0.42
76:9:587:A:H5'	76:9:592:C:H41	1.84	0.42
76:9:812:A:C5	76:9:813:A:C8	3.07	0.42
76:9:883:U:N3	76:9:904:A:C6	2.88	0.42
76:9:1207:G:C2	76:9:1837:G:C4	3.07	0.42
76:9:1551:U:O2	76:9:1551:U:O4'	2.36	0.42
76:9:1600:G:C2	76:9:1602:U:C4	3.07	0.42
76:9:1834:A:C2	76:9:1836:G:C6	3.07	0.42
1:A:98:ILE:HG22	1:A:99:GLY:N	2.32	0.42
2:C:10:VAL:HG22	2:C:153:VAL:HG11	2.02	0.42
2:C:224:ILE:CG2	2:C:225:PRO:HD2	2.49	0.42
2:C:328:LEU:HD22	15:F:186:MET:HE3	2.00	0.42
4:DD:24:PHE:CD2	4:DD:25:LEU:CD1	3.03	0.42
4:DD:173:ARG:HB2	4:DD:184:ILE:HB	2.01	0.42
4:DD:219:PRO:HB2	19:gg:190:GLY:N	2.34	0.42
5:dd:18:SER:OG	5:dd:19:ARG:N	2.53	0.42
6:D:138:GLN:OE1	6:D:139:PRO:HD2	2.18	0.42
8:EE:103:TYR:CE1	8:EE:109:PHE:CE1	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:b:72:ILE:HA	10:b:75:LEU:HD12	2.00	0.42
11:E:289:LEU:C	11:E:289:LEU:HD23	2.44	0.42
12:f:84:VAL:O	12:f:84:VAL:HG13	2.19	0.42
13:FF:55:ARG:HH11	53:QQ:124:PRO:CG	2.32	0.42
13:FF:153:LEU:HB3	13:FF:189:ALA:HB2	2.02	0.42
13:FF:188:TYR:OH	13:FF:192:LYS:CE	2.67	0.42
14:ff:101:ALA:O	14:ff:105:TYR:CE1	2.73	0.42
18:GG:25:ARG:HA	18:GG:28:TYR:HB2	2.00	0.42
19:gg:195:LEU:HA	19:gg:211:GLY:HA2	2.02	0.42
20:G:297:PRO:HD3	67:5:4162:C:C5	2.55	0.42
28:ii:394:ASP:O	28:ii:400:SER:HB3	2.20	0.42
30:j:79:ARG:NH1	73:8:94:G:C6	2.87	0.42
32:jj:280:VAL:HA	32:jj:298:PRO:HD3	2.01	0.42
32:jj:360:MET:O	32:jj:367:TRP:CD1	2.73	0.42
32:jj:479:VAL:HG21	32:jj:504:LEU:HD23	2.01	0.42
32:jj:530:THR:O	32:jj:633:VAL:HB	2.19	0.42
32:jj:540:HIS:ND1	32:jj:544:ILE:HG12	2.35	0.42
32:jj:568:CYS:O	32:jj:591:CYS:HB2	2.19	0.42
35:KK:5:LYS:HZ2	35:KK:8:ARG:CD	2.32	0.42
38:LL:72:ILE:HG13	38:LL:129:GLY:HA2	2.01	0.42
42:N:150:TRP:CE3	42:N:151:ILE:HG13	2.55	0.42
43:n:2:ARG:HG2	43:n:3:ALA:H	1.85	0.42
45:O:128:ARG:O	67:5:2055:G:H5"	2.20	0.42
47:OO:20:GLN:OE1	47:OO:25:GLU:O	2.37	0.42
47:OO:113:GLN:HG2	47:OO:114:SER:N	2.35	0.42
48:P:27:LYS:HE2	48:P:63:TYR:CE1	2.55	0.42
50:PP:18:ARG:HE	59:SS:88:LYS:CD	2.32	0.42
53:QQ:10:VAL:CG2	53:QQ:25:CYS:HB2	2.49	0.42
53:QQ:50:LYS:HA	53:QQ:50:LYS:HD3	1.74	0.42
57:S:154:LEU:HD13	57:S:157:ARG:NH1	2.35	0.42
58:t:61:LYS:HG3	58:t:74:VAL:HG23	2.02	0.42
59:SS:35:GLY:O	59:SS:97:GLN:NE2	2.52	0.42
59:SS:120:HIS:CE1	59:SS:124:ARG:HD2	2.55	0.42
61:TT:57:ALA:HB1	61:TT:107:LEU:HD21	2.00	0.42
63:UU:50:VAL:CB	63:UU:91:LEU:HD23	2.49	0.42
67:5:15:A:C6	73:8:143:G:N1	2.88	0.42
67:5:96:U:C2	67:5:97:G:C8	3.08	0.42
67:5:189:G:C5	67:5:253:G:C2	3.06	0.42
67:5:441:G:C2	67:5:442:G:C8	3.08	0.42
67:5:499:G:N3	67:5:500:G:C8	2.88	0.42
67:5:949:G:H2'	67:5:950:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:956:A:N7	67:5:1283:G:N3	2.67	0.42
67:5:1092:G:C4	67:5:1093:C:C5	3.08	0.42
67:5:1465:G:N2	67:5:1466:G:C4	2.88	0.42
67:5:1475:G:N2	67:5:1490:G:C4	2.87	0.42
67:5:1520:C:H42	67:5:1521:C:N4	2.11	0.42
67:5:1528:U:N3	67:5:1529:G:N7	2.67	0.42
67:5:2086:G:C6	67:5:2087:C:C4	3.06	0.42
67:5:2402:G:N2	67:5:2403:A:H1'	2.33	0.42
67:5:2547:G:N2	67:5:2548:C:C2	2.88	0.42
67:5:2735:G:C5	67:5:2736:G:N7	2.87	0.42
67:5:2870:A:N1	67:5:2881:A:N1	2.67	0.42
67:5:3902:A:C6	67:5:4523:A:C5	3.08	0.42
67:5:3920:U:C2	67:5:3921:U:C5	3.07	0.42
67:5:3933:G:N1	67:5:3934:G:C5	2.88	0.42
67:5:4192:A:H2'	67:5:4193:C:C6	2.55	0.42
67:5:4657:U:H3'	67:5:4658:G:H5"	2.00	0.42
67:5:4966:A:C2	67:5:4967:A:C6	3.08	0.42
67:5:4978:G:O2'	67:5:4980:C:OP2	2.34	0.42
76:9:149:A:C8	76:9:169:U:N3	2.83	0.42
76:9:221:A:H2'	76:9:222:U:C6	2.55	0.42
76:9:457:C:C2	76:9:458:A:C8	3.07	0.42
76:9:474:G:C2	76:9:475:C:C6	3.08	0.42
76:9:982:G:C4	76:9:983:A:C8	3.08	0.42
76:9:1039:C:N3	76:9:1077:A:C2	2.88	0.42
76:9:1087:A:C6	76:9:1861:G:C6	3.08	0.42
76:9:1149:A:C2	76:9:1151:G:C5	3.07	0.42
76:9:1250:A:N3	76:9:1488:C:O2	2.52	0.42
76:9:1508:A:N1	76:9:1510:G:H1'	2.34	0.42
76:9:1624:U:O2	76:9:1624:U:P	2.77	0.42
76:9:1645:C:H4'	76:9:1650:A:C5'	2.50	0.42
77:ZZ:68:ILE:HG22	77:ZZ:88:LEU:HD22	2.00	0.42
81:B:288:GLY:HA3	81:B:330:PHE:CZ	2.54	0.42
2:C:204:ARG:HA	67:5:2298:U:OP2	2.20	0.42
4:DD:177:LEU:N	4:DD:177:LEU:CD1	2.82	0.42
4:DD:204:LEU:HB2	4:DD:207:HIS:HB2	2.02	0.42
8:EE:31:PRO:HG2	8:EE:38:LEU:CD1	2.47	0.42
15:F:121:PHE:C	15:F:122:VAL:HG23	2.45	0.42
20:G:155:TYR:CE2	20:G:187:PRO:HG2	2.55	0.42
20:G:158:GLU:OE1	20:G:162:GLU:C	2.63	0.42
24:bb:21:LYS:HE2	76:9:921:G:O4'	2.20	0.42
25:H:63:ASN:OD1	25:H:66:GLU:OE1	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:i:94:LEU:HD12	26:i:97:MET:SD	2.59	0.42
28:ii:218:LYS:HZ1	28:ii:245:ARG:NH1	2.18	0.42
28:ii:323:TYR:HB2	28:ii:403:VAL:HG22	2.00	0.42
28:ii:361:GLU:CG	58:t:21:GLU:HA	2.50	0.42
32:jj:283:ALA:C	32:jj:294:ILE:CG2	2.92	0.42
32:jj:381:PRO:O	32:jj:384:LYS:HE3	2.20	0.42
33:J:39:VAL:HG23	33:J:123:ILE:HG21	2.01	0.42
33:J:119:TYR:CZ	59:SS:17:ASN:HB2	2.54	0.42
35:KK:19:GLY:O	35:KK:71:LEU:HB2	2.19	0.42
35:KK:67:PHE:C	35:KK:68:TYR:CD2	2.97	0.42
45:O:148:LYS:O	45:O:148:LYS:HG2	2.20	0.42
47:OO:112:ALA:O	47:OO:116:LEU:HG	2.19	0.42
50:PP:93:MET:SD	50:PP:106:GLU:CB	3.07	0.42
50:PP:123:TYR:HB2	76:9:1520:G:H1'	2.01	0.42
50:PP:123:TYR:OH	59:SS:127:TRP:CE3	2.72	0.42
51:Q:62:SER:OG	51:Q:65:ARG:HG3	2.20	0.42
54:R:119:MET:O	54:R:123:LEU:HD13	2.20	0.42
55:s:28:PHE:HE2	55:s:99:ARG:HB2	1.83	0.42
55:s:44:ARG:CZ	55:s:53:VAL:HG21	2.49	0.42
55:s:122:THR:HG22	55:s:159:GLN:OE1	2.19	0.42
55:s:161:ILE:CG1	55:s:171:GLU:OE2	2.68	0.42
56:RR:29:HIS:NE2	76:9:1453:C:C5	2.88	0.42
58:t:17:CYS:O	58:t:57:ARG:CA	2.67	0.42
59:SS:15:VAL:HG22	59:SS:68:ILE:CD1	2.49	0.42
59:SS:24:ARG:O	59:SS:56:ALA:HB3	2.20	0.42
61:TT:12:GLN:NE2	76:9:1540:G:N2	2.67	0.42
61:TT:41:LYS:HD3	76:9:1568:C:H4'	2.00	0.42
63:UU:21:ARG:NH2	76:9:1404:U:OP2	2.52	0.42
64:V:80:VAL:HG12	64:V:81:VAL:O	2.20	0.42
65:VV:11:LEU:HD23	65:VV:11:LEU:H	1.84	0.42
65:VV:58:ALA:HA	65:VV:61:ARG:NH1	2.34	0.42
67:5:125:C:H2'	67:5:126:C:H6	1.84	0.42
67:5:153:G:N1	67:5:154:G:C5	2.88	0.42
67:5:282:C:C4	67:5:283:G:C8	3.08	0.42
67:5:311:G:C2	67:5:312:G:C5	3.08	0.42
67:5:394:G:N2	67:5:397:G:OP2	2.53	0.42
67:5:462:G:C6	67:5:694:C:N3	2.88	0.42
67:5:465:G:N2	67:5:466:A:C4	2.87	0.42
67:5:735:G:C6	67:5:736:C:C4	3.08	0.42
67:5:744:G:C2	67:5:921:C:C2	3.07	0.42
67:5:950:G:N3	67:5:951:G:C8	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:984:C:N3	67:5:985:C:C5	2.87	0.42
67:5:1572:U:N3	67:5:1573:G:N7	2.68	0.42
67:5:1681:G:N1	67:5:1682:A:C5	2.88	0.42
67:5:1684:A:C5	67:5:1685:G:C8	3.07	0.42
67:5:2064:G:C6	67:5:2065:G:C5	3.07	0.42
67:5:2085:G:C2	67:5:2273:G:C6	3.07	0.42
67:5:2578:G:H5"	75:Z:107:LYS:NZ	2.35	0.42
67:5:2711:G:HO2'	67:5:2712:G:P	2.43	0.42
67:5:3716:C:N4	67:5:3735:G:C5	2.87	0.42
67:5:3923:A:C5	67:5:4381:A:C5	3.07	0.42
67:5:4232:U:C5	67:5:4233:A:C6	3.07	0.42
67:5:4525:C:N3	67:5:4526:U:C5	2.88	0.42
67:5:4934:A:H2'	67:5:4935:C:C6	2.55	0.42
73:8:25:G:C2	73:8:26:C:C6	3.08	0.42
76:9:141:A:H3'	76:9:179:C:N3	2.34	0.42
76:9:159:A:N1	76:9:467:G:O2'	2.28	0.42
76:9:606:G:C8	76:9:608:C:C5	3.07	0.42
76:9:818:A:C8	76:9:847:A:N6	2.87	0.42
76:9:980:A:H2'	76:9:981:A:C8	2.54	0.42
76:9:1088:U:H4'	76:9:1089:G:OP2	2.20	0.42
76:9:1214:A:N6	76:9:1686:G:O6	2.53	0.42
76:9:1243:U:H4'	76:9:1266:C:H4'	2.01	0.42
76:9:1261:C:C4	76:9:1262:C:C5	3.07	0.42
76:9:1264:C:OP2	76:9:1326:U:C4	2.72	0.42
76:9:1558:C:C2	76:9:1559:C:C5	3.07	0.42
76:9:1567:G:N1	76:9:1568:C:N4	2.68	0.42
76:9:1645:C:H4'	76:9:1650:A:H4'	2.02	0.42
76:9:1664:A:H1'	76:9:1665:G:O5'	2.19	0.42
76:9:1677:U:H6	76:9:1677:U:O5'	2.03	0.42
81:B:39:LYS:CD	81:B:40:PRO:HD2	2.50	0.42
81:B:73:VAL:O	81:B:74:GLU:HG3	2.20	0.42
2:C:121:ARG:HD3	2:C:277:TYR:CE1	2.54	0.42
4:DD:17:PHE:CD1	4:DD:77:PHE:CE1	3.08	0.42
4:DD:23:GLU:OE1	4:DD:27:ARG:CZ	2.67	0.42
4:DD:175:VAL:HG13	4:DD:177:LEU:HD13	2.02	0.42
5:dd:25:SER:CB	35:KK:65:ARG:CZ	2.98	0.42
5:dd:26:ASN:OD1	5:dd:39:CYS:HB3	2.19	0.42
6:D:75:VAL:HG13	6:D:76:CYS:N	2.34	0.42
11:E:213:LYS:CG	11:E:214:HIS:N	2.83	0.42
14:ff:103:LEU:HG	41:MM:60:MET:HB3	2.00	0.42
15:F:225:HIS:O	15:F:230:GLY:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BB:189:ILE:HB	17:BB:190:PRO:CD	2.49	0.42
18:GG:15:LEU:HD11	76:9:155:G:P	2.60	0.42
18:GG:133:LEU:HD12	76:9:168:C:O2	2.20	0.42
20:G:158:GLU:OE1	20:G:163:LYS:HA	2.19	0.42
20:G:223:LEU:HD23	20:G:223:LEU:O	2.19	0.42
25:H:61:TRP:CZ3	39:M:33:GLN:HG2	2.55	0.42
27:II:43:ILE:HG12	27:II:57:ALA:HA	2.01	0.42
28:ii:189:ARG:HG2	76:9:51:U:O3'	2.19	0.42
28:ii:278:VAL:HG12	28:ii:280:PHE:N	2.35	0.42
28:ii:401:GLN:HB3	32:jj:545:CYS:HB2	2.02	0.42
29:I:36:LEU:HD11	29:I:73:ASN:ND2	2.35	0.42
31:JJ:138:ARG:HH11	31:JJ:156:HIS:CE1	2.38	0.42
32:jj:286:GLU:OE2	32:jj:287:THR:O	2.37	0.42
32:jj:312:SER:HB2	32:jj:555:HIS:HB3	2.01	0.42
35:KK:64:TRP:HB2	35:KK:66:HIS:CD2	2.50	0.42
38:LL:111:VAL:HG12	38:LL:142:VAL:HG23	2.02	0.42
39:M:93:LYS:HA	39:M:96:GLU:HG3	2.01	0.42
39:M:106:ASP:HA	39:M:109:ARG:NH2	2.34	0.42
42:N:175:GLY:O	42:N:180:PHE:HB2	2.20	0.42
47:OO:42:VAL:HG21	47:OO:81:VAL:HG11	2.01	0.42
50:PP:16:THR:HA	50:PP:20:VAL:O	2.20	0.42
50:PP:43:ARG:NE	76:9:1615:U:C5	2.88	0.42
50:PP:81:ARG:HB3	76:9:1621:U:O4	2.20	0.42
50:PP:98:ASN:HD21	50:PP:120:SER:HB2	1.84	0.42
53:QQ:97:GLN:HB2	53:QQ:105:LYS:HG3	2.02	0.42
53:QQ:133:GLY:C	53:QQ:141:TYR:CD1	2.98	0.42
54:R:71:ARG:HH12	67:5:3605:C:P	2.42	0.42
59:SS:63:GLU:OE2	59:SS:67:VAL:HG23	2.20	0.42
61:TT:4:VAL:HG12	61:TT:8:ASP:OD2	2.20	0.42
67:5:493:G:C2	67:5:662:C:C2	3.07	0.42
67:5:649:A:N1	67:5:650:C:C2	2.87	0.42
67:5:714:G:C2	67:5:715:G:C5	3.07	0.42
67:5:721:G:C2	67:5:722:G:N9	2.88	0.42
67:5:752:G:C5	67:5:753:C:C5	3.08	0.42
67:5:1236:C:O2'	67:5:1238:A:OP1	2.37	0.42
67:5:1961:G:C2	67:5:2025:A:N7	2.88	0.42
67:5:2270:G:C6	67:5:2271:C:N4	2.87	0.42
67:5:2439:G:C8	67:5:2777:G:C6	3.08	0.42
67:5:3659:G:C5	67:5:3660:C:C5	3.08	0.42
67:5:3833:C:N3	67:5:3834:C:C5	2.88	0.42
67:5:4339:A:C2	67:5:4340:U:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4560:C:O2'	67:5:4561:C:H5'	2.20	0.42
67:5:4890:G:N1	67:5:4891:G:C5	2.88	0.42
67:5:4906:C:N3	67:5:4916:G:C6	2.87	0.42
67:5:4967:A:C2	67:5:4968:A:C8	3.07	0.42
68:WW:11:LEU:O	68:WW:14:ILE:HG12	2.20	0.42
70:7:60:G:C4	70:7:61:G:C8	3.08	0.42
70:7:71:G:N1	70:7:105:C:N3	2.68	0.42
73:8:15:G:H8	73:8:15:G:O5'	2.03	0.42
73:8:30:U:N3	73:8:31:G:C5	2.88	0.42
73:8:70:G:O2'	73:8:87:G:N2	2.53	0.42
76:9:209:A:C6	76:9:210:U:C2	3.08	0.42
76:9:565:G:C6	76:9:566:U:C4	3.07	0.42
76:9:1240:A:N1	76:9:1241:A:C6	2.88	0.42
76:9:1330:G:N1	76:9:1335:G:N1	2.68	0.42
76:9:1600:G:C2	76:9:1602:U:C5	3.07	0.42
77:ZZ:66:LYS:HD2	77:ZZ:66:LYS:HA	1.84	0.42
77:ZZ:70:PRO:HA	77:ZZ:84:ALA:HB1	2.02	0.42
79:AA:116:PHE:CZ	79:AA:118:GLU:CD	2.98	0.42
80:aa:42:ARG:HD2	80:aa:43:ASN:O	2.19	0.42
81:B:39:LYS:CG	81:B:40:PRO:HD2	2.50	0.42
81:B:92:TYR:HB3	81:B:99:LEU:HD21	2.01	0.42
82:c:67:ALA:C	82:c:68:LYS:HG3	2.44	0.42
84:cc:21:THR:O	84:cc:26:GLN:N	2.51	0.42
7:e:22:ARG:CG	7:e:23:HIS:N	2.83	0.42
11:E:186:ARG:NH2	67:5:4938:A:H2	2.17	0.42
13:FF:15:PRO:HB3	53:QQ:59:GLY:HA2	2.02	0.42
13:FF:35:LEU:HD22	13:FF:146:ARG:HH21	1.85	0.42
13:FF:74:ASN:CG	76:9:1676:U:H5'	2.45	0.42
14:ff:116:ARG:CD	14:ff:120:GLU:OE2	2.68	0.42
17:BB:47:THR:HG21	17:BB:62:LEU:CD1	2.50	0.42
18:GG:173:ALA:CB	76:9:77:A:O2'	2.68	0.42
19:gg:56:GLN:C	53:QQ:102:GLU:H	2.28	0.42
19:gg:70:VAL:HG12	19:gg:79:LEU:O	2.19	0.42
20:G:191:ALA:HB3	67:5:149:A:C2	2.55	0.42
22:HH:186:ASN:OD1	22:HH:187:PHE:N	2.50	0.42
23:hh:49:U:O2'	23:hh:50:G:C8	2.60	0.42
25:H:34:LEU:HD23	25:H:34:LEU:HA	1.83	0.42
27:II:141:ARG:N	27:II:141:ARG:HD2	2.35	0.42
28:ii:149:ILE:HD11	28:ii:213:PHE:CE2	2.55	0.42
28:ii:156:ALA:CB	28:ii:172:PHE:CE2	3.03	0.42
28:ii:400:SER:O	28:ii:404:LYS:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:339:ARG:CZ	32:jj:539:GLU:HG3	2.50	0.42
32:jj:449:LYS:HA	32:jj:452:GLY:O	2.19	0.42
36:L:74:ARG:HD3	67:5:76:A:OP2	2.19	0.42
36:L:92:ARG:HH22	67:5:108:A:C4'	2.32	0.42
38:LL:94:HIS:ND1	38:LL:103:GLU:OE2	2.53	0.42
38:LL:128:VAL:HG23	38:LL:140:PHE:CD2	2.55	0.42
41:MM:40:LYS:NZ	76:9:1311:C:OP2	2.52	0.42
43:n:1:MET:H1	76:9:1706:G:H5'	1.84	0.42
44:NN:124:ARG:HH21	76:9:677:G:P	2.42	0.42
45:O:185:VAL:HG13	45:O:188:LYS:HD3	2.02	0.42
50:PP:56:LEU:HD13	50:PP:78:THR:HG21	2.01	0.42
50:PP:59:ARG:HG2	50:PP:76:VAL:CB	2.50	0.42
53:QQ:17:LYS:HA	53:QQ:125:ARG:O	2.20	0.42
53:QQ:141:TYR:CZ	76:9:1668:U:OP1	2.70	0.42
54:R:149:LYS:CA	54:R:152:LYS:HG2	2.49	0.42
56:RR:78:ARG:NH2	79:AA:85:ARG:HB2	2.35	0.42
59:SS:15:VAL:O	59:SS:18:THR:CB	2.68	0.42
59:SS:132:ARG:HA	76:9:1623:A:O4'	2.20	0.42
60:T:78:LYS:O	60:T:84:ILE:HG23	2.20	0.42
61:TT:134:ILE:HA	61:TT:137:GLN:HE21	1.84	0.42
63:UU:51:LYS:CE	76:9:1402:A:O3'	2.68	0.42
67:5:19:G:C2	73:8:139:G:N3	2.87	0.42
67:5:27:C:C2	67:5:56:A:N6	2.88	0.42
67:5:1186:U:C4	67:5:1187:G:C2	3.08	0.42
67:5:1517:G:C6	67:5:1650:A:N6	2.88	0.42
67:5:1601:A:N7	67:5:3643:A:C4	2.88	0.42
67:5:1748:U:N3	67:5:1749:A:N7	2.67	0.42
67:5:2279:A:H8	67:5:2279:A:O5'	2.03	0.42
67:5:2301:G:C2	67:5:2302:C:C6	3.08	0.42
67:5:2307:A:N1	67:5:2308:A:C4	2.88	0.42
67:5:2544:G:C5	67:5:2545:U:C5	3.07	0.42
67:5:2602:G:C4	67:5:2742:G:C6	3.08	0.42
67:5:3611:A:C6	67:5:3612:C:C4	3.08	0.42
67:5:3619:G:H1	67:5:3624:A:H2	1.67	0.42
67:5:3656:A:C6	67:5:3689:G:C6	3.07	0.42
67:5:3911:C:C2	67:5:3912:U:C5	3.08	0.42
67:5:4185:G:N2	67:5:4186:A:N9	2.67	0.42
67:5:4208:U:O4	67:5:4225:G:C6	2.73	0.42
67:5:4215:C:C4	67:5:4216:G:C5	3.07	0.42
67:5:4310:A:C4	67:5:4311:A:C8	3.08	0.42
67:5:4340:U:C4	67:5:4341:C:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4538:G:C4	67:5:4549:G:N2	2.87	0.42
67:5:4751:G:O6	67:5:4949:G:O6	2.38	0.42
67:5:4775:C:C4	67:5:4776:G:N7	2.88	0.42
67:5:4967:A:C5	67:5:4968:A:N7	2.88	0.42
67:5:5045:G:H2'	67:5:5046:U:O4'	2.20	0.42
68:WW:86:LEU:HD23	68:WW:117:ARG:NH1	2.35	0.42
70:7:18:C:N3	70:7:19:C:C5	2.88	0.42
71:XX:27:TYR:CD1	71:XX:27:TYR:C	2.97	0.42
71:XX:131:LEU:HD23	71:XX:131:LEU:C	2.44	0.42
73:8:3:A:C4	73:8:4:C:C6	3.08	0.42
76:9:68:A:N6	76:9:82:G:C2	2.88	0.42
76:9:143:U:H4'	76:9:313:A:H2	1.85	0.42
76:9:149:A:H2'	76:9:150:A:C8	2.55	0.42
76:9:532:C:O2'	76:9:533:A:P	2.75	0.42
76:9:1013:U:N3	76:9:1014:G:N7	2.68	0.42
76:9:1293:A:N6	76:9:1306:U:C4	2.87	0.42
76:9:1390:U:C2	76:9:1391:C:C5	3.08	0.42
76:9:1626:C:C4	76:9:1627:C:C5	3.07	0.42
77:ZZ:50:PHE:CZ	77:ZZ:79:ILE:HD13	2.54	0.42
81:B:47:LEU:HD11	81:B:344:VAL:CG2	2.49	0.42
81:B:235:TRP:CD1	81:B:267:ALA:HB1	2.55	0.42
2:C:48:ASN:OD1	2:C:48:ASN:C	2.63	0.42
4:DD:16:ILE:HD11	5:dd:36:LEU:O	2.20	0.42
4:DD:156:LEU:HD11	76:9:1384:C:OP1	2.20	0.42
4:DD:185:LYS:HE2	76:9:1335:G:C5'	2.50	0.42
4:DD:213:PRO:HB3	56:RR:20:TYR:OH	2.19	0.42
5:dd:43:PHE:HE2	63:UU:80:PHE:CD1	2.37	0.42
6:D:234:ASP:OD2	6:D:234:ASP:N	2.50	0.42
11:E:153:LEU:HD11	11:E:167:PHE:HB2	2.01	0.42
12:f:4:ARG:C	12:f:5:LEU:HD22	2.45	0.42
15:F:41:LEU:HD23	15:F:41:LEU:C	2.44	0.42
15:F:46:ARG:HH12	67:5:976:G:H5"	1.84	0.42
17:BB:117:TRP:HA	17:BB:155:TYR:CZ	2.54	0.42
19:gg:10:THR:HB	19:gg:306:LEU:HD21	2.01	0.42
19:gg:19:THR:O	19:gg:20:GLN:HG2	2.19	0.42
19:gg:64:HIS:CE1	76:9:1452:A:C8	3.07	0.42
21:h:121:VAL:HG12	21:h:122:LYS:N	2.34	0.42
27:II:36:THR:O	27:II:96:LEU:HB2	2.20	0.42
28:ii:332:VAL:HG21	28:ii:341:GLU:OE2	2.19	0.42
32:jj:315:ASP:O	32:jj:350:VAL:HG22	2.20	0.42
32:jj:547:GLY:N	32:jj:563:ILE:O	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:572:LYS:HG2	32:jj:590:VAL:HG21	2.02	0.42
32:jj:604:GLU:CG	32:jj:612:MET:HB3	2.48	0.42
35:KK:16:PHE:CA	35:KK:79:LEU:HD13	2.50	0.42
35:KK:91:PRO:HD2	35:KK:94:LEU:HD22	2.02	0.42
37:l:27:ILE:CG2	37:l:28:TRP:N	2.82	0.42
39:M:124:LYS:O	39:M:127:VAL:HG12	2.19	0.42
42:N:32:GLN:OE1	42:N:32:GLN:HA	2.20	0.42
44:NN:18:TYR:CZ	68:WW:56:HIS:CE1	3.07	0.42
48:P:25:HIS:CE1	67:5:3858:C:OP2	2.72	0.42
50:PP:13:ARG:HG3	50:PP:14:LYS:O	2.19	0.42
57:S:95:ARG:HH11	67:5:1952:G:P	2.43	0.42
58:t:104:ILE:HD11	58:t:141:CYS:HB3	2.02	0.42
60:T:40:VAL:C	60:T:61:THR:HG23	2.45	0.42
61:TT:67:ARG:HH12	76:9:1587:G:C1’	2.33	0.42
67:5:38:A:C8	67:5:40:G:OP2	2.72	0.42
67:5:80:C:N3	67:5:81:C:C5	2.88	0.42
67:5:145:G:N2	67:5:146:G:C4	2.88	0.42
67:5:332:C:C4	67:5:333:U:C5	3.08	0.42
67:5:647:G:C8	67:5:648:G:C8	3.08	0.42
67:5:725:G:C2	67:5:726:G:C8	3.07	0.42
67:5:932:A:C6	67:5:939:G:C5	3.08	0.42
67:5:1076:C:H2’	67:5:1077:C:C6	2.54	0.42
67:5:1100:U:C2	67:5:1168:G:C8	3.08	0.42
67:5:1211:G:N1	67:5:1212:G:C5	2.88	0.42
67:5:1313:C:N4	67:5:1323:A:C5	2.87	0.42
67:5:1403:G:C6	67:5:1415:G:N1	2.88	0.42
67:5:1612:G:C2	67:5:1614:C:C6	3.08	0.42
67:5:1800:U:C4	67:5:1801:A:N7	2.88	0.42
67:5:1891:A:N6	67:5:1892:A:N6	2.68	0.42
67:5:1921:C:H1’	67:5:1922:G:OP1	2.20	0.42
67:5:1962:A:OP2	67:5:2024:G:C2	2.71	0.42
67:5:2008:U:C6	67:5:2010:A:OP2	2.73	0.42
67:5:2328:G:C5	67:5:2329:U:C5	3.08	0.42
67:5:2503:G:H5”	67:5:2503:G:H8	1.84	0.42
67:5:2657:G:H22	67:5:2678:A:N6	2.18	0.42
67:5:2727:C:N3	67:5:2728:U:C5	2.88	0.42
67:5:4167:G:C2	67:5:4168:G:C8	3.08	0.42
67:5:4758:U:O2	67:5:4758:U:O4’	2.37	0.42
67:5:5040:U:HO2’	67:5:5041:G:P	2.43	0.42
71:XX:51:VAL:HG13	71:XX:70:VAL:HG13	2.01	0.42
71:XX:126:ALA:O	71:XX:128:VAL:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:8:72:A:H1'	73:8:88:A:H2	1.85	0.42
74:YY:104:ARG:CD	76:9:491:C:H3'	2.50	0.42
74:YY:115:LYS:HG2	76:9:161:U:O4	2.20	0.42
76:9:102:A:C8	76:9:357:C:N4	2.88	0.42
76:9:183:G:O2'	76:9:184:G:O4'	2.38	0.42
76:9:190:G:H2'	76:9:208:G:N2	2.35	0.42
76:9:191:A:H3'	76:9:192:C:O4'	2.20	0.42
76:9:628:A:P	76:9:1501:C:O2'	2.78	0.42
76:9:815:U:C2	76:9:816:A:C8	3.08	0.42
76:9:1214:A:N6	76:9:1686:G:C6	2.87	0.42
76:9:1231:C:N4	76:9:1528:G:C6	2.87	0.42
76:9:1264:C:C2	76:9:1265:A:N1	2.88	0.42
76:9:1324:G:OP1	76:9:1497:G:C6	2.73	0.42
76:9:1718:G:N2	76:9:1816:G:O6	2.52	0.42
76:9:1820:G:H2'	76:9:1821:U:O4'	2.19	0.42
78:a:48:TYR:O	78:a:49:HIS:CG	2.73	0.42
78:a:126:ALA:HB3	78:a:129:PHE:CE1	2.55	0.42
81:B:348:ARG:HG2	81:B:349:LYS:N	2.35	0.42
83:CC:184:VAL:CG2	83:CC:195:LEU:HB2	2.49	0.42
4:DD:167:TYR:O	4:DD:190:LEU:HB2	2.18	0.42
5:dd:28:HIS:HD2	76:9:1256:G:C5'	2.33	0.42
11:E:170:GLN:NE2	11:E:174:GLY:O	2.52	0.42
13:FF:159:ARG:CZ	13:FF:159:ARG:HB2	2.49	0.42
15:F:145:ASN:HB2	15:F:240:ASN:HD21	1.85	0.42
15:F:178:LEU:N	15:F:178:LEU:CD1	2.83	0.42
16:g:24:ARG:HG3	16:g:30:ILE:HD13	2.02	0.42
18:GG:137:ARG:NH2	76:9:171:A:OP2	2.53	0.42
18:GG:160:LYS:HE2	18:GG:160:LYS:HA	2.02	0.42
19:gg:26:GLN:CD	19:gg:74:ASP:O	2.63	0.42
19:gg:39:THR:O	19:gg:66:VAL:HG21	2.19	0.42
19:gg:200:VAL:C	19:gg:241:PHE:CD2	2.98	0.42
20:G:82:ASN:ND2	20:G:84:LEU:HB2	2.35	0.42
22:HH:79:LEU:HD23	22:HH:79:LEU:O	2.19	0.42
28:ii:56:PHE:CD1	28:ii:75:ILE:HG21	2.54	0.42
28:ii:224:LEU:HD13	28:ii:246:LEU:HD11	2.02	0.42
28:ii:254:VAL:CG1	28:ii:267:ALA:CB	2.98	0.42
31:JJ:163:SER:OG	31:JJ:166:GLY:CA	2.68	0.42
32:jj:472:MET:CE	32:jj:512:ILE:HG13	2.50	0.42
42:N:68:ARG:HB2	42:N:126:THR:O	2.20	0.42
43:n:1:MET:CE	43:n:9:ARG:NH2	2.83	0.42
53:QQ:10:VAL:HG12	53:QQ:12:VAL:HG23	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:QQ:133:GLY:O	53:QQ:140:ARG:HA	2.20	0.42
55:s:58:ASN:OD1	55:s:58:ASN:N	2.52	0.42
58:t:157:SER:O	58:t:157:SER:OG	2.36	0.42
59:SS:42:HIS:O	59:SS:46:ARG:CD	2.67	0.42
59:SS:114:LEU:HD22	59:SS:122:GLY:N	2.35	0.42
63:UU:39:LEU:HD21	63:UU:104:ILE:O	2.20	0.42
63:UU:51:LYS:HE3	76:9:1403:C:OP1	2.20	0.42
63:UU:55:ARG:HG2	76:9:1446:A:O4'	2.19	0.42
65:VV:2:GLN:HG3	65:VV:7:GLU:O	2.20	0.42
65:VV:83:PHE:CD2	79:AA:53:ARG:NH1	2.88	0.42
67:5:132:G:N2	67:5:137:G:C5	2.87	0.42
67:5:181:C:N4	67:5:255:C:H42	2.18	0.42
67:5:246:G:C2	67:5:247:G:C8	3.08	0.42
67:5:300:A:C2	67:5:301:G:N7	2.88	0.42
67:5:311:G:N3	67:5:312:G:C8	2.88	0.42
67:5:490:C:O2	67:5:664:G:C2	2.73	0.42
67:5:522:C:N4	67:5:640:C:H42	2.18	0.42
67:5:914:U:O2'	67:5:915:A:C4	2.72	0.42
67:5:1074:G:N1	67:5:1238:A:C6	2.88	0.42
67:5:1355:G:C6	67:5:1385:G:C2	3.08	0.42
67:5:1358:G:C8	67:5:1377:G:O6	2.69	0.42
67:5:1368:A:C4	72:Y:1:MET:HG3	2.55	0.42
67:5:1633:G:H5'	67:5:1634:A:OP1	2.20	0.42
67:5:1663:C:C2	67:5:2287:G:N2	2.87	0.42
67:5:2013:A:C6	67:5:2014:C:C4	3.08	0.42
67:5:2076:G:C5	67:5:2077:C:C5	3.08	0.42
67:5:2315:G:C6	67:5:2316:G:C5	3.08	0.42
67:5:2693:G:C6	67:5:2694:G:N2	2.87	0.42
67:5:3701:C:N4	67:5:3746:A:C8	2.88	0.42
67:5:4238:G:H2'	67:5:4239:A:H8	1.84	0.42
67:5:4262:C:N3	67:5:4263:C:C5	2.87	0.42
67:5:4390:A:C6	67:5:4391:G:C5	3.08	0.42
67:5:4428:A:C6	67:5:4429:C:C4	3.08	0.42
67:5:4562:C:C4	67:5:4563:U:C5	3.08	0.42
67:5:4566:U:C4	67:5:4567:G:N7	2.88	0.42
69:X:149:VAL:HA	69:X:152:LYS:HB2	2.01	0.42
71:XX:3:LYS:HE2	76:9:1160:U:O4	2.19	0.42
71:XX:114:ASP:O	71:XX:116:PRO:HD3	2.20	0.42
73:8:49:G:N1	73:8:77:A:C6	2.88	0.42
76:9:123:G:C2	76:9:342:C:C2	3.08	0.42
76:9:126:G:H21	76:9:180:G:H21	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:439:A:N6	76:9:455:A:N6	2.67	0.42
76:9:487:U:C4	76:9:513:G:C6	3.08	0.42
76:9:920:A:N7	76:9:1021:U:O4	2.53	0.42
76:9:1069:U:O4	76:9:1070:A:N6	2.53	0.42
76:9:1203:G:C4	76:9:1697:A:C2	3.08	0.42
76:9:1233:G:N1	76:9:1526:G:C6	2.87	0.42
76:9:1255:G:N1	76:9:1494:U:N3	2.68	0.42
76:9:1259:A:H62	76:9:1518:C:H2'	1.85	0.42
76:9:1332:A:N6	76:9:1333:U:C5	2.88	0.42
76:9:1510:G:H2'	76:9:1511:U:O4'	2.20	0.42
76:9:1535:U:O2'	76:9:1536:G:P	2.78	0.42
76:9:1553:C:O2'	76:9:1554:C:O5'	2.37	0.42
76:9:1576:G:H2'	76:9:1577:G:O4'	2.20	0.42
76:9:1578:U:H5"	76:9:1579:A:O4'	2.20	0.42
76:9:1648:G:O2'	76:9:1649:U:OP2	2.37	0.42
76:9:1677:U:C2	76:9:1678:A:N7	2.87	0.42
76:9:1751:C:H1'	76:9:1784:G:N2	2.35	0.42
76:9:1839:U:C4	76:9:1862:G:N2	2.88	0.42
76:9:1852:C:N3	76:9:1853:C:C5	2.87	0.42
79:AA:53:ARG:HD3	79:AA:53:ARG:N	2.35	0.42
81:B:185:VAL:HG11	81:B:193:LYS:HG3	2.02	0.42
81:B:295:ASP:O	81:B:297:LYS:N	2.50	0.42
84:cc:13:ARG:CZ	84:cc:55:VAL:HG23	2.50	0.42
1:A:68:ARG:NH1	67:5:4084:G:C6	2.88	0.41
4:DD:92:ALA:C	4:DD:93:THR:HG22	2.45	0.41
5:dd:16:GLN:O	5:dd:19:ARG:O	2.37	0.41
8:EE:111:VAL:CG1	8:EE:113:ARG:NH1	2.83	0.41
13:FF:145:ARG:NE	76:9:1220:A:O3'	2.52	0.41
15:F:180:LYS:HE3	15:F:181:TYR:CZ	2.54	0.41
16:g:76:ARG:NH1	67:5:2583:C:OP2	2.52	0.41
17:BB:86:LEU:HD23	17:BB:99:ASN:O	2.20	0.41
17:BB:112:SER:HB2	80:aa:68:TYR:CZ	2.53	0.41
18:GG:25:ARG:HD2	18:GG:25:ARG:C	2.45	0.41
18:GG:45:TRP:HE3	18:GG:48:TYR:CE1	2.37	0.41
20:G:189:LEU:HA	20:G:189:LEU:HD23	1.82	0.41
22:HH:31:GLU:HG2	22:HH:37:LYS:HA	2.02	0.41
27:II:151:GLU:OE1	27:II:151:GLU:HA	2.20	0.41
28:ii:50:LYS:HA	28:ii:50:LYS:HD3	1.92	0.41
28:ii:332:VAL:CG1	28:ii:369:ILE:O	2.68	0.41
29:I:13:LYS:HE2	67:5:1867:A:OP1	2.20	0.41
29:I:164:LYS:HD3	29:I:164:LYS:HA	1.75	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:298:PRO:HG2	32:jj:306:ASN:CB	2.50	0.41
32:jj:307:MET:CE	32:jj:344:LEU:HD11	2.49	0.41
32:jj:485:LEU:HA	32:jj:489:VAL:O	2.20	0.41
38:LL:58:LYS:HG3	38:LL:59:LYS:HG3	2.02	0.41
39:M:46:ARG:HG2	39:M:46:ARG:HH11	1.85	0.41
44:NN:30:SER:HB2	44:NN:67:THR:CG2	2.50	0.41
44:NN:142:GLU:O	44:NN:145:THR:N	2.53	0.41
50:PP:22:LEU:HD22	50:PP:109:PRO:HG2	2.01	0.41
50:PP:37:TYR:OH	50:PP:86:LEU:CD2	2.68	0.41
50:PP:58:LYS:HE2	50:PP:61:ARG:HH11	1.85	0.41
50:PP:110:GLU:CB	59:SS:117:ILE:CG2	2.98	0.41
53:QQ:125:ARG:CG	76:9:1648:G:H5”	2.50	0.41
55:s:82:ILE:CG1	55:s:88:PHE:CZ	3.02	0.41
55:s:166:LYS:HD3	55:s:166:LYS:C	2.45	0.41
60:T:87:LYS:NZ	67:5:4301:U:P	2.93	0.41
64:V:42:VAL:CG1	64:V:43:LYS:N	2.83	0.41
67:5:182:G:N2	67:5:255:C:C2	2.87	0.41
67:5:450:G:C6	67:5:451:C:C4	3.08	0.41
67:5:466:A:C6	67:5:468:U:C4	3.08	0.41
67:5:1432:G:C2	67:5:1451:G:C6	3.08	0.41
67:5:1613:A:C2	67:5:1630:A:C2	3.09	0.41
67:5:1632:A:N6	67:5:1634:A:C4	2.88	0.41
67:5:1996:C:N3	67:5:2000:G:C2	2.86	0.41
67:5:2007:G:N1	67:5:2008:U:C6	2.88	0.41
67:5:2069:A:C6	67:5:2071:A:C4	3.08	0.41
67:5:2285:A:C2	67:5:2286:G:C5	3.08	0.41
67:5:2427:G:C5	67:5:2429:A:N7	2.88	0.41
67:5:2448:G:O6	67:5:2511:A:C8	2.73	0.41
67:5:2545:U:OP2	67:5:2546:G:C8	2.73	0.41
67:5:2610:G:C2	67:5:2611:A:C5	3.07	0.41
67:5:4199:C:H2’	67:5:4200:G:H5’	2.02	0.41
67:5:4231:C:C2	67:5:4331:G:N2	2.88	0.41
67:5:4303:C:O2	67:5:4303:C:O4’	2.34	0.41
67:5:4592:C:H2’	67:5:4593:C:H6	1.84	0.41
67:5:4594:U:N3	67:5:4617:G:C2	2.88	0.41
67:5:4638:U:C6	67:5:4639:G:N2	2.88	0.41
67:5:4898:G:C2	67:5:4899:G:N7	2.88	0.41
70:7:113:G:H2’	70:7:114:U:H6	1.85	0.41
70:7:116:G:C6	70:7:117:G:N7	2.88	0.41
73:8:27:U:C2	73:8:28:C:C5	3.08	0.41
73:8:49:G:C6	73:8:77:A:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Z:33:THR:O	75:Z:36:ARG:C	2.63	0.41
76:9:973:C:C4	76:9:974:C:C4	3.07	0.41
76:9:975:G:N1	76:9:976:G:C5	2.88	0.41
76:9:990:A:N6	76:9:992:A:C2	2.88	0.41
76:9:1010:G:H2'	76:9:1011:A:C8	2.55	0.41
76:9:1109:C:H2'	76:9:1110:G:H5'	2.01	0.41
76:9:1116:C:O2'	76:9:1117:C:O2	2.38	0.41
76:9:1317:C:C2	76:9:1318:G:C8	3.08	0.41
76:9:1480:A:N1	76:9:1481:G:C5	2.88	0.41
76:9:1534:C:H2'	76:9:1599:U:C5	2.55	0.41
76:9:1597:C:H4'	76:9:1603:G:O6	2.19	0.41
76:9:1743:G:N2	76:9:1791:A:H62	2.17	0.41
78:a:7:LYS:HG2	78:a:11:LEU:HD11	2.02	0.41
80:aa:50:VAL:O	80:aa:54:SER:CB	2.68	0.41
3:d:93:ASN:ND2	3:d:100:ASN:O	2.46	0.41
4:DD:157:MET:CE	4:DD:189:MET:HB2	2.49	0.41
5:dd:38:MET:HE2	5:dd:43:PHE:CA	2.51	0.41
6:D:262:LYS:O	6:D:263:LYS:HB2	2.20	0.41
9:ee:81:ARG:NE	76:9:615:C:O3'	2.43	0.41
13:FF:72:LEU:HB2	13:FF:151:ILE:HD11	2.01	0.41
13:FF:145:ARG:HH21	76:9:1221:G:P	2.43	0.41
17:BB:34:LYS:HG2	17:BB:95:ASN:OD1	2.20	0.41
17:BB:36:PRO:HA	17:BB:42:ARG:NH1	2.35	0.41
17:BB:92:GLN:CG	17:BB:229:MET:HE1	2.50	0.41
18:GG:143:LYS:CD	76:9:146:G:P	3.09	0.41
20:G:87:LYS:HD2	67:5:4129:G:O2'	2.20	0.41
20:G:255:VAL:CG1	20:G:256:ALA:N	2.83	0.41
21:h:107:GLN:O	21:h:111:GLU:HG3	2.20	0.41
22:HH:64:VAL:HG13	22:HH:65:PRO:HD2	2.02	0.41
25:H:107:GLU:O	25:H:108:ASN:C	2.63	0.41
28:ii:30:ASN:HB3	28:ii:101:VAL:HG11	2.02	0.41
28:ii:280:PHE:HE1	28:ii:396:SER:HB2	1.84	0.41
28:ii:291:PHE:HE2	32:jj:541:LYS:CE	2.33	0.41
28:ii:424:TYR:HD1	67:5:2009:A:N6	2.18	0.41
29:I:56:GLU:HG2	29:I:58:GLU:HG2	2.02	0.41
31:JJ:109:ARG:O	31:JJ:113:GLN:HG2	2.20	0.41
31:JJ:173:VAL:HG21	76:9:561:A:C6	2.55	0.41
32:jj:244:LEU:HD23	32:jj:244:LEU:HA	1.95	0.41
38:LL:112:HIS:HB3	38:LL:141:ASN:ND2	2.35	0.41
40:m:51:ILE:HG23	40:m:52:ILE:N	2.34	0.41
41:MM:38:ALA:O	41:MM:42:LEU:CD1	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:N:85:VAL:HG23	67:5:43:U:OP1	2.20	0.41
43:n:2:ARG:HH21	76:9:1842:C:P	2.43	0.41
43:n:2:ARG:HH22	76:9:1841:C:H3'	1.85	0.41
50:PP:18:ARG:CZ	59:SS:88:LYS:O	2.68	0.41
52:r:31:ASN:OD1	52:r:40:TYR:O	2.38	0.41
53:QQ:37:ARG:NH1	53:QQ:41:MET:HE1	2.35	0.41
53:QQ:112:LEU:HD11	53:QQ:119:LEU:HG	2.03	0.41
53:QQ:112:LEU:HD11	53:QQ:119:LEU:CB	2.50	0.41
56:RR:25:GLY:C	56:RR:31:ASN:OD1	2.63	0.41
56:RR:78:ARG:HH21	79:AA:85:ARG:HB2	1.85	0.41
57:S:30:MET:HE1	57:S:47:PHE:HD1	1.85	0.41
63:UU:69:PRO:CG	76:9:1335:G:N2	2.83	0.41
66:W:117:LYS:O	76:9:323:C:C5	2.73	0.41
67:5:32:G:H8	67:5:32:G:O5'	2.03	0.41
67:5:92:C:N3	78:a:55:LYS:HE3	2.34	0.41
67:5:291:U:O2	67:5:297:U:C2	2.73	0.41
67:5:346:G:N2	73:8:29:G:C4	2.89	0.41
67:5:980:U:C5	67:5:981:C:H5	2.38	0.41
67:5:1174:G:N1	67:5:1175:A:C5	2.89	0.41
67:5:1329:G:N2	67:5:3865:A:H1'	2.35	0.41
67:5:1340:C:N3	67:5:1341:U:C5	2.89	0.41
67:5:1878:G:N1	67:5:1879:C:C4	2.89	0.41
67:5:2316:G:C2	67:5:2324:C:N3	2.88	0.41
67:5:2475:G:C4	69:X:53:ARG:NH1	2.88	0.41
67:5:2515:G:C6	67:5:2516:G:C4	3.07	0.41
67:5:2813:A:N6	67:5:2815:A:C6	2.88	0.41
67:5:3638:G:N2	67:5:3639:U:H1'	2.34	0.41
67:5:3711:A:N3	67:5:3713:U:C5	2.87	0.41
67:5:3871:A:C6	67:5:3885:G:N1	2.88	0.41
67:5:4361:U:N3	67:5:4362:A:C8	2.88	0.41
67:5:4565:C:C2	67:5:4566:U:C6	3.07	0.41
76:9:15:U:C4	76:9:16:G:C4	3.08	0.41
76:9:140:U:O2'	76:9:143:U:OP1	2.36	0.41
76:9:329:G:N2	76:9:330:G:O6	2.53	0.41
76:9:798:G:O3'	76:9:800:U:P	2.78	0.41
76:9:1106:C:N3	76:9:1107:G:N7	2.67	0.41
76:9:1276:A:H62	76:9:1321:G:H21	1.68	0.41
76:9:1365:G:N3	76:9:1366:G:C8	2.88	0.41
76:9:1456:G:C2	76:9:1471:C:O2	2.74	0.41
76:9:1476:A:H4'	76:9:1477:U:OP2	2.21	0.41
76:9:1480:A:C6	76:9:1481:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1831:A:C2'	76:9:1832:A:H5'	2.49	0.41
79:AA:159:ILE:HG23	79:AA:159:ILE:O	2.19	0.41
81:B:35:ASP:OD1	81:B:193:LYS:NZ	2.53	0.41
2:C:5:ARG:HH11	67:5:491:G:P	2.43	0.41
2:C:8:ILE:HD12	2:C:149:GLU:CD	2.44	0.41
2:C:124:ILE:HD11	2:C:237:ILE:HD11	2.01	0.41
2:C:322:LEU:HD23	2:C:326:LEU:HG	2.03	0.41
4:DD:96:LEU:HD11	4:DD:131:ALA:CB	2.50	0.41
4:DD:183:GLY:CA	76:9:1334:G:O2'	2.69	0.41
7:e:8:VAL:HG22	7:e:10:PRO:HD3	2.01	0.41
13:FF:100:ILE:HG13	13:FF:174:ALA:CB	2.50	0.41
13:FF:167:LYS:CA	77:ZZ:71:ALA:HB1	2.50	0.41
15:F:191:HIS:O	15:F:195:THR:OG1	2.32	0.41
18:GG:15:LEU:HD21	76:9:154:U:C2'	2.50	0.41
18:GG:127:THR:HG23	18:GG:127:THR:O	2.20	0.41
19:gg:172:LYS:HD2	19:gg:193:GLY:N	2.36	0.41
19:gg:204:GLY:O	19:gg:221:LEU:HB2	2.19	0.41
22:HH:103:LYS:CG	22:HH:104:PRO:HD2	2.50	0.41
23:hh:50:G:C5	23:hh:51:A:N7	2.88	0.41
28:ii:15:TRP:NE1	28:ii:324:GLU:O	2.54	0.41
28:ii:291:PHE:HE2	32:jj:541:LYS:HE3	1.84	0.41
30:j:59:THR:O	30:j:64:MET:SD	2.79	0.41
32:jj:339:ARG:HH21	32:jj:539:GLU:HB2	1.83	0.41
32:jj:434:ARG:O	32:jj:435:SER:CB	2.66	0.41
32:jj:534:GLN:HG3	32:jj:592:ILE:HD13	2.01	0.41
38:LL:42:LEU:HD21	76:9:291:G:C4	2.55	0.41
41:MM:52:LEU:HD22	41:MM:65:VAL:HG13	2.01	0.41
43:n:12:ARG:NH2	76:9:1848:U:O4	2.46	0.41
43:n:23:ARG:HH22	67:5:3782:C:P	2.42	0.41
45:O:180:GLN:NE2	45:O:184:ASN:OD1	2.53	0.41
47:OO:59:GLY:HA3	76:9:957:A:OP2	2.19	0.41
58:t:55:GLY:CA	58:t:90:ARG:O	2.67	0.41
58:t:130:LYS:HB2	67:5:1994:C:H4'	2.03	0.41
60:T:12:ARG:HD3	60:T:13:TYR:CE1	2.55	0.41
61:TT:105:GLN:CD	76:9:1564:C:H5'	2.44	0.41
63:UU:71:GLY:CA	76:9:1255:G:O4'	2.68	0.41
67:5:63:G:N2	67:5:333:U:C2	2.88	0.41
67:5:108:A:N3	67:5:334:A:N6	2.68	0.41
67:5:127:G:C6	67:5:128:C:N4	2.88	0.41
67:5:475:G:N2	67:5:476:G:N3	2.68	0.41
67:5:966:A:N6	67:5:2096:G:OP2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1090:G:C5	67:5:1091:C:C5	3.09	0.41
67:5:1388:A:C2	67:5:1389:U:C2	3.08	0.41
67:5:1466:G:C4	67:5:1467:C:C5	3.08	0.41
67:5:1738:A:C2	67:5:1739:G:C5	3.08	0.41
67:5:1912:G:C5	67:5:2057:A:N3	2.87	0.41
67:5:1967:A:N6	67:5:1968:G:C6	2.89	0.41
67:5:1980:U:O2	67:5:1982:G:H5"	2.20	0.41
67:5:2029:A:N1	67:5:2030:A:C6	2.88	0.41
67:5:4098:A:C6	67:5:4099:G:C5	3.08	0.41
67:5:4231:C:C2	67:5:4331:G:C2	3.08	0.41
67:5:4232:U:C6	67:5:4233:A:C6	3.09	0.41
67:5:4371:G:C4	67:5:4372:U:C5	3.08	0.41
67:5:4455:G:C5	67:5:4456:C:C5	3.08	0.41
67:5:4575:G:C6	67:5:5069:U:C2	3.07	0.41
67:5:4710:C:H2'	67:5:4711:C:C6	2.55	0.41
67:5:4752:U:O2	67:5:4948:C:C5	2.74	0.41
67:5:5047:C:O2	67:5:5049:G:H3'	2.20	0.41
70:7:66:G:H2'	70:7:67:C:C6	2.55	0.41
71:XX:127:ASN:O	71:XX:127:ASN:CG	2.62	0.41
74:YY:79:LEU:H	74:YY:79:LEU:HD23	1.85	0.41
76:9:96:C:C2	76:9:97:U:C5	3.08	0.41
76:9:373:G:N2	76:9:392:A:C4	2.88	0.41
76:9:600:G:N1	76:9:601:G:C5	2.89	0.41
76:9:651:U:C2	76:9:652:U:C5	3.08	0.41
76:9:1054:G:C6	76:9:1055:A:N7	2.88	0.41
76:9:1534:C:O4'	76:9:1536:G:C4	2.74	0.41
76:9:1545:A:C6	76:9:1588:A:C8	3.07	0.41
76:9:1666:C:C5	76:9:1667:U:C4	3.08	0.41
76:9:1686:G:C2	76:9:1687:C:C2	3.08	0.41
76:9:1717:C:C2	76:9:1817:G:N2	2.88	0.41
76:9:1822:A:C5	76:9:1823:A:C2	3.09	0.41
76:9:1835:A:O2'	76:9:1836:G:C5'	2.67	0.41
78:a:24:LYS:HD2	78:a:24:LYS:N	2.35	0.41
83:CC:253:PRO:HA	83:CC:256:TRP:CE2	2.55	0.41
1:A:172:GLY:O	49:p:68:ALA:HB3	2.20	0.41
4:DD:142:LEU:HG	4:DD:143:ARG:N	2.35	0.41
5:dd:48:LYS:NZ	5:dd:53:ILE:HG22	2.35	0.41
6:D:28:THR:HG23	70:7:7:G:OP2	2.20	0.41
6:D:33:ARG:CZ	70:7:7:G:H4'	2.49	0.41
8:EE:66:MET:O	8:EE:66:MET:HG3	2.21	0.41
11:E:165:VAL:HG11	11:E:178:VAL:CG2	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:FF:48:TYR:O	13:FF:49:LEU:HD22	2.20	0.41
16:g:53:LEU:N	16:g:53:LEU:CD1	2.82	0.41
23:hh:45:A:C2'	23:hh:45:A:N3	2.83	0.41
24:bb:84:HIS:HB3	44:NN:25:TRP:CE3	2.55	0.41
27:II:117:TYR:CD1	27:II:156:ALA:HB2	2.54	0.41
27:II:119:LEU:HB3	27:II:120:PRO:HD2	2.02	0.41
28:ii:71:VAL:O	28:ii:75:ILE:HG13	2.20	0.41
28:ii:177:PRO:HB2	32:jj:448:TYR:HB2	2.01	0.41
29:I:48:LEU:HD22	29:I:142:LEU:HA	2.03	0.41
29:I:98:ARG:HH11	67:5:1865:G:P	2.43	0.41
32:jj:471:VAL:O	32:jj:519:CYS:N	2.34	0.41
33:J:31:ASP:OD2	33:J:31:ASP:N	2.49	0.41
45:O:156:LEU:HB3	67:5:4910:A:C6	2.55	0.41
48:P:24:VAL:HG23	48:P:144:CYS:SG	2.60	0.41
50:PP:59:ARG:NH1	76:9:1297:U:OP2	2.53	0.41
50:PP:79:HIS:HA	50:PP:97:TYR:HB2	2.02	0.41
53:QQ:16:LYS:HE3	53:QQ:17:LYS:HE3	2.01	0.41
56:RR:105:MET:O	56:RR:109:LEU:HG	2.20	0.41
63:UU:48:LEU:HD13	63:UU:93:SER:CB	2.50	0.41
63:UU:48:LEU:CD1	63:UU:91:LEU:HD22	2.50	0.41
67:5:170:C:C3'	67:5:171:U:C6	3.03	0.41
67:5:431:G:C2	67:5:3889:G:C6	3.08	0.41
67:5:932:A:C5	67:5:939:G:C6	3.08	0.41
67:5:1330:A:C4	67:5:1331:C:C5	3.08	0.41
67:5:1689:G:C5	67:5:1690:C:C5	3.09	0.41
67:5:1914:C:C2	67:5:2050:G:C2	3.08	0.41
67:5:2065:G:H2'	67:5:2066:C:O4'	2.21	0.41
67:5:2092:G:N2	67:5:2262:G:N1	2.69	0.41
67:5:2858:A:C5	67:5:2859:G:C5	3.09	0.41
67:5:3628:G:C2	67:5:3629:A:C5	3.08	0.41
67:5:3630:A:C6	67:5:3832:U:O4	2.73	0.41
67:5:3661:G:H22	67:5:3682:A:P	2.42	0.41
67:5:3771:C:C5	67:5:3772:U:O4	2.73	0.41
67:5:3779:A:C4	67:5:3816:A:N6	2.88	0.41
67:5:3891:A:C6	67:5:3892:U:C4	3.07	0.41
67:5:4111:U:N3	67:5:4112:C:N4	2.68	0.41
67:5:4743:G:C5	67:5:4958:C:C4	3.08	0.41
67:5:4873:G:H3'	67:5:4874:A:H5"	2.02	0.41
67:5:4919:G:C2	67:5:4920:C:O2	2.73	0.41
67:5:4937:C:N4	67:5:4939:C:C2	2.88	0.41
67:5:4967:A:C6	67:5:4968:A:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:5051:C:C2'	67:5:5052:C:O5'	2.68	0.41
67:5:5056:A:C2	67:5:5057:C:C2	3.08	0.41
68:WW:55:ASP:C	68:WW:57:ARG:N	2.78	0.41
70:7:22:A:C2	70:7:23:A:C4	3.08	0.41
70:7:106:G:C5	70:7:107:G:N7	2.88	0.41
74:YY:108:LYS:NZ	76:9:507:G:OP1	2.53	0.41
75:Z:40:HIS:NE2	75:Z:98:LYS:NZ	2.68	0.41
76:9:436:G:C6	76:9:458:A:C6	3.08	0.41
76:9:569:A:C6	76:9:570:C:C4	3.09	0.41
76:9:674:C:C4	76:9:675:U:C4	3.09	0.41
76:9:807:G:C2	76:9:808:A:C4	3.09	0.41
76:9:810:A:N1	76:9:851:C:C2	2.88	0.41
76:9:914:U:O2	76:9:914:U:O4'	2.36	0.41
76:9:992:A:C2	76:9:993:G:N7	2.89	0.41
76:9:1203:G:C4	76:9:1697:A:N1	2.89	0.41
76:9:1241:A:H2'	76:9:1242:U:O4'	2.20	0.41
76:9:1352:G:C2	76:9:1353:A:C8	3.08	0.41
76:9:1407:U:O2	76:9:1439:A:C2	2.73	0.41
76:9:1544:C:N4	76:9:1588:A:N7	2.68	0.41
76:9:1646:C:C2'	76:9:1647:A:OP2	2.69	0.41
77:ZZ:69:THR:HB	77:ZZ:70:PRO:HD2	2.03	0.41
82:c:22:MET:HE1	82:c:27:TYR:CG	2.55	0.41
4:DD:157:MET:HE2	4:DD:157:MET:HB2	1.94	0.41
7:e:106:LYS:HG3	7:e:107:ASN:OD1	2.20	0.41
8:EE:115:THR:O	8:EE:119:ALA:CB	2.68	0.41
13:FF:145:ARG:CZ	13:FF:149:GLN:HE21	2.34	0.41
16:g:31:VAL:HG22	16:g:32:TYR:N	2.36	0.41
18:GG:55:GLY:N	18:GG:109:LEU:HD23	2.36	0.41
19:gg:42:MET:HB3	19:gg:57:ARG:HB3	2.03	0.41
19:gg:159:ASN:HD21	19:gg:204:GLY:HA3	1.84	0.41
21:h:59:THR:O	21:h:63:GLN:HG2	2.21	0.41
25:H:16:VAL:HG12	25:H:17:ASP:N	2.34	0.41
28:ii:133:THR:HG22	28:ii:136:LEU:HD23	2.02	0.41
28:ii:229:SER:O	28:ii:232:PHE:CD2	2.72	0.41
28:ii:252:LYS:NZ	28:ii:271:SER:HA	2.35	0.41
28:ii:257:SER:O	28:ii:258:TYR:CG	2.74	0.41
31:JJ:163:SER:OG	31:JJ:166:GLY:HA3	2.19	0.41
32:jj:308:ILE:HG21	32:jj:553:HIS:CB	2.51	0.41
32:jj:350:VAL:HG11	32:jj:353:LEU:HA	2.02	0.41
32:jj:443:PRO:HA	32:jj:517:ILE:CG2	2.50	0.41
32:jj:554:ILE:HD13	32:jj:615:PHE:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:L:89:LYS:O	36:L:93:THR:HG23	2.20	0.41
38:LL:134:LEU:O	76:9:384:U:H4'	2.20	0.41
41:MM:33:ARG:CZ	41:MM:91:LEU:HD21	2.49	0.41
48:P:36:ILE:HA	48:P:39:MET:HE2	2.02	0.41
50:PP:94:VAL:HG11	50:PP:116:LEU:HD22	2.03	0.41
50:PP:98:ASN:OD1	50:PP:120:SER:CB	2.69	0.41
50:PP:114:HIS:NE2	59:SS:117:ILE:HD13	2.35	0.41
52:r:56:ASP:OD2	52:r:56:ASP:N	2.52	0.41
54:R:134:ASN:O	54:R:137:ILE:HG22	2.20	0.41
58:t:114:ARG:O	58:t:118:HIS:CD2	2.74	0.41
59:SS:36:VAL:HB	59:SS:71:MET:HE3	2.02	0.41
59:SS:137:LYS:HG3	76:9:1521:C:C4	2.56	0.41
63:UU:48:LEU:HD13	63:UU:93:SER:OG	2.21	0.41
64:V:123:LYS:O	64:V:123:LYS:HD2	2.21	0.41
67:5:247:G:N1	67:5:248:C:C4	2.88	0.41
67:5:470:A:C5	67:5:471:A:C8	3.08	0.41
67:5:475:G:C6	67:5:680:G:N1	2.89	0.41
67:5:737:C:N3	67:5:927:G:N1	2.69	0.41
67:5:1513:U:H2'	67:5:1514:U:O4'	2.20	0.41
67:5:1842:G:N2	67:5:1843:A:N3	2.69	0.41
67:5:1878:G:C2	67:5:1879:C:C6	3.09	0.41
67:5:1916:G:OP2	67:5:1917:A:OP2	2.37	0.41
67:5:1976:G:H1'	67:5:2002:A:H62	1.86	0.41
67:5:1998:A:H1'	67:5:2019:C:O2'	2.19	0.41
67:5:2550:G:N2	67:5:2770:C:C4	2.89	0.41
67:5:2655:C:N3	67:5:2656:U:C5	2.88	0.41
67:5:3763:A:C5	67:5:3764:U:C4	3.08	0.41
67:5:3795:A:C6	67:5:3806:G:C6	3.08	0.41
67:5:4135:G:C6	67:5:4150:G:C2	3.08	0.41
67:5:4311:A:C2	67:5:4312:U:C6	3.09	0.41
67:5:4534:G:C5	67:5:4553:A:C2	3.09	0.41
67:5:4538:G:C4	67:5:4539:U:C5	3.09	0.41
67:5:4543:G:O5'	67:5:4543:G:H8	2.04	0.41
67:5:4550:G:N2	67:5:4551:U:H1'	2.36	0.41
67:5:4686:G:C6	67:5:4687:A:N7	2.88	0.41
67:5:4877:G:C2	67:5:4878:C:C4	3.08	0.41
67:5:5033:G:O5'	67:5:5033:G:H8	2.04	0.41
70:7:66:G:H2'	70:7:67:C:H6	1.85	0.41
73:8:37:A:N6	73:8:103:A:N3	2.67	0.41
73:8:125:C:O2	73:8:125:C:O4'	2.37	0.41
76:9:92:A:C6	76:9:446:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:160:U:H2'	76:9:162:C:C5'	2.50	0.41
76:9:202:G:C6	76:9:203:G:C5	3.08	0.41
76:9:306:C:O2	76:9:308:G:C6	2.73	0.41
76:9:399:C:H3'	76:9:400:C:C5'	2.50	0.41
76:9:684:G:C8	76:9:920:A:N6	2.89	0.41
76:9:692:G:N1	76:9:693:A:C6	2.89	0.41
76:9:955:A:N1	76:9:972:A:C8	2.88	0.41
76:9:1057:C:O5'	76:9:1057:C:O2	2.38	0.41
76:9:1106:C:C2	76:9:1107:G:C8	3.07	0.41
76:9:1271:C:O2'	76:9:1303:C:H5'	2.20	0.41
76:9:1306:U:C4	76:9:1307:U:C2	3.09	0.41
76:9:1628:C:H2'	76:9:1629:C:C6	2.56	0.41
79:AA:81:ASN:HA	79:AA:84:GLN:HB2	2.02	0.41
80:aa:23:CYS:HB3	80:aa:28:ARG:N	2.35	0.41
81:B:57:VAL:HG22	81:B:73:VAL:HG12	2.02	0.41
4:DD:132:LYS:HZ1	4:DD:204:LEU:HD21	1.85	0.41
6:D:89:LYS:HE3	6:D:229:ASN:HB3	2.01	0.41
8:EE:241:GLY:O	8:EE:244:ILE:HD12	2.20	0.41
11:E:65:TYR:CD1	11:E:70:LEU:HB2	2.55	0.41
11:E:289:LEU:HD23	11:E:289:LEU:O	2.20	0.41
12:f:21:GLN:O	12:f:23:GLU:OE2	2.38	0.41
13:FF:20:PHE:CD1	13:FF:48:TYR:CE1	3.09	0.41
18:GG:29:GLU:HA	18:GG:101:ILE:HG23	2.02	0.41
18:GG:168:LYS:NZ	76:9:72:C:H2'	2.36	0.41
18:GG:181:THR:HG22	18:GG:184:VAL:HG23	2.02	0.41
19:gg:109:LEU:CB	19:gg:152:SER:O	2.69	0.41
20:G:109:LYS:HD3	67:5:4085:A:C4	2.56	0.41
20:G:117:GLN:NE2	73:8:151:G:O4'	2.54	0.41
22:HH:121:THR:O	22:HH:125:VAL:HG23	2.20	0.41
25:H:44:GLU:OE2	25:H:58:ASP:HB2	2.21	0.41
28:ii:13:GLU:HB3	28:ii:17:ILE:HD11	2.01	0.41
28:ii:124:LEU:HD11	28:ii:126:LEU:CD1	2.44	0.41
28:ii:314:MET:SD	67:5:2009:A:H5'	2.60	0.41
28:ii:401:GLN:HG2	32:jj:546:PRO:O	2.20	0.41
29:I:3:ARG:NH2	67:5:4431:U:P	2.93	0.41
30:j:3:LYS:HG3	30:j:4:GLY:N	2.35	0.41
31:JJ:39:ASN:HB2	76:9:642:U:OP2	2.20	0.41
32:jj:217:PHE:CD2	32:jj:294:ILE:CD1	3.03	0.41
32:jj:221:VAL:CB	32:jj:299:GLY:O	2.69	0.41
32:jj:376:LYS:HE3	32:jj:396:PHE:CE1	2.55	0.41
32:jj:394:ILE:HD13	32:jj:394:ILE:HG21	1.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:L:161:PHE:HB3	78:a:105:ARG:CZ	2.51	0.41
41:MM:52:LEU:HD13	41:MM:65:VAL:HG21	2.01	0.41
44:NN:103:GLU:O	44:NN:106:ARG:CZ	2.69	0.41
45:O:18:ARG:HB2	45:O:123:ALA:HB1	2.02	0.41
48:P:26:PHE:CD2	48:P:26:PHE:C	2.99	0.41
48:P:132:ALA:HB1	67:5:1597:G:N7	2.35	0.41
50:PP:80:LEU:HD23	50:PP:82:ASP:OD1	2.20	0.41
54:R:26:PRO:O	54:R:29:THR:OG1	2.38	0.41
55:s:123:VAL:CG1	55:s:174:LEU:HD23	2.50	0.41
56:RR:36:GLU:OE1	56:RR:47:ARG:HD2	2.20	0.41
58:t:32:ILE:HG12	58:t:64:ILE:HD13	2.01	0.41
64:V:131:ARG:O	64:V:134:SER:OG	2.37	0.41
67:5:384:A:N1	67:5:386:A:H1'	2.35	0.41
67:5:922(A):G:C6	67:5:922(B):C:C4	3.08	0.41
67:5:1383:G:C6	67:5:1384:C:C4	3.09	0.41
67:5:1406:G:N1	67:5:1412:G:C2	2.89	0.41
67:5:1553:A:N7	67:5:1575:A:C4	2.88	0.41
67:5:1570:G:C2	67:5:1571:G:C8	3.09	0.41
67:5:1588:U:O4	67:5:1589:C:N4	2.53	0.41
67:5:1730:U:N3	67:5:1731:C:C5	2.89	0.41
67:5:1733:G:C4	67:5:4214:A:H2	2.37	0.41
67:5:1800:U:C2	67:5:1801:A:C8	3.08	0.41
67:5:1928:C:C4	67:5:2054:U:O2	2.73	0.41
67:5:1990:A:C2	67:5:1991:A:H1'	2.55	0.41
67:5:2465:C:H2'	67:5:2466:G:O4'	2.21	0.41
67:5:2617:G:C2	67:5:2618:G:N9	2.89	0.41
67:5:2667:C:C2	67:5:2668:G:C8	3.09	0.41
67:5:2762:G:N2	67:5:2764:A:C2	2.88	0.41
67:5:2847:G:N2	67:5:2850:A:H62	2.19	0.41
67:5:3783:A:N7	67:5:3787:G:C2	2.88	0.41
67:5:4074:C:N3	67:5:4075:U:C5	2.89	0.41
67:5:4148:C:OP1	75:Z:59:LYS:HE3	2.21	0.41
67:5:4304:A:N1	67:5:4306:U:C2	2.89	0.41
67:5:4568:A:H4'	81:B:21:ARG:HH22	1.85	0.41
67:5:4664:A:C6	67:5:4665:A:C5	3.08	0.41
67:5:4950:U:O2'	67:5:4951:G:OP1	2.36	0.41
68:WW:15:ASN:O	68:WW:18:GLU:HG3	2.20	0.41
69:X:65:ALA:HB1	69:X:66:PRO:HD2	2.02	0.41
71:XX:128:VAL:HG11	71:XX:133:LEU:HD21	2.02	0.41
73:8:56:G:C5	73:8:57:C:C5	3.08	0.41
74:YY:40:ILE:HD13	74:YY:40:ILE:HA	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:74:G:O6	76:9:78:C:OP1	2.38	0.41
76:9:144:U:C5	76:9:313:A:C4	3.09	0.41
76:9:659:G:H2'	76:9:659:G:N3	2.35	0.41
