



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 26, 2026 – 09:20 PM UTC

PDB ID : 8OEQ / pdb_00008oeq
Title : Crystal structure of the Candida albicans 80S ribosome in complex with Paromomycin (250uM)
Authors : Kolosova, O.; Zgadzay, Y.; Yusupov, M.
Deposited on : 2023-03-12
Resolution : 3.30 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp>

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:

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

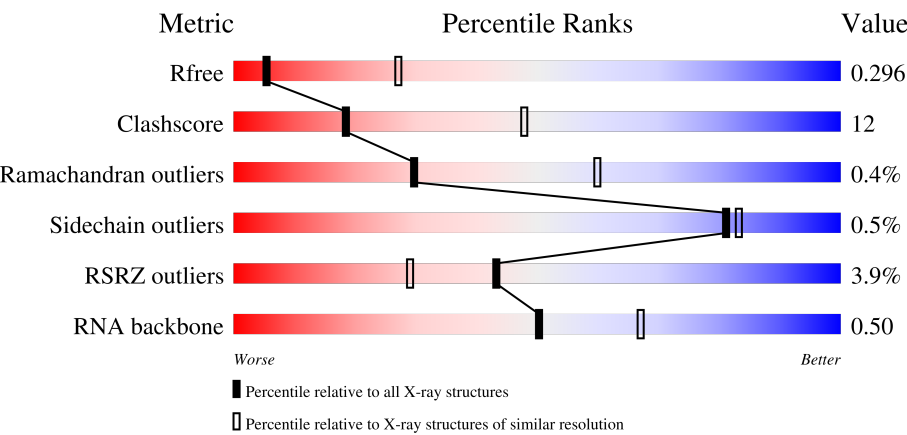
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 Å.

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



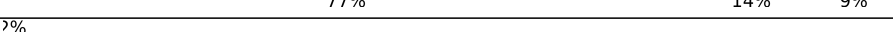
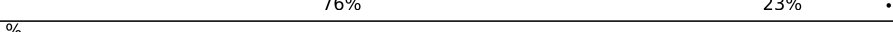
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	180053	1169 (3.32-3.28)
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)
RNA backbone	3983	1048 (3.60-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	1	3359	
1	AS	3359	
2	3	121	
2	AT	121	

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Mol	Chain	Length	Quality of chain
3	4	158	
3	AU	158	
4	AW	254	
4	j	254	
5	AX	389	
5	k	389	
6	AY	363	
6	l	363	
7	AZ	298	
7	m	298	
8	BA	176	
8	n	176	
9	BB	241	
9	o	241	
10	BC	262	
10	p	262	
11	BD	191	
11	q	191	
12	BE	220	
12	r	220	
13	BF	174	
13	s	174	
14	BG	202	
14	t	202	
15	BH	131	

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Mol	Chain	Length	Quality of chain
15	u	131	
16	BI	204	
16	v	204	
17	BJ	200	
17	w	200	
18	BK	185	
18	x	185	
19	BL	186	
19	y	186	
20	BM	190	
20	z	190	
21	0	172	
21	BN	172	
22	2	160	
22	BO	160	
23	5	124	
23	BP	124	
24	6	137	
24	BQ	137	
25	7	155	
25	BR	155	
26	8	142	
26	BS	142	
27	9	127	
27	BT	127	

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Mol	Chain	Length	Quality of chain
28	AA	136	
28	BU	136	
29	AB	149	
29	BV	149	
30	AC	63	
30	BW	63	
31	AD	106	
31	BX	106	
32	AE	112	
32	BY	112	
33	AF	131	
33	BZ	131	
34	AG	107	
34	CA	107	
35	AH	113	
35	CB	113	
36	AI	120	
36	CC	120	
37	AJ	99	
37	CD	99	
38	AK	90	
38	CE	90	
39	AL	78	
39	CF	78	
40	AM	51	

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Mol	Chain	Length	Quality of chain
40	CG	51	
41	AN	52	
41	CH	52	
42	AO	25	
42	CI	25	
43	AP	106	
43	CJ	106	
44	AQ	92	
44	CK	92	
45	CL	267	
45	i	267	
46	B	1787	
46	CM	1787	
47	C	261	
47	CN	261	
48	CO	256	
48	D	256	
49	CP	249	
49	E	249	
50	CQ	251	
50	F	251	
51	CR	262	
51	G	262	
52	CS	225	
52	H	225	

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Mol	Chain	Length	Quality of chain
53	CT	236	
53	I	236	
54	CU	186	
54	J	186	
55	CV	206	
55	K	206	
56	CW	189	
56	L	189	
57	CX	118	
57	M	118	
58	CY	155	
58	N	155	
59	CZ	143	
59	O	143	
60	DA	151	
60	P	151	
61	DB	132	
61	Q	132	
62	DC	142	
62	R	142	
63	DD	142	
63	S	142	
64	DE	137	
64	T	137	
65	DF	145	

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Mol	Chain	Length	Quality of chain
65	U	145	
66	DG	145	
66	V	145	
67	DH	119	
67	W	119	
68	DI	87	
68	X	87	
69	DJ	130	
69	Y	130	
70	DK	145	
70	Z	145	
71	DL	135	
71	a	135	
72	DM	105	
72	b	105	
73	DN	119	
73	c	119	
74	DO	82	
74	d	82	
75	DP	67	
75	e	67	
76	DQ	56	
76	f	56	
77	DR	63	
77	g	63	

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Mol	Chain	Length	Quality of chain
78	DS	193	
78	h	193	
79	AR	317	
79	DT	317	
80	L1	217	
80	l1	217	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
81	MG	1	3597	-	-	-	X
81	MG	AS	3729	-	-	-	X

2 Entry composition [i](#)

There are 85 unique types of molecules in this entry. The entry contains 405513 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	1	3217	Total	C	N	O	P	0	0	0
			68774	30723	12366	22468	3217			
1	AS	3199	Total	C	N	O	P	0	0	0
			68387	30550	12293	22345	3199			

- Molecule 2 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	3	121	Total	C	N	O	P	0	0	0
			2579	1153	463	842	121			
2	AT	121	Total	C	N	O	P	0	0	0
			2579	1153	463	842	121			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	4	157	Total	C	N	O	P	0	0	0
			3333	1491	583	1102	157			
3	AU	158	Total	C	N	O	P	0	0	0
			3353	1500	585	1110	158			

- Molecule 4 is a protein called 60S ribosomal protein L2-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	j	249	Total	C	N	O	S	0	0	0
			1888	1180	376	330	2			
4	AW	249	Total	C	N	O	S	0	0	0
			1888	1180	376	330	2			

- Molecule 5 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	k	386	Total	C	N	O	S	0	0	0
			3077	1950	582	538	7			
5	AX	386	Total	C	N	O	S	0	0	0
			3077	1950	582	538	7			

- Molecule 6 is a protein called 60S ribosomal protein L4-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	l	361	Total	C	N	O	S	0	0	0
			2751	1729	529	490	3			
6	AY	361	Total	C	N	O	S	0	0	0
			2751	1729	529	490	3			

- Molecule 7 is a protein called Uncharacterized protein CaJ7.0206.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	m	296	Total	C	N	O	S	0	0	0
			2426	1544	422	458	2			
7	AZ	292	Total	C	N	O	S	0	0	0
			2394	1526	416	450	2			

- Molecule 8 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	n	157	Total	C	N	O	S	0	0	0
			1242	796	226	219	1			
8	BA	153	Total	C	N	O	S	0	0	0
			1210	777	221	212				

- Molecule 9 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	o	234	Total	C	N	O	S	0	0	0
			1885	1208	345	331	1			
9	BB	234	Total	C	N	O	S	0	0	0
			1885	1208	345	331	1			

- Molecule 10 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	p	238	Total	C	N	O	S	0	0	0
			1839	1175	327	334	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	BC	233	Total	C	N	O	S	0	0	0
			1805	1156	321	325	3			

- Molecule 11 is a protein called 60S ribosomal protein L9-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	q	190	Total	C	N	O	S	0	0	0
			1519	958	276	281	4			
11	BD	190	Total	C	N	O	S	0	0	0
			1519	958	276	281	4			

- Molecule 12 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	r	208	Total	C	N	O	S	0	0	0
			1689	1069	322	291	7			
12	BE	208	Total	C	N	O	S	0	0	0
			1689	1069	322	291	7			

- Molecule 13 is a protein called 60S ribosomal protein L11-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	s	171	Total	C	N	O	S	0	0	0
			1371	857	260	250	4			
13	BF	171	Total	C	N	O	S	0	0	0
			1371	857	260	250	4			

- Molecule 14 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
14	t	200	Total	C	N	O	0	0	0
			1610	1009	318	283			
14	BG	200	Total	C	N	O	0	0	0
			1610	1009	318	283			

- Molecule 15 is a protein called 60S ribosomal protein L14-B.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	u	130	Total	C	N	O	0	0	0
			1029	660	193	175			
15	BH	130	Total	C	N	O	0	0	0
			1029	660	193	175			

- Molecule 16 is a protein called 60S ribosomal protein L15-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	v	203	Total	C	N	O	S	0	0	0
			1713	1075	356	280	2			
16	BI	203	Total	C	N	O	S	0	0	0
			1713	1075	356	280	2			

- Molecule 17 is a protein called Ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	w	199	Total	C	N	O	S	0	0	0
			1590	1025	294	269	2			
17	BJ	199	Total	C	N	O	S	0	0	0
			1590	1025	294	269	2			

- Molecule 18 is a protein called Ribosomal protein L22.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	x	173	Total	C	N	O	0	0	0
			1387	856	280	251			
18	BK	176	Total	C	N	O	0	0	0
			1406	868	284	254			

- Molecule 19 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	y	185	Total	C	N	O	0	0	0
			1458	916	297	245			
19	BL	185	Total	C	N	O	0	0	0
			1458	916	297	245			

- Molecule 20 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	z	179	Total	C	N	O	S	0	0	0
			1457	901	310	243	3			
20	BM	179	Total	C	N	O	S	0	0	0
			1457	901	310	243	3			

- Molecule 21 is a protein called 60S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	0	170	Total	C	N	O	S	0	0	0
			1423	921	258	241	3			
21	BN	170	Total	C	N	O	S	0	0	0
			1423	921	258	241	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	2	159	Total	C	N	O	S	0	0	0
			1262	798	241	221	2			
22	BO	159	Total	C	N	O	S	0	0	0
			1262	798	241	221	2			

- Molecule 23 is a protein called 60S ribosomal protein L22-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	5	103	Total	C	N	O		0	0	0
			831	539	138	154				
23	BP	102	Total	C	N	O		0	0	0
			826	536	137	153				

- Molecule 24 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	6	131	Total	C	N	O	S	0	0	0
			977	615	183	171	8			
24	BQ	131	Total	C	N	O	S	0	0	0
			977	615	183	171	8			

- Molecule 25 is a protein called 60S ribosomal protein L24-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	7	118	Total	C	N	O	S	0	0	0
			945	591	192	161	1			
25	BR	98	Total	C	N	O	S	0	0	0
			801	501	162	137	1			

- Molecule 26 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	8	121	Total	C	N	O	S	0	0	0
			974	622	175	176	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BS	119	Total	C	N	O	S	0	0	0
			960	613	172	174	1			

- Molecule 27 is a protein called Ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	9	126	Total	C	N	O		0	0	0
			989	618	190	181				
27	BT	126	Total	C	N	O		0	0	0
			989	618	190	181				

- Molecule 28 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	AA	135	Total	C	N	O	S	0	0	0
			1087	705	197	183	2			
28	BU	135	Total	C	N	O	S	0	0	0
			1087	705	197	183	2			

- Molecule 29 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	AB	148	Total	C	N	O	S	0	0	0
			1170	741	231	197	1			
29	BV	148	Total	C	N	O	S	0	0	0
			1170	741	231	197	1			

- Molecule 30 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	AC	62	Total	C	N	O		0	0	0
			493	307	105	81				
30	BW	63	Total	C	N	O	S	0	1	0
			509	317	109	82	1			

- Molecule 31 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	AD	96	Total	C	N	O	S	0	0	0
			729	469	121	137	2			
31	BX	96	Total	C	N	O	S	0	0	0
			729	469	121	137	2			

- Molecule 32 is a protein called 60S ribosomal protein L31-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	AE	110	Total	C	N	O	S	0	0	0
			894	565	168	159	2			
32	BY	108	Total	C	N	O	S	0	0	0
			881	556	166	157	2			

- Molecule 33 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	AF	124	Total	C	N	O	S	0	0	0
			1000	638	194	167	1			
33	BZ	125	Total	C	N	O	S	0	1	0
			1015	649	197	168	1			

- Molecule 34 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	AG	106	Total	C	N	O	S	0	0	0
			847	543	161	142	1			
34	CA	106	Total	C	N	O	S	0	3	0
			867	558	166	142	1			

- Molecule 35 is a protein called 60S ribosomal protein L34-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	AH	112	Total	C	N	O	S	0	0	0
			887	547	182	154	4			
35	CB	111	Total	C	N	O	S	0	4	0
			904	561	186	153	4			

- Molecule 36 is a protein called Ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	AI	120	Total	C	N	O	S	0	0	0
			992	629	195	167	1			
36	CC	118	Total	C	N	O		0	0	0
			979	621	193	165				

- Molecule 37 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	AJ	97	Total	C	N	O	S	0	0	0
			758	471	156	130	1			
37	CD	97	Total	C	N	O	S	0	1	0
			764	476	157	130	1			

- Molecule 38 is a protein called 60S ribosomal protein L37-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	AK	86	Total	C	N	O	S	0	0	0
			677	413	148	110	6			
38	CE	86	Total	C	N	O	S	0	0	0
			677	413	148	110	6			

- Molecule 39 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	AL	77	Total	C	N	O		0	0	0
			617	393	115	109				
39	CF	77	Total	C	N	O		0	1	0
			623	398	116	109				

- Molecule 40 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	AM	50	Total	C	N	O		0	0	0
			438	275	97	66				
40	CG	50	Total	C	N	O		0	0	0
			438	275	97	66				

- Molecule 41 is a protein called 60S ribosomal protein L40-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	AN	52	Total	C	N	O	S	0	0	0
			419	260	86	67	6			
41	CH	52	Total	C	N	O	S	0	1	0
			427	265	89	67	6			

- Molecule 42 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	AO	25	Total	C	N	O	S	0	0	0
			236	144	63	28	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	CI	24	Total	C	N	O	S	0	0	0
			227	138	61	27	1			

- Molecule 43 is a protein called 60S ribosomal protein L42-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	AP	103	Total	C	N	O	S	0	0	0
			828	521	165	137	5			
43	CJ	103	Total	C	N	O	S	0	2	0
			841	531	168	137	5			

- Molecule 44 is a protein called 60S ribosomal protein L43-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	AQ	91	Total	C	N	O	S	0	0	0
			698	430	140	124	4			
44	CK	91	Total	C	N	O	S	0	0	0
			698	430	140	124	4			

- Molecule 45 is a protein called 60S ribosomal protein CAALFM_C304810CA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	i	121	Total	C	N	O		0	0	0
			931	563	166	202				
45	CL	121	Total	C	N	O		0	0	0
			931	563	166	202				

- Molecule 46 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	B	1712	Total	C	N	O	P	0	0	0
			36504	16318	6483	11991	1712			
46	CM	1726	Total	C	N	O	P	0	0	0
			36805	16452	6537	12090	1726			

- Molecule 47 is a protein called 40S ribosomal protein S0.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	C	208	Total	C	N	O	S	0	0	0
			1627	1041	284	297	5			
47	CN	208	Total	C	N	O	S	0	0	0
			1627	1041	284	297	5			

- Molecule 48 is a protein called 40S ribosomal protein S1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	D	214	Total	C	N	O	S	0	0	0
			1724	1094	313	313	4			
48	CO	214	Total	C	N	O	S	0	0	0
			1724	1094	313	313	4			

- Molecule 49 is a protein called Ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	E	217	Total	C	N	O	S	0	0	0
			1629	1039	289	296	5			
49	CP	216	Total	C	N	O	S	0	0	0
			1620	1033	287	295	5			

- Molecule 50 is a protein called Ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	F	223	Total	C	N	O	S	0	0	0
			1707	1087	311	305	4			
50	CQ	223	Total	C	N	O	S	0	0	0
			1707	1087	311	305	4			

- Molecule 51 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	G	259	Total	C	N	O	S	0	0	0
			2051	1304	385	357	5			
51	CR	260	Total	C	N	O	S	0	0	0
			2055	1306	386	358	5			

- Molecule 52 is a protein called Ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	H	206	Total	C	N	O	S	0	0	0
			1614	1008	301	301	4			
52	CS	195	Total	C	N	O	S	0	0	0
			1530	960	280	286	4			

- Molecule 53 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	I	226	Total	C	N	O	S	0	0	0
			1820	1133	351	330	6			
53	CT	226	Total	C	N	O	S	0	0	0
			1820	1133	351	330	6			

- Molecule 54 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	J	185	Total	C	N	O	S	0	0	0
			1491	953	269	269				
54	CU	182	Total	C	N	O	S	0	0	0
			1466	939	264	263				

- Molecule 55 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	K	203	Total	C	N	O	S	0	0	0
			1579	973	322	283	1			
55	CV	203	Total	C	N	O	S	0	0	0
			1579	973	322	283	1			

- Molecule 56 is a protein called Ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	L	178	Total	C	N	O	S	0	0	0
			1453	918	286	248	1			
56	CW	178	Total	C	N	O	S	0	0	0
			1453	918	286	248	1			

- Molecule 57 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	M	98	Total	C	N	O	S	0	0	0
			817	531	135	150	1			
57	CX	93	Total	C	N	O	S	0	0	0
			783	511	129	142	1			

- Molecule 58 is a protein called 40S ribosomal protein S11A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	N	144	Total	C	N	O	S	0	0	0
			1150	734	215	198	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	CY	141	Total	C	N	O	S	0	0	0
			1129	722	212	192	3			

- Molecule 59 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	O	116	Total	C	N	O	S	0	0	0
			885	550	158	172	5			
59	CZ	116	Total	C	N	O	S	0	0	0
			885	550	158	172	5			

- Molecule 60 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
60	P	150	Total	C	N	O	S	0	0	0
			1187	757	219	210	1			
60	DA	150	Total	C	N	O	S	0	0	0
			1187	757	219	210	1			

- Molecule 61 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
61	Q	127	Total	C	N	O	S	0	0	0
			942	579	186	174	3			
61	DB	127	Total	C	N	O	S	0	0	0
			942	579	186	174	3			

- Molecule 62 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
62	R	129	Total	C	N	O	S	0	0	0
			1018	649	185	177	7			
62	DC	129	Total	C	N	O	S	0	0	0
			1018	649	185	177	7			

- Molecule 63 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
63	S	140	Total	C	N	O	S	0	0	0
			1091	700	198	192	1			
63	DD	140	Total	C	N	O	S	0	0	0
			1091	700	198	192	1			

- Molecule 64 is a protein called 40S ribosomal protein S17-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
64	T	124	Total	C	N	O	S	0	0	0
			997	628	183	185	1			
64	DE	125	Total	C	N	O	S	0	0	0
			1002	631	184	186	1			

- Molecule 65 is a protein called 40S ribosomal protein S18-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
65	U	144	Total	C	N	O	S	0	0	0
			1187	744	233	207	3			
65	DF	142	Total	C	N	O	S	0	0	0
			1169	733	228	205	3			

- Molecule 66 is a protein called 40S ribosomal protein S19-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
66	V	141	Total	C	N	O	S	0	0	0
			1100	689	210	200	1			
66	DG	141	Total	C	N	O	S	0	0	0
			1100	689	210	200	1			

- Molecule 67 is a protein called Ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
67	W	102	Total	C	N	O	S	0	0	0
			808	509	150	147	2			
67	DH	100	Total	C	N	O	S	0	0	0
			790	499	146	143	2			

- Molecule 68 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
68	X	87	Total	C	N	O	S	0	0	0
			676	415	126	133	2			
68	DI	87	Total	C	N	O	S	0	0	0
			676	415	126	133	2			

- Molecule 69 is a protein called 40S ribosomal protein S22-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
69	Y	129	Total	C	N	O	S	0	0	0
			1032	655	191	183	3			
69	DJ	129	Total	C	N	O	S	0	0	0
			1032	655	191	183	3			

- Molecule 70 is a protein called Ribosomal protein S23 (S12).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
70	Z	143	Total	C	N	O	S	0	0	0
			1110	701	219	188	2			
70	DK	143	Total	C	N	O	S	0	0	0
			1110	701	219	188	2			

- Molecule 71 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
71	a	134	Total	C	N	O		0	0	0
			1086	677	218	191				
71	DL	132	Total	C	N	O		0	0	0
			1072	670	216	186				

- Molecule 72 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
72	b	72	Total	C	N	O		0	0	0
			578	369	103	106				
72	DM	71	Total	C	N	O		0	0	0
			570	365	102	103				

- Molecule 73 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
73	c	98	Total	C	N	O	S	0	0	0
			779	482	163	128	6			
73	DN	97	Total	C	N	O	S	0	0	0
			770	477	161	126	6			

- Molecule 74 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
74	d	81	Total	C	N	O	S	0	0	0
			614	383	110	114	7			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
74	DO	81	Total	C	N	O	S	0	0	0
			614	383	110	114	7			

- Molecule 75 is a protein called 40S ribosomal protein S28-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
75	e	62	Total	C	N	O	S	0	0	0
			487	299	98	88	2			
75	DP	59	Total	C	N	O	S	0	0	0
			457	281	89	85	2			

- Molecule 76 is a protein called 40S ribosomal protein S29A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
76	f	55	Total	C	N	O	S	0	0	0
			454	281	94	75	4			
76	DQ	55	Total	C	N	O	S	0	0	0
			454	281	94	75	4			

- Molecule 77 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
77	g	60	Total	C	N	O	S	0	0	0
			474	297	96	79	2			
77	DR	56	Total	C	N	O	S	0	0	0
			444	278	89	75	2			

- Molecule 78 is a protein called Ubiquitin-40S ribosomal protein S31 fusion protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
78	h	63	Total	C	N	O	S	0	0	0
			510	320	100	84	6			
78	DS	70	Total	C	N	O	S	0	0	0
			574	362	113	93	6			

- Molecule 79 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
79	AR	311	Total	C	N	O	S	0	0	0
			2398	1519	412	462	5			
79	DT	311	Total	C	N	O	S	0	0	0
			2398	1519	412	462	5			

- Molecule 80 is a protein called Ribosomal protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
80	L1	217	Total	C	N	O	S	0	0	0
			1711	1096	294	312	9			
80	l1	217	Total	C	N	O	S	0	0	0
			1711	1096	294	312	9			

- Molecule 81 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
81	1	565	Total	Mg	0	0
			565	565		
81	3	14	Total	Mg	0	0
			14	14		
81	4	16	Total	Mg	0	0
			16	16		
81	j	4	Total	Mg	0	0
			4	4		
81	k	5	Total	Mg	0	0
			5	5		
81	l	2	Total	Mg	0	0
			2	2		
81	m	1	Total	Mg	0	0
			1	1		
81	o	4	Total	Mg	0	0
			4	4		
81	r	3	Total	Mg	0	0
			3	3		
81	s	1	Total	Mg	0	0
			1	1		
81	u	2	Total	Mg	0	0
			2	2		
81	v	2	Total	Mg	0	0
			2	2		
81	w	3	Total	Mg	0	0
			3	3		
81	x	5	Total	Mg	0	0
			5	5		
81	y	2	Total	Mg	0	0
			2	2		
81	z	1	Total	Mg	0	0
			1	1		
81	0	3	Total	Mg	0	0
			3	3		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
81	2	1	Total 1	Mg 1	0	0
81	5	1	Total 1	Mg 1	0	0
81	6	2	Total 2	Mg 2	0	0
81	8	2	Total 2	Mg 2	0	0
81	9	2	Total 2	Mg 2	0	0
81	AB	1	Total 1	Mg 1	0	0
81	AC	1	Total 1	Mg 1	0	0
81	AD	2	Total 2	Mg 2	0	0
81	AF	4	Total 4	Mg 4	0	0
81	AG	2	Total 2	Mg 2	0	0
81	AH	2	Total 2	Mg 2	0	0
81	AI	1	Total 1	Mg 1	0	0
81	AP	3	Total 3	Mg 3	0	0
81	AQ	1	Total 1	Mg 1	0	0
81	i	1	Total 1	Mg 1	0	0
81	B	169	Total 169	Mg 169	0	0
81	D	1	Total 1	Mg 1	0	0
81	E	2	Total 2	Mg 2	0	0
81	F	1	Total 1	Mg 1	0	0
81	G	1	Total 1	Mg 1	0	0
81	H	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
81	I	1	Total 1	Mg 1	0	0
81	K	1	Total 1	Mg 1	0	0
81	Q	2	Total 2	Mg 2	0	0
81	V	1	Total 1	Mg 1	0	0
81	Y	1	Total 1	Mg 1	0	0
81	Z	3	Total 3	Mg 3	0	0
81	c	1	Total 1	Mg 1	0	0
81	f	1	Total 1	Mg 1	0	0
81	g	1	Total 1	Mg 1	0	0
81	AR	1	Total 1	Mg 1	0	0
81	AS	387	Total 387	Mg 387	0	0
81	AT	13	Total 13	Mg 13	0	0
81	AU	7	Total 7	Mg 7	0	0
81	AW	3	Total 3	Mg 3	0	0
81	AX	2	Total 2	Mg 2	0	0
81	AY	1	Total 1	Mg 1	0	0
81	BB	3	Total 3	Mg 3	0	0
81	BE	2	Total 2	Mg 2	0	0
81	BF	1	Total 1	Mg 1	0	0
81	BG	2	Total 2	Mg 2	0	0
81	BH	1	Total 1	Mg 1	0	0

