



Full wwPDB EM Validation Report ⓘ

Dec 10, 2025 – 08:40 pm GMT

PDB ID : 7A01 / pdb_00007a01
EMDB ID : EMD-11590
Title : The Halastavi arva virus intergenic region IRES promotes translation by the simplest possible initiation mechanism
Authors : Abaeva, I.; Vicens, Q.; Bochler, A.; Soufari, H.; Simonetti, A.; Pestova, T.V.; Hashem, Y.; Hellen, C.U.T.
Deposited on : 2020-08-05
Resolution : 3.60 Å(reported)

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

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

A user guide is available at

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

The types of validation reports are described at

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

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

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

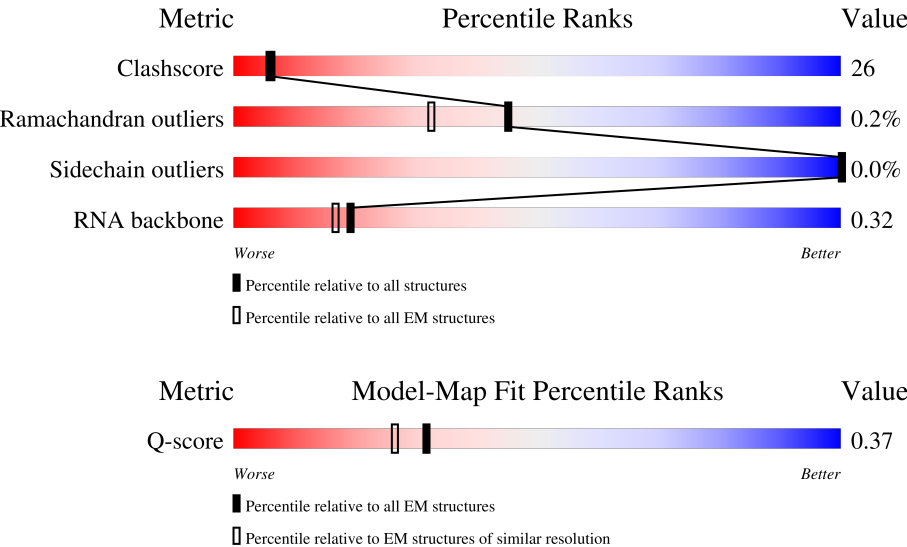
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 Å.

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



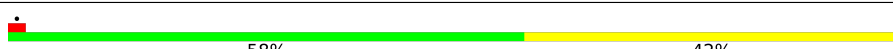
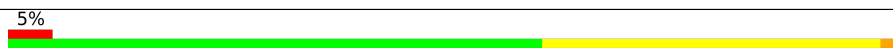
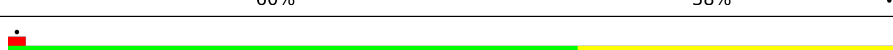
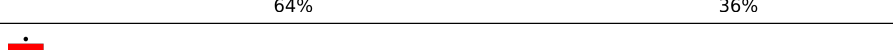
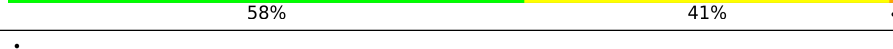
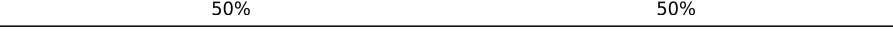
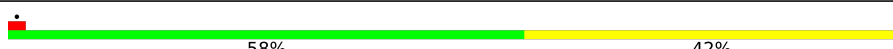
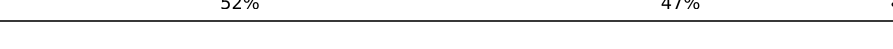
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
RNA backbone	6643	2191	-
Q-score	-	25397	12797 (3.10 - 4.10)

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

Mol	Chain	Length	Quality of chain
1	E1	153	84% 15% 39% 46%
2	e2	3825	5% 23% 54% 23%
3	h2	156	18% 61% 21%

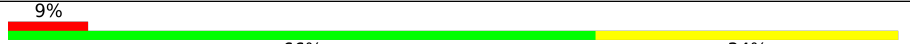
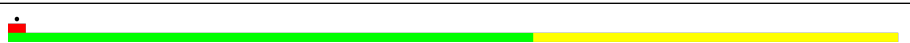
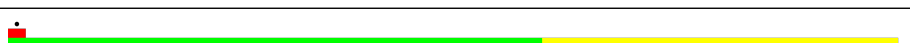
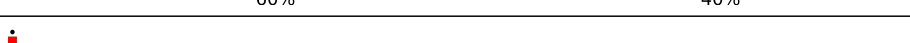
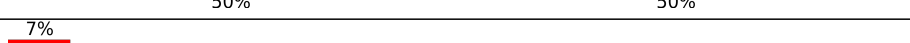
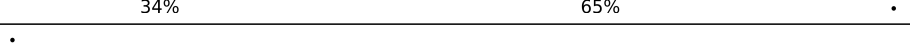
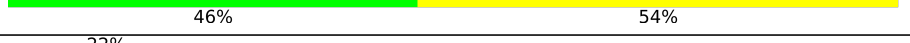
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Mol	Chain	Length	Quality of chain
4	d2	120	
5	p2	69	
6	k2	131	
7	l2	63	
8	m2	119	
9	o2	134	
10	q2	147	
11	r2	75	
12	t2	362	
13	u2	107	
14	v2	128	
15	w2	199	
16	x2	109	
17	y2	114	
18	92	244	
19	A2	122	
20	B2	102	
21	C2	86	
22	D2	50	
23	E2	52	
24	F2	104	
25	G2	292	
26	H2	153	
27	I2	91	
28	J2	125	

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Mol	Chain	Length	Quality of chain
29	K2	198	
30	L2	102	
31	M2	163	
32	R2	35	
33	S2	187	
34	T2	201	
35	U2	225	
36	V2	241	
37	W2	190	
38	X2	102	
39	Y2	169	
40	O2	138	
41	I2	203	
42	J2	135	
43	K3	180	
44	L3	217	
45	M3	394	
46	N3	175	
47	O3	159	
48	P3	99	
49	K3	1801	
50	s3	43	
51	I3	94	
52	Q3	188	
53	G3	153	

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Mol	Chain	Length	Quality of chain
54	G5	137	
55	a3	313	
56	a5	136	
57	A3	127	
58	T3	141	
59	U3	208	
60	V3	213	
61	W3	218	
62	X3	23	
63	Y3	227	
64	j3	262	
65	J5	129	
66	N3	191	
67	b3	237	
68	B3	141	
69	f3	64	
70	F3	150	
71	c3	206	
72	C3	129	
73	d3	185	
74	D3	83	
75	e3	124	
76	E3	98	
77	H3	53	
78	H5	141	

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Mol	Chain	Length	Quality of chain
79	P3	189	
80	I3	104	
81	I5	126	
82	L3	83	
83	M3	75	
84	O3	98	
85	a7	210	

2 Entry composition

There are 86 unique types of molecules in this entry. The entry contains 224880 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called INTERNAL RIBOSOME ENTRY SITE.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	E1	153	Total	C	N	O	P	0	0
			3208	1443	529	1083	153		

- Molecule 2 is a RNA chain called 28S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	e2	3825	Total	C	N	O	P	0	0
			81951	36501	14984	26650	3816		

- Molecule 3 is a RNA chain called 5.8S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	h2	156	Total	C	N	O	P	0	0
			3314	1480	585	1094	155		

- Molecule 4 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	d2	120	Total	C	N	O	P	0	0
			2558	1141	456	842	119		

- Molecule 5 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	p2	69	Total	C	N	O	S	0	0
			568	364	103	100	1		

- Molecule 6 is a protein called eL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	k2	131	Total	C	N	O	S	0	0
			979	618	184	172	5		

- Molecule 7 is a protein called Ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	l2	63	Total	C	N	O	S	0	0
			529	337	103	86	3		

- Molecule 8 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	m2	119	Total	C	N	O	S	0	0
			976	624	183	168	1		

- Molecule 9 is a protein called Ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	o2	134	Total	C	N	O	S	0	0
			1116	700	226	187	3		

- Molecule 10 is a protein called uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	q2	147	Total	C	N	O	S	0	0
			1162	734	239	185	4		

- Molecule 11 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	r2	75	Total	C	N	O	S	0	0
			610	378	130	99	3		

- Molecule 12 is a protein called uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	t2	362	Total	C	N	O	S	0	0
			2884	1812	577	481	14		

- Molecule 13 is a protein called eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	u2	107	Total	C	N	O	S	0	0
			889	560	171	156	2		

- Molecule 14 is a protein called eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	v2	128	Total	C	N	O	S	0	0
			1054	667	216	166	5		

- Molecule 15 is a protein called 60S RIBOSOMAL PROTEIN UL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	w2	199	Total	C	N	O	S	0	0
			1630	1051	319	255	5		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
w2	174	LEU	ILE	variant	UNP G5B8P1
w2	194	ASP	GLU	variant	UNP G5B8P1

- Molecule 16 is a protein called eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	x2	109	Total	C	N	O	S	0	0
			876	555	174	143	4		

- Molecule 17 is a protein called eL34.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	y2	114	Total	C	N	O	S	0	0
			907	566	187	148	6		

- Molecule 18 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	92	244	Total	C	N	O	S	0	0
			1869	1171	382	310	6		

- Molecule 19 is a protein called uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	A2	122	Total	C	N	O	S	0	0
			1013	640	204	168	1		

- Molecule 20 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	B2	102	Total	C	N	O	S	0	0
			831	520	176	130	5		

- Molecule 21 is a protein called Ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	C2	86	Total	C	N	O	S	0	0
			706	434	155	112	5		

- Molecule 22 is a protein called ribosomal protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	D2	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 23 is a protein called 60S RIBOSOMAL PROTEIN EL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	E2	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 24 is a protein called eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	F2	104	Total	C	N	O	S	0	0
			852	533	174	139	6		

- Molecule 25 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	G2	292	Total	C	N	O	S	0	0
			2387	1509	437	427	14		

- Molecule 26 is a protein called uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	H2	153	Total	C	N	O	S	0	0
			1243	777	241	216	9		

- Molecule 27 is a protein called ribosomal protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	I2	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 28 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	J2	125	Total	C	N	O	S	0	0
			1002	621	206	169	6		

- Molecule 29 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	K2	198	Total	C	N	O	S	0	0
			1524	969	265	281	9		

- Molecule 30 is a protein called Ribosomal protein L10 (Predicted).

Mol	Chain	Residues	Atoms					AltConf	Trace
30	L2	102	Total	C	N	O	S	0	0
			834	527	161	137	9		

- Molecule 31 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	M2	156	Total	C	N	O	S	0	0
			1183	738	221	219	5		

- Molecule 32 is a protein called Ribosomal_L6e_N domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	R2	35	Total	C	N	O	S	0	0
			285	179	59	45	2		

- Molecule 33 is a protein called 60S RIBOSOMAL PROTEIN EL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	S2	187	Total	C	N	O	S	0	0
			1513	944	314	250	5		

- Molecule 34 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	T2	201	Total	C	N	O	S	0	0
			1614	1039	301	273	1		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
T2	224	GLN	LYS	variant	UNP G1SKF7
T2	231	LYS	GLN	variant	UNP G1SKF7

- Molecule 35 is a protein called uL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	U2	225	Total	C	N	O	S	0	0
			1875	1205	358	303	9		

- Molecule 36 is a protein called 60S RIBOSOMAL PROTEIN EL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	V2	241	Total	C	N	O	S	0	0
			1932	1231	371	326	4		

- Molecule 37 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	W2	190	Total	C	N	O	S	0	0
			1517	954	284	273	6		

- Molecule 38 is a protein called Ribosomal protein L10 (Predicted).

Mol	Chain	Residues	Atoms					AltConf	Trace
38	X2	102	Total	C	N	O	S	0	0
			822	524	158	136	4		

- Molecule 39 is a protein called Ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Y2	169	Total	C	N	O	S	0	0
			1354	855	252	241	6		

- Molecule 40 is a protein called Ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	02	138	Total	C	N	O	S	0	0
			1138	727	221	183	7		

- Molecule 41 is a protein called Ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	12	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 42 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	22	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 43 is a protein called 60S RIBOSOMAL PROTEIN EL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	32	180	Total	C	N	O	S	0	0
			1509	933	328	239	9		

- Molecule 44 is a protein called Ribosomal protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	42	217	Total	C	N	O	S	0	0
			1744	1114	314	307	9		

- Molecule 45 is a protein called uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	52	394	Total	C	N	O	S	0	0
			3173	2020	597	543	13		

- Molecule 46 is a protein called 60S RIBOSOMAL PROTEIN EL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	62	175	Total	C	N	O	S	0	0
			1453	925	283	235	10		

- Molecule 47 is a protein called eL21.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	72	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 48 is a protein called Ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	82	99	Total	C	N	O	S	0	0
			809	518	141	148	2		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
82	32	GLY	ARG	variant	UNP G1TSG1
82	36	ALA	GLU	variant	UNP G1TSG1
82	39	PHE	SER	variant	UNP G1TSG1
82	54	GLY	ARG	variant	UNP G1TSG1
82	60	VAL	ALA	variant	UNP G1TSG1
82	97	ARG	HIS	variant	UNP G1TSG1

- Molecule 49 is a RNA chain called 18S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	K3	1801	Total	C	N	O	P	0	0
			38409	17147	6888	12577	1797		

- Molecule 50 is a protein called 40S RIBOSOMAL PROTEIN ES30.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	s3	43	Total	C	N	O	S	0	0
			351	215	80	55	1		

- Molecule 51 is a protein called Ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	13	94	Total	C	N	O	S	0	0
			733	464	130	133	6		

- Molecule 52 is a protein called 40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	Q3	63	Total	C	N	O	S	0	0
			527	336	99	86	6		

- Molecule 53 is a protein called Ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	G3	153	Total	C	N	O	S	0	0
			1248	793	234	215	6		

- Molecule 54 is a protein called ribosomal protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	G5	137	Total	C	N	O	S	0	0
			1140	714	231	194	1		

- Molecule 55 is a protein called ribosomal protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	a3	313	Total	C	N	O	S	0	0
			2437	1535	424	466	12		

- Molecule 56 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	a5	136	Total	C	N	O	S	0	0
			1016	621	199	190	6		

- Molecule 57 is a protein called ribosomal protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	A3	127	Total	C	N	O	S	0	0
			1061	673	201	180	7		

- Molecule 58 is a protein called Ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	T3	141	Total	C	N	O	S	0	0
			1099	693	219	184	3		

- Molecule 59 is a protein called 40S_SA_C domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	U3	208	Total	C	N	O	S	0	0
			1645	1046	289	302	8		

- Molecule 60 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	V3	213	Total	C	N	O	S	0	0
			1730	1098	309	309	14		

- Molecule 61 is a protein called S5 DRBM domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	W3	218	Total	C	N	O	S	0	0
			1691	1094	289	298	10		

- Molecule 62 is a protein called 60s ribosomal protein l41.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	X3	23	Total	C	N	O	S	0	0
			223	134	61	26	2		

- Molecule 63 is a protein called Ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	Y3	227	Total	C	N	O	S	0	0
			1765	1124	317	316	8		

- Molecule 64 is a protein called 40S ribosomal protein S4,40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	j3	262	Total	C	N	O	S	0	0
			2075	1324	384	358	9		

- Molecule 65 is a protein called Ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	J5	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 66 is a protein called Ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	N3	191	Total	C	N	O	S	0	0
			1509	943	286	273	7		

- Molecule 67 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	b3	237	Total	C	N	O	S	0	0
			1924	1200	387	330	7		

- Molecule 68 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	B3	141	Total	C	N	O	S	0	0
			1124	715	212	194	3		

- Molecule 69 is a protein called ribosomal protein eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	f3	64	Total	C	N	O	S	0	0
			507	308	102	95	2		

- Molecule 70 is a protein called ribosomal protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	F3	150	Total	C	N	O	S	0	0
			1208	773	229	205	1		

- Molecule 71 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	c3	206	Total	C	N	O	S	0	0
			1687	1058	332	292	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
c3	47	ARG	GLY	variant	UNP G1TJW1

- Molecule 72 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	C3	129	Total	C	N	O	S	0	0
			1048	658	193	192	5		

- Molecule 73 is a protein called Ribosomal protein S9 (Predicted).

Mol	Chain	Residues	Atoms					AltConf	Trace
73	d3	185	Total	C	N	O	S	0	0
			1526	969	306	249	2		

- Molecule 74 is a protein called 40S RIBOSOMAL PROTEIN ES21.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	D3	83	Total	C	N	O	S	0	0
			631	387	118	121	5		

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D3	3	SER	ASN	variant	UNP A0A1Z5KTU7
D3	4	ASN	ASP	variant	UNP A0A1Z5KTU7
D3	33	PRO	GLN	variant	UNP A0A1Z5KTU7
D3	50	SER	PHE	variant	UNP A0A1Z5KTU7
D3	76	HIS	ASP	variant	UNP A0A1Z5KTU7

- Molecule 75 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	e3	124	Total	C	N	O	S	0	0
			958	600	170	179	9		

- Molecule 76 is a protein called S10_pectin domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	E3	98	Total	C	N	O	S	0	0
			828	539	148	135	6		

- Molecule 77 is a protein called ribosomal protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	H3	53	Total	C	N	O	S	0	0
			445	278	90	72	5		

- Molecule 78 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	H5	141	Total	C	N	O	S	0	0
			1113	701	213	196	3		

- Molecule 79 is a protein called 40S RIBOSOMAL PROTEIN ES7.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	P3	189	Total	C	N	O	S	0	0
			1522	969	280	272	1		

- Molecule 80 is a protein called Ribosomal_S10 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	I3	104	Total	C	N	O	S	0	0
			822	514	156	148	4		

- Molecule 81 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	I5	126	Total	C	N	O	S	0	0
			1024	646	200	173	5		

- Molecule 82 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	L3	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 83 is a protein called ribosomal protein eS25.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	M3	75	Total	C	N	O	S	0	0
			599	382	111	105	1		

- Molecule 84 is a protein called 40S RIBOSOMAL PROTEIN ES26.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	O3	98	Total	C	N	O	S	0	0
			782	486	161	130	5		

- Molecule 85 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	a7	210	Total	C	N	O	S	0	0
			1702	1065	354	279	4		

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
a7	47	ALA	-	insertion	UNP G1TPV0
a7	48	PRO	-	insertion	UNP G1TPV0
a7	49	ARG	-	insertion	UNP G1TPV0
a7	50	PRO	-	insertion	UNP G1TPV0
a7	51	ALA	-	insertion	UNP G1TPV0
a7	52	ALA	-	insertion	UNP G1TPV0
a7	53	GLY	-	insertion	UNP G1TPV0
a7	54	PRO	-	insertion	UNP G1TPV0
a7	55	ILE	-	insertion	UNP G1TPV0

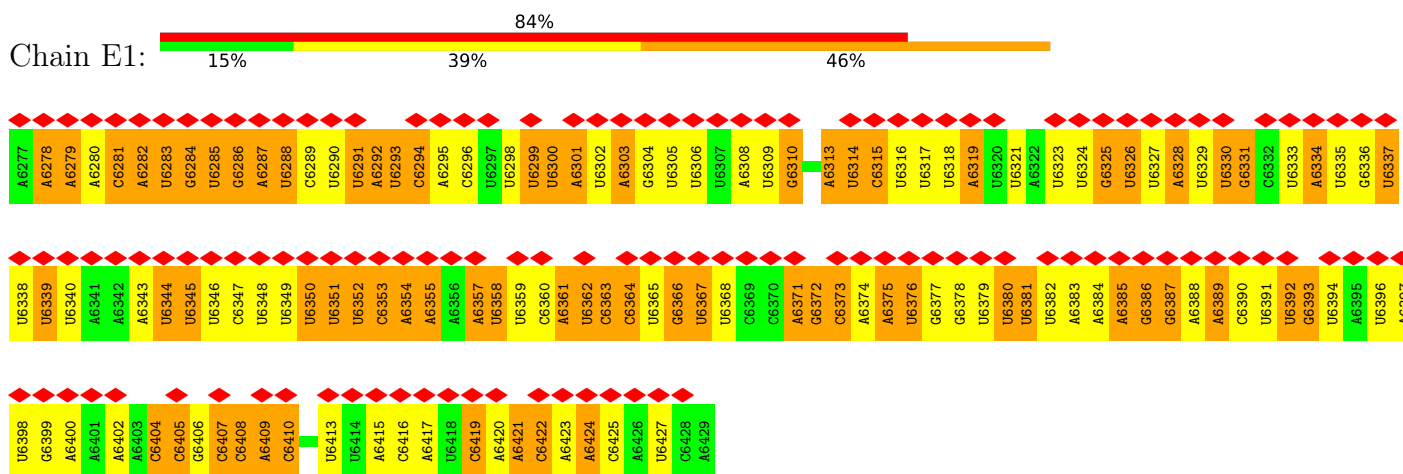
- Molecule 86 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
86	C2	1	Total 1	Zn 1	0
86	E2	1	Total 1	Zn 1	0
86	F2	1	Total 1	Zn 1	0
86	I2	1	Total 1	Zn 1	0
86	H3	1	Total 1	Zn 1	0
86	O3	1	Total 1	Zn 1	0

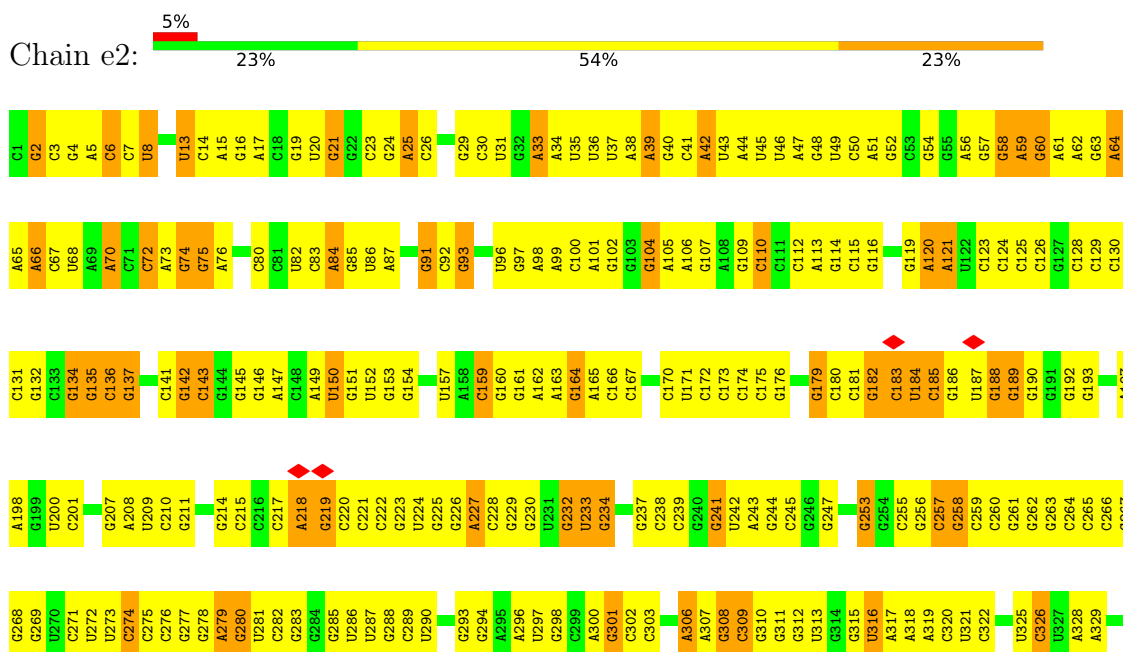
3 Residue-property plots

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

• Molecule 1: INTERNAL RIBOSOME ENTRY SITE



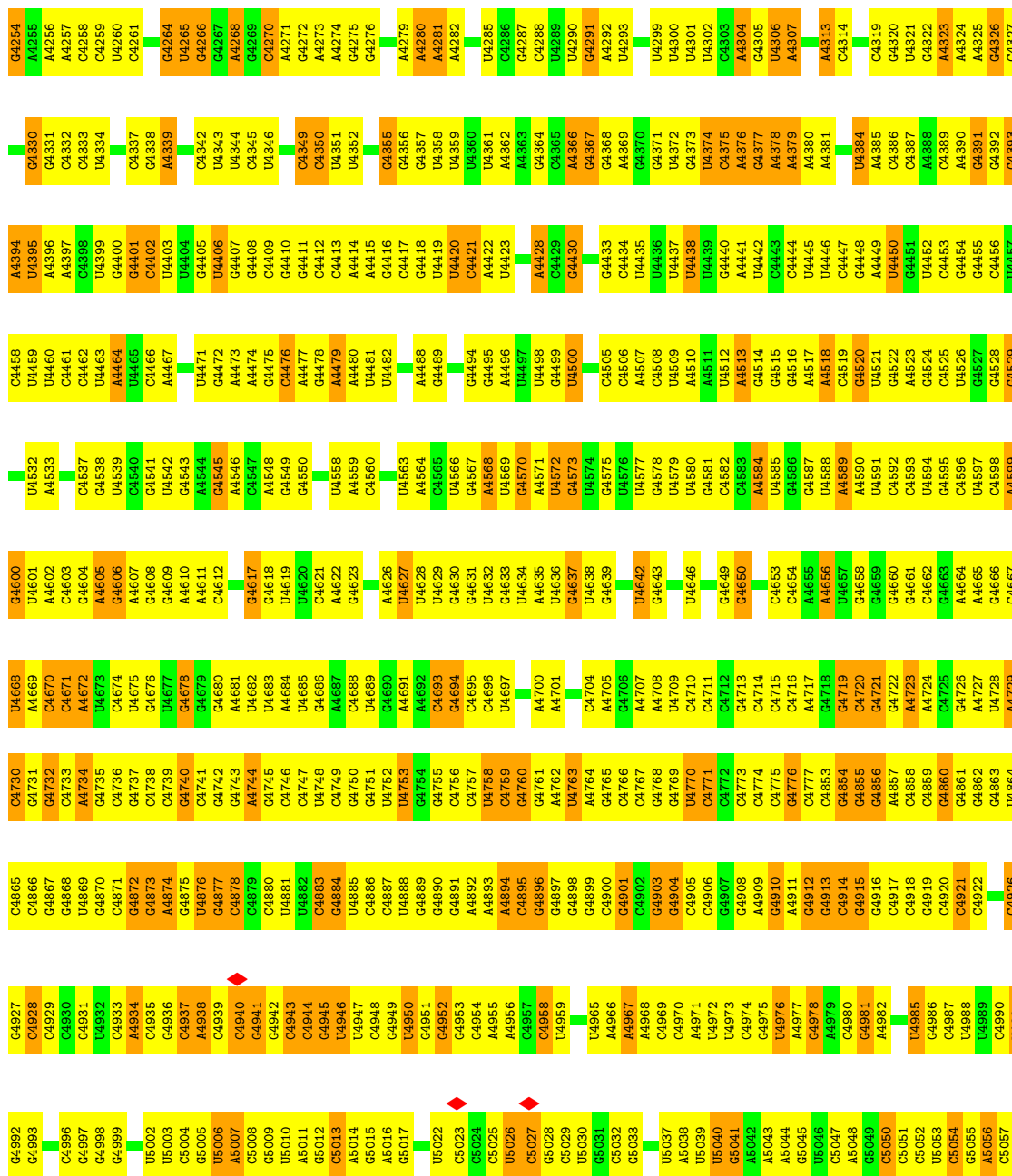
• Molecule 2: 28S RIBOSOMAL RNA





A2565	G2566	G2567	G2568	G2569	U2570	C2571	C2572	A2573	G2574	U2575	G2576	C2577	G2578	U2579	U2580	A2581	A2582	C2583	G2584		A2587	C2588	C2589	G2590		C2595	G2596	C2597	A2598	C2599	A2600	G2601	C2602	C2603	C2604	G2605	G2606	C2607	G2608	G2609	G2610	A2611	G2612	C2613	G2614	C2615	G2616	G2617	G2618	G2619	G2620	A2621	G2622	A2623	G2624	U2625	U2626	C2627													
C2502	G2503	G2504	C2505	G2506	A2507	U2508	C2509	G2510	A2511	A2512	A2513	G2514	G2515	G2516		U2519	C2520	G2521	G2522	G2523	U2524	U2525	C2526	A2527	G2528	A2529	U2530	C2531	G2532	C2533	C2534	A2535	A2536	A2537	U2538	C2539	G2540	G2541	G2542	A2543		G2544	U2545	G2546	G2547	C2548		G2552	A2553	U2554	G2555	G2556	C2557	U2558	G2559	C2560	C2561	G2562													
G2433	G2434	G2435	U2436	C2437	A2438		C2441	G2442	G2443	U2444	C2445	C2446	U2447	G2448	A2449	G2450	A2451	G2452		G2459	A2460	G2461	C2462	G2463	C2464	C2465		U2468	C2469	C2470	G2471	A2472	G2473	G2474	G2475	G2476	A2477	C2478	G2479	G2480		G2483	A2484	U2485	U2486	C2487	C2488	C2489	U2490	C2491	A2492	G2493	U2494	U2495	G2496		C2499	U2500	C2501												
C2364	C2365	A2366	C2367	U2368	U2369	A2370		A2375	C2376	C2377	C2378	A2379	C2380	A2381	A2382	C2383		A2389	C2390	G2391	C2392	C2393		A2396	G2397	U2398	C2399	G2400	A2401	G2402	A2403	A2404	G2405	G2406	G2407	U2408		C2411	A2412	U2413	U2414	U2415	C2416	A2417	C2418	A2419	A2420	G2421	A2422	A2423	G2424	U2425	U2426	G2427	A2428	A2429	A2430	A2431	U2432												
G2295	C2296	G2297	U2298	C2299	A2300	G2301		U2304	U2305	C2306	A2307	C2308	G2309	C2310	C2311	U2312	C2313	G2314	C2315	G2316	C2317	C2318	C2319	C2320	G2321	C2322	C2323	C2324	C2325	G2326	C2327	U2328	C2329		G2331	A2332		G2339	C2340	C2341	C2342	C2343	U2344	C2345	C2346	A2347	C2348	A2349	U2350	C2351	U2352	C2353	C2354		G2357	C2358	U2359	A2360	A2363												
C2120	G2121	C2122	G2123	C2124	G2125	C2126	C2127	A2128	G2129	C2130	C2131	C2132	C2133	C2134	C2135	G2136	C2137	C2138	A2139	G2140	A2141	A2142	C2143	C2144	C2145	C2146	C2147	C2148	C2149	C2150	C2151	C2152	C2153	C2154	C2155	C2156	C2157	C2158	C2159	C2160	C2161	C2162	C2163	C2164	C2165	C2166	C2167	C2168	C2169		C2172	C2173	C2174	C2175	C2176	C2177	C2178	C2179	C2180	U2181	C2182	C2183	G2184		G2188	C2189	C2190	G2191	C2192	C2193	C2194
U2060	C2061	G2062	U2063	C2064	C2065	C2066	C2067	A2068	U2069	A2070	C2071	C2072	C2073	G2074	C2075	C2076	C2077	G2078	U2079	C2080	G2081	C2082	C2083	C2084	G2085		C2086	A2087	G2088	C2089	C2090	C2091	A2092	C2093	A2094	C2095	U2096	G2097	G2098	A2099	C2100	G2101	G2102	G2103	A2104	G2105	C2106	G2107	G2108	G2109	G2110	G2111	G2112	G2113	G2114	C2115	G2116	G2117	C2118	G2119											
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A1931	G1932	A1933	C1934	C1935	U1936	C1937		A1938	G1939	A1940	A1941	A1942			G1945	U1946	G1947	U1948	U1949	G1950	G1951	U1952	U1953	G1954	A1955	U1956	A1957	U1958	A1959	G1960	A1961		G1964	C1965	A1966	G1967	A1968	A1969	C1970	G1971	G1972	U1973	G1974	G1975	C1976	C1977	U1978	U1979	G1980	G1981	A1982	U1983	G1984	U1985	C1986	G1987	G1988	A1989	A1990	C1993											
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U1796	G1797		G1798	G1799	U1800	A1801	A1802	G1803	A1804			C1808	C1809	G1810			U1813	C1814	G1815	C1816	U1817	G1818	G1819	C1820	G1821	U1822	G1823	A1825	G1826	G1827	C1828	G1829	U1830	G1831	C1832	U1833	U1834	G1835	G1836	A1837	U1838	U1839	G1840	G1841	U1842	G1843	U1844	G1845	C1846	U1847	U1848	A1849	G1850	U1851	G1852	C1853	U1854	C1855	U1856		G1863	G1864									
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C1682	C1683		A1688	G1670				U1673	C1674	C1675	C1676	A1679	G1680	G1681		A1684		U1687	U1688		G1691	C1692	U1693	G1694	U1695	C1696	G1697	C1698	A1699	G1700	A1701	C1702	C1703	C1704	G1705	A1706	C1707	G1708	C1709	A1710	C1711	C1712	C1713	C1714	C1715	G1716	C1717	C1718	A1719	C1720	C1722	G1723	U1725	U1726	U1727	A1728	A1729														
A1599	A1600	A1601	U1602	C1603	A1669	G1604	G1605		G1608		G1612	A1613	C1614	C1615	U1616	G1617	G1618	G1619	U1620	U1621	U1622	A1623	G1625	G1626	G1627	C1628	G1629	A1630	A1631	A1632	G1633	A1634	C1635	U1636	A1637	A1638	U1639	G1640	G1641	A1642	C1643	C1644	C1645	U1647	U1648	U1649	A1650	G1651	U1652	A1653	C1655	U1656	G1657	G1658	U1659	C1660	C1661														

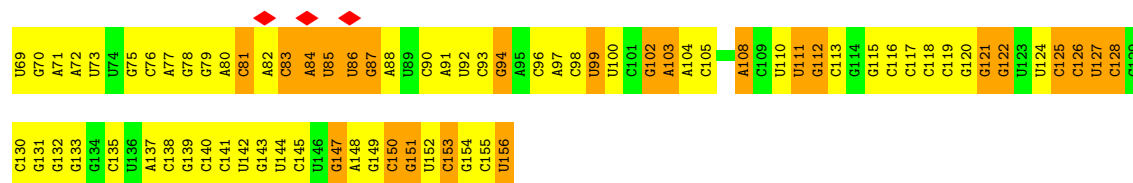
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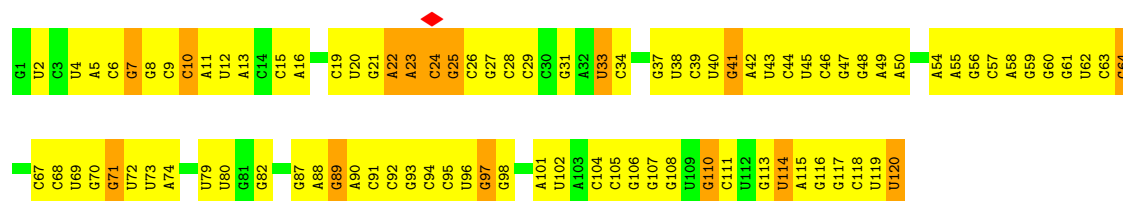
• Molecule 3: 5.8S RIBOSOMAL RNA

Chain h2: 18% 61% 21%

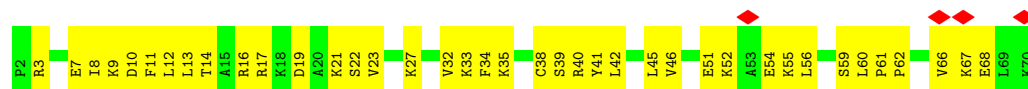
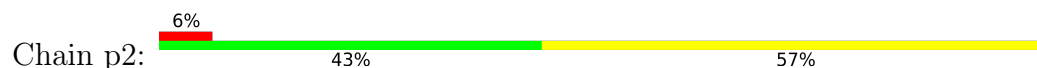




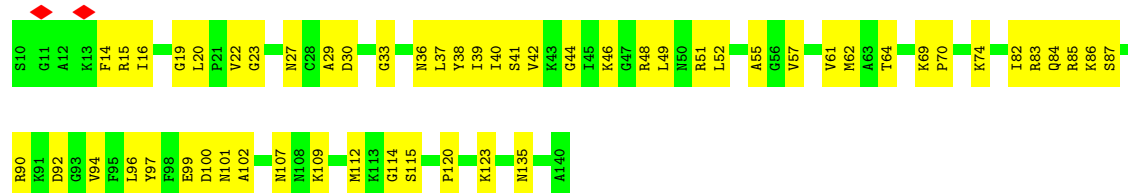
• Molecule 4: 5S RIBOSOMAL RNA



• Molecule 5: Uncharacterized protein



• Molecule 6: eL14



• Molecule 7: Ribosomal protein L24



• Molecule 8: Uncharacterized protein

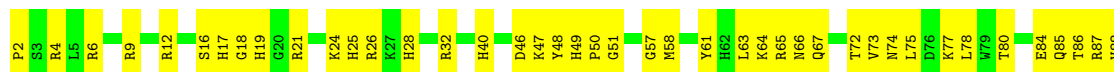




• Molecule 9: Ribosomal protein L26



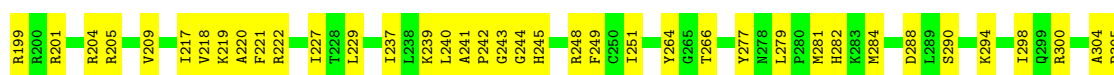
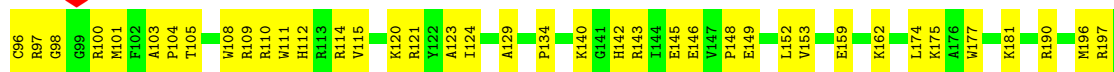
• Molecule 10: uL15



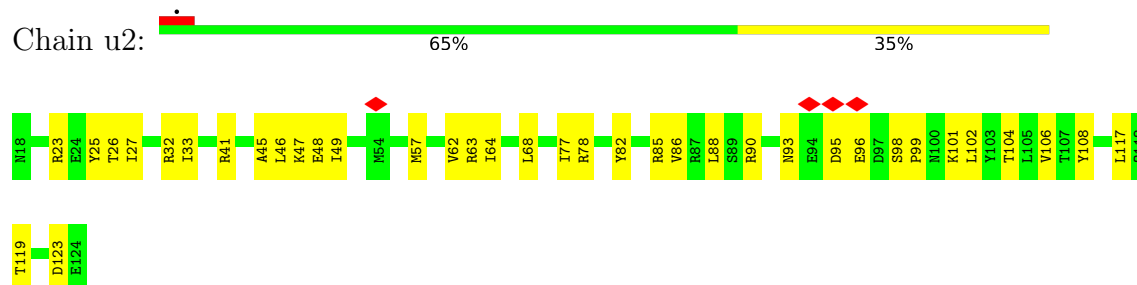
• Molecule 11: 60S ribosomal protein L29



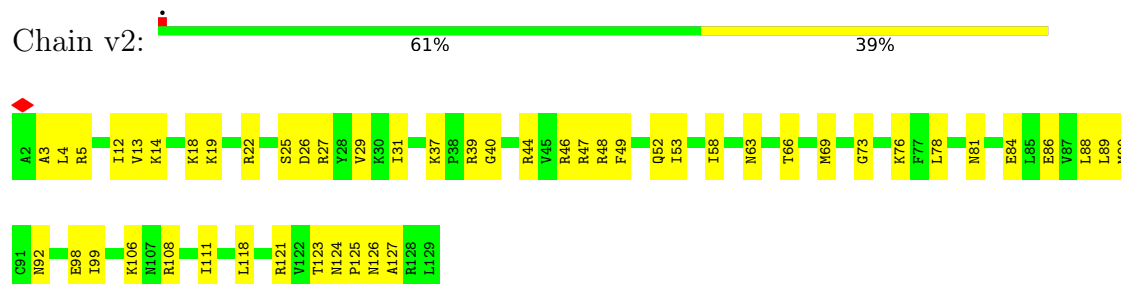
• Molecule 12: uL4



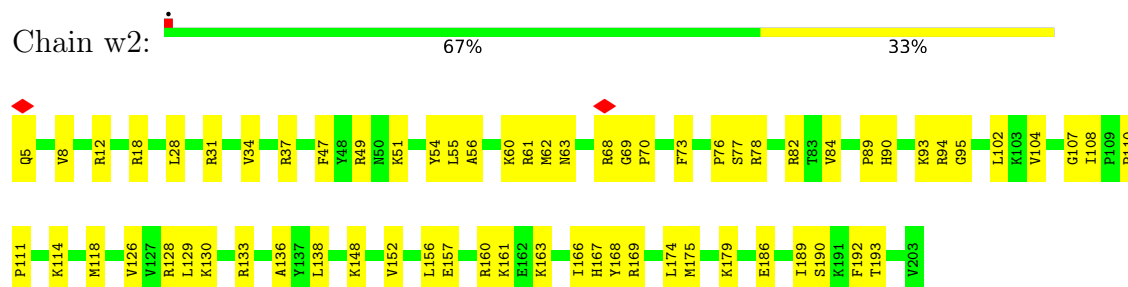
- Molecule 13: eL31



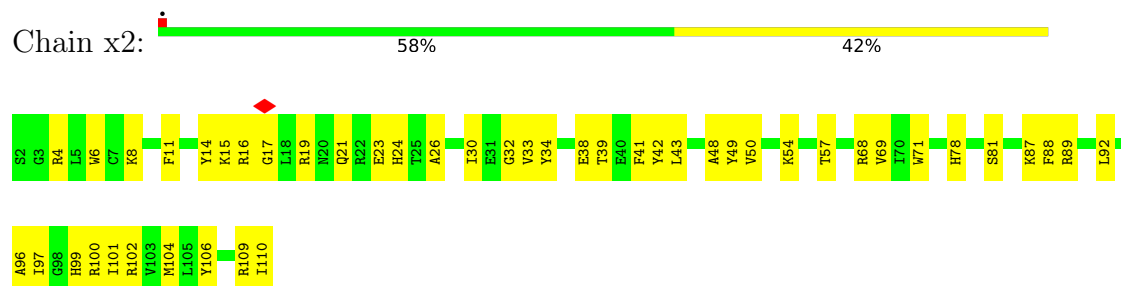
- Molecule 14: eL32



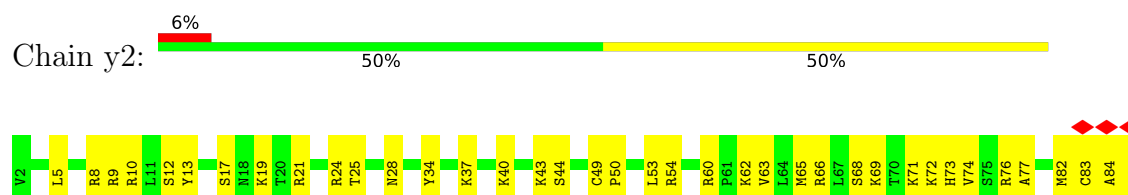
- Molecule 15: 60S RIBOSOMAL PROTEIN UL13

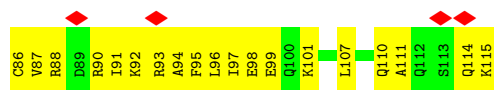


- Molecule 16: eL33



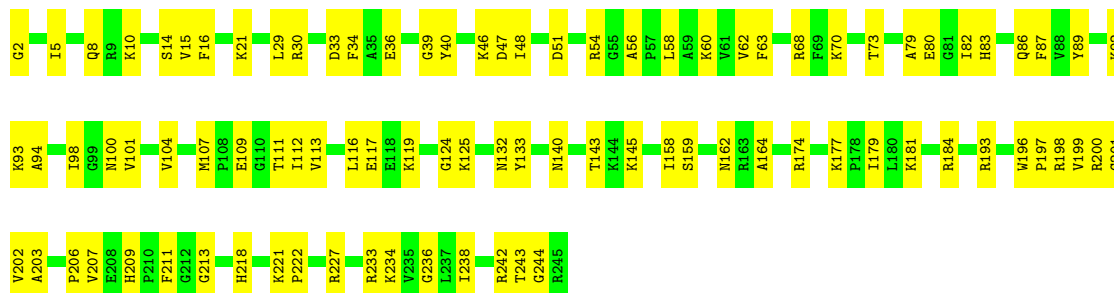
- Molecule 17: eL34





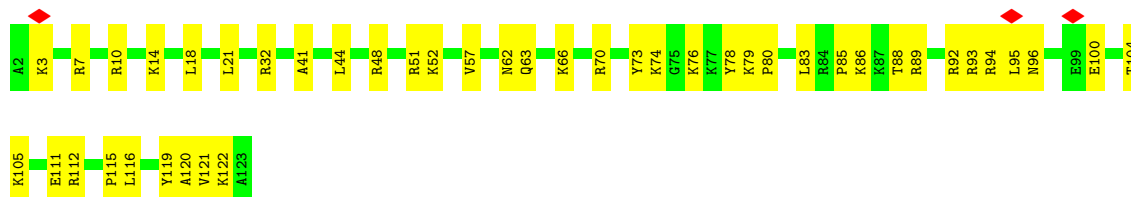
- Molecule 18: Uncharacterized protein

Chain 92: 63% 37%



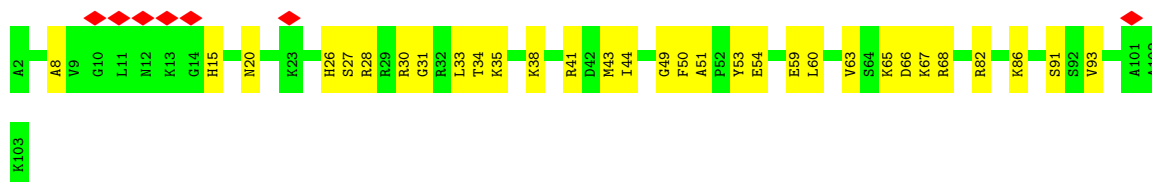
- Molecule 19: uL29

Chain A2: 64% 36%



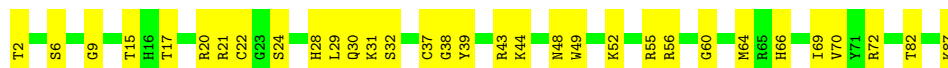
- Molecule 20: 60S ribosomal protein L36

Chain B2: 7% 70% 30%



- Molecule 21: Ribosomal protein L37

Chain C2: 63% 37%



- Molecule 22: ribosomal protein eL39

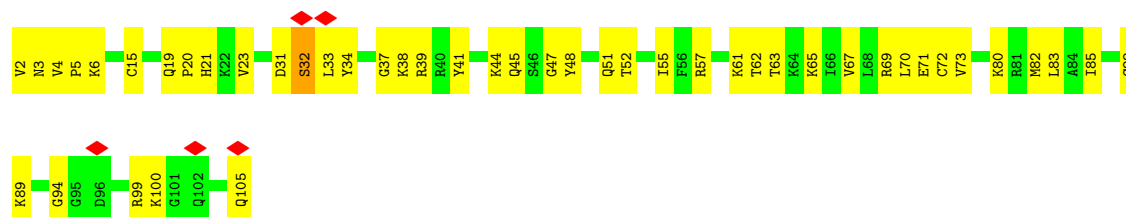
Chain D2: 50% 50%



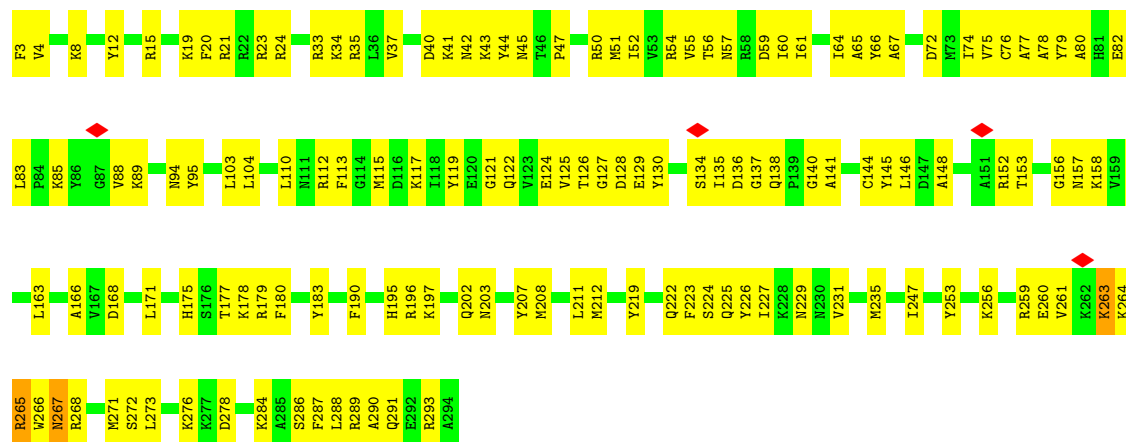
• Molecule 23: 60S RIBOSOMAL PROTEIN EL40



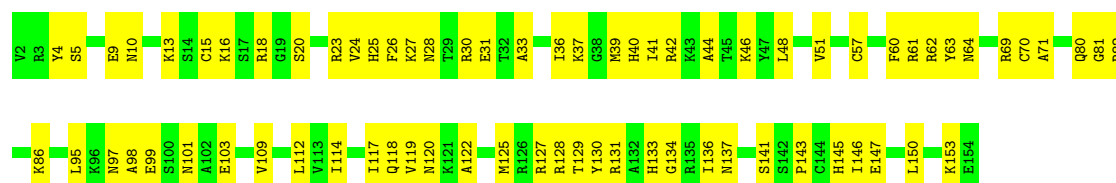
• Molecule 24: eL42



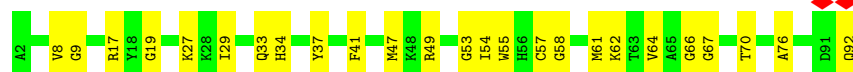
• Molecule 25: 60S ribosomal protein L5



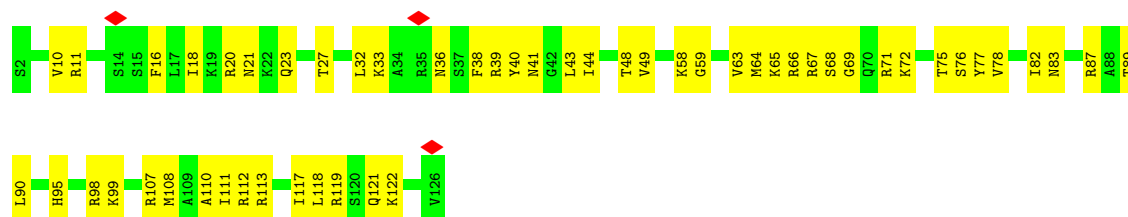
• Molecule 26: uL22



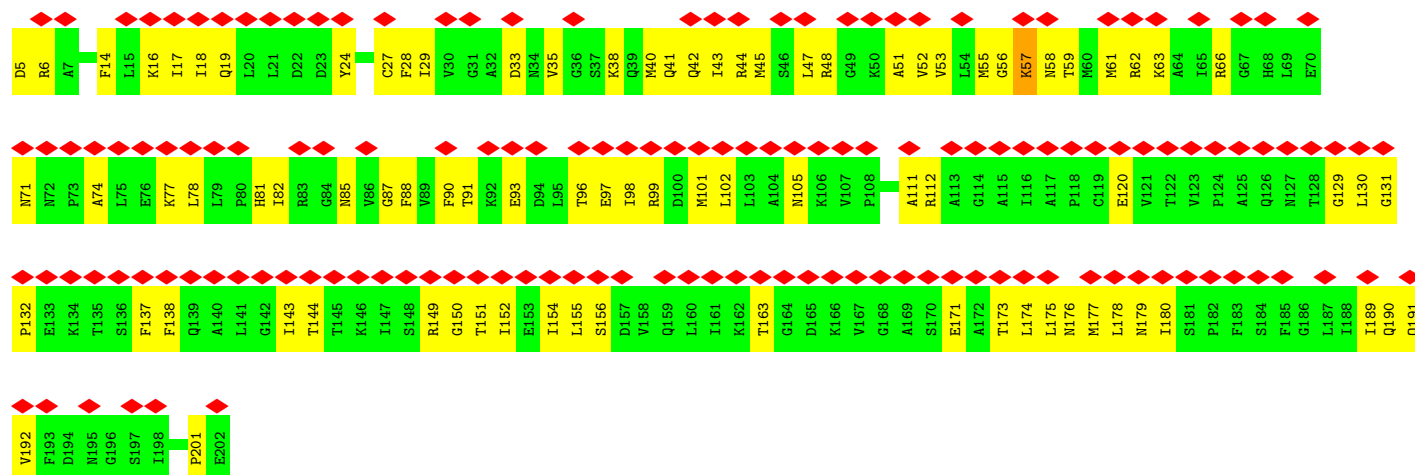
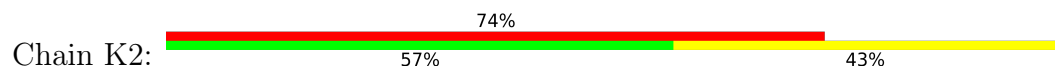
• Molecule 27: ribosomal protein eL43



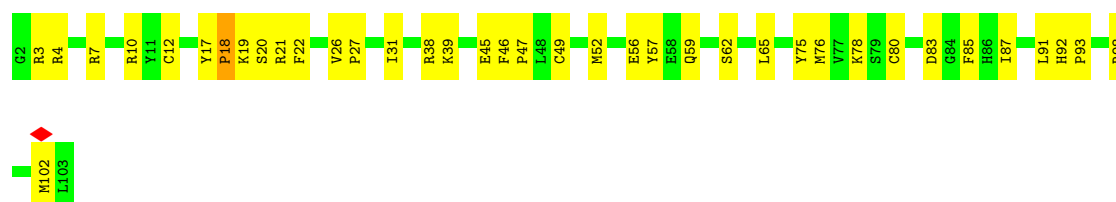
- Molecule 28: Uncharacterized protein



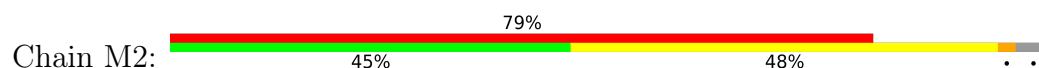
- Molecule 29: 60S acidic ribosomal protein P0

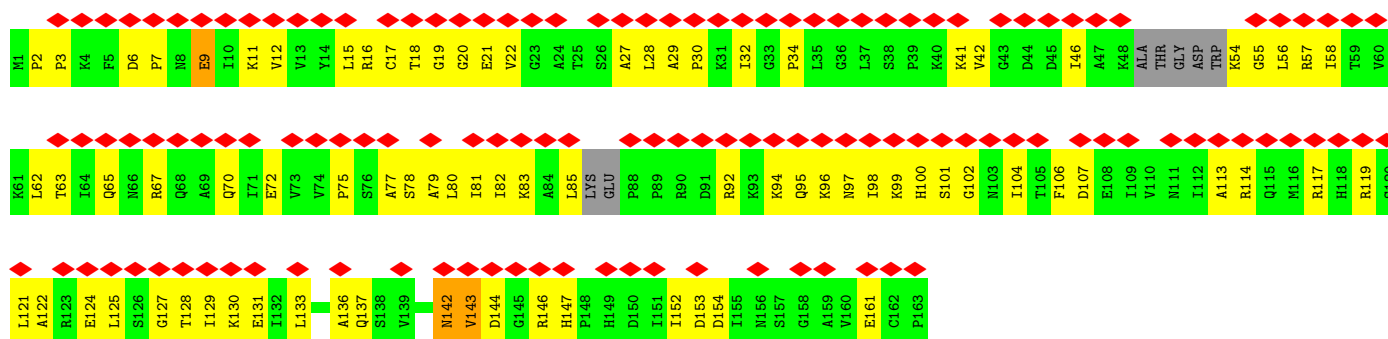


- Molecule 30: Ribosomal protein L10 (Predicted)

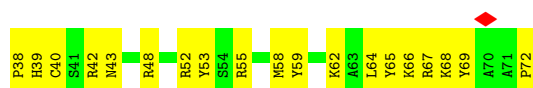


- Molecule 31: Uncharacterized protein

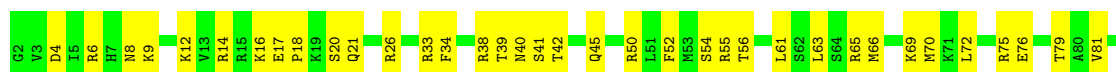




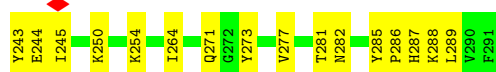
• Molecule 32: Ribosomal_L6e_N domain-containing protein



• Molecule 33: 60S RIBOSOMAL PROTEIN EL18

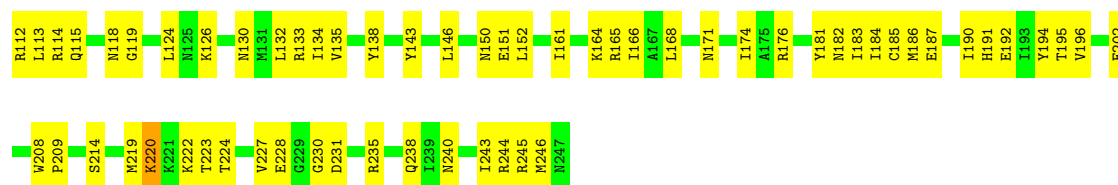


• Molecule 34: 60S ribosomal protein L6

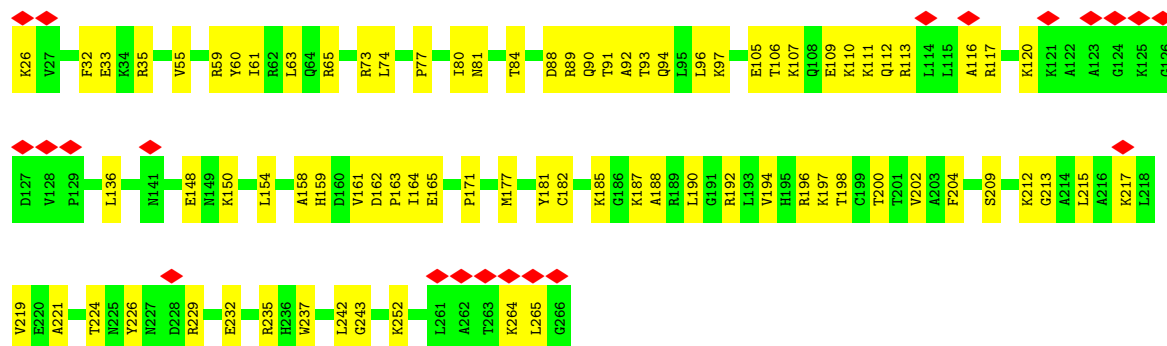


• Molecule 35: uL30

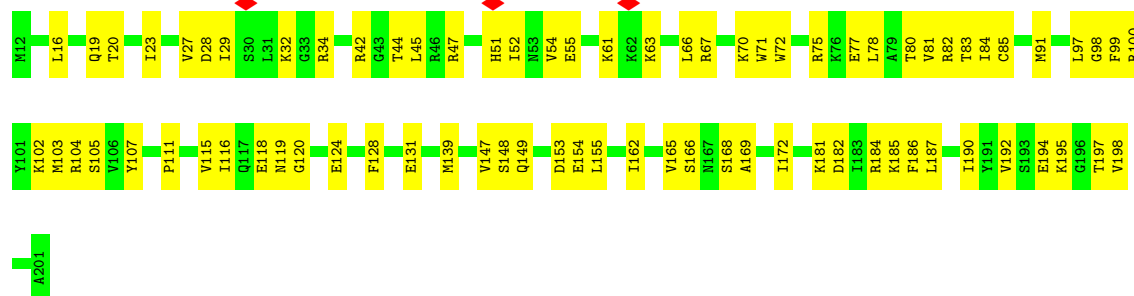




• Molecule 36: 60S RIBOSOMAL PROTEIN EL8



• Molecule 37: Uncharacterized protein

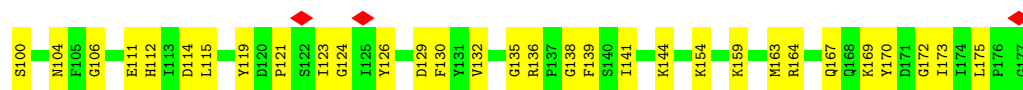


• Molecule 38: Ribosomal protein L10 (Predicted)

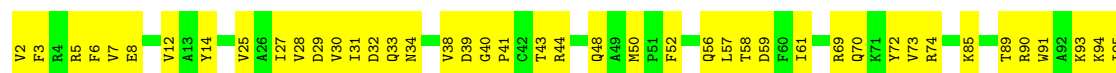


• Molecule 39: Ribosomal protein L11





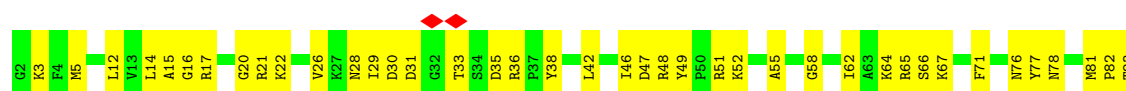
- Molecule 40: Ribosomal protein L14



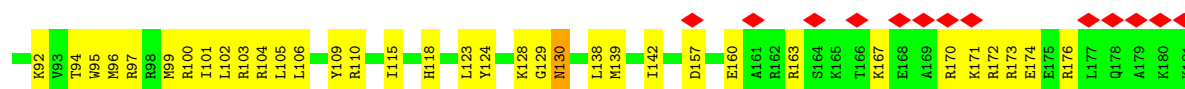
- Molecule 41: Ribosomal protein L15



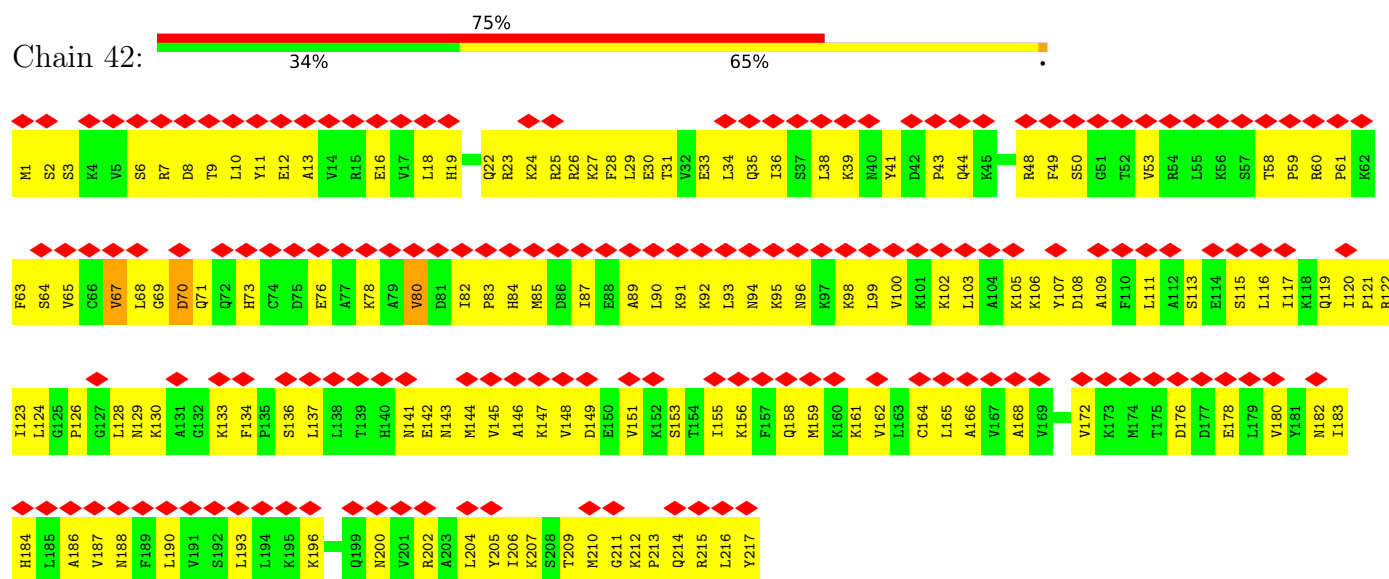
- Molecule 42: 60S ribosomal protein L27



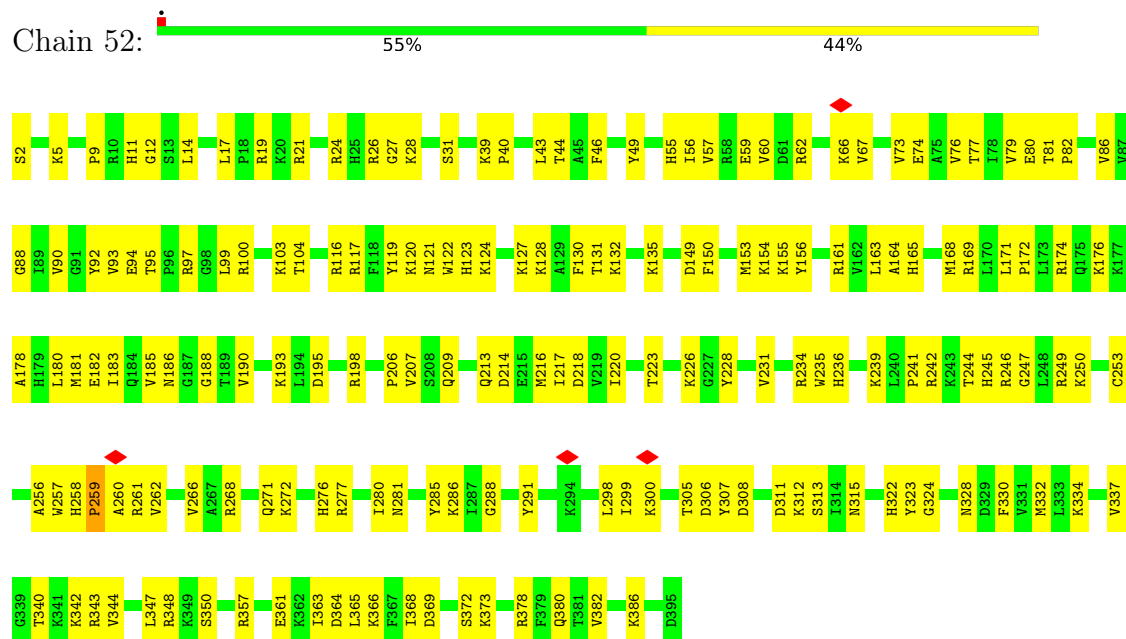
- Molecule 43: 60S RIBOSOMAL PROTEIN EL19



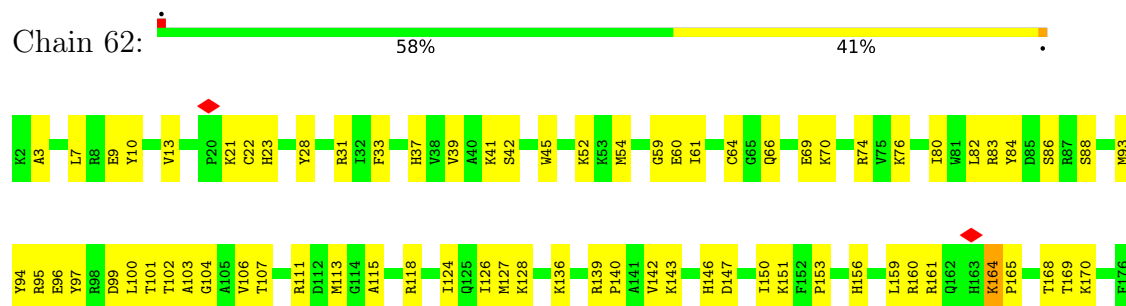
- Molecule 44: Ribosomal protein



• Molecule 45: uL3

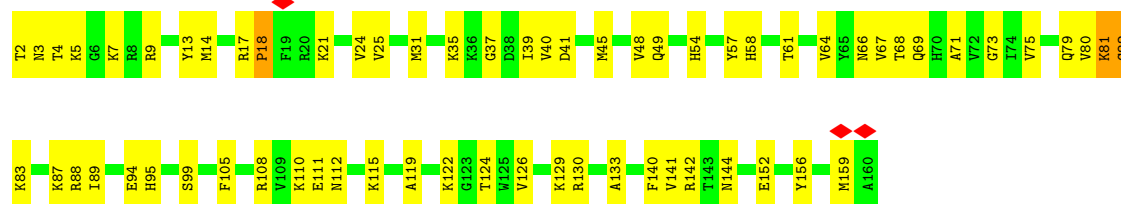


• Molecule 46: 60S RIBOSOMAL PROTEIN EL20



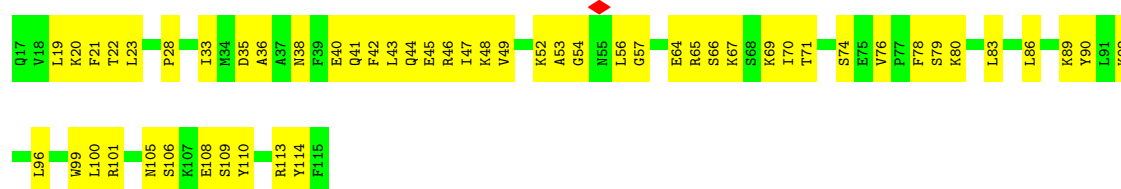
• Molecule 47: eL21

Chain 72:  59% 39%

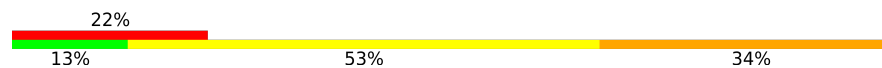


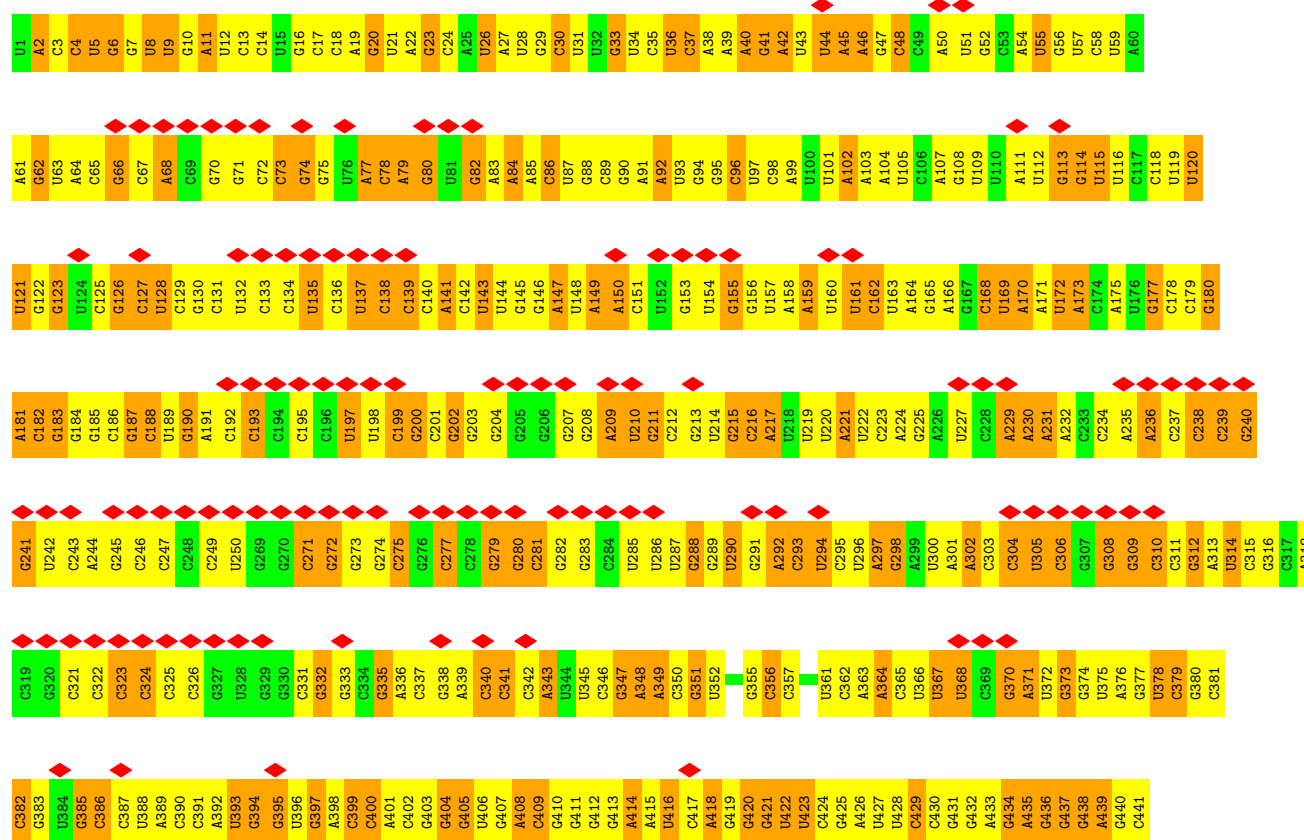
• Molecule 48: Ribosomal protein L22

Chain 82:  46% 54%

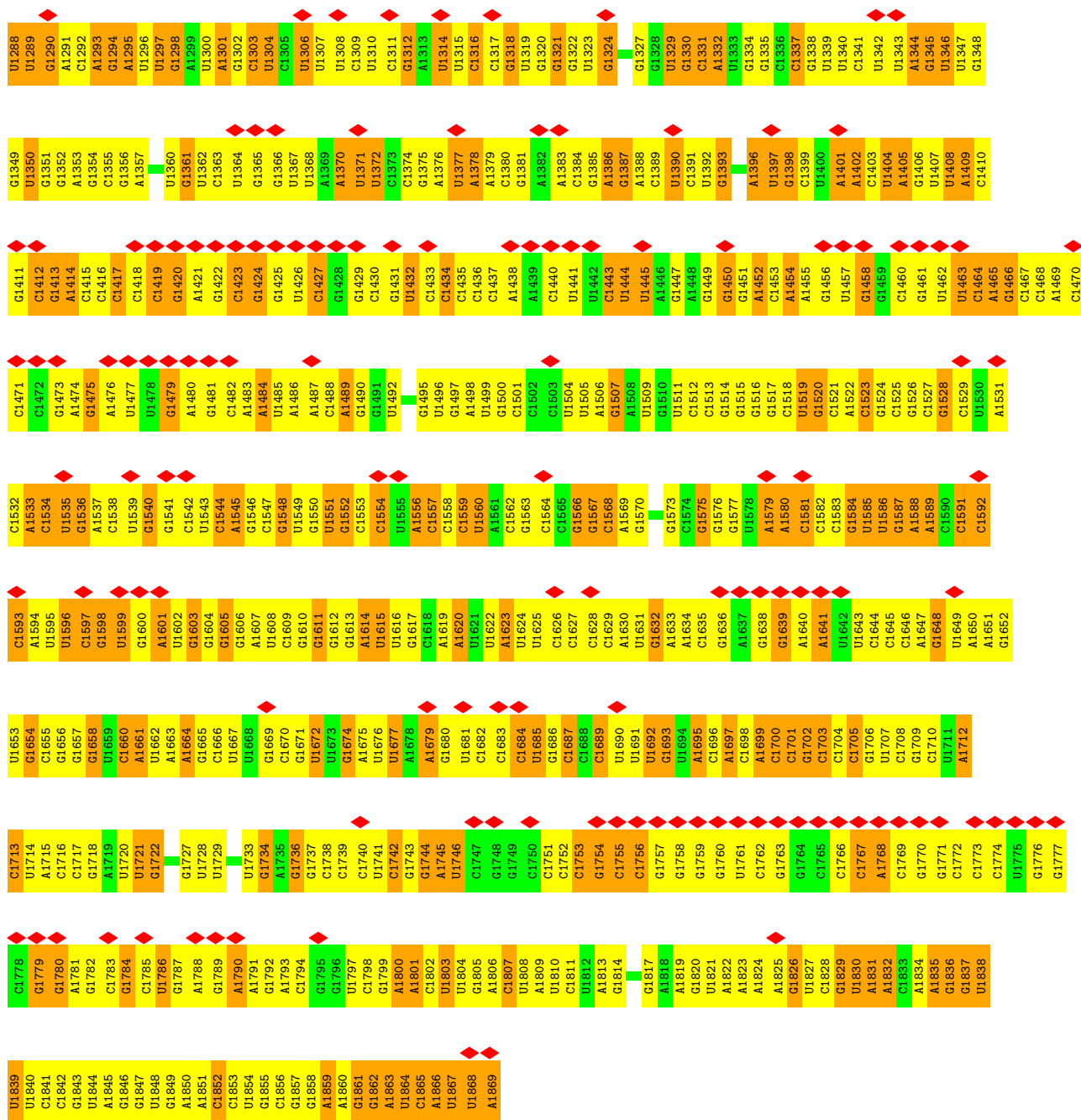


• Molecule 49: 18S RIBOSOMAL RNA

Chain K3:  22% 13% 53% 34%

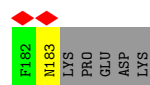
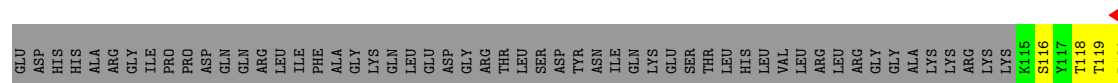
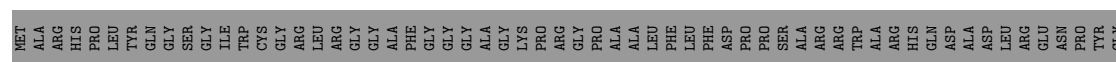


A1228	G1166	G1105	G1043	G982	G793	U882	C622	U562	C502	C442
G1229	G1167	C1106	G1044	A983	A794	G883	G823	G563	C503	U443
C1230	G1168	G1107	U1045	G859	A795	G884	C524	A564	G504	U444
C1231	G1169	G1108	G985	G860	A796	U885	G825	G565	G505	A445
U1232	A1170	C1109	G1046	A861	G797	U886	G826	U566	G506	G446
G1233	G1173	G1110	G1047	A862	G798	G887	G827	G567	G507	A447
C1234	A1174	U1111	A1049	U863	G799	U888	A828	C568	U448	A448
G1235	U1175	A1112	A1050	A864	U799	G889	A829	A569	A508	A449
U1236	G1176	A1113	G1051	A865	U800	U890	G630	G570	G510	C450
C1237	G1177	G991	A1052	U866	U801	G891	U831	U571	U511	G451
U1238	U1178	G992	C1053	G867	U804	G892	C632	U572	A512	G452
A1240	U1179	G993	G1054	G868	U805	G893	C633	C573	C453	C453
U1241	C1180	C994	A1055	A869	A808	G694	C634	U574	A514	A454
U1242	A1181	G995	U1056	A870	A809	G695	A634	A574	A515	A455
U1243	A1182	A996	C1057	U871	A810	G696	G635	A575	C517	C456
U1244	A1183	A997	A1058	A872	A811	G697	U637	U577	C518	A458
G1245	G1184	G998	G1059	G873	A812	G698	C638	C578	G518	C459
A1246	C1185	G999	A1060	G874	A813	G699	C639	C579	A519	A460
U1247	U1186	C1000	U1061	A875	U814	G700	C640	U580	A520	U461
G1248	G1187	U1001	A1062	C876	U815	G701	A643	A582	A521	C462
U1248	A1188	U1002	C1063	G877	A816	G702	G644	U581	A522	C463
C1249	A1189	U1003	G1064	G878	A817	G703	C645	A582	A523	A464
A1250	A1190	U1004	G942	C879	A818	G704	G646	C585	U524	A465
A1251	C1191	U1005	U943	G880	A819	G705	G647	A587	A525	A466
C1252	U1192	C1006	A944	G881	U820	G706	U647	C588	A526	G467
A1253	U1193	C1007	U945	U882	G821	G707	G648	G589	A527	A468
G1254	A1194	U1008	U946	U883	U822	G708	U649	A590	U530	G470
C1255	G1195	A1009	G947	U884	U823	C729	U650	U591	A531	G471
G1256	G1196	U1010	C948	A886	C824	G730	A653	C592	C532	C472
G1257	A1198	A1011	G949	U887	A825	G731	A654	C593	A473	A473
A1258	A1199	U1012	C950	U888	A826	G732	A655	G594	G534	G474
A1259	A1200	G1013	C951	U889	A827	G733	G595	U596	G535	C475
U1260	U1201	U1014	C952	G890	G828	C734	U657	U597	A536	A476
C1261	U1202	U1015	G953	U891	C829	G735	U658	G598	A537	G477
C1262	U1203	U1016	G954	U892	A830	C736	U659	G599	C537	C478
U1263	G1204	U1017	G955	U893	G831	G737	U660	G600	U538	C479
C1264	A1204	U1018	G956	U894	G832	C738	G661	G601	C539	C480
A1265	G1205	C1019	A957	G895	G833	C739	C662	G602	U540	G482
C1266	G1206	U1143	G958	U896	G834	C740	A664	C603	U541	C483
C1267	G1207	A1144	G959	U897	G835	C741	G665	A604	C542	A484
A1268	U1207	A1145	U960	U898	G836	U742	U666	A605	C543	A485
G1269	A1208	A1146	G961	U899	G837	U743	U667	G606	G544	U486
G1270	A1209	C1147	A962	U900	G838	U744	A668	U607	A545	U487
C1271	G1210	U1148	U963	G901	C839	G745	A669	C608	G546	U488
G1272	G1211	A1149	A964	U902	C840	C746	A670	U609	G547	A489
C1273	G1212	U1150	U965	U903	C841	C747	A671	G610	C548	C490
C1274	C1213	G1151	C973	G904	C842	U748	G672	G611	C549	C491
G1275	A1214	U1152	C974	G905	C843	C749	G673	U612	C550	C492
C1276	C1215	C1153	C975	U906	C844	C750	U674	G613	U551	A493
A1277	G1216	U1154	G976	U907	C845	G751	U675	G614	G552	C494
C1278	C1217	U1155	C977	U908	C846	G752	C676	C615	U553	C495
A1279	U1218	U1156	C978	G909	C847	C753	U677	A616	A554	C496
C1279	C1219	G1157	C979	U910	C848	G754	G678	G617	A555	C497
G1280	A1220	U1158	G975	G911	C849	G755	U679	A618	U556	C498
U1281	G1221	G1159	C976	U912	C850	C756	U680	G619	A557	A500
A1282	G1222	U1160	C977	U913	C851	C757	U681	G620	G558	C501
C1283	A1223	U1161	C978	U914	C852	G758	U682	C621	A560	
A1284	G1224	C1162	G978	U915	C853	G759	U683		A561	
U1285	U1225	G1163	C979	U916	C854	C790				
G1286	G1226	G1164	A980	U917	C855	C791				
A1287	G1227	G1165	A981	U918	C856	C792				

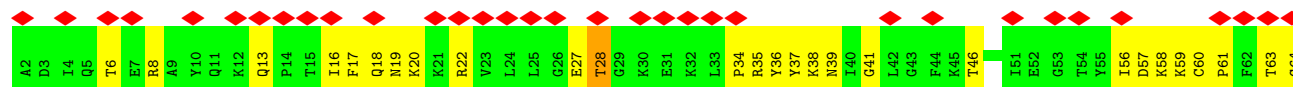




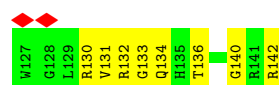
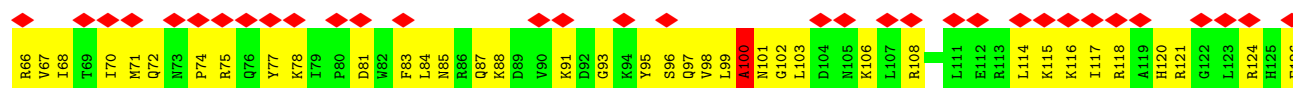
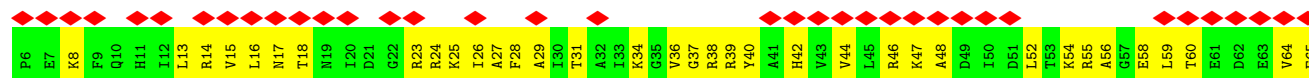
• Molecule 52: 40S ribosomal protein S27a



• Molecule 53: Ribosomal protein S11



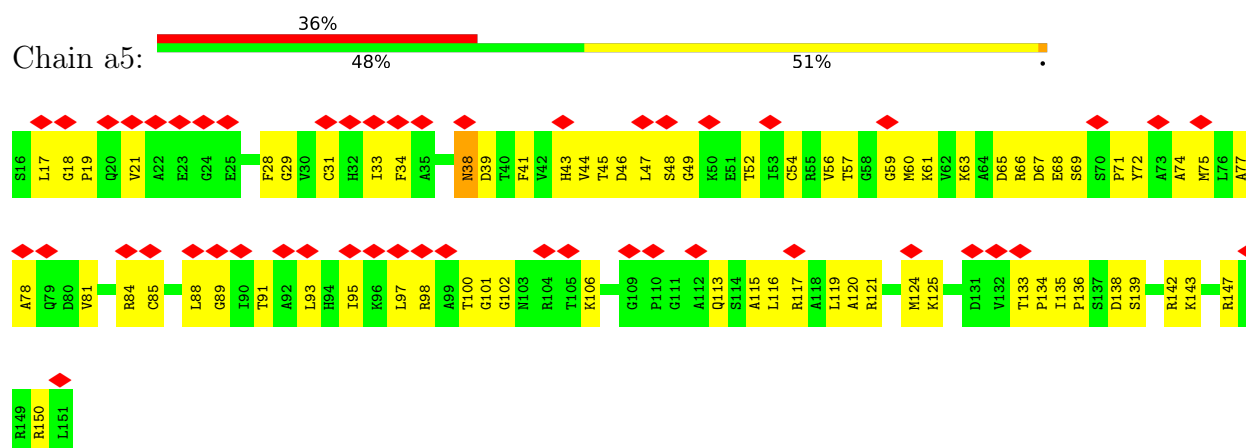
• Molecule 54: ribosomal protein uS13



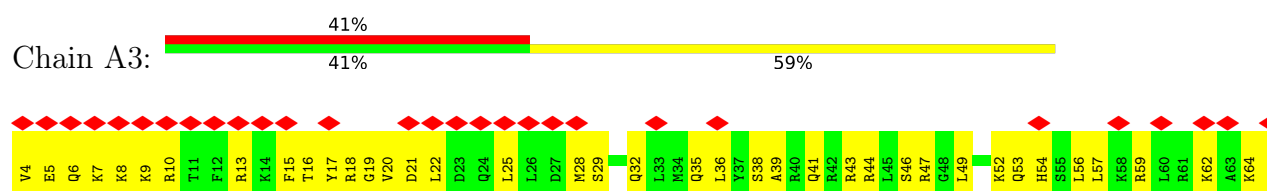
- Molecule 55: ribosomal protein RACK1

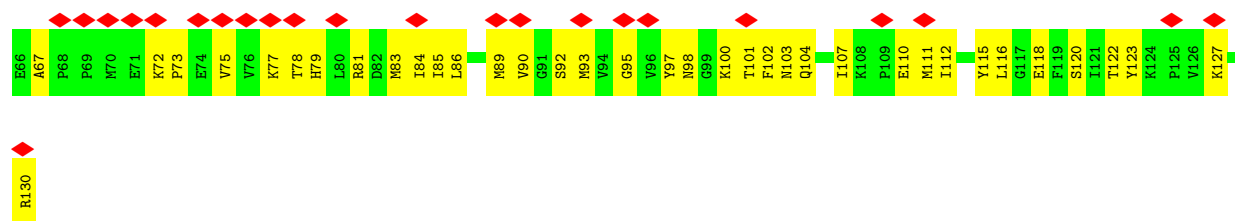


- Molecule 56: Uncharacterized protein

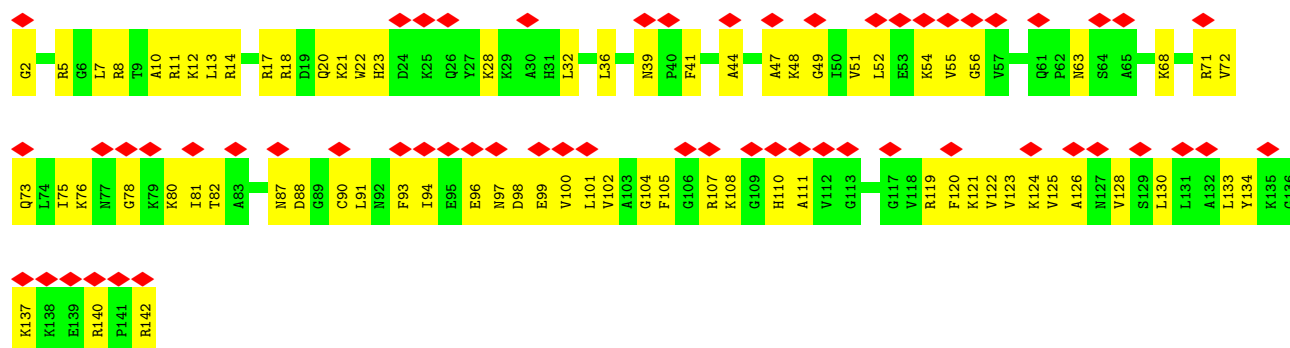
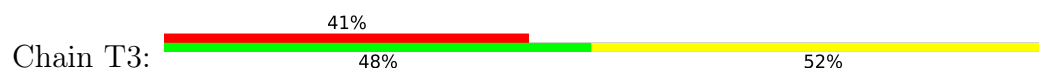


- Molecule 57: ribosomal protein uS19





• Molecule 58: Ribosomal protein S23

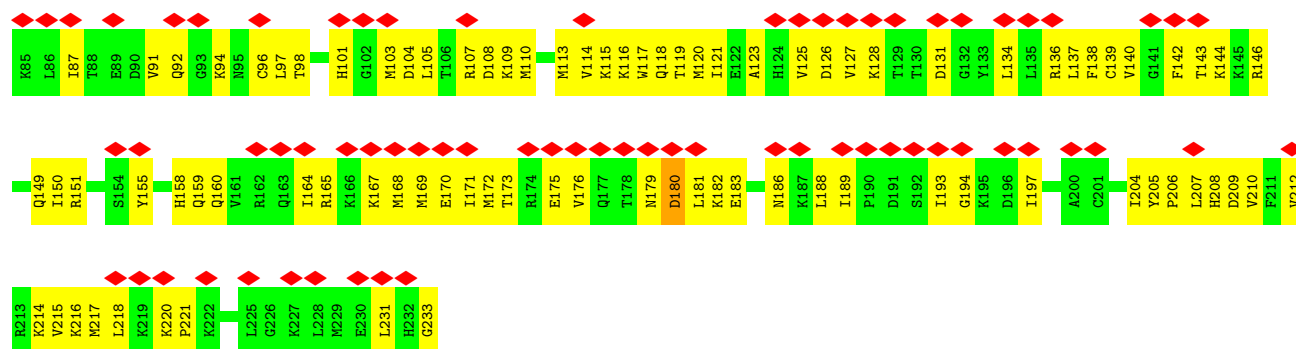


• Molecule 59: 40S_SA_C domain-containing protein

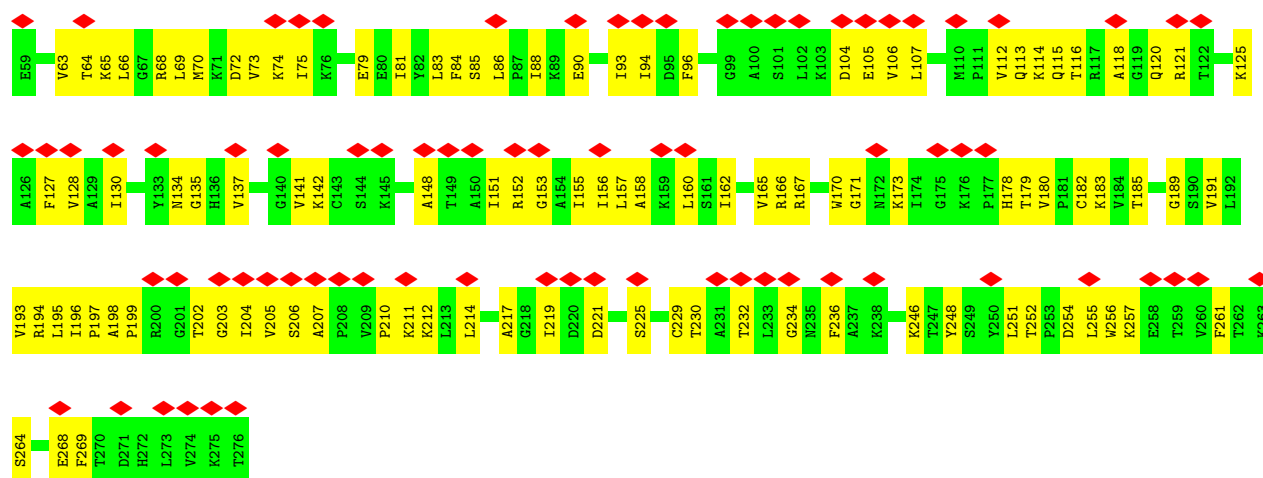


• Molecule 60: 40S ribosomal protein S3a

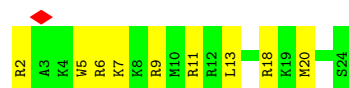




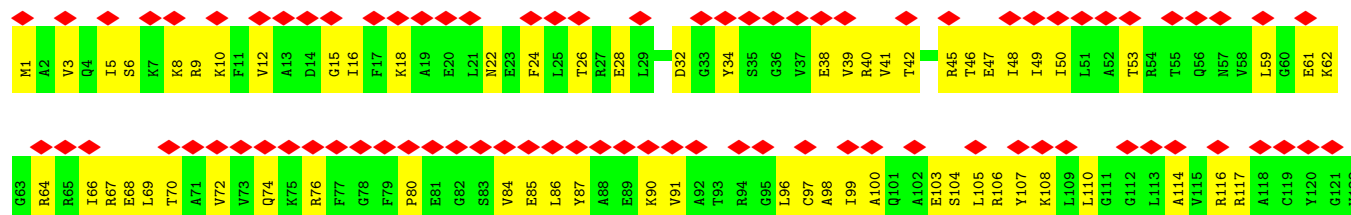
• Molecule 61: S5 DRBM domain-containing protein

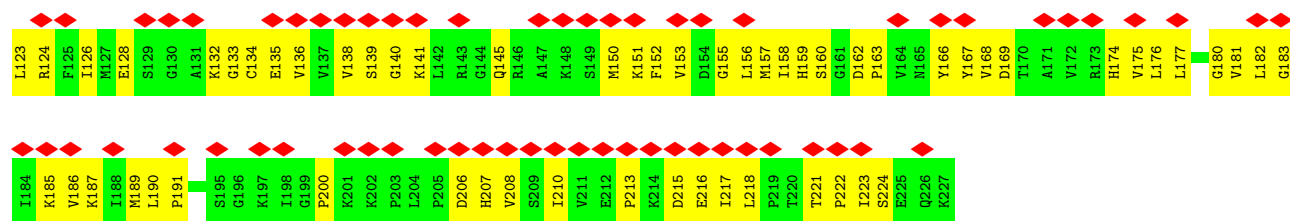


• Molecule 62: 60s ribosomal protein 141

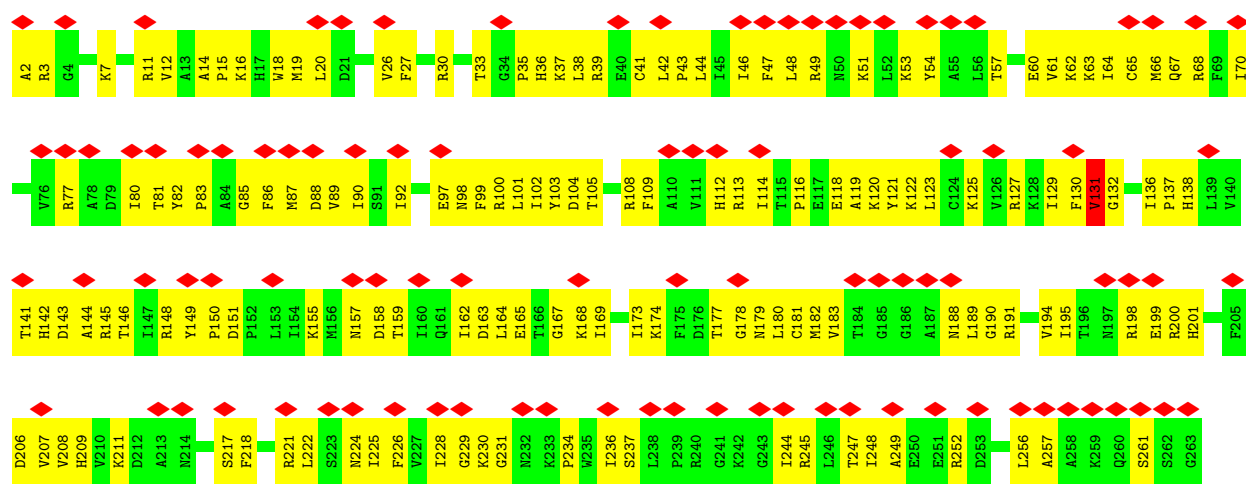


• Molecule 63: Ribosomal protein S3

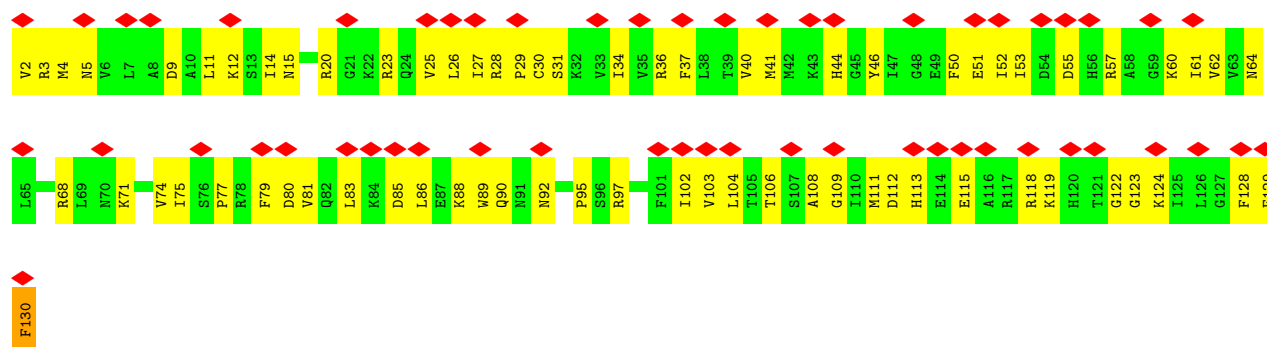




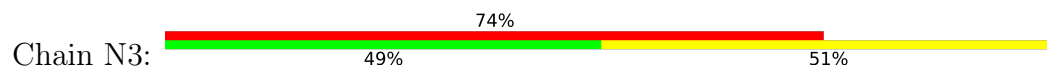
• Molecule 64: 40S ribosomal protein S4, 40S ribosomal protein S4

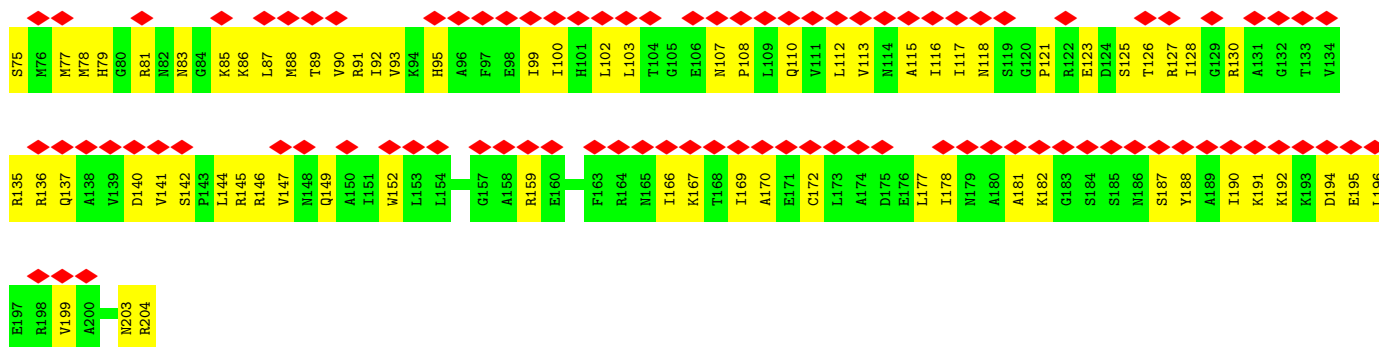


• Molecule 65: Ribosomal protein S15a

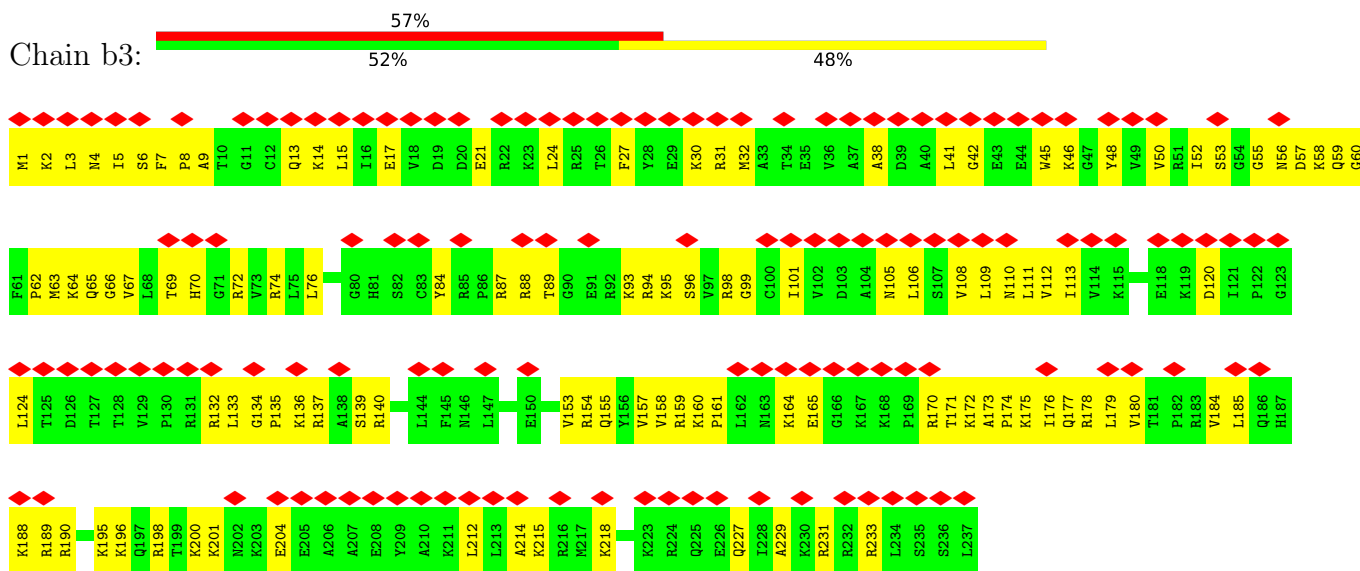


• Molecule 66: Ribosomal protein S5

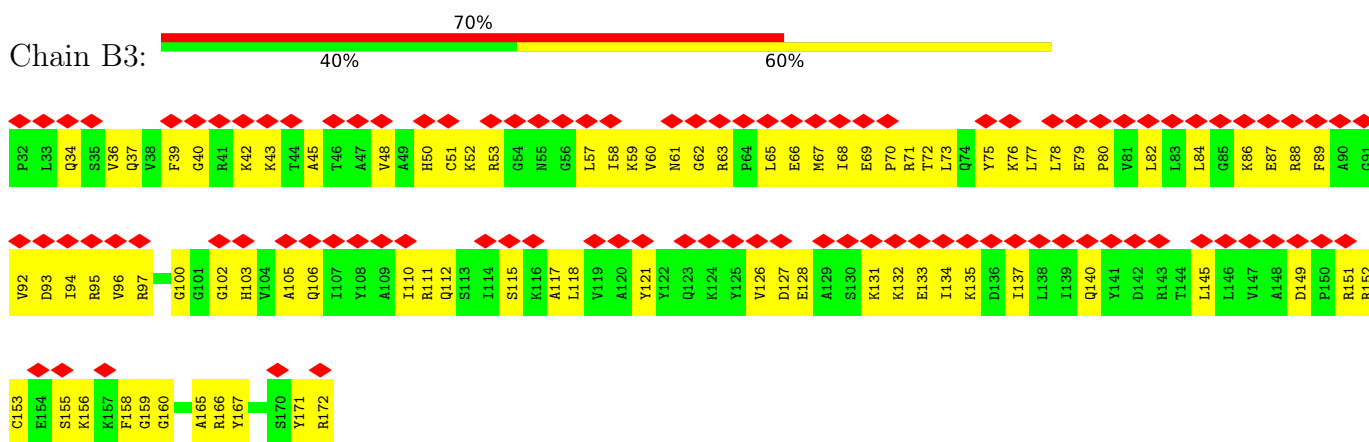




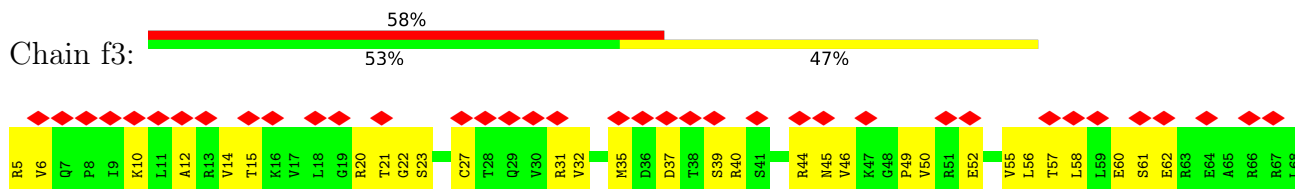
• Molecule 67: 40S ribosomal protein S6



• Molecule 68: Uncharacterized protein

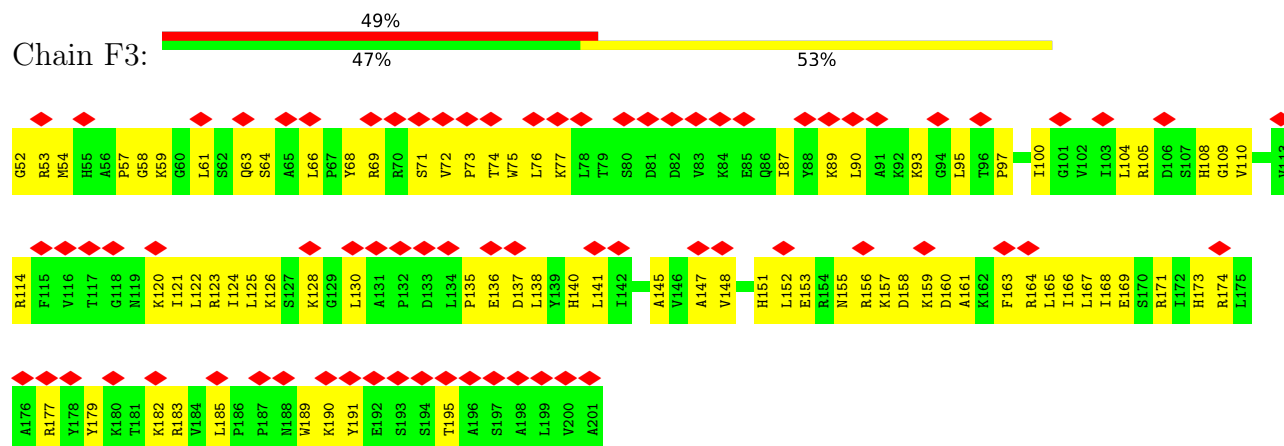


• Molecule 69: ribosomal protein eS28



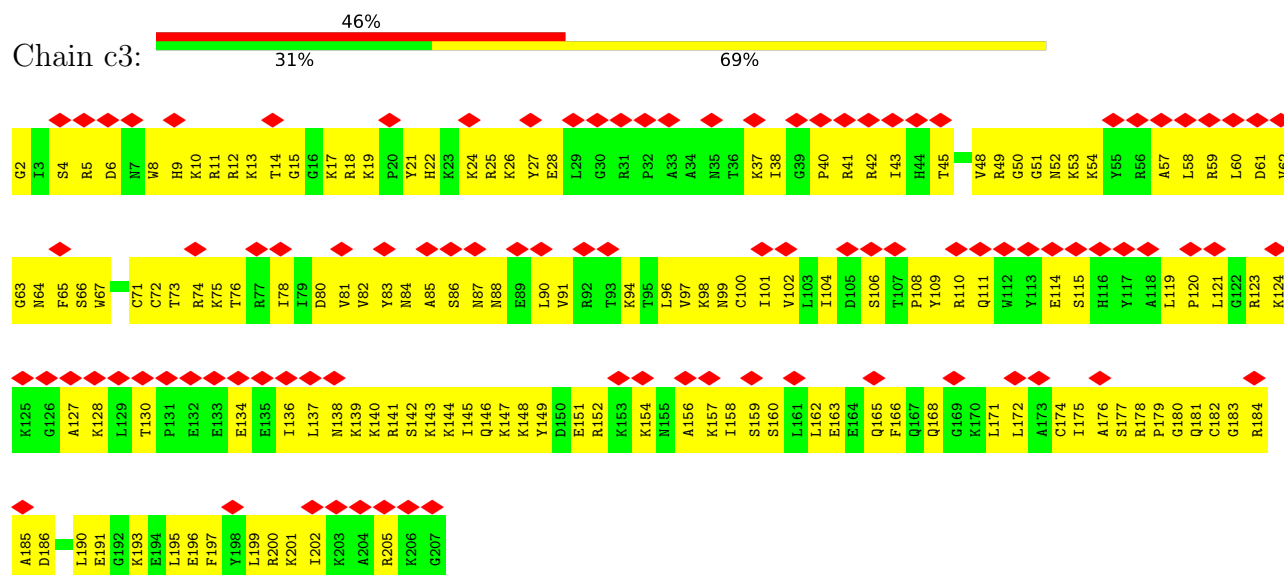
- Molecule 70: ribosomal protein uS15

Chain F3:



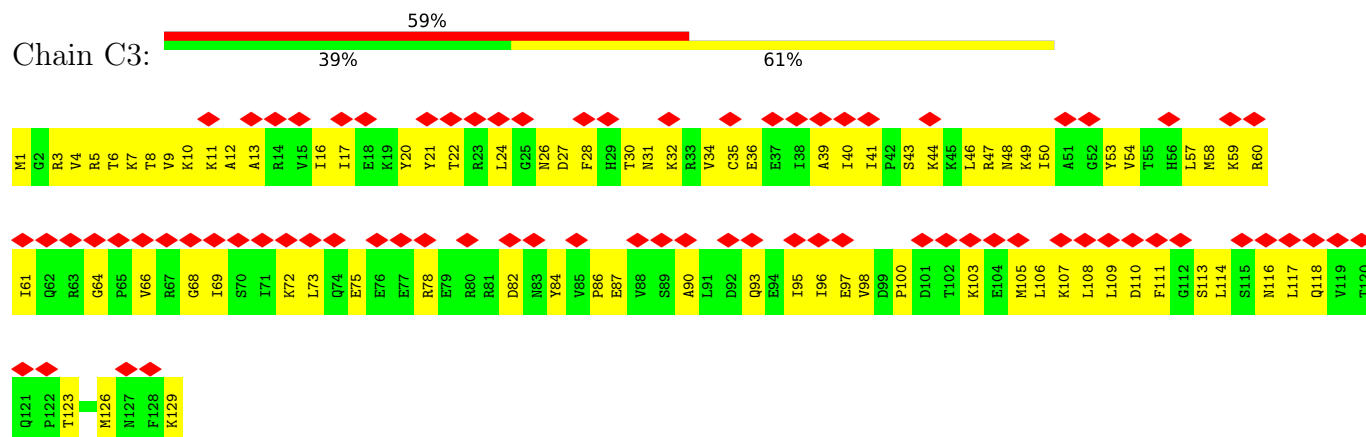
- Molecule 71: 40S ribosomal protein S8

Chain c3:

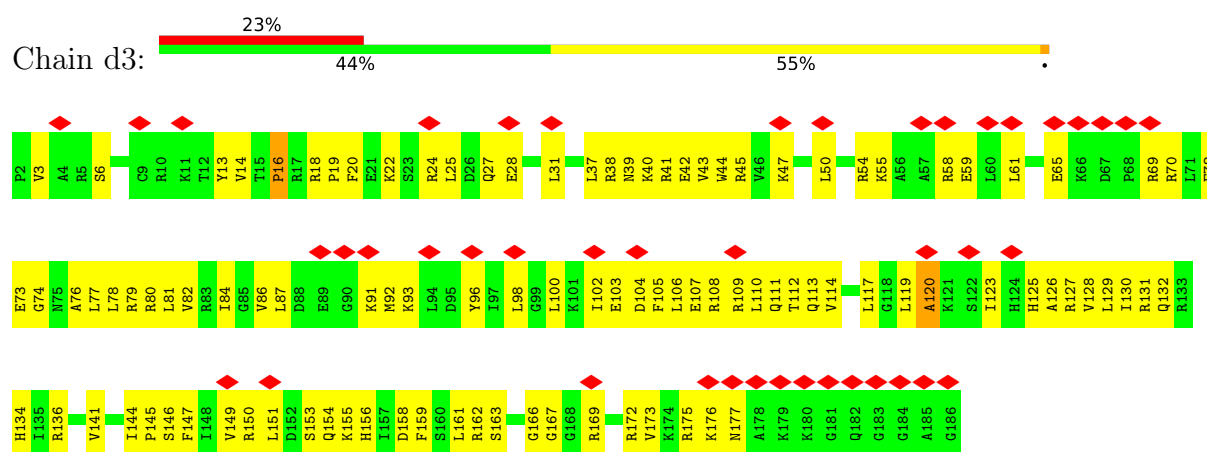


- Molecule 72: Uncharacterized protein

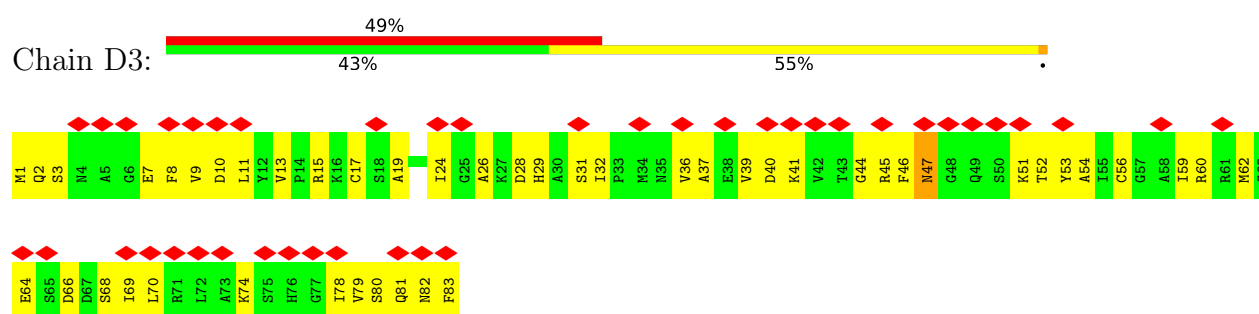
Chain C3:



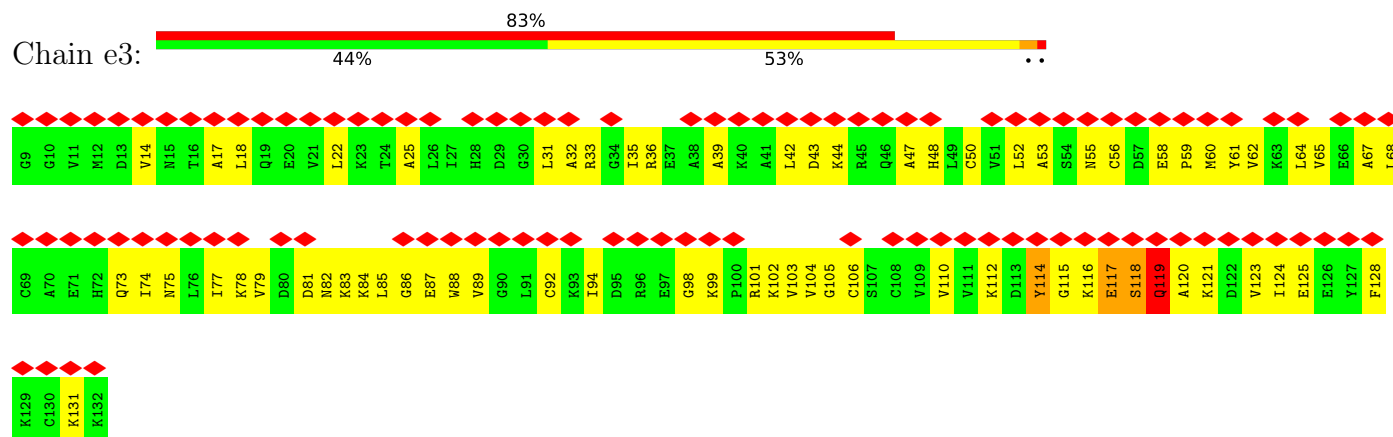
- Molecule 73: Ribosomal protein S9 (Predicted)



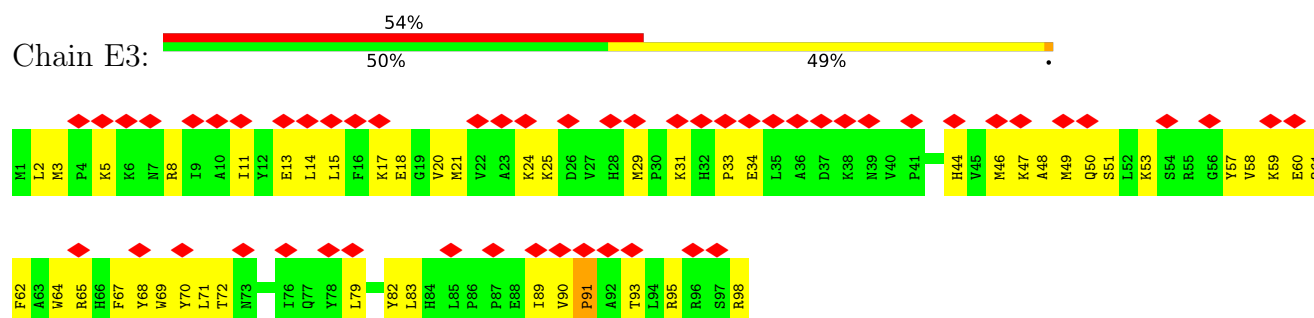
• Molecule 74: 40S RIBOSOMAL PROTEIN ES21



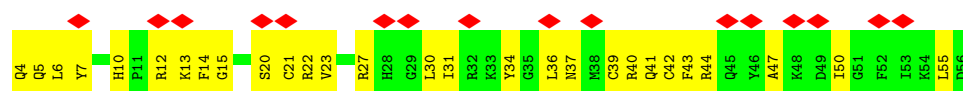
• Molecule 75: 40S ribosomal protein S12



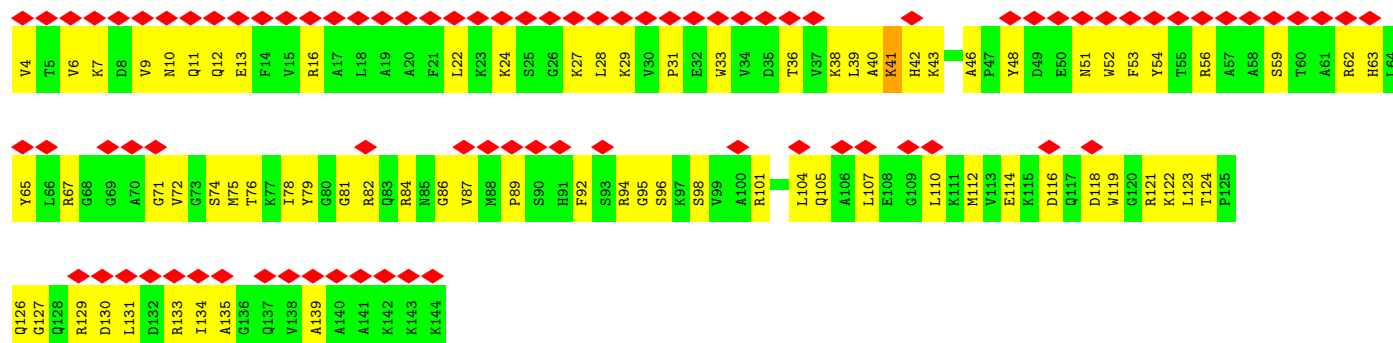
• Molecule 76: S10_pectin domain-containing protein



• Molecule 77: ribosomal protein uS14



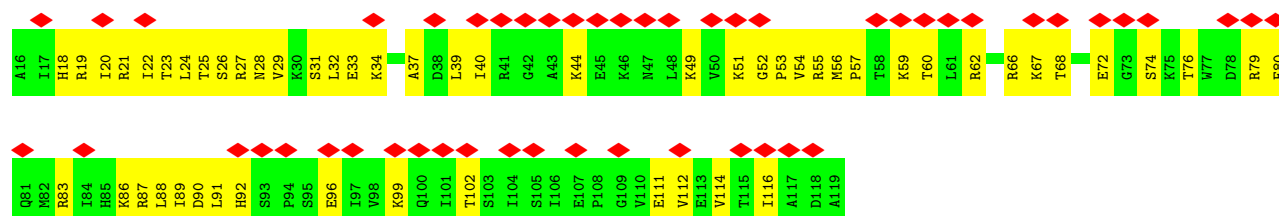
• Molecule 78: Uncharacterized protein



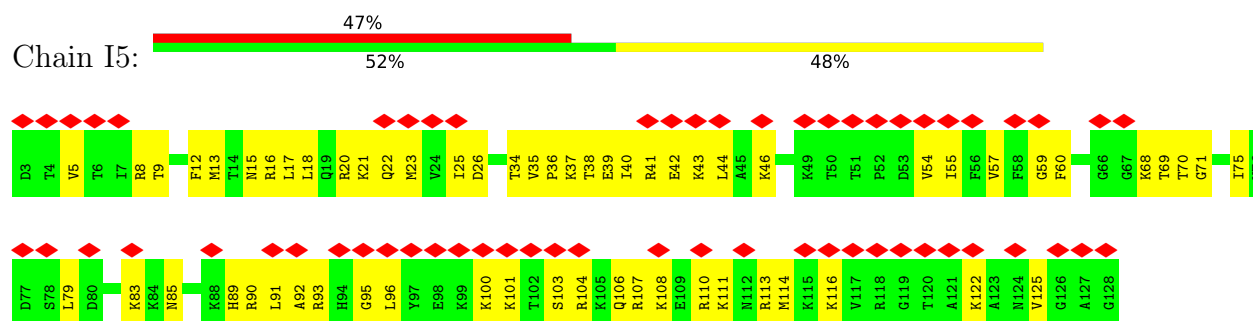
• Molecule 79: 40S RIBOSOMAL PROTEIN ES7



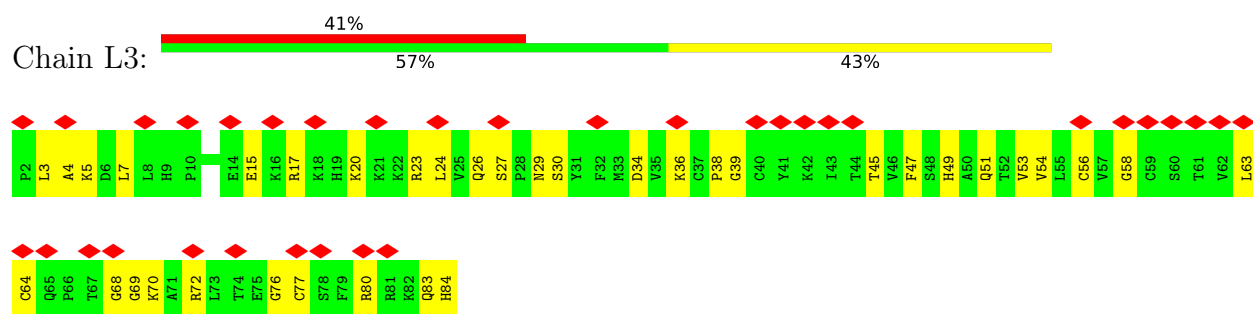
• Molecule 80: Ribosomal_S10 domain-containing protein



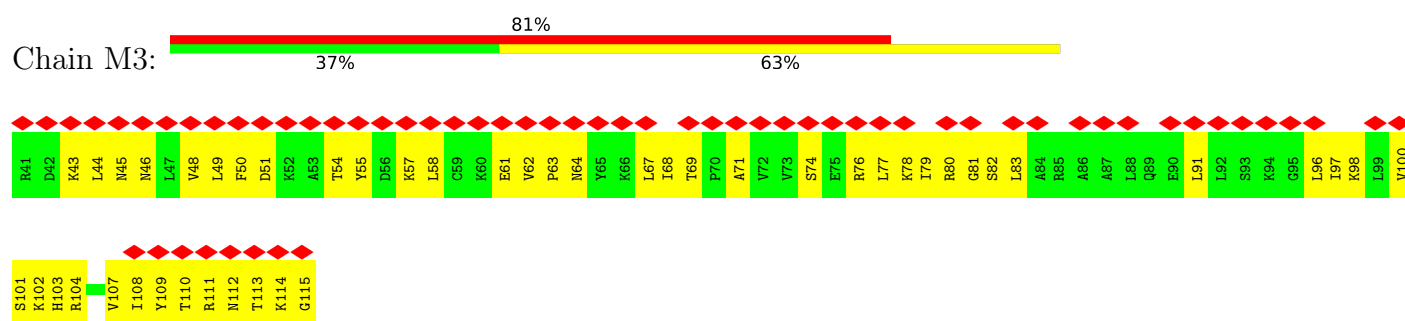
- Molecule 81: 40S ribosomal protein S24



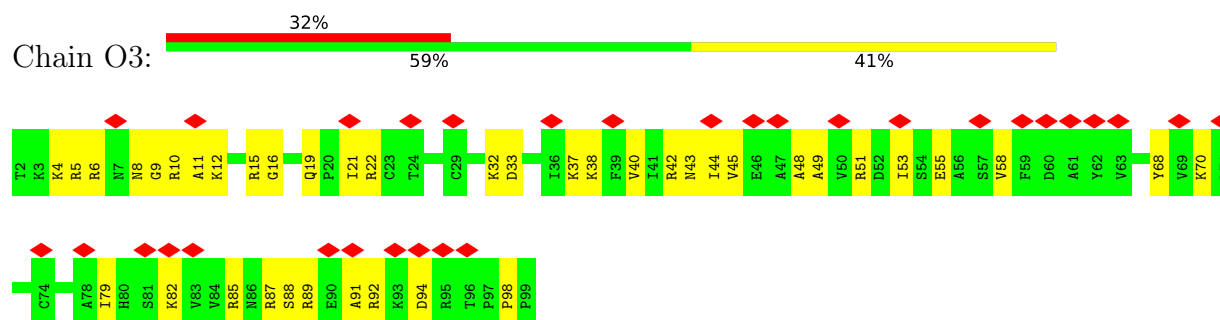
- Molecule 82: 40S ribosomal protein S27



- Molecule 83: ribosomal protein eS25

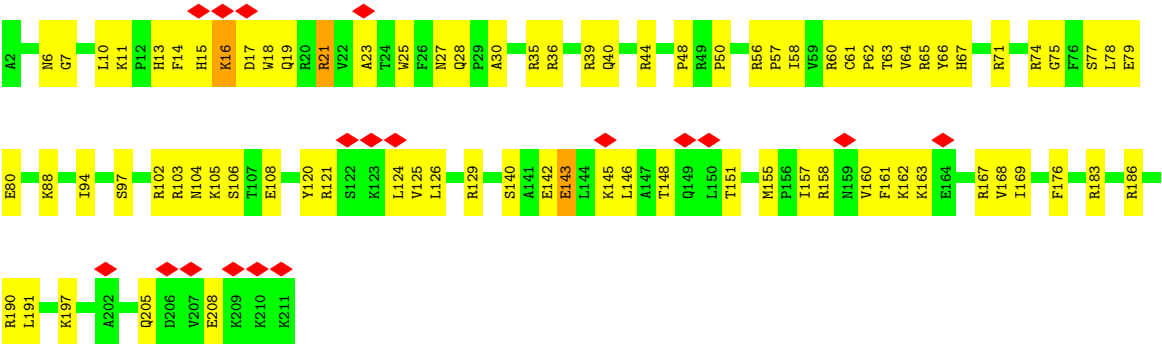


- Molecule 84: 40S RIBOSOMAL PROTEIN ES26



- Molecule 85: 60S ribosomal protein L13





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	42135	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.123	Depositor
Minimum map value	-0.073	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.018	Depositor
Map size ($\text{\AA}$)	396.0, 396.0, 396.0	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.1, 1.1, 1.1	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	E1	0.21	0/3579	0.48	0/5560
2	e2	0.36	0/91668	0.44	0/143010
3	h2	0.37	0/3701	0.43	0/5766
4	d2	0.32	0/2858	0.37	0/4455
5	p2	0.35	0/574	0.59	0/761
6	k2	0.37	0/993	0.60	0/1332
7	l2	0.32	0/542	0.70	1/720 (0.1%)
8	m2	0.31	0/993	0.54	0/1334
9	o2	0.35	0/1133	0.55	0/1504
10	q2	0.45	0/1191	0.62	0/1590
11	r2	0.31	0/620	0.61	0/818
12	t2	0.38	0/2938	0.58	0/3946
13	u2	0.38	0/904	0.56	0/1216
14	v2	0.42	0/1072	0.56	0/1429
15	w2	0.41	0/1662	0.57	0/2222
16	x2	0.43	0/895	0.64	0/1198
17	y2	0.39	0/917	0.63	0/1220
18	92	0.41	0/1907	0.60	0/2556
19	A2	0.31	0/1021	0.48	0/1348
20	B2	0.30	0/842	0.55	0/1112
21	C2	0.43	0/721	0.61	0/952
22	D2	0.39	0/454	0.62	0/599
23	E2	0.33	0/435	0.59	0/575
24	F2	0.36	0/865	0.64	0/1140
25	G2	0.31	0/2433	0.58	2/3257 (0.1%)
26	H2	0.43	0/1269	0.59	0/1700
27	I2	0.38	0/718	0.58	0/953
28	J2	0.38	0/1018	0.55	0/1364
29	K2	0.25	0/1548	0.62	1/2088 (0.0%)
30	L2	0.42	0/853	0.56	0/1137
31	M2	0.23	0/1198	0.69	0/1611
32	R2	0.32	0/292	0.56	0/388

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	S2	0.41	0/1537	0.61	0/2052
34	T2	0.32	0/1646	0.64	0/2213
35	U2	0.43	0/1911	0.60	0/2549
36	V2	0.29	0/1965	0.51	0/2644
37	W2	0.35	0/1536	0.53	0/2063
38	X2	0.37	0/841	0.54	0/1123
39	Y2	0.29	0/1377	0.54	0/1841
40	O2	0.33	0/1159	0.62	0/1547
41	12	0.44	0/1746	0.68	1/2338 (0.0%)
42	22	0.32	0/1130	0.54	0/1507
43	32	0.34	0/1525	0.56	0/2013
44	42	0.25	0/1772	0.69	2/2375 (0.1%)
45	52	0.39	0/3241	0.58	0/4339
46	62	0.38	0/1493	0.59	0/2003
47	72	0.39	0/1326	0.64	2/1770 (0.1%)
48	82	0.29	0/823	0.54	0/1103
49	K3	0.22	0/42945	0.44	0/66942
50	s3	0.22	0/354	0.54	0/462
51	13	0.31	0/743	0.50	0/995
52	Q3	0.26	0/538	0.65	1/713 (0.1%)
53	G3	0.25	0/1269	0.57	0/1696
54	G5	0.25	0/1158	0.64	0/1548
55	a3	0.23	0/2494	0.56	0/3394
56	a5	0.24	0/1029	0.56	0/1380
57	A3	0.24	0/1080	0.55	0/1437
58	T3	0.26	0/1117	0.55	0/1490
59	U3	0.24	0/1682	0.53	0/2286
60	V3	0.26	0/1757	0.66	1/2350 (0.0%)
61	W3	0.25	0/1727	0.58	0/2332
62	X3	0.27	0/224	0.59	0/284
63	Y3	0.25	0/1793	0.57	0/2412
64	j3	0.25	0/2117	0.58	0/2846
65	J5	1.33	6/1051 (0.6%)	1.30	8/1406 (0.6%)
66	N3	0.24	0/1531	0.57	0/2059
67	b3	0.24	0/1947	0.54	0/2590
68	B3	0.20	0/1142	0.59	0/1528
69	f3	0.24	0/509	0.60	0/680
70	F3	0.26	0/1232	0.60	2/1656 (0.1%)
71	c3	0.25	0/1716	0.57	0/2287
72	C3	0.27	0/1061	0.65	0/1421
73	d3	0.43	1/1551 (0.1%)	0.78	3/2069 (0.1%)
74	D3	0.24	0/639	0.52	0/855
75	e3	0.22	0/968	0.63	0/1296

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	E3	0.24	0/852	0.55	1/1147 (0.1%)
77	H3	0.23	0/455	0.59	0/603
78	H5	0.21	0/1133	0.52	0/1517
79	P3	0.23	0/1545	0.65	0/2068
80	I3	0.26	0/832	0.60	0/1117
81	I5	0.22	0/1041	0.54	0/1382
82	L3	0.21	0/665	0.52	0/891
83	M3	0.25	0/605	0.52	0/810
84	O3	0.25	0/795	0.58	0/1065
85	a7	0.34	0/1733	0.65	1/2316 (0.0%)
All	All	0.34	7/241872 (0.0%)	0.51	26/355671 (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
9	o2	0	1
11	r2	0	1
24	F2	0	1
25	G2	0	2
30	L2	0	1
31	M2	0	2
34	T2	0	2
35	U2	0	2
37	W2	0	1
42	22	0	1
44	42	0	2
45	52	0	2
46	62	0	1
47	72	0	2
50	s3	0	1
52	Q3	0	1
53	G3	0	1
54	G5	0	1
56	a5	0	1
59	U3	0	1
72	C3	0	1
73	d3	0	1
74	D3	0	1
75	e3	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
79	P3	0	3
80	I3	0	1
85	a7	0	2
All	All	0	40

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	J5	130	PHE	CD2-CE2	24.28	2.11	1.38
65	J5	130	PHE	CD1-CE1	23.80	2.10	1.38
65	J5	130	PHE	CE2-CZ	-14.64	0.94	1.38
65	J5	130	PHE	CE1-CZ	-14.56	0.94	1.38
73	d3	16	PRO	CG-CD	-12.13	1.09	1.50
65	J5	130	PHE	CG-CD1	-10.49	1.16	1.38
65	J5	130	PHE	CG-CD2	-10.45	1.16	1.38

All (26) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
65	J5	130	PHE	CE1-CZ-CE2	-28.57	68.58	120.00
65	J5	130	PHE	CD1-CG-CD2	-20.26	88.21	118.60
73	d3	16	PRO	N-CD-CG	-14.70	81.15	103.20
65	J5	130	PHE	CG-CD2-CE2	-14.57	95.93	120.70
65	J5	130	PHE	CG-CD1-CE1	-14.19	96.57	120.70
7	l2	3	VAL	N-CA-C	-10.43	102.63	111.91
65	J5	130	PHE	CB-CG-CD2	9.20	136.33	120.70
41	12	85	VAL	N-CA-C	-9.06	104.65	113.53
65	J5	130	PHE	CB-CG-CD1	8.68	135.46	120.70
73	d3	16	PRO	CA-CB-CG	-8.40	88.53	104.50
65	J5	130	PHE	CZ-CE2-CD2	-7.76	106.03	120.00
65	J5	130	PHE	CD1-CE1-CZ	-7.73	106.09	120.00
73	d3	16	PRO	CA-N-CD	-7.72	101.19	112.00
85	a7	143	GLU	N-CA-C	-6.77	105.57	114.31
60	V3	180	ASP	N-CA-C	6.55	118.61	109.31
44	42	121	PRO	N-CD-CG	-6.24	93.84	103.20
70	F3	95	LEU	CA-C-N	5.92	141.40	121.27
70	F3	95	LEU	C-N-CA	5.92	141.40	121.27
47	72	18	PRO	CA-C-N	5.79	132.60	121.54
47	72	18	PRO	C-N-CA	5.79	132.60	121.54
25	G2	263	LYS	CA-C-N	-5.74	113.30	122.08
25	G2	263	LYS	C-N-CA	-5.74	113.30	122.08
44	42	80	VAL	N-CA-C	-5.55	107.08	112.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	K2	57	LYS	N-CA-C	-5.36	107.39	114.04
52	Q3	154	PRO	CA-N-CD	-5.36	104.49	112.00
76	E3	89	ILE	N-CA-C	-5.18	107.93	112.90

There are no chirality outliers.