76:9:877:C:H2'	76:9:878:G:O4'	2.20	0.41
76:9:1253:A:C5	76:9:1666:C:C5'	3.03	0.41
76:9:1277:C:C2	76:9:1278:A:N7	2.88	0.41
76:9:1462:U:C3'	76:9:1463:U:H5'	2.50	0.41
76:9:1520:G:H3'	76:9:1521:C:C5	2.55	0.41
76:9:1569:A:O2'	76:9:1615:U:H1'	2.20	0.41
76:9:1645:C:C4'	76:9:1650:A:H4'	2.50	0.41
76:9:1831:A:N3	76:9:1832:A:C8	2.89	0.41
76:9:1846:G:C6	76:9:1847:G:N7	2.89	0.41
79:AA:21:ALA:HB1	79:AA:170:SER:HB3	2.02	0.41
81:B:332:MET:HE1	81:B:365:LEU:HD11	2.02	0.41
1:A:41:ILE:CG2	1:A:90:CYS:SG	3.09	0.41
1:A:116:LEU:HD12	1:A:117:GLU:H	1.86	0.41
3:d:107:THR:HG22	3:d:108:TYR:N	2.35	0.41
4:DD:24:PHE:CD1	35:KK:68:TYR:CD1	3.08	0.41
4:DD:49:ILE:CG2	4:DD:89:GLU:HB2	2.51	0.41
4:DD:173:ARG:CB	4:DD:184:ILE:HD12	2.49	0.41
5:dd:36:LEU:HA	5:dd:36:LEU:HD12	1.93	0.41
5:dd:38:MET:HE2	5:dd:43:PHE:HA	2.01	0.41
6:D:146:LEU:HD23	67:5:4323:A:C2	2.55	0.41
7:e:108:ARG:NH2	7:e:128:ARG:NH1	2.69	0.41
11:E:72:LYS:CE	67:5:983:C:O2	2.67	0.41
13:FF:35:LEU:HB2	13:FF:39:ILE:CD1	2.51	0.41
14:ff:138:ARG:HB2	14:ff:148:TYR:O	2.21	0.41
15:F:30:LYS:C	15:F:30:LYS:HD2	2.46	0.41
15:F:175:ALA:HB1	67:5:2102:G:C8	2.56	0.41
18:GG:79:LYS:NZ	18:GG:88:ARG:O	2.46	0.41
18:GG:105:ASN:O	18:GG:106:LEU:HG	2.21	0.41
18:GG:179:LEU:HD12	18:GG:180:VAL:N	2.35	0.41
19:gg:22:ALA:CB	19:gg:71:ILE:HG13	2.50	0.41
19:gg:102:VAL:HG11	76:9:1398:G:O3'	2.19	0.41
19:gg:178:ASN:O	19:gg:182:CYS:N	2.45	0.41
22:HH:60:ILE:HG23	22:HH:92:VAL:HA	2.02	0.41
27:II:201:LYS:O	27:II:205:ARG:CD	2.67	0.41
28:ii:37:LEU:O	28:ii:95:VAL:HB	2.20	0.41
28:ii:149:ILE:O	28:ii:227:ALA:HB3	2.21	0.41
28:ii:180:HIS:O	28:ii:182:ARG:N	2.54	0.41
28:ii:261:GLU:HA	28:ii:264:PHE:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:259:TRP:O	32:jj:263:TRP:CD1	2.74	0.41
32:jj:354:ILE:HD13	32:jj:422:PHE:HE1	1.86	0.41
32:jj:569:LEU:HD21	32:jj:585:VAL:HG23	2.03	0.41
33:J:127:GLY:O	67:5:4251:A:N6	2.54	0.41
35:KK:15:LEU:CG	35:KK:79:LEU:HD11	2.51	0.41
38:LL:22:ARG:O	38:LL:23:VAL:C	2.64	0.41
38:LL:120:VAL:HG12	38:LL:145:VAL:HG11	2.02	0.41
45:O:124:LEU:HA	45:O:124:LEU:HD12	1.89	0.41
47:OO:66:ARG:HA	76:9:960:U:O4	2.20	0.41
48:P:36:ILE:HD13	48:P:36:ILE:HG21	1.77	0.41
52:r:61:VAL:O	52:r:61:VAL:HG23	2.20	0.41
53:QQ:9:SER:HA	53:QQ:25:CYS:O	2.21	0.41
55:s:193:PHE:CZ	55:s:196:GLY:HA2	2.55	0.41
58:t:65:GLN:HA	58:t:65:GLN:OE1	2.21	0.41
59:SS:120:HIS:HA	59:SS:123:LEU:HD12	2.02	0.41
60:T:158:PHE:CE2	60:T:160:ALA:O	2.73	0.41
67:5:369:G:N2	67:5:373:G:C5	2.88	0.41
67:5:417:G:N2	73:8:16:G:O2'	2.54	0.41
67:5:1388:A:C4	67:5:1396:G:N2	2.88	0.41
67:5:1434:G:C6	67:5:1435:G:C5	3.08	0.41
67:5:1466:G:C6	67:5:1467:C:C5	3.08	0.41
67:5:1520:C:C2	67:5:1521:C:C5	3.09	0.41
67:5:1613:A:C2	67:5:1630:A:N1	2.89	0.41
67:5:1833:G:C2	67:5:1835:G:C6	3.08	0.41
67:5:2266:C:O2'	67:5:2267:U:P	2.78	0.41
67:5:2314:G:N2	67:5:2315:G:C4	2.88	0.41
67:5:2482:C:C4	67:5:2483:G:N7	2.89	0.41
67:5:2598:A:N6	67:5:2599:G:C2	2.88	0.41
67:5:2695:A:C6	67:5:2697:A:C5	3.09	0.41
67:5:2750:G:N2	67:5:2751:G:N3	2.68	0.41
67:5:3628:G:N1	67:5:3629:A:C5	2.88	0.41
67:5:3753:G:C2	67:5:3754:G:C4	3.09	0.41
67:5:3888:G:O2'	67:5:3889:G:P	2.78	0.41
67:5:3942:A:N1	67:5:4072:C:C4	2.88	0.41
67:5:4152:G:N2	67:5:4153:C:C2	2.88	0.41
67:5:4274:A:H2'	67:5:4275:G:H8	1.85	0.41
67:5:4368:G:C6	67:5:4369:A:C5	3.08	0.41
67:5:4371:G:C5	67:5:4372:U:C4	3.09	0.41
67:5:4759:C:H2'	67:5:4760:G:C8	2.55	0.41
67:5:4884:G:C5	67:5:4885:U:C5	3.09	0.41
67:5:4928:C:O2	67:5:4928:C:O4'	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:5012:G:C2	67:5:5014:A:N7	2.88	0.41
67:5:5043:A:C6	67:5:5044:A:C5	3.09	0.41
73:8:71:A:N9	73:8:88:A:C6	2.89	0.41
73:8:95:A:C6	73:8:96:C:C4	3.09	0.41
75:Z:32:GLY:HA3	75:Z:36:ARG:O	2.21	0.41
75:Z:76:ASN:CB	75:Z:78:ASN:OD1	2.68	0.41
76:9:181:A:OP2	76:9:182:C:C3'	2.68	0.41
76:9:376:A:N1	76:9:377:G:C5	2.89	0.41
76:9:410:G:C6	76:9:411:G:N7	2.89	0.41
76:9:418:A:C5	76:9:419:G:C5	3.08	0.41
76:9:490:C:C2	76:9:491:C:C5	3.09	0.41
76:9:653:A:N6	76:9:654:A:C6	2.89	0.41
76:9:1069:U:C2	76:9:1070:A:C8	3.09	0.41
76:9:1146:C:O2'	76:9:1150:A:N1	2.44	0.41
76:9:1533:A:OP2	76:9:1600:G:N2	2.54	0.41
76:9:1545:A:H62	76:9:1588:A:H5'	1.85	0.41
76:9:1577:G:H1'	76:9:1582:C:H1'	2.03	0.41
76:9:1600:G:N2	76:9:1602:U:C4	2.88	0.41
76:9:1738:C:C2	76:9:1739:C:C5	3.07	0.41
76:9:1782:G:C4	76:9:1784:G:N7	2.88	0.41
76:9:1847:G:N1	76:9:1853:C:C4	2.89	0.41
79:AA:42:LYS:HD2	79:AA:46:ILE:HB	2.03	0.41
79:AA:183:LEU:HB3	79:AA:189:ILE:HD12	2.03	0.41
81:B:46:PHE:CD2	81:B:47:LEU:N	2.88	0.41
2:C:122:TYR:CE1	2:C:280:PRO:HB3	2.55	0.41
4:DD:9:ARG:NH1	5:dd:34:TYR:HA	2.36	0.41
6:D:163:LEU:O	6:D:167:VAL:HG23	2.21	0.41
6:D:205:ALA:O	6:D:208:MET:HG3	2.20	0.41
6:D:205:ALA:HA	6:D:208:MET:HG2	2.03	0.41
10:b:57:MET:CE	67:5:1828:C:H1'	2.51	0.41
13:FF:140:ASP:CB	84:cc:44:ARG:NH1	2.83	0.41
13:FF:140:ASP:H	84:cc:44:ARG:NH1	2.18	0.41
17:BB:32:ASP:O	17:BB:95:ASN:CA	2.69	0.41
18:GG:77:LEU:O	18:GG:92:ARG:HG3	2.20	0.41
18:GG:133:LEU:HB2	76:9:169:U:H5'	2.03	0.41
18:GG:173:ALA:HB3	76:9:78:C:H5'	2.03	0.41
19:gg:128:THR:CG2	19:gg:143:GLN:HG2	2.51	0.41
19:gg:168:CYS:HB3	19:gg:195:LEU:HB2	2.02	0.41
19:gg:238:ALA:HB1	19:gg:289:LEU:CD2	2.51	0.41
20:G:260:VAL:HG21	20:G:268:LEU:HD13	2.03	0.41
20:G:304:ALA:O	20:G:308:LYS:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:h:102:LEU:HD23	21:h:102:LEU:HA	1.93	0.41
22:HH:82:GLU:O	22:HH:85:LYS:HG2	2.21	0.41
25:H:106:GLN:OE1	25:H:111:LEU:HD22	2.21	0.41
28:ii:166:ARG:HG2	28:ii:166:ARG:O	2.20	0.41
28:ii:215:SER:HB2	28:ii:218:LYS:O	2.21	0.41
28:ii:215:SER:HB2	28:ii:220:ASN:OD1	2.20	0.41
28:ii:224:LEU:HD22	28:ii:226:LEU:CD1	2.51	0.41
30:j:66:HIS:O	30:j:69:ILE:HG12	2.21	0.41
31:JJ:164:PRO:HB3	31:JJ:171:GLY:N	2.36	0.41
32:jj:232:ILE:HG21	32:jj:423:ILE:HD11	2.03	0.41
32:jj:463:SER:O	32:jj:464:ILE:CG1	2.68	0.41
33:J:110:GLN:O	33:J:127:GLY:CA	2.68	0.41
38:LL:89:ARG:NH1	38:LL:91:ASP:OD1	2.54	0.41
42:N:64:ILE:HD12	42:N:102:ALA:HB1	2.01	0.41
45:O:185:VAL:HG13	45:O:188:LYS:CD	2.51	0.41
46:o:33:LEU:HD23	46:o:33:LEU:C	2.45	0.41
53:QQ:138:ARG:NH2	76:9:1646:C:OP1	2.52	0.41
57:S:148:SER:HB3	57:S:149:LYS:HD3	2.03	0.41
62:U:99:TRP:O	62:U:115:PHE:HD2	2.03	0.41
65:VV:1:MET:N	65:VV:1:MET:SD	2.94	0.41
65:VV:2:GLN:HG3	65:VV:8:PHE:HA	2.03	0.41
67:5:33:A:C8	67:5:50:C:N4	2.88	0.41
67:5:127:G:C6	67:5:128:C:C4	3.08	0.41
67:5:376:A:C2	67:5:377:A:C8	3.08	0.41
67:5:438:G:O6	67:5:439:G:C6	2.74	0.41
67:5:504:G:N2	67:5:505:G:C4	2.89	0.41
67:5:508:G:C2	67:5:651:C:N3	2.89	0.41
67:5:1341:U:H2'	67:5:1342:A:H8	1.85	0.41
67:5:1356:U:N3	67:5:1357:C:C5	2.89	0.41
67:5:1448:G:C6	67:5:1449:C:N4	2.88	0.41
67:5:1456:C:H5"	67:5:1456:C:H6	1.85	0.41
67:5:1769:G:C6	67:5:1770:A:C4	3.09	0.41
67:5:1902:G:C6	67:5:1903:G:C5	3.09	0.41
67:5:1951:G:C6	67:5:2033:A:N1	2.88	0.41
67:5:1979:A:C2	67:5:1988:G:N1	2.89	0.41
67:5:2020:U:C2	67:5:2021:G:C8	3.08	0.41
67:5:2468:U:C5	67:5:2506:G:C8	3.09	0.41
67:5:2502:A:HO2'	67:5:2503:G:C5'	2.26	0.41
67:5:2702:C:C4	67:5:2703:G:N7	2.89	0.41
67:5:2736:G:C6	67:5:2737:C:N4	2.89	0.41
67:5:3612:C:H1'	67:5:5016:A:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:3662:A:C5	67:5:3681:G:C6	3.09	0.41
67:5:3788:C:C5	67:5:3812:C:N1	2.89	0.41
67:5:4164:C:N3	67:5:4165:C:C5	2.89	0.41
67:5:4228:G:N3	67:5:4373:G:N1	2.69	0.41
67:5:4414:A:N3	67:5:4427:G:N2	2.69	0.41
69:X:76:ILE:HD11	69:X:104:ALA:CB	2.50	0.41
69:X:119:ILE:HG13	69:X:144:TYR:CD2	2.56	0.41
70:7:23:A:N3	70:7:118:C:O2'	2.47	0.41
70:7:81:G:C2	70:7:96:U:O2	2.74	0.41
71:XX:46:HIS:HB3	71:XX:101:LEU:HD11	2.03	0.41
73:8:121:G:N1	73:8:130:C:C4	2.89	0.41
75:Z:105:ALA:HA	75:Z:108:ARG:NE	2.35	0.41
75:Z:117:LYS:HA	75:Z:120:GLU:CD	2.46	0.41
76:9:46:A:N1	76:9:99:A:C4	2.89	0.41
76:9:190:G:H22	76:9:208:G:H3'	1.86	0.41
76:9:207:G:C6	76:9:208:G:C5	3.09	0.41
76:9:599:A:C4	76:9:606:G:N2	2.88	0.41
76:9:991:G:C6	76:9:1134:G:H4'	2.56	0.41
76:9:1198:G:C2	76:9:1199:A:C5	3.08	0.41
76:9:1203:G:C5	76:9:1697:A:N1	2.89	0.41
76:9:1229:G:HO2'	76:9:1607:A:C2'	2.30	0.41
76:9:1260:A:C4	76:9:1620:A:C8	3.08	0.41
76:9:1598:G:C2	76:9:1599:U:O4	2.74	0.41
81:B:78:ILE:O	81:B:78:ILE:HG22	2.21	0.41
82:c:98:ASP:OD2	82:c:98:ASP:C	2.63	0.41
1:A:126:LEU:HD13	1:A:150:LEU:HD21	2.03	0.41
1:A:142:GLU:O	1:A:143:THR:OG1	2.36	0.41
2:C:201:ARG:HB3	2:C:201:ARG:NH1	2.35	0.41
3:d:20:VAL:HG23	3:d:20:VAL:O	2.21	0.41
3:d:93:ASN:CB	3:d:101:LYS:O	2.67	0.41
4:DD:50:ILE:C	4:DD:51:LEU:HD12	2.45	0.41
4:DD:80:PRO:HD2	4:DD:83:SER:CB	2.50	0.41
6:D:150:LEU:HD23	6:D:150:LEU:HA	1.88	0.41
6:D:212:MET:HE3	6:D:216:GLU:OE1	2.20	0.41
6:D:284:LYS:HG3	29:I:206:LEU:HD21	2.03	0.41
7:e:99:ILE:HG22	7:e:100:ALA:N	2.36	0.41
8:EE:49:ARG:HB2	8:EE:55:ALA:O	2.21	0.41
8:EE:123:LEU:HD13	8:EE:160:ILE:O	2.20	0.41
8:EE:139:LEU:HD23	8:EE:139:LEU:HA	1.96	0.41
12:f:81:SER:HB3	67:5:1918:U:OP1	2.21	0.41
13:FF:55:ARG:HH11	53:QQ:124:PRO:CD	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:FF:75:SER:OG	13:FF:152:TRP:HA	2.21	0.41
16:g:103:VAL:O	16:g:106:VAL:HB	2.21	0.41
17:BB:128:LYS:HG3	17:BB:133:TYR:O	2.21	0.41
17:BB:184:VAL:HG12	17:BB:188:LEU:CD1	2.51	0.41
18:GG:133:LEU:O	66:W:83:THR:HG21	2.20	0.41
19:gg:119:GLN:NE2	19:gg:133:ASN:HA	2.36	0.41
21:h:42:SER:HA	73:8:78:G:O2'	2.21	0.41
22:HH:52:GLU:OE2	22:HH:58:LYS:HG2	2.21	0.41
25:H:141:LYS:HG3	25:H:142:ASP:N	2.36	0.41
27:II:113:TYR:CD1	27:II:121:LEU:HD21	2.56	0.41
27:II:202:ILE:HG22	27:II:206:LYS:HD3	2.03	0.41
28:ii:15:TRP:CE2	28:ii:324:GLU:O	2.74	0.41
28:ii:144:SER:HB3	28:ii:222:ALA:HB2	2.03	0.41
28:ii:256:ILE:HD12	28:ii:259:GLY:HA2	2.02	0.41
28:ii:258:TYR:CE2	28:ii:262:ASN:CG	2.99	0.41
28:ii:413:LEU:CD1	28:ii:417:VAL:CG2	2.99	0.41
30:j:31:LYS:NZ	67:5:1532:G:OP2	2.44	0.41
31:JJ:77:LEU:HD23	31:JJ:81:LEU:HD12	2.03	0.41
32:jj:233:MET:CE	32:jj:265:LEU:HD21	2.51	0.41
32:jj:283:ALA:C	32:jj:294:ILE:HG22	2.45	0.41
32:jj:352:HIS:NE2	32:jj:425:TYR:HE2	2.18	0.41
32:jj:367:TRP:HZ3	32:jj:398:PRO:HB2	1.84	0.41
32:jj:397:MET:HE2	32:jj:420:LEU:O	2.21	0.41
32:jj:475:ASN:O	32:jj:476:LYS:HB3	2.20	0.41
33:J:128:LEU:HD12	33:J:128:LEU:C	2.45	0.41
33:J:141:ILE:HD11	70:7:55:A:C2	2.56	0.41
36:L:55:ILE:CG2	36:L:154:VAL:HG13	2.50	0.41
38:LL:135:SER:HA	76:9:384:U:H4'	2.03	0.41
38:LL:135:SER:C	76:9:384:U:O2'	2.63	0.41
40:m:68:MET:SD	40:m:97:PRO:HA	2.61	0.41
41:MM:83:LYS:HD3	41:MM:105:GLY:N	2.36	0.41
42:N:76:PRO:C	42:N:77:LYS:O	2.62	0.41
43:n:6:ARG:HB2	43:n:6:ARG:NH1	2.36	0.41
46:o:68:LEU:O	46:o:82:MET:HA	2.21	0.41
51:Q:23:ILE:HD13	51:Q:23:ILE:HG21	1.81	0.41
51:Q:168:ARG:NH2	67:5:86:U:P	2.94	0.41
53:QQ:22:VAL:HG11	53:QQ:71:ARG:HH22	1.86	0.41
53:QQ:128:GLU:CD	76:9:1649:U:H5"	2.46	0.41
53:QQ:134:GLY:N	53:QQ:141:TYR:CE1	2.89	0.41
54:R:153:LYS:HB2	54:R:153:LYS:HE2	1.93	0.41
54:R:163:ARG:HD2	76:9:871:U:O2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:s:57:LYS:HD2	67:5:1962:A:P	2.61	0.41
55:s:123:VAL:HG13	55:s:174:LEU:HD23	2.02	0.41
55:s:133:GLU:HG2	55:s:134:LYS:H	1.86	0.41
58:t:131:GLU:OE1	67:5:1973:G:H1'	2.20	0.41
60:T:24:VAL:HG12	60:T:25:VAL:N	2.36	0.41
60:T:84:ILE:HG22	60:T:85:LEU:N	2.36	0.41
61:TT:31:PRO:HG3	61:TT:102:ARG:HG3	2.03	0.41
61:TT:47:PRO:HB2	61:TT:52:TRP:CB	2.51	0.41
61:TT:123:LEU:HD21	61:TT:128:GLN:N	2.36	0.41
62:U:80:LYS:HG2	62:U:110:TYR:CE2	2.55	0.41
66:W:33:ASN:OD1	66:W:35:LYS:HB3	2.20	0.41
67:5:21:G:C6	73:8:36:G:N1	2.89	0.41
67:5:108:A:C4	67:5:334:A:N6	2.88	0.41
67:5:174:C:N4	67:5:263:G:O6	2.52	0.41
67:5:260:C:H2'	67:5:261:G:H8	1.85	0.41
67:5:321:U:N3	67:5:322:C:C5	2.89	0.41
67:5:457:G:C6	67:5:700:G:N1	2.89	0.41
67:5:487:G:C6	67:5:488:G:C5	3.08	0.41
67:5:516:C:C2	67:5:646:G:N2	2.89	0.41
67:5:517:C:H2'	67:5:518:G:H8	1.86	0.41
67:5:670:G:N3	67:5:671:G:C8	2.89	0.41
67:5:727:C:H2'	67:5:728:U:C6	2.56	0.41
67:5:751:G:H3'	67:5:752:G:OP2	2.21	0.41
67:5:985:C:N4	67:5:1070:G:O6	2.54	0.41
67:5:1067:G:C6	67:5:1068:G:N7	2.89	0.41
67:5:1173:G:H2'	67:5:1174:G:O4'	2.20	0.41
67:5:1190:C:H2'	67:5:1191:C:O4'	2.21	0.41
67:5:1333:A:C2	67:5:2354:G:C2	3.09	0.41
67:5:1516:G:C2	67:5:1518:A:C5	3.09	0.41
67:5:1531:U:N3	67:5:1532:G:N7	2.69	0.41
67:5:1532:G:C2	67:5:1623:A:C2	3.09	0.41
67:5:1554:A:N6	67:5:1573:G:N2	2.68	0.41
67:5:1604:G:N2	67:5:1605:G:N3	2.68	0.41
67:5:1651:G:C8	67:5:1651:G:O5'	2.73	0.41
67:5:1727:U:C2	67:5:1728:U:C5	3.08	0.41
67:5:1855:G:O6	67:5:1880:G:N2	2.52	0.41
67:5:1855:G:C6	67:5:1856:C:C4	3.09	0.41
67:5:2296:G:C6	67:5:2297:G:C5	3.09	0.41
67:5:2484:A:H2	67:5:2494:U:O2	2.03	0.41
67:5:2617:G:C4	67:5:2721:G:N2	2.88	0.41
67:5:2634:C:H2'	67:5:2635:U:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:2787:A:C2	67:5:2791:C:C4	3.09	0.41
67:5:3600:G:N1	67:5:3601:C:C4	2.89	0.41
67:5:3622:C:C4	67:5:3623:C:N4	2.89	0.41
67:5:3674:G:C2	67:5:3675:G:N9	2.88	0.41
67:5:3701:C:H1'	67:5:3745:U:O4	2.21	0.41
67:5:3748:A:C2	67:5:3749:C:C5	3.08	0.41
67:5:3779:A:N3	67:5:3816:A:C6	2.89	0.41
67:5:3878:C:N4	67:5:4518:A:C8	2.88	0.41
67:5:3888:G:HO2'	67:5:3889:G:P	2.44	0.41
67:5:4085:A:C6	67:5:4164:C:C5	3.08	0.41
67:5:4167:G:C2	67:5:4168:G:C4	3.09	0.41
67:5:4191:G:N3	67:5:4374:U:C2	2.89	0.41
67:5:4347:G:N2	67:5:4366:A:C4	2.89	0.41
67:5:4418:G:C4	67:5:4421:C:N4	2.89	0.41
67:5:4419:U:C5	67:5:4420:U:C5	3.09	0.41
67:5:4472:G:C2	67:5:4484:A:C2	3.09	0.41
67:5:4614:G:N1	67:5:4615:C:C4	2.88	0.41
67:5:4644:G:N2	67:5:4654:C:C2	2.88	0.41
67:5:4667:C:OP1	81:B:224:LYS:NZ	2.50	0.41
67:5:4669:A:C6	67:5:4672:A:C8	3.07	0.41
67:5:4737:G:C2	67:5:4738:C:C2	3.08	0.41
67:5:4759:C:H2'	67:5:4760:G:O4'	2.21	0.41
67:5:4860:G:N2	67:5:4861:G:C4	2.89	0.41
67:5:4866:C:C2	67:5:4867:G:C8	3.08	0.41
67:5:4967:A:N1	67:5:4968:A:C5	2.89	0.41
67:5:5008:C:C4	67:5:5009:G:C5	3.09	0.41
68:WW:46:TYR:HB3	68:WW:69:LEU:HD21	2.03	0.41
70:7:71:G:C2	70:7:105:C:C2	3.09	0.41
70:7:113:G:C2	70:7:114:U:C4	3.08	0.41
72:Y:103:LYS:C	72:Y:104:VAL:CG2	2.93	0.41
73:8:71:A:C2	73:8:88:A:C8	3.09	0.41
73:8:109:C:O2'	73:8:110:U:OP2	2.39	0.41
73:8:146:U:N3	73:8:147:G:N7	2.68	0.41
73:8:154:G:C5	73:8:155:C:C5	3.09	0.41
74:YY:93:ARG:HH21	76:9:575:A:P	2.44	0.41
75:Z:25:ILE:CG2	75:Z:26:VAL:N	2.84	0.41
75:Z:72:VAL:O	75:Z:72:VAL:HG13	2.21	0.41
76:9:54:A:N7	76:9:451:G:N2	2.68	0.41
76:9:216:C:C2	76:9:217:A:C8	3.09	0.41
76:9:440:G:C6	76:9:441:C:C4	3.09	0.41
76:9:464:A:C5'	76:9:465:A:N7	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:901:G:C2	76:9:902:G:C8	3.09	0.41
76:9:942:G:H2'	76:9:943:U:C6	2.55	0.41
76:9:1191:C:N3	76:9:1192:U:C5	2.89	0.41
76:9:1255:G:H5"	76:9:1256:G:H4'	2.03	0.41
76:9:1255:G:OP2	76:9:1257:G:C2'	2.69	0.41
76:9:1259:A:N6	76:9:1518:C:H3'	2.36	0.41
76:9:1361:G:C5	76:9:1362:U:C4	3.09	0.41
76:9:1559:C:C4	76:9:1560:U:C2	3.09	0.41
76:9:1654:G:N2	76:9:1671:G:C4	2.89	0.41
76:9:1662:U:C5	76:9:1663:A:C6	3.09	0.41
77:ZZ:82:SER:CB	77:ZZ:85:ARG:NH1	2.84	0.41
77:ZZ:102:LYS:HB3	77:ZZ:107:VAL:HG13	2.02	0.41
77:ZZ:104:ARG:HG3	77:ZZ:105:ALA:H	1.85	0.41
84:cc:45:ASN:H	84:cc:65:ALA:HB3	1.86	0.41
2:C:103:ALA:O	2:C:104:PRO:C	2.63	0.41
2:C:197:ARG:NH1	67:5:350:C:OP1	2.54	0.41
3:d:123:ASP:OD1	3:d:124:GLU:N	2.53	0.41
4:DD:116:ARG:CD	4:DD:152:PHE:CE1	3.04	0.41
4:DD:170:THR:HG22	4:DD:171:ALA:N	2.35	0.41
7:e:81:ASN:N	7:e:81:ASN:OD1	2.52	0.41
8:EE:176:ASP:OD2	8:EE:177:THR:N	2.48	0.41
11:E:52:LEU:HD13	11:E:52:LEU:HA	1.90	0.41
14:ff:143:LYS:N	76:9:1309:C:O2'	2.54	0.41
15:F:45:ARG:NH2	67:5:2102:G:H5'	2.36	0.41
15:F:198:LYS:HB2	15:F:199:HIS:CD2	2.56	0.41
17:BB:29:ASP:OD2	17:BB:29:ASP:O	2.38	0.41
17:BB:217:MET:C	17:BB:218:LEU:HD23	2.45	0.41
19:gg:63:SER:HB3	76:9:1395:C:O2'	2.20	0.41
19:gg:236:ILE:HG21	19:gg:239:LEU:HD11	2.03	0.41
20:G:80:VAL:HG23	20:G:81:VAL:HG23	2.02	0.41
20:G:170:ARG:O	20:G:174:LYS:HG2	2.21	0.41
20:G:172:GLU:OE1	20:G:172:GLU:HA	2.19	0.41
27:II:36:THR:HG23	27:II:96:LEU:HB2	2.03	0.41
28:ii:200:ASN:CG	76:9:479:C:OP1	2.64	0.41
28:ii:316:ALA:O	28:ii:414:ARG:HG3	2.21	0.41
28:ii:335:CYS:SG	28:ii:336:GLN:N	2.93	0.41
30:j:79:ARG:NH1	73:8:94:G:C5	2.89	0.41
32:jj:254:LYS:HA	76:9:463:C:H5'	2.03	0.41
32:jj:332:PHE:HE2	32:jj:379:LEU:HD23	1.86	0.41
32:jj:361:ASP:OD2	32:jj:402:LEU:HB2	2.21	0.41
32:jj:531:PHE:CZ	32:jj:552:LEU:HD21	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:618:ARG:N	32:jj:624:ILE:HD13	2.36	0.41
36:L:22:VAL:O	36:L:22:VAL:HG23	2.20	0.41
45:O:33:VAL:HG12	45:O:34:VAL:N	2.36	0.41
48:P:6:LEU:HD12	48:P:6:LEU:HA	1.91	0.41
48:P:78:TRP:HD1	48:P:79:THR:N	2.19	0.41
49:p:85:ARG:O	49:p:89:LEU:CD1	2.69	0.41
55:s:48:ARG:HG3	55:s:49:GLY:H	1.86	0.41
55:s:63:LYS:HD3	67:5:1960:A:O5'	2.20	0.41
59:SS:39:ARG:NH1	61:TT:38:LYS:HB2	2.36	0.41
60:T:30:TYR:OH	60:T:94:GLU:OE2	2.28	0.41
60:T:125:TRP:CE2	67:5:1834:U:C5	3.08	0.41
63:UU:69:PRO:HG2	76:9:1335:G:N2	2.35	0.41
64:V:20:LEU:HD21	64:V:101:ASN:OD1	2.20	0.41
67:5:300:A:C2	67:5:301:G:C5	3.09	0.41
67:5:364:G:HO2'	67:5:365:U:P	2.44	0.41
67:5:494:C:H42	67:5:661:C:N4	2.19	0.41
67:5:1169:G:N2	67:5:1193:C:H1'	2.36	0.41
67:5:1284:G:C4	67:5:1285:U:C5	3.09	0.41
67:5:1828:C:N3	67:5:1829:G:N7	2.69	0.41
67:5:1941:A:C2	67:5:1942:A:N7	2.89	0.41
67:5:1956:A:C2	67:5:2028:C:N3	2.89	0.41
67:5:2316:G:N2	67:5:2324:C:C2	2.89	0.41
67:5:2624:G:C4	67:5:2625:U:C5	3.09	0.41
67:5:2822:G:N2	67:5:2823:G:C4	2.89	0.41
67:5:3668:C:C2	67:5:3675:G:N2	2.89	0.41
67:5:3674:G:C2	67:5:3675:G:C8	3.09	0.41
67:5:3922:G:OP2	67:5:4183:G:N2	2.54	0.41
67:5:4091:G:N1	67:5:4092:G:C5	2.89	0.41
67:5:4357:G:C2	67:5:4358:U:C5	3.09	0.41
67:5:4860:G:C2	67:5:4861:G:C4	3.09	0.41
67:5:4877:G:C2	67:5:4878:C:C5	3.08	0.41
69:X:121:VAL:HG12	69:X:122:ALA:N	2.36	0.41
71:XX:37:LYS:HE3	76:9:407:G:O6	2.21	0.41
73:8:71:A:C2	73:8:88:A:N9	2.89	0.41
76:9:64:A:C4	76:9:82:G:C2	3.09	0.41
76:9:99:A:C6	76:9:100:U:C5	3.09	0.41
76:9:812:A:C2	76:9:813:A:H1'	2.55	0.41
76:9:883:U:C2	76:9:904:A:C2	3.09	0.41
76:9:1010:G:N2	76:9:1011:A:N6	2.69	0.41
76:9:1101:U:H2'	76:9:1102:G:C8	2.56	0.41
76:9:1536:G:N1	76:9:1537:A:C6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1617:G:N2	76:9:1619:A:H3'	2.36	0.41
76:9:1679:A:HO2'	76:9:1680:G:P	2.34	0.41
79:AA:208:GLU:OE1	79:AA:209:GLU:HG3	2.21	0.41
82:c:54:ALA:HA	82:c:57:LYS:CB	2.51	0.41
1:A:5:ILE:HD11	1:A:232:GLY:HA2	2.02	0.40
1:A:102:LEU:N	1:A:102:LEU:HD23	2.35	0.40
1:A:116:LEU:HD12	1:A:117:GLU:N	2.36	0.40
4:DD:96:LEU:CD2	4:DD:191:PRO:CD	2.95	0.40
5:dd:3:HIS:HE1	5:dd:7:TYR:CD1	2.39	0.40
10:b:28:ARG:NH2	10:b:29:TYR:CE2	2.89	0.40
11:E:115:MET:HB2	11:E:116:PRO:HD2	2.03	0.40
13:FF:41:VAL:HG22	13:FF:41:VAL:O	2.21	0.40
13:FF:55:ARG:O	13:FF:62:ARG:HG2	2.21	0.40
15:F:169:THR:O	15:F:169:THR:HG22	2.21	0.40
17:BB:102:GLY:HA2	17:BB:215:VAL:O	2.21	0.40
17:BB:208:HIS:CG	17:BB:209:ASP:N	2.89	0.40
18:GG:13:GLN:HE22	76:9:153:G:H21	1.70	0.40
19:gg:18:VAL:HG13	19:gg:34:ALA:O	2.22	0.40
20:G:116:LEU:HD23	20:G:117:GLN:N	2.36	0.40
20:G:126:ARG:HH12	20:G:296:GLY:N	2.19	0.40
20:G:170:ARG:O	20:G:173:LYS:HB3	2.20	0.40
20:G:170:ARG:NH1	20:G:173:LYS:HD3	2.37	0.40
20:G:249:ARG:NH1	67:5:149:A:N9	2.69	0.40
22:HH:91:HIS:CE1	22:HH:169:LYS:HG2	2.56	0.40
28:ii:369:ILE:O	28:ii:370:GLU:C	2.64	0.40
29:I:43:VAL:HG23	29:I:44:ASP:N	2.35	0.40
31:JJ:169:ARG:HG3	31:JJ:170:PRO:HD2	2.02	0.40
32:jj:251:ALA:HB1	32:jj:256:ARG:O	2.21	0.40
32:jj:252:LYS:HG2	76:9:158:A:H4'	2.03	0.40
32:jj:379:LEU:HD13	32:jj:396:PHE:CZ	2.56	0.40
32:jj:567:ILE:HB	32:jj:592:ILE:O	2.21	0.40
32:jj:613:GLY:CA	32:jj:629:VAL:HG11	2.51	0.40
33:J:24:ILE:HD12	33:J:40:LEU:HD11	2.04	0.40
33:J:174:ILE:C	33:J:175:LEU:HD22	2.47	0.40
35:KK:46:MET:HB3	35:KK:47:LYS:NZ	2.35	0.40
47:OO:84:ARG:O	47:OO:87:GLU:HB2	2.21	0.40
47:OO:142:ARG:HB3	80:aa:22:ARG:HG3	2.02	0.40
49:p:18:TYR:O	49:p:22:LEU:HD12	2.20	0.40
50:PP:19:GLY:HA2	59:SS:92:ASP:O	2.21	0.40
50:PP:37:TYR:CD2	50:PP:41:GLN:HB2	2.55	0.40
50:PP:59:ARG:HG2	50:PP:76:VAL:CG1	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Q:90:VAL:HG23	51:Q:91:ARG:N	2.35	0.40
53:QQ:47:LEU:HD12	53:QQ:50:LYS:HB2	2.03	0.40
56:RR:49:LYS:HD2	76:9:1453:C:H5'	2.03	0.40
58:t:131:GLU:CA	67:5:1973:G:H21	2.34	0.40
59:SS:44:VAL:HG12	59:SS:67:VAL:HG22	2.03	0.40
61:TT:53:PHE:HZ	61:TT:102:ARG:C	2.28	0.40
63:UU:66:ARG:HH21	63:UU:68:THR:HB	1.86	0.40
67:5:82:U:O2'	67:5:1382:G:O2'	2.39	0.40
67:5:93:G:O5'	78:a:53:PHE:HD1	2.04	0.40
67:5:202:C:N4	67:5:214:G:C6	2.89	0.40
67:5:739:G:C2	67:5:740:G:C8	3.09	0.40
67:5:942:G:H4'	67:5:944:A:C6	2.56	0.40
67:5:974:C:H2'	67:5:975:C:H6	1.86	0.40
67:5:977:C:C5	67:5:978:G:C8	3.09	0.40
67:5:1216:C:C4	67:5:1217:G:C8	3.09	0.40
67:5:1245:C:N4	67:5:1246:G:O6	2.54	0.40
67:5:1298:C:H2'	67:5:1299:G:H8	1.86	0.40
67:5:1300:G:O3'	67:5:1301:C:O2	2.39	0.40
67:5:1354:A:C6	67:5:1503:A:C2	3.10	0.40
67:5:1443:A:N3	67:5:2112:G:C2	2.88	0.40
67:5:1463:C:C4	67:5:1464:C:C5	3.08	0.40
67:5:1531:U:C2	67:5:1532:G:C8	3.10	0.40
67:5:1553:A:C8	67:5:1575:A:C4	3.09	0.40
67:5:1559:G:C2	67:5:1560:A:C8	3.09	0.40
67:5:1804:A:N7	67:5:1833:G:N2	2.69	0.40
67:5:1863:U:N3	67:5:1872:G:N1	2.68	0.40
67:5:1878:G:C2	67:5:1879:C:C5	3.09	0.40
67:5:1936:C:C5	70:7:84:U:C5	3.09	0.40
67:5:1955:G:C2	67:5:2029:A:C2	3.09	0.40
67:5:1973:G:H3'	67:5:1974:U:H2'	2.02	0.40
67:5:1976:G:C6	67:5:1977:C:N4	2.89	0.40
67:5:1992:U:H1'	67:5:2002:A:OP1	2.21	0.40
67:5:1996:C:H42	67:5:2000:G:N2	2.19	0.40
67:5:2041:A:C2	67:5:4464:A:C4	3.09	0.40
67:5:2303:C:N3	67:5:2333:G:C6	2.89	0.40
67:5:2419:C:N3	67:5:2420:A:N7	2.70	0.40
67:5:2487:G:O6	67:5:2489:C:O2	2.39	0.40
67:5:2547:G:C2	67:5:2548:C:C6	3.08	0.40
67:5:2644:G:N1	67:5:2645:G:C5	2.90	0.40
67:5:2745:A:N1	67:5:2746:A:C5	2.89	0.40
67:5:3687:A:C6	67:5:3688:U:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:3829:G:O6	67:5:3830:A:N6	2.53	0.40
67:5:4075:U:H2'	67:5:4169:G:H22	1.86	0.40
67:5:4207:C:N4	67:5:4226:G:C6	2.89	0.40
67:5:4664:A:C6	67:5:4665:A:C4	3.09	0.40
67:5:4884:G:C6	67:5:4885:U:C4	3.09	0.40
67:5:4884:G:O2'	67:5:4885:U:P	2.78	0.40
67:5:5017:G:C6	67:5:5018:C:C5	3.09	0.40
70:7:73:U:O4	70:7:74:A:C6	2.74	0.40
70:7:113:G:H2'	70:7:114:U:C6	2.56	0.40
76:9:110:U:HO2'	76:9:111:A:P	2.43	0.40
76:9:354:U:H2'	76:9:355:G:H8	1.86	0.40
76:9:965:U:C5	76:9:966:U:C6	3.09	0.40
76:9:1042:A:C4	76:9:1043:G:C8	3.09	0.40
76:9:1052:A:H2'	76:9:1053:C:C6	2.55	0.40
76:9:1130:G:HO2'	76:9:1131:G:C5'	2.34	0.40
76:9:1215:C:C5	76:9:1645:C:H2'	2.56	0.40
76:9:1303:C:O2	76:9:1303:C:O4'	2.39	0.40
76:9:1326:U:C4	76:9:1496:U:OP1	2.74	0.40
84:cc:32:VAL:HG22	84:cc:42:ILE:HG13	2.03	0.40
1:A:36:GLU:CB	1:A:163:ARG:NH2	2.84	0.40
2:C:23:THR:HG22	2:C:24:LEU:N	2.36	0.40
7:e:37:LYS:HE3	67:5:1663:C:P	2.61	0.40
8:EE:149:TYR:HB3	18:GG:209:TYR:HB2	2.03	0.40
10:b:101:HIS:HE1	10:b:104:LEU:HG	1.85	0.40
11:E:257:ASP:OD1	11:E:257:ASP:C	2.63	0.40
16:g:59:VAL:CG2	16:g:60:ARG:N	2.84	0.40
18:GG:6:SER:CB	18:GG:13:GLN:HB3	2.51	0.40
19:gg:83:TRP:CD2	56:RR:33:ARG:NH2	2.90	0.40
19:gg:174:VAL:CG2	19:gg:195:LEU:HD13	2.50	0.40
20:G:106:ARG:NH2	67:5:4088:C:C2	2.89	0.40
22:HH:32:MET:HE3	22:HH:32:MET:HB3	1.94	0.40
22:HH:91:HIS:ND1	22:HH:172:THR:HG21	2.36	0.40
22:HH:118:ARG:O	22:HH:121:THR:HG22	2.21	0.40
25:H:105:ILE:O	25:H:105:ILE:HG13	2.21	0.40
28:ii:42:LYS:CE	67:5:3761:C:O2	2.68	0.40
28:ii:233:LYS:HD2	28:ii:253:LEU:HB3	2.03	0.40
30:j:82:THR:O	30:j:83:THR:HG23	2.21	0.40
31:JJ:13:TYR:CE1	31:JJ:41:ARG:HD3	2.55	0.40
32:jj:339:ARG:NH2	32:jj:539:GLU:CB	2.84	0.40
32:jj:343:MET:HE3	32:jj:623:THR:CB	2.49	0.40
32:jj:352:HIS:CE1	32:jj:354:ILE:HG12	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:jj:401:GLY:HA3	87:jj:700:GCP:N7	2.37	0.40
36:L:62:PRO:O	36:L:63:THR:OG1	2.30	0.40
37:l:4:HIS:HD2	67:5:2404:A:OP1	2.04	0.40
39:M:62:LEU:HD11	39:M:76:ALA:HB1	2.04	0.40
39:M:89:THR:HG22	39:M:90:ARG:N	2.37	0.40
42:N:21:PHE:CD2	42:N:21:PHE:C	2.97	0.40
44:NN:104:ARG:HE	44:NN:104:ARG:HB2	1.70	0.40
45:O:104:VAL:HG12	45:O:105:PHE:N	2.36	0.40
45:O:125:LYS:HE3	45:O:125:LYS:HB3	1.90	0.40
50:PP:43:ARG:NH1	50:PP:47:ARG:HD2	2.36	0.40
51:Q:166:TYR:C	51:Q:167:VAL:HG23	2.46	0.40
53:QQ:22:VAL:HB	53:QQ:71:ARG:CZ	2.51	0.40
55:s:57:LYS:HZ2	67:5:1962:A:C5'	2.35	0.40
56:RR:28:PHE:CZ	76:9:1453:C:H1'	2.57	0.40
58:t:15:LEU:O	58:t:59:THR:HA	2.20	0.40
59:SS:130:ARG:H	59:SS:136:THR:HG21	1.86	0.40
60:T:67:VAL:HG12	60:T:68:THR:N	2.36	0.40
61:TT:121:ARG:N	61:TT:121:ARG:CD	2.84	0.40
65:VV:34:MET:HE2	65:VV:34:MET:HA	2.02	0.40
67:5:199:G:C4	67:5:201:C:C5	3.10	0.40
67:5:475:G:C4	67:5:680:G:N2	2.90	0.40
67:5:671:G:C6	67:5:672:C:N4	2.90	0.40
67:5:747:A:N7	67:5:913:U:C4	2.89	0.40
67:5:916:C:O2	67:5:916:C:O4'	2.39	0.40
67:5:934:C:O2	67:5:934:C:H5"	2.22	0.40
67:5:1235:G:C2	67:5:1236:C:C4	3.09	0.40
67:5:1470:G:C6	67:5:1471:U:C4	3.08	0.40
67:5:1667:A:N1	67:5:2281:U:OP2	2.54	0.40
67:5:1751:A:C2	67:5:1752:G:C5	3.09	0.40
67:5:1886:G:C6	67:5:1887:G:C6	3.09	0.40
67:5:1910:G:C2	67:5:1911:C:C4	3.09	0.40
67:5:1936:C:C5	70:7:84:U:C4	3.09	0.40
67:5:1968:G:C5	67:5:1969:G:N7	2.88	0.40
67:5:2077:C:C2	67:5:2078:C:C5	3.09	0.40
67:5:2617:G:C6	67:5:2618:G:C5	3.09	0.40
67:5:2650:G:N1	67:5:2684:C:N3	2.69	0.40
67:5:2833:A:C5	67:5:2834:C:N4	2.89	0.40
67:5:3737:A:H3'	67:5:3737:A:C8	2.56	0.40
67:5:3836:A:H2'	67:5:3837:C:O4'	2.21	0.40
67:5:3904:G:O2'	67:5:3905:A:OP1	2.34	0.40
67:5:3930:U:H6	67:5:3930:U:O5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:4310:A:H2'	67:5:4311:A:O4'	2.22	0.40
67:5:4405:G:C5	67:5:4406:U:C5	3.09	0.40
67:5:4472:G:C6	67:5:4473:A:N7	2.90	0.40
67:5:4660:G:C6	67:5:4661:G:N7	2.90	0.40
67:5:4998:G:C2	67:5:4999:G:C4	3.09	0.40
68:WW:80:ASP:O	68:WW:80:ASP:OD1	2.40	0.40
70:7:7:G:C2	70:7:8:G:N7	2.89	0.40
70:7:47:G:C5	70:7:48:G:N7	2.89	0.40
70:7:58:A:C6	70:7:59:G:C6	3.09	0.40
72:Y:50:ARG:HH12	73:8:71:A:P	2.42	0.40
73:8:9:A:C2	73:8:10:G:C5	3.10	0.40
73:8:151:G:C6	73:8:152:U:C4	3.09	0.40
74:YY:64:PHE:HD1	76:9:580:U:O3'	2.03	0.40
75:Z:49:TYR:CZ	75:Z:133:LYS:HA	2.56	0.40
76:9:124:U:C4	76:9:125:C:C5	3.09	0.40
76:9:191:A:C2'	76:9:192:C:OP1	2.69	0.40
76:9:196:C:N3	76:9:204:G:N1	2.69	0.40
76:9:431:G:C2	76:9:432:G:C4	3.09	0.40
76:9:676:C:N4	76:9:1030:A:N6	2.70	0.40
76:9:874:G:C6	76:9:914:U:H5	2.38	0.40
76:9:1010:G:N2	76:9:1011:A:C5	2.89	0.40
76:9:1188:A:C4	76:9:1189:A:C8	3.09	0.40
76:9:1246:A:N1	76:9:1247:C:N4	2.69	0.40
76:9:1345:G:N7	76:9:1371:U:C2'	2.84	0.40
76:9:1354:G:N1	76:9:1358:U:O4	2.54	0.40
76:9:1452:A:C6	76:9:1475:G:C6	3.09	0.40
76:9:1631:U:H5	76:9:1632:G:C6	2.39	0.40
76:9:1859:A:C2	76:9:1860:A:C5	3.09	0.40
79:AA:132:GLN:HB3	79:AA:133:PRO:HD3	2.02	0.40
80:aa:69:VAL:HG11	80:aa:71:LEU:HD21	2.03	0.40
1:A:36:GLU:OE2	1:A:163:ARG:CZ	2.70	0.40
3:d:63:ARG:NH1	3:d:103:TYR:CG	2.90	0.40
6:D:283:LYS:HD3	29:I:210:ARG:NH1	2.36	0.40
7:e:106:LYS:CG	7:e:107:ASN:N	2.82	0.40
8:EE:48:LEU:HD23	8:EE:61:VAL:HG22	2.03	0.40
8:EE:121:TYR:CE2	8:EE:161:GLN:CG	3.05	0.40
9:ee:111:TYR:CG	31:JJ:33:GLY:HA3	2.56	0.40
11:E:115:MET:SD	52:r:94:ARG:CZ	3.09	0.40
13:FF:165:ASN:O	76:9:1599:U:C5	2.74	0.40
14:ff:105:TYR:O	14:ff:131:PHE:CE1	2.74	0.40
16:g:4:ARG:HD3	67:5:2395:A:C2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BB:207:LEU:H	17:BB:207:LEU:HG	1.76	0.40
19:gg:106:LYS:HG3	19:gg:126:ASP:HB3	2.04	0.40
19:gg:196:ASN:H	19:gg:211:GLY:HA2	1.87	0.40
20:G:141:ASP:OD1	20:G:141:ASP:C	2.65	0.40
21:h:69:LEU:HD23	21:h:69:LEU:HA	1.90	0.40
22:HH:142:LYS:HB2	68:WW:54:ASP:CG	2.45	0.40
27:II:117:TYR:CE1	27:II:152:ARG:HB3	2.56	0.40
27:II:172:LEU:C	27:II:190:LEU:HD13	2.47	0.40
28:ii:323:TYR:HD1	28:ii:392:VAL:O	2.05	0.40
32:jj:324:ARG:CZ	32:jj:327:GLU:OE1	2.68	0.40
41:MM:49:LEU:O	41:MM:111:VAL:HG22	2.21	0.40
41:MM:85:LEU:O	41:MM:89:VAL:HG23	2.22	0.40
42:N:150:TRP:CZ3	42:N:151:ILE:HG12	2.56	0.40
42:N:175:GLY:C	42:N:180:PHE:CD2	2.99	0.40
46:o:47:GLY:HA3	67:5:289:C:OP2	2.21	0.40
47:OO:42:VAL:HG11	47:OO:81:VAL:CG1	2.51	0.40
47:OO:147:ARG:HB3	47:OO:150:ARG:NH1	2.36	0.40
50:PP:43:ARG:HH12	50:PP:47:ARG:CZ	2.34	0.40
50:PP:76:VAL:O	50:PP:94:VAL:HG23	2.21	0.40
51:Q:126:LEU:C	51:Q:126:LEU:HD23	2.47	0.40
53:QQ:41:MET:HE2	61:TT:9:VAL:O	2.22	0.40
53:QQ:96:TYR:HA	53:QQ:100:VAL:HG22	2.03	0.40
56:RR:5:ARG:HH11	76:9:1454:A:H5'	1.87	0.40
56:RR:5:ARG:HG2	56:RR:53:TYR:CG	2.56	0.40
56:RR:44:LYS:HD2	76:9:1451:G:N7	2.36	0.40
59:SS:16:LEU:O	59:SS:17:ASN:C	2.64	0.40
59:SS:46:ARG:HD2	59:SS:46:ARG:N	2.35	0.40
59:SS:117:ILE:O	59:SS:118:ARG:CB	2.70	0.40
59:SS:124:ARG:NH2	59:SS:129:LEU:CB	2.84	0.40
61:TT:33:TRP:CH2	61:TT:98:SER:HB3	2.56	0.40
61:TT:96:SER:CB	61:TT:99:VAL:HG22	2.52	0.40
61:TT:123:LEU:HD21	61:TT:128:GLN:HA	2.04	0.40
63:UU:23:THR:HG1	63:UU:113:GLU:HB2	1.86	0.40
63:UU:33:GLU:CD	76:9:1447:G:O2'	2.65	0.40
66:W:121:ALA:HB2	76:9:323:C:OP1	2.21	0.40
67:5:60:A:C6	67:5:61:A:C5	3.10	0.40
67:5:94:A:C6	67:5:95:G:H1'	2.57	0.40
67:5:415:G:C2	67:5:416:U:O2	2.75	0.40
67:5:450:G:C4	67:5:451:C:C6	3.10	0.40
67:5:742:G:C6	67:5:922(A):G:C6	3.09	0.40
67:5:922:C:C2	67:5:922(A):G:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:946:C:O2'	67:5:947:C:H5'	2.21	0.40
67:5:951:G:N1	67:5:952:G:C5	2.89	0.40
67:5:1072:C:H1'	67:5:1073:G:P	2.62	0.40
67:5:1382:G:C5	67:5:1383:G:N7	2.89	0.40
67:5:1398:A:C8	67:5:1420:A:C2	3.09	0.40
67:5:1480:C:N4	67:5:1484:G:H1	2.20	0.40
67:5:1520:C:C4	67:5:1521:C:C4	3.09	0.40
67:5:1624:G:C5	67:5:1643:A:C8	3.09	0.40
67:5:1672:U:C5	67:5:1684:A:N1	2.89	0.40
67:5:1755:C:O2	67:5:1756:U:C5	2.74	0.40
67:5:2534:C:O2'	67:5:2535:G:H5'	2.21	0.40
67:5:2548:C:C2	67:5:2549:G:C8	3.09	0.40
67:5:2663:G:N1	67:5:2664:G:C5	2.89	0.40
67:5:2707:U:C6	67:5:2708:U:C6	3.09	0.40
67:5:2722:G:C5	67:5:2723:U:C5	3.09	0.40
67:5:2836:A:N7	67:5:3852:A:H2	2.19	0.40
67:5:2837:U:C4	67:5:2838:G:N7	2.89	0.40
67:5:2849:A:N7	67:5:3840:U:C4	2.89	0.40
67:5:3879:G:C8	67:5:3882:C:N4	2.89	0.40
67:5:4215:C:C4	67:5:4216:G:C8	3.10	0.40
67:5:4316:G:C6	67:5:4317:A:N7	2.89	0.40
67:5:4642:U:C4	67:5:4658:G:N1	2.90	0.40
71:XX:50:ILE:O	71:XX:72:VAL:HA	2.21	0.40
72:Y:50:ARG:HG2	72:Y:51:LYS:H	1.86	0.40
75:Z:32:GLY:C	75:Z:36:ARG:O	2.64	0.40
76:9:15:U:H2'	76:9:16:G:O4'	2.21	0.40
76:9:442:C:H2'	76:9:443:U:O4'	2.21	0.40
76:9:988:C:C4	76:9:989:C:C4	3.09	0.40
76:9:1060:A:N3	76:9:1060:A:C2'	2.84	0.40
76:9:1166:G:C2	76:9:1167:G:C8	3.09	0.40
76:9:1173:A:H62	76:9:1187:G:H21	1.69	0.40
76:9:1198:G:C2	76:9:1199:A:C4	3.09	0.40
76:9:1290:G:H2'	76:9:1291:A:O4'	2.20	0.40
76:9:1566:G:N3	76:9:1568:C:C5	2.90	0.40
76:9:1792:G:N1	76:9:1793:A:C5	2.90	0.40
79:AA:151:ASP:O	79:AA:152:SER:C	2.64	0.40
83:CC:137:VAL:HG22	83:CC:138:GLY:N	2.36	0.40
1:A:207:VAL:HG23	1:A:208:GLU:HG3	2.03	0.40
1:A:243:THR:OG1	67:5:3748:A:OP1	2.38	0.40
4:DD:72:VAL:HG22	35:KK:22:VAL:HG12	2.03	0.40
4:DD:185:LYS:HE3	76:9:1335:G:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:213:PRO:CB	56:RR:20:TYR:OH	2.70	0.40
4:DD:222:PRO:HA	19:gg:190:GLY:HA3	2.03	0.40
8:EE:20:LEU:HD23	8:EE:20:LEU:HA	1.93	0.40
8:EE:105:THR:OG1	8:EE:245:ARG:N	2.53	0.40
9:ee:111:TYR:CE2	31:JJ:33:GLY:HA3	2.55	0.40
10:b:68:ARG:HD3	10:b:68:ARG:HA	1.88	0.40
11:E:209:VAL:C	11:E:210:LYS:HE2	2.47	0.40
13:FF:138:ALA:HB3	84:cc:63:ARG:HH12	1.85	0.40
15:F:73:MET:HE2	67:5:1089:G:H1'	2.04	0.40
17:BB:118:GLN:N	17:BB:155:TYR:HE1	2.20	0.40
18:GG:63:MET:HA	18:GG:98:ARG:O	2.21	0.40
18:GG:195:LYS:HD3	76:9:126:G:O4'	2.21	0.40
19:gg:80:SER:O	19:gg:87:LEU:HA	2.21	0.40
19:gg:287:THR:CG2	19:gg:301:GLY:O	2.69	0.40
22:HH:158:LEU:HD12	22:HH:189:PHE:CE2	2.57	0.40
27:II:73:THR:CG2	76:9:302:A:H1'	2.52	0.40
27:II:85:ALA:HB1	38:LL:8:ARG:HB3	2.02	0.40
27:II:202:ILE:O	27:II:206:LYS:HG3	2.22	0.40
28:ii:149:ILE:HD11	28:ii:213:PHE:HE2	1.85	0.40
28:ii:254:VAL:CG1	28:ii:267:ALA:HB1	2.50	0.40
28:ii:340:GLU:OE1	67:5:1980:U:OP2	2.39	0.40
29:I:31:ILE:O	29:I:31:ILE:CG2	2.66	0.40
31:JJ:11:LYS:HG2	76:9:519:A:H5"	2.03	0.40
32:jj:298:PRO:HB2	32:jj:303:PHE:O	2.21	0.40
32:jj:318:VAL:CG1	32:jj:356:LEU:HD13	2.52	0.40
32:jj:346:LYS:O	32:jj:614:ARG:CZ	2.69	0.40
32:jj:465:CYS:O	32:jj:467:GLY:N	2.54	0.40
32:jj:553:HIS:CD2	32:jj:558:ILE:CD1	3.05	0.40
33:J:63:ARG:CZ	46:o:104:ILE:O	2.69	0.40
33:J:129:ASP:OD1	67:5:4251:A:N7	2.55	0.40
41:MM:35:ILE:HG12	41:MM:61:TYR:CE2	2.56	0.40
44:NN:63:VAL:CG2	44:NN:71:ILE:HD11	2.51	0.40
44:NN:142:GLU:O	44:NN:143:SER:C	2.64	0.40
45:O:145:VAL:O	45:O:145:VAL:HG13	2.22	0.40
47:OO:26:ASN:HB3	47:OO:92:ALA:CB	2.52	0.40
47:OO:30:VAL:CG2	47:OO:94:HIS:HB2	2.51	0.40
47:OO:138:ASP:OD2	76:9:985:G:H1'	2.22	0.40
50:PP:76:VAL:O	50:PP:76:VAL:CG2	2.69	0.40
50:PP:108:LYS:NZ	50:PP:110:GLU:CD	2.79	0.40
51:Q:22:ASP:O	51:Q:22:ASP:OD1	2.40	0.40
51:Q:23:ILE:HD12	52:r:5:LEU:CD1	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:S:41:LYS:HD2	57:S:61:ILE:HD12	2.02	0.40
60:T:93:ILE:O	60:T:93:ILE:HG22	2.21	0.40
60:T:131:GLN:HA	60:T:132:PRO:HD3	1.98	0.40
61:TT:31:PRO:HD2	61:TT:34:VAL:CG2	2.51	0.40
61:TT:64:LEU:HG	61:TT:75:MET:HE3	2.03	0.40
61:TT:106:ALA:O	61:TT:110:LEU:CD2	2.69	0.40
61:TT:107:LEU:O	61:TT:113:VAL:HG22	2.22	0.40
63:UU:56:MET:HG3	63:UU:86:LYS:HE2	2.03	0.40
63:UU:78:ASP:HB3	63:UU:80:PHE:CE2	2.57	0.40
65:VV:27:LYS:HE2	83:CC:163:VAL:HG12	2.04	0.40
67:5:4:G:C6	73:8:154:G:O6	2.74	0.40
67:5:81:C:C2	67:5:103:G:N2	2.89	0.40
67:5:85:G:O2'	67:5:86:U:OP2	2.38	0.40
67:5:173:C:H2'	67:5:174:C:C6	2.57	0.40
67:5:211:G:N3	67:5:212:A:C8	2.89	0.40
67:5:257:C:N4	67:5:258:G:O6	2.55	0.40
67:5:271:C:N3	67:5:272:U:C5	2.89	0.40
67:5:301:G:C4	67:5:302:C:C5	3.09	0.40
67:5:360:A:N3	73:8:24:G:C1'	2.84	0.40
67:5:406:C:C2'	67:5:407:A:O5'	2.69	0.40
67:5:758:G:N1	67:5:906:C:C4	2.90	0.40
67:5:1349:G:N1	67:5:1508:A:C6	2.89	0.40
67:5:1398:A:H61	67:5:1419:G:C2'	2.34	0.40
67:5:1612:G:C5	67:5:1614:C:H1'	2.56	0.40
67:5:1745:G:C2	67:5:1786:A:C2	3.08	0.40
67:5:1748:U:C4	67:5:1749:A:N7	2.89	0.40
67:5:1764:G:N3	67:5:1766:A:OP2	2.54	0.40
67:5:1904:G:C2'	67:5:1905:U:H5'	2.51	0.40
67:5:2306:G:HO2'	67:5:2331:G:H1	1.66	0.40
67:5:2306:G:C2'	67:5:2331:G:H22	2.32	0.40
67:5:2724:G:C2	67:5:2726:G:N7	2.90	0.40
67:5:3647:A:C8	67:5:3649:A:N7	2.90	0.40
67:5:3674:G:N2	67:5:3675:G:C4	2.89	0.40
67:5:3760:A:N7	76:9:1826:G:O4'	2.54	0.40
67:5:3875:G:N2	67:5:3879:G:C8	2.90	0.40
67:5:3889:G:C5	67:5:4720:C:C5	3.10	0.40
67:5:4224:A:N6	67:5:4225:G:C5	2.90	0.40
67:5:4229:U:C4	67:5:4230:C:C5	3.10	0.40
67:5:4268:A:N6	67:5:4279:A:N6	2.69	0.40
67:5:4578:G:C2	67:5:4579:U:C6	3.10	0.40
67:5:5011:A:N6	67:5:5038:A:N6	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:5038:A:C6	67:5:5039:U:O4	2.75	0.40
71:XX:50:ILE:O	71:XX:72:VAL:HG13	2.22	0.40
73:8:15:G:N2	73:8:16:G:N2	2.69	0.40
73:8:29:G:C2	73:8:30:U:C5	3.10	0.40
73:8:42:G:N1	73:8:43:A:C5	2.90	0.40
75:Z:25:ILE:HG22	75:Z:26:VAL:N	2.36	0.40
76:9:16:G:H21	76:9:1195:A:H62	1.69	0.40
76:9:23:G:C6	76:9:24:C:C4	3.10	0.40
76:9:64:A:N7	76:9:82:G:C6	2.90	0.40
76:9:85:A:C2	76:9:86:C:C4	3.09	0.40
76:9:356:C:O2	76:9:356:C:C2'	2.70	0.40
76:9:533:A:C6	76:9:534:G:C5	3.09	0.40
76:9:928:G:H2'	76:9:929:G:C8	2.55	0.40
76:9:943:U:H2'	76:9:944:A:O4'	2.21	0.40
76:9:1164:G:C6	76:9:1165:G:O6	2.74	0.40
76:9:1280:G:C4	76:9:1318:G:N2	2.89	0.40
76:9:1397:U:H6	76:9:1442:U:H4'	1.86	0.40
76:9:1453:C:N3	76:9:1476:A:C2	2.88	0.40
76:9:1589:A:H2	76:9:1672:U:H1'	1.87	0.40
76:9:1601:A:C2	76:9:1635:C:C5	3.09	0.40
76:9:1602:U:C2	76:9:1604:G:C8	3.09	0.40
76:9:1858:G:C6	76:9:1859:A:N7	2.89	0.40
79:AA:41:ARG:HE	79:AA:45:GLY:HA2	1.86	0.40
79:AA:205:ARG:HH22	79:AA:213:GLU:HB2	1.86	0.40
81:B:140:ASP:O	81:B:144:ARG:HG3	2.21	0.40
1:A:40:TYR:CZ	67:5:4117:U:C4	3.10	0.40
1:A:137:ILE:HG22	1:A:138:SER:OG	2.22	0.40
1:A:141:PRO:O	1:A:144:LYS:HE3	2.22	0.40
2:C:122:TYR:HE1	2:C:280:PRO:CB	2.35	0.40
4:DD:25:LEU:C	4:DD:34:TYR:CE1	2.99	0.40
4:DD:132:LYS:HD2	4:DD:189:MET:HE2	2.04	0.40
4:DD:202:LYS:HG3	4:DD:203:PRO:HD2	2.03	0.40
8:EE:35:PRO:HG3	8:EE:82:TYR:OH	2.21	0.40
11:E:211:ILE:HG13	11:E:212:PRO:HD2	2.02	0.40
12:f:9:ALA:HB3	12:f:101:ILE:CG1	2.52	0.40
13:FF:167:LYS:HA	77:ZZ:71:ALA:CB	2.52	0.40
17:BB:33:VAL:O	17:BB:44:ILE:N	2.48	0.40
18:GG:1:MET:HE3	18:GG:108:VAL:O	2.21	0.40
18:GG:3:LEU:HD23	18:GG:109:LEU:HB2	2.01	0.40
19:gg:174:VAL:HG22	19:gg:195:LEU:HD13	2.03	0.40
19:gg:176:VAL:HB	19:gg:186:THR:CG2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:gg:179:LEU:O	19:gg:179:LEU:HD23	2.21	0.40
19:gg:232:GLY:HA2	19:gg:259:TRP:CZ2	2.57	0.40
22:HH:48:ALA:HB1	22:HH:60:ILE:HD11	2.03	0.40
24:bb:35:VAL:HG12	24:bb:63:LEU:HD23	2.04	0.40
27:II:60:LEU:HD12	27:II:60:LEU:HA	1.74	0.40
28:ii:24:LEU:HD13	28:ii:133:THR:HG21	2.04	0.40
28:ii:180:HIS:O	28:ii:181:GLY:C	2.62	0.40
28:ii:226:LEU:HD21	28:ii:242:PHE:CE1	2.56	0.40
28:ii:280:PHE:CE1	28:ii:396:SER:HB2	2.56	0.40
32:jj:214:ASN:HD21	32:jj:499:ASN:HD21	1.70	0.40
33:J:52:LYS:HD3	33:J:65:ASN:HA	2.03	0.40
38:LL:92:TYR:OH	76:9:355:G:OP1	2.18	0.40
40:m:66:ASP:O	40:m:67:LYS:HD3	2.22	0.40
47:OO:98:ARG:HG2	47:OO:99:ALA:N	2.36	0.40
48:P:18:ARG:N	48:P:94:MET:HE1	2.36	0.40
48:P:131:ARG:HE	67:5:1596:U:HO2’	1.67	0.40
50:PP:22:LEU:HD22	50:PP:109:PRO:CB	2.52	0.40
50:PP:73:PRO:HG3	50:PP:92:SER:HA	2.04	0.40
50:PP:118:GLU:HA	59:SS:120:HIS:HB2	2.04	0.40
51:Q:188:ASN:ND2	67:5:4307:A:P	2.94	0.40
53:QQ:140:ARG:NH2	76:9:1338:G:C4’	2.84	0.40
54:R:72:LYS:HD2	54:R:74:ARG:NH1	2.34	0.40
55:s:20:LEU:HD23	55:s:20:LEU:HA	1.97	0.40
55:s:105:ASN:OD1	55:s:187:LEU:HD11	2.21	0.40
59:SS:27:ALA:O	59:SS:31:THR:HG23	2.21	0.40
59:SS:113:ARG:O	59:SS:117:ILE:HG12	2.22	0.40
61:TT:74:SER:O	61:TT:78:ILE:HG22	2.22	0.40
64:V:43:LYS:NZ	67:5:4509:U:OP1	2.52	0.40
67:5:25:A:C6	67:5:26:C:C4	3.10	0.40
67:5:376:A:C6	67:5:377:A:N7	2.90	0.40
67:5:386:A:H2’	67:5:387:G:OP1	2.21	0.40
67:5:395:A:C6	67:5:396:A:C6	3.10	0.40
67:5:453:G:C6	67:5:705:G:C5	3.09	0.40
67:5:478:G:N1	67:5:479:G:C5	2.89	0.40
67:5:499:G:C4	67:5:500:G:C8	3.10	0.40
67:5:659:G:C6	67:5:660:G:C5	3.10	0.40
67:5:684:G:C5’	67:5:685:C:OP2	2.69	0.40
67:5:725:G:C2	67:5:726:G:N7	2.90	0.40
67:5:750:U:O4’	67:5:917:A:C2	2.75	0.40
67:5:959:G:H1’	67:5:960:A:OP2	2.21	0.40
67:5:1072:C:H41	67:5:1239:C:H42	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:5:1318:C:H3'	67:5:1318:C:H6	1.87	0.40
67:5:1570:G:C5	67:5:1571:G:N7	2.90	0.40
67:5:1874:A:C6	67:5:1875:C:N4	2.90	0.40
67:5:1952:G:N1	67:5:1953:U:C4	2.89	0.40
67:5:1967:A:N6	67:5:2019:C:H42	2.19	0.40
67:5:1968:G:C6	67:5:1969:G:N7	2.90	0.40
67:5:1999:A:C4	67:5:2019:C:C1'	3.04	0.40
67:5:2019:C:C2'	67:5:2020:U:O5'	2.70	0.40
67:5:2098:G:O6	67:5:2107:A:C5	2.74	0.40
67:5:2296:G:C6	67:5:2297:G:N7	2.90	0.40
67:5:2442:G:C2	67:5:2443:G:C5	3.10	0.40
67:5:2542:G:C4	67:5:2543:A:C8	3.10	0.40
67:5:2580:U:P	75:Z:36:ARG:HH22	2.44	0.40
67:5:2823:G:N1	67:5:2824:C:C4	2.89	0.40
67:5:2849:A:C2	67:5:2855:G:N9	2.90	0.40
67:5:2883:G:N1	67:5:2884:G:C5	2.89	0.40
67:5:3703:G:C5	67:5:3704:U:C5	3.10	0.40
67:5:3835:C:H2'	67:5:3836:A:C8	2.56	0.40
67:5:4074:C:C2	67:5:4075:U:C5	3.09	0.40
67:5:4228:G:C2	67:5:4373:G:C2	3.09	0.40
67:5:4232:U:C4	67:5:4233:A:N6	2.90	0.40
67:5:4283:G:C4	67:5:4284:C:C5	3.09	0.40
67:5:4303:C:C4	67:5:4305:G:C5	3.09	0.40
67:5:4412:C:N4	67:5:4413:C:N4	2.69	0.40
67:5:4614:G:N2	67:5:4615:C:C2	2.89	0.40
67:5:4622:A:N3	67:5:4676:G:N2	2.69	0.40
67:5:4686:G:N1	67:5:4705:A:C6	2.89	0.40
73:8:18:U:C4	73:8:19:C:C4	3.10	0.40
73:8:25:G:N3	73:8:26:C:C6	2.89	0.40
73:8:126:C:O2'	73:8:127:U:C5	2.74	0.40
74:YY:7:ILE:HG23	74:YY:25:ILE:HG23	2.03	0.40
76:9:158:A:N6	76:9:466:G:C6	2.89	0.40
76:9:807:G:H2'	76:9:808:A:O4'	2.21	0.40
76:9:815:U:C4	76:9:816:A:N7	2.90	0.40
76:9:872:A:O2'	76:9:873:G:P	2.80	0.40
76:9:924:G:C5	76:9:925:G:C8	3.10	0.40
76:9:955:A:HO2'	76:9:969:U:H5	1.69	0.40
76:9:982:G:N1	76:9:983:A:C5	2.90	0.40
76:9:993:G:N2	76:9:994:C:C2	2.90	0.40
76:9:1224:G:N3	76:9:1224:G:C2'	2.83	0.40
76:9:1241:A:C4'	76:9:1267:C:H4'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:9:1259:A:C2	76:9:1519:U:C5	3.09	0.40
76:9:1259:A:N7	76:9:1518:C:H2'	2.36	0.40
76:9:1273:C:C5	76:9:1506:A:C2	3.10	0.40
76:9:1534:C:C2	76:9:1536:G:C2	3.10	0.40
76:9:1620:A:O2'	76:9:1621:U:OP2	2.40	0.40
76:9:1645:C:H4'	76:9:1650:A:H5'	2.03	0.40
79:AA:180:ARG:NH1	79:AA:184:ARG:NH2	2.69	0.40
81:B:354:GLN:O	81:B:354:GLN:HG2	2.22	0.40
83:CC:82:TYR:OH	83:CC:162:ILE:HG13	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	246/249 (99%)	219 (89%)	27 (11%)	0	100 100
2	C	360/378 (95%)	335 (93%)	24 (7%)	1 (0%)	36 70
3	d	105/108 (97%)	90 (86%)	13 (12%)	2 (2%)	6 34
4	DD	226/281 (80%)	212 (94%)	13 (6%)	1 (0%)	30 65
5	dd	53/56 (95%)	46 (87%)	7 (13%)	0	100 100
6	D	291/296 (98%)	273 (94%)	18 (6%)	0	100 100
7	e	126/129 (98%)	121 (96%)	5 (4%)	0	100 100
8	EE	260/263 (99%)	244 (94%)	16 (6%)	0	100 100
9	ee	53/133 (40%)	51 (96%)	2 (4%)	0	100 100
10	b	100/226 (44%)	94 (94%)	5 (5%)	1 (1%)	12 46
11	E	208/291 (72%)	189 (91%)	19 (9%)	0	100 100
12	f	107/110 (97%)	98 (92%)	7 (6%)	2 (2%)	6 34
13	FF	181/204 (89%)	164 (91%)	14 (8%)	3 (2%)	7 36