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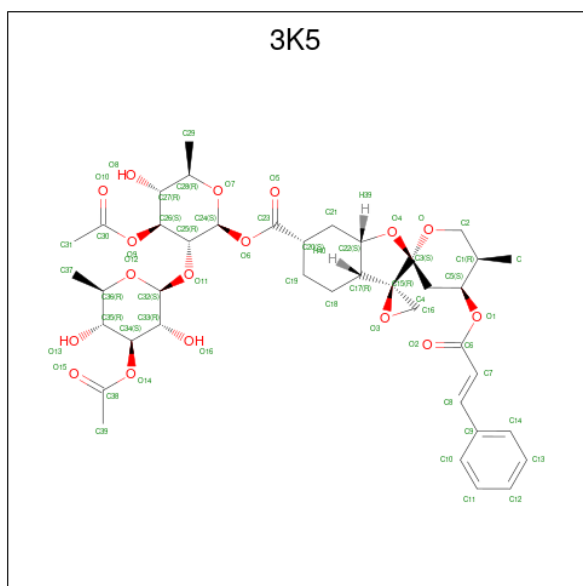
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
81	BI	1	Total 1	Mg 1	0	0
81	BJ	4	Total 4	Mg 4	0	0
81	BK	2	Total 2	Mg 2	0	0
81	BN	2	Total 2	Mg 2	0	0
81	BO	1	Total 1	Mg 1	0	0
81	BS	1	Total 1	Mg 1	0	0
81	BV	1	Total 1	Mg 1	0	0
81	BZ	4	Total 4	Mg 4	0	0
81	CA	1	Total 1	Mg 1	0	0
81	CJ	1	Total 1	Mg 1	0	0
81	CK	1	Total 1	Mg 1	0	0
81	CM	145	Total 145	Mg 145	0	0
81	CN	1	Total 1	Mg 1	0	0
81	CP	2	Total 2	Mg 2	0	0
81	CQ	4	Total 4	Mg 4	0	0
81	CW	1	Total 1	Mg 1	0	0
81	DA	2	Total 2	Mg 2	0	0
81	DB	4	Total 4	Mg 4	0	0
81	DC	1	Total 1	Mg 1	0	0
81	DG	1	Total 1	Mg 1	0	0
81	DJ	2	Total 2	Mg 2	0	0

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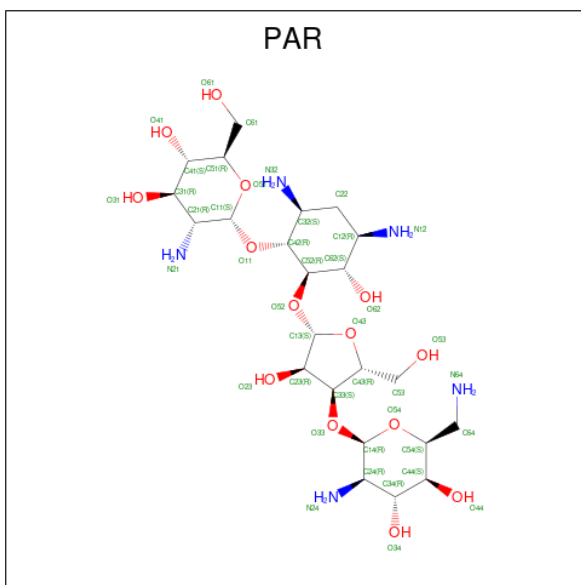
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
81	DQ	1	Total	Mg	0	0
			1	1		
81	CL	3	Total	Mg	0	0
			3	3		

- Molecule 82 is 3-O-acetyl-2-O-(3-O-acetyl-6-deoxy-beta-D-glucopyranosyl)-6-deoxy-1-O-{[(2R,2'S,3a'R,4''S,5''R,6'S,7a'S)-5''-methyl-4''-{[(2E)-3-phenylprop-2-enoyl]oxy}decahydrodispiro[oxirane-2,3'-[1]benzofuran-2'',2''-pyran]-6'-yl]carbonyl}-beta-D-glucopyranose (CCD ID: 3K5) (formula: C₄₀H₅₂O₁₇).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
82	1	1	Total	C	O	0	0
			57	40	17		
82	CJ	1	Total	C	O	0	0
			57	40	17		

- Molecule 83 is PAROMOMYCIN (CCD ID: PAR) (formula: C₂₃H₄₅N₅O₁₄) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
83	1	1	Total 42	C 23	N 5	O 14	0	0
83	1	1	Total 42	C 23	N 5	O 14	0	0
83	1	1	Total 42	C 23	N 5	O 14	0	0
83	B	1	Total 42	C 23	N 5	O 14	0	0
83	AS	1	Total 42	C 23	N 5	O 14	0	0
83	AS	1	Total 42	C 23	N 5	O 14	0	0
83	AS	1	Total 42	C 23	N 5	O 14	0	0
83	CM	1	Total 42	C 23	N 5	O 14	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
84	AH	1	Total Zn 1 1	0	0
84	AK	1	Total Zn 1 1	0	0
84	AN	1	Total Zn 1 1	0	0
84	AP	1	Total Zn 1 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
84	AQ	1	Total	Zn	0	0
			1	1		
84	c	1	Total	Zn	0	0
			1	1		
84	f	1	Total	Zn	0	0
			1	1		
84	CB	1	Total	Zn	0	0
			1	1		
84	CE	1	Total	Zn	0	0
			1	1		
84	CK	1	Total	Zn	0	0
			1	1		
84	DQ	1	Total	Zn	0	0
			1	1		

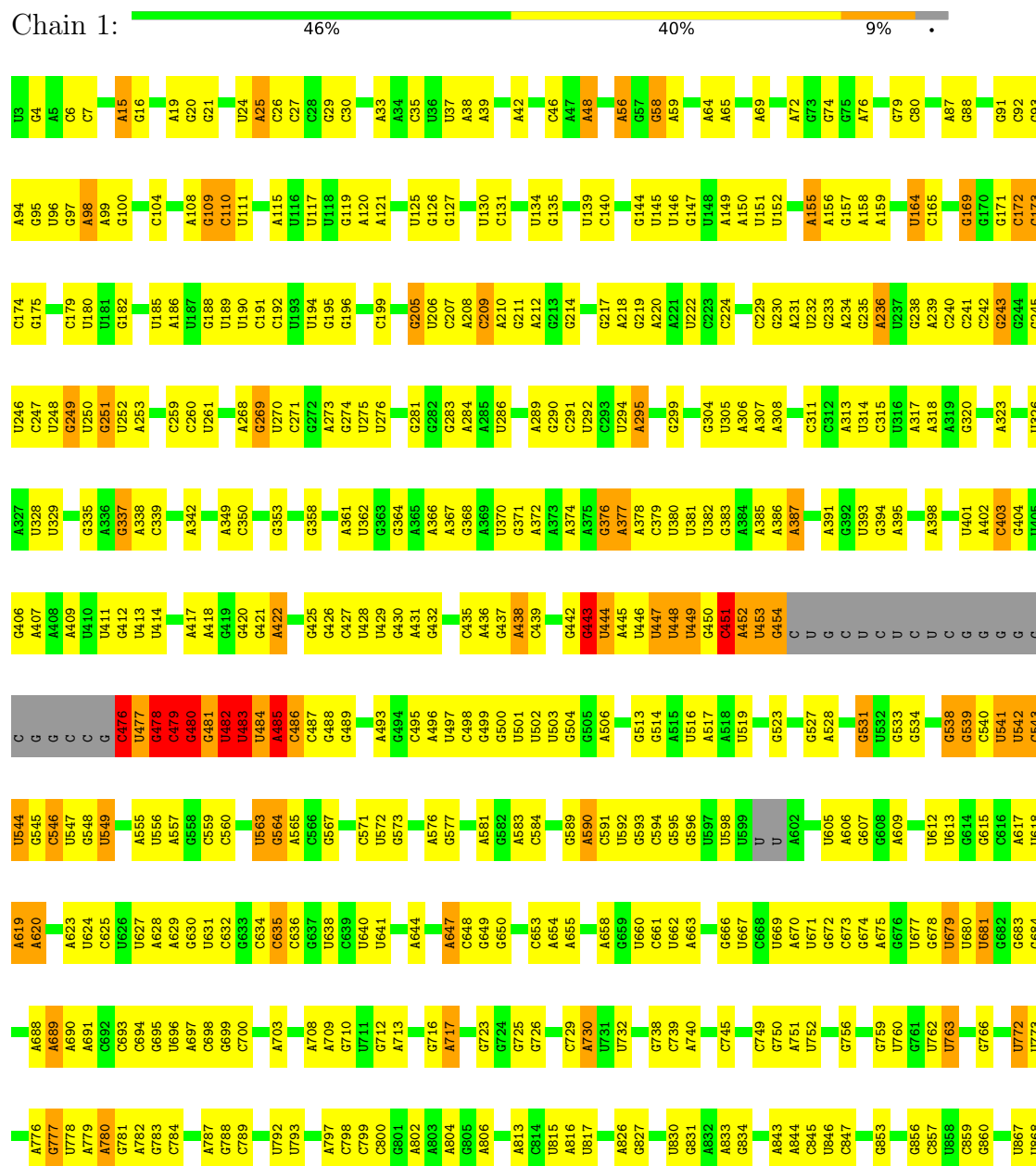
- Molecule 85 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
85	1	9	Total	O	0	0
			9	9		
85	4	3	Total	O	0	0
			3	3		
85	B	11	Total	O	0	0
			11	11		
85	G	1	Total	O	0	0
			1	1		
85	AS	20	Total	O	0	0
			20	20		
85	BQ	3	Total	O	0	0
			3	3		
85	BV	1	Total	O	0	0
			1	1		

3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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.

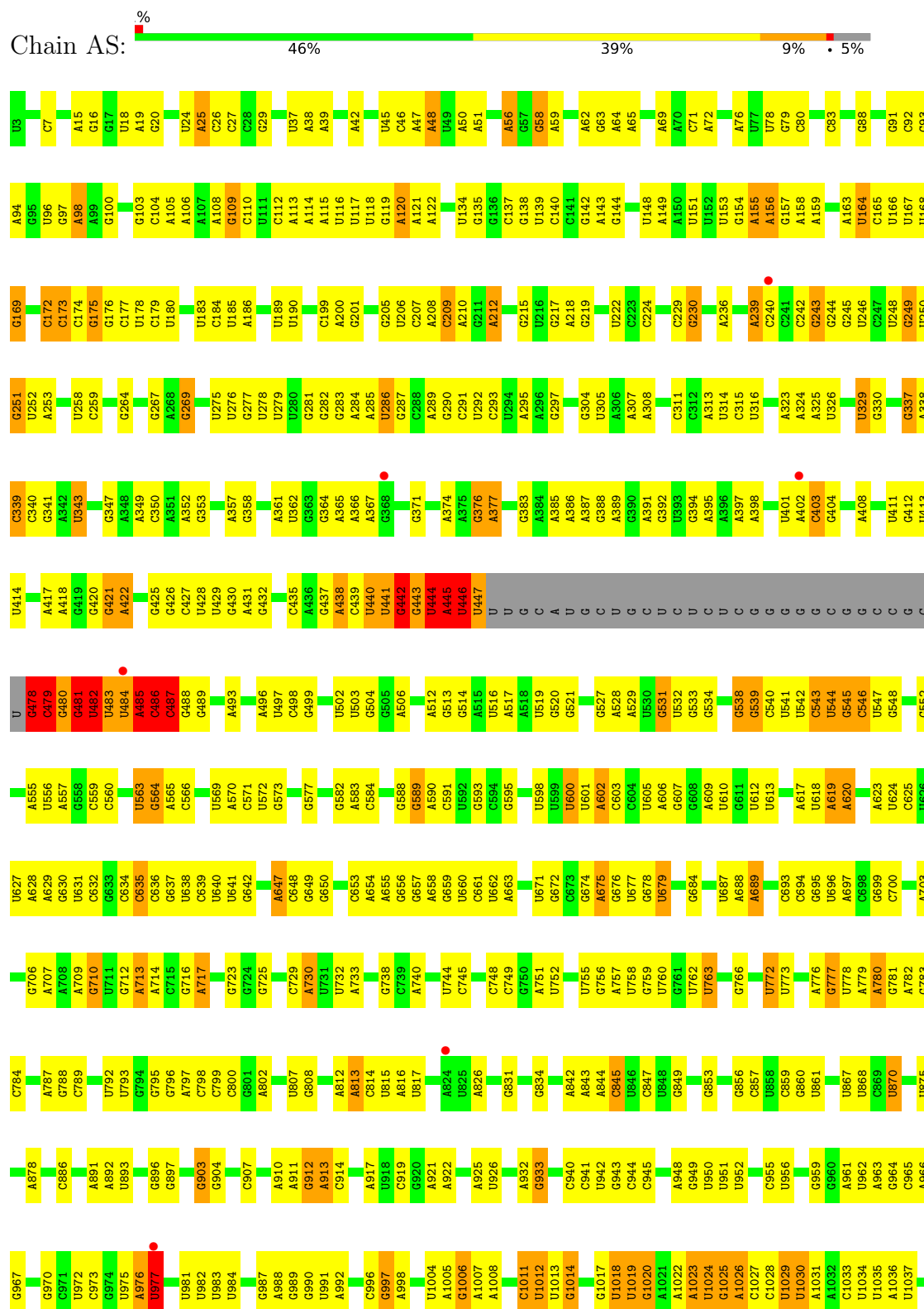
• Molecule 1: 25S ribosomal RNA





A3244	A3245	C3246	C3252	G3253	G3254	G3255	G3256	G3257	A3258	A3259	A3260	A3261	A3262	G3263	G3268	G3269	A3272	A3273	G3274	U3278	A3279	A3280	A3281	U3284	A3285	C3286	A3287	A3288	G3289	G3290	A3295	U3296	U3297	G3298	U3299	A3300	A3301	G3302	C3303	A3304	G3305	U3306	G3307	G3308	U3309	G3310	G3313	C3314	C3315	U3316	U3317	G3318	C3319																																																			
U	U	A3165	A3166	C3171	U3172	G3173	A3174	A3175	A3176	A3177	A3178	A3179	A3180	A3181	A3182	A3183	A3184	A3185	A3186	A3187	A3188	A3189	A3190	A3191	A3192	A3193	A3194	A3195	A3196	A3197	A3198	A3199	A3200	U3201	G3207	A3208	A3209	A3210	G3211	G3212	C3213	U3214	U3215	U3216	G3217	U3218	G3221	C3222	U3223	U3224	G3225	G3228	U3234	A3235	G3236	C3237	A3238	A3239	U3240	G3241	C3242	C3243	C3244																																									
U2131	A2136	U2137	G2138	G2139	U2140	A2146	U2147	U2148	U2149	G2155	A2156	G2157	A2158	C2159	G2163	U2164	U2167	U2171	G2172	C2173	A2175	G2176	G2177	U2181	U2182	U2183	G2184	A2185	U2186	U2187	U2188	A2191	A2192	U2195	G2196	A2197	A2198	G2199	A2200	A2201	A2202	U2203	U2204	G2205	A2206	A2207	A2210	A2211	G2216	A2220	A2221	A2222	G2227	A2233	A2234	G2235	U2236	A2237	U2238	A2239	C2240	C2241	U2244	G2245	U2246	U2247	A2248	A2249	G2250	G2251	G2254	G2255	G2256	A2257	A2258	U2259	U2260	G2261	G2262	G2266	A2273	U2276	A2277	G2285	A2286	A2287	U2288	A2291	U2292	G2293	U2312	G2313	U2314	U2318	A2397									
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- Molecule 1: 25S ribosomal RNA

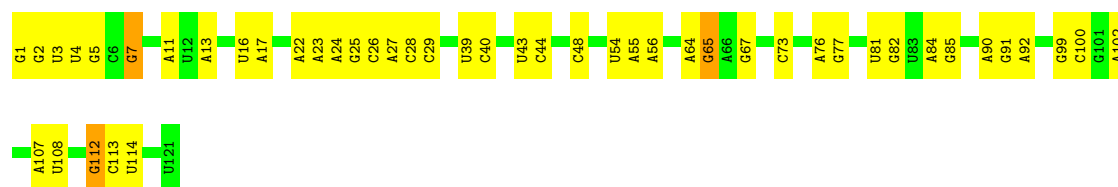


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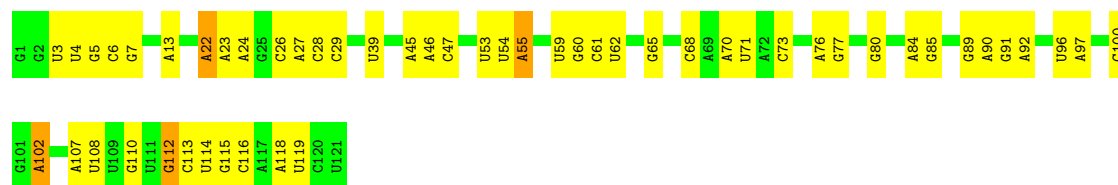
• Molecule 2: 5S ribosomal RNA

Chain 3:  61% 36% .



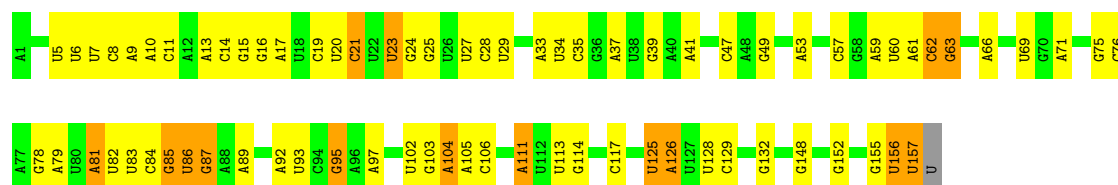
• Molecule 2: 5S ribosomal RNA

Chain AT:  57% 40% .



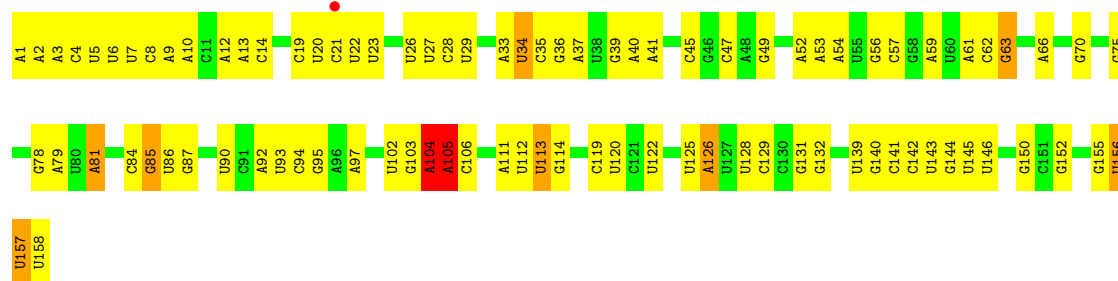
• Molecule 3: 5.8S ribosomal RNA

Chain 4:  53% 37% 9% .



• Molecule 3: 5.8S ribosomal RNA

Chain AU:  43% 51% 5% .



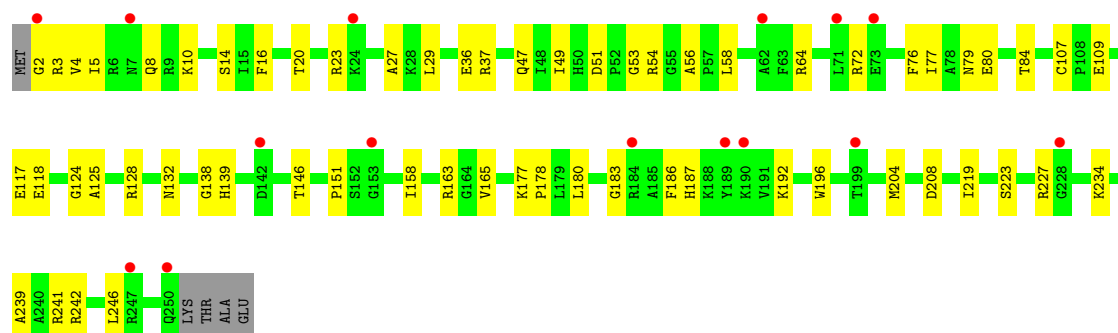
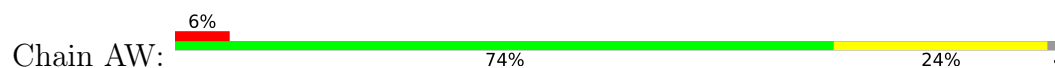
• Molecule 4: 60S ribosomal protein L2-B

Chain j:  75% 23% .

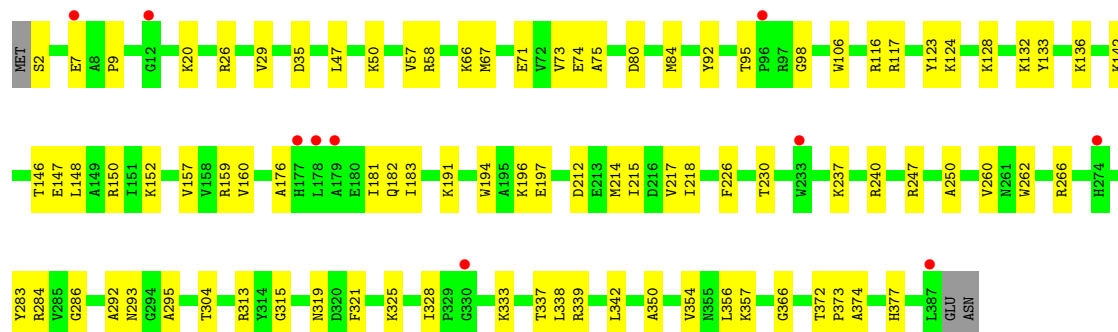
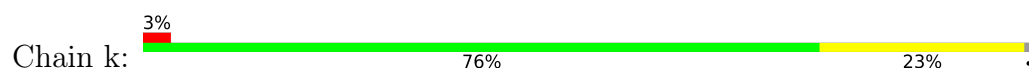




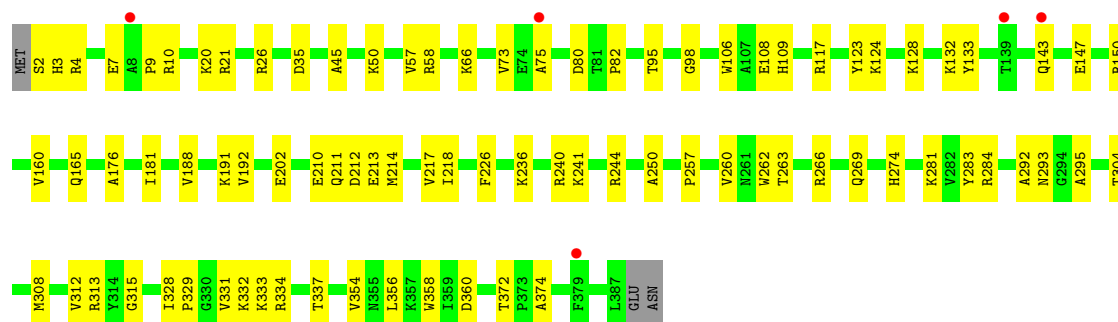
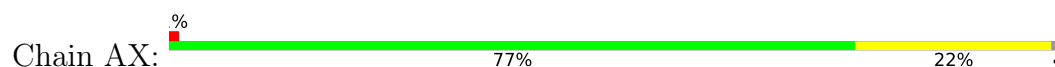
• Molecule 4: 60S ribosomal protein L2-B



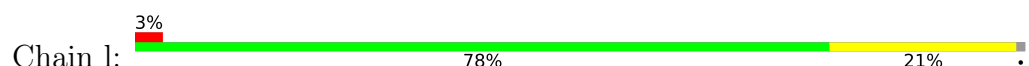
• Molecule 5: 60S ribosomal protein L3

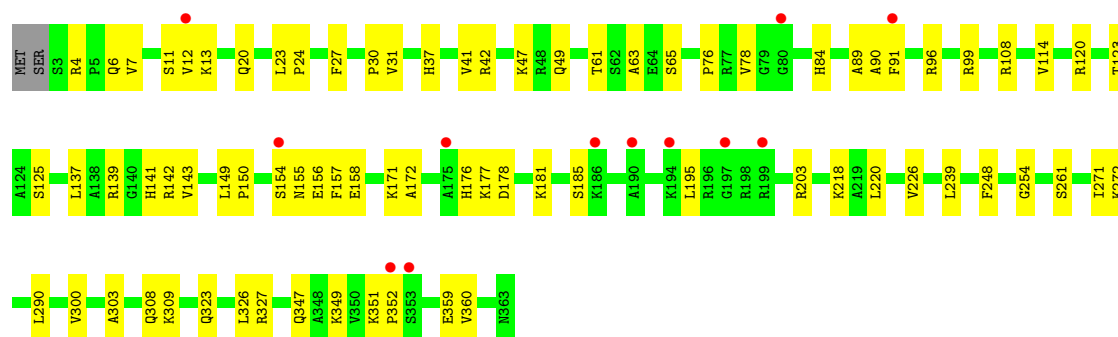


• Molecule 5: 60S ribosomal protein L3

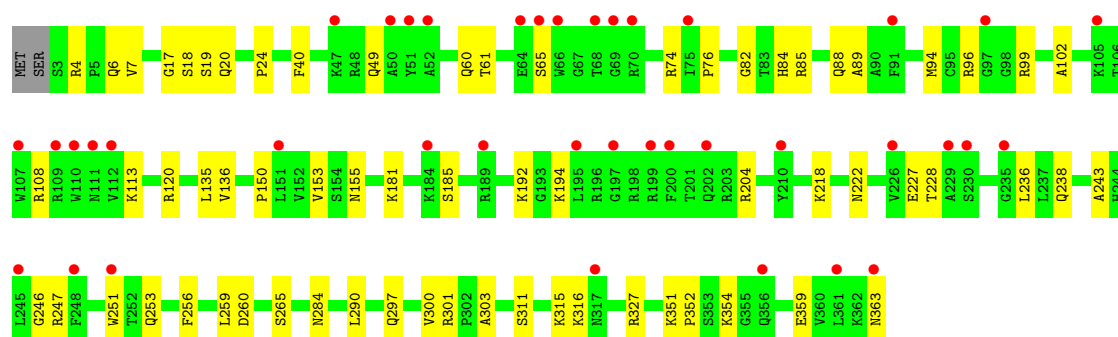
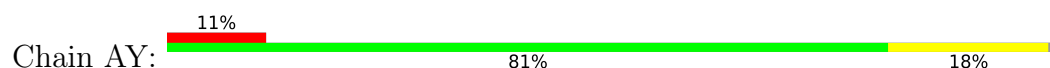