All (40) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
42	22	31	ASP	Peptide
44	42	67	VAL	Peptide
44	42	70	ASP	Peptide
45	52	17	LEU	Peptide
45	52	259	PRO	Peptide
46	62	164	LYS	Peptide
47	72	18	PRO	Peptide
47	72	81	LYS	Peptide
72	C3	126	MET	Peptide
74	D3	47	ASN	Peptide
24	F2	32	SER	Peptide
25	G2	265	ARG	Peptide
25	G2	267	ASN	Peptide
53	G3	28	THR	Peptide
54	G5	100	ALA	Peptide
80	I3	25	THR	Peptide
30	L2	18	PRO	Peptide
31	M2	142	ASN	Peptide
31	M2	9	GLU	Peptide
79	P3	304	VAL	Peptide
79	P3	337	ARG	Peptide
79	P3	386	LEU	Peptide
52	Q3	121	LYS	Peptide
34	T2	243	TYR	Peptide
34	T2	94	THR	Peptide
35	U2	220	LYS	Peptide
35	U2	85	GLU	Peptide
59	U3	72	ALA	Peptide
37	W2	51	HIS	Peptide
56	a5	38	ASN	Peptide
85	a7	16	LYS	Peptide
85	a7	21	ARG	Peptide
73	d3	120	ALA	Peptide
75	e3	114	TYR	Peptide

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Mol	Chain	Res	Type	Group
75	e3	117	GLU	Peptide
75	e3	118	SER	Peptide
75	e3	119	GLN	Peptide
9	o2	115	ARG	Peptide
11	r2	51	LYS	Peptide
50	s3	30	GLY	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	E1	3208	0	1622	92	0
2	e2	81951	0	41450	3399	0
3	h2	3314	0	1683	153	0
4	d2	2558	0	1296	107	0
5	p2	568	0	630	39	0
6	k2	979	0	1039	46	0
7	l2	529	0	541	30	0
8	m2	976	0	1053	44	0
9	o2	1116	0	1205	66	0
10	q2	1162	0	1209	69	0
11	r2	610	0	650	36	0
12	t2	2884	0	3053	145	0
13	u2	889	0	930	33	0
14	v2	1054	0	1147	41	0
15	w2	1630	0	1778	71	0
16	x2	876	0	912	47	0
17	y2	907	0	1002	75	0
18	92	1869	0	1959	84	0
19	A2	1013	0	1147	46	0
20	B2	831	0	916	27	0
21	C2	706	0	737	35	0
22	D2	444	0	483	29	0
23	E2	429	0	465	20	0
24	F2	852	0	920	45	0
25	G2	2387	0	2419	150	0
26	H2	1243	0	1274	66	0
27	I2	708	0	756	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	J2	1002	0	1060	52	0
29	K2	1524	0	1577	114	0
30	L2	834	0	855	42	0
31	M2	1183	0	1246	87	0
32	R2	285	0	298	27	0
33	S2	1513	0	1628	67	0
34	T2	1614	0	1748	116	0
35	U2	1875	0	1995	105	0
36	V2	1932	0	2083	76	0
37	W2	1517	0	1594	62	0
38	X2	822	0	849	42	0
39	Y2	1354	0	1386	63	0
40	O2	1138	0	1211	59	0
41	I2	1701	0	1749	89	0
42	22	1107	0	1182	63	0
43	32	1509	0	1664	72	0
44	42	1744	0	1859	145	0
45	52	3173	0	3310	176	0
46	62	1453	0	1490	72	0
47	72	1298	0	1366	66	0
48	82	809	0	831	43	0
49	K3	38409	0	19428	2181	0
50	s3	351	0	388	21	0
51	I3	733	0	767	32	0
52	Q3	527	0	546	39	0
53	G3	1248	0	1323	90	0
54	G5	1140	0	1191	94	0
55	a3	2437	0	2393	161	0
56	a5	1016	0	1039	68	0
57	A3	1061	0	1120	88	0
58	T3	1099	0	1167	83	0
59	U3	1645	0	1648	105	0
60	V3	1730	0	1803	121	0
61	W3	1691	0	1777	113	0
62	X3	223	0	264	10	0
63	Y3	1765	0	1863	119	0
64	j3	2075	0	2177	157	0
65	J5	1034	0	1080	82	0
66	N3	1509	0	1563	97	0
67	b3	1924	0	2089	139	0
68	B3	1124	0	1193	76	0
69	f3	507	0	536	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
70	F3	1208	0	1294	85	0
71	c3	1687	0	1772	175	0
72	C3	1048	0	1103	89	0
73	d3	1526	0	1640	132	0
74	D3	631	0	631	55	0
75	e3	958	0	993	61	0
76	E3	828	0	854	58	0
77	H3	445	0	438	31	0
78	H5	1113	0	1149	89	0
79	P3	1522	0	1616	107	0
80	I3	822	0	887	64	0
81	I5	1024	0	1090	62	0
82	L3	651	0	672	36	0
83	M3	599	0	656	52	0
84	O3	782	0	828	50	0
85	a7	1702	0	1820	102	0
86	C2	1	0	0	0	0
86	E2	1	0	0	0	0
86	F2	1	0	0	0	0
86	H3	1	0	0	0	0
86	I2	1	0	0	0	0
86	O3	1	0	0	0	0
All	All	224880	0	166055	10018	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 26.