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	ff	66/68 (97%)	62 (94%)	4 (6%)	0	100	100
15	F	223/249 (90%)	213 (96%)	9 (4%)	1 (0%)	30	65
16	g	112/126 (89%)	106 (95%)	6 (5%)	0	100	100
17	BB	211/264 (80%)	193 (92%)	18 (8%)	0	100	100
18	GG	235/263 (89%)	223 (95%)	12 (5%)	0	100	100
19	gg	311/314 (99%)	282 (91%)	27 (9%)	2 (1%)	21	58
20	G	229/242 (95%)	218 (95%)	9 (4%)	2 (1%)	14	49
21	h	120/123 (98%)	118 (98%)	2 (2%)	0	100	100
22	HH	181/191 (95%)	173 (96%)	8 (4%)	0	100	100
24	bb	81/84 (96%)	74 (91%)	7 (9%)	0	100	100
25	H	188/190 (99%)	178 (95%)	10 (5%)	0	100	100
26	i	100/107 (94%)	94 (94%)	6 (6%)	0	100	100
27	II	204/208 (98%)	188 (92%)	14 (7%)	2 (1%)	12	46
28	ii	417/437 (95%)	389 (93%)	24 (6%)	4 (1%)	12	46
29	I	201/214 (94%)	182 (90%)	19 (10%)	0	100	100
30	j	84/97 (87%)	78 (93%)	6 (7%)	0	100	100
31	JJ	183/194 (94%)	177 (97%)	6 (3%)	0	100	100
32	jj	426/428 (100%)	373 (88%)	46 (11%)	7 (2%)	7	37
33	J	168/176 (96%)	160 (95%)	8 (5%)	0	100	100
34	k	67/70 (96%)	63 (94%)	4 (6%)	0	100	100
35	KK	94/151 (62%)	88 (94%)	5 (5%)	1 (1%)	11	44
36	L	208/211 (99%)	192 (92%)	15 (7%)	1 (0%)	24	61
37	l	48/51 (94%)	45 (94%)	3 (6%)	0	100	100
38	LL	139/158 (88%)	133 (96%)	6 (4%)	0	100	100
39	M	136/218 (62%)	123 (90%)	13 (10%)	0	100	100
40	m	50/128 (39%)	46 (92%)	4 (8%)	0	100	100
41	MM	115/123 (94%)	103 (90%)	12 (10%)	0	100	100
42	N	201/204 (98%)	186 (92%)	11 (6%)	4 (2%)	6	33
43	n	23/25 (92%)	22 (96%)	1 (4%)	0	100	100
44	NN	147/150 (98%)	140 (95%)	6 (4%)	1 (1%)	18	55
45	O	197/203 (97%)	189 (96%)	7 (4%)	1 (0%)	24	61