• Molecule 6: 60S ribosomal protein L4-B

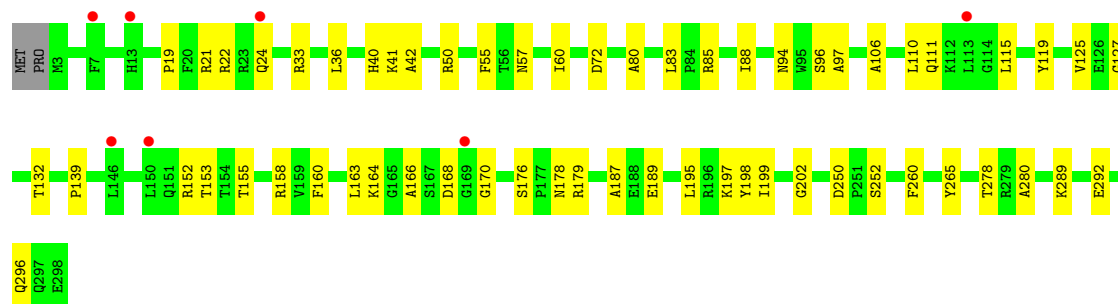
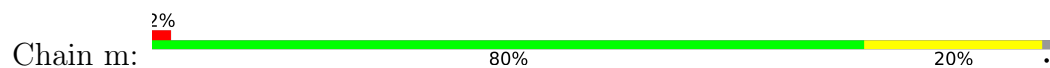




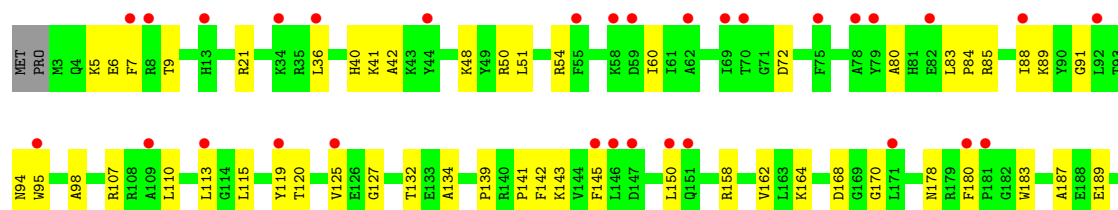
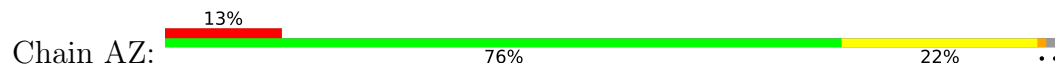
• Molecule 6: 60S ribosomal protein L4-B



• Molecule 7: Uncharacterized protein CaJ7.0206



• Molecule 7: Uncharacterized protein CaJ7.0206

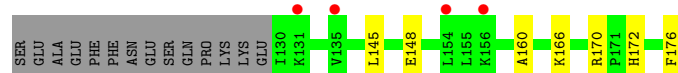




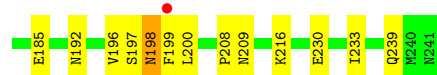
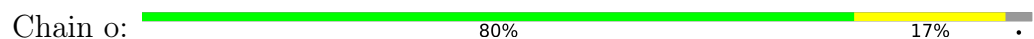
• Molecule 8: 60S ribosomal protein L6



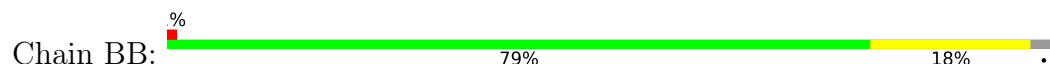
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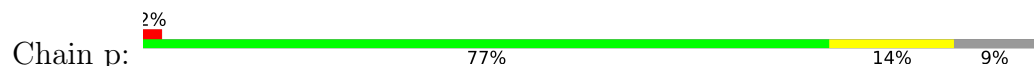
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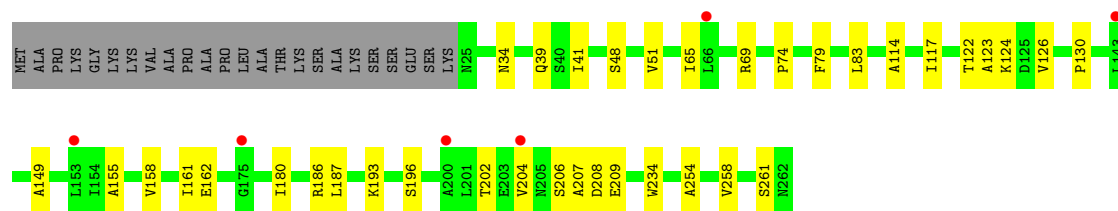


• Molecule 9: 60S ribosomal protein L7-A

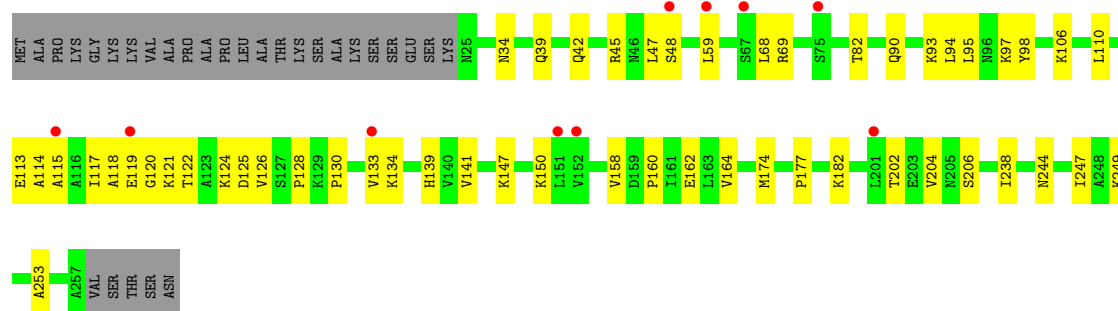


• Molecule 10: 60S ribosomal protein L8

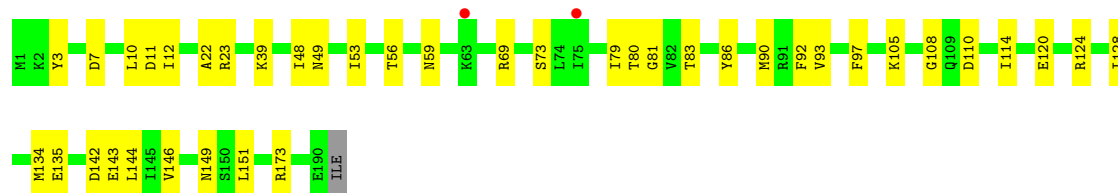
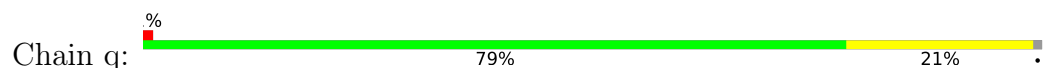




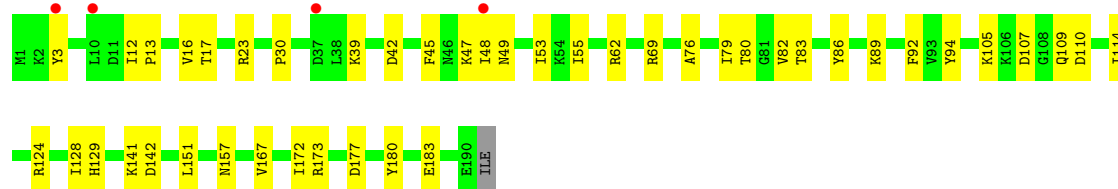
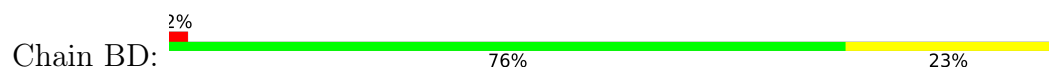
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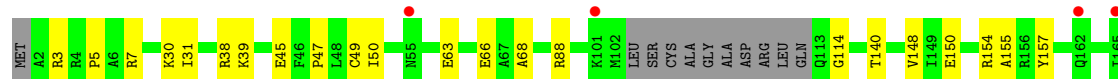
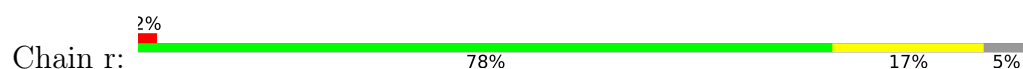
• Molecule 11: 60S ribosomal protein L9-B

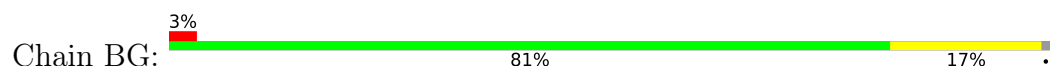


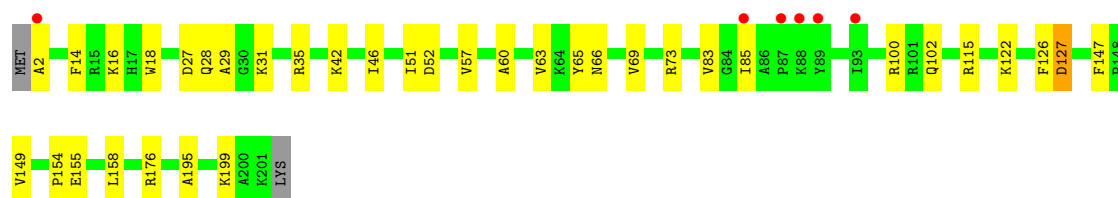
• Molecule 11: 60S ribosomal protein L9-B



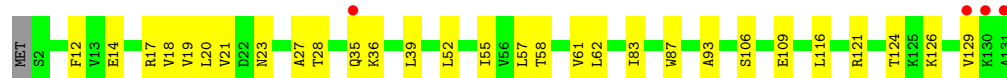
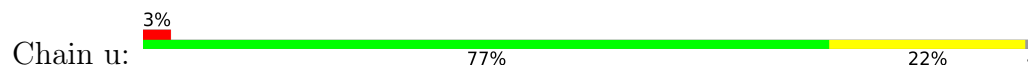
• Molecule 12: 60S ribosomal protein L10







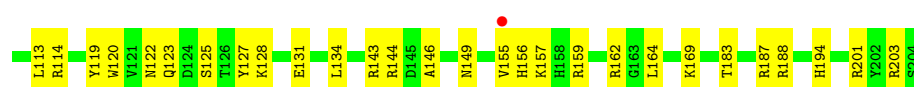
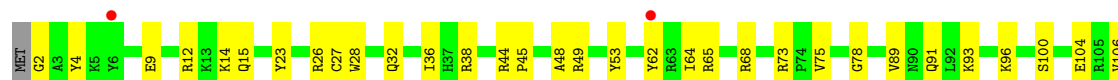
- Molecule 15: 60S ribosomal protein L14-B



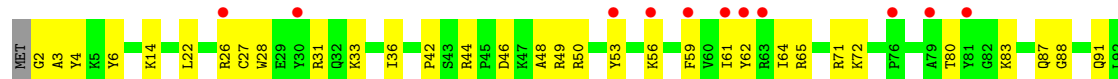
- Molecule 15: 60S ribosomal protein L14-B



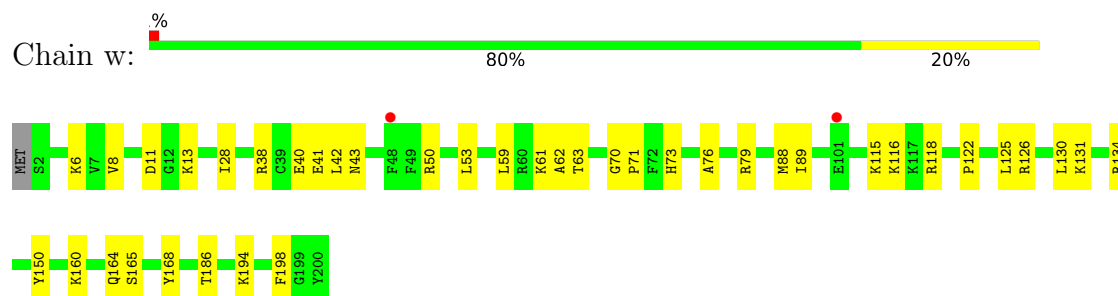
- Molecule 16: 60S ribosomal protein L15-A



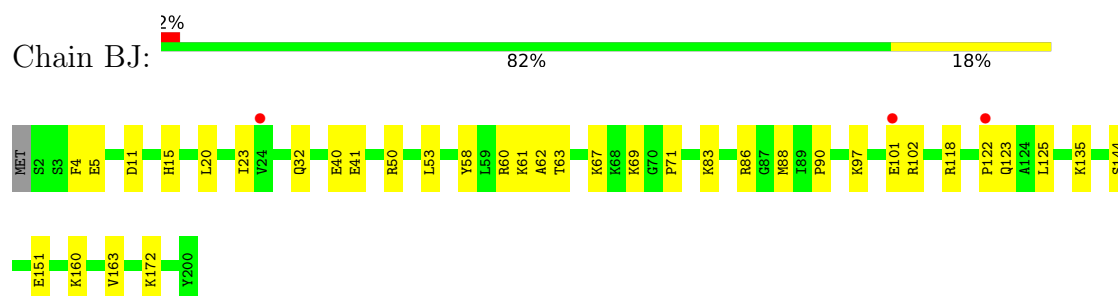
- Molecule 16: 60S ribosomal protein L15-A



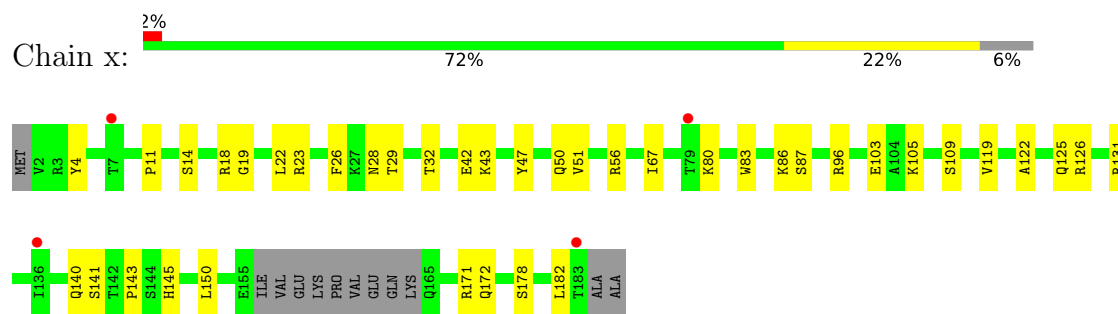
- Molecule 17: Ribosomal protein L13



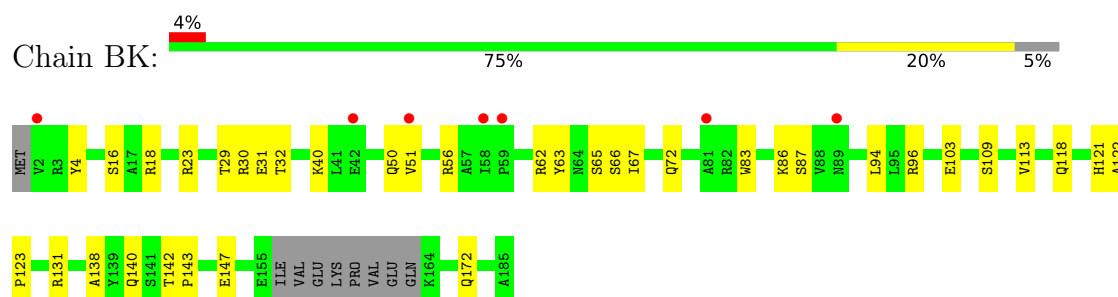
- Molecule 17: Ribosomal protein L13



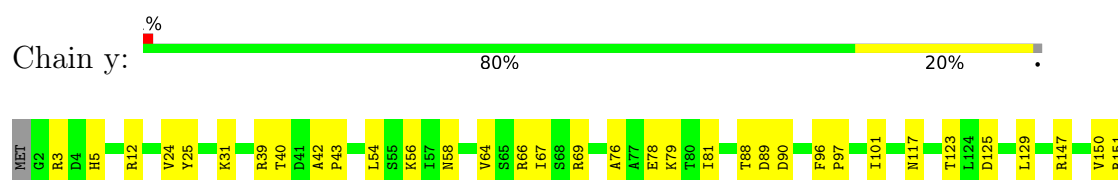
- Molecule 18: Ribosomal protein L22



- Molecule 18: Ribosomal protein L22

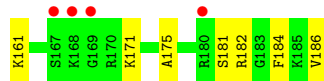
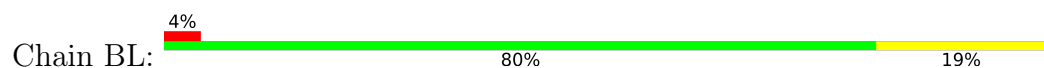


- Molecule 19: 60S ribosomal protein L18-A

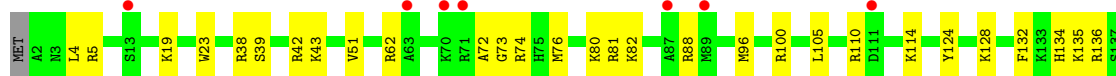
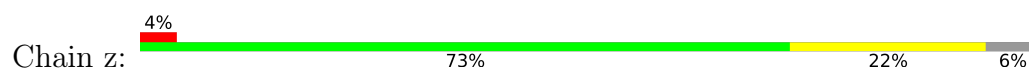




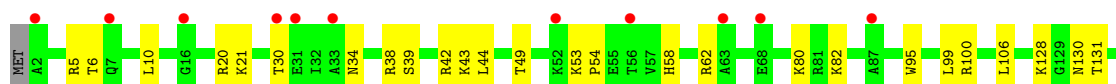
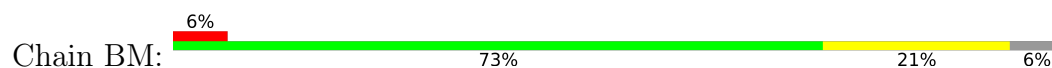
- Molecule 19: 60S ribosomal protein L18-A



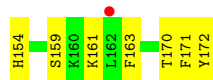
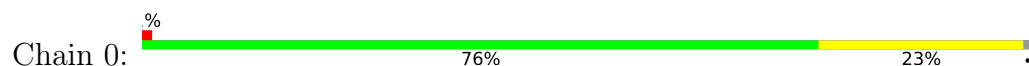
- Molecule 20: 60S ribosomal protein L19-A



- Molecule 20: 60S ribosomal protein L19-A

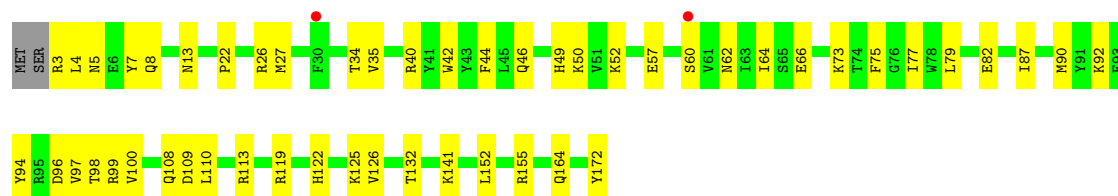


- Molecule 21: 60S ribosomal protein L20

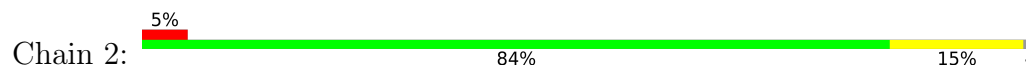


- Molecule 21: 60S ribosomal protein L20

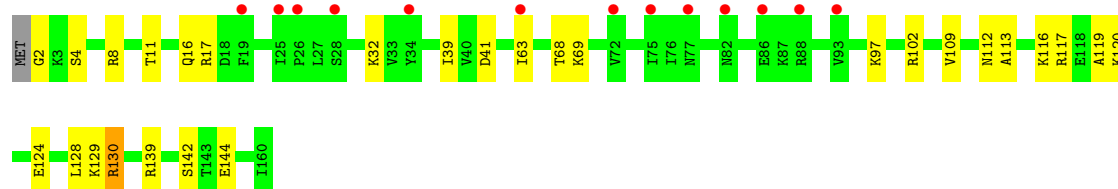
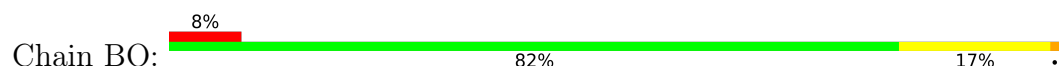




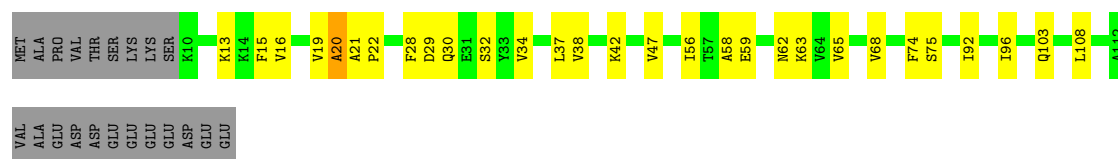
- Molecule 22: 60S ribosomal protein L21-A



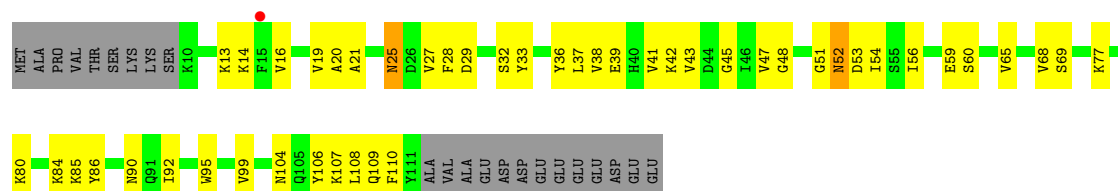
- Molecule 22: 60S ribosomal protein L21-A



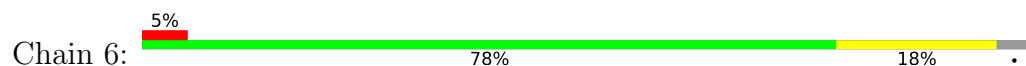
- Molecule 23: 60S ribosomal protein L22-B

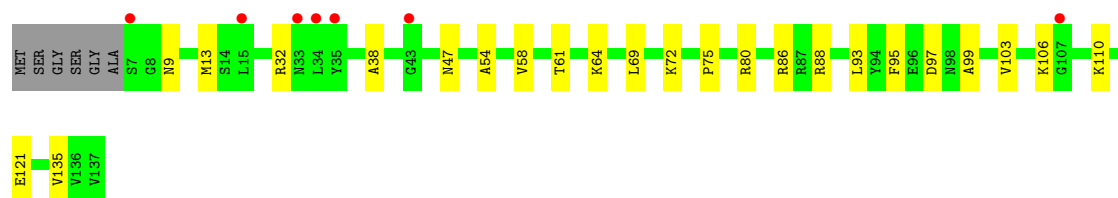


- Molecule 23: 60S ribosomal protein L22-B

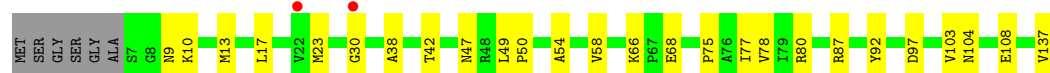
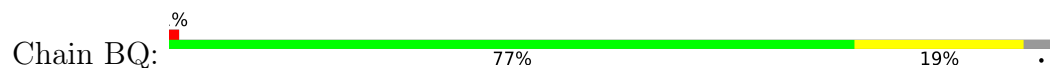


- Molecule 24: 60S ribosomal protein L23-A

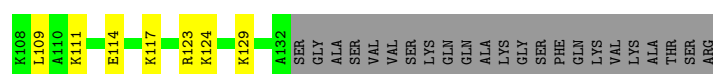
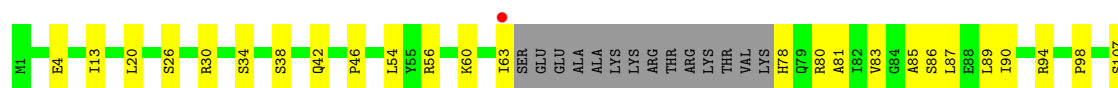




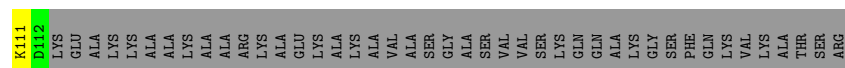
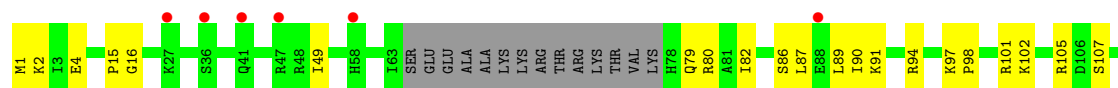
- Molecule 24: 60S ribosomal protein L23-A