All (10018) 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)
49:K3:1709:G:H1	49:K3:1824:A:N6	1.35	1.22
49:K3:1743:G:N2	49:K3:1791:A:H62	1.41	1.19
49:K3:1605:G:C2	49:K3:1634:A:N6	2.13	1.17
49:K3:1743:G:H21	49:K3:1791:A:N6	1.43	1.16
2:e2:1968:G:C2	2:e2:2016:A:N6	2.14	1.14
2:e2:1968:G:N3	2:e2:2016:A:N6	1.98	1.11
49:K3:677:G:H21	49:K3:1028:A:N6	1.48	1.11
49:K3:677:G:N2	49:K3:1028:A:H62	1.49	1.10
2:e2:752:G:C6	2:e2:911:U:O2	2.06	1.09
49:K3:1018:U:N3	49:K3:1019:C:N4	2.04	1.05
49:K3:457:C:N4	49:K3:458:A:H62	1.52	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:I5:8:ARG:HB2	81:I5:26:ASP:HB3	1.38	1.04
49:K3:1745:A:C2	49:K3:1789:G:N2	2.25	1.04
2:e2:4127:A:C5	2:e2:4156:G:N2	2.27	1.03
49:K3:1605:G:N2	49:K3:1634:A:C6	2.25	1.03
49:K3:1018:U:C4	49:K3:1019:C:N4	2.28	1.01
77:H3:39:CYS:HB2	77:H3:42:CYS:SG	2.00	1.01
49:K3:516:A:N7	49:K3:644:G:O6	1.94	0.99
2:e2:3753:G:H1	2:e2:3771:C:H41	1.10	0.99
61:W3:203:GLY:O	61:W3:221:ASP:HA	1.63	0.99
49:K3:1745:A:H2	49:K3:1789:G:N2	1.58	0.99
2:e2:3978:C:N4	2:e2:4031:U:H3	1.61	0.99
49:K3:39:A:H62	49:K3:515:G:H21	1.07	0.98
2:e2:2701:U:H3	2:e2:2715:G:H1	0.99	0.98
49:K3:1293:A:N6	49:K3:1306:U:N3	2.11	0.98
2:e2:1627:G:N2	2:e2:1636:U:O2	1.97	0.97
2:e2:510:U:H5'	10:q2:86:THR:HG22	1.45	0.97
49:K3:1162:C:H41	58:T3:2:GLY:HA2	1.27	0.97
49:K3:157:U:H3	49:K3:162:C:H42	1.02	0.97
35:U2:235:ARG:HD3	35:U2:238:GLN:HB2	1.45	0.97
49:K3:1605:G:N2	49:K3:1634:A:N6	2.13	0.96
49:K3:1552:G:H1	49:K3:1557:C:HO2'	1.02	0.96
49:K3:457:C:N4	49:K3:458:A:N6	2.13	0.96
59:U3:2:SER:HB2	59:U3:59:LEU:HD22	1.48	0.95
2:e2:1188:C:H2'	2:e2:1189:G:H8	1.26	0.95
49:K3:1700:C:O2	49:K3:1834:A:N6	2.00	0.95
2:e2:713:C:H42	2:e2:955:G:H1	1.11	0.94
49:K3:371:A:H5'	71:c3:11:ARG:HB2	1.46	0.94
49:K3:882:U:H3	49:K3:905:C:N4	1.64	0.94
72:C3:32:LYS:HZ3	72:C3:47:ARG:HH12	1.05	0.94
57:A3:86:LEU:HB2	57:A3:89:MET:HE3	1.46	0.94
2:e2:1445:U:H3	2:e2:2098:G:H22	1.16	0.94
72:C3:36:GLU:HB2	72:C3:47:ARG:HH21	1.33	0.94
49:K3:808:A:H2	49:K3:855:G:H1	1.15	0.93
2:e2:752:G:O6	2:e2:911:U:C2	2.21	0.93
49:K3:148:U:H3	49:K3:170:A:N6	1.65	0.93
49:K3:1099:G:H1	49:K3:1133:A:H2	1.08	0.93
58:T3:101:LEU:HB3	58:T3:124:LYS:HB2	1.49	0.93
49:K3:878:G:H1	49:K3:908:A:N6	1.66	0.92
2:e2:4745:G:N2	2:e2:4955:A:N1	2.17	0.92
2:e2:1994:G:N2	2:e2:1998:A:N7	2.16	0.92
49:K3:1844:U:H2'	49:K3:1845:A:H8	1.31	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:534:G:N2	49:K3:550:C:O2	2.02	0.92
71:c3:106:SER:HB3	71:c3:171:LEU:HD13	1.51	0.92
2:e2:3978:C:N4	2:e2:4031:U:N3	2.18	0.91
49:K3:1552:G:H21	49:K3:1553:C:H41	1.08	0.91
61:W3:141:VAL:H	61:W3:157:LEU:HD23	1.33	0.91
83:M3:97:ILE:HG21	83:M3:109:TYR:HB3	1.52	0.91
26:H2:30:ARG:HA	26:H2:119:VAL:HG21	1.53	0.90
2:e2:1967:G:H5''	29:K2:112:ARG:HB2	1.54	0.90
2:e2:3928:A:OP1	41:12:90:ASN:ND2	2.03	0.90
2:e2:4324:A:H2'	2:e2:4325:A:H8	1.36	0.90
44:42:33:GLU:HA	44:42:168:ALA:HA	1.54	0.90
2:e2:1968:G:N2	2:e2:2016:A:N6	2.20	0.90
49:K3:1415:C:H42	49:K3:1430:C:H42	1.16	0.90
53:G3:131:CYS:SG	53:G3:141:ASN:ND2	2.45	0.90
49:K3:1546:G:N2	49:K3:1670:C:O2	2.04	0.90
49:K3:457:C:C4	49:K3:458:A:N6	2.40	0.89
49:K3:215:G:H1	49:K3:302:A:H61	1.16	0.89
49:K3:1745:A:H2	49:K3:1789:G:H21	1.01	0.89
49:K3:955:A:H62	49:K3:971:G:N2	1.70	0.89
49:K3:386:C:OP2	53:G3:136:LYS:NZ	2.05	0.89
67:b3:50:VAL:HG12	67:b3:113:ILE:HG12	1.53	0.89
17:y2:76:ARG:HH12	17:y2:87:VAL:HG13	1.37	0.89
49:K3:39:A:H62	49:K3:515:G:N2	1.69	0.89
64:j3:182:MET:HE1	64:j3:190:GLY:H	1.38	0.89
2:e2:1627:G:H1	2:e2:1636:U:H3	0.96	0.89
2:e2:3978:C:C5	2:e2:4031:U:O4	2.25	0.88
68:B3:42:LYS:HD3	68:B3:105:ALA:HA	1.54	0.88
2:e2:2768:C:H2'	17:y2:69:LYS:HB2	1.54	0.88
2:e2:3692:A:N6	2:e2:3823:G:H21	1.70	0.88
2:e2:4518:A:OP2	45:52:258:HIS:ND1	2.05	0.88
49:K3:804:U:H3	49:K3:859:G:H1	0.92	0.88
2:e2:3692:A:H62	2:e2:3823:G:H21	1.21	0.88
2:e2:1089:G:H1'	35:U2:73:MET:HE1	1.54	0.88
2:e2:1267:C:N4	2:e2:2120:C:OP2	2.06	0.88
2:e2:3692:A:H62	2:e2:3823:G:N2	1.71	0.88
49:K3:148:U:H3	49:K3:170:A:H62	0.95	0.88
49:K3:1461:G:N2	49:K3:1465:A:N6	2.21	0.88
49:K3:197:U:C2	49:K3:202:G:O6	2.26	0.88
56:a5:78:ALA:HB1	56:a5:119:LEU:HG	1.56	0.88
2:e2:4580:U:O2'	45:52:182:GLU:OE2	1.91	0.87
49:K3:433:A:OP1	71:c3:25:ARG:NH1	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:957:A:H3'	49:K3:958:G:H21	1.40	0.87
2:e2:2248:C:H2'	2:e2:2252:G:H4'	1.57	0.87
49:K3:992:A:N7	84:O3:15:ARG:NH1	2.23	0.87
49:K3:1709:G:N2	49:K3:1824:A:N1	2.21	0.87
1:E1:6284:G:O6	1:E1:6287:A:C6	2.28	0.87
43:32:81:ARG:HG3	43:32:88:ARG:HH11	1.40	0.87
73:d3:162:ARG:HE	73:d3:169:ARG:HD3	1.38	0.87
18:92:242:ARG:NH2	18:92:244:GLY:O	2.08	0.86
25:G2:125:VAL:HB	25:G2:196:ARG:HD3	1.56	0.86
17:y2:83:CYS:H	17:y2:86:CYS:HB2	1.39	0.86
2:e2:4137:C:N3	2:e2:4147:G:N1	2.23	0.86
2:e2:3873:G:H2'	2:e2:3874:G:C8	2.10	0.86
14:v2:90:MET:HE1	28:J2:112:ARG:HB2	1.56	0.86
49:K3:878:G:H1	49:K3:908:A:H61	0.90	0.86
4:d2:89:G:H21	30:L2:10:ARG:HH22	1.23	0.86
49:K3:878:G:N2	49:K3:908:A:N1	2.24	0.86
2:e2:3845:A:O2'	2:e2:4668:U:O2'	1.93	0.86
85:a7:205:GLN:HA	85:a7:208:GLU:HG2	1.58	0.86
49:K3:1257:G:H4'	49:K3:1258:A:H5'	1.57	0.86
56:a5:19:PRO:HD3	56:a5:89:GLY:HA3	1.55	0.86
2:e2:1292:C:H2'	2:e2:1293:G:H8	1.41	0.86
2:e2:1882:G:OP1	14:v2:47:ARG:NH1	2.10	0.85
17:y2:83:CYS:O	17:y2:86:CYS:N	2.09	0.85
49:K3:148:U:O4	49:K3:170:A:N7	2.09	0.85
2:e2:4137:C:O2	2:e2:4147:G:N2	2.09	0.85
3:h2:87:G:H1	9:o2:117:LYS:HZ1	1.21	0.85
2:e2:1627:G:N1	2:e2:1636:U:N3	2.24	0.85
2:e2:3899:G:H4'	45:52:259:PRO:HD3	1.58	0.85
49:K3:492:C:O2	49:K3:508:A:N6	2.10	0.85
49:K3:882:U:H3	49:K3:905:C:H42	0.87	0.85
61:W3:69:LEU:O	61:W3:72:ASP:C	2.20	0.85
49:K3:1008:A:H5''	70:F3:147:ALA:HB1	1.57	0.85
49:K3:1099:G:O6	49:K3:1133:A:N1	2.10	0.85
56:a5:147:ARG:HB3	56:a5:150:ARG:HD2	1.59	0.85
60:V3:33:VAL:HA	60:V3:96:CYS:HB2	1.59	0.85
2:e2:1183:C:H2'	2:e2:1184:A:H8	1.43	0.84
2:e2:1432:G:N1	2:e2:1715:C:O2	2.09	0.84
2:e2:4741:C:N4	2:e2:4959:U:H3	1.75	0.84
41:12:68:ARG:NH1	41:12:123:GLU:OE1	2.09	0.84
49:K3:955:A:N6	49:K3:971:G:H21	1.75	0.84
2:e2:1563:A:C2	49:K3:1029:G:N2	2.44	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3697:U:H5''	2:e2:3698:G:H5'	1.59	0.84
49:K3:153:G:H21	67:b3:13:GLN:HG2	1.43	0.84
49:K3:39:A:N6	49:K3:515:G:H21	1.75	0.84
54:G5:131:VAL:HG23	54:G5:132:ARG:HG2	1.57	0.84
2:e2:507:G:N2	2:e2:651:C:O2	2.11	0.84
65:J5:115:GLU:HG2	65:J5:118:ARG:HH12	1.41	0.84
2:e2:100:C:H2'	2:e2:101:A:H8	1.41	0.84
49:K3:197:U:O2	49:K3:202:G:O6	1.95	0.84
2:e2:4888:U:H3	2:e2:4931:G:H1	1.26	0.83
49:K3:1361:G:O2'	49:K3:1380:C:N4	2.11	0.83
71:c3:137:LEU:HD13	71:c3:149:TYR:HB2	1.60	0.83
49:K3:44:U:H3	49:K3:482:G:H1'	1.43	0.83
24:F2:45:GLN:NE2	24:F2:51:GLN:OE1	2.11	0.83
49:K3:521:A:OP1	73:d3:45:ARG:NH1	2.10	0.83
49:K3:1407:U:H5''	68:B3:97:ARG:HH22	1.43	0.83
2:e2:106:A:H1'	2:e2:336:A:H8	1.43	0.83
2:e2:1268:G:H22	2:e2:2120:C:H41	1.22	0.83
33:S2:50:ARG:NH1	33:S2:140:SER:OG	2.11	0.83
61:W3:173:LYS:HB3	74:D3:7:GLU:HG2	1.58	0.83
2:e2:4197:G:N2	2:e2:4199:C:OP1	2.11	0.83
49:K3:63:U:OP1	67:b3:177:GLN:NE2	2.11	0.83
49:K3:1454:A:N6	49:K3:1469:A:N7	2.26	0.83
58:T3:73:GLN:NE2	58:T3:78:GLY:O	2.12	0.83
56:a5:46:ASP:OD2	60:V3:65:ARG:NH1	2.10	0.83
2:e2:1296:G:N3	2:e2:1297:U:N3	2.27	0.82
2:e2:1706:A:N7	2:e2:1833:G:N2	2.26	0.82
49:K3:1657:G:H1	49:K3:1667:U:H3	0.86	0.82
2:e2:1382:G:OP1	85:a7:66:TYR:OH	1.95	0.82
2:e2:4741:C:N4	2:e2:4959:U:N3	2.25	0.82
2:e2:4910:G:H4'	45:52:95:THR:HG22	1.60	0.82
49:K3:1745:A:H8	67:b3:66:GLY:HA3	1.44	0.82
49:K3:516:A:N7	49:K3:644:G:C6	2.46	0.82
54:G5:120:HIS:H	57:A3:118:GLU:HG2	1.45	0.82
13:u2:63:ARG:NH2	13:u2:95:ASP:OD2	2.12	0.82
24:F2:31:ASP:OD2	24:F2:38:LYS:NZ	2.11	0.82
55:a3:188:HIS:HA	63:Y3:224:SER:HA	1.62	0.82
2:e2:370:U:N3	2:e2:1637:A:C6	2.47	0.82
30:L2:76:MET:HE2	30:L2:85:PHE:HB3	1.62	0.82
49:K3:561:A:N3	73:d3:132:GLN:NE2	2.27	0.82
2:e2:1758:G:N1	2:e2:1774:C:O2	2.13	0.82
34:T2:289:LEU:HD11	40:02:109:ARG:HH22	1.45	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:V2:59:ARG:HB3	41:12:32:GLN:HB3	1.61	0.82
49:K3:1451:G:H2'	49:K3:1452:A:H2'	1.62	0.82
54:G5:34:LYS:HE2	54:G5:103:LEU:HD12	1.61	0.82
49:K3:1844:U:H2'	49:K3:1845:A:C8	2.14	0.81
61:W3:69:LEU:O	61:W3:72:ASP:O	1.97	0.81
2:e2:3946:G:N2	2:e2:4067:U:O2	2.13	0.81
66:N3:28:VAL:HB	66:N3:41:VAL:HG11	1.62	0.81
2:e2:1974:G:H21	2:e2:1976:C:H42	1.28	0.81
2:e2:4302:U:H4'	47:72:5:LYS:HG2	1.63	0.81
49:K3:63:U:O2'	49:K3:170:A:N3	2.12	0.81
63:Y3:74:GLN:NE2	63:Y3:80:PRO:O	2.14	0.81
2:e2:2122:C:O2'	2:e2:2123:G:N7	2.13	0.81
49:K3:141:A:N6	49:K3:177:G:C4	2.47	0.81
49:K3:1433:C:H2'	49:K3:1434:C:H4'	1.62	0.81
2:e2:2263:A:H5''	2:e2:2265:G:C8	2.16	0.81
2:e2:2317:C:OP1	14:v2:14:LYS:NZ	2.14	0.81
39:Y2:90:ARG:HA	57:A3:9:LYS:HZ3	1.44	0.81
2:e2:1178:G:H2'	2:e2:1179:U:H4'	1.60	0.81
2:e2:1826:G:H21	11:r2:50:ASN:HD21	1.27	0.81
49:K3:65:C:N3	67:b3:136:LYS:NZ	2.26	0.81
45:52:300:LYS:HB3	45:52:311:ASP:HB3	1.62	0.81
49:K3:1592:C:N4	49:K3:1593:C:N4	2.28	0.81
1:E1:6371:A:N6	1:E1:6384:A:C2	2.49	0.81
17:y2:44:SER:HG	17:y2:83:CYS:HG	1.03	0.81
2:e2:1332:C:H2'	2:e2:1333:A:H8	1.46	0.80
2:e2:1369:C:H3'	2:e2:1370:G:H5'	1.63	0.80
71:c3:83:TYR:HA	71:c3:91:VAL:HG22	1.61	0.80
2:e2:2666:U:OP2	43:32:124:TYR:OH	1.99	0.80
2:e2:3658:C:H2'	2:e2:3659:G:H8	1.46	0.80
10:q2:97:ALA:H	85:a7:168:VAL:HG12	1.47	0.80
81:I5:25:ILE:HB	81:I5:71:GLY:O	1.81	0.80
55:a3:38:LYS:HG2	55:a3:62:HIS:HB2	1.64	0.80
67:b3:63:MET:HA	67:b3:98:ARG:HB3	1.64	0.80
49:K3:955:A:H62	49:K3:971:G:H21	1.25	0.80
49:K3:1103:C:H2'	49:K3:1104:G:H8	1.46	0.80
60:V3:115:LYS:H	60:V3:118:GLN:HE21	1.29	0.80
2:e2:4759:C:OP1	15:w2:161:LYS:NZ	2.14	0.80
4:d2:113:G:H21	25:G2:72:ASP:H	1.27	0.80
18:92:5:ILE:HG12	18:92:8:GLN:HG2	1.64	0.80
49:K3:70:G:H21	49:K3:79:A:H62	1.28	0.80
2:e2:525:G:H1	2:e2:634:U:H3	1.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1594:C:O2	2:e2:1599:A:N6	2.15	0.80
2:e2:1758:G:H2'	2:e2:1759:G:C8	2.17	0.80
2:e2:1997:A:N6	29:K2:35:VAL:O	2.15	0.80
2:e2:2341:A:OP2	10:q2:4:ARG:NH2	2.14	0.80
2:e2:2443:G:OP2	2:e2:2516:G:N2	2.15	0.80
2:e2:3942:A:H2'	2:e2:3943:A:C8	2.17	0.80
54:G5:48:ALA:O	54:G5:66:ARG:NH2	2.14	0.80
2:e2:1517:G:N2	2:e2:1521:C:OP1	2.15	0.80
40:02:70:GLN:HA	40:02:73:VAL:HG12	1.63	0.80
49:K3:374:G:O6	49:K3:385:G:O6	1.98	0.80
72:C3:26:ASN:HA	72:C3:58:MET:HG2	1.64	0.80
76:E3:8:ARG:HH21	76:E3:48:ALA:HB2	1.47	0.80
49:K3:1485:U:H5''	63:Y3:151:LYS:HE3	1.62	0.79
2:e2:1188:C:H2'	2:e2:1189:G:C8	2.14	0.79
2:e2:1999:G:O2'	2:e2:2000:G:N7	2.14	0.79
2:e2:4630:G:H1	2:e2:4668:U:H3	1.30	0.79
28:J2:36:ASN:HB2	28:J2:40:TYR:HD1	1.46	0.79
76:E3:53:LYS:HE2	76:E3:59:LYS:HA	1.63	0.79
2:e2:2503:G:O6	18:92:70:LYS:NZ	2.16	0.79
49:K3:866:U:H2'	49:K3:867:G:C8	2.18	0.79
2:e2:507:G:N1	2:e2:651:C:N3	2.28	0.79
2:e2:752:G:H1	2:e2:911:U:H1'	1.47	0.79
2:e2:974:C:O2'	2:e2:2092:A:N6	2.15	0.79
5:p2:12:LEU:HB3	5:p2:16:ARG:HH22	1.47	0.79
58:T3:47:ALA:HB3	58:T3:102:VAL:O	1.83	0.79
2:e2:1468:C:OP1	10:q2:132:ARG:NH2	2.15	0.79
23:E2:99:CYS:HB3	23:E2:115:CYS:HB3	1.64	0.79
2:e2:2091:G:N2	2:e2:2092:A:O2'	2.15	0.79
49:K3:855:G:O2'	53:G3:71:ARG:NH1	2.16	0.79
33:S2:20:SER:O	33:S2:26:ARG:NH2	2.16	0.79
2:e2:152:U:OP2	41:12:49:ARG:NH2	2.14	0.79
2:e2:1075:G:N7	2:e2:1232:G:N1	2.30	0.79
2:e2:1823:G:O3'	47:72:35:LYS:NZ	2.16	0.79
44:42:8:ASP:HB2	44:42:10:LEU:HB2	1.65	0.79
72:C3:95:ILE:HG13	72:C3:114:LEU:HD21	1.65	0.79
2:e2:227:A:H62	2:e2:241:G:N2	1.80	0.78
49:K3:275:C:OP2	49:K3:277:C:N4	2.16	0.78
49:K3:933:G:H21	49:K3:1000:C:H2'	1.46	0.78
2:e2:2299:G:N7	12:t2:204:ARG:NH1	2.31	0.78
45:52:57:VAL:HG22	45:52:73:VAL:HG12	1.64	0.78
49:K3:192:C:H5''	71:c3:141:ARG:HD3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:a7:158:ARG:NH1	85:a7:160:VAL:O	2.16	0.78
2:e2:1970:C:OP2	2:e2:2002:G:N2	2.15	0.78
33:S2:79:THR:HG22	33:S2:99:LYS:HE3	1.64	0.78
44:42:148:VAL:HA	44:42:151:VAL:HG12	1.65	0.78
49:K3:516:A:C8	49:K3:644:G:O6	2.37	0.78
75:e3:73:GLN:HB3	75:e3:131:LYS:HD3	1.64	0.78
2:e2:1353:G:N1	2:e2:1503:A:O2'	2.15	0.78
2:e2:3667:C:OP2	18:92:234:LYS:NZ	2.14	0.78
2:e2:4301:U:OP2	47:72:87:LYS:NZ	2.16	0.78
2:e2:4761:G:OP2	15:w2:12:ARG:NH2	2.16	0.78
25:G2:126:THR:HG22	25:G2:128:ASP:H	1.48	0.78
49:K3:1866:A:N6	84:O3:85:ARG:O	2.16	0.78
55:a3:252:THR:OG1	55:a3:255:SER:O	2.02	0.78
21:C2:22:CYS:HB3	21:C2:37:CYS:SG	2.22	0.78
39:Y2:111:GLU:OE1	54:G5:108:ARG:NH2	2.16	0.78
49:K3:1293:A:N6	49:K3:1306:U:C2	2.50	0.78
79:P3:336:ARG:HH11	79:P3:363:VAL:HG13	1.47	0.78
49:K3:1615:U:OP2	57:A3:43:ARG:NH1	2.17	0.78
71:c3:4:SER:OG	71:c3:28:GLU:O	2.02	0.78
2:e2:1762:C:N4	2:e2:1767:A:OP2	2.17	0.78
2:e2:1836:G:OP2	47:72:129:LYS:NZ	2.17	0.78
2:e2:2664:G:OP1	43:32:110:ARG:NH1	2.17	0.78
49:K3:1164:G:H3'	49:K3:1165:G:H21	1.47	0.78
30:L2:80:CYS:SG	38:X2:144:ASN:ND2	2.57	0.78
44:42:133:LYS:HD2	44:42:158:GLN:HE22	1.49	0.78
71:c3:67:TRP:O	71:c3:71:CYS:HA	1.84	0.78
2:e2:979:C:OP2	32:R2:62:LYS:NZ	2.15	0.78
2:e2:1075:G:H1	2:e2:1235:G:H22	1.30	0.78
39:Y2:13:ARG:NH2	39:Y2:154:LYS:O	2.17	0.78
49:K3:371:A:N3	49:K3:394:G:N2	2.32	0.78
49:K3:558:G:H2'	49:K3:559:G:H8	1.48	0.78
49:K3:1602:U:O2'	54:G5:24:ARG:NH2	2.17	0.78
53:G3:58:LYS:HE3	53:G3:59:LYS:HZ2	1.49	0.78
77:H3:44:ARG:NH2	80:I3:66:ARG:O	2.16	0.78
35:U2:93:ARG:NH2	35:U2:114:ARG:O	2.17	0.78
44:42:92:LYS:NZ	44:42:123:ILE:O	2.15	0.78
49:K3:157:U:H3	49:K3:162:C:N4	1.82	0.78
49:K3:658:U:O2	58:T3:17:ARG:NH2	2.17	0.78
49:K3:1103:C:H2'	49:K3:1104:G:C8	2.19	0.78
49:K3:1293:A:N6	49:K3:1306:U:H3	1.81	0.78
2:e2:2000:G:H2'	2:e2:2001:A:H4'	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1419:C:HO2'	78:H5:4:VAL:N	1.81	0.77
72:C3:108:LEU:HD21	74:D3:83:PHE:HB2	1.66	0.77
2:e2:6:C:H5''	36:V2:197:LYS:HB3	1.66	0.77
2:e2:1759:G:N1	2:e2:1773:U:O2	2.17	0.77
59:U3:54:THR:HA	59:U3:162:PRO:HG2	1.64	0.77
71:c3:13:LYS:HG3	71:c3:14:THR:HG23	1.67	0.77
79:P3:337:ARG:O	79:P3:338:ILE:HG13	1.83	0.77
2:e2:3628:G:H2'	2:e2:3629:A:H8	1.48	0.77
4:d2:40:U:H6	39:Y2:75:ARG:HE	1.31	0.77
49:K3:112:U:H5''	49:K3:113:G:H5'	1.66	0.77
49:K3:1355:C:N3	49:K3:1356:G:N2	2.31	0.77
49:K3:1388:A:N6	63:Y3:160:SER:OG	2.18	0.77
52:Q3:148:ARG:NH1	52:Q3:153:CYS:SG	2.58	0.77
81:I5:41:ARG:HH21	81:I5:57:VAL:H	1.33	0.77
85:a7:121:ARG:O	85:a7:124:LEU:O	2.03	0.77
85:a7:121:ARG:O	85:a7:125:VAL:HA	1.83	0.77
2:e2:1103:C:N4	2:e2:1166:G:N3	2.32	0.77
59:U3:126:ASP:OD1	59:U3:165:ASN:ND2	2.17	0.77
60:V3:186:ASN:HA	60:V3:189:ILE:HD12	1.66	0.77
64:j3:87:MET:HE1	64:j3:123:LEU:HB2	1.66	0.77
1:E1:6284:G:C6	1:E1:6287:A:N1	2.53	0.77
12:t2:339:THR:OG1	12:t2:342:ARG:NH2	2.17	0.77
65:J5:108:ALA:O	65:J5:119:LYS:NZ	2.17	0.77
15:w2:61:ARG:NH2	15:w2:63:ASN:O	2.17	0.77
26:H2:118:GLN:NE2	26:H2:147:GLU:OE2	2.18	0.77
37:W2:119:ASN:OD1	37:W2:120:GLY:N	2.17	0.77
2:e2:3974:G:N2	2:e2:4051:C:OP2	2.17	0.77
2:e2:3982:C:H42	2:e2:4023:G:H22	1.30	0.77
12:t2:239:LYS:O	12:t2:248:ARG:NH1	2.17	0.77
10:q2:131:ARG:NH1	10:q2:135:GLU:OE2	2.18	0.77
49:K3:197:U:O2	49:K3:202:G:C6	2.36	0.77
49:K3:457:C:H42	49:K3:458:A:N6	1.80	0.77
49:K3:1144:A:H5'	49:K3:1355:C:H41	1.50	0.77
68:B3:69:GLU:OE1	68:B3:71:ARG:NH2	2.18	0.77
79:P3:307:LEU:O	79:P3:311:GLN:NE2	2.16	0.77
2:e2:1239:C:O2'	2:e2:1240:G:OP2	2.02	0.77
2:e2:280:G:N2	2:e2:306:A:OP2	2.17	0.77
2:e2:1326:A:OP2	2:e2:4445:U:O2'	2.02	0.77
2:e2:1646:A:O2'	21:C2:49:TRP:O	2.02	0.77
2:e2:1974:G:H1	2:e2:1982:A:H5'	1.49	0.77
2:e2:2100:C:H2'	2:e2:2101:G:H8	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1284:A:OP2	75:e3:105:GLY:N	2.18	0.77
49:K3:1622:U:H5''	54:G5:132:ARG:HD3	1.67	0.77
2:e2:4939:C:O2'	34:T2:159:ARG:NH1	2.16	0.76
18:92:107:MET:SD	18:92:111:THR:OG1	2.42	0.76
29:K2:190:GLN:HG3	29:K2:191:GLN:HG3	1.67	0.76
49:K3:934:G:O6	49:K3:1008:A:N1	2.17	0.76
61:W3:70:MET:HG3	61:W3:93:ILE:HG23	1.66	0.76
85:a7:61:CYS:SG	85:a7:71:ARG:NH1	2.58	0.76
2:e2:399:G:N2	26:H2:101:ASN:OD1	2.17	0.76
2:e2:963:G:O6	2:e2:2253:A:N6	2.17	0.76
2:e2:3759:A:H2	2:e2:3765:G:H21	1.33	0.76
49:K3:113:G:H1	53:G3:38:LYS:HD2	1.50	0.76
14:v2:78:LEU:O	28:J2:20:ARG:NH1	2.18	0.76
25:G2:135:ILE:HD13	25:G2:138:GLN:HE21	1.50	0.76
44:42:13:ALA:HB3	44:42:16:GLU:HB2	1.67	0.76
49:K3:1012:A:O2'	49:K3:1129:G:N2	2.18	0.76
57:A3:83:MET:HE3	57:A3:116:LEU:HD11	1.65	0.76
74:D3:45:ARG:NH1	74:D3:46:PHE:O	2.18	0.76
49:K3:457:C:N3	49:K3:458:A:N6	2.33	0.76
2:e2:4138:C:H2'	2:e2:4139:G:H8	1.50	0.76
43:32:109:TYR:OH	43:32:139:MET:SD	2.43	0.76
55:a3:5:MET:HB3	55:a3:310:TRP:HB3	1.67	0.76
61:W3:178:HIS:NE2	61:W3:198:ALA:O	2.17	0.76
49:K3:1608:U:O4	49:K3:1631:U:N3	2.17	0.76
55:a3:17:TRP:HB2	55:a3:36:ARG:HG3	1.65	0.76
67:b3:93:LYS:NZ	67:b3:94:ARG:O	2.19	0.76
2:e2:2527:A:OP1	43:32:9:ARG:NH2	2.18	0.76
2:e2:2590:G:H22	2:e2:2754:G:H1'	1.50	0.76
45:52:171:LEU:HD12	45:52:172:PRO:HD2	1.68	0.76
49:K3:1289:U:H5''	52:Q3:126:LYS:HE2	1.67	0.76
57:A3:16:THR:HG22	57:A3:21:ASP:HA	1.68	0.76
2:e2:462:G:H2'	2:e2:463:A:C8	2.21	0.76
9:o2:13:LYS:O	9:o2:17:ARG:NH1	2.19	0.76
37:W2:28:ASP:HA	37:W2:63:LYS:HE3	1.67	0.76
37:W2:70:LYS:HE3	37:W2:77:GLU:HG3	1.68	0.76
49:K3:58:C:N4	49:K3:62:G:O6	2.18	0.76
2:e2:279:A:N7	41:12:12:ARG:NH1	2.34	0.76
2:e2:1541:C:O2	2:e2:2448:G:N2	2.19	0.76
2:e2:4039:G:OP2	2:e2:4039:G:N2	2.19	0.76
49:K3:1452:A:N1	49:K3:1474:A:O2'	2.19	0.76
49:K3:1461:G:N2	49:K3:1465:A:C6	2.54	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E1:6373:C:O2'	49:K3:1524:G:O3'	2.04	0.75
2:e2:933:G:H2'	2:e2:940:C:H41	1.50	0.75
2:e2:2377:C:H42	2:e2:2381:A:H62	1.32	0.75
9:o2:115:ARG:HD2	9:o2:119:LEU:HD13	1.68	0.75
49:K3:1737:G:O6	49:K3:1797:U:O4	2.04	0.75
52:Q3:136:LYS:HG3	52:Q3:149:LEU:HD13	1.68	0.75
55:a3:207:CYS:O	55:a3:218:LEU:HA	1.85	0.75
2:e2:450:G:N2	2:e2:1297:U:O2	2.18	0.75
11:r2:21:ILE:O	11:r2:22:LYS:NZ	2.17	0.75
49:K3:1073:U:H2'	49:K3:1074:C:H6	1.51	0.75
61:W3:183:LYS:HG3	61:W3:196:ILE:HG12	1.67	0.75
2:e2:15:A:O2'	8:m2:59:LYS:NZ	2.18	0.75
2:e2:717:U:N3	2:e2:952:G:C6	2.54	0.75
2:e2:1169:G:H2'	2:e2:1170:G:H8	1.52	0.75
2:e2:1502:G:N1	33:S2:89:ASP:OD1	2.20	0.75
2:e2:2445:C:N4	2:e2:2446:C:N4	2.35	0.75
5:p2:17:ARG:NH2	5:p2:38:CYS:SG	2.58	0.75
79:P3:341:LYS:HE3	79:P3:343:THR:HB	1.67	0.75
2:e2:989:U:O2	2:e2:1064:G:O6	2.04	0.75
2:e2:1398:A:N6	2:e2:1420:A:OP2	2.18	0.75
2:e2:3848:U:H2'	2:e2:3849:A:H8	1.52	0.75
2:e2:4689:U:OP1	37:W2:195:LYS:NZ	2.18	0.75
49:K3:537:C:O2	49:K3:548:C:N4	2.15	0.75
49:K3:913:A:OP1	79:P3:358:ARG:NH2	2.19	0.75
2:e2:1064:G:H3'	2:e2:1065:G:H8	1.50	0.75
2:e2:4853:C:O5'	2:e2:4857:A:N6	2.19	0.75
15:w2:118:MET:HG3	46:62:169:THR:HG22	1.66	0.75
36:V2:94:GLN:HA	36:V2:97:LYS:HZ2	1.51	0.75
49:K3:103:A:N6	49:K3:356:C:O5'	2.20	0.75
49:K3:372:U:OP2	71:c3:10:LYS:NZ	2.20	0.75
49:K3:934:G:H1	49:K3:1008:A:H2	1.34	0.75
49:K3:1676:U:OP1	66:N3:71:ARG:NH1	2.18	0.75
71:c3:54:LYS:HD3	71:c3:181:GLN:HB2	1.69	0.75
2:e2:480:C:H2'	2:e2:481:G:H8	1.51	0.75
49:K3:959:G:OP2	56:a5:38:ASN:ND2	2.20	0.75
49:K3:1199:A:H2'	49:K3:1200:A:H8	1.50	0.75
84:O3:87:ARG:NE	84:O3:91:ALA:O	2.18	0.75
25:G2:253:TYR:OH	25:G2:256:LYS:NZ	2.20	0.75
49:K3:142:C:H2'	67:b3:180:VAL:HG13	1.69	0.75
49:K3:349:A:H2'	49:K3:350:C:C6	2.22	0.75
49:K3:1804:U:H2'	49:K3:1805:G:H8	1.52	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1508:A:H5''	10:q2:2:PRO:HD2	1.67	0.75
5:p2:38:CYS:SG	5:p2:39:SER:N	2.59	0.75
49:K3:526:A:N1	49:K3:559:G:O6	2.20	0.75
49:K3:1742:C:H2'	49:K3:1743:G:C8	2.22	0.75
2:e2:1267:C:N4	2:e2:2119:G:O2'	2.20	0.75
2:e2:1342:A:H5'	12:t2:109:ARG:HA	1.69	0.75
2:e2:3978:C:H5	2:e2:4031:U:O4	1.70	0.75
43:32:176:ARG:NH1	49:K3:908:A:O2'	2.20	0.75
49:K3:917:U:H1'	79:P3:356:ARG:HE	1.51	0.75
49:K3:1808:U:H2'	49:K3:1809:A:H8	1.51	0.75
64:j3:42:LEU:HD21	64:j3:47:PHE:HB2	1.69	0.75
2:e2:4767:C:OP1	15:w2:168:TYR:OH	2.04	0.74
35:U2:74:ALA:HB2	47:72:140:PHE:HE2	1.52	0.74
55:a3:195:LEU:HA	55:a3:211:GLY:HA3	1.69	0.74
58:T3:71:ARG:NH1	58:T3:82:THR:OG1	2.20	0.74
71:c3:8:TRP:HB2	71:c3:18:ARG:HG2	1.69	0.74
27:I2:57:CYS:SG	27:I2:58:GLY:N	2.59	0.74
49:K3:231:A:H2'	49:K3:232:A:H8	1.51	0.74
49:K3:1033:G:H1	49:K3:1080:A:HO2'	1.33	0.74
51:13:51:ASN:ND2	51:13:77:ASN:OD1	2.20	0.74
72:C3:41:ILE:HD11	72:C3:47:ARG:HB2	1.69	0.74
2:e2:951:G:H2'	2:e2:952:G:H8	1.50	0.74
49:K3:1354:G:N2	49:K3:1357:A:OP2	2.20	0.74
2:e2:2626:U:O2	48:82:89:LYS:NZ	2.20	0.74
18:92:206:PRO:HG3	18:92:213:GLY:HA3	1.68	0.74
26:H2:64:ASN:O	26:H2:80:GLN:NE2	2.20	0.74
66:N3:39:ILE:HG23	66:N3:68:ILE:HG21	1.69	0.74
79:P3:276:ALA:HA	79:P3:279:ARG:HB2	1.69	0.74
2:e2:978:G:OP1	32:R2:43:ASN:ND2	2.19	0.74
2:e2:3690:U:OP2	18:92:200:ARG:NH1	2.21	0.74
2:e2:3754:G:O6	2:e2:3770:U:O2	2.06	0.74
35:U2:93:ARG:HB2	35:U2:113:LEU:HD13	1.69	0.74
49:K3:383:G:O2'	53:G3:133:PRO:O	2.04	0.74
49:K3:1180:C:O2'	49:K3:1181:A:O5'	2.04	0.74
49:K3:1199:A:H2'	49:K3:1200:A:C8	2.22	0.74
58:T3:110:HIS:CD2	58:T3:111:ALA:H	2.06	0.74
68:B3:58:ILE:HG23	68:B3:94:ILE:HD12	1.70	0.74
28:J2:69:GLY:O	28:J2:71:ARG:NH2	2.20	0.74
39:Y2:119:TYR:HD1	54:G5:108:ARG:HH11	1.36	0.74
49:K3:158:A:N7	67:b3:59:GLN:NE2	2.34	0.74
69:f3:23:SER:HG	69:f3:27:CYS:HG	1.27	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:42:116:LEU:HD23	44:42:119:GLN:HE21	1.52	0.74
45:52:76:VAL:HG21	45:52:332:MET:HE2	1.68	0.74
49:K3:10:G:H1'	61:W3:115:GLN:HE21	1.51	0.74
49:K3:1214:A:N6	49:K3:1682:C:O2	2.19	0.74
50:s3:10:GLY:HA2	50:s3:13:ARG:HD3	1.69	0.74
71:c3:179:PRO:HA	71:c3:183:GLY:H	1.53	0.74
81:I5:44:LEU:HD21	81:I5:75:ILE:HD11	1.67	0.74
2:e2:47:A:OP1	85:a7:16:LYS:NZ	2.21	0.74
2:e2:1398:A:H61	2:e2:1419:G:H2'	1.52	0.74
2:e2:1402:C:O2	2:e2:1415:G:N1	2.21	0.74
2:e2:2501:C:OP2	8:m2:39:LYS:NZ	2.20	0.74
2:e2:2578:G:N7	42:22:17:ARG:NH1	2.35	0.74
2:e2:4729:A:N7	2:e2:5068:G:N1	2.35	0.74
10:q2:110:LYS:NZ	10:q2:130:SER:OG	2.21	0.74
49:K3:822:U:O2	49:K3:826:A:N7	2.20	0.74
49:K3:1337:C:H2'	49:K3:1338:G:H8	1.53	0.74
54:G5:26:ILE:HA	54:G5:56:ALA:HB2	1.70	0.74
2:e2:2447:U:O2	2:e2:2514:G:N2	2.19	0.74
2:e2:3948:C:H2'	2:e2:3949:A:H8	1.51	0.74
2:e2:4238:G:H2'	2:e2:4239:A:H8	1.52	0.74
36:V2:117:ARG:HA	36:V2:120:LYS:HD2	1.67	0.74
49:K3:1389:C:H1'	63:Y3:163:PRO:HD3	1.70	0.74
2:e2:72:C:N3	85:a7:60:ARG:NH2	2.35	0.74
2:e2:188:G:N2	2:e2:190:G:O6	2.21	0.74
2:e2:1282:G:N7	34:T2:131:HIS:NE2	2.35	0.74
9:o2:50:ARG:NH2	9:o2:112:ASP:OD2	2.21	0.74
35:U2:49:ILE:HD12	35:U2:185:CYS:HB3	1.70	0.74
72:C3:3:ARG:HH22	72:C3:49:LYS:HZ2	1.34	0.74
2:e2:752:G:C6	2:e2:911:U:C2	2.75	0.73
2:e2:3687:A:OP2	18:92:198:ARG:NH2	2.20	0.73
2:e2:4747:C:H5''	16:x2:54:LYS:HE3	1.70	0.73
36:V2:59:ARG:HD2	41:12:32:GLN:HG2	1.70	0.73
45:52:185:VAL:O	45:52:193:LYS:NZ	2.20	0.73
49:K3:1365:G:H2'	49:K3:1366:G:H8	1.50	0.73
49:K3:1548:G:N2	49:K3:1657:G:OP1	2.19	0.73
72:C3:93:GLN:HG3	72:C3:96:ILE:HD11	1.69	0.73
77:H3:20:SER:OG	77:H3:27:ARG:NH2	2.21	0.73
78:H5:40:ALA:HA	78:H5:95:GLY:HA3	1.69	0.73
2:e2:1577:G:OP1	27:I2:17:ARG:NH2	2.20	0.73
2:e2:2105:G:OP2	2:e2:2105:G:N2	2.19	0.73
2:e2:2114:G:N1	2:e2:2119:G:OP2	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4078:C:O2'	2:e2:4172:A:N6	2.21	0.73
14:v2:4:LEU:HB2	14:v2:121:ARG:HD3	1.70	0.73
37:W2:23:ILE:HD13	37:W2:29:ILE:HD13	1.69	0.73
82:L3:23:ARG:NH2	82:L3:29:ASN:OD1	2.22	0.73
2:e2:308:G:O2'	20:B2:31:GLY:O	2.05	0.73
2:e2:735:G:N2	2:e2:930:G:OP2	2.21	0.73
2:e2:2623:A:OP1	48:82:101:ARG:NH1	2.20	0.73
25:G2:19:LYS:HG2	25:G2:23:ARG:HH11	1.51	0.73
59:U3:52:LYS:HB2	72:C3:109:LEU:HD21	1.68	0.73
70:F3:69:ARG:NH2	82:L3:84:HIS:OXT	2.22	0.73
28:J2:72:LYS:NZ	28:J2:75:THR:OG1	2.21	0.73
70:F3:105:ARG:HA	70:F3:110:VAL:H	1.53	0.73
2:e2:1194:G:N2	2:e2:1195:G:N3	2.36	0.73
45:52:39:LYS:HD2	45:52:40:PRO:HD2	1.71	0.73
45:52:276:HIS:O	45:52:277:ARG:NH1	2.21	0.73
49:K3:1706:G:HO2'	49:K3:1850:A:HO2'	1.34	0.73
49:K3:229:A:O2'	49:K3:230:A:OP1	2.07	0.73
49:K3:886:A:N6	49:K3:900:C:O2	2.21	0.73
49:K3:1770:G:OP2	49:K3:1773:C:N4	2.22	0.73
63:Y3:114:ALA:HB3	63:Y3:117:ARG:HG2	1.69	0.73
71:c3:174:CYS:HB2	71:c3:190:LEU:HD11	1.70	0.73
2:e2:1174:G:H1	2:e2:1187:G:H22	1.34	0.73
2:e2:1975:G:O2'	31:M2:136:ALA:O	2.05	0.73
2:e2:2018:C:H1'	29:K2:57:LYS:HB2	1.70	0.73
29:K2:98:ILE:HG22	29:K2:189:ILE:HG13	1.69	0.73
31:M2:131:GLU:HG2	31:M2:153:ASP:HA	1.71	0.73
49:K3:1096:G:H5''	65:J5:20:ARG:HH12	1.54	0.73
55:a3:248:LEU:HB2	55:a3:261:LEU:HD11	1.71	0.73
57:A3:62:LYS:HA	57:A3:65:LYS:HE3	1.69	0.73
2:e2:413:G:OP2	22:D2:36:ARG:NH2	2.21	0.73
2:e2:979:C:H2'	2:e2:980:U:H6	1.51	0.73
2:e2:1111:U:O4	2:e2:1162:G:O6	2.06	0.73
3:h2:80:A:H5''	3:h2:81:C:H5'	1.71	0.73
41:12:116:LEU:O	41:12:117:ASN:ND2	2.22	0.73
45:52:322:HIS:O	45:52:342:LYS:NZ	2.20	0.73
49:K3:116:U:O2'	71:c3:49:ARG:NH1	2.22	0.73
49:K3:684:G:N2	49:K3:920:A:O4'	2.21	0.73
49:K3:1014:G:H21	82:L3:51:GLN:HE22	1.35	0.73
49:K3:1036:A:H5'	49:K3:1856:C:H1'	1.70	0.73
80:I3:40:ILE:HD11	80:I3:53:PRO:HD3	1.69	0.73
2:e2:665:C:H3'	2:e2:666:G:N2	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:747:A:O4'	2:e2:919:C:N4	2.22	0.73
44:42:58:THR:HG23	44:42:63:PHE:HB2	1.69	0.73
26:H2:119:VAL:HG12	26:H2:146:ILE:HG22	1.71	0.73
49:K3:1143:A:O3'	49:K3:1355:C:N4	2.22	0.73
2:e2:1957:A:O2'	2:e2:2024:A:N1	2.21	0.72
2:e2:4991:U:H2'	2:e2:4992:G:H8	1.54	0.72
49:K3:736:C:H2'	49:K3:737:G:C8	2.24	0.72
64:j3:122:LYS:HE3	64:j3:164:LEU:HD23	1.70	0.72
71:c3:65:PHE:O	71:c3:109:TYR:OH	2.06	0.72
78:H5:9:VAL:HG12	78:H5:139:ALA:HB2	1.71	0.72
2:e2:374:G:OP2	21:C2:56:ARG:NH1	2.22	0.72
2:e2:1974:G:H21	2:e2:1976:C:N4	1.86	0.72
2:e2:1998:A:N1	29:K2:40:MET:HG2	2.04	0.72
4:d2:38:U:O2	4:d2:42:A:N6	2.22	0.72
12:t2:59:GLY:HA2	12:t2:100:ARG:HD3	1.71	0.72
46:62:159:LEU:H	46:62:161:ARG:HH12	1.37	0.72
49:K3:65:C:N4	67:b3:135:PRO:O	2.22	0.72
49:K3:619:A:O2'	49:K3:622:C:N4	2.22	0.72
55:a3:214:GLY:HA2	55:a3:236:ILE:HG22	1.71	0.72
66:N3:14:THR:N	68:B3:140:GLN:O	2.22	0.72
71:c3:80:ASP:OD1	71:c3:81:VAL:N	2.20	0.72
2:e2:283:G:H1'	20:B2:82:ARG:HH12	1.55	0.72
2:e2:730:G:O6	2:e2:939:G:N2	2.18	0.72
2:e2:4195:G:O2'	2:e2:4442:U:OP1	2.07	0.72
2:e2:4475:G:N7	23:E2:125:LYS:NZ	2.36	0.72
25:G2:287:PHE:HD2	25:G2:291:GLN:HE21	1.36	0.72
58:T3:104:GLY:O	58:T3:121:LYS:NZ	2.23	0.72
63:Y3:177:LEU:HB2	63:Y3:180:GLY:O	1.89	0.72
2:e2:1441:C:N3	2:e2:2103:G:N2	2.37	0.72
2:e2:3795:A:H2'	2:e2:3796:U:H6	1.54	0.72
2:e2:3977:C:OP2	44:42:25:ARG:NE	2.22	0.72
2:e2:4060:U:O4	2:e2:4062:A:N6	2.23	0.72
49:K3:75:G:H2'	67:b3:155:GLN:HG2	1.70	0.72
49:K3:1453:C:OP1	72:C3:48:ASN:ND2	2.22	0.72
80:I3:68:THR:HG21	80:I3:72:GLU:HB3	1.70	0.72
82:L3:56:CYS:HB2	82:L3:63:LEU:HB2	1.72	0.72
2:e2:1424:G:O2'	11:r2:28:ARG:NH1	2.22	0.72
2:e2:1458:C:OP1	33:S2:69:LYS:NZ	2.19	0.72
2:e2:4978:G:O2'	2:e2:4982:A:N6	2.22	0.72
3:h2:60:G:OP1	8:m2:68:ARG:NH2	2.22	0.72
25:G2:134:SER:HA	25:G2:140:GLY:HA3	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:845:G:H5''	64:j3:108:ARG:HH21	1.55	0.72
49:K3:1192:U:OP2	58:T3:119:ARG:NH2	2.22	0.72
78:H5:104:LEU:HD13	78:H5:121:ARG:HD3	1.69	0.72
8:m2:135:LYS:NZ	8:m2:137:TYR:OH	2.22	0.72
41:12:37:HIS:HE1	41:12:63:ARG:HH21	1.35	0.72
49:K3:1241:A:H2	49:K3:1516:G:H21	1.36	0.72
49:K3:1644:C:OP1	68:B3:166:ARG:NH1	2.22	0.72
61:W3:214:LEU:HD22	61:W3:219:ILE:HD12	1.72	0.72
70:F3:120:LYS:HG2	70:F3:123:ARG:HG3	1.71	0.72
82:L3:34:ASP:HA	82:L3:45:THR:HG22	1.71	0.72
2:e2:1407:C:H3'	2:e2:1409:C:H5	1.54	0.72
49:K3:677:G:H21	49:K3:1028:A:H62	0.77	0.72
49:K3:1705:C:H1'	49:K3:1831:A:N1	2.05	0.72
2:e2:981:C:N3	2:e2:1274:A:N6	2.38	0.72
2:e2:1423:U:O2	11:r2:29:TYR:OH	2.06	0.72
2:e2:4011:G:H2'	2:e2:4012:G:H8	1.55	0.72
49:K3:444:G:O2'	49:K3:446:G:O6	2.08	0.72
49:K3:804:U:O4	49:K3:859:G:O6	2.08	0.72
49:K3:1234:C:H1'	68:B3:172:ARG:HH12	1.55	0.72
49:K3:1251:A:H61	68:B3:172:ARG:HE	1.35	0.72
49:K3:1279:C:N4	49:K3:1280:G:O6	2.23	0.72
49:K3:1753:C:N4	49:K3:1754:G:O6	2.23	0.72
79:P3:318:VAL:HG23	79:P3:319:ARG:HD3	1.70	0.72
79:P3:322:GLU:O	79:P3:326:SER:OG	2.06	0.72
2:e2:3658:C:OP1	18:92:242:ARG:NH1	2.23	0.72
2:e2:4741:C:H42	2:e2:4959:U:H3	1.33	0.72
16:x2:41:PHE:O	16:x2:109:ARG:NH2	2.22	0.72
44:42:22:GLN:NE2	44:42:176:ASP:OD1	2.23	0.72
49:K3:1203:G:H21	49:K3:1699:A:H1'	1.54	0.72
60:V3:50:THR:OG1	60:V3:56:LYS:NZ	2.22	0.72
85:a7:125:VAL:HG11	85:a7:140:SER:HA	1.72	0.72
2:e2:1960:G:N2	2:e2:2023:G:O2'	2.18	0.71
2:e2:3892:U:O2'	26:H2:80:GLN:OE1	2.07	0.71
2:e2:4274:A:H2'	2:e2:4275:G:H8	1.53	0.71
41:12:22:LEU:O	41:12:26:ARG:NH2	2.22	0.71
48:82:64:GLU:HB3	48:82:71:THR:O	1.88	0.71
49:K3:1286:G:OP1	75:e3:36:ARG:NH1	2.22	0.71
54:G5:130:ARG:NH2	54:G5:140:GLY:O	2.21	0.71
65:J5:55:ASP:OD2	65:J5:60:LYS:NZ	2.14	0.71
2:e2:227:A:N6	2:e2:241:G:H21	1.88	0.71
2:e2:1083:U:N3	2:e2:1217:G:N1	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1790:U:OP2	47:72:13:TYR:OH	2.07	0.71
49:K3:944:A:N6	49:K3:982:G:N1	2.38	0.71
73:d3:120:ALA:HB1	73:d3:125:HIS:CG	2.24	0.71
2:e2:987:C:OP2	2:e2:1050:C:N4	2.22	0.71
49:K3:558:G:H2'	49:K3:559:G:C8	2.24	0.71
60:V3:217:MET:HE3	60:V3:220:LYS:HE3	1.72	0.71
2:e2:676:C:OP1	28:J2:95:HIS:ND1	2.20	0.71
2:e2:2077:C:H5''	14:v2:63:ASN:HA	1.72	0.71
2:e2:4873:G:OP2	40:02:94:LYS:NZ	2.24	0.71
4:d2:63:C:H41	38:X2:210:ARG:HG3	1.55	0.71
30:L2:18:PRO:HG2	30:L2:20:SER:HB3	1.72	0.71
42:22:5:MET:O	42:22:28:ASN:ND2	2.23	0.71
49:K3:1270:G:H5''	52:Q3:121:LYS:HD3	1.72	0.71
49:K3:1324:G:N1	49:K3:1504:U:N3	2.37	0.71
49:K3:1402:A:P	80:I3:52:GLY:H	2.12	0.71
49:K3:1798:C:H1'	71:c3:2:GLY:HA3	1.73	0.71
54:G5:44:VAL:HG11	54:G5:71:MET:HG2	1.70	0.71
55:a3:280:LYS:HB3	72:C3:59:LYS:HG3	1.71	0.71
66:N3:102:LEU:HD11	83:M3:100:VAL:HG11	1.72	0.71
2:e2:288:G:H5'	24:F2:47:GLY:HA2	1.71	0.71
2:e2:1468:C:H5''	10:q2:132:ARG:HH12	1.55	0.71
29:K2:18:ILE:HB	29:K2:66:ARG:CZ	2.20	0.71
2:e2:1780:A:N3	38:X2:198:LYS:NZ	2.36	0.71
2:e2:2130:C:H42	2:e2:2243:C:H3'	1.56	0.71
58:T3:39:ASN:ND2	58:T3:41:PHE:O	2.15	0.71
71:c3:76:THR:HG22	71:c3:108:PRO:HG2	1.73	0.71
83:M3:43:LYS:HG3	83:M3:45:ASN:H	1.56	0.71
25:G2:83:LEU:HB3	25:G2:88:VAL:HB	1.71	0.71
29:K2:175:LEU:O	29:K2:179:ASN:ND2	2.24	0.71
65:J5:57:ARG:NH2	70:F3:66:LEU:O	2.23	0.71
2:e2:2001:A:N6	31:M2:136:ALA:O	2.24	0.71
2:e2:3753:G:H22	2:e2:3771:C:H5	1.38	0.71
2:e2:3875:G:N1	2:e2:3879:G:OP1	2.24	0.71
49:K3:1384:C:H2'	49:K3:1385:G:H8	1.55	0.71
49:K3:1605:G:N2	49:K3:1634:A:C5	2.57	0.71
54:G5:117:ILE:HD11	57:A3:111:MET:HG2	1.73	0.71
64:j3:173:ILE:HG23	64:j3:230:LYS:HB2	1.70	0.71
68:B3:137:ILE:HA	68:B3:140:GLN:HB2	1.71	0.71
71:c3:196:GLU:O	71:c3:200:ARG:HB2	1.91	0.71
2:e2:950:G:H2'	2:e2:951:G:C8	2.25	0.71
2:e2:1636:U:H5''	2:e2:1637:A:H5'	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:L2:12:CYS:HA	30:L2:59:GLN:HE21	1.54	0.71
44:42:67:VAL:HG11	44:42:84:HIS:HA	1.71	0.71
49:K3:160:U:O2'	49:K3:162:C:OP2	2.08	0.71
49:K3:1676:U:H2'	49:K3:1677:U:C2	2.26	0.71
49:K3:1716:C:H2'	49:K3:1717:C:H6	1.55	0.71
59:U3:201:LEU:O	59:U3:205:ARG:NH2	2.24	0.71
70:F3:160:ASP:HA	70:F3:163:PHE:HD2	1.55	0.71
79:P3:311:GLN:HA	79:P3:314:GLN:HB3	1.71	0.71
2:e2:1888:U:H5	2:e2:1889:G:C6	2.09	0.71
2:e2:2607:C:H5''	43:32:96:MET:HE1	1.71	0.71
2:e2:4693:C:O2'	2:e2:4695:C:N4	2.24	0.71
14:v2:99:ILE:HD12	14:v2:108:ARG:HE	1.56	0.71
29:K2:55:MET:SD	29:K2:56:GLY:N	2.64	0.71
49:K3:944:A:H1'	56:a5:136:PRO:HB3	1.72	0.71
49:K3:1122:A:H4'	60:V3:205:TYR:CD2	2.26	0.71
49:K3:1221:G:H2'	49:K3:1222:G:C8	2.26	0.71
49:K3:1743:G:H21	49:K3:1791:A:H62	0.73	0.71
64:j3:211:LYS:HZ3	64:j3:217:SER:HG	1.39	0.71
79:P3:268:LEU:HD11	79:P3:321:LEU:HD13	1.73	0.71
42:22:52:LYS:O	42:22:65:ARG:NE	2.23	0.70
47:72:68:THR:OG1	47:72:71:ALA:O	2.09	0.70
49:K3:836:G:N2	49:K3:838:G:OP2	2.24	0.70
49:K3:1545:A:N7	49:K3:1586:U:H2'	2.05	0.70
70:F3:179:TYR:HB3	70:F3:185:LEU:HD13	1.73	0.70
2:e2:930:G:O2'	2:e2:931:C:OP2	2.09	0.70
2:e2:2444:U:HO2'	3:h2:112:G:HO2'	1.35	0.70
2:e2:4038:C:OP2	2:e2:4050:A:O2'	2.09	0.70
12:t2:109:ARG:O	41:12:204:ARG:NH2	2.23	0.70
32:R2:40:CYS:SG	32:R2:42:ARG:NH2	2.63	0.70
49:K3:1714:U:H2'	49:K3:1715:A:C8	2.26	0.70
2:e2:1708:G:H2'	2:e2:1709:C:C6	2.26	0.70
2:e2:1894:G:OP1	35:U2:95:ARG:NH2	2.24	0.70
2:e2:3690:U:O2'	2:e2:3817:A:N3	2.24	0.70
2:e2:4563:U:H2'	2:e2:4564:A:H8	1.56	0.70
49:K3:1023:A:OP2	70:F3:174:ARG:NH1	2.24	0.70
49:K3:1461:G:C2	49:K3:1465:A:N6	2.60	0.70
79:P3:392:ILE:HB	79:P3:423:VAL:HG12	1.71	0.70
2:e2:1359:G:H2'	2:e2:1360:G:C8	2.25	0.70
2:e2:4419:U:OP1	2:e2:4475:G:N2	2.23	0.70
49:K3:1346:U:H5'	61:W3:121:ARG:HH22	1.55	0.70
49:K3:1865:C:H5'	49:K3:1866:A:H2	1.54	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:V3:127:VAL:O	60:V3:134:LEU:HA	1.92	0.70
68:B3:52:LYS:HB2	68:B3:93:ASP:HB3	1.72	0.70
81:I5:9:THR:HB	81:I5:23:MET:HG3	1.71	0.70
81:I5:37:LYS:HG3	81:I5:38:THR:HG23	1.73	0.70
2:e2:183:C:O2'	2:e2:188:G:OP2	2.07	0.70
2:e2:944:A:N6	35:U2:187:GLU:OE2	2.22	0.70
2:e2:1967:G:H3'	2:e2:1968:G:H8	1.57	0.70
2:e2:1969:A:H5''	2:e2:1999:G:H8	1.55	0.70
2:e2:2044:G:C2	15:w2:62:MET:HE1	2.27	0.70
2:e2:2755:A:OP2	42:22:51:ARG:NH2	2.24	0.70
2:e2:3795:A:H2'	2:e2:3796:U:C6	2.27	0.70
2:e2:3969:G:N1	2:e2:4049:U:OP2	2.22	0.70
2:e2:4542:U:O2	18:92:221:LYS:NZ	2.23	0.70
12:t2:67:TRP:HE3	12:t2:73:VAL:HG11	1.56	0.70
34:T2:95:VAL:O	34:T2:97:LYS:NZ	2.24	0.70
49:K3:294:U:OP1	53:G3:36:TYR:OH	2.09	0.70
49:K3:1050:A:OP1	49:K3:1846:G:N2	2.23	0.70
49:K3:1564:C:OP2	78:H5:105:GLN:NE2	2.24	0.70
70:F3:87:ILE:HD11	70:F3:104:LEU:HD22	1.73	0.70
73:d3:149:VAL:HG13	73:d3:153:SER:HB2	1.74	0.70
2:e2:143:C:N3	36:V2:112:GLN:NE2	2.39	0.70
2:e2:1941:A:H2'	2:e2:1942:A:H8	1.57	0.70
2:e2:2058:C:O2	46:62:118:ARG:NH1	2.25	0.70
9:o2:100:HIS:ND1	9:o2:101:PRO:O	2.17	0.70
16:x2:21:GLN:NE2	16:x2:23:GLU:OE1	2.23	0.70
49:K3:1538:C:N4	49:K3:1595:U:N3	2.39	0.70
1:E1:6293:U:O2'	1:E1:6315:C:O2	2.07	0.70
2:e2:469:C:OP2	2:e2:684:G:N1	2.17	0.70
2:e2:914:U:H2'	2:e2:915:A:H8	1.56	0.70
2:e2:1318:C:OP2	10:q2:21:ARG:NH2	2.24	0.70
2:e2:1382:G:H2'	2:e2:1383:G:H8	1.56	0.70
2:e2:2444:U:O2'	3:h2:112:G:O2'	2.08	0.70
37:W2:182:ASP:OD2	37:W2:185:LYS:N	2.24	0.70
49:K3:331:C:H2'	49:K3:332:G:H8	1.57	0.70
49:K3:1607:A:N6	49:K3:1632:G:O4'	2.24	0.70
78:H5:114:GLU:O	78:H5:122:LYS:N	2.24	0.70
2:e2:1563:A:N1	49:K3:1029:G:N3	2.40	0.70
2:e2:2112:G:H22	2:e2:2119:G:H2'	1.57	0.70
2:e2:2120:C:H2'	2:e2:2121:G:C8	2.27	0.70
2:e2:4058:U:O2'	2:e2:4059:C:O2	2.09	0.70
2:e2:4361:U:H2'	2:e2:4362:A:H8	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:A2:115:PRO:HB2	85:a7:129:ARG:HH22	1.56	0.70
35:U2:161:ILE:HD12	35:U2:166:ILE:HD11	1.72	0.70
43:32:167:LYS:HE3	49:K3:871:U:H2'	1.74	0.70
49:K3:1112:U:O2	49:K3:1121:G:O6	2.10	0.70
49:K3:1499:U:H5''	63:Y3:176:LEU:HD12	1.74	0.70
63:Y3:64:ARG:HE	76:E3:95:ARG:HH12	1.39	0.70
64:j3:247:THR:HG22	64:j3:249:ALA:H	1.56	0.70
72:C3:109:LEU:HB3	72:C3:111:PHE:HD2	1.57	0.70
2:e2:1543:G:OP1	2:e2:2514:G:O2'	2.09	0.70
2:e2:2692:U:OP1	5:p2:33:LYS:NZ	2.24	0.70
2:e2:4446:U:O2'	2:e2:4450:U:OP1	2.09	0.70
3:h2:142:U:OP1	41:12:38:ARG:NH2	2.25	0.70
25:G2:54:ARG:NH1	25:G2:148:ALA:O	2.24	0.70
42:22:5:MET:HB2	42:22:28:ASN:HD21	1.55	0.70
46:62:10:TYR:HA	46:62:66:GLN:HA	1.73	0.70
49:K3:216:C:O2	49:K3:312:G:N2	2.22	0.70
49:K3:1487:A:H2'	49:K3:1488:C:C6	2.26	0.70
2:e2:1168:G:N7	2:e2:1195:G:N2	2.39	0.70
2:e2:4314:C:O2'	11:r2:36:ASP:OD1	2.10	0.70
49:K3:83:A:O2'	49:K3:84:A:N7	2.24	0.70
49:K3:492:C:C2	49:K3:508:A:N6	2.60	0.70
49:K3:1699:A:N6	61:W3:116:THR:O	2.25	0.70
75:e3:43:ASP:OD2	75:e3:44:LYS:NZ	2.25	0.70
2:e2:1221:G:OP2	2:e2:1231:C:N4	2.25	0.69
2:e2:1563:A:C2	49:K3:1029:G:C2	2.80	0.69
2:e2:1881:U:OP1	2:e2:2280:G:O2'	2.10	0.69
2:e2:4993:G:OP1	45:52:176:LYS:NZ	2.24	0.69
10:q2:47:LYS:HG3	10:q2:48:TYR:HD2	1.57	0.69
49:K3:216:C:H2'	49:K3:217:A:H8	1.57	0.69
49:K3:955:A:O2'	49:K3:969:U:O4	2.08	0.69
49:K3:1605:G:OP1	78:H5:84:ARG:NH2	2.25	0.69
59:U3:63:ARG:HB3	74:D3:36:VAL:HG13	1.72	0.69
73:d3:119:LEU:HG	73:d3:120:ALA:H	1.57	0.69
2:e2:1768:C:O2'	2:e2:1773:U:O4	2.09	0.69
2:e2:4632:U:H3	2:e2:4666:G:H1	1.40	0.69
49:K3:1004:U:OP1	60:V3:165:ARG:NH2	2.26	0.69
49:K3:1483:A:H1'	63:Y3:160:SER:HA	1.75	0.69
2:e2:1777:C:HO2'	25:G2:3:PHE:N	1.90	0.69
2:e2:1802:A:H5''	2:e2:1803:G:H5'	1.74	0.69
2:e2:1960:G:H4'	2:e2:1961:A:H5'	1.73	0.69
2:e2:2555:G:N2	42:22:112:ARG:HH22	1.89	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:o2:102:SER:OG	9:o2:103:LYS:NZ	2.26	0.69
54:G5:124:ARG:HD2	54:G5:131:VAL:HA	1.74	0.69
84:O3:79:ILE:O	84:O3:82:LYS:NZ	2.26	0.69
2:e2:25:A:H2'	2:e2:26:C:H6	1.56	0.69
2:e2:1364:U:H3'	2:e2:1365:C:H4'	1.74	0.69
2:e2:1749:A:H2'	2:e2:1750:G:C8	2.27	0.69
2:e2:2739:C:OP1	18:92:177:LYS:NZ	2.26	0.69
2:e2:2847:G:OP2	6:k2:85:ARG:NH2	2.25	0.69
49:K3:613:G:N2	49:K3:625:G:O3'	2.26	0.69
55:a3:152:SER:HB2	55:a3:170:TRP:HE1	1.57	0.69
57:A3:32:GLN:HA	57:A3:35:GLN:HG2	1.74	0.69
75:e3:52:LEU:HD21	75:e3:78:LYS:HG3	1.72	0.69
2:e2:184:U:O4	2:e2:253:G:O6	2.11	0.69
2:e2:1564:A:H2'	2:e2:1565:A:C8	2.27	0.69
2:e2:4584:A:O2'	15:w2:78:ARG:NH2	2.24	0.69
2:e2:4630:G:H2'	2:e2:4631:G:H8	1.57	0.69
25:G2:211:LEU:HB3	25:G2:219:TYR:HB2	1.75	0.69
34:T2:99:VAL:HA	34:T2:109:VAL:HA	1.73	0.69
49:K3:1202:U:H2'	49:K3:1203:G:H8	1.56	0.69
59:U3:40:LYS:HB2	59:U3:48:ILE:HD11	1.73	0.69
79:P3:395:HIS:HB3	79:P3:428:PRO:HD3	1.75	0.69
82:L3:34:ASP:OD2	82:L3:80:ARG:NH1	2.25	0.69
2:e2:1104:C:N4	2:e2:1196:G:O2'	2.26	0.69
2:e2:1183:C:H2'	2:e2:1184:A:C8	2.26	0.69
2:e2:2516:G:OP2	17:y2:37:LYS:NZ	2.25	0.69
3:h2:70:G:OP1	9:o2:122:LYS:NZ	2.25	0.69
4:d2:23:A:O4'	4:d2:120:U:N3	2.26	0.69
17:y2:76:ARG:NH1	17:y2:87:VAL:HG13	2.06	0.69
28:J2:66:ARG:HE	28:J2:68:SER:HG	1.41	0.69
32:R2:53:TYR:HB2	32:R2:58:MET:HG2	1.74	0.69
49:K3:944:A:N6	49:K3:982:G:H1	1.90	0.69
57:A3:77:LYS:HD3	57:A3:102:PHE:CE1	2.28	0.69
59:U3:201:LEU:HA	59:U3:205:ARG:HH12	1.58	0.69
70:F3:151:HIS:NE2	70:F3:158:ASP:OD2	2.26	0.69
79:P3:416:LYS:NZ	79:P3:422:ASP:OD1	2.26	0.69
85:a7:6:ASN:OD1	85:a7:7:GLY:N	2.23	0.69
2:e2:149:A:N3	2:e2:151:G:N2	2.38	0.69
2:e2:1266:G:OP2	2:e2:1267:C:N4	2.26	0.69
2:e2:3870:C:H2'	2:e2:3871:A:H8	1.57	0.69
44:42:80:VAL:HG22	44:42:147:LYS:HG3	1.73	0.69
55:a3:44:LYS:NZ	55:a3:55:PRO:O	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:a3:83:TRP:HA	55:a3:107:ASP:HB3	1.73	0.69
2:e2:1080:C:H2'	2:e2:1081:C:C6	2.28	0.69
2:e2:2667:C:OP1	43:32:100:ARG:NE	2.26	0.69
2:e2:4211:C:H3'	2:e2:4212:A:H2'	1.75	0.69
2:e2:4878:C:OP1	40:02:101:LYS:NZ	2.25	0.69
33:S2:16:LYS:C	33:S2:18:PRO:HD3	2.17	0.69
34:T2:210:LYS:HG2	34:T2:211:ILE:HG13	1.74	0.69
35:U2:108:LEU:HD22	35:U2:113:LEU:HD11	1.73	0.69
49:K3:151:C:N3	49:K3:168:C:N4	2.41	0.69
49:K3:348:A:H5''	64:j3:2:ALA:HB3	1.74	0.69
49:K3:507:G:OP2	81:I5:104:ARG:NH1	2.25	0.69
49:K3:547:G:H1'	49:K3:548:C:H5	1.57	0.69
49:K3:589:G:H1'	49:K3:590:A:C8	2.28	0.69
49:K3:1214:A:O2'	49:K3:1216:C:OP1	2.10	0.69
49:K3:1286:G:N2	49:K3:1287:A:N7	2.41	0.69
49:K3:1423:C:OP1	49:K3:1424:G:N2	2.25	0.69
49:K3:1562:C:H2'	49:K3:1563:G:C8	2.27	0.69
55:a3:166:VAL:HG12	55:a3:176:VAL:HG22	1.75	0.69
56:a5:75:MET:SD	66:N3:204:ARG:NH1	2.65	0.69
2:e2:377:A:OP1	12:t2:86:ARG:NH1	2.25	0.69
6:k2:83:ARG:NE	6:k2:100:ASP:OD2	2.25	0.69
49:K3:30:C:O2'	58:T3:137:LYS:NZ	2.26	0.69
52:Q3:139:LYS:HZ1	52:Q3:149:LEU:HD21	1.58	0.69
55:a3:133:ASN:ND2	55:a3:137:VAL:O	2.26	0.69
60:V3:216:LYS:NZ	60:V3:217:MET:O	2.26	0.69
79:P3:302:VAL:HG12	79:P3:304:VAL:H	1.57	0.69
79:P3:314:GLN:HE21	79:P3:332:PHE:HB3	1.57	0.69
80:I3:49:LYS:HB3	80:I3:92:HIS:HB2	1.73	0.69
2:e2:717:U:C4	2:e2:952:G:O6	2.46	0.69
2:e2:1105:C:N4	2:e2:1165:G:N7	2.39	0.69
2:e2:1319:U:H5'	2:e2:4394:A:H61	1.57	0.69
2:e2:2011:A:H1'	31:M2:2:PRO:HB3	1.74	0.69
2:e2:4537:C:H2'	2:e2:4538:G:H8	1.57	0.69
2:e2:5040:U:H4'	2:e2:5041:G:H5'	1.75	0.69
49:K3:661:U:H3'	49:K3:662:G:H2'	1.74	0.69
49:K3:1038:U:H2'	49:K3:1039:C:C6	2.28	0.69
60:V3:91:VAL:HG13	60:V3:94:LYS:HA	1.75	0.69
64:j3:151:ASP:H	64:j3:169:ILE:HD11	1.57	0.69
83:M3:80:ARG:H	83:M3:83:LEU:HD12	1.56	0.69
2:e2:976:G:N3	12:t2:323:ARG:NH1	2.40	0.68
2:e2:4062:A:O2'	2:e2:4063:U:O4'	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4096:C:H42	2:e2:4113:U:H3	1.40	0.68
2:e2:4911:A:OP2	45:52:100:ARG:NH2	2.25	0.68
47:72:142:ARG:NH1	47:72:144:ASN:OD1	2.26	0.68
49:K3:102:A:H5'	71:c3:12:ARG:HH22	1.57	0.68
49:K3:1786:U:N3	49:K3:1787:G:N7	2.40	0.68
61:W3:107:LEU:HD12	61:W3:127:PHE:HB3	1.75	0.68
79:P3:264:ALA:HB1	79:P3:321:LEU:HD11	1.75	0.68
2:e2:2054:G:H3'	2:e2:2055:G:H5'	1.75	0.68
2:e2:2521:G:H5''	17:y2:25:THR:HG22	1.75	0.68
2:e2:3970:G:O2'	2:e2:4052:C:N4	2.24	0.68
2:e2:5037:U:H2'	2:e2:5038:A:C8	2.28	0.68
48:82:28:PRO:HG3	48:82:100:LEU:HD21	1.75	0.68
49:K3:656:G:OP2	49:K3:662:G:N1	2.26	0.68
54:G5:8:LYS:NZ	83:M3:50:PHE:O	2.24	0.68
55:a3:11:LEU:HB2	55:a3:307:VAL:HB	1.75	0.68
76:E3:59:LYS:HB2	76:E3:70:TYR:HB2	1.76	0.68
2:e2:3665:G:O3'	18:92:227:ARG:NH2	2.26	0.68
2:e2:4760:G:N2	2:e2:4766:C:OP1	2.26	0.68
2:e2:4869:U:O2'	2:e2:4873:G:OP1	2.11	0.68
28:J2:90:LEU:HD22	28:J2:111:ILE:HG23	1.74	0.68
49:K3:26:U:H2'	49:K3:27:A:C8	2.28	0.68
49:K3:61:A:H1'	49:K3:316:G:H21	1.59	0.68
49:K3:1310:U:O4	75:e3:36:ARG:NE	2.21	0.68
49:K3:1616:U:OP2	57:A3:47:ARG:NH2	2.26	0.68
49:K3:1623:A:O2'	49:K3:1625:U:OP2	2.10	0.68
71:c3:67:TRP:O	71:c3:71:CYS:CA	2.41	0.68
72:C3:32:LYS:NZ	72:C3:47:ARG:HH12	1.88	0.68
85:a7:94:ILE:HG23	85:a7:126:LEU:HD21	1.75	0.68
2:e2:1273:G:OP2	2:e2:1273:G:N2	2.24	0.68
25:G2:261:VAL:O	25:G2:263:LYS:NZ	2.23	0.68
28:J2:58:LYS:HE2	28:J2:83:ASN:HD21	1.58	0.68
41:12:128:LYS:HB3	41:12:130:PHE:HE2	1.59	0.68
49:K3:668:A:H5''	49:K3:1198:G:H4'	1.75	0.68
49:K3:1769:C:OP1	49:K3:1774:C:N4	2.27	0.68
69:f3:23:SER:OG	69:f3:27:CYS:SG	2.45	0.68
80:I3:86:LYS:O	80:I3:87:ARG:NH2	2.26	0.68
2:e2:2633:U:O3'	43:32:59:SER:OG	2.10	0.68
41:12:73:ARG:HH21	41:12:92:LEU:HD11	1.59	0.68
44:42:44:GLN:O	44:42:48:ARG:NH2	2.27	0.68
49:K3:1531:A:H2'	49:K3:1532:C:C6	2.29	0.68
49:K3:1662:U:O4	49:K3:1663:A:N6	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:T3:133:LEU:HD11	58:T3:140:ARG:HD2	1.76	0.68
71:c3:163:GLU:HA	71:c3:166:PHE:CD1	2.29	0.68
2:e2:676:C:H2'	2:e2:677:G:C8	2.27	0.68
2:e2:1292:C:H2'	2:e2:1293:G:C8	2.26	0.68
2:e2:1836:G:H2'	2:e2:1837:A:H8	1.59	0.68
2:e2:2116:G:H5''	35:U2:48:LEU:HD21	1.76	0.68
11:r2:6:ASN:OD1	11:r2:7:HIS:N	2.22	0.68
49:K3:885:U:O2	49:K3:901:G:O6	2.10	0.68
76:E3:58:VAL:HG12	76:E3:71:LEU:HA	1.75	0.68
2:e2:105:A:O2'	85:a7:35:ARG:NH1	2.25	0.68
2:e2:1426:G:N1	2:e2:1458:C:OP2	2.17	0.68
2:e2:1975:G:N7	2:e2:1983:A:O2'	2.27	0.68
2:e2:3848:U:H2'	2:e2:3849:A:C8	2.28	0.68
3:h2:94:G:OP2	21:C2:72:ARG:NH1	2.26	0.68
26:H2:31:GLU:HG2	26:H2:60:PHE:CD1	2.29	0.68
26:H2:31:GLU:HG2	26:H2:60:PHE:HD1	1.59	0.68
47:72:17:ARG:NH2	47:72:21:LYS:O	2.26	0.68
49:K3:1324:G:O6	49:K3:1504:U:O4	2.11	0.68
49:K3:1808:U:H2'	49:K3:1809:A:C8	2.29	0.68
57:A3:28:MET:HG2	57:A3:32:GLN:HE21	1.58	0.68
61:W3:179:THR:HA	61:W3:219:ILE:HG23	1.74	0.68
67:b3:2:LYS:HG2	67:b3:17:GLU:HG2	1.76	0.68
73:d3:37:LEU:HG	73:d3:38:ARG:H	1.58	0.68
2:e2:300:A:O2'	41:12:94:PHE:O	2.11	0.68
2:e2:727:C:OP1	35:U2:75:ARG:NH2	2.26	0.68
2:e2:986:C:H3'	2:e2:1050:C:H41	1.58	0.68
2:e2:1556:C:O2'	2:e2:2669:C:OP1	2.07	0.68
2:e2:1886:G:H21	2:e2:1937:C:H41	1.41	0.68
2:e2:2006:G:O2'	2:e2:2011:A:N6	2.27	0.68
2:e2:3979:C:O2'	2:e2:4027:G:N2	2.27	0.68
19:A2:119:TYR:HB3	85:a7:126:LEU:HD23	1.75	0.68
47:72:75:VAL:HG22	47:72:88:ARG:HG2	1.75	0.68
49:K3:1049:A:OP2	49:K3:1068:G:N1	2.20	0.68
49:K3:1259:A:O2'	49:K3:1261:C:OP2	2.11	0.68
49:K3:1417:C:H4'	78:H5:129:ARG:HB3	1.76	0.68
49:K3:1420:G:H2'	49:K3:1421:A:H8	1.58	0.68
53:G3:19:ASN:OD1	71:c3:193:LYS:NZ	2.26	0.68
61:W3:68:ARG:HH12	61:W3:69:LEU:HD23	1.58	0.68
2:e2:182:G:O2'	2:e2:183:C:OP2	2.11	0.68
2:e2:1563:A:C2	49:K3:677:G:H1'	2.29	0.68
2:e2:3642:A:O2'	21:C2:2:THR:OG1	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4032:G:OP1	2:e2:4037:C:N4	2.26	0.68
2:e2:4131:G:H2'	2:e2:4132:C:C6	2.28	0.68
2:e2:5002:U:H3	2:e2:5045:G:H1	1.41	0.68
49:K3:1030:A:H2'	49:K3:1031:A:H8	1.56	0.68
60:V3:160:GLN:O	60:V3:164:ILE:HG12	1.94	0.68
71:c3:87:ASN:HB3	71:c3:90:LEU:HD13	1.76	0.68
71:c3:140:LYS:H	71:c3:145:ILE:HD11	1.57	0.68
75:e3:17:ALA:HB2	75:e3:121:LYS:HA	1.76	0.68
2:e2:747:A:O2'	2:e2:748:G:H5'	1.94	0.68
2:e2:1969:A:H5''	2:e2:1999:G:C8	2.29	0.68
2:e2:1989:A:N7	31:M2:95:GLN:HA	2.09	0.68
3:h2:140:C:H2'	3:h2:141:C:H6	1.59	0.68
43:32:109:TYR:HB3	43:32:115:ILE:HG12	1.76	0.68
45:52:256:ALA:HB3	45:52:261:ARG:HE	1.58	0.68
49:K3:109:U:OP1	49:K3:809:A:O2'	2.12	0.68
49:K3:688:U:OP2	79:P3:341:LYS:NZ	2.27	0.68
49:K3:1255:G:O6	49:K3:1257:G:N2	2.27	0.68
49:K3:1862:G:H1'	49:K3:1863:A:H2'	1.76	0.68
57:A3:7:LYS:HD3	57:A3:13:ARG:HA	1.75	0.68
2:e2:1471:U:H2'	2:e2:1472:C:H6	1.59	0.67
2:e2:1968:G:N2	2:e2:2016:A:C6	2.60	0.67
2:e2:3658:C:H2'	2:e2:3659:G:C8	2.29	0.67
2:e2:3974:G:O2'	44:42:26:ARG:NH1	2.26	0.67
31:M2:124:GLU:HG2	31:M2:125:LEU:H	1.60	0.67
43:32:81:ARG:HG3	43:32:88:ARG:NH1	2.07	0.67
49:K3:932:G:O6	49:K3:1009:A:N1	2.27	0.67
49:K3:1451:G:O2'	49:K3:1474:A:N7	2.23	0.67
55:a3:27:PHE:HB2	55:a3:30:MET:HG3	1.74	0.67
73:d3:22:LYS:HA	73:d3:25:LEU:HB2	1.75	0.67
2:e2:495:C:H2'	2:e2:496:G:H8	1.59	0.67
2:e2:1082:C:N3	2:e2:1218:G:N1	2.42	0.67
2:e2:2839:U:O4	2:e2:2840:A:N6	2.27	0.67
2:e2:5047:C:O2'	2:e2:5050:C:OP2	2.09	0.67
18:92:158:ILE:HG13	18:92:162:ASN:HD21	1.59	0.67
49:K3:1038:U:H2'	49:K3:1039:C:H6	1.58	0.67
56:a5:34:PHE:HB3	56:a5:41:PHE:HB3	1.76	0.67
59:U3:149:ASN:OD1	59:U3:150:THR:N	2.28	0.67
71:c3:120:PRO:HG2	71:c3:128:LYS:H	1.57	0.67
72:C3:41:ILE:HD12	72:C3:46:LEU:HB2	1.74	0.67
84:O3:11:ALA:H	84:O3:33:ASP:HB2	1.58	0.67
2:e2:136:C:H42	19:A2:79:LYS:HE2	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:512:U:O4	2:e2:648:G:N1	2.27	0.67
2:e2:1471:U:H2'	2:e2:1472:C:C6	2.29	0.67
2:e2:1894:G:O2'	2:e2:1906:A:N3	2.26	0.67
2:e2:3797:C:H1'	2:e2:3804:G:H22	1.57	0.67
9:o2:54:GLU:HG3	9:o2:69:LYS:HG2	1.76	0.67
45:52:121:ASN:HB3	45:52:124:LYS:HB2	1.76	0.67
49:K3:374:G:O6	49:K3:385:G:C6	2.47	0.67
49:K3:880:G:H1	49:K3:906:U:H3	0.72	0.67
53:G3:133:PRO:HB3	53:G3:139:ARG:HH11	1.59	0.67
56:a5:74:ALA:HB1	56:a5:115:ALA:HB2	1.76	0.67
67:b3:24:LEU:HD23	67:b3:27:PHE:HD2	1.59	0.67
2:e2:1351:G:N7	33:S2:55:ARG:NH1	2.42	0.67
2:e2:2054:G:O6	46:62:156:HIS:ND1	2.28	0.67
2:e2:2268:A:OP2	28:J2:11:ARG:NH1	2.27	0.67
2:e2:4025:C:N4	2:e2:4026:G:O6	2.27	0.67
15:w2:62:MET:HG3	15:w2:68:ARG:HB3	1.77	0.67
29:K2:17:ILE:HG23	29:K2:66:ARG:HH12	1.60	0.67
35:U2:165:ARG:HD2	35:U2:208:TRP:CG	2.28	0.67
49:K3:45:A:N6	49:K3:480:G:O2'	2.28	0.67
49:K3:101:U:H5''	71:c3:19:LYS:HD2	1.76	0.67
55:a3:121:VAL:HG11	55:a3:165:ILE:HG21	1.77	0.67
55:a3:277:THR:H	55:a3:282:GLU:HG2	1.58	0.67
63:Y3:208:VAL:HG22	72:C3:12:ALA:HA	1.77	0.67
64:j3:182:MET:O	64:j3:226:PHE:HB3	1.94	0.67
71:c3:121:LEU:HD13	71:c3:158:ILE:HG12	1.76	0.67
85:a7:94:ILE:HG22	85:a7:121:ARG:HH11	1.57	0.67
2:e2:1302:U:H2'	2:e2:1303:A:C8	2.29	0.67
2:e2:1645:C:OP1	12:t2:80:ARG:NH2	2.22	0.67
2:e2:3753:G:H1	2:e2:3771:C:N4	1.88	0.67
2:e2:3861:A:H2	2:e2:4560:C:H41	1.42	0.67
2:e2:3952:A:OP2	44:42:7:ARG:NH1	2.27	0.67
2:e2:4741:C:N4	2:e2:4959:U:C4	2.62	0.67
41:12:197:THR:HG22	85:a7:21:ARG:HB3	1.74	0.67
68:B3:82:LEU:O	68:B3:86:LYS:NZ	2.20	0.67
2:e2:114:G:OP1	41:12:49:ARG:NH1	2.28	0.67
2:e2:1263:A:O2'	2:e2:2113:G:O4'	2.11	0.67
2:e2:4389:C:H2'	2:e2:4390:A:H8	1.60	0.67
36:V2:162:ASP:HB2	36:V2:163:PRO:HD3	1.75	0.67
45:52:244:THR:OG1	45:52:247:GLY:O	2.10	0.67
47:72:81:LYS:O	47:72:83:LYS:N	2.28	0.67
49:K3:491:C:OP1	81:I5:104:ARG:N	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:534:G:O2'	50:s3:44:ASN:O	2.13	0.67
49:K3:886:A:HO2'	49:K3:887:U:H6	1.41	0.67
49:K3:1370:A:N3	49:K3:1386:A:O2'	2.24	0.67
63:Y3:47:GLU:HB2	63:Y3:87:TYR:HE2	1.59	0.67
80:I3:39:LEU:HD22	80:I3:102:THR:HG22	1.76	0.67
2:e2:257:C:H2'	2:e2:258:G:H8	1.58	0.67
2:e2:709:C:H4'	34:T2:193:HIS:HE2	1.59	0.67
2:e2:1563:A:N1	49:K3:1029:G:C2	2.63	0.67
2:e2:4127:A:C6	2:e2:4156:G:N2	2.62	0.67
2:e2:4280:A:O2'	2:e2:4281:A:OP2	2.11	0.67
13:u2:25:TYR:CD2	13:u2:88:LEU:HD12	2.30	0.67
25:G2:135:ILE:HG22	25:G2:136:ASP:H	1.60	0.67
49:K3:308:G:H5'	49:K3:309:G:H5'	1.76	0.67
49:K3:1208:A:O2'	49:K3:1835:A:N7	2.28	0.67
49:K3:1702:G:H2'	49:K3:1703:C:C6	2.29	0.67
58:T3:133:LEU:HD21	58:T3:140:ARG:HG3	1.77	0.67
72:C3:98:VAL:HG23	72:C3:103:LYS:HD3	1.75	0.67
81:I5:100:LYS:HB2	81:I5:107:ARG:HH21	1.59	0.67
81:I5:122:LYS:HA	81:I5:125:VAL:HB	1.76	0.67
2:e2:3937:C:H1'	41:12:125:SER:HB3	1.76	0.67
2:e2:4092:G:H3'	2:e2:4093:G:H21	1.60	0.67
3:h2:119:C:H2'	3:h2:120:G:H8	1.59	0.67
31:M2:124:GLU:HB3	31:M2:128:THR:HB	1.74	0.67
45:52:300:LYS:HE3	45:52:311:ASP:HB3	1.75	0.67
49:K3:431:G:H2'	49:K3:432:G:C8	2.29	0.67
49:K3:1318:G:H2'	49:K3:1319:U:C6	2.30	0.67
80:I3:62:ARG:HA	80:I3:80:PHE:O	1.94	0.67
2:e2:76:A:OP2	85:a7:74:ARG:NE	2.23	0.67
2:e2:943:A:OP1	35:U2:244:ARG:NH1	2.28	0.67
2:e2:2127:G:H1	2:e2:2248:C:H42	1.43	0.67
2:e2:2477:A:H2	2:e2:2478:C:H41	1.41	0.67
2:e2:3759:A:OP2	2:e2:3765:G:N2	2.24	0.67
2:e2:4765:G:N1	2:e2:4870:G:N7	2.42	0.67
6:k2:97:TYR:OH	7:l2:37:GLU:OE2	2.12	0.67
43:32:129:GLY:O	43:32:130:ASN:ND2	2.27	0.67
49:K3:190:G:N2	49:K3:211:G:O6	2.28	0.67
49:K3:220:U:H2'	49:K3:221:A:C8	2.29	0.67
49:K3:1082:A:O2'	49:K3:1842:C:O2'	2.12	0.67
49:K3:1144:A:H2'	49:K3:1145:A:C8	2.30	0.67
49:K3:1422:G:N2	49:K3:1424:G:OP1	2.28	0.67
71:c3:110:ARG:HH21	71:c3:166:PHE:HA	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:M3:68:ILE:HB	83:M3:109:TYR:HB2	1.76	0.67
2:e2:1698:C:OP1	2:e2:2083:C:N4	2.28	0.67
2:e2:2437:C:O2'	8:m2:125:ASN:ND2	2.28	0.67
2:e2:2848:G:O2'	2:e2:3838:U:O4	2.12	0.67
2:e2:4011:G:H2'	2:e2:4012:G:C8	2.30	0.67
5:p2:12:LEU:HB3	5:p2:16:ARG:NH2	2.09	0.67
11:r2:43:MET:HE3	11:r2:47:LYS:HD2	1.77	0.67
23:E2:97:ARG:HE	23:E2:122:ARG:HB3	1.60	0.67
25:G2:21:ARG:HA	25:G2:24:ARG:HH11	1.60	0.67
28:J2:107:ARG:HG3	28:J2:108:MET:N	2.09	0.67
30:L2:38:ARG:HD2	30:L2:83:ASP:HB2	1.76	0.67
49:K3:10:G:H21	61:W3:114:LYS:HA	1.59	0.67
49:K3:155:G:H2'	49:K3:156:G:C8	2.29	0.67
49:K3:1408:U:H5''	49:K3:1409:A:H5'	1.77	0.67
53:G3:59:LYS:HG2	53:G3:132:ARG:HH12	1.59	0.67
59:U3:39:TYR:HD2	59:U3:40:LYS:HG2	1.58	0.67
64:j3:206:ASP:HB2	64:j3:222:LEU:HD22	1.77	0.67
69:f3:40:ARG:NH2	69:f3:61:SER:O	2.28	0.67
82:L3:23:ARG:NH1	82:L3:27:SER:O	2.28	0.67
2:e2:1733:G:N3	2:e2:4214:A:H2'	2.10	0.66
2:e2:2769:U:N3	17:y2:65:MET:O	2.25	0.66
2:e2:4461:C:H1'	2:e2:4516:G:H22	1.60	0.66
2:e2:4936:G:O6	34:T2:186:ARG:NH2	2.28	0.66
4:d2:57:C:H2'	4:d2:58:A:H8	1.60	0.66
39:Y2:31:ASP:O	39:Y2:35:ARG:HG3	1.95	0.66
41:12:22:LEU:HD12	41:12:26:ARG:HH22	1.60	0.66
43:32:99:MET:SD	43:32:103:ARG:HD2	2.36	0.66
49:K3:1518:C:H5''	49:K3:1519:U:H5''	1.76	0.66
70:F3:169:GLU:HG3	70:F3:191:TYR:HE2	1.60	0.66
71:c3:84:ASN:ND2	71:c3:100:CYS:SG	2.68	0.66
78:H5:38:LYS:HG3	78:H5:41:LYS:HE2	1.78	0.66
2:e2:268:G:H2'	2:e2:269:G:H8	1.61	0.66
2:e2:1446:C:H2'	2:e2:1447:C:H6	1.60	0.66
2:e2:2318:G:O6	14:v2:19:LYS:NZ	2.28	0.66
2:e2:2376:A:H2'	2:e2:2377:C:C6	2.30	0.66
2:e2:2557:G:H1	2:e2:2570:U:H3	1.33	0.66
2:e2:4218:U:OP2	47:72:9:ARG:NH2	2.27	0.66
2:e2:4364:G:H4'	10:q2:57:GLY:HA3	1.76	0.66
47:72:112:ASN:OD1	47:72:129:LYS:HD3	1.94	0.66
49:K3:1230:C:OP1	54:G5:130:ARG:NH2	2.27	0.66
49:K3:1284:A:H3'	75:e3:82:ASN:HD21	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:d3:114:VAL:HB	73:d3:126:ALA:HB1	1.78	0.66
2:e2:1105:C:N4	2:e2:1165:G:OP2	2.28	0.66
2:e2:1563:A:H2	49:K3:1029:G:N2	1.92	0.66
2:e2:4352:U:H1'	10:q2:58:MET:HE1	1.77	0.66
2:e2:4734:A:H2'	2:e2:4735:G:C8	2.30	0.66
2:e2:4935:C:N3	34:T2:186:ARG:NH2	2.43	0.66
25:G2:152:ARG:HD3	25:G2:153:THR:N	2.10	0.66
25:G2:266:TRP:HE3	25:G2:267:ASN:HD22	1.43	0.66
26:H2:9:GLU:N	26:H2:9:GLU:OE2	2.29	0.66
42:22:20:GLY:O	42:22:21:ARG:NH1	2.28	0.66
49:K3:843:C:H2'	49:K3:844:U:C2	2.30	0.66
49:K3:927:C:O2'	82:L3:51:GLN:OE1	2.13	0.66
49:K3:1517:G:H5''	57:A3:123:TYR:HE1	1.59	0.66
53:G3:113:LEU:HD21	53:G3:117:PHE:HB2	1.76	0.66
59:U3:80:ARG:NH2	59:U3:165:ASN:O	2.28	0.66
68:B3:36:VAL:O	68:B3:50:HIS:HA	1.94	0.66
79:P3:411:PHE:HB2	79:P3:425:PHE:CE2	2.30	0.66
1:E1:6419:C:H6	63:Y3:117:ARG:HD3	1.61	0.66
2:e2:98:A:O3'	41:12:195:ARG:NH1	2.28	0.66
2:e2:346:G:OP2	9:o2:13:LYS:NZ	2.20	0.66
2:e2:1053:C:O2'	2:e2:1063:U:N3	2.28	0.66
2:e2:1358:G:H4'	2:e2:1359:G:C8	2.30	0.66
2:e2:2126:C:O2	2:e2:2254:G:H5'	1.96	0.66
2:e2:4088:C:H2'	2:e2:4089:G:C8	2.30	0.66
25:G2:177:THR:HB	25:G2:180:PHE:CD1	2.30	0.66
31:M2:85:LEU:HG	31:M2:104:ILE:HD12	1.76	0.66
49:K3:1829:G:O2'	49:K3:1850:A:N6	2.27	0.66
61:W3:106:VAL:HA	61:W3:128:VAL:HG22	1.77	0.66
71:c3:96:LEU:HD22	71:c3:179:PRO:HG3	1.77	0.66
2:e2:423:G:OP1	26:H2:62:ARG:NH2	2.28	0.66
2:e2:4239:A:H2'	2:e2:4240:G:H8	1.58	0.66
31:M2:124:GLU:HG2	31:M2:125:LEU:N	2.10	0.66
40:02:12:VAL:O	40:02:58:THR:OG1	2.13	0.66
49:K3:158:A:H61	49:K3:467:G:H1'	1.60	0.66
49:K3:590:A:C4	50:s3:26:LYS:HD2	2.31	0.66
49:K3:1330:G:H4'	49:K3:1331:C:H3'	1.76	0.66
49:K3:1429:G:H5'	68:B3:59:LYS:HE2	1.77	0.66
2:e2:690:C:OP2	34:T2:117:ARG:NH2	2.29	0.66
2:e2:4453:C:N3	2:e2:4529:G:N2	2.43	0.66
49:K3:203:G:H2'	49:K3:204:G:H8	1.59	0.66
49:K3:235:A:N7	49:K3:274:G:O2'	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:650:A:OP2	58:T3:108:LYS:NZ	2.24	0.66
49:K3:1690:U:H2'	49:K3:1691:U:H6	1.60	0.66
55:a3:41:ILE:HG21	55:a3:55:PRO:HB3	1.77	0.66
2:e2:162:A:H2'	2:e2:163:A:H8	1.61	0.66
2:e2:1332:C:H2'	2:e2:1333:A:C8	2.30	0.66
2:e2:1445:U:H3	2:e2:2098:G:N2	1.90	0.66
2:e2:1740:C:N3	2:e2:1785:C:N4	2.44	0.66
2:e2:2087:A:O2'	12:t2:294:LYS:NZ	2.27	0.66
2:e2:2264:C:H2'	2:e2:2265:G:H4'	1.77	0.66
2:e2:3608:A:H2'	2:e2:3609:G:H8	1.61	0.66
2:e2:4860:G:H2'	2:e2:4861:G:H8	1.61	0.66
2:e2:4943:C:OP2	34:T2:190:ARG:NH2	2.29	0.66
42:22:21:ARG:HD2	42:22:47:ASP:HA	1.77	0.66
49:K3:1197:G:H2'	49:K3:1198:G:H8	1.59	0.66
71:c3:141:ARG:HE	71:c3:144:LYS:HD3	1.61	0.66
85:a7:94:ILE:O	85:a7:121:ARG:NH1	2.29	0.66
2:e2:511:C:H4'	10:q2:94:LYS:HG2	1.77	0.66
2:e2:956:A:H3'	2:e2:957:G:C8	2.31	0.66
2:e2:1503:A:N6	33:S2:87:THR:OG1	2.25	0.66
2:e2:1982:A:O2'	2:e2:1985:U:H2'	1.96	0.66
15:w2:193:THR:HA	40:02:119:ARG:HH12	1.60	0.66
44:42:143:ASN:HD22	44:42:146:ALA:HB3	1.58	0.66
49:K3:376:A:N3	71:c3:86:SER:OG	2.25	0.66
49:K3:610:G:N2	50:s3:16:THR:OG1	2.28	0.66
49:K3:1324:G:O6	49:K3:1504:U:C4	2.49	0.66
49:K3:1392:U:H2'	49:K3:1393:G:C8	2.30	0.66
49:K3:1752:C:H2'	49:K3:1753:C:O4'	1.95	0.66
55:a3:156:PHE:HA	55:a3:165:ILE:HG22	1.77	0.66
60:V3:144:LYS:H	60:V3:205:TYR:HE1	1.44	0.66
71:c3:40:PRO:HD2	71:c3:59:ARG:HD2	1.78	0.66
80:I3:33:GLU:OE2	80:I3:55:ARG:NH1	2.28	0.66
2:e2:1051:G:O2'	2:e2:1062:G:N2	2.28	0.66
2:e2:1281:G:H1	32:R2:48:ARG:HB3	1.61	0.66
2:e2:1777:C:O2'	25:G2:3:PHE:N	2.29	0.66
2:e2:5061:A:H5''	2:e2:5062:G:C8	2.31	0.66
15:w2:62:MET:HE3	15:w2:69:GLY:HA2	1.77	0.66
35:U2:70:MET:HA	35:U2:73:MET:HG2	1.76	0.66
59:U3:77:ILE:HA	59:U3:99:ILE:O	1.96	0.66
67:b3:55:GLY:N	67:b3:63:MET:SD	2.69	0.66
73:d3:162:ARG:NE	73:d3:169:ARG:HD3	2.10	0.66
78:H5:65:TYR:HA	78:H5:123:LEU:HD11	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:P3:378:VAL:N	79:P3:395:HIS:O	2.21	0.66
81:I5:16:ARG:HH22	81:I5:21:LYS:HG3	1.59	0.66
2:e2:2043:U:H5	45:52:260:ALA:HB1	1.60	0.66
2:e2:2120:C:C5'	35:U2:40:MET:HG2	2.25	0.66
2:e2:2739:C:OP2	27:I2:49:ARG:NH1	2.28	0.66
2:e2:4106:G:H2'	2:e2:4107:G:O4'	1.96	0.66
7:I2:6:CYS:SG	7:I2:7:SER:N	2.69	0.66
46:62:41:LYS:NZ	46:62:64:CYS:SG	2.68	0.66
46:62:95:ARG:NH1	46:62:97:TYR:OH	2.29	0.66
49:K3:1657:G:N2	49:K3:1667:U:O2	2.17	0.66
69:f3:5:ARG:HE	69:f3:6:VAL:H	1.44	0.66
2:e2:1511:U:H2'	2:e2:1512:G:C8	2.31	0.65
2:e2:2363:A:H1'	2:e2:3860:A:H61	1.60	0.65
2:e2:2778:G:N1	3:h2:113:C:OP1	2.28	0.65
2:e2:3940:U:H2'	2:e2:3941:G:H8	1.61	0.65
2:e2:4384:U:O2'	2:e2:4386:C:OP1	2.13	0.65
16:x2:88:PHE:HD2	16:x2:92:LEU:HD21	1.60	0.65
48:82:66:SER:OG	48:82:69:LYS:O	2.12	0.65
49:K3:55:U:OP1	49:K3:451:G:N1	2.29	0.65
49:K3:376:A:H2'	49:K3:377:G:H8	1.61	0.65
49:K3:1278:A:N6	49:K3:1320:G:O6	2.29	0.65
51:13:61:GLU:OE2	51:13:73:HIS:NE2	2.30	0.65
64:j3:97:GLU:OE1	64:j3:113:ARG:NH2	2.29	0.65
67:b3:3:LEU:HD13	67:b3:111:LEU:HD13	1.78	0.65
67:b3:76:LEU:HD13	67:b3:94:ARG:HH21	1.61	0.65
2:e2:432:U:H4'	2:e2:433:A:H5''	1.79	0.65
2:e2:1239:C:HO2'	2:e2:1240:G:P	2.19	0.65
2:e2:1294:A:H61	34:T2:226:ARG:HD2	1.60	0.65
2:e2:1701:A:H1'	2:e2:2096:U:H4'	1.78	0.65
2:e2:1739:G:N3	2:e2:1742:A:N6	2.44	0.65
2:e2:1980:G:OP1	2:e2:1980:G:N2	2.24	0.65
2:e2:2352:U:H2'	2:e2:2353:U:C6	2.31	0.65
2:e2:2380:G:N1	2:e2:2425:U:OP1	2.24	0.65
2:e2:4043:G:O2'	2:e2:4048:A:N6	2.30	0.65
2:e2:4755:G:N1	2:e2:4876:U:C4	2.65	0.65
40:02:5:ARG:NH2	40:02:59:ASP:OD2	2.29	0.65
44:42:23:ARG:HE	44:42:212:LYS:HD3	1.61	0.65
45:52:286:LYS:HZ3	45:52:305:THR:HG22	1.60	0.65
49:K3:66:G:H5''	67:b3:133:LEU:HD11	1.78	0.65
49:K3:102:A:H1'	49:K3:356:C:H41	1.60	0.65
49:K3:633:C:H4'	50:s3:13:ARG:HB3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1628:C:H2'	49:K3:1629:C:C6	2.31	0.65
55:a3:160:SER:OG	55:a3:222:ASN:OD1	2.13	0.65
64:j3:165:GLU:OE1	64:j3:167:GLY:N	2.28	0.65
65:J5:11:LEU:HD12	65:J5:74:VAL:HB	1.77	0.65
65:J5:27:ILE:HG22	65:J5:29:PRO:HD2	1.77	0.65
66:N3:99:ILE:HG12	83:M3:108:ILE:HD11	1.76	0.65
72:C3:36:GLU:HB2	72:C3:47:ARG:NH2	2.10	0.65
72:C3:54:VAL:HG13	72:C3:57:LEU:HD12	1.79	0.65
2:e2:700:G:H2'	2:e2:701:G:H8	1.60	0.65
2:e2:1282:G:OP1	12:t2:316:LYS:NZ	2.28	0.65
2:e2:5061:A:H4'	45:52:123:HIS:HE1	1.60	0.65
33:S2:39:THR:HG22	33:S2:41:SER:H	1.62	0.65
37:W2:105:SER:OG	37:W2:153:ASP:OD2	2.14	0.65
47:72:48:VAL:HG11	47:72:95:HIS:HE1	1.62	0.65
49:K3:476:A:HO2'	49:K3:487:U:HO2'	1.43	0.65
49:K3:1540:G:H2'	49:K3:1541:G:C8	2.32	0.65
55:a3:67:SER:OG	55:a3:81:GLY:O	2.13	0.65
55:a3:234:ASP:OD1	55:a3:235:ILE:N	2.28	0.65
70:F3:135:PRO:HD2	70:F3:138:LEU:HD12	1.78	0.65
76:E3:64:TRP:CG	77:H3:23:VAL:HG12	2.31	0.65
2:e2:1224:G:N2	2:e2:1224:G:OP2	2.28	0.65
2:e2:5051:C:H4'	45:52:324:GLY:HA2	1.78	0.65
30:L2:17:TYR:OH	30:L2:98:ARG:NH2	2.29	0.65
39:Y2:50:PHE:HD1	39:Y2:67:LYS:HZ1	1.44	0.65
49:K3:217:A:H61	49:K3:304:C:H42	1.42	0.65
49:K3:936:G:H21	70:F3:155:ASN:HD21	1.43	0.65
49:K3:1473:G:O2'	49:K3:1474:A:H2'	1.95	0.65
49:K3:1599:U:OP1	83:M3:43:LYS:NZ	2.25	0.65
2:e2:276:C:OP2	20:B2:34:THR:HG21	1.96	0.65
2:e2:1711:C:H3'	2:e2:2117:G:H21	1.60	0.65
2:e2:2408:U:H2'	22:D2:17:GLN:HE22	1.60	0.65
2:e2:2621:A:H2'	2:e2:2622:G:H8	1.61	0.65
2:e2:3770:U:H2'	2:e2:3771:C:O2	1.95	0.65
2:e2:3901:A:H61	2:e2:4446:U:H1'	1.61	0.65
2:e2:4759:C:H5'	15:w2:161:LYS:NZ	2.10	0.65
2:e2:4873:G:N2	2:e2:4875:G:O6	2.29	0.65
34:T2:230:HIS:HB2	34:T2:236:PHE:HZ	1.61	0.65
44:42:43:PRO:HB3	44:42:161:LYS:HA	1.77	0.65
49:K3:373:G:OP1	53:G3:137:THR:OG1	2.11	0.65
49:K3:609:U:H2'	49:K3:610:G:H8	1.60	0.65
49:K3:914:U:H4'	79:P3:358:ARG:HH22	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1319:U:H2'	49:K3:1320:G:C8	2.31	0.65
49:K3:1550:G:N3	49:K3:1559:C:H1'	2.12	0.65
59:U3:61:ALA:HB1	59:U3:145:ILE:HD11	1.77	0.65
59:U3:183:LEU:HD13	59:U3:186:ARG:HD3	1.79	0.65
67:b3:57:ASP:HA	67:b3:106:LEU:HG	1.77	0.65
67:b3:185:LEU:O	67:b3:189:ARG:HG2	1.96	0.65
2:e2:173:C:H2'	2:e2:174:C:C6	2.31	0.65
2:e2:218:A:N6	12:t2:175:LYS:HG2	2.12	0.65
2:e2:1359:G:OP1	12:t2:114:ARG:NE	2.29	0.65
2:e2:1712:C:O3'	2:e2:2117:G:N1	2.30	0.65
2:e2:2520:C:H1'	2:e2:2640:G:H21	1.61	0.65
2:e2:4739:C:H2'	2:e2:4740:G:C8	2.32	0.65
2:e2:4877:G:OP1	2:e2:4877:G:N2	2.27	0.65
2:e2:4926:C:N4	2:e2:4927:G:N7	2.45	0.65
2:e2:4929:C:OP1	40:02:114:LYS:NZ	2.30	0.65
2:e2:4944:C:O2	2:e2:4945:G:N2	2.29	0.65
2:e2:4954:G:H2'	2:e2:4955:A:H8	1.62	0.65
18:92:104:VAL:HA	18:92:107:MET:HE3	1.78	0.65
20:B2:33:LEU:HD23	20:B2:38:LYS:HB2	1.79	0.65
29:K2:48:ARG:NH1	29:K2:52:VAL:HA	2.11	0.65
29:K2:177:MET:O	31:M2:11:LYS:NZ	2.29	0.65
49:K3:120:U:O4	49:K3:343:A:N6	2.28	0.65
49:K3:639:C:OP1	50:s3:37:GLN:NE2	2.30	0.65
49:K3:1003:U:OP1	60:V3:165:ARG:NH1	2.29	0.65
64:j3:67:GLN:NE2	81:I5:85:ASN:OD1	2.29	0.65
2:e2:25:A:C8	2:e2:341:G:C8	2.85	0.65
2:e2:4046:A:N6	2:e2:4048:A:N3	2.44	0.65
2:e2:4412:C:OP1	23:E2:98:LYS:NZ	2.30	0.65
29:K2:18:ILE:HB	29:K2:66:ARG:NH2	2.12	0.65
39:Y2:57:VAL:H	39:Y2:62:ILE:HG13	1.60	0.65
49:K3:545:A:H2'	49:K3:546:G:H8	1.62	0.65
49:K3:917:U:H2'	49:K3:918:U:C6	2.32	0.65
49:K3:1466:G:H4'	72:C3:4:VAL:HG22	1.78	0.65
49:K3:1514:G:N3	57:A3:79:HIS:NE2	2.44	0.65
55:a3:173:LEU:HB2	55:a3:175:LYS:NZ	2.11	0.65
59:U3:50:ASN:HA	72:C3:105:MET:HE1	1.79	0.65
67:b3:3:LEU:HA	67:b3:109:LEU:O	1.95	0.65
67:b3:170:ARG:HE	67:b3:172:LYS:HD3	1.62	0.65
2:e2:34:A:H61	85:a7:16:LYS:HZ2	1.45	0.65
2:e2:669:C:H2'	2:e2:670:G:H8	1.62	0.65
2:e2:4211:C:OP2	2:e2:4212:A:O2'	2.13	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4233:A:C5	2:e2:4235:G:C8	2.85	0.65
2:e2:4860:G:O2'	15:w2:169:ARG:NH1	2.30	0.65
6:k2:84:GLN:NE2	6:k2:86:LYS:O	2.29	0.65
29:K2:55:MET:HA	29:K2:87:GLY:HA3	1.79	0.65
49:K3:10:G:O4'	49:K3:1697:A:O2'	2.15	0.65
49:K3:164:A:H2'	49:K3:165:G:C4	2.32	0.65
49:K3:647:U:O4	49:K3:648:A:N6	2.30	0.65
49:K3:1541:G:H2'	49:K3:1542:C:O2	1.97	0.65
53:G3:133:PRO:HB3	53:G3:139:ARG:NH1	2.11	0.65
56:a5:19:PRO:HB2	56:a5:21:VAL:HG22	1.78	0.65
64:j3:64:ILE:HG12	81:I5:18:LEU:HD21	1.79	0.65
85:a7:80:GLU:OE1	85:a7:104:ASN:ND2	2.30	0.65
2:e2:944:A:N1	35:U2:150:ASN:ND2	2.45	0.65
2:e2:966:A:H1'	34:T2:94:THR:HG21	1.79	0.65
2:e2:1070:G:H2'	2:e2:1071:C:C6	2.32	0.65
2:e2:4860:G:H2'	2:e2:4861:G:C8	2.32	0.65
48:82:80:LYS:HE2	48:82:110:TYR:CE1	2.32	0.65
49:K3:985:G:HO2'	49:K3:1001:A:HO2'	1.43	0.65
52:Q3:146:ILE:HD12	75:e3:67:ALA:HB3	1.79	0.65
53:G3:118:ARG:HG2	53:G3:119:ASP:H	1.61	0.65
57:A3:81:ARG:NH1	57:A3:98:ASN:O	2.30	0.65
58:T3:100:VAL:HG12	58:T3:125:VAL:HA	1.77	0.65
64:j3:132:GLY:HA3	64:j3:137:PRO:HA	1.78	0.65
67:b3:153:VAL:HG23	67:b3:179:LEU:HD21	1.79	0.65
2:e2:416:U:O2'	2:e2:2309:G:N2	2.30	0.65
2:e2:3710:G:N3	2:e2:3712:A:N7	2.44	0.65
2:e2:4044:U:O4'	2:e2:4045:G:N2	2.30	0.65
2:e2:4153:C:H2'	2:e2:4154:G:H8	1.62	0.65
15:w2:5:GLN:O	15:w2:31:ARG:NH1	2.30	0.65
17:y2:50:PRO:HD3	27:I2:61:MET:HG3	1.79	0.65
49:K3:73:C:O2'	67:b3:170:ARG:NH2	2.28	0.65
49:K3:301:A:O2'	71:c3:74:ARG:NH1	2.30	0.65
49:K3:482:G:H22	49:K3:484:A:H3'	1.60	0.65
49:K3:808:A:N3	64:j3:221:ARG:NH1	2.45	0.65
49:K3:1384:C:O2'	63:Y3:159:HIS:ND1	2.27	0.65
49:K3:1461:G:H2'	49:K3:1462:U:H2'	1.79	0.65
81:I5:42:GLU:O	81:I5:46:LYS:HG2	1.96	0.65
81:I5:113:ARG:HA	81:I5:116:LYS:HD3	1.78	0.65
2:e2:1511:U:H2'	2:e2:1512:G:H8	1.61	0.64
2:e2:3834:C:H2'	2:e2:3835:C:H6	1.62	0.64
2:e2:4015:C:O2'	2:e2:4017:G:N7	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:r2:53:GLY:O	11:r2:57:MET:N	2.23	0.64
19:A2:120:ALA:HB2	85:a7:48:PRO:HB2	1.79	0.64
25:G2:119:TYR:OH	25:G2:140:GLY:O	2.13	0.64
40:02:27:ILE:HA	40:02:38:VAL:HG12	1.78	0.64
49:K3:545:A:H2'	49:K3:546:G:C8	2.32	0.64
49:K3:729:C:H2'	49:K3:730:C:H5	1.62	0.64
49:K3:1365:G:H2'	49:K3:1366:G:C8	2.31	0.64
49:K3:1455:A:H2'	49:K3:1456:G:C8	2.32	0.64
49:K3:1745:A:C8	67:b3:66:GLY:HA3	2.30	0.64
63:Y3:22:ASN:O	63:Y3:26:THR:HG23	1.97	0.64
63:Y3:124:ARG:NH1	63:Y3:128:GLU:OE2	2.29	0.64
65:J5:3:ARG:NH1	65:J5:4:MET:O	2.30	0.64
67:b3:227:GLN:HE21	67:b3:231:ARG:CZ	2.10	0.64
75:e3:48:HIS:O	75:e3:75:ASN:ND2	2.30	0.64
76:E3:24:LYS:HD3	76:E3:65:ARG:HH11	1.62	0.64
2:e2:659:G:H2'	2:e2:660:A:H8	1.62	0.64
2:e2:751:G:C2	2:e2:752:G:C8	2.85	0.64
2:e2:1379:C:H4'	2:e2:1380:G:H5'	1.79	0.64
2:e2:1502:G:OP1	33:S2:65:ARG:NH2	2.29	0.64
2:e2:1763:C:N3	2:e2:1765:A:O2'	2.22	0.64
12:t2:162:LYS:HA	12:t2:220:ALA:HB2	1.79	0.64
35:U2:108:LEU:HD21	35:U2:135:VAL:HG21	1.78	0.64
48:82:74:SER:OG	48:82:76:VAL:O	2.15	0.64
49:K3:151:C:O2'	67:b3:132:ARG:NE	2.30	0.64
49:K3:560:A:H2'	49:K3:561:A:C8	2.32	0.64
49:K3:1597:C:O2'	49:K3:1598:G:O5'	2.14	0.64
66:N3:144:LEU:HD23	69:f3:49:PRO:HG2	1.77	0.64
71:c3:67:TRP:O	71:c3:71:CYS:N	2.31	0.64
72:C3:60:ARG:NH1	72:C3:68:GLY:HA3	2.12	0.64
75:e3:62:VAL:O	75:e3:65:VAL:HG12	1.97	0.64
82:L3:49:HIS:HD2	82:L3:70:LYS:HA	1.62	0.64
2:e2:232:G:O6	9:o2:61:HIS:N	2.25	0.64
2:e2:1368:A:H2'	2:e2:1369:C:O4'	1.97	0.64
2:e2:4076:G:C2	36:V2:74:LEU:HD11	2.32	0.64
49:K3:1040:G:H2'	49:K3:1041:G:H8	1.62	0.64
49:K3:1049:A:N7	49:K3:1069:U:O4	2.31	0.64
49:K3:1466:G:OP1	72:C3:5:ARG:N	2.30	0.64
49:K3:1619:A:H5''	57:A3:44:ARG:HD2	1.78	0.64
55:a3:20:GLN:HB3	55:a3:34:ALA:HB3	1.78	0.64
59:U3:120:ARG:HA	59:U3:142:LEU:HD22	1.78	0.64
67:b3:50:VAL:HG11	67:b3:111:LEU:HD23	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E1:6284:G:O6	1:E1:6287:A:N1	2.30	0.64
2:e2:377:A:H5'	12:t2:86:ARG:HD3	1.78	0.64
2:e2:409:G:O2'	2:e2:410:A:OP2	2.15	0.64
2:e2:1953:U:H2'	2:e2:1954:G:H8	1.62	0.64
2:e2:2116:G:H5'	35:U2:52:LYS:HE3	1.78	0.64
2:e2:2611:A:H2'	2:e2:2612:G:C8	2.33	0.64
2:e2:3937:C:OP2	2:e2:3938:G:O2'	2.15	0.64
2:e2:4029:C:O2'	2:e2:4033:C:N4	2.30	0.64
2:e2:4088:C:H2'	2:e2:4089:G:H8	1.62	0.64
2:e2:4499:G:N2	2:e2:4529:G:H1'	2.12	0.64
25:G2:117:LYS:HA	25:G2:117:LYS:HE3	1.79	0.64
49:K3:169:U:O2'	67:b3:134:GLY:O	2.14	0.64
49:K3:1101:U:H2'	49:K3:1102:G:C8	2.33	0.64
49:K3:1692:U:H4'	84:O3:92:ARG:HH22	1.61	0.64
66:N3:27:ASP:O	66:N3:110:GLN:NE2	2.31	0.64
83:M3:111:ARG:HG3	83:M3:113:THR:H	1.62	0.64
2:e2:1082:C:C2	2:e2:1218:G:C2	2.85	0.64
2:e2:2010:C:H2'	2:e2:2011:A:H8	1.63	0.64
2:e2:4642:U:H2'	2:e2:4643:G:H8	1.63	0.64
2:e2:4875:G:OP2	2:e2:4875:G:N2	2.25	0.64
14:v2:84:GLU:OE1	28:J2:20:ARG:NH2	2.30	0.64
20:B2:51:ALA:N	20:B2:54:GLU:OE1	2.23	0.64
25:G2:135:ILE:HD13	25:G2:138:GLN:NE2	2.12	0.64
47:72:40:VAL:O	47:72:61:THR:OG1	2.13	0.64
49:K3:683:G:C6	49:K3:1023:A:C6	2.86	0.64
59:U3:6:ASP:HA	59:U3:9:GLN:HB2	1.78	0.64
60:V3:123:ALA:HB3	60:V3:172:MET:HE1	1.80	0.64
63:Y3:207:HIS:ND1	72:C3:8:THR:HA	2.13	0.64
64:j3:179:ASN:OD1	64:j3:231:GLY:N	2.30	0.64
2:e2:25:A:H2'	2:e2:26:C:C6	2.33	0.64
2:e2:121:A:C6	2:e2:153:G:N1	2.66	0.64
2:e2:1864:G:OP2	30:L2:98:ARG:NH1	2.30	0.64
2:e2:3966:A:H5''	2:e2:4049:U:N3	2.13	0.64
2:e2:4730:C:O2'	2:e2:4732:G:N2	2.30	0.64
4:d2:48:G:OP1	25:G2:226:TYR:OH	2.14	0.64
25:G2:289:ARG:HH12	25:G2:293:ARG:HH21	1.45	0.64
49:K3:388:U:H2'	49:K3:389:A:H8	1.62	0.64
49:K3:573:U:N3	49:K3:576:A:OP2	2.30	0.64
49:K3:1412:C:N4	49:K3:1427:C:OP2	2.29	0.64
60:V3:114:VAL:HG22	60:V3:142:PHE:CZ	2.33	0.64
65:J5:115:GLU:HG2	65:J5:118:ARG:NH1	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:c3:73:THR:O	71:c3:74:ARG:NH1	2.30	0.64
78:H5:6:VAL:HG12	78:H5:135:ALA:HB2	1.79	0.64
1:E1:6308:A:H2	1:E1:6363:C:H41	1.45	0.64
1:E1:6381:U:O2'	49:K3:1058:A:OP2	2.13	0.64
2:e2:3946:G:H2'	2:e2:3947:A:C8	2.33	0.64
9:o2:65:GLN:O	9:o2:65:GLN:HG2	1.98	0.64
49:K3:468:A:O5'	67:b3:74:ARG:NH2	2.30	0.64
49:K3:526:A:N1	49:K3:559:G:C6	2.66	0.64
49:K3:1108:G:H21	49:K3:1109:C:H5	1.44	0.64
49:K3:1549:U:OP1	77:H3:34:TYR:OH	2.16	0.64
2:e2:39:A:N7	10:q2:40:HIS:NE2	2.45	0.64
2:e2:1082:C:O2	2:e2:1218:G:C2	2.51	0.64
2:e2:1267:C:O2	2:e2:1268:G:N2	2.30	0.64
2:e2:2702:C:O3'	48:82:113:ARG:NH1	2.29	0.64
2:e2:3873:G:H2'	2:e2:3874:G:H8	1.62	0.64
2:e2:4097:G:H2'	2:e2:4098:A:H8	1.61	0.64
37:W2:103:MET:HB2	37:W2:155:LEU:HB2	1.79	0.64
49:K3:141:A:O2'	67:b3:188:LYS:NZ	2.29	0.64
49:K3:203:G:O6	71:c3:143:LYS:NZ	2.30	0.64
49:K3:409:C:H2'	49:K3:410:G:H8	1.63	0.64
66:N3:146:ARG:NH2	69:f3:57:THR:OG1	2.30	0.64
67:b3:74:ARG:HH21	67:b3:96:SER:HB2	1.62	0.64
72:C3:35:CYS:O	72:C3:39:ALA:HB3	1.98	0.64
80:I3:24:LEU:HB2	80:I3:87:ARG:O	1.98	0.64
85:a7:77:SER:N	85:a7:80:GLU:OE2	2.23	0.64
2:e2:166:C:H2'	2:e2:167:C:C6	2.33	0.64
2:e2:646:G:C2	2:e2:647:G:H1'	2.33	0.64
2:e2:1075:G:H1	2:e2:1235:G:N2	1.96	0.64
2:e2:2614:C:O2'	2:e2:2808:G:OP1	2.16	0.64
9:o2:30:MET:HE3	9:o2:101:PRO:HG3	1.80	0.64
9:o2:111:LEU:HB3	9:o2:116:LYS:HE3	1.80	0.64
17:y2:73:HIS:ND1	17:y2:74:VAL:O	2.30	0.64
24:F2:63:THR:OG1	24:F2:88:CYS:O	2.15	0.64
36:V2:264:LYS:NZ	60:V3:29:ASP:O	2.30	0.64
49:K3:793:G:O5'	49:K3:795:A:O2'	2.16	0.64
49:K3:1611:G:O2'	54:G5:87:GLN:O	2.15	0.64
55:a3:239:LEU:HD22	55:a3:248:LEU:HD21	1.79	0.64
61:W3:137:VAL:HB	61:W3:217:ALA:HA	1.80	0.64
63:Y3:64:ARG:HA	76:E3:93:THR:HG21	1.80	0.64
63:Y3:135:GLU:HG3	63:Y3:153:VAL:HG12	1.80	0.64
66:N3:194:ASP:OD1	66:N3:195:GLU:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1739:G:H2'	2:e2:1740:C:C6	2.32	0.64
2:e2:1820:C:O2'	2:e2:1821:G:O5'	2.14	0.64
2:e2:1941:A:H2'	2:e2:1942:A:C8	2.32	0.64
2:e2:2377:C:N4	2:e2:2381:A:H62	1.96	0.64
2:e2:2431:A:OP2	22:D2:41:ARG:NH2	2.30	0.64
2:e2:2483:G:H1	2:e2:2495:U:H3	1.46	0.64
18:92:5:ILE:HG22	18:92:209:HIS:H	1.62	0.64
29:K2:130:LEU:HD22	29:K2:138:PHE:HZ	1.62	0.64
44:42:102:LYS:NZ	44:42:106:LYS:O	2.30	0.64
49:K3:831:G:H2'	49:K3:832:G:H8	1.63	0.64
49:K3:872:A:O4'	49:K3:915:G:N2	2.30	0.64
52:Q3:118:THR:HB	52:Q3:120:PRO:HD2	1.78	0.64
54:G5:120:HIS:CE1	54:G5:124:ARG:HE	2.16	0.64
61:W3:116:THR:HG23	61:W3:118:ALA:H	1.63	0.64
66:N3:140:ASP:HB2	69:f3:46:VAL:HG12	1.80	0.64
71:c3:99:ASN:H	71:c3:176:ALA:HA	1.63	0.64
2:e2:487:G:H2'	2:e2:488:G:C8	2.33	0.63
2:e2:1080:C:H2'	2:e2:1081:C:H6	1.61	0.63
2:e2:1298:C:H2'	2:e2:1299:G:H8	1.62	0.63
2:e2:1428:U:OP1	2:e2:1696:C:N4	2.31	0.63
2:e2:2018:C:H2'	2:e2:2019:U:C6	2.33	0.63
2:e2:2274:C:H5''	12:t2:312:ARG:HB3	1.78	0.63
2:e2:2491:C:H2'	2:e2:2492:C:C6	2.33	0.63
2:e2:2562:G:N2	2:e2:2565:A:OP2	2.31	0.63
24:F2:23:VAL:HG12	24:F2:70:LEU:HD23	1.79	0.63
34:T2:94:THR:O	34:T2:96:THR:N	2.30	0.63
45:52:213:GLN:OE1	45:52:214:ASP:N	2.30	0.63
49:K3:376:A:H2'	49:K3:377:G:C8	2.34	0.63
49:K3:1798:C:H2'	49:K3:1799:G:O4'	1.98	0.63
65:J5:46:TYR:HA	65:J5:68:ARG:HB2	1.80	0.63
71:c3:48:VAL:HG21	71:c3:54:LYS:HZ3	1.63	0.63
2:e2:38:A:H2	2:e2:41:C:C4	2.16	0.63
2:e2:2589:C:O2'	2:e2:2766:A:O2'	2.16	0.63
2:e2:3969:G:H22	2:e2:3970:G:H21	1.46	0.63
18:92:242:ARG:HD2	18:92:243:THR:H	1.63	0.63
24:F2:67:VAL:HG11	24:F2:82:MET:HE3	1.79	0.63
34:T2:100:GLY:HA3	34:T2:110:VAL:HG22	1.79	0.63
49:K3:129:C:O2'	49:K3:131:C:OP1	2.15	0.63
49:K3:154:U:O2'	67:b3:4:ASN:OD1	2.11	0.63
49:K3:787:G:O5'	49:K3:788:G:OP2	2.11	0.63
55:a3:240:CYS:HG	55:a3:291:TRP:HD1	1.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:425:U:OP1	26:H2:37:LYS:NZ	2.31	0.63
2:e2:1457:G:O2'	33:S2:75:ARG:NH2	2.31	0.63
2:e2:3993:U:H5''	2:e2:3994:G:N7	2.13	0.63
2:e2:4743:G:H2'	2:e2:4744:A:C8	2.34	0.63
3:h2:141:C:H2'	3:h2:142:U:C6	2.33	0.63
16:x2:88:PHE:CD2	16:x2:92:LEU:HD21	2.32	0.63
17:y2:95:PHE:HZ	42:22:20:GLY:HA2	1.63	0.63
39:Y2:35:ARG:HB3	39:Y2:123:ILE:HG23	1.79	0.63
49:K3:880:G:N2	49:K3:906:U:O2	2.32	0.63
49:K3:934:G:N1	49:K3:1008:A:C2	2.65	0.63
49:K3:975:G:H2'	49:K3:976:G:C8	2.33	0.63
49:K3:1533:A:C5	49:K3:1604:G:H1'	2.33	0.63
54:G5:74:PRO:O	54:G5:78:LYS:N	2.31	0.63
55:a3:35:SER:HG	55:a3:39:THR:HG1	1.40	0.63
80:I3:28:ASN:O	80:I3:32:LEU:HG	1.99	0.63
2:e2:37:U:N3	2:e2:38:A:N7	2.46	0.63
2:e2:2506:G:OP2	2:e2:2506:G:N2	2.31	0.63
2:e2:4077:A:H62	2:e2:4169:G:H21	1.46	0.63
4:d2:37:G:N2	4:d2:41:G:N3	2.47	0.63
28:J2:49:VAL:HG22	28:J2:64:MET:HG2	1.80	0.63
44:42:187:VAL:HA	44:42:190:LEU:HD13	1.81	0.63
49:K3:141:A:N6	49:K3:177:G:C5	2.66	0.63
49:K3:156:G:N2	49:K3:163:U:O2	2.32	0.63
49:K3:311:C:O2'	49:K3:338:G:N3	2.31	0.63
49:K3:318:A:N1	49:K3:332:G:N2	2.47	0.63
54:G5:130:ARG:NE	54:G5:134:GLN:OE1	2.30	0.63
55:a3:201:SER:OG	55:a3:206:LEU:N	2.27	0.63
60:V3:103:MET:HG2	60:V3:215:VAL:HB	1.81	0.63
70:F3:89:LYS:O	70:F3:93:LYS:HG2	1.98	0.63
2:e2:480:C:H2'	2:e2:481:G:C8	2.32	0.63
2:e2:659:G:H2'	2:e2:660:A:C8	2.33	0.63
2:e2:1225:U:O4	2:e2:1231:C:O2'	2.16	0.63
2:e2:1321:G:N2	2:e2:3876:A:O4'	2.29	0.63
2:e2:2283:G:H5''	10:q2:18:GLY:HA2	1.81	0.63
9:o2:111:LEU:HA	9:o2:115:ARG:HB3	1.80	0.63
11:r2:60:ASN:O	11:r2:63:LYS:NZ	2.22	0.63
35:U2:66:THR:HG23	35:U2:69:ARG:HH21	1.63	0.63
46:62:45:TRP:HE1	46:62:61:ILE:HD11	1.64	0.63
49:K3:1517:G:H5''	57:A3:123:TYR:CE1	2.32	0.63
49:K3:1542:C:O2'	49:K3:1543:U:O4'	2.17	0.63
49:K3:1592:C:OP1	83:M3:104:ARG:NH2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:T3:91:LEU:HD12	58:T3:94:ILE:HD12	1.81	0.63
72:C3:50:ILE:O	72:C3:54:VAL:HG23	1.98	0.63
80:I3:51:LYS:HB2	80:I3:90:ASP:O	1.99	0.63
2:e2:227:A:N6	2:e2:241:G:N2	2.44	0.63
2:e2:500:G:N2	2:e2:501:C:H41	1.96	0.63
2:e2:1301:C:H4'	2:e2:1302:U:C6	2.33	0.63
2:e2:1597:G:N3	2:e2:1599:A:N6	2.47	0.63
2:e2:2293:U:H2'	2:e2:2294:G:H8	1.62	0.63
2:e2:2425:U:H5'	2:e2:2426:U:C5	2.33	0.63
2:e2:4680:G:H2'	2:e2:4681:A:H8	1.64	0.63
2:e2:4952:G:H2'	2:e2:4953:G:H8	1.63	0.63
2:e2:4991:U:H2'	2:e2:4992:G:C8	2.32	0.63
41:12:117:ASN:OD1	41:12:166:SER:OG	2.13	0.63
49:K3:21:U:H2'	49:K3:22:A:C8	2.32	0.63
49:K3:1351:G:O2'	49:K3:1378:A:N1	2.30	0.63
49:K3:1560:U:H5	49:K3:1575:G:H1	1.47	0.63
61:W3:73:VAL:HG23	61:W3:96:PHE:HZ	1.64	0.63
64:j3:103:TYR:HE1	64:j3:109:PHE:HE2	1.45	0.63
2:e2:365:U:H3	2:e2:376:A:H62	1.47	0.63
2:e2:2078:G:H2'	2:e2:2079:U:C6	2.33	0.63
2:e2:2376:A:H2'	2:e2:2377:C:H6	1.62	0.63
2:e2:2739:C:O2	18:92:174:ARG:NH1	2.30	0.63
2:e2:4405:G:OP2	30:L2:7:ARG:NH2	2.32	0.63
2:e2:4582:C:OP2	45:52:28:LYS:NZ	2.23	0.63
3:h2:67:U:H2'	3:h2:68:G:C8	2.34	0.63
30:L2:98:ARG:HB3	38:X2:120:GLY:HA3	1.81	0.63
49:K3:336:A:H2'	49:K3:337:C:O4'	1.99	0.63
49:K3:382:C:H41	71:c3:5:ARG:HH22	1.47	0.63
55:a3:240:CYS:HG	55:a3:291:TRP:CD1	2.16	0.63
71:c3:120:PRO:HB2	71:c3:127:ALA:HA	1.81	0.63
2:e2:1687:U:H2'	2:e2:1688:G:C8	2.34	0.63
2:e2:5003:U:OP1	45:52:378:ARG:NH2	2.32	0.63
14:v2:26:ASP:OD1	14:v2:27:ARG:N	2.32	0.63
49:K3:57:U:P	81:I5:111:LYS:HZ1	2.22	0.63
49:K3:729:C:H2'	49:K3:730:C:C5	2.34	0.63
49:K3:932:G:H1	49:K3:1009:A:H2	1.45	0.63
53:G3:6:THR:O	53:G3:8:ARG:NH2	2.32	0.63
53:G3:94:HIS:N	53:G3:103:GLU:O	2.32	0.63
57:A3:20:VAL:HG21	57:A3:28:MET:HE1	1.79	0.63
72:C3:32:LYS:HZ3	72:C3:47:ARG:NH1	1.88	0.63
2:e2:370:U:C4	2:e2:1637:A:C6	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:444:G:C6	2:e2:2313:A:C4	2.87	0.63
2:e2:1696:C:O2'	2:e2:1697:G:N7	2.30	0.63
2:e2:2042:A:H61	2:e2:4437:U:H5''	1.63	0.63
8:m2:81:LEU:HD12	8:m2:99:ILE:HD11	1.81	0.63
18:92:14:SER:O	18:92:16:PHE:N	2.32	0.63
28:J2:65:LYS:HZ3	28:J2:77:TYR:HE2	1.47	0.63
29:K2:144:THR:O	29:K2:155:LEU:N	2.31	0.63
41:12:97:SER:O	41:12:100:SER:OG	2.14	0.63
49:K3:664:A:O2'	49:K3:670:A:N1	2.30	0.63
49:K3:1101:U:H2'	49:K3:1102:G:H8	1.64	0.63
49:K3:1693:G:O5'	49:K3:1693:G:H8	1.82	0.63
49:K3:1797:U:H2'	49:K3:1798:C:H6	1.63	0.63
56:a5:100:THR:HG1	56:a5:106:LYS:H	1.45	0.63
2:e2:498:C:H1'	2:e2:499:G:N7	2.14	0.62
2:e2:1931:A:OP1	15:w2:49:ARG:NH1	2.32	0.62
2:e2:1932:G:H2'	2:e2:1933:A:C8	2.34	0.62
2:e2:1958:U:H4'	2:e2:1959:A:H3'	1.81	0.62
2:e2:4215:C:C4	2:e2:4216:G:H1'	2.34	0.62
2:e2:5068:G:N2	2:e2:5069:U:O4	2.31	0.62
25:G2:129:GLU:HB3	25:G2:175:HIS:HE1	1.64	0.62
26:H2:36:ILE:HD12	26:H2:48:LEU:HD21	1.81	0.62
30:L2:27:PRO:HG2	38:X2:124:GLY:H	1.62	0.62
39:Y2:172:GLY:HA2	57:A3:10:ARG:HH12	1.64	0.62
44:42:82:ILE:HD12	44:42:83:PRO:HD2	1.81	0.62
49:K3:1214:A:H2'	49:K3:1215:C:H4'	1.81	0.62
49:K3:1545:A:H4'	68:B3:100:GLY:HA2	1.81	0.62
49:K3:1627:C:H2'	49:K3:1628:C:C6	2.33	0.62
55:a3:25:PRO:HA	55:a3:293:ALA:HB1	1.80	0.62
68:B3:79:GLU:HB2	68:B3:80:PRO:HD3	1.81	0.62
80:I3:31:SER:HA	80:I3:34:LYS:HG2	1.81	0.62
4:d2:22:A:H61	25:G2:264:LYS:H	1.47	0.62
4:d2:60:G:H2'	4:d2:61:G:H8	1.64	0.62
28:J2:48:THR:HG22	28:J2:65:LYS:HB2	1.82	0.62
29:K2:137:PHE:HD2	29:K2:174:LEU:HB3	1.62	0.62
33:S2:88:ASP:OD1	33:S2:89:ASP:N	2.32	0.62
45:52:258:HIS:O	45:52:261:ARG:N	2.29	0.62
49:K3:75:G:N2	49:K3:78:C:OP1	2.31	0.62
49:K3:107:A:H2'	49:K3:108:G:H8	1.63	0.62
49:K3:1291:A:N1	49:K3:1308:U:O2'	2.28	0.62
49:K3:1352:G:H2'	49:K3:1353:A:C8	2.34	0.62
74:D3:80:SER:O	74:D3:82:ASN:ND2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:H3:22:ARG:HG3	77:H3:23:VAL:HG13	1.81	0.62
2:e2:278:G:O2'	2:e2:329:A:N7	2.27	0.62
2:e2:1509:C:H2'	2:e2:1510:G:H8	1.64	0.62
2:e2:2117:G:H4'	35:U2:184:ILE:HG21	1.81	0.62
2:e2:2607:C:H2'	2:e2:2608:G:H8	1.65	0.62
2:e2:4513:A:H2'	2:e2:4514:G:H8	1.64	0.62
26:H2:40:HIS:ND1	26:H2:112:LEU:O	2.32	0.62
43:32:12:SER:OG	43:32:17:CYS:O	2.12	0.62
44:42:33:GLU:HB2	44:42:207:LYS:HB3	1.81	0.62
49:K3:467:G:H2'	49:K3:468:A:O4'	1.99	0.62
49:K3:1288:U:N3	49:K3:1289:U:O4	2.33	0.62
49:K3:1319:U:H2'	49:K3:1320:G:H8	1.64	0.62
49:K3:1789:G:H2'	49:K3:1790:A:H8	1.64	0.62
64:j3:88:ASP:HB3	64:j3:101:LEU:HD22	1.82	0.62
66:N3:95:HIS:O	66:N3:99:ILE:HG13	1.99	0.62
2:e2:752:G:N1	2:e2:911:U:H1'	2.13	0.62
2:e2:928:C:O2'	2:e2:929:A:H5'	1.99	0.62
2:e2:1178:G:N2	2:e2:1181:C:OP1	2.32	0.62
2:e2:4670:C:O2	6:k2:15:ARG:NH1	2.32	0.62
10:q2:100:ILE:HG13	10:q2:123:ILE:HB	1.82	0.62
30:L2:19:LYS:HG2	30:L2:26:VAL:HG21	1.80	0.62
35:U2:191:HIS:O	35:U2:195:THR:OG1	2.17	0.62
44:42:18:LEU:HB3	44:42:180:VAL:HB	1.79	0.62
49:K3:924:G:H2'	49:K3:925:G:O4'	1.98	0.62
49:K3:989:C:H3'	60:V3:116:LYS:HZ1	1.64	0.62
49:K3:1183:A:OP2	62:X3:18:ARG:NH2	2.27	0.62
66:N3:145:ARG:HE	66:N3:149:GLN:HE21	1.46	0.62
73:d3:14:VAL:HG12	73:d3:44:TRP:HB3	1.80	0.62
73:d3:114:VAL:HG11	73:d3:129:LEU:HD11	1.80	0.62
74:D3:15:ARG:NH2	74:D3:31:SER:O	2.28	0.62
76:E3:11:ILE:HA	76:E3:14:LEU:HD12	1.82	0.62
77:H3:10:HIS:CE1	77:H3:12:ARG:HG2	2.34	0.62
2:e2:1920:C:H4'	46:62:160:ARG:HG2	1.80	0.62
2:e2:2411:C:O2'	2:e2:2526:C:O2'	2.14	0.62
2:e2:3942:A:H2'	2:e2:3943:A:H8	1.63	0.62
2:e2:5025:C:N3	2:e2:5028:G:C6	2.67	0.62
9:o2:44:VAL:HG12	9:o2:126:ARG:HD2	1.80	0.62
17:y2:93:ARG:HD3	17:y2:97:ILE:HD12	1.81	0.62
44:42:67:VAL:HG21	44:42:92:LYS:HD3	1.80	0.62
49:K3:107:A:H2'	49:K3:108:G:C8	2.35	0.62
49:K3:223:C:OP1	53:G3:17:PHE:N	2.22	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1091:C:HO2'	70:F3:52:GLY:N	1.98	0.62
49:K3:1334:G:H2'	49:K3:1335:G:C8	2.34	0.62
49:K3:1566:G:O6	78:H5:98:SER:OG	2.10	0.62
61:W3:256:TRP:CE3	65:J5:68:ARG:HD3	2.35	0.62
73:d3:81:LEU:HA	73:d3:84:ILE:HG12	1.81	0.62
2:e2:106:A:H1'	2:e2:336:A:C8	2.30	0.62
2:e2:517:C:H2'	2:e2:518:G:C8	2.34	0.62
2:e2:1708:G:N2	2:e2:1719:A:OP2	2.33	0.62
2:e2:1769:G:H2'	2:e2:1770:A:H8	1.64	0.62
2:e2:1895:A:OP1	35:U2:222:LYS:NZ	2.33	0.62
2:e2:2378:G:N2	2:e2:2381:A:OP2	2.32	0.62
2:e2:4461:C:H1'	2:e2:4516:G:N2	2.14	0.62
3:h2:75:G:H2'	3:h2:76:C:C6	2.35	0.62
3:h2:86:U:O2'	3:h2:87:G:OP2	2.17	0.62
4:d2:27:G:H2'	4:d2:28:C:H6	1.65	0.62
13:u2:57:MET:HE2	13:u2:57:MET:HA	1.82	0.62
23:E2:99:CYS:HB2	23:E2:114:LYS:HZ2	1.64	0.62
31:M2:19:GLY:H	31:M2:58:ILE:HD12	1.63	0.62
41:12:115:VAL:HA	41:12:134:LEU:HD23	1.82	0.62
49:K3:54:A:H3'	49:K3:451:G:H1	1.63	0.62
49:K3:596:U:O2'	49:K3:645:C:O2	2.16	0.62
56:a5:67:ASP:OD1	66:N3:130:ARG:NH2	2.32	0.62
75:e3:58:GLU:HG3	75:e3:60:MET:HE2	1.81	0.62
84:O3:4:LYS:O	84:O3:5:ARG:NH1	2.32	0.62
2:e2:683:C:H4'	2:e2:684:G:H5'	1.81	0.62
2:e2:1772:C:H2'	2:e2:1773:U:O4'	1.99	0.62
2:e2:4349:C:O2'	2:e2:4350:C:OP2	2.17	0.62
2:e2:4723:A:H2'	2:e2:4724:A:H8	1.64	0.62
2:e2:4740:G:H2'	2:e2:4741:C:O4'	2.00	0.62
34:T2:244:GLU:OE1	34:T2:244:GLU:N	2.33	0.62
35:U2:231:ASP:CG	35:U2:235:ARG:HH11	2.07	0.62
40:02:90:ARG:HA	40:02:93:LYS:HD2	1.82	0.62
49:K3:1183:A:H2'	49:K3:1184:G:H8	1.64	0.62
49:K3:1339:U:H2'	49:K3:1340:U:C6	2.34	0.62
49:K3:1613:G:OP2	57:A3:39:ALA:N	2.30	0.62
60:V3:35:ALA:HB2	60:V3:44:ILE:HD11	1.82	0.62
60:V3:181:LEU:HD22	60:V3:182:LYS:HE2	1.81	0.62
61:W3:166:ARG:HH12	61:W3:252:THR:HG21	1.64	0.62
74:D3:28:ASP:O	74:D3:29:HIS:ND1	2.32	0.62
1:E1:6278:A:H3'	1:E1:6279:A:H8	1.65	0.62
2:e2:914:U:H2'	2:e2:915:A:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1562:G:O2'	2:e2:1564:A:N6	2.32	0.62
2:e2:1563:A:H2'	2:e2:1564:A:C4	2.35	0.62
2:e2:2897:G:H2'	2:e2:2898:G:C8	2.35	0.62
2:e2:3967:G:OP1	2:e2:4047:A:N6	2.29	0.62
2:e2:4870:G:N2	2:e2:4870:G:OP2	2.33	0.62
7:l2:2:LYS:HD2	7:l2:15:PRO:HA	1.82	0.62
33:S2:169:SER:HB2	33:S2:174:PHE:CE1	2.34	0.62
49:K3:135:U:H3	49:K3:1760:G:H21	1.46	0.62
49:K3:355:G:OP1	53:G3:105:ARG:NH1	2.30	0.62
49:K3:1531:A:H2'	49:K3:1532:C:H6	1.63	0.62
49:K3:1801:A:H2'	49:K3:1802:C:H6	1.64	0.62
59:U3:53:ARG:NE	59:U3:56:GLU:OE1	2.25	0.62
2:e2:4915:G:H2'	2:e2:4916:G:C8	2.35	0.62
15:w2:110:PRO:HG2	15:w2:111:PRO:HD3	1.81	0.62
25:G2:95:TYR:HA	25:G2:158:LYS:HG2	1.82	0.62
35:U2:41:LEU:O	35:U2:45:ARG:HG3	1.99	0.62
46:62:13:VAL:HA	46:62:28:TYR:O	2.00	0.62
49:K3:891:G:N1	49:K3:893:U:OP2	2.32	0.62
49:K3:1076:G:O6	49:K3:1077:A:N6	2.33	0.62
66:N3:48:TYR:HB3	68:B3:75:TYR:HB3	1.81	0.62
70:F3:53:ARG:NH1	70:F3:58:GLY:O	2.32	0.62
71:c3:165:GLN:HB3	71:c3:171:LEU:HA	1.82	0.62
2:e2:1240:G:N2	32:R2:69:TYR:OH	2.33	0.62
2:e2:1285:U:HO2'	2:e2:1286:C:H6	1.48	0.62
2:e2:2759:G:N3	2:e2:2764:A:H2	1.98	0.62
13:u2:25:TYR:O	13:u2:85:ARG:HD2	2.00	0.62
17:y2:82:MET:SD	17:y2:86:CYS:HB3	2.40	0.62
19:A2:122:LYS:HB2	85:a7:124:LEU:HB2	1.82	0.62
29:K2:171:GLU:O	29:K2:175:LEU:HG	1.99	0.62
42:22:103:ASP:HB2	42:22:106:LEU:HB2	1.82	0.62
49:K3:301:A:H1'	71:c3:72:CYS:HA	1.81	0.62
49:K3:1455:A:H2'	49:K3:1456:G:H8	1.64	0.62
49:K3:1592:C:O2'	68:B3:70:PRO:O	2.17	0.62
60:V3:204:ILE:HG22	60:V3:205:TYR:H	1.63	0.62
70:F3:75:TRP:CD1	70:F3:76:LEU:H	2.18	0.62
73:d3:73:GLU:HA	73:d3:76:ALA:HB3	1.82	0.62
2:e2:1413:C:H2'	2:e2:1414:C:C6	2.35	0.61
2:e2:1914:C:OP2	15:w2:94:ARG:NH2	2.32	0.61
2:e2:2341:A:OP1	12:t2:46:LYS:NZ	2.21	0.61
2:e2:4291:G:H5'	2:e2:4293:U:C6	2.35	0.61
2:e2:4888:U:O2	2:e2:4931:G:N2	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:111:A:O4'	49:K3:351:G:N2	2.32	0.61
49:K3:1063:C:O3'	56:a5:150:ARG:NH1	2.33	0.61
49:K3:1263:U:P	49:K3:1264:C:H2'	2.39	0.61
52:Q3:116:SER:OG	52:Q3:121:LYS:NZ	2.28	0.61
63:Y3:15:GLY:HA3	77:H3:50:ILE:O	1.99	0.61
65:J5:30:CYS:SG	65:J5:31:SER:N	2.73	0.61
66:N3:125:SER:HB2	66:N3:136:ARG:HB3	1.80	0.61
67:b3:229:ALA:O	67:b3:233:ARG:HG3	2.00	0.61
83:M3:57:LYS:O	83:M3:61:GLU:HB3	1.98	0.61
2:e2:40:G:C8	2:e2:41:C:C5	2.88	0.61
2:e2:328:A:H2'	2:e2:329:A:C8	2.36	0.61
2:e2:2612:G:H5''	17:y2:24:ARG:HH21	1.64	0.61
2:e2:4238:G:H2'	2:e2:4239:A:C8	2.33	0.61
2:e2:4592:C:H2'	2:e2:4593:C:H6	1.65	0.61
10:q2:50:PRO:HG2	33:S2:175:GLU:OE1	2.01	0.61
26:H2:18:ARG:NH2	26:H2:147:GLU:OE1	2.29	0.61
29:K2:97:GLU:O	29:K2:101:MET:HG3	2.00	0.61
44:42:24:LYS:HB3	44:42:172:VAL:HG11	1.82	0.61
49:K3:13:C:H4'	49:K3:1356:G:H21	1.64	0.61
49:K3:122:G:H1'	64:j3:146:THR:H	1.64	0.61
49:K3:408:A:O3'	49:K3:409:C:H4'	1.99	0.61
49:K3:414:A:H2'	49:K3:415:A:C8	2.34	0.61
49:K3:431:G:H2'	49:K3:432:G:H8	1.64	0.61
49:K3:604:A:H4'	73:d3:22:LYS:HE3	1.81	0.61
49:K3:1486:A:H2'	49:K3:1487:A:O4'	2.00	0.61
55:a3:212:LYS:NZ	72:C3:22:THR:O	2.26	0.61
59:U3:43:SER:O	72:C3:123:THR:OG1	2.18	0.61
83:M3:96:LEU:HD13	83:M3:115:GLY:HA2	1.82	0.61
31:M2:29:ALA:HB3	31:M2:30:PRO:HD3	1.82	0.61
36:V2:33:GLU:OE1	36:V2:35:ARG:HG3	1.99	0.61
49:K3:114:G:N2	49:K3:350:C:O2'	2.28	0.61
49:K3:549:C:H2'	49:K3:550:C:C6	2.35	0.61
49:K3:581:U:O2	81:I5:34:THR:OG1	2.17	0.61
49:K3:1470:C:N3	49:K3:1471:C:N4	2.48	0.61
54:G5:39:ARG:NH1	78:H5:36:THR:O	2.30	0.61
55:a3:35:SER:OG	55:a3:39:THR:OG1	2.14	0.61
65:J5:86:LEU:HD11	65:J5:113:HIS:HB2	1.82	0.61
66:N3:125:SER:HA	66:N3:137:GLN:O	2.00	0.61
67:b3:48:TYR:CD2	67:b3:113:ILE:HG21	2.34	0.61
70:F3:152:LEU:HD21	70:F3:161:ALA:HB3	1.81	0.61
2:e2:1071:C:OP2	32:R2:65:TYR:OH	2.17	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1192:C:H2'	2:e2:1193:C:C6	2.35	0.61
2:e2:2462:C:OP1	41:12:108:ARG:NH2	2.34	0.61
2:e2:4369:A:H5''	24:F2:65:LYS:HD2	1.81	0.61
12:t2:149:GLU:H	28:J2:72:LYS:HB2	1.65	0.61
45:52:116:ARG:NE	45:52:176:LYS:O	2.33	0.61
49:K3:423:U:O2'	49:K3:651:U:H4'	2.00	0.61
49:K3:1284:A:H61	75:e3:33:ARG:HE	1.45	0.61
49:K3:1361:G:HO2'	49:K3:1380:C:H41	1.47	0.61
58:T3:72:VAL:HG21	58:T3:102:VAL:HG21	1.80	0.61
73:d3:120:ALA:HB1	73:d3:125:HIS:ND1	2.16	0.61
2:e2:674:G:O3'	28:J2:99:LYS:NZ	2.33	0.61
2:e2:1485:C:N4	2:e2:4349:C:N3	2.47	0.61
2:e2:4053:A:P	44:42:211:GLY:H	2.23	0.61
2:e2:4250:G:O2'	39:Y2:129:ASP:OD1	2.19	0.61
2:e2:4605:A:O2'	2:e2:4606:G:OP1	2.17	0.61
3:h2:70:G:H2'	9:o2:118:ILE:HG12	1.80	0.61
3:h2:76:C:H2'	3:h2:77:A:C8	2.36	0.61
14:v2:89:LEU:O	14:v2:92:ASN:ND2	2.33	0.61
33:S2:115:ARG:HB3	33:S2:115:ARG:NH1	2.15	0.61
34:T2:163:LYS:HB3	34:T2:185:ASN:HD21	1.64	0.61
44:42:50:SER:O	44:42:156:LYS:NZ	2.29	0.61
44:42:120:ILE:HG23	44:42:124:LEU:HD21	1.82	0.61
49:K3:1197:G:H2'	49:K3:1198:G:C8	2.35	0.61
58:T3:49:GLY:O	58:T3:99:GLU:HA	2.01	0.61
59:U3:188:THR:HG23	59:U3:189:ILE:HG13	1.82	0.61
67:b3:201:LYS:O	67:b3:204:GLU:HG2	2.01	0.61
84:O3:45:VAL:HG21	84:O3:49:ALA:HB3	1.83	0.61
1:E1:6288:U:O2'	1:E1:6331:G:N3	2.27	0.61
2:e2:1726:U:OP1	35:U2:103:LYS:NZ	2.33	0.61
2:e2:1814:C:H5''	2:e2:1815:G:N2	2.16	0.61
2:e2:4274:A:H2'	2:e2:4275:G:C8	2.34	0.61
6:k2:69:LYS:HE3	6:k2:70:PRO:HD2	1.81	0.61
14:v2:98:GLU:HG2	14:v2:123:THR:HB	1.83	0.61
16:x2:30:ILE:HB	16:x2:33:VAL:HG12	1.83	0.61
33:S2:17:GLU:OE1	33:S2:33:ARG:NH2	2.34	0.61
39:Y2:26:VAL:HG21	39:Y2:33:LEU:HB3	1.82	0.61
44:42:193:LEU:O	44:42:196:LYS:NZ	2.33	0.61
45:52:103:LYS:HB3	45:52:153:MET:HE3	1.83	0.61
49:K3:75:G:H1	67:b3:172:LYS:HA	1.65	0.61
49:K3:1865:C:H5'	49:K3:1866:A:C2	2.35	0.61
55:a3:8:ARG:HB2	55:a3:309:VAL:HG12	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:A3:90:VAL:HG12	57:A3:112:ILE:HG21	1.81	0.61
64:j3:209:HIS:HE1	64:j3:217:SER:HB3	1.65	0.61
1:E1:6284:G:C6	1:E1:6287:A:C6	2.88	0.61
2:e2:363:A:N6	2:e2:377:A:OP2	2.34	0.61
2:e2:1224:G:H2'	2:e2:1233:G:H5'	1.82	0.61
2:e2:1695:U:H4'	2:e2:1718:C:H41	1.66	0.61
2:e2:2263:A:H5''	2:e2:2265:G:H8	1.66	0.61
2:e2:4260:U:H2'	2:e2:4261:C:H6	1.65	0.61
2:e2:4633:G:H21	2:e2:4665:A:H62	1.46	0.61
2:e2:4941:G:N2	2:e2:4943:C:OP2	2.33	0.61
21:C2:17:THR:HG23	21:C2:29:LEU:HD11	1.83	0.61
35:U2:35:LYS:O	35:U2:38:GLN:HG2	2.00	0.61
49:K3:180:G:H5''	49:K3:181:A:H8	1.66	0.61
49:K3:338:G:H2'	49:K3:339:A:H8	1.65	0.61
49:K3:370:G:O2'	49:K3:385:G:O2'	2.14	0.61
49:K3:734:C:OP2	49:K3:735:C:N4	2.32	0.61
49:K3:885:U:H2'	49:K3:886:A:H5''	1.82	0.61
49:K3:1262:C:H42	77:H3:15:GLY:HA3	1.65	0.61
49:K3:1552:G:N2	49:K3:1557:C:HO2'	1.97	0.61
53:G3:96:ILE:HD11	53:G3:103:GLU:HB2	1.82	0.61
61:W3:185:THR:HB	61:W3:194:ARG:HG3	1.83	0.61
66:N3:18:LYS:HB3	66:N3:25:THR:HB	1.83	0.61
66:N3:115:ALA:HA	66:N3:181:ALA:HB2	1.83	0.61
76:E3:44:HIS:HA	76:E3:47:LYS:HG2	1.81	0.61
79:P3:309:SER:HA	79:P3:312:LYS:HE3	1.82	0.61
2:e2:1676:C:O2'	2:e2:3914:U:N3	2.34	0.61
2:e2:2403:A:OP1	17:y2:10:ARG:NH1	2.33	0.61
41:12:198:LEU:HD23	41:12:200:LEU:HD11	1.83	0.61
45:52:154:LYS:NZ	45:52:195:ASP:OD2	2.22	0.61
49:K3:1025:U:OP1	49:K3:1090:C:O2'	2.14	0.61
49:K3:1630:A:H2'	49:K3:1631:U:C6	2.34	0.61
49:K3:1826:G:H2'	49:K3:1827:U:C6	2.36	0.61
54:G5:97:GLN:NE2	54:G5:98:VAL:O	2.33	0.61
55:a3:2:THR:OG1	55:a3:314:ILE:O	2.18	0.61
72:C3:97:GLU:HB3	72:C3:118:GLN:HB2	1.83	0.61
73:d3:113:GLN:HG2	73:d3:149:VAL:HG11	1.83	0.61
75:e3:74:ILE:H	75:e3:74:ILE:HD12	1.66	0.61
1:E1:6350:U:O2	1:E1:6353:C:N4	2.34	0.61
2:e2:409:G:HO2'	2:e2:410:A:P	2.23	0.61
2:e2:461:G:H2'	2:e2:462:G:H8	1.66	0.61
2:e2:1971:G:O6	2:e2:1999:G:N2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3788:C:N4	2:e2:3812:C:O4'	2.34	0.61
3:h2:23:C:OP1	9:o2:15:ARG:NH2	2.33	0.61
3:h2:53:G:O3'	22:D2:40:LYS:NZ	2.31	0.61
33:S2:99:LYS:HG3	33:S2:119:LYS:HB2	1.82	0.61
41:12:128:LYS:HB3	41:12:130:PHE:CE2	2.36	0.61
45:52:234:ARG:HD3	45:52:235:TRP:NE1	2.16	0.61
49:K3:1567:G:H5'	78:H5:33:TRP:HZ2	1.66	0.61
51:13:48:LEU:HD21	51:13:60:ILE:HG21	1.83	0.61
64:j3:183:VAL:HG21	64:j3:188:ASN:HB2	1.81	0.61
71:c3:166:PHE:CD2	71:c3:171:LEU:HD11	2.35	0.61
74:D3:37:ALA:HB1	74:D3:46:PHE:HD1	1.66	0.61
85:a7:25:TRP:CD1	85:a7:28:GLN:HB2	2.36	0.61
1:E1:6385:A:H2'	1:E1:6386:G:C8	2.36	0.61
2:e2:3984:C:H2'	2:e2:3985:C:C5	2.36	0.61
2:e2:4038:C:N4	2:e2:4050:A:OP2	2.21	0.61
2:e2:4239:A:H2'	2:e2:4240:G:C8	2.35	0.61
25:G2:153:THR:HG21	25:G2:160:PHE:CE1	2.36	0.61
26:H2:61:ARG:O	26:H2:64:ASN:ND2	2.32	0.61
29:K2:99:ARG:HD2	29:K2:201:PRO:HB2	1.81	0.61
35:U2:165:ARG:HD2	35:U2:208:TRP:CD1	2.36	0.61
37:W2:100:ARG:NH2	37:W2:197:THR:O	2.34	0.61
49:K3:30:C:H4'	58:T3:137:LYS:HD3	1.83	0.61
49:K3:215:G:OP1	49:K3:215:G:N2	2.29	0.61
49:K3:522:A:H5''	73:d3:145:PRO:HD2	1.82	0.61
49:K3:755:C:H2'	49:K3:756:C:C6	2.36	0.61
49:K3:1564:C:OP2	78:H5:101:ARG:NH2	2.34	0.61
49:K3:1716:C:H2'	49:K3:1717:C:C6	2.36	0.61
69:f3:15:THR:OG1	69:f3:31:ARG:O	2.18	0.61
2:e2:1180:C:H5'	2:e2:1181:C:H5'	1.83	0.60
2:e2:1272:C:H42	2:e2:2124:C:H41	1.48	0.60
2:e2:1349:G:OP2	33:S2:56:THR:OG1	2.11	0.60
2:e2:1753:G:O2'	2:e2:1754:U:O4'	2.19	0.60
2:e2:3717:A:N7	2:e2:3736:A:N6	2.49	0.60
2:e2:3760:A:N1	49:K3:1709:G:O2'	2.33	0.60
17:y2:82:MET:HB3	17:y2:86:CYS:HB2	1.83	0.60
49:K3:190:G:O2'	49:K3:209:A:N6	2.29	0.60
49:K3:640:A:H2'	49:K3:641:A:C8	2.35	0.60
49:K3:1209:A:N3	84:O3:85:ARG:NH1	2.48	0.60
55:a3:220:ASP:HB2	55:a3:225:LYS:HG2	1.82	0.60
60:V3:208:HIS:NE2	60:V3:209:ASP:OD1	2.34	0.60
72:C3:100:PRO:HG3	72:C3:117:LEU:HG	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:966:A:H5'	34:T2:96:THR:HG21	1.83	0.60
2:e2:1359:G:O6	2:e2:1378:C:N4	2.34	0.60
2:e2:1446:C:H2'	2:e2:1447:C:C6	2.36	0.60
2:e2:1834:U:H4'	2:e2:1835:G:C5	2.35	0.60
2:e2:2423:A:H2'	2:e2:2424:G:O4'	2.01	0.60
2:e2:4029:C:H2'	2:e2:4031:U:H4'	1.83	0.60
2:e2:4137:C:H2'	2:e2:4138:C:C6	2.36	0.60
45:52:86:VAL:HG12	45:52:164:ALA:HB2	1.83	0.60
46:62:160:ARG:NH1	46:62:164:LYS:HG3	2.16	0.60
49:K3:158:A:H2	49:K3:463:C:O2	1.83	0.60
79:P3:304:VAL:HG21	79:P3:335:GLN:H	1.65	0.60
84:O3:38:LYS:HE2	84:O3:40:VAL:HG22	1.83	0.60
2:e2:1965:C:H2'	2:e2:1966:A:H5'	1.83	0.60
2:e2:4749:C:H1'	2:e2:4750:G:C8	2.36	0.60
2:e2:4761:G:N2	2:e2:4765:G:O2'	2.34	0.60
3:h2:132:G:H2'	3:h2:133:G:H8	1.67	0.60
6:k2:23:GLY:HA2	6:k2:38:TYR:HE1	1.66	0.60
9:o2:88:GLU:HG3	9:o2:90:ALA:H	1.65	0.60
16:x2:6:TRP:HB3	16:x2:104:MET:HG2	1.83	0.60
42:22:100:VAL:HG23	42:22:106:LEU:HB3	1.83	0.60
45:52:26:ARG:HD2	45:52:181:MET:HE3	1.82	0.60
45:52:286:LYS:H	45:52:332:MET:HB3	1.66	0.60
49:K3:615:C:N4	49:K3:625:G:O2'	2.34	0.60
49:K3:634:A:H2'	49:K3:635:G:C8	2.36	0.60
49:K3:1347:U:H2'	49:K3:1348:G:C8	2.36	0.60
49:K3:1543:U:O2'	68:B3:68:ILE:O	2.17	0.60
64:j3:70:ILE:HB	64:j3:77:ARG:HE	1.66	0.60
64:j3:191:ARG:HE	64:j3:245:ARG:HD3	1.67	0.60
68:B3:84:LEU:HB2	68:B3:89:PHE:HE2	1.66	0.60
79:P3:335:GLN:C	79:P3:336:ARG:HD2	2.26	0.60
2:e2:713:C:N3	2:e2:955:G:N2	2.38	0.60
2:e2:1505:C:H2'	2:e2:1506:G:C8	2.36	0.60
2:e2:2437:C:OP2	2:e2:2528:G:O2'	2.17	0.60
2:e2:2491:C:H2'	2:e2:2492:C:H6	1.66	0.60
2:e2:2637:U:OP1	17:y2:28:ASN:ND2	2.35	0.60
4:d2:64:G:OP1	38:X2:204:GLY:N	2.34	0.60
5:p2:56:LEU:HD12	5:p2:59:SER:HB3	1.83	0.60
9:o2:88:GLU:OE2	9:o2:92:GLY:N	2.24	0.60
12:t2:103:ALA:O	12:t2:105:THR:N	2.33	0.60
19:A2:73:TYR:O	19:A2:79:LYS:NZ	2.34	0.60
37:W2:181:LYS:HB3	37:W2:186:PHE:HD2	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y2:123:ILE:HG22	39:Y2:124:GLY:H	1.65	0.60
48:82:105:ASN:OD1	48:82:106:SER:N	2.34	0.60
49:K3:17:C:H2'	49:K3:18:C:H6	1.65	0.60
49:K3:23:G:O2'	49:K3:416:U:OP1	2.18	0.60
49:K3:678:U:OP1	70:F3:177:ARG:NH2	2.34	0.60
49:K3:1372:U:H5'	49:K3:1386:A:C2	2.37	0.60
49:K3:1762:C:H2'	49:K3:1763:G:H8	1.67	0.60
71:c3:136:ILE:HG13	71:c3:149:TYR:HE2	1.67	0.60
2:e2:1804:A:N6	2:e2:1833:G:H4'	2.17	0.60
8:m2:129:ARG:HD3	8:m2:135:LYS:HE2	1.81	0.60
32:R2:55:ARG:NH2	35:U2:46:ARG:HH22	1.99	0.60
49:K3:148:U:N3	49:K3:170:A:N6	2.28	0.60
49:K3:441:C:OP1	71:c3:2:GLY:N	2.35	0.60
49:K3:556:U:O2'	49:K3:558:G:OP2	2.16	0.60
60:V3:66:VAL:HB	60:V3:87:ILE:HG22	1.82	0.60
66:N3:85:LYS:O	66:N3:89:THR:OG1	2.18	0.60
69:f3:5:ARG:HE	69:f3:6:VAL:N	1.99	0.60
76:E3:5:LYS:NZ	76:E3:82:TYR:OH	2.34	0.60
2:e2:128:C:H2'	2:e2:129:C:H6	1.67	0.60
2:e2:151:G:OP2	41:12:4:TYR:OH	2.14	0.60
2:e2:153:G:H2'	2:e2:154:G:H8	1.66	0.60
2:e2:700:G:H2'	2:e2:701:G:C8	2.36	0.60
2:e2:1698:C:N4	2:e2:2086:C:OP1	2.33	0.60
2:e2:1712:C:H5''	2:e2:2118:C:H42	1.65	0.60
2:e2:1854:G:O6	2:e2:1879:G:N2	2.34	0.60
2:e2:2452:G:H21	2:e2:2507:A:H62	1.48	0.60
2:e2:3796:U:HO2'	49:K3:1720:U:HO2'	1.46	0.60
2:e2:3980:G:H2'	2:e2:3981:G:O4'	2.00	0.60
10:q2:47:LYS:HG3	10:q2:48:TYR:CD2	2.37	0.60
12:t2:319:LEU:HD11	35:U2:151:GLU:HA	1.84	0.60
15:w2:129:LEU:HD21	15:w2:133:ARG:HB2	1.83	0.60
17:y2:97:ILE:O	17:y2:101:LYS:HG2	2.02	0.60
33:S2:81:VAL:HG13	33:S2:138:LEU:HD13	1.83	0.60
35:U2:208:TRP:CD1	35:U2:209:PRO:HD2	2.36	0.60
49:K3:28:U:H2'	49:K3:29:G:H8	1.66	0.60
49:K3:147:A:N1	49:K3:173:A:N6	2.50	0.60
49:K3:148:U:C2	49:K3:170:A:N6	2.69	0.60
49:K3:559:G:O2'	49:K3:560:A:O4'	2.20	0.60
49:K3:648:A:H2'	49:K3:649:U:C6	2.37	0.60
49:K3:798:G:N2	49:K3:798:G:OP2	2.35	0.60
49:K3:1629:C:H3'	49:K3:1630:A:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:a5:31:CYS:HB2	56:a5:44:VAL:HG22	1.83	0.60
56:a5:100:THR:OG1	56:a5:106:LYS:N	2.24	0.60
66:N3:126:THR:O	66:N3:136:ARG:HA	2.01	0.60
2:e2:1896:A:OP1	2:e2:2070:A:O2'	2.14	0.60
2:e2:4000:G:N7	2:e2:4001:C:N4	2.49	0.60
2:e2:4970:C:H1'	2:e2:5064:G:N2	2.16	0.60
5:p2:52:LYS:HA	5:p2:55:LYS:HE2	1.82	0.60
53:G3:58:LYS:O	53:G3:132:ARG:NH2	2.34	0.60
83:M3:63:PRO:O	83:M3:111:ARG:NH1	2.34	0.60
2:e2:1285:U:OP2	34:T2:133:LYS:NZ	2.35	0.60
2:e2:1525:A:O2'	2:e2:3916:G:O2'	2.19	0.60
2:e2:2018:C:O2'	29:K2:57:LYS:O	2.19	0.60
2:e2:2272:C:H2'	2:e2:2273:G:H8	1.66	0.60
2:e2:2360:A:O2'	26:H2:27:LYS:NZ	2.35	0.60
2:e2:3796:U:O2'	49:K3:1720:U:O2'	2.20	0.60
2:e2:4009:C:H2'	2:e2:4010:C:H6	1.65	0.60
2:e2:4053:A:H5''	44:42:213:PRO:HG3	1.83	0.60
2:e2:4473:A:O3'	23:E2:122:ARG:NH2	2.32	0.60
5:p2:22:SER:OG	5:p2:66:VAL:O	2.18	0.60
29:K2:143:ILE:HG23	29:K2:156:SER:HB3	1.83	0.60
44:42:6:SER:OG	44:42:213:PRO:O	2.20	0.60
44:42:69:GLY:O	44:42:73:HIS:HB2	2.02	0.60
49:K3:10:G:O2'	61:W3:120:GLN:NE2	2.34	0.60
49:K3:615:C:O3'	50:s3:8:ARG:NH2	2.35	0.60
49:K3:1049:A:H62	49:K3:1069:U:H3	1.48	0.60
49:K3:1615:U:HO2'	49:K3:1616:U:H6	1.50	0.60
63:Y3:105:LEU:HA	63:Y3:108:LYS:HG2	1.83	0.60
64:j3:98:ASN:HD22	64:j3:116:PRO:HD3	1.66	0.60
78:H5:126:GLN:O	78:H5:129:ARG:HG2	2.01	0.60
78:H5:126:GLN:HA	78:H5:129:ARG:HE	1.67	0.60
2:e2:225:G:P	12:t2:222:ARG:HH21	2.25	0.60
2:e2:229:G:H2'	2:e2:230:G:H8	1.67	0.60
2:e2:517:C:N4	2:e2:639:U:O4	2.34	0.60
2:e2:1251:C:H41	2:e2:1255:A:H2	1.49	0.60
2:e2:1400:G:O3'	11:r2:52:LYS:NZ	2.34	0.60
2:e2:2575:U:H3'	42:22:48:ARG:HH22	1.66	0.60
2:e2:3763:A:H8	2:e2:3764:U:C6	2.20	0.60
2:e2:3900:G:OP1	2:e2:3901:A:O2'	2.15	0.60
2:e2:4977:A:H2'	2:e2:4978:G:O4'	2.02	0.60
21:C2:21:ARG:HE	21:C2:39:TYR:HA	1.67	0.60
22:D2:12:PHE:HB3	22:D2:16:LYS:NZ	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:G2:76:CYS:SG	25:G2:77:ALA:N	2.75	0.60
49:K3:388:U:H2'	49:K3:389:A:C8	2.36	0.60
49:K3:391:C:H2'	49:K3:392:A:H8	1.67	0.60
49:K3:1736:G:O6	49:K3:1799:G:N2	2.35	0.60
55:a3:149:GLU:HB2	55:a3:170:TRP:HB2	1.84	0.60
55:a3:199:THR:O	55:a3:207:CYS:HA	2.01	0.60
60:V3:108:ASP:OD1	60:V3:109:LYS:N	2.35	0.60
71:c3:166:PHE:CE2	71:c3:171:LEU:HD21	2.37	0.60
79:P3:304:VAL:HG21	79:P3:334:ALA:HA	1.84	0.60
2:e2:2402:G:H1'	17:y2:12:SER:HB3	1.83	0.60
2:e2:2422:C:OP1	26:H2:127:ARG:NH1	2.30	0.60
2:e2:2445:C:N4	2:e2:2446:C:H41	1.99	0.60
2:e2:3973:G:N2	2:e2:4032:G:H1	1.99	0.60
2:e2:4249:G:H1'	39:Y2:100:SER:HB3	1.84	0.60
2:e2:4676:G:OP1	45:52:281:ASN:ND2	2.35	0.60
6:k2:99:GLU:HB3	7:l2:24:THR:HG23	1.84	0.60
31:M2:18:THR:HG23	31:M2:21:GLU:HB2	1.83	0.60
44:42:95:LYS:HA	44:42:98:LYS:HD3	1.84	0.60
46:62:93:MET:HE2	46:62:95:ARG:HE	1.66	0.60
49:K3:983:A:OP1	49:K3:1073:U:O2'	2.20	0.60
49:K3:1276:A:OP2	49:K3:1321:G:N2	2.35	0.60
49:K3:1700:C:N3	49:K3:1834:A:N7	2.50	0.60
56:a5:91:THR:O	56:a5:125:LYS:HB2	2.02	0.60
61:W3:206:SER:HB3	61:W3:210:PRO:HB2	1.83	0.60
64:j3:199:GLU:HG2	64:j3:201:HIS:HB3	1.83	0.60
83:M3:51:ASP:O	83:M3:55:TYR:N	2.34	0.60
1:E1:6281:C:O2	1:E1:6282:A:N7	2.35	0.59
2:e2:257:C:H2'	2:e2:258:G:C8	2.35	0.59
2:e2:370:U:H3	2:e2:1637:A:N6	1.98	0.59
2:e2:2411:C:H2'	2:e2:2412:A:H8	1.66	0.59
29:K2:14:PHE:CD1	29:K2:62:ARG:HB2	2.36	0.59
29:K2:45:MET:HA	31:M2:122:ALA:H	1.67	0.59
31:M2:131:GLU:HA	31:M2:154:ASP:HB2	1.83	0.59
49:K3:333:G:O6	67:b3:190:ARG:NH2	2.22	0.59
49:K3:620:G:N2	49:K3:647:U:OP1	2.35	0.59
49:K3:934:G:C6	49:K3:1008:A:N1	2.69	0.59
49:K3:1627:C:O2'	78:H5:41:LYS:NZ	2.25	0.59
73:d3:44:TRP:CD1	73:d3:47:LYS:HZ1	2.20	0.59
2:e2:2289:C:O2'	2:e2:2290:C:OP2	2.20	0.59
2:e2:3948:C:H2'	2:e2:3949:A:C8	2.35	0.59
2:e2:4912:G:H3'	2:e2:4913:G:C2	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:h2:125:C:O2	3:h2:126:C:O2'	2.17	0.59
8:m2:44:PRO:HA	36:V2:55:VAL:HG12	1.84	0.59
17:y2:40:LYS:HD2	17:y2:43:LYS:HZ1	1.66	0.59
34:T2:230:HIS:HB2	34:T2:236:PHE:CZ	2.37	0.59
36:V2:182:CYS:HA	36:V2:226:TYR:CD2	2.37	0.59
48:82:43:LEU:HD22	48:82:47:ILE:HD11	1.85	0.59
49:K3:611:G:H21	50:s3:12:VAL:HB	1.67	0.59
49:K3:1255:G:H5''	77:H3:40:ARG:NH2	2.16	0.59
49:K3:1533:A:H2'	49:K3:1536:G:H1'	1.84	0.59
49:K3:1598:G:H4'	49:K3:1600:G:N7	2.17	0.59
49:K3:1707:U:OP1	62:X3:9:ARG:NH1	2.35	0.59
55:a3:206:LEU:HB3	55:a3:218:LEU:HD23	1.83	0.59
59:U3:182:VAL:O	59:U3:186:ARG:HG3	2.02	0.59
65:J5:90:GLN:OE1	65:J5:113:HIS:NE2	2.33	0.59
2:e2:1505:C:H2'	2:e2:1506:G:H8	1.67	0.59
2:e2:3938:G:OP2	41:12:20:ARG:NH1	2.35	0.59
2:e2:4373:G:H4'	2:e2:4374:U:H5''	1.84	0.59
2:e2:4680:G:H2'	2:e2:4681:A:C8	2.38	0.59
5:p2:22:SER:OG	5:p2:23:VAL:N	2.34	0.59
34:T2:229:ARG:HH22	34:T2:242:LYS:HB2	1.67	0.59
43:32:25:ASP:OD1	43:32:28:GLU:N	2.35	0.59
49:K3:24:C:O2'	49:K3:415:A:O2'	2.14	0.59
49:K3:187:G:H2'	49:K3:188:C:C6	2.37	0.59
49:K3:231:A:H2'	49:K3:232:A:C8	2.35	0.59
49:K3:1402:A:O5'	80:I3:52:GLY:N	2.35	0.59
49:K3:1623:A:H3'	54:G5:132:ARG:HB2	1.84	0.59
49:K3:1680:G:O2'	69:f3:20:ARG:O	2.20	0.59
58:T3:22:TRP:O	58:T3:23:HIS:ND1	2.35	0.59
60:V3:35:ALA:O	60:V3:42:ARG:NH2	2.34	0.59
61:W3:85:SER:OG	74:D3:26:ALA:O	2.17	0.59
67:b3:212:LEU:HA	67:b3:215:LYS:HZ1	1.68	0.59
71:c3:66:SER:HA	71:c3:73:THR:HA	1.84	0.59
2:e2:1284:G:N1	2:e2:2075:G:OP1	2.24	0.59
2:e2:1656:U:OP2	10:q2:26:ARG:NH2	2.35	0.59
2:e2:1882:G:O2'	14:v2:48:ARG:O	2.20	0.59
2:e2:2363:A:N3	2:e2:3860:A:C6	2.70	0.59
2:e2:2758:G:O2'	2:e2:2759:G:O4'	2.19	0.59
2:e2:2837:U:OP1	45:52:249:ARG:HD3	2.03	0.59
2:e2:4522:G:O2'	2:e2:4525:C:OP2	2.17	0.59
2:e2:4704:C:H2'	2:e2:4705:A:H8	1.65	0.59
2:e2:4734:A:H2'	2:e2:4735:G:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:92:159:SER:O	18:92:162:ASN:ND2	2.35	0.59
29:K2:143:ILE:HG21	29:K2:154:ILE:HD12	1.85	0.59
49:K3:819:G:H4'	64:j3:256:LEU:HD11	1.84	0.59
49:K3:1095:C:O2'	65:J5:20:ARG:NH1	2.36	0.59
49:K3:1310:U:O2	49:K3:1312:G:N2	2.36	0.59
49:K3:1652:G:H2'	49:K3:1653:U:O4'	2.02	0.59
60:V3:101:HIS:HA	60:V3:217:MET:HE2	1.85	0.59
64:j3:68:ARG:NH2	64:j3:77:ARG:O	2.35	0.59
2:e2:159:C:OP1	20:B2:27:SER:OG	2.19	0.59
2:e2:279:A:OP2	41:12:50:ARG:NH2	2.36	0.59
2:e2:438:G:N1	2:e2:1311:G:O6	2.35	0.59
2:e2:470:A:OP2	2:e2:683:C:N4	2.35	0.59
2:e2:490:C:HO2'	2:e2:491:G:H8	1.50	0.59
2:e2:517:C:H2'	2:e2:518:G:H8	1.68	0.59
2:e2:664:G:H5'	2:e2:666:G:H1	1.67	0.59
2:e2:1379:C:H1'	2:e2:1380:G:C8	2.38	0.59
2:e2:1694:C:H41	33:S2:14:ARG:NH1	2.00	0.59
2:e2:1784:U:H1'	30:L2:92:HIS:HD2	1.67	0.59
2:e2:1979:U:H3'	2:e2:1980:G:N2	2.16	0.59
2:e2:2664:G:N1	2:e2:2671:C:N3	2.50	0.59
2:e2:3707:U:H2'	2:e2:3708:C:H6	1.66	0.59
11:r2:69:ALA:O	11:r2:73:LYS:NZ	2.35	0.59
35:U2:95:ARG:HD3	35:U2:138:TYR:CE1	2.38	0.59
37:W2:52:ILE:HG21	37:W2:84:ILE:HD12	1.85	0.59
49:K3:493:A:H4'	81:I5:89:HIS:CE1	2.37	0.59
49:K3:1111:U:H3'	49:K3:1112:U:H6	1.68	0.59
51:13:17:ARG:HB3	51:13:104:ILE:HG23	1.84	0.59
64:j3:97:GLU:HG2	64:j3:113:ARG:HH12	1.68	0.59
67:b3:48:TYR:HD2	67:b3:113:ILE:HG21	1.67	0.59
71:c3:99:ASN:N	71:c3:175:ILE:O	2.35	0.59
79:P3:383:ARG:NH1	79:P3:384:VAL:O	2.36	0.59
82:L3:49:HIS:CD2	82:L3:70:LYS:HA	2.36	0.59
2:e2:13:U:O4	3:h2:115:G:N2	2.35	0.59
2:e2:189:G:H2'	2:e2:190:G:H8	1.67	0.59
2:e2:455:C:H2'	14:v2:5:ARG:HH22	1.66	0.59
2:e2:752:G:O6	2:e2:911:U:O2	2.12	0.59
2:e2:1825:A:H2'	2:e2:1826:G:H8	1.67	0.59
2:e2:1887:A:O2'	2:e2:1888:U:OP1	2.20	0.59
2:e2:2007:U:O4'	2:e2:2010:C:N4	2.36	0.59
2:e2:3692:A:H2	27:I2:19:GLY:HA2	1.67	0.59
2:e2:3910:C:H2'	2:e2:3911:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:k2:85:ARG:HD3	6:k2:99:GLU:O	2.02	0.59
18:92:242:ARG:HD2	18:92:243:THR:N	2.17	0.59
29:K2:48:ARG:HH11	29:K2:52:VAL:HA	1.68	0.59
34:T2:102:ASP:N	34:T2:108:ARG:HG3	2.17	0.59
42:22:3:LYS:NZ	42:22:30:ASP:OD2	2.25	0.59
49:K3:399:C:OP2	58:T3:11:ARG:NH2	2.36	0.59
49:K3:654:A:OP2	49:K3:655:A:O2'	2.20	0.59
49:K3:1209:A:O2'	84:O3:85:ARG:NE	2.32	0.59
49:K3:1548:G:H2'	49:K3:1549:U:C6	2.38	0.59
49:K3:1855:G:H2'	49:K3:1856:C:C6	2.38	0.59
55:a3:240:CYS:SG	55:a3:291:TRP:HD1	2.24	0.59
67:b3:56:ASN:HD22	67:b3:62:PRO:HA	1.67	0.59
67:b3:64:LYS:HG2	67:b3:65:GLN:H	1.68	0.59
73:d3:79:ARG:HA	73:d3:82:VAL:HG12	1.83	0.59
2:e2:2:G:H2'	2:e2:3:C:H6	1.67	0.59
2:e2:278:G:OP1	41:12:12:ARG:NH2	2.35	0.59
2:e2:1472:C:H2'	2:e2:1473:U:H6	1.66	0.59
2:e2:1927:C:N4	2:e2:2053:U:O2	2.36	0.59
2:e2:1998:A:H61	29:K2:40:MET:HG2	1.67	0.59
2:e2:4080:C:O2'	18:92:119:LYS:NZ	2.30	0.59
13:u2:93:ASN:HB3	13:u2:96:GLU:O	2.02	0.59
33:S2:6:ARG:HE	33:S2:8:ASN:ND2	2.01	0.59
33:S2:76:GLU:N	33:S2:76:GLU:OE1	2.36	0.59
35:U2:95:ARG:NH1	35:U2:223:THR:OG1	2.29	0.59
35:U2:174:ILE:H	35:U2:174:ILE:HD12	1.67	0.59
44:42:94:ASN:OD1	44:42:95:LYS:N	2.33	0.59
49:K3:527:C:H2'	49:K3:528:A:O4'	2.02	0.59
49:K3:999:G:N7	84:O3:16:GLY:HA3	2.18	0.59
49:K3:1139:C:H5	49:K3:1149:A:H62	1.49	0.59
49:K3:1337:C:H2'	49:K3:1338:G:C8	2.36	0.59
49:K3:1600:G:H5'	83:M3:43:LYS:HB2	1.85	0.59
49:K3:1797:U:H2'	49:K3:1798:C:C6	2.38	0.59
53:G3:57:ASP:HB3	53:G3:60:CYS:HB2	1.82	0.59
60:V3:82:ARG:NH2	60:V3:189:ILE:O	2.36	0.59
60:V3:143:THR:HB	60:V3:205:TYR:CE1	2.37	0.59
60:V3:169:MET:O	60:V3:173:THR:HG23	2.01	0.59
63:Y3:48:ILE:HD13	63:Y3:84:VAL:HG13	1.83	0.59
71:c3:82:VAL:HG22	71:c3:202:ILE:HD13	1.83	0.59
73:d3:109:ARG:HB2	73:d3:111:GLN:HG3	1.85	0.59
2:e2:52:G:P	21:C2:48:ASN:HD22	2.25	0.59
2:e2:149:A:N3	2:e2:151:G:N1	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1082:C:C2	2:e2:1218:G:N1	2.70	0.59
2:e2:2368:A:O2'	2:e2:4656:A:N6	2.35	0.59
2:e2:4453:C:C2	2:e2:4529:G:N2	2.71	0.59
2:e2:4888:U:H2'	2:e2:4889:G:H8	1.67	0.59
3:h2:27:U:H2'	3:h2:28:C:C6	2.37	0.59
4:d2:87:G:N2	4:d2:90:A:OP2	2.36	0.59
12:t2:360:ALA:HA	12:t2:363:ASP:HB2	1.85	0.59
36:V2:88:ASP:O	36:V2:91:THR:OG1	2.19	0.59
39:Y2:54:ARG:O	39:Y2:64:ARG:NH2	2.30	0.59
47:72:39:ILE:O	47:72:99:SER:OG	2.20	0.59
49:K3:355:G:H5''	53:G3:105:ARG:NH1	2.17	0.59
49:K3:863:U:O2	65:J5:124:LYS:NZ	2.33	0.59
49:K3:1096:G:H2'	49:K3:1097:G:C8	2.37	0.59
49:K3:1251:A:H61	68:B3:172:ARG:NE	2.00	0.59
55:a3:292:SER:HB2	55:a3:297:THR:HG22	1.84	0.59
64:j3:86:PHE:CD2	64:j3:87:MET:HG3	2.38	0.59
72:C3:98:VAL:O	72:C3:118:GLN:N	2.35	0.59
1:E1:6371:A:N7	1:E1:6384:A:N1	2.51	0.59
2:e2:413:G:P	22:D2:36:ARG:HH12	2.25	0.59
2:e2:969:C:N3	2:e2:2256:C:O2'	2.32	0.59
2:e2:4572:U:H2'	2:e2:4573:G:C8	2.38	0.59
2:e2:4980:C:OP2	2:e2:4981:G:N2	2.31	0.59
18:92:234:LYS:HG2	18:92:238:ILE:HD12	1.85	0.59
26:H2:39:MET:O	26:H2:114:ILE:HG22	2.03	0.59
46:62:160:ARG:HH12	46:62:164:LYS:HG3	1.68	0.59
49:K3:562:U:OP2	73:d3:172:ARG:NH2	2.34	0.59
49:K3:917:U:H1'	79:P3:356:ARG:NE	2.17	0.59
49:K3:923:G:H2'	49:K3:924:G:C8	2.38	0.59
51:13:18:LEU:HD12	51:13:22:MET:HE3	1.84	0.59
63:Y3:5:ILE:HD12	63:Y3:9:ARG:HB3	1.85	0.59
73:d3:13:TYR:HB3	73:d3:41:ARG:HG3	1.85	0.59
74:D3:40:ASP:OD1	74:D3:45:ARG:N	2.36	0.59
2:e2:946:C:OP1	12:t2:342:ARG:NH1	2.36	0.59
2:e2:3969:G:H22	2:e2:3970:G:N2	2.00	0.59
2:e2:4053:A:OP1	44:42:211:GLY:N	2.36	0.59
2:e2:4755:G:C2	2:e2:4876:U:C4	2.91	0.59
12:t2:152:LEU:HD21	12:t2:174:LEU:HD23	1.85	0.59
20:B2:53:TYR:OH	20:B2:86:LYS:NZ	2.35	0.59
25:G2:291:GLN:NE2	38:X2:212:LEU:HD22	2.18	0.59
34:T2:108:ARG:N	34:T2:108:ARG:HD2	2.17	0.59
34:T2:217:ASP:HB3	34:T2:221:LYS:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:32:84:THR:HG22	43:32:86:ASN:H	1.68	0.59
45:52:357:ARG:O	45:52:361:GLU:HG2	2.03	0.59
49:K3:7:G:H5''	49:K3:8:U:OP2	2.03	0.59
49:K3:372:U:O2'	49:K3:394:G:O2'	2.10	0.59
49:K3:1113:A:O2'	49:K3:1114:U:O4'	2.16	0.59
49:K3:1515:G:H2'	49:K3:1516:G:H8	1.67	0.59
49:K3:1859:A:OP1	84:O3:10:ARG:NH2	2.32	0.59
55:a3:292:SER:HB3	55:a3:295:GLY:H	1.67	0.59
57:A3:18:ARG:HH22	57:A3:38:SER:HB2	1.68	0.59
60:V3:182:LYS:HE3	60:V3:231:LEU:HB3	1.85	0.59
63:Y3:163:PRO:O	63:Y3:167:TYR:HB3	2.03	0.59
80:I3:33:GLU:OE1	80:I3:55:ARG:NH2	2.33	0.59
82:L3:36:LYS:HE3	82:L3:38:PRO:HA	1.84	0.59
83:M3:63:PRO:HG3	83:M3:91:LEU:HD22	1.85	0.59
2:e2:723:A:H2	2:e2:943:A:N1	2.01	0.58
2:e2:1407:C:OP1	2:e2:1409:C:N4	2.35	0.58
2:e2:2091:G:H1'	2:e2:2092:A:H5'	1.85	0.58
2:e2:2101:G:H2'	2:e2:2102:G:C8	2.37	0.58
2:e2:2363:A:H1'	2:e2:3860:A:N6	2.17	0.58
2:e2:3759:A:H2'	2:e2:3760:A:C4	2.37	0.58
2:e2:3927:U:O2	2:e2:4185:G:C2	2.56	0.58
4:d2:25:G:H2'	4:d2:26:C:C6	2.38	0.58
4:d2:29:C:O2'	4:d2:50:A:N1	2.30	0.58
19:A2:86:LYS:HA	19:A2:92:ARG:HH12	1.67	0.58
35:U2:92:ILE:HG21	35:U2:246:MET:HE1	1.83	0.58
49:K3:479:C:H2'	49:K3:480:G:H8	1.68	0.58
49:K3:1380:C:N4	49:K3:1381:G:O6	2.36	0.58
49:K3:1606:G:H21	49:K3:1633:A:H8	1.48	0.58
49:K3:1609:C:H2'	49:K3:1610:G:H8	1.67	0.58
49:K3:1737:G:H1	49:K3:1797:U:H3	0.75	0.58
60:V3:113:MET:O	60:V3:118:GLN:NE2	2.36	0.58
64:j3:54:TYR:OH	64:j3:97:GLU:OE2	2.20	0.58
66:N3:199:VAL:O	66:N3:203:ASN:HB2	2.02	0.58
69:f3:14:VAL:HG13	69:f3:52:GLU:HA	1.84	0.58
71:c3:48:VAL:HG21	71:c3:54:LYS:NZ	2.18	0.58
81:I5:13:MET:HB3	81:I5:22:GLN:HG2	1.84	0.58
85:a7:13:HIS:O	85:a7:13:HIS:ND1	2.35	0.58
2:e2:1280:C:C4	2:e2:1282:G:C6	2.92	0.58
2:e2:1757:U:H5	2:e2:1768:C:H6	1.49	0.58
2:e2:1838:A:H2'	2:e2:1839:U:C6	2.38	0.58
2:e2:2291:G:H1'	2:e2:2345:G:N2	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3723:A:H2'	2:e2:3724:A:H8	1.68	0.58
2:e2:4299:U:H2'	2:e2:4300:U:H6	1.68	0.58
2:e2:4769:G:N2	2:e2:4866:C:O2	2.37	0.58
2:e2:4949:G:H5'	2:e2:4950:U:H5''	1.84	0.58
3:h2:94:G:N2	21:C2:82:THR:OG1	2.32	0.58
9:o2:26:ARG:O	9:o2:30:MET:HG2	2.02	0.58
49:K3:490:C:H2'	49:K3:491:C:C6	2.38	0.58
49:K3:1567:G:O2'	49:K3:1568:C:H6	1.86	0.58
49:K3:1762:C:N4	49:K3:1763:G:O6	2.36	0.58
53:G3:152:LYS:H	70:F3:183:ARG:HH22	1.49	0.58
55:a3:130:LYS:HE3	55:a3:141:THR:HG23	1.85	0.58
56:a5:66:ARG:NH1	56:a5:67:ASP:OD2	2.37	0.58
61:W3:182:CYS:HB2	65:J5:95:PRO:O	2.04	0.58
63:Y3:72:VAL:HG23	76:E3:18:GLU:OE1	2.02	0.58
66:N3:112:LEU:HB2	66:N3:177:LEU:HD23	1.84	0.58
67:b3:74:ARG:HE	67:b3:96:SER:HB2	1.69	0.58
73:d3:16:PRO:HB2	73:d3:19:PRO:HD3	1.85	0.58
2:e2:1541:C:H5''	18:92:21:LYS:HD3	1.85	0.58
2:e2:1627:G:N1	2:e2:1636:U:C2	2.70	0.58
2:e2:4518:A:OP2	45:52:257:TRP:HB3	2.03	0.58
41:12:160:GLU:OE1	41:12:160:GLU:N	2.23	0.58
49:K3:166:A:H5'	67:b3:112:VAL:HG21	1.83	0.58
49:K3:340:C:H4'	49:K3:341:C:OP1	2.03	0.58
49:K3:436:G:O6	49:K3:471:G:C6	2.57	0.58
49:K3:495:U:H4'	64:j3:11:ARG:NH2	2.17	0.58
49:K3:1260:A:N1	49:K3:1620:A:N6	2.51	0.58
49:K3:1404:U:OP2	80:I3:19:ARG:HB3	2.02	0.58
49:K3:1802:C:H2'	49:K3:1803:U:C6	2.38	0.58
56:a5:39:ASP:HA	56:a5:69:SER:HB3	1.85	0.58
59:U3:52:LYS:HE3	74:D3:81:GLN:HB3	1.84	0.58
63:Y3:41:VAL:HG22	63:Y3:46:THR:HG23	1.84	0.58
65:J5:108:ALA:HB3	65:J5:111:MET:HE1	1.84	0.58
75:e3:58:GLU:HG2	75:e3:60:MET:H	1.69	0.58
2:e2:1712:C:H5''	2:e2:2118:C:N4	2.18	0.58
2:e2:2259:G:O2'	2:e2:2261:G:OP2	2.21	0.58
2:e2:2552:G:N2	2:e2:2764:A:N7	2.50	0.58
2:e2:3604:A:H2'	2:e2:3605:C:O4'	2.03	0.58
2:e2:4138:C:H2'	2:e2:4139:G:C8	2.36	0.58
2:e2:4710:C:H2'	2:e2:4711:C:H6	1.68	0.58
2:e2:4893:A:H2'	2:e2:4894:A:C5	2.38	0.58
3:h2:111:U:O4	21:C2:20:ARG:NH1	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:m2:122:ALA:HB2	8:m2:141:ALA:HA	1.85	0.58
45:52:382:VAL:O	45:52:386:LYS:HG2	2.04	0.58
47:72:37:GLY:H	47:72:64:VAL:HG13	1.68	0.58
49:K3:829:C:O2'	49:K3:846:G:O2'	2.15	0.58
49:K3:1782:G:N2	49:K3:1784:G:O4'	2.36	0.58
60:V3:144:LYS:O	60:V3:205:TYR:OH	2.20	0.58
78:H5:75:MET:HB2	78:H5:79:TYR:CZ	2.38	0.58
79:P3:341:LYS:HD3	79:P3:344:ARG:HG2	1.84	0.58
2:e2:1204:C:H2'	2:e2:1205:G:C8	2.39	0.58
2:e2:1371:A:N6	3:h2:28:C:O2'	2.36	0.58
2:e2:2643:G:O2'	5:p2:3:ARG:NH2	2.36	0.58
2:e2:2759:G:H2'	2:e2:2760:G:C4	2.39	0.58
2:e2:3707:U:H2'	2:e2:3708:C:C6	2.38	0.58
2:e2:4070:U:N3	2:e2:4071:U:C4	2.71	0.58
3:h2:87:G:H1	9:o2:117:LYS:NZ	1.99	0.58
6:k2:29:ALA:HB2	6:k2:102:ALA:HB1	1.85	0.58
27:I2:55:TRP:NE1	27:I2:70:THR:O	2.35	0.58
31:M2:107:ASP:HA	31:M2:161:GLU:HG2	1.85	0.58
49:K3:824:C:O2'	73:d3:146:SER:O	2.14	0.58
49:K3:1533:A:N7	49:K3:1604:G:H1'	2.19	0.58
49:K3:1714:U:H2'	49:K3:1715:A:H8	1.67	0.58
53:G3:22:ARG:NE	71:c3:156:ALA:O	2.22	0.58
54:G5:99:LEU:O	54:G5:103:LEU:HG	2.03	0.58
59:U3:49:ILE:HD13	59:U3:163:CYS:HA	1.84	0.58
63:Y3:61:GLU:OE2	63:Y3:64:ARG:NH1	2.36	0.58
63:Y3:163:PRO:HA	63:Y3:166:TYR:CE1	2.38	0.58
73:d3:110:LEU:HB3	73:d3:147:PHE:HB3	1.86	0.58
73:d3:134:HIS:HA	73:d3:163:SER:HB2	1.84	0.58
83:M3:58:LEU:HD23	83:M3:62:VAL:HG21	1.85	0.58
2:e2:1199:G:H2'	2:e2:1200:G:H8	1.67	0.58
2:e2:2108:G:O3'	35:U2:33:ARG:NH2	2.36	0.58
2:e2:2310:C:N4	2:e2:2311:C:N4	2.51	0.58
2:e2:3911:C:H2'	2:e2:3912:U:H6	1.68	0.58
2:e2:4082:G:N2	2:e2:4165:C:O2	2.36	0.58
4:d2:119:U:H2'	25:G2:259:ARG:HH21	1.69	0.58
9:o2:47:MET:HA	9:o2:47:MET:HE3	1.83	0.58
48:82:80:LYS:HG2	48:82:110:TYR:CZ	2.39	0.58
49:K3:373:G:H2'	49:K3:374:G:H8	1.69	0.58
49:K3:574:A:N3	81:I5:101:LYS:NZ	2.51	0.58
49:K3:1221:G:H4'	66:N3:152:TRP:CH2	2.38	0.58
49:K3:1414:A:H2'	49:K3:1415:C:H6	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:s3:11:LYS:O	50:s3:15:GLN:HG3	2.04	0.58
54:G5:85:ASN:N	54:G5:97:GLN:OE1	2.23	0.58
55:a3:79:LEU:HD21	55:a3:111:VAL:HG22	1.85	0.58
57:A3:49:LEU:O	57:A3:54:HIS:NE2	2.36	0.58
63:Y3:132:LYS:HB2	63:Y3:189:MET:HG2	1.83	0.58
66:N3:43:GLU:O	66:N3:44:LYS:HD3	2.04	0.58
67:b3:67:VAL:HB	67:b3:99:GLY:HA2	1.84	0.58
73:d3:110:LEU:HD12	73:d3:113:GLN:HB3	1.84	0.58
1:E1:6373:C:H3'	1:E1:6374:A:C8	2.39	0.58
2:e2:977:C:H2'	2:e2:978:G:H8	1.68	0.58
2:e2:1272:C:O2'	2:e2:2122:C:O3'	2.22	0.58
2:e2:1994:G:H5''	31:M2:131:GLU:OE2	2.03	0.58
2:e2:2800:G:H1'	21:C2:9:GLY:HA3	1.86	0.58
2:e2:4731:G:H21	2:e2:4734:A:H1'	1.68	0.58
9:o2:37:GLU:N	9:o2:37:GLU:OE1	2.36	0.58
12:t2:74:ALA:H	12:t2:78:ARG:HH21	1.50	0.58
26:H2:122:ALA:HB3	26:H2:143:PRO:HG2	1.84	0.58
40:02:8:GLU:OE1	40:02:61:ILE:HD13	2.04	0.58
45:52:259:PRO:HA	45:52:262:VAL:H	1.68	0.58
49:K3:130:G:OP2	49:K3:182:C:O2'	2.20	0.58
49:K3:202:G:H3'	49:K3:203:G:C8	2.39	0.58
49:K3:305:U:OP2	49:K3:306:C:H5''	2.03	0.58
49:K3:472:C:H42	49:K3:476:A:H61	1.52	0.58
49:K3:944:A:N3	56:a5:139:SER:OG	2.31	0.58
57:A3:52:LYS:O	57:A3:56:LEU:HD13	2.04	0.58
63:Y3:3:VAL:HG23	63:Y3:5:ILE:HG23	1.84	0.58
63:Y3:28:GLU:HG3	76:E3:70:TYR:CE1	2.39	0.58
64:j3:125:LYS:HB2	64:j3:226:PHE:HE2	1.67	0.58
66:N3:102:LEU:HD22	83:M3:110:THR:HG21	1.86	0.58
68:B3:128:GLU:O	68:B3:132:LYS:HG3	2.03	0.58
75:e3:35:ILE:HG13	75:e3:36:ARG:HD3	1.84	0.58
81:I5:25:ILE:HG21	81:I5:40:ILE:HG12	1.85	0.58
2:e2:60:G:H2'	2:e2:61:A:C8	2.39	0.58
2:e2:1890:A:O2'	2:e2:1891:A:O5'	2.17	0.58
2:e2:2428:A:H8	22:D2:45:ARG:NH1	2.02	0.58
2:e2:4368:G:H21	24:F2:82:MET:HE1	1.69	0.58
2:e2:4883:C:OP2	40:02:117:LYS:NZ	2.35	0.58
2:e2:4954:G:H2'	2:e2:4955:A:C8	2.38	0.58
4:d2:8:G:OP2	4:d2:10:C:N4	2.36	0.58
9:o2:127:GLN:O	9:o2:131:GLU:HG2	2.04	0.58
13:u2:45:ALA:O	13:u2:49:ILE:HG12	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:F2:55:ILE:HD12	24:F2:57:ARG:HH12	1.69	0.58
25:G2:261:VAL:HG12	25:G2:263:LYS:H	1.68	0.58
35:U2:95:ARG:HD3	35:U2:138:TYR:CD1	2.39	0.58
35:U2:187:GLU:O	35:U2:190:ILE:HG22	2.03	0.58
40:02:14:TYR:N	40:02:56:GLN:O	2.36	0.58
46:62:84:TYR:CE2	46:62:86:SER:HB3	2.38	0.58
49:K3:350:C:H4'	49:K3:383:G:H1	1.69	0.58
55:a3:44:LYS:HG3	55:a3:54:ILE:HG13	1.86	0.58
58:T3:128:VAL:HB	58:T3:140:ARG:HG2	1.85	0.58
73:d3:31:LEU:HD21	73:d3:102:ILE:HD12	1.86	0.58
2:e2:3910:C:H2'	2:e2:3911:C:H6	1.67	0.58
2:e2:5022:U:C2	2:e2:5025:C:C2	2.91	0.58
39:Y2:20:LEU:HD11	39:Y2:130:PHE:HD1	1.69	0.58
44:42:9:THR:HB	44:42:10:LEU:HA	1.85	0.58
45:52:239:LYS:NZ	45:52:242:ARG:HH12	2.02	0.58
49:K3:35:C:N4	49:K3:520:A:H61	2.01	0.58
49:K3:70:G:H21	49:K3:79:A:N6	2.00	0.58
49:K3:367:U:O2'	49:K3:368:U:OP2	2.20	0.58
49:K3:1597:C:H5'	54:G5:25:LYS:HE2	1.85	0.58
53:G3:84:ARG:NE	53:G3:115:PRO:HD3	2.18	0.58
71:c3:163:GLU:HA	71:c3:166:PHE:HD1	1.69	0.58
79:P3:280:GLU:N	79:P3:280:GLU:OE2	2.36	0.58
2:e2:175:C:H2'	2:e2:176:G:C8	2.38	0.58
2:e2:396:A:H2'	2:e2:397:G:C8	2.39	0.58
2:e2:449:C:H41	2:e2:1296:G:H21	1.50	0.58
2:e2:524:C:H2'	2:e2:525:G:C8	2.38	0.58
2:e2:1779:U:H2'	2:e2:1780:A:C8	2.39	0.58
2:e2:1834:U:H4'	2:e2:1835:G:N7	2.18	0.58
2:e2:1981:G:H5''	2:e2:1982:A:C8	2.39	0.58
2:e2:1985:U:O4	2:e2:2010:C:H3'	2.04	0.58
2:e2:2045:G:O5'	15:w2:60:LYS:NZ	2.35	0.58
2:e2:3752:C:H41	2:e2:3777:G:N2	2.02	0.58
2:e2:3754:G:H2'	2:e2:3755:G:H8	1.69	0.58
3:h2:85:U:O2'	3:h2:86:U:O3'	2.21	0.58
4:d2:24:C:H5''	4:d2:25:G:N7	2.18	0.58
15:w2:157:GLU:O	15:w2:161:LYS:HG2	2.04	0.58
25:G2:40:ASP:OD2	47:72:69:GLN:NE2	2.37	0.58
40:02:28:VAL:HG12	40:02:29:ASP:OD2	2.03	0.58
49:K3:43:U:C4	49:K3:484:A:H2	2.21	0.58
49:K3:754:G:O6	49:K3:789:G:N1	2.36	0.58
49:K3:886:A:N7	49:K3:900:C:N3	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:927:C:H2'	49:K3:928:G:N7	2.19	0.58
49:K3:956:G:H2'	49:K3:957:A:H8	1.69	0.58
49:K3:1538:C:O2'	78:H5:48:TYR:OH	2.18	0.58
49:K3:1597:C:O2'	49:K3:1598:G:H8	1.86	0.58
49:K3:1864:U:OP2	84:O3:5:ARG:NH2	2.37	0.58
61:W3:81:ILE:HG23	61:W3:86:LEU:HD12	1.86	0.58
63:Y3:85:GLU:HB3	76:E3:98:ARG:HD3	1.85	0.58
65:J5:25:VAL:O	65:J5:62:VAL:HA	2.04	0.58
69:f3:46:VAL:HG21	69:f3:50:VAL:HG21	1.85	0.58
71:c3:177:SER:OG	71:c3:184:ARG:O	2.18	0.58
78:H5:10:ASN:HB3	78:H5:13:GLU:HG2	1.86	0.58
2:e2:226:G:H3'	9:o2:1:MET:HE1	1.85	0.57
2:e2:1382:G:OP1	85:a7:65:ARG:NH2	2.24	0.57
3:h2:60:G:O6	19:A2:62:ASN:ND2	2.32	0.57
6:k2:82:ILE:HG22	6:k2:83:ARG:HG3	1.85	0.57
7:l2:1:MET:HE3	45:52:57:VAL:HG11	1.86	0.57
12:t2:78:ARG:HD3	12:t2:90:GLY:HA2	1.85	0.57
21:C2:22:CYS:SG	21:C2:24:SER:OG	2.61	0.57
49:K3:437:G:OP1	49:K3:473:A:N6	2.37	0.57
49:K3:660:C:H2'	49:K3:661:U:C6	2.39	0.57
49:K3:1220:A:O2'	49:K3:1677:U:O2'	2.21	0.57
49:K3:1301:A:C8	49:K3:1303:C:H1'	2.39	0.57
55:a3:254:PRO:HD3	55:a3:285:GLN:HG2	1.86	0.57
64:j3:138:HIS:HB3	64:j3:148:ARG:HA	1.85	0.57
69:f3:14:VAL:HA	69:f3:32:VAL:HG12	1.85	0.57
71:c3:197:PHE:CZ	71:c3:201:LYS:HE3	2.39	0.57
2:e2:67:C:N4	2:e2:325:U:O2'	2.37	0.57
2:e2:189:G:H2'	2:e2:190:G:C8	2.40	0.57
2:e2:647:G:C2	2:e2:648:G:H1'	2.39	0.57
2:e2:1338:G:H22	10:q2:25:HIS:CG	2.21	0.57
2:e2:1836:G:H2'	2:e2:1837:A:C8	2.39	0.57
2:e2:1886:G:H21	2:e2:1937:C:N4	2.00	0.57
2:e2:1918:G:H22	16:x2:34:TYR:HD2	1.51	0.57
2:e2:1976:C:O2'	31:M2:98:ILE:HG21	2.03	0.57
2:e2:2262:G:N2	28:J2:108:MET:HB2	2.19	0.57
2:e2:2485:U:H3	2:e2:2493:G:H1	1.53	0.57
2:e2:2830:G:O6	2:e2:3856:A:N6	2.36	0.57
2:e2:3610:A:H2'	2:e2:3611:A:H8	1.69	0.57
6:k2:30:ASP:OD2	6:k2:114:GLY:HA3	2.03	0.57
25:G2:121:GLY:HA3	25:G2:168:ASP:O	2.05	0.57
26:H2:31:GLU:OE2	26:H2:61:ARG:N	2.24	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:32:172:ARG:HH11	49:K3:908:A:H5'	1.69	0.57
49:K3:323:C:O2'	49:K3:324:C:OP2	2.19	0.57