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	o	102/142 (72%)	98 (96%)	4 (4%)	0	100	100
47	OO	134/156 (86%)	124 (92%)	8 (6%)	2 (2%)	8	39
48	P	151/199 (76%)	143 (95%)	8 (5%)	0	100	100
49	p	89/109 (82%)	82 (92%)	7 (8%)	0	100	100
50	PP	118/145 (81%)	104 (88%)	12 (10%)	2 (2%)	7	36
51	Q	185/188 (98%)	173 (94%)	11 (6%)	1 (0%)	24	61
52	r	122/137 (89%)	112 (92%)	9 (7%)	1 (1%)	16	52
53	QQ	140/158 (89%)	133 (95%)	6 (4%)	1 (1%)	18	55
54	R	178/196 (91%)	173 (97%)	5 (3%)	0	100	100
55	s	194/318 (61%)	175 (90%)	17 (9%)	2 (1%)	12	46
56	RR	130/145 (90%)	121 (93%)	9 (7%)	0	100	100
57	S	174/176 (99%)	159 (91%)	12 (7%)	3 (2%)	7	36
58	t	151/196 (77%)	134 (89%)	16 (11%)	1 (1%)	18	55
59	SS	142/152 (93%)	137 (96%)	4 (3%)	1 (1%)	18	55
60	T	157/160 (98%)	146 (93%)	11 (7%)	0	100	100
61	TT	139/145 (96%)	131 (94%)	8 (6%)	0	100	100
62	U	97/128 (76%)	89 (92%)	8 (8%)	0	100	100
63	UU	98/118 (83%)	91 (93%)	7 (7%)	0	100	100
64	V	129/132 (98%)	119 (92%)	10 (8%)	0	100	100
65	VV	81/83 (98%)	78 (96%)	3 (4%)	0	100	100
66	W	102/134 (76%)	98 (96%)	4 (4%)	0	100	100
68	WW	127/139 (91%)	118 (93%)	7 (6%)	2 (2%)	7	37
69	X	116/156 (74%)	107 (92%)	9 (8%)	0	100	100
71	XX	139/142 (98%)	125 (90%)	11 (8%)	3 (2%)	5	31
72	Y	132/134 (98%)	121 (92%)	11 (8%)	0	100	100
74	YY	122/146 (84%)	115 (94%)	7 (6%)	0	100	100
75	Z	133/136 (98%)	125 (94%)	6 (4%)	2 (2%)	8	39
77	ZZ	73/122 (60%)	69 (94%)	4 (6%)	0	100	100
78	a	145/147 (99%)	129 (89%)	16 (11%)	0	100	100
79	AA	215/295 (73%)	201 (94%)	13 (6%)	1 (0%)	24	61
80	aa	99/117 (85%)	89 (90%)	9 (9%)	1 (1%)	12	46