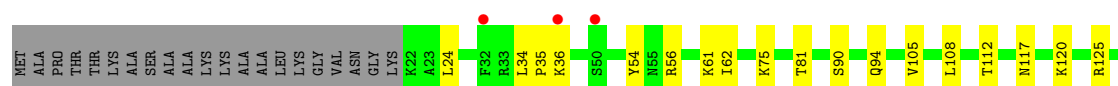
- Molecule 25: 60S ribosomal protein L24-A



- Molecule 25: 60S ribosomal protein L24-A



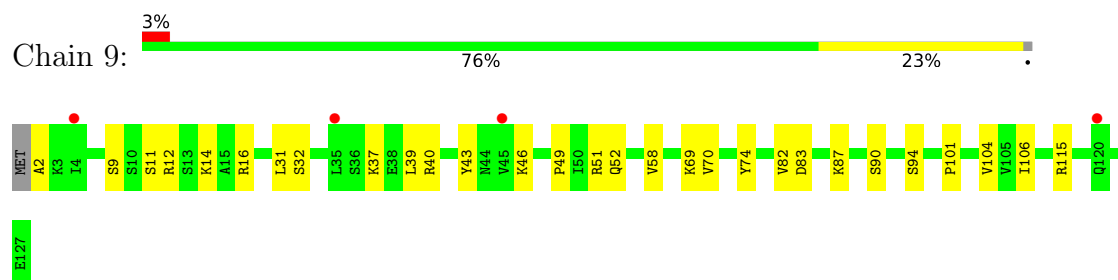
- Molecule 26: 60S ribosomal protein L25



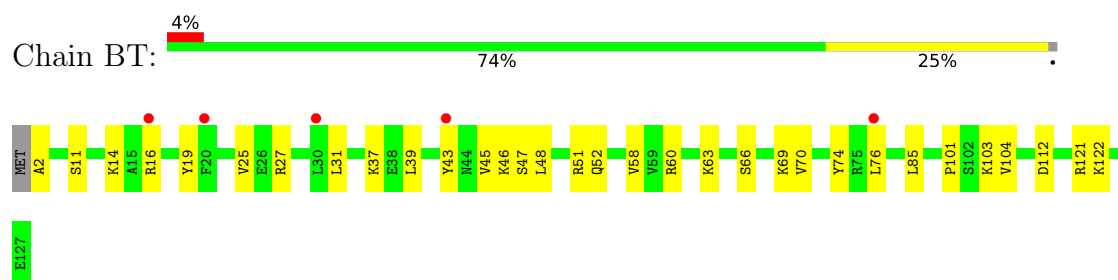
- Molecule 26: 60S ribosomal protein L25



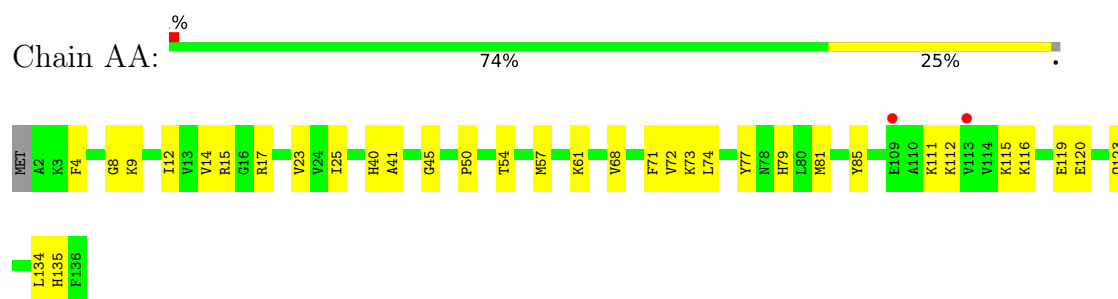
- Molecule 27: Ribosomal protein L24



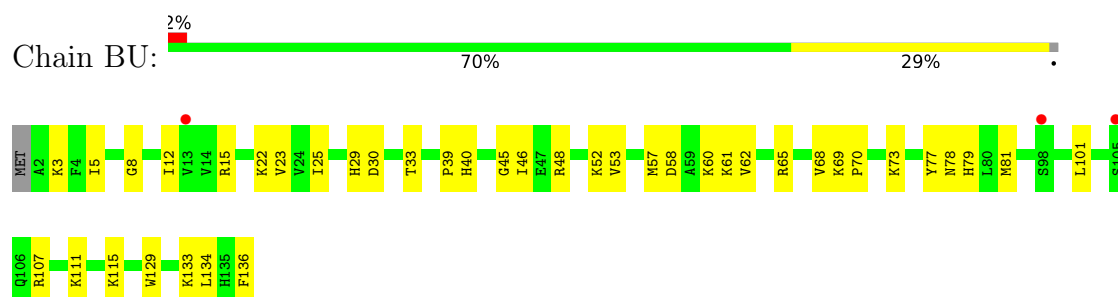
- Molecule 27: Ribosomal protein L24



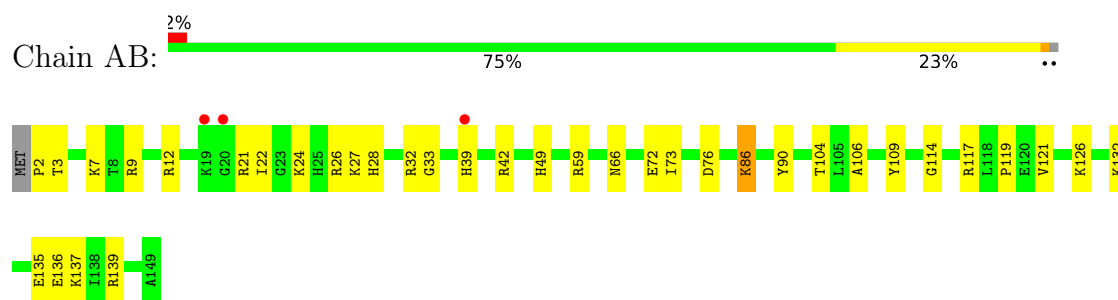
- Molecule 28: 60S ribosomal protein L27



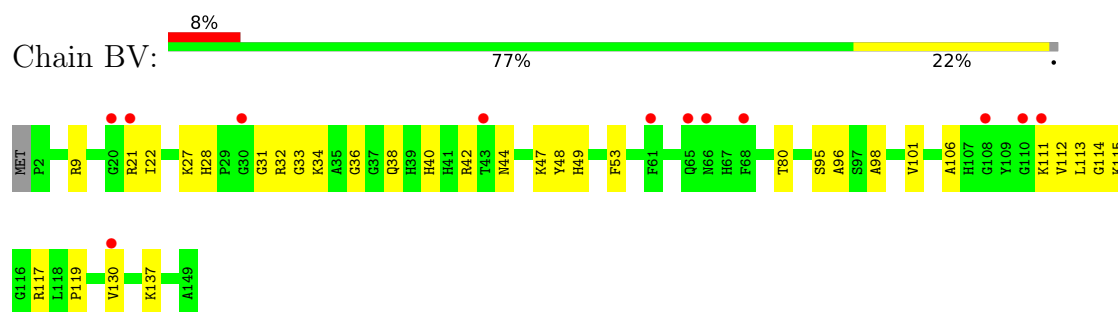
- Molecule 28: 60S ribosomal protein L27



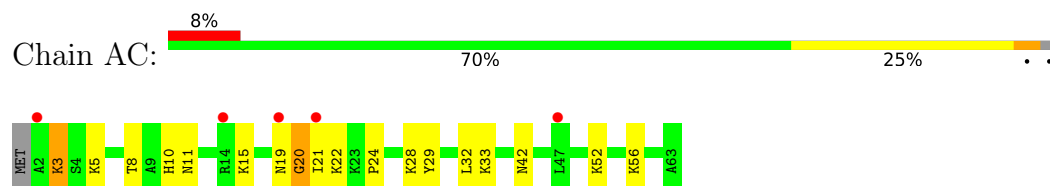
- Molecule 29: 60S ribosomal protein L28



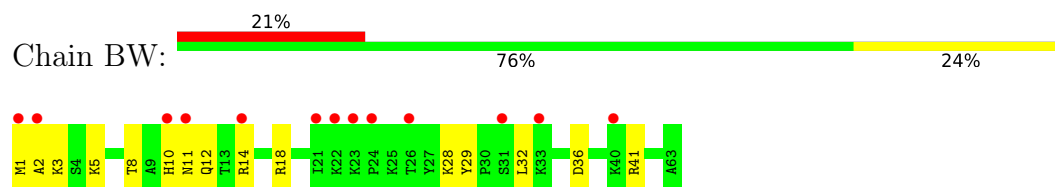
- Molecule 29: 60S ribosomal protein L28



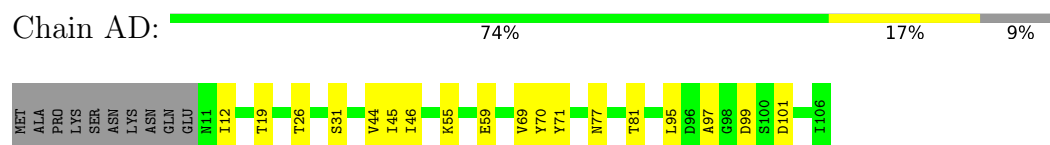
- Molecule 30: 60S ribosomal protein L29



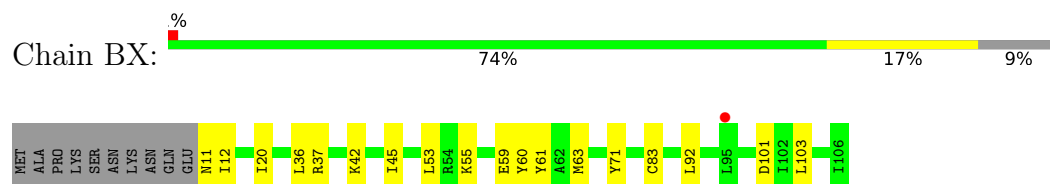
- Molecule 30: 60S ribosomal protein L29



- Molecule 31: 60S ribosomal protein L30

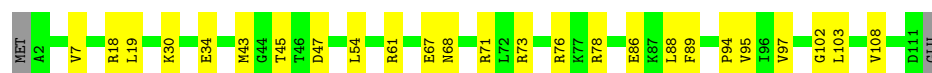


- Molecule 31: 60S ribosomal protein L30



- Molecule 32: 60S ribosomal protein L31-B

Chain AE:  76% 22% .



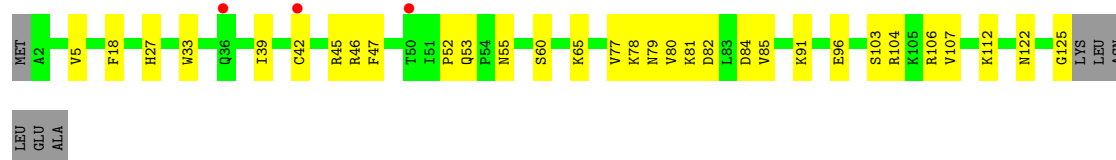
- Molecule 32: 60S ribosomal protein L31-B

Chain BY:  3% 76% 21% .



- Molecule 33: 60S ribosomal protein L32

Chain AF:  2% 71% 24% 5%



- Molecule 33: 60S ribosomal protein L32

Chain BZ:  5% 70% 25% 5%



- Molecule 34: 60S ribosomal protein L33-A

Chain AG:  % 77% 22% .

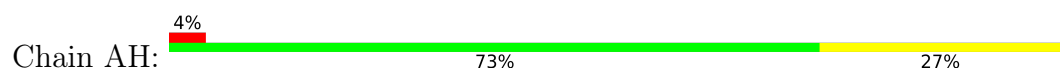


- Molecule 34: 60S ribosomal protein L33-A

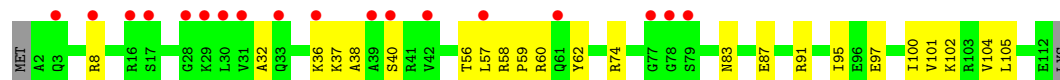
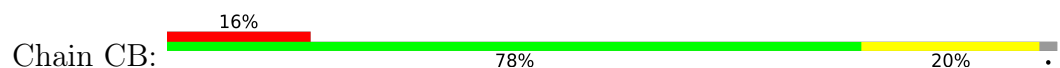
Chain CA:  3% 81% 18% .



- Molecule 35: 60S ribosomal protein L34-B



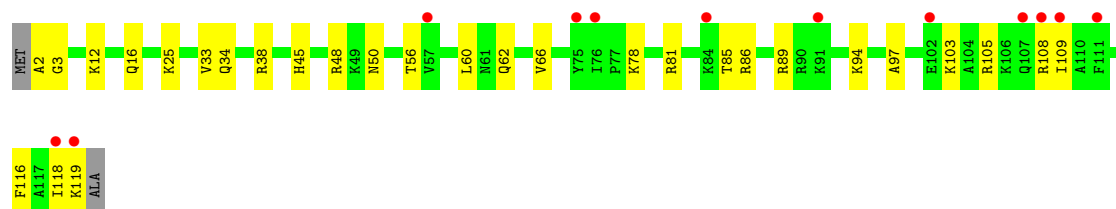
- Molecule 35: 60S ribosomal protein L34-B



- Molecule 36: Ribosomal protein L29



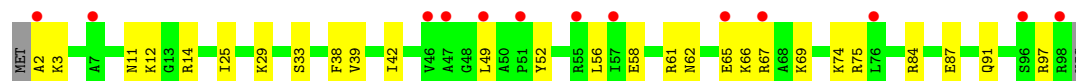
- Molecule 36: Ribosomal protein L29



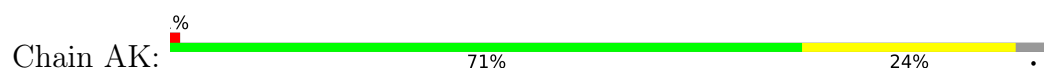
- Molecule 37: 60S ribosomal protein L36



- Molecule 37: 60S ribosomal protein L36

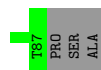


- Molecule 38: 60S ribosomal protein L37-B

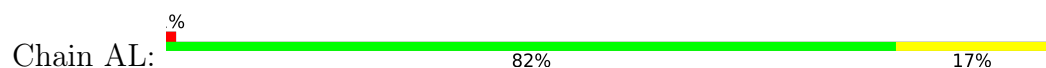




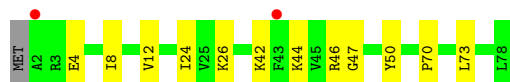
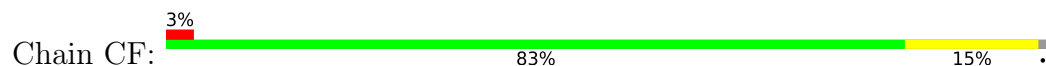
- Molecule 38: 60S ribosomal protein L37-B



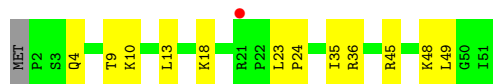
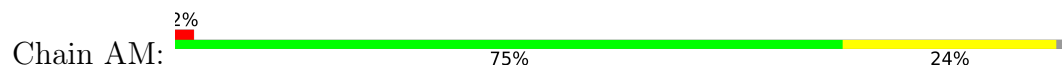
- Molecule 39: 60S ribosomal protein L38



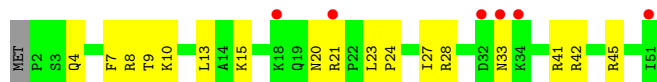
- Molecule 39: 60S ribosomal protein L38



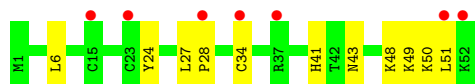
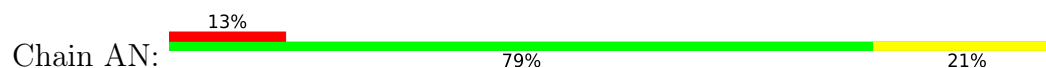
- Molecule 40: 60S ribosomal protein L39



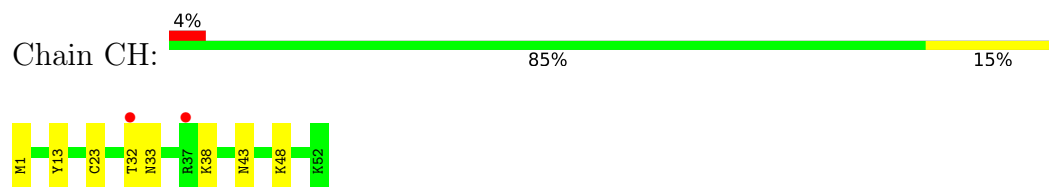
- Molecule 40: 60S ribosomal protein L39



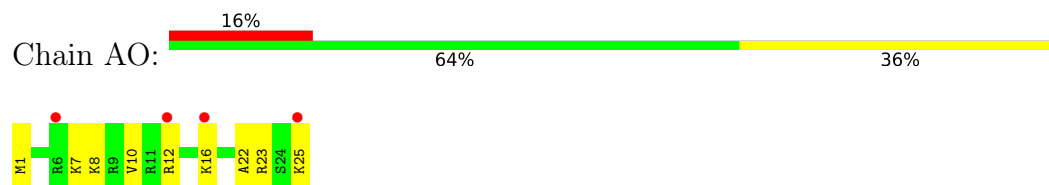
- Molecule 41: 60S ribosomal protein L40-B



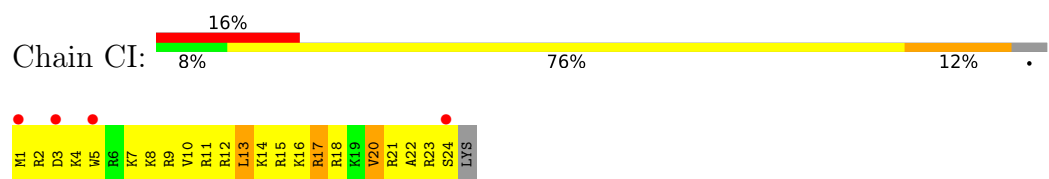
- Molecule 41: 60S ribosomal protein L40-B



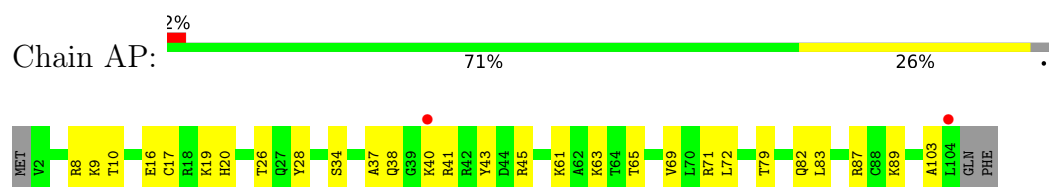
- Molecule 42: 60S ribosomal protein L41



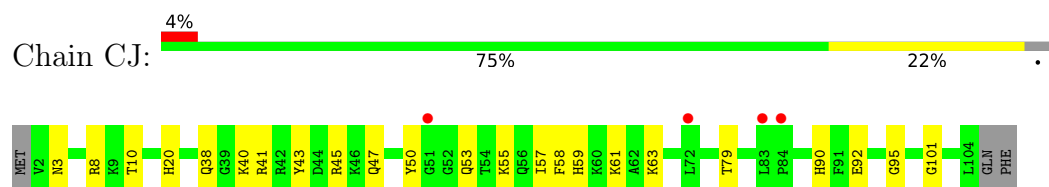
- Molecule 42: 60S ribosomal protein L41



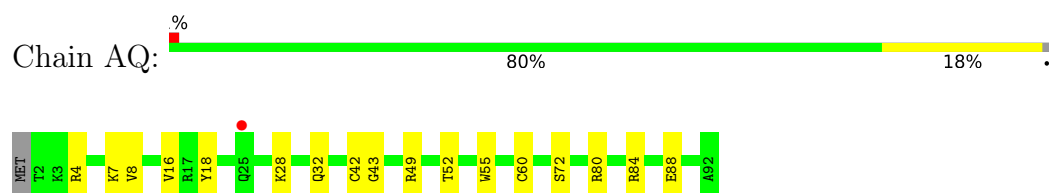
- Molecule 43: 60S ribosomal protein L42-B



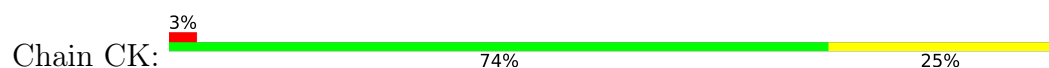
- Molecule 43: 60S ribosomal protein L42-B

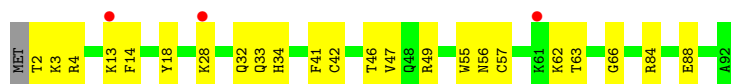


- Molecule 44: 60S ribosomal protein L43-A

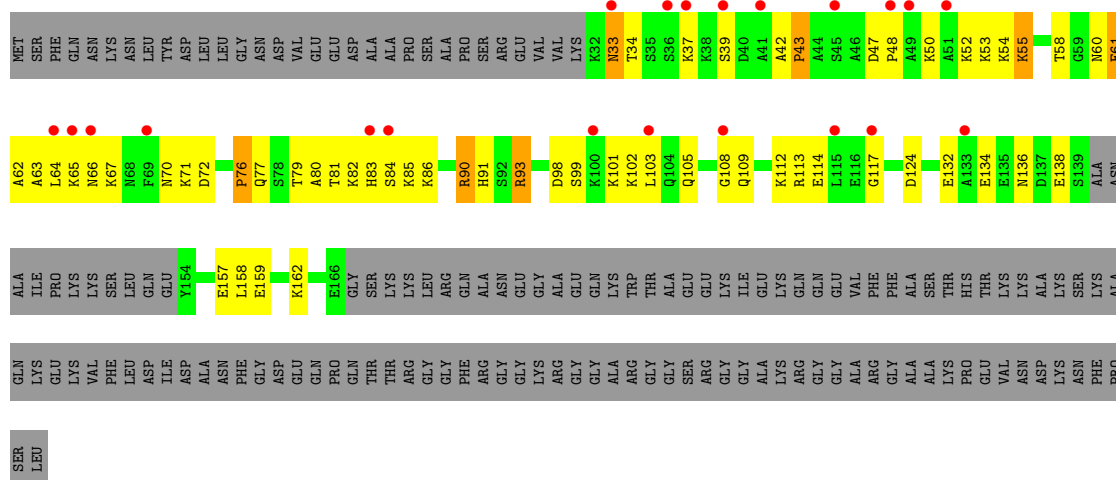


- Molecule 44: 60S ribosomal protein L43-A

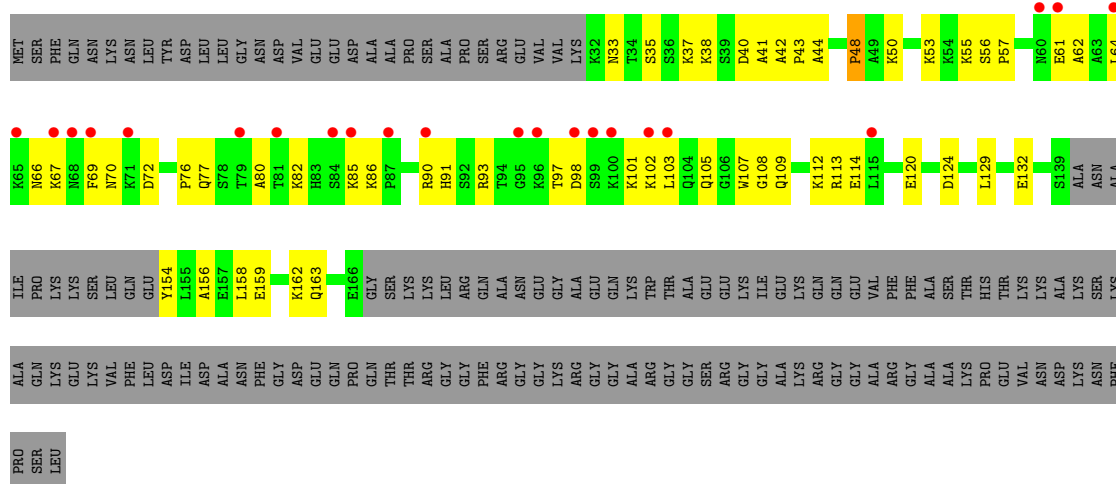
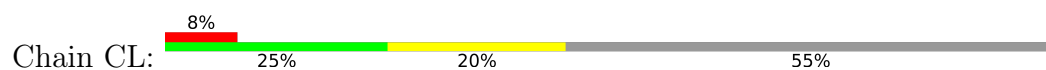