49:K3:872:A:HO2'	49:K3:873:G:H8	1.52	0.57
49:K3:1121:G:H2'	49:K3:1122:A:C8	2.40	0.57
49:K3:1202:U:H2'	49:K3:1203:G:C8	2.38	0.57
49:K3:1215:C:N3	49:K3:1219:C:N4	2.51	0.57
49:K3:1391:C:H4'	80:I3:83:ARG:HH22	1.69	0.57
49:K3:1709:G:N1	49:K3:1824:A:N6	2.16	0.57
49:K3:1864:U:N3	84:O3:9:GLY:HA3	2.19	0.57
59:U3:33:GLN:NE2	74:D3:62:MET:O	2.37	0.57
61:W3:170:TRP:CE3	61:W3:199:PRO:HB3	2.39	0.57
2:e2:2413:U:H2'	2:e2:2414:G:H8	1.70	0.57
2:e2:4474:A:C8	2:e2:4476:C:H5	2.23	0.57
2:e2:4584:A:H2'	2:e2:4585:U:O4'	2.04	0.57
12:t2:41:HIS:NE2	12:t2:243:GLY:HA2	2.19	0.57
23:E2:104:HIS:CE1	23:E2:107:ALA:HB2	2.40	0.57
31:M2:142:ASN:O	31:M2:143:VAL:HG23	2.04	0.57
48:82:54:GLY:O	48:82:57:GLY:N	2.37	0.57
49:K3:578:C:H2'	49:K3:579:C:C6	2.40	0.57
49:K3:1717:C:C2	49:K3:1817:G:N2	2.72	0.57
59:U3:78:SER:OG	59:U3:79:SER:N	2.33	0.57
59:U3:89:LYS:NZ	72:C3:82:ASP:O	2.25	0.57
71:c3:179:PRO:HA	71:c3:183:GLY:N	2.18	0.57
81:I5:39:GLU:OE2	81:I5:43:LYS:NZ	2.30	0.57
2:e2:218:A:H62	12:t2:175:LYS:HG2	1.69	0.57
2:e2:691:C:H2'	2:e2:692:A:C8	2.39	0.57
2:e2:1853:G:H4'	2:e2:1854:G:OP2	2.04	0.57
2:e2:2581:A:H1'	2:e2:2654:C:O2'	2.04	0.57
12:t2:304:ALA:HA	33:S2:38:ARG:HH21	1.69	0.57
17:y2:53:LEU:HA	17:y2:83:CYS:HA	1.85	0.57
25:G2:20:PHE:O	25:G2:24:ARG:CB	2.52	0.57
25:G2:50:ARG:CZ	25:G2:52:ILE:HD11	2.35	0.57
28:J2:66:ARG:NE	28:J2:68:SER:OG	2.27	0.57
41:12:193:ARG:O	41:12:197:THR:HG23	2.04	0.57
43:32:176:ARG:NH2	49:K3:909:G:OP1	2.36	0.57
49:K3:145:G:N7	67:b3:178:ARG:NH1	2.49	0.57
49:K3:217:A:N6	49:K3:304:C:H42	2.03	0.57
49:K3:676:C:H2'	49:K3:677:G:C8	2.39	0.57
49:K3:1012:A:H2	49:K3:1104:G:H4'	1.69	0.57
49:K3:1420:G:O4'	78:H5:4:VAL:N	2.37	0.57
58:T3:10:ALA:HA	58:T3:13:LEU:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:T3:128:VAL:HG21	58:T3:140:ARG:HA	1.85	0.57
59:U3:15:VAL:HA	59:U3:18:PHE:HB2	1.87	0.57
59:U3:107:THR:HA	59:U3:113:GLN:HG2	1.87	0.57
66:N3:136:ARG:HB2	66:N3:203:ASN:HB3	1.85	0.57
71:c3:110:ARG:O	71:c3:114:GLU:HG3	2.05	0.57
85:a7:121:ARG:O	85:a7:124:LEU:C	2.48	0.57
2:e2:60:G:O6	2:e2:337:U:O2	2.22	0.57
2:e2:125:C:H2'	2:e2:126:C:H6	1.69	0.57
2:e2:275:C:H2'	2:e2:276:C:C6	2.39	0.57
2:e2:714:G:OP1	12:t2:321:ASN:ND2	2.25	0.57
2:e2:1534:A:C8	21:C2:15:THR:HG23	2.39	0.57
2:e2:1813:U:H1'	11:r2:50:ASN:OD1	2.03	0.57
2:e2:2088:G:OP2	2:e2:2259:G:O2'	2.14	0.57
2:e2:2812:A:H2'	2:e2:2813:A:C8	2.39	0.57
2:e2:4145:C:H2'	2:e2:4146:G:C8	2.39	0.57
2:e2:4323:A:H2'	2:e2:4324:A:O4'	2.05	0.57
3:h2:53:G:O2'	3:h2:54:C:H6	1.86	0.57
4:d2:25:G:O2'	4:d2:26:C:O4'	2.14	0.57
4:d2:117:G:OP1	25:G2:253:TYR:OH	2.23	0.57
7:l2:16:GLY:HA3	45:52:55:HIS:CE1	2.39	0.57
29:K2:62:ARG:HG2	29:K2:66:ARG:NH2	2.19	0.57
35:U2:165:ARG:HD2	35:U2:208:TRP:CD2	2.39	0.57
35:U2:240:ASN:O	35:U2:244:ARG:NH2	2.37	0.57
36:V2:91:THR:HA	36:V2:94:GLN:OE1	2.05	0.57
36:V2:182:CYS:HA	36:V2:226:TYR:HD2	1.69	0.57
41:12:73:ARG:HB3	41:12:89:VAL:HG12	1.86	0.57
44:42:146:ALA:HB1	44:42:149:ASP:HB2	1.87	0.57
45:52:59:GLU:OE1	45:52:366:LYS:NZ	2.29	0.57
49:K3:909:G:H2'	49:K3:910:G:O4'	2.03	0.57
49:K3:1201:U:H2'	49:K3:1202:U:C6	2.39	0.57
49:K3:1237:C:H2'	49:K3:1238:U:O4'	2.04	0.57
49:K3:1538:C:HO2'	78:H5:48:TYR:HH	1.53	0.57
49:K3:1552:G:H21	49:K3:1553:C:N4	1.90	0.57
49:K3:1556:A:H5''	77:H3:13:LYS:HG2	1.86	0.57
49:K3:1623:A:N3	54:G5:132:ARG:HG3	2.19	0.57
55:a3:311:GLN:NE2	55:a3:312:VAL:O	2.38	0.57
57:A3:64:LYS:NZ	57:A3:92:SER:OG	2.37	0.57
68:B3:45:ALA:HB1	68:B3:106:GLN:HG2	1.85	0.57
71:c3:60:LEU:HD12	71:c3:61:ASP:H	1.70	0.57
80:I3:18:HIS:O	80:I3:92:HIS:HA	2.03	0.57
2:e2:185:C:N4	85:a7:44:ARG:HD2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:681:G:H3'	2:e2:682:G:H21	1.70	0.57
2:e2:1388:A:H2'	2:e2:1389:U:O4'	2.05	0.57
2:e2:1946:U:OP1	23:E2:109:ASN:ND2	2.37	0.57
2:e2:4356:G:H2'	2:e2:4357:G:H8	1.70	0.57
15:w2:68:ARG:NH1	45:52:260:ALA:HA	2.20	0.57
24:F2:41:TYR:HE2	24:F2:45:GLN:HE21	1.51	0.57
29:K2:14:PHE:HB3	29:K2:62:ARG:HD3	1.85	0.57
37:W2:99:PHE:CE1	37:W2:162:ILE:HD12	2.40	0.57
39:Y2:100:SER:OG	39:Y2:104:ASN:O	2.17	0.57
39:Y2:169:LYS:HG2	39:Y2:170:TYR:CD2	2.39	0.57
44:42:61:PRO:HB2	44:42:108:ASP:OD2	2.05	0.57
45:52:291:TYR:OH	45:52:315:ASN:ND2	2.38	0.57
49:K3:398:A:H4'	49:K3:400:C:C5	2.39	0.57
49:K3:590:A:O2'	49:K3:593:C:O4'	2.22	0.57
49:K3:1781:A:H2'	49:K3:1782:G:H8	1.69	0.57
54:G5:67:VAL:O	54:G5:71:MET:HG3	2.05	0.57
73:d3:13:TYR:HB2	73:d3:44:TRP:HE3	1.69	0.57
2:e2:307:A:H2'	2:e2:308:G:O4'	2.04	0.57
2:e2:1516:G:O2'	85:a7:19:GLN:OE1	2.13	0.57
2:e2:1650:A:OP2	12:t2:60:HIS:HB2	2.05	0.57
2:e2:1723:A:OP2	11:r2:23:LYS:NZ	2.38	0.57
2:e2:2250:C:H2'	2:e2:2252:G:H1'	1.86	0.57
2:e2:2804:C:C4	2:e2:2805:C:N4	2.73	0.57
9:o2:109:LEU:HD11	9:o2:115:ARG:NE	2.20	0.57
12:t2:140:LYS:HE2	12:t2:242:PRO:HG2	1.86	0.57
25:G2:55:VAL:HG22	25:G2:60:ILE:HG23	1.87	0.57
28:J2:87:ARG:NE	34:T2:115:MET:O	2.38	0.57
37:W2:116:ILE:HG22	37:W2:118:GLU:O	2.04	0.57
45:52:291:TYR:CE1	45:52:299:ILE:HG13	2.40	0.57
49:K3:381:C:N4	71:c3:27:TYR:O	2.33	0.57
49:K3:511:U:H3'	49:K3:512:A:H8	1.69	0.57
49:K3:1189:A:OP1	58:T3:28:LYS:NZ	2.37	0.57
49:K3:1258:A:O2'	49:K3:1259:A:OP1	2.23	0.57
49:K3:1376:A:H2'	49:K3:1377:U:O4'	2.05	0.57
56:a5:101:GLY:HA3	56:a5:134:PRO:HG2	1.85	0.57
85:a7:17:ASP:HB3	85:a7:19:GLN:HG2	1.87	0.57
2:e2:468:U:O2'	2:e2:469:C:H5''	2.04	0.57
2:e2:2120:C:H5'	35:U2:40:MET:HG2	1.85	0.57
2:e2:3968:U:H5'	2:e2:4047:A:C5	2.39	0.57
2:e2:4710:C:H2'	2:e2:4711:C:C6	2.39	0.57
2:e2:4903:G:C2	2:e2:4919:G:C6	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d2:47:G:OP2	25:G2:158:LYS:NZ	2.32	0.57
4:d2:90:A:O2'	30:L2:57:TYR:O	2.23	0.57
7:l2:1:MET:CG	7:l2:2:LYS:H	2.18	0.57
11:r2:16:TRP:CD1	47:72:82:GLY:H	2.23	0.57
25:G2:222:GLN:HG3	25:G2:223:PHE:CE1	2.39	0.57
28:J2:41:ASN:HB2	28:J2:44:ILE:HG12	1.86	0.57
29:K2:48:ARG:HE	31:M2:124:GLU:HB2	1.69	0.57
34:T2:164:ARG:H	34:T2:185:ASN:HD21	1.53	0.57
41:12:37:HIS:CE1	41:12:63:ARG:HH21	2.20	0.57
46:62:159:LEU:O	46:62:161:ARG:NH1	2.38	0.57
48:82:47:ILE:HG12	48:82:86:LEU:HD13	1.86	0.57
49:K3:54:A:H3'	49:K3:451:G:H22	1.69	0.57
49:K3:77:A:C2	67:b3:179:LEU:HD22	2.40	0.57
49:K3:158:A:H62	67:b3:59:GLN:HE22	1.53	0.57
49:K3:338:G:H2'	49:K3:339:A:C8	2.40	0.57
49:K3:1009:A:H2'	49:K3:1010:G:C8	2.40	0.57
49:K3:1109:C:H3'	49:K3:1110:G:H8	1.69	0.57
49:K3:1292:C:H42	52:Q3:168:PHE:HB2	1.68	0.57
49:K3:1690:U:H2'	49:K3:1691:U:C6	2.40	0.57
49:K3:1745:A:H2'	49:K3:1746:U:O4'	2.05	0.57
55:a3:191:HIS:CD2	55:a3:195:LEU:HG	2.40	0.57
71:c3:38:ILE:HG23	71:c3:61:ASP:HA	1.85	0.57
73:d3:106:LEU:O	73:d3:112:THR:OG1	2.17	0.57
76:E3:21:MET:HB3	76:E3:69:TRP:HB2	1.87	0.57
83:M3:48:VAL:C	83:M3:83:LEU:HD11	2.29	0.57
2:e2:58:G:O3'	2:e2:59:A:H4'	2.05	0.57
2:e2:308:G:N2	20:B2:41:ARG:HE	2.02	0.57
2:e2:713:C:N4	2:e2:955:G:H1	1.92	0.57
2:e2:735:G:OP1	40:02:74:ARG:NH1	2.37	0.57
2:e2:982:U:C6	32:R2:67:ARG:HD3	2.39	0.57
2:e2:1109:C:H42	2:e2:1164:G:N2	2.03	0.57
2:e2:3899:G:H5''	45:52:257:TRP:NE1	2.19	0.57
2:e2:4107:G:H2'	2:e2:4108:G:C8	2.40	0.57
2:e2:4759:C:H5'	15:w2:161:LYS:HZ1	1.68	0.57
5:p2:40:ARG:HG2	5:p2:41:TYR:CD2	2.40	0.57
17:y2:44:SER:OG	17:y2:83:CYS:SG	2.37	0.57
18:92:140:ASN:ND2	18:92:143:THR:OG1	2.38	0.57
31:M2:114:ARG:HD3	31:M2:130:LYS:HG3	1.87	0.57
38:X2:210:ARG:O	38:X2:214:SER:OG	2.22	0.57
44:42:9:THR:O	44:42:215:ARG:NE	2.37	0.57
49:K3:392:A:H2'	49:K3:393:U:H5'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1121:G:H2'	49:K3:1122:A:H8	1.69	0.57
49:K3:1241:A:H2'	49:K3:1242:U:H4'	1.86	0.57
49:K3:1401:A:N7	49:K3:1441:U:H2'	2.19	0.57
64:j3:89:VAL:HG22	64:j3:100:ARG:HD2	1.86	0.57
67:b3:48:TYR:HD2	67:b3:113:ILE:HD13	1.70	0.57
67:b3:70:HIS:O	67:b3:98:ARG:NH2	2.37	0.57
74:D3:51:LYS:HG3	74:D3:78:ILE:HG21	1.86	0.57
79:P3:394:VAL:O	79:P3:425:PHE:HA	2.05	0.57
2:e2:676:C:H2'	2:e2:677:G:H8	1.68	0.57
2:e2:750:U:H2'	2:e2:751:G:H8	1.70	0.57
2:e2:1250:C:H5''	2:e2:1255:A:N6	2.19	0.57
2:e2:1340:C:OP2	10:q2:6:ARG:HD2	2.05	0.57
2:e2:1635:C:N3	2:e2:1636:U:N3	2.52	0.57
2:e2:4196:G:OP1	38:X2:116:ARG:NH1	2.33	0.57
2:e2:4637:G:OP2	13:u2:82:TYR:OH	2.18	0.57
9:o2:54:GLU:N	9:o2:54:GLU:OE2	2.38	0.57
9:o2:112:ASP:H	9:o2:115:ARG:HB3	1.70	0.57
12:t2:209:VAL:HG22	12:t2:251:ILE:HB	1.86	0.57
14:v2:69:MET:HE3	14:v2:73:GLY:HA2	1.86	0.57
15:w2:186:GLU:OE2	15:w2:190:SER:OG	2.22	0.57
19:A2:21:LEU:HB3	19:A2:57:VAL:HG11	1.85	0.57
19:A2:89:ARG:CZ	19:A2:93:ARG:HH21	2.18	0.57
34:T2:167:PHE:HA	34:T2:178:VAL:HG12	1.87	0.57
47:72:108:ARG:HA	47:72:111:GLU:OE2	2.05	0.57
49:K3:35:C:H42	49:K3:520:A:N6	2.03	0.57
49:K3:703:C:N4	49:K3:704:G:O6	2.38	0.57
49:K3:1073:U:H2'	49:K3:1074:C:C6	2.38	0.57
49:K3:1468:C:OP2	72:C3:1:MET:HB3	2.05	0.57
49:K3:1566:G:H22	49:K3:1568:C:H5''	1.70	0.57
66:N3:116:ILE:HG21	66:N3:147:VAL:HG23	1.86	0.57
71:c3:88:ASN:HD21	71:c3:205:ARG:HG3	1.67	0.57
2:e2:85:G:C6	85:a7:11:LYS:HG3	2.40	0.56
2:e2:100:C:H2'	2:e2:101:A:C8	2.33	0.56
2:e2:422:C:H2'	2:e2:423:G:H8	1.70	0.56
2:e2:1180:C:O4'	25:G2:289:ARG:NH2	2.38	0.56
2:e2:1210:C:N4	35:U2:65:ARG:HG2	2.20	0.56
2:e2:1779:U:H2'	2:e2:1780:A:H8	1.70	0.56
2:e2:2059:G:C2	46:62:115:ALA:HB2	2.40	0.56
2:e2:2583:C:H2'	2:e2:2584:G:H8	1.70	0.56
2:e2:3700:C:H2'	2:e2:3746:A:H61	1.70	0.56
2:e2:3731:C:H2'	2:e2:3732:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4260:U:H2'	2:e2:4261:C:C6	2.39	0.56
35:U2:90:PHE:CE2	35:U2:243:ILE:HD11	2.40	0.56
48:82:38:ASN:OD1	48:82:90:TYR:OH	2.22	0.56
49:K3:102:A:OP1	71:c3:19:LYS:NZ	2.29	0.56
49:K3:752:G:N1	49:K3:792:C:O2	2.37	0.56
49:K3:943:U:H2'	49:K3:944:A:H8	1.69	0.56
49:K3:1121:G:H1'	60:V3:204:ILE:HA	1.87	0.56
49:K3:1515:G:H2'	49:K3:1516:G:C8	2.39	0.56
56:a5:66:ARG:HH12	66:N3:135:ARG:HD3	1.70	0.56
56:a5:85:CYS:HB3	56:a5:124:MET:HE1	1.86	0.56
67:b3:55:GLY:HA2	67:b3:110:ASN:HD22	1.69	0.56
67:b3:157:VAL:O	67:b3:159:ARG:NH1	2.38	0.56
70:F3:120:LYS:H	70:F3:123:ARG:HD2	1.70	0.56
75:e3:25:ALA:HB1	75:e3:31:LEU:HB2	1.87	0.56
2:e2:962:C:N4	2:e2:2264:C:OP2	2.31	0.56
2:e2:2126:C:N4	2:e2:2255:C:OP1	2.36	0.56
2:e2:4322:G:N2	2:e2:4325:A:OP2	2.37	0.56
2:e2:4747:C:O2	2:e2:4954:G:N2	2.38	0.56
10:q2:123:ILE:HD11	85:a7:169:ILE:HG12	1.85	0.56
40:02:39:ASP:OD1	40:02:40:GLY:N	2.37	0.56
41:12:30:TYR:HB3	41:12:65:ARG:NH2	2.19	0.56
41:12:200:LEU:HD23	41:12:204:ARG:HH12	1.69	0.56
45:52:103:LYS:NZ	45:52:149:ASP:OD1	2.35	0.56
47:72:119:ALA:HA	47:72:122:LYS:HZ2	1.70	0.56
49:K3:8:U:H4'	49:K3:8:U:OP1	2.04	0.56
49:K3:17:C:H2'	49:K3:18:C:C6	2.39	0.56
49:K3:295:C:H2'	49:K3:296:U:C6	2.39	0.56
49:K3:409:C:H2'	49:K3:410:G:C8	2.40	0.56
49:K3:525:A:O2'	49:K3:526:A:O5'	2.22	0.56
49:K3:562:U:O4	49:K3:587:A:N7	2.37	0.56
49:K3:623:G:N7	58:T3:63:ASN:ND2	2.52	0.56
49:K3:944:A:N1	49:K3:982:G:N2	2.52	0.56
49:K3:1015:U:O2'	70:F3:105:ARG:NH1	2.38	0.56
49:K3:1226:G:H1'	49:K3:1641:A:H61	1.70	0.56
49:K3:1820:G:H2'	49:K3:1821:U:C6	2.40	0.56
59:U3:197:VAL:HG13	59:U3:201:LEU:HD13	1.87	0.56
64:j3:48:LEU:HD13	64:j3:64:ILE:HD12	1.87	0.56
2:e2:59:A:H2'	2:e2:60:G:C8	2.40	0.56
2:e2:209:U:H3'	9:o2:59:ARG:HH11	1.71	0.56
2:e2:453:G:H5''	2:e2:454:U:C5	2.41	0.56
2:e2:454:U:H3'	2:e2:455:C:H5''	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:936:C:H4'	40:02:44:ARG:HG2	1.87	0.56
2:e2:1198:G:H2'	2:e2:1199:G:C8	2.40	0.56
2:e2:1268:G:N2	2:e2:2120:C:H41	1.99	0.56
2:e2:1523:A:O2'	2:e2:1524:A:OP1	2.22	0.56
2:e2:1697:G:OP1	2:e2:1714:C:N4	2.32	0.56
2:e2:3723:A:OP1	20:B2:68:ARG:NH1	2.36	0.56
2:e2:3824:A:H2'	2:e2:3825:A:H8	1.70	0.56
2:e2:3870:C:O3'	45:52:260:ALA:HB2	2.05	0.56
2:e2:3940:U:H2'	2:e2:3941:G:C8	2.40	0.56
2:e2:4020:U:O2'	2:e2:4023:G:O6	2.21	0.56
2:e2:4054:C:H1'	44:42:207:LYS:HB2	1.86	0.56
2:e2:4291:G:H4'	2:e2:4292:A:H5''	1.88	0.56
2:e2:4306:U:O4	2:e2:4307:A:N6	2.38	0.56
2:e2:4768:G:O5'	2:e2:4874:A:N6	2.38	0.56
4:d2:33:U:H2'	4:d2:34:C:H6	1.70	0.56
5:p2:61:PRO:HD2	5:p2:62:PRO:HD3	1.86	0.56
12:t2:322:LEU:HD11	12:t2:336:ARG:NH1	2.20	0.56
17:y2:110:GLN:O	17:y2:114:GLN:HG2	2.05	0.56
19:A2:112:ARG:HG2	19:A2:112:ARG:HH11	1.71	0.56
26:H2:33:ALA:HA	26:H2:36:ILE:HG22	1.87	0.56
29:K2:29:ILE:HD11	29:K2:78:LEU:HD13	1.86	0.56
29:K2:44:ARG:HA	29:K2:47:LEU:HD12	1.86	0.56
34:T2:115:MET:HE3	34:T2:116:PRO:HD2	1.86	0.56
43:32:163:ARG:O	43:32:167:LYS:HG2	2.04	0.56
44:42:22:GLN:HG3	44:42:172:VAL:HG23	1.86	0.56
44:42:183:ILE:O	44:42:187:VAL:HG22	2.05	0.56
44:42:184:HIS:O	44:42:188:ASN:ND2	2.38	0.56
45:52:88:GLY:O	45:52:163:LEU:N	2.38	0.56
49:K3:158:A:C2	49:K3:463:C:O2	2.58	0.56
49:K3:533:A:H2'	49:K3:534:G:H8	1.71	0.56
49:K3:1025:U:O2'	49:K3:1160:U:O2'	2.21	0.56
49:K3:1827:U:H2'	49:K3:1828:C:C6	2.39	0.56
54:G5:36:VAL:HG13	54:G5:40:TYR:HD2	1.70	0.56
59:U3:41:ARG:HE	59:U3:47:TYR:HE2	1.51	0.56
61:W3:69:LEU:HA	61:W3:72:ASP:HB2	1.86	0.56
64:j3:127:ARG:HA	64:j3:127:ARG:HH11	1.68	0.56
67:b3:58:LYS:N	67:b3:105:ASN:O	2.31	0.56
70:F3:75:TRP:HE3	82:L3:83:GLN:HE21	1.53	0.56
70:F3:145:ALA:HB2	70:F3:168:ILE:HG21	1.85	0.56
71:c3:83:TYR:CE2	71:c3:201:LYS:HD3	2.41	0.56
80:I3:22:ILE:HB	80:I3:89:ILE:HB	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:38:A:H2	2:e2:41:C:C5	2.23	0.56
2:e2:162:A:H2'	2:e2:163:A:C8	2.39	0.56
2:e2:1428:U:H5''	33:S2:42:THR:HG23	1.88	0.56
2:e2:2082:C:OP1	33:S2:12:LYS:NZ	2.37	0.56
2:e2:4191:G:H2'	2:e2:4192:A:H8	1.69	0.56
2:e2:5002:U:O2	2:e2:5045:G:N2	2.31	0.56
18:92:30:ARG:NH1	18:92:36:GLU:OE2	2.30	0.56
44:42:128:LEU:H	44:42:128:LEU:HD12	1.69	0.56
45:52:31:SER:OG	45:52:348:ARG:NH1	2.38	0.56
49:K3:222:U:H5''	53:G3:17:PHE:CG	2.40	0.56
49:K3:612:U:H5''	50:s3:15:GLN:OE1	2.05	0.56
49:K3:881:G:N1	49:K3:906:U:O2'	2.38	0.56
49:K3:1354:G:N2	49:K3:1356:G:H3'	2.21	0.56
54:G5:46:ARG:HH22	54:G5:52:LEU:HD13	1.71	0.56
55:a3:208:ALA:HB3	55:a3:239:LEU:HD13	1.87	0.56
66:N3:28:VAL:HG21	66:N3:41:VAL:HG21	1.86	0.56
67:b3:212:LEU:HA	67:b3:215:LYS:NZ	2.19	0.56
68:B3:51:CYS:HB3	68:B3:92:VAL:HG13	1.87	0.56
76:E3:64:TRP:HA	77:H3:23:VAL:HA	1.88	0.56
2:e2:469:C:H5'	2:e2:683:C:N4	2.20	0.56
2:e2:989:U:C2	2:e2:1064:G:O6	2.58	0.56
2:e2:1420:A:H61	10:q2:115:GLY:HA2	1.69	0.56
2:e2:3710:G:O4'	2:e2:3712:A:N6	2.39	0.56
2:e2:3969:G:N2	2:e2:3970:G:N3	2.53	0.56
2:e2:4592:C:H2'	2:e2:4593:C:C6	2.40	0.56
3:h2:62:A:OP1	19:A2:52:LYS:NZ	2.38	0.56
10:q2:138:LYS:NZ	85:a7:176:PHE:O	2.39	0.56
14:v2:76:LYS:NZ	14:v2:98:GLU:OE1	2.38	0.56
24:F2:34:TYR:HA	24:F2:38:LYS:HZ1	1.71	0.56
32:R2:38:PRO:O	32:R2:39:HIS:ND1	2.38	0.56
42:22:22:LYS:NZ	42:22:132:GLN:O	2.35	0.56
45:52:216:MET:O	45:52:350:SER:HB2	2.05	0.56
49:K3:436:G:N1	49:K3:458:A:N6	2.53	0.56
49:K3:925:G:H22	49:K3:1017:U:H3	1.52	0.56
49:K3:1390:U:H2'	49:K3:1391:C:C6	2.40	0.56
49:K3:1449:G:C2	49:K3:1450:G:H1'	2.40	0.56
49:K3:1536:G:H21	49:K3:1604:G:H4'	1.70	0.56
56:a5:54:CYS:SG	56:a5:84:ARG:HB2	2.45	0.56
56:a5:65:ASP:HA	56:a5:68:GLU:HG3	1.87	0.56
57:A3:53:GLN:HG2	57:A3:57:LEU:HD23	1.88	0.56
59:U3:53:ARG:NH1	74:D3:83:PHE:HB3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:j3:11:ARG:N	64:j3:26:VAL:O	2.29	0.56
64:j3:86:PHE:CE2	64:j3:87:MET:HG3	2.41	0.56
71:c3:166:PHE:HE2	71:c3:171:LEU:HD21	1.69	0.56
2:e2:490:C:O2'	2:e2:491:G:H8	1.88	0.56
2:e2:1596:U:H2'	26:H2:131:ARG:HH21	1.70	0.56
2:e2:3999:C:N4	2:e2:4003:A:C2	2.74	0.56
2:e2:4212:A:N1	47:72:2:THR:N	2.53	0.56
2:e2:4582:C:O2'	45:52:99:LEU:O	2.24	0.56
2:e2:4918:C:H2'	2:e2:4919:G:C8	2.41	0.56
2:e2:4919:G:H2'	2:e2:4920:C:O4'	2.06	0.56
5:p2:16:ARG:HE	5:p2:61:PRO:HG2	1.70	0.56
39:Y2:20:LEU:HD13	39:Y2:132:VAL:HG22	1.88	0.56
40:02:30:VAL:HB	46:62:150:ILE:HD11	1.88	0.56
49:K3:105:U:O2'	49:K3:432:G:O4'	2.23	0.56
49:K3:243:C:H2'	49:K3:244:A:H8	1.70	0.56
49:K3:441:C:H4'	49:K3:1738:C:H5'	1.88	0.56
49:K3:1277:C:H2'	49:K3:1278:A:C8	2.41	0.56
49:K3:1329:U:O4	49:K3:1500:G:O6	2.23	0.56
49:K3:1628:C:H5''	78:H5:38:LYS:HE2	1.88	0.56
71:c3:98:LYS:HA	71:c3:176:ALA:HA	1.86	0.56
2:e2:369:G:N1	2:e2:373:G:C6	2.74	0.56
2:e2:451:C:H5'	2:e2:1295:C:N3	2.21	0.56
2:e2:979:C:H2'	2:e2:980:U:C6	2.39	0.56
2:e2:1960:G:O2'	2:e2:1961:A:O5'	2.24	0.56
2:e2:2327:G:C6	2:e2:2328:G:C6	2.94	0.56
2:e2:2366:A:H2'	2:e2:2367:A:H5''	1.87	0.56
2:e2:2607:C:H2'	2:e2:2608:G:C8	2.41	0.56
2:e2:4567:G:H2'	2:e2:4568:A:H5'	1.88	0.56
2:e2:5047:C:OP2	2:e2:5050:C:N4	2.34	0.56
3:h2:132:G:H2'	3:h2:133:G:C8	2.41	0.56
6:k2:39:ILE:HD12	6:k2:61:VAL:HG21	1.87	0.56
9:o2:50:ARG:HH22	9:o2:115:ARG:HB2	1.70	0.56
31:M2:78:SER:HA	31:M2:81:ILE:HG22	1.87	0.56
47:72:80:VAL:HG22	47:72:81:LYS:H	1.71	0.56
49:K3:596:U:O2'	49:K3:645:C:H1'	2.05	0.56
49:K3:616:A:H8	49:K3:616:A:O5'	1.89	0.56
49:K3:1026:C:OP1	49:K3:1089:G:N2	2.39	0.56
51:13:21:VAL:HB	51:13:22:MET:HE2	1.87	0.56
54:G5:67:VAL:HG12	54:G5:71:MET:HE3	1.88	0.56
59:U3:39:TYR:CD2	59:U3:40:LYS:HG2	2.40	0.56
59:U3:143:PRO:HG3	74:D3:32:ILE:HD12	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:B3:36:VAL:HG23	68:B3:117:ALA:HB1	1.87	0.56
76:E3:60:GLU:HA	76:E3:68:TYR:O	2.06	0.56
80:I3:20:ILE:HG22	80:I3:91:LEU:O	2.06	0.56
2:e2:664:G:H21	2:e2:666:G:H2'	1.70	0.56
2:e2:686:A:N6	34:T2:103:LYS:HB2	2.20	0.56
2:e2:1183:C:N4	2:e2:1184:A:H62	2.04	0.56
2:e2:1536:U:H2'	2:e2:1537:A:H8	1.71	0.56
2:e2:2768:C:H4'	2:e2:2769:U:C5	2.40	0.56
2:e2:3648:A:H1'	2:e2:3785:A:N6	2.20	0.56
2:e2:3975:C:OP2	44:42:28:PHE:N	2.25	0.56
3:h2:122:G:H21	3:h2:128:C:N4	2.04	0.56
7:l2:23:ARG:HG3	7:l2:24:THR:H	1.70	0.56
21:C2:69:ILE:HB	21:C2:72:ARG:HH22	1.70	0.56
25:G2:41:LYS:N	47:72:69:GLN:O	2.37	0.56
31:M2:82:ILE:HG23	31:M2:106:PHE:HE1	1.70	0.56
41:12:26:ARG:HA	41:12:29:GLN:HG2	1.87	0.56
42:22:123:LYS:O	42:22:124:THR:OG1	2.24	0.56
44:42:38:LEU:HD12	44:42:41:TYR:HD2	1.71	0.56
45:52:260:ALA:H	45:52:262:VAL:HG12	1.71	0.56
49:K3:1221:G:H4'	66:N3:152:TRP:HH2	1.70	0.56
52:Q3:136:LYS:HG2	52:Q3:149:LEU:HB3	1.87	0.56
56:a5:98:ARG:HA	56:a5:133:THR:HG22	1.88	0.56
57:A3:130:ARG:NE	57:A3:130:ARG:OXT	2.39	0.56
60:V3:116:LYS:HB3	60:V3:117:TRP:CE3	2.41	0.56
71:c3:124:LYS:NZ	71:c3:166:PHE:O	2.39	0.56
79:P3:377:ILE:HG23	79:P3:394:VAL:HG13	1.88	0.56
85:a7:65:ARG:HG2	85:a7:66:TYR:CE1	2.41	0.56
2:e2:19:G:C4	3:h2:139:G:N2	2.74	0.56
2:e2:1108:C:H42	2:e2:1164:G:H1	1.54	0.56
2:e2:1668:A:H2'	2:e2:1669:A:O4'	2.05	0.56
2:e2:1970:C:H2'	2:e2:1971:G:H5''	1.88	0.56
2:e2:1975:G:O2'	2:e2:2001:A:N6	2.39	0.56
2:e2:3843:C:OP1	6:k2:51:ARG:NE	2.39	0.56
2:e2:4334:U:H4'	47:72:7:LYS:HB2	1.88	0.56
2:e2:4940:C:C6	34:T2:159:ARG:HB2	2.41	0.56
3:h2:66:A:H2'	3:h2:67:U:H6	1.71	0.56
3:h2:119:C:H2'	3:h2:120:G:C8	2.40	0.56
28:J2:113:ARG:O	28:J2:117:ILE:HG12	2.06	0.56
31:M2:94:LYS:HA	31:M2:95:GLN:HB2	1.88	0.56
49:K3:122:G:H4'	64:j3:145:ARG:HD3	1.88	0.56
49:K3:289:G:H2'	49:K3:290:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:418:A:H2'	49:K3:419:G:H8	1.70	0.56
49:K3:505:G:OP2	81:I5:100:LYS:NZ	2.31	0.56
49:K3:1330:G:HO2'	49:K3:1492:U:H5	1.54	0.56
49:K3:1606:G:N2	49:K3:1633:A:OP2	2.38	0.56
55:a3:173:LEU:HB2	55:a3:175:LYS:HZ2	1.68	0.56
57:A3:103:ASN:HD21	57:A3:120:SER:HB2	1.70	0.56
61:W3:72:ASP:O	61:W3:74:LYS:HG2	2.06	0.56
64:j3:89:VAL:HG11	64:j3:119:ALA:HB1	1.87	0.56
72:C3:97:GLU:HG2	72:C3:116:ASN:HB2	1.86	0.56
79:P3:287:LYS:O	79:P3:299:ILE:HG12	2.06	0.56
2:e2:188:G:O2'	2:e2:189:G:O5'	2.19	0.56
2:e2:225:G:OP1	12:t2:222:ARG:NE	2.36	0.56
2:e2:316:U:O2'	2:e2:317:A:N7	2.34	0.56
2:e2:453:G:H5''	2:e2:454:U:H5	1.71	0.56
2:e2:1174:G:H22	2:e2:1187:G:N2	2.04	0.56
2:e2:1204:C:H2'	2:e2:1205:G:H8	1.70	0.56
2:e2:1327:C:N4	2:e2:1328:G:O6	2.38	0.56
2:e2:1403:G:C6	2:e2:1415:G:C5	2.94	0.56
2:e2:1707:C:H5''	2:e2:1835:G:OP1	2.06	0.56
2:e2:1853:G:C6	2:e2:4394:A:C5	2.93	0.56
2:e2:4458:C:H2'	2:e2:4459:U:H6	1.70	0.56
2:e2:4975:G:C5	2:e2:4977:A:C2	2.94	0.56
9:o2:50:ARG:HD2	9:o2:51:LYS:N	2.20	0.56
12:t2:27:VAL:HG11	12:t2:264:TYR:CD2	2.41	0.56
12:t2:41:HIS:CD2	12:t2:244:GLY:H	2.24	0.56
45:52:245:HIS:O	45:52:247:GLY:N	2.39	0.56
49:K3:348:A:H2'	49:K3:349:A:C8	2.41	0.56
49:K3:391:C:H2'	49:K3:392:A:C8	2.41	0.56
49:K3:526:A:H2'	49:K3:527:C:C6	2.41	0.56
49:K3:925:G:H2'	49:K3:926:A:H8	1.70	0.56
49:K3:970:G:OP1	49:K3:970:G:N2	2.29	0.56
49:K3:1567:G:H5'	78:H5:33:TRP:CZ2	2.41	0.56
49:K3:1627:C:H2'	49:K3:1628:C:H6	1.68	0.56
49:K3:1852:C:H41	62:X3:5:TRP:CD1	2.24	0.56
59:U3:180:ARG:HH11	59:U3:184:ARG:HH21	1.53	0.56
61:W3:115:GLN:NE2	61:W3:120:GLN:OE1	2.39	0.56
64:j3:105:THR:HB	64:j3:245:ARG:HA	1.87	0.56
2:e2:161:G:H2'	2:e2:162:A:H8	1.71	0.55
2:e2:1099:C:C4	2:e2:1100:U:C4	2.94	0.55
2:e2:4058:U:O2'	2:e2:4059:C:O4'	2.24	0.55
2:e2:4285:U:OP2	24:F2:100:LYS:NZ	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4342:C:H2'	2:e2:4343:U:H6	1.69	0.55
44:42:202:ARG:O	44:42:217:TYR:OH	2.10	0.55
49:K3:82:G:H2'	49:K3:83:A:C4	2.42	0.55
49:K3:547:G:H1'	49:K3:548:C:C5	2.40	0.55
49:K3:1060:A:H1'	49:K3:1062:A:C8	2.41	0.55
49:K3:1098:C:H2'	49:K3:1099:G:C8	2.41	0.55
49:K3:1229:G:H21	78:H5:87:VAL:HG23	1.70	0.55
53:G3:17:PHE:CZ	53:G3:19:ASN:HB2	2.41	0.55
55:a3:127:LYS:HZ1	55:a3:150:TRP:CD1	2.24	0.55
57:A3:18:ARG:HB2	57:A3:36:LEU:HD22	1.88	0.55
60:V3:66:VAL:HA	60:V3:87:ILE:HA	1.88	0.55
63:Y3:169:ASP:HB2	63:Y3:190:LEU:HD21	1.88	0.55
70:F3:72:VAL:O	82:L3:84:HIS:NE2	2.39	0.55
71:c3:111:GLN:O	71:c3:115:SER:OG	2.23	0.55
2:e2:159:C:O2	85:a7:88:LYS:NZ	2.23	0.55
2:e2:180:C:H2'	2:e2:181:C:C6	2.41	0.55
2:e2:487:G:O2'	2:e2:488:G:H5'	2.06	0.55
2:e2:1237:C:O2'	35:U2:51:GLU:OE2	2.23	0.55
2:e2:1443:A:H3'	2:e2:1444:G:H8	1.72	0.55
2:e2:2411:C:H2'	2:e2:2412:A:C8	2.40	0.55
2:e2:2634:C:H2'	2:e2:2635:U:C6	2.41	0.55
2:e2:3678:G:P	18:92:193:ARG:HH21	2.30	0.55
2:e2:4324:A:H2'	2:e2:4325:A:C8	2.28	0.55
21:C2:21:ARG:HD3	21:C2:39:TYR:HD1	1.72	0.55
23:E2:99:CYS:HB2	23:E2:114:LYS:NZ	2.22	0.55
25:G2:289:ARG:NH1	25:G2:293:ARG:HH21	2.03	0.55
37:W2:102:LYS:HB2	37:W2:194:GLU:HG2	1.87	0.55
43:32:70:ARG:NH1	43:32:76:MET:HE3	2.21	0.55
45:52:234:ARG:HG3	45:52:272:LYS:HB3	1.89	0.55
49:K3:813:A:P	64:j3:16:LYS:HG3	2.46	0.55
49:K3:1106:C:P	82:L3:72:ARG:HH22	2.29	0.55
49:K3:1275:G:O2'	49:K3:1322:G:N2	2.40	0.55
76:E3:90:VAL:HG22	76:E3:95:ARG:NH2	2.21	0.55
79:P3:274:LEU:HD22	79:P3:278:LEU:HB2	1.88	0.55
81:I5:79:LEU:O	81:I5:83:LYS:HG3	2.07	0.55
2:e2:261:G:H2'	2:e2:262:G:C8	2.41	0.55
2:e2:1814:C:O2'	11:r2:42:ASN:OD1	2.23	0.55
2:e2:1881:U:C4	2:e2:2279:A:H2	2.23	0.55
2:e2:2521:G:H2'	2:e2:2522:G:H8	1.70	0.55
2:e2:2703:G:H2'	2:e2:2704:C:C6	2.40	0.55
6:k2:90:ARG:NH2	6:k2:123:LYS:HB3	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:m2:38:LYS:HG2	8:m2:40:ILE:HG23	1.88	0.55
13:u2:32:ARG:HB3	13:u2:48:GLU:HG3	1.87	0.55
35:U2:30:LYS:HG3	35:U2:34:LYS:HE3	1.86	0.55
49:K3:65:C:H2'	67:b3:133:LEU:HD22	1.86	0.55
49:K3:219:U:H2'	49:K3:220:U:H6	1.71	0.55
49:K3:301:A:HO2'	71:c3:74:ARG:HH12	1.54	0.55
49:K3:469:A:P	67:b3:74:ARG:HH12	2.30	0.55
49:K3:600:G:H2'	49:K3:601:G:C8	2.41	0.55
49:K3:959:G:O2'	49:K3:960:U:O4'	2.23	0.55
49:K3:1026:C:H4'	49:K3:1161:U:H1'	1.88	0.55
49:K3:1339:U:H2'	49:K3:1340:U:H6	1.71	0.55
49:K3:1402:A:H2'	49:K3:1405:A:N7	2.20	0.55
49:K3:1482:C:P	80:I3:79:ARG:HH12	2.28	0.55
49:K3:1676:U:H2'	49:K3:1677:U:N3	2.20	0.55
49:K3:1854:U:H2'	49:K3:1855:G:C8	2.41	0.55
61:W3:166:ARG:HB2	61:W3:248:TYR:CZ	2.41	0.55
80:I3:21:ARG:NH2	80:I3:90:ASP:HB2	2.21	0.55
2:e2:21:G:OP2	21:C2:43:ARG:NH1	2.39	0.55
2:e2:66:A:N6	2:e2:282:C:O2'	2.39	0.55
2:e2:352:G:C6	12:t2:196:MET:HE2	2.42	0.55
2:e2:683:C:H1'	2:e2:684:G:C4	2.42	0.55
2:e2:709:C:H4'	34:T2:193:HIS:NE2	2.22	0.55
2:e2:1244:G:H1'	2:e2:1245:C:H5''	1.89	0.55
2:e2:1259:G:N2	2:e2:1260:G:O6	2.39	0.55
2:e2:1701:A:O4'	2:e2:2095:G:O2'	2.16	0.55
2:e2:4107:G:H2'	2:e2:4108:G:H8	1.70	0.55
2:e2:4320:G:H2'	2:e2:4321:U:C6	2.41	0.55
2:e2:4940:C:O4'	34:T2:159:ARG:NH1	2.38	0.55
3:h2:13:G:C5	3:h2:14:U:C4	2.94	0.55
12:t2:322:LEU:O	12:t2:326:LEU:HG	2.07	0.55
25:G2:286:SER:O	25:G2:289:ARG:HG2	2.06	0.55
38:X2:143:GLN:OE1	38:X2:143:GLN:N	2.30	0.55
42:22:95:VAL:HG13	42:22:96:VAL:HG23	1.87	0.55
49:K3:82:G:O2'	49:K3:83:A:O4'	2.22	0.55
49:K3:220:U:H2'	49:K3:221:A:H8	1.71	0.55
49:K3:635:G:H2'	49:K3:636:C:C6	2.41	0.55
49:K3:683:G:O2'	65:J5:4:MET:HG2	2.05	0.55
49:K3:1020:A:OP2	70:F3:120:LYS:NZ	2.38	0.55
49:K3:1104:G:H2'	49:K3:1105:G:H8	1.71	0.55
49:K3:1523:C:H1'	57:A3:130:ARG:HH22	1.71	0.55
60:V3:167:LYS:O	60:V3:170:GLU:HG2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:j3:103:TYR:HD2	64:j3:189:LEU:HD22	1.71	0.55
71:c3:142:SER:HA	71:c3:146:GLN:HE22	1.71	0.55
79:P3:301:PHE:HE1	79:P3:333:ILE:HG21	1.71	0.55
79:P3:398:LYS:H	79:P3:430:PHE:HE2	1.55	0.55
1:E1:6416:C:H5'	63:Y3:117:ARG:HB3	1.87	0.55
2:e2:724:C:H2'	2:e2:725:G:H8	1.70	0.55
2:e2:1165:G:H8	2:e2:1165:G:O5'	1.89	0.55
2:e2:1390:G:H5'	2:e2:1391:A:OP2	2.06	0.55
2:e2:1865:U:H5'	30:L2:4:ARG:NH1	2.22	0.55
2:e2:2621:A:H2'	2:e2:2622:G:C8	2.40	0.55
2:e2:4057:C:H2'	2:e2:4058:U:H4'	1.89	0.55
23:E2:78:ILE:HG22	23:E2:83:ARG:HB2	1.88	0.55
35:U2:26:GLU:HA	35:U2:29:ILE:HD12	1.86	0.55
49:K3:1007:C:H2'	49:K3:1008:A:C8	2.41	0.55
49:K3:1636:G:N2	49:K3:1636:G:OP2	2.40	0.55
55:a3:218:LEU:HD22	55:a3:228:TYR:CE1	2.42	0.55
56:a5:120:ALA:HB2	84:O3:53:ILE:HD13	1.88	0.55
61:W3:94:ILE:HG21	61:W3:162:ILE:HD12	1.88	0.55
65:J5:52:ILE:HB	79:P3:382:ILE:HB	1.89	0.55
68:B3:134:ILE:HA	68:B3:137:ILE:HG22	1.89	0.55
78:H5:42:HIS:CE1	78:H5:43:LYS:HG2	2.41	0.55
85:a7:11:LYS:O	85:a7:13:HIS:N	2.39	0.55
2:e2:271:C:H2'	2:e2:272:U:C6	2.41	0.55
2:e2:312:G:H2'	2:e2:313:U:H6	1.72	0.55
2:e2:959:G:N3	34:T2:128:LEU:HB2	2.22	0.55
2:e2:1083:U:N3	2:e2:1217:G:C6	2.74	0.55
2:e2:1432:G:H22	2:e2:1715:C:H1'	1.72	0.55
2:e2:1627:G:O2'	2:e2:1628:C:OP1	2.24	0.55
2:e2:1711:C:H3'	2:e2:2093:G:H21	1.71	0.55
2:e2:1712:C:OP2	2:e2:2117:G:N2	2.40	0.55
2:e2:1865:U:H2'	2:e2:1866:A:C8	2.42	0.55
2:e2:1972:G:N2	2:e2:1993:C:H1'	2.21	0.55
2:e2:4458:C:H2'	2:e2:4459:U:C6	2.42	0.55
2:e2:4577:U:H2'	2:e2:4578:G:C8	2.41	0.55
2:e2:4763:U:O2'	37:W2:34:ARG:NH2	2.39	0.55
4:d2:61:G:H5''	25:G2:271:MET:HG3	1.87	0.55
25:G2:20:PHE:O	25:G2:24:ARG:HB3	2.06	0.55
33:S2:6:ARG:HH21	33:S2:8:ASN:HD21	1.55	0.55
42:22:12:LEU:HB2	42:22:81:MET:HB3	1.89	0.55
43:32:105:LEU:HD23	43:32:138:LEU:HD23	1.87	0.55
49:K3:229:A:N6	49:K3:900:C:O2'	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:288:G:H2'	49:K3:289:G:C8	2.41	0.55
49:K3:434:G:OP2	64:j3:3:ARG:NH2	2.39	0.55
49:K3:695:C:H2'	49:K3:696:G:C8	2.41	0.55
49:K3:700:G:C6	49:K3:731:G:C2	2.95	0.55
49:K3:704:G:N2	49:K3:727:G:N7	2.55	0.55
49:K3:1108:G:N2	49:K3:1109:C:H5	2.04	0.55
49:K3:1468:C:OP1	72:C3:1:MET:N	2.29	0.55
49:K3:1548:G:H2'	49:K3:1549:U:H6	1.70	0.55
63:Y3:96:LEU:HD23	63:Y3:189:MET:O	2.07	0.55
67:b3:42:GLY:O	67:b3:46:LYS:N	2.39	0.55
74:D3:45:ARG:NH1	74:D3:47:ASN:OD1	2.39	0.55
78:H5:13:GLU:HA	78:H5:16:ARG:HD3	1.88	0.55
2:e2:175:C:H2'	2:e2:176:G:H8	1.70	0.55
2:e2:224:U:O2	12:t2:219:LYS:NZ	2.24	0.55
2:e2:239:C:H5''	9:o2:46:SER:HB3	1.89	0.55
2:e2:509:A:N7	10:q2:105:ARG:NH2	2.55	0.55
2:e2:1075:G:H22	2:e2:1235:G:H22	1.53	0.55
2:e2:1388:A:N7	2:e2:1396:G:N2	2.54	0.55
2:e2:1461:C:H2'	2:e2:1462:A:H8	1.70	0.55
2:e2:1889:G:N2	2:e2:1938:A:H61	2.04	0.55
2:e2:1968:G:N2	2:e2:2016:A:H62	1.96	0.55
2:e2:2557:G:O6	2:e2:2570:U:O4	2.25	0.55
2:e2:2635:U:H2'	2:e2:2636:U:C6	2.41	0.55
2:e2:4212:A:H4'	2:e2:4213:A:O5'	2.05	0.55
2:e2:4345:C:H2'	2:e2:4346:U:H6	1.72	0.55
2:e2:4856:G:O2'	2:e2:4857:A:O4'	2.24	0.55
11:r2:28:ARG:HG2	11:r2:29:TYR:H	1.72	0.55
12:t2:26:ALA:HB2	12:t2:266:THR:HG23	1.88	0.55
13:u2:32:ARG:HD3	13:u2:48:GLU:HB3	1.89	0.55
20:B2:65:LYS:HD2	20:B2:68:ARG:HB2	1.89	0.55
25:G2:288:LEU:HA	25:G2:291:GLN:OE1	2.06	0.55
36:V2:209:SER:HA	36:V2:212:LYS:HG3	1.87	0.55
40:02:106:ASP:O	40:02:109:ARG:N	2.40	0.55
49:K3:210:U:H2'	49:K3:211:G:C8	2.42	0.55
49:K3:302:A:O2'	71:c3:64:ASN:ND2	2.40	0.55
49:K3:314:U:H2'	49:K3:315:C:C6	2.42	0.55
49:K3:418:A:H2'	49:K3:419:G:C8	2.42	0.55
49:K3:1109:C:H3'	49:K3:1110:G:C8	2.41	0.55
49:K3:1355:C:N4	49:K3:1356:G:H1	2.04	0.55
49:K3:1420:G:H2'	49:K3:1421:A:C8	2.41	0.55
56:a5:142:ARG:H	84:O3:22:ARG:HH22	1.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Y3:67:ARG:HB2	76:E3:93:THR:HG22	1.88	0.55
64:j3:228:ILE:HG13	64:j3:234:PRO:HB3	1.88	0.55
65:J5:36:ARG:O	65:J5:40:VAL:HG23	2.07	0.55
67:b3:5:ILE:HD12	67:b3:113:ILE:HD11	1.88	0.55
75:e3:55:ASN:HB2	75:e3:81:ASP:H	1.71	0.55
77:H3:43:PHE:HE2	80:I3:80:PHE:CG	2.24	0.55
2:e2:40:G:C6	2:e2:4378:A:C4	2.94	0.55
2:e2:1967:G:N3	2:e2:2018:C:N4	2.55	0.55
2:e2:2713:C:H2'	2:e2:2714:G:H5''	1.89	0.55
2:e2:3981:G:O2'	2:e2:3982:C:O4'	2.15	0.55
2:e2:4685:U:OP2	23:E2:112:LYS:NZ	2.31	0.55
2:e2:5025:C:N4	2:e2:5028:G:O6	2.40	0.55
4:d2:89:G:N2	30:L2:10:ARG:HH22	1.98	0.55
18:92:201:GLY:HA3	18:92:209:HIS:CE1	2.41	0.55
19:A2:10:ARG:NH2	19:A2:63:GLN:OE1	2.34	0.55
25:G2:67:ALA:HB1	47:72:31:MET:HE2	1.89	0.55
40:02:7:VAL:O	46:62:151:LYS:HA	2.07	0.55
47:72:3:ASN:O	47:72:9:ARG:NH1	2.40	0.55
48:82:23:LEU:HD11	48:82:83:LEU:HD23	1.88	0.55
49:K3:147:A:H62	67:b3:137:ARG:HH12	1.53	0.55
49:K3:1091:C:O2'	70:F3:52:GLY:N	2.40	0.55
49:K3:1165:G:N1	58:T3:20:GLN:OE1	2.40	0.55
49:K3:1282:A:N3	49:K3:1287:A:O2'	2.38	0.55
49:K3:1351:G:H4'	59:U3:110:ASN:HA	1.87	0.55
49:K3:1355:C:C4	49:K3:1356:G:N1	2.75	0.55
49:K3:1608:U:H4'	54:G5:130:ARG:HD3	1.88	0.55
59:U3:139:TYR:O	74:D3:29:HIS:HD2	1.88	0.55
80:I3:57:PRO:O	80:I3:59:LYS:NZ	2.38	0.55
83:M3:111:ARG:NH1	83:M3:114:LYS:O	2.40	0.55
1:E1:6291:U:H4'	1:E1:6292:A:OP2	2.07	0.55
2:e2:1986:C:H2'	2:e2:1987:G:H21	1.72	0.55
2:e2:3973:G:H1	2:e2:4032:G:H22	1.54	0.55
2:e2:4587:G:O2'	45:52:14:LEU:O	2.25	0.55
2:e2:5041:G:OP2	7:l2:61:LYS:NZ	2.29	0.55
3:h2:33:G:H5''	3:h2:34:U:OP1	2.07	0.55
12:t2:78:ARG:HB3	12:t2:90:GLY:H	1.72	0.55
33:S2:18:PRO:HD2	33:S2:52:PHE:CG	2.42	0.55
48:82:44:GLN:HG3	48:82:56:LEU:HD23	1.88	0.55
49:K3:1004:U:H2'	49:K3:1005:G:C8	2.41	0.55
49:K3:1843:G:OP1	62:X3:7:LYS:NZ	2.35	0.55
55:a3:164:ILE:HD12	55:a3:176:VAL:HG11	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:a3:273:GLU:HG2	55:a3:284:PRO:HD2	1.89	0.55
56:a5:71:PRO:O	56:a5:75:MET:HG2	2.06	0.55
57:A3:98:ASN:ND2	57:A3:101:THR:O	2.40	0.55
58:T3:41:PHE:HE1	58:T3:120:PHE:HE1	1.55	0.55
59:U3:182:VAL:HG13	59:U3:183:LEU:HD22	1.88	0.55
59:U3:185:MET:O	74:D3:46:PHE:N	2.31	0.55
71:c3:160:SER:O	71:c3:163:GLU:HG3	2.06	0.55
72:C3:109:LEU:HB3	72:C3:111:PHE:CD2	2.39	0.55
1:E1:6378:G:H2'	1:E1:6379:U:C6	2.42	0.55
2:e2:222:C:H2'	2:e2:223:G:O4'	2.07	0.55
2:e2:243:A:H2'	2:e2:244:G:C8	2.42	0.55
2:e2:261:G:H2'	2:e2:262:G:H8	1.72	0.55
2:e2:512:U:OP1	10:q2:94:LYS:HE2	2.07	0.55
2:e2:913:U:H2'	2:e2:914:U:C6	2.41	0.55
2:e2:1733:G:H21	2:e2:4214:A:H3'	1.72	0.55
2:e2:1819:G:C8	2:e2:1820:C:H2'	2.42	0.55
2:e2:1838:A:O2'	2:e2:1839:U:O5'	2.22	0.55
2:e2:2053:U:OP1	15:w2:18:ARG:NH1	2.40	0.55
2:e2:3946:G:H1	2:e2:4067:U:H3	1.54	0.55
2:e2:4976:U:H4'	45:52:340:THR:HG21	1.89	0.55
17:y2:98:GLU:OE1	42:22:134:LEU:HD13	2.07	0.55
31:M2:130:LYS:HB3	31:M2:154:ASP:HB3	1.88	0.55
49:K3:229:A:H61	49:K3:900:C:H1'	1.70	0.55
49:K3:382:C:H2'	49:K3:383:G:C8	2.42	0.55
49:K3:1099:G:N1	49:K3:1133:A:C2	2.67	0.55
49:K3:1457:U:H2'	49:K3:1458:G:H8	1.70	0.55
49:K3:1474:A:O2'	49:K3:1475:G:O5'	2.25	0.55
64:j3:183:VAL:HG13	64:j3:224:ASN:HB3	1.88	0.55
67:b3:38:ALA:HB2	67:b3:50:VAL:HG22	1.88	0.55
79:P3:261:ILE:O	79:P3:265:LEU:HG	2.07	0.55
1:E1:6362:U:N3	1:E1:6392:U:O2	2.40	0.54
2:e2:86:U:O2'	10:q2:65:ARG:NH1	2.40	0.54
2:e2:495:C:H2'	2:e2:496:G:C8	2.40	0.54
2:e2:1166:G:O2'	2:e2:1167:C:OP1	2.21	0.54
2:e2:1819:G:H21	25:G2:113:PHE:HZ	1.56	0.54
2:e2:3612:C:H2'	2:e2:3613:U:C6	2.42	0.54
2:e2:4258:C:OP2	39:Y2:54:ARG:NH2	2.40	0.54
2:e2:4688:C:O2'	37:W2:166:SER:OG	2.18	0.54
5:p2:12:LEU:HD21	5:p2:56:LEU:HD11	1.89	0.54
7:l2:40:PHE:HD2	7:l2:41:LEU:HD23	1.72	0.54
9:o2:50:ARG:NH1	9:o2:114:ASP:OD2	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:w2:76:PRO:HB3	15:w2:138:LEU:HD23	1.89	0.54
16:x2:57:THR:HG21	16:x2:68:ARG:HG2	1.88	0.54
34:T2:224:GLN:HG3	34:T2:225:LEU:HG	1.88	0.54
35:U2:227:VAL:HG13	46:62:39:VAL:HG22	1.89	0.54
49:K3:26:U:H2'	49:K3:27:A:H8	1.69	0.54
49:K3:31:U:C2	49:K3:644:G:N1	2.76	0.54
49:K3:1064:C:H2'	49:K3:1065:G:H8	1.72	0.54
49:K3:1541:G:O2'	78:H5:12:GLN:OE1	2.21	0.54
49:K3:1756:C:C4	49:K3:1777:G:N2	2.76	0.54
53:G3:111:VAL:HG22	53:G3:140:PHE:HB2	1.88	0.54
54:G5:91:LYS:HE2	57:A3:5:GLU:HB2	1.89	0.54
55:a3:299:PHE:CD1	55:a3:309:VAL:HG22	2.42	0.54
59:U3:11:LYS:HB2	59:U3:13:GLU:HG2	1.89	0.54
64:j3:16:LYS:HA	64:j3:20:LEU:HG	1.88	0.54
68:B3:60:VAL:HG11	68:B3:110:ILE:HD13	1.90	0.54
2:e2:5:A:H1'	36:V2:192:ARG:NH2	2.22	0.54
2:e2:20:U:OP2	3:h2:36:G:N1	2.35	0.54
2:e2:309:C:H5''	2:e2:310:G:C8	2.42	0.54
2:e2:1346:C:N4	2:e2:1347:G:O6	2.40	0.54
2:e2:1458:C:C2	2:e2:1459:A:C8	2.95	0.54
2:e2:1472:C:H2'	2:e2:1473:U:C6	2.42	0.54
2:e2:2008:A:H1'	31:M2:3:PRO:HA	1.89	0.54
2:e2:2283:G:H2'	2:e2:2284:G:H8	1.72	0.54
2:e2:4052:C:O2	44:42:60:ARG:NH2	2.36	0.54
2:e2:4107:G:H8	2:e2:4107:G:O5'	1.91	0.54
2:e2:4891:G:H2'	2:e2:4892:A:H8	1.72	0.54
9:o2:1:MET:HB2	9:o2:3:PHE:CE1	2.41	0.54
9:o2:114:ASP:HA	9:o2:117:LYS:HG2	1.88	0.54
12:t2:241:ALA:O	12:t2:243:GLY:N	2.36	0.54
14:v2:37:LYS:O	14:v2:39:ARG:NH2	2.39	0.54
16:x2:48:ALA:HB2	16:x2:71:TRP:CZ3	2.41	0.54
26:H2:98:ALA:HA	26:H2:101:ASN:HD22	1.73	0.54
41:12:84:PRO:HA	41:12:87:HIS:ND1	2.22	0.54
44:42:49:PHE:CZ	44:42:190:LEU:HG	2.42	0.54
49:K3:59:U:N3	49:K3:62:G:OP2	2.40	0.54
49:K3:185:G:H2'	49:K3:186:C:C6	2.42	0.54
49:K3:219:U:H2'	49:K3:220:U:C6	2.42	0.54
49:K3:380:G:N7	71:c3:178:ARG:NH2	2.55	0.54
49:K3:523:A:N6	49:K3:594:A:H62	2.05	0.54
49:K3:533:A:H2'	49:K3:534:G:C8	2.43	0.54
49:K3:574:A:H3'	49:K3:575:A:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:808:A:N1	49:K3:855:G:O6	2.40	0.54
49:K3:1080:A:O2'	49:K3:1081:U:OP2	2.25	0.54
49:K3:1202:U:H1'	61:W3:114:LYS:HG3	1.88	0.54
49:K3:1540:G:H2'	49:K3:1541:G:H8	1.72	0.54
49:K3:1754:G:H2'	49:K3:1755:C:O4'	2.07	0.54
52:Q3:139:LYS:NZ	52:Q3:149:LEU:HD21	2.21	0.54
55:a3:218:LEU:HB3	55:a3:227:LEU:HD12	1.89	0.54
55:a3:246:TYR:C	55:a3:247:TRP:HD1	2.15	0.54
56:a5:113:GLN:HA	84:O3:45:VAL:HG12	1.89	0.54
70:F3:165:LEU:HA	70:F3:168:ILE:HD12	1.89	0.54
75:e3:35:ILE:HD13	75:e3:64:LEU:HD13	1.89	0.54
1:E1:6327:U:O2'	44:42:44:GLN:NE2	2.33	0.54
1:E1:6386:G:H2'	1:E1:6387:G:C8	2.43	0.54
2:e2:85:G:C5	85:a7:11:LYS:HG3	2.43	0.54
2:e2:652:G:H2'	2:e2:653:U:C6	2.42	0.54
2:e2:1700:G:O2'	2:e2:1702:C:OP1	2.22	0.54
2:e2:2582:A:OP1	17:y2:76:ARG:NH2	2.32	0.54
2:e2:2633:U:H5''	43:32:61:ALA:HB2	1.88	0.54
10:q2:134:GLU:HA	10:q2:137:ILE:HG22	1.87	0.54
26:H2:23:ARG:HA	26:H2:143:PRO:HB3	1.89	0.54
41:12:18:VAL:HA	41:12:21:PHE:HD2	1.73	0.54
44:42:73:HIS:HA	44:42:76:GLU:HB2	1.89	0.54
46:62:140:PRO:HA	46:62:143:LYS:HB2	1.88	0.54
49:K3:405:G:H2'	49:K3:406:U:C6	2.42	0.54
49:K3:527:C:OP2	50:s3:35:ARG:NH2	2.39	0.54
49:K3:640:A:OP1	73:d3:22:LYS:HE2	2.08	0.54
49:K3:1059:G:OP2	49:K3:1059:G:N2	2.38	0.54
49:K3:1284:A:H61	75:e3:33:ARG:NE	2.04	0.54
49:K3:1390:U:H2'	49:K3:1391:C:H6	1.70	0.54
60:V3:92:GLN:HB2	60:V3:97:LEU:HD11	1.88	0.54
61:W3:65:LYS:O	61:W3:69:LEU:HG	2.08	0.54
61:W3:104:ASP:OD1	61:W3:130:ILE:HG12	2.07	0.54
61:W3:257:LYS:NZ	74:D3:13:VAL:HG11	2.22	0.54
65:J5:3:ARG:HH21	65:J5:29:PRO:HG3	1.72	0.54
65:J5:115:GLU:OE2	65:J5:119:LYS:HE2	2.07	0.54
71:c3:62:VAL:HG23	71:c3:75:LYS:HE3	1.89	0.54
74:D3:28:ASP:C	74:D3:29:HIS:HD1	2.14	0.54
2:e2:67:C:N4	2:e2:326:C:O5'	2.41	0.54
2:e2:132:G:C2	2:e2:137:G:C6	2.96	0.54
2:e2:444:G:O5'	2:e2:445:U:H5''	2.07	0.54
2:e2:2460:A:O2'	41:12:104:GLU:OE2	2.18	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4152:G:H2'	2:e2:4153:C:C6	2.42	0.54
2:e2:4213:A:H5'	2:e2:4214:A:C5'	2.38	0.54
3:h2:81:C:N4	3:h2:83:C:O4'	2.40	0.54
3:h2:138:C:N4	3:h2:139:G:O6	2.41	0.54
7:l2:9:SER:O	7:l2:11:TYR:N	2.41	0.54
9:o2:9:SER:O	9:o2:9:SER:OG	2.24	0.54
15:w2:157:GLU:OE2	15:w2:160:ARG:NH2	2.38	0.54
25:G2:113:PHE:HB2	25:G2:115:MET:HE2	1.89	0.54
31:M2:128:THR:HG23	31:M2:131:GLU:OE2	2.07	0.54
38:X2:207:ASP:N	38:X2:207:ASP:OD1	2.37	0.54
40:02:48:GLN:HE22	40:02:50:MET:HE3	1.72	0.54
42:22:14:LEU:HD11	42:22:81:MET:HB2	1.89	0.54
49:K3:121:U:N3	49:K3:122:G:N7	2.54	0.54
49:K3:498:C:H2'	49:K3:499:G:C8	2.42	0.54
49:K3:526:A:H2'	49:K3:527:C:H6	1.72	0.54
49:K3:831:G:H2'	49:K3:832:G:C8	2.41	0.54
49:K3:1805:G:H2'	49:K3:1806:A:O4'	2.08	0.54
49:K3:1819:A:O5'	62:X3:13:LEU:HD11	2.07	0.54
56:a5:97:LEU:HD22	84:O3:44:ILE:HG23	1.90	0.54
60:V3:179:ASN:OD1	60:V3:183:GLU:HG2	2.08	0.54
67:b3:3:LEU:HB3	67:b3:109:LEU:HB3	1.89	0.54
70:F3:164:ARG:O	70:F3:168:ILE:HG13	2.07	0.54
79:P3:363:VAL:O	79:P3:367:ILE:HG12	2.07	0.54
2:e2:121:A:C6	2:e2:153:G:C2	2.95	0.54
2:e2:197:A:C2	2:e2:225:G:C4	2.96	0.54
2:e2:351:C:OP2	12:t2:197:ARG:NH2	2.40	0.54
2:e2:424:U:H2'	2:e2:425:U:C6	2.43	0.54
2:e2:1410:U:H3'	2:e2:1411:C:H6	1.71	0.54
2:e2:1727:U:H2'	2:e2:1728:U:C6	2.43	0.54
2:e2:1778:C:C2'	2:e2:1779:U:H5'	2.37	0.54
2:e2:2568:C:N4	2:e2:2569:G:O6	2.40	0.54
2:e2:3953:G:N1	2:e2:4060:U:O2	2.40	0.54
2:e2:4762:A:N7	15:w2:126:VAL:HG21	2.23	0.54
2:e2:4998:G:H2'	2:e2:4999:G:H8	1.72	0.54
4:d2:55:A:OP1	39:Y2:154:LYS:NZ	2.27	0.54
4:d2:92:C:H2'	4:d2:93:G:H8	1.71	0.54
35:U2:146:LEU:HB3	35:U2:194:TYR:CE1	2.42	0.54
45:52:55:HIS:HB2	45:52:369:ASP:HB3	1.90	0.54
49:K3:378:U:OP2	71:c3:98:LYS:NZ	2.40	0.54
49:K3:930:C:H2'	49:K3:931:C:C6	2.43	0.54
49:K3:1261:C:OP1	49:K3:1518:C:N4	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1309:C:H41	52:Q3:137:TYR:HE1	1.56	0.54
54:G5:23:ARG:O	83:M3:80:ARG:NH2	2.41	0.54
63:Y3:15:GLY:HA2	63:Y3:18:LYS:HE2	1.89	0.54
64:j3:125:LYS:HB2	64:j3:226:PHE:CE2	2.42	0.54
67:b3:45:TRP:HD1	67:b3:48:TYR:CG	2.25	0.54
73:d3:42:GLU:O	73:d3:45:ARG:HG2	2.07	0.54
73:d3:81:LEU:HD23	73:d3:87:LEU:HB2	1.90	0.54
79:P3:359:THR:HG23	79:P3:361:THR:H	1.72	0.54
81:I5:41:ARG:HE	81:I5:57:VAL:HG13	1.72	0.54
1:E1:6313:A:H4'	1:E1:6314:U:OP1	2.07	0.54
2:e2:1278:C:C3'	2:e2:1279:A:H4'	2.37	0.54
2:e2:1758:G:H2'	2:e2:1759:G:H8	1.64	0.54
2:e2:1764:G:H4'	2:e2:1765:A:H2	1.72	0.54
2:e2:1993:C:H3'	2:e2:1994:G:H8	1.73	0.54
2:e2:2042:A:N6	2:e2:4437:U:H5''	2.23	0.54
2:e2:2352:U:H2'	2:e2:2353:U:H6	1.71	0.54
2:e2:2477:A:O2'	2:e2:2478:C:H5'	2.07	0.54
2:e2:2624:G:H2'	2:e2:2625:U:C6	2.42	0.54
2:e2:3759:A:H2'	2:e2:3760:A:N3	2.21	0.54
2:e2:3980:G:C6	2:e2:4026:G:N1	2.75	0.54
2:e2:4321:U:H2'	2:e2:4322:G:C8	2.43	0.54
2:e2:4359:U:P	85:a7:197:LYS:HZ1	2.31	0.54
2:e2:4537:C:H2'	2:e2:4538:G:C8	2.41	0.54
2:e2:4763:U:H4'	40:02:2:VAL:HG11	1.90	0.54
34:T2:108:ARG:HD2	34:T2:108:ARG:H	1.72	0.54
36:V2:213:GLY:O	36:V2:217:LYS:HG2	2.07	0.54
41:12:46:ASP:OD1	41:12:50:ARG:NE	2.41	0.54
44:42:9:THR:HA	44:42:215:ARG:HH21	1.72	0.54
49:K3:28:U:H2'	49:K3:29:G:C8	2.42	0.54
49:K3:98:C:OP2	49:K3:426:A:O2'	2.16	0.54
49:K3:170:A:H3'	67:b3:137:ARG:HH21	1.73	0.54
49:K3:223:C:H5'	53:G3:20:LYS:HE3	1.90	0.54
49:K3:348:A:C6	49:K3:349:A:N6	2.75	0.54
49:K3:436:G:N1	49:K3:458:A:C6	2.76	0.54
49:K3:494:C:H2'	49:K3:495:U:O4'	2.08	0.54
49:K3:864:A:H2'	49:K3:865:A:H8	1.71	0.54
49:K3:983:A:H2	56:a5:139:SER:HA	1.72	0.54
49:K3:1159:G:OP2	58:T3:5:ARG:NH2	2.38	0.54
49:K3:1208:A:OP2	49:K3:1835:A:O2'	2.20	0.54
49:K3:1332:A:O2'	63:Y3:141:LYS:NZ	2.25	0.54
49:K3:1350:U:H2'	49:K3:1351:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1744:G:O2'	49:K3:1789:G:N2	2.37	0.54
55:a3:174:VAL:CG1	55:a3:188:HIS:HB2	2.37	0.54
55:a3:251:ALA:HB2	55:a3:289:LEU:HD22	1.90	0.54
58:T3:48:LYS:HB3	58:T3:75:ILE:HD11	1.90	0.54
59:U3:77:ILE:HG22	59:U3:123:VAL:O	2.08	0.54
64:j3:177:THR:O	64:j3:179:ASN:ND2	2.41	0.54
74:D3:53:TYR:HB3	74:D3:69:ILE:HD12	1.89	0.54
2:e2:1177:U:H2'	2:e2:1178:G:C8	2.43	0.54
2:e2:1308:C:H2'	2:e2:1309:C:C6	2.43	0.54
2:e2:2396:A:H3'	2:e2:2397:G:H5''	1.88	0.54
2:e2:4327:C:O4'	25:G2:35:ARG:NH2	2.40	0.54
2:e2:4376:A:H5''	2:e2:4377:G:OP1	2.07	0.54
6:k2:14:PHE:HE2	45:52:66:LYS:HD2	1.73	0.54
49:K3:300:U:H2'	49:K3:301:A:C8	2.43	0.54
49:K3:364:A:N6	49:K3:397:G:O6	2.40	0.54
49:K3:397:G:H2'	49:K3:397:G:N3	2.22	0.54
49:K3:1111:U:H3'	49:K3:1112:U:C6	2.43	0.54
49:K3:1294:G:C6	49:K3:1295:A:C5	2.95	0.54
49:K3:1706:G:OP1	62:X3:6:ARG:NH2	2.40	0.54
55:a3:220:ASP:HB2	55:a3:225:LYS:CG	2.38	0.54
68:B3:159:GLY:O	68:B3:167:TYR:N	2.32	0.54
69:f3:44:ARG:NH1	69:f3:61:SER:O	2.40	0.54
70:F3:153:GLU:OE2	70:F3:156:ARG:NH1	2.38	0.54
71:c3:146:GLN:H	71:c3:146:GLN:CD	2.15	0.54
72:C3:3:ARG:NH2	72:C3:49:LYS:HZ2	2.03	0.54
75:e3:56:CYS:SG	75:e3:82:ASN:HB2	2.47	0.54
79:P3:262:SER:HA	79:P3:265:LEU:HD12	1.89	0.54
1:E1:6278:A:H3'	1:E1:6279:A:C8	2.42	0.54
2:e2:375:G:O2'	2:e2:376:A:O4'	2.25	0.54
2:e2:1448:G:H4'	12:t2:300:ARG:NH2	2.22	0.54
2:e2:2078:G:H4'	14:v2:58:ILE:HD11	1.89	0.54
2:e2:2778:G:O2'	8:m2:105:ASN:OD1	2.15	0.54
2:e2:4593:C:H2'	2:e2:4594:U:H6	1.71	0.54
2:e2:4899:G:N1	2:e2:4922:C:N3	2.56	0.54
4:d2:29:C:OP1	39:Y2:138:GLY:N	2.41	0.54
18:92:101:VAL:HG23	18:92:164:ALA:C	2.33	0.54
29:K2:55:MET:HG2	29:K2:87:GLY:HA3	1.89	0.54
31:M2:102:GLY:HA3	31:M2:143:VAL:HA	1.89	0.54
37:W2:97:LEU:O	37:W2:198:VAL:HB	2.08	0.54
41:12:128:LYS:HD3	41:12:130:PHE:HE2	1.72	0.54
42:22:89:ILE:HG13	42:22:117:LYS:HE3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:62:160:ARG:O	46:62:160:ARG:HD2	2.08	0.54
49:K3:1032:C:OP1	70:F3:159:LYS:NZ	2.27	0.54
49:K3:1301:A:C8	77:H3:6:LEU:HD22	2.43	0.54
49:K3:1341:C:H5'	49:K3:1687:C:H4'	1.90	0.54
55:a3:59:LEU:HD22	55:a3:90:TRP:CE3	2.41	0.54
60:V3:42:ARG:NH1	60:V3:233:GLY:OXT	2.40	0.54
70:F3:120:LYS:HE2	70:F3:123:ARG:HE	1.73	0.54
2:e2:919:C:O2'	40:02:72:TYR:OH	2.22	0.54
2:e2:957:G:N2	2:e2:958:G:N7	2.56	0.54
2:e2:1228:U:P	2:e2:1232:G:H5''	2.48	0.54
2:e2:1465:G:OP1	11:r2:44:ARG:NH2	2.39	0.54
2:e2:1885:G:O2'	2:e2:1908:G:O2'	2.25	0.54
2:e2:2570:U:H5''	2:e2:2571:C:OP2	2.08	0.54
2:e2:3731:C:H2'	2:e2:3732:A:H8	1.73	0.54
2:e2:3838:U:O2'	2:e2:3839:G:H5'	2.08	0.54
2:e2:4126:C:H5''	2:e2:4127:A:H5''	1.90	0.54
2:e2:4519:C:H5''	2:e2:4520:G:H5'	1.89	0.54
25:G2:44:TYR:OH	47:72:67:VAL:HG21	2.08	0.54
25:G2:78:ALA:HB1	25:G2:104:LEU:HD23	1.88	0.54
25:G2:208:MET:O	25:G2:212:MET:HG2	2.08	0.54
38:X2:115:MET:HA	38:X2:118:ALA:HB2	1.89	0.54
44:42:35:GLN:HG2	44:42:36:ILE:H	1.73	0.54
45:52:163:LEU:HD23	45:52:182:GLU:HG3	1.90	0.54
46:62:80:ILE:HD11	46:62:126:ILE:HD12	1.89	0.54
48:82:35:ASP:OD1	48:82:36:ALA:N	2.41	0.54
49:K3:430:C:H2'	49:K3:431:G:H8	1.73	0.54
49:K3:743:U:H1'	79:P3:341:LYS:H	1.71	0.54
49:K3:1136:U:H2'	49:K3:1137:U:C6	2.43	0.54
49:K3:1214:A:C2'	49:K3:1215:C:H4'	2.37	0.54
49:K3:1280:G:OP2	75:e3:102:LYS:NZ	2.40	0.54
49:K3:1354:G:H22	49:K3:1356:G:H3'	1.73	0.54
49:K3:1606:G:N2	49:K3:1633:A:C8	2.67	0.54
49:K3:1613:G:O6	49:K3:1627:C:N4	2.41	0.54
63:Y3:26:THR:HG22	63:Y3:34:TYR:CE2	2.43	0.54
64:j3:36:HIS:NE2	64:j3:143:ASP:OD1	2.40	0.54
65:J5:53:ILE:HD12	79:P3:381:ARG:HD2	1.89	0.54
74:D3:40:ASP:HB3	74:D3:47:ASN:HD22	1.72	0.54
75:e3:85:LEU:HD23	75:e3:106:CYS:O	2.07	0.54
77:H3:22:ARG:HH21	77:H3:36:LEU:HA	1.73	0.54
81:I5:20:ARG:NE	81:I5:22:GLN:HB3	2.22	0.54
85:a7:17:ASP:CB	85:a7:19:GLN:HG2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:403:G:C2	2:e2:404:U:C4	2.96	0.54
2:e2:470:A:OP1	2:e2:682:G:N1	2.41	0.54
2:e2:512:U:O2'	2:e2:513:U:H4'	2.08	0.54
2:e2:916:C:O2'	2:e2:917:A:O4'	2.26	0.54
2:e2:1545:G:N1	2:e2:1615:C:N3	2.56	0.54
2:e2:1650:A:O2'	2:e2:1651:G:H5'	2.07	0.54
2:e2:2559:G:H2'	2:e2:2560:C:C6	2.43	0.54
2:e2:4131:G:OP2	36:V2:26:LYS:NZ	2.27	0.54
3:h2:67:U:H2'	3:h2:68:G:H8	1.70	0.54
3:h2:155:C:H2'	3:h2:156:U:O4'	2.08	0.54
4:d2:110:G:H2'	4:d2:111:C:C6	2.43	0.54
10:q2:64:LYS:HE2	10:q2:67:GLN:HE22	1.73	0.54
11:r2:65:MET:N	11:r2:65:MET:HE2	2.23	0.54
12:t2:58:ALA:O	12:t2:60:HIS:N	2.41	0.54
19:A2:41:ALA:HA	19:A2:44:LEU:HD12	1.90	0.54
45:52:80:GLU:HA	45:52:330:PHE:HA	1.90	0.54
49:K3:34:U:H2'	49:K3:35:C:C5	2.43	0.54
49:K3:243:C:H2'	49:K3:244:A:C8	2.42	0.54
49:K3:616:A:N1	49:K3:632:C:H1'	2.23	0.54
49:K3:853:C:H2'	49:K3:854:A:O4'	2.08	0.54
49:K3:897:U:H2'	49:K3:898:U:C5	2.43	0.54
49:K3:1221:G:O2'	49:K3:1676:U:O2	2.26	0.54
54:G5:81:ASP:HA	54:G5:84:LEU:HD12	1.90	0.54
55:a3:16:GLY:HA3	55:a3:37:ASP:H	1.73	0.54
58:T3:49:GLY:HA2	58:T3:75:ILE:HG23	1.90	0.54
65:J5:44:HIS:NE2	65:J5:112:ASP:OD2	2.35	0.54
69:f3:21:THR:OG1	69:f3:22:GLY:N	2.40	0.54
71:c3:12:ARG:HD2	71:c3:17:LYS:N	2.22	0.54
73:d3:69:ARG:HD2	73:d3:73:GLU:OE2	2.08	0.54
2:e2:52:G:OP2	21:C2:48:ASN:ND2	2.37	0.53
2:e2:1100:U:C2	2:e2:1195:G:O6	2.61	0.53
2:e2:1265:G:H3'	2:e2:1266:G:H8	1.73	0.53
2:e2:1439:C:H1'	2:e2:2107:G:O2'	2.08	0.53
2:e2:1891:A:H5''	2:e2:1892:C:H5	1.72	0.53
2:e2:2276:A:OP1	35:U2:165:ARG:NH1	2.41	0.53
2:e2:3736:A:H2'	2:e2:3737:A:H8	1.73	0.53
2:e2:4371:G:O2'	2:e2:4372:U:OP2	2.24	0.53
2:e2:4723:A:H2'	2:e2:4724:A:C8	2.42	0.53
2:e2:4873:G:H8	40:02:94:LYS:HZ3	1.54	0.53
3:h2:36:G:N7	19:A2:89:ARG:HD2	2.23	0.53
4:d2:59:G:O2'	25:G2:267:ASN:OD1	2.14	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:p2:27:LYS:HA	5:p2:32:VAL:HG22	1.90	0.53
17:y2:95:PHE:CZ	42:22:20:GLY:HA2	2.43	0.53
24:F2:3:ASN:OD1	24:F2:4:VAL:N	2.41	0.53
35:U2:107:VAL:HG21	35:U2:134:ILE:HD11	1.89	0.53
43:32:123:LEU:HD11	43:32:142:ILE:HD11	1.89	0.53
44:42:43:PRO:CB	44:42:161:LYS:HA	2.38	0.53
46:62:21:LYS:HD2	46:62:22:CYS:N	2.23	0.53
49:K3:683:G:N1	49:K3:1023:A:C6	2.75	0.53
49:K3:699:C:H2'	49:K3:700:G:H8	1.73	0.53
49:K3:1128:C:N4	49:K3:1129:G:O6	2.41	0.53
54:G5:16:LEU:HD23	54:G5:68:ILE:HG23	1.89	0.53
55:a3:218:LEU:HD22	55:a3:228:TYR:CZ	2.43	0.53
57:A3:107:ILE:HA	57:A3:111:MET:HE2	1.90	0.53
64:j3:43:PRO:O	64:j3:46:ILE:HG22	2.08	0.53
64:j3:70:ILE:HD12	64:j3:92:ILE:HG12	1.90	0.53
64:j3:127:ARG:HA	64:j3:127:ARG:NH1	2.23	0.53
71:c3:120:PRO:HG2	71:c3:128:LYS:N	2.22	0.53
85:a7:25:TRP:HD1	85:a7:28:GLN:HB2	1.73	0.53
2:e2:68:U:H1'	2:e2:74:G:N2	2.23	0.53
2:e2:1631:A:O2'	18:92:203:ALA:O	2.26	0.53
2:e2:2318:G:N2	2:e2:2321:G:OP2	2.42	0.53
2:e2:3612:C:H2'	2:e2:3613:U:H6	1.73	0.53
2:e2:3663:A:H4'	2:e2:3664:G:OP2	2.09	0.53
2:e2:4345:C:H2'	2:e2:4346:U:C6	2.43	0.53
2:e2:4393:G:N2	2:e2:4396:A:OP2	2.31	0.53
2:e2:4559:A:O2'	2:e2:4560:C:H2'	2.09	0.53
2:e2:4968:A:H2'	2:e2:4969:C:H6	1.72	0.53
3:h2:22:U:OP1	9:o2:11:ARG:NH2	2.32	0.53
22:D2:27:ILE:O	22:D2:33:ASN:ND2	2.41	0.53
25:G2:156:GLY:N	25:G2:179:ARG:O	2.34	0.53
26:H2:40:HIS:CE1	26:H2:41:ILE:HG22	2.43	0.53
29:K2:14:PHE:O	29:K2:66:ARG:NH2	2.41	0.53
31:M2:79:ALA:HA	31:M2:137:GLN:HB3	1.91	0.53
36:V2:94:GLN:HA	36:V2:97:LYS:HG2	1.90	0.53
38:X2:140:THR:OG1	38:X2:141:LYS:N	2.41	0.53
39:Y2:169:LYS:HG2	39:Y2:170:TYR:HD2	1.71	0.53
40:02:69:ARG:NH1	40:02:72:TYR:HB2	2.23	0.53
49:K3:370:G:H4'	49:K3:371:A:OP1	2.08	0.53
49:K3:568:C:H42	49:K3:582:U:H3	1.55	0.53
49:K3:1514:G:H2'	49:K3:1515:G:H8	1.73	0.53
49:K3:1804:U:H2'	49:K3:1805:G:C8	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:V3:205:TYR:CD1	60:V3:206:PRO:HD2	2.43	0.53
64:j3:129:ILE:HG23	64:j3:129:ILE:O	2.08	0.53
73:d3:113:GLN:CD	73:d3:154:GLN:HG3	2.33	0.53
79:P3:247:VAL:HA	79:P3:282:ASN:ND2	2.23	0.53
2:e2:444:G:H3'	2:e2:445:U:C5'	2.38	0.53
2:e2:452:A:N6	34:T2:224:GLN:O	2.41	0.53
2:e2:458:C:H2'	2:e2:459:C:H6	1.72	0.53
2:e2:511:C:C2	2:e2:512:U:H5	2.25	0.53
2:e2:1228:U:H5''	2:e2:1231:C:H4'	1.90	0.53
2:e2:1662:C:H2'	2:e2:1663:C:C6	2.43	0.53
2:e2:1885:G:OP2	16:x2:19:ARG:NH1	2.41	0.53
2:e2:3930:U:H2'	2:e2:3931:C:C6	2.43	0.53
4:d2:57:C:H2'	4:d2:58:A:C8	2.41	0.53
13:u2:64:ILE:HA	13:u2:106:VAL:HB	1.90	0.53
21:C2:21:ARG:NH2	21:C2:38:GLY:O	2.38	0.53
22:D2:28:ARG:HA	22:D2:33:ASN:HD22	1.72	0.53
34:T2:218:ALA:H	34:T2:221:LYS:HB2	1.73	0.53
49:K3:75:G:O2'	49:K3:77:A:OP1	2.25	0.53
49:K3:429:C:H2'	49:K3:430:C:H6	1.73	0.53
49:K3:826:A:H3'	49:K3:827:A:H8	1.74	0.53
49:K3:989:C:O2	84:O3:32:LYS:NZ	2.41	0.53
49:K3:1135:C:H2'	49:K3:1136:U:C6	2.44	0.53
49:K3:1206:G:H2'	49:K3:1208:A:C8	2.44	0.53
60:V3:150:ILE:HG22	72:C3:129:LYS:H	1.73	0.53
63:Y3:50:ILE:HG13	63:Y3:86:LEU:HD23	1.91	0.53
64:j3:11:ARG:HG2	64:j3:27:PHE:O	2.08	0.53
76:E3:90:VAL:HG22	76:E3:95:ARG:HH21	1.72	0.53
79:P3:345:LYS:NZ	79:P3:350:ASN:O	2.41	0.53
81:I5:91:LEU:HD21	81:I5:96:LEU:HD23	1.90	0.53
2:e2:666:G:N2	2:e2:666:G:OP2	2.24	0.53
2:e2:971:U:H5'	34:T2:129:LEU:HD21	1.90	0.53
2:e2:1098:G:C2	2:e2:1099:C:C5	2.97	0.53
2:e2:1111:U:H3	2:e2:1162:G:H1	0.68	0.53
2:e2:1707:C:H2'	2:e2:1708:G:N7	2.23	0.53
2:e2:1720:C:H5	2:e2:1721:G:C6	2.27	0.53
2:e2:1731:C:O2'	47:72:41:ASP:OD2	2.27	0.53
2:e2:2366:A:H1'	2:e2:3850:C:O2'	2.08	0.53
2:e2:2797:C:O2'	2:e2:2798:A:O5'	2.19	0.53
2:e2:3713:U:H1'	2:e2:3714:G:N7	2.23	0.53
2:e2:3893:C:H1'	26:H2:69:ARG:HH12	1.72	0.53
2:e2:4488:A:H4'	2:e2:4489:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:h2:78:G:H2'	3:h2:79:G:C8	2.43	0.53
3:h2:121:G:C6	3:h2:122:G:C6	2.96	0.53
12:t2:7:LEU:HD12	12:t2:21:ASN:HB3	1.91	0.53
13:u2:25:TYR:HD1	13:u2:119:THR:HB	1.74	0.53
20:B2:91:SER:C	20:B2:93:VAL:H	2.17	0.53
25:G2:89:LYS:HB2	25:G2:229:ASN:HD21	1.72	0.53
25:G2:266:TRP:HE3	25:G2:267:ASN:ND2	2.05	0.53
29:K2:132:PRO:HD3	31:M2:12:VAL:HG13	1.91	0.53
36:V2:154:LEU:HB3	36:V2:204:PHE:HD1	1.73	0.53
36:V2:159:HIS:ND1	36:V2:185:LYS:HA	2.23	0.53
37:W2:54:VAL:HG12	37:W2:70:LYS:HD3	1.91	0.53
46:62:45:TRP:NE1	46:62:61:ILE:HD11	2.22	0.53
49:K3:12:U:H2'	49:K3:13:C:H6	1.73	0.53
49:K3:52:G:N2	49:K3:507:G:N7	2.55	0.53
49:K3:96:C:H2'	49:K3:97:U:C6	2.43	0.53
49:K3:215:G:H1	49:K3:302:A:N6	1.94	0.53
49:K3:445:A:H4'	71:c3:51:GLY:HA3	1.90	0.53
49:K3:476:A:O2'	49:K3:487:U:O2'	2.15	0.53
49:K3:1134:G:H2'	49:K3:1135:C:C6	2.44	0.53
49:K3:1214:A:H2'	49:K3:1217:A:N7	2.22	0.53
49:K3:1533:A:H5'	49:K3:1534:C:OP2	2.09	0.53
49:K3:1868:U:H3'	49:K3:1869:A:H2'	1.89	0.53
55:a3:20:GLN:HG2	55:a3:69:VAL:H	1.73	0.53
55:a3:127:LYS:HZ1	55:a3:150:TRP:HD1	1.56	0.53
58:T3:68:LYS:HG3	58:T3:91:LEU:HD22	1.90	0.53
59:U3:30:LEU:HD11	59:U3:34:MET:HB3	1.89	0.53
60:V3:87:ILE:HG23	60:V3:101:HIS:HB2	1.89	0.53
61:W3:105:GLU:HG2	61:W3:212:LYS:HZ3	1.74	0.53
71:c3:123:ARG:NH2	71:c3:158:ILE:HD13	2.22	0.53
73:d3:80:ARG:HH21	73:d3:81:LEU:HD11	1.73	0.53
74:D3:24:ILE:HB	74:D3:28:ASP:OD2	2.09	0.53
76:E3:31:LYS:NZ	76:E3:33:PRO:HG3	2.24	0.53
2:e2:6:C:H2'	2:e2:7:C:O4'	2.08	0.53
2:e2:23:C:OP1	21:C2:44:LYS:NZ	2.32	0.53
2:e2:192:G:H2'	2:e2:193:G:C8	2.43	0.53
2:e2:1064:G:H3'	2:e2:1065:G:C8	2.38	0.53
2:e2:2033:G:H2'	2:e2:2034:C:C6	2.44	0.53
2:e2:2078:G:H2'	2:e2:2079:U:H6	1.73	0.53
2:e2:2427:G:O2'	2:e2:2428:A:N3	2.41	0.53
2:e2:3727:A:H2'	2:e2:3728:A:C8	2.43	0.53
2:e2:3756:A:H2'	2:e2:3757:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3883:U:H2'	2:e2:3884:U:C6	2.43	0.53
2:e2:4047:A:O4'	44:42:162:VAL:HG21	2.08	0.53
3:h2:26:C:O2'	12:t2:53:ALA:O	2.22	0.53
5:p2:7:GLU:OE1	5:p2:10:ASP:N	2.30	0.53
42:22:105:ALA:HA	42:22:108:ARG:HE	1.74	0.53
44:42:134:PHE:CZ	44:42:136:SER:HB3	2.43	0.53
45:52:56:ILE:HG12	45:52:365:LEU:HD22	1.91	0.53
49:K3:482:G:N2	49:K3:484:A:H3'	2.23	0.53
49:K3:818:A:C5	49:K3:847:A:N7	2.77	0.53
49:K3:1604:G:C6	49:K3:1605:G:C6	2.97	0.53
53:G3:109:MET:HE3	53:G3:140:PHE:CD2	2.43	0.53
54:G5:98:VAL:C	54:G5:99:LEU:HD12	2.33	0.53
56:a5:31:CYS:HB3	56:a5:95:ILE:HD13	1.91	0.53
57:A3:98:ASN:ND2	57:A3:101:THR:OG1	2.34	0.53
84:O3:10:ARG:HH11	84:O3:12:LYS:HD3	1.72	0.53
2:e2:211:G:H5'	2:e2:234:G:H8	1.74	0.53
2:e2:1217:G:H2'	2:e2:1218:G:C8	2.43	0.53
2:e2:2750:G:C2	2:e2:2751:G:C4	2.97	0.53
2:e2:3978:C:C5	2:e2:4031:U:C4	2.95	0.53
2:e2:3981:G:H2'	2:e2:3982:C:C6	2.44	0.53
2:e2:4996:C:H4'	13:u2:26:THR:HG23	1.90	0.53
3:h2:66:A:H2'	3:h2:67:U:C6	2.44	0.53
12:t2:86:ARG:HH21	12:t2:97:ARG:NE	2.06	0.53
18:92:54:ARG:HG2	18:92:56:ALA:H	1.74	0.53
49:K3:183:G:O2'	49:K3:185:G:N7	2.39	0.53
49:K3:318:A:N6	49:K3:332:G:N1	2.56	0.53
49:K3:363:A:N6	49:K3:398:A:H5'	2.24	0.53
49:K3:851:C:O3'	49:K3:852:G:N2	2.40	0.53
49:K3:881:G:H1	49:K3:906:U:HO2'	1.51	0.53
49:K3:932:G:N3	49:K3:994:C:H4'	2.23	0.53
49:K3:1092:G:H2'	49:K3:1093:A:H8	1.74	0.53
49:K3:1182:A:O2'	49:K3:1845:A:OP1	2.21	0.53
49:K3:1467:C:H2'	49:K3:1468:C:C6	2.44	0.53
49:K3:1597:C:H2'	83:M3:82:SER:HB3	1.91	0.53
57:A3:79:HIS:ND1	57:A3:79:HIS:O	2.39	0.53
59:U3:26:GLY:HA2	59:U3:164:ASN:HB3	1.89	0.53
59:U3:73:ASP:O	59:U3:120:ARG:N	2.42	0.53
60:V3:34:LYS:HA	60:V3:42:ARG:O	2.09	0.53
61:W3:70:MET:HE1	61:W3:75:ILE:HB	1.90	0.53
64:j3:121:TYR:HA	64:j3:163:ASP:HA	1.89	0.53
66:N3:40:ALA:H	66:N3:68:ILE:HG23	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:c3:38:ILE:HA	71:c3:60:LEU:O	2.08	0.53
73:d3:82:VAL:HB	73:d3:92:MET:HE1	1.91	0.53
80:I3:66:ARG:NH2	80:I3:74:SER:O	2.41	0.53
2:e2:710:G:H2'	2:e2:711:A:C8	2.43	0.53
2:e2:954:C:H2'	2:e2:955:G:H8	1.73	0.53
2:e2:2062:G:H2'	2:e2:2063:G:C8	2.43	0.53
2:e2:2345:G:OP2	10:q2:9:ARG:NH2	2.35	0.53
2:e2:2747:U:O2'	17:y2:62:LYS:NZ	2.40	0.53
2:e2:4112:C:H2'	2:e2:4113:U:O4'	2.08	0.53
4:d2:114:U:H2'	4:d2:115:A:C8	2.44	0.53
6:k2:16:ILE:HD11	6:k2:57:VAL:H	1.72	0.53
10:q2:84:GLU:O	10:q2:88:VAL:HG23	2.09	0.53
10:q2:97:ALA:HB3	85:a7:168:VAL:HA	1.90	0.53
15:w2:8:VAL:HG22	15:w2:34:VAL:HB	1.91	0.53
18:92:209:HIS:O	18:92:211:PHE:N	2.41	0.53
31:M2:7:PRO:HA	31:M2:65:GLN:HE21	1.73	0.53
33:S2:124:ASP:OD1	33:S2:124:ASP:N	2.42	0.53
42:22:76:ASN:OD1	42:22:78:ASN:N	2.33	0.53
49:K3:347:G:O2'	49:K3:348:A:OP1	2.27	0.53
49:K3:387:C:H2'	49:K3:388:U:C6	2.44	0.53
49:K3:416:U:O2	49:K3:652:U:O2'	2.27	0.53
49:K3:498:C:OP1	64:j3:30:ARG:NH2	2.42	0.53
49:K3:571:U:H5''	81:I5:37:LYS:HG2	1.90	0.53
49:K3:1335:G:O6	49:K3:1492:U:O2	2.26	0.53
49:K3:1655:C:OP1	78:H5:92:PHE:N	2.41	0.53
55:a3:147:HIS:NE2	55:a3:175:LYS:HB2	2.24	0.53
61:W3:125:LYS:HD2	61:W3:127:PHE:HE2	1.72	0.53
70:F3:179:TYR:HA	70:F3:182:LYS:HB2	1.90	0.53
72:C3:106:LEU:HD23	72:C3:109:LEU:HD12	1.91	0.53
73:d3:126:ALA:O	73:d3:129:LEU:HG	2.09	0.53
79:P3:377:ILE:HA	79:P3:396:LEU:HD23	1.90	0.53
81:I5:55:ILE:HG23	81:I5:75:ILE:HG13	1.89	0.53
1:E1:6363:C:H4'	1:E1:6364:C:OP1	2.08	0.53
2:e2:1174:G:H1	2:e2:1187:G:N2	2.04	0.53
2:e2:1250:C:H2'	2:e2:1251:C:O4'	2.09	0.53
2:e2:1881:U:C4	2:e2:2279:A:C2	2.97	0.53
2:e2:1966:A:N3	29:K2:85:ASN:ND2	2.56	0.53
2:e2:4517:A:N3	45:52:261:ARG:NH2	2.57	0.53
2:e2:4728:U:H5'	2:e2:4729:A:OP1	2.08	0.53
2:e2:4739:C:H2'	2:e2:4740:G:H8	1.73	0.53
3:h2:144:U:H2'	3:h2:145:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:t2:41:HIS:CE1	12:t2:243:GLY:HA2	2.43	0.53
12:t2:109:ARG:HB2	12:t2:111:TRP:NE1	2.24	0.53
17:y2:62:LYS:HG2	17:y2:65:MET:HE2	1.91	0.53
30:L2:49:CYS:HB3	38:X2:168:SER:OG	2.09	0.53
40:02:91:TRP:O	40:02:91:TRP:HD1	1.92	0.53
49:K3:126:G:H4'	49:K3:127:C:O5'	2.08	0.53
49:K3:156:G:N2	67:b3:60:GLY:O	2.27	0.53
49:K3:561:A:N6	49:K3:588:G:H1	2.07	0.53
49:K3:1207:G:N2	49:K3:1837:G:N7	2.56	0.53
49:K3:1298:G:H1'	57:A3:79:HIS:HB2	1.90	0.53
49:K3:1443:C:H4'	68:B3:39:PHE:HB3	1.90	0.53
49:K3:1629:C:H3'	49:K3:1630:A:H8	1.72	0.53
49:K3:1649:U:OP1	68:B3:153:CYS:HA	2.09	0.53
55:a3:21:ILE:HA	55:a3:32:LEU:O	2.08	0.53
55:a3:69:VAL:HG23	55:a3:80:SER:HB3	1.91	0.53
60:V3:171:ILE:HG13	60:V3:197:ILE:HG12	1.90	0.53
65:J5:3:ARG:NH2	65:J5:29:PRO:HG3	2.24	0.53
65:J5:41:MET:HE1	65:J5:129:PHE:HB3	1.90	0.53
66:N3:88:MET:O	66:N3:92:ILE:HG12	2.09	0.53
68:B3:58:ILE:HG22	68:B3:65:LEU:HD13	1.91	0.53
2:e2:2:G:H2'	2:e2:3:C:C6	2.44	0.53
2:e2:325:U:P	20:B2:28:ARG:HH22	2.31	0.53
2:e2:1379:C:H4'	2:e2:1380:G:O4'	2.09	0.53
2:e2:1563:A:N6	49:K3:1028:A:N1	2.57	0.53
2:e2:2768:C:H4'	2:e2:2769:U:H5	1.73	0.53
2:e2:4307:A:N1	2:e2:4376:A:C6	2.77	0.53
2:e2:4338:G:N7	24:F2:61:LYS:NZ	2.51	0.53
2:e2:4453:C:C4	2:e2:4529:G:N2	2.77	0.53
45:52:81:THR:O	45:52:81:THR:OG1	2.22	0.53
49:K3:158:A:H8	49:K3:158:A:OP1	1.92	0.53
49:K3:1102:G:OP1	60:V3:151:ARG:NH1	2.41	0.53
49:K3:1217:A:H2'	49:K3:1218:C:H6	1.74	0.53
51:13:17:ARG:HB3	51:13:104:ILE:HD12	1.91	0.53
64:j3:116:PRO:O	64:j3:120:LYS:HG2	2.08	0.53
66:N3:103:LEU:HD11	83:M3:67:LEU:HD22	1.91	0.53
67:b3:52:ILE:HD11	67:b3:109:LEU:HD21	1.91	0.53
71:c3:63:GLY:HA3	71:c3:185:ALA:O	2.09	0.53
72:C3:53:TYR:O	72:C3:57:LEU:HG	2.09	0.53
75:e3:47:ALA:HB2	75:e3:112:LYS:HG2	1.89	0.53
80:I3:26:SER:HB2	80:I3:32:LEU:HD11	1.90	0.53
80:I3:54:VAL:HG21	80:I3:56:MET:HE3	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:a7:155:MET:N	85:a7:155:MET:SD	2.82	0.53
2:e2:97:G:O2'	2:e2:98:A:O4'	2.25	0.53
2:e2:423:G:H2'	2:e2:424:U:H6	1.73	0.53
2:e2:1178:G:N2	2:e2:1181:C:H5''	2.24	0.53
2:e2:1953:U:H2'	2:e2:1954:G:C8	2.44	0.53
2:e2:1956:U:O2'	2:e2:1957:A:OP2	2.25	0.53
2:e2:2043:U:C5	45:52:260:ALA:HB1	2.42	0.53
2:e2:3628:G:H2'	2:e2:3629:A:C8	2.37	0.53
2:e2:3927:U:C2	2:e2:4185:G:C2	2.97	0.53
2:e2:4563:U:H2'	2:e2:4564:A:C8	2.43	0.53
2:e2:5064:G:H4'	26:H2:46:LYS:HE2	1.91	0.53
4:d2:27:G:OP2	25:G2:57:ASN:N	2.31	0.53
5:p2:23:VAL:HG11	5:p2:60:LEU:HD11	1.90	0.53
25:G2:157:ASN:OD1	25:G2:158:LYS:N	2.42	0.53
25:G2:231:VAL:HA	25:G2:235:MET:HE2	1.91	0.53
35:U2:181:TYR:OH	35:U2:202:GLU:HG3	2.08	0.53
44:42:70:ASP:OD1	44:42:115:SER:HB2	2.08	0.53
49:K3:688:U:H2'	49:K3:689:U:H5''	1.91	0.53
49:K3:918:U:H5''	70:F3:114:ARG:HH11	1.74	0.53
49:K3:934:G:H2'	49:K3:935:G:C8	2.44	0.53
61:W3:229:CYS:O	61:W3:232:THR:OG1	2.26	0.53
63:Y3:215:ASP:HB3	63:Y3:217:ILE:HG23	1.90	0.53
64:j3:48:LEU:HB2	64:j3:61:VAL:HG13	1.89	0.53
65:J5:37:PHE:CE1	65:J5:103:VAL:HG11	2.43	0.53
76:E3:59:LYS:O	76:E3:69:TRP:HA	2.08	0.53
1:E1:6284:G:H1'	1:E1:6285:U:C5	2.43	0.52
1:E1:6287:A:H1'	1:E1:6334:A:N7	2.24	0.52
2:e2:259:C:H2'	2:e2:260:C:H6	1.74	0.52
2:e2:933:G:C2	2:e2:939:G:C2	2.97	0.52
2:e2:1052:G:H5'	32:R2:38:PRO:HD2	1.91	0.52
2:e2:1077:C:C4	2:e2:1078:A:H1'	2.44	0.52
2:e2:1531:U:H2'	2:e2:1532:G:H8	1.74	0.52
2:e2:1873:A:H2'	2:e2:1874:C:H6	1.73	0.52
2:e2:1975:G:H1'	2:e2:2001:A:N7	2.24	0.52
2:e2:1996:U:O4	29:K2:59:THR:HG23	2.10	0.52
2:e2:2059:G:N2	46:62:115:ALA:HB2	2.24	0.52
2:e2:4058:U:O2'	2:e2:4059:C:O5'	2.26	0.52
2:e2:4145:C:H2'	2:e2:4146:G:H8	1.74	0.52
2:e2:4680:G:C2	2:e2:4681:A:C5	2.97	0.52
3:h2:126:C:H1'	3:h2:127:U:C6	2.44	0.52
8:m2:79:PHE:CE1	8:m2:99:ILE:HD12	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:y2:49:CYS:HB3	17:y2:85:LYS:HB3	1.89	0.52
42:22:5:MET:HB2	42:22:28:ASN:ND2	2.23	0.52
44:42:164:CYS:SG	44:42:165:LEU:N	2.83	0.52
49:K3:457:C:H2'	49:K3:458:A:C8	2.44	0.52
49:K3:473:A:H2'	49:K3:473:A:N3	2.24	0.52
49:K3:588:G:N2	49:K3:589:G:H22	2.07	0.52
49:K3:744:G:H1'	79:P3:346:SER:HB2	1.91	0.52
49:K3:1035:A:O2'	49:K3:1856:C:O2	2.13	0.52
49:K3:1405:A:O5'	49:K3:1405:A:H8	1.91	0.52
49:K3:1421:A:H3'	49:K3:1422:G:C8	2.44	0.52
49:K3:1789:G:H2'	49:K3:1790:A:C8	2.44	0.52
49:K3:1800:A:C8	49:K3:1801:A:C8	2.97	0.52
54:G5:58:GLU:OE1	83:M3:49:LEU:HD22	2.09	0.52
54:G5:87:GLN:HG2	54:G5:88:LYS:HG3	1.91	0.52
60:V3:120:MET:SD	60:V3:140:VAL:HG23	2.49	0.52
64:j3:46:ILE:HA	64:j3:49:ARG:HB3	1.90	0.52
64:j3:180:LEU:HG	64:j3:234:PRO:HD3	1.90	0.52
66:N3:188:TYR:HA	66:N3:191:LYS:HZ3	1.73	0.52
73:d3:73:GLU:O	73:d3:77:LEU:HG	2.09	0.52
75:e3:32:ALA:HB3	75:e3:110:VAL:HG22	1.90	0.52
77:H3:21:CYS:HA	77:H3:37:ASN:O	2.08	0.52
80:I3:37:ALA:HA	80:I3:40:ILE:HD12	1.91	0.52
2:e2:1439:C:H4'	35:U2:33:ARG:NH1	2.25	0.52
2:e2:1732:C:H2'	2:e2:1733:G:C8	2.45	0.52
2:e2:2483:G:C6	2:e2:2496:G:C6	2.97	0.52
2:e2:2537:A:H2'	2:e2:2538:U:O4'	2.09	0.52
2:e2:3607:U:H2'	2:e2:3608:A:C8	2.43	0.52
2:e2:3687:A:O2'	18:92:236:GLY:N	2.42	0.52
2:e2:3958:G:N2	2:e2:3965:A:OP1	2.42	0.52
2:e2:4052:C:O2'	44:42:209:THR:HB	2.10	0.52
2:e2:4594:U:H2'	2:e2:4595:G:H8	1.74	0.52
13:u2:41:ARG:HD3	13:u2:78:ARG:O	2.08	0.52
31:M2:146:ARG:O	31:M2:147:HIS:ND1	2.42	0.52
49:K3:492:C:H41	49:K3:507:G:H5''	1.74	0.52
49:K3:493:A:H4'	81:I5:89:HIS:CG	2.44	0.52
49:K3:609:U:H2'	49:K3:610:G:C8	2.42	0.52
49:K3:1004:U:H2'	49:K3:1005:G:H8	1.74	0.52
49:K3:1019:C:H5''	70:F3:122:LEU:HD22	1.91	0.52
49:K3:1098:C:O2'	49:K3:1099:G:H5'	2.09	0.52
49:K3:1262:C:H2'	49:K3:1263:U:O4'	2.09	0.52
49:K3:1285:G:H8	52:Q3:134:VAL:HG23	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1287:A:H5'	52:Q3:132:LEU:HD13	1.91	0.52
49:K3:1297:U:O4	57:A3:59:ARG:NH2	2.42	0.52
49:K3:1405:A:H2'	49:K3:1406:G:H8	1.73	0.52
51:13:45:LEU:HB3	51:13:96:ILE:CG2	2.39	0.52
67:b3:57:ASP:HB3	67:b3:98:ARG:HG2	1.90	0.52
72:C3:17:ILE:HD11	72:C3:61:ILE:HD11	1.90	0.52
2:e2:163:A:H2'	2:e2:164:G:C8	2.44	0.52
2:e2:181:C:N4	2:e2:182:G:O6	2.42	0.52
2:e2:214:G:P	2:e2:219:G:H22	2.32	0.52
2:e2:1381:U:H5'	2:e2:1382:G:OP2	2.09	0.52
2:e2:1443:A:H2'	2:e2:1444:G:O4'	2.09	0.52
2:e2:1613:A:N7	2:e2:3638:G:H1'	2.23	0.52
2:e2:2091:G:H22	35:U2:176:ARG:HH21	1.57	0.52
2:e2:2523:G:H2'	2:e2:2524:U:H6	1.74	0.52
2:e2:2701:U:O2	2:e2:2715:G:N2	2.29	0.52
2:e2:4117:U:N3	18:92:40:TYR:O	2.21	0.52
2:e2:4635:A:O4'	2:e2:4664:A:N6	2.42	0.52
2:e2:4853:C:N4	2:e2:4856:G:O6	2.42	0.52
6:k2:87:SER:HA	6:k2:97:TYR:HB3	1.91	0.52
17:y2:37:LYS:O	17:y2:60:ARG:HD3	2.10	0.52
18:92:40:TYR:HB2	18:92:94:ALA:HB2	1.91	0.52
26:H2:62:ARG:O	26:H2:64:ASN:ND2	2.43	0.52
28:J2:108:MET:O	28:J2:112:ARG:HG3	2.09	0.52
31:M2:57:ARG:HH22	31:M2:83:LYS:HE3	1.75	0.52
41:12:68:ARG:HD3	41:12:127:TYR:O	2.10	0.52
44:42:38:LEU:HA	44:42:41:TYR:HB3	1.90	0.52
49:K3:432:G:H2'	49:K3:433:A:C8	2.45	0.52
49:K3:1040:G:H2'	49:K3:1041:G:C8	2.42	0.52
49:K3:1514:G:H2'	49:K3:1515:G:C8	2.45	0.52
49:K3:1569:A:C2	49:K3:1614:A:H1'	2.44	0.52
55:a3:145:GLU:CD	55:a3:146:SER:H	2.17	0.52
56:a5:54:CYS:HB3	56:a5:81:VAL:HG22	1.91	0.52
64:j3:36:HIS:HE1	64:j3:142:HIS:CD2	2.27	0.52
71:c3:88:ASN:ND2	71:c3:205:ARG:HG3	2.25	0.52
2:e2:966:A:H1'	34:T2:94:THR:CG2	2.39	0.52
2:e2:1242:G:H2'	2:e2:1242:G:N3	2.25	0.52
2:e2:1281:G:N1	32:R2:48:ARG:HB3	2.23	0.52
2:e2:1324:A:O2'	2:e2:1326:A:OP1	2.21	0.52
2:e2:1354:A:C8	2:e2:1503:A:C2	2.97	0.52
2:e2:1543:G:N2	2:e2:2513:A:N1	2.47	0.52
2:e2:2753:G:C5	2:e2:2754:G:C6	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3965:A:N6	2:e2:4048:A:N7	2.57	0.52
2:e2:3974:G:H5''	44:42:28:PHE:CG	2.45	0.52
2:e2:4066:U:HO2'	20:B2:59:GLU:CD	2.16	0.52
3:h2:90:C:H2'	3:h2:91:A:C8	2.45	0.52
8:m2:79:PHE:HE1	8:m2:99:ILE:HD12	1.75	0.52
17:y2:88:ARG:O	17:y2:91:ILE:HG22	2.09	0.52
32:R2:65:TYR:HB2	32:R2:69:TYR:CE2	2.44	0.52
49:K3:432:G:H2'	49:K3:433:A:H8	1.74	0.52
49:K3:946:U:H2'	49:K3:947:G:C8	2.45	0.52
49:K3:1026:C:O3'	49:K3:1161:U:O2'	2.27	0.52
49:K3:1287:A:N1	76:E3:3:MET:HE1	2.24	0.52
49:K3:1592:C:H42	49:K3:1593:C:N4	2.05	0.52
49:K3:1809:A:H2'	49:K3:1810:U:C6	2.44	0.52
59:U3:98:PRO:O	59:U3:99:ILE:HD13	2.10	0.52
67:b3:176:ILE:HG22	67:b3:177:GLN:H	1.75	0.52
71:c3:199:LEU:HD23	71:c3:202:ILE:HD12	1.91	0.52
73:d3:111:GLN:NE2	73:d3:112:THR:OG1	2.43	0.52
2:e2:185:C:OP2	85:a7:44:ARG:NH2	2.43	0.52
2:e2:752:G:H2'	2:e2:753:C:O4'	2.10	0.52
2:e2:756:G:H2'	2:e2:757:G:C8	2.45	0.52
2:e2:1820:C:H4'	25:G2:137:GLY:N	2.25	0.52
2:e2:2428:A:C5	2:e2:2789:A:C4	2.98	0.52
2:e2:2730:U:H2'	2:e2:2731:C:C6	2.45	0.52
2:e2:2875:C:H4'	2:e2:2876:G:C4	2.45	0.52
2:e2:3870:C:H2'	2:e2:3871:A:C8	2.42	0.52
2:e2:4588:U:O2'	2:e2:4589:A:H2'	2.10	0.52
2:e2:4897:G:H2'	2:e2:4898:G:H8	1.75	0.52
21:C2:52:LYS:O	21:C2:56:ARG:NE	2.37	0.52
25:G2:59:ASP:OD1	25:G2:60:ILE:N	2.41	0.52
30:L2:12:CYS:HB2	38:X2:128:ARG:NH1	2.24	0.52
33:S2:183:SER:O	33:S2:184:ARG:NH1	2.39	0.52
35:U2:61:ARG:HD2	35:U2:65:ARG:NH2	2.25	0.52
35:U2:112:ARG:HD2	35:U2:114:ARG:NH2	2.24	0.52
46:62:7:LEU:O	46:62:103:ALA:HB1	2.09	0.52
46:62:69:GLU:OE1	46:62:70:LYS:N	2.42	0.52
49:K3:350:C:O3'	49:K3:383:G:N2	2.41	0.52
49:K3:421:G:H8	49:K3:421:G:OP2	1.92	0.52
49:K3:812:A:H2	64:j3:12:VAL:HB	1.75	0.52
49:K3:1507:G:N2	52:Q3:122:LYS:O	2.42	0.52
49:K3:1594:A:H2'	49:K3:1595:U:O4'	2.10	0.52
49:K3:1702:G:C5	49:K3:1703:C:C4	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:13:18:LEU:O	51:13:22:MET:HG2	2.09	0.52
59:U3:169:HIS:HA	59:U3:203:PHE:CD1	2.45	0.52
60:V3:136:ARG:O	60:V3:215:VAL:HA	2.10	0.52
65:J5:15:ASN:CG	65:J5:71:LYS:HG3	2.34	0.52
1:E1:6404:C:H2'	1:E1:6405:C:C6	2.45	0.52
2:e2:62:A:P	41:12:172:ARG:HH22	2.33	0.52
2:e2:1228:U:OP2	2:e2:1232:G:H5''	2.09	0.52
2:e2:1339:U:OP2	2:e2:1340:C:H5'	2.10	0.52
2:e2:1834:U:H4'	2:e2:1835:G:C8	2.44	0.52
2:e2:1918:G:N2	16:x2:34:TYR:HD2	2.08	0.52
2:e2:2041:A:O2'	2:e2:2042:A:O5'	2.23	0.52
2:e2:2062:G:H2'	2:e2:2063:G:H8	1.75	0.52
2:e2:2127:G:H1	2:e2:2248:C:N4	2.06	0.52
2:e2:2405:G:N7	22:D2:2:SER:N	2.57	0.52
2:e2:2511:A:C6	2:e2:2514:G:C2	2.98	0.52
2:e2:3764:U:C5	2:e2:3765:G:C4	2.97	0.52
2:e2:4622:A:H2'	2:e2:4623:G:C8	2.45	0.52
3:h2:64:U:C2	3:h2:65:A:C8	2.97	0.52
9:o2:112:ASP:N	9:o2:115:ARG:HB3	2.24	0.52
12:t2:108:TRP:HB3	85:a7:23:ALA:HB1	1.90	0.52
12:t2:244:GLY:O	12:t2:245:HIS:ND1	2.38	0.52
39:Y2:119:TYR:CD2	39:Y2:121:PRO:HD3	2.45	0.52
42:22:76:ASN:OD1	42:22:77:TYR:N	2.43	0.52
43:32:130:ASN:HD22	43:32:130:ASN:C	2.18	0.52
45:52:43:LEU:HB3	45:52:183:ILE:HG21	1.92	0.52
45:52:300:LYS:O	45:52:312:LYS:N	2.42	0.52
46:62:113:MET:HG2	46:62:124:ILE:HD11	1.92	0.52
49:K3:70:G:N2	49:K3:71:G:O2'	2.43	0.52
49:K3:1169:G:H3'	49:K3:1170:A:H8	1.75	0.52
49:K3:1551:U:O2'	49:K3:1552:G:N7	2.42	0.52
49:K3:1607:A:P	49:K3:1607:A:H8	2.32	0.52
49:K3:1751:C:H42	49:K3:1781:A:H61	1.58	0.52
53:G3:80:MET:HA	53:G3:80:MET:HE3	1.92	0.52
55:a3:31:ILE:HG21	55:a3:299:PHE:HE2	1.75	0.52
59:U3:26:GLY:O	59:U3:166:LYS:NZ	2.41	0.52
66:N3:187:SER:O	66:N3:190:ILE:HG22	2.08	0.52
67:b3:5:ILE:O	67:b3:13:GLN:HA	2.08	0.52
73:d3:65:GLU:HA	73:d3:70:ARG:HH11	1.75	0.52
74:D3:40:ASP:HB3	74:D3:47:ASN:ND2	2.25	0.52
79:P3:271:ASN:O	79:P3:275:LYS:HG3	2.10	0.52
81:I5:25:ILE:O	81:I5:70:THR:HA	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:457:G:H2'	2:e2:458:C:H6	1.74	0.52
2:e2:742:G:N1	2:e2:923:C:N3	2.57	0.52
2:e2:924:C:H2'	2:e2:925:C:C6	2.44	0.52
2:e2:1820:C:H4'	25:G2:137:GLY:H	1.75	0.52
2:e2:1950:G:O3'	46:62:95:ARG:NH2	2.43	0.52
2:e2:3754:G:H2'	2:e2:3755:G:C8	2.45	0.52
2:e2:3913:G:H4'	2:e2:3914:U:OP2	2.08	0.52
2:e2:3978:C:H2'	2:e2:3979:C:H5'	1.92	0.52
2:e2:3993:U:H5''	2:e2:3994:G:C8	2.45	0.52
2:e2:4008:C:N3	2:e2:4009:C:N4	2.57	0.52
2:e2:4729:A:N7	2:e2:5068:G:C6	2.77	0.52
2:e2:4730:C:H5''	2:e2:4965:U:O2	2.10	0.52
5:p2:40:ARG:HG2	5:p2:41:TYR:HD2	1.72	0.52
6:k2:16:ILE:HD13	6:k2:57:VAL:HG12	1.91	0.52
7:l2:1:MET:HG3	7:l2:2:LYS:N	2.25	0.52
10:q2:103:VAL:HG12	10:q2:108:TYR:HB2	1.91	0.52
15:w2:37:ARG:N	15:w2:107:GLY:O	2.33	0.52
33:S2:101:CYS:HB2	33:S2:121:LEU:HB2	1.92	0.52
38:X2:206:LEU:HD22	38:X2:209:TRP:HB2	1.91	0.52
44:42:124:LEU:HD23	44:42:124:LEU:H	1.74	0.52
49:K3:412:G:OP2	49:K3:425:G:N1	2.43	0.52
49:K3:493:A:H1'	49:K3:574:A:O4'	2.10	0.52
49:K3:1629:C:H5''	54:G5:39:ARG:HG2	1.90	0.52
49:K3:1768:A:H2'	49:K3:1769:C:C2	2.45	0.52
49:K3:1868:U:O2'	49:K3:1869:A:OP1	2.23	0.52
53:G3:65:ASN:O	53:G3:132:ARG:NE	2.38	0.52
54:G5:88:LYS:HE3	57:A3:18:ARG:NH1	2.25	0.52
55:a3:130:LYS:HG2	55:a3:141:THR:HA	1.91	0.52
56:a5:28:PHE:HZ	84:O3:58:VAL:HG11	1.74	0.52
59:U3:85:ARG:NH1	59:U3:205:ARG:HE	2.07	0.52
61:W3:166:ARG:HH22	61:W3:255:LEU:HD11	1.74	0.52
68:B3:67:MET:HA	68:B3:69:GLU:HG3	1.91	0.52
73:d3:54:ARG:HB3	73:d3:98:LEU:HD13	1.90	0.52
79:P3:244:ALA:HB1	79:P3:248:LYS:O	2.10	0.52
2:e2:59:A:C6	2:e2:60:G:C6	2.97	0.52
2:e2:318:A:H2'	2:e2:319:A:C8	2.44	0.52
2:e2:1100:U:O2	2:e2:1195:G:O6	2.28	0.52
2:e2:2022:C:H2'	2:e2:2023:G:O4'	2.10	0.52
2:e2:3916:G:H2'	2:e2:3917:A:H8	1.75	0.52
2:e2:4895:C:O2'	2:e2:4896:G:OP1	2.27	0.52
2:e2:4985:U:OP1	45:52:117:ARG:NH1	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:t2:142:HIS:ND1	12:t2:249:PHE:HB2	2.23	0.52
22:D2:38:ASN:OD1	22:D2:41:ARG:N	2.43	0.52
31:M2:42:VAL:O	31:M2:46:ILE:HG12	2.10	0.52
31:M2:124:GLU:O	31:M2:129:ILE:HG13	2.10	0.52
34:T2:273:TYR:OH	40:02:106:ASP:OD2	2.15	0.52
40:02:118:MET:HE3	40:02:122:ILE:HD11	1.91	0.52
41:12:30:TYR:HB3	41:12:35:ALA:HA	1.91	0.52
41:12:128:LYS:HD3	41:12:130:PHE:CE2	2.45	0.52
45:52:77:THR:HG21	45:52:337:VAL:HG22	1.91	0.52
49:K3:157:U:O2	49:K3:162:C:N3	2.42	0.52
49:K3:568:C:H2'	49:K3:569:A:H8	1.74	0.52
49:K3:631:U:H5''	49:K3:632:C:H5	1.74	0.52
49:K3:680:G:H2'	49:K3:681:U:C6	2.45	0.52
49:K3:1079:C:H4'	49:K3:1182:A:H61	1.74	0.52
49:K3:1414:A:H2'	49:K3:1415:C:C6	2.44	0.52
49:K3:1421:A:H3'	49:K3:1422:G:H8	1.74	0.52
49:K3:1444:U:H2'	49:K3:1445:U:C5	2.45	0.52
49:K3:1481:G:O2'	80:I3:79:ARG:NH2	2.42	0.52
49:K3:1580:A:OP2	80:I3:86:LYS:NZ	2.36	0.52
49:K3:1743:G:N2	49:K3:1791:A:N6	2.21	0.52
54:G5:48:ALA:HB2	54:G5:70:ILE:HG21	1.92	0.52
59:U3:37:TYR:CD1	59:U3:162:PRO:HB3	2.45	0.52
64:j3:125:LYS:HB3	64:j3:142:HIS:ND1	2.25	0.52
71:c3:57:ALA:HB2	71:c3:179:PRO:HB2	1.92	0.52
79:P3:336:ARG:NH1	79:P3:363:VAL:HG13	2.22	0.52
2:e2:40:G:N7	2:e2:41:C:N4	2.58	0.52
2:e2:49:U:O2	85:a7:16:LYS:NZ	2.23	0.52
2:e2:302:C:H2'	2:e2:303:C:H6	1.75	0.52
2:e2:954:C:H2'	2:e2:955:G:C8	2.45	0.52
2:e2:1348:U:C2	2:e2:1349:G:C8	2.98	0.52
2:e2:1360:G:H8	2:e2:1360:G:O5'	1.93	0.52
2:e2:1441:C:H2'	2:e2:1442:C:C6	2.45	0.52
2:e2:1967:G:H3'	2:e2:1968:G:C8	2.40	0.52
2:e2:2275:G:H2'	2:e2:2276:A:C8	2.45	0.52
2:e2:3796:U:H2'	2:e2:3797:C:C6	2.45	0.52
2:e2:4513:A:H2'	2:e2:4514:G:C8	2.45	0.52
2:e2:4743:G:N1	2:e2:4958:C:N3	2.57	0.52
2:e2:4869:U:H2'	2:e2:4870:G:C4	2.44	0.52
12:t2:218:VAL:HA	12:t2:229:LEU:HD13	1.92	0.52
18:92:179:ILE:HG22	18:92:184:ARG:HB3	1.91	0.52
28:J2:66:ARG:HG2	28:J2:76:SER:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:K2:29:ILE:HD13	29:K2:191:GLN:HB3	1.92	0.52
36:V2:81:ASN:O	36:V2:84:THR:HG22	2.10	0.52
37:W2:104:ARG:HG2	37:W2:104:ARG:HH11	1.74	0.52
43:32:123:LEU:HD11	43:32:142:ILE:CD1	2.40	0.52
44:42:1:MET:HE2	44:42:3:SER:HB3	1.92	0.52
45:52:60:VAL:HG22	45:52:62:ARG:HG3	1.92	0.52
49:K3:31:U:O2	49:K3:644:G:C2	2.63	0.52
49:K3:410:G:H2'	49:K3:411:G:C8	2.44	0.52
49:K3:789:G:H2'	49:K3:790:C:C5	2.45	0.52
49:K3:830:A:N1	49:K3:845:G:N1	2.41	0.52
49:K3:834:C:H2'	49:K3:835:C:C2	2.45	0.52
49:K3:898:U:H2'	49:K3:899:U:O4'	2.10	0.52
49:K3:1018:U:H4'	70:F3:97:PRO:HB2	1.92	0.52
49:K3:1666:C:H2'	49:K3:1667:U:H6	1.75	0.52
49:K3:1680:G:H4'	69:f3:20:ARG:HB2	1.92	0.52
55:a3:173:LEU:HD21	55:a3:189:ILE:HD13	1.91	0.52
71:c3:83:TYR:HB3	71:c3:101:ILE:HB	1.92	0.52
75:e3:35:ILE:HG13	75:e3:36:ARG:N	2.25	0.52
84:O3:88:SER:H	84:O3:91:ALA:HB3	1.74	0.52
1:E1:6351:U:OP2	1:E1:6352:U:N3	2.42	0.52
2:e2:301:G:H2'	2:e2:302:C:C6	2.45	0.52
2:e2:462:G:H2'	2:e2:463:A:H8	1.70	0.52
2:e2:1442:C:H2'	2:e2:1443:A:O4'	2.10	0.52
2:e2:1734:G:N2	2:e2:1794:A:OP2	2.37	0.52
2:e2:2294:G:C6	2:e2:2341:A:C6	2.98	0.52
2:e2:2323:C:H2'	2:e2:2324:C:H6	1.75	0.52
2:e2:2375:A:H2'	2:e2:2376:A:H8	1.75	0.52
2:e2:3939:G:C6	2:e2:4170:A:C8	2.98	0.52
2:e2:4134:C:H2'	2:e2:4135:G:H8	1.74	0.52
3:h2:98:C:H5''	3:h2:99:U:OP1	2.10	0.52
29:K2:24:TYR:CG	29:K2:90:PHE:HB3	2.44	0.52
34:T2:92:LEU:O	34:T2:97:LYS:HG2	2.09	0.52
39:Y2:99:PHE:HB2	39:Y2:159:LYS:HG3	1.92	0.52
46:62:147:ASP:HB2	46:62:150:ILE:CG2	2.39	0.52
49:K3:109:U:O2	53:G3:71:ARG:NH2	2.23	0.52
49:K3:534:G:N2	49:K3:550:C:C2	2.75	0.52
49:K3:571:U:H5''	81:I5:37:LYS:H	1.74	0.52
49:K3:923:G:H2'	49:K3:924:G:H8	1.75	0.52
49:K3:1190:A:H2'	49:K3:1191:C:O4'	2.10	0.52
49:K3:1191:C:H5''	58:T3:119:ARG:HH22	1.74	0.52
51:13:18:LEU:CD1	51:13:22:MET:HE3	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:A3:59:ARG:HA	57:A3:62:LYS:HD2	1.92	0.52
61:W3:74:LYS:HG3	61:W3:75:ILE:HD12	1.91	0.52
66:N3:102:LEU:HD13	83:M3:108:ILE:HG21	1.92	0.52
70:F3:104:LEU:HD12	70:F3:108:HIS:CD2	2.44	0.52
1:E1:6278:A:H5''	1:E1:6279:A:N7	2.25	0.51
1:E1:6366:G:H4'	1:E1:6367:U:OP1	2.10	0.51
2:e2:150:U:N3	36:V2:162:ASP:OD2	2.43	0.51
2:e2:370:U:C4	2:e2:1637:A:N1	2.78	0.51
2:e2:710:G:H21	34:T2:139:HIS:CE1	2.27	0.51
2:e2:1089:G:H1'	35:U2:73:MET:CE	2.34	0.51
2:e2:1673:U:H2'	2:e2:1674:C:C6	2.44	0.51
2:e2:1814:C:H1'	11:r2:46:ALA:HB2	1.92	0.51
2:e2:1904:U:O2	35:U2:214:SER:OG	2.22	0.51
2:e2:3855:C:H2'	2:e2:3856:A:H8	1.75	0.51
2:e2:4481:U:H2'	2:e2:4482:U:C6	2.45	0.51
2:e2:4968:A:H2'	2:e2:4969:C:C6	2.45	0.51
4:d2:27:G:H2'	4:d2:28:C:C6	2.45	0.51
7:l2:16:GLY:HA3	45:52:55:HIS:ND1	2.25	0.51
18:92:46:LYS:HB2	18:92:62:VAL:HG23	1.91	0.51
25:G2:3:PHE:CD2	25:G2:4:VAL:HG22	2.45	0.51
30:L2:75:TYR:O	30:L2:78:LYS:HB3	2.10	0.51
35:U2:28:LYS:N	35:U2:31:ARG:HH21	2.09	0.51
36:V2:150:LYS:HE3	36:V2:177:MET:HG2	1.92	0.51
45:52:56:ILE:HD11	45:52:365:LEU:HB3	1.91	0.51
45:52:300:LYS:HE3	45:52:311:ASP:CB	2.39	0.51
46:62:95:ARG:HD2	46:62:113:MET:CE	2.40	0.51
46:62:99:ASP:CG	46:62:100:LEU:H	2.18	0.51
49:K3:10:G:H8	49:K3:1697:A:HO2'	1.57	0.51
49:K3:70:G:C2	49:K3:71:G:H1'	2.44	0.51
49:K3:303:C:O2	71:c3:184:ARG:NH1	2.40	0.51
49:K3:815:U:N3	49:K3:816:A:N7	2.58	0.51
49:K3:915:G:H5''	79:P3:355:PRO:HG3	1.92	0.51
49:K3:932:G:N1	49:K3:1009:A:C2	2.74	0.51
49:K3:935:G:N2	70:F3:151:HIS:CE1	2.79	0.51
49:K3:984:C:O2'	56:a5:138:ASP:OD2	2.28	0.51
49:K3:990:A:C6	49:K3:992:A:C6	2.98	0.51
49:K3:1098:C:H2'	49:K3:1099:G:H8	1.75	0.51
49:K3:1288:U:O4	52:Q3:131:LYS:NZ	2.24	0.51
49:K3:1633:A:H2'	49:K3:1634:A:H8	1.75	0.51
55:a3:299:PHE:HD1	55:a3:309:VAL:HG22	1.75	0.51
59:U3:187:GLY:HA3	74:D3:45:ARG:HG3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:U3:201:LEU:HB2	72:C3:86:PRO:HG3	1.92	0.51
60:V3:30:TRP:CH2	60:V3:48:LEU:HD23	2.45	0.51
66:N3:71:ARG:O	66:N3:75:SER:OG	2.19	0.51
67:b3:2:LYS:HB3	67:b3:15:LEU:HD11	1.93	0.51
76:E3:8:ARG:HB2	76:E3:44:HIS:HD2	1.76	0.51
77:H3:4:GLN:OE1	77:H3:7:TYR:HB2	2.10	0.51
2:e2:731:G:C6	2:e2:939:G:C2	2.98	0.51
2:e2:1378:C:OP1	2:e2:1379:C:H2'	2.10	0.51
2:e2:1928:A:O2'	2:e2:1931:A:OP2	2.25	0.51
2:e2:1942:A:N6	2:e2:2038:G:O2'	2.41	0.51
2:e2:1969:A:H4'	2:e2:2015:C:C5	2.46	0.51
2:e2:2020:G:C2	2:e2:2021:C:H6	2.29	0.51
2:e2:2109:C:P	35:U2:33:ARG:HH22	2.33	0.51
2:e2:2443:G:P	2:e2:2516:G:H22	2.33	0.51
2:e2:3911:C:C2	2:e2:4392:G:N2	2.79	0.51
2:e2:3975:C:OP2	44:42:27:LYS:N	2.43	0.51
2:e2:4593:C:C2	2:e2:4618:G:N2	2.78	0.51
2:e2:4940:C:H2'	34:T2:222:LYS:HD2	1.91	0.51
8:m2:122:ALA:HB3	8:m2:139:ARG:HG2	1.91	0.51
15:w2:102:LEU:HD21	15:w2:104:VAL:HG13	1.92	0.51
25:G2:261:VAL:HG12	25:G2:263:LYS:N	2.24	0.51
34:T2:155:ILE:HA	34:T2:197:VAL:HG23	1.92	0.51
39:Y2:95:ARG:HD2	39:Y2:175:LEU:HB2	1.92	0.51
49:K3:155:G:O6	49:K3:163:U:C4	2.63	0.51
49:K3:180:G:H5'	49:K3:182:C:C6	2.44	0.51
49:K3:382:C:OP1	71:c3:181:GLN:NE2	2.36	0.51
49:K3:426:A:H2'	49:K3:427:U:O4'	2.09	0.51
49:K3:571:U:H2'	49:K3:572:U:C6	2.45	0.51
49:K3:612:U:H2'	49:K3:613:G:C8	2.46	0.51
49:K3:870:A:O3'	70:F3:126:LYS:NZ	2.43	0.51
49:K3:879:C:N4	49:K3:880:G:N7	2.58	0.51
49:K3:1227:G:C2	49:K3:1228:A:C8	2.98	0.51
49:K3:1580:A:O2'	49:K3:1581:C:OP1	2.28	0.51
49:K3:1617:G:H2'	49:K3:1619:A:OP2	2.09	0.51
49:K3:1629:C:H2'	49:K3:1630:A:O4'	2.09	0.51
56:a5:121:ARG:HD3	69:f3:40:ARG:HE	1.75	0.51
59:U3:13:GLU:O	59:U3:17:LYS:NZ	2.23	0.51
61:W3:142:LYS:HG2	61:W3:153:GLY:HA3	1.92	0.51
61:W3:199:PRO:O	61:W3:202:THR:OG1	2.27	0.51
63:Y3:223:ILE:HG13	63:Y3:224:SER:H	1.75	0.51
64:j3:35:PRO:O	64:j3:83:PRO:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:J5:80:ASP:OD1	65:J5:124:LYS:HG2	2.11	0.51
71:c3:42:ARG:HB3	71:c3:58:LEU:HB2	1.92	0.51
75:e3:52:LEU:HB3	75:e3:65:VAL:HG11	1.91	0.51
2:e2:62:A:N7	2:e2:63:G:C5	2.79	0.51
2:e2:73:A:N7	85:a7:103:ARG:NH2	2.58	0.51
2:e2:342:G:H2'	2:e2:343:C:C6	2.45	0.51
2:e2:734:G:N1	2:e2:930:G:H2'	2.26	0.51
2:e2:963:G:C6	2:e2:2252:G:C8	2.98	0.51
2:e2:2126:C:C2	2:e2:2254:G:H5'	2.45	0.51
2:e2:2263:A:OP1	2:e2:2265:G:H5''	2.11	0.51
2:e2:3952:A:N6	2:e2:3953:G:O6	2.42	0.51
2:e2:4567:G:OP1	45:52:19:ARG:N	2.43	0.51
18:92:39:GLY:O	18:92:92:LYS:N	2.43	0.51
34:T2:182:LEU:HD12	34:T2:188:PRO:HA	1.91	0.51
44:42:90:LEU:HD21	44:42:122:ARG:HA	1.92	0.51
48:82:19:LEU:C	48:82:20:LYS:HD3	2.35	0.51
48:82:21:PHE:CE1	48:82:80:LYS:HB2	2.45	0.51
49:K3:161:U:H1'	67:b3:87:ARG:HG3	1.91	0.51
49:K3:379:C:OP1	71:c3:180:GLY:HA3	2.11	0.51
49:K3:641:A:OP1	73:d3:40:LYS:NZ	2.34	0.51
49:K3:648:A:H5''	58:T3:121:LYS:HZ1	1.73	0.51
49:K3:671:A:OP1	49:K3:1163:C:O2'	2.22	0.51
49:K3:693:A:N3	49:K3:694:G:H4'	2.25	0.51
49:K3:799:U:H5	49:K3:867:G:H21	1.58	0.51
49:K3:835:C:OP2	81:I5:8:ARG:NH2	2.44	0.51
49:K3:899:U:H2'	49:K3:900:C:H6	1.76	0.51
49:K3:1058:A:H2'	49:K3:1059:G:H5'	1.92	0.51
49:K3:1584:G:OP2	78:H5:74:SER:OG	2.28	0.51
53:G3:122:ILE:H	53:G3:122:ILE:HD12	1.75	0.51
54:G5:13:LEU:HD13	54:G5:64:VAL:HG21	1.91	0.51
54:G5:130:ARG:HH12	54:G5:142:ARG:CZ	2.22	0.51
61:W3:251:LEU:HB3	61:W3:256:TRP:HE1	1.74	0.51
68:B3:115:SER:HA	68:B3:118:LEU:HG	1.93	0.51
70:F3:74:THR:HG22	70:F3:77:LYS:HE3	1.91	0.51
78:H5:116:ASP:OD1	78:H5:122:LYS:NZ	2.32	0.51
79:P3:392:ILE:HG22	79:P3:394:VAL:HG23	1.92	0.51
80:I3:18:HIS:CD2	80:I3:116:ILE:HG23	2.46	0.51
2:e2:1352:C:OP1	12:t2:33:ARG:NH2	2.43	0.51
2:e2:1662:C:H2'	2:e2:1663:C:H6	1.73	0.51
2:e2:1945:G:O2'	2:e2:1947:G:OP1	2.17	0.51
2:e2:2727:C:H2'	2:e2:2728:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3719:A:H3'	2:e2:3720:G:H8	1.75	0.51
2:e2:4230:C:H1'	2:e2:4271:A:C2	2.45	0.51
2:e2:4258:C:OP1	39:Y2:53:ALA:HA	2.11	0.51
2:e2:4342:C:H2'	2:e2:4343:U:C6	2.45	0.51
2:e2:4459:U:H2'	2:e2:4460:U:C6	2.45	0.51
2:e2:4633:G:N2	2:e2:4664:A:OP2	2.38	0.51
3:h2:81:C:C2	3:h2:87:G:H4'	2.46	0.51
12:t2:134:PRO:HG3	28:J2:71:ARG:HB3	1.92	0.51
13:u2:101:LYS:HG3	13:u2:102:LEU:HD12	1.92	0.51
36:V2:159:HIS:CE1	36:V2:185:LYS:HD2	2.45	0.51
37:W2:19:GLN:HG2	37:W2:85:CYS:HB2	1.92	0.51
44:42:25:ARG:HD2	44:42:25:ARG:O	2.10	0.51
45:52:39:LYS:HG3	45:52:40:PRO:O	2.10	0.51
45:52:119:TYR:OH	45:52:128:LYS:N	2.44	0.51
49:K3:754:G:H5'	49:K3:755:C:OP2	2.10	0.51
49:K3:900:C:C2	49:K3:901:G:C8	2.98	0.51
49:K3:1252:C:N4	68:B3:171:TYR:O	2.44	0.51
49:K3:1384:C:H4'	63:Y3:157:MET:O	2.10	0.51
54:G5:91:LYS:HA	57:A3:17:TYR:HA	1.92	0.51
55:a3:80:SER:OG	55:a3:88:ARG:O	2.26	0.51
56:a5:57:THR:OG1	56:a5:60:MET:N	2.44	0.51
58:T3:101:LEU:CB	58:T3:124:LYS:HB2	2.32	0.51
69:f3:12:ALA:HB2	69:f3:58:LEU:HD11	1.91	0.51
72:C3:5:ARG:HH12	72:C3:53:TYR:HA	1.76	0.51
2:e2:135:G:OP1	2:e2:135:G:N2	2.30	0.51
2:e2:1751:A:O2'	38:X2:193:ASP:OD1	2.25	0.51
2:e2:1764:G:O2'	2:e2:1765:A:H2'	2.10	0.51
2:e2:2019:U:H4'	29:K2:61:MET:HB2	1.93	0.51
2:e2:2682:G:H2'	2:e2:2683:C:O4'	2.10	0.51
2:e2:2859:G:N2	2:e2:3837:C:O2	2.43	0.51
2:e2:4252:C:OP2	2:e2:4253:A:O2'	2.27	0.51
2:e2:4396:A:C2	2:e2:4397:A:C4	2.99	0.51
2:e2:4986:G:O4'	45:52:174:ARG:NH1	2.42	0.51
3:h2:32:C:H2'	3:h2:33:G:O4'	2.11	0.51
3:h2:62:A:H3'	19:A2:48:ARG:NH2	2.25	0.51
15:w2:61:ARG:HA	15:w2:70:PRO:HD2	1.92	0.51
36:V2:73:ARG:NH1	36:V2:73:ARG:HA	2.26	0.51
49:K3:203:G:H2'	49:K3:204:G:C8	2.44	0.51
49:K3:437:G:C6	49:K3:438:G:C6	2.99	0.51
49:K3:444:G:C2	49:K3:447:A:C8	2.99	0.51
49:K3:588:G:H21	49:K3:589:G:H22	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:594:A:N6	49:K3:643:A:O5'	2.35	0.51
49:K3:945:U:H2'	49:K3:946:U:C6	2.45	0.51
49:K3:1251:A:N6	68:B3:172:ARG:HE	2.06	0.51
49:K3:1349:G:H2'	49:K3:1350:U:C6	2.46	0.51
49:K3:1692:U:H5''	84:O3:92:ARG:HH12	1.75	0.51
50:s3:37:GLN:NE2	50:s3:41:ARG:HH21	2.09	0.51
54:G5:39:ARG:HG3	54:G5:83:PHE:CZ	2.46	0.51
64:j3:198:ARG:HH11	64:j3:222:LEU:HD11	1.75	0.51
66:N3:43:GLU:OE1	66:N3:67:PRO:HD3	2.11	0.51
67:b3:6:SER:HB2	67:b3:112:VAL:HA	1.92	0.51
69:f3:27:CYS:HA	69:f3:46:VAL:O	2.11	0.51
2:e2:66:A:H61	2:e2:282:C:HO2'	1.58	0.51
2:e2:493:G:N2	12:t2:2:ALA:O	2.44	0.51
2:e2:1268:G:H22	2:e2:2120:C:N4	1.99	0.51
2:e2:1499:C:H2'	2:e2:1500:A:O4'	2.10	0.51
2:e2:1584:G:H2'	2:e2:1585:C:O4'	2.10	0.51
2:e2:1586:G:C2	2:e2:1608:G:C6	2.99	0.51
2:e2:1738:A:H2'	2:e2:1739:G:H8	1.76	0.51
2:e2:2061:C:O2'	46:62:111:ARG:NH1	2.43	0.51
2:e2:2245:G:H5'	2:e2:2246:C:C4	2.46	0.51
2:e2:3966:A:H5''	2:e2:4049:U:H3	1.74	0.51
2:e2:4884:G:N3	2:e2:4884:G:H2'	2.25	0.51
24:F2:6:LYS:O	24:F2:23:VAL:HG22	2.11	0.51
43:32:23:TRP:CE3	43:32:51:ILE:HG12	2.46	0.51
46:62:159:LEU:H	46:62:161:ARG:NH1	2.06	0.51
49:K3:71:G:O2'	49:K3:79:A:N6	2.44	0.51
49:K3:103:A:N6	49:K3:356:C:O4'	2.43	0.51
49:K3:634:A:H2'	49:K3:635:G:H8	1.75	0.51
49:K3:1538:C:H2'	49:K3:1539:U:C6	2.46	0.51
49:K3:1652:G:O6	49:K3:1672:U:O4	2.29	0.51
53:G3:113:LEU:HD12	53:G3:142:VAL:HG21	1.91	0.51
54:G5:14:ARG:HH22	54:G5:17:ASN:HA	1.75	0.51
63:Y3:106:ARG:NH1	63:Y3:110:LEU:HD12	2.26	0.51
64:j3:149:TYR:O	64:j3:168:LYS:HD2	2.11	0.51
65:J5:28:ARG:HA	65:J5:60:LYS:HG2	1.92	0.51
67:b3:140:ARG:HD2	67:b3:140:ARG:N	2.26	0.51
70:F3:163:PHE:O	70:F3:167:LEU:HD13	2.11	0.51
73:d3:104:ASP:O	73:d3:108:ARG:HG3	2.11	0.51
75:e3:87:GLU:OE2	75:e3:99:LYS:NZ	2.37	0.51
76:E3:31:LYS:HZ1	76:E3:33:PRO:HG3	1.75	0.51
2:e2:301:G:H2'	2:e2:302:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:382:G:N1	2:e2:385:A:OP2	2.44	0.51
2:e2:911:U:C2	2:e2:912:G:N7	2.79	0.51
2:e2:964:A:H3'	2:e2:964:A:N3	2.26	0.51
2:e2:1083:U:C2	2:e2:1217:G:C2	2.99	0.51
2:e2:1083:U:C2	2:e2:1217:G:N1	2.79	0.51
2:e2:1089:G:H2'	2:e2:1090:G:H8	1.76	0.51
2:e2:1523:A:HO2'	2:e2:1524:A:P	2.31	0.51
2:e2:1978:A:H2	2:e2:1981:G:H5'	1.76	0.51
2:e2:3706:C:H2'	2:e2:3707:U:C6	2.46	0.51
2:e2:4191:G:H2'	2:e2:4192:A:C8	2.45	0.51
2:e2:4970:C:C2	2:e2:4971:A:C8	2.98	0.51
3:h2:1:C:H2'	3:h2:2:G:C5	2.46	0.51
17:y2:99:GLU:HG3	42:22:12:LEU:HD11	1.91	0.51
25:G2:65:ALA:HB2	25:G2:74:ILE:HD13	1.93	0.51
35:U2:194:TYR:HD2	35:U2:195:THR:HG23	1.76	0.51
42:22:21:ARG:NE	42:22:47:ASP:O	2.44	0.51
45:52:300:LYS:HB3	45:52:311:ASP:CB	2.38	0.51
45:52:307:TYR:CD2	45:52:366:LYS:HD3	2.46	0.51
47:72:3:ASN:OD1	47:72:4:THR:N	2.42	0.51
47:72:25:VAL:HG22	47:72:45:MET:HE1	1.92	0.51
48:82:33:ILE:HD12	48:82:96:LEU:HD22	1.91	0.51
49:K3:74:G:OP2	67:b3:170:ARG:NH1	2.44	0.51
49:K3:156:G:C2	49:K3:163:U:O2	2.63	0.51
49:K3:373:G:H1'	53:G3:82:MET:HE2	1.93	0.51
49:K3:689:U:H3	65:J5:36:ARG:HB2	1.76	0.51
49:K3:1012:A:O2'	49:K3:1130:G:N2	2.44	0.51
49:K3:1700:C:H4'	49:K3:1701:C:H5''	1.93	0.51
51:13:21:VAL:HG21	51:13:96:ILE:HD11	1.91	0.51
56:a5:48:SER:OG	60:V3:66:VAL:O	2.22	0.51
59:U3:76:VAL:HA	59:U3:123:VAL:HB	1.91	0.51
66:N3:50:PRO:HG2	66:N3:69:VAL:HG22	1.93	0.51
73:d3:112:THR:HA	73:d3:123:ILE:HD11	1.92	0.51
81:I5:100:LYS:HB2	81:I5:107:ARG:NH2	2.26	0.51
2:e2:112:C:C2	2:e2:113:A:C8	2.99	0.51
2:e2:308:G:H3'	20:B2:33:LEU:CD1	2.41	0.51
2:e2:1241:C:C5	2:e2:1242:G:H8	2.29	0.51
2:e2:1267:C:N4	2:e2:2119:G:HO2'	2.09	0.51
2:e2:1356:U:H2'	2:e2:1357:C:C6	2.46	0.51
2:e2:1965:C:H2'	2:e2:1966:A:C5'	2.40	0.51
2:e2:2041:A:HO2'	2:e2:2042:A:P	2.33	0.51
2:e2:2397:G:O2'	2:e2:2398:U:H3'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:2576:G:OP1	42:22:48:ARG:NH2	2.44	0.51
2:e2:2762:G:O2'	2:e2:2763:U:OP2	2.22	0.51
2:e2:3704:U:C4	2:e2:3705:G:N7	2.79	0.51
2:e2:4174:U:H2'	2:e2:4175:G:H8	1.76	0.51
2:e2:4338:G:O6	24:F2:61:LYS:NZ	2.43	0.51
2:e2:4520:G:N7	45:52:2:SER:OG	2.41	0.51
2:e2:4872:G:C6	46:62:170:LYS:HD2	2.46	0.51
29:K2:137:PHE:CD2	29:K2:174:LEU:HB3	2.46	0.51
36:V2:148:GLU:HA	36:V2:177:MET:SD	2.50	0.51
39:Y2:43:LEU:HD21	39:Y2:115:LEU:HD13	1.92	0.51
43:32:129:GLY:C	43:32:130:ASN:HD22	2.18	0.51
46:62:69:GLU:HG2	46:62:101:THR:HG23	1.93	0.51
49:K3:102:A:C5'	71:c3:12:ARG:HH22	2.21	0.51
49:K3:934:G:H2'	49:K3:935:G:H8	1.75	0.51
49:K3:1357:A:H5''	61:W3:112:VAL:HG21	1.93	0.51
49:K3:1533:A:H2'	49:K3:1533:A:N3	2.25	0.51
49:K3:1791:A:H2'	49:K3:1792:G:O4'	2.11	0.51
55:a3:259:TRP:HD1	55:a3:266:ILE:HG23	1.75	0.51
60:V3:164:ILE:CG2	60:V3:207:LEU:HD22	2.40	0.51
61:W3:134:ASN:OD1	61:W3:135:GLY:N	2.43	0.51
63:Y3:96:LEU:HD22	63:Y3:191:PRO:HB3	1.92	0.51
71:c3:142:SER:HA	71:c3:146:GLN:NE2	2.25	0.51
72:C3:64:GLY:O	72:C3:66:VAL:HG13	2.10	0.51
73:d3:154:GLN:HG2	73:d3:155:LYS:HG3	1.91	0.51
78:H5:29:LYS:HD3	78:H5:53:PHE:CZ	2.46	0.51
78:H5:129:ARG:HH11	78:H5:133:ARG:HH22	1.57	0.51
2:e2:48:G:OP1	41:12:192:TRP:NE1	2.41	0.51
2:e2:341:G:C5	2:e2:342:G:C8	2.99	0.51
2:e2:743:G:N1	2:e2:922:C:N3	2.59	0.51
2:e2:912:G:C6	2:e2:913:U:C4	2.99	0.51
2:e2:1305:C:H1'	2:e2:2313:A:N3	2.26	0.51
2:e2:1448:G:H4'	12:t2:300:ARG:HH22	1.76	0.51
2:e2:1707:C:H5'	2:e2:1834:U:C6	2.46	0.51
2:e2:1763:C:H2'	2:e2:1765:A:C2	2.46	0.51
2:e2:1822:U:O3'	25:G2:45:ASN:ND2	2.35	0.51
2:e2:1827:C:H2'	2:e2:1828:C:C6	2.46	0.51
2:e2:2408:U:H2'	22:D2:17:GLN:NE2	2.26	0.51
2:e2:3607:U:H2'	2:e2:3608:A:H8	1.75	0.51
2:e2:3608:A:H2'	2:e2:3609:G:C8	2.45	0.51
2:e2:3971:G:C4	2:e2:4051:C:H1'	2.46	0.51
2:e2:3976:C:OP1	2:e2:4036:G:N2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4231:C:OP2	24:F2:2:VAL:N	2.44	0.51
2:e2:4662:C:O2'	2:e2:5004:C:OP1	2.29	0.51
2:e2:4911:A:N1	45:52:97:ARG:NH2	2.59	0.51
4:d2:96:U:OP1	46:62:42:SER:OG	2.20	0.51
18:92:107:MET:HB2	18:92:111:THR:HG21	1.92	0.51
30:L2:45:GLU:O	30:L2:47:PRO:HD3	2.11	0.51
33:S2:70:MET:HA	33:S2:70:MET:HE2	1.93	0.51
47:72:108:ARG:CZ	47:72:130:ARG:HH12	2.24	0.51
48:82:54:GLY:C	48:82:57:GLY:H	2.19	0.51
49:K3:92:A:H2'	49:K3:92:A:N3	2.26	0.51
49:K3:345:U:H2'	49:K3:346:C:C6	2.46	0.51
49:K3:495:U:H4'	64:j3:11:ARG:HH22	1.75	0.51
49:K3:584:A:OP2	73:d3:175:ARG:NH1	2.43	0.51
49:K3:1018:U:H3	49:K3:1019:C:N4	2.06	0.51
49:K3:1444:U:H2'	49:K3:1445:U:C4	2.46	0.51
49:K3:1566:G:N1	49:K3:1568:C:OP2	2.44	0.51
56:a5:54:CYS:SG	56:a5:81:VAL:HA	2.51	0.51
59:U3:163:CYS:HB3	59:U3:174:MET:HE3	1.93	0.51
60:V3:104:ASP:OD1	60:V3:105:LEU:N	2.39	0.51
61:W3:88:ILE:HG13	61:W3:88:ILE:O	2.10	0.51
64:j3:118:GLU:OE2	64:j3:237:SER:OG	2.28	0.51
67:b3:7:PHE:CE2	67:b3:9:ALA:HB3	2.46	0.51
67:b3:188:LYS:HD2	67:b3:189:ARG:HH22	1.75	0.51
68:B3:37:GLN:HB2	68:B3:50:HIS:ND1	2.25	0.51
71:c3:143:LYS:HA	71:c3:147:LYS:NZ	2.25	0.51
73:d3:19:PRO:HA	73:d3:24:ARG:HD3	1.93	0.51
1:E1:6422:C:H5'	1:E1:6423:A:C2	2.46	0.51
2:e2:60:G:H8	2:e2:60:G:O5'	1.93	0.51
2:e2:135:G:C8	19:A2:95:LEU:HB3	2.46	0.51
2:e2:438:G:C6	2:e2:1311:G:O6	2.64	0.51
2:e2:1435:G:H21	2:e2:1702:C:H5'	1.76	0.51
2:e2:1449:C:H2'	2:e2:1450:C:C6	2.46	0.51
2:e2:1804:A:H61	2:e2:1833:G:H4'	1.75	0.51
2:e2:2293:U:H2'	2:e2:2294:G:C8	2.44	0.51
2:e2:2547:G:C6	2:e2:2773:G:C2	2.98	0.51
2:e2:2555:G:C2	2:e2:2556:G:C5	2.99	0.51
2:e2:2893:U:H2'	2:e2:2894:A:C8	2.46	0.51
2:e2:3694:U:C2'	2:e2:3695:U:H5'	2.40	0.51
2:e2:3754:G:O6	2:e2:3770:U:C2	2.64	0.51
2:e2:3772:U:O2'	2:e2:3773:U:O4'	2.18	0.51
9:o2:115:ARG:HG3	9:o2:119:LEU:HD22	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:r2:66:ALA:O	11:r2:70:GLU:HG2	2.10	0.51
12:t2:333:LYS:HE2	12:t2:337:ARG:HH12	1.76	0.51
25:G2:259:ARG:HD2	25:G2:260:GLU:O	2.11	0.51
31:M2:27:ALA:HB2	31:M2:34:PRO:HG3	1.93	0.51
45:52:363:ILE:HD12	45:52:365:LEU:HD21	1.93	0.51
49:K3:79:A:H2'	49:K3:79:A:N3	2.26	0.51
49:K3:229:A:H5''	49:K3:887:U:H1'	1.92	0.51
49:K3:601:G:OP2	49:K3:605:A:N6	2.44	0.51
49:K3:864:A:H2'	49:K3:865:A:C8	2.46	0.51
49:K3:892:U:H2'	49:K3:893:U:H5'	1.91	0.51
49:K3:1464:C:H2'	49:K3:1465:A:C4	2.45	0.51
49:K3:1606:G:H22	49:K3:1633:A:P	2.33	0.51
54:G5:28:PHE:HD1	54:G5:38:ARG:HG3	1.76	0.51
55:a3:61:GLY:HA3	55:a3:88:ARG:NH2	2.26	0.51
70:F3:105:ARG:O	70:F3:109:GLY:HA2	2.11	0.51
78:H5:112:MET:HE3	78:H5:127:GLY:HA2	1.92	0.51
80:I3:20:ILE:HG13	80:I3:116:ILE:HA	1.93	0.51
85:a7:143:GLU:HA	85:a7:146:LEU:O	2.10	0.51
2:e2:443:G:C5	2:e2:445:U:C4	2.98	0.50
2:e2:666:G:N7	12:t2:4:ALA:HB3	2.26	0.50
2:e2:740:G:N1	2:e2:925:C:N3	2.60	0.50
2:e2:1436:C:H5'	2:e2:1702:C:H2'	1.93	0.50
2:e2:2868:G:H2'	2:e2:2869:U:C6	2.47	0.50
2:e2:3598:C:C2	2:e2:3599:A:C8	2.99	0.50
2:e2:4591:U:H2'	2:e2:4592:C:C6	2.46	0.50
3:h2:75:G:OP2	9:o2:74:TYR:OH	2.25	0.50
10:q2:85:GLN:O	10:q2:88:VAL:HB	2.11	0.50
10:q2:128:PHE:HE1	85:a7:186:ARG:HH22	1.59	0.50
11:r2:54:LEU:HD12	11:r2:58:GLN:CD	2.36	0.50
12:t2:121:ARG:HD3	12:t2:277:TYR:CE1	2.46	0.50
12:t2:325:MET:HE2	12:t2:332:ALA:HB2	1.93	0.50
24:F2:33:LEU:O	24:F2:38:LYS:NZ	2.44	0.50
26:H2:131:ARG:HG3	26:H2:137:ASN:OD1	2.11	0.50
34:T2:286:PRO:HA	34:T2:289:LEU:HB3	1.94	0.50
39:Y2:26:VAL:HG23	39:Y2:28:GLU:H	1.75	0.50
39:Y2:173:ILE:HG12	57:A3:10:ARG:HD2	1.93	0.50
49:K3:526:A:O4'	73:d3:128:VAL:HG11	2.11	0.50
49:K3:745:C:H2'	49:K3:796:G:H22	1.76	0.50
49:K3:755:C:H2'	49:K3:756:C:H6	1.76	0.50
49:K3:824:C:C6	73:d3:144:ILE:HG13	2.46	0.50
49:K3:988:C:H5'	60:V3:114:VAL:HG12	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1346:U:O2'	49:K3:1485:U:O2'	2.25	0.50
49:K3:1720:U:H5''	49:K3:1721:U:H5''	1.93	0.50
54:G5:114:LEU:HD13	54:G5:121:ARG:HG3	1.92	0.50
55:a3:189:ILE:N	63:Y3:223:ILE:O	2.44	0.50
60:V3:119:THR:OG1	60:V3:155:TYR:HA	2.10	0.50
63:Y3:85:GLU:HB2	63:Y3:87:TYR:CZ	2.46	0.50
67:b3:88:ARG:HG2	67:b3:89:THR:H	1.75	0.50
73:d3:58:ARG:O	73:d3:61:LEU:HB2	2.11	0.50
2:e2:62:A:OP1	41:12:172:ARG:NH2	2.44	0.50
2:e2:1090:G:C2	2:e2:1207:C:C2	2.99	0.50
2:e2:1282:G:H5'	12:t2:323:ARG:HB2	1.94	0.50
2:e2:1588:U:H2'	2:e2:1589:C:C6	2.46	0.50
2:e2:1633:G:C6	18:92:207:VAL:HG21	2.46	0.50
2:e2:1768:C:OP2	2:e2:1772:C:N4	2.44	0.50
2:e2:1967:G:C8	29:K2:112:ARG:HD3	2.47	0.50
2:e2:2033:G:O2'	46:62:118:ARG:HD2	2.11	0.50
2:e2:2555:G:H21	42:22:112:ARG:HH12	1.59	0.50
2:e2:2730:U:H2'	2:e2:2731:C:H6	1.76	0.50
2:e2:3682:A:H5''	18:92:132:ASN:OD1	2.11	0.50
2:e2:3826:C:O2'	2:e2:3827:G:H5'	2.12	0.50
2:e2:4097:G:C4	2:e2:4098:A:C8	3.00	0.50
2:e2:4250:G:OP1	39:Y2:98:ASN:ND2	2.43	0.50
3:h2:86:U:H5'	19:A2:7:ARG:NH2	2.25	0.50
12:t2:298:ILE:HD13	33:S2:131:PRO:HG3	1.91	0.50
18:92:39:GLY:HA2	18:92:93:LYS:HD2	1.93	0.50
25:G2:129:GLU:HB3	25:G2:175:HIS:CE1	2.45	0.50
35:U2:168:LEU:HD22	35:U2:174:ILE:HD11	1.93	0.50
36:V2:194:VAL:HG23	36:V2:196:ARG:H	1.76	0.50
37:W2:103:MET:HE1	37:W2:169:ALA:HA	1.94	0.50
42:22:104:PRO:O	42:22:108:ARG:HG3	2.11	0.50
43:32:92:LYS:HG3	43:32:96:MET:HE3	1.91	0.50
49:K3:345:U:H5''	64:j3:37:LYS:HD3	1.92	0.50
49:K3:421:G:C6	49:K3:422:U:C4	3.00	0.50
49:K3:454:U:O2'	49:K3:1736:G:O3'	2.29	0.50
49:K3:1457:U:H2'	49:K3:1458:G:C8	2.46	0.50
49:K3:1577:G:H21	49:K3:1579:A:H61	1.59	0.50
49:K3:1585:U:OP2	78:H5:67:ARG:NH2	2.44	0.50
49:K3:1606:G:O2'	49:K3:1607:A:OP2	2.25	0.50
55:a3:201:SER:HB2	55:a3:202:PRO:HD2	1.93	0.50
65:J5:81:VAL:N	65:J5:123:GLY:O	2.33	0.50
71:c3:81:VAL:HG23	71:c3:94:LYS:HZ2	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:D3:1:MET:H2	74:D3:10:ASP:HB2	1.75	0.50
76:E3:15:LEU:HD23	76:E3:79:LEU:HD13	1.93	0.50
2:e2:644:G:H2'	2:e2:645:G:O4'	2.11	0.50
2:e2:2008:A:C4	31:M2:3:PRO:HB3	2.46	0.50
2:e2:2780:C:OP1	8:m2:134:LYS:NZ	2.35	0.50
2:e2:3969:G:O4'	2:e2:4054:C:N4	2.45	0.50
2:e2:4129:G:P	42:22:55:ALA:H	2.34	0.50
4:d2:4:U:O4	4:d2:5:A:N6	2.44	0.50
6:k2:41:SER:O	6:k2:61:VAL:HG23	2.10	0.50
6:k2:96:LEU:HD12	7:l2:20:ARG:HD2	1.93	0.50
10:q2:72:THR:HG22	10:q2:110:LYS:HB3	1.93	0.50
25:G2:135:ILE:HG22	25:G2:136:ASP:N	2.26	0.50
28:J2:82:ILE:HG21	28:J2:89:THR:HG23	1.94	0.50
37:W2:181:LYS:HD2	37:W2:186:PHE:HE2	1.77	0.50
41:12:64:ILE:HD13	41:12:106:ALA:HB2	1.94	0.50
43:32:101:ILE:O	43:32:104:ARG:HG2	2.12	0.50
45:52:285:TYR:HB2	45:52:332:MET:HG2	1.93	0.50
49:K3:238:C:H42	49:K3:274:G:C4'	2.24	0.50
49:K3:412:G:O6	49:K3:429:C:N4	2.44	0.50
49:K3:1082:A:H5'	49:K3:1843:G:H4'	1.93	0.50
49:K3:1352:G:H2'	49:K3:1353:A:H8	1.73	0.50
49:K3:1406:G:H2'	49:K3:1407:U:O4'	2.11	0.50
49:K3:1593:C:H2'	49:K3:1594:A:C8	2.47	0.50
52:Q3:141:ASP:OD1	52:Q3:142:GLU:N	2.37	0.50
59:U3:99:ILE:HD11	59:U3:117:ARG:NH2	2.26	0.50
60:V3:194:GLY:HA2	60:V3:197:ILE:HD12	1.93	0.50
63:Y3:150:MET:HE2	63:Y3:152:PHE:CE1	2.46	0.50
68:B3:60:VAL:HG13	68:B3:110:ILE:HG21	1.92	0.50
80:I3:60:THR:HG22	80:I3:62:ARG:HD2	1.92	0.50
1:E1:6286:G:O2'	1:E1:6287:A:O4'	2.26	0.50
2:e2:218:A:H8	12:t2:177:TRP:HB3	1.75	0.50
2:e2:342:G:H2'	2:e2:343:C:H6	1.77	0.50
2:e2:436:C:H42	2:e2:1312:A:H2	1.59	0.50
2:e2:490:C:O2'	2:e2:491:G:O5'	2.29	0.50
2:e2:922:C:H2'	2:e2:923:C:H6	1.77	0.50
2:e2:923:C:H2'	2:e2:924:C:H6	1.76	0.50
2:e2:1091:C:H2'	2:e2:1092:G:C8	2.46	0.50
2:e2:1728:U:OP1	35:U2:126:LYS:NZ	2.45	0.50
2:e2:1996:U:H2'	29:K2:57:LYS:HD2	1.94	0.50
2:e2:3772:U:H2'	2:e2:3773:U:C6	2.47	0.50
2:e2:4246:G:H2'	2:e2:4247:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4736:C:H2'	2:e2:4737:G:H8	1.76	0.50
16:x2:14:TYR:O	16:x2:16:ARG:HG2	2.12	0.50
17:y2:101:LYS:HE2	17:y2:101:LYS:HA	1.92	0.50
18:92:51:ASP:HB2	18:92:58:LEU:HG	1.94	0.50
18:92:80:GLU:HG2	27:I2:76:ALA:HB2	1.94	0.50
31:M2:20:GLY:HA2	31:M2:28:LEU:HG	1.93	0.50
40:02:119:ARG:O	40:02:123:ILE:HG12	2.12	0.50
49:K3:303:C:C1'	71:c3:64:ASN:HD21	2.24	0.50
49:K3:446:G:OP1	71:c3:51:GLY:N	2.43	0.50
49:K3:448:A:H4'	49:K3:449:A:H5'	1.94	0.50
49:K3:1050:A:H4'	49:K3:1846:G:O2'	2.11	0.50
49:K3:1259:A:H2'	49:K3:1260:A:H5''	1.93	0.50
49:K3:1587:G:N2	78:H5:63:HIS:O	2.44	0.50
49:K3:1606:G:O2'	49:K3:1632:G:N2	2.44	0.50
49:K3:1648:G:H5''	68:B3:151:ARG:HE	1.76	0.50
49:K3:1745:A:N1	49:K3:1789:G:N3	2.59	0.50
49:K3:1780:G:H2'	49:K3:1781:A:C8	2.47	0.50
49:K3:1788:A:H2'	49:K3:1789:G:O4'	2.11	0.50
54:G5:14:ARG:NH2	54:G5:17:ASN:HA	2.26	0.50
54:G5:47:LYS:HE3	54:G5:77:TYR:HB3	1.92	0.50
54:G5:120:HIS:HE1	54:G5:124:ARG:HE	1.59	0.50
58:T3:54:LYS:NZ	58:T3:94:ILE:O	2.33	0.50
60:V3:28:LYS:HE2	60:V3:50:THR:HG23	1.93	0.50
60:V3:208:HIS:CD2	60:V3:209:ASP:OD1	2.65	0.50
65:J5:28:ARG:HB3	65:J5:29:PRO:HD3	1.94	0.50
71:c3:83:TYR:HB2	71:c3:202:ILE:HD11	1.93	0.50
73:d3:55:LYS:O	73:d3:59:GLU:HG3	2.12	0.50
80:I3:22:ILE:HG23	80:I3:114:VAL:HG22	1.92	0.50
85:a7:64:VAL:O	85:a7:67:HIS:ND1	2.44	0.50
2:e2:96:U:OP2	85:a7:11:LYS:HD3	2.10	0.50
2:e2:370:U:N3	2:e2:1637:A:N6	2.57	0.50
2:e2:388:A:H1'	2:e2:403:G:N2	2.27	0.50
2:e2:923:C:H2'	2:e2:924:C:C6	2.47	0.50
2:e2:970:G:H1	2:e2:972:C:H1'	1.75	0.50
2:e2:1707:C:P	2:e2:1834:U:H3'	2.51	0.50
2:e2:1763:C:C5	2:e2:1764:G:H1'	2.47	0.50
2:e2:2044:G:N1	15:w2:62:MET:HE1	2.26	0.50
2:e2:2650:G:H21	17:y2:54:ARG:NH1	2.08	0.50
2:e2:2704:C:H2'	2:e2:2705:G:H8	1.77	0.50
2:e2:3923:A:H2'	2:e2:3924:C:C6	2.47	0.50
2:e2:4240:G:H2'	2:e2:4241:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4475:G:OP2	2:e2:4476:C:H2'	2.11	0.50
2:e2:4884:G:H1	34:T2:186:ARG:HH21	1.59	0.50
4:d2:4:U:H2'	4:d2:5:A:C8	2.46	0.50
5:p2:21:LYS:NZ	5:p2:39:SER:HA	2.27	0.50
7:l2:14:TYR:CE2	45:52:380:GLN:HG2	2.47	0.50
15:w2:84:VAL:HG11	15:w2:102:LEU:HD13	1.92	0.50
17:y2:53:LEU:HB2	17:y2:82:MET:O	2.12	0.50
27:I2:29:ILE:HG22	27:I2:33:GLN:OE1	2.12	0.50
36:V2:113:ARG:HG2	36:V2:117:ARG:NE	2.27	0.50
37:W2:16:LEU:HB2	37:W2:71:TRP:CZ3	2.46	0.50
40:02:91:TRP:O	40:02:91:TRP:CD1	2.65	0.50
42:22:122:TYR:HB2	42:22:131:PHE:CE2	2.46	0.50
43:32:102:LEU:O	43:32:105:LEU:HB3	2.11	0.50
49:K3:24:C:H4'	49:K3:415:A:H4'	1.92	0.50
49:K3:457:C:H42	49:K3:458:A:H61	1.60	0.50
49:K3:934:G:N1	49:K3:1008:A:H2	2.04	0.50
49:K3:982:G:C2	49:K3:983:A:C5	2.99	0.50
49:K3:1665:G:H5'	78:H5:89:PRO:HG2	1.92	0.50
49:K3:1717:C:H2'	49:K3:1718:G:C8	2.46	0.50
51:13:22:MET:HE2	51:13:22:MET:N	2.27	0.50
53:G3:13:GLN:NE2	53:G3:36:TYR:H	2.10	0.50
55:a3:19:THR:HG21	55:a3:36:ARG:NH2	2.27	0.50
55:a3:20:GLN:HE21	55:a3:21:ILE:C	2.20	0.50
55:a3:44:LYS:HD3	55:a3:56:GLN:OE1	2.11	0.50
2:e2:370:U:C4	2:e2:1637:A:C2	3.00	0.50
2:e2:975:C:O2	12:t2:323:ARG:NH2	2.35	0.50
2:e2:1178:G:H5''	25:G2:287:PHE:HD1	1.77	0.50
2:e2:1392:A:H2'	2:e2:1393:G:C8	2.47	0.50
2:e2:1430:C:OP1	33:S2:135:GLY:N	2.37	0.50
2:e2:1701:A:H1'	2:e2:2096:U:C4'	2.42	0.50
2:e2:1998:A:N6	29:K2:40:MET:HG2	2.27	0.50
2:e2:2428:A:C6	2:e2:2789:A:C8	2.99	0.50
2:e2:2521:G:H2'	2:e2:2522:G:C8	2.46	0.50
2:e2:4213:A:H5'	2:e2:4214:A:H5'	1.94	0.50
2:e2:4597:U:H2'	2:e2:4598:C:O4'	2.11	0.50
2:e2:4861:G:H5'	15:w2:169:ARG:HD2	1.93	0.50
2:e2:5002:U:OP1	45:52:372:SER:OG	2.27	0.50
3:h2:67:U:OP2	21:C2:87:LYS:NZ	2.44	0.50
5:p2:13:LEU:HD23	5:p2:16:ARG:HH11	1.76	0.50
8:m2:60:TYR:HD1	19:A2:78:TYR:HB3	1.77	0.50
9:o2:67:ILE:HG12	9:o2:107:THR:HG21	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:G2:110:LEU:HG	25:G2:115:MET:HE3	1.94	0.50
29:K2:27:CYS:O	29:K2:192:VAL:HA	2.11	0.50
31:M2:117:ARG:HG2	31:M2:133:LEU:HD21	1.94	0.50
34:T2:152:ILE:O	34:T2:200:THR:HG22	2.11	0.50
34:T2:236:PHE:CD1	34:T2:240:LYS:HG3	2.47	0.50
43:32:31:GLU:OE2	43:32:49:LEU:HD13	2.12	0.50
43:32:106:LEU:HD11	43:32:138:LEU:HD21	1.94	0.50
44:42:53:VAL:HG21	44:42:186:ALA:HB2	1.94	0.50
44:42:144:MET:HG3	44:42:145:VAL:HG13	1.93	0.50
45:52:150:PHE:CE2	45:52:198:ARG:HD2	2.47	0.50
45:52:285:TYR:CD1	45:52:363:ILE:HD13	2.45	0.50
49:K3:112:U:O2'	49:K3:114:G:O2'	2.16	0.50
49:K3:149:A:N7	49:K3:150:A:H1'	2.27	0.50
49:K3:534:G:H3'	49:K3:535:G:H8	1.77	0.50
49:K3:617:G:H4'	58:T3:88:ASP:HB2	1.94	0.50
49:K3:696:G:N1	49:K3:737:G:C6	2.79	0.50
49:K3:1470:C:H2'	49:K3:1471:C:C6	2.45	0.50
49:K3:1579:A:H5''	80:I3:86:LYS:HZ2	1.76	0.50
55:a3:241:PHE:HE1	55:a3:248:LEU:HB2	1.77	0.50
64:j3:57:THR:OG1	81:I5:90:ARG:NH2	2.31	0.50
70:F3:160:ASP:HA	70:F3:163:PHE:CD2	2.40	0.50
75:e3:22:LEU:HD22	75:e3:89:VAL:HG22	1.94	0.50
80:I3:49:LYS:HG2	80:I3:92:HIS:CD2	2.47	0.50
1:E1:6372:G:C6	1:E1:6384:A:C6	2.99	0.50
2:e2:5:A:H1'	36:V2:192:ARG:HH22	1.76	0.50
2:e2:102:G:O2'	2:e2:1381:U:O2'	2.17	0.50
2:e2:149:A:C8	36:V2:196:ARG:NH1	2.79	0.50
2:e2:277:G:N7	20:B2:30:ARG:HD2	2.26	0.50
2:e2:437:G:H4'	14:v2:18:LYS:NZ	2.27	0.50
2:e2:635:G:H2'	2:e2:636:G:C8	2.46	0.50
2:e2:1075:G:H2'	2:e2:1076:C:O4'	2.12	0.50
2:e2:1281:G:H22	32:R2:48:ARG:C	2.20	0.50
2:e2:1468:C:H5''	10:q2:132:ARG:NH1	2.23	0.50
2:e2:1523:A:C2	2:e2:1653:A:N7	2.80	0.50
2:e2:1866:A:N3	2:e2:4403:U:O2'	2.45	0.50
2:e2:2275:G:H4'	35:U2:165:ARG:O	2.11	0.50
2:e2:2892:C:H5	43:32:74:ARG:HH22	1.59	0.50
2:e2:4368:G:N2	24:F2:82:MET:HE1	2.27	0.50
2:e2:4390:A:C6	2:e2:4391:G:C5	2.99	0.50
2:e2:4865:C:H3'	2:e2:4866:C:C6	2.45	0.50
2:e2:4937:C:O2	2:e2:4937:C:H2'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:5004:C:H2'	2:e2:5005:G:O4'	2.12	0.50
2:e2:5055:G:H2'	2:e2:5056:A:C8	2.47	0.50
7:l2:1:MET:HG3	7:l2:2:LYS:H	1.77	0.50
10:q2:134:GLU:O	10:q2:137:ILE:HG22	2.11	0.50
12:t2:80:ARG:HG2	12:t2:80:ARG:HH11	1.76	0.50
29:K2:17:ILE:HB	29:K2:59:THR:HG22	1.92	0.50
31:M2:16:ARG:HD3	31:M2:62:LEU:HA	1.94	0.50
41:12:42:PRO:HA	41:12:61:ILE:HD13	1.93	0.50
49:K3:102:A:N7	49:K3:406:U:O4	2.45	0.50
49:K3:171:A:OP2	67:b3:137:ARG:NH2	2.45	0.50
49:K3:212:C:H2'	49:K3:213:G:C8	2.47	0.50
49:K3:527:C:C2	49:K3:528:A:C8	3.00	0.50
49:K3:679:A:H2'	49:K3:680:G:H5'	1.93	0.50
49:K3:742:U:H3	79:P3:338:ILE:HG21	1.76	0.50
49:K3:792:C:H3'	49:K3:793:G:H8	1.77	0.50
49:K3:1092:G:C6	49:K3:1158:G:O6	2.64	0.50
49:K3:1134:G:H2'	49:K3:1135:C:H6	1.75	0.50
49:K3:1238:U:H2'	49:K3:1239:U:O4'	2.11	0.50
49:K3:1560:U:O2'	49:K3:1583:C:O2'	2.21	0.50
49:K3:1606:G:HO2'	49:K3:1607:A:P	2.34	0.50
49:K3:1669:G:H5'	68:B3:155:SER:OG	2.11	0.50
49:K3:1753:C:C2	49:K3:1780:G:N2	2.79	0.50
49:K3:1859:A:H2'	49:K3:1860:A:C8	2.47	0.50
59:U3:185:MET:SD	74:D3:39:VAL:HG12	2.52	0.50
72:C3:3:ARG:HH12	72:C3:49:LYS:NZ	2.10	0.50
1:E1:6280:A:H61	1:E1:6336:G:N2	2.09	0.50
1:E1:6415:A:O2'	63:Y3:116:ARG:NH2	2.40	0.50
2:e2:97:G:N7	85:a7:11:LYS:NZ	2.55	0.50
2:e2:437:G:H3'	2:e2:437:G:N3	2.27	0.50
2:e2:468:U:H1'	2:e2:470:A:H1'	1.94	0.50
2:e2:1819:G:N7	2:e2:1820:C:H2'	2.27	0.50
2:e2:2434:G:H5''	8:m2:83:THR:HG21	1.93	0.50
2:e2:4026:G:O2'	2:e2:4027:G:H5'	2.12	0.50
2:e2:4287:G:C6	2:e2:4288:C:N4	2.80	0.50
2:e2:4642:U:H2'	2:e2:4643:G:C8	2.47	0.50
2:e2:5003:U:H2'	2:e2:5004:C:C6	2.47	0.50
3:h2:91:A:H2'	3:h2:92:U:O4'	2.11	0.50
12:t2:149:GLU:OE2	28:J2:72:LYS:HD3	2.11	0.50
18:92:80:GLU:HG2	27:I2:76:ALA:CB	2.42	0.50
20:B2:49:GLY:C	20:B2:50:PHE:HD1	2.20	0.50
45:52:181:MET:HG2	45:52:182:GLU:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:421:G:H5'	53:G3:98:LYS:HG3	1.94	0.50
49:K3:448:A:H5''	71:c3:24:LYS:O	2.12	0.50
49:K3:583:A:H5'	49:K3:584:A:OP2	2.12	0.50
49:K3:694:G:N2	49:K3:739:C:H1'	2.27	0.50
49:K3:736:C:H2'	49:K3:737:G:N7	2.26	0.50
49:K3:834:C:H2'	49:K3:835:C:N1	2.27	0.50
49:K3:964:A:C2	49:K3:1054:G:H1'	2.46	0.50
49:K3:1030:A:H2'	49:K3:1031:A:C8	2.43	0.50
49:K3:1368:U:N3	49:K3:1371:U:OP2	2.40	0.50
49:K3:1431:G:H5''	49:K3:1432:U:H5'	1.94	0.50
49:K3:1550:G:H2'	49:K3:1579:A:N6	2.27	0.50
49:K3:1704:C:H1'	49:K3:1832:A:N1	2.27	0.50
56:a5:72:TYR:HA	56:a5:75:MET:HE3	1.94	0.50
57:A3:72:LYS:HE2	57:A3:93:MET:HG2	1.94	0.50
59:U3:190:SER:N	59:U3:192:GLU:OE1	2.45	0.50
61:W3:151:ILE:O	61:W3:155:ILE:HG13	2.12	0.50
64:j3:209:HIS:ND1	64:j3:218:PHE:O	2.45	0.50
66:N3:58:ALA:HB2	66:N3:62:ARG:HH11	1.77	0.50
71:c3:165:GLN:HE21	71:c3:195:LEU:HD13	1.76	0.50
72:C3:9:VAL:HG21	72:C3:49:LYS:HG2	1.94	0.50
77:H3:21:CYS:HB2	77:H3:30:LEU:HD21	1.93	0.50
1:E1:6352:U:H4'	1:E1:6353:C:OP1	2.11	0.50
2:e2:473:C:C2	2:e2:474:C:C5	3.00	0.50
2:e2:502:C:N4	2:e2:504:G:H4'	2.27	0.50
2:e2:1449:C:H2'	2:e2:1450:C:H6	1.77	0.50
2:e2:1750:G:P	30:L2:39:LYS:HZ1	2.34	0.50
2:e2:2245:G:N7	2:e2:2251:G:O2'	2.45	0.50
2:e2:2412:A:H5'	2:e2:2526:C:O2'	2.12	0.50
2:e2:2428:A:H8	22:D2:45:ARG:HH11	1.60	0.50
2:e2:2503:G:O4'	2:e2:4084:G:N2	2.45	0.50
2:e2:2832:A:OP1	13:u2:47:LYS:NZ	2.36	0.50
11:r2:9:THR:HG22	11:r2:12:GLN:NE2	2.27	0.50
38:X2:167:ILE:O	38:X2:167:ILE:HG13	2.12	0.50
44:42:11:TYR:HA	44:42:217:TYR:HB2	1.93	0.50
49:K3:280:G:H2'	49:K3:890:U:O2'	2.11	0.50
49:K3:524:U:OP1	73:d3:131:ARG:NH1	2.41	0.50
49:K3:1096:G:N2	49:K3:1136:U:O2	2.38	0.50
49:K3:1331:C:O5'	49:K3:1489:A:H2'	2.12	0.50
49:K3:1511:U:H2'	49:K3:1512:C:C6	2.47	0.50
55:a3:201:SER:HB2	55:a3:202:PRO:CD	2.42	0.50
60:V3:121:ILE:O	60:V3:168:MET:HE1	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:W3:63:VAL:HB	61:W3:90:GLU:OE2	2.11	0.50
61:W3:179:THR:OG1	61:W3:180:VAL:N	2.44	0.50
66:N3:178:ILE:O	66:N3:182:LYS:HB2	2.11	0.50
79:P3:384:VAL:HA	79:P3:390:ARG:HH12	1.77	0.50
2:e2:364:G:O6	21:C2:55:ARG:NH1	2.44	0.49
2:e2:743:G:N2	2:e2:922:C:C2	2.80	0.49
2:e2:1439:C:H4'	35:U2:33:ARG:HH11	1.76	0.49
2:e2:1969:A:N6	29:K2:111:ALA:O	2.44	0.49
2:e2:2641:A:H3'	2:e2:2642:A:H8	1.76	0.49
2:e2:3953:G:H2'	2:e2:3954:A:C8	2.47	0.49
2:e2:4095:G:H2'	2:e2:4096:C:C6	2.47	0.49
2:e2:4118:U:C2	18:92:89:TYR:CZ	3.00	0.49
2:e2:4876:U:C4	46:62:169:THR:HG21	2.47	0.49
2:e2:4904:G:H2'	2:e2:4905:C:C6	2.46	0.49
12:t2:333:LYS:HE2	12:t2:337:ARG:NH1	2.27	0.49
31:M2:16:ARG:HD3	31:M2:63:THR:H	1.77	0.49
35:U2:126:LYS:HE2	35:U2:130:ASN:OD1	2.12	0.49
36:V2:81:ASN:ND2	36:V2:237:TRP:O	2.45	0.49
48:82:64:GLU:O	48:82:70:ILE:HG23	2.12	0.49
49:K3:9:U:H2'	49:K3:9:U:O2	2.11	0.49
49:K3:631:U:H5''	49:K3:632:C:C5	2.47	0.49
49:K3:688:U:C4	79:P3:341:LYS:HD2	2.47	0.49
49:K3:1105:G:H5''	82:L3:68:GLY:HA3	1.93	0.49
49:K3:1248:U:O2'	49:K3:1249:C:OP1	2.30	0.49
49:K3:1269:G:H1'	49:K3:1298:G:H1	1.75	0.49
49:K3:1310:U:O2'	52:Q3:175:LYS:NZ	2.28	0.49
49:K3:1470:C:H2'	49:K3:1471:C:C5	2.47	0.49
50:s3:34:ARG:NH2	50:s3:37:GLN:OE1	2.43	0.49
60:V3:71:LEU:HD13	60:V3:79:VAL:HB	1.93	0.49
64:j3:158:ASP:CG	64:j3:174:LYS:HA	2.37	0.49
72:C3:43:SER:OG	72:C3:44:LYS:N	2.45	0.49
80:I3:19:ARG:HG3	80:I3:92:HIS:CE1	2.47	0.49
82:L3:5:LYS:O	82:L3:7:LEU:HG	2.12	0.49
1:E1:6303:A:H1'	1:E1:6304:G:N1	2.27	0.49
2:e2:160:G:C8	20:B2:26:HIS:CD2	3.01	0.49
2:e2:423:G:H2'	2:e2:424:U:C6	2.46	0.49
2:e2:455:C:O2'	14:v2:5:ARG:NH1	2.45	0.49
2:e2:980:U:H2'	2:e2:981:C:C6	2.47	0.49
2:e2:1184:A:C6	2:e2:1185:G:C6	3.00	0.49
2:e2:1441:C:H2'	2:e2:1442:C:H6	1.77	0.49
2:e2:1523:A:H3'	2:e2:1524:A:H2	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1636:U:H5	2:e2:1640:C:N3	2.10	0.49
2:e2:2279:A:OP2	2:e2:2279:A:H8	1.95	0.49
2:e2:3661:G:C2	2:e2:3682:A:N7	2.80	0.49
2:e2:3920:U:H2'	2:e2:3921:U:C6	2.47	0.49
2:e2:4197:G:H2'	2:e2:4197:G:N3	2.26	0.49
5:p2:51:GLU:O	5:p2:54:GLU:HG3	2.12	0.49
20:B2:44:ILE:HG21	41:12:9:GLU:HG3	1.93	0.49
28:J2:36:ASN:HB2	28:J2:40:TYR:CD1	2.37	0.49
29:K2:51:ALA:HB2	29:K2:91:THR:HG22	1.94	0.49
35:U2:224:THR:HB	35:U2:230:GLY:HA3	1.93	0.49
37:W2:45:LEU:HD12	37:W2:91:MET:HG3	1.93	0.49
37:W2:116:ILE:HD11	37:W2:147:VAL:H	1.77	0.49
40:02:96:GLU:HA	40:02:99:GLU:OE2	2.12	0.49
49:K3:351:G:P	49:K3:383:G:H22	2.35	0.49
49:K3:490:C:H2'	49:K3:491:C:H6	1.75	0.49
49:K3:1308:U:O4	52:Q3:131:LYS:HB3	2.11	0.49
49:K3:1445:U:O2'	80:I3:56:MET:O	2.22	0.49
49:K3:1545:A:H2'	49:K3:1546:G:C8	2.47	0.49
53:G3:37:TYR:CD2	53:G3:46:THR:HG21	2.47	0.49
54:G5:8:LYS:HA	54:G5:58:GLU:HB3	1.93	0.49
57:A3:15:PHE:HB3	57:A3:22:LEU:HD12	1.93	0.49
60:V3:134:LEU:HG	60:V3:218:LEU:HB2	1.94	0.49
64:j3:15:PRO:HG3	64:j3:39:ARG:CZ	2.42	0.49
64:j3:198:ARG:NH1	64:j3:200:ARG:HH21	2.09	0.49
67:b3:31:ARG:H	67:b3:31:ARG:HD3	1.78	0.49
67:b3:74:ARG:NH2	67:b3:96:SER:HB2	2.27	0.49
67:b3:136:LYS:O	67:b3:176:ILE:HG23	2.12	0.49
71:c3:139:LYS:HA	71:c3:146:GLN:HE21	1.78	0.49
75:e3:32:ALA:HB3	75:e3:110:VAL:CG2	2.42	0.49
83:M3:46:ASN:HB3	83:M3:79:ILE:O	2.12	0.49
1:E1:6286:G:O2'	1:E1:6287:A:N3	2.44	0.49
2:e2:1326:A:H4'	2:e2:4446:U:H4'	1.93	0.49
2:e2:1369:C:H5''	2:e2:1370:G:OP2	2.11	0.49
2:e2:2413:U:H2'	2:e2:2414:G:C8	2.47	0.49
2:e2:3627:G:H2'	2:e2:3628:G:H8	1.77	0.49
2:e2:3973:G:N3	2:e2:3973:G:H2'	2.27	0.49
2:e2:4054:C:H2'	44:42:35:GLN:HB3	1.93	0.49
2:e2:4532:U:H2'	2:e2:4533:A:H8	1.76	0.49
2:e2:4578:G:H2'	2:e2:4579:U:C6	2.47	0.49
2:e2:4864:U:OP2	37:W2:32:LYS:NZ	2.45	0.49
2:e2:4892:A:N6	2:e2:4893:A:N1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4946:U:H4'	34:T2:161:ARG:HH21	1.76	0.49
5:p2:3:ARG:HG2	5:p2:41:TYR:HD1	1.77	0.49
12:t2:159:GLU:HA	12:t2:217:ILE:HB	1.94	0.49
13:u2:25:TYR:HD2	13:u2:88:LEU:HD12	1.77	0.49
34:T2:129:LEU:HD23	34:T2:129:LEU:O	2.12	0.49
42:22:33:THR:C	42:22:35:ASP:H	2.20	0.49
44:42:18:LEU:HB2	44:42:176:ASP:HB3	1.94	0.49
44:42:63:PHE:HB3	44:42:153:SER:OG	2.12	0.49
44:42:205:TYR:HE2	44:42:215:ARG:HH11	1.60	0.49
45:52:165:HIS:HB3	45:52:180:LEU:HD12	1.95	0.49
46:62:33:PHE:CE1	46:62:106:VAL:HG21	2.47	0.49
48:82:42:PHE:CE1	48:82:46:ARG:HG3	2.47	0.49
49:K3:68:A:N6	49:K3:82:G:N3	2.59	0.49
49:K3:193:C:H1'	49:K3:207:G:N2	2.27	0.49
49:K3:379:C:OP2	71:c3:178:ARG:NE	2.44	0.49
49:K3:489:A:H2'	49:K3:490:C:C6	2.48	0.49
49:K3:564:A:N6	49:K3:586:G:H1'	2.28	0.49
49:K3:696:G:C4	49:K3:697:G:C8	3.01	0.49
49:K3:797:C:H3'	49:K3:798:G:H21	1.76	0.49
49:K3:810:A:H5''	49:K3:811:A:H5'	1.93	0.49
49:K3:1142:G:N2	49:K3:1146:C:O2	2.45	0.49
49:K3:1224:G:H2'	49:K3:1225:U:O4'	2.11	0.49
49:K3:1240:A:C8	57:A3:100:LYS:HD2	2.46	0.49
49:K3:1268:C:O2'	57:A3:97:TYR:OH	2.24	0.49
49:K3:1628:C:H5'	78:H5:41:LYS:HD3	1.94	0.49
49:K3:1751:C:H42	49:K3:1781:A:N6	2.10	0.49
59:U3:38:ILE:HD12	59:U3:47:TYR:HB3	1.94	0.49
63:Y3:207:HIS:CE1	72:C3:8:THR:HA	2.47	0.49
74:D3:32:ILE:O	74:D3:32:ILE:HG13	2.12	0.49
78:H5:118:ASP:O	78:H5:119:TRP:CD1	2.64	0.49
79:P3:302:VAL:O	79:P3:304:VAL:HG23	2.13	0.49
2:e2:3:C:H2'	2:e2:4:G:C8	2.47	0.49
2:e2:961:G:H1	2:e2:968:C:H1'	1.78	0.49
2:e2:1332:C:H5''	14:v2:29:VAL:HG23	1.93	0.49
2:e2:1515:A:H2	2:e2:1516:G:C6	2.30	0.49
2:e2:4524:G:H2'	2:e2:4525:C:C6	2.48	0.49
2:e2:4593:C:H2'	2:e2:4594:U:C6	2.47	0.49
8:m2:71:LEU:HD12	8:m2:71:LEU:O	2.12	0.49
12:t2:71:ARG:HB2	12:t2:73:VAL:HG22	1.95	0.49
21:C2:15:THR:O	21:C2:29:LEU:HD12	2.11	0.49
24:F2:44:LYS:CG	24:F2:52:THR:HG21	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:H2:128:ARG:NH2	26:H2:130:TYR:OH	2.46	0.49
49:K3:2:A:O2'	61:W3:225:SER:OG	2.13	0.49
49:K3:293:C:O2'	49:K3:295:C:O4'	2.30	0.49
49:K3:557:U:H2'	49:K3:558:G:C8	2.48	0.49
49:K3:673:G:H8	49:K3:673:G:O5'	1.96	0.49
49:K3:1610:G:OP2	49:K3:1623:A:N6	2.45	0.49
53:G3:96:ILE:HG12	58:T3:14:ARG:NH2	2.27	0.49
54:G5:100:ALA:O	54:G5:102:GLY:N	2.37	0.49
58:T3:48:LYS:HA	58:T3:100:VAL:O	2.12	0.49
64:j3:137:PRO:O	64:j3:138:HIS:ND1	2.45	0.49
66:N3:113:VAL:O	66:N3:117:ILE:HG12	2.13	0.49
70:F3:57:PRO:HD2	70:F3:58:GLY:H	1.76	0.49
71:c3:62:VAL:CG2	71:c3:75:LYS:HE3	2.42	0.49
73:d3:79:ARG:O	73:d3:82:VAL:HG12	2.11	0.49
73:d3:156:HIS:ND1	73:d3:156:HIS:O	2.46	0.49
81:I5:26:ASP:OD1	81:I5:68:LYS:HG3	2.12	0.49
1:E1:6337:U:H2'	1:E1:6338:U:C6	2.47	0.49
2:e2:146:G:H2'	2:e2:147:A:H8	1.76	0.49
2:e2:172:C:H2'	2:e2:173:C:C6	2.47	0.49
2:e2:219:G:OP2	12:t2:181:LYS:NZ	2.45	0.49
2:e2:474:C:H2'	2:e2:475:G:C8	2.47	0.49
2:e2:488:G:H2'	2:e2:489:C:O4'	2.12	0.49
2:e2:699:C:H2'	2:e2:700:G:C8	2.47	0.49
2:e2:750:U:H2'	2:e2:751:G:C8	2.47	0.49
2:e2:1977:C:OP1	31:M2:98:ILE:HG22	2.12	0.49
2:e2:2304:U:H5	2:e2:2332:A:C5	2.31	0.49
2:e2:2470:C:O3'	36:V2:59:ARG:NH2	2.46	0.49
2:e2:2696:A:O2'	2:e2:2697:A:O5'	2.29	0.49
2:e2:3759:A:C8	49:K3:1826:G:H1'	2.48	0.49
2:e2:4047:A:C8	44:42:162:VAL:HG11	2.48	0.49
2:e2:4171:C:C4	2:e2:4172:A:C2	2.99	0.49
2:e2:4313:A:O2'	47:72:68:THR:HG21	2.13	0.49
14:v2:81:ASN:HA	14:v2:111:ILE:HD11	1.93	0.49
17:y2:8:ARG:N	17:y2:34:TYR:OH	2.44	0.49
18:92:233:ARG:HG3	18:92:233:ARG:O	2.13	0.49
29:K2:28:PHE:CD2	29:K2:192:VAL:HG22	2.47	0.49
30:L2:56:GLU:OE2	38:X2:162:ARG:HG2	2.12	0.49
30:L2:91:LEU:HD22	38:X2:135:ILE:HG22	1.93	0.49
31:M2:152:ILE:H	31:M2:152:ILE:HD12	1.76	0.49
35:U2:91:VAL:O	35:U2:119:GLY:HA2	2.12	0.49
41:12:36:LEU:HG	41:12:64:ILE:HG22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:22:46:ILE:HD11	42:22:49:TYR:CE1	2.48	0.49
42:22:81:MET:SD	42:22:82:PRO:HD2	2.53	0.49
45:52:122:TRP:CZ2	45:52:127:LYS:HG2	2.48	0.49
45:52:188:GLY:O	45:52:193:LYS:HE2	2.12	0.49
49:K3:127:C:O2'	49:K3:128:U:H5'	2.12	0.49
49:K3:929:G:H2'	49:K3:930:C:C1'	2.42	0.49
49:K3:1129:G:H2'	49:K3:1130:G:N9	2.27	0.49
49:K3:1169:G:N2	49:K3:1191:C:N3	2.60	0.49
49:K3:1407:U:H2'	49:K3:1408:U:C6	2.47	0.49
49:K3:1407:U:O2'	49:K3:1408:U:O4'	2.26	0.49
49:K3:1670:C:H2'	49:K3:1671:G:O4'	2.11	0.49
49:K3:1854:U:H2'	49:K3:1855:G:H8	1.77	0.49
55:a3:109:LEU:HG	55:a3:124:SER:HA	1.94	0.49
63:Y3:190:LEU:HD12	63:Y3:200:PRO:HG3	1.95	0.49
1:E1:6366:G:O5'	1:E1:6366:G:H8	1.95	0.49
2:e2:724:C:C2	2:e2:943:A:N1	2.81	0.49
2:e2:1622:U:O2'	2:e2:1627:G:H4'	2.12	0.49
2:e2:1975:G:H2'	2:e2:1976:C:H6	1.78	0.49
2:e2:1999:G:H4'	2:e2:2000:G:C6	2.47	0.49
2:e2:3651:A:OP1	18:92:200:ARG:HG3	2.12	0.49
2:e2:4120:U:C4	17:y2:101:LYS:HE3	2.47	0.49
2:e2:4264:G:OP1	25:G2:8:LYS:NZ	2.29	0.49
3:h2:126:C:H1'	3:h2:127:U:C5	2.48	0.49
3:h2:150:C:O2'	3:h2:151:G:OP1	2.26	0.49
10:q2:16:SER:O	10:q2:18:GLY:N	2.45	0.49
17:y2:76:ARG:HG2	17:y2:77:ALA:N	2.28	0.49
19:A2:121:VAL:HG13	85:a7:120:TYR:HB3	1.93	0.49
25:G2:177:THR:HB	25:G2:180:PHE:HD1	1.74	0.49
26:H2:48:LEU:HA	26:H2:51:VAL:HG12	1.95	0.49
29:K2:171:GLU:O	29:K2:174:LEU:HG	2.12	0.49
35:U2:74:ALA:HB2	47:72:140:PHE:CE2	2.41	0.49
35:U2:183:ILE:HD11	35:U2:192:GLU:OE2	2.12	0.49
35:U2:186:MET:HA	35:U2:186:MET:HE2	1.94	0.49
36:V2:116:ALA:HB1	36:V2:120:LYS:NZ	2.28	0.49
42:22:133:LYS:NZ	42:22:135:ARG:HE	2.11	0.49
44:42:31:THR:O	44:42:33:GLU:HG3	2.12	0.49
45:52:92:TYR:CE2	45:52:161:ARG:HD2	2.47	0.49
49:K3:74:G:N2	67:b3:171:THR:H	2.11	0.49
49:K3:145:G:OP1	67:b3:139:SER:OG	2.24	0.49
49:K3:374:G:C6	49:K3:375:U:C4	3.01	0.49
49:K3:378:U:P	71:c3:98:LYS:HG2	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:381:C:N3	71:c3:49:ARG:HG3	2.28	0.49
49:K3:408:A:H5'	49:K3:409:C:OP1	2.13	0.49
49:K3:429:C:H2'	49:K3:430:C:C6	2.48	0.49
49:K3:436:G:H1	49:K3:458:A:N6	2.10	0.49
49:K3:502:C:H5'	64:j3:66:MET:HE2	1.95	0.49
49:K3:669:A:N3	49:K3:1164:G:O2'	2.40	0.49
49:K3:842:C:N3	49:K3:843:C:N4	2.60	0.49
49:K3:870:A:N6	49:K3:916:A:OP2	2.46	0.49
49:K3:1597:C:HO2'	49:K3:1598:G:H8	1.57	0.49
53:G3:8:ARG:O	71:c3:85:ALA:HB1	2.12	0.49
59:U3:106:GLY:HA2	59:U3:110:ASN:H	1.77	0.49
63:Y3:138:VAL:HA	63:Y3:183:GLY:O	2.11	0.49
63:Y3:168:VAL:HG12	63:Y3:189:MET:HA	1.95	0.49
65:J5:46:TYR:HE2	65:J5:129:PHE:CD1	2.31	0.49
68:B3:61:ASN:HB2	68:B3:63:ARG:HG3	1.93	0.49
68:B3:68:ILE:HG22	68:B3:103:HIS:CE1	2.48	0.49
85:a7:13:HIS:O	85:a7:13:HIS:CG	2.65	0.49
2:e2:262:G:C6	2:e2:263:G:O6	2.66	0.49
2:e2:312:G:H2'	2:e2:313:U:C6	2.47	0.49
2:e2:693:C:H2'	2:e2:694:C:H6	1.77	0.49
2:e2:1517:G:OP1	2:e2:1518:A:N6	2.46	0.49
2:e2:1887:A:HO2'	2:e2:1888:U:P	2.35	0.49
2:e2:1974:G:H8	31:M2:16:ARG:H	1.54	0.49
2:e2:1995:C:H1'	2:e2:1998:A:H62	1.78	0.49
2:e2:2021:C:H2'	2:e2:2022:C:C6	2.47	0.49
2:e2:2119:G:H4'	35:U2:40:MET:SD	2.53	0.49
2:e2:2307:A:H2'	2:e2:2308:A:H8	1.76	0.49
2:e2:2762:G:O2'	2:e2:2763:U:H5''	2.13	0.49
2:e2:2863:G:C4	2:e2:2864:A:C8	3.01	0.49
2:e2:4046:A:H2'	2:e2:4047:A:C8	2.48	0.49
2:e2:4704:C:H2'	2:e2:4705:A:C8	2.46	0.49
2:e2:4903:G:N1	2:e2:4919:G:O6	2.46	0.49
2:e2:5038:A:H2'	2:e2:5039:U:C6	2.48	0.49
16:x2:24:HIS:O	16:x2:87:LYS:NZ	2.41	0.49
17:y2:83:CYS:O	17:y2:84:ALA:C	2.56	0.49
23:E2:94:MET:HG2	23:E2:105:PRO:HA	1.94	0.49
33:S2:8:ASN:OD1	33:S2:9:LYS:HG2	2.12	0.49
37:W2:181:LYS:HB3	37:W2:186:PHE:CD2	2.46	0.49
42:22:52:LYS:HE2	42:22:52:LYS:HA	1.95	0.49
48:82:22:THR:OG1	48:82:108:GLU:O	2.23	0.49
49:K3:127:C:H1'	49:K3:312:G:C2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:479:C:H2'	49:K3:480:G:C8	2.47	0.49
49:K3:560:A:OP2	73:d3:177:ASN:ND2	2.46	0.49
49:K3:744:G:H1'	79:P3:346:SER:CB	2.42	0.49
49:K3:804:U:C2	49:K3:805:U:C5	3.00	0.49
49:K3:844:U:C2	49:K3:845:G:N7	2.81	0.49
49:K3:1511:U:H2'	49:K3:1512:C:C5	2.48	0.49
49:K3:1548:G:H5'	80:I3:60:THR:O	2.13	0.49
49:K3:1845:A:H2'	49:K3:1846:G:C8	2.48	0.49
54:G5:116:LYS:HA	54:G5:118:ARG:NH1	2.27	0.49
56:a5:45:THR:CG2	56:a5:49:GLY:HA2	2.42	0.49
58:T3:18:ARG:HA	58:T3:21:LYS:HD2	1.95	0.49
58:T3:36:LEU:H	58:T3:36:LEU:HD12	1.77	0.49
58:T3:126:ALA:HB3	58:T3:140:ARG:HE	1.76	0.49
64:j3:19:MET:HE1	64:j3:51:LYS:HE3	1.93	0.49
64:j3:130:PHE:O	64:j3:131:VAL:HB	2.13	0.49
64:j3:190:GLY:O	64:j3:244:ILE:HA	2.12	0.49
66:N3:40:ALA:O	66:N3:68:ILE:HG12	2.12	0.49
68:B3:131:LYS:HZ2	68:B3:135:LYS:HG3	1.77	0.49
83:M3:97:ILE:HG23	83:M3:110:THR:O	2.13	0.49
2:e2:1163:G:H3'	2:e2:1164:G:H8	1.77	0.49
2:e2:1181:C:O2	2:e2:1181:C:H2'	2.12	0.49
2:e2:1509:C:H2'	2:e2:1510:G:C8	2.48	0.49
2:e2:1804:A:C6	2:e2:1833:G:H4'	2.48	0.49
2:e2:2265:G:N2	2:e2:2266:C:N3	2.60	0.49
2:e2:2297:G:H4'	12:t2:242:PRO:O	2.12	0.49
2:e2:2473:A:C2	2:e2:2506:G:C8	3.00	0.49
2:e2:2573:A:H5''	42:22:67:LYS:NZ	2.28	0.49
2:e2:2744:A:H2'	2:e2:2745:A:C8	2.48	0.49
2:e2:2878:G:H4'	2:e2:3825:A:H5''	1.94	0.49
2:e2:3756:A:H2'	2:e2:3757:G:H8	1.78	0.49
2:e2:3853:U:C4	2:e2:3854:C:N4	2.81	0.49
2:e2:3886:G:OP2	15:w2:90:HIS:NE2	2.43	0.49
2:e2:3953:G:H2'	2:e2:3954:A:H8	1.78	0.49
2:e2:4131:G:H2'	2:e2:4132:C:H6	1.78	0.49
2:e2:4633:G:O3'	2:e2:4634:U:H3'	2.12	0.49
12:t2:338:ASN:C	12:t2:340:ILE:H	2.21	0.49
14:v2:13:VAL:O	14:v2:13:VAL:HG13	2.13	0.49
37:W2:80:THR:O	37:W2:83:THR:OG1	2.23	0.49
39:Y2:119:TYR:HD1	54:G5:108:ARG:NH1	2.07	0.49
47:72:7:LYS:O	47:72:54:HIS:NE2	2.45	0.49
48:82:35:ASP:HB3	48:82:38:ASN:ND2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:333:G:O5'	49:K3:333:G:H8	1.96	0.49
49:K3:930:C:H2'	49:K3:931:C:H6	1.77	0.49
49:K3:1840:U:H2'	49:K3:1841:C:O4'	2.11	0.49
54:G5:134:GLN:HG3	54:G5:134:GLN:O	2.12	0.49
64:j3:100:ARG:HB3	64:j3:102:ILE:HG23	1.95	0.49
73:d3:109:ARG:O	73:d3:113:GLN:HB2	2.12	0.49
74:D3:15:ARG:HH11	74:D3:54:ALA:HB1	1.77	0.49
76:E3:13:GLU:OE2	76:E3:83:LEU:HD21	2.12	0.49
85:a7:57:PRO:HG3	85:a7:75:GLY:C	2.38	0.49
2:e2:8:U:H5'	41:12:40:PRO:HG3	1.94	0.49
2:e2:207:G:N2	2:e2:383:A:C8	2.81	0.49
2:e2:683:C:H5''	34:T2:104:ASN:ND2	2.27	0.49
2:e2:1067:G:H2'	2:e2:1068:G:H8	1.77	0.49
2:e2:1163:G:C2	2:e2:1164:G:H1'	2.48	0.49
2:e2:1847:C:H2'	2:e2:1848:U:O4'	2.13	0.49
2:e2:1978:A:C2	2:e2:1981:G:H5'	2.48	0.49
2:e2:2033:G:H2'	2:e2:2034:C:H6	1.78	0.49
2:e2:2079:U:H2'	2:e2:2080:C:C6	2.48	0.49
2:e2:2528:G:H4'	2:e2:2783:A:H4'	1.94	0.49
2:e2:2553:A:H2	2:e2:2554:U:C4	2.31	0.49
2:e2:3771:C:C2'	2:e2:3772:U:H5'	2.42	0.49