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
81	B	392/402 (98%)	355 (91%)	35 (9%)	2 (0%)	24 61
82	c	96/115 (84%)	94 (98%)	2 (2%)	0	100 100
83	CC	219/259 (85%)	205 (94%)	14 (6%)	0	100 100
84	cc	60/69 (87%)	58 (97%)	2 (3%)	0	100 100
All	All	12362/14087 (88%)	11478 (93%)	823 (7%)	61 (0%)	26 61

All (61) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	d	95	ASP
28	ii	272	THR
32	jj	466	LYS
32	jj	620	GLU
42	N	76	PRO
42	N	77	LYS
50	PP	18	ARG
71	XX	62	PRO
71	XX	86	PRO
27	II	124	LYS
28	ii	181	GLY
28	ii	258	TYR
32	jj	224	GLY
32	jj	280	VAL
32	jj	555	HIS
44	NN	108	ASP
45	O	186	GLU
52	r	11	ARG
53	QQ	30	GLY
59	SS	100	ALA
10	b	102	PRO
12	f	107	PRO
28	ii	370	GLU
35	KK	64	TRP
36	L	63	THR
42	N	89	VAL
47	OO	20	GLN
47	OO	30	VAL
55	s	142	GLY
57	S	155	PRO
75	Z	91	LEU
80	aa	99	PRO