- Molecule 45: 60S ribosomal protein CAALFM_C304810CA



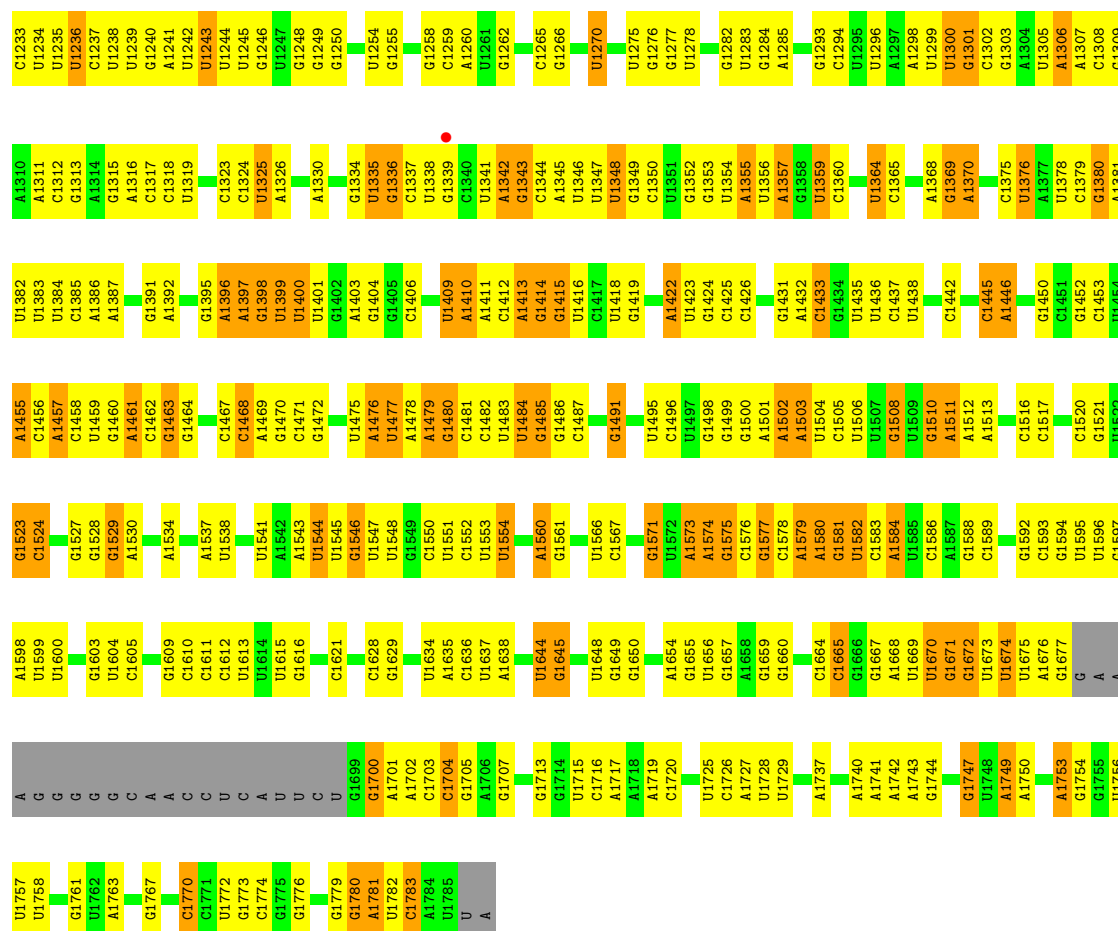
- Molecule 45: 60S ribosomal protein CAALFM_C304810CA



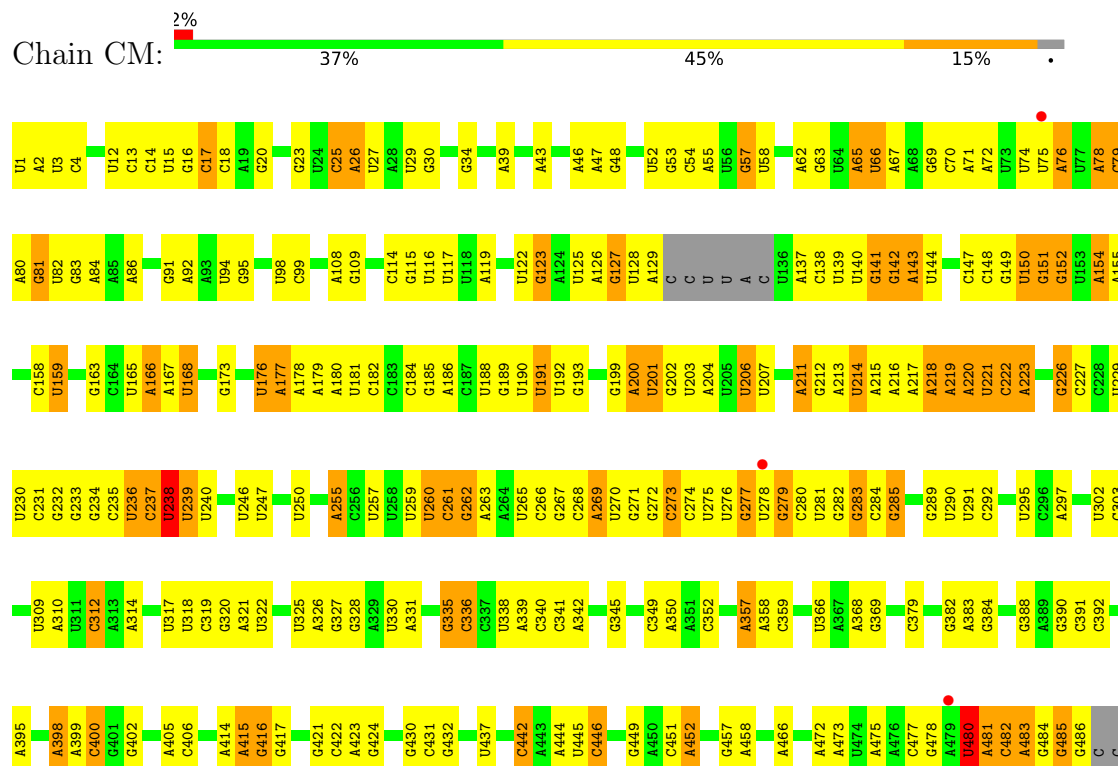
- Molecule 46: 18S ribosomal RNA



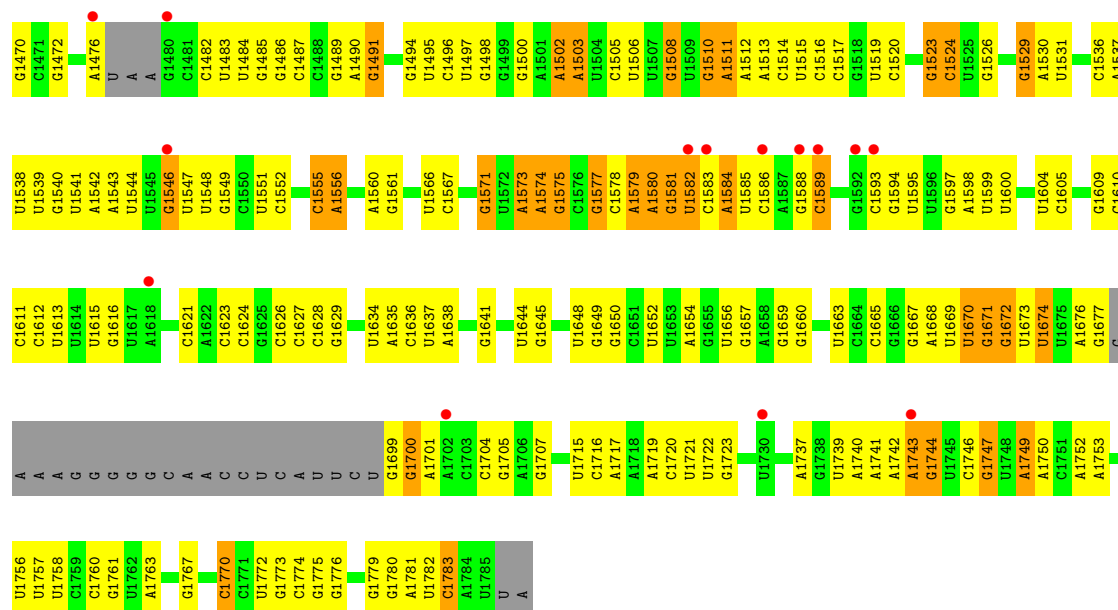
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G1157	A1074	A1004	A940	A	6639	U556	C	A405	U317	U230	A154	A84
C1158	A1075	A1005	A941	U	6644	C557	C	C406	U318	C231	A155	A85
C1159	A1076	U920	U842	U	6644	U558	U	C413	C319	G232	U156	A86
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G1161	A1078	A1008	A844	A	6648	G560	U	A415	A321	G234	C158	
	U1080	A1011	U645	U	6648	U561	U	A416	U325	C235	U159	A92
G1164	C1081	A1012	U646	U	6649	G562	G	G417	A115	U236	A93	A93
C1165	A926	C1013	A847	G	6650	C563	G	G418	G161	C237	G161	U94
U1166	A927	U1016	A848	C	6652	C564	G	A418	G327	U238	G96	G95
U1167	G1085	G1017	G853	G	6653	A565	U	G421	G328	G241	U165	C97
G1168	G1086	U1018	G854	A	6654	G566	C	G422	A329	U166	A166	U96
A1169	G1087	C1018	6655	A	6655	G569	U	G423	U330	U167	A167	C99
U1170	G1094	A1021	C720	C	6656	C573	U	G424	U333	U168	U168	A103
A1179	G1099	C1022	A722	A	6656	G574	A	G425	G334	U169	G173	A104
G1180	U1100	U1023	G723	U	6656	G575	U	A426	G335	C174	C174	A105
A1181	U1101	G1025	C726	C	6656	U576	U	G430	C336	U175	U175	
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G1183	U1102	G1027	A796	U	6656	U578	U	G432	U338	U177	A177	G109
G1184	G1103	U1028	U728	U	6656	U579	U	G433	A339	U178	A178	U110
G1185	G1104	U945	U729	U	6656	U580	U	U437	C340	U179	A179	
G1186	U1105	U946	G799	U	6656	U583	U	U438	A342	C261	A180	G114
A1187	C1106	C947	U733	G	6656	G584	U	U439	A343	G262	G115	G115
			U734	A	6656	C585	U	C442	G345	U116	U116	U116
			U735	U	6656	G586	U	C443	G346	U117	U117	U117
			U736	U	6656	U587	U	C444	G347	U118	U118	U118
			U737	G	6656	C588	U	U445	U348	U119	U119	A119
			U738	G	6656	G589	U	U446	C349	U120	U120	U120
			U739	U	6656	A590	U	C447	A350	U121	U121	U121
			A740	A	6656	A591	U	C448	C352	U122	U122	U122
			A741	U	6656	A592	U	C449	A353	G123	G123	G123
			A742	U	6656	G593	U	C450	A354	A124	A124	A124
			A743	U	6656	A594	U	C451	A357	U125	U125	U125
			A744	U	6656	A595	U	C452	A358	A126	A126	A126
			A745	U	6656	A596	U	C453	C359	G127	G127	G127
			A746	U	6656	A597	U	C454	U366	U128	U128	U128
			A747	U	6656	U598	U	A458	A367	A129	A129	A129
			A748	U	6656	A603	U	A459	A376	C130	C130	C130
			A749	U	6656	A604	U	A460	C380	C	C	C
			A750	U	6656	A605	U	A461	G381	U	U	U
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			A755	U	6656	A619	U	A466	A215	C138	C138	C138
			A756	U	6656	A620	U	A467	A216	U139	U139	U139
			A757	U	6656	A621	U	A468	A217	U140	U140	U140
			A758	U	6656	U691	U	A469	G388	G141	G141	G141
			A759	U	6656	U692	U	A470	A391	A142	A142	A142
			A760	U	6656	U693	U	A471	A220	A143	A143	A143
			A761	U	6656	U694	U	A472	U221	U144	U144	U144
			A762	U	6656	U695	U	A473	A218	A145	A145	A145
			A763	U	6656	U696	U	A474	A219	U146	U146	U146
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			A766	U	6656	U699	U	A477	A222	A149	A149	A149
			A767	U	6656	U701	U	A478	A223	C140	C140	C140
			A768	U	6656	U702	U	A479	A224	U150	U150	U150
			A769	U	6656	U703	U	A480	A225	G151	G151	G151
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			A821	U	6656	U755	U	A532	A277			
			A822	U	6656	U756	U	A533	A278			
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			A824	U	6656	U758	U	A535	A280			
			A825	U	6656	U759	U	A536	A281			
			A826	U	6656	U760	U	A537	A282			
			A827	U	6656	U761	U	A538	A283			
			A828	U	6656	U762	U	A539	A284			
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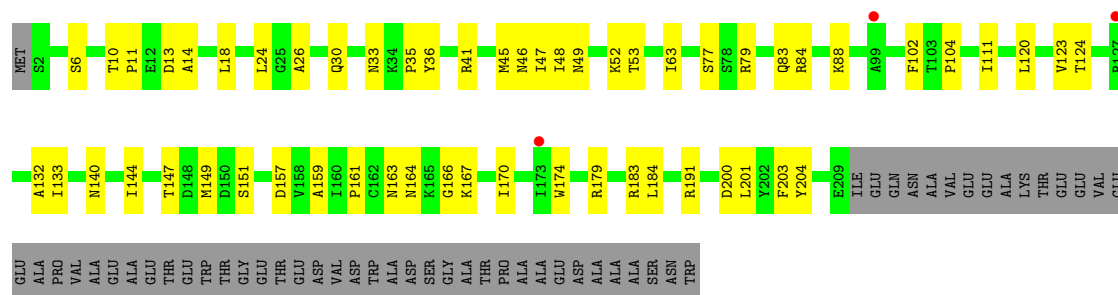
Molecule 46: 18S ribosomal RNA



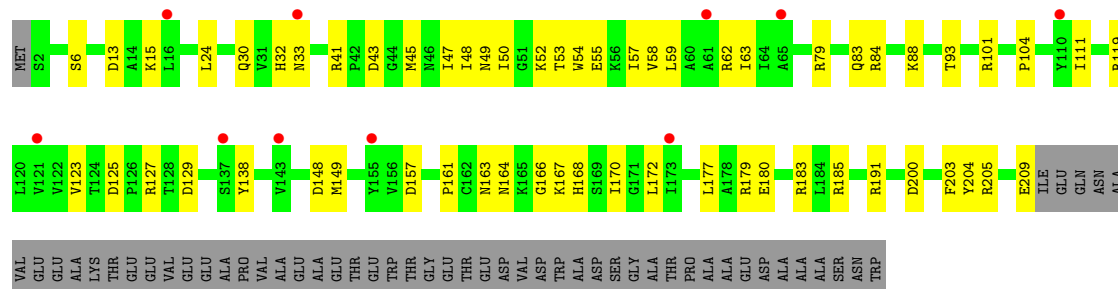
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G1402	G1336	G1265	C1200	C1133	G1059	C985	A908	C837	U764	C698	C636	G559	U
U1409	G1339	C1266	C1201	G1134	C1060	A986	A909	C838	U765	U699	U637	G560	U
A1410	C1340	U1270	G1203	G1135	C1062	G987	A910	U839	U766	G700	U638	U561	U
A1413	U1341	U1273	C1204	G1138	C1063	A988	A911	A840	G767	G701	G639	G562	G
G1414	A1342	G1273	C1205	G1139	C1064	U989	U912	A841	C768	G702	G640	C563	G
G1415	G1343	U1274	A1206	G1140	U1065	A990	U913	U842	C770	U703	G641	C564	G
U1416	C1344	U1275	C1207	C1141	U1066	C991	A914	A844	G771	U704	C642	A565	U
C1417	A1345	U1276	A1208	A1142	C1067	C992	U915	U845	A772	C706	U644	G566	U
U1418	U1346	G1276	C1209	C1143	G1068	U997	C916	U846	U773	G707	G645	C573	U499
U1421	U1347	G1277	U1210	C1144	U1069	A998	U917	U847	U774	A708	G646	G574	U500
U1422	U1348	U1278	A1211	A1145	A1071	U1002	A918	A848	A775	U709	C647	G575	U502
U1423	G1349	G1279	C1212	C1146	A1072	U1003	U920	U849	U778	U710	U648	U576	A503
U1424	C1350	U1280	G1213	C1147	A1073	U1004	G921	A850	U779	U711	G649	A577	A504
G1425	U1351	A1281	C1214	A1148	U1074	A1004	C922	G851	U779	A712	U650	A578	U505
C1426	G1352	G1282	A1215	A1149	G1085	A1005	G923	G852	U784	U713	C651	U579	U506
U1427	U1353	U1283	U1216	G1150	G1086	C1006	A924	G853	U785	G714	C652	G507	G507
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U1436	G1371	U1296	C1227	C1159	U1084	G1017	U933	G861	U798	A722	C	U515	U515
C1437	U1364	A1297	G1228	U1160	G1086	G1020	C934	G863	G799	G724	U	A518	A518
U1441	C1365	U1298	A1229	G1161	U1091	A1021	A937	C869	C802	A725	U	A519	A519
U1442	A1368	U1299	G1230	A1162	G1092	A1024	A940	G870	U804	C726	U	U520	U520
G1443	G1369	U1300	C1231	G1163	G1093	G1025	U944	C871	U805	U727	G	G521	G521
C1444	A1370	C1302	U1232	G1164	C1094	G1026	U945	A872	U806	U729	U	A524	A524
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U1447	A1374	U1305	U1235	A1168	G1099	U1029	C947	C875	U816	U735	C	A527	A527
G1448	C1375	U1306	U1236	A1169	U1099	C1030	A948	A876	U817	U736	U	C528	C528
C1449	U1376	A1307	C1237	U1170	U1105	G1031	U949	G877	C812	G737	U	C529	C529
U1450	A1377	C1308	U1238	U1171	C1106	U1032	U950	U878	U813	A604	A	U530	U530
G1451	U1378	G1309	G1239	G1172	C1107	U1033	A951	U879	A814	U605	U	A533	A533
U1452	C1379	A1310	G1240	A1173	A1110	U1034	A952	C880	U815	U609	U	C534	C534
U1453	G1380	C1312	U1242	C1177	G1111	G1035	U953	U881	U816	U610	U	G536	G536
U1454	A1381	G1313	U1243	A1178	C1112	U1036	A954	C882	U817	G611	U	A536	A536
A1455	U1382	A1314	U1244	C1179	U1114	U1039	A955	A883	G819	G614	U	G537	G537
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A1457	U1384	A1316	G1246	A1181	A1116	U1043	A963	C886	U821	A745	U	A539	A539
C1458	C1385	C1317	U1247	C1182	A1117	U1044	A964	C887	G822	G746	U	A617	A617
U1459	A1387	U1319	G1248	G1183	A1118	U1045	G965	U888	G823	A747	U	A618	A618
A1460	G1388	A1322	C1250	G1184	C1119	U1046	G966	A891	U824	G748	U	A619	A619
C1461	U1392	C1323	G1253	G1185	U1120	A1046	G972	U891	U825	U749	U	U544	U544
G1462	A1393	C1324	U1254	G1186	U1121	U1047	A973	C899	G826	G750	U	U545	U545
U1464	G1394	U1325	C1255	A1187	A1122	U1048	U974	A900	U828	U751	U	G546	G546
A1465	C1395	A1326	G1256	G1188	A1123	G1049	C975	U901	A829	U752	U	G547	G547
C1466	A1396	C1327	U1257	G1189	A1124	U1052	G976	U902	G830	A756	U	A553	A553
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C1468	G1398	C1259	A1260	C1192	U1128	A1055	A977	U904	A832	G760	U	G555	G555
A1469	U1399	A1330	U1261	A1193	U1130	U1056	G982	C905	C834	G761	U	U556	U556



• Molecule 47: 40S ribosomal protein S0



• Molecule 47: 40S ribosomal protein S0



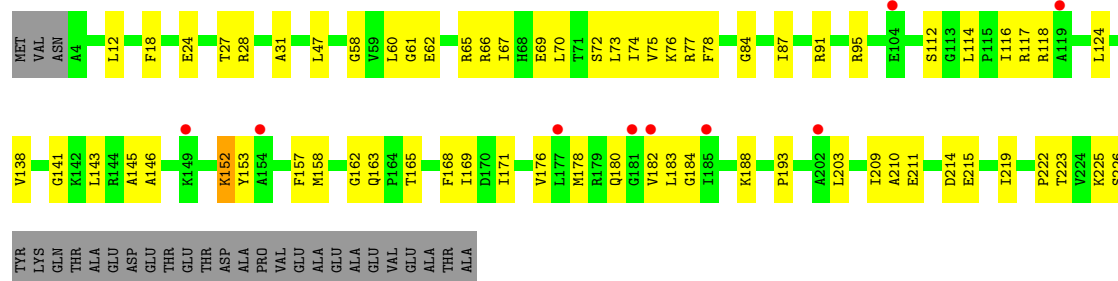
• Molecule 48: 40S ribosomal protein S1



GLY
LYS
LYS
ARG
TYR

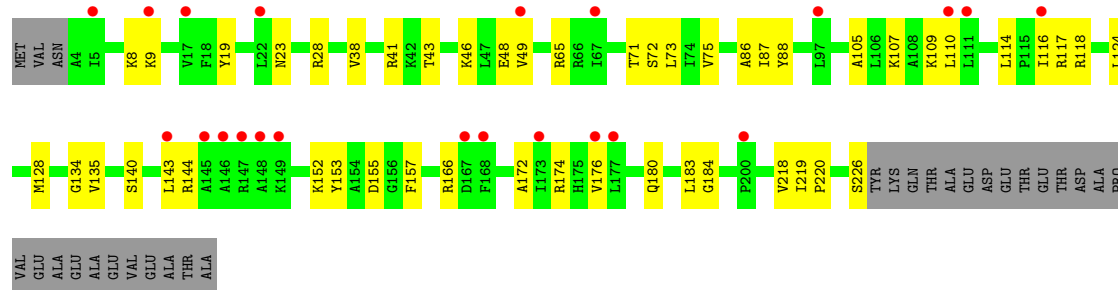
• Molecule 50: Ribosomal protein S3

Chain F: 



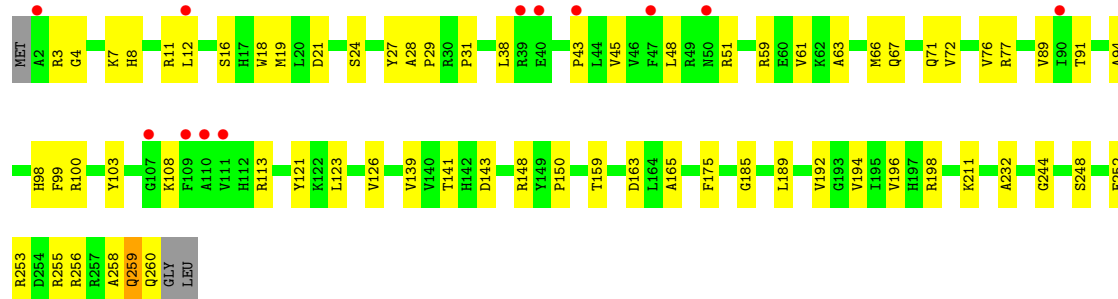
• Molecule 50: Ribosomal protein S3

Chain CQ: 



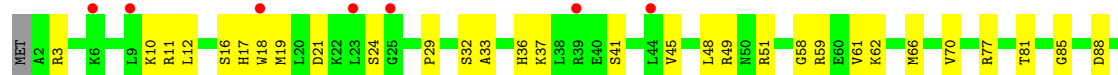
• Molecule 51: 40S ribosomal protein S4

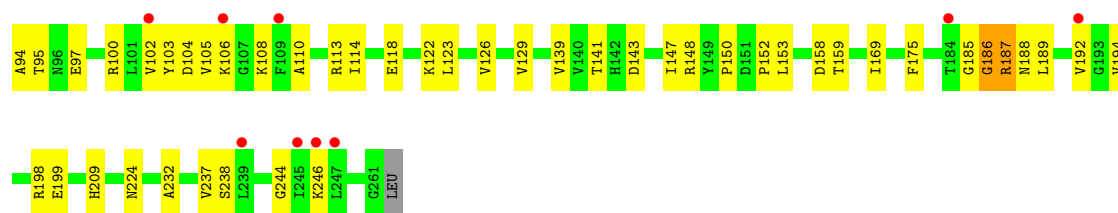
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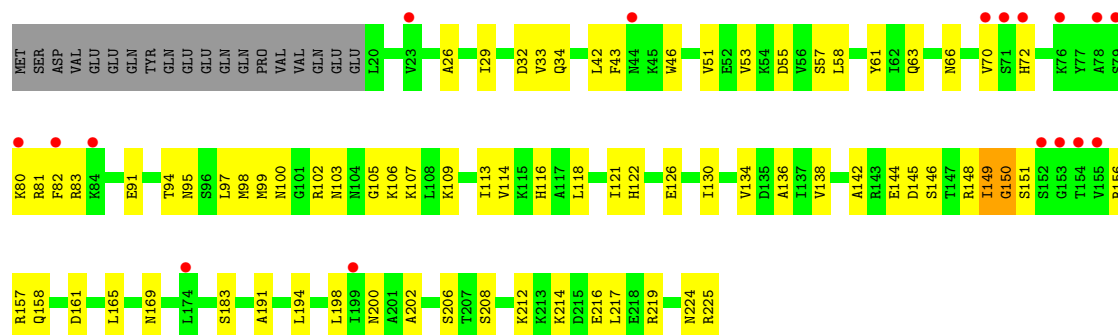
• Molecule 51: 40S ribosomal protein S4

Chain CR: 