2:e2:3779:A:N7	2:e2:3780:G:C8	2.80	0.49
2:e2:3824:A:C4	2:e2:3825:A:C8	3.01	0.49
2:e2:4123:C:H5''	2:e2:4124:G:OP2	2.13	0.49
2:e2:4256:A:O2'	2:e2:4257:A:H5'	2.13	0.49
2:e2:4300:U:OP1	47:72:87:LYS:HE3	2.13	0.49
2:e2:4300:U:H4'	47:72:89:ILE:HG22	1.95	0.49
2:e2:4342:C:O3'	24:F2:37:GLY:HA3	2.13	0.49
2:e2:4594:U:C2	2:e2:4617:G:N2	2.80	0.49
2:e2:4881:U:P	40:02:120:ASN:HD22	2.35	0.49
2:e2:4934:A:H2'	2:e2:4935:C:C6	2.48	0.49
5:p2:11:PHE:O	5:p2:14:THR:OG1	2.28	0.49
15:w2:110:PRO:CG	15:w2:111:PRO:HD3	2.42	0.49
16:x2:23:GLU:N	16:x2:23:GLU:OE2	2.45	0.49
29:K2:152:ILE:HG12	31:M2:6:ASP:HB3	1.95	0.49
36:V2:188:ALA:O	36:V2:192:ARG:HG3	2.12	0.49
44:42:59:PRO:HG2	44:42:61:PRO:HG2	1.94	0.49
45:52:306:ASP:OD1	45:52:307:TYR:N	2.46	0.49
46:62:9:GLU:HG3	46:62:33:PHE:CE1	2.48	0.49
49:K3:180:G:O6	67:b3:196:LYS:NZ	2.46	0.49
49:K3:824:C:C2	73:d3:144:ILE:HG21	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:885:U:O2	49:K3:901:G:C6	2.65	0.49
49:K3:1050:A:H2'	49:K3:1051:G:O4'	2.13	0.49
49:K3:1567:G:H21	49:K3:1567:G:P	2.36	0.49
51:13:53:PRO:O	51:13:56:ARG:N	2.46	0.49
53:G3:76:VAL:H	53:G3:88:ILE:HG23	1.77	0.49
53:G3:89:ARG:HG3	53:G3:106:HIS:CD2	2.47	0.49
55:a3:2:THR:OG1	55:a3:3:GLU:N	2.45	0.49
57:A3:81:ARG:HH22	57:A3:122:THR:HB	1.78	0.49
57:A3:95:GLY:HA2	57:A3:104:GLN:HA	1.95	0.49
60:V3:204:ILE:HG22	60:V3:205:TYR:N	2.28	0.49
63:Y3:69:LEU:HB3	76:E3:20:VAL:HG21	1.95	0.49
70:F3:72:VAL:HG23	70:F3:74:THR:HG23	1.94	0.49
71:c3:157:LYS:HE2	71:c3:162:LEU:HB2	1.95	0.49
73:d3:50:LEU:O	73:d3:54:ARG:HG3	2.13	0.49
78:H5:31:PRO:HB3	78:H5:52:TRP:CZ2	2.48	0.49
81:I5:20:ARG:HD2	81:I5:21:LYS:N	2.28	0.49
2:e2:30:C:C4	2:e2:31:U:C4	3.01	0.49
2:e2:125:C:H2'	2:e2:126:C:C6	2.47	0.49
2:e2:701:G:H2'	2:e2:701:G:N3	2.28	0.49
2:e2:1517:G:C4	2:e2:1650:A:C5	3.00	0.49
2:e2:1971:G:N9	29:K2:41:GLN:HG3	2.28	0.49
2:e2:2350:U:H5''	2:e2:2351:C:H5''	1.95	0.49
2:e2:2595:C:C2	2:e2:2751:G:N2	2.81	0.49
2:e2:2655:C:C2	2:e2:2680:G:N2	2.81	0.49
2:e2:2843:U:O4	2:e2:2844:A:N6	2.46	0.49
2:e2:3722:G:OP1	20:B2:68:ARG:NH2	2.46	0.49
2:e2:3759:A:H1'	49:K3:1826:G:O4'	2.12	0.49
2:e2:4005:G:C5	2:e2:4006:G:H1'	2.48	0.49
2:e2:4325:A:H4'	25:G2:145:TYR:CD1	2.48	0.49
2:e2:4578:G:H2'	2:e2:4579:U:H6	1.77	0.49
12:t2:288:ASP:OD2	12:t2:290:SER:OG	2.26	0.49
24:F2:39:ARG:NE	24:F2:39:ARG:HA	2.28	0.49
24:F2:105:GLN:O	39:Y2:63:ARG:NH2	2.46	0.49
25:G2:47:PRO:HB3	25:G2:66:TYR:CD2	2.47	0.49
36:V2:165:GLU:OE1	41:12:11:TRP:NE1	2.46	0.49
46:62:45:TRP:HH2	46:62:59:GLY:HA3	1.78	0.49
49:K3:215:G:H21	49:K3:215:G:P	2.35	0.49
49:K3:236:A:H62	49:K3:238:C:H41	1.60	0.49
49:K3:291:G:C8	53:G3:39:ASN:HB3	2.47	0.49
49:K3:410:G:H2'	49:K3:411:G:H8	1.78	0.49
49:K3:568:C:N4	49:K3:582:U:H3	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:658:U:O2'	49:K3:659:G:OP2	2.29	0.49
49:K3:812:A:C2	64:j3:12:VAL:HB	2.48	0.49
49:K3:921:G:H4'	70:F3:61:LEU:HD23	1.94	0.49
49:K3:947:G:H2'	49:K3:948:C:C6	2.48	0.49
49:K3:1034:A:H2'	49:K3:1035:A:O4'	2.12	0.49
49:K3:1215:C:H42	49:K3:1220:A:N6	2.10	0.49
49:K3:1277:C:C4	49:K3:1321:G:N2	2.81	0.49
49:K3:1308:U:O2'	52:Q3:167:HIS:NE2	2.41	0.49
55:a3:127:LYS:NZ	55:a3:150:TRP:HD1	2.11	0.49
58:T3:55:VAL:HG22	58:T3:56:GLY:H	1.77	0.49
59:U3:90:PHE:CD1	59:U3:175:TRP:HE3	2.31	0.49
63:Y3:207:HIS:CE1	72:C3:11:LYS:HG3	2.47	0.49
65:J5:55:ASP:O	65:J5:57:ARG:N	2.45	0.49
72:C3:5:ARG:HD2	72:C3:49:LYS:HG3	1.95	0.49
73:d3:103:GLU:O	73:d3:107:GLU:OE1	2.31	0.49
85:a7:27:ASN:O	85:a7:30:ALA:N	2.45	0.49
1:E1:6373:C:H5''	1:E1:6374:A:N7	2.28	0.48
2:e2:452:A:H2	2:e2:1294:A:C4	2.31	0.48
2:e2:744:G:O2'	2:e2:745:G:O5'	2.30	0.48
2:e2:1083:U:O2	2:e2:1217:G:C2	2.66	0.48
2:e2:1247:U:O5'	2:e2:1247:U:H6	1.96	0.48
2:e2:1723:A:P	11:r2:23:LYS:HZ2	2.37	0.48
2:e2:2062:G:C4	2:e2:2063:G:C8	3.01	0.48
2:e2:2539:C:H2'	2:e2:2540:C:C6	2.48	0.48
2:e2:2696:A:O2'	2:e2:2697:A:H8	1.96	0.48
2:e2:4418:G:N2	2:e2:4423:U:OP1	2.40	0.48
2:e2:4577:U:H2'	2:e2:4578:G:H8	1.77	0.48
3:h2:7:U:H2'	3:h2:8:U:C6	2.48	0.48
3:h2:49:G:C6	3:h2:77:A:N1	2.81	0.48
17:y2:88:ARG:HH22	42:22:15:ALA:HB2	1.77	0.48
25:G2:89:LYS:HB2	25:G2:229:ASN:ND2	2.28	0.48
26:H2:10:ASN:HB3	26:H2:13:LYS:HE3	1.95	0.48
33:S2:111:SER:O	33:S2:115:ARG:HG3	2.13	0.48
36:V2:32:PHE:CZ	42:22:55:ALA:HA	2.47	0.48
37:W2:139:MET:SD	37:W2:168:SER:HB2	2.53	0.48
45:52:74:GLU:OE2	45:52:285:TYR:OH	2.20	0.48
49:K3:150:A:H2'	49:K3:150:A:N3	2.28	0.48
49:K3:377:G:C2	49:K3:378:U:C4	3.00	0.48
49:K3:1192:U:P	58:T3:119:ARG:HH21	2.35	0.48
53:G3:101:ARG:HG2	58:T3:7:LEU:HD12	1.94	0.48
55:a3:150:TRP:HB2	55:a3:170:TRP:CD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:A3:67:ALA:HB3	57:A3:73:PRO:HA	1.94	0.48
58:T3:96:GLU:HG3	58:T3:97:ASN:OD1	2.12	0.48
61:W3:66:LEU:O	61:W3:70:MET:HG2	2.13	0.48
61:W3:191:VAL:HG11	61:W3:236:PHE:HD1	1.77	0.48
65:J5:11:LEU:O	65:J5:15:ASN:ND2	2.44	0.48
72:C3:58:MET:HA	72:C3:61:ILE:HD12	1.94	0.48
73:d3:42:GLU:HA	73:d3:45:ARG:HG2	1.93	0.48
73:d3:50:LEU:HD21	73:d3:102:ILE:HA	1.93	0.48
78:H5:51:ASN:HA	78:H5:54:TYR:HD2	1.78	0.48
2:e2:75:G:C5	85:a7:102:ARG:HA	2.48	0.48
2:e2:451:C:O2'	34:T2:235:ILE:HA	2.12	0.48
2:e2:477:C:H2'	2:e2:478:G:C8	2.48	0.48
2:e2:1082:C:C2	2:e2:1218:G:N2	2.81	0.48
2:e2:1338:G:H4'	2:e2:1339:U:OP2	2.13	0.48
2:e2:1461:C:H2'	2:e2:1462:A:C8	2.48	0.48
2:e2:1556:C:H2'	2:e2:1557:C:C6	2.48	0.48
2:e2:1600:A:C2	26:H2:134:GLY:HA3	2.48	0.48
2:e2:1778:C:H4'	25:G2:4:VAL:O	2.13	0.48
2:e2:1823:G:H2'	2:e2:1825:A:H8	1.78	0.48
2:e2:2310:C:C4	2:e2:2311:C:C4	3.01	0.48
2:e2:2437:C:OP1	2:e2:2782:U:O2'	2.27	0.48
2:e2:2664:G:O6	2:e2:2671:C:N4	2.46	0.48
2:e2:3723:A:H2'	2:e2:3724:A:C8	2.47	0.48
2:e2:4669:A:N3	2:e2:4671:C:O2'	2.42	0.48
4:d2:21:G:O6	4:d2:58:A:N6	2.46	0.48
4:d2:71:G:C5	4:d2:72:U:C4	3.01	0.48
5:p2:45:LEU:HD12	5:p2:46:VAL:H	1.78	0.48
6:k2:40:ILE:HG12	6:k2:62:MET:O	2.13	0.48
16:x2:96:ALA:HB1	16:x2:99:HIS:HB2	1.94	0.48
18:92:14:SER:C	18:92:16:PHE:N	2.71	0.48
22:D2:12:PHE:HB3	22:D2:16:LYS:HZ1	1.76	0.48
33:S2:98:LEU:O	33:S2:118:GLY:HA3	2.13	0.48
44:42:3:SER:OG	44:42:211:GLY:O	2.28	0.48
45:52:117:ARG:HD3	45:52:178:ALA:O	2.11	0.48
49:K3:54:A:H5'	49:K3:55:U:O5'	2.13	0.48
49:K3:65:C:C4	67:b3:174:PRO:HB3	2.49	0.48
49:K3:640:A:H2'	49:K3:641:A:H8	1.78	0.48
49:K3:1107:G:C6	49:K3:1126:G:C2	3.01	0.48
49:K3:1402:A:H5'	80:I3:51:LYS:HB3	1.94	0.48
49:K3:1707:U:H2'	49:K3:1708:C:O4'	2.13	0.48
51:13:19:GLN:O	51:13:23:LYS:HE2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:T3:119:ARG:HG3	58:T3:120:PHE:CE2	2.49	0.48
71:c3:11:ARG:NH1	71:c3:15:GLY:O	2.46	0.48
81:I5:104:ARG:O	81:I5:108:LYS:HG2	2.13	0.48
2:e2:370:U:O4	2:e2:1637:A:C4	2.66	0.48
2:e2:753:C:H2'	2:e2:754:U:H6	1.78	0.48
2:e2:1315:C:N4	2:e2:1316:G:O6	2.47	0.48
2:e2:1424:G:H4'	11:r2:28:ARG:HH12	1.78	0.48
2:e2:1520:C:N4	2:e2:1521:C:N4	2.61	0.48
2:e2:1600:A:H2	26:H2:134:GLY:HA3	1.77	0.48
2:e2:1697:G:P	2:e2:1714:C:H42	2.35	0.48
2:e2:1698:C:N4	33:S2:38:ARG:HG2	2.29	0.48
2:e2:1941:A:N6	2:e2:2039:A:OP1	2.46	0.48
2:e2:3753:G:C5	2:e2:3776:G:C2	3.01	0.48
2:e2:4525:C:H2'	2:e2:4526:U:C6	2.49	0.48
2:e2:4584:A:C2	2:e2:4719:G:C4	3.01	0.48
2:e2:4759:C:H3'	2:e2:4760:G:O4'	2.12	0.48
2:e2:4940:C:O2	34:T2:222:LYS:NZ	2.38	0.48
2:e2:4943:C:OP1	34:T2:158:GLY:HA2	2.13	0.48
2:e2:4997:G:H2'	2:e2:4998:G:H8	1.79	0.48
2:e2:5032:C:H2'	2:e2:5033:G:O4'	2.14	0.48
2:e2:5056:A:H2'	2:e2:5057:C:C6	2.49	0.48
5:p2:61:PRO:CD	5:p2:62:PRO:HD3	2.43	0.48
9:o2:2:LYS:HE2	9:o2:9:SER:HB3	1.95	0.48
10:q2:46:ASP:OD2	33:S2:178:ARG:NH1	2.46	0.48
12:t2:142:HIS:CE1	12:t2:249:PHE:H	2.31	0.48
13:u2:68:LEU:CD1	13:u2:106:VAL:HG12	2.43	0.48
15:w2:18:ARG:NH2	15:w2:128:ARG:HE	2.11	0.48
25:G2:291:GLN:CD	38:X2:212:LEU:HA	2.37	0.48
29:K2:149:ARG:HB3	31:M2:67:ARG:HH21	1.77	0.48
29:K2:174:LEU:HA	29:K2:177:MET:HB2	1.95	0.48
30:L2:76:MET:CE	30:L2:85:PHE:HB3	2.40	0.48
43:32:171:LYS:O	43:32:174:GLU:HG3	2.12	0.48
49:K3:30:C:H2'	49:K3:31:U:O4'	2.12	0.48
49:K3:114:G:O2'	49:K3:115:U:O5'	2.22	0.48
49:K3:222:U:O3'	53:G3:17:PHE:HB2	2.13	0.48
49:K3:530:U:H2'	49:K3:531:A:C8	2.49	0.48
49:K3:549:C:O2'	49:K3:550:C:O4'	2.20	0.48
49:K3:556:U:O3'	49:K3:557:U:H3'	2.13	0.48
49:K3:625:G:H4'	49:K3:629:A:C4	2.48	0.48
49:K3:1067:C:H2'	49:K3:1068:G:O4'	2.14	0.48
49:K3:1466:G:H2'	49:K3:1467:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1513:C:H2'	49:K3:1514:G:C8	2.48	0.48
49:K3:1545:A:C2	49:K3:1588:A:C6	3.01	0.48
49:K3:1585:U:P	78:H5:67:ARG:HH22	2.36	0.48
49:K3:1607:A:C5	49:K3:1608:U:C4	3.02	0.48
49:K3:1737:G:H2'	49:K3:1738:C:C6	2.48	0.48
59:U3:74:VAL:O	59:U3:96:ALA:HB1	2.14	0.48
59:U3:135:THR:O	59:U3:138:SER:OG	2.24	0.48
65:J5:26:LEU:HD11	65:J5:60:LYS:HB3	1.95	0.48
66:N3:48:TYR:CD2	68:B3:79:GLU:HG2	2.48	0.48
67:b3:56:ASN:HB2	67:b3:108:VAL:HG23	1.95	0.48
68:B3:48:VAL:O	68:B3:96:VAL:HA	2.13	0.48
76:E3:49:MET:HA	76:E3:49:MET:HE2	1.94	0.48
1:E1:6284:G:O2'	1:E1:6285:U:O5'	2.31	0.48
2:e2:1219:G:H2'	2:e2:1220:G:C8	2.48	0.48
2:e2:1311:G:O2'	2:e2:1312:A:N7	2.41	0.48
2:e2:1348:U:H2'	2:e2:1349:G:H8	1.78	0.48
2:e2:1445:U:O4	2:e2:2099:A:N6	2.47	0.48
2:e2:1863:G:C6	2:e2:1870:A:C6	3.01	0.48
2:e2:2004:G:H2'	2:e2:2005:U:C6	2.48	0.48
2:e2:2108:G:N2	2:e2:2119:G:H21	2.10	0.48
2:e2:2319:C:O2'	2:e2:2320:G:H5'	2.13	0.48
2:e2:2773:G:H5''	5:p2:39:SER:HB2	1.95	0.48
2:e2:4026:G:H2'	2:e2:4027:G:C8	2.47	0.48
2:e2:4326:G:H8	2:e2:4326:G:OP2	1.96	0.48
2:e2:4635:A:C4	2:e2:4664:A:C6	3.02	0.48
2:e2:5047:C:O2'	2:e2:5050:C:H5'	2.12	0.48
10:q2:73:VAL:HB	10:q2:108:TYR:CD1	2.49	0.48
29:K2:78:LEU:O	29:K2:81:HIS:HB2	2.14	0.48
45:52:286:LYS:NZ	45:52:368:ILE:HD11	2.28	0.48
45:52:305:THR:OG1	45:52:306:ASP:N	2.45	0.48
47:72:57:TYR:HE2	47:72:89:ILE:HG21	1.79	0.48
49:K3:198:U:H3'	49:K3:200:G:OP2	2.13	0.48
49:K3:516:A:N6	49:K3:643:A:O2'	2.47	0.48
49:K3:952:G:N1	49:K3:975:G:C6	2.81	0.48
49:K3:1293:A:C6	49:K3:1294:G:O6	2.66	0.48
49:K3:1567:G:O2'	49:K3:1568:C:O5'	2.30	0.48
49:K3:1652:G:H4'	66:N3:81:ARG:HB3	1.96	0.48
54:G5:34:LYS:HB3	54:G5:103:LEU:HD12	1.94	0.48
59:U3:60:LEU:HD11	74:D3:79:VAL:HG21	1.95	0.48
64:j3:64:ILE:HG21	81:I5:17:LEU:HD23	1.95	0.48
68:B3:88:ARG:HH22	68:B3:133:GLU:CD	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:F3:87:ILE:HD12	70:F3:121:ILE:HG12	1.95	0.48
70:F3:182:LYS:HB3	70:F3:182:LYS:HE3	1.61	0.48
73:d3:86:VAL:HB	73:d3:105:PHE:CE2	2.48	0.48
78:H5:51:ASN:HA	78:H5:54:TYR:CD2	2.49	0.48
1:E1:6373:C:O3'	49:K3:1524:G:O2'	2.30	0.48
2:e2:424:U:C2	2:e2:425:U:C5	3.01	0.48
2:e2:649:A:C6	2:e2:650:C:C4	3.01	0.48
2:e2:722:G:N2	2:e2:947:C:C2	2.81	0.48
2:e2:1673:U:H2'	2:e2:1674:C:H6	1.78	0.48
2:e2:1823:G:H2'	2:e2:1825:A:C8	2.48	0.48
2:e2:2310:C:C4	2:e2:2311:C:N4	2.82	0.48
2:e2:2520:C:H2'	2:e2:2521:G:H8	1.78	0.48
2:e2:2840:A:N6	2:e2:3849:A:H61	2.11	0.48
2:e2:3660:C:O2'	2:e2:3661:G:H5'	2.14	0.48
2:e2:4972:U:H2'	2:e2:4973:U:H6	1.78	0.48
3:h2:103:A:OP2	3:h2:104:A:H2'	2.13	0.48
4:d2:11:A:O2'	4:d2:12:U:H3'	2.13	0.48
12:t2:58:ALA:C	12:t2:60:HIS:H	2.22	0.48
12:t2:324:ILE:O	12:t2:328:LEU:HD23	2.13	0.48
15:w2:68:ARG:HH11	45:52:260:ALA:HA	1.77	0.48
25:G2:284:LYS:HA	38:X2:211:ALA:HB2	1.96	0.48
28:J2:10:VAL:O	28:J2:10:VAL:HG13	2.14	0.48
32:R2:42:ARG:HG3	32:R2:58:MET:HE1	1.95	0.48
39:Y2:89:VAL:HA	57:A3:8:LYS:HZ2	1.77	0.48
42:22:64:LYS:O	42:22:67:LYS:HG2	2.14	0.48
44:42:103:LEU:HD23	44:42:105:LYS:H	1.78	0.48
45:52:223:THR:HG22	45:52:338:VAL:HB	1.95	0.48
49:K3:47:G:H2'	49:K3:48:C:C6	2.48	0.48
49:K3:564:A:H3'	49:K3:565:G:O4'	2.14	0.48
49:K3:702:G:H2'	49:K3:703:C:O4'	2.13	0.48
49:K3:744:G:H2'	49:K3:745:C:C6	2.49	0.48
49:K3:1059:G:O6	49:K3:1060:A:N6	2.46	0.48
49:K3:1177:U:H2'	49:K3:1178:U:C6	2.47	0.48
49:K3:1540:G:OP2	78:H5:43:LYS:NZ	2.26	0.48
49:K3:1591:C:H4'	66:N3:85:LYS:HG2	1.95	0.48
53:G3:27:GLU:OE2	71:c3:193:LYS:HD3	2.14	0.48
54:G5:54:LYS:HG2	54:G5:55:ARG:H	1.77	0.48
55:a3:173:LEU:CD2	55:a3:189:ILE:HD13	2.44	0.48
55:a3:283:PRO:HB2	55:a3:285:GLN:HG3	1.96	0.48
58:T3:17:ARG:HG3	58:T3:21:LYS:HE3	1.95	0.48
59:U3:141:ASN:ND2	61:W3:86:LEU:HA	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:U3:185:MET:HG2	74:D3:44:GLY:O	2.14	0.48
60:V3:71:LEU:HD22	60:V3:75:GLN:CD	2.38	0.48
60:V3:136:ARG:HG2	60:V3:138:PHE:CZ	2.49	0.48
61:W3:165:VAL:HG13	61:W3:167:ARG:HG3	1.94	0.48
63:Y3:210:ILE:HB	63:Y3:213:PRO:HD3	1.96	0.48
64:j3:155:LYS:NZ	64:j3:200:ARG:HH22	2.12	0.48
73:d3:114:VAL:CG1	73:d3:129:LEU:HD11	2.44	0.48
75:e3:75:ASN:HB3	75:e3:128:PHE:CE1	2.49	0.48
79:P3:247:VAL:HB	79:P3:262:SER:HB2	1.95	0.48
1:E1:6372:G:C2	1:E1:6384:A:C2	3.02	0.48
2:e2:56:A:N1	2:e2:57:G:C2	2.81	0.48
2:e2:462:G:C2	2:e2:463:A:C5	3.00	0.48
2:e2:499:G:N3	2:e2:500:G:H5'	2.28	0.48
2:e2:681:G:H2'	2:e2:682:G:O4'	2.14	0.48
2:e2:737:C:H2'	2:e2:738:C:C6	2.49	0.48
2:e2:1222:A:H4'	2:e2:1223:G:C5	2.49	0.48
2:e2:1403:G:H8	2:e2:1403:G:O5'	1.96	0.48
2:e2:1790:U:O2'	2:e2:1791:U:H5'	2.12	0.48
2:e2:1865:U:H5'	30:L2:4:ARG:HH11	1.78	0.48
2:e2:1967:G:H8	29:K2:112:ARG:HH11	1.60	0.48
2:e2:2381:A:O2'	2:e2:2383:C:OP2	2.29	0.48
2:e2:3894:A:C6	2:e2:4567:G:N1	2.82	0.48
2:e2:3972:A:O4'	2:e2:4050:A:N6	2.47	0.48
2:e2:4419:U:H2'	2:e2:4420:U:H5'	1.95	0.48
2:e2:4478:G:C4	2:e2:4479:A:C8	3.02	0.48
3:h2:63:U:O2'	19:A2:52:LYS:HE3	2.14	0.48
3:h2:80:A:H3'	3:h2:80:A:N3	2.28	0.48
3:h2:112:G:C6	3:h2:113:C:C4	3.02	0.48
5:p2:3:ARG:HG2	5:p2:41:TYR:CD1	2.49	0.48
16:x2:11:PHE:CE2	16:x2:97:ILE:HG22	2.49	0.48
25:G2:208:MET:HA	25:G2:223:PHE:HE2	1.79	0.48
37:W2:162:ILE:HA	37:W2:165:VAL:HG22	1.96	0.48
42:22:93:LYS:O	42:22:97:ASN:ND2	2.43	0.48
49:K3:73:C:N4	49:K3:79:A:H4'	2.29	0.48
49:K3:112:U:HO2'	49:K3:114:G:HO2'	1.51	0.48
49:K3:170:A:H2'	49:K3:171:A:C8	2.49	0.48
49:K3:375:U:O4	49:K3:376:A:N6	2.47	0.48
49:K3:457:C:C2	49:K3:458:A:N7	2.82	0.48
49:K3:951:C:H2'	49:K3:952:G:C8	2.49	0.48
49:K3:1027:A:H3'	49:K3:1028:A:H8	1.79	0.48
49:K3:1173:A:H2'	49:K3:1174:U:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1270:G:H5'	52:Q3:122:LYS:HG2	1.95	0.48
49:K3:1405:A:H2'	49:K3:1406:G:C8	2.48	0.48
53:G3:22:ARG:HG3	71:c3:158:ILE:H	1.78	0.48
53:G3:82:MET:HG3	53:G3:85:THR:HB	1.95	0.48
56:a5:116:LEU:HB3	84:O3:53:ILE:HD11	1.96	0.48
57:A3:44:ARG:HH21	57:A3:52:LYS:HZ1	1.62	0.48
59:U3:176:TRP:NE1	59:U3:197:VAL:O	2.46	0.48
60:V3:44:ILE:HG12	60:V3:74:LEU:HD11	1.96	0.48
64:j3:99:PHE:HA	64:j3:112:HIS:O	2.13	0.48
68:B3:57:LEU:N	68:B3:92:VAL:O	2.41	0.48
70:F3:136:GLU:HB2	70:F3:140:HIS:CE1	2.49	0.48
72:C3:5:ARG:HH22	72:C3:53:TYR:N	2.11	0.48
79:P3:371:LEU:HB2	79:P3:415:TYR:CZ	2.49	0.48
85:a7:124:LEU:CD2	85:a7:148:THR:H	2.27	0.48
1:E1:6310:G:OP1	1:E1:6393:G:N2	2.47	0.48
2:e2:259:C:H2'	2:e2:260:C:C6	2.48	0.48
2:e2:465:G:H2'	2:e2:466:A:C8	2.49	0.48
2:e2:482:G:N2	2:e2:673:C:C2	2.82	0.48
2:e2:1278:C:C6	2:e2:1279:A:H1'	2.48	0.48
2:e2:1281:G:H8	12:t2:321:ASN:HA	1.79	0.48
2:e2:1400:G:H2'	2:e2:1401:C:C6	2.48	0.48
2:e2:1617:G:H1'	2:e2:2513:A:N6	2.29	0.48
2:e2:1707:C:H1'	2:e2:1719:A:H5''	1.96	0.48
2:e2:2019:U:C4	2:e2:2020:G:N7	2.82	0.48
2:e2:2310:C:H2'	2:e2:2311:C:C6	2.49	0.48
2:e2:2650:G:H2'	2:e2:2651:C:C6	2.48	0.48
2:e2:2779:C:H5'	8:m2:105:ASN:OD1	2.13	0.48
2:e2:2830:G:C6	2:e2:3856:A:N6	2.82	0.48
2:e2:3855:C:P	26:H2:82:ARG:HH21	2.36	0.48
2:e2:3947:A:H2'	2:e2:3948:C:O4'	2.14	0.48
2:e2:4454:G:HO2'	2:e2:4500:U:HO2'	1.52	0.48
2:e2:4460:U:H2'	2:e2:4461:C:C6	2.48	0.48
2:e2:4915:G:H2'	2:e2:4916:G:H8	1.78	0.48
13:u2:68:LEU:HD21	13:u2:108:TYR:HA	1.95	0.48
24:F2:44:LYS:HG2	24:F2:52:THR:HG21	1.95	0.48
44:42:117:ILE:HD12	44:42:137:LEU:HD13	1.95	0.48
45:52:344:VAL:O	45:52:344:VAL:HG13	2.14	0.48
49:K3:12:U:H2'	49:K3:13:C:C6	2.49	0.48
49:K3:18:C:H2'	49:K3:19:A:H8	1.78	0.48
49:K3:244:A:O2'	49:K3:245:G:N7	2.47	0.48
49:K3:472:C:O2'	49:K3:474:G:OP1	2.24	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:483:C:H2'	49:K3:484:A:C8	2.49	0.48
49:K3:538:U:H2'	49:K3:539:C:O4'	2.12	0.48
49:K3:659:G:C5	49:K3:663:C:H1'	2.48	0.48
49:K3:1374:C:H2'	49:K3:1375:G:O4'	2.13	0.48
49:K3:1622:U:O4	57:A3:122:THR:HG22	2.14	0.48
49:K3:1622:U:OP1	54:G5:132:ARG:NH1	2.46	0.48
54:G5:68:ILE:O	54:G5:72:GLN:HG2	2.13	0.48
60:V3:103:MET:SD	60:V3:188:LEU:HD13	2.53	0.48
61:W3:157:LEU:HD12	61:W3:160:LEU:HD11	1.94	0.48
66:N3:90:VAL:O	66:N3:93:VAL:HG12	2.14	0.48
79:P3:371:LEU:HB2	79:P3:415:TYR:OH	2.14	0.48
79:P3:379:GLY:HA3	79:P3:395:HIS:HD2	1.78	0.48
2:e2:746:A:OP1	46:62:146:HIS:NE2	2.47	0.48
2:e2:1089:G:N1	2:e2:1208:G:C6	2.82	0.48
2:e2:1624:G:OP1	2:e2:1626:G:O2'	2.23	0.48
2:e2:1740:C:C2	2:e2:1785:C:N4	2.81	0.48
2:e2:2119:G:O2'	2:e2:2120:C:OP2	2.27	0.48
2:e2:2120:C:O2'	2:e2:2121:G:O4'	2.18	0.48
2:e2:2250:C:C2	2:e2:2260:C:N4	2.82	0.48
2:e2:2263:A:H5'	2:e2:2265:G:O5'	2.14	0.48
2:e2:2322:G:C6	2:e2:2323:C:C4	3.02	0.48
2:e2:2759:G:H2'	2:e2:2760:G:N3	2.29	0.48
2:e2:2841:G:N2	2:e2:3848:U:O2	2.47	0.48
2:e2:4287:G:H2'	2:e2:4288:C:C6	2.49	0.48
2:e2:4366:A:H5''	2:e2:4367:G:OP2	2.14	0.48
2:e2:4667:C:H2'	2:e2:4668:U:O4'	2.13	0.48
2:e2:4695:C:OP2	37:W2:82:ARG:NH2	2.47	0.48
2:e2:4755:G:N1	2:e2:4876:U:N3	2.62	0.48
2:e2:4775:C:H2'	2:e2:4776:G:C8	2.49	0.48
3:h2:115:G:H2'	3:h2:116:C:C6	2.49	0.48
3:h2:125:C:H1'	3:h2:126:C:H2'	1.94	0.48
8:m2:111:GLN:O	8:m2:115:LYS:HG2	2.14	0.48
9:o2:56:GLN:HE21	9:o2:65:GLN:HA	1.77	0.48
14:v2:22:ARG:HD3	14:v2:31:ILE:CG2	2.44	0.48
15:w2:47:PHE:HD1	15:w2:136:ALA:HB1	1.78	0.48
15:w2:186:GLU:HA	15:w2:189:ILE:HG12	1.96	0.48
16:x2:14:TYR:CD1	16:x2:23:GLU:HA	2.49	0.48
25:G2:61:ILE:HG12	25:G2:79:TYR:HD1	1.79	0.48
36:V2:215:LEU:O	36:V2:219:VAL:HG23	2.14	0.48
49:K3:84:A:C8	49:K3:85:A:C8	3.02	0.48
49:K3:85:A:H2'	49:K3:86:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:131:C:H2'	49:K3:138:C:H1'	1.94	0.48
49:K3:163:U:H5''	67:b3:84:TYR:HA	1.96	0.48
49:K3:235:A:H62	49:K3:274:G:H4'	1.79	0.48
49:K3:609:U:C2	49:K3:610:G:N7	2.81	0.48
49:K3:1261:C:O2	49:K3:1261:C:H2'	2.14	0.48
49:K3:1262:C:H42	77:H3:14:PHE:C	2.22	0.48
49:K3:1429:G:O3'	78:H5:7:LYS:NZ	2.46	0.48
49:K3:1562:C:OP1	78:H5:71:GLY:HA3	2.13	0.48
53:G3:17:PHE:CE2	53:G3:19:ASN:HB2	2.48	0.48
63:Y3:24:PHE:HE1	76:E3:68:TYR:CG	2.32	0.48
64:j3:132:GLY:HA3	64:j3:136:ILE:O	2.14	0.48
66:N3:95:HIS:HE1	83:M3:101:SER:HB3	1.79	0.48
68:B3:34:GLN:O	68:B3:53:ARG:HG3	2.14	0.48
68:B3:70:PRO:HG3	68:B3:103:HIS:NE2	2.29	0.48
73:d3:44:TRP:HD1	73:d3:47:LYS:HZ1	1.60	0.48
81:I5:110:ARG:O	81:I5:114:MET:HG3	2.13	0.48
1:E1:6421:A:H3'	1:E1:6422:C:H5''	1.95	0.48
2:e2:262:G:C6	2:e2:263:G:C6	3.01	0.48
2:e2:974:C:H4'	2:e2:2092:A:H61	1.79	0.48
2:e2:1360:G:C2	2:e2:1361:G:C4	3.02	0.48
2:e2:1563:A:N6	49:K3:1029:G:H1'	2.28	0.48
2:e2:1711:C:H5	2:e2:2117:G:H1'	1.78	0.48
2:e2:1958:U:H5'	2:e2:2024:A:H61	1.79	0.48
2:e2:2129:G:N1	2:e2:2248:C:OP2	2.46	0.48
2:e2:2379:A:H2'	2:e2:2380:G:O4'	2.13	0.48
2:e2:2399:G:H2'	2:e2:2400:G:C8	2.49	0.48
2:e2:2523:G:H2'	2:e2:2524:U:C6	2.49	0.48
2:e2:3662:A:C8	2:e2:3664:G:C2	3.01	0.48
2:e2:3871:A:H2'	2:e2:3872:A:C8	2.49	0.48
2:e2:4090:G:OP1	36:V2:252:LYS:NZ	2.40	0.48
2:e2:4188:U:H2'	2:e2:4189:U:C6	2.49	0.48
2:e2:4588:U:HO2'	2:e2:4589:A:H2'	1.79	0.48
2:e2:4921:C:H2'	2:e2:4922:C:C6	2.49	0.48
2:e2:4944:C:O2'	2:e2:4945:G:N2	2.46	0.48
3:h2:13:G:H2'	3:h2:14:U:C6	2.48	0.48
12:t2:240:LEU:HD23	12:t2:240:LEU:HA	1.72	0.48
19:A2:80:PRO:HB2	19:A2:83:LEU:HG	1.95	0.48
28:J2:98:ARG:HG3	28:J2:107:ARG:HH21	1.79	0.48
28:J2:119:ARG:HB2	34:T2:118:TYR:HE1	1.77	0.48
34:T2:103:LYS:C	34:T2:108:ARG:HH11	2.22	0.48
37:W2:115:VAL:O	37:W2:124:GLU:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:02:96:GLU:HA	40:02:99:GLU:CD	2.39	0.48
42:22:29:ILE:O	42:22:29:ILE:HG22	2.13	0.48
46:62:82:LEU:C	46:62:127:MET:HE1	2.39	0.48
49:K3:20:G:H4'	49:K3:620:G:N7	2.28	0.48
49:K3:239:C:H2'	49:K3:240:G:C8	2.49	0.48
49:K3:373:G:H1'	53:G3:82:MET:CE	2.43	0.48
49:K3:610:G:C6	49:K3:611:G:C5	3.01	0.48
49:K3:956:G:H2'	49:K3:957:A:C8	2.49	0.48
49:K3:1054:G:C6	49:K3:1065:G:N1	2.82	0.48
49:K3:1102:G:H22	49:K3:1130:G:N2	2.12	0.48
49:K3:1158:G:O2'	65:J5:5:ASN:ND2	2.46	0.48
49:K3:1437:C:H4'	80:I3:49:LYS:HE2	1.95	0.48
49:K3:1481:G:O3'	80:I3:79:ARG:NH2	2.46	0.48
49:K3:1521:C:H2'	54:G5:136:THR:HG22	1.95	0.48
49:K3:1554:C:H5''	76:E3:24:LYS:HZ1	1.79	0.48
49:K3:1781:A:H8	49:K3:1781:A:O5'	1.97	0.48
51:13:31:TYR:CE2	51:13:35:LEU:HD11	2.49	0.48
59:U3:158:ASP:HB2	74:D3:60:ARG:HH21	1.79	0.48
61:W3:84:PHE:CZ	61:W3:264:SER:HA	2.49	0.48
63:Y3:59:LEU:HA	63:Y3:66:ILE:HD13	1.96	0.48
63:Y3:175:VAL:HG22	63:Y3:182:LEU:HB2	1.96	0.48
66:N3:191:LYS:O	66:N3:195:GLU:HG3	2.14	0.48
70:F3:63:GLN:HG3	70:F3:64:SER:N	2.29	0.48
71:c3:137:LEU:HD12	71:c3:146:GLN:HA	1.95	0.48
71:c3:162:LEU:HD13	71:c3:191:GLU:HB3	1.95	0.48
78:H5:98:SER:HA	78:H5:101:ARG:HB2	1.94	0.48
80:I3:51:LYS:HB2	80:I3:90:ASP:HB3	1.95	0.48
2:e2:3:C:H2'	2:e2:4:G:H8	1.78	0.48
2:e2:61:A:O2'	41:12:172:ARG:NH1	2.26	0.48
2:e2:164:G:C2	2:e2:165:A:C5	3.01	0.48
2:e2:279:A:O2'	2:e2:280:G:O5'	2.29	0.48
2:e2:737:C:H2'	2:e2:738:C:H6	1.79	0.48
2:e2:1299:G:N3	2:e2:1300:G:C8	2.81	0.48
2:e2:1397:A:C8	10:q2:114:LYS:HD2	2.48	0.48
2:e2:1406:G:H5''	2:e2:1407:C:H5''	1.96	0.48
2:e2:1759:G:H22	2:e2:1773:U:H1'	1.79	0.48
2:e2:1854:G:C2	2:e2:1855:C:C2	3.01	0.48
2:e2:1997:A:H61	29:K2:35:VAL:HB	1.78	0.48
2:e2:1999:G:N3	2:e2:1999:G:H2'	2.29	0.48
2:e2:2296:G:C6	2:e2:2339:G:C2	3.02	0.48
2:e2:2315:G:C2	2:e2:2325:C:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:2435:G:H21	2:e2:2783:A:H1'	1.79	0.48
2:e2:2490:U:OP2	2:e2:2491:C:N4	2.47	0.48
2:e2:2749:C:H2'	2:e2:2750:G:H8	1.78	0.48
2:e2:3648:A:H1'	2:e2:3785:A:H61	1.79	0.48
2:e2:3911:C:H2'	2:e2:3912:U:C6	2.47	0.48
2:e2:3974:G:N2	2:e2:4051:C:H5'	2.29	0.48
2:e2:4986:G:H2'	2:e2:4987:C:C6	2.49	0.48
2:e2:5015:G:N2	2:e2:5033:G:H2'	2.29	0.48
3:h2:130:C:O2'	8:m2:111:GLN:NE2	2.26	0.48
3:h2:153:C:H2'	3:h2:154:G:C8	2.48	0.48
12:t2:40:VAL:HG23	12:t2:115:VAL:HG21	1.95	0.48
15:w2:62:MET:SD	15:w2:68:ARG:HG2	2.53	0.48
18:92:48:ILE:HG22	27:I2:54:ILE:HD12	1.95	0.48
29:K2:29:ILE:HB	29:K2:191:GLN:HB2	1.95	0.48
45:52:257:TRP:CG	45:52:258:HIS:H	2.32	0.48
46:62:165:PRO:HG2	46:62:168:THR:HB	1.96	0.48
49:K3:552:G:H5'	50:s3:39:ASN:HB3	1.96	0.48
49:K3:561:A:H2'	49:K3:562:U:C6	2.49	0.48
49:K3:604:A:O2'	49:K3:639:C:O3'	2.32	0.48
49:K3:935:G:C2	49:K3:1008:A:C2	3.02	0.48
49:K3:980:A:H2'	49:K3:981:A:C8	2.49	0.48
49:K3:1018:U:C2	49:K3:1019:C:C4	3.01	0.48
49:K3:1099:G:C6	49:K3:1134:G:C2	3.02	0.48
49:K3:1203:G:H2'	49:K3:1204:A:C8	2.48	0.48
49:K3:1380:C:H2'	49:K3:1381:G:C8	2.49	0.48
49:K3:1538:C:N4	49:K3:1595:U:H3	2.09	0.48
55:a3:36:ARG:HA	55:a3:66:VAL:H	1.79	0.48
56:a5:41:PHE:CE1	56:a5:57:THR:HG22	2.48	0.48
61:W3:252:THR:H	61:W3:255:LEU:HD12	1.78	0.48
67:b3:157:VAL:HG22	67:b3:158:VAL:H	1.78	0.48
76:E3:25:LYS:HD2	76:E3:67:PHE:HE2	1.79	0.48
79:P3:339:LEU:HD12	79:P3:340:PRO:HD2	1.96	0.48
81:I5:15:ASN:OD1	81:I5:20:ARG:NE	2.44	0.48
85:a7:36:ARG:O	85:a7:40:GLN:HG2	2.14	0.48
1:E1:6294:C:H2'	1:E1:6295:A:C8	2.49	0.47
2:e2:109:G:C2	2:e2:110:C:H1'	2.48	0.47
2:e2:131:C:H2'	2:e2:132:G:O4'	2.14	0.47
2:e2:161:G:H2'	2:e2:162:A:C8	2.49	0.47
2:e2:707:C:C2	2:e2:1291:G:C6	3.02	0.47
2:e2:1211:G:H2'	2:e2:1212:G:H8	1.79	0.47
2:e2:1838:A:OP2	2:e2:1838:A:H8	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:2478:C:H2'	2:e2:2479:G:O4'	2.14	0.47
2:e2:3911:C:C2	2:e2:3912:U:C5	3.02	0.47
2:e2:4092:G:N1	2:e2:4158:C:N3	2.61	0.47
2:e2:4434:C:H2'	2:e2:4435:U:H6	1.79	0.47
2:e2:4467:A:O2'	2:e2:4510:A:N3	2.37	0.47
2:e2:4474:A:C8	2:e2:4476:C:C5	3.02	0.47
2:e2:5068:G:O2'	2:e2:5069:U:OP2	2.26	0.47
3:h2:1:C:H2'	3:h2:2:G:C8	2.49	0.47
3:h2:19:C:O2'	3:h2:20:A:H5'	2.14	0.47
3:h2:142:U:C2	3:h2:143:G:C8	3.02	0.47
7:l2:43:LYS:HA	7:l2:43:LYS:HE3	1.96	0.47
10:q2:17:HIS:O	10:q2:19:HIS:ND1	2.41	0.47
13:u2:25:TYR:CD1	13:u2:119:THR:HB	2.49	0.47
13:u2:33:ILE:HD11	13:u2:41:ARG:HA	1.95	0.47
17:y2:82:MET:HB3	17:y2:86:CYS:CB	2.44	0.47
24:F2:69:ARG:HH12	24:F2:80:LYS:HD3	1.78	0.47
29:K2:150:GLY:HA2	31:M2:7:PRO:HB2	1.96	0.47
30:L2:87:ILE:HG23	38:X2:138:ILE:HG12	1.96	0.47
39:Y2:13:ARG:O	39:Y2:136:ARG:NH1	2.47	0.47
44:42:178:GLU:HG2	44:42:182:ASN:ND2	2.29	0.47
46:62:107:THR:O	46:62:111:ARG:HG2	2.13	0.47
47:72:48:VAL:HG22	47:72:94:GLU:OE2	2.14	0.47
47:72:105:PHE:HD1	47:72:108:ARG:CZ	2.27	0.47
49:K3:12:U:H1'	49:K3:1357:A:N3	2.29	0.47
49:K3:43:U:H5	49:K3:485:A:H61	1.62	0.47
49:K3:462:C:H3'	49:K3:463:C:C6	2.48	0.47
49:K3:837:A:O2'	49:K3:838:G:H8	1.97	0.47
49:K3:956:G:O2'	49:K3:972:A:N1	2.34	0.47
49:K3:1054:G:C6	49:K3:1065:G:C6	3.02	0.47
49:K3:1397:U:H5'	49:K3:1398:G:H8	1.78	0.47
49:K3:1416:C:H2'	49:K3:1417:C:C6	2.49	0.47
49:K3:1440:C:H2'	49:K3:1441:U:C6	2.48	0.47
49:K3:1603:G:H4'	54:G5:38:ARG:CZ	2.44	0.47
49:K3:1654:G:OP1	78:H5:82:ARG:NH1	2.47	0.47
51:13:47:ILE:HD12	51:13:94:LEU:HD11	1.95	0.47
60:V3:28:LYS:HD2	60:V3:48:LEU:HD13	1.95	0.47
60:V3:83:LYS:HG2	60:V3:104:ASP:O	2.14	0.47
61:W3:64:THR:OG1	61:W3:90:GLU:OE2	2.27	0.47
61:W3:79:GLU:OE1	61:W3:79:GLU:HA	2.14	0.47
62:X3:2:ARG:O	62:X3:6:ARG:HG2	2.14	0.47
63:Y3:69:LEU:HA	76:E3:20:VAL:HB	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:F3:128:LYS:HE2	70:F3:130:LEU:HD22	1.95	0.47
75:e3:79:VAL:HG21	75:e3:88:TRP:HZ3	1.79	0.47
78:H5:31:PRO:HB3	78:H5:52:TRP:HZ2	1.79	0.47
85:a7:142:GLU:OE1	85:a7:142:GLU:N	2.46	0.47
1:E1:6373:C:H3'	1:E1:6374:A:H8	1.79	0.47
2:e2:1082:C:O2	2:e2:1218:G:N2	2.47	0.47
2:e2:1234:G:H2'	2:e2:1235:G:O4'	2.14	0.47
2:e2:1299:G:C2	2:e2:1300:G:C8	3.02	0.47
2:e2:1309:C:H5''	15:w2:93:LYS:HD3	1.95	0.47
2:e2:1370:G:OP1	12:t2:48:ASN:ND2	2.46	0.47
2:e2:1577:G:O2'	2:e2:1612:G:H4'	2.14	0.47
2:e2:1759:G:C6	2:e2:1773:U:O2	2.67	0.47
2:e2:2627:C:OP1	48:82:92:LYS:NZ	2.47	0.47
2:e2:2654:C:C2	2:e2:2681:G:N2	2.82	0.47
2:e2:4125:C:H2'	2:e2:4126:C:C6	2.48	0.47
2:e2:4169:G:O2'	2:e2:4170:A:O4'	2.25	0.47
2:e2:4186:A:H2'	2:e2:4187:G:C8	2.49	0.47
2:e2:4265:U:H2'	25:G2:12:TYR:HE1	1.78	0.47
2:e2:4361:U:H2'	2:e2:4362:A:C8	2.44	0.47
2:e2:4584:A:C2	2:e2:4719:G:C5	3.02	0.47
2:e2:4765:G:N2	2:e2:4870:G:C8	2.81	0.47
2:e2:4999:G:N1	2:e2:5052:C:N3	2.63	0.47
2:e2:5029:C:H2'	2:e2:5030:U:C6	2.48	0.47
10:q2:87:ARG:HH22	33:S2:93:GLN:HG3	1.79	0.47
16:x2:92:LEU:HD23	16:x2:92:LEU:HA	1.54	0.47
25:G2:51:MET:HE1	25:G2:163:LEU:HA	1.96	0.47
29:K2:99:ARG:HG2	29:K2:189:ILE:O	2.14	0.47
31:M2:9:GLU:O	31:M2:12:VAL:HG23	2.14	0.47
33:S2:61:LEU:N	33:S2:85:THR:O	2.47	0.47
39:Y2:56:THR:OG1	39:Y2:63:ARG:HA	2.14	0.47
43:32:92:LYS:HE2	43:32:96:MET:HE3	1.95	0.47
45:52:291:TYR:CZ	45:52:299:ILE:HG13	2.49	0.47
45:52:299:ILE:HG12	45:52:313:SER:HB3	1.95	0.47
49:K3:96:C:H5'	49:K3:474:G:O3'	2.14	0.47
49:K3:151:C:C2	49:K3:168:C:N4	2.82	0.47
49:K3:230:A:C8	49:K3:888:U:N3	2.81	0.47
49:K3:736:C:H2'	49:K3:737:G:H8	1.77	0.47
49:K3:1095:C:N3	49:K3:1149:A:N1	2.62	0.47
49:K3:1099:G:C6	49:K3:1133:A:N1	2.81	0.47
49:K3:1367:U:H2'	49:K3:1368:U:C5	2.48	0.47
49:K3:1650:A:N1	66:N3:83:ASN:ND2	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1841:C:O2'	49:K3:1842:C:H5'	2.13	0.47
59:U3:191:ARG:N	59:U3:191:ARG:HD2	2.29	0.47
60:V3:57:ILE:H	60:V3:57:ILE:HD12	1.80	0.47
63:Y3:32:ASP:N	63:Y3:107:TYR:OH	2.48	0.47
63:Y3:86:LEU:H	76:E3:98:ARG:HH11	1.61	0.47
63:Y3:91:VAL:HG11	63:Y3:97:CYS:SG	2.54	0.47
64:j3:116:PRO:HA	64:j3:119:ALA:HB3	1.97	0.47
65:J5:23:ARG:H	82:L3:4:ALA:HB2	1.80	0.47
66:N3:192:LYS:O	66:N3:196:LEU:HG	2.14	0.47
67:b3:7:PHE:HB2	67:b3:124:LEU:HD11	1.96	0.47
67:b3:160:LYS:O	67:b3:171:THR:HA	2.14	0.47
67:b3:176:ILE:HG22	67:b3:177:GLN:N	2.29	0.47
68:B3:37:GLN:HB2	68:B3:50:HIS:CG	2.50	0.47
76:E3:46:MET:N	76:E3:46:MET:SD	2.88	0.47
79:P3:401:GLN:O	79:P3:405:GLU:HG2	2.13	0.47
2:e2:105:A:N3	2:e2:336:A:O2'	2.36	0.47
2:e2:128:C:H2'	2:e2:129:C:C6	2.46	0.47
2:e2:431:G:H2'	2:e2:3888:G:H21	1.79	0.47
2:e2:476:G:H2'	2:e2:477:C:H6	1.79	0.47
2:e2:483:G:N2	2:e2:672:C:C2	2.82	0.47
2:e2:751:G:N1	2:e2:752:G:N7	2.62	0.47
2:e2:1051:G:H1'	2:e2:1062:G:H21	1.79	0.47
2:e2:1272:C:C2	2:e2:2123:G:H1'	2.49	0.47
2:e2:1975:G:H22	2:e2:1990:A:H62	1.62	0.47
2:e2:2021:C:N3	2:e2:2022:C:N4	2.62	0.47
2:e2:2459:G:N2	2:e2:2462:C:OP2	2.45	0.47
2:e2:2823:G:OP2	43:32:18:GLY:HA3	2.14	0.47
2:e2:3647:A:OP2	2:e2:3829:G:H5'	2.14	0.47
2:e2:4250:G:HO2'	39:Y2:129:ASP:CG	2.21	0.47
2:e2:4916:G:H2'	2:e2:4917:C:O4'	2.14	0.47
4:d2:22:A:H8	25:G2:265:ARG:HH21	1.63	0.47
4:d2:33:U:C2	25:G2:207:TYR:CD1	3.03	0.47
13:u2:26:THR:HB	13:u2:85:ARG:HH11	1.79	0.47
15:w2:61:ARG:HG3	15:w2:62:MET:O	2.15	0.47
19:A2:7:ARG:NH2	19:A2:7:ARG:HB2	2.29	0.47
20:B2:20:ASN:HB2	85:a7:105:LYS:O	2.14	0.47
29:K2:130:LEU:HD22	29:K2:138:PHE:CZ	2.48	0.47
30:L2:56:GLU:OE1	38:X2:161:GLY:HA3	2.14	0.47
31:M2:125:LEU:O	31:M2:127:GLY:N	2.47	0.47
35:U2:113:LEU:HD12	35:U2:113:LEU:O	2.14	0.47
36:V2:60:TYR:CE2	36:V2:61:ILE:HG13	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:V2:162:ASP:HB2	36:V2:163:PRO:CD	2.41	0.47
45:52:364:ASP:N	45:52:364:ASP:OD1	2.45	0.47
47:72:122:LYS:NZ	47:72:124:THR:O	2.47	0.47
48:82:49:VAL:N	48:82:52:LYS:O	2.31	0.47
49:K3:564:A:H61	49:K3:586:G:H1'	1.79	0.47
49:K3:918:U:OP2	70:F3:114:ARG:NH1	2.47	0.47
49:K3:983:A:C2	56:a5:139:SER:HA	2.49	0.47
49:K3:1329:U:H5''	49:K3:1330:G:OP2	2.14	0.47
49:K3:1449:G:H2'	49:K3:1450:G:O4'	2.14	0.47
49:K3:1525:C:H2'	49:K3:1526:G:C8	2.49	0.47
49:K3:1547:C:N4	49:K3:1586:U:O4	2.47	0.47
49:K3:1607:A:H2'	49:K3:1608:U:C6	2.49	0.47
49:K3:1654:G:H2'	49:K3:1655:C:O4'	2.13	0.47
49:K3:1801:A:H2'	49:K3:1802:C:C6	2.48	0.47
55:a3:174:VAL:HG13	55:a3:188:HIS:HB2	1.95	0.47
55:a3:266:ILE:H	55:a3:266:ILE:HD12	1.79	0.47
57:A3:84:ILE:HG13	57:A3:115:TYR:HE1	1.78	0.47
58:T3:102:VAL:CG1	58:T3:120:PHE:HB3	2.44	0.47
60:V3:103:MET:CG	60:V3:215:VAL:HB	2.44	0.47
65:J5:71:LYS:HB3	65:J5:130:PHE:CZ	2.48	0.47
68:B3:131:LYS:NZ	68:B3:135:LYS:HG3	2.29	0.47
70:F3:136:GLU:O	70:F3:140:HIS:ND1	2.48	0.47
71:c3:81:VAL:HA	71:c3:102:VAL:HG12	1.95	0.47
75:e3:94:ILE:HD11	75:e3:98:GLY:O	2.14	0.47
75:e3:121:LYS:O	75:e3:124:ILE:HG22	2.14	0.47
80:I3:53:PRO:HA	80:I3:88:LEU:O	2.14	0.47
2:e2:461:G:H2'	2:e2:462:G:C8	2.47	0.47
2:e2:693:C:H2'	2:e2:694:C:C6	2.50	0.47
2:e2:1109:C:H42	2:e2:1164:G:H22	1.61	0.47
2:e2:1494:U:H2'	2:e2:1495:G:C8	2.49	0.47
2:e2:1975:G:H1'	2:e2:2001:A:C5	2.49	0.47
2:e2:2071:C:H2'	2:e2:2072:C:H6	1.79	0.47
2:e2:2263:A:O2'	2:e2:2264:C:OP1	2.31	0.47
2:e2:3650:C:C2	2:e2:3651:A:C8	3.02	0.47
2:e2:4030:C:N4	44:42:27:LYS:O	2.46	0.47
2:e2:4259:C:O4'	39:Y2:23:ASN:ND2	2.47	0.47
2:e2:4399:U:H2'	2:e2:4400:G:O4'	2.13	0.47
2:e2:4727:A:H2'	2:e2:4728:U:O4'	2.14	0.47
2:e2:4909:A:N6	2:e2:4912:G:O6	2.47	0.47
12:t2:237:ILE:H	12:t2:237:ILE:HD12	1.79	0.47
12:t2:331:TYR:HD1	35:U2:50:TYR:CE1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:y2:95:PHE:HE1	42:22:136:PHE:CD2	2.31	0.47
19:A2:104:THR:HG22	41:12:146:PRO:HG2	1.97	0.47
29:K2:130:LEU:HG	29:K2:131:GLY:O	2.14	0.47
34:T2:143:LEU:HD11	34:T2:147:ILE:HB	1.95	0.47
36:V2:94:GLN:CA	36:V2:97:LYS:HZ2	2.25	0.47
39:Y2:93:GLU:OE2	39:Y2:175:LEU:HG	2.13	0.47
41:12:30:TYR:HA	41:12:34:SER:O	2.14	0.47
49:K3:104:A:H62	49:K3:356:C:N4	2.12	0.47
49:K3:158:A:O2'	49:K3:464:A:N7	2.45	0.47
49:K3:398:A:OP1	49:K3:399:C:H2'	2.14	0.47
49:K3:880:G:N1	49:K3:906:U:N3	2.23	0.47
49:K3:1024:A:O5'	70:F3:54:MET:HG3	2.14	0.47
49:K3:1105:G:H4'	82:L3:69:GLY:H	1.79	0.47
49:K3:1249:C:H2'	49:K3:1250:A:N7	2.30	0.47
54:G5:84:LEU:HD22	54:G5:97:GLN:HB2	1.96	0.47
56:a5:29:GLY:O	56:a5:93:LEU:HA	2.14	0.47
61:W3:85:SER:HB3	74:D3:28:ASP:O	2.14	0.47
63:Y3:64:ARG:HE	76:E3:95:ARG:NH1	2.11	0.47
63:Y3:221:THR:HB	63:Y3:222:PRO:HD2	1.94	0.47
64:j3:104:ASP:OD1	64:j3:105:THR:N	2.39	0.47
67:b3:21:GLU:OE1	67:b3:21:GLU:N	2.46	0.47
70:F3:195:THR:O	70:F3:195:THR:HG22	2.14	0.47
71:c3:58:LEU:O	71:c3:59:ARG:HG3	2.14	0.47
72:C3:27:ASP:O	72:C3:30:THR:OG1	2.23	0.47
73:d3:120:ALA:HB3	73:d3:129:LEU:HD23	1.97	0.47
83:M3:58:LEU:HA	83:M3:62:VAL:HG23	1.97	0.47
85:a7:106:SER:O	85:a7:108:GLU:N	2.43	0.47
2:e2:424:U:H2'	2:e2:425:U:H6	1.78	0.47
2:e2:498:C:O2'	2:e2:499:G:O5'	2.33	0.47
2:e2:2087:A:O3'	12:t2:294:LYS:NZ	2.44	0.47
2:e2:2559:G:H2'	2:e2:2560:C:H6	1.80	0.47
2:e2:3970:G:N2	2:e2:4048:A:H3'	2.29	0.47
2:e2:3972:A:C4'	2:e2:4050:A:H61	2.28	0.47
2:e2:3978:C:N4	2:e2:4031:U:C2	2.83	0.47
2:e2:4128:A:H4'	36:V2:35:ARG:NH2	2.30	0.47
2:e2:4777:C:H5	2:e2:4854:G:H1'	1.80	0.47
3:h2:154:G:N2	3:h2:155:C:O2	2.48	0.47
10:q2:51:GLY:HA3	33:S2:178:ARG:O	2.13	0.47
12:t2:5:ARG:HD2	12:t2:24:LEU:O	2.14	0.47
21:C2:21:ARG:HH22	21:C2:44:LYS:HA	1.80	0.47
21:C2:60:GLY:HA2	21:C2:64:MET:SD	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:22:66:SER:O	42:22:66:SER:OG	2.30	0.47
44:42:64:SER:HB2	44:42:107:TYR:CE1	2.50	0.47
44:42:65:VAL:HG22	44:42:109:ALA:O	2.14	0.47
44:42:92:LYS:O	44:42:93:LEU:HD23	2.13	0.47
46:62:128:LYS:HG3	47:72:152:GLU:OE2	2.15	0.47
49:K3:5:U:H2'	49:K3:6:G:C8	2.50	0.47
49:K3:29:G:N2	49:K3:597:G:OP1	2.42	0.47
49:K3:35:C:H42	49:K3:520:A:H61	1.61	0.47
49:K3:171:A:OP1	67:b3:178:ARG:NH1	2.34	0.47
49:K3:190:G:HO2'	49:K3:209:A:H62	1.55	0.47
49:K3:468:A:H3'	49:K3:469:A:H8	1.78	0.47
49:K3:955:A:N6	49:K3:971:G:N2	2.41	0.47
49:K3:1269:G:H2'	49:K3:1270:G:C8	2.50	0.47
49:K3:1355:C:N3	49:K3:1356:G:C2	2.81	0.47
49:K3:1543:U:H2'	49:K3:1544:C:H5	1.78	0.47
49:K3:1766:C:H3'	49:K3:1767:C:H5''	1.97	0.47
55:a3:254:PRO:HB3	55:a3:273:GLU:OE2	2.15	0.47
55:a3:277:THR:N	55:a3:282:GLU:HG2	2.28	0.47
63:Y3:64:ARG:NE	76:E3:95:ARG:HH12	2.07	0.47
63:Y3:134:CYS:HA	63:Y3:187:LYS:O	2.13	0.47
75:e3:101:ARG:HB2	75:e3:102:LYS:HG2	1.97	0.47
85:a7:106:SER:HB3	85:a7:108:GLU:OE2	2.15	0.47
2:e2:459:C:OP1	28:J2:87:ARG:NH2	2.48	0.47
2:e2:1102:U:O2'	2:e2:1196:G:N2	2.42	0.47
2:e2:1184:A:C6	2:e2:1185:G:C5	3.02	0.47
2:e2:1341:U:H2'	2:e2:1342:A:C8	2.49	0.47
2:e2:1341:U:H2'	2:e2:1342:A:H8	1.79	0.47
2:e2:1515:A:C5	2:e2:1518:A:C8	3.02	0.47
2:e2:1647:U:C4	2:e2:1648:C:N4	2.82	0.47
2:e2:1647:U:P	12:t2:60:HIS:NE2	2.87	0.47
2:e2:1738:A:H4'	4:d2:101:A:C2	2.49	0.47
2:e2:1998:A:C6	29:K2:40:MET:HG2	2.49	0.47
2:e2:2662:G:H2'	2:e2:2663:G:O4'	2.15	0.47
2:e2:2773:G:H4'	5:p2:19:ASP:OD2	2.15	0.47
2:e2:2794:C:N4	26:H2:134:GLY:O	2.45	0.47
2:e2:2847:G:OP1	6:k2:101:ASN:ND2	2.44	0.47
2:e2:3936:A:N6	2:e2:4175:G:O6	2.48	0.47
2:e2:4031:U:H5	2:e2:4036:G:O6	1.97	0.47
2:e2:4052:C:H1'	44:42:26:ARG:NH2	2.29	0.47
2:e2:4943:C:HO2'	34:T2:157:THR:HG1	1.38	0.47
4:d2:119:U:H4'	4:d2:120:U:C5	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:l2:23:ARG:HG3	7:l2:24:THR:N	2.30	0.47
10:q2:63:LEU:HD23	10:q2:63:LEU:HA	1.71	0.47
11:r2:12:GLN:H	11:r2:12:GLN:CD	2.21	0.47
14:v2:52:GLN:NE2	14:v2:52:GLN:HA	2.29	0.47
18:92:89:TYR:N	18:92:100:ASN:OD1	2.34	0.47
18:92:98:ILE:O	18:92:100:ASN:ND2	2.48	0.47
25:G2:64:ILE:O	25:G2:75:VAL:N	2.47	0.47
26:H2:57:CYS:SG	26:H2:81:GLY:HA3	2.54	0.47
34:T2:144:ARG:NH1	34:T2:194:GLN:O	2.48	0.47
34:T2:281:THR:OG1	34:T2:282:ASN:N	2.47	0.47
41:12:30:TYR:OH	41:12:63:ARG:HB3	2.14	0.47
44:42:38:LEU:HD11	44:42:43:PRO:HG3	1.97	0.47
49:K3:11:A:HO2'	61:W3:113:GLN:H	1.62	0.47
49:K3:46:A:C6	49:K3:99:A:C5	3.02	0.47
49:K3:363:A:H61	49:K3:398:A:H5'	1.80	0.47
49:K3:476:A:H5'	49:K3:477:G:OP2	2.15	0.47
49:K3:537:C:O2	49:K3:537:C:H2'	2.15	0.47
49:K3:1025:U:OP2	70:F3:54:MET:HE2	2.15	0.47
49:K3:1034:A:H2	49:K3:1857:G:N3	2.13	0.47
49:K3:1203:G:N2	49:K3:1699:A:H1'	2.27	0.47
49:K3:1226:G:O2'	49:K3:1640:A:N6	2.48	0.47
54:G5:24:ARG:HB2	54:G5:29:ALA:HB2	1.95	0.47
55:a3:65:PHE:O	55:a3:82:SER:HB3	2.15	0.47
55:a3:104:HIS:HB2	55:a3:106:LYS:O	2.15	0.47
61:W3:254:ASP:OD2	74:D3:9:VAL:HG21	2.15	0.47
63:Y3:47:GLU:HB2	63:Y3:87:TYR:CE2	2.45	0.47
63:Y3:76:ARG:HA	76:E3:34:GLU:HB3	1.96	0.47
65:J5:55:ASP:HA	70:F3:68:TYR:CE1	2.50	0.47
68:B3:36:VAL:HG21	68:B3:121:TYR:HB2	1.95	0.47
71:c3:114:GLU:CD	71:c3:120:PRO:HB3	2.40	0.47
72:C3:60:ARG:HH12	72:C3:68:GLY:HA3	1.80	0.47
82:L3:20:LYS:HA	82:L3:23:ARG:NE	2.30	0.47
2:e2:70:A:OP1	10:q2:67:GLN:NE2	2.48	0.47
2:e2:395:A:H2'	2:e2:396:A:O4'	2.14	0.47
2:e2:440:U:H2'	2:e2:441:G:C8	2.50	0.47
2:e2:455:C:N4	2:e2:702:U:O2	2.46	0.47
2:e2:496:G:H2'	2:e2:497:G:H8	1.79	0.47
2:e2:500:G:H21	2:e2:501:C:H41	1.62	0.47
2:e2:717:U:C4	2:e2:952:G:C6	3.02	0.47
2:e2:940:C:H2'	2:e2:941:C:C6	2.49	0.47
2:e2:1070:G:H5'	2:e2:1226:U:O2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1169:G:H2'	2:e2:1170:G:C8	2.42	0.47
2:e2:1178:G:N1	2:e2:1184:A:C6	2.83	0.47
2:e2:1202:C:H2'	2:e2:1203:G:O4'	2.15	0.47
2:e2:1273:G:C4	32:R2:72:PRO:HG3	2.50	0.47
2:e2:1372:A:C5	2:e2:1373:A:C8	3.02	0.47
2:e2:1454:G:H2'	2:e2:1455:G:H8	1.79	0.47
2:e2:1599:A:OP1	2:e2:2795:A:N6	2.43	0.47
2:e2:1673:U:H1'	2:e2:4304:A:H2	1.80	0.47
2:e2:1727:U:C2	2:e2:1836:G:N2	2.82	0.47
2:e2:1767:A:O2'	2:e2:1769:G:O5'	2.25	0.47
2:e2:1836:G:OP2	47:72:129:LYS:HG3	2.15	0.47
2:e2:1910:C:H1'	2:e2:1916:A:H2'	1.94	0.47
2:e2:1911:G:C6	2:e2:2056:A:C2	3.02	0.47
2:e2:1996:U:O4	29:K2:59:THR:N	2.47	0.47
2:e2:2547:G:H2'	2:e2:2548:C:H6	1.80	0.47
2:e2:2857:A:H2'	2:e2:2858:A:O4'	2.15	0.47
2:e2:3730:U:H2'	2:e2:3731:C:H6	1.79	0.47
2:e2:3916:G:H2'	2:e2:3917:A:C8	2.50	0.47
2:e2:4238:G:C2	2:e2:4239:A:C5	3.03	0.47
2:e2:4345:C:C2	2:e2:4346:U:C5	3.02	0.47
2:e2:4394:A:H4'	2:e2:4395:U:OP2	2.15	0.47
2:e2:4460:U:H2'	2:e2:4461:C:H6	1.78	0.47
2:e2:4505:C:H2'	2:e2:4506:C:H6	1.80	0.47
2:e2:4598:C:H3'	2:e2:4599:A:H8	1.80	0.47
2:e2:4773:C:C2	2:e2:4863:G:C2	3.03	0.47
2:e2:4861:G:C6	2:e2:4862:G:N7	2.82	0.47
2:e2:4891:G:C2	2:e2:4892:A:N7	2.83	0.47
3:h2:25:G:C4	3:h2:26:C:C5	3.03	0.47
3:h2:148:A:H2'	3:h2:149:G:C8	2.49	0.47
4:d2:19:C:H2'	4:d2:20:U:H6	1.79	0.47
4:d2:79:U:H3	4:d2:97:G:H1	1.61	0.47
6:k2:19:GLY:C	6:k2:20:LEU:HD12	2.39	0.47
6:k2:107:ASN:O	6:k2:109:LYS:N	2.46	0.47
8:m2:140:LEU:HD21	8:m2:149:VAL:HG21	1.96	0.47
12:t2:146:GLU:HG3	12:t2:175:LYS:HB3	1.97	0.47
22:D2:21:ARG:HG3	22:D2:22:PRO:HD2	1.97	0.47
26:H2:40:HIS:CD2	26:H2:42:ARG:H	2.33	0.47
29:K2:43:ILE:HD13	29:K2:105:ASN:HB2	1.97	0.47
29:K2:44:ARG:NH1	29:K2:53:VAL:HB	2.29	0.47
29:K2:179:ASN:O	29:K2:180:ILE:HG13	2.15	0.47
31:M2:54:LYS:HA	31:M2:55:GLY:HA2	1.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:M2:100:HIS:CD2	31:M2:101:SER:H	2.33	0.47
43:32:100:ARG:O	43:32:104:ARG:NE	2.39	0.47
44:42:12:GLU:HG2	44:42:216:LEU:HD22	1.95	0.47
44:42:200:ASN:HD21	44:42:204:LEU:HD11	1.80	0.47
45:52:169:ARG:HE	45:52:169:ARG:HB3	1.59	0.47
45:52:305:THR:N	45:52:308:ASP:OD1	2.38	0.47
46:62:9:GLU:OE2	46:62:31:ARG:HD2	2.15	0.47
49:K3:109:U:O2'	49:K3:855:G:N3	2.45	0.47
49:K3:122:G:C6	49:K3:343:A:C2	3.03	0.47
49:K3:133:C:N4	49:K3:139:C:OP2	2.47	0.47
49:K3:147:A:N6	67:b3:137:ARG:HH22	2.13	0.47
49:K3:156:G:O5'	49:K3:156:G:H8	1.97	0.47
49:K3:170:A:H5''	67:b3:137:ARG:HE	1.79	0.47
49:K3:192:C:OP2	71:c3:141:ARG:NH1	2.48	0.47
49:K3:831:G:H2'	49:K3:832:G:O4'	2.14	0.47
49:K3:916:A:O2'	70:F3:123:ARG:NH1	2.47	0.47
49:K3:936:G:H21	70:F3:155:ASN:ND2	2.11	0.47
49:K3:1059:G:H21	49:K3:1059:G:P	2.38	0.47
49:K3:1065:G:OP2	56:a5:143:LYS:NZ	2.47	0.47
49:K3:1184:G:OP1	62:X3:11:ARG:NH2	2.48	0.47
49:K3:1221:G:H2'	49:K3:1222:G:H8	1.79	0.47
49:K3:1419:C:O5'	78:H5:133:ARG:HG3	2.15	0.47
49:K3:1453:C:O2'	72:C3:5:ARG:NH2	2.48	0.47
49:K3:1587:G:C2	78:H5:67:ARG:HB3	2.50	0.47
49:K3:1831:A:C2'	49:K3:1832:A:H5'	2.45	0.47
49:K3:1860:A:O3'	49:K3:1861:G:H2'	2.14	0.47
51:13:22:MET:HA	51:13:27:TYR:CE1	2.49	0.47
53:G3:22:ARG:HG3	71:c3:158:ILE:N	2.29	0.47
53:G3:35:ARG:NE	53:G3:56:ILE:HG13	2.29	0.47
53:G3:118:ARG:CZ	53:G3:118:ARG:HB3	2.44	0.47
55:a3:52:TYR:HD2	55:a3:309:VAL:HG11	1.77	0.47
55:a3:86:THR:HG23	55:a3:88:ARG:HG3	1.95	0.47
55:a3:125:ARG:HH11	55:a3:125:ARG:HG3	1.80	0.47
55:a3:216:ALA:O	55:a3:229:THR:HA	2.15	0.47
58:T3:140:ARG:HB2	58:T3:142:ARG:HG3	1.97	0.47
59:U3:2:SER:OG	74:D3:79:VAL:HG22	2.15	0.47
60:V3:138:PHE:HE1	60:V3:214:LYS:HZ2	1.61	0.47
63:Y3:62:LYS:HG2	76:E3:95:ARG:HD2	1.97	0.47
64:j3:65:CYS:SG	64:j3:66:MET:N	2.87	0.47
65:J5:75:ILE:HG22	65:J5:77:PRO:O	2.14	0.47
65:J5:102:ILE:HG13	65:J5:113:HIS:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:b3:4:ASN:HA	67:b3:14:LYS:O	2.14	0.47
70:F3:63:GLN:HG3	70:F3:64:SER:H	1.80	0.47
71:c3:157:LYS:HE3	71:c3:159:SER:HB2	1.96	0.47
72:C3:61:ILE:HA	72:C3:69:ILE:HD11	1.97	0.47
73:d3:24:ARG:NH2	73:d3:47:LYS:HZ2	2.13	0.47
73:d3:126:ALA:O	73:d3:130:ILE:HG13	2.14	0.47
75:e3:114:TYR:O	75:e3:116:LYS:N	2.45	0.47
79:P3:244:ALA:HB1	79:P3:248:LYS:HB3	1.97	0.47
79:P3:265:LEU:HD22	79:P3:317:LEU:HD11	1.97	0.47
83:M3:112:ASN:HB3	83:M3:114:LYS:HE2	1.97	0.47
85:a7:57:PRO:HG3	85:a7:75:GLY:O	2.15	0.47
85:a7:94:ILE:HG22	85:a7:94:ILE:O	2.15	0.47
2:e2:289:C:H2'	2:e2:290:U:C6	2.50	0.47
2:e2:396:A:C6	2:e2:397:G:C6	3.02	0.47
2:e2:672:C:H2'	2:e2:673:C:H6	1.79	0.47
2:e2:716:C:H5'	2:e2:717:U:OP2	2.15	0.47
2:e2:751:G:N1	2:e2:752:G:C8	2.83	0.47
2:e2:968:C:H4'	2:e2:969:C:OP2	2.14	0.47
2:e2:1400:G:H2'	2:e2:1401:C:H6	1.79	0.47
2:e2:1586:G:C6	2:e2:1608:G:O6	2.68	0.47
2:e2:1620:U:OP2	21:C2:30:GLN:HG2	2.14	0.47
2:e2:1971:G:C8	29:K2:41:GLN:HG3	2.50	0.47
2:e2:2088:G:OP1	2:e2:2259:G:H1'	2.15	0.47
2:e2:2484:A:H2'	2:e2:2485:U:O4'	2.15	0.47
2:e2:2541:G:H2'	2:e2:2542:G:O4'	2.15	0.47
2:e2:2604:C:H2'	2:e2:2605:G:H8	1.80	0.47
2:e2:2830:G:C2	2:e2:2831:G:C8	3.03	0.47
2:e2:3985:C:H2'	2:e2:3986:C:C6	2.50	0.47
2:e2:4240:G:H2'	2:e2:4241:C:H6	1.80	0.47
2:e2:4250:G:H4'	39:Y2:106:GLY:C	2.39	0.47
2:e2:4454:G:O2'	2:e2:4500:U:O2'	2.23	0.47
2:e2:4934:A:H2'	2:e2:4935:C:H6	1.80	0.47
4:d2:118:C:O2'	4:d2:120:U:O4	2.33	0.47
12:t2:10:VAL:HG13	12:t2:153:VAL:HG12	1.96	0.47
25:G2:42:ASN:ND2	47:72:69:GLN:OE1	2.48	0.47
30:L2:102:MET:HA	38:X2:113:THR:HG23	1.96	0.47
32:R2:66:LYS:N	32:R2:69:TYR:HD2	2.13	0.47
35:U2:90:PHE:CD2	35:U2:243:ILE:HD11	2.50	0.47
39:Y2:75:ARG:H	39:Y2:78:LYS:NZ	2.13	0.47
46:62:83:ARG:HH11	47:72:156:TYR:HD1	1.62	0.47
49:K3:13:C:H4'	49:K3:1356:G:N2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:63:U:H4'	49:K3:170:A:O2'	2.14	0.47
49:K3:186:C:H3'	49:K3:187:G:H8	1.80	0.47
49:K3:546:G:H3'	49:K3:547:G:N2	2.29	0.47
49:K3:677:G:N1	49:K3:1027:A:OP2	2.44	0.47
49:K3:846:G:H2'	64:j3:19:MET:HG3	1.95	0.47
49:K3:1628:C:H2'	49:K3:1629:C:H6	1.76	0.47
57:A3:49:LEU:O	57:A3:49:LEU:HD12	2.13	0.47
59:U3:13:GLU:CD	59:U3:184:ARG:HH22	2.23	0.47
59:U3:123:VAL:HA	59:U3:145:ILE:CG2	2.45	0.47
71:c3:49:ARG:HD2	71:c3:50:GLY:N	2.29	0.47
71:c3:106:SER:HB2	71:c3:110:ARG:HG3	1.96	0.47
73:d3:125:HIS:HA	73:d3:128:VAL:HG22	1.97	0.47
84:O3:48:ALA:O	84:O3:51:ARG:NE	2.42	0.47
2:e2:136:C:N4	19:A2:76:LYS:O	2.47	0.47
2:e2:1517:G:P	2:e2:1517:G:C8	3.08	0.47
2:e2:1731:C:C2	2:e2:1799:G:N1	2.83	0.47
2:e2:2062:G:C2	2:e2:2063:G:C4	3.03	0.47
2:e2:2111:G:O6	2:e2:2118:C:H1'	2.14	0.47
2:e2:2128:C:O2'	2:e2:2129:G:O4'	2.29	0.47
2:e2:2306:G:H1'	2:e2:2332:A:H61	1.79	0.47
2:e2:2620:G:OP2	48:82:79:SER:OG	2.30	0.47
2:e2:2893:U:H2'	2:e2:2894:A:H8	1.79	0.47
2:e2:3598:C:C4	2:e2:3599:A:C5	3.03	0.47
2:e2:3795:A:C6	2:e2:3806:G:N1	2.83	0.47
2:e2:3978:C:C4	2:e2:4031:U:N3	2.73	0.47
2:e2:4054:C:O2'	44:42:205:TYR:HB2	2.15	0.47
2:e2:4165:C:H2'	2:e2:4166:G:H8	1.80	0.47
2:e2:4389:C:C2	2:e2:4390:A:C8	3.03	0.47
2:e2:4410:G:C2	2:e2:4433:G:C2	3.03	0.47
2:e2:4649:G:H2'	2:e2:4650:G:O4'	2.14	0.47
4:d2:37:G:N1	4:d2:41:G:C2	2.82	0.47
10:q2:74:ASN:HB3	10:q2:114:LYS:HB3	1.97	0.47
17:y2:90:ARG:NE	17:y2:93:ARG:HH21	2.12	0.47
18:92:14:SER:C	18:92:16:PHE:H	2.23	0.47
34:T2:289:LEU:HD11	40:02:109:ARG:NH2	2.21	0.47
40:02:128:LYS:HA	40:02:131:GLN:OE1	2.14	0.47
41:12:198:LEU:HD12	41:12:198:LEU:HA	1.69	0.47
49:K3:40:A:C6	49:K3:515:G:C2	3.03	0.47
49:K3:79:A:H5'	49:K3:80:G:OP2	2.15	0.47
49:K3:112:U:C4	49:K3:115:U:O4	2.68	0.47
49:K3:432:G:H2'	49:K3:433:A:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:477:G:H2'	49:K3:478:G:C8	2.50	0.47
49:K3:535:G:H21	49:K3:536:A:H62	1.62	0.47
49:K3:615:C:H3'	49:K3:625:G:H22	1.80	0.47
49:K3:994:C:C2	49:K3:995:G:C8	3.02	0.47
49:K3:1082:A:N6	49:K3:1084:A:H1'	2.30	0.47
49:K3:1162:C:H2'	49:K3:1163:C:O4'	2.15	0.47
49:K3:1437:C:OP1	80:I3:19:ARG:NH1	2.48	0.47
49:K3:1597:C:C2	49:K3:1598:G:C8	3.03	0.47
49:K3:1679:A:OP2	66:N3:60:ARG:HB3	2.14	0.47
49:K3:1867:U:C5	84:O3:98:PRO:HD2	2.50	0.47
51:13:80:GLU:OE2	51:13:80:GLU:HA	2.14	0.47
53:G3:128:VAL:HA	53:G3:141:ASN:O	2.15	0.47
55:a3:306:LEU:HD12	55:a3:307:VAL:H	1.80	0.47
59:U3:19:LEU:HD12	72:C3:113:SER:HB2	1.96	0.47
61:W3:73:VAL:HG23	61:W3:96:PHE:CZ	2.46	0.47
61:W3:202:THR:OG1	61:W3:221:ASP:HB3	2.15	0.47
65:J5:106:THR:OG1	65:J5:122:GLY:O	2.23	0.47
66:N3:78:MET:H	66:N3:159:ARG:NH2	2.13	0.47
70:F3:90:LEU:HB3	70:F3:100:ILE:HG12	1.96	0.47
76:E3:57:TYR:O	76:E3:72:THR:OG1	2.29	0.47
78:H5:75:MET:HB2	78:H5:79:TYR:CE2	2.50	0.47
80:I3:67:LYS:HB3	80:I3:76:THR:HB	1.97	0.47
2:e2:87:A:C2	2:e2:98:A:C6	3.03	0.47
2:e2:717:U:C2	2:e2:952:G:N1	2.82	0.47
2:e2:989:U:O2	2:e2:1064:G:C6	2.68	0.47
2:e2:1292:C:H41	34:T2:226:ARG:HH21	1.63	0.47
2:e2:1333:A:H2'	2:e2:1334:A:C8	2.51	0.47
2:e2:1589:C:H2'	2:e2:1590:C:C6	2.50	0.47
2:e2:1831:G:H2'	2:e2:1832:C:C6	2.50	0.47
2:e2:1974:G:O6	31:M2:15:LEU:HD23	2.15	0.47
2:e2:2021:C:C2	2:e2:2022:C:C5	3.03	0.47
2:e2:2403:A:OP1	22:D2:3:SER:OG	2.32	0.47
2:e2:3754:G:C6	2:e2:3771:C:N4	2.82	0.47
2:e2:3954:A:H2'	2:e2:3955:G:C8	2.49	0.47
2:e2:4238:G:C6	2:e2:4287:G:C6	3.03	0.47
2:e2:4265:U:P	2:e2:4265:U:H6	2.37	0.47
2:e2:4459:U:H4'	45:52:266:VAL:HG12	1.97	0.47
2:e2:4476:C:N4	37:W2:184:ARG:HH12	2.13	0.47
2:e2:4683:U:C4	2:e2:4707:A:C6	3.03	0.47
2:e2:4748:U:O2'	2:e2:4749:C:H5'	2.15	0.47
4:d2:46:C:H2'	4:d2:47:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:l2:1:MET:CG	7:l2:2:LYS:N	2.77	0.47
13:u2:27:ILE:HD12	13:u2:86:VAL:HG21	1.97	0.47
17:y2:63:VAL:HG13	17:y2:66:ARG:NH2	2.30	0.47
29:K2:101:MET:SD	29:K2:102:LEU:HD12	2.55	0.47
30:L2:31:ILE:HG22	30:L2:62:SER:OG	2.15	0.47
33:S2:40:ASN:OD1	33:S2:40:ASN:N	2.47	0.47
49:K3:36:U:C2	49:K3:520:A:C6	3.02	0.47
49:K3:304:C:OP1	71:c3:75:LYS:NZ	2.46	0.47
49:K3:376:A:O4'	53:G3:8:ARG:HB2	2.15	0.47
49:K3:460:A:H2	49:K3:470:G:N1	2.12	0.47
49:K3:832:G:C2'	49:K3:833:C:H5'	2.45	0.47
49:K3:1140:G:N2	49:K3:1149:A:N7	2.62	0.47
49:K3:1461:G:H21	49:K3:1465:A:N6	1.96	0.47
49:K3:1526:G:H2'	49:K3:1527:C:C6	2.50	0.47
49:K3:1535:U:C6	66:N3:169:ILE:HG13	2.50	0.47
49:K3:1627:C:HO2'	78:H5:41:LYS:HZ3	1.53	0.47
49:K3:1706:G:C2	49:K3:1707:U:C4	3.03	0.47
54:G5:39:ARG:HH21	78:H5:46:ALA:HB2	1.80	0.47
58:T3:102:VAL:HG22	58:T3:122:VAL:HG22	1.97	0.47
61:W3:116:THR:HG22	61:W3:120:GLN:HA	1.96	0.47
61:W3:268:GLU:HG3	61:W3:269:PHE:CD1	2.50	0.47
63:Y3:175:VAL:CG2	63:Y3:182:LEU:HB2	2.45	0.47
66:N3:145:ARG:HE	66:N3:149:GLN:NE2	2.12	0.47
67:b3:32:MET:HG3	67:b3:53:SER:C	2.40	0.47
69:f3:39:SER:HB3	84:O3:55:GLU:HB2	1.97	0.47
70:F3:105:ARG:O	82:L3:47:PHE:HB2	2.15	0.47
70:F3:136:GLU:HB2	70:F3:140:HIS:HE1	1.80	0.47
71:c3:165:GLN:HA	71:c3:168:GLN:HG2	1.96	0.47
73:d3:93:LYS:H	73:d3:96:TYR:HB2	1.79	0.47
76:E3:61:GLN:HG2	76:E3:62:PHE:N	2.30	0.47
2:e2:87:A:N3	2:e2:98:A:C6	2.83	0.46
2:e2:135:G:H21	2:e2:135:G:P	2.38	0.46
2:e2:711:A:H1'	34:T2:139:HIS:NE2	2.30	0.46
2:e2:751:G:H2'	2:e2:751:G:N3	2.30	0.46
2:e2:1277:G:H2'	2:e2:1278:C:C6	2.50	0.46
2:e2:1335:G:H2'	2:e2:1336:G:H8	1.80	0.46
2:e2:1411:C:H2'	2:e2:1412:G:H8	1.78	0.46
2:e2:1695:U:H4'	2:e2:1718:C:C5	2.50	0.46
2:e2:2127:G:H1'	34:T2:94:THR:OG1	2.15	0.46
2:e2:2310:C:N3	2:e2:2311:C:C4	2.83	0.46
2:e2:2323:C:H2'	2:e2:2324:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:2382:A:N6	2:e2:2383:C:H42	2.14	0.46
2:e2:2667:C:H5''	43:32:99:MET:HE3	1.98	0.46
2:e2:3635:A:C8	2:e2:3692:A:C8	3.03	0.46
2:e2:3816:A:O2'	2:e2:3819:G:N3	2.48	0.46
2:e2:3980:G:H8	2:e2:3980:G:O5'	1.98	0.46
2:e2:4164:C:H2'	2:e2:4165:C:C6	2.49	0.46
2:e2:4917:C:H2'	2:e2:4918:C:H6	1.79	0.46
2:e2:5053:U:O2'	2:e2:5054:C:O4'	2.21	0.46
17:y2:53:LEU:CA	17:y2:83:CYS:HA	2.45	0.46
29:K2:40:MET:HE3	29:K2:44:ARG:NE	2.31	0.46
29:K2:98:ILE:HB	29:K2:189:ILE:HG21	1.97	0.46
35:U2:93:ARG:HD2	35:U2:108:LEU:HD13	1.96	0.46
35:U2:171:ASN:OD1	35:U2:185:CYS:HA	2.14	0.46
36:V2:89:ARG:O	36:V2:93:THR:HG23	2.15	0.46
43:32:89:MET:SD	43:32:97:ARG:NH1	2.88	0.46
44:42:24:LYS:HB3	44:42:172:VAL:HG21	1.97	0.46
45:52:11:HIS:ND1	45:52:236:HIS:O	2.48	0.46
45:52:24:ARG:HG2	45:52:28:LYS:HB2	1.97	0.46
45:52:239:LYS:HZ1	45:52:242:ARG:HH12	1.61	0.46
46:62:96:GLU:HG2	46:62:142:VAL:HG21	1.96	0.46
47:72:66:ASN:OD1	47:72:67:VAL:N	2.48	0.46
49:K3:158:A:N6	49:K3:467:G:H1'	2.28	0.46
49:K3:600:G:P	49:K3:600:G:H8	2.38	0.46
49:K3:1235:G:C6	49:K3:1524:G:C6	3.03	0.46
49:K3:1466:G:OP1	72:C3:4:VAL:HA	2.15	0.46
49:K3:1533:A:H61	49:K3:1602:U:H2'	1.80	0.46
49:K3:1535:U:C5	66:N3:169:ILE:HG21	2.51	0.46
49:K3:1666:C:H2'	49:K3:1667:U:C6	2.50	0.46
49:K3:1790:A:H2'	49:K3:1791:A:H8	1.80	0.46
50:s3:26:LYS:HD3	50:s3:28:LYS:HG2	1.97	0.46
54:G5:93:GLY:H	57:A3:19:GLY:N	2.12	0.46
58:T3:130:LEU:HA	58:T3:133:LEU:HB2	1.96	0.46
59:U3:134:LEU:HD21	59:U3:156:TYR:HB2	1.97	0.46
60:V3:87:ILE:O	60:V3:98:THR:HA	2.15	0.46
64:j3:43:PRO:HG2	64:j3:46:ILE:HG22	1.97	0.46
64:j3:70:ILE:CD1	64:j3:92:ILE:HG12	2.45	0.46
64:j3:201:HIS:HE1	64:j3:207:VAL:HG23	1.80	0.46
65:J5:60:LYS:HE2	82:L3:23:ARG:O	2.15	0.46
66:N3:167:LYS:HA	66:N3:167:LYS:HE3	1.96	0.46
71:c3:99:ASN:CA	71:c3:175:ILE:O	2.64	0.46
76:E3:29:MET:HG2	76:E3:31:LYS:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:H5:52:TRP:CD1	78:H5:52:TRP:H	2.32	0.46
78:H5:114:GLU:HB2	78:H5:124:THR:HG22	1.97	0.46
79:P3:304:VAL:O	79:P3:304:VAL:HG12	2.15	0.46
2:e2:452:A:H1'	34:T2:227:LYS:HG2	1.97	0.46
2:e2:911:U:H2'	2:e2:912:G:C8	2.50	0.46
2:e2:1241:C:P	2:e2:1243:C:H41	2.39	0.46
2:e2:1420:A:H4'	2:e2:1421:G:H5'	1.96	0.46
2:e2:1450:C:H2'	2:e2:1451:G:C8	2.50	0.46
2:e2:1625:G:O2'	2:e2:1626:G:OP2	2.33	0.46
2:e2:1647:U:O4	2:e2:1648:C:N4	2.46	0.46
2:e2:1769:G:H2'	2:e2:1770:A:C8	2.49	0.46
2:e2:3733:A:H2'	2:e2:3734:U:C6	2.50	0.46
2:e2:4052:C:OP1	44:42:1:MET:N	2.48	0.46
2:e2:4529:G:H8	2:e2:4529:G:O5'	1.97	0.46
2:e2:4591:U:H2'	2:e2:4592:C:H6	1.78	0.46
2:e2:4727:A:H4'	45:52:128:LYS:O	2.15	0.46
2:e2:4769:G:N2	2:e2:4866:C:C2	2.83	0.46
3:h2:70:G:C2	3:h2:87:G:C2	3.04	0.46
4:d2:4:U:H2'	4:d2:5:A:H8	1.80	0.46
4:d2:63:C:N4	38:X2:210:ARG:HG3	2.25	0.46
11:r2:28:ARG:CG	11:r2:29:TYR:H	2.28	0.46
15:w2:193:THR:HA	40:02:119:ARG:NH1	2.29	0.46
17:y2:93:ARG:CD	17:y2:97:ILE:HD12	2.44	0.46
24:F2:48:TYR:CD2	41:12:88:GLY:HA3	2.50	0.46
31:M2:30:PRO:HB2	31:M2:32:ILE:H	1.80	0.46
36:V2:107:LYS:C	36:V2:109:GLU:H	2.22	0.46
37:W2:169:ALA:O	37:W2:172:ILE:HG22	2.14	0.46
40:02:25:VAL:HG23	40:02:39:ASP:C	2.40	0.46
45:52:343:ARG:HG3	45:52:344:VAL:N	2.30	0.46
49:K3:468:A:H2'	49:K3:469:A:O4'	2.16	0.46
49:K3:472:C:N4	49:K3:476:A:H61	2.13	0.46
49:K3:808:A:C2	49:K3:855:G:N1	2.70	0.46
49:K3:1456:G:N1	49:K3:1471:C:N4	2.63	0.46
55:a3:45:LEU:HD13	55:a3:52:TYR:CZ	2.51	0.46
59:U3:38:ILE:CD1	59:U3:47:TYR:HB3	2.44	0.46
61:W3:230:THR:HG22	61:W3:236:PHE:CE1	2.50	0.46
63:Y3:97:CYS:O	63:Y3:100:ALA:N	2.48	0.46
64:j3:62:LYS:HA	64:j3:80:ILE:HG21	1.97	0.46
66:N3:123:GLU:HG3	66:N3:140:ASP:HA	1.97	0.46
66:N3:188:TYR:HA	66:N3:191:LYS:NZ	2.30	0.46
74:D3:36:VAL:HB	74:D3:51:LYS:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:H3:41:GLN:HA	77:H3:44:ARG:NH1	2.30	0.46
78:H5:116:ASP:HB2	78:H5:122:LYS:HB2	1.97	0.46
83:M3:111:ARG:NE	83:M3:113:THR:HA	2.30	0.46
1:E1:6325:G:O2'	1:E1:6326:U:O5'	2.29	0.46
2:e2:135:G:H8	19:A2:96:ASN:N	2.13	0.46
2:e2:453:G:C6	2:e2:704:C:C2	3.04	0.46
2:e2:461:G:N2	2:e2:695:G:H1'	2.30	0.46
2:e2:1173:G:C2	2:e2:1189:G:C6	3.03	0.46
2:e2:1527:A:H2'	2:e2:1528:U:C6	2.50	0.46
2:e2:1533:A:C8	2:e2:1622:U:O4	2.68	0.46
2:e2:1971:G:O2'	29:K2:38:LYS:NZ	2.47	0.46
2:e2:2067:C:OP1	16:x2:15:LYS:HE2	2.14	0.46
2:e2:2088:G:C8	2:e2:2263:A:OP2	2.68	0.46
2:e2:2475:G:H4'	2:e2:2476:G:H5''	1.96	0.46
2:e2:2597:G:C2	2:e2:2749:C:C2	3.04	0.46
2:e2:3782:C:N4	2:e2:3809:G:N3	2.63	0.46
2:e2:3939:G:C5	2:e2:4170:A:C8	3.03	0.46
2:e2:4092:G:H2'	2:e2:4093:G:N3	2.30	0.46
2:e2:4462:C:O2'	2:e2:4463:U:H5'	2.15	0.46
2:e2:4489:G:N1	2:e2:4708:A:C5	2.83	0.46
2:e2:4892:A:C6	2:e2:4893:A:C2	3.03	0.46
4:d2:5:A:H2'	4:d2:6:C:C6	2.50	0.46
5:p2:14:THR:HA	5:p2:17:ARG:HG3	1.97	0.46
7:l2:34:ALA:HA	7:l2:37:GLU:HB3	1.97	0.46
12:t2:28:PHE:HA	12:t2:129:ALA:HA	1.97	0.46
17:y2:111:ALA:HA	17:y2:114:GLN:HG2	1.97	0.46
18:92:10:LYS:HG2	18:92:16:PHE:CD1	2.49	0.46
18:92:86:GLN:HG2	18:92:87:PHE:N	2.30	0.46
19:A2:86:LYS:HA	19:A2:92:ARG:NH1	2.30	0.46
25:G2:125:VAL:CG2	25:G2:196:ARG:HB2	2.45	0.46
27:I2:33:GLN:HG3	27:I2:34:HIS:CD2	2.51	0.46
34:T2:96:THR:HG23	34:T2:113:ARG:HH22	1.80	0.46
43:32:4:LEU:HD11	43:32:29:THR:HG23	1.98	0.46
44:42:116:LEU:HD12	44:42:117:ILE:H	1.78	0.46
49:K3:95:G:H22	49:K3:435:A:H2	1.61	0.46
49:K3:122:G:H21	64:j3:146:THR:HG1	1.62	0.46
49:K3:164:A:O2'	49:K3:165:G:O4'	2.21	0.46
49:K3:851:C:H5''	49:K3:852:G:H5'	1.98	0.46
49:K3:1051:G:H2'	49:K3:1052:A:H8	1.81	0.46
49:K3:1398:G:C4	55:a3:63:SER:HB3	2.51	0.46
49:K3:1413:G:C2	49:K3:1414:A:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1466:G:OP1	72:C3:5:ARG:HG3	2.16	0.46
49:K3:1633:A:H2'	49:K3:1634:A:C8	2.49	0.46
51:13:19:GLN:HB3	51:13:23:LYS:NZ	2.31	0.46
53:G3:96:ILE:HG21	58:T3:14:ARG:HH22	1.80	0.46
55:a3:21:ILE:HD12	55:a3:289:LEU:HA	1.96	0.46
55:a3:120:ILE:O	55:a3:131:LEU:HD12	2.15	0.46
55:a3:147:HIS:CD2	55:a3:175:LYS:HD3	2.50	0.46
58:T3:5:ARG:O	65:J5:77:PRO:HD3	2.15	0.46
61:W3:114:LYS:O	61:W3:120:GLN:HB2	2.15	0.46
64:j3:112:HIS:HE1	64:j3:114:ILE:HD13	1.80	0.46
68:B3:126:VAL:HG12	68:B3:127:ASP:H	1.81	0.46
74:D3:1:MET:H2	74:D3:10:ASP:CB	2.28	0.46
83:M3:51:ASP:HB2	83:M3:54:THR:HB	1.96	0.46
85:a7:50:PRO:HA	85:a7:151:THR:HB	1.97	0.46
1:E1:6407:C:H3'	1:E1:6409:A:OP1	2.16	0.46
2:e2:50:C:C2	2:e2:51:A:C8	3.02	0.46
2:e2:229:G:H2'	2:e2:230:G:C8	2.50	0.46
2:e2:916:C:N4	2:e2:919:C:N4	2.64	0.46
2:e2:1100:U:O2	2:e2:1195:G:C6	2.69	0.46
2:e2:1273:G:N3	32:R2:72:PRO:HG3	2.31	0.46
2:e2:1442:C:C2	2:e2:1443:A:C8	3.04	0.46
2:e2:1711:C:C5	2:e2:2117:G:H1'	2.50	0.46
2:e2:2054:G:O4'	15:w2:130:LYS:NZ	2.48	0.46
2:e2:2555:G:C6	2:e2:2573:A:N6	2.84	0.46
2:e2:2779:C:P	8:m2:106:LYS:HG3	2.55	0.46
2:e2:2840:A:N1	2:e2:3849:A:C6	2.84	0.46
2:e2:2851:G:C6	2:e2:2852:U:C2	3.03	0.46
2:e2:3827:G:O2'	2:e2:3829:G:OP2	2.25	0.46
2:e2:4097:G:H2'	2:e2:4098:A:C8	2.47	0.46
2:e2:4244:A:H2'	2:e2:4245:G:O4'	2.15	0.46
2:e2:4697:U:H4'	23:E2:104:HIS:NE2	2.31	0.46
2:e2:4770:U:C2	2:e2:4771:C:H5	2.33	0.46
15:w2:28:LEU:O	15:w2:28:LEU:HD23	2.16	0.46
25:G2:60:ILE:HB	25:G2:80:ALA:HB2	1.97	0.46
30:L2:59:GLN:OE1	38:X2:126:VAL:HG21	2.14	0.46
36:V2:264:LYS:HZ2	60:V3:49:VAL:HG12	1.81	0.46
42:22:83:THR:HG22	42:22:85:TYR:H	1.79	0.46
44:42:206:ILE:N	44:42:214:GLN:O	2.45	0.46
45:52:258:HIS:O	45:52:261:ARG:HB2	2.16	0.46
49:K3:10:G:H2'	49:K3:11:A:C8	2.50	0.46
49:K3:305:U:O4'	71:c3:184:ARG:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:340:C:H1'	49:K3:341:C:H5'	1.96	0.46
49:K3:437:G:P	49:K3:473:A:H62	2.37	0.46
49:K3:526:A:H1'	73:d3:128:VAL:HG21	1.96	0.46
49:K3:552:G:H4'	50:s3:36:MET:HG3	1.98	0.46
49:K3:563:G:H2'	49:K3:564:A:O4'	2.15	0.46
49:K3:746:C:H5	49:K3:796:G:C2	2.34	0.46
49:K3:1034:A:C2	49:K3:1035:A:H1'	2.50	0.46
49:K3:1401:A:O2'	49:K3:1402:A:OP2	2.29	0.46
49:K3:1604:G:OP2	54:G5:38:ARG:NH2	2.48	0.46
53:G3:124:ASP:HB3	53:G3:147:LYS:O	2.16	0.46
55:a3:5:MET:HA	55:a3:311:GLN:O	2.15	0.46
55:a3:19:THR:HG21	55:a3:36:ARG:HH21	1.81	0.46
59:U3:59:LEU:HG	59:U3:181:GLU:OE2	2.16	0.46
61:W3:185:THR:O	61:W3:246:LYS:NZ	2.26	0.46
63:Y3:40:ARG:HG3	63:Y3:47:GLU:OE2	2.16	0.46
64:j3:36:HIS:CD2	64:j3:85:GLY:H	2.33	0.46
64:j3:252:ARG:HD3	73:d3:72:PHE:HE1	1.80	0.46
65:J5:34:ILE:HA	65:J5:37:PHE:HD2	1.81	0.46
66:N3:112:LEU:O	66:N3:116:ILE:HG13	2.16	0.46
72:C3:97:GLU:HG2	72:C3:116:ASN:CB	2.46	0.46
73:d3:161:LEU:HA	73:d3:167:GLY:O	2.16	0.46
75:e3:94:ILE:HD11	75:e3:99:LYS:HA	1.98	0.46
81:I5:59:GLY:O	81:I5:71:GLY:HA2	2.16	0.46
1:E1:6357:A:O2'	1:E1:6358:U:H5''	2.14	0.46
2:e2:418:A:N6	3:h2:17:A:C8	2.84	0.46
2:e2:448:G:H2'	2:e2:449:C:C4'	2.45	0.46
2:e2:449:C:H41	2:e2:1296:G:N2	2.14	0.46
2:e2:470:A:N1	2:e2:687:U:N3	2.62	0.46
2:e2:497:G:OP2	2:e2:498:C:N4	2.49	0.46
2:e2:752:G:C6	2:e2:753:C:N3	2.84	0.46
2:e2:752:G:H2'	2:e2:753:C:C6	2.50	0.46
2:e2:964:A:O2'	2:e2:965:G:H5'	2.15	0.46
2:e2:1336:G:C4	2:e2:2346:C:N4	2.83	0.46
2:e2:1416:G:H2'	2:e2:1417:C:O4'	2.15	0.46
2:e2:1604:G:C6	2:e2:1605:G:C6	3.04	0.46
2:e2:2040:A:C4	2:e2:4464:A:N7	2.83	0.46
2:e2:2491:C:C2	2:e2:2492:C:C5	3.03	0.46
2:e2:3973:G:H1	2:e2:4032:G:N2	2.14	0.46
2:e2:4123:C:O5'	2:e2:4123:C:H6	1.98	0.46
2:e2:4660:G:C2	2:e2:4661:G:N7	2.83	0.46
2:e2:4674:C:H2'	2:e2:4675:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:h2:17:A:H2'	3:h2:18:U:H6	1.81	0.46
9:o2:36:LYS:HA	9:o2:36:LYS:HD2	1.72	0.46
10:q2:103:VAL:CG1	10:q2:108:TYR:HB2	2.46	0.46
17:y2:60:ARG:HB2	17:y2:63:VAL:HG23	1.97	0.46
29:K2:14:PHE:CE1	29:K2:58:ASN:HB3	2.51	0.46
29:K2:176:ASN:HA	29:K2:179:ASN:HD21	1.79	0.46
36:V2:171:PRO:HB3	36:V2:181:TYR:CE2	2.50	0.46
41:12:18:VAL:O	41:12:22:LEU:HG	2.15	0.46
43:32:92:LYS:HE2	43:32:96:MET:CE	2.46	0.46
46:62:104:GLY:O	46:62:107:THR:HG22	2.15	0.46
47:72:64:VAL:HG23	47:72:73:GLY:O	2.16	0.46
49:K3:4:C:H5''	61:W3:230:THR:OG1	2.16	0.46
49:K3:23:G:H8	49:K3:23:G:OP2	1.99	0.46
49:K3:306:C:O4'	71:c3:41:ARG:NE	2.49	0.46
49:K3:375:U:H2'	49:K3:376:A:C8	2.50	0.46
49:K3:375:U:H2'	49:K3:376:A:H8	1.81	0.46
49:K3:1289:U:O2	52:Q3:175:LYS:NZ	2.33	0.46
51:13:31:TYR:CZ	51:13:35:LEU:HD11	2.50	0.46
54:G5:42:HIS:O	54:G5:46:ARG:HD3	2.14	0.46
54:G5:59:LEU:HD23	54:G5:60:THR:O	2.15	0.46
64:j3:44:LEU:HD12	64:j3:47:PHE:HB3	1.98	0.46
71:c3:151:GLU:HA	71:c3:154:LYS:HE2	1.98	0.46
72:C3:60:ARG:O	72:C3:66:VAL:HG11	2.14	0.46
78:H5:40:ALA:O	78:H5:42:HIS:N	2.49	0.46
79:P3:367:ILE:HD12	79:P3:418:LEU:HD13	1.98	0.46
1:E1:6283:U:O2'	1:E1:6284:G:OP1	2.29	0.46
2:e2:285:G:H2'	2:e2:286:U:C6	2.50	0.46
2:e2:691:C:H2'	2:e2:692:A:H8	1.81	0.46
2:e2:711:A:H1'	34:T2:139:HIS:CD2	2.50	0.46
2:e2:1441:C:C4	2:e2:2103:G:N2	2.83	0.46
2:e2:1994:G:N2	2:e2:1999:G:H22	2.13	0.46
2:e2:2093:G:OP1	2:e2:2094:A:N6	2.46	0.46
2:e2:3969:G:H3'	2:e2:3969:G:N3	2.31	0.46
2:e2:3982:C:OP1	2:e2:3984:C:N4	2.49	0.46
2:e2:4007:G:H2'	2:e2:4008:C:O4'	2.15	0.46
2:e2:4210:U:H2'	2:e2:4211:C:C6	2.50	0.46
2:e2:4299:U:H2'	2:e2:4300:U:C6	2.49	0.46
2:e2:4394:A:H3'	2:e2:4395:U:H6	1.80	0.46
2:e2:4584:A:C6	2:e2:4719:G:C2	3.03	0.46
2:e2:4600:G:N2	2:e2:4609:G:C8	2.84	0.46
2:e2:4913:G:O6	15:w2:111:PRO:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:h2:78:G:H2'	3:h2:79:G:N9	2.31	0.46
3:h2:147:G:H2'	3:h2:148:A:H8	1.81	0.46
4:d2:62:U:HO2'	4:d2:64:G:H8	1.64	0.46
12:t2:98:GLY:O	12:t2:100:ARG:N	2.48	0.46
12:t2:331:TYR:HD2	12:t2:335:MET:HE3	1.80	0.46
14:v2:53:ILE:H	14:v2:53:ILE:HD12	1.81	0.46
26:H2:125:MET:HB2	26:H2:141:SER:OG	2.15	0.46
31:M2:41:LYS:HD3	31:M2:41:LYS:HA	1.78	0.46
31:M2:75:PRO:HB3	31:M2:80:LEU:HB3	1.98	0.46
34:T2:229:ARG:HH12	34:T2:242:LYS:HB2	1.80	0.46
37:W2:42:ARG:NH2	37:W2:198:VAL:HG21	2.30	0.46
37:W2:81:VAL:O	37:W2:84:ILE:HG22	2.15	0.46
48:82:80:LYS:HZ1	48:82:109:SER:H	1.61	0.46
49:K3:155:G:O2'	49:K3:156:G:O4'	2.22	0.46
49:K3:300:U:O4	49:K3:301:A:N6	2.46	0.46
49:K3:462:C:H5'	49:K3:463:C:OP2	2.15	0.46
49:K3:816:A:C5	49:K3:817:G:H1'	2.51	0.46
49:K3:957:A:C6	49:K3:958:G:C5	3.04	0.46
49:K3:990:A:N1	49:K3:992:A:N6	2.63	0.46
49:K3:1164:G:O2'	49:K3:1165:G:H5'	2.15	0.46
49:K3:1282:A:O2'	49:K3:1287:A:H4'	2.16	0.46
49:K3:1324:G:C6	49:K3:1504:U:N3	2.83	0.46
49:K3:1553:C:H2'	49:K3:1553:C:O2	2.15	0.46
49:K3:1864:U:C4	84:O3:9:GLY:HA3	2.49	0.46
53:G3:35:ARG:NH1	53:G3:36:TYR:O	2.49	0.46
53:G3:60:CYS:SG	53:G3:61:PRO:HD2	2.55	0.46
57:A3:4:VAL:HA	57:A3:5:GLU:HA	1.47	0.46
57:A3:64:LYS:HG2	57:A3:73:PRO:HG2	1.96	0.46
79:P3:385:LYS:O	79:P3:386:LEU:HG	2.16	0.46
80:I3:29:VAL:HA	80:I3:32:LEU:HD12	1.97	0.46
2:e2:33:A:N6	2:e2:50:C:C2	2.83	0.46
2:e2:174:C:H2'	2:e2:175:C:O4'	2.16	0.46
2:e2:272:U:H2'	2:e2:273:U:C6	2.51	0.46
2:e2:357:U:C2	2:e2:359:A:N7	2.84	0.46
2:e2:407:A:O2'	2:e2:410:A:OP1	2.33	0.46
2:e2:652:G:H2'	2:e2:653:U:H6	1.80	0.46
2:e2:672:C:H2'	2:e2:673:C:C6	2.50	0.46
2:e2:1322:A:N3	2:e2:1324:A:C8	2.84	0.46
2:e2:1348:U:H2'	2:e2:1349:G:C8	2.50	0.46
2:e2:1352:C:H41	33:S2:55:ARG:NH1	2.14	0.46
2:e2:1592:G:N1	2:e2:1604:G:C6	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1627:G:H2'	2:e2:1628:C:C6	2.50	0.46
2:e2:1737:A:C6	2:e2:1738:A:C5	3.03	0.46
2:e2:1814:C:H2'	2:e2:1816:C:C5	2.51	0.46
2:e2:2259:G:OP2	2:e2:2259:G:N2	2.45	0.46
2:e2:2557:G:N2	2:e2:2570:U:O2	2.43	0.46
2:e2:2623:A:C2	2:e2:2624:G:N7	2.83	0.46
2:e2:3692:A:C2	27:I2:19:GLY:HA2	2.50	0.46
2:e2:3693:U:C2	2:e2:3694:U:C5	3.04	0.46
2:e2:3890:A:N6	2:e2:4570:G:O2'	2.48	0.46
2:e2:4052:C:H1'	44:42:26:ARG:HH22	1.81	0.46
2:e2:4186:A:H2'	2:e2:4187:G:H8	1.81	0.46
2:e2:4618:G:C2	2:e2:4619:U:C5	3.04	0.46
3:h2:22:U:C5	12:t2:196:MET:HE1	2.50	0.46
5:p2:33:LYS:HE2	5:p2:33:LYS:HB3	1.69	0.46
12:t2:142:HIS:HE1	12:t2:249:PHE:H	1.63	0.46
26:H2:24:VAL:HG12	26:H2:86:LYS:HE3	1.98	0.46
31:M2:46:ILE:HG13	31:M2:72:GLU:HG3	1.97	0.46
34:T2:126:ARG:HH12	34:T2:129:LEU:HD13	1.80	0.46
43:32:36:ASN:OD1	43:32:37:SER:OG	2.26	0.46
49:K3:582:U:H2'	49:K3:583:A:H8	1.81	0.46
49:K3:996:A:N6	70:F3:163:PHE:CD2	2.83	0.46
49:K3:1246:A:H2'	49:K3:1251:A:H1'	1.97	0.46
49:K3:1377:U:O2	49:K3:1379:A:H5'	2.15	0.46
49:K3:1680:G:H2'	49:K3:1681:U:O4'	2.15	0.46
49:K3:1779:G:N2	49:K3:1780:G:N3	2.64	0.46
55:a3:91:ASP:O	55:a3:95:GLY:N	2.49	0.46
60:V3:175:GLU:OE2	60:V3:193:ILE:HG12	2.16	0.46
61:W3:157:LEU:O	61:W3:160:LEU:HG	2.15	0.46
63:Y3:141:LYS:HZ2	63:Y3:145:GLN:HA	1.79	0.46
64:j3:158:ASP:OD2	64:j3:174:LYS:HG3	2.15	0.46
65:J5:51:GLU:HB3	65:J5:62:VAL:CG2	2.45	0.46
66:N3:77:MET:HE3	66:N3:86:LYS:HG3	1.98	0.46
71:c3:81:VAL:HG23	71:c3:94:LYS:NZ	2.30	0.46
73:d3:150:ARG:H	73:d3:153:SER:HB2	1.81	0.46
74:D3:19:ALA:HB1	74:D3:68:SER:OG	2.16	0.46
74:D3:59:ILE:CG2	74:D3:64:GLU:HB2	2.46	0.46
80:I3:26:SER:C	80:I3:27:ARG:HD3	2.41	0.46
2:e2:164:G:H2'	2:e2:165:A:C8	2.51	0.46
2:e2:172:C:O2'	2:e2:173:C:H5'	2.16	0.46
2:e2:223:G:H5''	2:e2:224:U:OP1	2.16	0.46
2:e2:258:G:C6	2:e2:259:C:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:682:G:O2'	2:e2:683:C:H5'	2.16	0.46
2:e2:703:G:O2'	2:e2:704:C:OP1	2.28	0.46
2:e2:916:C:O2'	2:e2:917:A:N3	2.29	0.46
2:e2:1494:U:H2'	2:e2:1495:G:H8	1.80	0.46
2:e2:1833:G:N2	2:e2:1833:G:OP1	2.47	0.46
2:e2:2412:A:OP1	43:32:6:LEU:HD22	2.16	0.46
2:e2:2700:G:C6	2:e2:2701:U:C4	3.03	0.46
2:e2:2835:A:O2'	45:52:228:TYR:O	2.26	0.46
2:e2:3865:A:C6	2:e2:3866:C:C4	3.04	0.46
2:e2:4209:G:C6	2:e2:4224:A:N1	2.84	0.46
2:e2:4410:G:C4	2:e2:4433:G:N2	2.83	0.46
6:k2:27:ASN:O	6:k2:102:ALA:HA	2.15	0.46
15:w2:89:PRO:O	15:w2:95:GLY:HA3	2.15	0.46
16:x2:88:PHE:CD2	16:x2:92:LEU:HD11	2.51	0.46
23:E2:97:ARG:NE	23:E2:122:ARG:HB3	2.30	0.46
29:K2:120:GLU:HB2	29:K2:163:THR:OG1	2.14	0.46
35:U2:126:LYS:CB	47:72:133:ALA:HB3	2.46	0.46
36:V2:63:LEU:HD12	36:V2:63:LEU:HA	1.79	0.46
39:Y2:62:ILE:HG22	39:Y2:68:ILE:HD11	1.96	0.46
41:12:24:ARG:HB3	41:12:28:TRP:CZ3	2.51	0.46
42:22:46:ILE:HD11	42:22:49:TYR:CZ	2.51	0.46
45:52:5:LYS:HB3	45:52:5:LYS:HE2	1.74	0.46
45:52:128:LYS:NZ	45:52:131:THR:HG21	2.30	0.46
49:K3:230:A:O2'	49:K3:231:A:O5'	2.34	0.46
49:K3:700:G:C6	49:K3:731:G:N1	2.83	0.46
49:K3:875:A:O2'	49:K3:876:C:O4'	2.30	0.46
49:K3:1093:A:H2'	49:K3:1094:C:H6	1.81	0.46
49:K3:1104:G:H2'	49:K3:1105:G:C8	2.49	0.46
49:K3:1253:A:H4'	49:K3:1254:C:H5''	1.98	0.46
49:K3:1314:U:H3	76:E3:8:ARG:NE	2.13	0.46
49:K3:1566:G:N2	49:K3:1567:G:O2'	2.49	0.46
49:K3:1592:C:C4	49:K3:1593:C:C4	3.04	0.46
49:K3:1805:G:C4	49:K3:1806:A:C8	3.04	0.46
49:K3:1806:A:O2'	49:K3:1807:C:H5'	2.16	0.46
53:G3:61:PRO:HA	53:G3:66:VAL:HG21	1.97	0.46
54:G5:116:LYS:HA	54:G5:118:ARG:HH12	1.81	0.46
55:a3:236:ILE:HD13	55:a3:252:THR:HG22	1.98	0.46
71:c3:87:ASN:OD1	71:c3:88:ASN:N	2.49	0.46
72:C3:21:TYR:HA	72:C3:24:LEU:HD12	1.97	0.46
73:d3:41:ARG:HG2	73:d3:45:ARG:HH21	1.80	0.46
79:P3:265:LEU:CD2	79:P3:317:LEU:HD11	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:M3:102:LYS:HA	83:M3:107:VAL:HG12	1.98	0.46
2:e2:47:A:OP2	85:a7:14:PHE:HB3	2.15	0.46
2:e2:431:G:C2	2:e2:4720:C:H5	2.34	0.46
2:e2:489:C:H2'	2:e2:490:C:H5'	1.97	0.46
2:e2:1177:U:H2'	2:e2:1178:G:H8	1.81	0.46
2:e2:1516:G:H2'	2:e2:1516:G:N3	2.30	0.46
2:e2:1625:G:C5	2:e2:1642:A:C4	3.04	0.46
2:e2:1816:C:H2'	2:e2:1817:U:C6	2.51	0.46
2:e2:1997:A:OP2	29:K2:55:MET:HE3	2.15	0.46
2:e2:2291:G:N2	2:e2:2345:G:C5	2.84	0.46
2:e2:2417:A:N3	2:e2:2418:A:C8	2.84	0.46
2:e2:2657:G:N2	2:e2:2678:A:C6	2.83	0.46
2:e2:2752:G:C6	2:e2:2753:G:C2	3.04	0.46
2:e2:3976:C:H5''	44:42:210:MET:HE1	1.97	0.46
2:e2:4933:C:H3'	2:e2:4934:A:H5''	1.98	0.46
2:e2:4971:A:C5	2:e2:4972:U:C5	3.04	0.46
2:e2:4986:G:H2'	2:e2:4987:C:H6	1.80	0.46
2:e2:5013:C:O2	2:e2:5027:C:N4	2.49	0.46
2:e2:5043:A:H2'	2:e2:5044:A:C8	2.50	0.46
12:t2:11:TYR:HE2	12:t2:148:PRO:HG2	1.81	0.46
14:v2:106:LYS:HB3	14:v2:106:LYS:HE2	1.64	0.46
17:y2:90:ARG:NH1	17:y2:94:ALA:HB2	2.30	0.46
18:92:221:LYS:HD3	18:92:221:LYS:HA	1.69	0.46
31:M2:56:LEU:HB2	31:M2:92:ARG:HB3	1.97	0.46
36:V2:107:LYS:HA	36:V2:110:LYS:HG2	1.98	0.46
40:02:97:ALA:HA	40:02:100:ARG:HD2	1.98	0.46
49:K3:127:C:O2'	49:K3:216:C:N3	2.49	0.46
49:K3:597:G:O6	49:K3:640:A:N6	2.49	0.46
49:K3:872:A:C2	49:K3:873:G:C6	3.04	0.46
49:K3:957:A:O5'	49:K3:958:G:N2	2.49	0.46
49:K3:1023:A:H2'	49:K3:1024:A:H8	1.80	0.46
49:K3:1255:G:H5''	77:H3:40:ARG:HH21	1.80	0.46
49:K3:1258:A:HO2'	49:K3:1259:A:P	2.39	0.46
49:K3:1460:C:N4	49:K3:1461:G:O6	2.49	0.46
49:K3:1479:G:H2'	49:K3:1480:A:H8	1.81	0.46
49:K3:1601:A:C5	49:K3:1635:C:C4	3.04	0.46
61:W3:68:ARG:CZ	61:W3:68:ARG:HB3	2.45	0.46
61:W3:256:TRP:CE2	65:J5:68:ARG:HA	2.51	0.46
63:Y3:133:GLY:HA2	63:Y3:155:GLY:HA3	1.98	0.46
67:b3:48:TYR:CD2	67:b3:113:ILE:HD13	2.50	0.46
69:f3:46:VAL:HG11	69:f3:56:LEU:HD13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:H5:71:GLY:C	78:H5:75:MET:HE2	2.41	0.46
79:P3:390:ARG:H	79:P3:421:LYS:HE2	1.81	0.46
80:I3:96:GLU:HA	80:I3:99:LYS:HE3	1.98	0.46
82:L3:30:SER:HA	82:L3:49:HIS:HE1	1.79	0.46
2:e2:286:U:H2'	2:e2:287:U:C6	2.51	0.46
2:e2:344:A:C6	3:h2:31:G:C6	3.03	0.46
2:e2:444:G:H3'	2:e2:445:U:H5''	1.98	0.46
2:e2:1098:G:C2	2:e2:1198:G:N1	2.84	0.46
2:e2:1178:G:N1	2:e2:1179:U:O2	2.49	0.46
2:e2:1274:A:H2	2:e2:1275:G:C5	2.34	0.46
2:e2:1643:A:H2'	2:e2:1644:C:C6	2.51	0.46
2:e2:1906:A:C6	2:e2:2068:A:C5	3.04	0.46
2:e2:1939:G:O2'	2:e2:1940:A:H5''	2.15	0.46
2:e2:2783:A:H2'	2:e2:2784:C:O4'	2.16	0.46
2:e2:3736:A:H1'	2:e2:3933:G:H5'	1.98	0.46
2:e2:3757:G:C5	2:e2:3758:U:C4	3.03	0.46
2:e2:4166:G:C2	2:e2:4167:G:C8	3.04	0.46
2:e2:4272:G:H2'	2:e2:4272:G:N3	2.30	0.46
2:e2:4358:U:H2'	2:e2:4359:U:C6	2.50	0.46
2:e2:4366:A:N6	2:e2:4367:G:O6	2.49	0.46
2:e2:4405:G:O6	2:e2:4440:G:C4	2.69	0.46
8:m2:109:ILE:O	8:m2:113:VAL:HG12	2.15	0.46
12:t2:91:ALA:HA	12:t2:96:CYS:SG	2.55	0.46
12:t2:190:ARG:HH12	12:t2:199:ARG:HD2	1.81	0.46
18:92:111:THR:O	18:92:113:VAL:HG13	2.16	0.46
25:G2:197:LYS:HG2	25:G2:202:GLN:NE2	2.31	0.46
27:I2:41:PHE:CD2	27:I2:62:LYS:HD2	2.51	0.46
34:T2:102:ASP:CG	34:T2:103:LYS:N	2.73	0.46
45:52:241:PRO:O	45:52:244:THR:HG23	2.16	0.46
47:72:105:PHE:HA	47:72:108:ARG:NE	2.31	0.46
49:K3:147:A:H2'	49:K3:148:U:C6	2.51	0.46
49:K3:590:A:H4'	49:K3:591:U:C5'	2.46	0.46
49:K3:656:G:H5'	49:K3:662:G:N2	2.31	0.46
53:G3:16:ILE:HB	53:G3:34:PRO:HG2	1.98	0.46
53:G3:59:LYS:O	53:G3:112:HIS:NE2	2.49	0.46
60:V3:126:ASP:HB3	60:V3:134:LEU:HD11	1.98	0.46
60:V3:179:ASN:CG	60:V3:183:GLU:HG2	2.41	0.46
63:Y3:157:MET:O	63:Y3:157:MET:HG2	2.16	0.46
64:j3:163:ASP:H	64:j3:165:GLU:HG3	1.81	0.46
65:J5:55:ASP:C	65:J5:57:ARG:H	2.23	0.46
66:N3:87:LEU:O	68:B3:72:THR:HG21	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:N3:92:ILE:HG23	66:N3:170:ALA:HB2	1.97	0.46
68:B3:59:LYS:HE3	68:B3:62:GLY:C	2.41	0.46
75:e3:81:ASP:OD2	75:e3:84:LYS:N	2.49	0.46
75:e3:83:LYS:H	75:e3:83:LYS:HD2	1.80	0.46
75:e3:99:LYS:HD2	75:e3:103:VAL:HA	1.98	0.46
78:H5:114:GLU:HB2	78:H5:124:THR:CG2	2.45	0.46
78:H5:130:ASP:O	78:H5:134:ILE:HG23	2.16	0.46
81:I5:54:VAL:HG12	81:I5:79:LEU:HB2	1.97	0.46
82:L3:39:GLY:HA3	82:L3:58:GLY:C	2.40	0.46
83:M3:64:ASN:HA	83:M3:111:ARG:NH1	2.31	0.46
2:e2:353:A:C6	2:e2:360:A:C8	3.04	0.45
2:e2:452:A:OP1	2:e2:452:A:H2'	2.15	0.45
2:e2:476:G:H2'	2:e2:477:C:C6	2.51	0.45
2:e2:494:U:H2'	2:e2:495:C:O4'	2.16	0.45
2:e2:653:U:H2'	2:e2:654:C:C6	2.51	0.45
2:e2:686:A:H61	34:T2:103:LYS:HB2	1.81	0.45
2:e2:911:U:H2'	2:e2:912:G:H8	1.80	0.45
2:e2:1280:C:C2	2:e2:1282:G:C4	3.03	0.45
2:e2:1282:G:H5''	12:t2:316:LYS:NZ	2.31	0.45
2:e2:1710:A:H3'	2:e2:1711:C:H4'	1.97	0.45
2:e2:2109:C:O2'	2:e2:2119:G:N2	2.40	0.45
2:e2:2127:G:H22	2:e2:2248:C:H41	1.63	0.45
2:e2:2445:C:C4	2:e2:2446:C:N4	2.85	0.45
2:e2:2520:C:H2'	2:e2:2521:G:C8	2.51	0.45
2:e2:2704:C:H2'	2:e2:2705:G:C8	2.50	0.45
2:e2:3972:A:H4'	2:e2:3973:G:O4'	2.16	0.45
2:e2:4123:C:H4'	42:22:135:ARG:HG3	1.98	0.45
2:e2:4138:C:C2	2:e2:4139:G:N7	2.84	0.45
2:e2:4749:C:H1'	2:e2:4750:G:H8	1.79	0.45
2:e2:4938:A:H61	34:T2:160:HIS:HB3	1.80	0.45
2:e2:4943:C:O2'	34:T2:157:THR:OG1	2.12	0.45
7:l2:14:TYR:O	7:l2:16:GLY:N	2.49	0.45
9:o2:132:LYS:C	9:o2:134:LYS:H	2.24	0.45
11:r2:63:LYS:HG3	11:r2:64:ALA:N	2.31	0.45
12:t2:31:PRO:HB3	12:t2:282:HIS:CD2	2.52	0.45
18:92:47:ASP:OD1	18:92:60:LYS:HB3	2.15	0.45
25:G2:125:VAL:HG23	25:G2:196:ARG:HB2	1.98	0.45
40:02:31:ILE:HG22	40:02:32:ASP:OD2	2.16	0.45
42:22:26:VAL:HG22	42:22:42:LEU:HD22	1.98	0.45
45:52:135:LYS:HB2	45:52:135:LYS:HE3	1.63	0.45
47:72:115:LYS:HZ3	47:72:126:VAL:HG21	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:77:A:OP2	67:b3:154:ARG:NE	2.34	0.45
49:K3:215:G:H5'	49:K3:216:C:C5	2.51	0.45
49:K3:355:G:H5''	53:G3:105:ARG:HH12	1.81	0.45
49:K3:430:C:H2'	49:K3:431:G:C8	2.51	0.45
49:K3:493:A:H4'	81:I5:89:HIS:CD2	2.51	0.45
49:K3:520:A:O2'	49:K3:825:A:N3	2.44	0.45
49:K3:913:A:C6	79:P3:336:ARG:NH2	2.84	0.45
49:K3:1350:U:H2'	49:K3:1351:G:C8	2.50	0.45
49:K3:1638:G:O2'	49:K3:1639:G:N7	2.40	0.45
49:K3:1712:A:H2'	49:K3:1713:C:C6	2.51	0.45
49:K3:1751:C:N4	49:K3:1781:A:H61	2.14	0.45
49:K3:1842:C:C2	49:K3:1858:G:C2	3.04	0.45
65:J5:112:ASP:OD1	65:J5:112:ASP:N	2.48	0.45
67:b3:195:LYS:HE3	67:b3:198:ARG:NH1	2.31	0.45
78:H5:126:GLN:HA	78:H5:129:ARG:NE	2.31	0.45
80:I3:27:ARG:HH12	80:I3:111:GLU:HG3	1.80	0.45
84:O3:33:ASP:N	84:O3:33:ASP:OD1	2.47	0.45
1:E1:6280:A:H61	1:E1:6336:G:H22	1.64	0.45
1:E1:6325:G:HO2'	1:E1:6326:U:P	2.40	0.45
1:E1:6386:G:H2'	1:E1:6387:G:N7	2.32	0.45
2:e2:25:A:C5	2:e2:341:G:C5	3.03	0.45
2:e2:38:A:H3'	2:e2:39:A:H4'	1.98	0.45
2:e2:119:G:N2	36:V2:105:GLU:OE2	2.49	0.45
2:e2:189:G:C5	2:e2:253:G:C6	3.05	0.45
2:e2:370:U:N3	2:e2:1637:A:N1	2.64	0.45
2:e2:1085:C:H2'	2:e2:1086:C:O4'	2.16	0.45
2:e2:2552:G:N2	2:e2:2766:A:C6	2.84	0.45
2:e2:2636:U:H2'	2:e2:2637:U:C6	2.52	0.45
2:e2:2691:U:H2'	2:e2:2692:U:C6	2.51	0.45
2:e2:2863:G:C6	2:e2:2864:A:C5	3.04	0.45
2:e2:2870:A:H2'	2:e2:2871:A:H8	1.80	0.45
2:e2:3611:A:H2	2:e2:5016:A:C8	2.34	0.45
2:e2:3754:G:C5	2:e2:3771:C:N4	2.85	0.45
2:e2:4097:G:N3	2:e2:4098:A:C8	2.84	0.45
2:e2:4745:G:C2	2:e2:4746:C:C5	3.05	0.45
2:e2:5032:C:C4	2:e2:5033:G:C5	3.04	0.45
4:d2:42:A:C5	4:d2:43:U:C5	3.04	0.45
6:k2:42:VAL:HG22	6:k2:55:ALA:HB2	1.98	0.45
11:r2:6:ASN:CG	11:r2:7:HIS:H	2.19	0.45
16:x2:97:ILE:HG13	16:x2:97:ILE:O	2.16	0.45
19:A2:96:ASN:HB3	19:A2:100:GLU:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:F2:105:GLN:HB2	39:Y2:63:ARG:HH21	1.81	0.45
29:K2:17:ILE:HD11	29:K2:88:PHE:HD2	1.81	0.45
33:S2:42:THR:HA	33:S2:45:GLN:HG3	1.98	0.45
35:U2:219:MET:O	35:U2:220:LYS:C	2.57	0.45
37:W2:20:THR:HA	37:W2:66:LEU:O	2.16	0.45
44:42:28:PHE:CE2	44:42:60:ARG:HD2	2.52	0.45
45:52:190:VAL:HA	45:52:193:LYS:HD2	1.98	0.45
49:K3:96:C:O2'	49:K3:473:A:O2'	2.29	0.45
49:K3:98:C:N4	49:K3:433:A:N1	2.64	0.45
49:K3:312:G:H5'	49:K3:314:U:OP2	2.16	0.45
49:K3:381:C:C4	71:c3:49:ARG:HG3	2.52	0.45
49:K3:661:U:OP2	49:K3:662:G:O2'	2.28	0.45
49:K3:926:A:OP2	49:K3:927:C:N4	2.48	0.45
49:K3:928:G:H21	82:L3:69:GLY:N	2.14	0.45
49:K3:932:G:N1	49:K3:1009:A:H2	2.13	0.45
49:K3:1129:G:H2'	49:K3:1130:G:C4	2.51	0.45
49:K3:1269:G:H1'	49:K3:1298:G:H22	1.81	0.45
49:K3:1269:G:H2'	49:K3:1270:G:H8	1.81	0.45
49:K3:1391:C:H2'	49:K3:1392:U:C6	2.50	0.45
55:a3:87:LEU:O	55:a3:100:ARG:HA	2.16	0.45
57:A3:8:LYS:HD3	57:A3:8:LYS:HA	1.54	0.45
60:V3:168:MET:O	60:V3:172:MET:HG3	2.15	0.45
64:j3:125:LYS:HE2	64:j3:157:ASN:HA	1.96	0.45
64:j3:125:LYS:HD2	64:j3:158:ASP:O	2.16	0.45
66:N3:64:ALA:HB2	66:N3:144:LEU:HD22	1.97	0.45
66:N3:145:ARG:O	66:N3:149:GLN:HG3	2.16	0.45
73:d3:74:GLY:O	73:d3:78:LEU:HG	2.16	0.45
75:e3:59:PRO:HA	75:e3:62:VAL:HG12	1.98	0.45
83:M3:43:LYS:HZ1	83:M3:46:ASN:HB2	1.79	0.45
84:O3:44:ILE:HD12	84:O3:44:ILE:H	1.81	0.45
85:a7:78:LEU:HD23	85:a7:78:LEU:HA	1.76	0.45
2:e2:35:U:O3'	2:e2:1651:G:N2	2.34	0.45
2:e2:209:U:H3'	9:o2:59:ARG:NH1	2.31	0.45
2:e2:423:G:C4	3:h2:12:G:N2	2.85	0.45
2:e2:490:C:C2	2:e2:667:A:H2	2.35	0.45
2:e2:1299:G:H2'	2:e2:1300:G:H8	1.81	0.45
2:e2:1778:C:H2'	2:e2:1779:U:H5'	1.98	0.45
2:e2:1998:A:H4'	2:e2:2016:A:H2	1.80	0.45
2:e2:2018:C:C4	2:e2:2019:U:C4	3.04	0.45
2:e2:2247:C:O2'	2:e2:2248:C:OP1	2.27	0.45
2:e2:2382:A:N1	2:e2:2829:U:O2'	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:2576:G:C4	2:e2:2588:C:C2	3.04	0.45
2:e2:2823:G:N7	43:32:20:LYS:HD2	2.32	0.45
2:e2:3760:A:H3'	2:e2:3762:U:OP2	2.17	0.45
2:e2:3861:A:N1	2:e2:4560:C:H5	2.14	0.45
2:e2:4095:G:H22	2:e2:4114:C:H1'	1.81	0.45
2:e2:4393:G:C5	2:e2:4446:U:C5	3.05	0.45
2:e2:4532:U:H2'	2:e2:4533:A:C8	2.52	0.45
2:e2:4622:A:H2'	2:e2:4623:G:H8	1.80	0.45
2:e2:4921:C:H2'	2:e2:4922:C:H6	1.81	0.45
2:e2:4941:G:C8	34:T2:221:LYS:HA	2.52	0.45
2:e2:4967:A:C2	2:e2:4968:A:C5	3.04	0.45
2:e2:4972:U:H2'	2:e2:4973:U:C6	2.52	0.45
4:d2:108:G:OP1	25:G2:273:LEU:HD13	2.15	0.45
5:p2:19:ASP:HB3	5:p2:39:SER:OG	2.16	0.45
6:k2:22:VAL:HG22	6:k2:52:LEU:HD22	1.98	0.45
16:x2:49:TYR:O	16:x2:69:VAL:HA	2.16	0.45
24:F2:6:LYS:HG3	24:F2:94:GLY:HA3	1.98	0.45
25:G2:290:ALA:O	25:G2:293:ARG:HB2	2.16	0.45
29:K2:18:ILE:HD11	29:K2:71:ASN:ND2	2.32	0.45
29:K2:33:ASP:OD1	29:K2:85:ASN:N	2.34	0.45
39:Y2:164:ARG:HA	39:Y2:167:GLN:HE21	1.81	0.45
41:12:123:GLU:OE2	41:12:128:LYS:HE3	2.16	0.45
45:52:90:VAL:HG23	45:52:104:THR:HG22	1.97	0.45
45:52:128:LYS:HZ2	45:52:131:THR:HG21	1.82	0.45
46:62:95:ARG:HD2	46:62:113:MET:HE1	1.98	0.45
49:K3:86:C:O2	49:K3:86:C:H2'	2.15	0.45
49:K3:138:C:N4	49:K3:178:C:H5'	2.31	0.45
49:K3:221:A:H2'	49:K3:222:U:C6	2.52	0.45
49:K3:474:G:N2	49:K3:507:G:O2'	2.31	0.45
49:K3:546:G:O5'	49:K3:547:G:N2	2.49	0.45
49:K3:987:A:C2	60:V3:114:VAL:HG21	2.52	0.45
49:K3:1001:A:N6	84:O3:19:GLN:OE1	2.27	0.45
49:K3:1181:A:H2'	49:K3:1182:A:C4	2.51	0.45
49:K3:1460:C:H2'	49:K3:1461:G:H8	1.81	0.45
49:K3:1607:A:H2'	49:K3:1608:U:H6	1.81	0.45
49:K3:1689:C:C2	49:K3:1690:U:C5	3.04	0.45
56:a5:88:LEU:HD21	60:V3:25:PHE:CD1	2.51	0.45
60:V3:168:MET:HB3	60:V3:172:MET:HE3	1.99	0.45
65:J5:104:LEU:HA	65:J5:124:LYS:O	2.17	0.45
68:B3:152:ARG:HG2	68:B3:153:CYS:N	2.31	0.45
72:C3:46:LEU:O	72:C3:50:ILE:HG13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:C3:57:LEU:O	72:C3:61:ILE:HG13	2.16	0.45
73:d3:27:GLN:O	73:d3:31:LEU:HG	2.16	0.45
75:e3:81:ASP:O	75:e3:84:LYS:N	2.49	0.45
77:H3:55:LEU:HD13	80:I3:83:ARG:HH21	1.81	0.45
2:e2:120:A:H4'	2:e2:121:A:O5'	2.16	0.45
2:e2:244:G:H8	2:e2:244:G:O5'	1.98	0.45
2:e2:457:G:H2'	2:e2:458:C:C6	2.51	0.45
2:e2:518:G:C6	2:e2:644:G:N1	2.85	0.45
2:e2:1106:A:H2'	2:e2:1107:C:H6	1.80	0.45
2:e2:1277:G:H2'	2:e2:1278:C:H6	1.81	0.45
2:e2:1285:U:P	34:T2:133:LYS:HZ3	2.40	0.45
2:e2:1909:G:N2	2:e2:2066:C:C2	2.85	0.45
2:e2:2004:G:H2'	2:e2:2005:U:H6	1.80	0.45
2:e2:2375:A:H2'	2:e2:2376:A:C8	2.51	0.45
2:e2:2503:G:C6	2:e2:2505:C:N4	2.85	0.45
2:e2:2520:C:H1'	2:e2:2640:G:N2	2.29	0.45
2:e2:2607:C:H5''	43:32:96:MET:CE	2.43	0.45
2:e2:2738:C:O2'	2:e2:2740:U:O2	2.32	0.45
2:e2:3694:U:O2'	2:e2:3695:U:H5'	2.15	0.45
2:e2:3849:A:C6	2:e2:3850:C:N4	2.85	0.45
2:e2:4130:C:H2'	2:e2:4131:G:C8	2.52	0.45
2:e2:4138:C:C2	2:e2:4147:G:N2	2.84	0.45
2:e2:4419:U:P	2:e2:4421:C:H42	2.39	0.45
2:e2:4472:G:O2'	23:E2:100:TYR:O	2.30	0.45
2:e2:4630:G:H2'	2:e2:4631:G:C8	2.45	0.45
2:e2:5015:G:C2	2:e2:5033:G:C2	3.04	0.45
3:h2:111:U:OP1	22:D2:6:THR:HB	2.16	0.45
4:d2:92:C:H2'	4:d2:93:G:C8	2.51	0.45
15:w2:77:SER:OG	15:w2:78:ARG:N	2.49	0.45
26:H2:30:ARG:CA	26:H2:119:VAL:HG21	2.35	0.45
27:I2:55:TRP:HD1	27:I2:66:GLY:HA3	1.81	0.45
28:J2:16:PHE:HE1	28:J2:43:LEU:HD11	1.80	0.45
29:K2:173:THR:O	29:K2:177:MET:HG2	2.16	0.45
34:T2:100:GLY:H	34:T2:108:ARG:C	2.21	0.45
35:U2:73:MET:HB2	35:U2:73:MET:HE3	1.71	0.45
36:V2:187:LYS:HB2	36:V2:198:THR:OG1	2.16	0.45
40:02:85:LYS:O	40:02:89:THR:HG23	2.16	0.45
47:72:81:LYS:HB3	47:72:81:LYS:HE2	1.82	0.45
49:K3:4:C:H5'	61:W3:207:ALA:HB2	1.98	0.45
49:K3:84:A:C2	49:K3:150:A:H2'	2.50	0.45
49:K3:94:G:H3'	49:K3:95:G:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:648:A:H5''	58:T3:121:LYS:NZ	2.31	0.45
49:K3:731:G:C2	49:K3:734:C:H1'	2.51	0.45
49:K3:865:A:C5	49:K3:866:U:C4	3.05	0.45
49:K3:932:G:P	60:V3:158:HIS:HB2	2.56	0.45
49:K3:1142:G:H21	49:K3:1145:A:H62	1.65	0.45
49:K3:1321:G:H3'	49:K3:1321:G:P	2.57	0.45
49:K3:1481:G:H2'	49:K3:1482:C:C6	2.51	0.45
49:K3:1541:G:H5'	78:H5:59:SER:CB	2.47	0.45
49:K3:1842:C:OP2	62:X3:2:ARG:NE	2.44	0.45
49:K3:1867:U:C4	84:O3:38:LYS:HB2	2.52	0.45
53:G3:67:SER:O	53:G3:131:CYS:HA	2.16	0.45
55:a3:257:LYS:HG2	55:a3:269:GLU:HG3	1.98	0.45
56:a5:75:MET:HE1	66:N3:204:ARG:HD3	1.98	0.45
57:A3:56:LEU:HD21	57:A3:78:THR:HG22	1.99	0.45
57:A3:85:ILE:HG21	57:A3:112:ILE:HG22	1.98	0.45
63:Y3:126:ILE:HD11	63:Y3:134:CYS:SG	2.57	0.45
64:j3:122:LYS:HG3	64:j3:162:ILE:HG13	1.98	0.45
64:j3:236:ILE:HG13	64:j3:236:ILE:O	2.16	0.45
66:N3:36:GLN:OE1	66:N3:37:ASP:N	2.49	0.45
70:F3:90:LEU:HD23	70:F3:93:LYS:HE2	1.99	0.45
72:C3:16:ILE:HA	72:C3:20:TYR:HD2	1.82	0.45
73:d3:87:LEU:HD21	73:d3:92:MET:HA	1.96	0.45
73:d3:162:ARG:HB3	73:d3:169:ARG:CZ	2.47	0.45
75:e3:22:LEU:HB3	75:e3:89:VAL:HA	1.97	0.45
80:I3:24:LEU:CD1	80:I3:112:VAL:HG22	2.47	0.45
1:E1:6384:A:O2'	49:K3:1639:G:N2	2.47	0.45
2:e2:19:G:C2	3:h2:139:G:C2	3.04	0.45
2:e2:370:U:O4	2:e2:1637:A:C5	2.69	0.45
2:e2:408:A:C2	2:e2:411:G:C4	3.05	0.45
2:e2:668:C:H2'	2:e2:669:C:C6	2.51	0.45
2:e2:682:G:H2'	2:e2:683:C:C2	2.51	0.45
2:e2:1975:G:C2	2:e2:1976:C:C5	3.05	0.45
2:e2:2511:A:C5	2:e2:2514:G:C2	3.04	0.45
2:e2:2576:G:C6	2:e2:2588:C:C4	3.05	0.45
2:e2:2654:C:H2'	2:e2:2655:C:C6	2.51	0.45
2:e2:2780:C:H2'	2:e2:2781:G:H8	1.82	0.45
2:e2:2816:G:C4	2:e2:2817:C:C5	3.04	0.45
2:e2:3707:U:H1'	2:e2:3744:G:N2	2.32	0.45
2:e2:3897:G:O2'	2:e2:3898:G:OP2	2.25	0.45
2:e2:3971:G:O5'	44:42:60:ARG:NH2	2.50	0.45
2:e2:4358:U:H2'	2:e2:4359:U:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4415:A:C2	2:e2:4416:G:H1'	2.52	0.45
2:e2:4607:A:H8	2:e2:4608:G:C8	2.34	0.45
2:e2:4627:U:H2'	2:e2:4628:U:C6	2.52	0.45
2:e2:4759:C:P	15:w2:161:LYS:HZ1	2.39	0.45
2:e2:4880:C:H2'	2:e2:4881:U:O2	2.17	0.45
2:e2:4937:C:N4	34:T2:245:ILE:HA	2.31	0.45
6:k2:36:ASN:O	6:k2:37:LEU:HD23	2.16	0.45
8:m2:60:TYR:CD1	19:A2:78:TYR:HB3	2.51	0.45
9:o2:109:LEU:HD11	9:o2:115:ARG:HE	1.81	0.45
25:G2:8:LYS:HD3	25:G2:12:TYR:CE2	2.52	0.45
26:H2:15:CYS:SG	26:H2:150:LEU:HB2	2.57	0.45
28:J2:21:ASN:O	28:J2:23:GLN:HG3	2.17	0.45
29:K2:96:THR:HA	29:K2:99:ARG:HH11	1.81	0.45
35:U2:37:ALA:O	35:U2:40:MET:HE3	2.16	0.45
36:V2:77:PRO:HD2	36:V2:80:ILE:HB	1.99	0.45
36:V2:242:LEU:HD12	36:V2:243:GLY:H	1.81	0.45
45:52:57:VAL:O	45:52:366:LYS:N	2.43	0.45
49:K3:29:G:C6	49:K3:646:G:C2	3.05	0.45
49:K3:36:U:H5''	49:K3:37:C:OP2	2.16	0.45
49:K3:166:A:C4	67:b3:13:GLN:NE2	2.85	0.45
49:K3:411:G:OP2	49:K3:425:G:N1	2.49	0.45
49:K3:497:C:H5''	64:j3:7:LYS:O	2.17	0.45
49:K3:946:U:H1'	49:K3:1045:U:H4'	1.99	0.45
49:K3:1161:U:H5'	58:T3:12:LYS:HE3	1.98	0.45
49:K3:1164:G:C4	49:K3:1165:G:C2	3.04	0.45
49:K3:1168:G:H2'	49:K3:1169:G:O4'	2.15	0.45
49:K3:1259:A:H3'	49:K3:1259:A:N3	2.30	0.45
49:K3:1304:U:H3'	52:Q3:127:ARG:HG2	1.99	0.45
49:K3:1547:C:N3	49:K3:1656:G:O2'	2.45	0.45
59:U3:50:ASN:HA	72:C3:105:MET:CE	2.44	0.45
59:U3:85:ARG:HD3	59:U3:205:ARG:HH21	1.82	0.45
63:Y3:133:GLY:HA3	63:Y3:156:LEU:O	2.17	0.45
64:j3:181:CYS:HB2	64:j3:225:ILE:HG23	1.98	0.45
64:j3:229:GLY:HA3	64:j3:234:PRO:HA	1.97	0.45
70:F3:190:LYS:O	70:F3:195:THR:OG1	2.24	0.45
74:D3:39:VAL:HG23	74:D3:41:LYS:HG3	1.99	0.45
79:P3:339:LEU:HD23	79:P3:354:ARG:HG3	1.98	0.45
2:e2:243:A:H5'	9:o2:1:MET:O	2.17	0.45
2:e2:729:G:H5'	35:U2:75:ARG:HH12	1.81	0.45
2:e2:746:A:C4	2:e2:915:A:C6	3.05	0.45
2:e2:756:G:H5'	37:W2:61:LYS:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:932:A:H5'	2:e2:934:C:C2	2.51	0.45
2:e2:1313:C:O2	2:e2:3881:G:O2'	2.28	0.45
2:e2:1414:C:H3'	2:e2:1415:G:H5''	1.97	0.45
2:e2:1506:G:H5'	12:t2:114:ARG:HH11	1.82	0.45
2:e2:1772:C:H3'	2:e2:1773:U:C6	2.52	0.45
2:e2:1827:C:H1'	11:r2:50:ASN:ND2	2.31	0.45
2:e2:1837:A:C6	2:e2:1838:A:C6	3.04	0.45
2:e2:1873:A:H2'	2:e2:1874:C:C6	2.51	0.45
2:e2:1889:G:H22	2:e2:1938:A:H61	1.64	0.45
2:e2:1892:C:H1'	2:e2:1936:C:O2	2.16	0.45
2:e2:1979:U:H5''	2:e2:1980:G:C2	2.52	0.45
2:e2:2092:A:H3'	2:e2:2094:A:N6	2.32	0.45
2:e2:2556:G:H2'	2:e2:2557:G:C8	2.52	0.45
2:e2:2648:G:C2	2:e2:2649:G:C5	3.05	0.45
2:e2:2653:C:C2	2:e2:2682:G:N2	2.84	0.45
2:e2:2664:G:H5''	43:32:110:ARG:HH12	1.82	0.45
2:e2:2678:A:N6	2:e2:2679:G:O6	2.50	0.45
2:e2:2689:C:H2'	2:e2:2690:C:C6	2.51	0.45
2:e2:2747:U:H2'	2:e2:2748:C:C6	2.51	0.45
2:e2:2876:G:OP1	27:I2:8:VAL:HG13	2.17	0.45
2:e2:3799:A:C2	6:k2:40:ILE:HB	2.52	0.45
2:e2:4130:C:H2'	2:e2:4131:G:H8	1.80	0.45
2:e2:4143:G:N2	2:e2:4145:C:O4'	2.50	0.45
2:e2:4739:C:C2	2:e2:4740:G:N7	2.84	0.45
2:e2:4912:G:H3'	2:e2:4913:G:N3	2.32	0.45
2:e2:4939:C:O3'	2:e2:4940:C:H4'	2.16	0.45
4:d2:26:C:H5''	25:G2:56:THR:HB	1.99	0.45
4:d2:72:U:C4	4:d2:73:U:C4	3.05	0.45
12:t2:98:GLY:C	12:t2:100:ARG:H	2.24	0.45
16:x2:110:ILE:OXT	34:T2:144:ARG:NE	2.48	0.45
19:A2:115:PRO:HB2	85:a7:129:ARG:NH2	2.28	0.45
33:S2:63:LEU:HD12	33:S2:66:MET:HB3	1.97	0.45
37:W2:77:GLU:HA	37:W2:77:GLU:OE2	2.15	0.45
40:O2:14:TYR:O	40:O2:56:GLN:N	2.50	0.45
43:32:172:ARG:HB3	43:32:176:ARG:NH2	2.32	0.45
44:42:94:ASN:CG	44:42:126:PRO:HD2	2.42	0.45
45:52:286:LYS:NZ	45:52:305:THR:HG22	2.30	0.45
49:K3:122:G:N2	64:j3:146:THR:OG1	2.39	0.45
49:K3:230:A:HO2'	49:K3:231:A:H8	1.61	0.45
49:K3:419:G:C5	49:K3:420:G:H8	2.33	0.45
49:K3:522:A:H2	49:K3:523:A:N7	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:835:C:O2'	49:K3:836:G:N2	2.50	0.45
49:K3:987:A:OP1	84:O3:32:LYS:NZ	2.48	0.45
49:K3:1346:U:HO2'	49:K3:1485:U:HO2'	1.55	0.45
49:K3:1568:C:H1'	78:H5:41:LYS:HD2	1.97	0.45
49:K3:1852:C:H2'	49:K3:1853:C:H6	1.82	0.45
54:G5:130:ARG:HH12	54:G5:142:ARG:NE	2.15	0.45
55:a3:241:PHE:CD1	55:a3:248:LEU:HD13	2.52	0.45
59:U3:51:LEU:HA	59:U3:54:THR:HB	1.98	0.45
63:Y3:106:ARG:HG2	63:Y3:106:ARG:HH11	1.81	0.45
67:b3:45:TRP:HD1	67:b3:48:TYR:CD1	2.35	0.45
72:C3:72:LYS:O	72:C3:73:LEU:C	2.60	0.45
72:C3:84:TYR:OH	72:C3:87:GLU:OE1	2.21	0.45
75:e3:14:VAL:HG12	75:e3:123:VAL:HG12	1.99	0.45
75:e3:52:LEU:HD13	75:e3:65:VAL:CG1	2.47	0.45
2:e2:209:U:N3	2:e2:233:U:O4	2.46	0.45
2:e2:230:G:H4'	9:o2:18:HIS:CD2	2.51	0.45
2:e2:325:U:H2'	2:e2:326:C:C6	2.52	0.45
2:e2:483:G:N2	2:e2:671:G:H1	2.14	0.45
2:e2:736:C:C5	2:e2:737:C:H1'	2.51	0.45
2:e2:911:U:N3	2:e2:912:G:N7	2.65	0.45
2:e2:1366:G:H4'	2:e2:1367:C:H5'	1.99	0.45
2:e2:1394:G:OP1	85:a7:186:ARG:NH1	2.49	0.45
2:e2:1468:C:C5'	10:q2:132:ARG:HH12	2.27	0.45
2:e2:1506:G:H5'	12:t2:114:ARG:NH1	2.31	0.45
2:e2:1523:A:C2	2:e2:1653:A:C5	3.05	0.45
2:e2:1710:A:C5	2:e2:1711:C:H1'	2.51	0.45
2:e2:1911:G:C4	2:e2:1912:C:C5	3.04	0.45
2:e2:1926:U:OP1	2:e2:1948:U:O2'	2.30	0.45
2:e2:2392:C:H2'	2:e2:2393:C:C6	2.51	0.45
2:e2:3651:A:H2'	2:e2:3652:A:O4'	2.16	0.45
2:e2:4209:G:C6	2:e2:4224:A:C6	3.05	0.45
2:e2:4355:G:N2	2:e2:4356:G:C4	2.85	0.45
2:e2:4587:G:C5	2:e2:4588:U:N3	2.85	0.45
4:d2:80:U:C4	4:d2:97:G:C2	3.05	0.45
5:p2:8:ILE:HD11	5:p2:56:LEU:HD13	1.99	0.45
8:m2:127:LEU:HD23	8:m2:135:LYS:O	2.16	0.45
11:r2:7:HIS:ND1	11:r2:9:THR:OG1	2.50	0.45
12:t2:305:PRO:HD3	33:S2:38:ARG:NH2	2.31	0.45
18:92:109:GLU:N	18:92:109:GLU:OE1	2.48	0.45
22:D2:14:ALA:O	22:D2:18:LYS:HG2	2.16	0.45
25:G2:37:VAL:O	25:G2:37:VAL:HG22	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:G2:152:ARG:HD3	25:G2:152:ARG:C	2.42	0.45
47:72:119:ALA:HA	47:72:122:LYS:NZ	2.32	0.45
49:K3:156:G:H2'	49:K3:157:U:O4'	2.16	0.45
49:K3:166:A:O2'	67:b3:8:PRO:HA	2.16	0.45
49:K3:678:U:H2'	49:K3:679:A:C8	2.52	0.45
49:K3:886:A:O2'	49:K3:887:U:H5''	2.16	0.45
49:K3:1822:A:H2'	49:K3:1823:A:C8	2.51	0.45
49:K3:1822:A:H2'	49:K3:1823:A:H8	1.82	0.45
49:K3:1832:A:O5'	49:K3:1840:U:H5''	2.17	0.45
53:G3:66:VAL:HB	53:G3:131:CYS:SG	2.57	0.45
58:T3:41:PHE:HE2	58:T3:44:ALA:H	1.64	0.45
61:W3:171:GLY:CA	65:J5:97:ARG:HD2	2.47	0.45
61:W3:256:TRP:CD2	65:J5:68:ARG:HD3	2.52	0.45
64:j3:132:GLY:CA	64:j3:137:PRO:HA	2.45	0.45
66:N3:19:LEU:HG	66:N3:21:GLY:H	1.81	0.45
72:C3:54:VAL:HA	72:C3:57:LEU:HD12	1.99	0.45
73:d3:40:LYS:HA	73:d3:43:VAL:HG23	1.97	0.45
73:d3:93:LYS:HB2	73:d3:96:TYR:CD2	2.52	0.45
79:P3:248:LYS:HD2	79:P3:258:GLU:HG3	1.98	0.45
79:P3:321:LEU:HD12	79:P3:321:LEU:HA	1.79	0.45
80:I3:67:LYS:HB2	80:I3:67:LYS:HE3	1.74	0.45
2:e2:134:G:H1'	19:A2:85:PRO:HB3	1.99	0.45
2:e2:149:A:N3	2:e2:151:G:C2	2.85	0.45
2:e2:185:C:C4	85:a7:44:ARG:HD2	2.52	0.45
2:e2:496:G:C6	2:e2:659:G:C6	3.05	0.45
2:e2:653:U:H2'	2:e2:654:C:O4'	2.16	0.45
2:e2:1165:G:H3'	2:e2:1166:G:C5'	2.47	0.45
2:e2:1174:G:H22	2:e2:1187:G:H21	1.63	0.45
2:e2:1392:A:H2'	2:e2:1393:G:H8	1.82	0.45
2:e2:1457:G:O2'	2:e2:1458:C:H5'	2.17	0.45
2:e2:1920:C:O2'	2:e2:1921:G:H4'	2.17	0.45
2:e2:2020:G:O2'	29:K2:82:ILE:O	2.33	0.45
2:e2:3730:U:H2'	2:e2:3731:C:C6	2.51	0.45
2:e2:3889:G:C2	2:e2:4720:C:C4	3.04	0.45
2:e2:3969:G:OP1	2:e2:4054:C:N4	2.49	0.45
2:e2:3974:G:C8	2:e2:3975:C:H4'	2.52	0.45
2:e2:4249:G:H4'	39:Y2:97:ASN:O	2.17	0.45
2:e2:4349:C:HO2'	2:e2:4350:C:P	2.37	0.45
2:e2:4389:C:H2'	2:e2:4390:A:C8	2.47	0.45
2:e2:4765:G:N2	2:e2:4870:G:H8	2.15	0.45
4:d2:104:C:H2'	4:d2:105:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d2:104:C:H2'	4:d2:105:C:H6	1.81	0.45
7:l2:2:LYS:HB3	7:l2:15:PRO:HA	1.99	0.45
18:92:79:ALA:O	18:92:82:ILE:HG12	2.17	0.45
24:F2:55:ILE:HD11	24:F2:57:ARG:HH22	1.82	0.45
28:J2:38:PHE:CG	28:J2:39:ARG:N	2.85	0.45
33:S2:158:THR:HB	33:S2:159:PRO:HD2	1.97	0.45
39:Y2:114:ASP:OD2	57:A3:6:GLN:NE2	2.47	0.45
43:32:106:LEU:HD21	43:32:123:LEU:HB3	1.99	0.45
45:52:231:VAL:HG23	45:52:268:ARG:O	2.17	0.45
49:K3:77:A:C6	67:b3:176:ILE:HB	2.52	0.45
49:K3:88:G:N2	49:K3:499:G:O3'	2.50	0.45
49:K3:641:A:H2'	49:K3:642:U:O4'	2.16	0.45
49:K3:996:A:OP1	70:F3:164:ARG:NH1	2.49	0.45
49:K3:1091:C:C4	49:K3:1092:G:N7	2.85	0.45
49:K3:1277:C:N4	49:K3:1321:G:H22	2.13	0.45
49:K3:1781:A:H2'	49:K3:1782:G:C8	2.49	0.45
51:13:74:TYR:CG	51:13:81:LEU:HD13	2.52	0.45
56:a5:47:LEU:HB3	60:V3:67:PHE:HD1	1.81	0.45
56:a5:54:CYS:C	56:a5:56:VAL:HG23	2.41	0.45
60:V3:144:LYS:HZ2	60:V3:146:ARG:HD2	1.82	0.45
73:d3:114:VAL:HG21	73:d3:130:ILE:HD11	1.99	0.45
2:e2:38:A:H62	2:e2:44:A:H61	1.64	0.45
2:e2:182:G:OP2	2:e2:182:G:H2'	2.17	0.45
2:e2:209:U:N3	2:e2:233:U:C4	2.80	0.45
2:e2:268:G:C4	2:e2:269:G:C8	3.05	0.45
2:e2:498:C:H4'	2:e2:499:G:H5'	1.99	0.45
2:e2:499:G:N3	2:e2:499:G:H2'	2.31	0.45
2:e2:720:G:C2	2:e2:949:G:C2	3.04	0.45
2:e2:1267:C:C2	2:e2:2120:C:C5	3.05	0.45
2:e2:1410:U:H3'	2:e2:1411:C:C6	2.51	0.45
2:e2:1852:G:H5''	2:e2:1853:G:C5'	2.46	0.45
2:e2:1977:C:O2'	31:M2:83:LYS:NZ	2.46	0.45
2:e2:2077:C:C5'	14:v2:63:ASN:HA	2.43	0.45
2:e2:2245:G:H5'	2:e2:2246:C:C5	2.52	0.45
2:e2:2341:A:P	10:q2:2:PRO:HG3	2.57	0.45
2:e2:2419:C:C2	2:e2:2420:A:C8	3.05	0.45
2:e2:2452:G:N2	2:e2:2507:A:H62	2.13	0.45
2:e2:2514:G:OP1	17:y2:17:SER:OG	2.32	0.45
2:e2:2735:G:C2	2:e2:2736:G:C5	3.05	0.45
2:e2:3853:U:O4	2:e2:3854:C:N4	2.50	0.45
2:e2:3877:A:H3'	2:e2:3878:C:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4196:G:C6	2:e2:4197:G:C8	3.05	0.45
2:e2:4407:G:H1'	2:e2:4438:U:C2	2.52	0.45
2:e2:4525:C:C4	2:e2:4526:U:C4	3.05	0.45
2:e2:4691:A:C2	2:e2:4700:A:C5	3.05	0.45
2:e2:4761:G:C5	2:e2:4762:A:N1	2.84	0.45
2:e2:4897:G:H2'	2:e2:4898:G:C8	2.52	0.45
2:e2:5010:U:O4	2:e2:5011:A:N6	2.50	0.45
3:h2:17:A:H2'	3:h2:18:U:C6	2.52	0.45
3:h2:86:U:H4'	3:h2:87:G:H5'	1.99	0.45
5:p2:7:GLU:OE2	5:p2:9:LYS:HB3	2.16	0.45
6:k2:92:ASP:C	6:k2:92:ASP:OD1	2.60	0.45
10:q2:123:ILE:CD1	10:q2:143:ALA:HB3	2.46	0.45
12:t2:112:HIS:HB2	41:12:202:ARG:O	2.17	0.45
13:u2:46:LEU:HD23	13:u2:46:LEU:HA	1.61	0.45
13:u2:98:SER:HB2	13:u2:99:PRO:HD2	1.99	0.45
15:w2:18:ARG:HA	15:w2:18:ARG:HD2	1.86	0.45
15:w2:108:ILE:HG21	15:w2:160:ARG:NE	2.31	0.45
29:K2:151:THR:HG23	31:M2:9:GLU:OE1	2.17	0.45
33:S2:70:MET:HE1	33:S2:137:VAL:HG21	1.98	0.45
34:T2:111:LYS:HB3	34:T2:113:ARG:O	2.17	0.45
35:U2:161:ILE:HD12	35:U2:166:ILE:CD1	2.43	0.45
36:V2:221:ALA:O	36:V2:224:THR:OG1	2.33	0.45
37:W2:72:TRP:CH2	40:02:33:GLN:HB3	2.52	0.45
44:42:126:PRO:HA	44:42:129:ASN:HB2	1.99	0.45
45:52:56:ILE:O	45:52:73:VAL:HA	2.17	0.45
45:52:164:ALA:O	45:52:180:LEU:HD12	2.17	0.45
49:K3:291:G:O2'	53:G3:41:GLY:HA3	2.17	0.45
49:K3:747:U:H2'	49:K3:747:U:O2	2.17	0.45
49:K3:934:G:O4'	49:K3:994:C:O2'	2.27	0.45
49:K3:957:A:C8	49:K3:958:G:C2	3.05	0.45
49:K3:1134:G:P	84:O3:6:ARG:HH21	2.38	0.45
49:K3:1273:C:O2'	49:K3:1506:A:N1	2.38	0.45
49:K3:1286:G:H4'	52:Q3:132:LEU:HD12	1.99	0.45
49:K3:1615:U:OP2	49:K3:1615:U:H3'	2.17	0.45
49:K3:1718:G:H22	49:K3:1814:G:H2'	1.82	0.45
49:K3:1743:G:C2	49:K3:1791:A:N6	2.78	0.45
55:a3:195:LEU:HD22	55:a3:210:GLY:C	2.42	0.45
60:V3:146:ARG:HB2	60:V3:149:GLN:HB2	1.99	0.45
63:Y3:140:GLY:HA3	63:Y3:182:LEU:HD23	1.98	0.45
63:Y3:150:MET:HE2	63:Y3:152:PHE:CZ	2.52	0.45
65:J5:9:ASP:O	65:J5:12:LYS:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:N3:166:ILE:HD11	83:M3:44:LEU:HD11	1.98	0.45
70:F3:137:ASP:O	70:F3:141:LEU:HG	2.16	0.45
71:c3:21:TYR:CD2	71:c3:22:HIS:HB3	2.52	0.45
71:c3:99:ASN:HA	71:c3:174:CYS:SG	2.57	0.45
73:d3:110:LEU:HB2	73:d3:149:VAL:HG23	1.98	0.45
1:E1:6281:C:O2	1:E1:6282:A:C8	2.70	0.45
1:E1:6354:A:H2	1:E1:6355:A:C8	2.35	0.45
1:E1:6387:G:C4	1:E1:6388:A:C8	3.05	0.45
2:e2:33:A:C6	2:e2:50:C:N3	2.85	0.45
2:e2:1379:C:H4'	2:e2:1380:G:C5'	2.45	0.45
2:e2:1420:A:O2'	2:e2:1501:C:OP2	2.34	0.45
2:e2:1472:C:C2	2:e2:1473:U:C5	3.05	0.45
2:e2:1960:G:H22	2:e2:2023:G:HO2'	1.55	0.45
2:e2:2112:G:O2'	2:e2:2113:G:H5''	2.17	0.45
2:e2:2342:G:C4	2:e2:2344:U:C5	3.05	0.45
2:e2:2344:U:N3	10:q2:9:ARG:HD2	2.32	0.45
2:e2:3834:C:H2'	2:e2:3835:C:C6	2.48	0.45
2:e2:4053:A:H62	44:42:2:SER:HA	1.81	0.45
2:e2:4254:G:H2'	2:e2:4254:G:N3	2.32	0.45
2:e2:4393:G:C5	2:e2:4447:C:N3	2.85	0.45
2:e2:4541:G:O2'	2:e2:4543:G:O6	2.34	0.45
2:e2:4713:G:C5	2:e2:4714:C:C5	3.04	0.45
2:e2:4731:G:N2	2:e2:4734:A:H1'	2.32	0.45
2:e2:4968:A:OP1	45:52:120:LYS:HG2	2.17	0.45
4:d2:2:U:O2	4:d2:117:G:O6	2.35	0.45
27:I2:37:TYR:O	27:I2:47:MET:HB2	2.17	0.45
32:R2:67:ARG:HG2	32:R2:72:PRO:O	2.17	0.45
33:S2:85:THR:OG1	33:S2:104:ARG:O	2.15	0.45
39:Y2:20:LEU:HB3	39:Y2:74:VAL:HG23	1.99	0.45
41:12:193:ARG:HB3	41:12:193:ARG:CZ	2.46	0.45
43:32:70:ARG:HH11	43:32:76:MET:HE3	1.82	0.45
48:82:78:PHE:CE2	48:82:83:LEU:HD11	2.52	0.45
49:K3:129:C:H3'	49:K3:182:C:H4'	1.99	0.45
49:K3:273:G:H2'	49:K3:274:G:C8	2.52	0.45
49:K3:373:G:H2'	49:K3:374:G:C8	2.51	0.45
49:K3:544:G:C2	49:K3:545:A:H1'	2.51	0.45
49:K3:750:C:O5'	49:K3:750:C:H6	2.00	0.45
49:K3:1343:U:H2'	49:K3:1344:A:O4'	2.17	0.45
49:K3:1568:C:H2'	49:K3:1569:A:O4'	2.17	0.45
49:K3:1756:C:C4	49:K3:1757:G:N7	2.85	0.45
53:G3:69:ARG:NH1	53:G3:130:GLU:OE2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:G3:102:PHE:HD2	58:T3:8:ARG:HE	1.65	0.45
57:A3:21:ASP:O	57:A3:25:LEU:HB2	2.17	0.45
57:A3:29:SER:HB2	57:A3:32:GLN:NE2	2.32	0.45
59:U3:117:ARG:O	59:U3:119:PRO:HD3	2.17	0.45
60:V3:108:ASP:HA	84:O3:68:TYR:CE1	2.52	0.45
65:J5:85:ASP:O	65:J5:89:TRP:HD1	1.99	0.45
70:F3:73:PRO:HB3	70:F3:75:TRP:CH2	2.52	0.45
71:c3:121:LEU:HG	71:c3:166:PHE:CZ	2.53	0.45
73:d3:128:VAL:HG12	73:d3:131:ARG:HH21	1.80	0.45
80:I3:21:ARG:CZ	80:I3:88:LEU:HB3	2.45	0.45
81:I5:26:ASP:HA	81:I5:69:THR:O	2.17	0.45
85:a7:162:LYS:HG3	85:a7:163:LYS:H	1.82	0.45
1:E1:6377:G:H2'	1:E1:6378:G:C8	2.52	0.44
2:e2:29:G:H5''	41:12:172:ARG:HD3	1.99	0.44
2:e2:377:A:P	12:t2:86:ARG:NH1	2.91	0.44
2:e2:458:C:C2	2:e2:459:C:C5	3.05	0.44
2:e2:680:G:H2'	2:e2:681:G:H8	1.83	0.44
2:e2:710:G:N2	34:T2:139:HIS:HE1	2.15	0.44
2:e2:1333:A:C6	2:e2:2354:G:N1	2.85	0.44
2:e2:1378:C:O5'	2:e2:1379:C:H5''	2.17	0.44
2:e2:1846:C:H2'	2:e2:1847:C:C6	2.52	0.44
2:e2:2065:C:O2'	2:e2:2066:C:H5'	2.17	0.44
2:e2:2684:C:H2'	2:e2:2685:C:H6	1.81	0.44
2:e2:2703:G:H2'	2:e2:2704:C:H6	1.80	0.44
2:e2:2751:G:OP1	17:y2:69:LYS:NZ	2.51	0.44
2:e2:3950:U:H3'	2:e2:3951:G:C8	2.52	0.44
2:e2:3975:C:P	44:42:25:ARG:HH12	2.39	0.44
2:e2:3980:G:C6	2:e2:4026:G:C2	3.05	0.44
2:e2:4455:G:H5''	45:52:5:LYS:NZ	2.32	0.44
2:e2:4494:G:C6	2:e2:4507:A:N1	2.85	0.44
2:e2:4603:C:H4'	37:W2:186:PHE:CE1	2.52	0.44
2:e2:4917:C:H2'	2:e2:4918:C:C6	2.52	0.44
4:d2:70:G:C4	4:d2:71:G:C8	3.05	0.44
12:t2:120:LYS:O	12:t2:124:ILE:HG13	2.16	0.44
13:u2:23:ARG:NH1	13:u2:57:MET:HE1	2.32	0.44
13:u2:48:GLU:OE2	13:u2:48:GLU:HA	2.17	0.44
16:x2:50:VAL:HG11	16:x2:102:ARG:CZ	2.46	0.44
26:H2:10:ASN:HB3	26:H2:13:LYS:HG2	1.98	0.44
28:J2:32:LEU:HD11	28:J2:110:ALA:HA	1.98	0.44
28:J2:117:ILE:O	28:J2:121:GLN:HG3	2.16	0.44
29:K2:16:LYS:O	29:K2:19:GLN:HB3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:T2:287:HIS:CD2	34:T2:288:LYS:N	2.85	0.44
44:42:73:HIS:NE2	44:42:142:GLU:O	2.50	0.44
45:52:49:TYR:O	45:52:79:VAL:HA	2.17	0.44
45:52:257:TRP:HE3	45:52:258:HIS:CE1	2.35	0.44
48:82:80:LYS:HZ2	48:82:108:GLU:N	2.15	0.44
49:K3:71:G:N2	67:b3:165:GLU:OE1	2.49	0.44
49:K3:180:G:H5'	49:K3:182:C:C5	2.52	0.44
49:K3:589:G:H21	49:K3:591:U:H3	1.65	0.44
49:K3:748:C:H2'	49:K3:749:U:C5	2.52	0.44
49:K3:1018:U:C2	49:K3:1019:C:N4	2.81	0.44
49:K3:1114:U:C5	49:K3:1116:C:H5''	2.53	0.44
49:K3:1401:A:C6	49:K3:1402:A:N6	2.85	0.44
49:K3:1462:U:H3'	49:K3:1463:U:H6	1.81	0.44
49:K3:1507:G:H1'	52:Q3:119:THR:O	2.17	0.44
49:K3:1526:G:H2'	49:K3:1527:C:H6	1.82	0.44
49:K3:1646:C:OP1	49:K3:1647:A:H5'	2.16	0.44
49:K3:1745:A:C5	49:K3:1790:A:C4	3.05	0.44
49:K3:1753:C:C2	49:K3:1754:G:N7	2.85	0.44
49:K3:1807:C:H2'	49:K3:1808:U:C6	2.52	0.44
55:a3:244:ASN:OD1	55:a3:245:ARG:HG3	2.17	0.44
58:T3:55:VAL:HG22	58:T3:56:GLY:N	2.32	0.44
59:U3:51:LEU:HD23	59:U3:51:LEU:H	1.82	0.44
59:U3:198:MET:HG2	72:C3:90:ALA:HB2	1.99	0.44
61:W3:185:THR:H	61:W3:246:LYS:NZ	2.15	0.44
65:J5:31:SER:H	65:J5:34:ILE:HG12	1.82	0.44
66:N3:79:HIS:HB2	66:N3:159:ARG:HE	1.82	0.44
67:b3:214:ALA:O	67:b3:218:LYS:HG3	2.16	0.44
71:c3:50:GLY:C	71:c3:52:ASN:H	2.24	0.44
76:E3:64:TRP:N	76:E3:64:TRP:CD1	2.85	0.44
81:I5:92:ALA:HA	81:I5:95:GLY:HA2	1.99	0.44
83:M3:98:LYS:HB2	83:M3:112:ASN:ND2	2.32	0.44
85:a7:106:SER:O	85:a7:108:GLU:HG2	2.16	0.44
2:e2:16:G:P	8:m2:62:ARG:HH22	2.39	0.44
2:e2:220:C:O2	2:e2:220:C:H2'	2.17	0.44
2:e2:261:G:C2	2:e2:262:G:C5	3.05	0.44
2:e2:383:A:H2'	2:e2:384:A:O4'	2.17	0.44
2:e2:744:G:N2	2:e2:921:C:O2	2.51	0.44
2:e2:1440:U:N3	2:e2:2104:A:O2'	2.50	0.44
2:e2:1950:G:C6	2:e2:1951:G:C5	3.05	0.44
2:e2:2470:C:O2	2:e2:3673:C:N4	2.50	0.44
2:e2:3599:A:H2'	2:e2:3600:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3692:A:C5	2:e2:3693:U:C5	3.05	0.44
2:e2:3835:C:H2'	2:e2:3836:A:C8	2.51	0.44
2:e2:3965:A:H2	2:e2:4043:G:O6	2.00	0.44
2:e2:4367:G:N1	2:e2:4368:G:C5	2.85	0.44
2:e2:4914:C:C2'	2:e2:4915:G:H5'	2.48	0.44
2:e2:4978:G:H2'	2:e2:4980:C:OP2	2.17	0.44
4:d2:15:C:H2'	4:d2:16:A:H8	1.82	0.44
10:q2:77:LYS:O	10:q2:80:THR:HG22	2.18	0.44
11:r2:55:LYS:O	11:r2:59:ALA:HB3	2.17	0.44
14:v2:86:GLU:C	14:v2:88:LEU:H	2.25	0.44
26:H2:70:CYS:SG	26:H2:71:ALA:N	2.91	0.44
26:H2:120:ASN:HD22	26:H2:120:ASN:N	2.15	0.44
28:J2:16:PHE:HB3	28:J2:27:THR:OG1	2.17	0.44
30:L2:46:PHE:HB3	38:X2:139:ARG:HG2	2.00	0.44
38:X2:134:VAL:HG23	38:X2:134:VAL:O	2.17	0.44
44:42:18:LEU:HD23	44:42:18:LEU:H	1.82	0.44
44:42:141:ASN:HB3	44:42:143:ASN:OD1	2.17	0.44
49:K3:21:U:H4'	73:d3:18:ARG:HH22	1.82	0.44
49:K3:38:A:H5''	73:d3:6:SER:O	2.17	0.44
49:K3:54:A:H3'	49:K3:451:G:N1	2.32	0.44
49:K3:305:U:O3'	71:c3:43:ILE:HG13	2.17	0.44
49:K3:844:U:O2'	49:K3:845:G:O4'	2.30	0.44
49:K3:846:G:OP2	64:j3:108:ARG:NE	2.51	0.44
49:K3:1241:A:H2	49:K3:1516:G:N2	2.11	0.44
49:K3:1734:G:H22	49:K3:1799:G:H2'	1.81	0.44
55:a3:286:CYS:HB2	55:a3:302:TYR:CE1	2.51	0.44
57:A3:85:ILE:HB	57:A3:112:ILE:HA	1.99	0.44
59:U3:199:PRO:HD2	72:C3:90:ALA:HA	1.99	0.44
61:W3:251:LEU:HA	61:W3:255:LEU:HD12	2.00	0.44
61:W3:257:LYS:HZ1	74:D3:13:VAL:HG11	1.81	0.44
63:Y3:140:GLY:HA3	63:Y3:182:LEU:CD2	2.48	0.44
65:J5:37:PHE:HE1	65:J5:103:VAL:HG11	1.82	0.44
66:N3:50:PRO:HB3	66:N3:70:GLU:CG	2.47	0.44
70:F3:145:ALA:CB	70:F3:168:ILE:HG21	2.48	0.44
70:F3:148:VAL:HG21	70:F3:168:ILE:HD11	1.99	0.44
72:C3:31:ASN:HD21	72:C3:58:MET:HE1	1.83	0.44
73:d3:84:ILE:HA	73:d3:150:ARG:HG2	1.99	0.44
73:d3:102:ILE:O	73:d3:106:LEU:HG	2.17	0.44
74:D3:2:GLN:NE2	74:D3:3:SER:O	2.50	0.44
79:P3:403:ASN:OD1	79:P3:404:VAL:N	2.51	0.44
82:L3:15:GLU:OE2	82:L3:24:LEU:N	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:M3:71:ALA:HA	83:M3:74:SER:OG	2.17	0.44
83:M3:96:LEU:O	83:M3:114:LYS:HB2	2.17	0.44
84:O3:87:ARG:NH1	84:O3:94:ASP:OD1	2.35	0.44
2:e2:106:A:H2'	2:e2:107:G:O4'	2.18	0.44
2:e2:149:A:OP1	2:e2:151:G:H5'	2.17	0.44
2:e2:166:C:H5	2:e2:269:G:H1	1.63	0.44
2:e2:346:G:C4	3:h2:29:G:N2	2.86	0.44
2:e2:408:A:OP1	2:e2:409:G:N2	2.51	0.44
2:e2:717:U:O4	2:e2:952:G:O6	2.35	0.44
2:e2:1075:G:H22	2:e2:1235:G:N2	2.15	0.44
2:e2:1519:C:H2'	2:e2:1520:C:C6	2.53	0.44
2:e2:1603:C:H2'	2:e2:1604:G:H8	1.82	0.44
2:e2:1680:G:N1	2:e2:1681:G:C5	2.85	0.44
2:e2:1765:A:H2'	2:e2:1765:A:N3	2.32	0.44
2:e2:2044:G:C6	15:w2:62:MET:HE1	2.52	0.44
2:e2:2105:G:H21	2:e2:2105:G:P	2.39	0.44
2:e2:2464:C:H2'	2:e2:2465:C:C6	2.53	0.44
2:e2:2862:G:O5'	2:e2:2862:G:H8	2.01	0.44
2:e2:3871:A:H2'	2:e2:3872:A:H8	1.81	0.44
2:e2:4137:C:H2'	2:e2:4138:C:H6	1.79	0.44
2:e2:4167:G:N1	2:e2:4168:G:C5	2.86	0.44
2:e2:4232:U:C2	24:F2:5:PRO:HD3	2.53	0.44
2:e2:4759:C:C5'	15:w2:161:LYS:HZ1	2.30	0.44
2:e2:4940:C:C1'	34:T2:159:ARG:HH11	2.30	0.44
3:h2:12:G:C6	3:h2:13:G:N7	2.85	0.44
9:o2:117:LYS:O	9:o2:121:ARG:HD3	2.17	0.44
10:q2:24:LYS:O	10:q2:26:ARG:N	2.50	0.44
12:t2:40:VAL:HG11	12:t2:123:ALA:CB	2.47	0.44
16:x2:39:THR:O	16:x2:41:PHE:N	2.50	0.44
18:92:116:LEU:O	18:92:125:LYS:N	2.47	0.44
18:92:202:VAL:O	18:92:202:VAL:HG12	2.16	0.44
25:G2:51:MET:HA	25:G2:64:ILE:HD13	1.99	0.44
32:R2:64:LEU:O	32:R2:68:LYS:CB	2.65	0.44
34:T2:95:VAL:O	34:T2:97:LYS:HG3	2.17	0.44
36:V2:161:VAL:HG11	36:V2:200:THR:HG23	1.98	0.44
36:V2:229:ARG:HH22	36:V2:232:GLU:HG2	1.83	0.44
42:22:71:PHE:HA	42:22:111:ARG:HD2	1.99	0.44
49:K3:192:C:OP1	71:c3:140:LYS:HE3	2.17	0.44
49:K3:193:C:N4	71:c3:144:LYS:HZ2	2.15	0.44
49:K3:199:C:C4	49:K3:200:G:H1'	2.52	0.44
49:K3:309:G:H21	49:K3:310:C:N4	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:366:U:C2	49:K3:395:G:N2	2.85	0.44
49:K3:410:G:C2	49:K3:411:G:C5	3.05	0.44
49:K3:569:A:H2'	49:K3:570:C:C6	2.52	0.44
49:K3:683:G:C2	49:K3:1023:A:C2	3.05	0.44
49:K3:868:G:H2'	79:P3:353:LYS:HD3	1.99	0.44
49:K3:1096:G:H2'	49:K3:1097:G:H8	1.79	0.44
49:K3:1104:G:C2	49:K3:1105:G:C5	3.04	0.44
49:K3:1143:A:H8	49:K3:1143:A:OP1	2.01	0.44
49:K3:1297:U:O2	49:K3:1301:A:H2	1.99	0.44
49:K3:1604:G:C2	49:K3:1605:G:C4	3.05	0.44
49:K3:1722:G:N1	49:K3:1813:A:N7	2.65	0.44
56:a5:56:VAL:HG13	56:a5:61:LYS:NZ	2.32	0.44
58:T3:54:LYS:HB3	58:T3:91:LEU:HD11	1.99	0.44
60:V3:197:ILE:HB	60:V3:210:VAL:HG11	2.00	0.44
61:W3:127:PHE:HE1	61:W3:234:GLY:HA2	1.81	0.44
64:j3:77:ARG:HH12	64:j3:80:ILE:HA	1.83	0.44
66:N3:204:ARG:HH22	69:f3:60:GLU:CD	2.24	0.44
72:C3:13:ALA:O	72:C3:17:ILE:HG22	2.17	0.44
73:d3:87:LEU:HD11	73:d3:91:LYS:O	2.18	0.44
79:P3:288:GLU:H	79:P3:288:GLU:CD	2.25	0.44
81:I5:60:PHE:CD1	81:I5:71:GLY:HA3	2.52	0.44
82:L3:23:ARG:HB2	82:L3:26:GLN:HA	1.98	0.44
2:e2:76:A:N7	85:a7:74:ARG:NH2	2.65	0.44
2:e2:123:C:C2	2:e2:147:A:N1	2.86	0.44
2:e2:176:G:C6	2:e2:261:G:N1	2.85	0.44
2:e2:507:G:N2	2:e2:651:C:C2	2.73	0.44
2:e2:711:A:H1'	34:T2:139:HIS:CE1	2.52	0.44
2:e2:751:G:C2	2:e2:912:G:C2	3.05	0.44
2:e2:935:A:H5''	2:e2:936:C:OP1	2.17	0.44
2:e2:986:C:C6	2:e2:1050:C:H5	2.36	0.44
2:e2:1198:G:N1	2:e2:1199:G:C6	2.86	0.44
2:e2:1241:C:H2'	2:e2:1242:G:H5'	2.00	0.44
2:e2:1282:G:N7	34:T2:131:HIS:CD2	2.85	0.44
2:e2:1352:C:H41	33:S2:55:ARG:CZ	2.30	0.44
2:e2:1507:C:H2'	2:e2:1508:A:C8	2.52	0.44
2:e2:1523:A:C8	2:e2:4389:C:O2'	2.69	0.44
2:e2:2296:G:C6	2:e2:2297:G:N7	2.86	0.44
2:e2:2479:G:H2'	2:e2:2480:G:H8	1.81	0.44
2:e2:2616:C:P	43:32:60:ARG:HH21	2.40	0.44
2:e2:2804:C:N4	2:e2:2805:C:N4	2.65	0.44
2:e2:3643:A:OP1	21:C2:2:THR:OG1	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3695:U:H2'	2:e2:3696:C:C6	2.53	0.44
2:e2:4401:G:C4	2:e2:4402:C:C5	3.06	0.44
2:e2:4495:G:C2	2:e2:4496:A:N7	2.86	0.44
2:e2:4518:A:N7	45:52:257:TRP:CZ3	2.86	0.44
2:e2:4765:G:C2	2:e2:4870:G:C8	3.06	0.44
15:w2:37:ARG:CZ	15:w2:37:ARG:HB3	2.47	0.44
17:y2:83:CYS:N	17:y2:86:CYS:HB2	2.20	0.44
20:B2:66:ASP:OD1	20:B2:67:LYS:N	2.50	0.44
23:E2:102:ARG:O	23:E2:103:LEU:HD23	2.17	0.44
26:H2:99:GLU:OE2	26:H2:109:VAL:HB	2.18	0.44
28:J2:18:ILE:HG13	28:J2:18:ILE:O	2.17	0.44
28:J2:32:LEU:O	28:J2:33:LYS:C	2.59	0.44
31:M2:22:VAL:O	31:M2:22:VAL:HG12	2.16	0.44
40:02:40:GLY:HA3	40:02:43:THR:OG1	2.17	0.44
41:12:14:LYS:C	41:12:15:GLN:HG2	2.43	0.44
41:12:61:ILE:O	41:12:61:ILE:HG13	2.16	0.44
47:72:115:LYS:HA	47:72:115:LYS:HD2	1.70	0.44
49:K3:13:C:N3	49:K3:1199:A:N1	2.66	0.44
49:K3:143:U:C6	67:b3:184:VAL:HG13	2.53	0.44
49:K3:187:G:C2	49:K3:188:C:C4	3.06	0.44
49:K3:436:G:C6	49:K3:458:A:N6	2.85	0.44
49:K3:469:A:OP1	67:b3:93:LYS:NZ	2.44	0.44
49:K3:497:C:OP1	64:j3:30:ARG:HG3	2.17	0.44
49:K3:572:U:P	81:I5:37:LYS:HE2	2.58	0.44
49:K3:1261:C:H41	49:K3:1661:A:N6	2.14	0.44
53:G3:84:ARG:HE	53:G3:115:PRO:HD3	1.80	0.44
54:G5:115:LYS:HG3	54:G5:126:PHE:CZ	2.52	0.44
55:a3:172:LYS:HZ1	63:Y3:216:GLU:HA	1.81	0.44
57:A3:77:LYS:HD3	57:A3:102:PHE:CD1	2.53	0.44
65:J5:23:ARG:O	65:J5:64:ASN:ND2	2.51	0.44
68:B3:126:VAL:HG12	68:B3:127:ASP:N	2.32	0.44
71:c3:145:ILE:HA	71:c3:148:LYS:HG2	2.00	0.44
71:c3:148:LYS:O	71:c3:152:ARG:HG3	2.17	0.44
79:P3:297:ALA:HA	79:P3:328:LYS:HD3	2.00	0.44
80:I3:23:THR:HA	80:I3:88:LEU:HD23	2.00	0.44
83:M3:63:PRO:HA	83:M3:68:ILE:HD11	1.99	0.44
1:E1:6319:A:H4'	1:E1:6350:U:H5	1.82	0.44
1:E1:6344:U:H4'	1:E1:6345:U:OP1	2.18	0.44
1:E1:6379:U:H2'	1:E1:6380:U:H5'	2.00	0.44
2:e2:21:G:O6	3:h2:36:G:C6	2.71	0.44
2:e2:173:C:H2'	2:e2:174:C:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:369:G:OP2	22:D2:51:LEU:HD13	2.17	0.44
2:e2:431:G:C5	2:e2:4720:C:N4	2.83	0.44
2:e2:718:C:C2	2:e2:951:G:N2	2.85	0.44
2:e2:735:G:N2	2:e2:736:C:N4	2.65	0.44
2:e2:964:A:H5''	28:J2:98:ARG:NH2	2.33	0.44
2:e2:1234:G:C4	2:e2:1235:G:C8	3.06	0.44
2:e2:1695:U:H4'	2:e2:1718:C:H5	1.81	0.44
2:e2:1825:A:H2'	2:e2:1826:G:C8	2.49	0.44
2:e2:1884:G:C4	2:e2:1894:G:N2	2.85	0.44
2:e2:2542:G:H2'	2:e2:2542:G:N3	2.32	0.44
2:e2:2656:U:H5''	42:22:38:TYR:HB3	1.98	0.44
2:e2:2862:G:O2'	2:e2:3624:A:H8	1.99	0.44
2:e2:3606:U:OP2	43:32:76:MET:HE1	2.18	0.44
2:e2:3704:U:N3	2:e2:3705:G:N7	2.65	0.44
2:e2:4489:G:N3	2:e2:4708:A:H2'	2.33	0.44
2:e2:4567:G:C2'	2:e2:4568:A:H5'	2.47	0.44
3:h2:49:G:N1	3:h2:77:A:N1	2.65	0.44
3:h2:84:A:OP1	9:o2:117:LYS:HD2	2.16	0.44
6:k2:83:ARG:NH1	6:k2:120:PRO:O	2.40	0.44
17:y2:88:ARG:NH1	17:y2:92:LYS:HE3	2.32	0.44
24:F2:20:PRO:O	24:F2:73:VAL:HG22	2.18	0.44
24:F2:34:TYR:HA	24:F2:38:LYS:NZ	2.31	0.44
24:F2:62:THR:HG23	24:F2:89:LYS:HZ1	1.82	0.44
25:G2:219:TYR:CE1	25:G2:223:PHE:HD2	2.34	0.44
29:K2:98:ILE:HA	29:K2:101:MET:SD	2.58	0.44
29:K2:129:GLY:O	29:K2:178:LEU:HA	2.17	0.44
41:12:92:LEU:HA	41:12:92:LEU:HD23	1.59	0.44
45:52:56:ILE:HD11	45:52:365:LEU:HD13	2.00	0.44
46:62:82:LEU:HD23	46:62:83:ARG:N	2.33	0.44
49:K3:141:A:C6	49:K3:177:G:C2	3.05	0.44
49:K3:217:A:H4'	49:K3:340:C:H5''	2.00	0.44
49:K3:683:G:N1	49:K3:1023:A:C5	2.86	0.44
49:K3:696:G:H2'	49:K3:697:G:O4'	2.17	0.44
49:K3:731:G:N3	49:K3:734:C:H1'	2.32	0.44
49:K3:894:G:H2'	49:K3:895:G:C8	2.53	0.44
49:K3:1023:A:H2'	49:K3:1024:A:C8	2.52	0.44
49:K3:1093:A:H2'	49:K3:1094:C:C6	2.52	0.44
49:K3:1102:G:H2'	49:K3:1103:C:C6	2.52	0.44
49:K3:1151:G:H2'	49:K3:1152:U:C6	2.53	0.44
49:K3:1334:G:H5''	63:Y3:139:SER:HB2	2.00	0.44
49:K3:1819:A:N6	49:K3:1820:G:O6	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:G5:27:ALA:O	54:G5:31:THR:HG23	2.17	0.44
55:a3:195:LEU:HD11	55:a3:209:SER:HB3	1.98	0.44
56:a5:57:THR:OG1	56:a5:60:MET:HB2	2.18	0.44
58:T3:41:PHE:CE1	58:T3:120:PHE:HE1	2.35	0.44
59:U3:123:VAL:HA	59:U3:145:ILE:HG22	2.00	0.44
60:V3:57:ILE:HB	60:V3:60:ASP:OD2	2.17	0.44
64:j3:206:ASP:O	64:j3:222:LEU:HB2	2.18	0.44
65:J5:85:ASP:O	65:J5:89:TRP:CD1	2.71	0.44
68:B3:87:GLU:HG3	68:B3:88:ARG:N	2.33	0.44
77:H3:47:ALA:HA	77:H3:50:ILE:HB	2.00	0.44
79:P3:421:LYS:HA	79:P3:421:LYS:HD2	1.81	0.44
82:L3:3:LEU:HD23	82:L3:3:LEU:HA	1.83	0.44
2:e2:25:A:N7	2:e2:341:G:C4	2.86	0.44
2:e2:179:G:N1	2:e2:258:G:C6	2.85	0.44
2:e2:749:G:H2'	2:e2:750:U:O4'	2.17	0.44
2:e2:929:A:H3'	2:e2:929:A:N3	2.32	0.44
2:e2:961:G:H8	2:e2:961:G:OP2	2.00	0.44
2:e2:1753:G:H2'	2:e2:1754:U:C6	2.53	0.44
2:e2:1891:A:H5''	2:e2:1892:C:C5	2.52	0.44
2:e2:1917:U:O2'	2:e2:1918:G:H3'	2.17	0.44
2:e2:2275:G:H2'	2:e2:2276:A:H8	1.80	0.44
2:e2:2417:A:H61	2:e2:2430:C:H1'	1.81	0.44
2:e2:2655:C:H2'	2:e2:2656:U:H6	1.82	0.44
2:e2:3835:C:H2'	2:e2:3836:A:H8	1.83	0.44
2:e2:3965:A:H1'	2:e2:4038:C:N3	2.33	0.44
2:e2:4070:U:C4	2:e2:4071:U:C4	3.06	0.44
2:e2:4213:A:H5'	2:e2:4214:A:H5''	1.99	0.44
2:e2:4413:C:H5	2:e2:4430:G:N1	2.15	0.44
2:e2:4414:A:H5''	30:L2:75:TYR:OH	2.18	0.44
2:e2:4678:G:N2	2:e2:4713:G:H1'	2.33	0.44
2:e2:4909:A:OP1	15:w2:163:LYS:NZ	2.44	0.44
4:d2:21:G:C6	4:d2:58:A:C6	3.06	0.44
4:d2:22:A:N6	25:G2:265:ARG:H	2.15	0.44
4:d2:37:G:N2	4:d2:41:G:C2	2.86	0.44
7:l2:27:LYS:HE2	7:l2:29:PHE:CZ	2.52	0.44
9:o2:56:GLN:NE2	9:o2:65:GLN:HA	2.32	0.44
10:q2:19:HIS:HB3	10:q2:25:HIS:HB2	2.00	0.44
14:v2:3:ALA:C	14:v2:4:LEU:HD22	2.43	0.44
14:v2:124:ASN:OD1	14:v2:127:ALA:HB2	2.17	0.44
19:A2:111:GLU:HA	19:A2:111:GLU:OE2	2.17	0.44
26:H2:117:ILE:HA	26:H2:147:GLU:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:H2:129:THR:HG22	26:H2:137:ASN:O	2.18	0.44
44:42:29:LEU:HB3	44:42:60:ARG:HB2	1.98	0.44
49:K3:18:C:H2'	49:K3:19:A:C8	2.53	0.44
49:K3:192:C:N3	49:K3:208:G:N2	2.66	0.44
49:K3:279:G:OP1	49:K3:281:C:O2'	2.19	0.44
49:K3:335:G:C6	49:K3:336:A:C6	3.05	0.44
49:K3:886:A:H1'	49:K3:887:U:O5'	2.18	0.44
49:K3:1018:U:H2'	49:K3:1019:C:C6	2.52	0.44
49:K3:1057:C:C2'	49:K3:1059:G:H22	2.31	0.44
49:K3:1112:U:O2	49:K3:1121:G:C6	2.70	0.44
49:K3:1203:G:N2	49:K3:1699:A:N3	2.65	0.44
49:K3:1334:G:N3	63:Y3:174:HIS:HE1	2.15	0.44
49:K3:1388:A:N6	63:Y3:160:SER:HG	2.15	0.44
49:K3:1403:C:OP1	80:I3:51:LYS:HD2	2.17	0.44
49:K3:1702:G:C6	49:K3:1703:C:C4	3.06	0.44
53:G3:90:ARG:HH21	53:G3:109:MET:HB3	1.83	0.44
60:V3:71:LEU:HD22	60:V3:75:GLN:NE2	2.33	0.44
63:Y3:110:LEU:HD21	63:Y3:175:VAL:HB	1.99	0.44
64:j3:36:HIS:HD2	64:j3:85:GLY:H	1.64	0.44
64:j3:194:VAL:HG23	64:j3:211:LYS:HB3	1.99	0.44
66:N3:71:ARG:NE	66:N3:75:SER:OG	2.49	0.44
68:B3:78:LEU:HB3	68:B3:82:LEU:HD13	1.98	0.44
71:c3:165:GLN:HE22	71:c3:195:LEU:HB2	1.81	0.44
73:d3:127:ARG:HA	73:d3:130:ILE:HD12	1.99	0.44
77:H3:31:ILE:O	77:H3:37:ASN:HA	2.18	0.44
83:M3:97:ILE:HG21	83:M3:109:TYR:CB	2.37	0.44
2:e2:664:G:C4	2:e2:664:G:OP2	2.71	0.44
2:e2:1074:G:N2	2:e2:1238:A:C4	2.86	0.44
2:e2:1318:C:OP2	10:q2:21:ARG:HD3	2.18	0.44
2:e2:1706:A:H62	2:e2:1833:G:N2	2.16	0.44
2:e2:1828:C:H2'	2:e2:1829:G:H8	1.83	0.44
2:e2:1977:C:OP1	31:M2:99:LYS:HB2	2.18	0.44
2:e2:2412:A:H2'	2:e2:2413:U:C6	2.53	0.44
2:e2:2533:C:OP1	8:m2:123:LYS:NZ	2.50	0.44
2:e2:2573:A:H2'	2:e2:2574:G:C8	2.52	0.44
2:e2:2769:U:OP2	17:y2:69:LYS:N	2.44	0.44
2:e2:3706:C:H2'	2:e2:3707:U:O4'	2.17	0.44
2:e2:4092:G:O6	2:e2:4158:C:N4	2.50	0.44
2:e2:4517:A:C2	45:52:261:ARG:NH2	2.86	0.44
2:e2:4752:U:OP2	16:x2:100:ARG:NE	2.50	0.44
2:e2:5006:U:H4'	2:e2:5007:A:H5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d2:2:U:H4'	25:G2:266:TRP:CG	2.53	0.44
6:k2:92:ASP:OD1	6:k2:94:VAL:HG22	2.18	0.44
11:r2:53:GLY:O	11:r2:56:LYS:HB2	2.18	0.44
15:w2:12:ARG:HB2	15:w2:37:ARG:HH21	1.82	0.44
17:y2:96:LEU:HD21	42:22:14:LEU:HD21	1.99	0.44
28:J2:119:ARG:HG3	34:T2:118:TYR:OH	2.17	0.44
32:R2:64:LEU:O	32:R2:68:LYS:HB2	2.18	0.44
33:S2:17:GLU:N	33:S2:18:PRO:HD3	2.33	0.44
39:Y2:10:ASN:C	39:Y2:12:MET:H	2.26	0.44
44:42:133:LYS:HB2	44:42:133:LYS:HE3	1.75	0.44
45:52:82:PRO:HB3	45:52:328:ASN:ND2	2.33	0.44
46:62:74:ARG:O	46:62:76:LYS:NZ	2.36	0.44
49:K3:77:A:O4'	67:b3:154:ARG:HB3	2.18	0.44
49:K3:145:G:H2'	49:K3:146:G:C8	2.52	0.44
49:K3:216:C:H2'	49:K3:217:A:C8	2.45	0.44
49:K3:390:C:H2'	49:K3:391:C:O4'	2.17	0.44
49:K3:419:G:C5	49:K3:420:G:C8	3.06	0.44
49:K3:497:C:H2'	49:K3:498:C:H6	1.82	0.44
49:K3:845:G:H5''	64:j3:108:ARG:NH2	2.27	0.44
49:K3:907:G:H2'	49:K3:908:A:H8	1.83	0.44
49:K3:935:G:H21	70:F3:151:HIS:CE1	2.35	0.44
49:K3:963:A:H2'	49:K3:964:A:C8	2.52	0.44
49:K3:1062:A:C2	49:K3:1838:U:H5	2.36	0.44
49:K3:1460:C:H2'	49:K3:1461:G:C8	2.52	0.44
49:K3:1539:U:H3'	78:H5:43:LYS:NZ	2.33	0.44
49:K3:1596:U:H5''	49:K3:1597:C:OP2	2.17	0.44
49:K3:1598:G:C2'	83:M3:81:GLY:H	2.30	0.44
49:K3:1663:A:O2'	49:K3:1664:A:OP2	2.29	0.44
49:K3:1864:U:H2'	49:K3:1865:C:H4'	1.99	0.44
55:a3:59:LEU:HD13	55:a3:90:TRP:CD2	2.53	0.44
60:V3:30:TRP:HB3	60:V3:46:LYS:HB3	1.99	0.44
60:V3:139:CYS:SG	60:V3:212:VAL:HG22	2.58	0.44
65:J5:57:ARG:NH1	82:L3:26:GLN:HG2	2.33	0.44
65:J5:71:LYS:HB3	65:J5:130:PHE:CE1	2.52	0.44
66:N3:142:SER:HB3	69:f3:49:PRO:O	2.18	0.44
67:b3:30:LYS:HA	67:b3:30:LYS:HD3	1.80	0.44
73:d3:87:LEU:CD1	73:d3:100:LEU:HD21	2.48	0.44
75:e3:18:LEU:HD21	75:e3:77:ILE:HG21	2.00	0.44
75:e3:39:ALA:HA	75:e3:42:LEU:HB2	1.99	0.44
75:e3:64:LEU:O	75:e3:68:LEU:HB2	2.17	0.44
78:H5:22:LEU:HD22	78:H5:27:LYS:HZ1	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:P3:411:PHE:HB2	79:P3:425:PHE:HE2	1.81	0.44
81:I5:5:VAL:HG21	81:I5:35:VAL:HG11	1.98	0.44
1:E1:6408:C:H2'	1:E1:6409:A:N3	2.32	0.44
2:e2:229:G:OP1	9:o2:11:ARG:NH1	2.47	0.44
2:e2:370:U:O5'	2:e2:370:U:H6	2.01	0.44
2:e2:396:A:H2'	2:e2:397:G:H8	1.83	0.44
2:e2:922:C:H2'	2:e2:923:C:C6	2.52	0.44
2:e2:1102:U:O2	2:e2:1167:C:N4	2.51	0.44
2:e2:1446:C:C2	2:e2:2098:G:N2	2.86	0.44
2:e2:1484:G:C6	2:e2:1486:C:C4	3.06	0.44
2:e2:1554:A:C6	2:e2:1555:G:C5	3.06	0.44
2:e2:1592:G:C2	2:e2:1593:A:C8	3.05	0.44
2:e2:1849:A:C6	2:e2:1850:G:C6	3.06	0.44
2:e2:2112:G:H1'	2:e2:2114:G:OP2	2.17	0.44
2:e2:2255:C:O2'	2:e2:2258:C:O5'	2.31	0.44
2:e2:2609:G:H2'	2:e2:2610:G:H8	1.82	0.44
2:e2:3798:U:OP2	6:k2:74:LYS:NZ	2.49	0.44
2:e2:3980:G:O6	2:e2:4026:G:N1	2.50	0.44
2:e2:4233:A:N7	2:e2:4235:G:C8	2.86	0.44
2:e2:4455:G:H2'	2:e2:4456:C:H6	1.82	0.44
2:e2:4745:G:H1	2:e2:4955:A:H61	1.64	0.44
2:e2:4888:U:H2'	2:e2:4889:G:C8	2.50	0.44
3:h2:62:A:H4'	3:h2:63:U:O5'	2.18	0.44
4:d2:19:C:H2'	4:d2:20:U:C6	2.52	0.44
15:w2:166:ILE:HG13	15:w2:167:HIS:N	2.32	0.44
18:92:83:HIS:HB3	27:I2:64:VAL:HG22	1.99	0.44
22:D2:27:ILE:HG12	22:D2:35:ILE:HD11	1.99	0.44
38:X2:156:LYS:HB3	38:X2:156:LYS:HE2	1.69	0.44
39:Y2:163:MET:O	39:Y2:167:GLN:HG3	2.18	0.44
41:12:109:HIS:ND1	41:12:110:CYS:SG	2.85	0.44
44:42:102:LYS:HG3	44:42:106:LYS:HG2	2.00	0.44
44:42:126:PRO:HB3	44:42:130:LYS:HG2	1.99	0.44
45:52:150:PHE:CD2	45:52:198:ARG:HD2	2.52	0.44
49:K3:235:A:N6	49:K3:274:G:H4'	2.32	0.44
49:K3:345:U:H1'	64:j3:33:THR:O	2.18	0.44
49:K3:516:A:C5	49:K3:644:G:C6	3.06	0.44
49:K3:556:U:H5	49:K3:588:G:N3	2.16	0.44
49:K3:1033:G:N1	49:K3:1080:A:O2'	2.27	0.44
49:K3:1431:G:N3	78:H5:67:ARG:HD2	2.33	0.44
49:K3:1443:C:H1'	68:B3:48:VAL:HG11	2.00	0.44
49:K3:1630:A:H2'	49:K3:1631:U:H6	1.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1654:G:C6	49:K3:1671:G:N2	2.86	0.44
49:K3:1660:C:O2	49:K3:1660:C:H2'	2.17	0.44
49:K3:1692:U:OP1	84:O3:89:ARG:HB2	2.18	0.44
49:K3:1742:C:C2	49:K3:1793:A:N6	2.85	0.44
49:K3:1786:U:C2	49:K3:1787:G:N7	2.86	0.44
55:a3:278:SER:OG	55:a3:279:SER:N	2.49	0.44
57:A3:81:ARG:NH2	57:A3:122:THR:HB	2.33	0.44
60:V3:179:ASN:OD1	60:V3:179:ASN:N	2.51	0.44
63:Y3:158:ILE:HD12	63:Y3:163:PRO:HG2	2.00	0.44
64:j3:123:LEU:HB3	64:j3:159:THR:HG21	2.00	0.44
64:j3:198:ARG:HG3	64:j3:208:VAL:HG22	2.00	0.44
66:N3:100:ILE:HB	66:N3:108:PRO:HB3	1.99	0.44
70:F3:157:LYS:O	70:F3:159:LYS:N	2.51	0.44
73:d3:84:ILE:O	73:d3:150:ARG:HG3	2.18	0.44
79:P3:352:GLN:OE1	79:P3:352:GLN:N	2.51	0.44
81:I5:17:LEU:H	81:I5:17:LEU:HD12	1.82	0.44
81:I5:44:LEU:HD23	81:I5:55:ILE:HG21	2.00	0.44
84:O3:5:ARG:HB2	84:O3:8:ASN:HA	2.00	0.44
1:E1:6404:C:OP1	49:K3:1830:U:H2'	2.18	0.44
2:e2:7:C:H2'	2:e2:8:U:C6	2.53	0.44
2:e2:38:A:C2	2:e2:41:C:C4	3.03	0.44
2:e2:423:G:C6	3:h2:12:G:N1	2.86	0.44
2:e2:450:G:N1	2:e2:1296:G:C2	2.86	0.44
2:e2:485:C:H2'	2:e2:487:G:H5''	2.00	0.44
2:e2:1076:C:N4	2:e2:1233:G:O6	2.51	0.44
2:e2:1347:G:H2'	2:e2:1348:U:H6	1.83	0.44
2:e2:1517:G:C5	2:e2:1650:A:C6	3.05	0.44
2:e2:1635:C:N4	2:e2:1636:U:O4	2.51	0.44
2:e2:1883:C:H2'	2:e2:1884:G:H8	1.83	0.44
2:e2:2583:C:H5''	17:y2:74:VAL:HG12	1.99	0.44
2:e2:2655:C:H2'	2:e2:2656:U:C6	2.52	0.44
2:e2:2705:G:C2	2:e2:2706:G:C8	3.06	0.44
2:e2:2841:G:C2	2:e2:3848:U:O2	2.71	0.44
2:e2:3711:A:H1'	2:e2:3713:U:OP2	2.18	0.44
2:e2:3765:G:OP2	2:e2:3765:G:H8	2.00	0.44
2:e2:3865:A:C4	2:e2:3866:C:C5	3.06	0.44
2:e2:3930:U:H2'	2:e2:3931:C:H6	1.80	0.44
2:e2:4243:C:C4	2:e2:4266:G:N2	2.86	0.44
2:e2:4268:A:N1	2:e2:4279:A:N6	2.63	0.44
2:e2:4646:U:OP1	43:32:59:SER:N	2.45	0.44
2:e2:4653:C:H2'	2:e2:4654:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4686:G:C6	2:e2:4705:A:C6	3.06	0.44
2:e2:4891:G:H2'	2:e2:4892:A:C8	2.51	0.44
5:p2:66:VAL:HA	5:p2:67:LYS:HA	1.78	0.44
8:m2:79:PHE:HB3	19:A2:32:ARG:HB3	1.99	0.44
9:o2:50:ARG:NH2	9:o2:115:ARG:HB2	2.32	0.44
12:t2:281:MET:CB	33:S2:110:ARG:HH12	2.30	0.44
13:u2:62:VAL:HG22	13:u2:104:THR:HB	2.00	0.44
17:y2:53:LEU:HD13	17:y2:82:MET:C	2.42	0.44
22:D2:48:LYS:HD3	22:D2:48:LYS:HA	1.72	0.44
25:G2:226:TYR:HD1	25:G2:231:VAL:HG21	1.82	0.44
26:H2:103:GLU:HA	26:H2:103:GLU:OE1	2.18	0.44
32:R2:59:TYR:CZ	32:R2:64:LEU:HB2	2.53	0.44
33:S2:66:MET:CE	33:S2:100:VAL:HG12	2.47	0.44
45:52:217:ILE:HD12	45:52:347:LEU:HB3	1.98	0.44
47:72:141:VAL:HG13	47:72:141:VAL:O	2.17	0.44
48:82:45:GLU:HG3	48:82:46:ARG:HG2	2.00	0.44
49:K3:186:C:N4	49:K3:187:G:O6	2.51	0.44
49:K3:521:A:C4	49:K3:522:A:C8	3.06	0.44