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Mol	Chain	Res	Type
13	FF	43	GLU
13	FF	80	GLY
50	PP	80	LEU
57	S	166	ARG
58	t	125	LEU
68	WW	56	HIS
71	XX	61	GLN
75	Z	90	PRO
4	DD	93	THR
12	f	106	TYR
57	S	53	LYS
81	B	17	LEU
81	B	376	HIS
15	F	196	VAL
32	jj	558	ILE
42	N	55	ALA
79	AA	159	ILE
13	FF	21	GLY
19	gg	224	GLY
55	s	25	PRO
68	WW	29	PRO
3	d	58	GLY
27	II	3	ILE
19	gg	275	ILE
20	G	216	PRO
51	Q	92	VAL
2	C	83	GLY
20	G	221	VAL
32	jj	464	ILE

5.3.2 Protein sidechains

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

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
23	hh	14/15 (93%)	8 (57%)	0
67	5	3517/3705 (94%)	864 (24%)	155 (4%)
70	7	119/120 (99%)	14 (11%)	0
73	8	149/151 (98%)	34 (22%)	5 (3%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
76	9	1680/1779 (94%)	425 (25%)	66 (3%)
All	All	5479/5770 (94%)	1345 (24%)	226 (4%)

All (1345) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
23	hh	42	C
23	hh	43	A
23	hh	45	A
23	hh	46	G
23	hh	49	U
23	hh	52	G
23	hh	54	U
23	hh	55	C
67	5	12	A
67	5	13	U
67	5	15	A
67	5	25	A
67	5	35	U
67	5	39	A
67	5	42	A
67	5	43	U
67	5	48	G
67	5	49	U
67	5	56	A
67	5	58	G
67	5	59	A
67	5	64	A
67	5	65	A
67	5	73	A
67	5	91	G
67	5	93	G
67	5	109	G
67	5	110	C
67	5	118	C
67	5	119	G
67	5	120	A
67	5	126	C
67	5	134	G
67	5	135	G
67	5	136	C
67	5	137	G

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Mol	Chain	Res	Type
67	5	143	C
67	5	144	G
67	5	159	C
67	5	172	C
67	5	173	C
67	5	177	G
67	5	179	G
67	5	197	A
67	5	200	U
67	5	201	C
67	5	202	C
67	5	205	C
67	5	209	U
67	5	216	C
67	5	218	A
67	5	220	C
67	5	221	C
67	5	224	U
67	5	226	G
67	5	227	A
67	5	233	U
67	5	234	G
67	5	245	C
67	5	246	G
67	5	253	G
67	5	262	G
67	5	263	G
67	5	266	C
67	5	267	G
67	5	276	C
67	5	279	A
67	5	280	G
67	5	281	U
67	5	297	U
67	5	306	A
67	5	309	C
67	5	310	G
67	5	315	G
67	5	316	U
67	5	322	C
67	5	328	A
67	5	334	A

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Mol	Chain	Res	Type
67	5	340	C
67	5	350	C
67	5	357	U
67	5	363	A
67	5	386	A
67	5	387	G
67	5	399	G
67	5	406	C
67	5	407	A
67	5	408	A
67	5	409	G
67	5	410	A
67	5	412	G
67	5	413	G
67	5	414	C
67	5	431	G
67	5	432	U
67	5	446	C
67	5	449	C
67	5	450	G
67	5	452	A
67	5	453	G
67	5	454	U
67	5	457	G
67	5	467	U
67	5	468	U
67	5	469	C
67	5	481	G
67	5	481(A)	C
67	5	482	G
67	5	483	G
67	5	484	U
67	5	485	C
67	5	486	C
67	5	492	U
67	5	493	G
67	5	495	C
67	5	497	G
67	5	498	C
67	5	499	G
67	5	505	G
67	5	510	U

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Mol	Chain	Res	Type
67	5	649	A
67	5	654	C
67	5	658	C
67	5	666	G
67	5	667	A
67	5	668	C
67	5	672	C
67	5	683	C
67	5	684	G
67	5	685	C
67	5	687	U
67	5	696	C
67	5	697	G
67	5	704	C
67	5	705	G
67	5	708	G
67	5	719	C
67	5	722	G
67	5	729	G
67	5	730	G
67	5	731	G
67	5	734	G
67	5	738	C
67	5	738(A)	C
67	5	739	G
67	5	747	A
67	5	748	G
67	5	749	G
67	5	750	U
67	5	756	G
67	5	758	G
67	5	911	U
67	5	913	U
67	5	914	U
67	5	916	C
67	5	917	A
67	5	918	G
67	5	923	C
67	5	924	C
67	5	925	C
67	5	926	G
67	5	928	C

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Mol	Chain	Res	Type
67	5	929	A
67	5	931	C
67	5	932	A
67	5	933	G
67	5	934	C
67	5	935	A
67	5	935(A)	G
67	5	936	C
67	5	938	C
67	5	939	G
67	5	943	A
67	5	944	A
67	5	945	U
67	5	955	G
67	5	956	A
67	5	957	G
67	5	959	G
67	5	960	A
67	5	961	G
67	5	962	C
67	5	965	G
67	5	966	A
67	5	967	C
67	5	968	C
67	5	969	C
67	5	970	G
67	5	972	C
67	5	973	G
67	5	979	C
67	5	983	C
67	5	990	C
67	5	1072	C
67	5	1073	G
67	5	1075	G
67	5	1076	C
67	5	1078	A
67	5	1079	C
67	5	1082	C
67	5	1174	G
67	5	1177	U
67	5	1179	U
67	5	1184	A

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Mol	Chain	Res	Type
67	5	1195	G
67	5	1211	G
67	5	1212	G
67	5	1214	C
67	5	1215	C
67	5	1234	G
67	5	1235	G
67	5	1236	C
67	5	1237	C
67	5	1238	A
67	5	1239	C
67	5	1272	C
67	5	1273	G
67	5	1274	A
67	5	1276	C
67	5	1280	C
67	5	1284	G
67	5	1287	G
67	5	1288	G
67	5	1291	G
67	5	1292	C
67	5	1293	G
67	5	1295	U
67	5	1296	G
67	5	1301	C
67	5	1303	A
67	5	1304	C
67	5	1326	A
67	5	1328	G
67	5	1330	A
67	5	1337	A
67	5	1354	A
67	5	1359	G
67	5	1360	G
67	5	1364	U
67	5	1370	G
67	5	1371	A
67	5	1377	G
67	5	1378	C
67	5	1379	C
67	5	1380	G
67	5	1381	U

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Mol	Chain	Res	Type
67	5	1387	A
67	5	1394	G
67	5	1397	A
67	5	1398	A
67	5	1401	C
67	5	1403	G
67	5	1416	G
67	5	1418	C
67	5	1419	G
67	5	1420	A
67	5	1421	G
67	5	1429	C
67	5	1435	G
67	5	1436	C
67	5	1437	C
67	5	1438	U
67	5	1441	C
67	5	1442	C
67	5	1445	U
67	5	1446	C
67	5	1453	G
67	5	1455	G
67	5	1456	C
67	5	1457	G
67	5	1458	C
67	5	1465	G
67	5	1475	G
67	5	1478	C
67	5	1481	C
67	5	1482	G
67	5	1483	C
67	5	1484	G
67	5	1485	C
67	5	1486	C
67	5	1489	G
67	5	1493	G
67	5	1497	A
67	5	1498	G
67	5	1502	G
67	5	1514	U
67	5	1516	G
67	5	1518	A

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Mol	Chain	Res	Type
67	5	1523	A
67	5	1525	A
67	5	1534	A
67	5	1535	C
67	5	1547	A
67	5	1554	A
67	5	1563	A
67	5	1564	A
67	5	1566	C
67	5	1574	G
67	5	1578	U
67	5	1586	G
67	5	1591	U
67	5	1596	U
67	5	1601	A
67	5	1602	U
67	5	1612	G
67	5	1613	A
67	5	1624	G
67	5	1625	G
67	5	1626	G
67	5	1631	A
67	5	1633	G
67	5	1634	A
67	5	1654	G
67	5	1656	U
67	5	1661	C
67	5	1670	G
67	5	1676	C
67	5	1677	U
67	5	1679	A
67	5	1691	G
67	5	1724	G
67	5	1726	U
67	5	1733	G
67	5	1734	G
67	5	1735	U
67	5	1740	C
67	5	1741	G
67	5	1742	A
67	5	1750	G
67	5	1753	G

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Mol	Chain	Res	Type
67	5	1755	C
67	5	1756	U
67	5	1757	U
67	5	1761	G
67	5	1763	C
67	5	1764	G
67	5	1772	C
67	5	1773	U
67	5	1776	A
67	5	1780	A
67	5	1781	U
67	5	1787	A
67	5	1797	G
67	5	1799	G
67	5	1800	U
67	5	1803	G
67	5	1804	A
67	5	1805	A
67	5	1819	G
67	5	1821	G
67	5	1822	U
67	5	1823	G
67	5	1828	C
67	5	1833	G
67	5	1834	U
67	5	1835	G
67	5	1836	G
67	5	1837	A
67	5	1842	G
67	5	1855	G
67	5	1867	A
67	5	1869	G
67	5	1882	U
67	5	1883	G
67	5	1890	G
67	5	1893	C
67	5	1897	A
67	5	1910	G
67	5	1918	U
67	5	1920	C
67	5	1921	C
67	5	1922	G

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Mol	Chain	Res	Type
67	5	1923	A
67	5	1931	C
67	5	1933	G
67	5	1941	A
67	5	1945	G
67	5	1948	G
67	5	1952	G
67	5	1959	U
67	5	1961	G
67	5	1962	A
67	5	1963	C
67	5	1966	C
67	5	1967	A
67	5	1976	G
67	5	1977	C
67	5	1979	A
67	5	1980	U
67	5	1981	G
67	5	1982	G
67	5	1983	A
67	5	1984	A
67	5	1986	U
67	5	1987	C
67	5	1991	A
67	5	1997	U
67	5	2001	G
67	5	2002	A
67	5	2003	G
67	5	2004	U
67	5	2005	G
67	5	2008	U
67	5	2011	C
67	5	2024	G
67	5	2025	A
67	5	2026	A
67	5	2046	G
67	5	2047	A
67	5	2048	U
67	5	2052	G
67	5	2055	G
67	5	2056	G
67	5	2062	C

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Mol	Chain	Res	Type
67	5	2064	G
67	5	2069	A
67	5	2070	U
67	5	2084	U
67	5	2085	G
67	5	2089	G
67	5	2090	U
67	5	2092	G
67	5	2093	G
67	5	2094	C
67	5	2095	A
67	5	2097	A
67	5	2098	G
67	5	2100	G
67	5	2101	A
67	5	2102	G
67	5	2104	A
67	5	2106	G
67	5	2107	A
67	5	2108	G
67	5	2110	G
67	5	2259	G
67	5	2260	C
67	5	2262	G
67	5	2266	C
67	5	2267	U
67	5	2268	A
67	5	2269	C
67	5	2270	G
67	5	2275	G
67	5	2278	G
67	5	2279	A
67	5	2288	G
67	5	2289	C
67	5	2295	C
67	5	2300	A
67	5	2301	G
67	5	2313	A
67	5	2314	G
67	5	2322	G
67	5	2331	G
67	5	2333	G

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Mol	Chain	Res	Type
67	5	2348	G
67	5	2351	C
67	5	2364	G
67	5	2370	A
67	5	2395	A
67	5	2396	A
67	5	2399	G
67	5	2402	G
67	5	2416	G
67	5	2417	A
67	5	2422	C
67	5	2424	G
67	5	2425	U
67	5	2428	A
67	5	2429	A
67	5	2433	G
67	5	2441	C
67	5	2450	G
67	5	2469	C
67	5	2470	C
67	5	2471	G
67	5	2475	G
67	5	2479	G
67	5	2483	G
67	5	2485	U
67	5	2488	C
67	5	2489	C
67	5	2490	U
67	5	2491	C
67	5	2493	G
67	5	2495	U
67	5	2503	G
67	5	2504	C
67	5	2505	C
67	5	2506	G
67	5	2511	A
67	5	2513	A
67	5	2521	G
67	5	2530	U
67	5	2537	A
67	5	2546	G
67	5	2547	G

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Mol	Chain	Res	Type
67	5	2554	U
67	5	2555	G
67	5	2564	G
67	5	2566	G
67	5	2571	C
67	5	2572	C
67	5	2575	U
67	5	2583	C
67	5	2586	G
67	5	2587	A
67	5	2601	A
67	5	2618	G
67	5	2620	G
67	5	2627	C
67	5	2638	G
67	5	2640	G
67	5	2647	A
67	5	2661	U
67	5	2662	G
67	5	2663	G
67	5	2669	C
67	5	2670	C
67	5	2673	G
67	5	2676	A
67	5	2681	G
67	5	2686	G
67	5	2687	U
67	5	2688	G
67	5	2689	C
67	5	2695	A
67	5	2696	A
67	5	2707	U
67	5	2708	U
67	5	2709	C
67	5	2710	C
67	5	2711	G
67	5	2712	G
67	5	2714	G
67	5	2716	C
67	5	2719	C
67	5	2721	G
67	5	2725	A

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Mol	Chain	Res	Type
67	5	2726	G
67	5	2740	U
67	5	2743	A
67	5	2744	A
67	5	2754	G
67	5	2755	A
67	5	2760	G
67	5	2761	U
67	5	2763	U
67	5	2764	A
67	5	2769	U
67	5	2772	C
67	5	2787	A
67	5	2788	U
67	5	2789	A
67	5	2790	U
67	5	2794	C
67	5	2795	A
67	5	2796	G
67	5	2798	A
67	5	2806	A
67	5	2807	A
67	5	2808	G
67	5	2814	C
67	5	2826	U
67	5	2827	G
67	5	2828	U
67	5	2829	U
67	5	2835	A
67	5	2838	G
67	5	2839	U
67	5	2842	G
67	5	2845	A
67	5	2855	G
67	5	2864	A
67	5	2875	C
67	5	2884	G
67	5	2896	G
67	5	2897	G
67	5	3598	C
67	5	3599	A
67	5	3604	A

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Mol	Chain	Res	Type
67	5	3605	C
67	5	3615	G
67	5	3625	G
67	5	3626	G
67	5	3635	A
67	5	3644	U
67	5	3653	A
67	5	3662	A
67	5	3671	G
67	5	3673	C
67	5	3674	G
67	5	3692	A
67	5	3696	C
67	5	3698	G
67	5	3711	A
67	5	3712	A
67	5	3722	G
67	5	3729	U
67	5	3740	G
67	5	3748	A
67	5	3750	G
67	5	3753	G
67	5	3756	A
67	5	3759	A
67	5	3760	A
67	5	3765	G
67	5	3766	A
67	5	3773	U
67	5	3774	A
67	5	3776	G
67	5	3777	G
67	5	3778	U
67	5	3783	A
67	5	3784	A
67	5	3785	A
67	5	3786	U
67	5	3799	A
67	5	3810	C
67	5	3811	G
67	5	3812	C
67	5	3814	U
67	5	3817	A

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Mol	Chain	Res	Type
67	5	3819	G
67	5	3822	U
67	5	3831	U
67	5	3838	U
67	5	3840	U
67	5	3851	U
67	5	3859	G
67	5	3867	A
67	5	3876	A
67	5	3877	A
67	5	3878	C
67	5	3879	G
67	5	3889	G
67	5	3892	U
67	5	3897	G
67	5	3898	G
67	5	3901	A
67	5	3905	A
67	5	3906	A
67	5	3907	G
67	5	3915	U
67	5	3916	G
67	5	3917	A
67	5	3927	U
67	5	3939	G
67	5	3943	A
67	5	3946	G
67	5	4067	U
67	5	4069	U
67	5	4071	U
67	5	4076	G
67	5	4084	G
67	5	4085	A
67	5	4086	G
67	5	4088	C
67	5	4099	G
67	5	4100	C
67	5	4116	C
67	5	4117	U
67	5	4118	U
67	5	4119	C
67	5	4120	U

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Mol	Chain	Res	Type
67	5	4121	G
67	5	4122	G
67	5	4125	C
67	5	4127	A
67	5	4150	G
67	5	4158	C
67	5	4162	C
67	5	4163	U
67	5	4164	C
67	5	4166	G
67	5	4171	C
67	5	4183	G
67	5	4184	G
67	5	4190	U
67	5	4191	G
67	5	4203	A
67	5	4212	A
67	5	4213	A
67	5	4218	U
67	5	4219	A
67	5	4225	G
67	5	4229	U
67	5	4232	U
67	5	4233	A
67	5	4249	G
67	5	4251	A
67	5	4255	A
67	5	4257	A
67	5	4258	C
67	5	4265	U
67	5	4266	G
67	5	4267	G
67	5	4268	A
67	5	4271	A
67	5	4273	A
67	5	4281	A
67	5	4291	G
67	5	4297	G
67	5	4304	A
67	5	4305	G
67	5	4306	U
67	5	4314	C

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Mol	Chain	Res	Type
67	5	4317	A
67	5	4318	C
67	5	4319	C
67	5	4326	G
67	5	4329	G
67	5	4330	G
67	5	4335	C
67	5	4336	A
67	5	4339	A
67	5	4349	C
67	5	4350	C
67	5	4354	U
67	5	4355	G
67	5	4373	G
67	5	4377	G
67	5	4378	A
67	5	4379	A
67	5	4380	A
67	5	4387	C
67	5	4391	G
67	5	4393	G
67	5	4394	A
67	5	4395	U
67	5	4396	A
67	5	4398	C
67	5	4401	G
67	5	4415	A
67	5	4419	U
67	5	4421	C
67	5	4422	A
67	5	4440	G
67	5	4444	C
67	5	4448	G
67	5	4449	A
67	5	4450	U
67	5	4453	C
67	5	4464	A
67	5	4471	U
67	5	4475	G
67	5	4476	C
67	5	4488	A
67	5	4495	G

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Mol	Chain	Res	Type
67	5	4500	U
67	5	4510	A
67	5	4511	A
67	5	4512	U
67	5	4513	A
67	5	4519	C
67	5	4520	G
67	5	4524	G
67	5	4527	G
67	5	4528	G
67	5	4531	U
67	5	4548	A
67	5	4549	G
67	5	4560	C
67	5	4567	G
67	5	4570	G
67	5	4573	G
67	5	4575	G
67	5	4578	G
67	5	4586	G
67	5	4590	A
67	5	4618	G
67	5	4627	U
67	5	4636	U
67	5	4637	G
67	5	4639	G
67	5	4656	A
67	5	4657	U
67	5	4661	G
67	5	4667	C
67	5	4670	C
67	5	4672	A
67	5	4677	U
67	5	4678	G
67	5	4687	A
67	5	4694	G
67	5	4700	A
67	5	4701	A
67	5	4709	U
67	5	4719	G
67	5	4720	C
67	5	4721	G

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Mol	Chain	Res	Type
67	5	4728	U
67	5	4736	C
67	5	4737	G
67	5	4745	G
67	5	4751	G
67	5	4754	G
67	5	4755	G
67	5	4756	C
67	5	4757	C
67	5	4759	C
67	5	4761	G
67	5	4765	G
67	5	4771	C
67	5	4772	C
67	5	4868	G
67	5	4870	G
67	5	4871	C
67	5	4872	G
67	5	4873	G
67	5	4874	A
67	5	4875	G
67	5	4876	A
67	5	4877	G
67	5	4882	U
67	5	4883	C
67	5	4885	U
67	5	4887	C
67	5	4891	G
67	5	4895	C
67	5	4897	G
67	5	4910	A
67	5	4912	G
67	5	4914	G
67	5	4915	G
67	5	4918	C
67	5	4919	G
67	5	4921	C
67	5	4924	C
67	5	4925	U
67	5	4926	C
67	5	4928	C
67	5	4931	G

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Mol	Chain	Res	Type
67	5	4935	C
67	5	4937	C
67	5	4938	A
67	5	4940	C
67	5	4943	A
67	5	4944	C
67	5	4948	C
67	5	4949	G
67	5	4950	U
67	5	4951	G
67	5	4956	A
67	5	4957	C
67	5	4958	C
67	5	4964	C
67	5	4965	U
67	5	4966	A
67	5	4967	A
67	5	4976	U
67	5	4985	U
67	5	4988	U
67	5	4989	U
67	5	4990	C
67	5	4991	U
67	5	4993	G
67	5	5007	A
67	5	5014	A
67	5	5017	G
67	5	5035	U
67	5	5040	U
67	5	5041	G
67	5	5047	C
67	5	5050	C
67	5	5052	C
67	5	5053	U
67	5	5054	C
67	5	5056	A
67	5	5061	A
67	5	5062	G
70	7	7	G
70	7	11	A
70	7	22	A
70	7	25	G

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Mol	Chain	Res	Type
70	7	33	U
70	7	42	A
70	7	53	U
70	7	54	A
70	7	64	G
70	7	97	G
70	7	100	A
70	7	106	G
70	7	110	G
70	7	120	U
73	8	2	G
73	8	3	A
73	8	32	C
73	8	34	U
73	8	35	C
73	8	49	G
73	8	59	A
73	8	62	A
73	8	63	U
73	8	75	G
73	8	79	G
73	8	86	U
73	8	87	G
73	8	94	G
73	8	95	A
73	8	103	A
73	8	104	A
73	8	105	C
73	8	107	C
73	8	109	C
73	8	110	U
73	8	111	U
73	8	112	G
73	8	114	G
73	8	121	G
73	8	123	U
73	8	124	U
73	8	125	C
73	8	126	C
73	8	127	U
73	8	137	A
73	8	143	G

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Mol	Chain	Res	Type
73	8	150	C
73	8	153	C
76	9	2	A
76	9	3	C
76	9	4	C
76	9	17	C
76	9	25	A
76	9	26	U
76	9	33	G
76	9	41	G
76	9	44	U
76	9	45	A
76	9	46	A
76	9	56	G
76	9	58	C
76	9	60	A
76	9	65	C
76	9	67	C
76	9	68	A
76	9	70	G
76	9	71	G
76	9	73	C
76	9	74	G
76	9	75	G
76	9	77	A
76	9	79	A
76	9	99	A
76	9	100	U
76	9	103	A
76	9	104	A
76	9	110	U
76	9	111	A
76	9	113	G
76	9	115	U
76	9	116	U
76	9	124	U
76	9	126	G
76	9	127	C
76	9	129	C
76	9	130	G
76	9	141	A
76	9	143	U

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Mol	Chain	Res	Type
76	9	147	A
76	9	155	G
76	9	158	A
76	9	161	U
76	9	162	C
76	9	163	U
76	9	167	G
76	9	168	C
76	9	173	A
76	9	175	A
76	9	182	C
76	9	183	G
76	9	184	G
76	9	188	C
76	9	189	U
76	9	192	C
76	9	200	G
76	9	202	G
76	9	206	G
76	9	213	G
76	9	215	G
76	9	289	G
76	9	292	A
76	9	293	C
76	9	294	U
76	9	302	A
76	9	304	C
76	9	307	G
76	9	308	G
76	9	309	G
76	9	312	G
76	9	314	U
76	9	318	A
76	9	319	C
76	9	322	C
76	9	331	C
76	9	332	G
76	9	335	G
76	9	340	C
76	9	347	G
76	9	351	G
76	9	360	A

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Mol	Chain	Res	Type
76	9	362	C
76	9	364	A
76	9	368	U
76	9	369	C
76	9	370	G
76	9	371	A
76	9	372	U
76	9	381	C
76	9	382	C
76	9	383	G
76	9	384	U
76	9	385	G
76	9	386	C
76	9	400	C
76	9	407	G
76	9	409	C
76	9	417	C
76	9	418	A
76	9	435	A
76	9	438	G
76	9	448	A
76	9	449	A
76	9	450	C
76	9	459	C
76	9	460	A
76	9	462	C
76	9	464	A
76	9	465	A
76	9	466	G
76	9	472	C
76	9	473	A
76	9	474	G
76	9	476	A
76	9	482	G
76	9	487	U
76	9	492	C
76	9	496	C
76	9	507	G
76	9	508	A
76	9	512	A
76	9	516	A
76	9	525	A

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Mol	Chain	Res	Type
76	9	531	A
76	9	532	C
76	9	533	A
76	9	544	G
76	9	545	A
76	9	546	G
76	9	548	C
76	9	549	C
76	9	550	C
76	9	551	U
76	9	554	A
76	9	555	A
76	9	556	U
76	9	557	U
76	9	559	G
76	9	563	G
76	9	564	A
76	9	568	C
76	9	576	A
76	9	583	A
76	9	587	A
76	9	588	G
76	9	589	G
76	9	590	A
76	9	591	U
76	9	592	C
76	9	597	G
76	9	598	G
76	9	604	A
76	9	606	G
76	9	607	U
76	9	608	C
76	9	614	C
76	9	620	G
76	9	629	A
76	9	631	U
76	9	637	U
76	9	643	A
76	9	644	G
76	9	655	A
76	9	659	G
76	9	660	C

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Mol	Chain	Res	Type
76	9	663	C
76	9	664	A
76	9	668	A
76	9	669	A
76	9	670	A
76	9	671	A
76	9	672	A
76	9	673	G
76	9	684	G
76	9	688	U
76	9	689	U
76	9	732	U
76	9	752	G
76	9	753	C
76	9	754	G
76	9	810	A
76	9	811	A
76	9	812	A
76	9	821	G
76	9	822	U
76	9	830	A
76	9	834	C
76	9	847	A
76	9	861	A
76	9	868	G
76	9	869	A
76	9	870	A
76	9	871	U
76	9	872	A
76	9	873	G
76	9	874	G
76	9	875	A
76	9	877	C
76	9	878	G
76	9	885	U
76	9	887	U
76	9	890	U
76	9	892	U
76	9	913	A
76	9	914	U
76	9	920	A
76	9	922	A

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Mol	Chain	Res	Type
76	9	930	C
76	9	933	G
76	9	934	G
76	9	943	U
76	9	955	A
76	9	971	G
76	9	985	G
76	9	990	A
76	9	992	A
76	9	999	G
76	9	1008	A
76	9	1016	U
76	9	1017	U
76	9	1023	A
76	9	1041	G
76	9	1045	U
76	9	1060	A
76	9	1061	U
76	9	1062	A
76	9	1078	C
76	9	1083	A
76	9	1085	C
76	9	1089	G
76	9	1096	G
76	9	1099	G
76	9	1100	A
76	9	1113	A
76	9	1114	U
76	9	1115	U
76	9	1116	C
76	9	1117	C
76	9	1118	C
76	9	1121	G
76	9	1131	G
76	9	1133	A
76	9	1138	C
76	9	1139	C
76	9	1148	A
76	9	1149	A
76	9	1150	A
76	9	1153	C
76	9	1154	U

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Mol	Chain	Res	Type
76	9	1165	G
76	9	1166	G
76	9	1195	A
76	9	1197	G
76	9	1207	G
76	9	1208	A
76	9	1211	G
76	9	1213	C
76	9	1215	C
76	9	1216	C
76	9	1221	G
76	9	1223	A
76	9	1224	G
76	9	1240	A
76	9	1242	U
76	9	1251	A
76	9	1253	A
76	9	1254	C
76	9	1256	G
76	9	1257	G
76	9	1259	A
76	9	1260	A
76	9	1265	A
76	9	1271	C
76	9	1274	G
76	9	1275	G
76	9	1281	G
76	9	1284	A
76	9	1285	G
76	9	1286	G
76	9	1287	A
76	9	1289	U
76	9	1293	A
76	9	1298	G
76	9	1299	A
76	9	1300	U
76	9	1301	A
76	9	1302	G
76	9	1307	U
76	9	1308	U
76	9	1313	A
76	9	1314	U

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Mol	Chain	Res	Type
76	9	1316	C
76	9	1330	G
76	9	1331	C
76	9	1342	U
76	9	1348	G
76	9	1354	G
76	9	1369	A
76	9	1371	U
76	9	1372	U
76	9	1378	A
76	9	1395	C
76	9	1396	A
76	9	1397	U
76	9	1401	A
76	9	1402	A
76	9	1404	U
76	9	1410	C
76	9	1412	C
76	9	1424	G
76	9	1428	G
76	9	1429	G
76	9	1439	A
76	9	1449	G
76	9	1452	A
76	9	1454	A
76	9	1458	G
76	9	1459	G
76	9	1462	U
76	9	1463	U
76	9	1466	G
76	9	1473	G
76	9	1476	A
76	9	1477	U
76	9	1478	U
76	9	1490	G
76	9	1493	C
76	9	1494	U
76	9	1495	G
76	9	1497	G
76	9	1498	A
76	9	1507	G
76	9	1509	U

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Mol	Chain	Res	Type
76	9	1510	G
76	9	1519	U
76	9	1520	G
76	9	1521	C
76	9	1522	A
76	9	1531	A
76	9	1533	A
76	9	1536	G
76	9	1544	C
76	9	1545	A
76	9	1548	G
76	9	1552	G
76	9	1553	C
76	9	1555	U
76	9	1556	A
76	9	1557	C
76	9	1560	U
76	9	1570	G
76	9	1574	C
76	9	1575	G
76	9	1580	A
76	9	1581	C
76	9	1582	C
76	9	1585	U
76	9	1586	U
76	9	1587	G
76	9	1588	A
76	9	1589	A
76	9	1600	G
76	9	1601	A
76	9	1602	U
76	9	1604	G
76	9	1621	U
76	9	1623	A
76	9	1625	U
76	9	1637	A
76	9	1638	G
76	9	1639	G
76	9	1641	A
76	9	1647	A
76	9	1648	G
76	9	1654	G