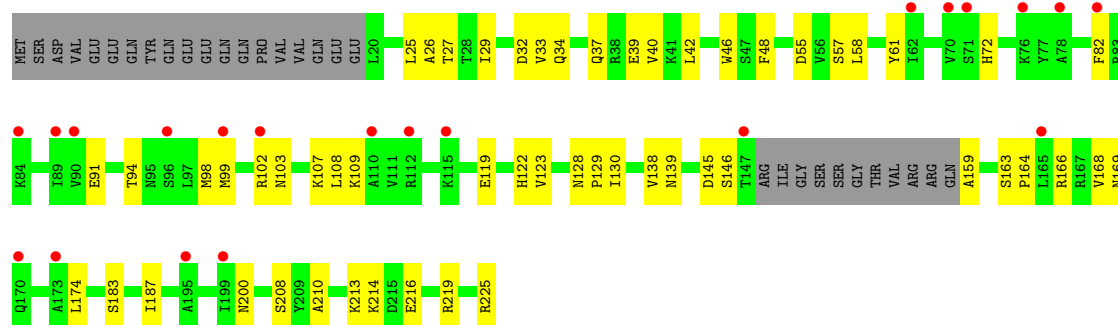




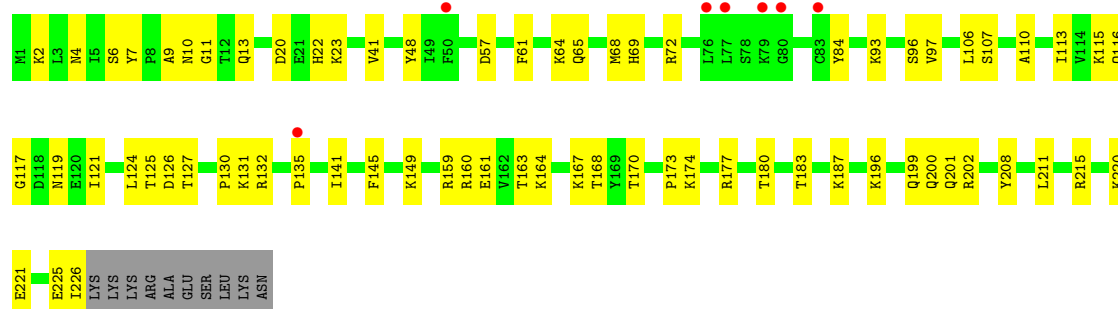
• Molecule 52: Ribosomal protein S7



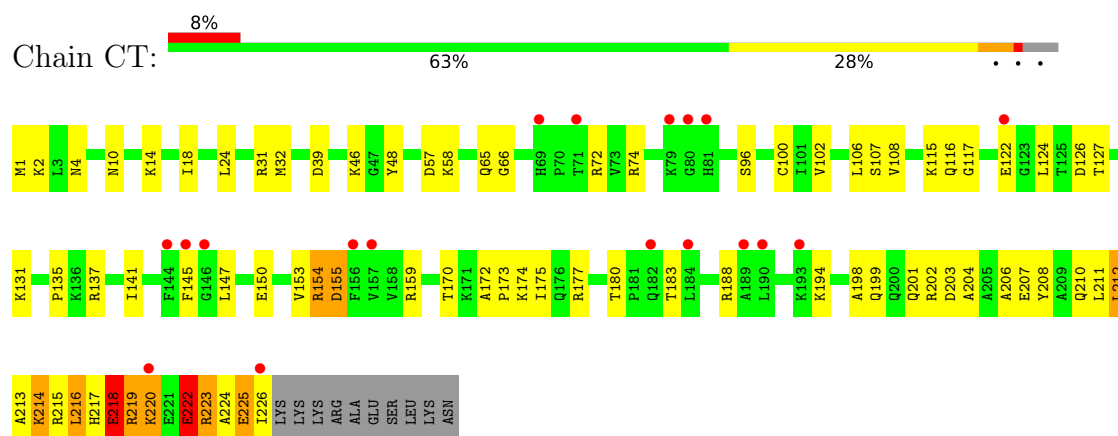
• Molecule 52: Ribosomal protein S7



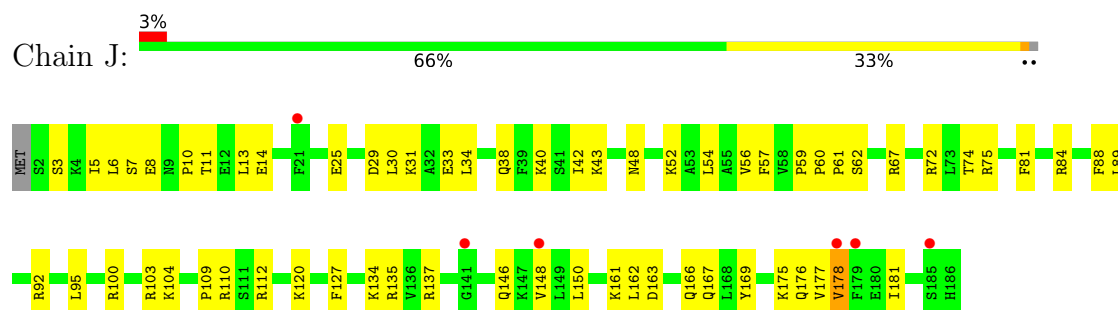
• Molecule 53: 40S ribosomal protein S6



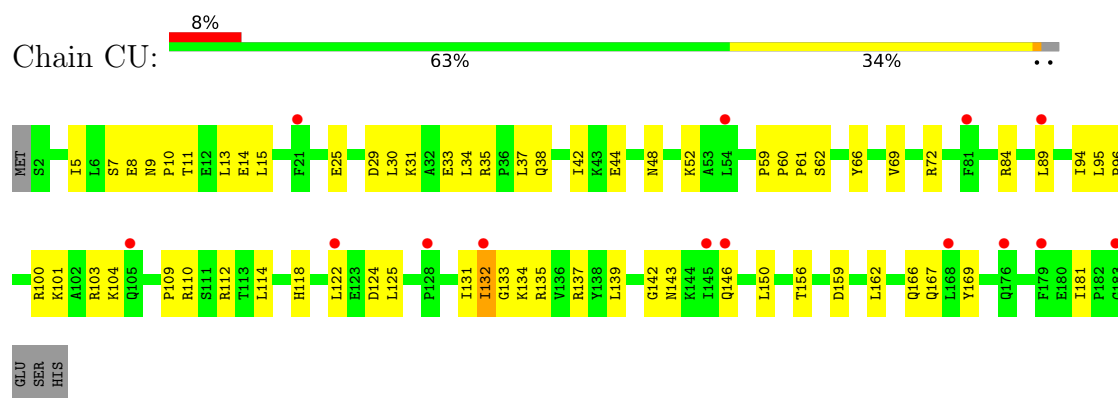
- Molecule 53: 40S ribosomal protein S6



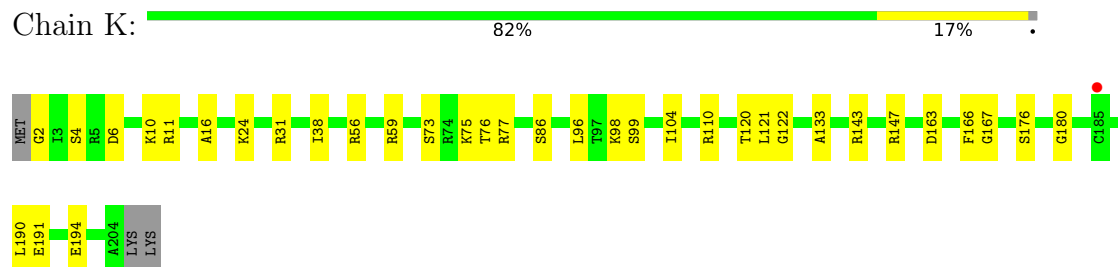
- Molecule 54: 40S ribosomal protein S7



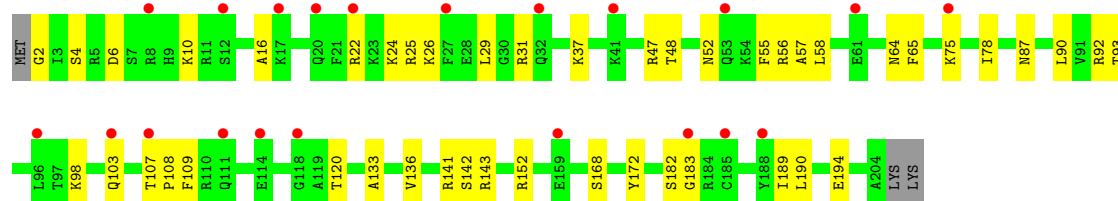
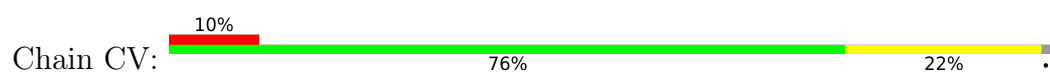
- Molecule 54: 40S ribosomal protein S7



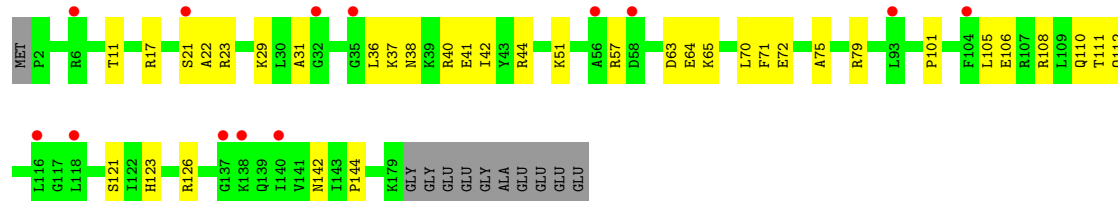
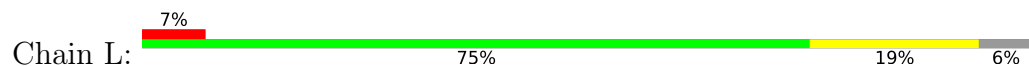
- Molecule 55: 40S ribosomal protein S8



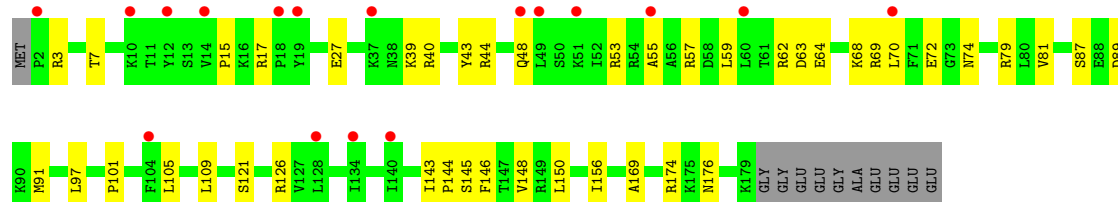
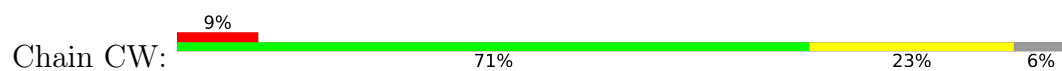
- Molecule 55: 40S ribosomal protein S8



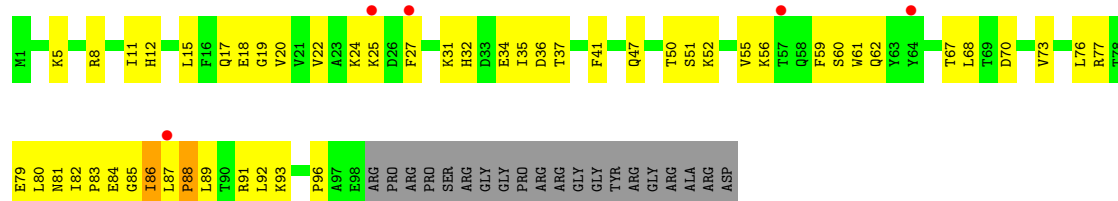
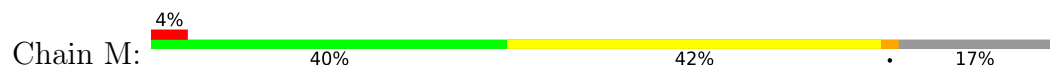
• Molecule 56: Ribosomal protein S4



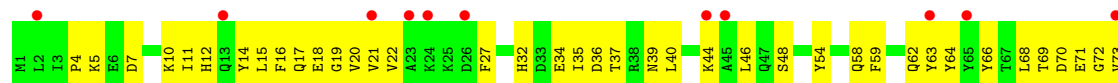
• Molecule 56: Ribosomal protein S4

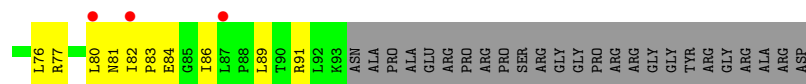


• Molecule 57: 40S ribosomal protein S10-A

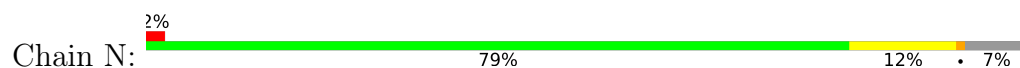


• Molecule 57: 40S ribosomal protein S10-A

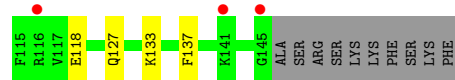
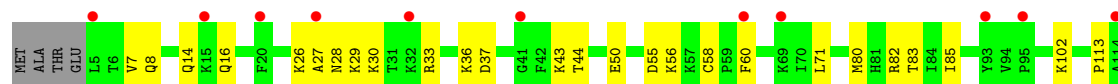
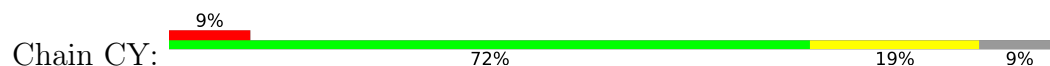




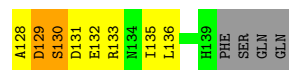
• Molecule 58: 40S ribosomal protein S11A



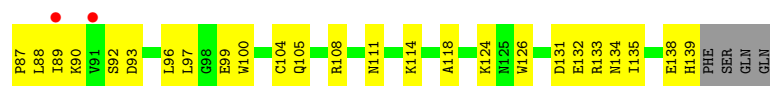
• Molecule 58: 40S ribosomal protein S11A



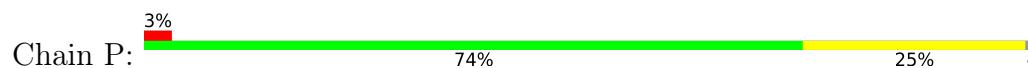
• Molecule 59: 40S ribosomal protein S12

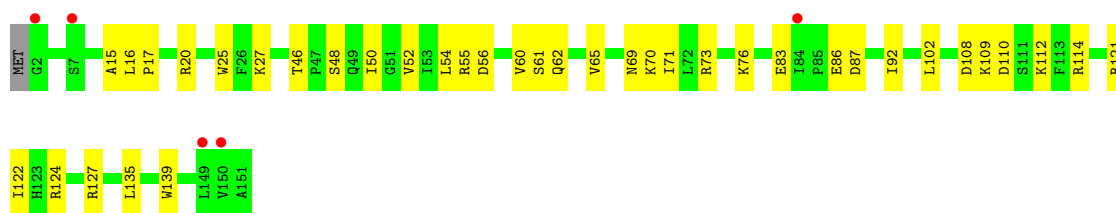


• Molecule 59: 40S ribosomal protein S12

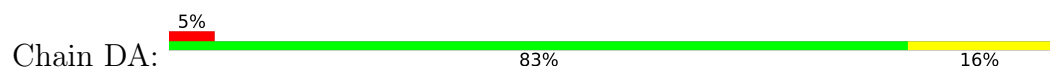


• Molecule 60: 40S ribosomal protein S13

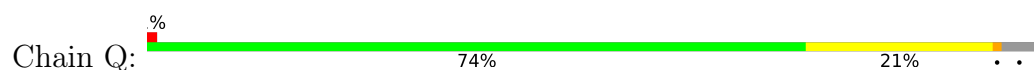




- Molecule 60: 40S ribosomal protein S13



- Molecule 61: 40S ribosomal protein S14-A



- Molecule 61: 40S ribosomal protein S14-A

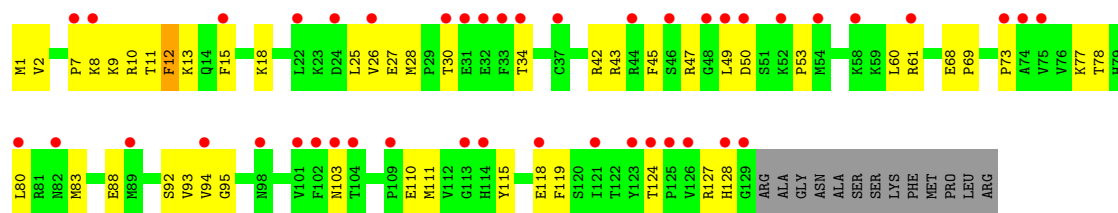


- Molecule 62: 40S ribosomal protein S15

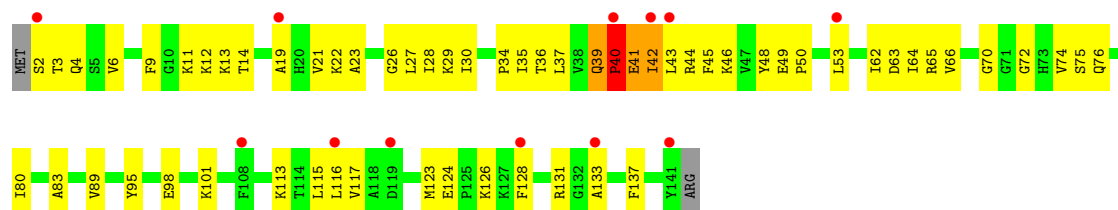


- Molecule 62: 40S ribosomal protein S15

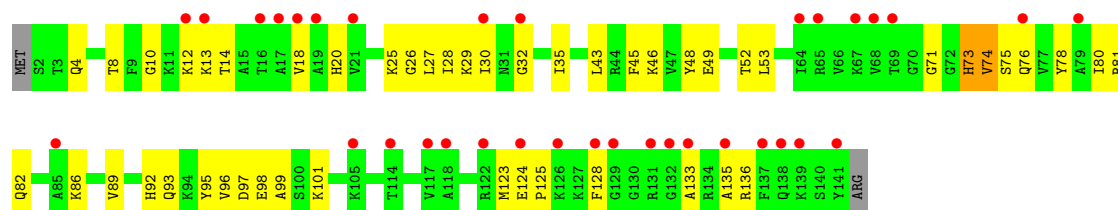




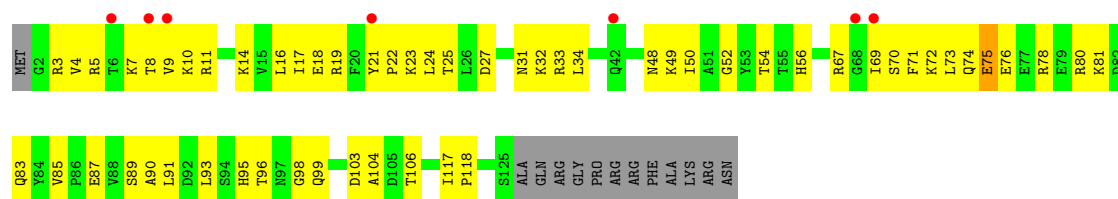
• Molecule 63: 40S ribosomal protein S16



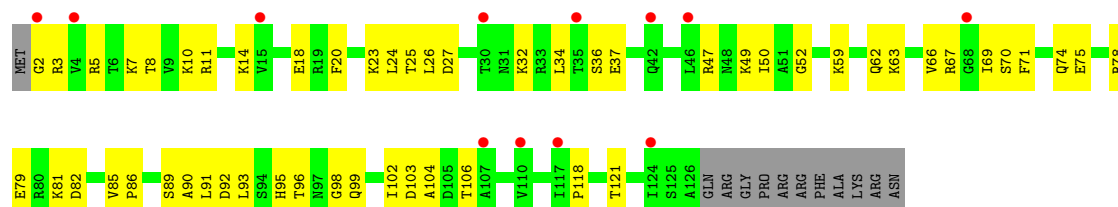
• Molecule 63: 40S ribosomal protein S16



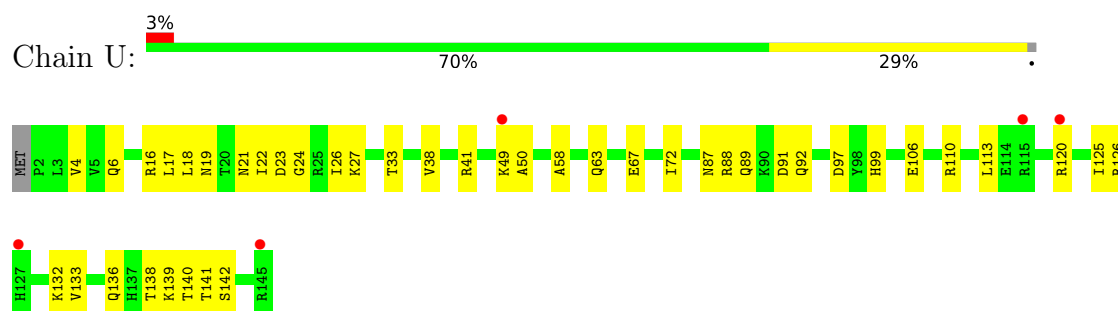
• Molecule 64: 40S ribosomal protein S17-B



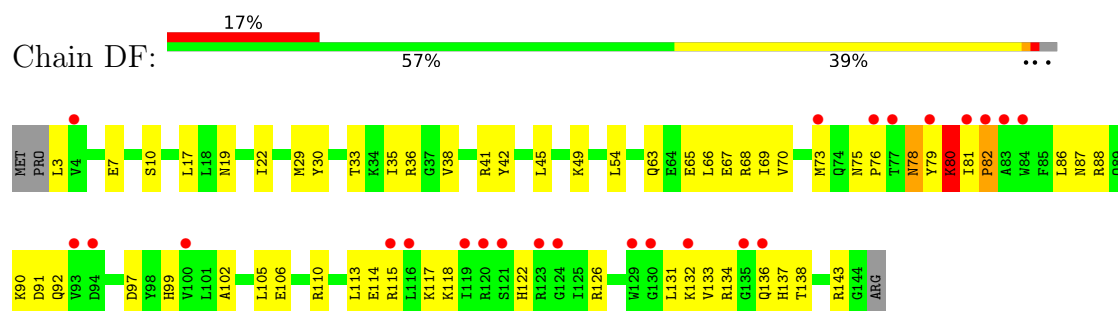
• Molecule 64: 40S ribosomal protein S17-B



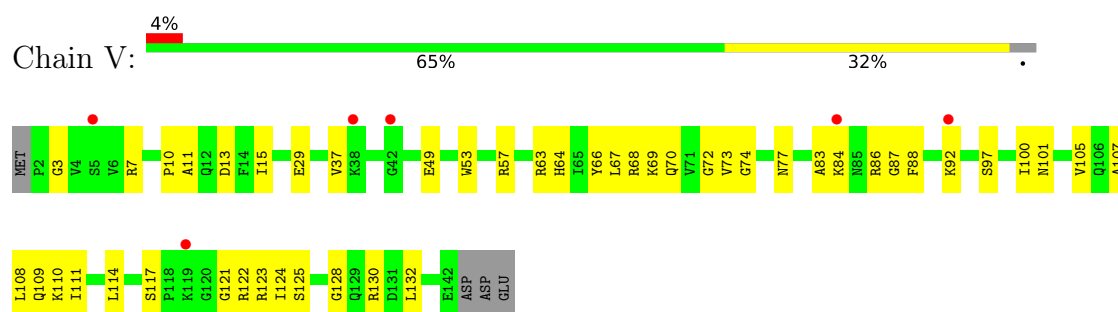
- Molecule 65: 40S ribosomal protein S18-B



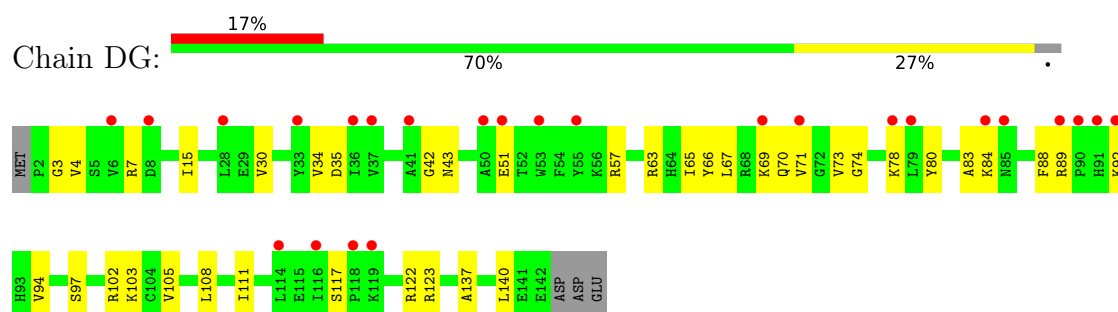
- Molecule 65: 40S ribosomal protein S18-B



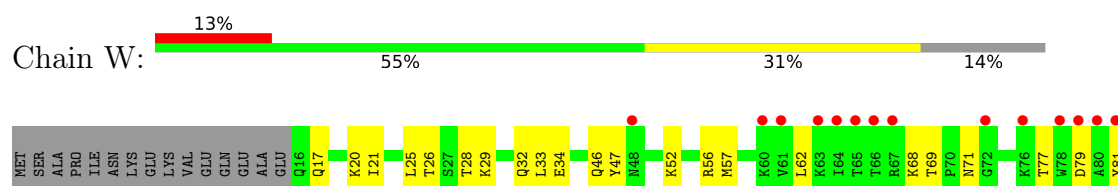
- Molecule 66: 40S ribosomal protein S19-A



- Molecule 66: 40S ribosomal protein S19-A



- Molecule 67: Ribosomal protein S10





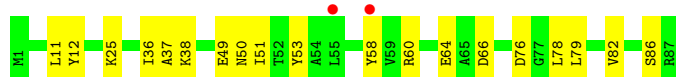
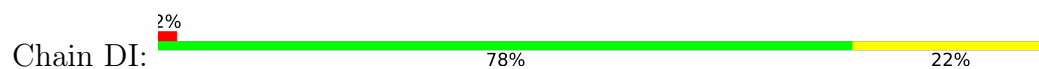
- Molecule 67: Ribosomal protein S10



- Molecule 68: 40S ribosomal protein S21



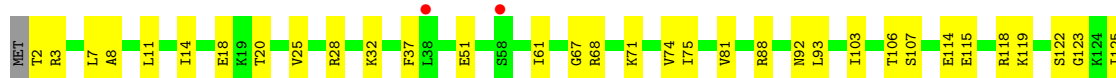
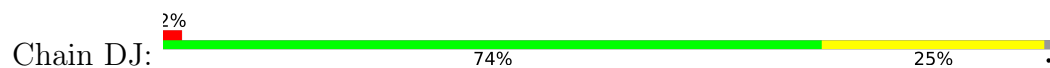
- Molecule 68: 40S ribosomal protein S21