49:K3:642:U:P	73:d3:39:ASN:HB2	2.58	0.44
49:K3:822:U:H2'	49:K3:824:C:OP2	2.18	0.44
49:K3:937:C:C2	49:K3:938:A:C8	3.06	0.44
49:K3:1233:G:C2	49:K3:1526:G:C2	3.06	0.44
49:K3:1286:G:C6	49:K3:1312:G:C2	3.05	0.44
49:K3:1287:A:C5	49:K3:1288:U:H1'	2.53	0.44
49:K3:1587:G:N2	78:H5:67:ARG:HB3	2.32	0.44
49:K3:1766:C:H3'	49:K3:1767:C:C5'	2.47	0.44
49:K3:1772:C:C4	49:K3:1773:C:C4	3.06	0.44
49:K3:1790:A:H2'	49:K3:1791:A:C8	2.52	0.44
60:V3:138:PHE:HE1	60:V3:214:LYS:NZ	2.16	0.44
64:j3:49:ARG:O	64:j3:53:LYS:HA	2.18	0.44
66:N3:127:ARG:HD2	66:N3:136:ARG:CZ	2.48	0.44
67:b3:74:ARG:HD2	67:b3:94:ARG:HG3	1.99	0.44
70:F3:168:ILE:HA	70:F3:171:ARG:HG2	2.00	0.44
79:P3:247:VAL:HG11	79:P3:266:LEU:HD23	1.99	0.44
2:e2:655:C:O2	2:e2:655:C:H2'	2.17	0.43
2:e2:675:C:H2'	2:e2:676:C:O4'	2.18	0.43
2:e2:751:G:C6	2:e2:912:G:N1	2.86	0.43
2:e2:1251:C:OP2	2:e2:1255:A:N6	2.51	0.43
2:e2:1427:A:C6	2:e2:1458:C:C2	3.05	0.43
2:e2:1754:U:H2'	2:e2:1755:C:H6	1.83	0.43
2:e2:1979:U:C5	31:M2:57:ARG:HB3	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1999:G:H4'	2:e2:2000:G:C5	2.53	0.43
2:e2:2276:A:H2'	2:e2:2277:C:C6	2.52	0.43
2:e2:2445:C:H42	2:e2:2446:C:N4	2.13	0.43
2:e2:2853:C:N4	2:e2:2854:G:C6	2.86	0.43
2:e2:3780:G:C5	2:e2:3781:C:C5	3.06	0.43
2:e2:4226:G:O2'	2:e2:4227:U:H5'	2.18	0.43
2:e2:4476:C:O2	37:W2:182:ASP:HB2	2.18	0.43
2:e2:4499:G:H21	2:e2:4529:G:H1'	1.80	0.43
2:e2:4899:G:C2	2:e2:4922:C:C2	3.06	0.43
2:e2:5026:U:H5'	2:e2:5028:G:O4'	2.18	0.43
6:k2:33:GLY:O	6:k2:69:LYS:HG2	2.18	0.43
12:t2:322:LEU:HD11	12:t2:336:ARG:CZ	2.47	0.43
17:y2:5:LEU:HA	17:y2:5:LEU:HD23	1.68	0.43
17:y2:76:ARG:HG3	42:22:16:GLY:O	2.18	0.43
21:C2:2:THR:HA	21:C2:6:SER:HB2	2.00	0.43
24:F2:21:HIS:CD2	24:F2:72:CYS:HA	2.53	0.43
25:G2:288:LEU:HA	25:G2:291:GLN:CD	2.43	0.43
37:W2:100:ARG:CZ	37:W2:198:VAL:HA	2.47	0.43
42:22:126:LYS:H	42:22:126:LYS:HG3	1.59	0.43
44:42:103:LEU:O	44:42:106:LYS:N	2.51	0.43
46:62:136:LYS:HE2	46:62:136:LYS:HB3	1.89	0.43
49:K3:34:U:H2'	49:K3:35:C:H5	1.83	0.43
49:K3:39:A:OP1	73:d3:3:VAL:HG21	2.18	0.43
49:K3:188:C:H2'	49:K3:189:U:O4'	2.18	0.43
49:K3:241:G:O5'	49:K3:272:G:H5'	2.17	0.43
49:K3:308:G:N2	71:c3:45:THR:OG1	2.50	0.43
49:K3:366:U:C4	49:K3:394:G:O6	2.71	0.43
49:K3:588:G:N3	49:K3:589:G:N2	2.66	0.43
49:K3:646:G:H2'	49:K3:647:U:C6	2.53	0.43
49:K3:655:A:C2	49:K3:657:U:H2'	2.52	0.43
49:K3:860:G:H2'	49:K3:861:A:H5'	2.00	0.43
49:K3:898:U:H6	49:K3:898:U:O5'	2.01	0.43
49:K3:930:C:H5'	60:V3:159:GLN:NE2	2.33	0.43
49:K3:1056:U:H1'	49:K3:1063:C:N4	2.33	0.43
49:K3:1265:A:H2	49:K3:1266:C:C6	2.36	0.43
49:K3:1527:C:H3'	49:K3:1528:G:H5''	2.00	0.43
49:K3:1607:A:H1'	49:K3:1633:A:N1	2.33	0.43
49:K3:1653:U:H5''	49:K3:1654:G:OP2	2.17	0.43
49:K3:1762:C:H2'	49:K3:1763:G:C8	2.49	0.43
55:a3:14:HIS:ND1	55:a3:35:SER:HB3	2.33	0.43
56:a5:33:ILE:HB	56:a5:97:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:a5:142:ARG:H	84:O3:22:ARG:NH2	2.13	0.43
60:V3:131:ASP:O	60:V3:221:PRO:HG2	2.17	0.43
64:j3:249:ALA:HA	73:d3:72:PHE:CG	2.53	0.43
66:N3:107:ASN:OD1	66:N3:108:PRO:HD2	2.17	0.43
67:b3:56:ASN:HB2	67:b3:108:VAL:CG2	2.48	0.43
68:B3:66:GLU:OE2	68:B3:78:LEU:HD11	2.18	0.43
70:F3:69:ARG:C	70:F3:71:SER:H	2.26	0.43
71:c3:49:ARG:HH11	71:c3:50:GLY:HA3	1.83	0.43
71:c3:130:THR:O	71:c3:134:GLU:HG3	2.18	0.43
73:d3:110:LEU:HA	73:d3:113:GLN:HB3	1.99	0.43
75:e3:25:ALA:CB	75:e3:31:LEU:HB2	2.47	0.43
80:I3:26:SER:HB2	80:I3:32:LEU:HD21	1.99	0.43
2:e2:17:A:OP2	8:m2:60:TYR:OH	2.28	0.43
2:e2:725:G:C2	2:e2:726:G:C5	3.06	0.43
2:e2:932:A:O2'	2:e2:933:G:O5'	2.33	0.43
2:e2:1279:A:C4	2:e2:1280:C:C4	3.06	0.43
2:e2:1296:G:H1'	2:e2:1297:U:C2	2.53	0.43
2:e2:1915:G:C4	16:x2:17:GLY:O	2.71	0.43
2:e2:1996:U:C4	29:K2:59:THR:HG23	2.52	0.43
2:e2:2009:A:H2	31:M2:15:LEU:HB2	1.83	0.43
2:e2:2318:G:N1	2:e2:2322:G:C6	2.86	0.43
2:e2:2417:A:N3	2:e2:2417:A:H2'	2.33	0.43
2:e2:2521:G:C6	2:e2:2535:G:N1	2.86	0.43
2:e2:2556:G:H2'	2:e2:2557:G:H8	1.83	0.43
2:e2:2728:U:H2'	2:e2:2729:C:H6	1.82	0.43
2:e2:2862:G:C4	2:e2:3624:A:N7	2.86	0.43
2:e2:3732:A:H2'	2:e2:3733:A:C8	2.53	0.43
2:e2:3977:C:O2'	2:e2:3979:C:N3	2.38	0.43
2:e2:4676:G:P	45:52:281:ASN:HD22	2.41	0.43
2:e2:4745:G:C2	2:e2:4956:A:N1	2.86	0.43
2:e2:4746:C:H2'	2:e2:4747:C:C6	2.53	0.43
2:e2:4854:G:H5'	2:e2:4855:G:C8	2.53	0.43
2:e2:4916:G:H2'	2:e2:4917:C:C6	2.52	0.43
2:e2:4973:U:H2'	2:e2:4974:C:H6	1.82	0.43
2:e2:5025:C:N3	2:e2:5028:G:C5	2.86	0.43
3:h2:65:A:C6	3:h2:66:A:C5	3.07	0.43
8:m2:100:VAL:HG23	8:m2:134:LYS:HB3	2.00	0.43
10:q2:132:ARG:O	10:q2:136:LYS:HG3	2.18	0.43
12:t2:209:VAL:HG21	12:t2:221:PHE:HE2	1.82	0.43
12:t2:279:LEU:HD23	12:t2:279:LEU:HA	1.79	0.43
16:x2:30:ILE:HB	16:x2:33:VAL:CG1	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:y2:49:CYS:SG	17:y2:85:LYS:HG3	2.58	0.43
34:T2:107:THR:HB	34:T2:109:VAL:HG22	2.00	0.43
35:U2:195:THR:O	35:U2:196:VAL:C	2.62	0.43
44:42:111:LEU:HD23	44:42:111:LEU:H	1.83	0.43
45:52:218:ASP:OD2	45:52:280:ILE:HG23	2.18	0.43
46:62:60:GLU:N	46:62:60:GLU:OE2	2.50	0.43
46:62:93:MET:HE2	46:62:95:ARG:NE	2.32	0.43
48:82:48:LYS:HA	48:82:53:ALA:HB2	2.00	0.43
49:K3:46:A:N6	49:K3:99:A:N7	2.65	0.43
49:K3:416:U:O4	49:K3:421:G:O6	2.36	0.43
49:K3:602:G:C8	49:K3:603:C:H2'	2.53	0.43
49:K3:677:G:H3'	49:K3:1026:C:H42	1.82	0.43
49:K3:699:C:H2'	49:K3:700:G:C8	2.53	0.43
49:K3:964:A:H2	49:K3:1054:G:H1'	1.83	0.43
49:K3:1355:C:O2	61:W3:189:GLY:HA2	2.17	0.43
49:K3:1551:U:O5'	49:K3:1558:C:H1'	2.18	0.43
49:K3:1830:U:O2	49:K3:1831:A:N6	2.51	0.43
51:13:96:ILE:HG23	51:13:96:ILE:O	2.18	0.43
52:Q3:135:LEU:HG	52:Q3:136:LYS:H	1.83	0.43
54:G5:116:LYS:C	54:G5:118:ARG:HH11	2.26	0.43
55:a3:55:PRO:HB2	68:B3:128:GLU:HG3	2.00	0.43
55:a3:280:LYS:HB2	55:a3:280:LYS:HE3	1.60	0.43
57:A3:15:PHE:CE1	57:A3:110:GLU:HA	2.53	0.43
58:T3:48:LYS:O	58:T3:75:ILE:HG12	2.18	0.43
60:V3:137:LEU:HD21	60:V3:139:CYS:SG	2.57	0.43
61:W3:232:THR:O	61:W3:236:PHE:HB2	2.18	0.43
63:Y3:8:LYS:O	63:Y3:12:VAL:HG23	2.18	0.43
67:b3:159:ARG:HH11	67:b3:159:ARG:HG3	1.82	0.43
69:f3:45:ASN:OD1	69:f3:46:VAL:N	2.51	0.43
73:d3:37:LEU:CG	73:d3:38:ARG:H	2.29	0.43
73:d3:119:LEU:CG	73:d3:120:ALA:H	2.25	0.43
76:E3:65:ARG:NH2	77:H3:20:SER:HB2	2.32	0.43
78:H5:39:LEU:HD11	78:H5:56:ARG:NE	2.33	0.43
79:P3:396:LEU:HB2	79:P3:427:PHE:CZ	2.53	0.43
85:a7:145:LYS:HA	85:a7:145:LYS:HD3	1.60	0.43
2:e2:37:U:C2	2:e2:38:A:C8	3.06	0.43
2:e2:274:C:H2'	2:e2:275:C:C6	2.53	0.43
2:e2:484:U:C6	2:e2:486:C:H5'	2.53	0.43
2:e2:700:G:C2	2:e2:701:G:N7	2.86	0.43
2:e2:1243:C:H42	2:e2:1264:C:H41	1.64	0.43
2:e2:1351:G:P	33:S2:21:GLN:HE21	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1363:C:OP2	85:a7:39:ARG:NH2	2.50	0.43
2:e2:1662:C:C2	2:e2:2288:G:N2	2.86	0.43
2:e2:1836:G:C2	2:e2:1837:A:N7	2.86	0.43
2:e2:1915:G:C5	16:x2:17:GLY:O	2.71	0.43
2:e2:2641:A:OP1	17:y2:21:ARG:NH2	2.51	0.43
2:e2:2673:G:C6	51:13:89:TYR:CZ	3.06	0.43
2:e2:2694:G:C8	2:e2:2695:A:C6	3.06	0.43
2:e2:2832:A:H2'	2:e2:2833:A:O4'	2.18	0.43
2:e2:3759:A:C6	2:e2:3766:A:C5	3.06	0.43
2:e2:3871:A:C6	2:e2:3885:G:C2	3.06	0.43
2:e2:4292:A:C2	2:e2:4330:G:C6	3.06	0.43
2:e2:4719:G:C6	2:e2:4721:G:C2	3.07	0.43
2:e2:5029:C:H2'	2:e2:5030:U:H6	1.83	0.43
2:e2:5062:G:O6	45:52:123:HIS:NE2	2.49	0.43
3:h2:5:U:H2'	3:h2:6:C:C6	2.53	0.43
3:h2:115:G:H2'	3:h2:116:C:H6	1.82	0.43
10:q2:9:ARG:NH1	10:q2:12:ARG:HH11	2.15	0.43
12:t2:50:GLN:HG2	12:t2:51:PRO:HD2	1.99	0.43
19:A2:66:LYS:O	19:A2:70:ARG:HG3	2.18	0.43
19:A2:88:THR:O	19:A2:92:ARG:NE	2.44	0.43
26:H2:16:LYS:HB2	26:H2:16:LYS:HE3	1.67	0.43
26:H2:136:ILE:O	26:H2:137:ASN:ND2	2.51	0.43
29:K2:5:ASP:CG	29:K2:6:ARG:H	2.26	0.43
44:42:18:LEU:HG	44:42:19:HIS:ND1	2.34	0.43
44:42:105:LYS:C	44:42:107:TYR:H	2.27	0.43
49:K3:172:U:H4'	49:K3:173:A:OP2	2.17	0.43
49:K3:397:G:H1'	49:K3:401:A:H1'	1.98	0.43
49:K3:697:G:C2	49:K3:698:G:C5	3.06	0.43
49:K3:936:G:H2'	49:K3:937:C:C6	2.53	0.43
49:K3:1027:A:H3'	49:K3:1028:A:C8	2.53	0.43
49:K3:1034:A:C8	49:K3:1082:A:N6	2.86	0.43
49:K3:1291:A:H1'	52:Q3:172:TYR:CE2	2.53	0.43
49:K3:1322:G:H8	49:K3:1505:U:C4	2.37	0.43
49:K3:1500:G:H2'	49:K3:1501:C:C6	2.54	0.43
49:K3:1512:C:H2'	49:K3:1513:C:O4'	2.18	0.43
49:K3:1523:C:H2'	49:K3:1524:G:H8	1.82	0.43
49:K3:1786:U:C2	49:K3:1787:G:C8	3.06	0.43
49:K3:1860:A:H3'	84:O3:8:ASN:OD1	2.19	0.43
49:K3:1868:U:H4'	60:V3:117:TRP:HZ3	1.82	0.43
53:G3:152:LYS:N	70:F3:183:ARG:HH22	2.14	0.43
55:a3:59:LEU:HD13	55:a3:90:TRP:CE2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:a3:146:SER:HB2	55:a3:177:TRP:HZ2	1.83	0.43
57:A3:92:SER:HB2	57:A3:107:ILE:HG13	2.00	0.43
60:V3:114:VAL:HG22	60:V3:142:PHE:HZ	1.79	0.43
60:V3:180:ASP:O	60:V3:183:GLU:HG3	2.17	0.43
60:V3:204:ILE:O	60:V3:205:TYR:C	2.62	0.43
64:j3:44:LEU:N	64:j3:81:THR:HG22	2.33	0.43
64:j3:90:ILE:O	64:j3:90:ILE:HG13	2.18	0.43
66:N3:112:LEU:HD22	66:N3:177:LEU:HD21	1.99	0.43
67:b3:161:PRO:HA	67:b3:170:ARG:O	2.18	0.43
70:F3:169:GLU:O	70:F3:173:HIS:HB2	2.19	0.43
71:c3:6:ASP:O	71:c3:9:HIS:ND1	2.50	0.43
71:c3:141:ARG:NE	71:c3:144:LYS:HD3	2.31	0.43
72:C3:7:LYS:HG3	72:C3:8:THR:N	2.32	0.43
72:C3:20:TYR:O	72:C3:24:LEU:N	2.52	0.43
72:C3:75:GLU:O	72:C3:78:ARG:HG2	2.18	0.43
78:H5:107:LEU:HA	78:H5:110:LEU:HB2	2.01	0.43
79:P3:266:LEU:HA	79:P3:269:GLU:HG2	1.99	0.43
81:I5:41:ARG:CZ	81:I5:57:VAL:HG22	2.49	0.43
81:I5:89:HIS:CE1	81:I5:90:ARG:HD2	2.53	0.43
82:L3:7:LEU:HD23	82:L3:7:LEU:HA	1.76	0.43
2:e2:43:U:O2'	24:F2:44:LYS:HE2	2.18	0.43
2:e2:673:C:C2	2:e2:674:G:C8	3.05	0.43
2:e2:1098:G:N1	2:e2:1198:G:N1	2.66	0.43
2:e2:1433:A:N6	2:e2:1451:G:O2'	2.49	0.43
2:e2:1463:C:H4'	11:r2:30:GLU:C	2.44	0.43
2:e2:1974:G:N7	31:M2:17:CYS:HB3	2.33	0.43
2:e2:2298:U:C5	12:t2:204:ARG:NH2	2.86	0.43
2:e2:2306:G:H1'	2:e2:2332:A:N6	2.32	0.43
2:e2:2479:G:H2'	2:e2:2480:G:C8	2.53	0.43
2:e2:2566:G:C4	2:e2:2567:G:C8	3.05	0.43
2:e2:2710:C:OP1	43:32:39:GLN:HB3	2.17	0.43
2:e2:2793:G:H5''	2:e2:2794:C:H5''	2.01	0.43
2:e2:3759:A:N6	2:e2:3766:A:C4	2.86	0.43
2:e2:4608:G:C6	2:e2:4609:G:C5	3.07	0.43
2:e2:4908:G:C8	2:e2:4912:G:N2	2.86	0.43
2:e2:5062:G:H2'	2:e2:5063:G:H8	1.83	0.43
3:h2:111:U:H1'	3:h2:112:G:OP2	2.19	0.43
3:h2:117:C:H2'	3:h2:118:C:C6	2.53	0.43
4:d2:48:G:P	25:G2:94:ASN:HD21	2.41	0.43
6:k2:94:VAL:HG12	7:l2:2:LYS:HE2	1.99	0.43
6:k2:112:MET:HE2	6:k2:112:MET:HB3	1.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:m2:93:ASN:O	8:m2:139:ARG:NH2	2.51	0.43
11:r2:70:GLU:HG3	11:r2:71:ALA:N	2.33	0.43
25:G2:21:ARG:HA	25:G2:24:ARG:NH1	2.30	0.43
25:G2:34:LYS:HE3	25:G2:35:ARG:HG3	1.99	0.43
25:G2:180:PHE:HZ	25:G2:190:PHE:CD2	2.35	0.43
37:W2:98:GLY:O	37:W2:198:VAL:N	2.51	0.43
39:Y2:18:ARG:HG3	39:Y2:135:GLY:HA3	2.01	0.43
39:Y2:86:GLY:HA2	39:Y2:115:LEU:HD21	2.00	0.43
40:02:41:PRO:HB2	40:02:74:ARG:NH2	2.33	0.43
41:12:11:TRP:NE1	41:12:44:ARG:HG2	2.33	0.43
43:32:49:LEU:HA	43:32:49:LEU:HD23	1.79	0.43
44:42:70:ASP:HB3	44:42:113:SER:HB2	2.01	0.43
44:42:73:HIS:HD2	44:42:76:GLU:HG3	1.83	0.43
49:K3:33:G:H2'	49:K3:34:U:O4'	2.17	0.43
49:K3:102:A:H1'	49:K3:356:C:N4	2.29	0.43
49:K3:157:U:H4'	67:b3:59:GLN:HA	1.99	0.43
49:K3:222:U:H5''	53:G3:17:PHE:CD1	2.53	0.43
49:K3:335:G:N1	49:K3:336:A:C6	2.86	0.43
49:K3:341:C:C5	49:K3:343:A:C8	3.06	0.43
49:K3:404:G:H2'	49:K3:404:G:N3	2.33	0.43
49:K3:520:A:N3	49:K3:825:A:H2	2.16	0.43
49:K3:561:A:O2'	49:K3:562:U:H5'	2.18	0.43
49:K3:914:U:H4'	79:P3:358:ARG:NH2	2.29	0.43
49:K3:1229:G:H2'	49:K3:1230:C:O4'	2.18	0.43
49:K3:1345:G:H21	49:K3:1484:A:H2	1.64	0.43
49:K3:1675:A:H2'	49:K3:1676:U:C5	2.54	0.43
49:K3:1713:C:H5'	58:T3:80:LYS:NZ	2.33	0.43
49:K3:1790:A:C2	49:K3:1791:A:C5	3.06	0.43
53:G3:27:GLU:HG2	53:G3:28:THR:H	1.83	0.43
55:a3:17:TRP:HB2	55:a3:36:ARG:HE	1.84	0.43
55:a3:41:ILE:HA	55:a3:57:ARG:O	2.19	0.43
55:a3:241:PHE:CE1	55:a3:248:LEU:HD13	2.53	0.43
55:a3:244:ASN:ND2	55:a3:294:ASP:O	2.52	0.43
58:T3:98:ASP:O	58:T3:100:VAL:HG13	2.19	0.43
59:U3:103:PHE:CG	59:U3:104:THR:N	2.86	0.43
61:W3:171:GLY:HA2	65:J5:97:ARG:HD2	2.01	0.43
63:Y3:104:SER:O	63:Y3:107:TYR:HB2	2.17	0.43
63:Y3:136:VAL:HA	63:Y3:185:LYS:O	2.19	0.43
64:j3:43:PRO:HG2	64:j3:46:ILE:CG2	2.47	0.43
73:d3:107:GLU:O	73:d3:112:THR:HB	2.18	0.43
78:H5:28:LEU:HD13	78:H5:107:LEU:HD21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:P3:264:ALA:O	79:P3:268:LEU:HG	2.19	0.43
81:I5:12:PHE:HZ	81:I5:21:LYS:HD2	1.83	0.43
83:M3:76:ARG:NH1	83:M3:77:LEU:HD23	2.33	0.43
2:e2:61:A:H2'	2:e2:62:A:O4'	2.18	0.43
2:e2:192:G:H2'	2:e2:193:G:H8	1.82	0.43
2:e2:373:G:C6	2:e2:374:G:N7	2.87	0.43
2:e2:436:C:N4	2:e2:1312:A:H2	2.15	0.43
2:e2:441:G:C6	2:e2:442:G:C5	3.06	0.43
2:e2:646:G:H2'	2:e2:647:G:O4'	2.19	0.43
2:e2:1282:G:H8	2:e2:1282:G:O5'	2.02	0.43
2:e2:1655:C:OP1	2:e2:1679:A:O2'	2.36	0.43
2:e2:1754:U:H2'	2:e2:1755:C:C6	2.54	0.43
2:e2:1975:G:N3	2:e2:1976:C:C6	2.86	0.43
2:e2:2093:G:C8	35:U2:45:ARG:NH1	2.86	0.43
2:e2:2576:G:C6	2:e2:2577:C:C4	3.07	0.43
2:e2:2709:C:H6	2:e2:2709:C:H2'	1.64	0.43
2:e2:2710:C:C4	2:e2:2712:G:C8	3.07	0.43
2:e2:2793:G:C2	2:e2:2799:G:C5	3.06	0.43
2:e2:2840:A:C6	2:e2:3849:A:N6	2.86	0.43
2:e2:3659:G:C6	2:e2:3686:G:N1	2.86	0.43
2:e2:3759:A:H2	2:e2:3765:G:N2	2.10	0.43
2:e2:3804:G:H2'	2:e2:3805:U:O4'	2.19	0.43
2:e2:3946:G:N1	2:e2:4068:U:C4	2.86	0.43
2:e2:3972:A:C6	2:e2:4041:C:H1'	2.53	0.43
2:e2:4008:C:H5''	2:e2:4009:C:OP2	2.19	0.43
2:e2:4880:C:H5''	40:02:120:ASN:ND2	2.33	0.43
2:e2:4909:A:O2'	2:e2:4910:G:OP2	2.33	0.43
4:d2:10:C:C2	25:G2:20:PHE:HD1	2.37	0.43
9:o2:101:PRO:O	9:o2:102:SER:OG	2.27	0.43
12:t2:24:LEU:HD11	12:t2:28:PHE:HD1	1.84	0.43
18:92:39:GLY:H	18:92:92:LYS:HB3	1.84	0.43
19:A2:14:LYS:O	19:A2:18:LEU:HD23	2.19	0.43
20:B2:8:ALA:HB2	20:B2:15:HIS:ND1	2.33	0.43
21:C2:31:LYS:O	21:C2:32:SER:OG	2.35	0.43
22:D2:28:ARG:HA	22:D2:33:ASN:ND2	2.33	0.43
25:G2:223:PHE:O	25:G2:226:TYR:HB2	2.18	0.43
31:M2:77:ALA:HB2	31:M2:117:ARG:HH11	1.83	0.43
34:T2:166:VAL:HB	34:T2:179:THR:O	2.19	0.43
37:W2:148:SER:OG	37:W2:149:GLN:N	2.50	0.43
41:12:150:TRP:HA	41:12:153:LYS:NZ	2.33	0.43
43:32:138:LEU:HD12	43:32:138:LEU:HA	1.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:52:119:TYR:O	45:52:120:LYS:HD2	2.18	0.43
48:82:41:GLN:O	48:82:45:GLU:HG2	2.18	0.43
49:K3:42:A:C6	49:K3:43:U:C4	3.07	0.43
49:K3:45:A:H1'	49:K3:47:G:C8	2.53	0.43
49:K3:333:G:N7	67:b3:190:ARG:NE	2.64	0.43
49:K3:475:C:C4	49:K3:476:A:N7	2.86	0.43
49:K3:683:G:C6	49:K3:1023:A:N6	2.87	0.43
49:K3:982:G:H2'	49:K3:983:A:H8	1.83	0.43
49:K3:1242:U:C4	49:K3:1520:G:C8	3.06	0.43
49:K3:1392:U:H2'	49:K3:1393:G:H8	1.78	0.43
49:K3:1399:C:H5''	55:a3:100:ARG:HH22	1.83	0.43
49:K3:1500:G:H2'	49:K3:1501:C:H6	1.83	0.43
49:K3:1550:G:H1'	49:K3:1559:C:O4'	2.18	0.43
49:K3:1646:C:O2'	49:K3:1679:A:N6	2.51	0.43
49:K3:1817:G:H1'	62:X3:20:MET:HE1	2.01	0.43
53:G3:18:GLN:HE21	71:c3:193:LYS:NZ	2.15	0.43
54:G5:28:PHE:HA	54:G5:31:THR:HG23	2.01	0.43
54:G5:39:ARG:HE	54:G5:83:PHE:HE1	1.64	0.43
58:T3:52:LEU:HD13	58:T3:73:GLN:OE1	2.19	0.43
58:T3:105:PHE:HB2	58:T3:119:ARG:C	2.44	0.43
61:W3:204:ILE:HG21	61:W3:211:LYS:HA	2.00	0.43
66:N3:39:ILE:HG23	66:N3:68:ILE:HD13	1.99	0.43
68:B3:94:ILE:O	68:B3:95:ARG:NH1	2.44	0.43
71:c3:134:GLU:O	71:c3:138:ASN:N	2.49	0.43
73:d3:31:LEU:HA	73:d3:31:LEU:HD23	1.80	0.43
79:P3:307:LEU:HA	79:P3:310:PHE:HB3	2.00	0.43
82:L3:38:PRO:HG3	82:L3:77:CYS:SG	2.58	0.43
82:L3:54:VAL:O	82:L3:63:LEU:HB3	2.18	0.43
1:E1:6371:A:N6	1:E1:6384:A:H2	2.11	0.43
1:E1:6384:A:H2'	1:E1:6384:A:N3	2.32	0.43
2:e2:56:A:N1	2:e2:57:G:N2	2.66	0.43
2:e2:75:G:O6	85:a7:103:ARG:NH1	2.51	0.43
2:e2:298:G:H8	2:e2:298:G:O5'	2.01	0.43
2:e2:375:G:O6	21:C2:56:ARG:NH2	2.51	0.43
2:e2:695:G:H3'	2:e2:696:C:O4'	2.18	0.43
2:e2:940:C:H2'	2:e2:941:C:H6	1.84	0.43
2:e2:958:G:H5''	2:e2:959:G:OP2	2.19	0.43
2:e2:1244:G:C6	2:e2:1259:G:C8	3.06	0.43
2:e2:1271:G:N3	2:e2:1271:G:H2'	2.32	0.43
2:e2:1330:A:C8	2:e2:3864:C:C4	3.06	0.43
2:e2:1336:G:H2'	2:e2:2346:C:H42	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1444:G:O2'	2:e2:1445:U:H5'	2.18	0.43
2:e2:1523:A:H8	2:e2:4389:C:HO2'	1.64	0.43
2:e2:1697:G:H5''	2:e2:1699:A:H1'	2.00	0.43
2:e2:1865:U:C4	2:e2:1866:A:C6	3.06	0.43
2:e2:1971:G:C4	29:K2:41:GLN:HG3	2.54	0.43
2:e2:1975:G:C4	2:e2:1976:C:C5	3.06	0.43
2:e2:2368:A:H4'	2:e2:4656:A:N1	2.34	0.43
2:e2:2888:G:C2	2:e2:3614:G:C2	3.07	0.43
2:e2:3662:A:C8	2:e2:3664:G:N3	2.86	0.43
2:e2:3668:C:H5'	18:92:8:GLN:O	2.19	0.43
2:e2:3689:G:OP1	18:92:202:VAL:HG23	2.18	0.43
2:e2:3702:A:C6	2:e2:3774:A:C5	3.06	0.43
2:e2:4205:A:C5	2:e2:4375:C:N4	2.87	0.43
2:e2:4323:A:C8	25:G2:160:PHE:CZ	3.07	0.43
2:e2:4605:A:O2'	2:e2:4606:G:P	2.77	0.43
3:h2:94:G:H21	21:C2:82:THR:HG1	1.60	0.43
12:t2:57:LEU:O	12:t2:100:ARG:NH1	2.51	0.43
26:H2:4:TYR:CD1	26:H2:16:LYS:HD2	2.53	0.43
28:J2:72:LYS:HG3	28:J2:72:LYS:O	2.19	0.43
29:K2:149:ARG:HG3	29:K2:151:THR:H	1.83	0.43
30:L2:56:GLU:OE2	38:X2:162:ARG:N	2.29	0.43
31:M2:131:GLU:HG2	31:M2:154:ASP:H	1.84	0.43
33:S2:88:ASP:HB2	33:S2:109:ALA:HB2	2.01	0.43
36:V2:90:GLN:O	36:V2:93:THR:OG1	2.24	0.43
40:02:57:LEU:HA	40:02:57:LEU:HD23	1.83	0.43
41:12:159:ARG:CZ	41:12:165:THR:HG22	2.48	0.43
43:32:4:LEU:HD23	43:32:4:LEU:HA	1.80	0.43
44:42:53:VAL:HG13	44:42:155:ILE:HG13	2.01	0.43
49:K3:34:U:O2	49:K3:35:C:C5	2.72	0.43
49:K3:95:G:C2	49:K3:96:C:C4	3.07	0.43
49:K3:122:G:N2	64:j3:146:THR:HG1	2.17	0.43
49:K3:378:U:P	71:c3:97:VAL:HB	2.58	0.43
49:K3:610:G:C5	49:K3:611:G:N7	2.86	0.43
49:K3:617:G:O2'	49:K3:632:C:H4'	2.17	0.43
49:K3:920:A:C8	49:K3:922:A:C8	3.07	0.43
49:K3:986:G:H3'	49:K3:988:C:H41	1.83	0.43
49:K3:1006:C:H2'	49:K3:1007:C:O4'	2.18	0.43
49:K3:1018:U:N3	49:K3:1019:C:C4	2.83	0.43
49:K3:1035:A:O3'	49:K3:1856:C:O2'	2.26	0.43
49:K3:1176:G:C6	49:K3:1177:U:C4	3.07	0.43
49:K3:1256:G:H5'	77:H3:40:ARG:NH2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1587:G:O3'	78:H5:78:ILE:HB	2.17	0.43
49:K3:1648:G:H1'	49:K3:1674:G:C6	2.54	0.43
55:a3:107:ASP:O	55:a3:124:SER:HB3	2.19	0.43
55:a3:275:ILE:HG13	55:a3:282:GLU:HG3	1.98	0.43
58:T3:51:VAL:HG23	58:T3:100:VAL:HG21	2.00	0.43
59:U3:19:LEU:HD21	72:C3:106:LEU:HD11	2.00	0.43
59:U3:158:ASP:OD2	74:D3:32:ILE:HD11	2.18	0.43
60:V3:28:LYS:HG2	60:V3:50:THR:HG23	1.98	0.43
60:V3:59:SER:HA	60:V3:62:LEU:HB3	2.01	0.43
61:W3:170:TRP:CD1	61:W3:199:PRO:HD3	2.54	0.43
64:j3:14:ALA:O	64:j3:20:LEU:HD11	2.19	0.43
64:j3:38:LEU:HA	64:j3:41:CYS:SG	2.59	0.43
64:j3:122:LYS:N	64:j3:162:ILE:O	2.51	0.43
66:N3:95:HIS:CE1	83:M3:101:SER:HB3	2.53	0.43
66:N3:167:LYS:HB2	66:N3:172:CYS:SG	2.59	0.43
67:b3:200:LYS:HE2	67:b3:200:LYS:HB3	1.71	0.43
75:e3:119:GLN:O	75:e3:121:LYS:N	2.52	0.43
79:P3:263:GLN:O	79:P3:266:LEU:HG	2.18	0.43
2:e2:652:G:C6	2:e2:653:U:C4	3.06	0.43
2:e2:659:G:C2	2:e2:660:A:C5	3.07	0.43
2:e2:1676:C:C5	2:e2:4378:A:C5	3.07	0.43
2:e2:1758:G:H22	2:e2:1774:C:H1'	1.84	0.43
2:e2:1822:U:O2'	25:G2:43:LYS:O	2.36	0.43
2:e2:1853:G:C5	2:e2:4394:A:C6	3.07	0.43
2:e2:1928:A:C2	2:e2:1931:A:C8	3.07	0.43
2:e2:1994:G:C2	2:e2:1999:G:N2	2.80	0.43
2:e2:2539:C:H2'	2:e2:2540:C:H6	1.84	0.43
2:e2:2617:G:C6	2:e2:2618:G:N7	2.86	0.43
2:e2:2779:C:OP1	8:m2:106:LYS:HG3	2.18	0.43
2:e2:2898:G:H8	2:e2:2898:G:OP2	2.02	0.43
2:e2:3809:G:N3	2:e2:3809:G:H2'	2.34	0.43
2:e2:3991:G:H3'	2:e2:3993:U:OP1	2.18	0.43
3:h2:103:A:C8	3:h2:104:A:C8	3.07	0.43
4:d2:12:U:OP2	4:d2:67:C:O2'	2.37	0.43
6:k2:83:ARG:HE	6:k2:100:ASP:CG	2.20	0.43
8:m2:95:THR:HG23	8:m2:139:ARG:HA	1.99	0.43
12:t2:241:ALA:HB1	12:t2:245:HIS:O	2.19	0.43
12:t2:306:ARG:HG3	12:t2:308:LYS:NZ	2.33	0.43
14:v2:52:GLN:HA	14:v2:52:GLN:HE21	1.83	0.43
24:F2:15:CYS:SG	24:F2:19:GLN:HG3	2.59	0.43
25:G2:75:VAL:O	25:G2:112:ARG:NH1	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:G2:146:LEU:HD22	25:G2:163:LEU:HD12	2.00	0.43
26:H2:64:ASN:HB2	26:H2:80:GLN:NE2	2.34	0.43
31:M2:15:LEU:H	31:M2:15:LEU:HD12	1.83	0.43
32:R2:43:ASN:ND2	32:R2:58:MET:HE2	2.33	0.43
35:U2:45:ARG:O	35:U2:49:ILE:HG12	2.18	0.43
35:U2:86:PRO:HG3	35:U2:143:TYR:CD2	2.54	0.43
36:V2:59:ARG:CZ	41:12:32:GLN:HA	2.48	0.43
41:12:22:LEU:CD1	41:12:26:ARG:HH22	2.28	0.43
45:52:249:ARG:O	45:52:249:ARG:HG2	2.18	0.43
49:K3:158:A:C2	49:K3:467:G:N2	2.87	0.43
49:K3:292:A:H2'	49:K3:292:A:N3	2.33	0.43
49:K3:447:A:H2'	71:c3:26:LYS:HD2	2.00	0.43
49:K3:547:G:H8	49:K3:548:C:H41	1.65	0.43
49:K3:1293:A:H3'	49:K3:1294:G:C8	2.53	0.43
49:K3:1568:C:H1'	78:H5:41:LYS:CD	2.48	0.43
49:K3:1658:G:H4'	77:H3:31:ILE:CD1	2.48	0.43
49:K3:1810:U:H2'	49:K3:1811:C:C6	2.54	0.43
51:13:27:TYR:HA	51:13:97:ILE:H	1.83	0.43
55:a3:8:ARG:HB2	55:a3:309:VAL:CG1	2.49	0.43
55:a3:109:LEU:HD12	55:a3:110:SER:HB2	2.00	0.43
56:a5:44:VAL:HG11	56:a5:85:CYS:SG	2.59	0.43
60:V3:52:THR:HG23	60:V3:57:ILE:HG13	2.00	0.43
60:V3:52:THR:OG1	60:V3:57:ILE:HG23	2.18	0.43
66:N3:36:GLN:HG3	66:N3:37:ASP:OD2	2.18	0.43
67:b3:110:ASN:C	67:b3:111:LEU:HD12	2.44	0.43
72:C3:103:LYS:N	72:C3:103:LYS:HD2	2.33	0.43
73:d3:13:TYR:HB2	73:d3:44:TRP:CE3	2.51	0.43
73:d3:107:GLU:HA	73:d3:112:THR:HG21	2.00	0.43
75:e3:50:CYS:SG	75:e3:110:VAL:HG12	2.58	0.43
78:H5:76:THR:OG1	78:H5:94:ARG:HD3	2.18	0.43
81:I5:16:ARG:HH12	81:I5:21:LYS:HG2	1.83	0.43
81:I5:41:ARG:NE	81:I5:57:VAL:HG22	2.33	0.43
81:I5:103:SER:HB2	81:I5:106:GLN:HB2	2.01	0.43
83:M3:63:PRO:HD3	83:M3:91:LEU:HD13	2.00	0.43
84:O3:21:ILE:HG13	84:O3:32:LYS:HE3	2.00	0.43
85:a7:190:ARG:HH21	85:a7:191:LEU:HD21	1.84	0.43
1:E1:6280:A:N6	1:E1:6336:G:H22	2.17	0.43
2:e2:40:G:N7	2:e2:41:C:C4	2.87	0.43
2:e2:91:G:C6	2:e2:93:G:N2	2.86	0.43
2:e2:215:C:OP2	2:e2:219:G:N2	2.44	0.43
2:e2:281:U:H2'	2:e2:282:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:310:G:C4	2:e2:311:G:C8	3.07	0.43
2:e2:403:G:N1	2:e2:404:U:O4	2.51	0.43
2:e2:446:C:O2'	2:e2:2314:G:H4'	2.18	0.43
2:e2:461:G:C2	2:e2:462:G:C5	3.07	0.43
2:e2:497:G:C2	2:e2:499:G:N7	2.87	0.43
2:e2:525:G:N2	2:e2:634:U:O2	2.52	0.43
2:e2:966:A:O2'	2:e2:967:C:OP1	2.29	0.43
2:e2:972:C:OP1	2:e2:1282:G:N2	2.49	0.43
2:e2:1082:C:N3	2:e2:1218:G:C6	2.86	0.43
2:e2:1110:C:C2	2:e2:1111:U:C5	3.06	0.43
2:e2:1266:G:H1'	2:e2:2110:G:H21	1.84	0.43
2:e2:1323:A:H8	2:e2:1323:A:O5'	2.02	0.43
2:e2:1430:C:C2	2:e2:1455:G:C2	3.07	0.43
2:e2:1631:A:C8	18:92:199:VAL:HG11	2.53	0.43
2:e2:1819:G:H4'	25:G2:141:ALA:O	2.18	0.43
2:e2:2061:C:H1'	46:62:111:ARG:NH2	2.32	0.43
2:e2:2066:C:O2'	2:e2:2067:C:H5'	2.19	0.43
2:e2:2254:G:H2'	2:e2:2254:G:N3	2.33	0.43
2:e2:2557:G:H2'	2:e2:2558:C:O4'	2.18	0.43
2:e2:3706:C:H2'	2:e2:3707:U:H6	1.84	0.43
2:e2:3736:A:H2'	2:e2:3737:A:C8	2.52	0.43
2:e2:4177:C:OP1	41:12:91:GLN:HG2	2.19	0.43
2:e2:4415:A:C4	2:e2:4428:A:C6	3.06	0.43
2:e2:4596:C:C4	2:e2:4597:U:C4	3.07	0.43
2:e2:5005:G:N2	2:e2:5041:G:O2'	2.50	0.43
3:h2:18:U:H2'	3:h2:19:C:C6	2.54	0.43
4:d2:22:A:H8	25:G2:265:ARG:NH2	2.16	0.43
4:d2:55:A:C4	4:d2:56:G:C8	3.07	0.43
4:d2:113:G:H2'	4:d2:114:U:O4'	2.19	0.43
9:o2:10:ASP:HB3	9:o2:13:LYS:HG3	2.01	0.43
9:o2:103:LYS:HZ3	9:o2:103:LYS:HG2	1.65	0.43
10:q2:89:ASN:HB3	10:q2:92:LYS:O	2.19	0.43
14:v2:125:PRO:O	14:v2:126:ASN:C	2.61	0.43
18:92:62:VAL:HG22	18:92:73:THR:HG22	1.99	0.43
27:I2:92:GLN:HB3	60:V3:128:LYS:NZ	2.33	0.43
34:T2:161:ARG:H	34:T2:161:ARG:HG3	1.56	0.43
35:U2:89:ALA:CB	35:U2:124:LEU:HD21	2.48	0.43
36:V2:106:THR:O	36:V2:110:LYS:HG2	2.19	0.43
39:Y2:119:TYR:CE2	39:Y2:121:PRO:HD3	2.54	0.43
39:Y2:123:ILE:HG22	39:Y2:124:GLY:N	2.33	0.43
43:32:28:GLU:O	43:32:31:GLU:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:42:165:LEU:HG	44:42:166:ALA:H	1.84	0.43
45:52:285:TYR:OH	45:52:334:LYS:HD3	2.19	0.43
49:K3:134:C:O2	49:K3:1773:C:H4'	2.19	0.43
49:K3:331:C:O2'	49:K3:332:G:H5'	2.17	0.43
49:K3:614:C:H5'	49:K3:626:G:O4'	2.19	0.43
49:K3:737:G:C6	49:K3:738:C:C4	3.07	0.43
49:K3:743:U:O2'	79:P3:341:LYS:HB3	2.18	0.43
49:K3:1238:U:O3'	57:A3:127:LYS:HB2	2.19	0.43
49:K3:1276:A:N7	49:K3:1321:G:N3	2.66	0.43
49:K3:1589:A:H5'	78:H5:81:GLY:HA2	2.00	0.43
49:K3:1603:G:O6	54:G5:25:LYS:HE3	2.18	0.43
49:K3:1641:A:H8	49:K3:1641:A:OP2	2.01	0.43
60:V3:125:VAL:O	60:V3:136:ARG:HA	2.18	0.43
61:W3:88:ILE:HB	61:W3:93:ILE:CD1	2.48	0.43
63:Y3:68:GLU:CG	76:E3:91:PRO:HG3	2.48	0.43
65:J5:9:ASP:HA	65:J5:12:LYS:HG3	2.00	0.43
70:F3:166:ILE:HG23	70:F3:167:LEU:HD12	2.00	0.43
73:d3:16:PRO:HB3	73:d3:24:ARG:CZ	2.49	0.43
73:d3:117:LEU:HD21	73:d3:154:GLN:O	2.18	0.43
74:D3:7:GLU:O	74:D3:9:VAL:HG23	2.19	0.43
79:P3:261:ILE:HD13	79:P3:325:PHE:CE2	2.53	0.43
79:P3:289:ILE:O	79:P3:296:LYS:HG2	2.19	0.43
1:E1:6343:A:O2'	1:E1:6344:U:OP1	2.35	0.43
2:e2:91:G:C5	2:e2:93:G:N2	2.87	0.43
2:e2:228:C:OP2	12:t2:201:ARG:NH2	2.51	0.43
2:e2:268:G:H2'	2:e2:269:G:C8	2.47	0.43
2:e2:338:A:C6	2:e2:339:C:C4	3.07	0.43
2:e2:418:A:H4'	2:e2:2311:C:H5'	2.01	0.43
2:e2:418:A:O2'	2:e2:2311:C:OP1	2.36	0.43
2:e2:1109:C:N4	2:e2:1164:G:H22	2.17	0.43
2:e2:1524:A:C8	2:e2:3916:G:H1'	2.54	0.43
2:e2:1967:G:C2	2:e2:2018:C:N4	2.87	0.43
2:e2:2020:G:C4	29:K2:85:ASN:ND2	2.86	0.43
2:e2:2525:U:C2	2:e2:2528:G:C6	3.07	0.43
2:e2:3973:G:H22	2:e2:4032:G:H1	1.67	0.43
2:e2:4344:U:OP1	24:F2:32:SER:N	2.51	0.43
2:e2:4413:C:N3	2:e2:4414:A:C6	2.87	0.43
2:e2:4461:C:O2	2:e2:4516:G:C2	2.72	0.43
2:e2:4521:U:H1'	45:52:253:CYS:SG	2.58	0.43
2:e2:4695:C:H2'	2:e2:4696:C:O4'	2.18	0.43
3:h2:27:U:H2'	3:h2:28:C:H6	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:h2:102:G:H5''	3:h2:103:A:OP2	2.19	0.43
12:t2:110:ARG:HB3	12:t2:110:ARG:NH1	2.34	0.43
14:v2:44:ARG:HD2	14:v2:49:PHE:HD1	1.83	0.43
16:x2:87:LYS:C	16:x2:88:PHE:HD1	2.26	0.43
25:G2:122:GLN:HE21	25:G2:124:GLU:HB2	1.83	0.43
26:H2:95:LEU:HD12	26:H2:95:LEU:HA	1.82	0.43
31:M2:114:ARG:HH11	31:M2:130:LYS:HB2	1.83	0.43
34:T2:153:LEU:O	34:T2:165:VAL:HG22	2.19	0.43
37:W2:27:VAL:HG12	37:W2:28:ASP:N	2.34	0.43
37:W2:103:MET:HE2	37:W2:192:VAL:HG22	2.00	0.43
37:W2:105:SER:HB2	37:W2:190:ILE:HG12	2.00	0.43
39:Y2:84:GLU:HB2	39:Y2:170:TYR:OH	2.19	0.43
47:72:122:LYS:HE2	47:72:124:THR:HB	2.01	0.43
49:K3:121:U:C2	49:K3:122:G:N7	2.87	0.43
49:K3:431:G:C6	49:K3:432:G:C6	3.07	0.43
49:K3:497:C:C2	49:K3:498:C:C5	3.06	0.43
49:K3:522:A:N6	49:K3:643:A:OP1	2.52	0.43
49:K3:624:C:H41	58:T3:63:ASN:CG	2.27	0.43
49:K3:696:G:H2'	49:K3:697:G:C8	2.54	0.43
49:K3:821:G:N7	49:K3:823:U:O2'	2.51	0.43
49:K3:1041:G:N1	49:K3:1042:A:C5	2.86	0.43
51:13:64:ALA:HB1	51:13:69:THR:O	2.19	0.43
58:T3:87:ASN:HB3	58:T3:134:TYR:HB2	2.01	0.43
60:V3:110:MET:O	60:V3:114:VAL:HG23	2.18	0.43
63:Y3:1:MET:HG3	63:Y3:3:VAL:HG22	2.01	0.43
64:j3:36:HIS:O	64:j3:41:CYS:HB3	2.19	0.43
67:b3:1:MET:HE1	67:b3:106:LEU:HB2	2.01	0.43
70:F3:189:TRP:CZ3	70:F3:191:TYR:HB2	2.54	0.43
73:d3:87:LEU:HD13	73:d3:100:LEU:HD11	2.01	0.43
73:d3:108:ARG:HH22	73:d3:151:LEU:N	2.16	0.43
79:P3:315:VAL:O	79:P3:319:ARG:HG2	2.19	0.43
85:a7:160:VAL:O	85:a7:161:PHE:CD1	2.71	0.43
2:e2:64:A:H4'	2:e2:65:A:H5''	2.01	0.43
2:e2:198:A:N3	2:e2:222:C:H1'	2.34	0.43
2:e2:285:G:H2'	2:e2:286:U:H6	1.84	0.43
2:e2:353:A:C4	2:e2:379:G:N7	2.87	0.43
2:e2:441:G:H2'	2:e2:442:G:O4'	2.18	0.43
2:e2:682:G:H3'	2:e2:683:C:H2'	2.00	0.43
2:e2:944:A:O2'	2:e2:945:U:OP1	2.27	0.43
2:e2:976:G:C6	2:e2:977:C:C4	3.07	0.43
2:e2:1111:U:H6	2:e2:1111:U:O5'	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1245:C:N3	2:e2:1247:U:N3	2.67	0.43
2:e2:1250:C:N4	2:e2:1261:G:C2	2.86	0.43
2:e2:1266:G:H3'	2:e2:1267:C:C2	2.54	0.43
2:e2:1285:U:O2'	2:e2:1286:C:H5''	2.19	0.43
2:e2:1445:U:H2'	2:e2:1446:C:O4'	2.19	0.43
2:e2:1546:C:H5''	2:e2:1547:A:OP1	2.19	0.43
2:e2:1563:A:N3	49:K3:677:G:H1'	2.33	0.43
2:e2:1627:G:O6	2:e2:1636:U:O4	2.36	0.43
2:e2:1663:C:O2'	2:e2:2320:G:N2	2.51	0.43
2:e2:1727:U:H2'	2:e2:1728:U:H6	1.84	0.43
2:e2:1960:G:O2'	2:e2:1961:A:P	2.76	0.43
2:e2:2072:C:H2'	2:e2:2073:C:C6	2.54	0.43
2:e2:2091:G:H22	35:U2:176:ARG:NH2	2.17	0.43
2:e2:2113:G:O2'	2:e2:2115:C:N3	2.51	0.43
2:e2:2443:G:H2'	2:e2:2444:U:O4'	2.19	0.43
2:e2:2460:A:O2'	41:12:96:ARG:NH1	2.52	0.43
2:e2:2566:G:H2'	2:e2:2567:G:O4'	2.19	0.43
2:e2:2616:C:C2	2:e2:2722:G:C2	3.06	0.43
2:e2:2706:G:H2'	2:e2:2708:U:H5	1.84	0.43
2:e2:3621:A:N3	2:e2:3621:A:H5'	2.34	0.43
2:e2:3975:C:OP2	44:42:26:ARG:HG3	2.18	0.43
2:e2:4044:U:N3	44:42:96:ASN:OD1	2.51	0.43
2:e2:4054:C:H5'	44:42:213:PRO:CG	2.49	0.43
2:e2:4061:G:H2'	2:e2:4062:A:O4'	2.19	0.43
2:e2:4094:G:H2'	2:e2:4095:G:C8	2.54	0.43
2:e2:4120:U:C5	17:y2:101:LYS:HE3	2.54	0.43
2:e2:4265:U:H4'	2:e2:4266:G:OP1	2.18	0.43
2:e2:4270:C:C5'	2:e2:4271:A:H5''	2.49	0.43
2:e2:4621:C:C2	2:e2:4622:A:C8	3.07	0.43
4:d2:37:G:C2	4:d2:41:G:C2	3.07	0.43
12:t2:66:SER:O	12:t2:67:TRP:HD1	2.02	0.43
12:t2:108:TRP:HB2	41:12:200:LEU:HD22	2.01	0.43
15:w2:152:VAL:O	15:w2:156:LEU:HD23	2.18	0.43
20:B2:43:MET:HE2	20:B2:43:MET:HB3	1.80	0.43
22:D2:26:TRP:CD1	22:D2:26:TRP:H	2.36	0.43
29:K2:17:ILE:HB	29:K2:59:THR:CG2	2.49	0.43
29:K2:38:LYS:HE2	31:M2:11:LYS:HG2	2.01	0.43
29:K2:38:LYS:O	29:K2:42:GLN:HG3	2.17	0.43
29:K2:131:GLY:HA3	29:K2:177:MET:SD	2.58	0.43
29:K2:149:ARG:HB2	31:M2:67:ARG:HE	1.84	0.43
29:K2:190:GLN:HA	29:K2:201:PRO:HG3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:02:6:PHE:CE2	46:62:153:PRO:HD3	2.53	0.43
40:02:6:PHE:HE2	46:62:153:PRO:HD3	1.83	0.43
41:12:98:LEU:CD1	41:12:128:LYS:HD2	2.49	0.43
48:82:92:LYS:HD2	48:82:92:LYS:HA	1.82	0.43
49:K3:122:G:C4'	64:j3:145:ARG:HD3	2.49	0.43
49:K3:127:C:H2'	49:K3:128:U:H6	1.84	0.43
49:K3:140:C:H2'	49:K3:141:A:O4'	2.19	0.43
49:K3:158:A:H2'	49:K3:159:A:C8	2.54	0.43
49:K3:367:U:HO2'	49:K3:368:U:P	2.42	0.43
49:K3:653:A:H2'	49:K3:654:A:C8	2.54	0.43
49:K3:752:G:H2'	49:K3:753:C:C5	2.54	0.43
49:K3:991:G:C8	49:K3:1134:G:H5'	2.54	0.43
49:K3:1092:G:H2'	49:K3:1093:A:C8	2.54	0.43
49:K3:1133:A:H2'	49:K3:1134:G:C8	2.54	0.43
49:K3:1139:C:C4	49:K3:1140:G:C6	3.07	0.43
49:K3:1185:C:H2'	49:K3:1186:U:O4'	2.18	0.43
49:K3:1192:U:H2'	49:K3:1193:U:O4'	2.19	0.43
49:K3:1197:G:C2	49:K3:1198:G:C5	3.07	0.43
49:K3:1240:A:N9	57:A3:100:LYS:HD2	2.33	0.43
49:K3:1286:G:O6	75:e3:33:ARG:HD3	2.17	0.43
49:K3:1351:G:C2	49:K3:1379:A:C6	3.07	0.43
49:K3:1718:G:H2'	49:K3:1814:G:N2	2.34	0.43
49:K3:1797:U:C2	49:K3:1798:C:C5	3.07	0.43
52:Q3:138:TYR:OH	52:Q3:152:GLU:HB2	2.19	0.43
53:G3:102:PHE:HB2	58:T3:8:ARG:HG3	2.00	0.43
53:G3:106:HIS:O	53:G3:107:LYS:HD2	2.19	0.43
55:a3:77:PHE:HB3	55:a3:89:LEU:HD11	2.01	0.43
55:a3:244:ASN:C	55:a3:245:ARG:HG3	2.42	0.43
57:A3:84:ILE:H	57:A3:84:ILE:HD12	1.84	0.43
63:Y3:28:GLU:HG3	76:E3:70:TYR:CZ	2.54	0.43
74:D3:51:LYS:HG3	74:D3:78:ILE:HD13	2.01	0.43
79:P3:296:LYS:O	79:P3:328:LYS:HG2	2.19	0.43
1:E1:6423:A:O2'	1:E1:6424:A:H5''	2.19	0.42
2:e2:83:C:H3'	2:e2:84:A:H8	1.83	0.42
2:e2:172:C:H42	2:e2:264:C:N4	2.17	0.42
2:e2:226:G:H3'	9:o2:1:MET:CE	2.49	0.42
2:e2:723:A:P	12:t2:347:HIS:HD1	2.42	0.42
2:e2:1335:G:H2'	2:e2:1336:G:C8	2.54	0.42
2:e2:1493:G:H2'	2:e2:1494:U:O4'	2.19	0.42
2:e2:1714:C:H1'	2:e2:1716:G:O6	2.19	0.42
2:e2:1795:A:OP2	2:e2:4214:A:N6	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1966:A:C2	2:e2:1967:G:H1'	2.54	0.42
2:e2:2090:C:H4'	2:e2:2091:G:OP1	2.18	0.42
2:e2:2116:G:H3'	35:U2:48:LEU:HD11	1.99	0.42
2:e2:2677:G:C5	2:e2:2678:A:C8	3.06	0.42
2:e2:3664:G:C2	2:e2:3665:G:N7	2.86	0.42
2:e2:3941:G:O2'	2:e2:3942:A:H5'	2.19	0.42
2:e2:3968:U:O2'	2:e2:4054:C:N4	2.52	0.42
2:e2:4036:G:H2'	2:e2:4037:C:C4	2.53	0.42
2:e2:4509:U:O3'	6:k2:46:LYS:NZ	2.51	0.42
2:e2:4594:U:H2'	2:e2:4595:G:C8	2.53	0.42
2:e2:4891:G:C2	2:e2:4892:A:C5	3.07	0.42
2:e2:4998:G:H2'	2:e2:4999:G:C8	2.51	0.42
4:d2:7:G:P	25:G2:33:ARG:HH11	2.42	0.42
4:d2:47:G:H21	25:G2:222:GLN:CD	2.27	0.42
15:w2:54:TYR:OH	15:w2:73:PHE:O	2.37	0.42
16:x2:39:THR:O	16:x2:42:TYR:N	2.47	0.42
17:y2:82:MET:HB2	17:y2:87:VAL:HG23	2.01	0.42
17:y2:96:LEU:CB	51:13:55:LEU:HD11	2.49	0.42
18:92:179:ILE:H	18:92:179:ILE:HD12	1.83	0.42
31:M2:113:ALA:O	31:M2:133:LEU:HD13	2.19	0.42
34:T2:164:ARG:HH22	34:T2:277:VAL:C	2.26	0.42
35:U2:164:LYS:HB2	35:U2:164:LYS:HE3	1.72	0.42
39:Y2:92:TYR:O	57:A3:10:ARG:NH1	2.52	0.42
45:52:12:GLY:HA3	45:52:235:TRP:HE3	1.84	0.42
46:62:84:TYR:HE2	46:62:86:SER:HB3	1.80	0.42
49:K3:77:A:C5	67:b3:176:ILE:HB	2.54	0.42
49:K3:91:A:H5'	64:j3:7:LYS:NZ	2.34	0.42
49:K3:426:A:H3'	49:K3:427:U:C6	2.54	0.42
49:K3:590:A:H2'	50:s3:26:LYS:HB2	2.00	0.42
49:K3:746:C:C4	49:K3:795:A:H2	2.38	0.42
49:K3:1204:A:H2'	49:K3:1205:C:H6	1.84	0.42
49:K3:1263:U:OP2	49:K3:1264:C:H2'	2.19	0.42
49:K3:1514:G:N3	57:A3:79:HIS:CE1	2.87	0.42
49:K3:1838:U:H3	49:K3:1854:U:P	2.41	0.42
59:U3:155:ARG:H	59:U3:155:ARG:HD2	1.84	0.42
60:V3:82:ARG:NH2	60:V3:188:LEU:O	2.52	0.42
73:d3:136:ARG:HG3	73:d3:136:ARG:O	2.18	0.42
83:M3:62:VAL:O	83:M3:64:ASN:N	2.50	0.42
1:E1:6289:C:H4'	1:E1:6330:U:H3	1.85	0.42
1:E1:6338:U:H6	1:E1:6338:U:O5'	2.02	0.42
2:e2:29:G:C6	2:e2:30:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:34:A:H1'	2:e2:1526:G:H21	1.85	0.42
2:e2:48:G:O2'	2:e2:49:U:OP2	2.32	0.42
2:e2:277:G:C5	20:B2:30:ARG:HD2	2.53	0.42
2:e2:407:A:C2	2:e2:410:A:C4	3.07	0.42
2:e2:1349:G:C2	2:e2:1508:A:C2	3.07	0.42
2:e2:1503:A:OP2	2:e2:1503:A:H8	2.02	0.42
2:e2:1733:G:H5'	47:72:58:HIS:HE2	1.84	0.42
2:e2:1846:C:H4'	33:S2:152:PHE:CZ	2.54	0.42
2:e2:2389:A:H2'	2:e2:2390:G:H8	1.84	0.42
2:e2:2623:A:C2	2:e2:2634:C:N3	2.88	0.42
2:e2:2793:G:C2	2:e2:2797:C:N3	2.87	0.42
2:e2:4339:A:C8	2:e2:4377:G:C5	3.07	0.42
2:e2:4509:U:H5'	6:k2:44:GLY:HA2	2.01	0.42
2:e2:4629:U:H2'	2:e2:4630:G:H8	1.83	0.42
2:e2:4863:G:H2'	2:e2:4864:U:C6	2.54	0.42
2:e2:4877:G:N7	40:02:98:ARG:NH2	2.67	0.42
4:d2:22:A:N6	25:G2:264:LYS:HG2	2.34	0.42
4:d2:70:G:C5	4:d2:106:G:C6	3.07	0.42
10:q2:9:ARG:HH12	10:q2:12:ARG:HH11	1.66	0.42
17:y2:19:LYS:HE2	17:y2:19:LYS:HB2	1.88	0.42
19:A2:116:LEU:O	85:a7:129:ARG:NH1	2.52	0.42
31:M2:144:ASP:HB3	31:M2:146:ARG:HG3	2.00	0.42
33:S2:115:ARG:HB3	33:S2:115:ARG:HH11	1.83	0.42
34:T2:202:THR:O	34:T2:202:THR:HG23	2.19	0.42
34:T2:250:LYS:O	34:T2:254:LYS:HG2	2.19	0.42
36:V2:136:LEU:HD12	36:V2:202:VAL:HB	2.00	0.42
38:X2:165:ILE:HG12	38:X2:166:HIS:H	1.84	0.42
41:12:132:VAL:HG12	41:12:134:LEU:HG	2.01	0.42
44:42:59:PRO:HB2	44:42:61:PRO:HD2	2.01	0.42
49:K3:112:U:C5'	49:K3:113:G:H5'	2.44	0.42
49:K3:149:A:C2	49:K3:170:A:N6	2.87	0.42
49:K3:402:C:OP1	71:c3:14:THR:OG1	2.35	0.42
49:K3:468:A:H3'	49:K3:469:A:C8	2.53	0.42
49:K3:491:C:O2	49:K3:493:A:N6	2.33	0.42
49:K3:602:G:N2	49:K3:621:C:C4	2.87	0.42
49:K3:677:G:O6	49:K3:1026:C:H3'	2.19	0.42
49:K3:695:C:N4	49:K3:696:G:O6	2.52	0.42
49:K3:808:A:H61	49:K3:856:C:N4	2.17	0.42
49:K3:925:G:N2	49:K3:1017:U:H3	2.17	0.42
49:K3:978:G:H2'	49:K3:979:C:C6	2.54	0.42
49:K3:1023:A:H1'	65:J5:2:VAL:CG1	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1055:A:C6	49:K3:1056:U:C4	3.07	0.42
49:K3:1234:C:O3'	49:K3:1246:A:N6	2.48	0.42
49:K3:1274:G:H5'	76:E3:2:LEU:HD11	2.01	0.42
49:K3:1521:C:H2'	54:G5:136:THR:O	2.19	0.42
53:G3:35:ARG:NH2	53:G3:56:ILE:HG23	2.34	0.42
54:G5:114:LEU:HA	54:G5:114:LEU:HD23	1.71	0.42
55:a3:140:TYR:HE2	55:a3:142:VAL:HG22	1.84	0.42
59:U3:31:ASP:OD2	59:U3:32:PHE:N	2.52	0.42
60:V3:208:HIS:CG	60:V3:209:ASP:N	2.86	0.42
64:j3:82:TYR:CD1	64:j3:83:PRO:HD2	2.54	0.42
64:j3:103:TYR:HE1	64:j3:109:PHE:CE2	2.29	0.42
66:N3:152:TRP:O	66:N3:152:TRP:CG	2.72	0.42
73:d3:158:ASP:OD1	73:d3:158:ASP:N	2.51	0.42
76:E3:82:TYR:HD2	76:E3:83:LEU:HD12	1.83	0.42
77:H3:40:ARG:HD2	80:I3:66:ARG:H	1.84	0.42
82:L3:34:ASP:HB2	82:L3:80:ARG:HD3	2.00	0.42
83:M3:62:VAL:HG22	83:M3:76:ARG:HH12	1.84	0.42
85:a7:162:LYS:HG3	85:a7:163:LYS:N	2.34	0.42
2:e2:302:C:C2	2:e2:303:C:C5	3.08	0.42
2:e2:710:G:H21	34:T2:139:HIS:HE1	1.67	0.42
2:e2:722:G:C6	2:e2:723:A:N6	2.88	0.42
2:e2:1173:G:N2	2:e2:1174:G:C2	2.87	0.42
2:e2:1227:C:H2'	2:e2:1232:G:C8	2.54	0.42
2:e2:1362:G:H5''	85:a7:39:ARG:NH1	2.34	0.42
2:e2:1395:U:H5'	85:a7:183:ARG:NH1	2.35	0.42
2:e2:1414:C:C4	2:e2:1415:G:C8	3.08	0.42
2:e2:1450:C:H2'	2:e2:1451:G:H8	1.84	0.42
2:e2:1737:A:C4	2:e2:1738:A:C8	3.07	0.42
2:e2:1826:G:H2'	2:e2:1827:C:H6	1.84	0.42
2:e2:2009:A:C2	31:M2:15:LEU:HB2	2.54	0.42
2:e2:2060:U:O2	46:62:111:ARG:HD2	2.19	0.42
2:e2:2245:G:O6	2:e2:2251:G:O2'	2.33	0.42
2:e2:2343:G:C4	12:t2:101:MET:HE1	2.55	0.42
2:e2:2383:C:C2	2:e2:2423:A:H2	2.38	0.42
2:e2:2508:U:H2'	2:e2:2509:C:C6	2.54	0.42
2:e2:2581:A:H1'	2:e2:2654:C:HO2'	1.84	0.42
2:e2:3689:G:P	18:92:201:GLY:H	2.43	0.42
2:e2:3727:A:H8	2:e2:3727:A:O5'	2.02	0.42
2:e2:3766:A:OP2	2:e2:3767:C:N4	2.39	0.42
2:e2:3799:A:OP1	6:k2:64:THR:HG21	2.19	0.42
2:e2:3902:A:C4	2:e2:4523:A:N6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4053:A:H4'	44:42:207:LYS:HE2	2.01	0.42
2:e2:4237:C:O2'	2:e2:4321:U:H1'	2.19	0.42
2:e2:4238:G:N1	2:e2:4287:G:C6	2.88	0.42
2:e2:4545:G:C2	2:e2:4546:A:C5	3.06	0.42
2:e2:4635:A:C8	2:e2:5048:A:N6	2.86	0.42
2:e2:4970:C:H2'	2:e2:4971:A:O4'	2.20	0.42
2:e2:5063:G:H2'	2:e2:5063:G:N3	2.34	0.42
4:d2:87:G:N2	4:d2:89:G:H5''	2.35	0.42
6:k2:115:SER:O	6:k2:135:ASN:ND2	2.50	0.42
7:l2:57:ARG:NH1	7:l2:62:GLY:O	2.52	0.42
8:m2:117:TYR:O	8:m2:119:ILE:HG12	2.18	0.42
14:v2:40:GLY:O	14:v2:46:ARG:NH2	2.46	0.42
14:v2:78:LEU:HD12	14:v2:98:GLU:O	2.20	0.42
15:w2:51:LYS:O	15:w2:55:LEU:HG	2.19	0.42
16:x2:106:TYR:HD1	16:x2:106:TYR:HA	1.67	0.42
20:B2:34:THR:HG22	20:B2:35:LYS:N	2.34	0.42
23:E2:93:LYS:HG3	23:E2:102:ARG:HD2	2.02	0.42
23:E2:127:VAL:HB	37:W2:184:ARG:HB3	1.99	0.42
25:G2:203:ASN:OD1	25:G2:203:ASN:N	2.52	0.42
25:G2:287:PHE:O	25:G2:291:GLN:HG3	2.20	0.42
28:J2:99:LYS:HB3	28:J2:99:LYS:HE2	1.78	0.42
33:S2:65:ARG:NE	33:S2:142:PRO:HD3	2.34	0.42
37:W2:55:GLU:OE2	40:02:3:PHE:HD2	2.02	0.42
42:22:89:ILE:HB	42:22:121:ARG:HD2	2.00	0.42
43:32:129:GLY:C	43:32:130:ASN:ND2	2.77	0.42
44:42:35:GLN:NE2	44:42:164:CYS:HB3	2.34	0.42
45:52:299:ILE:CG1	45:52:313:SER:HB3	2.49	0.42
48:82:65:ARG:NH1	48:82:66:SER:O	2.53	0.42
48:82:65:ARG:HH12	48:82:67:LYS:HA	1.83	0.42
49:K3:16:G:H2'	49:K3:17:C:C6	2.54	0.42
49:K3:123:G:O2'	64:j3:148:ARG:NE	2.51	0.42
49:K3:137:U:N3	49:K3:140:C:OP2	2.52	0.42
49:K3:231:A:N7	49:K3:889:U:N3	2.66	0.42
49:K3:377:G:H2'	49:K3:378:U:C6	2.55	0.42
49:K3:420:G:N3	49:K3:420:G:H2'	2.34	0.42
49:K3:559:G:H2'	49:K3:560:A:C8	2.54	0.42
49:K3:824:C:N1	73:d3:144:ILE:HG21	2.34	0.42
49:K3:878:G:C2	49:K3:909:G:C6	3.07	0.42
49:K3:975:G:N1	49:K3:976:G:C6	2.88	0.42
49:K3:1220:A:N6	49:K3:1221:G:O6	2.52	0.42
49:K3:1507:G:H5'	52:Q3:124:LYS:HE2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1656:G:C5	49:K3:1669:G:C2	3.07	0.42
53:G3:111:VAL:HG12	53:G3:112:HIS:O	2.20	0.42
56:a5:17:LEU:O	56:a5:88:LEU:HA	2.20	0.42
58:T3:68:LYS:N	58:T3:68:LYS:HD2	2.35	0.42
59:U3:74:VAL:HG22	59:U3:121:LEU:N	2.35	0.42
63:Y3:98:ALA:HB3	63:Y3:169:ASP:O	2.20	0.42
63:Y3:110:LEU:HD23	63:Y3:110:LEU:HA	1.81	0.42
64:j3:15:PRO:HD2	64:j3:18:TRP:CZ3	2.55	0.42
67:b3:172:LYS:HG3	67:b3:173:ALA:N	2.34	0.42
71:c3:94:LYS:HE3	71:c3:94:LYS:HB3	1.81	0.42
71:c3:99:ASN:HA	71:c3:175:ILE:O	2.19	0.42
73:d3:38:ARG:HE	73:d3:38:ARG:HB2	1.41	0.42
78:H5:116:ASP:HB3	78:H5:119:TRP:O	2.20	0.42
79:P3:384:VAL:HG22	79:P3:390:ARG:HH12	1.83	0.42
80:I3:40:ILE:CG2	80:I3:44:LYS:HE2	2.50	0.42
1:E1:6385:A:OP2	49:K3:1639:G:N2	2.52	0.42
2:e2:319:A:HO2'	2:e2:3726:A:H8	1.65	0.42
2:e2:375:G:OP1	12:t2:62:THR:HB	2.19	0.42
2:e2:1199:G:O2'	46:62:23:HIS:NE2	2.52	0.42
2:e2:1279:A:C5	2:e2:1280:C:C4	3.07	0.42
2:e2:1441:C:C2	2:e2:2103:G:N2	2.87	0.42
2:e2:1453:G:O6	2:e2:1715:C:O2'	2.18	0.42
2:e2:1597:G:C2	2:e2:1599:A:C6	3.08	0.42
2:e2:1968:G:N3	2:e2:2016:A:C6	2.78	0.42
2:e2:1972:G:H22	2:e2:1993:C:H1'	1.82	0.42
2:e2:2100:C:H2'	2:e2:2101:G:C8	2.41	0.42
2:e2:2295:C:H2'	2:e2:2296:G:C8	2.54	0.42
2:e2:2296:G:C6	2:e2:2297:G:C5	3.08	0.42
2:e2:2399:G:O2'	2:e2:2822:G:O2'	2.31	0.42
2:e2:2428:A:C8	22:D2:45:ARG:NH1	2.85	0.42
2:e2:2474:G:OP2	8:m2:48:ARG:NH1	2.50	0.42
2:e2:3752:C:C5	2:e2:3777:G:C2	3.07	0.42
2:e2:3977:C:N4	2:e2:4025:C:H41	2.17	0.42
2:e2:4505:C:H2'	2:e2:4506:C:C6	2.53	0.42
2:e2:4581:G:HO2'	2:e2:4582:C:H5'	1.85	0.42
2:e2:4697:U:H4'	23:E2:104:HIS:CE1	2.54	0.42
4:d2:5:A:H2'	4:d2:6:C:H6	1.84	0.42
4:d2:71:G:C4	4:d2:72:U:C5	3.07	0.42
4:d2:94:C:H2'	4:d2:95:C:H6	1.83	0.42
12:t2:74:ALA:H	12:t2:78:ARG:NH2	2.17	0.42
16:x2:33:VAL:HG23	16:x2:38:GLU:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:92:2:GLY:HA3	18:92:207:VAL:HG13	2.01	0.42
28:J2:32:LEU:HD13	28:J2:113:ARG:HD2	2.00	0.42
28:J2:66:ARG:HD3	28:J2:76:SER:HA	2.02	0.42
34:T2:164:ARG:H	34:T2:185:ASN:ND2	2.14	0.42
37:W2:47:ARG:CB	37:W2:91:MET:HE1	2.49	0.42
39:Y2:141:ILE:HD12	39:Y2:144:LYS:HD2	2.00	0.42
41:12:63:ARG:HE	41:12:63:ARG:HB2	1.68	0.42
43:32:167:LYS:HD3	43:32:170:ARG:HH12	1.85	0.42
44:42:95:LYS:C	44:42:98:LYS:HZ2	2.27	0.42
49:K3:64:A:H8	67:b3:175:LYS:HE2	1.83	0.42
49:K3:348:A:O2'	49:K3:349:A:O5'	2.35	0.42
49:K3:403:G:N3	49:K3:404:G:H1'	2.35	0.42
49:K3:1099:G:C5	49:K3:1100:A:C8	3.08	0.42
49:K3:1104:G:C2	49:K3:1129:G:C2	3.08	0.42
49:K3:1261:C:O2	49:K3:1262:C:H5	2.03	0.42
49:K3:1386:A:C5	49:K3:1387:G:C5	3.06	0.42
49:K3:1606:G:N2	49:K3:1632:G:H1'	2.33	0.42
49:K3:1718:G:N2	49:K3:1814:G:H2'	2.34	0.42
52:Q3:123:ASN:HB3	52:Q3:125:HIS:ND1	2.34	0.42
55:a3:259:TRP:CD1	55:a3:266:ILE:HG23	2.53	0.42
58:T3:47:ALA:HA	58:T3:76:LYS:HE2	2.01	0.42
59:U3:10:MET:HB3	72:C3:111:PHE:CE2	2.54	0.42
59:U3:76:VAL:HG21	59:U3:91:ALA:HB2	2.01	0.42
65:J5:14:ILE:HG13	65:J5:15:ASN:N	2.34	0.42
66:N3:121:PRO:HG3	66:N3:149:GLN:OE1	2.20	0.42
68:B3:149:ASP:C	68:B3:151:ARG:H	2.28	0.42
79:P3:338:ILE:O	79:P3:340:PRO:HD3	2.20	0.42
81:I5:37:LYS:O	81:I5:57:VAL:HG21	2.19	0.42
84:O3:82:LYS:HA	84:O3:82:LYS:HD3	1.76	0.42
2:e2:149:A:N7	36:V2:196:ARG:NH1	2.67	0.42
2:e2:482:G:OP2	28:J2:67:ARG:NE	2.50	0.42
2:e2:927:G:O2'	2:e2:928:C:OP2	2.31	0.42
2:e2:1281:G:N7	12:t2:322:LEU:HD13	2.34	0.42
2:e2:1516:G:H1'	85:a7:19:GLN:HB3	2.01	0.42
2:e2:1673:U:H1'	2:e2:4304:A:C2	2.54	0.42
2:e2:1701:A:N3	2:e2:2096:U:H4'	2.34	0.42
2:e2:1743:A:O4'	25:G2:15:ARG:HD2	2.19	0.42
2:e2:3738:G:H2'	2:e2:3739:C:H6	1.84	0.42
2:e2:3749:C:H1'	18:92:222:PRO:HG3	2.01	0.42
2:e2:3751:G:C2	2:e2:3752:C:N3	2.87	0.42
2:e2:3991:G:H8	2:e2:3991:G:O5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:4233:A:C8	2:e2:4235:G:C8	3.08	0.42
2:e2:4903:G:N2	2:e2:4904:G:C4	2.88	0.42
2:e2:4936:G:N3	2:e2:4938:A:O2'	2.52	0.42
3:h2:49:G:C6	3:h2:50:C:C4	3.07	0.42
3:h2:65:A:C4	3:h2:66:A:C8	3.08	0.42
3:h2:72:A:C4	3:h2:73:U:C5	3.07	0.42
3:h2:152:U:H2'	3:h2:153:C:O4'	2.19	0.42
4:d2:116:G:C2	4:d2:117:G:C8	3.07	0.42
10:q2:28:HIS:ND1	10:q2:32:ARG:HD3	2.34	0.42
12:t2:11:TYR:CE2	12:t2:148:PRO:HG2	2.55	0.42
23:E2:119:ASN:OD1	23:E2:120:ASN:N	2.52	0.42
28:J2:59:GLY:HA3	28:J2:82:ILE:O	2.20	0.42
33:S2:18:PRO:HD2	33:S2:52:PHE:CD2	2.55	0.42
34:T2:149:PRO:HB3	34:T2:206:ILE:HD11	2.01	0.42
35:U2:81:TYR:HD1	47:72:140:PHE:CE2	2.38	0.42
38:X2:206:LEU:HD23	38:X2:206:LEU:HA	1.72	0.42
40:02:130:LEU:HD23	40:02:130:LEU:HA	1.88	0.42
42:22:95:VAL:HG13	42:22:96:VAL:N	2.35	0.42
42:22:133:LYS:NZ	42:22:135:ARG:HH21	2.17	0.42
45:52:280:ILE:HG22	45:52:281:ASN:OD1	2.19	0.42
45:52:306:ASP:OD1	45:52:307:TYR:CD1	2.71	0.42
49:K3:2:A:H5'	61:W3:205:VAL:HG11	2.00	0.42
49:K3:73:C:H42	49:K3:79:A:H4'	1.84	0.42
49:K3:221:A:N1	49:K3:301:A:C6	2.87	0.42
49:K3:812:A:O2'	64:j3:16:LYS:HB2	2.20	0.42
49:K3:904:A:H2'	49:K3:905:C:C6	2.54	0.42
49:K3:1035:A:H2'	49:K3:1036:A:O4'	2.18	0.42
49:K3:1047:C:H4'	56:a5:142:ARG:O	2.20	0.42
49:K3:1064:C:H2'	49:K3:1065:G:C8	2.52	0.42
49:K3:1076:G:C6	49:K3:1077:A:N6	2.87	0.42
49:K3:1277:C:H2'	49:K3:1278:A:H8	1.82	0.42
49:K3:1297:U:H5	57:A3:59:ARG:HH22	1.68	0.42
49:K3:1298:G:O2'	57:A3:79:HIS:HB2	2.19	0.42
49:K3:1755:C:H2'	49:K3:1756:C:C5	2.55	0.42
51:13:26:LYS:HB3	51:13:97:ILE:HB	2.00	0.42
55:a3:17:TRP:HB2	55:a3:36:ARG:CG	2.43	0.42
55:a3:132:TRP:CE3	55:a3:138:CYS:HB3	2.55	0.42
55:a3:178:ASN:OD1	55:a3:179:LEU:N	2.53	0.42
56:a5:17:LEU:HG	56:a5:18:GLY:O	2.19	0.42
61:W3:152:ARG:O	61:W3:156:ILE:HG13	2.19	0.42
61:W3:193:VAL:HG12	61:W3:195:LEU:HD22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Y3:32:ASP:O	63:Y3:107:TYR:OH	2.27	0.42
63:Y3:64:ARG:HG2	63:Y3:64:ARG:HH11	1.85	0.42
63:Y3:99:ILE:H	63:Y3:99:ILE:HD12	1.84	0.42
64:j3:141:THR:HG23	64:j3:145:ARG:O	2.19	0.42
67:b3:93:LYS:HD2	67:b3:94:ARG:H	1.84	0.42
67:b3:172:LYS:HG3	67:b3:173:ALA:H	1.83	0.42
69:f3:10:LYS:O	69:f3:58:LEU:HB2	2.20	0.42
71:c3:37:LYS:HA	71:c3:94:LYS:O	2.20	0.42
72:C3:10:LYS:HD3	72:C3:10:LYS:HA	1.78	0.42
75:e3:52:LEU:HD23	75:e3:77:ILE:O	2.19	0.42
79:P3:347:ARG:HH21	79:P3:349:LYS:HB2	1.85	0.42
79:P3:380:LYS:H	79:P3:381:ARG:NH2	2.17	0.42
2:e2:288:G:C6	2:e2:300:A:N1	2.87	0.42
2:e2:310:G:H2'	2:e2:311:G:H8	1.84	0.42
2:e2:636:G:H2'	2:e2:637:G:H5'	2.01	0.42
2:e2:943:A:C6	2:e2:946:C:C5	3.08	0.42
2:e2:1054:G:C2	2:e2:1062:G:C6	3.07	0.42
2:e2:1108:C:H5''	2:e2:1160:C:OP1	2.20	0.42
2:e2:1552:G:O2'	2:e2:1553:A:OP2	2.31	0.42
2:e2:1697:G:H5''	2:e2:1699:A:C1'	2.50	0.42
2:e2:1699:A:OP1	2:e2:2083:C:N4	2.53	0.42
2:e2:1827:C:H2'	2:e2:1828:C:H6	1.84	0.42
2:e2:1843:G:C6	2:e2:1844:U:C4	3.08	0.42
2:e2:1854:G:H2'	2:e2:1855:C:C6	2.54	0.42
2:e2:1906:A:N6	2:e2:2068:A:C8	2.87	0.42
2:e2:1923:C:C4	2:e2:1924:G:N7	2.88	0.42
2:e2:2010:C:C2'	2:e2:2011:A:H8	2.31	0.42
2:e2:2642:A:H2'	2:e2:2643:G:O4'	2.19	0.42
2:e2:3599:A:H2'	2:e2:3600:G:C8	2.54	0.42
2:e2:3650:C:H2'	2:e2:3651:A:O4'	2.19	0.42
2:e2:3693:U:N3	2:e2:3694:U:C5	2.88	0.42
2:e2:3695:U:O2'	2:e2:3696:C:O5'	2.36	0.42
2:e2:3923:A:C2	2:e2:3924:C:C4	3.07	0.42
2:e2:4094:G:H2'	2:e2:4095:G:N7	2.34	0.42
2:e2:4355:G:C2	2:e2:4356:G:C5	3.07	0.42
2:e2:4602:A:C2	2:e2:4610:A:C4	3.07	0.42
2:e2:4626:A:H62	2:e2:4672:A:N6	2.17	0.42
2:e2:4668:U:OP1	45:52:226:LYS:HD3	2.20	0.42
2:e2:5026:U:O4	71:c3:168:GLN:HA	2.20	0.42
3:h2:135:C:O3'	8:m2:56:ARG:NH1	2.43	0.42
4:d2:13:A:C4	4:d2:110:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d2:113:G:H21	25:G2:72:ASP:N	2.05	0.42
7:l2:1:MET:HE3	45:52:57:VAL:CG1	2.48	0.42
16:x2:32:GLY:HA2	34:T2:285:TYR:CD2	2.54	0.42
24:F2:67:VAL:HG13	24:F2:83:LEU:O	2.19	0.42
24:F2:72:CYS:SG	24:F2:73:VAL:N	2.93	0.42
25:G2:160:PHE:CE2	25:G2:179:ARG:HB2	2.54	0.42
25:G2:268:ARG:HA	25:G2:268:ARG:HD2	1.75	0.42
31:M2:70:GLN:NE2	31:M2:72:GLU:OE1	2.53	0.42
32:R2:66:LYS:H	32:R2:69:TYR:HD2	1.66	0.42
35:U2:132:LEU:HD23	35:U2:132:LEU:HA	1.86	0.42
37:W2:107:TYR:CD2	37:W2:111:PRO:HA	2.55	0.42
39:Y2:93:GLU:O	39:Y2:94:LEU:HD22	2.19	0.42
39:Y2:112:HIS:CD2	39:Y2:126:TYR:H	2.37	0.42
40:O2:34:ASN:O	40:O2:52:PHE:N	2.50	0.42
43:32:95:TRP:CD1	43:32:95:TRP:C	2.97	0.42
44:42:78:LYS:NZ	44:42:84:HIS:HB3	2.35	0.42
45:52:44:THR:HG21	45:52:186:ASN:OD1	2.20	0.42
46:62:86:SER:C	46:62:88:SER:H	2.26	0.42
48:82:96:LEU:HB3	48:82:100:LEU:HD12	2.01	0.42
48:82:99:TRP:O	48:82:114:TYR:HA	2.20	0.42
49:K3:41:G:H5''	49:K3:485:A:H2'	2.00	0.42
49:K3:77:A:H2'	67:b3:174:PRO:O	2.20	0.42
49:K3:202:G:C6	49:K3:203:G:C2	3.07	0.42
49:K3:224:A:C2	49:K3:298:G:C6	3.08	0.42
49:K3:347:G:HO2'	49:K3:348:A:P	2.42	0.42
49:K3:410:G:C6	49:K3:431:G:C6	3.07	0.42
49:K3:439:A:N1	49:K3:440:G:C5	2.88	0.42
49:K3:511:U:H3'	49:K3:512:A:C8	2.53	0.42
49:K3:650:A:H2'	49:K3:650:A:N3	2.35	0.42
49:K3:805:U:H5'	65:J5:83:LEU:HD12	2.02	0.42
49:K3:990:A:P	84:O3:37:LYS:HE3	2.59	0.42
49:K3:1271:C:O2	49:K3:1271:C:H2'	2.19	0.42
49:K3:1496:U:O2	49:K3:1498:A:H5''	2.20	0.42
49:K3:1563:G:H5''	78:H5:121:ARG:NH2	2.34	0.42
49:K3:1569:A:C8	49:K3:1570:G:C8	3.07	0.42
49:K3:1830:U:O2'	49:K3:1831:A:N7	2.53	0.42
52:Q3:180:TYR:HD2	52:Q3:183:ASN:H	1.67	0.42
63:Y3:103:GLU:OE2	63:Y3:106:ARG:NH2	2.53	0.42
68:B3:134:ILE:O	68:B3:137:ILE:HG22	2.20	0.42
71:c3:162:LEU:HD12	71:c3:165:GLN:OE1	2.19	0.42
73:d3:65:GLU:HA	73:d3:70:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:D3:17:CYS:HB2	74:D3:56:CYS:SG	2.59	0.42
2:e2:21:G:H1'	3:h2:103:A:N3	2.34	0.42
2:e2:104:G:C2	2:e2:105:A:N7	2.88	0.42
2:e2:320:C:C4	2:e2:321:U:C4	3.08	0.42
2:e2:408:A:C4	2:e2:410:A:N7	2.88	0.42
2:e2:469:C:H5'	2:e2:683:C:H42	1.82	0.42
2:e2:478:G:C2	2:e2:677:G:C2	3.07	0.42
2:e2:1278:C:H3'	2:e2:1279:A:H4'	2.00	0.42
2:e2:1600:A:H5'	26:H2:133:HIS:HA	2.00	0.42
2:e2:1808:C:H2'	2:e2:1809:C:O4'	2.20	0.42
2:e2:1917:U:OP1	16:x2:81:SER:OG	2.28	0.42
2:e2:1975:G:C2	2:e2:1976:C:C6	3.08	0.42
2:e2:2027:C:H2'	2:e2:2028:A:C8	2.55	0.42
2:e2:2431:A:H2'	2:e2:2432:U:H6	1.85	0.42
2:e2:2691:U:H2'	2:e2:2692:U:H6	1.85	0.42
2:e2:3606:U:H2'	2:e2:3607:U:H6	1.85	0.42
2:e2:3750:G:OP1	18:92:218:HIS:HB2	2.20	0.42
2:e2:3845:A:OP2	45:52:249:ARG:NH2	2.53	0.42
2:e2:3948:C:O2'	2:e2:3949:A:H5'	2.20	0.42
2:e2:3978:C:O2'	2:e2:3979:C:OP1	2.33	0.42
2:e2:4177:C:C2	2:e2:4178:A:C8	3.07	0.42
2:e2:4390:A:N6	2:e2:4391:G:C6	2.87	0.42
2:e2:5009:G:H2'	2:e2:5010:U:O4'	2.20	0.42
3:h2:92:U:H2'	3:h2:93:C:O4'	2.19	0.42
8:m2:96:LEU:HD23	8:m2:96:LEU:HA	1.86	0.42
9:o2:58:VAL:HG23	9:o2:59:ARG:HG2	2.01	0.42
14:v2:25:SER:O	14:v2:25:SER:OG	2.37	0.42
16:x2:11:PHE:HE1	16:x2:26:ALA:HB1	1.84	0.42
18:92:29:LEU:HD13	18:92:124:GLY:HA3	2.00	0.42
18:92:112:ILE:HG22	18:92:133:TYR:HB2	2.01	0.42
20:B2:60:LEU:HA	20:B2:63:VAL:HG12	2.02	0.42
28:J2:118:LEU:O	28:J2:122:LYS:HG2	2.19	0.42
33:S2:72:LEU:HD23	33:S2:72:LEU:HA	1.82	0.42
34:T2:184:LEU:HD11	34:T2:264:ILE:HD12	2.00	0.42
36:V2:77:PRO:HA	36:V2:237:TRP:CZ3	2.54	0.42
37:W2:78:LEU:O	37:W2:81:VAL:HG12	2.19	0.42
37:W2:185:LYS:O	37:W2:187:LEU:HG	2.20	0.42
40:02:95:ILE:O	40:02:99:GLU:OE1	2.38	0.42
43:32:41:ILE:O	43:32:45:ILE:HG13	2.20	0.42
45:52:80:GLU:OE2	45:52:323:TYR:OH	2.35	0.42
46:62:37:HIS:HB2	46:62:64:CYS:SG	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:230:A:O2'	49:K3:231:A:C8	2.72	0.42
49:K3:341:C:C2	49:K3:343:A:H1'	2.55	0.42
49:K3:405:G:H2'	49:K3:406:U:H6	1.84	0.42
49:K3:496:C:C2	49:K3:497:C:C5	3.07	0.42
49:K3:933:G:N2	49:K3:1000:C:H2'	2.25	0.42
49:K3:1051:G:C4	49:K3:1052:A:C8	3.08	0.42
49:K3:1107:G:H2'	49:K3:1108:G:O4'	2.19	0.42
49:K3:1127:C:O2'	82:L3:17:ARG:HG3	2.20	0.42
49:K3:1134:G:C6	49:K3:1135:C:C4	3.07	0.42
49:K3:1152:U:H5''	49:K3:1153:C:OP2	2.20	0.42
49:K3:1278:A:C6	49:K3:1320:G:O6	2.72	0.42
49:K3:1461:G:N2	49:K3:1465:A:H62	2.13	0.42
53:G3:27:GLU:HG3	71:c3:193:LYS:HZ3	1.85	0.42
54:G5:37:GLY:H	54:G5:40:TYR:HB3	1.85	0.42
54:G5:65:GLU:HA	54:G5:68:ILE:HD12	2.00	0.42
59:U3:85:ARG:HD3	59:U3:205:ARG:NH2	2.34	0.42
60:V3:121:ILE:HD13	60:V3:207:LEU:HD13	2.01	0.42
60:V3:176:VAL:O	60:V3:176:VAL:HG12	2.20	0.42
61:W3:199:PRO:HD2	61:W3:202:THR:HG21	2.01	0.42
63:Y3:18:LYS:HG2	63:Y3:39:VAL:HG21	2.01	0.42
63:Y3:67:ARG:NH2	76:E3:98:ARG:HE	2.17	0.42
63:Y3:123:LEU:HD22	63:Y3:134:CYS:SG	2.59	0.42
64:j3:180:LEU:C	64:j3:228:ILE:HG12	2.44	0.42
67:b3:185:LEU:O	67:b3:189:ARG:NH1	2.52	0.42
74:D3:70:LEU:O	74:D3:74:LYS:HG3	2.20	0.42
76:E3:8:ARG:HB2	76:E3:44:HIS:CD2	2.54	0.42
85:a7:124:LEU:HD21	85:a7:148:THR:H	1.84	0.42
2:e2:35:U:H5'	2:e2:36:U:OP2	2.20	0.42
2:e2:465:G:H2'	2:e2:466:A:H8	1.84	0.42
2:e2:491:G:H2'	2:e2:492:U:C6	2.55	0.42
2:e2:976:G:O3'	12:t2:333:LYS:NZ	2.53	0.42
2:e2:1370:G:H4'	2:e2:1371:A:OP1	2.20	0.42
2:e2:1452:A:O5'	2:e2:1452:A:H8	2.02	0.42
2:e2:1718:C:C2	2:e2:1720:C:H1'	2.55	0.42
2:e2:1763:C:O2'	2:e2:1767:A:N6	2.53	0.42
2:e2:1966:A:N7	2:e2:2020:G:N1	2.68	0.42
2:e2:2107:G:C6	2:e2:2123:G:H4'	2.55	0.42
2:e2:2357:G:N1	2:e2:2358:G:C6	2.88	0.42
2:e2:2370:A:C2	13:u2:77:ILE:HD12	2.55	0.42
2:e2:2396:A:H4'	2:e2:2397:G:OP2	2.20	0.42
2:e2:2499:C:C4	2:e2:2500:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:2683:C:N4	2:e2:2684:C:H41	2.17	0.42
2:e2:2707:U:H5'	2:e2:2708:U:C5	2.54	0.42
2:e2:3702:A:C5	2:e2:3703:G:C8	3.08	0.42
2:e2:3708:C:O2'	2:e2:3709:U:H5'	2.19	0.42
2:e2:3887:C:OP1	15:w2:82:ARG:NH2	2.52	0.42
2:e2:3920:U:H2'	2:e2:3921:U:H6	1.83	0.42
2:e2:3954:A:H2'	2:e2:3955:G:H8	1.85	0.42
2:e2:4344:U:H2'	2:e2:4345:C:C6	2.55	0.42
2:e2:4410:G:C2	2:e2:4411:G:C8	3.07	0.42
2:e2:4854:G:H5'	2:e2:4855:G:N7	2.35	0.42
3:h2:87:G:N1	9:o2:117:LYS:NZ	2.62	0.42
4:d2:49:A:H3'	25:G2:225:GLN:HG2	2.01	0.42
12:t2:30:ALA:HB1	12:t2:31:PRO:HD2	2.00	0.42
13:u2:90:ARG:HB3	13:u2:102:LEU:HD23	2.01	0.42
16:x2:41:PHE:HE1	16:x2:110:ILE:HD11	1.83	0.42
18:92:181:LYS:HG3	18:92:184:ARG:HB2	2.02	0.42
18:92:196:TRP:HB3	18:92:197:PRO:HD3	2.00	0.42
26:H2:20:SER:HA	26:H2:145:HIS:ND1	2.34	0.42
31:M2:57:ARG:NH2	31:M2:83:LYS:HE3	2.34	0.42
33:S2:16:LYS:HA	33:S2:16:LYS:HD3	1.89	0.42
36:V2:113:ARG:HG2	36:V2:117:ARG:CZ	2.50	0.42
38:X2:188:LYS:HB3	38:X2:188:LYS:HE3	1.85	0.42
44:42:156:LYS:HZ2	44:42:156:LYS:HB3	1.84	0.42
45:52:93:VAL:HG22	45:52:94:GLU:H	1.85	0.42
49:K3:222:U:H2'	49:K3:223:C:C5	2.54	0.42
49:K3:545:A:C2'	49:K3:546:G:H8	2.30	0.42
49:K3:587:A:H3'	49:K3:587:A:OP1	2.20	0.42
49:K3:604:A:H2'	49:K3:639:C:O2'	2.20	0.42
49:K3:610:G:C4	49:K3:611:G:C8	3.07	0.42
49:K3:746:C:H4'	49:K3:747:U:H5'	2.02	0.42
49:K3:808:A:N6	49:K3:809:A:N1	2.68	0.42
49:K3:865:A:H2'	49:K3:866:U:C6	2.54	0.42
49:K3:932:G:C6	49:K3:1009:A:N1	2.88	0.42
49:K3:1154:U:H4'	49:K3:1155:U:H3'	2.01	0.42
49:K3:1399:C:C5'	55:a3:100:ARG:HH22	2.32	0.42
49:K3:1405:A:H2'	49:K3:1406:G:O4'	2.19	0.42
49:K3:1458:G:C6	49:K3:1469:A:N1	2.88	0.42
49:K3:1499:U:O2'	49:K3:1500:G:H8	2.02	0.42
49:K3:1597:C:OP1	54:G5:25:LYS:NZ	2.41	0.42
49:K3:1650:A:C6	49:K3:1651:A:C4	3.08	0.42
49:K3:1745:A:N1	49:K3:1789:G:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1757:G:C2	49:K3:1776:G:C6	3.07	0.42
52:Q3:151:ARG:HD3	52:Q3:183:ASN:O	2.20	0.42
55:a3:108:VAL:HA	55:a3:124:SER:OG	2.20	0.42
55:a3:116:ASP:OD2	55:a3:119:GLN:HB2	2.20	0.42
55:a3:246:TYR:C	55:a3:247:TRP:CD1	2.96	0.42
56:a5:61:LYS:HA	56:a5:61:LYS:HD3	1.80	0.42
57:A3:44:ARG:HG2	57:A3:84:ILE:HD11	2.00	0.42
57:A3:75:VAL:HG13	57:A3:95:GLY:H	1.83	0.42
58:T3:47:ALA:CB	58:T3:102:VAL:O	2.61	0.42
59:U3:19:LEU:HD23	59:U3:24:HIS:CD2	2.55	0.42
59:U3:169:HIS:HA	59:U3:203:PHE:CE1	2.54	0.42
61:W3:79:GLU:O	61:W3:83:LEU:HD23	2.20	0.42
67:b3:76:LEU:HB2	67:b3:94:ARG:NH2	2.35	0.42
67:b3:174:PRO:HG2	67:b3:176:ILE:HD11	2.02	0.42
71:c3:102:VAL:HB	71:c3:104:ILE:HG23	2.01	0.42
73:d3:162:ARG:HA	73:d3:169:ARG:HG2	2.01	0.42
76:E3:17:LYS:HE2	76:E3:17:LYS:HB3	1.86	0.42
79:P3:398:LYS:HE2	79:P3:398:LYS:HB3	1.68	0.42
1:E1:6338:U:H5''	1:E1:6339:U:OP2	2.20	0.42
1:E1:6385:A:H2'	1:E1:6385:A:N3	2.35	0.42
2:e2:43:U:H1'	24:F2:52:THR:HG23	2.02	0.42
2:e2:44:A:C6	2:e2:45:U:C4	3.08	0.42
2:e2:112:C:H3'	2:e2:157:U:O4	2.20	0.42
2:e2:124:C:H2'	2:e2:125:C:H6	1.85	0.42
2:e2:165:A:C6	2:e2:166:C:C4	3.08	0.42
2:e2:197:A:OP2	9:o2:45:ARG:HD2	2.20	0.42
2:e2:319:A:H1'	2:e2:3726:A:C8	2.54	0.42
2:e2:373:G:C4	2:e2:374:G:C8	3.08	0.42
2:e2:471:A:H2'	2:e2:472:C:H6	1.85	0.42
2:e2:752:G:C6	2:e2:753:C:C2	3.07	0.42
2:e2:927:G:C2	2:e2:928:C:C5	3.08	0.42
2:e2:956:A:H5''	2:e2:957:G:C8	2.54	0.42
2:e2:1183:C:C2	2:e2:1184:A:N7	2.88	0.42
2:e2:1218:G:C2	2:e2:1219:G:C5	3.07	0.42
2:e2:1617:G:C2	2:e2:1618:G:C4	3.08	0.42
2:e2:2010:C:H2'	2:e2:2011:A:C8	2.49	0.42
2:e2:2399:G:N1	2:e2:2400:G:C6	2.87	0.42
2:e2:2446:C:H2'	2:e2:2447:U:C6	2.55	0.42
2:e2:2450:G:C6	2:e2:2510:G:C2	3.07	0.42
2:e2:2555:G:H21	42:22:112:ARG:HH22	1.65	0.42
2:e2:2889:G:N2	2:e2:3613:U:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3605:C:OP2	43:32:71:ARG:NH2	2.52	0.42
2:e2:3781:C:H2'	2:e2:3782:C:C6	2.55	0.42
2:e2:4408:G:H2'	2:e2:4409:C:C6	2.55	0.42
2:e2:4459:U:H2'	2:e2:4460:U:H6	1.84	0.42
2:e2:4901:G:C2	2:e2:4921:C:C2	3.08	0.42
3:h2:25:G:H2'	3:h2:26:C:C6	2.55	0.42
3:h2:36:G:C5	19:A2:89:ARG:HD2	2.55	0.42
3:h2:45:C:C2	3:h2:46:G:C8	3.08	0.42
4:d2:54:A:H1'	39:Y2:12:MET:HB2	2.02	0.42
7:l2:27:LYS:HE2	7:l2:29:PHE:HZ	1.84	0.42
8:m2:100:VAL:HG21	8:m2:109:ILE:HD11	2.01	0.42
10:q2:66:ASN:OD1	85:a7:65:ARG:HD3	2.19	0.42
11:r2:71:ALA:HA	11:r2:74:ALA:HB3	2.02	0.42
18:92:33:ASP:O	18:92:34:PHE:C	2.63	0.42
22:D2:44:TRP:CD1	22:D2:44:TRP:H	2.36	0.42
26:H2:36:ILE:HD11	26:H2:44:ALA:HB1	2.02	0.42
29:K2:45:MET:CA	31:M2:122:ALA:H	2.32	0.42
30:L2:12:CYS:HA	30:L2:59:GLN:NE2	2.31	0.42
31:M2:97:ASN:HA	31:M2:98:ILE:HA	1.70	0.42
35:U2:114:ARG:HG3	35:U2:115:GLN:N	2.35	0.42
36:V2:158:ALA:HB2	36:V2:190:LEU:HD12	2.01	0.42
42:22:36:ARG:HB3	42:22:38:TYR:CZ	2.55	0.42
44:42:34:LEU:HD12	44:42:205:TYR:O	2.19	0.42
45:52:155:LYS:HD2	45:52:156:TYR:CE2	2.55	0.42
48:82:20:LYS:HE2	48:82:20:LYS:HB2	1.90	0.42
48:82:64:GLU:CB	48:82:71:THR:O	2.63	0.42
49:K3:380:G:N3	71:c3:5:ARG:NE	2.67	0.42
49:K3:419:G:N7	49:K3:420:G:H8	2.17	0.42
49:K3:639:C:N4	49:K3:640:A:H62	2.17	0.42
49:K3:690:G:N3	49:K3:690:G:H2'	2.35	0.42
49:K3:987:A:H4'	84:O3:70:LYS:HB2	2.00	0.42
49:K3:989:C:H4'	49:K3:990:A:C4	2.55	0.42
49:K3:1166:G:C2	49:K3:1194:A:N1	2.88	0.42
49:K3:1562:C:H4'	78:H5:119:TRP:HB3	2.00	0.42
49:K3:1652:G:N1	49:K3:1672:U:N3	2.61	0.42
49:K3:1695:A:O2'	49:K3:1696:C:H5'	2.19	0.42
49:K3:1757:G:C2	49:K3:1758:G:C6	3.08	0.42
52:Q3:139:LYS:N	52:Q3:149:LEU:HG	2.35	0.42
52:Q3:146:ILE:HD11	75:e3:64:LEU:HD23	2.01	0.42
54:G5:15:VAL:O	54:G5:18:THR:N	2.53	0.42
59:U3:3:GLY:O	59:U3:9:GLN:NE2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:W3:66:LEU:HA	61:W3:69:LEU:HD12	2.02	0.42
61:W3:210:PRO:HG3	61:W3:236:PHE:CZ	2.55	0.42
64:j3:42:LEU:HB2	64:j3:109:PHE:CE1	2.54	0.42
66:N3:91:ARG:HG2	68:B3:72:THR:HG23	2.01	0.42
68:B3:156:LYS:NZ	68:B3:158:PHE:HA	2.34	0.42
70:F3:124:ILE:HD12	70:F3:124:ILE:HA	1.90	0.42
71:c3:42:ARG:O	71:c3:43:ILE:HD13	2.20	0.42
75:e3:115:GLY:C	75:e3:125:GLU:HB2	2.45	0.42
83:M3:111:ARG:HE	83:M3:113:THR:HA	1.85	0.42
2:e2:182:G:HO2'	2:e2:183:C:P	2.41	0.42
2:e2:457:G:C6	2:e2:700:G:N1	2.87	0.42
2:e2:704:C:N3	2:e2:705:G:C5	2.88	0.42
2:e2:948:C:P	12:t2:336:ARG:HH21	2.42	0.42
2:e2:974:C:HO2'	2:e2:2092:A:N6	2.16	0.42
2:e2:982:U:H2'	2:e2:983:C:C6	2.55	0.42
2:e2:1075:G:N2	2:e2:1235:G:H22	2.16	0.42
2:e2:1287:G:N3	34:T2:136:PHE:HB2	2.35	0.42
2:e2:1303:A:H1'	2:e2:1304:C:C6	2.55	0.42
2:e2:1451:G:OP2	2:e2:1716:G:C2	2.72	0.42
2:e2:1599:A:C2	2:e2:1602:U:C6	3.08	0.42
2:e2:2419:C:H2'	2:e2:2420:A:H8	1.85	0.42
2:e2:2530:U:O4	17:y2:9:ARG:NE	2.34	0.42
2:e2:2595:C:H2'	2:e2:2596:G:O4'	2.20	0.42
2:e2:2716:C:C2	2:e2:2717:G:C8	3.07	0.42
2:e2:3651:A:C6	2:e2:3652:A:C6	3.08	0.42
2:e2:3969:G:O6	2:e2:4049:U:H5'	2.20	0.42
2:e2:4018:G:H22	2:e2:4021:C:N4	2.18	0.42
2:e2:4113:U:H2'	2:e2:4114:C:O2	2.20	0.42
2:e2:4253:A:H5'	2:e2:4254:G:C8	2.54	0.42
2:e2:4523:A:C4	2:e2:4559:A:C6	3.08	0.42
2:e2:4935:C:C2	34:T2:186:ARG:NH2	2.87	0.42
2:e2:5057:C:H2'	2:e2:5058:A:C8	2.55	0.42
3:h2:77:A:C6	3:h2:78:G:C6	3.07	0.42
4:d2:49:A:H5''	25:G2:224:SER:OG	2.20	0.42
4:d2:63:C:C6	38:X2:207:ASP:HB3	2.55	0.42
4:d2:71:G:C6	4:d2:72:U:C4	3.08	0.42
4:d2:82:G:N2	4:d2:95:C:C2	2.88	0.42
13:u2:119:THR:O	13:u2:119:THR:OG1	2.27	0.42
16:x2:89:ARG:HH21	16:x2:89:ARG:HG3	1.85	0.42
22:D2:18:LYS:HE3	22:D2:18:LYS:HB3	1.88	0.42
25:G2:227:ILE:H	25:G2:227:ILE:HD12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:V2:235:ARG:CZ	36:V2:235:ARG:HB2	2.49	0.42
44:42:9:THR:C	44:42:215:ARG:HE	2.25	0.42
44:42:33:GLU:CD	44:42:207:LYS:HD3	2.44	0.42
44:42:85:MET:HB3	44:42:92:LYS:HE3	2.02	0.42
47:72:67:VAL:HG23	47:72:67:VAL:O	2.19	0.42
49:K3:36:U:OP1	49:K3:578:C:H1'	2.19	0.42
49:K3:61:A:O2'	49:K3:172:U:O4	2.32	0.42
49:K3:229:A:C3'	49:K3:230:A:H5''	2.49	0.42
49:K3:345:U:H2'	49:K3:346:C:H6	1.84	0.42
49:K3:376:A:C6	49:K3:377:G:C6	3.07	0.42
49:K3:447:A:C2	49:K3:449:A:C4	3.07	0.42
49:K3:527:C:H4'	73:d3:125:HIS:ND1	2.35	0.42
49:K3:597:G:C6	49:K3:640:A:N6	2.87	0.42
49:K3:940:U:H1'	49:K3:1003:U:C2	2.55	0.42
49:K3:947:G:H2'	49:K3:948:C:H6	1.83	0.42
49:K3:989:C:H4'	49:K3:990:A:C5	2.55	0.42
49:K3:1038:U:O2'	49:K3:1181:A:H2	2.03	0.42
49:K3:1353:A:C6	49:K3:1354:G:C8	3.08	0.42
49:K3:1385:G:C2	49:K3:1386:A:C8	3.07	0.42
49:K3:1396:A:H8	49:K3:1449:G:H22	1.67	0.42
49:K3:1513:C:H2'	49:K3:1514:G:H8	1.85	0.42
49:K3:1516:G:O3'	57:A3:122:THR:HG21	2.20	0.42
49:K3:1547:C:O2	49:K3:1656:G:H1'	2.20	0.42
49:K3:1717:C:C4	49:K3:1718:G:C6	3.08	0.42
49:K3:1767:C:H2'	49:K3:1768:A:N7	2.35	0.42
49:K3:1789:G:O2'	49:K3:1790:A:O4'	2.26	0.42
59:U3:53:ARG:HH12	74:D3:83:PHE:HB3	1.84	0.42
64:j3:178:GLY:HA2	64:j3:195:ILE:N	2.35	0.42
67:b3:157:VAL:HG22	67:b3:158:VAL:N	2.35	0.42
68:B3:42:LYS:CG	68:B3:43:LYS:H	2.33	0.42
73:d3:136:ARG:HB3	73:d3:141:VAL:HG22	2.01	0.42
78:H5:24:LYS:HZ3	78:H5:24:LYS:HB2	1.85	0.42
78:H5:112:MET:HE3	78:H5:112:MET:HB3	1.96	0.42
79:P3:305:PRO:HD2	79:P3:306:GLN:HG3	2.02	0.42
83:M3:62:VAL:HG22	83:M3:76:ARG:NH1	2.35	0.42
2:e2:82:U:H2'	2:e2:83:C:C6	2.55	0.41
2:e2:372:A:N3	2:e2:1531:U:H1'	2.35	0.41
2:e2:508:G:C2	2:e2:510:U:C4	3.07	0.41
2:e2:735:G:C2	2:e2:736:C:N4	2.88	0.41
2:e2:1077:C:OP1	2:e2:1215:C:H3'	2.19	0.41
2:e2:1387:A:C6	2:e2:1397:A:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1612:G:C6	2:e2:1614:C:C2	3.08	0.41
2:e2:1693:U:N3	2:e2:1843:G:C2	2.88	0.41
2:e2:1810:G:C6	2:e2:1829:G:C6	3.07	0.41
2:e2:1836:G:H8	2:e2:1836:G:OP1	2.03	0.41
2:e2:2529:A:O2'	2:e2:2531:C:OP2	2.38	0.41
2:e2:2847:G:P	6:k2:85:ARG:NH2	2.93	0.41
2:e2:2868:G:C2	2:e2:2869:U:C4	3.08	0.41
2:e2:3628:G:N1	2:e2:3834:C:N3	2.68	0.41
2:e2:3732:A:H2'	2:e2:3733:A:H8	1.83	0.41
2:e2:3880:G:O2'	2:e2:3881:G:H5'	2.20	0.41
2:e2:3899:G:C4'	45:52:259:PRO:HD3	2.39	0.41
2:e2:4062:A:O2'	2:e2:4063:U:H6	2.03	0.41
2:e2:4206:C:H5'	2:e2:4207:C:OP2	2.20	0.41
2:e2:4279:A:C5	2:e2:4281:A:N6	2.88	0.41
2:e2:4607:A:C8	2:e2:4608:G:C8	3.08	0.41
2:e2:4944:C:H1'	16:x2:71:TRP:HZ2	1.85	0.41
4:d2:31:G:C6	4:d2:47:G:C6	3.08	0.41
10:q2:49:HIS:O	10:q2:51:GLY:N	2.53	0.41
12:t2:143:ARG:NH1	12:t2:145:GLU:OE2	2.53	0.41
15:w2:62:MET:HG2	15:w2:69:GLY:HA3	2.02	0.41
16:x2:49:TYR:HD1	16:x2:101:ILE:HD11	1.85	0.41
25:G2:126:THR:HG22	25:G2:127:GLY:N	2.35	0.41
29:K2:74:ALA:HB1	29:K2:77:LYS:NZ	2.34	0.41
31:M2:96:LYS:HG3	31:M2:96:LYS:O	2.19	0.41
33:S2:4:ASP:HB3	35:U2:97:ILE:HD11	2.01	0.41
34:T2:222:LYS:HE2	34:T2:224:GLN:NE2	2.35	0.41
35:U2:133:ARG:HH11	35:U2:133:ARG:HG3	1.85	0.41
35:U2:220:LYS:H	35:U2:220:LYS:HG2	1.65	0.41
36:V2:264:LYS:NZ	60:V3:49:VAL:HG12	2.35	0.41
40:02:118:MET:O	40:02:122:ILE:HG12	2.20	0.41
40:02:128:LYS:HA	40:02:128:LYS:HD2	1.88	0.41
44:42:99:LEU:HG	44:42:100:VAL:HG13	2.01	0.41
44:42:187:VAL:HG12	44:42:190:LEU:HD22	2.02	0.41
45:52:116:ARG:CZ	45:52:176:LYS:HB3	2.49	0.41
45:52:206:PRO:HG2	45:52:209:GLN:HB3	2.02	0.41
47:72:79:GLN:NE2	47:72:80:VAL:O	2.53	0.41
49:K3:58:C:C4	49:K3:500:A:C6	3.08	0.41
49:K3:101:U:H2'	49:K3:104:A:C2	2.56	0.41
49:K3:188:C:H3'	49:K3:189:U:C6	2.55	0.41
49:K3:580:U:H2'	49:K3:581:U:O4'	2.20	0.41
49:K3:869:A:C4	79:P3:351:LYS:HE2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1086:G:O2'	49:K3:1087:A:H5'	2.20	0.41
49:K3:1462:U:O2'	49:K3:1464:C:C5	2.73	0.41
49:K3:1569:A:H2	49:K3:1614:A:H1'	1.83	0.41
49:K3:1727:G:H2'	49:K3:1728:U:H6	1.85	0.41
50:s3:21:LYS:O	50:s3:23:GLU:N	2.47	0.41
52:Q3:136:LYS:HB3	52:Q3:150:ARG:NH2	2.35	0.41
53:G3:22:ARG:HB2	71:c3:156:ALA:O	2.20	0.41
54:G5:106:LYS:HA	54:G5:106:LYS:HD3	1.77	0.41
55:a3:280:LYS:HG2	72:C3:59:LYS:O	2.20	0.41
56:a5:63:LYS:HD3	56:a5:63:LYS:HA	1.88	0.41
56:a5:117:ARG:HH11	69:f3:62:GLU:CG	2.32	0.41
56:a5:135:ILE:HG22	60:V3:107:ARG:HH21	1.85	0.41
58:T3:123:VAL:O	58:T3:130:LEU:N	2.49	0.41
59:U3:107:THR:O	59:U3:116:PHE:HA	2.20	0.41
61:W3:256:TRP:HH2	65:J5:46:TYR:CE1	2.38	0.41
63:Y3:53:THR:HA	63:Y3:90:LYS:HG3	2.02	0.41
63:Y3:85:GLU:HG2	76:E3:98:ARG:HD3	2.02	0.41
63:Y3:163:PRO:O	63:Y3:167:TYR:CB	2.68	0.41
67:b3:48:TYR:OH	67:b3:120:ASP:HA	2.20	0.41
71:c3:165:GLN:NE2	71:c3:195:LEU:HD13	2.35	0.41
72:C3:36:GLU:HA	72:C3:36:GLU:OE2	2.19	0.41
73:d3:110:LEU:HG	73:d3:114:VAL:HG23	2.02	0.41
85:a7:56:ARG:HH11	85:a7:97:SER:HB3	1.85	0.41
1:E1:6360:C:C4	1:E1:6361:A:C8	3.09	0.41
2:e2:431:G:H2'	2:e2:3888:G:N2	2.35	0.41
2:e2:1241:C:OP2	2:e2:1243:C:N4	2.54	0.41
2:e2:1258:G:H3'	2:e2:1259:G:C8	2.54	0.41
2:e2:1516:G:N3	2:e2:1518:A:N6	2.69	0.41
2:e2:1698:C:H4'	2:e2:1699:A:H5''	2.01	0.41
2:e2:2021:C:H2'	2:e2:2022:C:C5	2.56	0.41
2:e2:2297:G:OP1	12:t2:205:ARG:NH1	2.41	0.41
2:e2:2845:A:N3	2:e2:2846:G:C8	2.88	0.41
2:e2:3902:A:C2	2:e2:4523:A:C6	3.08	0.41
2:e2:3903:A:N1	2:e2:4558:U:C4	2.88	0.41
2:e2:3943:A:H2'	2:e2:3944:G:H8	1.85	0.41
2:e2:3965:A:H2'	2:e2:4049:U:O2'	2.20	0.41
2:e2:3984:C:H2'	2:e2:3985:C:H5	1.81	0.41
2:e2:4726:G:H4'	45:52:130:PHE:CD1	2.54	0.41
2:e2:4728:U:OP1	45:52:132:LYS:NZ	2.53	0.41
2:e2:4753:U:OP1	16:x2:4:ARG:HD3	2.19	0.41
2:e2:5007:A:H2'	2:e2:5008:C:C6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d2:97:G:C6	4:d2:98:G:N7	2.88	0.41
4:d2:117:G:P	25:G2:253:TYR:HH	2.43	0.41
7:l2:6:CYS:HB3	7:l2:9:SER:O	2.19	0.41
9:o2:2:LYS:HE3	9:o2:2:LYS:HB3	1.89	0.41
13:u2:68:LEU:HA	13:u2:68:LEU:HD23	1.86	0.41
16:x2:8:LYS:HB3	16:x2:100:ARG:NH1	2.35	0.41
18:92:117:GLU:HG2	18:92:124:GLY:H	1.85	0.41
19:A2:74:LYS:HD3	19:A2:74:LYS:HA	1.82	0.41
28:J2:63:VAL:HA	28:J2:78:VAL:O	2.20	0.41
29:K2:28:PHE:O	29:K2:88:PHE:HA	2.20	0.41
37:W2:67:ARG:HE	37:W2:67:ARG:HB2	1.75	0.41
41:12:97:SER:O	41:12:100:SER:N	2.53	0.41
41:12:184:ILE:O	41:12:184:ILE:HG13	2.20	0.41
42:22:109:LYS:HE3	42:22:109:LYS:HB2	1.96	0.41
45:52:258:HIS:HA	45:52:259:PRO:HD2	1.86	0.41
48:82:69:LYS:HB3	48:82:69:LYS:HE2	1.81	0.41
49:K3:138:C:H41	49:K3:178:C:H5'	1.85	0.41
49:K3:145:G:N3	49:K3:146:G:N7	2.68	0.41
49:K3:296:U:O2	64:j3:131:VAL:HG11	2.20	0.41
49:K3:467:G:O3'	67:b3:72:ARG:NH2	2.53	0.41
49:K3:521:A:OP1	49:K3:825:A:O2'	2.37	0.41
49:K3:563:G:H1	49:K3:592:C:H5	1.63	0.41
49:K3:815:U:C2	49:K3:816:A:C8	3.08	0.41
49:K3:859:G:C2	49:K3:860:G:H1'	2.55	0.41
49:K3:1023:A:H1'	65:J5:2:VAL:HG13	2.01	0.41
49:K3:1184:G:C6	49:K3:1185:C:C4	3.08	0.41
49:K3:1452:A:C5	49:K3:1475:G:C5	3.07	0.41
52:Q3:138:TYR:HD2	75:e3:68:LEU:HD11	1.85	0.41
59:U3:120:ARG:HE	59:U3:120:ARG:HB3	1.65	0.41
61:W3:88:ILE:HB	61:W3:93:ILE:HD12	2.02	0.41
63:Y3:38:GLU:OE2	63:Y3:49:ILE:HD12	2.21	0.41
63:Y3:136:VAL:HG23	63:Y3:186:VAL:HG22	2.02	0.41
65:J5:27:ILE:HB	65:J5:61:ILE:HG13	2.02	0.41
69:f3:37:ASP:OD2	69:f3:40:ARG:HG2	2.20	0.41
71:c3:49:ARG:NH1	71:c3:50:GLY:HA3	2.35	0.41
71:c3:52:ASN:OD1	71:c3:53:LYS:N	2.53	0.41
71:c3:100:CYS:HB3	71:c3:175:ILE:CG2	2.50	0.41
73:d3:13:TYR:HA	73:d3:44:TRP:HB2	2.02	0.41
73:d3:159:PHE:HB3	73:d3:166:GLY:HA3	2.01	0.41
74:D3:8:PHE:CE2	74:D3:11:LEU:HA	2.55	0.41
75:e3:121:LYS:HE3	75:e3:121:LYS:HB2	1.91	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:H5:72:VAL:N	78:H5:75:MET:HE2	2.35	0.41
78:H5:131:LEU:O	78:H5:134:ILE:HG12	2.20	0.41
2:e2:381:U:H4'	2:e2:415:G:H5'	2.02	0.41
2:e2:1178:G:H21	2:e2:1180:C:H3'	1.85	0.41
2:e2:1350:C:OP2	33:S2:54:SER:HB2	2.20	0.41
2:e2:1394:G:C6	2:e2:1395:U:C4	3.09	0.41
2:e2:1687:U:H2'	2:e2:1688:G:H8	1.85	0.41
2:e2:1696:C:H4'	2:e2:1697:G:C6	2.56	0.41
2:e2:1972:G:C2	2:e2:1973:U:O4	2.73	0.41
2:e2:1988:G:HO2'	2:e2:1989:A:H2	1.67	0.41
2:e2:2327:G:N1	2:e2:2328:G:C6	2.88	0.41
2:e2:2751:G:C2	2:e2:2752:G:N7	2.88	0.41
2:e2:2793:G:N1	2:e2:2799:G:C6	2.88	0.41
2:e2:3689:G:C6	2:e2:3690:U:C4	3.09	0.41
2:e2:3704:U:C2	2:e2:3705:G:C8	3.08	0.41
2:e2:4434:C:C4	2:e2:4435:U:C5	3.08	0.41
2:e2:4568:A:H2	2:e2:4569:U:C2	2.38	0.41
2:e2:4736:C:H2'	2:e2:4737:G:C8	2.53	0.41
2:e2:4920:C:C2'	2:e2:4921:C:H5'	2.50	0.41
2:e2:4941:G:O5'	2:e2:4941:G:N3	2.54	0.41
3:h2:68:G:OP2	21:C2:87:LYS:HD3	2.20	0.41
3:h2:68:G:H2'	3:h2:69:U:O4'	2.20	0.41
8:m2:70:LYS:HB3	8:m2:70:LYS:HE3	1.90	0.41
9:o2:26:ARG:NE	9:o2:78:TYR:CZ	2.88	0.41
15:w2:189:ILE:O	15:w2:193:THR:N	2.40	0.41
16:x2:6:TRP:CE3	16:x2:102:ARG:HG2	2.54	0.41
18:92:218:HIS:O	18:92:218:HIS:ND1	2.53	0.41
24:F2:85:ILE:HD13	24:F2:85:ILE:HA	1.94	0.41
26:H2:5:SER:OG	26:H2:118:GLN:NE2	2.53	0.41
29:K2:63:LYS:HA	29:K2:66:ARG:HB2	2.02	0.41
31:M2:18:THR:C	31:M2:20:GLY:H	2.27	0.41
43:32:66:ASN:O	43:32:70:ARG:HG3	2.20	0.41
44:42:94:ASN:C	44:42:98:LYS:HG2	2.45	0.41
49:K3:56:G:C6	49:K3:90:G:N1	2.88	0.41
49:K3:403:G:H2'	49:K3:404:G:O4'	2.20	0.41
49:K3:438:G:C8	49:K3:439:A:C8	3.08	0.41
49:K3:528:A:H2	49:K3:529:A:H62	1.67	0.41
49:K3:697:G:C2	49:K3:698:G:N7	2.89	0.41
49:K3:822:U:C2	49:K3:827:A:C5	3.07	0.41
49:K3:863:U:N3	49:K3:864:A:N7	2.69	0.41
49:K3:990:A:OP2	84:O3:37:LYS:HE3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1086:G:N1	49:K3:1088:U:O2'	2.52	0.41
49:K3:1479:G:H2'	49:K3:1480:A:C8	2.54	0.41
49:K3:1481:G:O3'	80:I3:79:ARG:NH1	2.53	0.41
49:K3:1520:G:H5'	57:A3:123:TYR:CE2	2.56	0.41
49:K3:1738:C:H2'	49:K3:1739:C:O4'	2.20	0.41
49:K3:1856:C:C4	49:K3:1857:G:N7	2.88	0.41
55:a3:311:GLN:OE1	55:a3:313:THR:OG1	2.38	0.41
56:a5:102:GLY:HA2	56:a5:136:PRO:HD3	2.01	0.41
57:A3:44:ARG:HH21	57:A3:52:LYS:NZ	2.16	0.41
60:V3:168:MET:HG2	60:V3:197:ILE:HG21	2.02	0.41
63:Y3:106:ARG:HH11	63:Y3:110:LEU:HD12	1.85	0.41
65:J5:15:ASN:ND2	65:J5:71:LYS:HG3	2.34	0.41
70:F3:168:ILE:HA	70:F3:171:ARG:NE	2.35	0.41
71:c3:175:ILE:HG13	71:c3:186:ASP:O	2.20	0.41
73:d3:22:LYS:O	73:d3:22:LYS:HG2	2.20	0.41
73:d3:84:ILE:HG13	73:d3:86:VAL:HG22	2.02	0.41
75:e3:53:ALA:HA	75:e3:79:VAL:O	2.19	0.41
85:a7:10:LEU:HD23	85:a7:10:LEU:H	1.85	0.41
1:E1:6280:A:C5	1:E1:6281:C:H1'	2.55	0.41
2:e2:38:A:H2'	2:e2:38:A:N3	2.35	0.41
2:e2:46:U:O2'	85:a7:15:HIS:HB2	2.21	0.41
2:e2:301:G:C4	2:e2:302:C:C5	3.09	0.41
2:e2:341:G:C6	2:e2:342:G:C8	3.08	0.41
2:e2:346:G:C2	2:e2:347:A:C4	3.09	0.41
2:e2:431:G:C6	2:e2:3888:G:C6	3.09	0.41
2:e2:435:A:H8	2:e2:435:A:O5'	2.03	0.41
2:e2:449:C:H2'	2:e2:450:G:O4'	2.21	0.41
2:e2:464:G:H2'	2:e2:465:G:O4'	2.20	0.41
2:e2:701:G:C2	2:e2:702:U:O4'	2.73	0.41
2:e2:752:G:N1	2:e2:911:U:O2	2.51	0.41
2:e2:1098:G:C2	2:e2:1198:G:C2	3.09	0.41
2:e2:1293:G:C6	2:e2:1294:A:C6	3.08	0.41
2:e2:1302:U:H3'	2:e2:1303:A:H2'	2.03	0.41
2:e2:1401:C:H2'	2:e2:1402:C:O4'	2.19	0.41
2:e2:1497:A:N1	33:S2:175:GLU:OE2	2.54	0.41
2:e2:1517:G:OP2	2:e2:1650:A:N6	2.29	0.41
2:e2:1699:A:H3'	2:e2:1699:A:N3	2.35	0.41
2:e2:1765:A:C8	2:e2:1766:A:N7	2.88	0.41
2:e2:2067:C:O2'	2:e2:2068:A:H5'	2.21	0.41
2:e2:2112:G:P	2:e2:2114:G:H21	2.43	0.41
2:e2:2294:G:C6	2:e2:2341:A:N1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:2363:A:N6	2:e2:2364:G:C2	2.88	0.41
2:e2:2513:A:C4	17:y2:13:TYR:CD2	3.08	0.41
2:e2:2536:A:H5''	5:p2:42:LEU:HD13	2.03	0.41
2:e2:2655:C:C2	2:e2:2656:U:C5	3.08	0.41
2:e2:2696:A:H62	5:p2:35:LYS:NZ	2.18	0.41
2:e2:3748:A:H2'	2:e2:3749:C:H6	1.85	0.41
2:e2:4603:C:H4'	37:W2:186:PHE:HE1	1.85	0.41
3:h2:49:G:N1	3:h2:77:A:C6	2.88	0.41
12:t2:221:PHE:HB3	12:t2:227:ILE:HG21	2.03	0.41
16:x2:78:HIS:CD2	16:x2:78:HIS:C	2.98	0.41
25:G2:20:PHE:O	25:G2:24:ARG:HB2	2.20	0.41
25:G2:82:GLU:OE1	25:G2:85:LYS:NZ	2.52	0.41
29:K2:45:MET:HB2	31:M2:121:LEU:HA	2.01	0.41
30:L2:93:PRO:HA	38:X2:127:ALA:HB2	2.01	0.41
33:S2:34:PHE:CE1	33:S2:38:ARG:HD3	2.55	0.41
35:U2:126:LYS:HB3	47:72:133:ALA:HB3	2.01	0.41
35:U2:152:LEU:HD23	35:U2:152:LEU:HA	1.83	0.41
36:V2:61:ILE:O	36:V2:65:ARG:HG2	2.21	0.41
45:52:21:ARG:NE	45:52:271:GLN:OE1	2.38	0.41
45:52:46:PHE:CZ	45:52:207:VAL:HG22	2.56	0.41
45:52:49:TYR:OH	45:52:168:MET:HE1	2.20	0.41
45:52:56:ILE:HD12	45:52:56:ILE:HA	1.90	0.41
48:82:40:GLU:HB2	48:82:65:ARG:HG3	2.02	0.41
49:K3:236:A:H62	49:K3:238:C:N4	2.18	0.41
49:K3:439:A:C2	49:K3:455:A:C5	3.09	0.41
49:K3:442:C:C4	49:K3:443:U:C4	3.09	0.41
49:K3:615:C:O2	50:s3:11:LYS:NZ	2.46	0.41
49:K3:928:G:H21	82:L3:68:GLY:C	2.28	0.41
49:K3:1211:G:N1	49:K3:1689:C:C4	2.88	0.41
49:K3:1254:C:H2'	49:K3:1255:G:C8	2.54	0.41
49:K3:1569:A:O2'	49:K3:1626:C:O2	2.38	0.41
49:K3:1690:U:C2	49:K3:1691:U:C5	3.09	0.41
58:T3:140:ARG:HB2	58:T3:142:ARG:NE	2.35	0.41
61:W3:148:ALA:HB1	61:W3:152:ARG:CZ	2.50	0.41
61:W3:256:TRP:HH2	65:J5:46:TYR:HE1	1.68	0.41
63:Y3:6:SER:O	63:Y3:10:LYS:HB2	2.20	0.41
64:j3:60:GLU:CD	64:j3:63:LYS:HG3	2.46	0.41
65:J5:53:ILE:CD1	79:P3:381:ARG:HD2	2.50	0.41
65:J5:77:PRO:HG2	65:J5:79:PHE:CE1	2.55	0.41
65:J5:89:TRP:HA	65:J5:92:ASN:OD1	2.20	0.41
66:N3:28:VAL:C	66:N3:29:GLN:HG3	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:N3:59:LYS:HE2	66:N3:61:PHE:HB2	2.02	0.41
66:N3:128:ILE:HG23	66:N3:128:ILE:O	2.20	0.41
68:B3:86:LYS:H	68:B3:86:LYS:HD2	1.86	0.41
68:B3:160:GLY:HA3	68:B3:165:ALA:O	2.21	0.41
69:f3:44:ARG:HH12	69:f3:61:SER:C	2.29	0.41
72:C3:30:THR:O	72:C3:34:VAL:HG23	2.21	0.41
73:d3:28:GLU:HB3	73:d3:40:LYS:HD3	2.02	0.41
74:D3:1:MET:HA	74:D3:10:ASP:HB2	2.02	0.41
76:E3:62:PHE:HB2	76:E3:67:PHE:CZ	2.56	0.41
76:E3:64:TRP:CD2	77:H3:23:VAL:HG12	2.54	0.41
78:H5:11:GLN:HE21	78:H5:62:ARG:CZ	2.33	0.41
81:I5:39:GLU:HA	81:I5:42:GLU:OE1	2.20	0.41
1:E1:6328:A:O3'	44:42:134:PHE:HB2	2.21	0.41
1:E1:6378:G:H2'	1:E1:6379:U:H6	1.84	0.41
2:e2:146:G:H2'	2:e2:147:A:C8	2.54	0.41
2:e2:294:G:N7	10:q2:61:TYR:HD1	2.18	0.41
2:e2:707:C:H1'	2:e2:1291:G:N2	2.35	0.41
2:e2:1068:G:N1	2:e2:1069:G:C6	2.89	0.41
2:e2:1698:C:H5''	12:t2:308:LYS:HE2	2.01	0.41
2:e2:1950:G:C6	2:e2:2032:A:N1	2.88	0.41
2:e2:1969:A:N1	29:K2:112:ARG:HA	2.36	0.41
2:e2:1970:C:O2	2:e2:1971:G:N7	2.53	0.41
2:e2:1973:U:O5'	2:e2:1973:U:H6	2.03	0.41
2:e2:1978:A:H5'	31:M2:95:GLN:HG3	2.02	0.41
2:e2:2347:A:C2	14:v2:31:ILE:HD11	2.56	0.41
2:e2:2347:A:O2'	2:e2:2348:G:O4'	2.27	0.41
2:e2:2437:C:O2	8:m2:125:ASN:ND2	2.53	0.41
2:e2:2438:A:C6	2:e2:2531:C:C5	3.09	0.41
2:e2:2602:G:H2'	2:e2:2603:C:C6	2.56	0.41
2:e2:2784:C:N4	2:e2:2785:C:H41	2.18	0.41
2:e2:3931:C:N4	2:e2:4180:G:O6	2.52	0.41
2:e2:4092:G:N1	2:e2:4158:C:C4	2.88	0.41
2:e2:4168:G:O2'	2:e2:4169:G:OP1	2.32	0.41
2:e2:4406:U:OP2	30:L2:3:ARG:NE	2.53	0.41
2:e2:4419:U:O5'	2:e2:4421:C:N4	2.53	0.41
2:e2:4538:G:C4	2:e2:4549:G:N2	2.89	0.41
2:e2:4758:U:H2'	2:e2:4759:C:C6	2.55	0.41
3:h2:46:G:OP2	22:D2:15:LYS:HD3	2.21	0.41
3:h2:53:G:O2'	3:h2:54:C:O5'	2.36	0.41
3:h2:96:C:H2'	3:h2:97:A:N3	2.36	0.41
15:w2:174:LEU:HD12	15:w2:174:LEU:HA	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:B2:65:LYS:NZ	20:B2:67:LYS:HB3	2.36	0.41
26:H2:40:HIS:CG	26:H2:41:ILE:N	2.88	0.41
30:L2:46:PHE:CB	38:X2:139:ARG:HG2	2.51	0.41
33:S2:119:LYS:HE2	33:S2:119:LYS:HB3	1.91	0.41
41:12:8:GLN:HE21	41:12:12:ARG:HE	1.68	0.41
41:12:8:GLN:HG3	41:12:50:ARG:NH2	2.35	0.41
42:22:89:ILE:CG1	42:22:117:LYS:HE3	2.50	0.41
44:42:26:ARG:HB3	44:42:30:GLU:OE1	2.20	0.41
45:52:12:GLY:HA3	45:52:235:TRP:CE3	2.56	0.41
49:K3:113:G:O6	49:K3:292:A:H4'	2.20	0.41
49:K3:271:C:H1'	49:K3:272:G:OP2	2.21	0.41
49:K3:385:G:O6	49:K3:389:A:N6	2.53	0.41
49:K3:476:A:C6	49:K3:477:G:C4	3.09	0.41
49:K3:481:C:N4	49:K3:482:G:O6	2.54	0.41
49:K3:531:A:H8	49:K3:531:A:O5'	2.04	0.41
49:K3:666:U:O5'	49:K3:666:U:H6	2.03	0.41
49:K3:917:U:H2'	49:K3:918:U:H6	1.83	0.41
49:K3:1230:C:H2'	49:K3:1231:C:C6	2.55	0.41
49:K3:1401:A:H8	49:K3:1441:U:P	2.44	0.41
49:K3:1409:A:H2'	49:K3:1410:C:H5'	2.03	0.41
49:K3:1453:C:H5	72:C3:28:PHE:CG	2.38	0.41
49:K3:1581:C:OP2	49:K3:1582:C:H5	2.02	0.41
49:K3:1654:G:H8	49:K3:1654:G:O5'	2.03	0.41
49:K3:1842:C:H2'	49:K3:1843:G:H8	1.86	0.41
52:Q3:136:LYS:CG	52:Q3:149:LEU:HB3	2.49	0.41
53:G3:35:ARG:NE	53:G3:63:THR:HG21	2.35	0.41
53:G3:94:HIS:CD2	53:G3:95:TYR:H	2.39	0.41
54:G5:75:ARG:HA	54:G5:75:ARG:HH11	1.85	0.41
60:V3:51:ARG:HE	60:V3:51:ARG:HB3	1.75	0.41
66:N3:88:MET:O	66:N3:91:ARG:HB2	2.21	0.41
70:F3:120:LYS:HG2	70:F3:123:ARG:CG	2.45	0.41
71:c3:178:ARG:HB3	71:c3:182:CYS:SG	2.60	0.41
79:P3:381:ARG:HG2	79:P3:395:HIS:NE2	2.35	0.41
83:M3:69:THR:HG22	83:M3:71:ALA:H	1.86	0.41
2:e2:290:U:H1'	2:e2:298:G:N2	2.35	0.41
2:e2:498:C:O2'	2:e2:499:G:P	2.79	0.41
2:e2:669:C:H2'	2:e2:670:G:C8	2.50	0.41
2:e2:1186:U:O2'	25:G2:278:ASP:OD2	2.39	0.41
2:e2:1237:C:N4	32:R2:55:ARG:HH21	2.19	0.41
2:e2:1239:C:C5	32:R2:59:TYR:CE2	3.08	0.41
2:e2:1316:G:H4'	2:e2:2348:G:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1443:A:H1'	2:e2:2101:G:N2	2.35	0.41
2:e2:2643:G:C6	2:e2:2692:U:N3	2.89	0.41
2:e2:2669:C:H2'	2:e2:2670:C:O4'	2.21	0.41
2:e2:3714:G:C5	2:e2:3715:U:C5	3.09	0.41
2:e2:3802:U:C5	2:e2:4498:U:H1'	2.56	0.41
2:e2:4169:G:H4'	2:e2:4171:C:C2	2.56	0.41
2:e2:4237:C:O3'	2:e2:4326:G:N2	2.54	0.41
2:e2:4664:A:H2'	2:e2:4665:A:C8	2.55	0.41
2:e2:4694:G:N3	2:e2:4694:G:H2'	2.36	0.41
2:e2:5055:G:O2'	2:e2:5056:A:O5'	2.35	0.41
3:h2:10:G:C6	3:h2:11:C:C4	3.09	0.41
3:h2:20:A:H2'	3:h2:21:C:O4'	2.20	0.41
3:h2:49:G:H2'	3:h2:50:C:C6	2.55	0.41
3:h2:62:A:H3'	19:A2:48:ARG:HH22	1.85	0.41
3:h2:117:C:H2'	3:h2:118:C:H6	1.84	0.41
4:d2:110:G:H2'	4:d2:111:C:H6	1.83	0.41
10:q2:75:LEU:HD23	10:q2:78:LEU:HD12	2.02	0.41
12:t2:11:TYR:OH	12:t2:149:GLU:HB2	2.20	0.41
12:t2:209:VAL:HG21	12:t2:221:PHE:CE2	2.54	0.41
16:x2:43:LEU:HD23	16:x2:43:LEU:HA	1.87	0.41
18:92:30:ARG:HD2	18:92:63:PHE:CD2	2.56	0.41
18:92:51:ASP:OD2	18:92:54:ARG:NH2	2.45	0.41
25:G2:183:TYR:HB2	25:G2:190:PHE:HB3	2.02	0.41
34:T2:229:ARG:O	34:T2:230:HIS:CG	2.73	0.41
34:T2:271:GLN:OE1	34:T2:271:GLN:N	2.38	0.41
37:W2:148:SER:HB3	37:W2:154:GLU:CG	2.51	0.41
39:Y2:63:ARG:H	39:Y2:66:GLU:HB2	1.86	0.41
44:42:89:ALA:O	44:42:91:LYS:N	2.49	0.41
44:42:120:ILE:HG13	44:42:136:SER:HA	2.03	0.41
44:42:148:VAL:HA	44:42:151:VAL:CG1	2.44	0.41
46:62:52:LYS:O	46:62:54:MET:N	2.50	0.41
49:K3:35:C:N4	49:K3:520:A:N6	2.65	0.41
49:K3:347:G:C6	49:K3:348:A:C6	3.09	0.41
49:K3:403:G:C5	49:K3:404:G:C8	3.08	0.41
49:K3:492:C:N3	49:K3:508:A:N7	2.68	0.41
49:K3:1148:A:H4'	49:K3:1149:A:O4'	2.21	0.41
49:K3:1330:G:O2'	49:K3:1492:U:H5	2.04	0.41
49:K3:1334:G:C2	49:K3:1335:G:C4	3.08	0.41
49:K3:1368:U:H2'	49:K3:1370:A:P	2.60	0.41
49:K3:1541:G:OP1	78:H5:56:ARG:HG3	2.20	0.41
49:K3:1592:C:O2'	68:B3:71:ARG:HD2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1867:U:N3	84:O3:98:PRO:O	2.54	0.41
53:G3:36:TYR:CE2	53:G3:38:LYS:HA	2.56	0.41
61:W3:84:PHE:HB2	61:W3:86:LEU:HG	2.02	0.41
61:W3:170:TRP:CE2	61:W3:199:PRO:HD3	2.55	0.41
66:N3:91:ARG:HH11	83:M3:103:HIS:CD2	2.39	0.41
67:b3:69:THR:O	67:b3:99:GLY:HA3	2.21	0.41
70:F3:121:ILE:O	70:F3:125:LEU:HD13	2.20	0.41
71:c3:38:ILE:HG13	71:c3:78:ILE:O	2.21	0.41
79:P3:334:ALA:HB1	79:P3:336:ARG:NE	2.36	0.41
84:O3:10:ARG:HB2	84:O3:33:ASP:CG	2.45	0.41
2:e2:23:C:H6	2:e2:23:C:O5'	2.03	0.41
2:e2:98:A:C6	2:e2:99:A:C5	3.09	0.41
2:e2:221:C:C2	2:e2:237:G:C2	3.08	0.41
2:e2:1108:C:N4	2:e2:1164:G:H1	2.17	0.41
2:e2:1187:G:H2'	2:e2:1188:C:C6	2.56	0.41
2:e2:1486:C:H2'	2:e2:1487:G:C8	2.56	0.41
2:e2:1620:U:H2'	2:e2:1621:A:H8	1.86	0.41
2:e2:2018:C:H4'	29:K2:5:ASP:N	2.35	0.41
2:e2:2072:C:C2	2:e2:2073:C:C5	3.09	0.41
2:e2:2634:C:H2'	2:e2:2635:U:H6	1.85	0.41
2:e2:2845:A:C2	2:e2:2846:G:C8	3.09	0.41
2:e2:2866:C:C4	2:e2:2867:C:C5	3.08	0.41
2:e2:3941:G:C6	2:e2:4073:A:N1	2.89	0.41
2:e2:4508:C:H2'	2:e2:4509:U:O4'	2.20	0.41
2:e2:4587:G:C2	2:e2:4716:C:C2	3.08	0.41
2:e2:4934:A:C6	2:e2:4935:C:C4	3.08	0.41
8:m2:100:VAL:HG22	8:m2:134:LYS:O	2.20	0.41
10:q2:100:ILE:HD11	85:a7:167:ARG:HG2	2.03	0.41
10:q2:134:GLU:O	10:q2:138:LYS:HG3	2.21	0.41
15:w2:110:PRO:CD	15:w2:111:PRO:HD3	2.50	0.41
15:w2:192:PHE:O	40:02:119:ARG:NH1	2.54	0.41
24:F2:70:LEU:O	24:F2:80:LYS:HA	2.21	0.41
25:G2:166:ALA:HB1	25:G2:171:LEU:HD12	2.03	0.41
29:K2:99:ARG:HA	29:K2:189:ILE:HB	2.02	0.41
30:L2:52:MET:SD	38:X2:135:ILE:HD11	2.60	0.41
35:U2:92:ILE:HA	35:U2:118:ASN:O	2.20	0.41
35:U2:182:ASN:O	35:U2:183:ILE:HD13	2.21	0.41
36:V2:92:ALA:O	36:V2:96:LEU:HD23	2.20	0.41
37:W2:75:ARG:C	37:W2:77:GLU:H	2.28	0.41
40:02:125:ASN:C	40:02:125:ASN:HD22	2.28	0.41
42:22:58:GLY:O	42:22:62:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:72:49:GLN:HE21	47:72:49:GLN:HB3	1.69	0.41
49:K3:165:G:HO2'	67:b3:6:SER:HG	1.56	0.41
49:K3:282:G:C2	49:K3:283:G:C8	3.08	0.41
49:K3:297:A:H2'	49:K3:298:G:H5'	2.03	0.41
49:K3:399:C:C2	53:G3:104:LYS:HE3	2.56	0.41
49:K3:431:G:N1	49:K3:432:G:C6	2.89	0.41
49:K3:522:A:O5'	73:d3:38:ARG:NH1	2.44	0.41
49:K3:578:C:H2'	49:K3:579:C:N1	2.36	0.41
49:K3:656:G:H1	49:K3:662:G:H5'	1.86	0.41
49:K3:980:A:O2'	49:K3:981:A:H5'	2.21	0.41
49:K3:997:A:H2'	49:K3:998:A:C8	2.55	0.41
49:K3:998:A:O2'	49:K3:1034:A:H5'	2.20	0.41
49:K3:1293:A:C8	49:K3:1294:G:N7	2.89	0.41
51:13:36:LYS:HE2	51:13:36:LYS:HB3	1.77	0.41
54:G5:88:LYS:HG3	54:G5:95:TYR:HE1	1.85	0.41
54:G5:91:LYS:HE3	57:A3:15:PHE:CD1	2.56	0.41
55:a3:36:ARG:HA	55:a3:66:VAL:N	2.36	0.41
55:a3:103:GLY:HA3	55:a3:132:TRP:CH2	2.56	0.41
55:a3:174:VAL:HG11	55:a3:219:TRP:NE1	2.36	0.41
56:a5:39:ASP:OD2	56:a5:59:GLY:N	2.54	0.41
59:U3:136:GLU:O	59:U3:140:VAL:HG22	2.21	0.41
61:W3:130:ILE:HD12	61:W3:158:ALA:C	2.45	0.41
64:j3:35:PRO:HG3	64:j3:144:ALA:HB3	2.02	0.41
65:J5:109:GLY:O	65:J5:111:MET:HE3	2.21	0.41
68:B3:135:LYS:HE3	68:B3:135:LYS:HB3	1.90	0.41
70:F3:75:TRP:HD1	70:F3:76:LEU:H	1.66	0.41
73:d3:18:ARG:HH21	73:d3:20:PHE:HD2	1.66	0.41
73:d3:106:LEU:O	73:d3:111:GLN:NE2	2.54	0.41
73:d3:127:ARG:O	73:d3:130:ILE:HB	2.21	0.41
76:E3:62:PHE:HB2	76:E3:67:PHE:CE1	2.56	0.41
85:a7:58:ILE:HG22	85:a7:157:ILE:HG23	2.01	0.41
1:E1:6300:U:H4'	1:E1:6301:A:C8	2.56	0.41
1:E1:6375:A:H1'	1:E1:6376:U:C5	2.55	0.41
1:E1:6388:A:H2'	1:E1:6389:A:N7	2.35	0.41
1:E1:6415:A:H2'	1:E1:6416:C:O4'	2.21	0.41
2:e2:121:A:N6	2:e2:153:G:N1	2.68	0.41
2:e2:279:A:H2	2:e2:280:G:H21	1.67	0.41
2:e2:387:G:C8	2:e2:412:G:C6	3.09	0.41
2:e2:452:A:N9	34:T2:227:LYS:HA	2.36	0.41
2:e2:985:C:H2'	2:e2:986:C:O4'	2.21	0.41
2:e2:1294:A:N1	34:T2:226:ARG:HA	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1345:A:O2'	85:a7:6:ASN:ND2	2.52	0.41
2:e2:1404:G:H2'	2:e2:1405:C:C6	2.56	0.41
2:e2:1884:G:C6	2:e2:1894:G:N1	2.89	0.41
2:e2:1966:A:C8	2:e2:2020:G:N1	2.89	0.41
2:e2:2306:G:C6	2:e2:2331:G:C6	3.08	0.41
2:e2:2601:A:H4'	2:e2:2602:G:OP1	2.20	0.41
2:e2:2605:G:C6	2:e2:2735:G:C2	3.08	0.41
2:e2:2671:C:H2'	2:e2:2672:C:C6	2.56	0.41
2:e2:3836:A:H2'	2:e2:3837:C:C6	2.56	0.41
2:e2:3858:C:OP2	26:H2:25:HIS:NE2	2.54	0.41
2:e2:3971:G:N2	2:e2:4050:A:N7	2.69	0.41
2:e2:4087:G:C2	18:92:34:PHE:CE2	3.09	0.41
2:e2:4097:G:H4'	17:y2:115:LYS:NZ	2.36	0.41
2:e2:4302:U:O2'	47:72:5:LYS:HD3	2.19	0.41
2:e2:4408:G:H2'	2:e2:4409:C:H6	1.85	0.41
2:e2:4515:G:N2	2:e2:4516:G:C4	2.89	0.41
2:e2:4683:U:C2	2:e2:4684:A:C8	3.09	0.41
2:e2:4688:C:H2'	2:e2:4689:U:C6	2.55	0.41
2:e2:4760:G:C6	2:e2:4761:G:N1	2.89	0.41
3:h2:48:A:H5''	19:A2:51:ARG:HH12	1.86	0.41
3:h2:121:G:C4	3:h2:122:G:N7	2.89	0.41
3:h2:139:G:H2'	3:h2:140:C:O4'	2.20	0.41
3:h2:155:C:H2'	3:h2:156:U:C1'	2.51	0.41
4:d2:94:C:H2'	4:d2:95:C:C6	2.56	0.41
4:d2:106:G:C6	4:d2:107:G:C5	3.09	0.41
16:x2:38:GLU:OE1	34:T2:287:HIS:NE2	2.54	0.41
25:G2:103:LEU:HG	25:G2:247:ILE:HG21	2.03	0.41
26:H2:26:PHE:O	26:H2:28:ASN:N	2.53	0.41
27:I2:9:GLY:HA3	27:I2:27:LYS:HD2	2.01	0.41
28:J2:87:ARG:NH1	34:T2:114:LYS:HD2	2.35	0.41
30:L2:65:LEU:HD23	38:X2:159:PHE:HZ	1.86	0.41
43:32:89:MET:HE3	43:32:94:THR:OG1	2.21	0.41
49:K3:79:A:H5''	49:K3:80:G:C8	2.56	0.41
49:K3:422:U:O2	49:K3:652:U:H4'	2.21	0.41
49:K3:551:U:O2'	50:s3:39:ASN:HB3	2.21	0.41
49:K3:561:A:H61	49:K3:588:G:H1	1.68	0.41
49:K3:668:A:H2	49:K3:1197:G:N2	2.18	0.41
49:K3:930:C:H5'	60:V3:159:GLN:HE22	1.86	0.41
49:K3:936:G:O6	49:K3:1007:C:N4	2.53	0.41
49:K3:1296:U:O2'	49:K3:1303:C:N4	2.54	0.41
49:K3:1301:A:H4'	77:H3:5:GLN:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1351:G:H1	49:K3:1360:U:H3	1.68	0.41
49:K3:1392:U:C2	49:K3:1393:G:N7	2.89	0.41
49:K3:1727:G:H2'	49:K3:1728:U:C6	2.56	0.41
49:K3:1744:G:O2'	49:K3:1746:U:O4	2.35	0.41
55:a3:36:ARG:HB3	55:a3:65:PHE:HA	2.03	0.41
55:a3:146:SER:HB2	55:a3:177:TRP:CZ2	2.56	0.41
55:a3:220:ASP:CG	55:a3:227:LEU:HD21	2.46	0.41
55:a3:276:SER:H	55:a3:282:GLU:CD	2.28	0.41
57:A3:38:SER:HB3	57:A3:41:GLN:OE1	2.21	0.41
57:A3:43:ARG:NH2	57:A3:46:SER:HB3	2.35	0.41
59:U3:34:MET:HG2	59:U3:150:THR:HA	2.02	0.41
63:Y3:162:ASP:N	63:Y3:163:PRO:HD3	2.35	0.41
64:j3:89:VAL:HA	64:j3:99:PHE:O	2.20	0.41
64:j3:209:HIS:CE1	64:j3:217:SER:HB3	2.51	0.41
65:J5:55:ASP:C	65:J5:57:ARG:N	2.78	0.41
67:b3:41:LEU:HD23	67:b3:45:TRP:CG	2.55	0.41
68:B3:40:GLY:HA2	68:B3:112:GLN:HE21	1.86	0.41
68:B3:102:GLY:O	68:B3:106:GLN:HG3	2.21	0.41
68:B3:111:ARG:HH12	68:B3:145:LEU:HD21	1.85	0.41
71:c3:172:LEU:HG	71:c3:190:LEU:HB2	2.03	0.41
75:e3:86:GLY:HA3	75:e3:105:GLY:HA2	2.02	0.41
78:H5:40:ALA:HA	78:H5:96:SER:H	1.85	0.41
78:H5:71:GLY:O	78:H5:75:MET:HG2	2.21	0.41
82:L3:53:VAL:HG12	82:L3:64:CYS:O	2.21	0.41
1:E1:6281:C:O2'	1:E1:6282:A:P	2.79	0.41
1:E1:6301:A:N6	1:E1:6313:A:H5''	2.36	0.41
1:E1:6375:A:H1'	1:E1:6376:U:H5	1.86	0.41
1:E1:6409:A:H2'	1:E1:6410:C:C6	2.56	0.41
2:e2:20:U:O2'	2:e2:21:G:O5'	2.30	0.41
2:e2:98:A:H5'	41:12:195:ARG:HD2	2.02	0.41
2:e2:217:C:H4'	2:e2:218:A:OP2	2.21	0.41
2:e2:466:A:O2'	2:e2:467:U:H5'	2.20	0.41
2:e2:496:G:C2	2:e2:497:G:C8	3.09	0.41
2:e2:920:C:H2'	2:e2:921:C:O4'	2.21	0.41
2:e2:931:C:H5'	2:e2:932:A:O5'	2.20	0.41
2:e2:1260:G:C5	2:e2:1261:G:N7	2.89	0.41
2:e2:1284:G:H22	2:e2:2075:G:P	2.44	0.41
2:e2:1309:C:H2'	2:e2:1310:C:C6	2.55	0.41
2:e2:1370:G:C5	2:e2:1372:A:C6	3.09	0.41
2:e2:1388:A:C8	2:e2:1396:G:N2	2.89	0.41
2:e2:1462:A:C6	2:e2:1463:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:1516:G:C1'	85:a7:19:GLN:HB3	2.50	0.41
2:e2:1668:A:C2	2:e2:2282:A:C2	3.09	0.41
2:e2:1702:C:H4'	2:e2:1703:C:OP1	2.20	0.41
2:e2:1833:G:H2'	2:e2:1834:U:C6	2.55	0.41
2:e2:1856:C:C2	2:e2:1877:G:N2	2.89	0.41
2:e2:1931:A:C5	2:e2:1932:G:C5	3.09	0.41
2:e2:1972:G:H2'	2:e2:1973:U:C5	2.56	0.41
2:e2:1978:A:H4'	31:M2:95:GLN:OE1	2.20	0.41
2:e2:2061:C:OP1	46:62:3:ALA:HA	2.21	0.41
2:e2:2359:U:C6	2:e2:2360:A:C8	3.09	0.41
2:e2:2431:A:H2'	2:e2:2432:U:C6	2.56	0.41
2:e2:2450:G:C4	2:e2:2451:A:C8	3.09	0.41
2:e2:2489:C:O3'	2:e2:2491:C:N4	2.54	0.41
2:e2:2519:U:C2	2:e2:2537:A:C2	3.09	0.41
2:e2:2557:G:N1	2:e2:2570:U:N3	2.46	0.41
2:e2:2708:U:OP1	43:32:43:LYS:NZ	2.51	0.41
2:e2:2795:A:O2'	2:e2:2796:G:H3'	2.20	0.41
2:e2:2815:A:C4	2:e2:2816:G:N7	2.89	0.41
2:e2:2841:G:H3'	2:e2:2842:G:H5''	2.03	0.41
2:e2:2844:A:N1	2:e2:3845:A:C6	2.89	0.41
2:e2:2884:G:H2'	2:e2:2885:A:H8	1.86	0.41
2:e2:3700:C:C4	2:e2:3746:A:C5	3.08	0.41
2:e2:3941:G:C2	2:e2:3942:A:C5	3.08	0.41
2:e2:3969:G:O6	2:e2:4051:C:N4	2.54	0.41
2:e2:4153:C:H2'	2:e2:4154:G:C8	2.49	0.41
2:e2:4275:G:C4	2:e2:4276:G:C8	3.09	0.41
2:e2:4364:G:O2'	10:q2:58:MET:HG2	2.21	0.41
2:e2:4417:C:C4	2:e2:4418:G:C5	3.09	0.41
2:e2:4581:G:C2	2:e2:4723:A:C6	3.09	0.41
2:e2:4757:C:C2	15:w2:114:LYS:HA	2.56	0.41
2:e2:4889:G:N1	2:e2:4890:G:C5	2.88	0.41
2:e2:4919:G:C6	2:e2:4920:C:C4	3.09	0.41
2:e2:4940:C:C5'	34:T2:190:ARG:HH12	2.34	0.41
2:e2:5061:A:H3'	2:e2:5061:A:N3	2.35	0.41
3:h2:83:C:OP1	3:h2:87:G:H5''	2.21	0.41
3:h2:108:A:C2	3:h2:112:G:C6	3.09	0.41
3:h2:140:C:H2'	3:h2:141:C:C6	2.48	0.41
4:d2:43:U:C4	4:d2:44:C:C4	3.09	0.41
6:k2:48:ARG:HB3	6:k2:51:ARG:HD2	2.03	0.41
8:m2:64:SER:OG	8:m2:65:ALA:N	2.53	0.41
12:t2:284:MET:CE	33:S2:124:ASP:HB3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:u2:117:LEU:HD23	13:u2:117:LEU:HA	1.83	0.41
17:y2:107:LEU:HA	17:y2:107:LEU:HD23	1.81	0.41
18:92:140:ASN:N	18:92:145:LYS:O	2.52	0.41
22:D2:12:PHE:HB3	22:D2:16:LYS:HZ3	1.85	0.41
24:F2:71:GLU:OE1	24:F2:80:LYS:HE2	2.21	0.41
24:F2:99:ARG:O	24:F2:99:ARG:HD2	2.20	0.41
26:H2:36:ILE:O	26:H2:39:MET:HG3	2.21	0.41
26:H2:114:ILE:HG23	26:H2:114:ILE:O	2.20	0.41
26:H2:153:LYS:HB3	26:H2:153:LYS:HE2	1.88	0.41
30:L2:4:ARG:HD2	30:L2:4:ARG:HA	1.73	0.41
30:L2:27:PRO:HG2	38:X2:124:GLY:N	2.33	0.41
34:T2:180:GLY:O	34:T2:181:PRO:C	2.63	0.41
34:T2:213:LYS:HA	34:T2:213:LYS:HD2	1.79	0.41
36:V2:80:ILE:HD12	36:V2:164:ILE:HG12	2.03	0.41
36:V2:264:LYS:NZ	60:V3:31:TYR:HB2	2.36	0.41
38:X2:146:GLU:OE2	38:X2:146:GLU:HA	2.20	0.41
38:X2:159:PHE:HB3	38:X2:163:GLN:HE22	1.86	0.41
43:32:173:ARG:NE	49:K3:910:G:OP2	2.53	0.41
43:32:176:ARG:HG2	49:K3:909:G:O2'	2.21	0.41
44:42:68:LEU:HD12	44:42:70:ASP:OD2	2.20	0.41
46:62:102:THR:O	46:62:106:VAL:HG23	2.21	0.41
47:72:14:MET:HB2	47:72:14:MET:HE3	1.72	0.41
49:K3:10:G:N2	61:W3:114:LYS:HA	2.33	0.41
49:K3:13:C:H42	49:K3:1199:A:N6	2.18	0.41
49:K3:22:A:H8	49:K3:22:A:O5'	2.03	0.41
49:K3:145:G:N7	67:b3:178:ARG:NH2	2.65	0.41
49:K3:379:C:H2'	49:K3:380:G:C4	2.56	0.41
49:K3:438:G:H5'	49:K3:439:A:OP2	2.20	0.41
49:K3:466:G:H3'	49:K3:466:G:N3	2.36	0.41
49:K3:546:G:H3'	49:K3:547:G:C2	2.56	0.41
49:K3:590:A:H5''	50:s3:24:LYS:NZ	2.36	0.41
49:K3:878:G:H1'	49:K3:910:G:N2	2.36	0.41
49:K3:939:U:H2'	49:K3:940:U:O4'	2.20	0.41
49:K3:959:G:H2'	49:K3:960:U:C6	2.55	0.41
49:K3:974:C:H2'	49:K3:975:G:C8	2.56	0.41
49:K3:1115:U:H2'	49:K3:1116:C:O2	2.21	0.41
49:K3:1155:U:H4'	49:K3:1156:U:OP2	2.21	0.41
49:K3:1204:A:O2'	49:K3:1700:C:OP2	2.25	0.41
49:K3:1212:G:H2'	49:K3:1213:C:O4'	2.21	0.41
49:K3:1227:G:C6	49:K3:1638:G:C6	3.09	0.41
49:K3:1262:C:H42	77:H3:15:GLY:CA	2.30	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:1301:A:H2'	49:K3:1303:C:O2	2.21	0.41
49:K3:1350:U:H2'	49:K3:1351:G:H8	1.86	0.41
49:K3:1384:C:H5''	63:Y3:158:ILE:HG22	2.03	0.41
49:K3:1407:U:H5''	68:B3:97:ARG:NH2	2.23	0.41
49:K3:1788:A:H2'	49:K3:1789:G:C8	2.56	0.41
51:13:45:LEU:O	51:13:96:ILE:HG22	2.21	0.41
53:G3:111:VAL:HG22	53:G3:140:PHE:CB	2.50	0.41
53:G3:112:HIS:HE1	53:G3:141:ASN:OD1	2.04	0.41
54:G5:24:ARG:HA	54:G5:24:ARG:HD3	1.85	0.41
54:G5:84:LEU:HB3	54:G5:96:SER:C	2.45	0.41
54:G5:91:LYS:HE3	57:A3:15:PHE:HD1	1.86	0.41
54:G5:132:ARG:HA	54:G5:133:GLY:HA2	1.83	0.41
55:a3:32:LEU:HD13	55:a3:69:VAL:HG13	2.02	0.41
55:a3:283:PRO:HA	55:a3:284:PRO:HD3	1.97	0.41
56:a5:45:THR:HG23	56:a5:49:GLY:HA2	2.03	0.41
57:A3:44:ARG:HG2	57:A3:84:ILE:CD1	2.51	0.41
58:T3:52:LEU:HD23	58:T3:71:ARG:O	2.21	0.41
58:T3:140:ARG:CB	58:T3:142:ARG:HG3	2.51	0.41
60:V3:28:LYS:HA	60:V3:49:VAL:O	2.21	0.41
61:W3:69:LEU:O	61:W3:72:ASP:N	2.54	0.41
61:W3:93:ILE:H	61:W3:93:ILE:HG13	1.76	0.41
61:W3:196:ILE:HG22	61:W3:197:PRO:O	2.21	0.41
63:Y3:206:ASP:CG	63:Y3:207:HIS:H	2.28	0.41
64:j3:245:ARG:HG3	64:j3:245:ARG:O	2.21	0.41
64:j3:257:ALA:HA	64:j3:261:SER:HB3	2.03	0.41
66:N3:145:ARG:NE	66:N3:149:GLN:HE21	2.14	0.41
67:b3:76:LEU:HD13	67:b3:94:ARG:NH2	2.31	0.41
71:c3:119:LEU:HD12	71:c3:119:LEU:HA	1.92	0.41
72:C3:3:ARG:HH22	72:C3:6:THR:HG23	1.85	0.41
72:C3:107:LYS:C	72:C3:110:ASP:H	2.29	0.41
73:d3:42:GLU:HA	73:d3:45:ARG:HE	1.86	0.41
73:d3:45:ARG:HH11	73:d3:45:ARG:HD3	1.75	0.41
76:E3:50:GLN:HG3	76:E3:51:SER:N	2.35	0.41
79:P3:258:GLU:H	79:P3:258:GLU:CD	2.29	0.41
79:P3:297:ALA:HB1	79:P3:329:HIS:H	1.86	0.41
80:I3:18:HIS:HD2	80:I3:116:ILE:HG23	1.85	0.41
80:I3:37:ALA:O	80:I3:40:ILE:HB	2.21	0.41
83:M3:78:LYS:HB3	83:M3:78:LYS:HE2	1.88	0.41
1:E1:6299:U:H4'	1:E1:6300:U:OP1	2.21	0.41
2:e2:25:A:C6	2:e2:341:G:C6	3.09	0.41
2:e2:61:A:H8	2:e2:61:A:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:242:U:H2'	2:e2:243:A:H8	1.86	0.41
2:e2:264:C:H4'	19:A2:105:LYS:NZ	2.36	0.41
2:e2:701:G:C5	2:e2:702:U:C5	3.09	0.41
2:e2:1085:C:C4	2:e2:1086:C:C5	3.09	0.41
2:e2:1167:C:N4	2:e2:1196:G:C8	2.89	0.41
2:e2:1293:G:C4	2:e2:1294:A:C2	3.09	0.41
2:e2:1400:G:C6	2:e2:1401:C:N4	2.89	0.41
2:e2:1564:A:C6	2:e2:1565:A:C6	3.09	0.41
2:e2:1569:U:H2'	2:e2:1570:G:H8	1.85	0.41
2:e2:1744:U:H2'	2:e2:1745:G:H8	1.85	0.41
2:e2:1792:U:C2	2:e2:1793:A:C8	3.09	0.41
2:e2:1997:A:OP2	29:K2:55:MET:HB3	2.21	0.41
2:e2:2307:A:H2'	2:e2:2308:A:C8	2.56	0.41
2:e2:2641:A:H3'	2:e2:2642:A:C8	2.56	0.41
2:e2:2667:C:H5''	43:32:99:MET:CE	2.50	0.41
2:e2:3693:U:C4	2:e2:3694:U:C4	3.09	0.41
2:e2:3851:U:H2'	2:e2:3852:A:O4'	2.20	0.41
2:e2:3941:G:H2'	2:e2:3942:A:H8	1.85	0.41
2:e2:3977:C:C4	44:42:27:LYS:HD3	2.56	0.41
2:e2:4163:U:H6	2:e2:4163:U:H2'	1.73	0.41
2:e2:4584:A:OP1	15:w2:148:LYS:NZ	2.54	0.41
2:e2:4721:G:C2	2:e2:4722:G:C8	3.09	0.41
2:e2:4928:C:N4	2:e2:4929:C:N4	2.69	0.41
2:e2:4949:G:C2	2:e2:4950:U:C2	3.09	0.41
3:h2:141:C:C2	3:h2:142:U:C5	3.09	0.41
11:r2:37:PRO:O	11:r2:41:ARG:HG3	2.21	0.41
12:t2:57:LEU:HD12	12:t2:100:ARG:NH1	2.36	0.41
15:w2:175:MET:O	15:w2:179:LYS:HG2	2.21	0.41
19:A2:94:ARG:HG3	19:A2:95:LEU:N	2.36	0.41
25:G2:55:VAL:HG13	25:G2:60:ILE:HG12	2.02	0.41
25:G2:129:GLU:OE1	25:G2:130:TYR:N	2.54	0.41
29:K2:51:ALA:CB	29:K2:91:THR:HG22	2.51	0.41
34:T2:160:HIS:CE1	34:T2:190:ARG:NH1	2.89	0.41
37:W2:105:SER:HA	37:W2:190:ILE:HA	2.03	0.41
43:32:95:TRP:HH2	43:32:128:LYS:O	2.03	0.41
44:42:87:ILE:HD11	44:42:122:ARG:HE	1.85	0.41
45:52:155:LYS:HD2	45:52:156:TYR:CZ	2.56	0.41
45:52:247:GLY:HA3	45:52:250:LYS:NZ	2.37	0.41
45:52:288:GLY:HA3	45:52:330:PHE:CE2	2.55	0.41
45:52:298:LEU:HD12	45:52:298:LEU:HA	1.84	0.41
47:72:110:LYS:HA	47:72:110:LYS:HD3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:72:159:MET:HE3	47:72:159:MET:HB3	1.87	0.41
49:K3:64:A:H4'	67:b3:136:LYS:HE3	2.03	0.41
49:K3:273:G:H2'	49:K3:274:G:H8	1.85	0.41
49:K3:419:G:C6	49:K3:420:G:C8	3.09	0.41
49:K3:422:U:OP1	53:G3:98:LYS:HE2	2.20	0.41
49:K3:521:A:H2'	49:K3:522:A:O4'	2.21	0.41
49:K3:570:C:H4'	81:I5:36:PRO:HG3	2.02	0.41
49:K3:574:A:H4'	81:I5:93:ARG:NH1	2.36	0.41
49:K3:668:A:O2'	49:K3:669:A:N7	2.54	0.41
49:K3:824:C:H3'	49:K3:825:A:C8	2.55	0.41
49:K3:968:U:H4'	49:K3:972:A:O4'	2.21	0.41
49:K3:1013:U:N3	49:K3:1014:G:N7	2.69	0.41
49:K3:1036:A:N3	49:K3:1844:U:O2'	2.45	0.41
49:K3:1052:A:C6	49:K3:1053:C:C4	3.09	0.41
49:K3:1102:G:C2	49:K3:1103:C:C4	3.08	0.41
49:K3:1134:G:C2	49:K3:1135:C:C2	3.09	0.41
49:K3:1256:G:H2'	49:K3:1256:G:N3	2.36	0.41
49:K3:1570:G:H4'	49:K3:1615:U:H5'	2.03	0.41
49:K3:1810:U:H2'	49:K3:1811:C:H6	1.86	0.41
55:a3:14:HIS:HE2	55:a3:33:SER:HB2	1.85	0.41
59:U3:205:ARG:O	59:U3:207:PRO:HD3	2.21	0.41
60:V3:216:LYS:HB3	60:V3:216:LYS:HE3	1.85	0.41
66:N3:92:ILE:HG21	66:N3:169:ILE:HB	2.03	0.41
68:B3:77:LEU:HD23	68:B3:77:LEU:H	1.85	0.41
71:c3:110:ARG:NH2	71:c3:166:PHE:HA	2.31	0.41
72:C3:12:ALA:O	72:C3:16:ILE:HG12	2.19	0.41
73:d3:108:ARG:HB3	73:d3:108:ARG:NH1	2.35	0.41
73:d3:109:ARG:HH21	73:d3:146:SER:HB3	1.85	0.41
75:e3:92:CYS:HB2	75:e3:104:VAL:HG11	2.03	0.41
78:H5:62:ARG:O	78:H5:62:ARG:HD3	2.21	0.41
79:P3:317:LEU:HA	79:P3:317:LEU:HD12	1.88	0.41
80:I3:32:LEU:HD23	80:I3:32:LEU:HA	1.85	0.41
84:O3:42:ARG:HG3	84:O3:43:ASN:O	2.20	0.41
1:E1:6415:A:O3'	63:Y3:116:ARG:NH2	2.54	0.40
2:e2:42:A:H4'	41:12:84:PRO:HD2	2.03	0.40
2:e2:56:A:C6	2:e2:57:G:C2	3.09	0.40
2:e2:145:G:C2	2:e2:146:G:C4	3.09	0.40
2:e2:352:G:N2	3:h2:24:G:C6	2.89	0.40
2:e2:440:U:H2'	2:e2:441:G:H8	1.84	0.40
2:e2:458:C:H2'	2:e2:459:C:C6	2.54	0.40
2:e2:470:A:N1	2:e2:687:U:C4	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:926:G:HO2'	2:e2:927:G:C5'	2.31	0.40
2:e2:936:C:H4'	40:02:44:ARG:CG	2.49	0.40
2:e2:1062:G:H8	2:e2:1062:G:P	2.44	0.40
2:e2:1198:G:C2	2:e2:1199:G:C4	3.09	0.40
2:e2:1279:A:C2	2:e2:1280:C:C2	3.09	0.40
2:e2:1400:G:O6	2:e2:1418:C:N4	2.54	0.40
2:e2:1703:C:H4'	2:e2:1713:C:H4'	2.02	0.40
2:e2:1733:G:C2	2:e2:4214:A:C4	3.09	0.40
2:e2:2633:U:H2'	2:e2:2634:C:C6	2.57	0.40
2:e2:2661:U:O2'	43:32:118:HIS:NE2	2.30	0.40
2:e2:2844:A:O2'	2:e2:2845:A:O5'	2.36	0.40
2:e2:3680:U:O5'	2:e2:3680:U:H6	2.04	0.40
2:e2:3693:U:C2	2:e2:3694:U:C6	3.09	0.40
2:e2:3806:G:C6	2:e2:3807:A:C5	3.08	0.40
2:e2:4441:A:C6	2:e2:4442:U:C4	3.09	0.40
2:e2:4627:U:H4'	45:52:373:LYS:NZ	2.36	0.40
2:e2:4903:G:C2	2:e2:4904:G:C4	3.09	0.40
2:e2:5050:C:N4	2:e2:5051:C:H41	2.19	0.40
3:h2:111:U:O2	3:h2:111:U:H2'	2.21	0.40
3:h2:120:G:C6	3:h2:131:G:N1	2.89	0.40
4:d2:43:U:C2	4:d2:44:C:C6	3.10	0.40
5:p2:67:LYS:HD3	5:p2:68:GLU:N	2.36	0.40
8:m2:97:VAL:HG22	8:m2:137:TYR:HD1	1.86	0.40
9:o2:65:GLN:N	9:o2:65:GLN:OE1	2.54	0.40
9:o2:82:ILE:HG22	9:o2:83:GLU:H	1.85	0.40
13:u2:123:ASP:OD1	13:u2:123:ASP:N	2.54	0.40
17:y2:68:SER:HB2	17:y2:71:LYS:HG2	2.03	0.40
17:y2:68:SER:O	17:y2:72:LYS:HG3	2.20	0.40
17:y2:88:ARG:HA	17:y2:88:ARG:HD2	1.82	0.40
21:C2:66:HIS:O	21:C2:70:VAL:HG23	2.20	0.40
29:K2:28:PHE:CE2	29:K2:98:ILE:HG13	2.55	0.40
29:K2:48:ARG:NE	31:M2:124:GLU:HB2	2.33	0.40
29:K2:52:VAL:HG12	29:K2:90:PHE:HB2	2.03	0.40
31:M2:124:GLU:H	31:M2:128:THR:HB	1.86	0.40
31:M2:128:THR:HA	31:M2:131:GLU:HG3	2.03	0.40
34:T2:160:HIS:HE1	34:T2:190:ARG:NH1	2.20	0.40
34:T2:161:ARG:O	34:T2:163:LYS:N	2.54	0.40
35:U2:224:THR:HG22	35:U2:228:GLU:HB2	2.03	0.40
36:V2:110:LYS:HG3	36:V2:111:LYS:H	1.86	0.40
37:W2:128:PHE:O	37:W2:131:GLU:HB2	2.20	0.40
39:Y2:172:GLY:HA2	57:A3:10:ARG:NH1	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:32:157:ASP:HA	43:32:160:GLU:HG2	2.03	0.40
44:42:43:PRO:O	44:42:159:MET:HE2	2.21	0.40
49:K3:12:U:C2	49:K3:13:C:C5	3.08	0.40
49:K3:23:G:H22	49:K3:652:U:H1'	1.86	0.40
49:K3:114:G:N2	49:K3:383:G:C5	2.89	0.40
49:K3:229:A:H3'	49:K3:230:A:H5''	2.02	0.40
49:K3:230:A:O2'	49:K3:231:A:H8	2.04	0.40
49:K3:455:A:O2'	49:K3:1736:G:O4'	2.39	0.40
49:K3:799:U:H5	49:K3:867:G:N2	2.19	0.40
49:K3:810:A:H2'	49:K3:851:C:H2'	2.03	0.40
49:K3:932:G:H5''	49:K3:933:G:OP2	2.20	0.40
49:K3:975:G:C6	49:K3:976:G:C6	3.09	0.40
49:K3:1089:G:C6	49:K3:1161:U:C4	3.08	0.40
49:K3:1092:G:OP2	70:F3:59:LYS:HD3	2.21	0.40
49:K3:1143:A:H2'	49:K3:1144:A:C8	2.57	0.40
49:K3:1181:A:H2'	49:K3:1182:A:N3	2.36	0.40
49:K3:1204:A:H2'	49:K3:1205:C:C6	2.56	0.40
49:K3:1214:A:N6	49:K3:1686:G:C6	2.89	0.40
49:K3:1229:G:H5''	54:G5:142:ARG:HG3	2.02	0.40
49:K3:1398:G:P	55:a3:61:GLY:HA2	2.61	0.40
49:K3:1601:A:H61	49:K3:1635:C:H2'	1.86	0.40
49:K3:1650:A:C2	49:K3:1651:A:H1'	2.56	0.40
55:a3:77:PHE:CD2	55:a3:89:LEU:HD21	2.56	0.40
56:a5:77:ALA:O	56:a5:81:VAL:HG23	2.21	0.40
58:T3:107:ARG:HB3	58:T3:110:HIS:O	2.21	0.40
59:U3:117:ARG:C	59:U3:119:PRO:HD3	2.47	0.40
60:V3:32:ASP:HA	60:V3:46:LYS:HD3	2.03	0.40
63:Y3:217:ILE:HG13	63:Y3:218:LEU:N	2.36	0.40
64:j3:150:PRO:HA	64:j3:169:ILE:HG12	2.02	0.40
66:N3:123:GLU:CA	66:N3:141:VAL:HG23	2.51	0.40
67:b3:74:ARG:NE	67:b3:96:SER:HB2	2.33	0.40
68:B3:73:LEU:HB3	68:B3:76:LYS:HB2	2.03	0.40
71:c3:100:CYS:HB3	71:c3:175:ILE:HG22	2.02	0.40
75:e3:35:ILE:HG23	75:e3:61:TYR:CZ	2.56	0.40
85:a7:18:TRP:CD1	85:a7:18:TRP:H	2.39	0.40
85:a7:125:VAL:HG22	85:a7:126:LEU:O	2.22	0.40
85:a7:205:GLN:HA	85:a7:208:GLU:CG	2.42	0.40
2:e2:289:C:H2'	2:e2:290:U:H6	1.86	0.40
2:e2:365:U:O4	2:e2:376:A:N7	2.54	0.40
2:e2:377:A:H5'	12:t2:86:ARG:NH1	2.36	0.40
2:e2:385:A:C2	2:e2:386:A:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:489:C:C4	2:e2:490:C:C5	3.10	0.40
2:e2:747:A:N6	2:e2:749:G:C4	2.89	0.40
2:e2:916:C:N4	2:e2:919:C:H41	2.19	0.40
2:e2:1178:G:O2'	25:G2:289:ARG:NH2	2.54	0.40
2:e2:1210:C:OP1	2:e2:1211:G:H5'	2.21	0.40
2:e2:1398:A:O2'	2:e2:1399:G:O5'	2.39	0.40
2:e2:1647:U:OP1	12:t2:60:HIS:NE2	2.54	0.40
2:e2:1854:G:C6	2:e2:1855:C:C4	3.09	0.40
2:e2:1907:A:N7	2:e2:1908:G:C8	2.89	0.40
2:e2:2095:G:OP2	35:U2:34:LYS:HB3	2.21	0.40
2:e2:2247:C:H5'	2:e2:2249:C:N4	2.37	0.40
2:e2:2405:G:H2'	2:e2:2406:G:H8	1.87	0.40
2:e2:2412:A:H2'	2:e2:2413:U:H6	1.85	0.40
2:e2:2487:G:O6	2:e2:2489:C:H4'	2.22	0.40
2:e2:2587:A:O4'	2:e2:2770:C:H5'	2.21	0.40
2:e2:3599:A:C4	2:e2:3600:G:C8	3.09	0.40
2:e2:3901:A:H8	2:e2:4518:A:N6	2.19	0.40
2:e2:3966:A:OP1	2:e2:4049:U:C4	2.74	0.40
2:e2:4084:G:O6	18:92:68:ARG:NE	2.54	0.40
2:e2:4093:G:C2	2:e2:4094:G:C5	3.09	0.40
2:e2:4323:A:H5'	25:G2:178:LYS:HD3	2.03	0.40
2:e2:4621:C:H5'	45:52:9:PRO:HG2	2.03	0.40
2:e2:4940:C:H3'	2:e2:4941:G:N2	2.36	0.40
3:h2:14:U:C4	3:h2:15:G:N1	2.88	0.40
3:h2:17:A:C5	3:h2:18:U:C4	3.08	0.40
3:h2:88:A:OP1	19:A2:3:LYS:NZ	2.54	0.40
3:h2:99:U:H2'	3:h2:100:U:H6	1.86	0.40
4:d2:41:G:N2	4:d2:45:U:C2	2.90	0.40
4:d2:68:C:H2'	4:d2:69:U:C6	2.56	0.40
5:p2:34:PHE:N	5:p2:34:PHE:CD1	2.88	0.40
6:k2:49:LEU:HD12	6:k2:49:LEU:HA	1.74	0.40
14:v2:12:ILE:HG22	14:v2:66:THR:HG21	2.02	0.40
25:G2:20:PHE:HE2	47:72:24:VAL:CG2	2.34	0.40
25:G2:51:MET:HB2	25:G2:144:CYS:SG	2.60	0.40
25:G2:219:TYR:CE2	25:G2:227:ILE:HD11	2.56	0.40
26:H2:27:LYS:HA	26:H2:63:TYR:CD2	2.57	0.40
27:I2:53:GLY:HA2	27:I2:67:GLY:O	2.21	0.40
28:J2:107:ARG:HG3	28:J2:108:MET:H	1.81	0.40
29:K2:93:GLU:HB3	29:K2:97:GLU:OE1	2.21	0.40
35:U2:245:ARG:HH11	35:U2:245:ARG:HD2	1.76	0.40
41:12:63:ARG:HG2	41:12:131:GLU:HB3	2.01	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:42:8:ASP:OD1	44:42:8:ASP:N	2.54	0.40
45:52:67:VAL:O	45:52:67:VAL:HG22	2.21	0.40
46:62:159:LEU:HD23	46:62:161:ARG:NH1	2.36	0.40
49:K3:103:A:H61	49:K3:355:G:H2'	1.85	0.40
49:K3:187:G:C6	49:K3:188:C:N4	2.89	0.40
49:K3:192:C:N4	71:c3:144:LYS:HZ3	2.19	0.40
49:K3:203:G:C4	49:K3:204:G:N7	2.90	0.40
49:K3:214:U:H3'	49:K3:216:C:N4	2.35	0.40
49:K3:230:A:H2'	49:K3:888:U:O2	2.21	0.40
49:K3:502:C:OP1	64:j3:66:MET:HE1	2.21	0.40
49:K3:524:U:P	73:d3:131:ARG:HH12	2.43	0.40
49:K3:808:A:H1'	64:j3:221:ARG:NE	2.35	0.40
49:K3:1035:A:N6	49:K3:1081:U:N3	2.69	0.40
49:K3:1134:G:C4	49:K3:1135:C:C5	3.10	0.40
49:K3:1289:U:C4	49:K3:1290:G:N2	2.90	0.40
49:K3:1466:G:H2'	49:K3:1467:C:H6	1.85	0.40
51:13:28:VAL:HB	51:13:97:ILE:HD11	2.04	0.40
52:Q3:178:LEU:HA	52:Q3:178:LEU:HD23	1.81	0.40
53:G3:38:LYS:HD3	53:G3:64:GLY:O	2.21	0.40
53:G3:57:ASP:OD2	53:G3:84:ARG:NH2	2.54	0.40
56:a5:98:ARG:CA	56:a5:133:THR:HG22	2.50	0.40
58:T3:81:ILE:HD12	58:T3:120:PHE:CG	2.56	0.40
60:V3:149:GLN:O	60:V3:150:ILE:HD13	2.21	0.40
61:W3:69:LEU:O	61:W3:72:ASP:CA	2.70	0.40
61:W3:88:ILE:HD12	61:W3:94:ILE:HD11	2.02	0.40
63:Y3:70:THR:HG22	63:Y3:86:LEU:HD13	2.03	0.40
63:Y3:175:VAL:O	63:Y3:181:VAL:HA	2.22	0.40
71:c3:165:GLN:NE2	71:c3:195:LEU:HB2	2.36	0.40
73:d3:110:LEU:O	73:d3:114:VAL:HG23	2.21	0.40
74:D3:66:ASP:N	74:D3:66:ASP:OD1	2.52	0.40
74:D3:78:ILE:HG13	74:D3:79:VAL:HG23	2.03	0.40
79:P3:286:ALA:HA	79:P3:299:ILE:O	2.21	0.40
79:P3:390:ARG:HB3	79:P3:421:LYS:HE2	2.03	0.40
81:I5:15:ASN:HB2	81:I5:20:ARG:HB3	2.03	0.40
84:O3:49:ALA:O	84:O3:53:ILE:HG12	2.21	0.40
85:a7:77:SER:O	85:a7:80:GLU:HG2	2.21	0.40
1:E1:6327:U:H2'	1:E1:6328:A:C8	2.56	0.40
2:e2:80:C:C2	2:e2:104:G:N2	2.90	0.40
2:e2:141:C:H3'	2:e2:142:G:H5''	2.03	0.40
2:e2:247:G:H4'	9:o2:132:LYS:HE3	2.02	0.40
2:e2:399:G:H1'	26:H2:97:ASN:HD21	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:460:C:C2	2:e2:461:G:C8	3.09	0.40
2:e2:1629:G:C2	2:e2:1631:A:C2	3.10	0.40
2:e2:1657:G:N1	2:e2:1658:G:C6	2.90	0.40
2:e2:1691:G:C6	2:e2:1845:G:C6	3.09	0.40
2:e2:1726:U:C4	2:e2:1727:U:C5	3.10	0.40
2:e2:1794:A:C4	2:e2:1795:A:C8	3.09	0.40
2:e2:1853:G:N1	2:e2:4394:A:C8	2.90	0.40
2:e2:2001:A:N3	2:e2:2001:A:H5''	2.37	0.40
2:e2:2055:G:H4'	2:e2:2056:A:OP1	2.21	0.40
2:e2:2243:C:O5'	2:e2:2244:C:OP2	2.31	0.40
2:e2:2540:C:H2'	2:e2:2541:G:H8	1.86	0.40
2:e2:2574:G:H5''	2:e2:2575:U:OP1	2.22	0.40
2:e2:2599:G:C6	2:e2:2600:A:N6	2.90	0.40
2:e2:2619:G:C2	2:e2:2719:C:C2	3.08	0.40
2:e2:3627:G:H2'	2:e2:3628:G:C8	2.57	0.40
2:e2:4332:C:N4	2:e2:4333:C:H41	2.17	0.40
2:e2:4459:U:C4'	45:52:266:VAL:HG12	2.51	0.40
2:e2:4710:C:C2	2:e2:4711:C:C5	3.09	0.40
3:h2:52:A:C6	3:h2:53:G:N7	2.89	0.40
3:h2:70:G:C2	3:h2:87:G:N3	2.90	0.40
3:h2:118:C:H2'	3:h2:119:C:C6	2.55	0.40
4:d2:22:A:N7	25:G2:265:ARG:HB2	2.36	0.40
5:p2:21:LYS:HZ3	5:p2:39:SER:HA	1.85	0.40
14:v2:89:LEU:HD13	14:v2:118:LEU:HD22	2.02	0.40
15:w2:56:ALA:O	15:w2:60:LYS:HE2	2.20	0.40
17:y2:114:GLN:O	17:y2:114:GLN:HG3	2.21	0.40
19:A2:119:TYR:CB	85:a7:126:LEU:HD23	2.45	0.40
21:C2:28:HIS:O	21:C2:32:SER:N	2.55	0.40
25:G2:152:ARG:NH1	25:G2:153:THR:O	2.54	0.40
25:G2:272:SER:O	25:G2:276:LYS:HG3	2.22	0.40
29:K2:175:LEU:O	29:K2:179:ASN:HA	2.21	0.40
35:U2:224:THR:O	35:U2:231:ASP:N	2.54	0.40
36:V2:116:ALA:HB1	36:V2:120:LYS:HZ1	1.86	0.40
37:W2:44:THR:O	37:W2:45:LEU:HD23	2.21	0.40
40:O2:48:GLN:NE2	40:O2:50:MET:HE3	2.36	0.40
41:12:56:LYS:HE2	41:12:56:LYS:HB3	1.82	0.40
42:22:123:LYS:HD2	42:22:123:LYS:HA	1.71	0.40
44:42:73:HIS:CE1	44:42:111:LEU:HD11	2.57	0.40
46:62:94:TYR:HD2	46:62:139:ARG:HH11	1.69	0.40
49:K3:54:A:H3'	49:K3:451:G:N2	2.34	0.40
49:K3:227:U:C5	49:K3:888:U:H5''	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:229:A:HO2'	49:K3:230:A:P	2.37	0.40
49:K3:419:G:N3	65:J5:88:LYS:HE3	2.36	0.40
49:K3:677:G:N7	49:K3:1026:C:C5	2.90	0.40
49:K3:680:G:N1	49:K3:1025:U:C2	2.89	0.40
49:K3:819:G:O3'	64:j3:256:LEU:HD21	2.20	0.40
49:K3:856:C:H2'	49:K3:857:U:H6	1.86	0.40
49:K3:1039:C:H2'	49:K3:1040:G:O4'	2.21	0.40
49:K3:1174:U:H2'	49:K3:1175:G:C8	2.57	0.40
49:K3:1270:G:C2	49:K3:1271:C:C5	3.10	0.40
49:K3:1285:G:H8	52:Q3:134:VAL:CG2	2.33	0.40
49:K3:1718:G:H2'	49:K3:1814:G:H22	1.85	0.40
49:K3:1821:U:H2'	49:K3:1822:A:O4'	2.21	0.40
55:a3:16:GLY:H	55:a3:35:SER:HB2	1.86	0.40
57:A3:84:ILE:HG13	57:A3:115:TYR:CE1	2.55	0.40
58:T3:90:CYS:SG	58:T3:93:PHE:HE2	2.45	0.40
59:U3:10:MET:HB3	72:C3:111:PHE:HE2	1.85	0.40
61:W3:261:PHE:CD2	74:D3:52:THR:HG21	2.57	0.40
63:Y3:42:THR:OG1	63:Y3:45:ARG:HB2	2.22	0.40
65:J5:50:PHE:HB2	65:J5:62:VAL:O	2.20	0.40
65:J5:75:ILE:HG12	65:J5:128:PHE:HE1	1.87	0.40
67:b3:31:ARG:HA	67:b3:101:ILE:HA	2.02	0.40
71:c3:114:GLU:OE1	71:c3:120:PRO:HB3	2.21	0.40
71:c3:177:SER:OG	71:c3:178:ARG:N	2.53	0.40
74:D3:40:ASP:N	74:D3:45:ARG:O	2.53	0.40
82:L3:38:PRO:HD3	82:L3:76:GLY:HA2	2.02	0.40
2:e2:37:U:C2	2:e2:38:A:N7	2.90	0.40
2:e2:73:A:C5	85:a7:103:ARG:NH2	2.86	0.40
2:e2:114:G:C4	2:e2:115:C:C5	3.09	0.40
2:e2:452:A:H5'	2:e2:1294:A:C8	2.57	0.40
2:e2:520:C:N3	2:e2:642:G:C6	2.89	0.40
2:e2:704:C:N4	2:e2:705:G:O6	2.54	0.40
2:e2:753:C:H2'	2:e2:754:U:C6	2.56	0.40
2:e2:1085:C:C2	2:e2:1213:G:C2	3.09	0.40
2:e2:1330:A:C6	2:e2:1331:C:C4	3.10	0.40
2:e2:1625:G:N7	2:e2:1642:A:C5	2.89	0.40
2:e2:1707:C:O2'	2:e2:1719:A:H5''	2.21	0.40
2:e2:1729:A:C6	2:e2:1801:A:C6	3.10	0.40
2:e2:1895:A:H5''	2:e2:1896:A:OP2	2.21	0.40
2:e2:1973:U:OP2	31:M2:119:ARG:NH1	2.53	0.40
2:e2:1977:C:P	31:M2:99:LYS:HB2	2.61	0.40
2:e2:2002:G:H4'	2:e2:2003:U:OP1	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:2428:A:N6	2:e2:2789:A:C8	2.89	0.40
2:e2:3616:U:H5'	2:e2:3617:G:C2	2.56	0.40
2:e2:3707:U:C2	2:e2:3708:C:C5	3.09	0.40
2:e2:3737:A:C4	2:e2:3738:G:C8	3.10	0.40
2:e2:3783:A:N1	2:e2:3787:G:N2	2.68	0.40
2:e2:3797:C:H2'	2:e2:3801:U:O4	2.21	0.40
2:e2:3962:A:O2'	2:e2:3963:A:O4'	2.37	0.40
2:e2:4056:A:H5'	44:42:39:LYS:HE3	2.03	0.40
2:e2:4378:A:O2'	2:e2:4379:A:H2'	2.22	0.40
2:e2:4523:A:C5	2:e2:4559:A:C6	3.09	0.40
2:e2:4538:G:H2'	2:e2:4539:U:C6	2.56	0.40
2:e2:4598:C:C6	2:e2:4599:A:C8	3.10	0.40
2:e2:4863:G:C5	2:e2:4864:U:C4	3.09	0.40
2:e2:4974:C:H1'	2:e2:4985:U:O2	2.21	0.40
2:e2:5012:G:C2	2:e2:5037:U:C2	3.09	0.40
3:h2:75:G:H5'	22:D2:31:THR:HG23	2.04	0.40
6:k2:90:ARG:C	6:k2:92:ASP:H	2.29	0.40
7:l2:1:MET:O	7:l2:3:VAL:N	2.53	0.40
12:t2:48:ASN:O	12:t2:49:ARG:C	2.65	0.40
12:t2:92:PHE:CD2	12:t2:92:PHE:C	3.00	0.40
14:v2:118:LEU:HD23	14:v2:118:LEU:HA	1.79	0.40
25:G2:37:VAL:HG22	25:G2:67:ALA:HB2	2.03	0.40
29:K2:102:LEU:HD13	29:K2:189:ILE:CG1	2.51	0.40
30:L2:21:ARG:HH21	30:L2:22:PHE:HZ	1.68	0.40
35:U2:133:ARG:CZ	35:U2:133:ARG:HB2	2.52	0.40
36:V2:73:ARG:NH1	36:V2:242:LEU:HA	2.35	0.40
36:V2:265:LEU:HD23	60:V3:94:LYS:HB3	2.03	0.40
37:W2:47:ARG:HB3	37:W2:91:MET:HE1	2.03	0.40
39:Y2:136:ARG:N	39:Y2:139:PHE:HE2	2.20	0.40
41:12:30:TYR:CE1	41:12:37:HIS:CD2	3.09	0.40
45:52:27:GLY:HA3	45:52:220:ILE:HG22	2.03	0.40
46:62:21:LYS:HD2	46:62:22:CYS:CB	2.52	0.40
46:62:37:HIS:HD2	46:62:41:LYS:NZ	2.18	0.40
49:K3:88:G:C6	49:K3:500:A:C6	3.09	0.40
49:K3:93:U:H2'	49:K3:94:G:H8	1.86	0.40
49:K3:215:G:H5'	49:K3:216:C:C4	2.57	0.40
49:K3:288:G:C2	49:K3:289:G:C5	3.09	0.40
49:K3:445:A:H8	49:K3:445:A:OP1	2.05	0.40
49:K3:492:C:C4	49:K3:509:G:C6	3.09	0.40
49:K3:526:A:C2	49:K3:559:G:N1	2.89	0.40
49:K3:814:U:N3	49:K3:815:U:H1'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K3:865:A:C6	49:K3:866:U:C4	3.09	0.40
49:K3:904:A:C6	49:K3:905:C:N4	2.90	0.40
49:K3:1051:G:C2	49:K3:1052:A:C8	3.10	0.40
49:K3:1144:A:O5'	49:K3:1144:A:H8	2.05	0.40
49:K3:1173:A:C6	49:K3:1188:A:C5	3.09	0.40
49:K3:1217:A:O2'	49:K3:1218:C:H5'	2.22	0.40
49:K3:1353:A:C5	49:K3:1354:G:C8	3.10	0.40
49:K3:1401:A:H2	80:I3:55:ARG:HG3	1.86	0.40
49:K3:1604:G:H2'	49:K3:1605:G:C8	2.56	0.40
49:K3:1684:C:C4	49:K3:1685:U:C4	3.09	0.40
49:K3:1785:C:H2'	49:K3:1786:U:O4'	2.21	0.40
49:K3:1831:A:H2'	49:K3:1832:A:H5'	2.03	0.40
51:13:36:LYS:O	51:13:40:GLN:HG2	2.21	0.40
54:G5:39:ARG:NE	54:G5:83:PHE:HE1	2.20	0.40
56:a5:43:HIS:NE2	56:a5:52:THR:HG23	2.37	0.40
58:T3:32:LEU:HD12	58:T3:32:LEU:HA	1.85	0.40
59:U3:56:GLU:OE2	74:D3:74:LYS:HE2	2.22	0.40
59:U3:104:THR:O	59:U3:107:THR:HG23	2.22	0.40
59:U3:184:ARG:HB3	59:U3:191:ARG:NH2	2.37	0.40
60:V3:30:TRP:CZ2	60:V3:48:LEU:HD23	2.57	0.40
61:W3:127:PHE:CE1	61:W3:234:GLY:HA2	2.57	0.40
64:j3:248:ILE:HG13	64:j3:249:ALA:N	2.37	0.40
66:N3:26:ASP:CG	66:N3:27:ASP:H	2.29	0.40
66:N3:50:PRO:HB3	66:N3:70:GLU:HG3	2.03	0.40
72:C3:40:ILE:HG23	72:C3:40:ILE:O	2.21	0.40
85:a7:64:VAL:HA	85:a7:67:HIS:ND1	2.36	0.40
85:a7:75:GLY:O	85:a7:102:ARG:NH2	2.55	0.40
2:e2:29:G:C6	2:e2:54:G:C6	3.10	0.40
2:e2:136:C:N4	19:A2:79:LYS:HE2	2.32	0.40
2:e2:344:A:N6	3:h2:31:G:O6	2.55	0.40
2:e2:364:G:O6	21:C2:52:LYS:NZ	2.53	0.40
2:e2:1168:G:C4	2:e2:1194:G:N2	2.90	0.40
2:e2:1548:G:C6	2:e2:1549:G:C5	3.10	0.40
2:e2:1627:G:C5	2:e2:1628:C:C4	3.09	0.40
2:e2:1964:G:N3	2:e2:1964:G:H2'	2.36	0.40
2:e2:2011:A:O2'	29:K2:132:PRO:HB2	2.22	0.40
2:e2:2020:G:N2	2:e2:2021:C:O4'	2.55	0.40
2:e2:2352:U:C2	2:e2:2353:U:C5	3.10	0.40
2:e2:2470:C:H1'	36:V2:59:ARG:HH22	1.87	0.40
2:e2:2610:G:C4	2:e2:2611:A:C8	3.09	0.40
2:e2:2844:A:H61	2:e2:3845:A:N6	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e2:3638:G:C6	2:e2:3639:U:C4	3.10	0.40
2:e2:3672:G:C2	2:e2:3674:G:H1'	2.55	0.40
2:e2:3698:G:H1	2:e2:3752:C:N4	2.19	0.40
2:e2:3795:A:C4	2:e2:3796:U:C5	3.09	0.40
2:e2:3899:G:O2'	45:52:259:PRO:HG3	2.21	0.40
2:e2:4096:C:H2'	2:e2:4097:G:C8	2.57	0.40
2:e2:4131:G:C6	2:e2:4154:G:C6	3.10	0.40
2:e2:4350:C:C2	2:e2:4351:U:C5	3.10	0.40
2:e2:4566:U:H2'	2:e2:4567:G:O4'	2.22	0.40
2:e2:4611:A:H2'	2:e2:4612:C:C6	2.57	0.40
2:e2:4708:A:N3	2:e2:4708:A:H3'	2.36	0.40
4:d2:15:C:H2'	4:d2:16:A:C8	2.57	0.40
4:d2:40:U:H5	39:Y2:75:ARG:HH21	1.70	0.40
7:l2:4:GLU:HB3	7:l2:30:GLN:HE21	1.86	0.40
12:t2:341:LEU:HD12	32:R2:52:ARG:HG3	2.02	0.40
15:w2:108:ILE:HG22	15:w2:157:GLU:OE1	2.21	0.40
17:y2:96:LEU:HB3	51:13:55:LEU:HD11	2.02	0.40
24:F2:82:MET:HE2	24:F2:82:MET:HB3	1.70	0.40
25:G2:95:TYR:OH	25:G2:195:HIS:HE1	2.05	0.40
34:T2:98:PRO:HB3	34:T2:111:LYS:HA	2.04	0.40
44:42:80:VAL:HG12	44:42:80:VAL:O	2.20	0.40
49:K3:303:C:H1'	71:c3:64:ASN:HD21	1.85	0.40
49:K3:314:U:H2'	49:K3:315:C:H6	1.84	0.40
49:K3:423:U:H1'	49:K3:651:U:O2'	2.21	0.40
49:K3:668:A:O2'	49:K3:669:A:C8	2.75	0.40
49:K3:851:C:O2'	49:K3:852:G:N2	2.55	0.40
49:K3:935:G:N1	49:K3:1008:A:N1	2.69	0.40
49:K3:1013:U:C4	49:K3:1014:G:N7	2.89	0.40
49:K3:1316:C:H2'	49:K3:1317:C:C6	2.57	0.40
49:K3:1357:A:O3'	61:W3:112:VAL:HB	2.22	0.40
49:K3:1607:A:OP1	78:H5:86:GLY:HA3	2.20	0.40
49:K3:1653:U:H2'	49:K3:1654:G:N7	2.37	0.40
49:K3:1836:G:OP1	49:K3:1839:U:H4'	2.22	0.40
54:G5:117:ILE:HD11	57:A3:111:MET:CG	2.48	0.40
58:T3:90:CYS:SG	58:T3:130:LEU:HD12	2.61	0.40
58:T3:107:ARG:HG3	58:T3:110:HIS:HB3	2.02	0.40
63:Y3:12:VAL:O	63:Y3:16:ILE:HG13	2.21	0.40
64:j3:100:ARG:HG2	64:j3:114:ILE:HB	2.03	0.40
67:b3:95:LYS:HB3	67:b3:95:LYS:HE3	1.80	0.40
67:b3:164:LYS:HE2	67:b3:164:LYS:HB3	1.90	0.40
69:f3:35:MET:HE3	69:f3:55:VAL:CG1	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:d3:173:VAL:HG13	73:d3:176:LYS:HE2	2.03	0.40
76:E3:5:LYS:CD	76:E3:8:ARG:HB3	2.51	0.40
85:a7:79:GLU:OE1	85:a7:104:ASN:HB3	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	p2	67/69 (97%)	59 (88%)	8 (12%)	0	100	100
6	k2	129/131 (98%)	111 (86%)	18 (14%)	0	100	100
7	l2	61/63 (97%)	55 (90%)	6 (10%)	0	100	100
8	m2	117/119 (98%)	105 (90%)	12 (10%)	0	100	100
9	o2	132/134 (98%)	112 (85%)	20 (15%)	0	100	100
10	q2	145/147 (99%)	119 (82%)	26 (18%)	0	100	100
11	r2	73/75 (97%)	57 (78%)	16 (22%)	0	100	100
12	t2	360/362 (99%)	299 (83%)	60 (17%)	1 (0%)	37	67
13	u2	105/107 (98%)	89 (85%)	16 (15%)	0	100	100
14	v2	126/128 (98%)	105 (83%)	21 (17%)	0	100	100
15	w2	197/199 (99%)	177 (90%)	20 (10%)	0	100	100
16	x2	107/109 (98%)	89 (83%)	18 (17%)	0	100	100
17	y2	112/114 (98%)	101 (90%)	11 (10%)	0	100	100
18	92	242/244 (99%)	210 (87%)	31 (13%)	1 (0%)	30	63
19	A2	120/122 (98%)	109 (91%)	11 (9%)	0	100	100
20	B2	100/102 (98%)	89 (89%)	11 (11%)	0	100	100
21	C2	84/86 (98%)	69 (82%)	15 (18%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	D2	48/50 (96%)	42 (88%)	6 (12%)	0	100	100
23	E2	50/52 (96%)	45 (90%)	5 (10%)	0	100	100
24	F2	102/104 (98%)	91 (89%)	11 (11%)	0	100	100
25	G2	290/292 (99%)	250 (86%)	40 (14%)	0	100	100
26	H2	151/153 (99%)	130 (86%)	21 (14%)	0	100	100
27	I2	89/91 (98%)	81 (91%)	8 (9%)	0	100	100
28	J2	123/125 (98%)	106 (86%)	17 (14%)	0	100	100
29	K2	196/198 (99%)	157 (80%)	39 (20%)	0	100	100
30	L2	100/102 (98%)	87 (87%)	13 (13%)	0	100	100
31	M2	150/163 (92%)	106 (71%)	43 (29%)	1 (1%)	19	53
32	R2	33/35 (94%)	25 (76%)	8 (24%)	0	100	100
33	S2	185/187 (99%)	153 (83%)	32 (17%)	0	100	100
34	T2	199/201 (99%)	155 (78%)	43 (22%)	1 (0%)	25	59
35	U2	223/225 (99%)	203 (91%)	20 (9%)	0	100	100
36	V2	239/241 (99%)	225 (94%)	14 (6%)	0	100	100
37	W2	188/190 (99%)	174 (93%)	14 (7%)	0	100	100
38	X2	100/102 (98%)	80 (80%)	20 (20%)	0	100	100
39	Y2	167/169 (99%)	147 (88%)	20 (12%)	0	100	100
40	O2	136/138 (99%)	120 (88%)	16 (12%)	0	100	100
41	I2	201/203 (99%)	175 (87%)	26 (13%)	0	100	100
42	22	133/135 (98%)	112 (84%)	21 (16%)	0	100	100
43	32	178/180 (99%)	172 (97%)	6 (3%)	0	100	100
44	42	215/217 (99%)	152 (71%)	62 (29%)	1 (0%)	25	59
45	52	392/394 (100%)	338 (86%)	53 (14%)	1 (0%)	37	67
46	62	173/175 (99%)	157 (91%)	16 (9%)	0	100	100
47	72	157/159 (99%)	127 (81%)	29 (18%)	1 (1%)	22	55
48	82	97/99 (98%)	92 (95%)	5 (5%)	0	100	100
50	s3	41/43 (95%)	30 (73%)	11 (27%)	0	100	100
51	13	92/94 (98%)	87 (95%)	5 (5%)	0	100	100
52	Q3	59/188 (31%)	48 (81%)	11 (19%)	0	100	100
53	G3	151/153 (99%)	116 (77%)	35 (23%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
54	G5	135/137 (98%)	114 (84%)	19 (14%)	2 (2%)	8	39
55	a3	311/313 (99%)	255 (82%)	56 (18%)	0	100	100
56	a5	134/136 (98%)	109 (81%)	25 (19%)	0	100	100
57	A3	125/127 (98%)	107 (86%)	18 (14%)	0	100	100
58	T3	139/141 (99%)	115 (83%)	24 (17%)	0	100	100
59	U3	206/208 (99%)	185 (90%)	21 (10%)	0	100	100
60	V3	211/213 (99%)	179 (85%)	32 (15%)	0	100	100
61	W3	216/218 (99%)	187 (87%)	29 (13%)	0	100	100
62	X3	21/23 (91%)	21 (100%)	0	0	100	100
63	Y3	225/227 (99%)	195 (87%)	30 (13%)	0	100	100
64	j3	260/262 (99%)	215 (83%)	44 (17%)	1 (0%)	30	63
65	J5	127/129 (98%)	113 (89%)	14 (11%)	0	100	100
66	N3	189/191 (99%)	165 (87%)	24 (13%)	0	100	100
67	b3	235/237 (99%)	195 (83%)	40 (17%)	0	100	100
68	B3	139/141 (99%)	122 (88%)	17 (12%)	0	100	100
69	f3	62/64 (97%)	50 (81%)	12 (19%)	0	100	100
70	F3	148/150 (99%)	123 (83%)	25 (17%)	0	100	100
71	c3	204/206 (99%)	176 (86%)	28 (14%)	0	100	100
72	C3	127/129 (98%)	102 (80%)	25 (20%)	0	100	100
73	d3	183/185 (99%)	154 (84%)	29 (16%)	0	100	100
74	D3	81/83 (98%)	72 (89%)	9 (11%)	0	100	100
75	e3	122/124 (98%)	95 (78%)	23 (19%)	4 (3%)	3	25
76	E3	96/98 (98%)	80 (83%)	15 (16%)	1 (1%)	13	46
77	H3	51/53 (96%)	47 (92%)	4 (8%)	0	100	100
78	H5	139/141 (99%)	122 (88%)	16 (12%)	1 (1%)	19	53
79	P3	187/189 (99%)	158 (84%)	29 (16%)	0	100	100
80	I3	102/104 (98%)	81 (79%)	21 (21%)	0	100	100
81	I5	124/126 (98%)	111 (90%)	13 (10%)	0	100	100
82	L3	81/83 (98%)	67 (83%)	14 (17%)	0	100	100
83	M3	73/75 (97%)	65 (89%)	8 (11%)	0	100	100
84	O3	96/98 (98%)	78 (81%)	18 (19%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
85	a7	208/210 (99%)	179 (86%)	27 (13%)	2 (1%)	13	46
All	All	11692/11990 (98%)	9975 (85%)	1699 (14%)	18 (0%)	45	73