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Mol	Chain	Res	Type
76	9	1664	A
76	9	1665	G
76	9	1671	G
76	9	1680	G
76	9	1682	C
76	9	1683	C
76	9	1686	G
76	9	1689	C
76	9	1695	A
76	9	1698	C
76	9	1699	A
76	9	1700	C
76	9	1703	C
76	9	1715	A
76	9	1721	U
76	9	1722	G
76	9	1726	G
76	9	1728	U
76	9	1729	U
76	9	1730	U
76	9	1737	G
76	9	1744	G
76	9	1745	A
76	9	1753	C
76	9	1756	C
76	9	1758	G
76	9	1760	G
76	9	1772	C
76	9	1783	C
76	9	1785	C
76	9	1800	A
76	9	1823	A
76	9	1825	A
76	9	1826	G
76	9	1829	G
76	9	1831	A
76	9	1835	A
76	9	1836	G
76	9	1838	U
76	9	1849	G
76	9	1851	A
76	9	1861	G

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Mol	Chain	Res	Type
76	9	1862	G
76	9	1863	A
76	9	1865	C
76	9	1866	A
76	9	1867	U
76	9	1868	U
76	9	1869	A

All (226) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
67	5	12	A
67	5	47	A
67	5	48	G
67	5	64	A
67	5	119	G
67	5	125	C
67	5	134	G
67	5	143	C
67	5	159	C
67	5	217	C
67	5	226	G
67	5	234	G
67	5	245	C
67	5	265	C
67	5	275	C
67	5	278	G
67	5	385	A
67	5	387	G
67	5	406	C
67	5	408	A
67	5	409	G
67	5	449	C
67	5	480	C
67	5	481(A)	C
67	5	482	G
67	5	484	U
67	5	485	C
67	5	492	U
67	5	497	G
67	5	498	C
67	5	504	G

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Mol	Chain	Res	Type
67	5	696	C
67	5	729	G
67	5	738(A)	C
67	5	747	A
67	5	748	G
67	5	915	A
67	5	916	C
67	5	930	G
67	5	935(A)	G
67	5	955	G
67	5	956	A
67	5	959	G
67	5	965	G
67	5	966	A
67	5	969	C
67	5	971(A)	G
67	5	1071	C
67	5	1072	C
67	5	1211	G
67	5	1214	C
67	5	1236	C
67	5	1238	A
67	5	1287	G
67	5	1291	G
67	5	1295	U
67	5	1329	G
67	5	1354	A
67	5	1358	G
67	5	1359	G
67	5	1370	G
67	5	1378	C
67	5	1380	G
67	5	1420	A
67	5	1440	U
67	5	1445	U
67	5	1455	G
67	5	1477	C
67	5	1481	C
67	5	1484	G
67	5	1485	C
67	5	1497	A
67	5	1502	G

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Mol	Chain	Res	Type
67	5	1563	A
67	5	1633	G
67	5	1733	G
67	5	1734	G
67	5	1740	C
67	5	1804	A
67	5	1815	G
67	5	1818	G
67	5	1833	G
67	5	1834	U
67	5	1835	G
67	5	1836	G
67	5	1881	C
67	5	1892	A
67	5	1921	C
67	5	1935	C
67	5	1979	A
67	5	1983	A
67	5	2046	G
67	5	2068	C
67	5	2088	A
67	5	2089	G
67	5	2100	G
67	5	2265	G
67	5	2266	C
67	5	2278	G
67	5	2313	A
67	5	2398	U
67	5	2428	A
67	5	2467	U
67	5	2468	U
67	5	2474	G
67	5	2475	G
67	5	2490	U
67	5	2502	A
67	5	2546	G
67	5	2587	A
67	5	2661	U
67	5	2695	A
67	5	2754	G
67	5	2794	C
67	5	2806	A

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Mol	Chain	Res	Type
67	5	3625	G
67	5	3673	C
67	5	3697	U
67	5	3710	G
67	5	3765	G
67	5	3809	G
67	5	3876	A
67	5	3888	G
67	5	3904	G
67	5	4075	U
67	5	4076	G
67	5	4084	G
67	5	4119	C
67	5	4121	G
67	5	4124	G
67	5	4162	C
67	5	4170	A
67	5	4232	U
67	5	4254	G
67	5	4266	G
67	5	4378	A
67	5	4395	U
67	5	4448	G
67	5	4449	A
67	5	4510	A
67	5	4527	G
67	5	4626	A
67	5	4694	G
67	5	4699	U
67	5	4719	G
67	5	4871	C
67	5	4872	G
67	5	4876	A
67	5	4884	G
67	5	4925	U
67	5	4936	G
67	5	4942	C
67	5	4947	U
67	5	4965	U
67	5	4966	A
73	8	2	G
73	8	86	U

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Mol	Chain	Res	Type
73	8	94	G
73	8	110	U
73	8	124	U
76	9	2	A
76	9	72	C
76	9	110	U
76	9	126	G
76	9	160	U
76	9	182	C
76	9	293	C
76	9	308	G
76	9	369	C
76	9	370	G
76	9	434	G
76	9	448	A
76	9	465	A
76	9	473	A
76	9	487	U
76	9	532	C
76	9	550	C
76	9	553	U
76	9	555	A
76	9	563	G
76	9	591	U
76	9	606	G
76	9	620	G
76	9	642	U
76	9	670	A
76	9	688	U
76	9	752	G
76	9	821	G
76	9	869	A
76	9	870	A
76	9	872	A
76	9	874	G
76	9	1016	U
76	9	1114	U
76	9	1115	U
76	9	1120	U
76	9	1137	U
76	9	1165	G
76	9	1215	C

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Mol	Chain	Res	Type
76	9	1253	A
76	9	1264	C
76	9	1284	A
76	9	1286	G
76	9	1313	A
76	9	1330	G
76	9	1394	G
76	9	1395	C
76	9	1396	A
76	9	1489	A
76	9	1493	C
76	9	1519	U
76	9	1520	G
76	9	1535	U
76	9	1585	U
76	9	1637	A
76	9	1638	G
76	9	1646	C
76	9	1664	A
76	9	1665	G
76	9	1679	A
76	9	1721	U
76	9	1744	G
76	9	1824	A
76	9	1835	A
76	9	1867	U
76	9	1868	U

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 291 ligands modelled in this entry, 289 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
87	GCP	jj	700	-	32,34,34	3.10	12 (37%)	49,54,54	1.79	13 (26%)
88	BLS	5	5122	67	30,31,31	4.21	17 (56%)	30,43,43	1.61	6 (20%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
87	GCP	jj	700	-	-	5/19/38/38	0/3/3/3
88	BLS	5	5122	67	-	6/25/38/38	0/2/2/2

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
88	5	5122	BLS	O5'-C1'	11.79	1.65	1.42
88	5	5122	BLS	O5'-C5'	-9.89	1.24	1.43
87	jj	700	GCP	O4'-C1'	8.79	1.62	1.42
88	5	5122	BLS	C3'-C2'	7.35	1.55	1.33
88	5	5122	BLS	C4'-C5'	7.17	1.69	1.53
87	jj	700	GCP	C2'-C1'	-6.88	1.31	1.53
87	jj	700	GCP	O4'-C4'	-6.15	1.31	1.45
87	jj	700	GCP	PB-O3A	5.65	1.64	1.58
88	5	5122	BLS	C7-N6	5.48	1.45	1.34
87	jj	700	GCP	PA-O3A	5.21	1.65	1.59
88	5	5122	BLS	C14-N12	4.86	1.45	1.35
88	5	5122	BLS	C1'-N1	-4.82	1.41	1.48
88	5	5122	BLS	C4-N4	4.81	1.45	1.33
88	5	5122	BLS	C14-N15	4.60	1.44	1.34
87	jj	700	GCP	C2-N2	4.40	1.44	1.34
88	5	5122	BLS	C1'-C2'	-3.89	1.40	1.49
88	5	5122	BLS	C5-C4	-3.25	1.35	1.42
87	jj	700	GCP	C6-N1	-2.96	1.33	1.38
87	jj	700	GCP	O3'-C3'	-2.89	1.35	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
87	jj	700	GCP	O2'-C2'	2.74	1.49	1.43
88	5	5122	BLS	O2-C2	-2.74	1.18	1.23
88	5	5122	BLS	C4'-C3'	-2.60	1.40	1.49
87	jj	700	GCP	C5-N7	-2.55	1.34	1.39
88	5	5122	BLS	O7-C7	-2.50	1.18	1.23
88	5	5122	BLS	C5'-C6'	2.35	1.57	1.53
87	jj	700	GCP	O6-C6	-2.24	1.19	1.23
87	jj	700	GCP	PB-O2B	-2.24	1.50	1.56
88	5	5122	BLS	C6-N1	-2.20	1.32	1.38
88	5	5122	BLS	C2-N1	-2.01	1.35	1.40

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
87	jj	700	GCP	C5-C4-N3	-5.80	119.16	128.39
87	jj	700	GCP	C2-N3-C4	4.84	120.63	112.30
88	5	5122	BLS	C8-C7-N6	4.82	122.84	116.25
87	jj	700	GCP	C2-N1-C6	-3.36	119.01	125.11
87	jj	700	GCP	PB-O3A-PA	-3.16	122.04	132.37
88	5	5122	BLS	O7-C7-C8	-2.96	117.21	121.54
87	jj	700	GCP	N9-C4-N3	2.80	131.56	125.95
88	5	5122	BLS	C11-C10-C9	-2.66	108.49	113.96
87	jj	700	GCP	N9-C8-N7	-2.65	108.48	113.40
87	jj	700	GCP	C5-C6-N1	2.60	119.86	113.25
87	jj	700	GCP	C4-C5-N7	-2.48	106.74	110.67
87	jj	700	GCP	C2'-C3'-C4'	-2.46	97.86	102.61
88	5	5122	BLS	C1'-C2'-C3'	-2.45	119.44	122.45
87	jj	700	GCP	C8-N7-C5	2.42	108.58	104.26
87	jj	700	GCP	O6-C6-C5	-2.31	120.43	126.53
88	5	5122	BLS	O4-C6'-O3	-2.15	119.20	124.08
87	jj	700	GCP	N2-C2-N1	2.08	121.15	116.76
88	5	5122	BLS	C3'-C4'-N6	-2.04	106.70	110.44
87	jj	700	GCP	C5-C4-N9	2.03	109.28	105.66

There are no chirality outliers.

All (11) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
87	jj	700	GCP	PG-C3B-PB-O1B
87	jj	700	GCP	PG-C3B-PB-O2B
87	jj	700	GCP	PG-C3B-PB-O3A
87	jj	700	GCP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
87	jj	700	GCP	C5'-O5'-PA-O2A
88	5	5122	BLS	C3'-C4'-N6-C7
88	5	5122	BLS	C7-C8-C9-N9
88	5	5122	BLS	C11-C10-C9-C8
88	5	5122	BLS	C11-C10-C9-N9
88	5	5122	BLS	C7-C8-C9-C10
88	5	5122	BLS	C5'-C4'-N6-C7

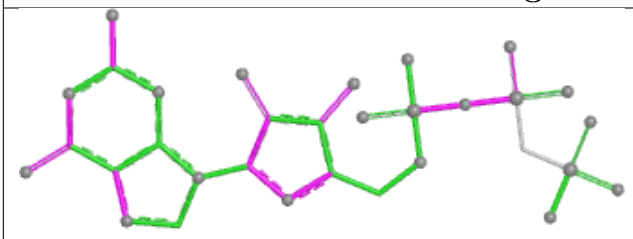
There are no ring outliers.

2 monomers are involved in 17 short contacts:

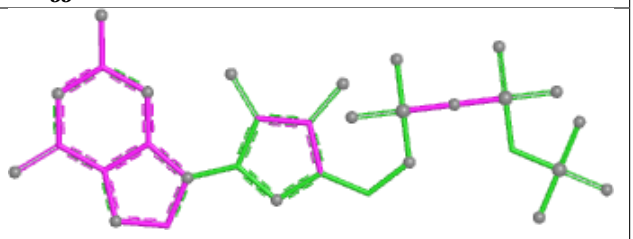
Mol	Chain	Res	Type	Clashes	Symm-Clashes
87	jj	700	GCP	14	0
88	5	5122	BLS	3	0

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

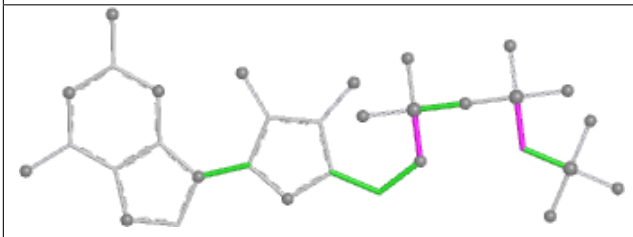
Ligand GCP jj 700



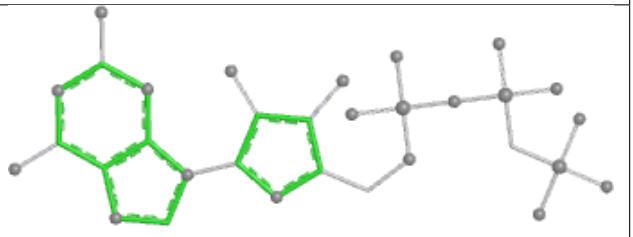
Bond lengths



Bond angles

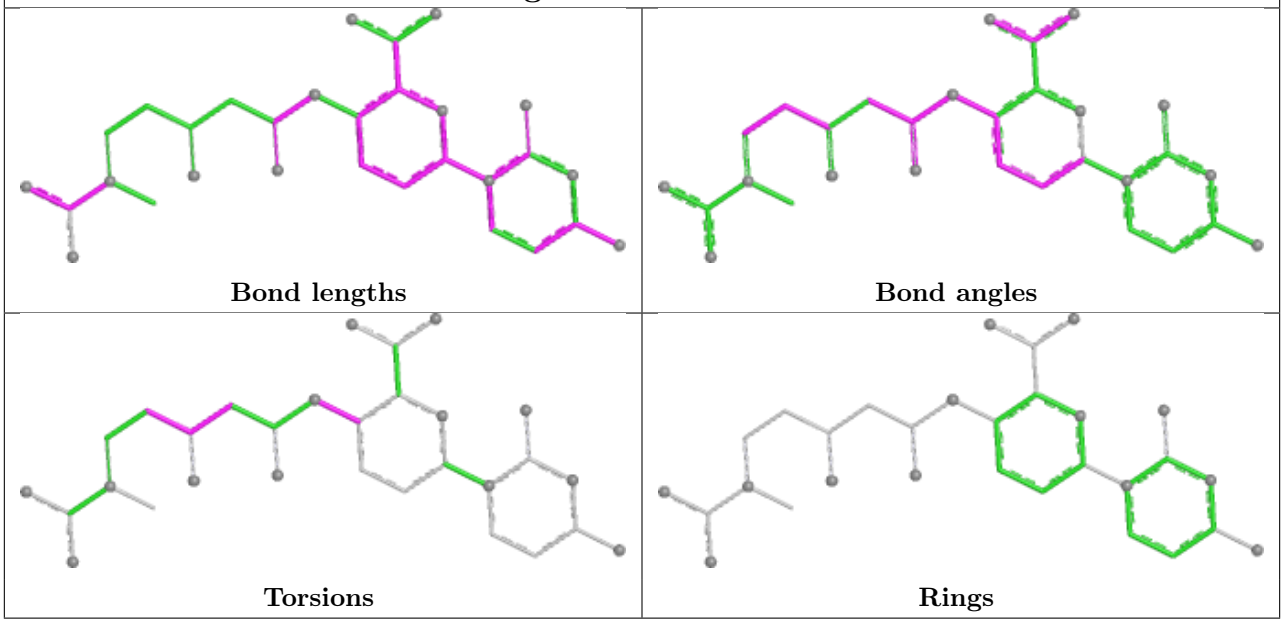


Torsions



Rings

Ligand BLS 5 5122



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
67	5	7
76	9	7
73	8	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	990:C	O3'	1064:G	P	17.61
1	5	1406(C):G	O3'	1411:C	P	17.48
1	8	79:G	O3'	85:U	P	15.70
1	5	4138:C	O3'	4146:G	P	15.08
1	9	322:C	O3'	323:C	P	9.57
1	9	798:G	O3'	799:U	P	5.28
1	5	1438:U	O3'	1440:U	P	4.98
1	9	1295:A	O3'	1296:U	P	4.76
1	5	5020:G	O3'	5021:C	P	4.72
1	9	304:C	O3'	305:U	P	4.39

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	170:C	O3'	171:U	P	4.32
1	5	751:G	O3'	752:G	P	3.76
1	9	902:G	O3'	903:A	P	3.75
1	9	309:G	O3'	310:C	P	3.57
1	9	903:A	O3'	904:A	P	3.28

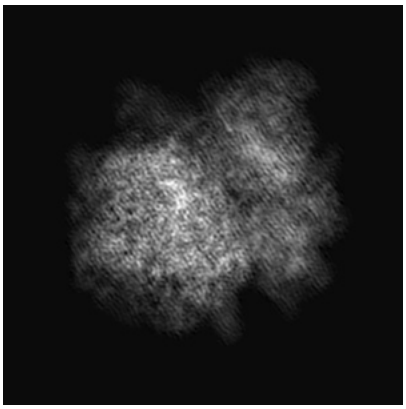
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-12632. These allow visual inspection of the internal detail of the map and identification of artifacts.

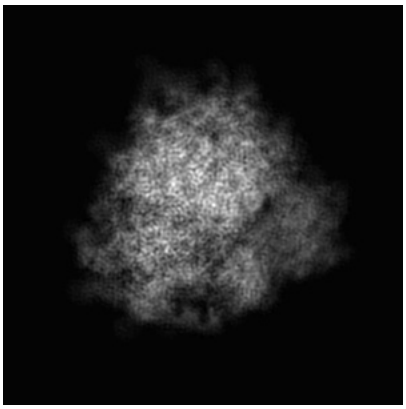
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

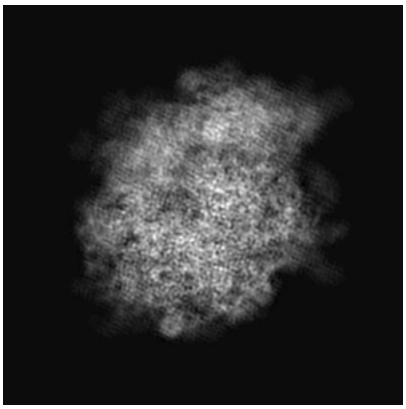
6.1.1 Primary map



X

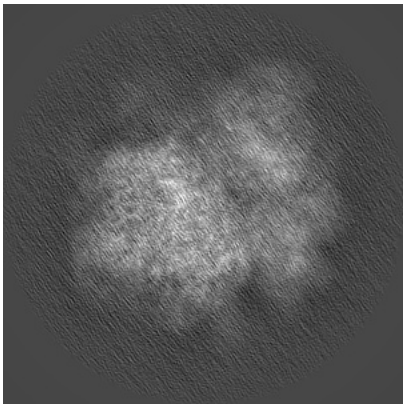


Y

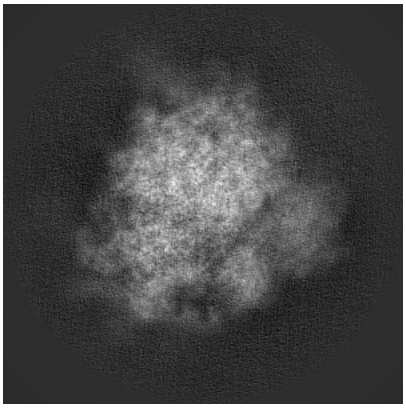


Z

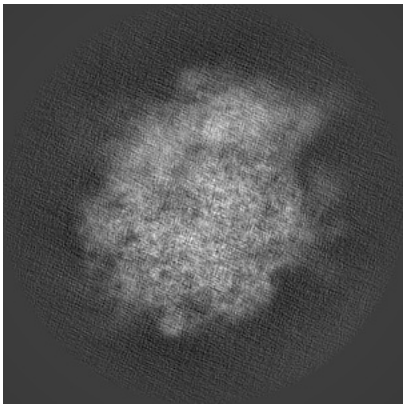
6.1.2 Raw map



X



Y

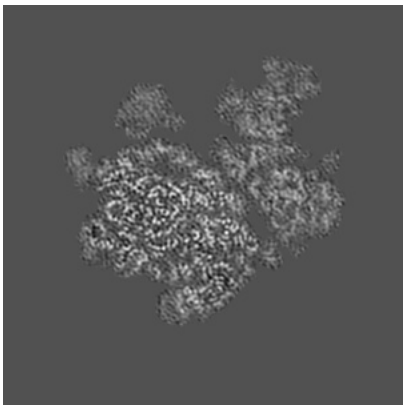


Z

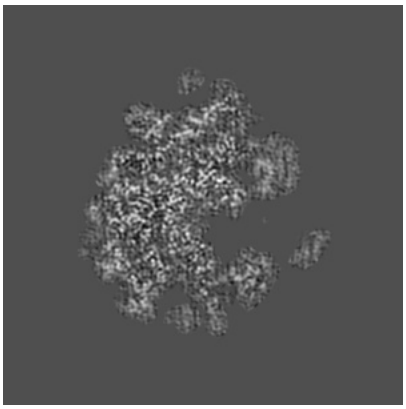
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

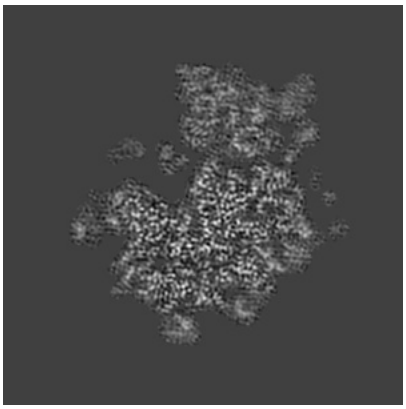
6.2.1 Primary map



X Index: 150

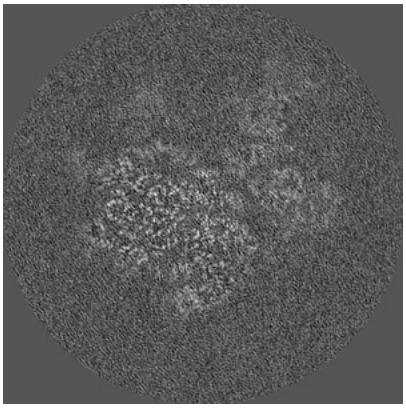


Y Index: 150

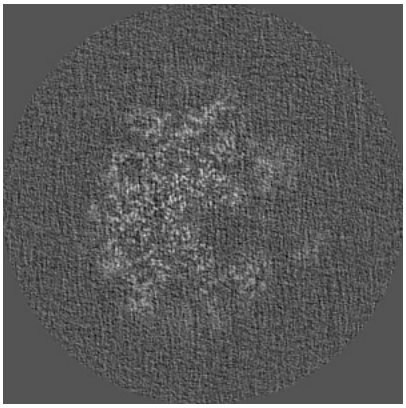


Z Index: 150

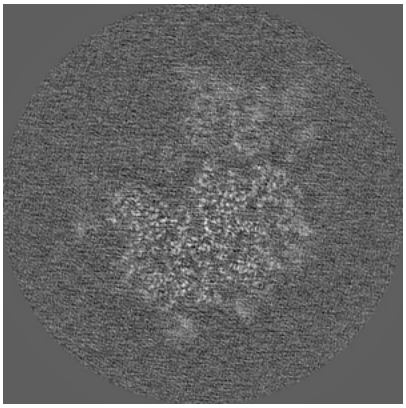
6.2.2 Raw map



X Index: 150



Y Index: 150

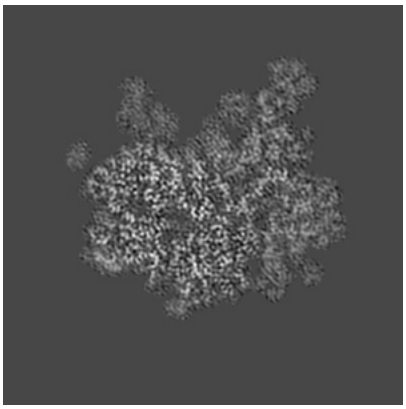


Z Index: 150

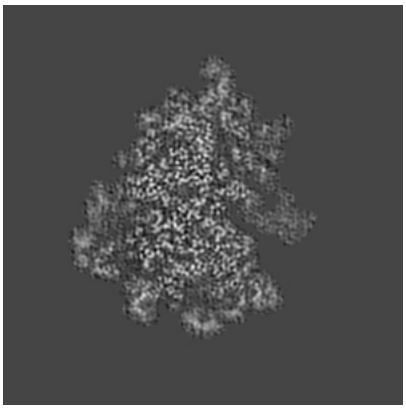
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

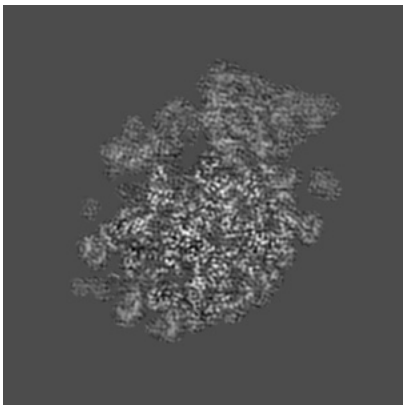
6.3.1 Primary map



X Index: 158

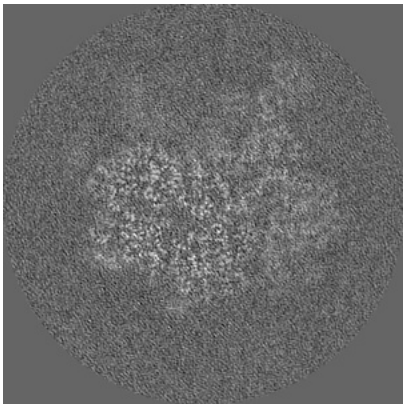


Y Index: 130

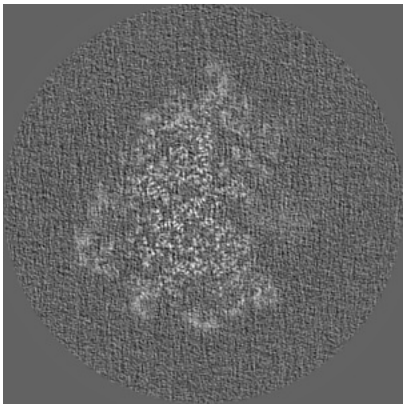


Z Index: 128

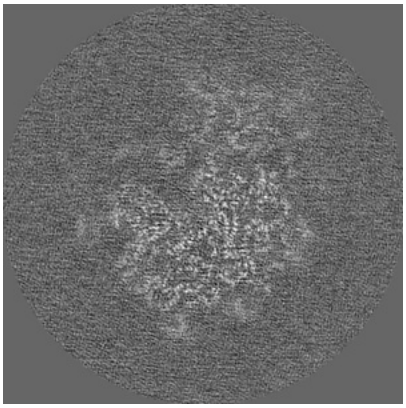
6.3.2 Raw map



X Index: 158



Y Index: 130

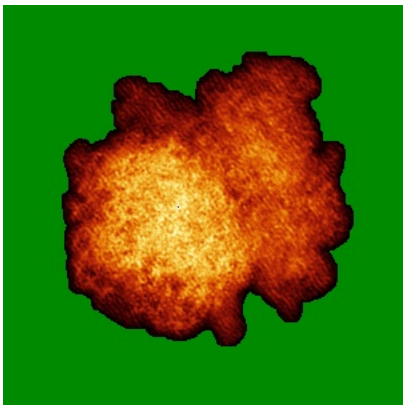


Z Index: 148

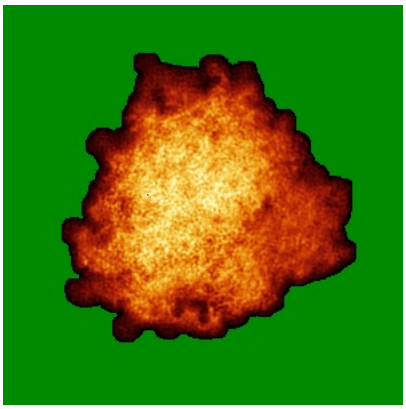
The images above show the largest variance slices of the map in three orthogonal directions.