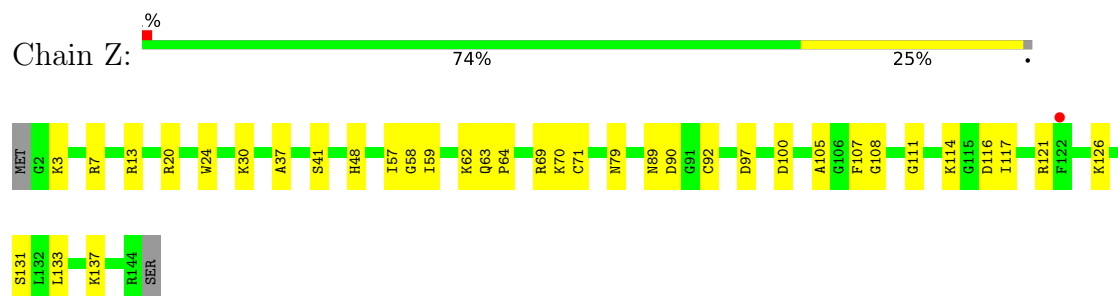
- Molecule 69: 40S ribosomal protein S22-A



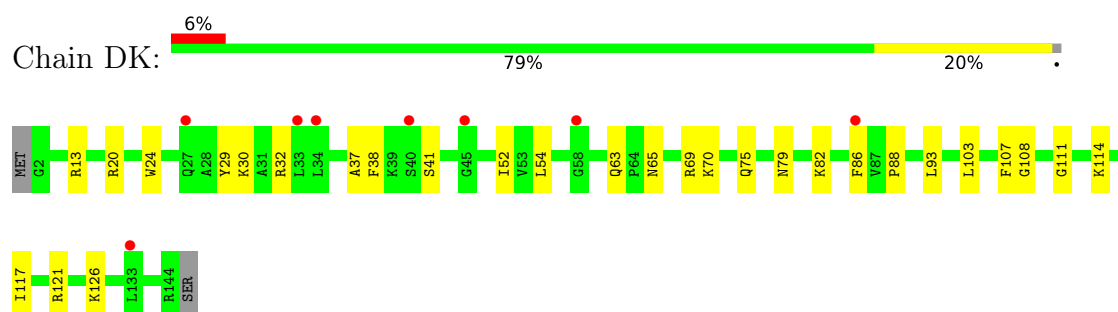
- Molecule 69: 40S ribosomal protein S22-A



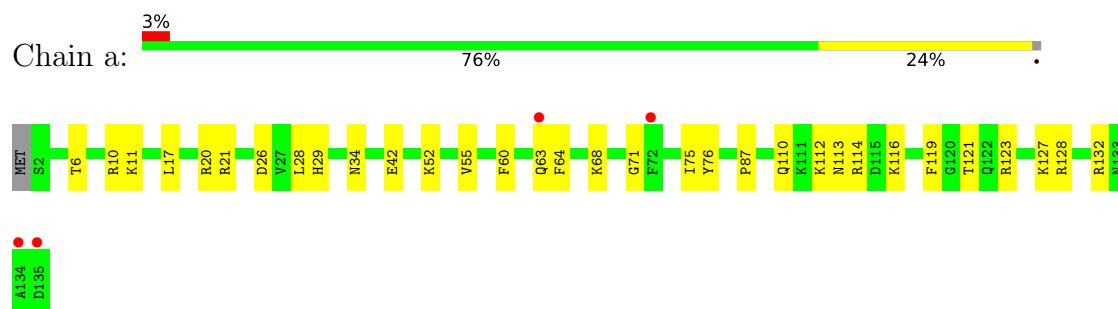
- Molecule 70: Ribosomal protein S23 (S12)



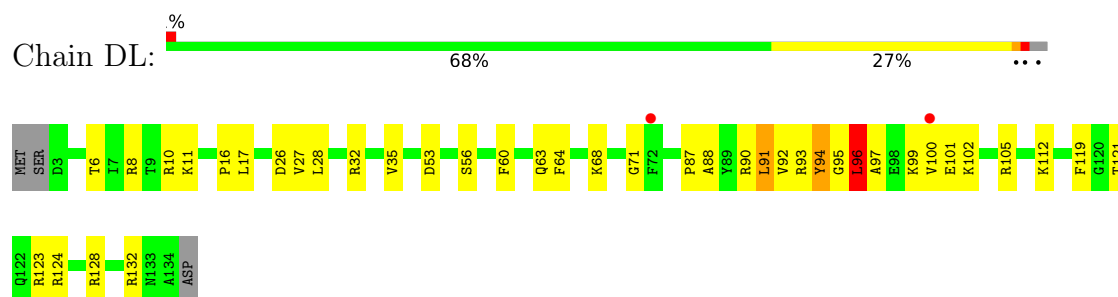
- Molecule 70: Ribosomal protein S23 (S12)



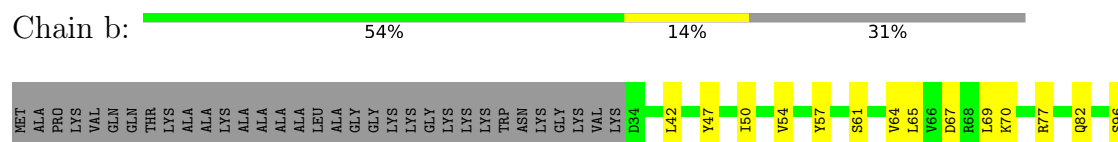
- Molecule 71: 40S ribosomal protein S24



- Molecule 71: 40S ribosomal protein S24

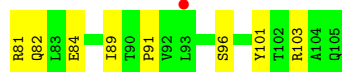
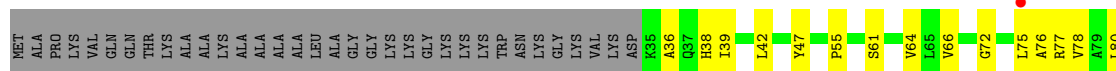


- Molecule 72: 40S ribosomal protein S25

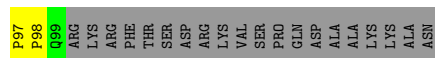




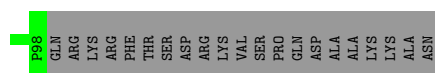
- Molecule 72: 40S ribosomal protein S25



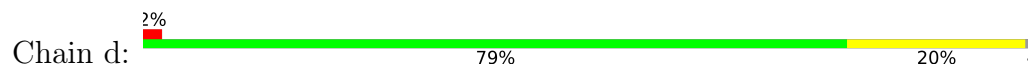
- Molecule 73: 40S ribosomal protein S26



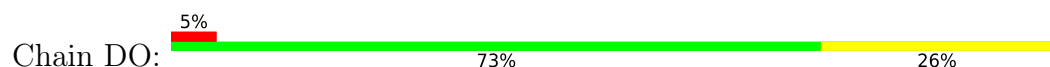
- Molecule 73: 40S ribosomal protein S26



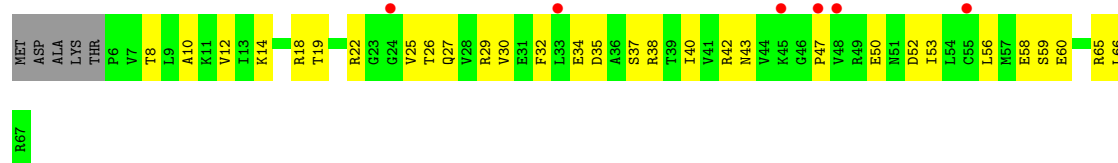
- Molecule 74: 40S ribosomal protein S27



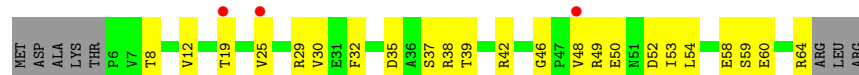
- Molecule 74: 40S ribosomal protein S27



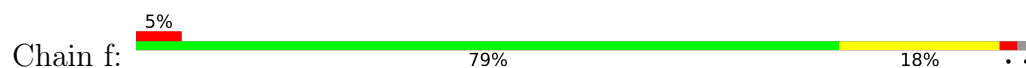
- Molecule 75: 40S ribosomal protein S28-B



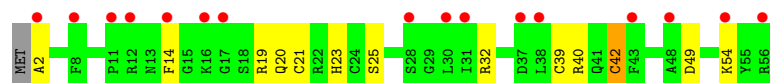
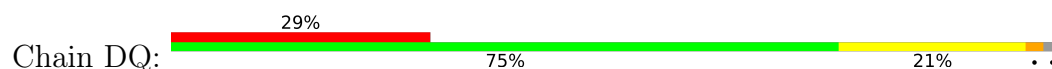
- Molecule 75: 40S ribosomal protein S28-B



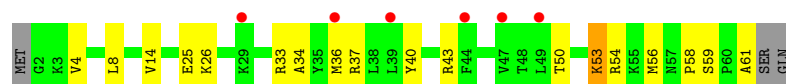
- Molecule 76: 40S ribosomal protein S29A



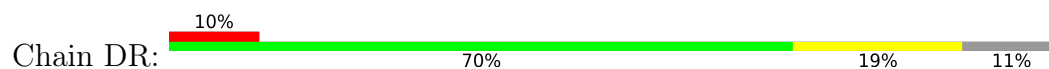
- Molecule 76: 40S ribosomal protein S29A



- Molecule 77: 40S ribosomal protein S30

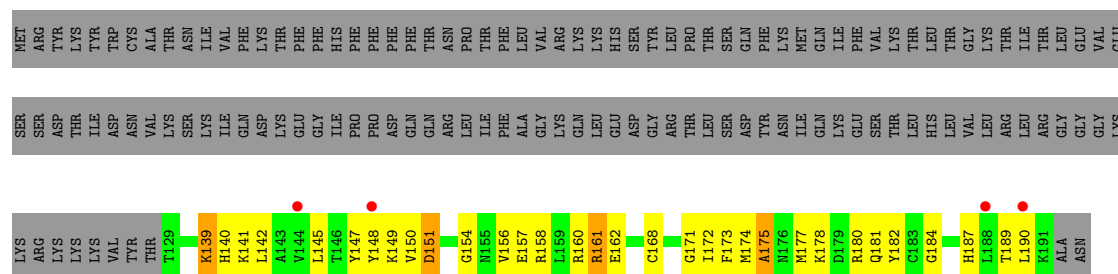


- Molecule 77: 40S ribosomal protein S30

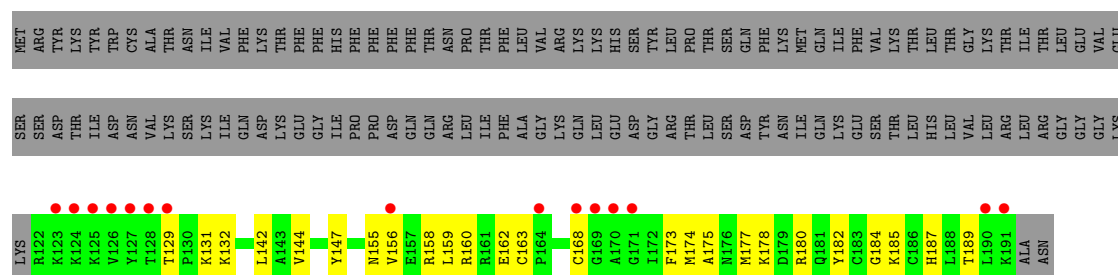


- Molecule 78: Ubiquitin-40S ribosomal protein S31 fusion protein

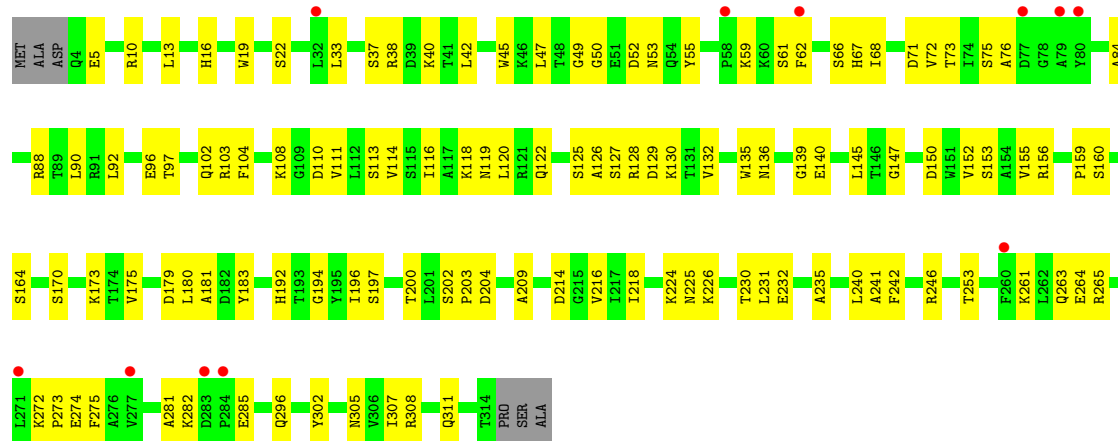




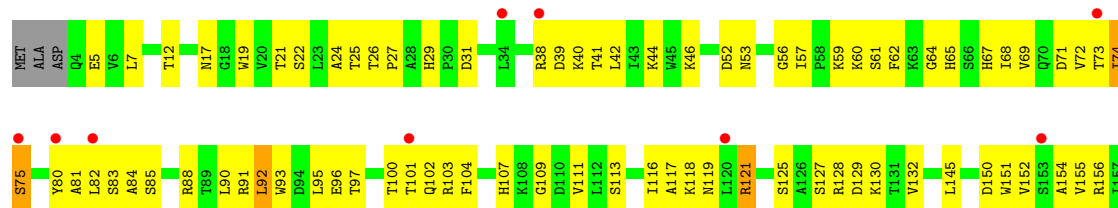
- Molecule 78: Ubiquitin-40S ribosomal protein S31 fusion protein

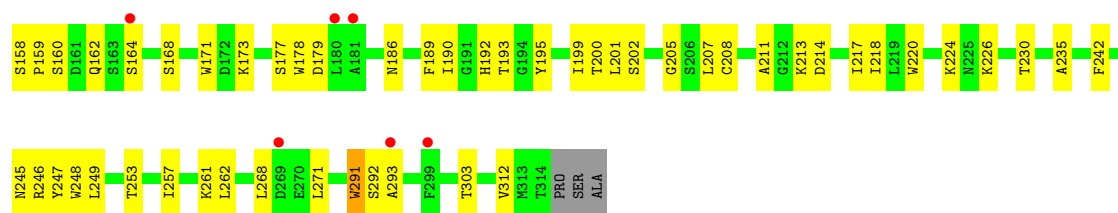


- Molecule 79: Guanine nucleotide-binding protein subunit beta-like protein

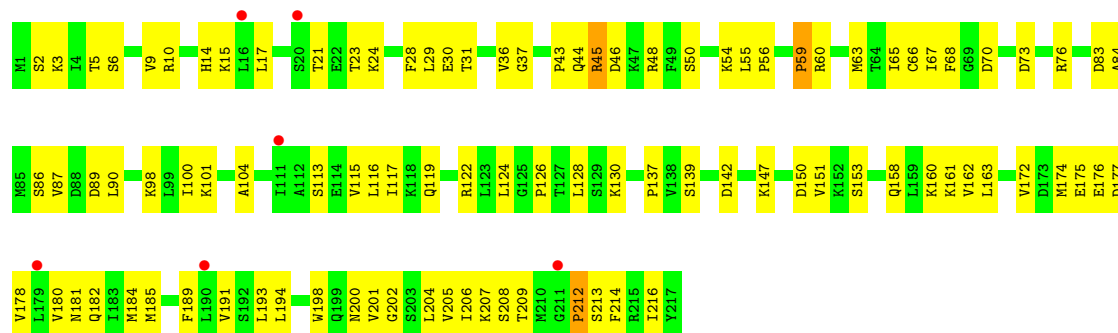


- Molecule 79: Guanine nucleotide-binding protein subunit beta-like protein

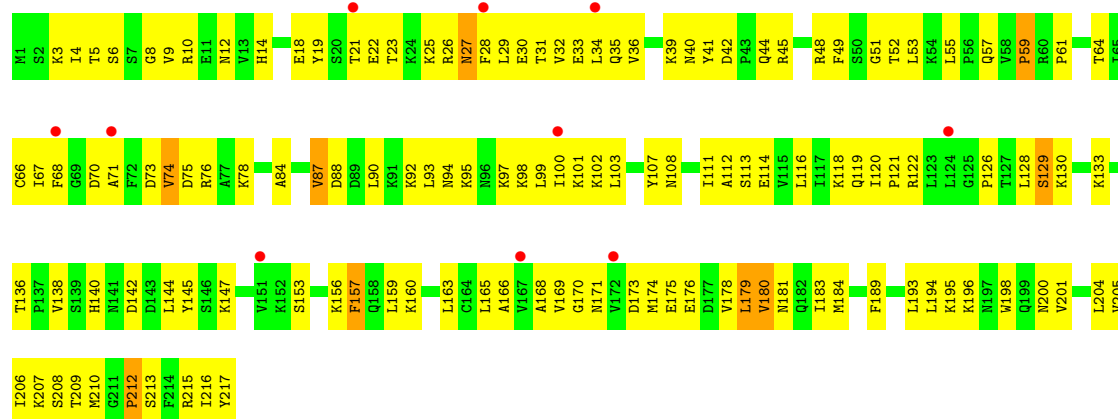




● Molecule 80: Ribosomal protein



● Molecule 80: Ribosomal protein



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	298.32Å 293.37Å 451.08Å 90.00° 100.16° 90.00°	Depositor
Resolution (Å)	177.03 – 3.30 177.03 – 3.30	Depositor EDS
% Data completeness (in resolution range)	99.3 (177.03-3.30) 88.6 (177.03-3.30)	Depositor EDS
R_{merge}	0.69	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.74 (at 3.19Å)	Xtriage
Refinement program	PHENIX 1.19rc4_4035	Depositor
R, R_{free}	0.254 , 0.297 0.254 , 0.296	Depositor DCC
R_{free} test set	2000 reflections (0.16%)	wwPDB-VP
Wilson B-factor (Å ²)	60.9	Xtriage
Anisotropy	0.055	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 60.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.24$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	405513	wwPDB-VP
Average B, all atoms (Å ²)	102.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.33% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 3K5, ZN, PAR, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	1	0.25	0/76973	0.53	37/119996 (0.0%)
1	AS	0.24	0/76539	0.52	36/119319 (0.0%)
2	3	0.20	0/2884	0.40	0/4492
2	AT	0.22	0/2884	0.41	0/4492
3	4	0.21	0/3724	0.48	2/5798 (0.0%)
3	AU	0.21	0/3746	0.49	3/5832 (0.1%)
4	AW	0.20	0/1922	0.48	0/2581
4	j	0.25	0/1922	0.53	0/2581
5	AX	0.23	0/3145	0.56	0/4231
5	k	0.23	0/3145	0.56	0/4231
6	AY	0.20	0/2799	0.56	0/3777
6	l	0.24	0/2799	0.62	0/3777
7	AZ	0.21	0/2447	0.62	0/3294
7	m	0.22	0/2479	0.58	0/3337
8	BA	0.21	0/1231	0.55	0/1662
8	n	0.22	0/1263	0.61	0/1703
9	BB	0.23	0/1918	0.55	0/2575
9	o	0.26	0/1918	0.56	0/2575
10	BC	0.22	0/1835	0.66	0/2472
10	p	0.24	0/1869	0.57	0/2519
11	BD	0.22	0/1537	0.55	0/2067
11	q	0.22	0/1537	0.56	0/2067
12	BE	0.22	0/1724	0.56	0/2314
12	r	0.21	0/1724	0.55	0/2314
13	BF	0.22	0/1390	0.64	0/1861
13	s	0.22	0/1390	0.61	0/1861
14	BG	0.20	0/1637	0.60	0/2195
14	t	0.22	0/1637	0.54	0/2195
15	BH	0.27	0/1044	0.58	0/1407
15	u	0.23	0/1044	0.55	0/1407
16	BI	0.19	0/1753	0.54	0/2347
16	v	0.24	0/1753	0.55	0/2347

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	BJ	0.22	0/1620	0.58	0/2167
17	w	0.23	0/1620	0.57	0/2167
18	BK	0.21	0/1429	0.53	0/1920
18	x	0.22	0/1410	0.58	0/1895
19	BL	0.19	0/1482	0.49	0/1985
19	y	0.21	0/1482	0.52	0/1985
20	BM	0.21	0/1475	0.59	0/1961
20	z	0.21	0/1475	0.57	0/1961
21	0	0.22	0/1457	0.53	0/1962
21	BN	0.21	0/1457	0.51	0/1962
22	2	0.21	0/1285	0.56	0/1723
22	BO	0.20	0/1285	0.56	1/1723 (0.1%)
23	5	0.20	0/846	0.58	0/1140
23	BP	0.28	0/841	0.78	0/1133
24	6	0.21	0/993	0.52	0/1339
24	BQ	0.20	0/993	0.52	0/1339
25	7	0.21	0/958	0.41	0/1267
25	BR	0.21	0/814	0.40	0/1079
26	8	0.21	0/990	0.55	0/1337
26	BS	0.19	0/976	0.54	0/1319
27	9	0.20	0/999	0.51	0/1334
27	BT	0.20	0/999	0.58	0/1334
28	AA	0.19	0/1112	0.54	0/1488
28	BU	0.18	0/1112	0.56	0/1488
29	AB	0.23	0/1199	0.54	0/1607
29	BV	0.20	0/1199	0.54	0/1607
30	AC	0.21	0/503	0.79	3/668 (0.4%)
30	BW	0.23	0/522	0.69	0/692
31	AD	0.19	0/738	0.51	0/994
31	BX	0.19	0/738	0.56	0/994
32	AE	0.22	0/907	0.60	0/1219
32	BY	0.21	0/894	0.57	0/1201
33	AF	0.21	0/1021	0.57	0/1368
33	BZ	0.23	0/1039	0.60	0/1390
34	AG	0.21	0/866	0.50	0/1165
34	CA	0.24	0/895	0.52	0/1201
35	AH	0.22	0/896	0.58	0/1195
35	CB	0.20	0/925	0.55	0/1231
36	AI	0.20	0/1003	0.54	0/1336
36	CC	0.18	0/990	0.59	0/1319
37	AJ	0.21	0/763	0.55	0/1012
37	CD	0.21	0/772	0.60	0/1023
38	AK	0.27	0/690	0.62	0/916

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	CE	0.20	0/690	0.55	0/916
39	AL	0.20	0/623	0.62	0/831
39	CF	0.18	0/632	0.61	0/842
40	AM	0.23	0/447	0.55	0/594
40	CG	0.23	0/447	0.63	0/594
41	AN	0.21	0/425	0.62	0/563
41	CH	0.30	0/436	0.62	0/577
42	AO	0.23	0/237	0.57	0/304
42	CI	0.70	0/228	1.04	0/293
43	AP	0.23	0/840	0.59	0/1110
43	CJ	0.25	0/860	0.59	0/1136
44	AQ	0.25	0/705	0.55	0/940
44	CK	0.23	0/705	0.56	0/940
45	CL	0.30	0/942	0.83	0/1258
45	i	0.38	0/942	1.08	3/1258 (0.2%)
46	B	0.23	0/40832	0.53	10/63622 (0.0%)
46	CM	0.24	0/41169	0.52	5/64148 (0.0%)
47	C	0.18	0/1666	0.50	0/2273
47	CN	0.20	0/1666	0.59	0/2273
48	CO	0.34	0/1750	0.72	1/2354 (0.0%)
48	D	0.20	0/1750	0.53	0/2354
49	CP	0.22	0/1648	0.51	0/2237
49	E	0.20	0/1657	0.57	0/2248
50	CQ	0.24	0/1731	0.64	0/2324
50	F	0.26	0/1731	0.72	0/2324
51	CR	0.26	0/2096	0.60	1/2822 (0.0%)
51	G	0.20	0/2092	0.54	0/2817
52	CS	0.25	0/1546	0.60	0/2085
52	H	0.25	0/1631	0.57	0/2199
53	CT	0.35	0/1845	0.68	0/2464
53	I	0.20	0/1845	0.64	0/2464
54	CU	0.27	0/1490	0.64	1/2004 (0.0%)
54	J	0.27	0/1516	0.65	0/2039
55	CV	0.22	0/1606	0.59	0/2150
55	K	0.20	0/1606	0.55	0/2150
56	CW	0.19	0/1478	0.55	0/1978
56	L	0.21	0/1478	0.58	0/1978
57	CX	0.27	0/801	0.65	0/1081
57	M	0.30	0/836	0.82	3/1130 (0.3%)
58	CY	0.20	0/1154	0.53	0/1553
58	N	0.27	0/1175	0.66	2/1582 (0.1%)
59	CZ	0.24	0/892	0.77	0/1203
59	O	0.47	0/892	1.21	3/1203 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
60	DA	0.19	0/1210	0.55	0/1631
60	P	0.20	0/1210	0.53	0/1631
61	DB	0.23	0/953	0.70	0/1279
61	Q	0.22	0/953	0.63	0/1279
62	DC	0.28	0/1038	0.69	0/1395
62	R	0.32	0/1038	0.74	0/1395
63	DD	0.25	0/1109	0.57	0/1486
63	S	0.28	0/1109	0.64	0/1486
64	DE	0.21	0/1014	0.62	0/1361
64	T	0.25	0/1009	0.74	2/1354 (0.1%)
65	DF	0.29	0/1186	0.81	2/1590 (0.1%)
65	U	0.21	0/1205	0.58	0/1615
66	DG	0.21	0/1120	0.59	0/1508
66	V	0.24	0/1120	0.73	0/1508
67	DH	0.24	0/800	0.63	0/1082
67	W	0.23	0/818	0.70	0/1106
68	DI	0.22	0/683	0.55	0/918
68	X	0.22	0/683	0.60	0/918
69	DJ	0.22	0/1049	0.56	0/1412
69	Y	0.20	0/1049	0.54	0/1412
70	DK	0.23	0/1128	0.63	0/1505
70	Z	0.20	0/1128	0.63	0/1505
71	DL	0.32	0/1086	0.62	0/1447
71	a	0.24	0/1100	0.63	0/1466
72	DM	0.22	0/577	0.72	0/778
72	b	0.20	0/585	0.54	0/789
73	DN	0.29	0/782	0.72	0/1048
73	c	0.60	0/791	1.15	9/1060 (0.8%)
74	DO	0.21	0/624	0.62	0/843
74	d	0.22	0/624	0.63	0/843
75	DP	0.23	0/459	0.70	0/615
75	e	0.23	0/489	0.65	0/654
76	DQ	0.27	0/466	0.74	2/620 (0.3%)
76	f	0.34	0/466	0.75	1/620 (0.2%)
77	DR	0.27	0/451	0.78	0/601
77	g	0.32	0/482	0.86	1/642 (0.2%)
78	DS	0.24	0/585	0.70	0/778
78	h	0.32	0/520	1.02	2/693 (0.3%)
79	AR	0.23	0/2451	0.63	0/3337
79	DT	0.29	0/2451	0.75	2/3337 (0.1%)
80	L1	0.18	0/1737	0.39	0/2335
80	l1	0.23	0/1737	0.52	0/2335
All	All	0.24	0/433095	0.56	132/635204 (0.0%)

There are no bond length outliers.