All (18) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
18	92	15	VAL
45	52	246	ARG
54	G5	101	ASN
64	j3	131	VAL
75	e3	117	GLU
75	e3	118	SER
75	e3	119	GLN
75	e3	120	ALA
85	a7	63	THR
34	T2	95	VAL
44	42	71	GLN
47	72	82	GLY
54	G5	100	ALA
31	M2	143	VAL
85	a7	62	PRO
12	t2	104	PRO
78	H5	41	LYS
76	E3	91	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	p2	64/64 (100%)	64 (100%)	0	100	100
6	k2	101/101 (100%)	101 (100%)	0	100	100
7	l2	55/55 (100%)	55 (100%)	0	100	100
8	m2	107/107 (100%)	107 (100%)	0	100	100
9	o2	124/124 (100%)	124 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	q2	119/119 (100%)	119 (100%)	0	100	100
11	r2	62/62 (100%)	62 (100%)	0	100	100
12	t2	302/302 (100%)	302 (100%)	0	100	100
13	u2	98/98 (100%)	98 (100%)	0	100	100
14	v2	114/114 (100%)	114 (100%)	0	100	100
15	w2	171/171 (100%)	171 (100%)	0	100	100
16	x2	88/88 (100%)	88 (100%)	0	100	100
17	y2	98/98 (100%)	98 (100%)	0	100	100
18	92	187/187 (100%)	187 (100%)	0	100	100
19	A2	109/109 (100%)	109 (100%)	0	100	100
20	B2	86/86 (100%)	86 (100%)	0	100	100
21	C2	73/73 (100%)	73 (100%)	0	100	100
22	D2	47/47 (100%)	47 (100%)	0	100	100
23	E2	48/48 (100%)	48 (100%)	0	100	100
24	F2	92/92 (100%)	92 (100%)	0	100	100
25	G2	247/247 (100%)	247 (100%)	0	100	100
26	H2	134/134 (100%)	134 (100%)	0	100	100
27	I2	74/74 (100%)	74 (100%)	0	100	100
28	J2	109/109 (100%)	109 (100%)	0	100	100
29	K2	166/166 (100%)	166 (100%)	0	100	100
30	L2	89/89 (100%)	89 (100%)	0	100	100
31	M2	131/136 (96%)	131 (100%)	0	100	100
32	R2	29/29 (100%)	29 (100%)	0	100	100
33	S2	164/164 (100%)	164 (100%)	0	100	100
34	T2	180/180 (100%)	180 (100%)	0	100	100
35	U2	196/196 (100%)	196 (100%)	0	100	100
36	V2	205/205 (100%)	205 (100%)	0	100	100
37	W2	169/169 (100%)	169 (100%)	0	100	100
38	X2	85/85 (100%)	85 (100%)	0	100	100
39	Y2	142/142 (100%)	142 (100%)	0	100	100
40	O2	117/117 (100%)	117 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
41	12	171/171 (100%)	171 (100%)	0	100	100
42	22	117/117 (100%)	117 (100%)	0	100	100
43	32	159/159 (100%)	158 (99%)	1 (1%)	84	92
44	42	196/196 (100%)	196 (100%)	0	100	100
45	52	342/342 (100%)	342 (100%)	0	100	100
46	62	156/156 (100%)	156 (100%)	0	100	100
47	72	139/139 (100%)	139 (100%)	0	100	100
48	82	89/89 (100%)	89 (100%)	0	100	100
50	s3	35/35 (100%)	35 (100%)	0	100	100
51	13	80/80 (100%)	80 (100%)	0	100	100
52	Q3	59/154 (38%)	59 (100%)	0	100	100
53	G3	137/137 (100%)	137 (100%)	0	100	100
54	G5	119/119 (100%)	119 (100%)	0	100	100
55	a3	272/272 (100%)	271 (100%)	1 (0%)	89	95
56	a5	106/106 (100%)	106 (100%)	0	100	100
57	A3	116/116 (100%)	116 (100%)	0	100	100
58	T3	113/113 (100%)	113 (100%)	0	100	100
59	U3	175/175 (100%)	175 (100%)	0	100	100
60	V3	194/194 (100%)	194 (100%)	0	100	100
61	W3	184/184 (100%)	184 (100%)	0	100	100
62	X3	22/22 (100%)	22 (100%)	0	100	100
63	Y3	190/190 (100%)	190 (100%)	0	100	100
64	j3	224/224 (100%)	223 (100%)	1 (0%)	89	95
65	J5	112/112 (100%)	112 (100%)	0	100	100
66	N3	161/161 (100%)	160 (99%)	1 (1%)	84	92
67	b3	207/207 (100%)	207 (100%)	0	100	100
68	B3	117/117 (100%)	117 (100%)	0	100	100
69	f3	57/57 (100%)	57 (100%)	0	100	100
70	F3	130/130 (100%)	130 (100%)	0	100	100
71	c3	178/178 (100%)	178 (100%)	0	100	100
72	C3	117/117 (100%)	117 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
73	d3	161/161 (100%)	161 (100%)	0	100	100
74	D3	68/68 (100%)	68 (100%)	0	100	100
75	e3	104/104 (100%)	104 (100%)	0	100	100
76	E3	89/89 (100%)	89 (100%)	0	100	100
77	H3	47/47 (100%)	47 (100%)	0	100	100
78	H5	113/113 (100%)	113 (100%)	0	100	100
79	P3	169/169 (100%)	169 (100%)	0	100	100
80	I3	94/94 (100%)	94 (100%)	0	100	100
81	I5	108/108 (100%)	108 (100%)	0	100	100
82	L3	75/75 (100%)	75 (100%)	0	100	100
83	M3	66/66 (100%)	66 (100%)	0	100	100
84	O3	85/85 (100%)	85 (100%)	0	100	100
85	a7	175/175 (100%)	175 (100%)	0	100	100
All	All	10210/10310 (99%)	10206 (100%)	4 (0%)	100	100