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

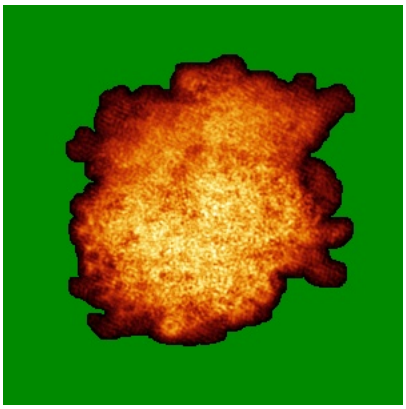
6.4.1 Primary map



X

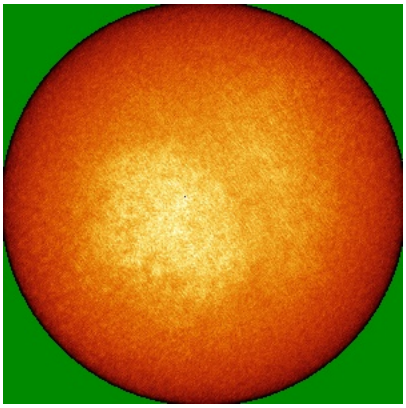


Y

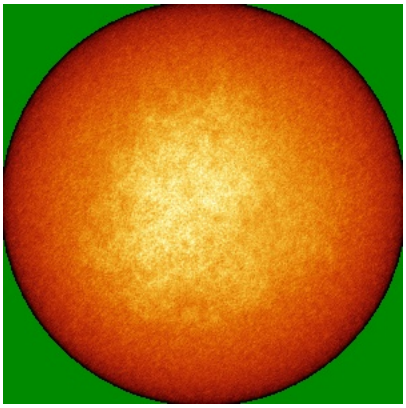


Z

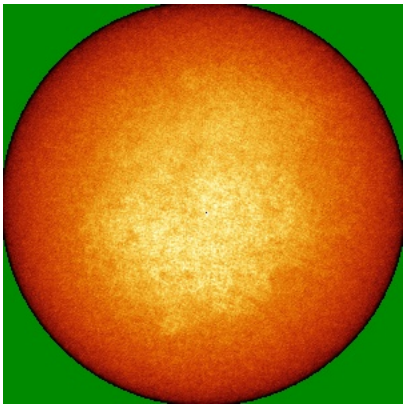
6.4.2 Raw map



X



Y

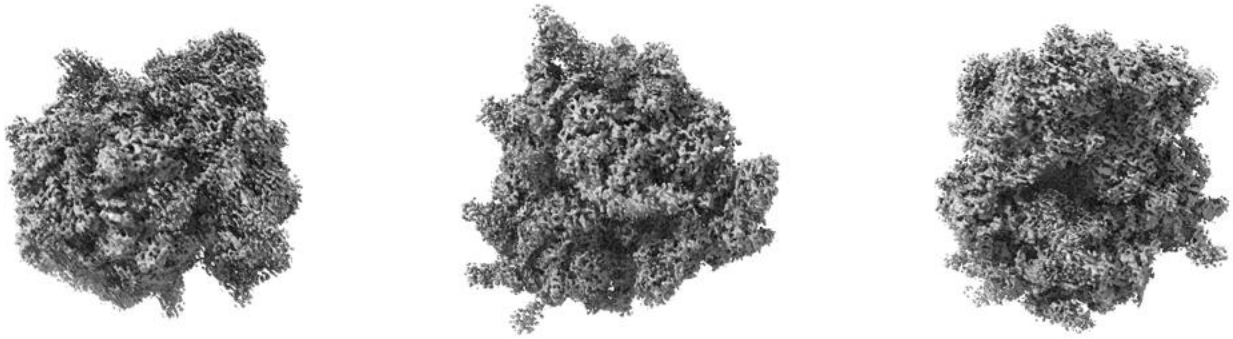


Z

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

6.5 Orthogonal surface views (i)

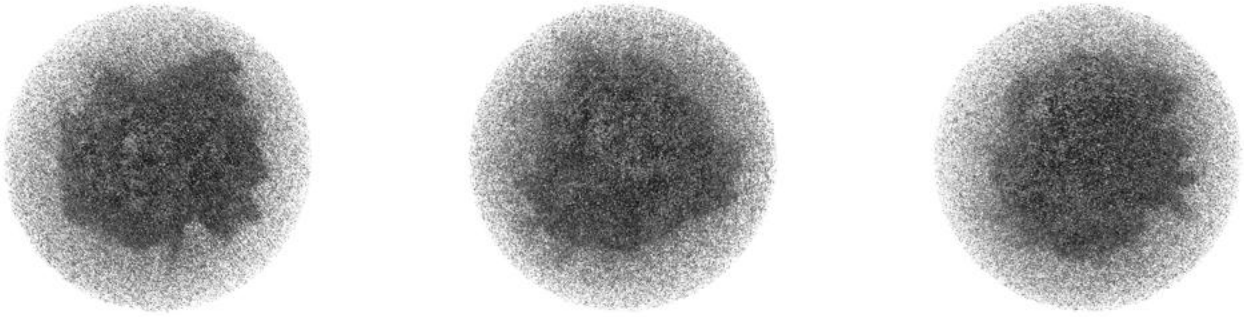
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.014. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

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

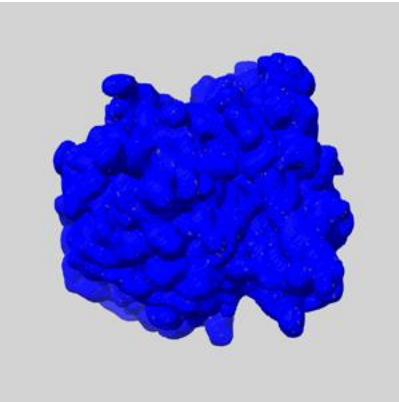
6.6 Mask visualisation

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

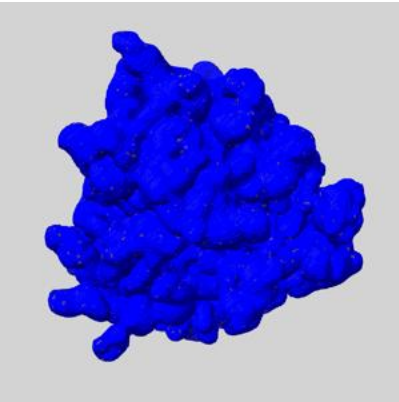
A mask typically either:

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

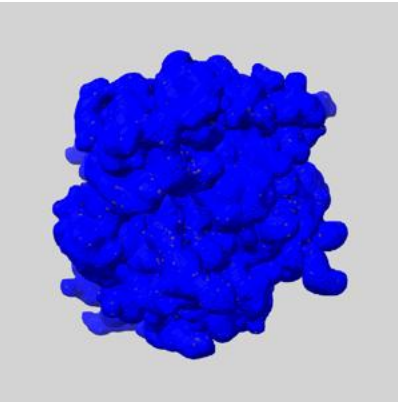
6.6.1 emd_12632_msk_1.map



X



Y

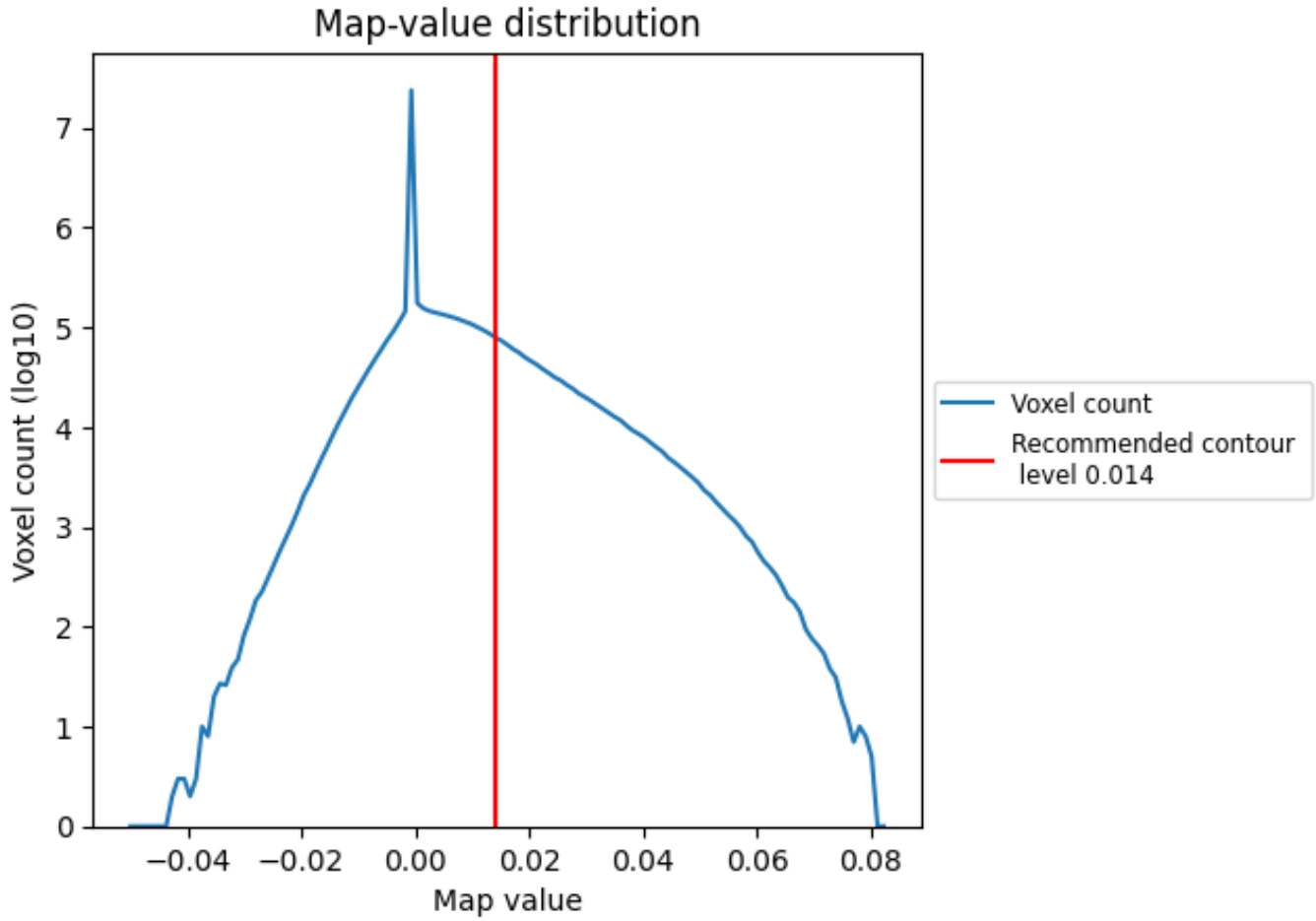


Z

7 Map analysis

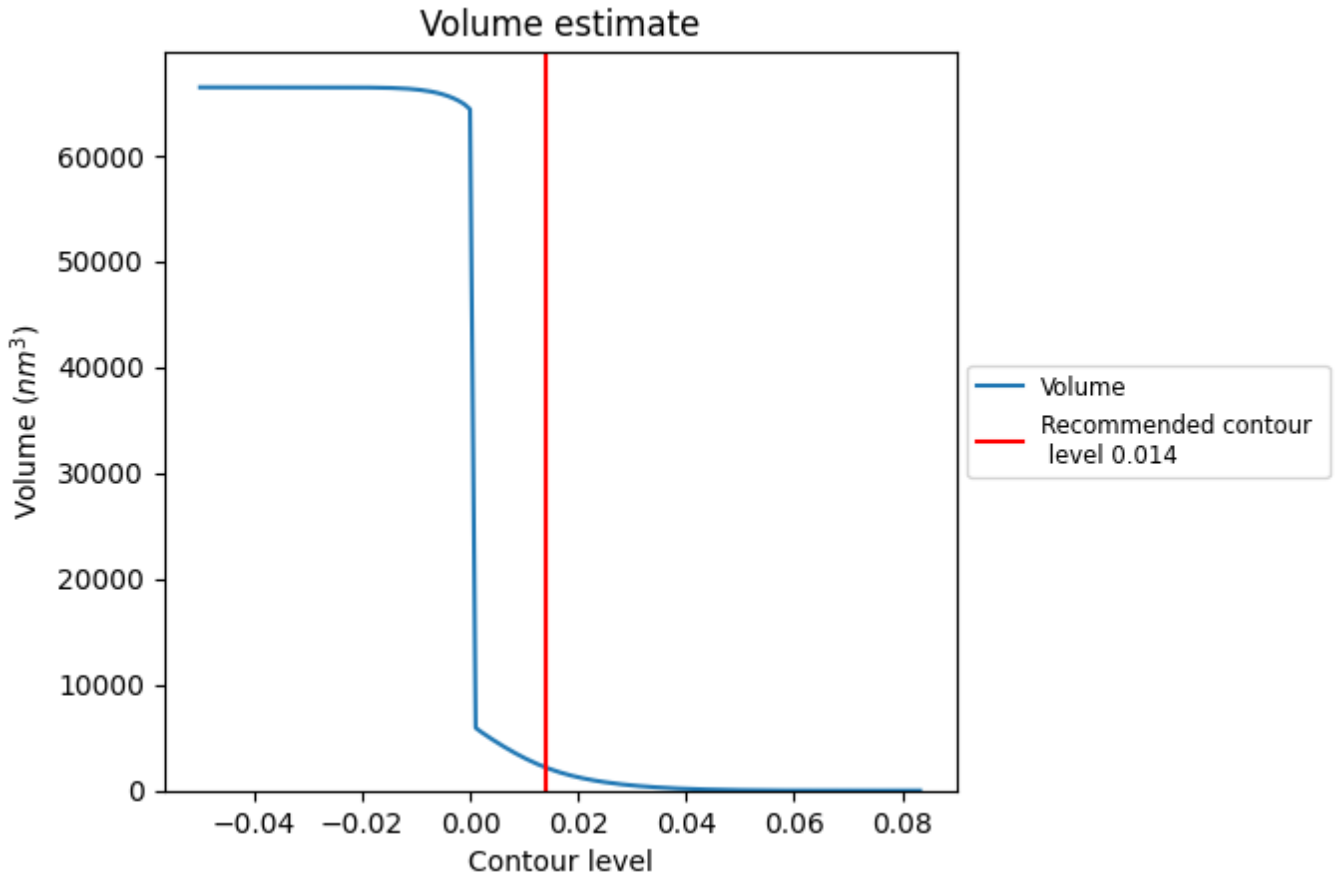
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

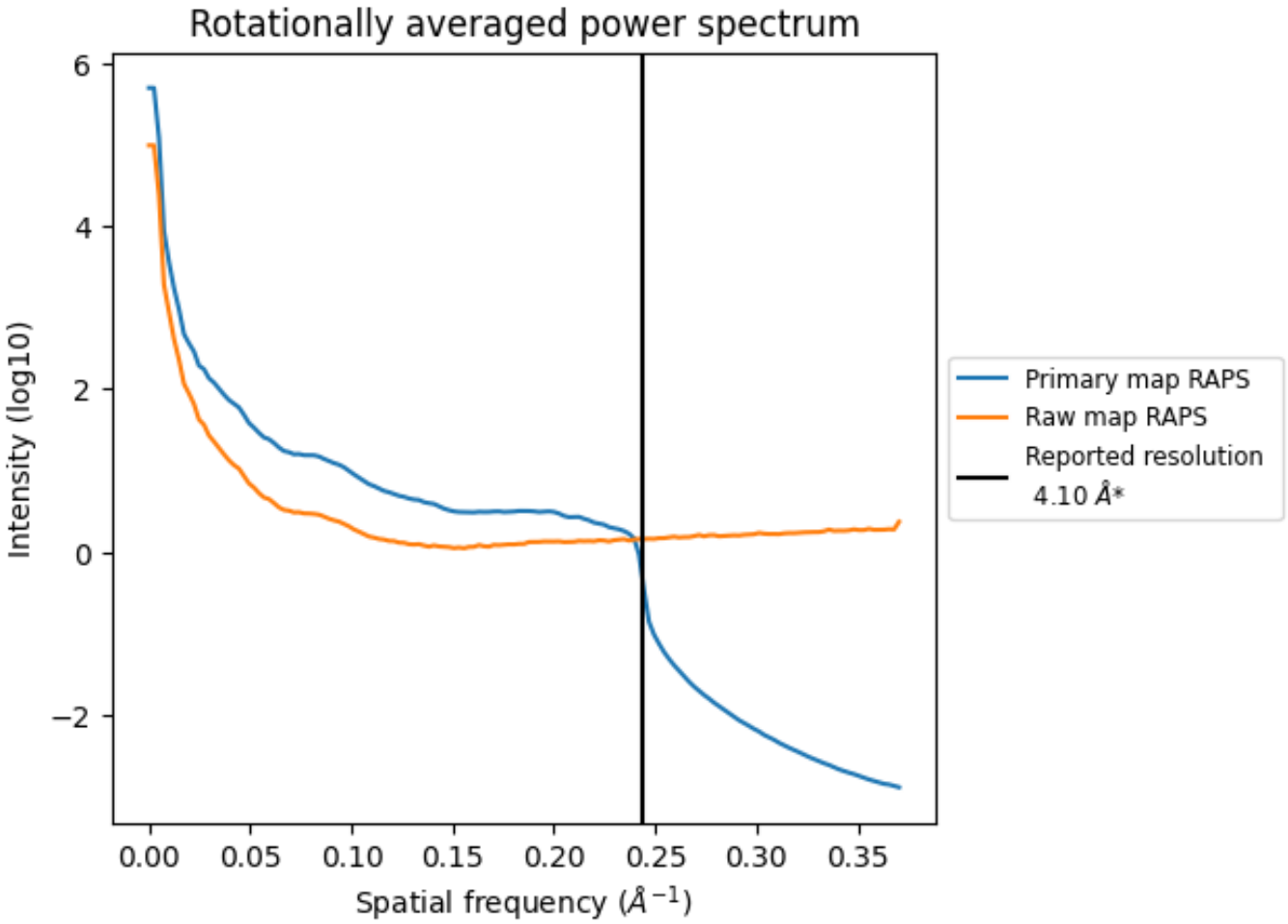
7.2 Volume estimate



The volume at the recommended contour level is 2180 nm^3; this corresponds to an approximate mass of 1970 kDa.

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

7.3 Rotationally averaged power spectrum (i)

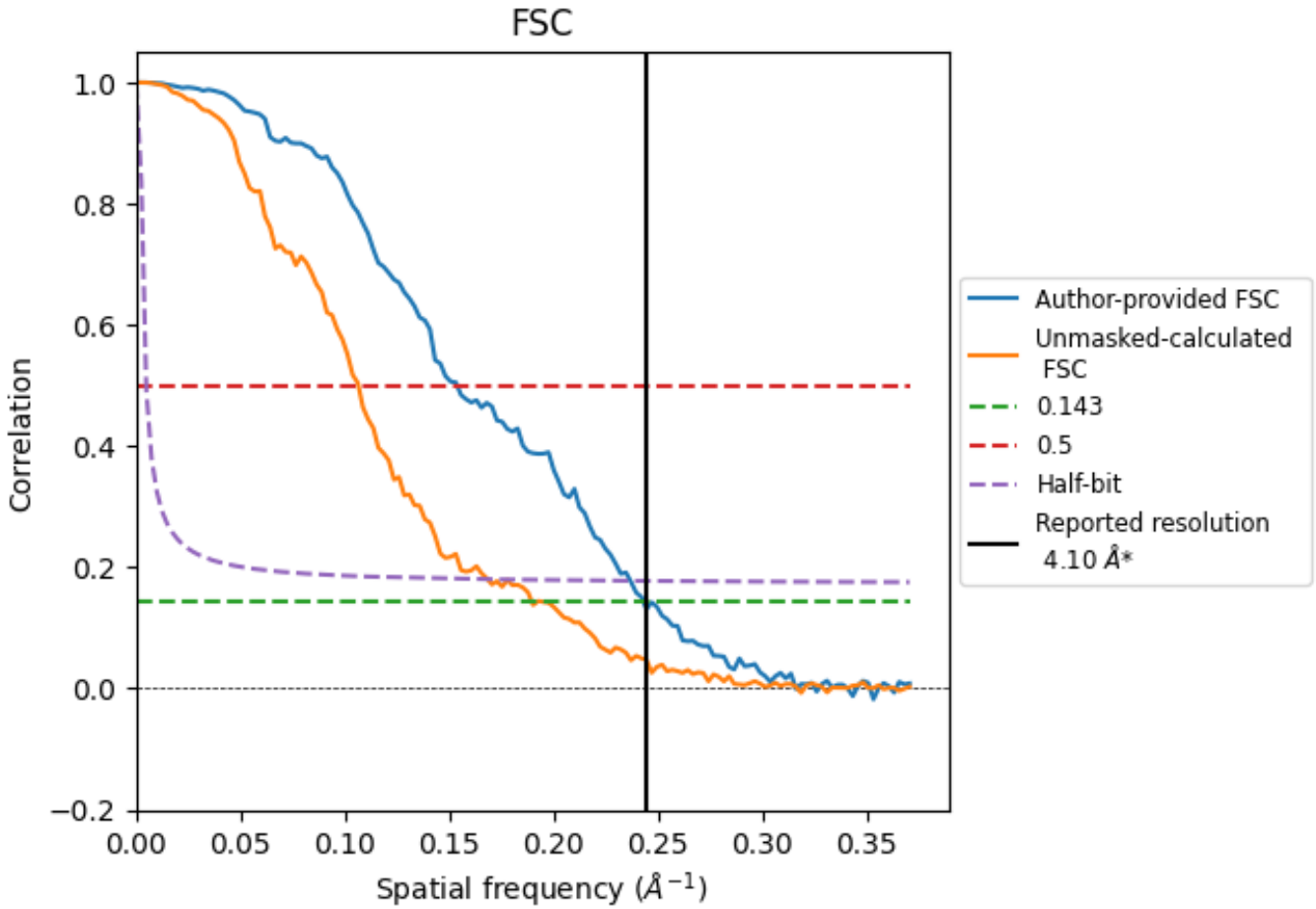


*Reported resolution corresponds to spatial frequency of 0.244 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.244 Å^{-1}

8.2 Resolution estimates (i)

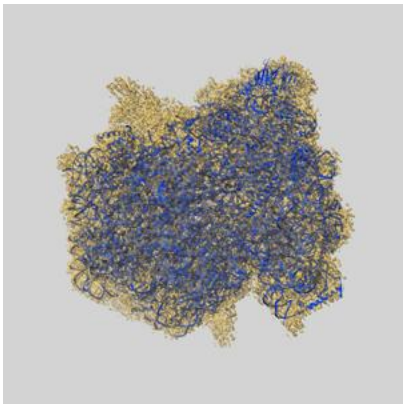
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.10	-	-
Author-provided FSC curve	4.12	6.51	4.22
Unmasked-calculated*	5.28	9.40	5.94

*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 5.28 differs from the reported value 4.1 by more than 10 %

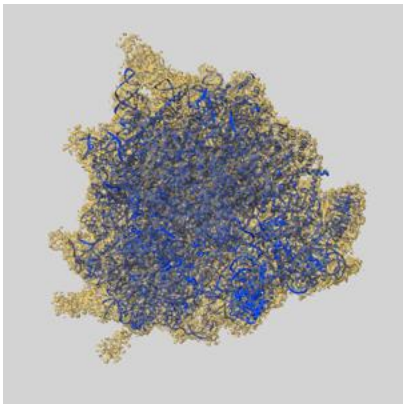
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-12632 and PDB model 7NWH. Per-residue inclusion information can be found in section 3 on page 22.

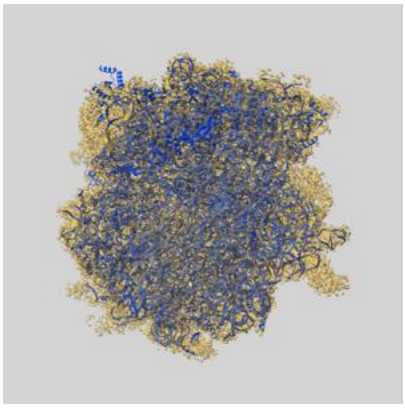
9.1 Map-model overlay



X



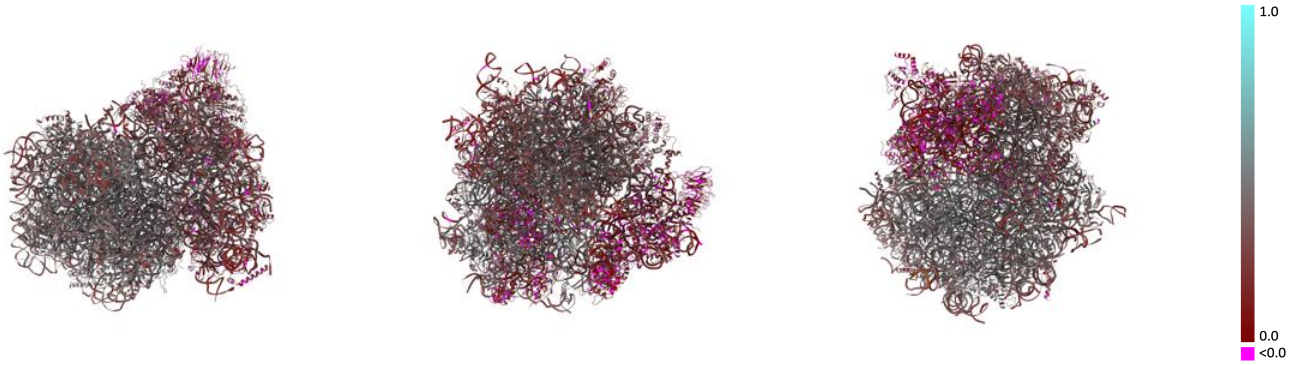
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.014 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.

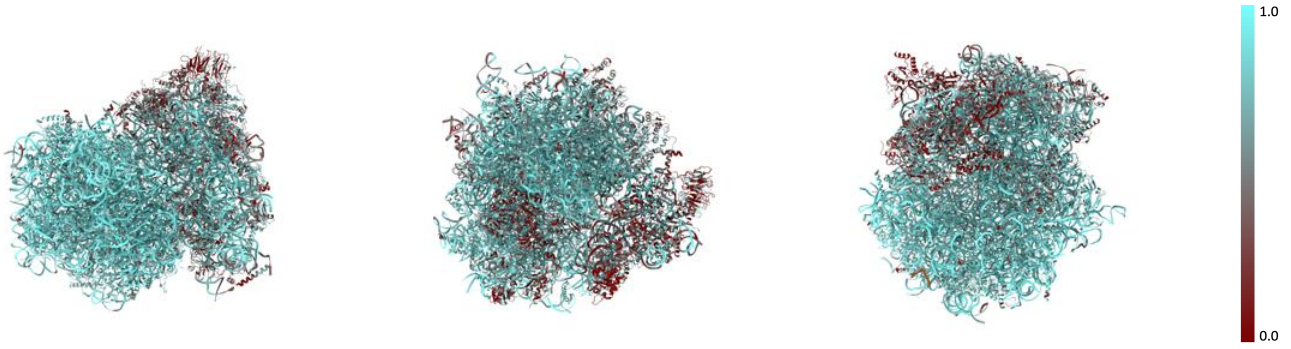
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

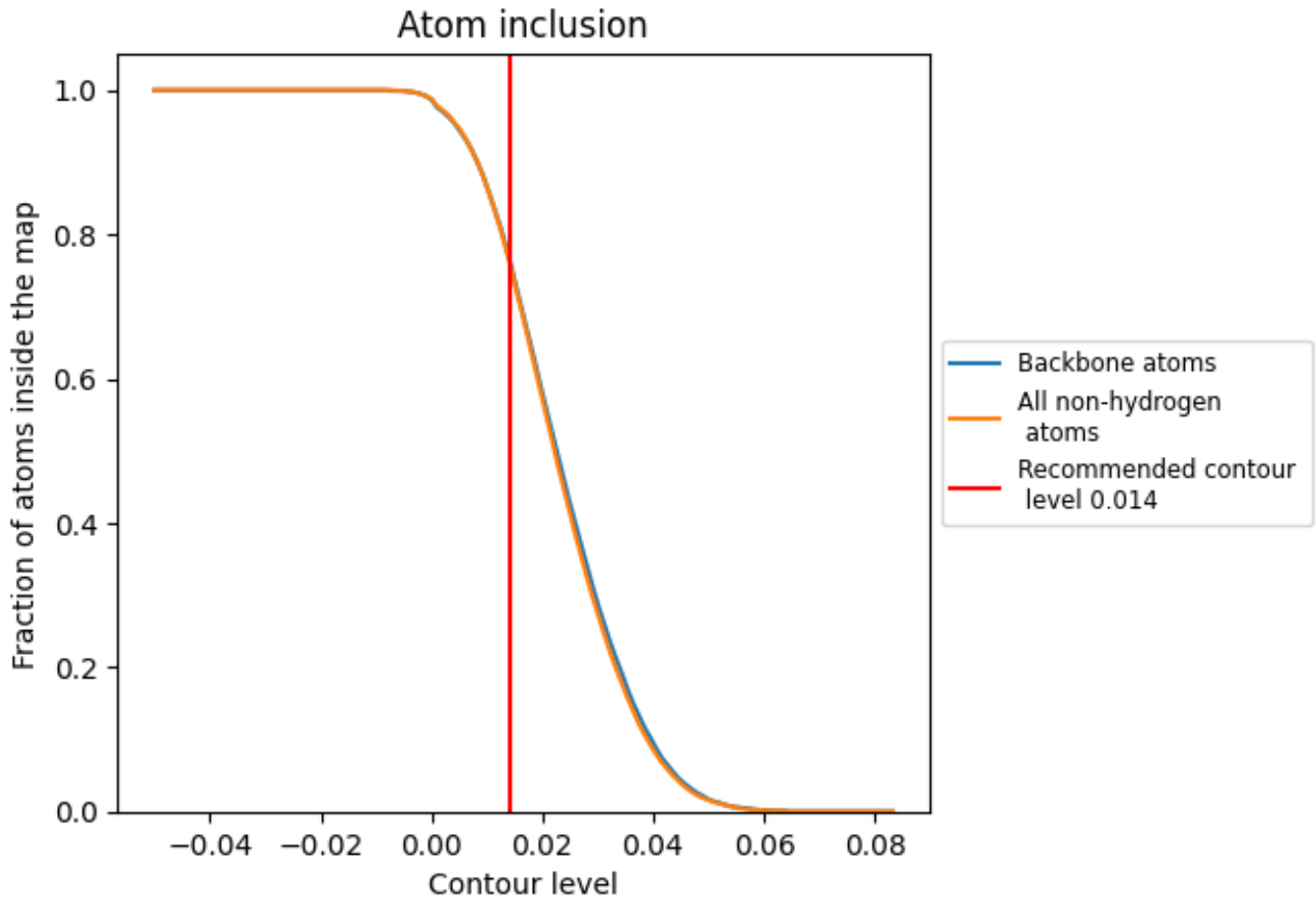
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.014).

9.4 Atom inclusion (i)



At the recommended contour level, 77% of all backbone atoms, 76% 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 (0.014) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7640	0.3480
5	0.9280	0.3970
7	0.9630	0.4130
8	0.9480	0.4100
9	0.7790	0.2790
A	0.8120	0.4540
AA	0.6060	0.3260
B	0.8010	0.4370
BB	0.5570	0.2980
C	0.8140	0.4440
CC	0.6570	0.3580
D	0.7990	0.3880
DD	0.3700	0.2000
E	0.8020	0.4100
EE	0.6000	0.3260
F	0.8010	0.4240
FF	0.3400	0.1590
G	0.7540	0.3880
GG	0.5020	0.2420
H	0.7740	0.4150
HH	0.4890	0.2780
I	0.8050	0.4320
II	0.5820	0.3030
J	0.7540	0.3480
JJ	0.6530	0.3220
KK	0.3990	0.1850
L	0.7750	0.4060
LL	0.6600	0.3600
M	0.8090	0.4130
MM	0.0810	0.0870
N	0.8450	0.4470
NN	0.6130	0.3210
O	0.8190	0.4320
OO	0.5510	0.2680
P	0.8260	0.4440

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Chain	Atom inclusion	Q-score
PP	0.4930	0.1590
Q	0.8020	0.4370
QQ	0.4360	0.1810
R	0.7500	0.3910
RR	0.4000	0.2170
S	0.8210	0.4420
SS	0.4810	0.1830
T	0.7980	0.4440
TT	0.4500	0.1640
U	0.7380	0.3510
UU	0.4080	0.1710
V	0.7720	0.4530
VV	0.6000	0.3340
W	0.5700	0.3100
WW	0.6480	0.3580
X	0.8060	0.4180
XX	0.7280	0.3910
Y	0.8090	0.4200
YY	0.5400	0.2790
Z	0.7930	0.3830
ZZ	0.3690	0.1690
a	0.8220	0.4490
aa	0.6620	0.3430
b	0.7220	0.3870
bb	0.5540	0.3160
c	0.6940	0.3420
cc	0.2750	0.1690
d	0.7780	0.4200
dd	0.4500	0.1990
e	0.8270	0.4580
ee	0.5920	0.3220
f	0.8470	0.4600
ff	0.3460	0.2120
g	0.7800	0.4170
gg	0.2730	0.1370
h	0.8020	0.3970
hh	0.2130	0.1730
i	0.7710	0.3880
ii	0.2780	0.1660
j	0.8740	0.4480
jj	0.2420	0.1590
k	0.7400	0.3890

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Chain	Atom inclusion	Q-score
l	0.8360	0.4370
m	0.8150	0.4180
n	0.6280	0.3300
o	0.7790	0.4390
p	0.7940	0.4420
r	0.8020	0.4280
s	0.3250	0.1490
t	0.3160	0.1860