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

Mol	Chain	Res	Type
43	32	130	ASN
55	a3	272	GLN
64	j3	131	VAL
66	N3	118	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (109) such sidechains are listed below:

Mol	Chain	Res	Type
9	o2	56	GLN
10	q2	62	HIS
10	q2	120	GLN
11	r2	10	HIS
11	r2	50	ASN
12	t2	142	HIS
12	t2	329	ASN
13	u2	79	ASN
14	v2	57	ASN
15	w2	143	HIS

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Mol	Chain	Res	Type
15	w2	150	GLN
16	x2	24	HIS
18	92	162	ASN
18	92	194	ASN
24	F2	25	GLN
25	G2	138	GLN
25	G2	202	GLN
25	G2	229	ASN
25	G2	291	GLN
26	H2	64	ASN
26	H2	97	ASN
26	H2	116	HIS
26	H2	137	ASN
28	J2	21	ASN
28	J2	36	ASN
28	J2	83	ASN
29	K2	39	GLN
29	K2	71	ASN
29	K2	179	ASN
30	L2	92	HIS
30	L2	100	ASN
31	M2	65	GLN
31	M2	100	HIS
31	M2	103	ASN
34	T2	185	ASN
34	T2	230	HIS
34	T2	259	GLN
35	U2	115	GLN
35	U2	204	ASN
35	U2	234	ASN
36	V2	81	ASN
36	V2	208	ASN
36	V2	227	ASN
37	W2	127	ASN
37	W2	173	GLN
38	X2	144	ASN
38	X2	147	HIS
39	Y2	167	GLN
40	02	48	GLN
40	02	120	ASN
41	12	37	HIS
41	12	178	HIS

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Mol	Chain	Res	Type
44	42	73	HIS
44	42	119	GLN
44	42	140	HIS
44	42	141	ASN
44	42	158	GLN
44	42	199	GLN
46	62	37	HIS
46	62	77	ASN
50	s3	3	HIS
51	13	51	ASN
51	13	77	ASN
52	Q3	123	ASN
52	Q3	125	HIS
53	G3	112	HIS
53	G3	141	ASN
55	a3	4	GLN
55	a3	305	ASN
56	a5	38	ASN
57	A3	32	GLN
58	T3	110	HIS
60	V3	75	GLN
60	V3	118	GLN
60	V3	148	ASN
61	W3	115	GLN
61	W3	172	ASN
63	Y3	57	ASN
63	Y3	174	HIS
63	Y3	179	GLN
64	j3	36	HIS
64	j3	98	ASN
65	J5	5	ASN
65	J5	64	ASN
65	J5	91	ASN
66	N3	149	GLN
66	N3	179	ASN
66	N3	186	ASN
67	b3	59	GLN
67	b3	197	GLN
67	b3	227	GLN
68	B3	103	HIS
69	f3	26	GLN
70	F3	99	GLN

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Mol	Chain	Res	Type
71	c3	22	HIS
71	c3	64	ASN
73	d3	27	GLN
73	d3	111	GLN
73	d3	143	ASN
76	E3	32	HIS
77	H3	41	GLN
78	H5	10	ASN
78	H5	51	ASN
79	P3	314	GLN
80	I3	92	HIS
82	L3	49	HIS
84	O3	86	ASN
85	a7	28	GLN
85	a7	87	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	E1	152/153 (99%)	107 (70%)	13 (8%)
2	e2	3816/3825 (99%)	1178 (30%)	0
3	h2	155/156 (99%)	46 (29%)	0
4	d2	119/120 (99%)	21 (17%)	0
49	K3	1797/1801 (99%)	767 (42%)	24 (1%)
All	All	6039/6055 (99%)	2119 (35%)	37 (0%)

All (2119) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	E1	6278	A
1	E1	6279	A
1	E1	6281	C
1	E1	6282	A
1	E1	6283	U
1	E1	6284	G
1	E1	6285	U
1	E1	6286	G
1	E1	6287	A
1	E1	6288	U
1	E1	6290	U
1	E1	6291	U

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Mol	Chain	Res	Type
1	E1	6292	A
1	E1	6293	U
1	E1	6294	C
1	E1	6296	C
1	E1	6298	U
1	E1	6299	U
1	E1	6300	U
1	E1	6301	A
1	E1	6302	U
1	E1	6303	A
1	E1	6305	U
1	E1	6306	U
1	E1	6309	U
1	E1	6310	G
1	E1	6314	U
1	E1	6315	C
1	E1	6316	U
1	E1	6317	U
1	E1	6318	U
1	E1	6319	A
1	E1	6321	U
1	E1	6323	U
1	E1	6324	U
1	E1	6325	G
1	E1	6326	U
1	E1	6328	A
1	E1	6329	U
1	E1	6330	U
1	E1	6331	G
1	E1	6333	U
1	E1	6334	A
1	E1	6335	U
1	E1	6337	U
1	E1	6339	U
1	E1	6340	U
1	E1	6345	U
1	E1	6346	U
1	E1	6347	C
1	E1	6348	U
1	E1	6349	U
1	E1	6350	U
1	E1	6351	U

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Mol	Chain	Res	Type
1	E1	6352	U
1	E1	6353	C
1	E1	6354	A
1	E1	6355	A
1	E1	6357	A
1	E1	6358	U
1	E1	6359	U
1	E1	6361	A
1	E1	6362	U
1	E1	6363	C
1	E1	6364	C
1	E1	6365	U
1	E1	6367	U
1	E1	6368	U
1	E1	6371	A
1	E1	6372	G
1	E1	6373	C
1	E1	6375	A
1	E1	6376	U
1	E1	6381	U
1	E1	6382	U
1	E1	6383	A
1	E1	6385	A
1	E1	6386	G
1	E1	6387	G
1	E1	6389	A
1	E1	6390	C
1	E1	6391	U
1	E1	6392	U
1	E1	6393	G
1	E1	6394	U
1	E1	6396	U
1	E1	6397	A
1	E1	6398	U
1	E1	6399	G
1	E1	6400	A
1	E1	6402	A
1	E1	6404	C
1	E1	6405	C
1	E1	6406	G
1	E1	6407	C
1	E1	6408	C

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Mol	Chain	Res	Type
1	E1	6409	A
1	E1	6410	C
1	E1	6413	U
1	E1	6417	A
1	E1	6419	C
1	E1	6420	A
1	E1	6421	A
1	E1	6422	C
1	E1	6424	A
1	E1	6425	C
1	E1	6427	U
2	e2	2	G
2	e2	6	C
2	e2	8	U
2	e2	13	U
2	e2	14	C
2	e2	21	G
2	e2	24	G
2	e2	25	A
2	e2	33	A
2	e2	39	A
2	e2	42	A
2	e2	58	G
2	e2	59	A
2	e2	60	G
2	e2	64	A
2	e2	66	A
2	e2	70	A
2	e2	72	C
2	e2	74	G
2	e2	75	G
2	e2	84	A
2	e2	91	G
2	e2	92	C
2	e2	93	G
2	e2	104	G
2	e2	110	C
2	e2	116	G
2	e2	120	A
2	e2	121	A
2	e2	130	C
2	e2	134	G

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Mol	Chain	Res	Type
2	e2	135	G
2	e2	136	C
2	e2	137	G
2	e2	142	G
2	e2	143	C
2	e2	150	U
2	e2	159	C
2	e2	164	G
2	e2	170	C
2	e2	171	U
2	e2	179	G
2	e2	182	G
2	e2	183	C
2	e2	184	U
2	e2	185	C
2	e2	186	G
2	e2	187	U
2	e2	188	G
2	e2	189	G
2	e2	200	U
2	e2	201	C
2	e2	208	A
2	e2	210	C
2	e2	218	A
2	e2	219	G
2	e2	227	A
2	e2	232	G
2	e2	233	U
2	e2	234	G
2	e2	238	C
2	e2	241	G
2	e2	245	C
2	e2	253	G
2	e2	255	C
2	e2	256	G
2	e2	257	C
2	e2	258	G
2	e2	265	C
2	e2	266	C
2	e2	267	G
2	e2	274	C
2	e2	279	A

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Mol	Chain	Res	Type
2	e2	280	G
2	e2	293	G
2	e2	296	A
2	e2	297	U
2	e2	301	G
2	e2	306	A
2	e2	308	G
2	e2	309	C
2	e2	315	G
2	e2	316	U
2	e2	322	C
2	e2	326	C
2	e2	334	A
2	e2	340	C
2	e2	352	G
2	e2	355	A
2	e2	360	A
2	e2	363	A
2	e2	376	A
2	e2	379	G
2	e2	387	G
2	e2	390	C
2	e2	395	A
2	e2	396	A
2	e2	409	G
2	e2	410	A
2	e2	412	G
2	e2	413	G
2	e2	415	G
2	e2	436	C
2	e2	437	G
2	e2	438	G
2	e2	443	G
2	e2	444	G
2	e2	445	U
2	e2	446	C
2	e2	449	C
2	e2	452	A
2	e2	454	U
2	e2	455	C
2	e2	456	C
2	e2	463	A

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Mol	Chain	Res	Type
2	e2	465	G
2	e2	468	U
2	e2	469	C
2	e2	470	A
2	e2	483	G
2	e2	484	U
2	e2	486	C
2	e2	487	G
2	e2	488	G
2	e2	489	C
2	e2	491	G
2	e2	493	G
2	e2	499	G
2	e2	501	C
2	e2	503	C
2	e2	504	G
2	e2	505	G
2	e2	510	U
2	e2	511	C
2	e2	513	U
2	e2	521	C
2	e2	523	C
2	e2	525	G
2	e2	637	G
2	e2	639	U
2	e2	640	C
2	e2	648	G
2	e2	650	C
2	e2	654	C
2	e2	655	C
2	e2	657	C
2	e2	664	G
2	e2	665	C
2	e2	666	G
2	e2	682	G
2	e2	683	C
2	e2	685	C
2	e2	686	A
2	e2	687	U
2	e2	688	U
2	e2	695	G
2	e2	696	C

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Mol	Chain	Res	Type
2	e2	697	G
2	e2	701	G
2	e2	702	U
2	e2	703	G
2	e2	704	C
2	e2	707	C
2	e2	708	G
2	e2	716	C
2	e2	717	U
2	e2	718	C
2	e2	722	G
2	e2	726	G
2	e2	728	U
2	e2	729	G
2	e2	730	G
2	e2	734	G
2	e2	737	C
2	e2	740	G
2	e2	742	G
2	e2	744	G
2	e2	746	A
2	e2	747	A
2	e2	748	G
2	e2	751	G
2	e2	752	G
2	e2	756	G
2	e2	906	C
2	e2	910	G
2	e2	915	A
2	e2	916	C
2	e2	917	A
2	e2	918	G
2	e2	919	C
2	e2	920	C
2	e2	927	G
2	e2	928	C
2	e2	929	A
2	e2	930	G
2	e2	931	C
2	e2	932	A
2	e2	933	G
2	e2	937	U

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Mol	Chain	Res	Type
2	e2	938	C
2	e2	940	C
2	e2	944	A
2	e2	945	U
2	e2	946	C
2	e2	957	G
2	e2	958	G
2	e2	959	G
2	e2	960	A
2	e2	961	G
2	e2	962	C
2	e2	963	G
2	e2	964	A
2	e2	966	A
2	e2	967	C
2	e2	968	C
2	e2	969	C
2	e2	971	U
2	e2	972	C
2	e2	973	G
2	e2	982	U
2	e2	984	C
2	e2	988	C
2	e2	1051	G
2	e2	1052	G
2	e2	1055	U
2	e2	1057	U
2	e2	1058	C
2	e2	1060	U
2	e2	1064	G
2	e2	1065	G
2	e2	1066	G
2	e2	1072	C
2	e2	1075	G
2	e2	1077	C
2	e2	1078	A
2	e2	1079	C
2	e2	1081	C
2	e2	1084	C
2	e2	1089	G
2	e2	1101	C
2	e2	1102	U

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Mol	Chain	Res	Type
2	e2	1104	C
2	e2	1105	C
2	e2	1106	A
2	e2	1108	C
2	e2	1111	U
2	e2	1160	C
2	e2	1161	G
2	e2	1166	G
2	e2	1167	C
2	e2	1168	G
2	e2	1171	G
2	e2	1173	G
2	e2	1179	U
2	e2	1180	C
2	e2	1182	C
2	e2	1187	G
2	e2	1200	G
2	e2	1203	G
2	e2	1208	G
2	e2	1209	U
2	e2	1210	C
2	e2	1211	G
2	e2	1214	C
2	e2	1215	C
2	e2	1219	G
2	e2	1222	A
2	e2	1223	G
2	e2	1224	G
2	e2	1225	U
2	e2	1226	U
2	e2	1228	U
2	e2	1229	C
2	e2	1230	U
2	e2	1231	C
2	e2	1232	G
2	e2	1233	G
2	e2	1238	A
2	e2	1239	C
2	e2	1240	G
2	e2	1241	C
2	e2	1242	G
2	e2	1245	C

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Mol	Chain	Res	Type
2	e2	1246	G
2	e2	1248	C
2	e2	1250	C
2	e2	1252	C
2	e2	1254	A
2	e2	1255	A
2	e2	1258	G
2	e2	1261	G
2	e2	1264	C
2	e2	1267	C
2	e2	1268	G
2	e2	1269	G
2	e2	1270	A
2	e2	1272	C
2	e2	1274	A
2	e2	1275	G
2	e2	1279	A
2	e2	1280	C
2	e2	1282	G
2	e2	1285	U
2	e2	1288	G
2	e2	1294	A
2	e2	1295	C
2	e2	1296	G
2	e2	1301	C
2	e2	1302	U
2	e2	1303	A
2	e2	1310	C
2	e2	1311	G
2	e2	1312	A
2	e2	1313	C
2	e2	1318	C
2	e2	1320	U
2	e2	1321	G
2	e2	1324	A
2	e2	1326	A
2	e2	1337	A
2	e2	1339	U
2	e2	1340	C
2	e2	1344	C
2	e2	1351	G
2	e2	1352	C

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Mol	Chain	Res	Type
2	e2	1353	G
2	e2	1354	A
2	e2	1355	G
2	e2	1359	G
2	e2	1364	U
2	e2	1365	C
2	e2	1367	C
2	e2	1369	C
2	e2	1370	G
2	e2	1371	A
2	e2	1377	G
2	e2	1378	C
2	e2	1379	C
2	e2	1381	U
2	e2	1382	G
2	e2	1389	U
2	e2	1390	G
2	e2	1391	A
2	e2	1393	G
2	e2	1394	G
2	e2	1396	G
2	e2	1398	A
2	e2	1399	G
2	e2	1403	G
2	e2	1406	G
2	e2	1408	G
2	e2	1409	C
2	e2	1413	C
2	e2	1415	G
2	e2	1416	G
2	e2	1419	G
2	e2	1420	A
2	e2	1422	G
2	e2	1423	U
2	e2	1435	G
2	e2	1437	C
2	e2	1439	C
2	e2	1440	U
2	e2	1445	U
2	e2	1452	A
2	e2	1457	G
2	e2	1478	C

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Mol	Chain	Res	Type
2	e2	1483	C
2	e2	1485	C
2	e2	1492	G
2	e2	1493	G
2	e2	1497	A
2	e2	1498	G
2	e2	1501	C
2	e2	1502	G
2	e2	1503	A
2	e2	1504	G
2	e2	1516	G
2	e2	1517	G
2	e2	1518	A
2	e2	1523	A
2	e2	1524	A
2	e2	1534	A
2	e2	1535	C
2	e2	1543	G
2	e2	1547	A
2	e2	1555	G
2	e2	1560	A
2	e2	1566	C
2	e2	1568	C
2	e2	1578	U
2	e2	1586	G
2	e2	1590	C
2	e2	1591	U
2	e2	1596	U
2	e2	1601	A
2	e2	1602	U
2	e2	1605	G
2	e2	1612	G
2	e2	1613	A
2	e2	1614	C
2	e2	1624	G
2	e2	1628	C
2	e2	1631	A
2	e2	1632	A
2	e2	1633	G
2	e2	1634	A
2	e2	1638	A
2	e2	1642	A

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Mol	Chain	Res	Type
2	e2	1649	U
2	e2	1650	A
2	e2	1651	G
2	e2	1656	U
2	e2	1660	U
2	e2	1661	C
2	e2	1670	G
2	e2	1676	C
2	e2	1679	A
2	e2	1684	A
2	e2	1691	G
2	e2	1692	C
2	e2	1694	C
2	e2	1696	C
2	e2	1697	G
2	e2	1698	C
2	e2	1700	G
2	e2	1701	A
2	e2	1702	C
2	e2	1703	C
2	e2	1704	C
2	e2	1705	G
2	e2	1707	C
2	e2	1710	A
2	e2	1711	C
2	e2	1712	C
2	e2	1713	C
2	e2	1714	C
2	e2	1715	C
2	e2	1716	G
2	e2	1717	C
2	e2	1719	A
2	e2	1725	U
2	e2	1741	G
2	e2	1750	G
2	e2	1751	A
2	e2	1760	G
2	e2	1761	G
2	e2	1762	C
2	e2	1764	G
2	e2	1766	A
2	e2	1768	C

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Mol	Chain	Res	Type
2	e2	1769	G
2	e2	1771	U
2	e2	1772	C
2	e2	1775	A
2	e2	1778	C
2	e2	1779	U
2	e2	1787	A
2	e2	1791	U
2	e2	1797	G
2	e2	1803	G
2	e2	1804	A
2	e2	1809	C
2	e2	1815	G
2	e2	1817	U
2	e2	1820	C
2	e2	1821	G
2	e2	1832	C
2	e2	1833	G
2	e2	1834	U
2	e2	1835	G
2	e2	1836	G
2	e2	1838	A
2	e2	1839	U
2	e2	1840	G
2	e2	1841	G
2	e2	1854	G
2	e2	1864	G
2	e2	1866	A
2	e2	1868	G
2	e2	1880	C
2	e2	1887	A
2	e2	1888	U
2	e2	1890	A
2	e2	1891	A
2	e2	1892	C
2	e2	1895	A
2	e2	1898	G
2	e2	1905	U
2	e2	1908	G
2	e2	1909	G
2	e2	1914	C
2	e2	1917	U

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Mol	Chain	Res	Type
2	e2	1920	C
2	e2	1921	G
2	e2	1928	A
2	e2	1929	U
2	e2	1930	C
2	e2	1931	A
2	e2	1935	C
2	e2	1936	C
2	e2	1937	C
2	e2	1939	G
2	e2	1940	A
2	e2	1947	G
2	e2	1949	U
2	e2	1950	G
2	e2	1951	G
2	e2	1957	A
2	e2	1959	A
2	e2	1961	A
2	e2	1964	G
2	e2	1966	A
2	e2	1967	G
2	e2	1968	G
2	e2	1969	A
2	e2	1970	C
2	e2	1971	G
2	e2	1973	U
2	e2	1974	G
2	e2	1976	C
2	e2	1977	C
2	e2	1979	U
2	e2	1980	G
2	e2	1981	G
2	e2	1983	A
2	e2	1984	G
2	e2	1985	U
2	e2	1986	C
2	e2	1987	G
2	e2	1988	G
2	e2	1989	A
2	e2	1990	A
2	e2	1993	C
2	e2	1996	U

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Mol	Chain	Res	Type
2	e2	1998	A
2	e2	1999	G
2	e2	2000	G
2	e2	2001	A
2	e2	2003	U
2	e2	2004	G
2	e2	2009	A
2	e2	2010	C
2	e2	2015	C
2	e2	2016	A
2	e2	2022	C
2	e2	2024	A
2	e2	2025	A
2	e2	2033	G
2	e2	2042	A
2	e2	2043	U
2	e2	2045	G
2	e2	2046	A
2	e2	2047	U
2	e2	2051	G
2	e2	2054	G
2	e2	2055	G
2	e2	2056	A
2	e2	2063	G
2	e2	2066	C
2	e2	2068	A
2	e2	2083	C
2	e2	2084	G
2	e2	2087	A
2	e2	2088	G
2	e2	2089	U
2	e2	2090	C
2	e2	2091	G
2	e2	2092	A
2	e2	2093	G
2	e2	2095	G
2	e2	2096	U
2	e2	2097	G
2	e2	2106	C
2	e2	2108	G
2	e2	2109	C
2	e2	2110	G

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Mol	Chain	Res	Type
2	e2	2111	G
2	e2	2113	G
2	e2	2114	G
2	e2	2115	C
2	e2	2116	G
2	e2	2117	G
2	e2	2118	C
2	e2	2120	C
2	e2	2122	C
2	e2	2123	G
2	e2	2125	G
2	e2	2128	C
2	e2	2129	G
2	e2	2130	C
2	e2	2244	C
2	e2	2245	G
2	e2	2246	C
2	e2	2247	C
2	e2	2248	C
2	e2	2249	C
2	e2	2250	C
2	e2	2251	G
2	e2	2252	G
2	e2	2254	G
2	e2	2255	C
2	e2	2256	C
2	e2	2257	C
2	e2	2258	C
2	e2	2260	C
2	e2	2262	G
2	e2	2264	C
2	e2	2265	G
2	e2	2266	C
2	e2	2267	U
2	e2	2268	A
2	e2	2269	C
2	e2	2277	C
2	e2	2289	C
2	e2	2290	C
2	e2	2297	G
2	e2	2298	U
2	e2	2300	A

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Mol	Chain	Res	Type
2	e2	2301	G
2	e2	2309	G
2	e2	2313	A
2	e2	2314	G
2	e2	2328	G
2	e2	2332	A
2	e2	2346	C
2	e2	2348	G
2	e2	2349	A
2	e2	2350	U
2	e2	2351	C
2	e2	2360	A
2	e2	2363	A
2	e2	2364	G
2	e2	2366	A
2	e2	2368	A
2	e2	2379	A
2	e2	2381	A
2	e2	2397	G
2	e2	2398	U
2	e2	2416	G
2	e2	2417	A
2	e2	2422	C
2	e2	2425	U
2	e2	2426	U
2	e2	2428	A
2	e2	2437	C
2	e2	2441	C
2	e2	2442	G
2	e2	2445	C
2	e2	2450	G
2	e2	2461	G
2	e2	2468	U
2	e2	2469	C
2	e2	2470	C
2	e2	2471	G
2	e2	2472	A
2	e2	2478	C
2	e2	2485	U
2	e2	2488	C
2	e2	2489	C
2	e2	2491	C

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Mol	Chain	Res	Type
2	e2	2499	C
2	e2	2504	C
2	e2	2505	C
2	e2	2506	G
2	e2	2511	A
2	e2	2512	A
2	e2	2513	A
2	e2	2527	A
2	e2	2529	A
2	e2	2538	U
2	e2	2542	G
2	e2	2544	G
2	e2	2546	G
2	e2	2549	G
2	e2	2554	U
2	e2	2555	G
2	e2	2556	G
2	e2	2558	C
2	e2	2560	C
2	e2	2561	C
2	e2	2562	G
2	e2	2571	C
2	e2	2576	G
2	e2	2580	U
2	e2	2588	C
2	e2	2589	C
2	e2	2619	G
2	e2	2620	G
2	e2	2627	C
2	e2	2631	U
2	e2	2638	G
2	e2	2643	G
2	e2	2647	A
2	e2	2653	C
2	e2	2660	A
2	e2	2669	C
2	e2	2670	C
2	e2	2673	G
2	e2	2675	G
2	e2	2679	G
2	e2	2683	C
2	e2	2687	U

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Mol	Chain	Res	Type
2	e2	2695	A
2	e2	2696	A
2	e2	2697	A
2	e2	2705	G
2	e2	2707	U
2	e2	2708	U
2	e2	2709	C
2	e2	2710	C
2	e2	2711	G
2	e2	2714	G
2	e2	2724	G
2	e2	2725	A
2	e2	2726	G
2	e2	2743	A
2	e2	2745	A
2	e2	2756	G
2	e2	2758	G
2	e2	2760	G
2	e2	2761	U
2	e2	2762	G
2	e2	2763	U
2	e2	2768	C
2	e2	2769	U
2	e2	2770	C
2	e2	2778	G
2	e2	2788	U
2	e2	2789	A
2	e2	2790	U
2	e2	2796	G
2	e2	2797	C
2	e2	2798	A
2	e2	2799	G
2	e2	2803	U
2	e2	2805	C
2	e2	2814	C
2	e2	2823	G
2	e2	2825	A
2	e2	2826	U
2	e2	2827	G
2	e2	2830	G
2	e2	2838	G
2	e2	2842	G

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Mol	Chain	Res	Type
2	e2	2845	A
2	e2	2848	G
2	e2	2855	G
2	e2	2864	A
2	e2	2867	C
2	e2	2870	A
2	e2	2876	G
2	e2	2877	G
2	e2	2879	A
2	e2	2898	G
2	e2	2900	U
2	e2	3598	C
2	e2	3605	C
2	e2	3606	U
2	e2	3615	G
2	e2	3616	U
2	e2	3617	G
2	e2	3621	A
2	e2	3622	C
2	e2	3624	A
2	e2	3625	G
2	e2	3626	G
2	e2	3635	A
2	e2	3642	A
2	e2	3643	A
2	e2	3646	A
2	e2	3653	A
2	e2	3658	C
2	e2	3662	A
2	e2	3673	C
2	e2	3678	G
2	e2	3682	A
2	e2	3684	G
2	e2	3685	C
2	e2	3689	G
2	e2	3692	A
2	e2	3695	U
2	e2	3710	G
2	e2	3711	A
2	e2	3712	A
2	e2	3719	A
2	e2	3722	G

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Mol	Chain	Res	Type
2	e2	3723	A
2	e2	3746	A
2	e2	3753	G
2	e2	3755	G
2	e2	3756	A
2	e2	3758	U
2	e2	3760	A
2	e2	3762	U
2	e2	3765	G
2	e2	3767	C
2	e2	3768	U
2	e2	3770	U
2	e2	3771	C
2	e2	3772	U
2	e2	3773	U
2	e2	3774	A
2	e2	3776	G
2	e2	3777	G
2	e2	3784	A
2	e2	3785	A
2	e2	3789	C
2	e2	3798	U
2	e2	3802	U
2	e2	3811	G
2	e2	3814	U
2	e2	3816	A
2	e2	3817	A
2	e2	3819	G
2	e2	3822	U
2	e2	3839	G
2	e2	3840	U
2	e2	3843	C
2	e2	3845	A
2	e2	3876	A
2	e2	3877	A
2	e2	3878	C
2	e2	3879	G
2	e2	3889	G
2	e2	3890	A
2	e2	3892	U
2	e2	3895	G
2	e2	3897	G

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Mol	Chain	Res	Type
2	e2	3898	G
2	e2	3901	A
2	e2	3906	A
2	e2	3907	G
2	e2	3909	C
2	e2	3914	U
2	e2	3915	U
2	e2	3926	C
2	e2	3938	G
2	e2	3939	G
2	e2	3947	A
2	e2	3949	A
2	e2	3952	A
2	e2	3953	G
2	e2	3956	G
2	e2	3957	U
2	e2	3958	G
2	e2	3959	U
2	e2	3961	G
2	e2	3963	A
2	e2	3964	U
2	e2	3965	A
2	e2	3966	A
2	e2	3967	G
2	e2	3968	U
2	e2	3969	G
2	e2	3970	G
2	e2	3971	G
2	e2	3972	A
2	e2	3975	C
2	e2	3976	C
2	e2	3977	C
2	e2	3979	C
2	e2	3980	G
2	e2	3984	C
2	e2	3990	C
2	e2	3991	G
2	e2	3993	U
2	e2	3994	G
2	e2	3999	C
2	e2	4000	G
2	e2	4001	C

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Mol	Chain	Res	Type
2	e2	4002	G
2	e2	4003	A
2	e2	4006	G
2	e2	4007	G
2	e2	4008	C
2	e2	4009	C
2	e2	4015	C
2	e2	4016	G
2	e2	4017	G
2	e2	4019	G
2	e2	4021	C
2	e2	4022	C
2	e2	4024	C
2	e2	4025	C
2	e2	4027	G
2	e2	4029	C
2	e2	4030	C
2	e2	4032	G
2	e2	4033	C
2	e2	4034	G
2	e2	4035	G
2	e2	4038	C
2	e2	4039	G
2	e2	4042	G
2	e2	4044	U
2	e2	4046	A
2	e2	4048	A
2	e2	4049	U
2	e2	4050	A
2	e2	4051	C
2	e2	4053	A
2	e2	4055	U
2	e2	4058	U
2	e2	4059	C
2	e2	4060	U
2	e2	4061	G
2	e2	4063	U
2	e2	4064	C
2	e2	4073	A
2	e2	4076	G
2	e2	4081	G
2	e2	4088	C

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Mol	Chain	Res	Type
2	e2	4091	G
2	e2	4094	G
2	e2	4095	G
2	e2	4097	G
2	e2	4100	C
2	e2	4102	C
2	e2	4103	C
2	e2	4108	G
2	e2	4109	G
2	e2	4114	C
2	e2	4115	G
2	e2	4117	U
2	e2	4118	U
2	e2	4119	C
2	e2	4121	G
2	e2	4122	G
2	e2	4123	C
2	e2	4124	G
2	e2	4127	A
2	e2	4128	A
2	e2	4134	C
2	e2	4140	C
2	e2	4141	G
2	e2	4142	C
2	e2	4143	G
2	e2	4145	C
2	e2	4163	U
2	e2	4168	G
2	e2	4169	G
2	e2	4170	A
2	e2	4171	C
2	e2	4172	A
2	e2	4173	G
2	e2	4183	G
2	e2	4184	G
2	e2	4191	G
2	e2	4198	G
2	e2	4199	C
2	e2	4205	A
2	e2	4206	C
2	e2	4212	A
2	e2	4213	A

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Mol	Chain	Res	Type
2	e2	4215	C
2	e2	4216	G
2	e2	4225	G
2	e2	4229	U
2	e2	4233	A
2	e2	4234	A
2	e2	4241	C
2	e2	4250	G
2	e2	4251	A
2	e2	4253	A
2	e2	4254	G
2	e2	4264	G
2	e2	4265	U
2	e2	4266	G
2	e2	4268	A
2	e2	4270	C
2	e2	4273	A
2	e2	4280	A
2	e2	4281	A
2	e2	4282	A
2	e2	4290	U
2	e2	4291	G
2	e2	4304	A
2	e2	4305	G
2	e2	4306	U
2	e2	4307	A
2	e2	4313	A
2	e2	4319	C
2	e2	4323	A
2	e2	4326	G
2	e2	4330	G
2	e2	4331	G
2	e2	4337	C
2	e2	4339	A
2	e2	4349	C
2	e2	4350	C
2	e2	4355	G
2	e2	4366	A
2	e2	4367	G
2	e2	4374	U
2	e2	4375	C
2	e2	4376	A

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Mol	Chain	Res	Type
2	e2	4377	G
2	e2	4378	A
2	e2	4379	A
2	e2	4380	A
2	e2	4381	A
2	e2	4384	U
2	e2	4385	A
2	e2	4387	C
2	e2	4391	G
2	e2	4393	G
2	e2	4394	A
2	e2	4395	U
2	e2	4401	G
2	e2	4402	C
2	e2	4406	U
2	e2	4420	U
2	e2	4421	C
2	e2	4422	A
2	e2	4428	A
2	e2	4430	G
2	e2	4438	U
2	e2	4444	C
2	e2	4448	G
2	e2	4449	A
2	e2	4450	U
2	e2	4452	U
2	e2	4464	A
2	e2	4466	C
2	e2	4471	U
2	e2	4476	C
2	e2	4477	A
2	e2	4479	A
2	e2	4480	A
2	e2	4500	U
2	e2	4512	U
2	e2	4513	A
2	e2	4518	A
2	e2	4520	G
2	e2	4528	G
2	e2	4529	G
2	e2	4545	G
2	e2	4548	A

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Mol	Chain	Res	Type
2	e2	4550	G
2	e2	4568	A
2	e2	4570	G
2	e2	4571	A
2	e2	4572	U
2	e2	4573	G
2	e2	4575	G
2	e2	4584	A
2	e2	4589	A
2	e2	4590	A
2	e2	4599	A
2	e2	4600	G
2	e2	4601	U
2	e2	4604	G
2	e2	4605	A
2	e2	4606	G
2	e2	4617	G
2	e2	4627	U
2	e2	4636	U
2	e2	4637	G
2	e2	4638	U
2	e2	4639	G
2	e2	4642	U
2	e2	4650	G
2	e2	4656	A
2	e2	4658	G
2	e2	4668	U
2	e2	4670	C
2	e2	4671	C
2	e2	4672	A
2	e2	4678	G
2	e2	4682	U
2	e2	4693	C
2	e2	4694	G
2	e2	4701	A
2	e2	4709	U
2	e2	4715	C
2	e2	4717	A
2	e2	4719	G
2	e2	4720	C
2	e2	4721	G
2	e2	4723	A

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Mol	Chain	Res	Type
2	e2	4729	A
2	e2	4730	C
2	e2	4732	G
2	e2	4733	C
2	e2	4734	A
2	e2	4738	C
2	e2	4740	G
2	e2	4742	G
2	e2	4744	A
2	e2	4751	G
2	e2	4753	U
2	e2	4756	C
2	e2	4758	U
2	e2	4759	C
2	e2	4760	G
2	e2	4763	U
2	e2	4764	A
2	e2	4770	U
2	e2	4771	C
2	e2	4774	C
2	e2	4776	G
2	e2	4854	G
2	e2	4855	G
2	e2	4856	G
2	e2	4858	C
2	e2	4859	C
2	e2	4860	G
2	e2	4867	G
2	e2	4868	G
2	e2	4871	C
2	e2	4872	G
2	e2	4873	G
2	e2	4874	A
2	e2	4876	U
2	e2	4877	G
2	e2	4878	C
2	e2	4883	C
2	e2	4884	G
2	e2	4885	U
2	e2	4886	C
2	e2	4887	C
2	e2	4894	A

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Mol	Chain	Res	Type
2	e2	4895	C
2	e2	4896	G
2	e2	4900	C
2	e2	4901	G
2	e2	4903	G
2	e2	4904	G
2	e2	4906	C
2	e2	4910	G
2	e2	4912	G
2	e2	4913	G
2	e2	4914	C
2	e2	4915	G
2	e2	4921	C
2	e2	4926	C
2	e2	4928	C
2	e2	4934	A
2	e2	4937	C
2	e2	4938	A
2	e2	4940	C
2	e2	4941	G
2	e2	4942	G
2	e2	4943	C
2	e2	4944	C
2	e2	4945	G
2	e2	4946	U
2	e2	4947	U
2	e2	4948	C
2	e2	4950	U
2	e2	4951	G
2	e2	4952	G
2	e2	4958	C
2	e2	4966	A
2	e2	4967	A
2	e2	4976	U
2	e2	4978	G
2	e2	4981	G
2	e2	4985	U
2	e2	4988	U
2	e2	4990	C
2	e2	4991	U
2	e2	5006	U
2	e2	5007	A

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Mol	Chain	Res	Type
2	e2	5013	C
2	e2	5014	A
2	e2	5017	G
2	e2	5023	C
2	e2	5026	U
2	e2	5027	C
2	e2	5040	U
2	e2	5041	G
2	e2	5050	C
2	e2	5054	C
2	e2	5056	A
2	e2	5061	A
2	e2	5066	U
3	h2	3	A
3	h2	12	G
3	h2	13	G
3	h2	16	G
3	h2	22	U
3	h2	23	C
3	h2	33	G
3	h2	34	U
3	h2	35	C
3	h2	39	G
3	h2	49	G
3	h2	51	U
3	h2	54	C
3	h2	59	A
3	h2	61	A
3	h2	63	U
3	h2	71	A
3	h2	81	C
3	h2	82	A
3	h2	83	C
3	h2	84	A
3	h2	85	U
3	h2	86	U
3	h2	87	G
3	h2	94	G
3	h2	99	U
3	h2	102	G
3	h2	103	A
3	h2	105	C

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Mol	Chain	Res	Type
3	h2	108	A
3	h2	110	U
3	h2	111	U
3	h2	112	G
3	h2	121	G
3	h2	122	G
3	h2	124	U
3	h2	125	C
3	h2	126	C
3	h2	127	U
3	h2	128	C
3	h2	137	A
3	h2	147	G
3	h2	150	C
3	h2	151	G
3	h2	153	C
3	h2	156	U
4	d2	7	G
4	d2	9	C
4	d2	10	C
4	d2	22	A
4	d2	23	A
4	d2	24	C
4	d2	25	G
4	d2	33	U
4	d2	39	C
4	d2	41	G
4	d2	64	G
4	d2	71	G
4	d2	74	A
4	d2	88	A
4	d2	89	G
4	d2	91	C
4	d2	97	G
4	d2	102	U
4	d2	110	G
4	d2	114	U
4	d2	120	U
49	K3	2	A
49	K3	3	C
49	K3	4	C
49	K3	5	U

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Mol	Chain	Res	Type
49	K3	6	G
49	K3	8	U
49	K3	9	U
49	K3	11	A
49	K3	14	C
49	K3	20	G
49	K3	23	G
49	K3	26	U
49	K3	30	C
49	K3	33	G
49	K3	36	U
49	K3	37	C
49	K3	40	A
49	K3	41	G
49	K3	42	A
49	K3	44	U
49	K3	45	A
49	K3	46	A
49	K3	48	C
49	K3	50	A
49	K3	51	U
49	K3	55	U
49	K3	62	G
49	K3	66	G
49	K3	67	C
49	K3	68	A
49	K3	72	C
49	K3	73	C
49	K3	74	G
49	K3	77	A
49	K3	78	C
49	K3	79	A
49	K3	80	G
49	K3	82	G
49	K3	84	A
49	K3	86	C
49	K3	87	U
49	K3	89	C
49	K3	92	A
49	K3	96	C
49	K3	102	A
49	K3	113	G

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Mol	Chain	Res	Type
49	K3	114	G
49	K3	115	U
49	K3	118	C
49	K3	119	U
49	K3	120	U
49	K3	121	U
49	K3	123	G
49	K3	125	C
49	K3	126	G
49	K3	127	C
49	K3	128	U
49	K3	132	U
49	K3	135	U
49	K3	136	C
49	K3	137	U
49	K3	138	C
49	K3	139	C
49	K3	141	A
49	K3	143	U
49	K3	144	U
49	K3	147	A
49	K3	149	A
49	K3	150	A
49	K3	155	G
49	K3	159	A
49	K3	161	U
49	K3	162	C
49	K3	168	C
49	K3	169	U
49	K3	170	A
49	K3	172	U
49	K3	173	A
49	K3	175	A
49	K3	177	G
49	K3	179	C
49	K3	180	G
49	K3	181	A
49	K3	182	C
49	K3	183	G
49	K3	184	G
49	K3	187	G
49	K3	188	C

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Mol	Chain	Res	Type
49	K3	190	G
49	K3	191	A
49	K3	193	C
49	K3	195	C
49	K3	197	U
49	K3	199	C
49	K3	200	G
49	K3	201	C
49	K3	202	G
49	K3	209	A
49	K3	210	U
49	K3	211	G
49	K3	215	G
49	K3	216	C
49	K3	217	A
49	K3	221	A
49	K3	225	G
49	K3	229	A
49	K3	230	A
49	K3	231	A
49	K3	234	C
49	K3	236	A
49	K3	237	C
49	K3	238	C
49	K3	239	C
49	K3	240	G
49	K3	241	G
49	K3	242	U
49	K3	246	C
49	K3	247	C
49	K3	249	C
49	K3	250	U
49	K3	271	C
49	K3	272	G
49	K3	275	C
49	K3	277	C
49	K3	279	G
49	K3	280	G
49	K3	281	C
49	K3	285	U
49	K3	286	U
49	K3	287	U

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Mol	Chain	Res	Type
49	K3	288	G
49	K3	290	U
49	K3	292	A
49	K3	293	C
49	K3	294	U
49	K3	297	A
49	K3	298	G
49	K3	302	A
49	K3	304	C
49	K3	305	U
49	K3	306	C
49	K3	308	G
49	K3	309	G
49	K3	310	C
49	K3	312	G
49	K3	313	A
49	K3	314	U
49	K3	321	C
49	K3	322	C
49	K3	323	C
49	K3	324	C
49	K3	325	C
49	K3	326	C
49	K3	332	G
49	K3	335	G
49	K3	340	C
49	K3	341	C
49	K3	342	C
49	K3	343	A
49	K3	347	G
49	K3	348	A
49	K3	349	A
49	K3	351	G
49	K3	352	U
49	K3	356	C
49	K3	357	C
49	K3	361	U
49	K3	362	C
49	K3	364	A
49	K3	365	C
49	K3	367	U
49	K3	368	U

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Mol	Chain	Res	Type
49	K3	370	G
49	K3	371	A
49	K3	373	G
49	K3	378	U
49	K3	379	C
49	K3	382	C
49	K3	385	G
49	K3	386	C
49	K3	394	G
49	K3	395	G
49	K3	396	U
49	K3	397	G
49	K3	399	C
49	K3	400	C
49	K3	404	G
49	K3	405	G
49	K3	407	G
49	K3	408	A
49	K3	409	C
49	K3	413	G
49	K3	414	A
49	K3	416	U
49	K3	417	C
49	K3	418	A
49	K3	420	G
49	K3	421	G
49	K3	422	U
49	K3	423	U
49	K3	424	C
49	K3	428	U
49	K3	429	C
49	K3	434	G
49	K3	435	A
49	K3	436	G
49	K3	437	G
49	K3	438	G
49	K3	439	A
49	K3	442	C
49	K3	448	A
49	K3	450	C
49	K3	451	G
49	K3	452	G

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Mol	Chain	Res	Type
49	K3	454	U
49	K3	455	A
49	K3	458	A
49	K3	462	C
49	K3	463	C
49	K3	464	A
49	K3	465	A
49	K3	467	G
49	K3	468	A
49	K3	472	C
49	K3	474	G
49	K3	476	A
49	K3	477	G
49	K3	478	G
49	K3	482	G
49	K3	487	U
49	K3	489	A
49	K3	492	C
49	K3	494	C
49	K3	496	C
49	K3	497	C
49	K3	500	A
49	K3	501	C
49	K3	502	C
49	K3	503	C
49	K3	504	G
49	K3	512	A
49	K3	516	A
49	K3	517	C
49	K3	518	G
49	K3	526	A
49	K3	529	A
49	K3	530	U
49	K3	531	A
49	K3	532	C
49	K3	536	A
49	K3	538	U
49	K3	542	U
49	K3	545	A
49	K3	548	C
49	K3	549	C
49	K3	551	U

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Mol	Chain	Res	Type
49	K3	552	G
49	K3	553	U
49	K3	554	A
49	K3	555	A
49	K3	556	U
49	K3	557	U
49	K3	560	A
49	K3	564	A
49	K3	565	G
49	K3	566	U
49	K3	568	C
49	K3	572	U
49	K3	573	U
49	K3	574	A
49	K3	577	U
49	K3	578	C
49	K3	583	A
49	K3	584	A
49	K3	585	C
49	K3	586	G
49	K3	588	G
49	K3	589	G
49	K3	590	A
49	K3	592	C
49	K3	593	C
49	K3	594	A
49	K3	600	G
49	K3	604	A
49	K3	606	G
49	K3	607	U
49	K3	608	C
49	K3	611	G
49	K3	612	U
49	K3	614	C
49	K3	615	C
49	K3	617	G
49	K3	620	G
49	K3	623	G
49	K3	627	U
49	K3	628	A
49	K3	630	U
49	K3	631	U

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Mol	Chain	Res	Type
49	K3	640	A
49	K3	641	A
49	K3	643	A
49	K3	646	G
49	K3	658	U
49	K3	660	C
49	K3	661	U
49	K3	663	C
49	K3	664	A
49	K3	668	A
49	K3	669	A
49	K3	671	A
49	K3	672	A
49	K3	673	G
49	K3	675	U
49	K3	680	G
49	K3	683	G
49	K3	684	G
49	K3	690	G
49	K3	693	A
49	K3	694	G
49	K3	729	C
49	K3	730	C
49	K3	732	U
49	K3	733	C
49	K3	734	C
49	K3	735	C
49	K3	736	C
49	K3	737	G
49	K3	739	C
49	K3	740	C
49	K3	742	U
49	K3	743	U
49	K3	744	G
49	K3	746	C
49	K3	747	U
49	K3	748	C
49	K3	754	G
49	K3	755	C
49	K3	788	G
49	K3	789	G
49	K3	790	C

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Mol	Chain	Res	Type
49	K3	793	G
49	K3	794	A
49	K3	795	A
49	K3	796	G
49	K3	797	C
49	K3	799	U
49	K3	801	U
49	K3	804	U
49	K3	805	U
49	K3	808	A
49	K3	811	A
49	K3	812	A
49	K3	813	A
49	K3	815	U
49	K3	817	G
49	K3	821	G
49	K3	822	U
49	K3	823	U
49	K3	828	G
49	K3	829	C
49	K3	830	A
49	K3	831	G
49	K3	833	C
49	K3	834	C
49	K3	836	G
49	K3	837	A
49	K3	838	G
49	K3	839	C
49	K3	840	C
49	K3	841	G
49	K3	846	G
49	K3	847	A
49	K3	852	G
49	K3	858	A
49	K3	868	G
49	K3	869	A
49	K3	870	A
49	K3	871	U
49	K3	872	A
49	K3	873	G
49	K3	874	G
49	K3	875	A

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Mol	Chain	Res	Type
49	K3	877	C
49	K3	878	G
49	K3	880	G
49	K3	881	G
49	K3	882	U
49	K3	886	A
49	K3	887	U
49	K3	888	U
49	K3	889	U
49	K3	890	U
49	K3	891	G
49	K3	892	U
49	K3	893	U
49	K3	894	G
49	K3	898	U
49	K3	904	A
49	K3	905	C
49	K3	906	U
49	K3	909	G
49	K3	913	A
49	K3	914	U
49	K3	918	U
49	K3	920	A
49	K3	921	G
49	K3	922	A
49	K3	930	C
49	K3	942	G
49	K3	943	U
49	K3	945	U
49	K3	947	G
49	K3	948	C
49	K3	951	C
49	K3	955	A
49	K3	962	A
49	K3	963	A
49	K3	970	G
49	K3	971	G
49	K3	981	A
49	K3	988	C
49	K3	990	A
49	K3	991	G
49	K3	992	A

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Mol	Chain	Res	Type
49	K3	994	C
49	K3	998	A
49	K3	1001	A
49	K3	1002	U
49	K3	1006	C
49	K3	1007	C
49	K3	1014	G
49	K3	1015	U
49	K3	1017	U
49	K3	1020	A
49	K3	1023	A
49	K3	1026	C
49	K3	1027	A
49	K3	1042	A
49	K3	1044	G
49	K3	1045	U
49	K3	1047	C
49	K3	1049	A
49	K3	1050	A
49	K3	1054	G
49	K3	1058	A
49	K3	1060	A
49	K3	1062	A
49	K3	1063	C
49	K3	1064	C
49	K3	1073	U
49	K3	1077	A
49	K3	1080	A
49	K3	1081	U
49	K3	1084	A
49	K3	1086	G
49	K3	1089	G
49	K3	1090	C
49	K3	1096	G
49	K3	1099	G
49	K3	1102	G
49	K3	1107	G
49	K3	1108	G
49	K3	1112	U
49	K3	1115	U
49	K3	1117	C
49	K3	1118	C

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Mol	Chain	Res	Type
49	K3	1123	C
49	K3	1126	G
49	K3	1131	G
49	K3	1141	G
49	K3	1150	A
49	K3	1153	C
49	K3	1154	U
49	K3	1155	U
49	K3	1156	U
49	K3	1157	G
49	K3	1168	G
49	K3	1169	G
49	K3	1170	A
49	K3	1178	U
49	K3	1180	C
49	K3	1181	A
49	K3	1182	A
49	K3	1192	U
49	K3	1198	G
49	K3	1205	C
49	K3	1207	G
49	K3	1209	A
49	K3	1210	G
49	K3	1212	G
49	K3	1215	C
49	K3	1216	C
49	K3	1217	A
49	K3	1218	C
49	K3	1220	A
49	K3	1224	G
49	K3	1235	G
49	K3	1241	A
49	K3	1242	U
49	K3	1243	U
49	K3	1245	G
49	K3	1246	A
49	K3	1248	U
49	K3	1249	C
49	K3	1250	A
49	K3	1251	A
49	K3	1253	A
49	K3	1256	G

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Mol	Chain	Res	Type
49	K3	1257	G
49	K3	1258	A
49	K3	1259	A
49	K3	1264	C
49	K3	1265	A
49	K3	1267	C
49	K3	1268	C
49	K3	1270	G
49	K3	1271	C
49	K3	1272	C
49	K3	1274	G
49	K3	1275	G
49	K3	1279	C
49	K3	1280	G
49	K3	1282	A
49	K3	1285	G
49	K3	1286	G
49	K3	1288	U
49	K3	1289	U
49	K3	1290	G
49	K3	1293	A
49	K3	1294	G
49	K3	1295	A
49	K3	1297	U
49	K3	1298	G
49	K3	1300	U
49	K3	1301	A
49	K3	1302	G
49	K3	1303	C
49	K3	1304	U
49	K3	1306	U
49	K3	1307	U
49	K3	1311	C
49	K3	1312	G
49	K3	1314	U
49	K3	1315	U
49	K3	1316	C
49	K3	1318	G
49	K3	1321	G
49	K3	1323	U
49	K3	1324	G
49	K3	1327	G

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Mol	Chain	Res	Type
49	K3	1329	U
49	K3	1331	C
49	K3	1332	A
49	K3	1337	C
49	K3	1342	U
49	K3	1344	A
49	K3	1345	G
49	K3	1346	U
49	K3	1350	U
49	K3	1361	G
49	K3	1362	U
49	K3	1363	C
49	K3	1364	U
49	K3	1370	A
49	K3	1371	U
49	K3	1372	U
49	K3	1378	A
49	K3	1383	A
49	K3	1386	A
49	K3	1387	G
49	K3	1390	U
49	K3	1393	G
49	K3	1396	A
49	K3	1397	U
49	K3	1398	G
49	K3	1401	A
49	K3	1402	A
49	K3	1404	U
49	K3	1405	A
49	K3	1408	U
49	K3	1409	A
49	K3	1411	G
49	K3	1412	C
49	K3	1413	G
49	K3	1414	A
49	K3	1417	C
49	K3	1418	C
49	K3	1419	C
49	K3	1420	G
49	K3	1423	C
49	K3	1424	G
49	K3	1425	G

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Mol	Chain	Res	Type
49	K3	1426	U
49	K3	1427	C
49	K3	1432	U
49	K3	1434	C
49	K3	1435	C
49	K3	1436	C
49	K3	1438	A
49	K3	1444	U
49	K3	1445	U
49	K3	1447	G
49	K3	1450	G
49	K3	1452	A
49	K3	1454	A
49	K3	1458	G
49	K3	1463	U
49	K3	1464	C
49	K3	1465	A
49	K3	1466	G
49	K3	1475	G
49	K3	1476	A
49	K3	1477	U
49	K3	1479	G
49	K3	1484	A
49	K3	1489	A
49	K3	1490	G
49	K3	1495	G
49	K3	1497	G
49	K3	1507	G
49	K3	1509	U
49	K3	1519	U
49	K3	1520	G
49	K3	1522	A
49	K3	1523	C
49	K3	1528	G
49	K3	1529	C
49	K3	1533	A
49	K3	1534	C
49	K3	1535	U
49	K3	1536	G
49	K3	1537	A
49	K3	1540	G
49	K3	1544	C

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Mol	Chain	Res	Type
49	K3	1545	A
49	K3	1548	G
49	K3	1551	U
49	K3	1552	G
49	K3	1554	C
49	K3	1556	A
49	K3	1557	C
49	K3	1559	C
49	K3	1560	U
49	K3	1566	G
49	K3	1567	G
49	K3	1568	C
49	K3	1573	G
49	K3	1575	G
49	K3	1576	G
49	K3	1579	A
49	K3	1580	A
49	K3	1581	C
49	K3	1584	G
49	K3	1585	U
49	K3	1586	U
49	K3	1587	G
49	K3	1588	A
49	K3	1589	A
49	K3	1591	C
49	K3	1592	C
49	K3	1593	C
49	K3	1596	U
49	K3	1597	C
49	K3	1598	G
49	K3	1599	U
49	K3	1601	A
49	K3	1603	G
49	K3	1605	G
49	K3	1611	G
49	K3	1612	G
49	K3	1614	A
49	K3	1615	U
49	K3	1620	A
49	K3	1623	A
49	K3	1624	U
49	K3	1632	G

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Mol	Chain	Res	Type
49	K3	1639	G
49	K3	1641	A
49	K3	1643	U
49	K3	1645	C
49	K3	1648	G
49	K3	1654	G
49	K3	1658	G
49	K3	1660	C
49	K3	1661	A
49	K3	1664	A
49	K3	1672	U
49	K3	1674	G
49	K3	1677	U
49	K3	1679	A
49	K3	1683	C
49	K3	1684	C
49	K3	1685	U
49	K3	1687	C
49	K3	1689	C
49	K3	1692	U
49	K3	1693	G
49	K3	1695	A
49	K3	1697	A
49	K3	1698	C
49	K3	1699	A
49	K3	1700	C
49	K3	1701	C
49	K3	1702	G
49	K3	1703	C
49	K3	1705	C
49	K3	1710	C
49	K3	1712	A
49	K3	1713	C
49	K3	1721	U
49	K3	1722	G
49	K3	1729	U
49	K3	1733	U
49	K3	1734	G
49	K3	1736	G
49	K3	1740	C
49	K3	1741	U
49	K3	1742	C

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Mol	Chain	Res	Type
49	K3	1744	G
49	K3	1745	A
49	K3	1746	U
49	K3	1753	C
49	K3	1754	G
49	K3	1755	C
49	K3	1756	C
49	K3	1759	G
49	K3	1761	U
49	K3	1767	C
49	K3	1768	A
49	K3	1771	G
49	K3	1779	G
49	K3	1780	G
49	K3	1783	C
49	K3	1784	G
49	K3	1786	U
49	K3	1790	A
49	K3	1794	C
49	K3	1800	A
49	K3	1801	A
49	K3	1803	U
49	K3	1807	C
49	K3	1825	A
49	K3	1826	G
49	K3	1829	G
49	K3	1830	U
49	K3	1831	A
49	K3	1832	A
49	K3	1835	A
49	K3	1836	G
49	K3	1837	G
49	K3	1838	U
49	K3	1839	U
49	K3	1847	G
49	K3	1848	U
49	K3	1849	G
49	K3	1851	A
49	K3	1852	C
49	K3	1859	A
49	K3	1861	G
49	K3	1862	G

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Mol	Chain	Res	Type
49	K3	1863	A
49	K3	1864	U
49	K3	1865	C
49	K3	1866	A
49	K3	1867	U
49	K3	1868	U
49	K3	1869	A

All (37) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	E1	6281	C
1	E1	6286	G
1	E1	6291	U
1	E1	6313	A
1	E1	6314	U
1	E1	6344	U
1	E1	6352	U
1	E1	6363	C
1	E1	6366	G
1	E1	6380	U
1	E1	6382	U
1	E1	6392	U
1	E1	6393	G
49	K3	126	G
49	K3	229	A
49	K3	240	G
49	K3	271	C
49	K3	340	C
49	K3	347	G
49	K3	370	G
49	K3	385	G
49	K3	393	U
49	K3	516	A
49	K3	525	A
49	K3	599	A
49	K3	793	G
49	K3	838	G
49	K3	886	A
49	K3	919	A
49	K3	1248	U
49	K3	1258	A

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Mol	Chain	Res	Type
49	K3	1330	G
49	K3	1344	A
49	K3	1377	U
49	K3	1443	C
49	K3	1579	A
49	K3	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 6 ligands modelled in this entry, 6 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

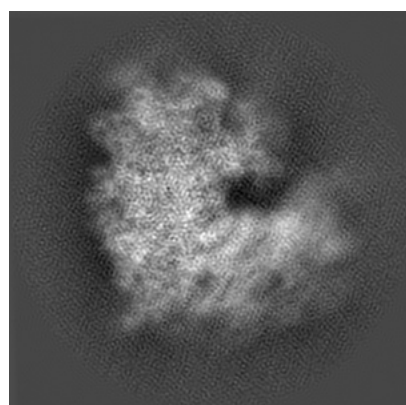
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-11590. These allow visual inspection of the internal detail of the map and identification of artifacts.

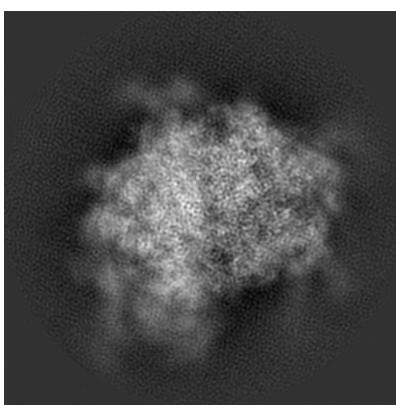
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

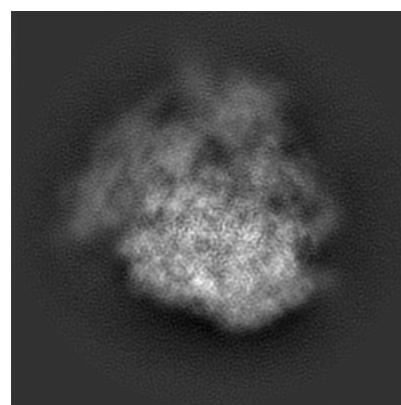
6.1.1 Primary map



X



Y

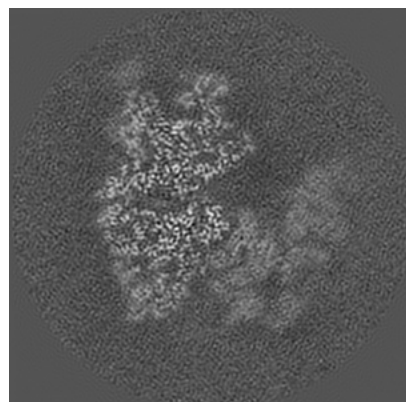


Z

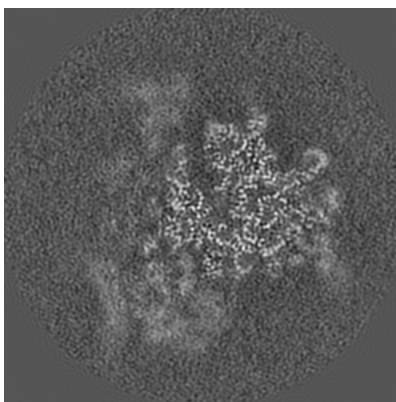
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

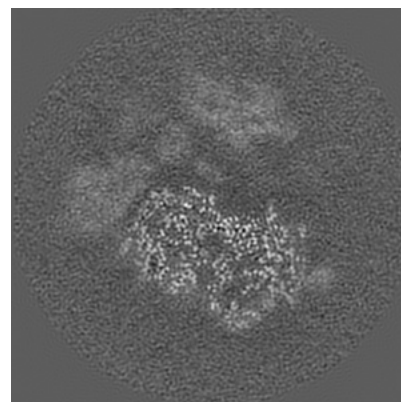
6.2.1 Primary map



X Index: 180



Y Index: 180

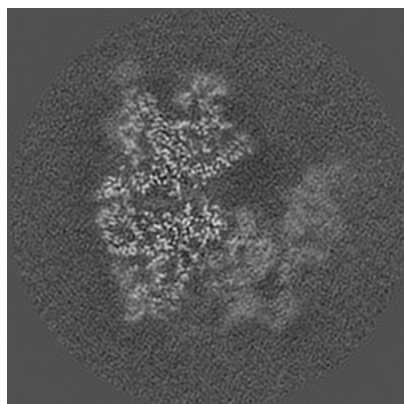


Z Index: 180

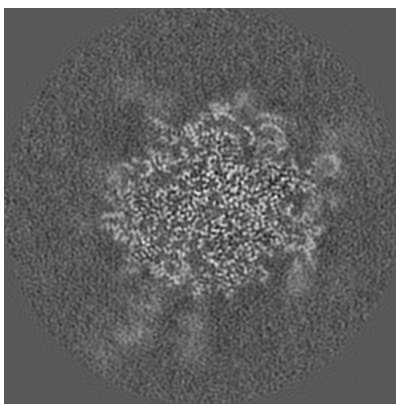
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

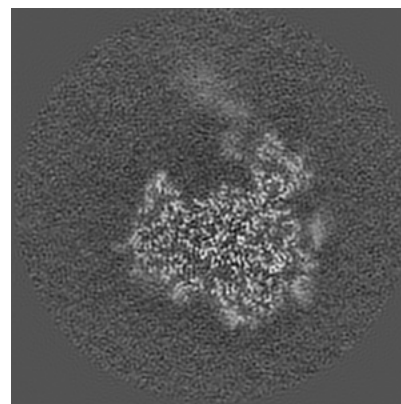
6.3.1 Primary map



X Index: 179



Y Index: 158

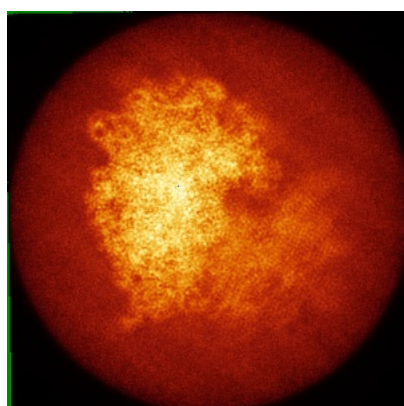


Z Index: 212

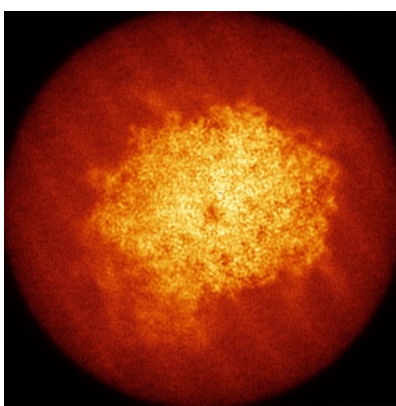
The images above show the largest variance slices of the map in three orthogonal directions.

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

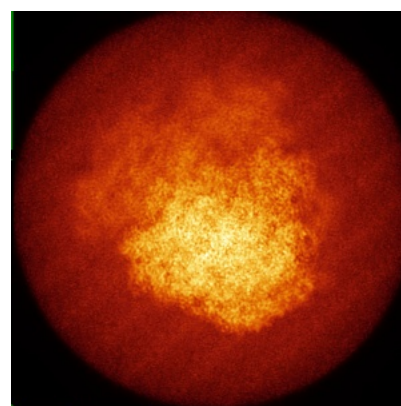
6.4.1 Primary map



X



Y

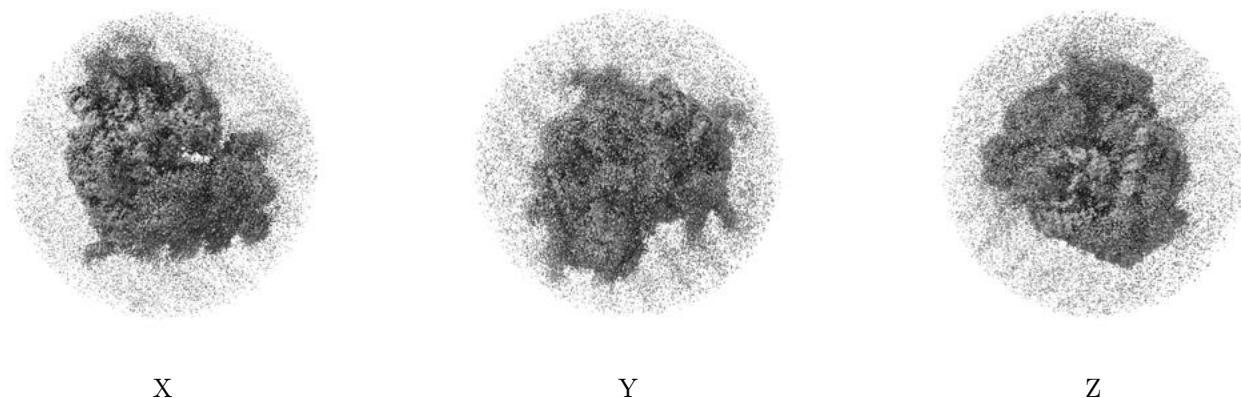


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.018. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

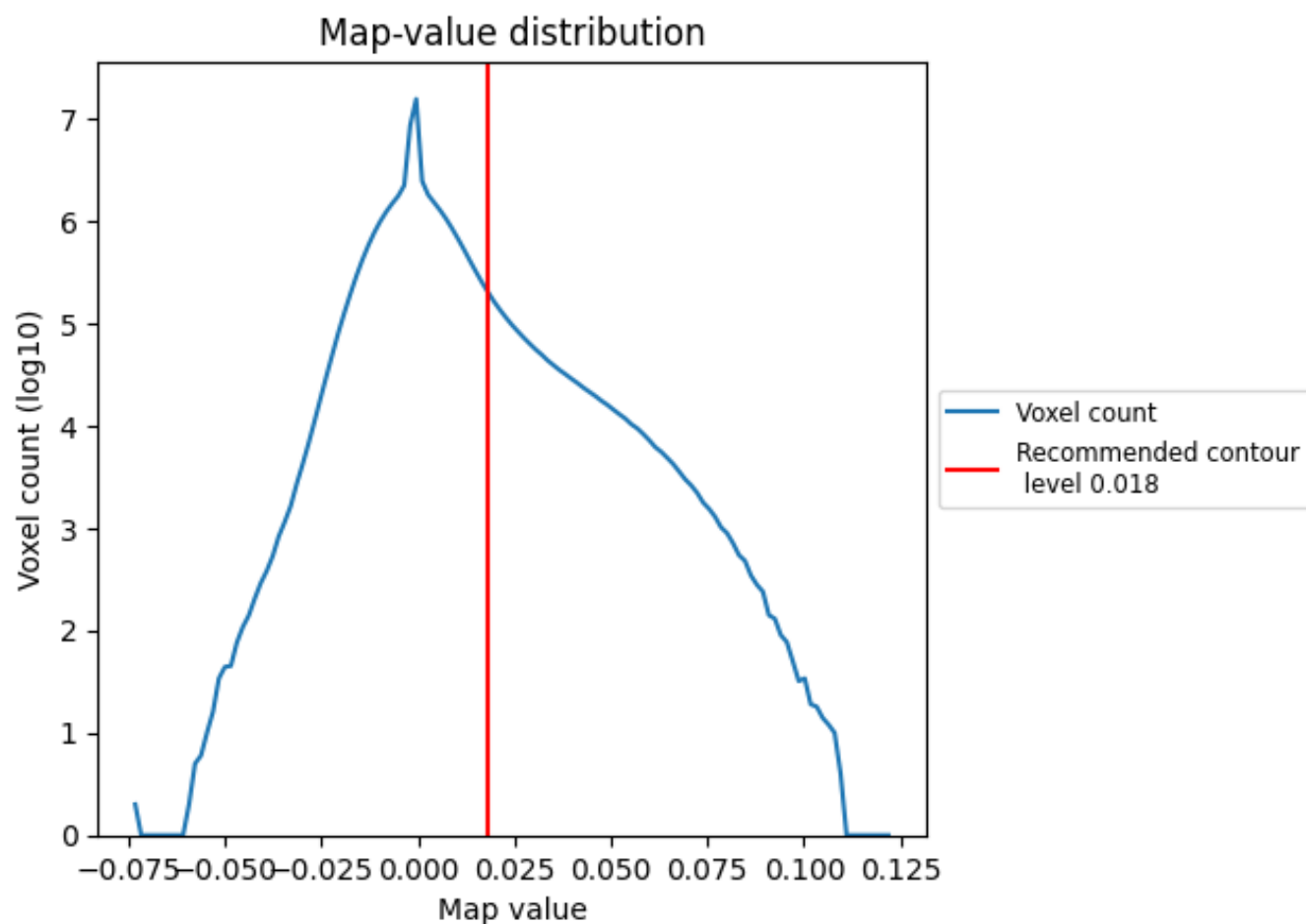
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

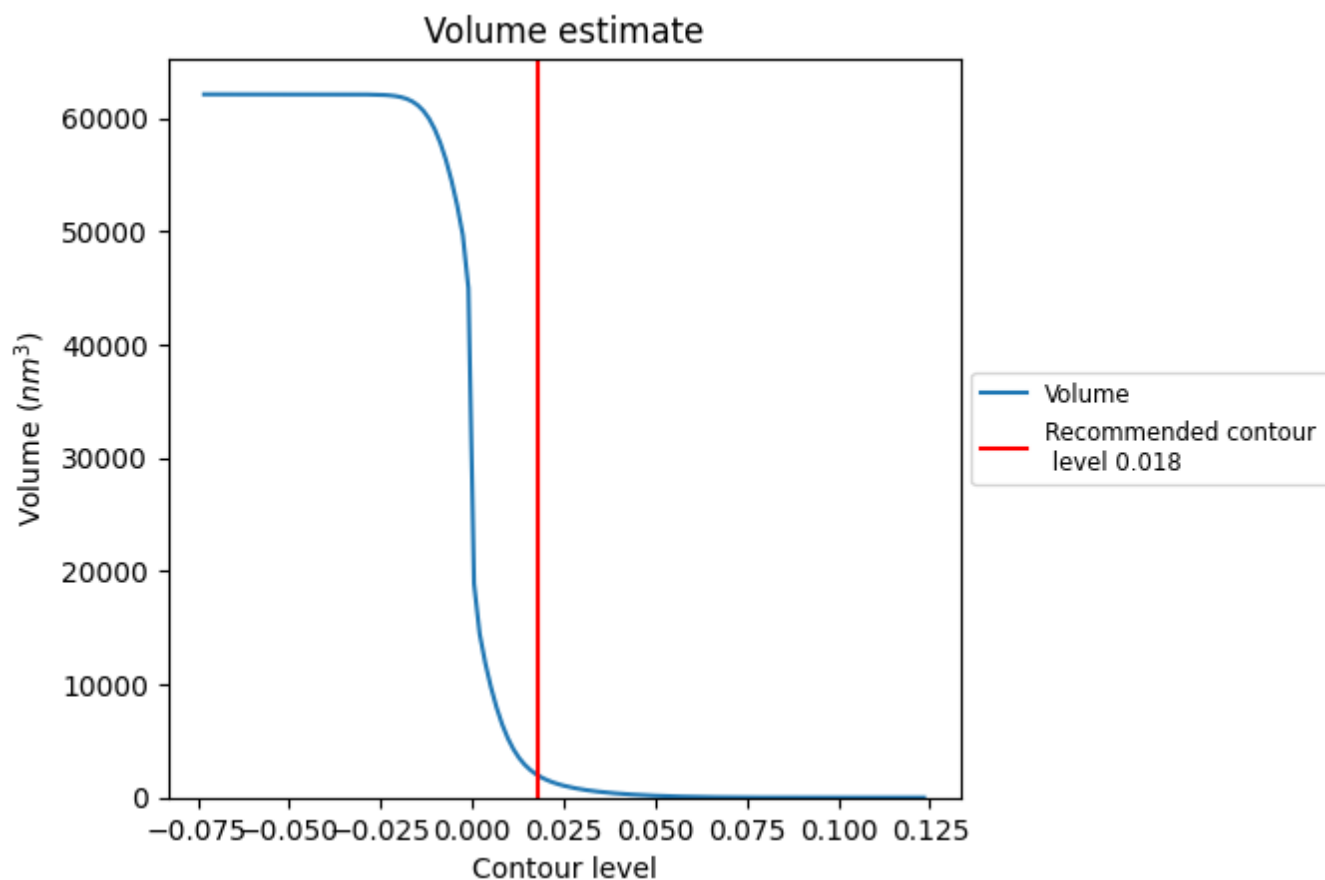
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

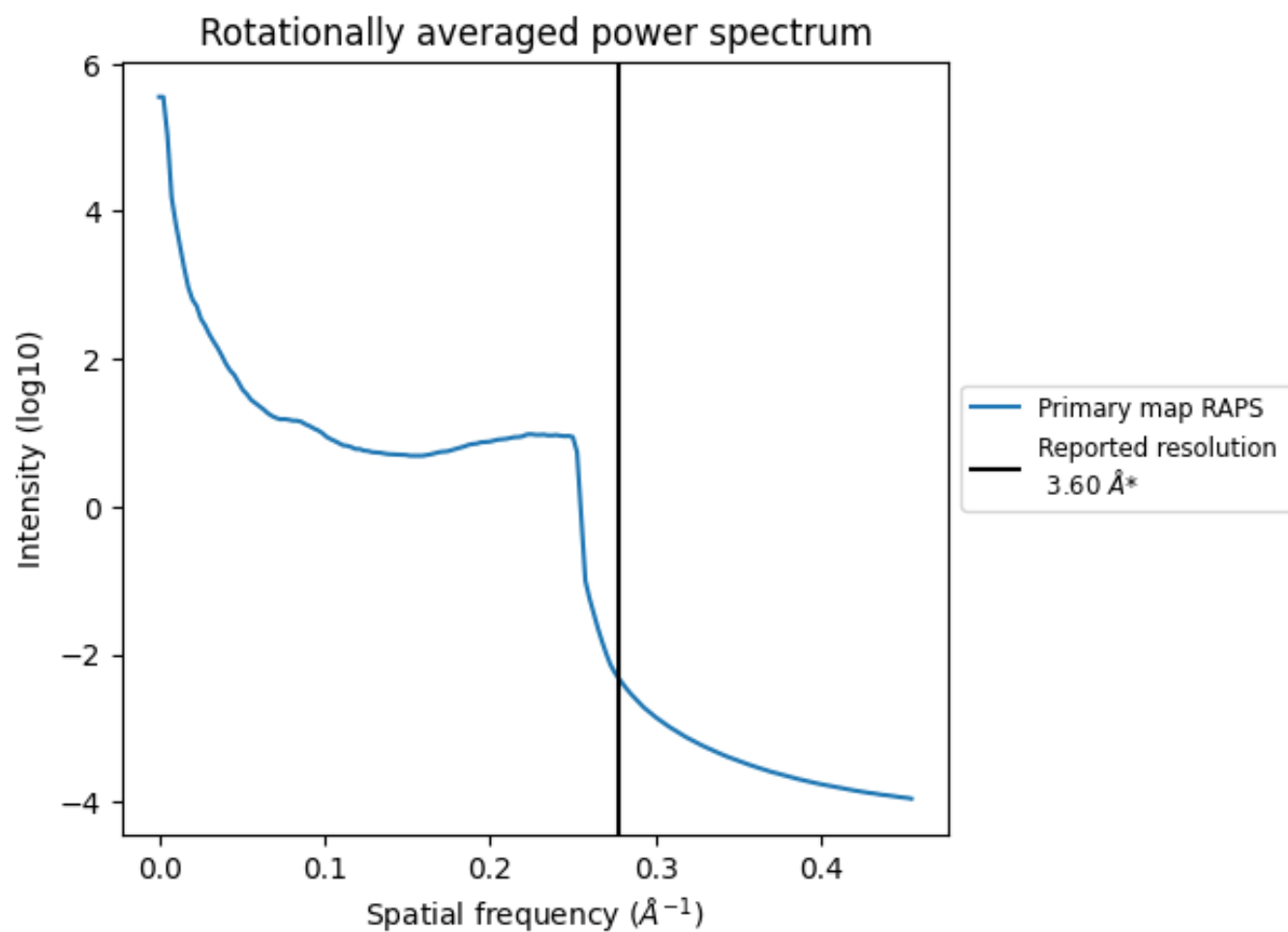
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1960 nm³; this corresponds to an approximate mass of 1770 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

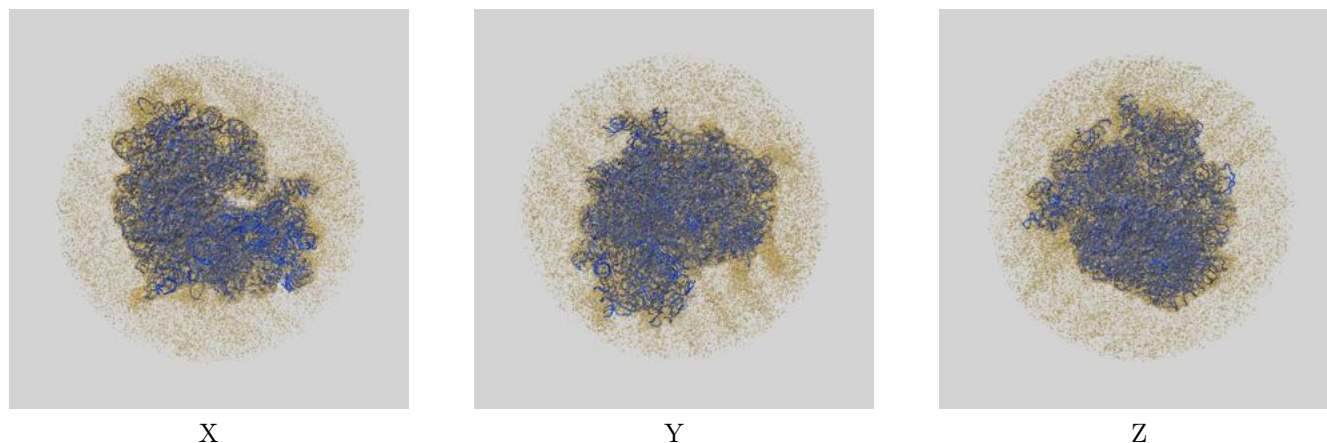
8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

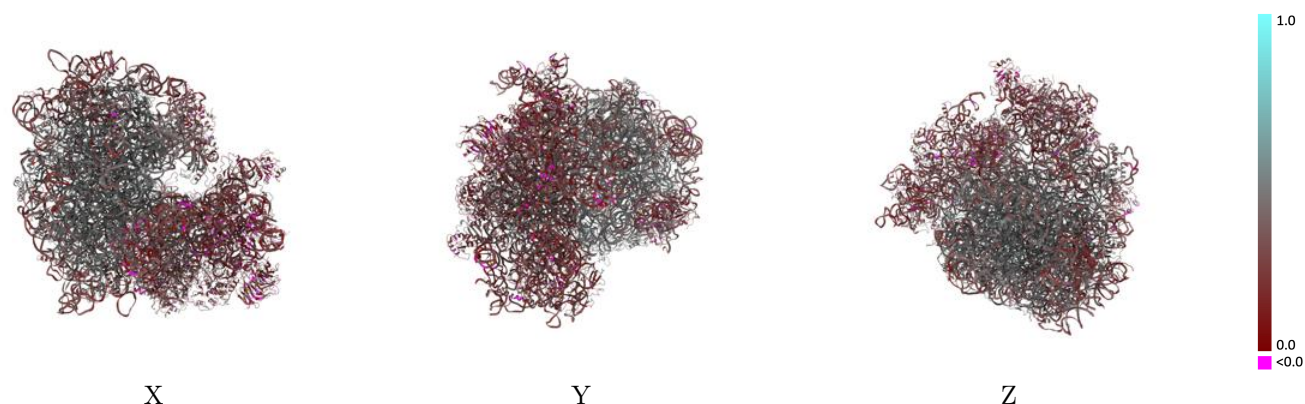
This section contains information regarding the fit between EMDB map EMD-11590 and PDB model 7A01. Per-residue inclusion information can be found in [section 3](#) on [page 21](#).

9.1 Map-model overlay [i](#)



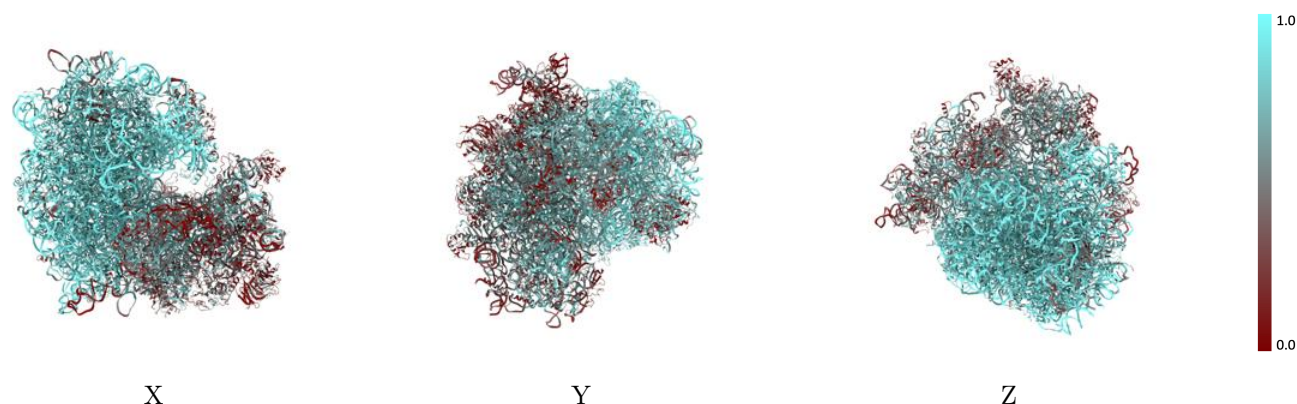
The images above show the 3D surface view of the map at the recommended contour level 0.018 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



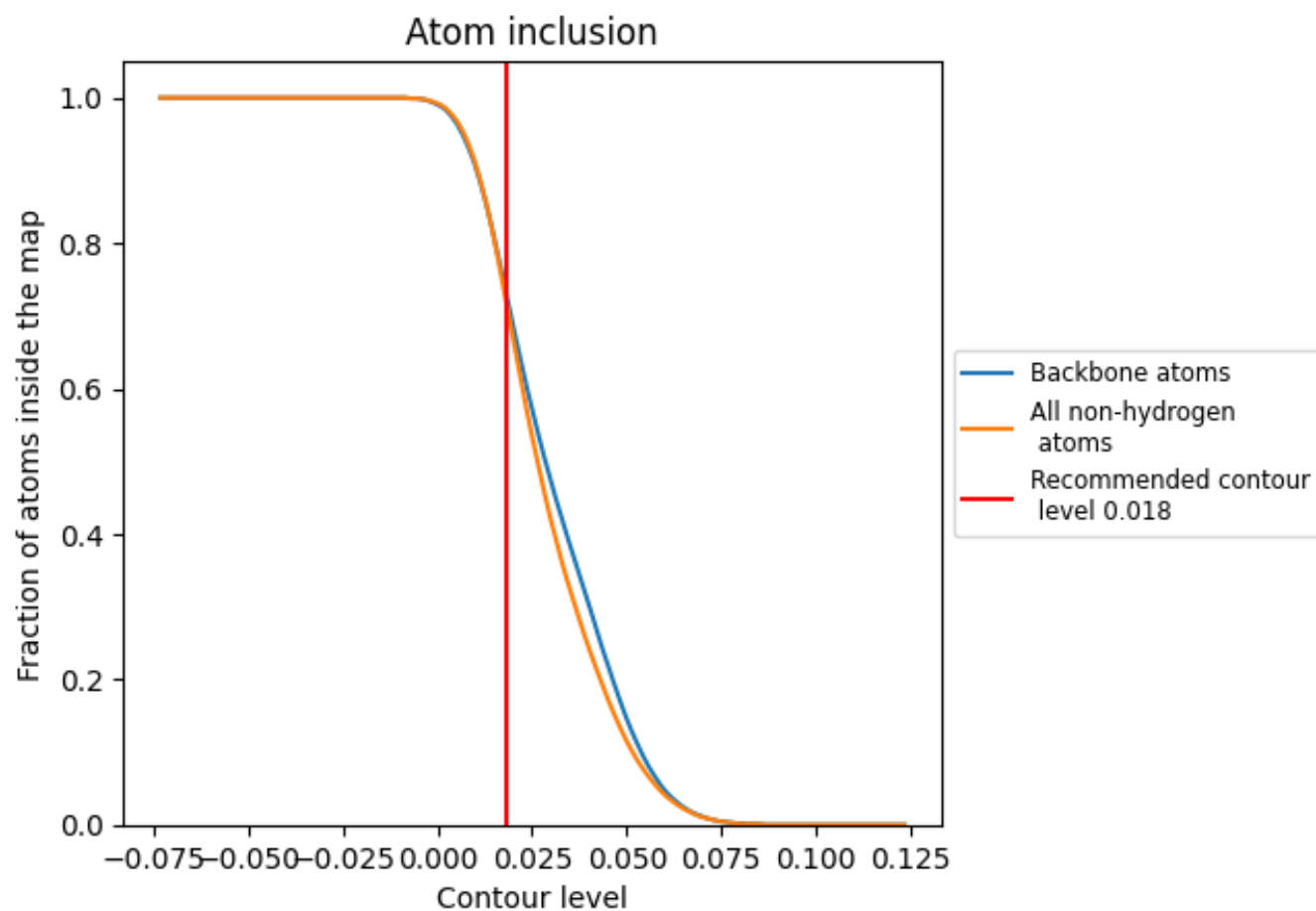
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.018).

9.4 Atom inclusion [i](#)



At the recommended contour level, 73% of all backbone atoms, 72% 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 (0.018) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7230	 0.3700
02	 0.8760	 0.4520
12	 0.8610	 0.4890
13	 0.8370	 0.4510
22	 0.8580	 0.4430
32	 0.7980	 0.4470
42	 0.2700	 0.2610
52	 0.8670	 0.4770
62	 0.8600	 0.4850
72	 0.8190	 0.4820
82	 0.8410	 0.4270
92	 0.8560	 0.5050
A2	 0.8280	 0.4600
A3	 0.4630	 0.2890
B2	 0.8180	 0.4510
B3	 0.2900	 0.2470
C2	 0.9050	 0.5190
C3	 0.3530	 0.2680
D2	 0.8820	 0.4960
D3	 0.4470	 0.3090
E1	 0.2150	 0.2500
E2	 0.8320	 0.4760
E3	 0.3810	 0.2650
F2	 0.8040	 0.4810
F3	 0.4420	 0.3290
G2	 0.8540	 0.4170
G3	 0.4800	 0.3360
G5	 0.4010	 0.2980
H2	 0.8640	 0.4860
H3	 0.5440	 0.2900
H5	 0.3420	 0.2630
I2	 0.8240	 0.4900
I3	 0.4580	 0.2810
I5	 0.4590	 0.2680
J2	 0.8580	 0.4580



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Chain	Atom inclusion	Q-score
J5	 0.4630	 0.3290
K2	 0.2520	 0.2480
K3	 0.6100	 0.2730
L2	 0.8210	 0.4950
L3	 0.4870	 0.3230
M2	 0.2260	 0.2640
M3	 0.1750	 0.2390
N3	 0.2600	 0.2620
O3	 0.5440	 0.3390
P3	 0.3530	 0.3040
Q3	 0.3090	 0.2570
R2	 0.8440	 0.3710
S2	 0.8560	 0.4930
T2	 0.7760	 0.4050
T3	 0.4780	 0.3350
U2	 0.8460	 0.4680
U3	 0.4050	 0.2990
V2	 0.7810	 0.4220
V3	 0.4360	 0.3070
W2	 0.8350	 0.4590
W3	 0.5150	 0.3250
X2	 0.8180	 0.4550
X3	 0.7180	 0.4630
Y2	 0.8220	 0.4250
Y3	 0.3290	 0.2580
a3	 0.2560	 0.2500
a5	 0.5060	 0.3330
a7	 0.8050	 0.4340
b3	 0.3700	 0.2770
c3	 0.4460	 0.2780
d2	 0.9590	 0.4240
d3	 0.5910	 0.2760
e2	 0.8800	 0.4000
e3	 0.2270	 0.2400
f3	 0.3510	 0.2880
h2	 0.9270	 0.4260
j3	 0.5160	 0.3020
k2	 0.8040	 0.5040
l2	 0.8140	 0.4730
m2	 0.8570	 0.4910
o2	 0.8530	 0.4650
p2	 0.7790	 0.4250

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Chain	Atom inclusion	Q-score
q2	 0.8810	 0.4850
r2	 0.7210	 0.3830
s3	 0.3780	 0.2870
t2	 0.8460	 0.4820
u2	 0.8360	 0.4700
v2	 0.8580	 0.5080
w2	 0.8670	 0.4780
x2	 0.8720	 0.5050
y2	 0.7970	 0.4570