All (132) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	B	823	G	OP1-P-O3'	-12.00	72.01	108.00
73	c	77	CYS	CB-CA-C	-10.39	94.39	110.92
1	AS	3160	C	P-O3'-C3'	-9.73	105.61	120.20
77	g	53	LYS	CA-CB-CG	9.18	132.45	114.10
1	AS	484	U	P-O3'-C3'	-9.15	106.48	120.20
1	1	481	G	P-O3'-C3'	-9.06	106.61	120.20
1	1	449	U	P-O3'-C3'	-8.99	106.71	120.20
1	AS	3167	G	P-O3'-C3'	-8.97	106.75	120.20
46	B	1409	U	OP2-P-O3'	-8.91	81.28	108.00
1	AS	3159	A	P-O3'-C3'	-8.87	106.89	120.20
1	1	444	U	P-O3'-C3'	-8.49	107.47	120.20
1	1	451	C	P-O3'-C3'	-8.46	107.52	120.20
3	AU	104	A	P-O3'-C3'	-8.45	107.52	120.20
1	AS	483	U	P-O3'-C3'	-8.32	107.71	120.20
1	1	445	A	P-O3'-C3'	-8.26	107.82	120.20
1	1	443	G	P-O3'-C3'	-8.24	107.84	120.20
1	AS	485	A	P-O3'-C3'	-8.14	107.99	120.20
1	1	453	U	P-O3'-C3'	-8.11	108.03	120.20
1	1	450	G	P-O3'-C3'	-8.10	108.05	120.20
1	1	1019	U	P-O3'-C3'	-8.06	108.10	120.20
1	1	448	U	P-O3'-C3'	-7.96	108.26	120.20
1	1	1020	G	P-O3'-C3'	-7.76	108.55	120.20
1	AS	3165	U	P-O3'-C3'	-7.75	108.58	120.20
1	1	447	U	P-O3'-C3'	-7.70	108.65	120.20
1	1	477	U	P-O3'-C3'	-7.70	108.65	120.20
65	DF	78	ASN	N-CA-C	-7.68	98.44	109.96
1	1	446	U	P-O3'-C3'	-7.62	108.77	120.20
59	O	39	ASP	N-CA-C	-7.54	102.26	113.72
46	CM	481	A	P-O3'-C3'	-7.54	108.89	120.20
1	1	482	U	P-O3'-C3'	-7.50	108.95	120.20
46	B	824	U	O4'-C1'-N1	-7.46	97.31	108.50
1	AS	443	G	P-O3'-C3'	-7.44	109.04	120.20
1	1	476	C	P-O3'-C3'	-7.42	109.06	120.20
1	1	484	U	P-O3'-C3'	-7.41	109.09	120.20
1	1	480	G	P-O3'-C3'	-7.30	109.25	120.20
1	AS	446	U	P-O3'-C3'	-7.19	109.41	120.20
1	AS	486	C	P-O3'-C3'	-7.12	109.52	120.20
73	c	53	LEU	CB-CG-CD2	-7.11	89.37	110.70
1	1	478	G	P-O3'-C3'	-7.03	109.66	120.20
73	c	53	LEU	CA-CB-CG	6.94	140.59	116.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AS	481	G	P-O3'-C3'	-6.89	109.86	120.20
1	AS	3163	U	P-O3'-C3'	-6.84	109.94	120.20
57	M	85	GLY	N-CA-C	-6.82	97.01	113.18
1	1	483	U	P-O3'-C3'	-6.82	109.97	120.20
58	N	26	LYS	CD-CE-NZ	-6.77	90.24	111.90
45	i	71	LYS	N-CA-C	-6.71	94.54	107.57
1	1	452	A	P-O3'-C3'	-6.69	110.16	120.20
1	1	479	C	P-O3'-C3'	-6.62	110.26	120.20
1	AS	3164	U	P-O3'-C3'	-6.54	110.39	120.20
1	AS	478	G	P-O3'-C3'	-6.54	110.39	120.20
1	AS	3161	U	P-O3'-C3'	-6.51	110.43	120.20
1	1	442	G	P-O3'-C3'	-6.50	110.44	120.20
1	AS	1347	U	P-O3'-C3'	6.46	129.90	120.20
1	1	2637	U	C4'-C3'-O3'	-6.41	99.79	109.40
1	AS	3166	A	P-O3'-C3'	-6.40	110.59	120.20
79	DT	121	ARG	CA-CB-CG	6.40	126.89	114.10
1	AS	482	U	P-O3'-C3'	-6.38	110.63	120.20
1	AS	479	C	P-O3'-C3'	-6.36	110.66	120.20
1	1	1576	A	C4-N9-C1'	6.36	145.37	126.30
1	AS	1224	C	O5'-P-OP2	-6.36	88.93	108.00
76	f	24	CYS	CB-CA-C	6.31	121.24	111.02
1	AS	445	A	P-O3'-C3'	-6.21	110.89	120.20
46	CM	480	U	P-O3'-C3'	-6.18	110.92	120.20
30	AC	20	GLY	CA-C-N	6.17	133.07	121.97
30	AC	20	GLY	C-N-CA	6.17	133.07	121.97
1	AS	543	C	C4'-C3'-O3'	-6.15	103.77	113.00
1	AS	1576	A	O4'-C1'-N9	6.07	117.60	108.50
46	CM	273	C	N1-C1'-C2'	6.03	121.04	112.00
3	4	62	C	C5'-C4'-C3'	6.00	124.20	115.20
76	DQ	42	CYS	N-CA-CB	5.97	118.99	110.16
79	DT	92	LEU	CA-CB-CG	5.95	137.14	116.30
46	B	238	U	O3'-P-O5'	-5.93	95.10	104.00
1	1	485	A	P-O3'-C3'	-5.89	111.37	120.20
46	B	823	G	OP2-P-O3'	-5.83	90.51	108.00
22	BO	130	ARG	N-CA-C	5.83	117.95	108.63
57	M	52	LYS	CA-CB-CG	5.82	125.73	114.10
46	B	1554	U	O3'-P-O5'	-5.80	95.30	104.00
45	i	93	ARG	CB-CG-CD	5.79	124.61	111.30
78	h	151	ASP	N-CA-C	-5.74	100.32	109.96
45	i	90	ARG	CB-CG-CD	-5.72	98.14	111.30
54	CU	132	ILE	N-CA-C	-5.71	107.18	112.43
1	1	1576	A	O4'-C1'-N9	5.65	116.97	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	CO	89	ASP	N-CA-C	5.63	122.09	113.19
3	AU	103	G	P-O3'-C3'	-5.63	111.75	120.20
51	CR	186	GLY	CA-C-O	-5.62	118.41	122.45
1	1	1576	A	C8-N9-C1'	-5.61	110.88	127.70
64	T	75	GLU	CA-C-N	5.61	133.59	121.64
64	T	75	GLU	C-N-CA	5.61	133.59	121.64
1	AS	444	U	P-O3'-C3'	-5.60	111.81	120.20
1	1	1018	U	P-O3'-C3'	-5.54	111.89	120.20
1	AS	1576	A	C4-N9-C1'	5.52	142.87	126.30
73	c	58	VAL	CA-C-N	5.51	130.92	122.93
73	c	58	VAL	C-N-CA	5.51	130.92	122.93
1	AS	441	U	P-O3'-C3'	-5.50	111.95	120.20
1	AS	442	G	P-O3'-C3'	-5.46	112.01	120.20
1	1	3320	U	C4'-C3'-O3'	5.41	121.12	113.00
1	AS	1089	A	O3'-P-O5'	-5.41	95.89	104.00
1	1	549	U	C5'-C4'-C3'	-5.41	107.89	116.00
3	AU	105	A	P-O3'-C3'	-5.39	112.12	120.20
46	B	138	C	C4'-C3'-O3'	5.38	117.47	109.40
1	1	2069	U	O3'-P-O5'	-5.37	95.95	104.00
1	AS	977	U	O5'-C5'-C4'	5.36	119.74	111.70
1	1	1917	A	O3'-P-O5'	-5.36	95.96	104.00
1	AS	1024	U	O4'-C1'-N1	-5.34	100.19	108.20
46	CM	823	G	C4'-C3'-O3'	5.30	117.35	109.40
1	AS	1224	C	O5'-P-OP1	5.29	123.87	108.00
57	M	34	GLU	N-CA-C	-5.28	108.60	114.62
3	4	21	C	N1-C1'-C2'	5.26	119.90	112.00
1	AS	487	C	P-O3'-C3'	-5.26	112.31	120.20
46	CM	238	U	C2'-C3'-O3'	5.26	117.39	109.50
59	O	129	ASP	CA-C-N	5.20	131.47	121.54
59	O	129	ASP	C-N-CA	5.20	131.47	121.54
58	N	27	ALA	N-CA-C	5.19	118.03	108.58
1	1	2792	A	C5'-C4'-C3'	-5.17	108.24	116.00
1	AS	1018	U	O3'-P-O5'	5.17	111.76	104.00
73	c	52	ASP	CA-C-N	-5.16	111.91	120.68
73	c	52	ASP	C-N-CA	-5.16	111.91	120.68
46	B	219	A	N9-C1'-C2'	5.16	119.73	112.00
76	DQ	42	CYS	CB-CA-C	-5.13	102.14	110.85
1	AS	1559	C	C2'-C3'-O3'	5.12	121.39	113.70
1	AS	2199	G	O3'-P-O5'	-5.12	96.32	104.00
65	DF	80	LYS	N-CA-C	5.11	121.68	110.80
46	B	824	U	O5'-P-OP1	5.09	123.28	108.00
73	c	25	ASN	CA-C-N	-5.08	114.26	122.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
73	c	25	ASN	C-N-CA	-5.08	114.26	122.23
78	h	175	ALA	N-CA-C	5.07	116.89	108.02
30	AC	20	GLY	N-CA-C	5.06	119.83	112.60
1	AS	1576	A	C8-N9-C1'	-5.04	112.57	127.70
46	B	813	U	C5'-C4'-C3'	-5.04	108.44	116.00
1	1	2545	C	OP1-P-O3'	5.04	123.11	108.00
1	1	1656	C	C5'-C4'-C3'	-5.03	108.45	116.00
1	1	2638	C	C5'-C4'-C3'	-5.02	108.47	116.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	68774	0	34561	1290	0
1	AS	68387	0	34366	1368	0
2	3	2579	0	1304	40	0
2	AT	2579	0	1304	46	0
3	4	3333	0	1684	61	0
3	AU	3353	0	1694	80	0
4	AW	1888	0	1962	50	0
4	j	1888	0	1962	52	0
5	AX	3077	0	3166	69	0
5	k	3077	0	3166	76	0
6	AY	2751	0	2879	62	0
6	l	2751	0	2879	74	0
7	AZ	2394	0	2362	52	0
7	m	2426	0	2389	41	0
8	BA	1210	0	1285	28	0
8	n	1242	0	1321	39	0
9	BB	1885	0	1977	33	0
9	o	1885	0	1977	36	0
10	BC	1805	0	1925	49	0
10	p	1839	0	1957	28	0
11	BD	1519	0	1588	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	q	1519	0	1588	31	0
12	BE	1689	0	1730	37	0
12	r	1689	0	1731	28	0
13	BF	1371	0	1410	41	0
13	s	1371	0	1410	32	0
14	BG	1610	0	1686	34	0
14	t	1610	0	1686	35	0
15	BH	1029	0	1116	33	0
15	u	1029	0	1116	34	0
16	BI	1713	0	1764	61	0
16	v	1713	0	1764	44	0
17	BJ	1590	0	1705	31	0
17	w	1590	0	1705	31	0
18	BK	1406	0	1431	29	0
18	x	1387	0	1408	33	0
19	BL	1458	0	1556	33	0
19	y	1458	0	1556	37	0
20	BM	1457	0	1564	41	0
20	z	1457	0	1564	41	0
21	0	1423	0	1480	33	0
21	BN	1423	0	1480	39	0
22	2	1262	0	1314	19	0
22	BO	1262	0	1314	25	0
23	5	831	0	848	24	0
23	BP	826	0	843	38	0
24	6	977	0	1026	20	0
24	BQ	977	0	1026	19	0
25	7	945	0	1010	25	0
25	BR	801	0	840	18	0
26	8	974	0	1032	17	0
26	BS	960	0	1014	19	0
27	9	989	0	1063	21	0
27	BT	989	0	1064	31	0
28	AA	1087	0	1154	27	0
28	BU	1087	0	1154	25	0
29	AB	1170	0	1203	32	0
29	BV	1170	0	1203	37	0
30	AC	493	0	520	17	0
30	BW	509	0	545	17	0
31	AD	729	0	775	13	0
31	BX	729	0	775	14	0
32	AE	894	0	941	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	BY	881	0	925	16	0
33	AF	1000	0	1069	29	0
33	BZ	1015	0	1095	25	0
34	AG	847	0	893	23	0
34	CA	867	0	932	20	0
35	AH	887	0	947	26	0
35	CB	904	0	986	23	0
36	AI	992	0	1093	27	0
36	CC	979	0	1076	27	0
37	AJ	758	0	838	15	0
37	CD	764	0	851	23	0
38	AK	677	0	697	20	0
38	CE	677	0	696	24	0
39	AL	617	0	675	8	0
39	CF	623	0	688	12	0
40	AM	438	0	475	9	0
40	CG	438	0	475	15	0
41	AN	419	0	460	12	0
41	CH	427	0	477	8	0
42	AO	236	0	285	7	0
42	CI	227	0	272	21	0
43	AP	828	0	893	27	0
43	CJ	841	0	917	25	0
44	AQ	698	0	734	13	0
44	CK	698	0	734	16	0
45	CL	931	0	908	57	0
45	i	931	0	908	89	0
46	B	36504	0	18363	867	0
46	CM	36805	0	18515	943	0
47	C	1627	0	1644	49	0
47	CN	1627	0	1644	49	0
48	CO	1724	0	1805	75	0
48	D	1724	0	1805	34	0
49	CP	1620	0	1715	35	0
49	E	1629	0	1728	36	0
50	CQ	1707	0	1807	46	0
50	F	1707	0	1807	72	0
51	CR	2055	0	2137	59	0
51	G	2051	0	2134	53	0
52	CS	1530	0	1597	43	0
52	H	1614	0	1688	59	0
53	CT	1820	0	1896	77	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	I	1820	0	1896	57	0
54	CU	1466	0	1561	51	0
54	J	1491	0	1579	43	0
55	CV	1579	0	1602	36	0
55	K	1579	0	1602	32	0
56	CW	1453	0	1532	31	0
56	L	1453	0	1532	32	0
57	CX	783	0	799	46	0
57	M	817	0	828	57	0
58	CY	1129	0	1183	27	0
58	N	1150	0	1201	19	0
59	CZ	885	0	915	37	0
59	O	885	0	915	105	0
60	DA	1187	0	1249	18	0
60	P	1187	0	1249	33	0
61	DB	942	0	981	41	0
61	Q	942	0	981	27	0
62	DC	1018	0	1065	49	0
62	R	1018	0	1065	52	0
63	DD	1091	0	1155	47	0
63	S	1091	0	1155	51	0
64	DE	1002	0	1058	51	0
64	T	997	0	1053	56	0
65	DF	1169	0	1216	61	0
65	U	1187	0	1237	39	0
66	DG	1100	0	1114	34	0
66	V	1100	0	1114	40	0
67	DH	790	0	855	29	0
67	W	808	0	871	35	0
68	DI	676	0	677	22	0
68	X	676	0	677	22	0
69	DJ	1032	0	1066	30	0
69	Y	1032	0	1066	24	0
70	DK	1110	0	1182	27	0
70	Z	1110	0	1182	28	0
71	DL	1072	0	1123	37	0
71	a	1086	0	1132	27	0
72	DM	570	0	609	16	0
72	b	578	0	613	12	0
73	DN	770	0	828	32	0
73	c	779	0	832	29	0
74	DO	614	0	630	17	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
74	d	614	0	630	13	0
75	DP	457	0	486	23	0
75	e	487	0	523	28	0
76	DQ	454	0	431	14	0
76	f	454	0	432	12	0
77	DR	444	0	483	12	0
77	g	474	0	515	20	0
78	DS	574	0	610	25	0
78	h	510	0	533	34	0
79	AR	2398	0	2373	90	0
79	DT	2398	0	2374	115	0
80	L1	1711	0	1817	70	0
80	l1	1711	0	1817	128	0
81	0	3	0	0	0	0
81	1	565	0	0	0	0
81	2	1	0	0	0	0
81	3	14	0	0	0	0
81	4	16	0	0	0	0
81	5	1	0	0	0	0
81	6	2	0	0	0	0
81	8	2	0	0	0	0
81	9	2	0	0	0	0
81	AB	1	0	0	0	0
81	AC	1	0	0	0	0
81	AD	2	0	0	0	0
81	AF	4	0	0	0	0
81	AG	2	0	0	0	0
81	AH	2	0	0	0	0
81	AI	1	0	0	0	0
81	AP	3	0	0	0	0
81	AQ	1	0	0	0	0
81	AR	1	0	0	0	0
81	AS	387	0	0	0	0
81	AT	13	0	0	0	0
81	AU	7	0	0	0	0
81	AW	3	0	0	0	0
81	AX	2	0	0	0	0
81	AY	1	0	0	0	0
81	B	169	0	0	0	0
81	BB	3	0	0	0	0
81	BE	2	0	0	0	0
81	BF	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
81	BG	2	0	0	0	0
81	BH	1	0	0	0	0
81	BI	1	0	0	0	0
81	BJ	4	0	0	0	0
81	BK	2	0	0	0	0
81	BN	2	0	0	0	0
81	BO	1	0	0	0	0
81	BS	1	0	0	0	0
81	BV	1	0	0	0	0
81	BZ	4	0	0	0	0
81	CA	1	0	0	0	0
81	CJ	1	0	0	0	0
81	CK	1	0	0	0	0
81	CL	3	0	0	0	0
81	CM	145	0	0	0	0
81	CN	1	0	0	0	0
81	CP	2	0	0	0	0
81	CQ	4	0	0	0	0
81	CW	1	0	0	0	0
81	D	1	0	0	0	0
81	DA	2	0	0	0	0
81	DB	4	0	0	0	0
81	DC	1	0	0	0	0
81	DG	1	0	0	0	0
81	DJ	2	0	0	0	0
81	DQ	1	0	0	0	0
81	E	2	0	0	0	0
81	F	1	0	0	0	0
81	G	1	0	0	0	0
81	H	1	0	0	0	0
81	I	1	0	0	0	0
81	K	1	0	0	0	0
81	Q	2	0	0	0	0
81	V	1	0	0	0	0
81	Y	1	0	0	0	0
81	Z	3	0	0	0	0
81	c	1	0	0	0	0
81	f	1	0	0	0	0
81	g	1	0	0	0	0
81	i	1	0	0	0	0
81	j	4	0	0	0	0
81	k	5	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
81	l	2	0	0	0	0
81	m	1	0	0	0	0
81	o	4	0	0	0	0
81	r	3	0	0	0	0
81	s	1	0	0	0	0
81	u	2	0	0	0	0
81	v	2	0	0	0	0
81	w	3	0	0	0	0
81	x	5	0	0	0	0
81	y	2	0	0	0	0
81	z	1	0	0	0	0
82	1	57	0	52	7	0
82	CJ	57	0	52	7	0
83	1	126	0	135	9	0
83	AS	126	0	135	20	0
83	B	42	0	45	18	0
83	CM	42	0	45	0	0
84	AH	1	0	0	0	0
84	AK	1	0	0	0	0
84	AN	1	0	0	0	0
84	AP	1	0	0	0	0
84	AQ	1	0	0	0	0
84	CB	1	0	0	0	0
84	CE	1	0	0	0	0
84	CK	1	0	0	0	0
84	DQ	1	0	0	0	0
84	c	1	0	0	0	0
84	f	1	0	0	0	0
85	1	9	0	0	2	0
85	4	3	0	0	1	0
85	AS	20	0	0	3	0
85	B	11	0	0	1	0
85	BQ	3	0	0	1	0
85	BV	1	0	0	0	0
85	G	1	0	0	0	0
All	All	405513	0	301774	8356	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 12.

All (8356) 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)
79:AR:16:HIS:CE1	79:AR:37:SER:HB2	1.48	1.47
73:DN:23:CYS:SG	73:DN:74:CYS:HB3	1.56	1.46
73:DN:23:CYS:SG	73:DN:74:CYS:CB	2.32	1.17
79:AR:16:HIS:CE1	79:AR:37:SER:CB	2.26	1.17
46:B:1410:A:H2'	49:E:87:ALA:HB3	1.30	1.11
1:AS:389:A:H62	83:AS:3789:PAR:H221	1.10	1.09
52:H:150:GLY:HA2	52:H:156:ARG:HB2	1.35	1.06
45:i:64:LEU:HA	45:i:67:LYS:HE2	1.36	1.04
1:l:1233:G:H1	1:l:1247:A:N6	1.54	1.03
66:V:117:SER:HB2	66:V:123:ARG:HB2	1.39	1.03
46:B:485:G:H1	46:B:499:U:H3	1.04	1.02
59:O:36:LEU:C	59:O:38:HIS:H	1.60	0.99
62:R:14:GLN:HE22	62:R:22:LEU:H	1.10	0.98
57:M:86:ILE:HG13	57:M:87:LEU:H	1.25	0.96
80:l1:53:LEU:HB3	80:l1:189:PHE:HZ	1.29	0.96
73:DN:23:CYS:SG	73:DN:74:CYS:SG	2.64	0.95
35:CB:58:ARG:HD3	35:CB:59:PRO:HD2	1.49	0.95
76:DQ:23:HIS:HB3	76:DQ:42:CYS:SG	2.07	0.95
54:CU:25:GLU:HB2	54:CU:31:LYS:HG3	1.48	0.94
46:CM:271:G:H1	46:CM:281:U:H3	1.12	0.94
1:AS:1870:A:N7	20:BM:20:ARG:NH2	2.15	0.94
73:DN:23:CYS:HG	73:DN:74:CYS:CB	1.76	0.93
1:AS:3313:G:H1	1:AS:3322:U:H3	0.95	0.92
46:CM:697:U:H3	46:CM:724:G:H1	1.10	0.92
1:l:739:C:H5''	19:y:69:ARG:HH22	1.35	0.92
80:l1:26:ARG:NH1	80:l1:210:MET:SD	2.43	0.92
66:DG:117:SER:HB2	66:DG:123:ARG:HB2	1.52	0.92
80:l1:59:PRO:HB3	80:l1:169:VAL:HB	1.50	0.92
1:AS:389:A:N6	83:AS:3789:PAR:H221	1.84	0.91
1:l:3235:A:N7	8:n:45:ARG:NH1	2.19	0.91
1:AS:976:A:H2'	1:AS:977:U:H5'	1.52	0.91
46:CM:218:A:H3'	46:CM:219:A:H5''	1.52	0.90
59:O:36:LEU:C	59:O:38:HIS:N	2.25	0.90
71:DL:10:ARG:NH1	71:DL:26:ASP:OD2	2.04	0.90
46:CM:272:G:N2	46:CM:280:C:O2	2.03	0.90
10:BC:42:GLN:OE1	10:BC:45:ARG:NH2	2.04	0.90
57:CX:81:ASN:ND2	59:CZ:37:VAL:O	2.04	0.90
65:DF:134:ARG:HB2	65:DF:136:GLN:HE22	1.34	0.90
46:B:1230:G:H1	46:B:1235:U:H3	1.14	0.90
1:AS:2836:A:H5''	12:BE:114:GLY:HA2	1.54	0.89
46:CM:1549:G:OP1	66:DG:89:ARG:NH1	2.06	0.89
69:DJ:75:ILE:HD11	69:DJ:93:LEU:HD11	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:272:G:N1	46:CM:280:C:N3	2.20	0.89
26:8:75:LYS:HB3	26:8:81:THR:HG23	1.53	0.89
46:CM:214:U:H5'	46:CM:815:U:H4'	1.54	0.89
1:AS:538:G:H1	1:AS:547:U:H3	0.93	0.89
46:B:1042:U:H3'	46:B:1043:U:H2'	1.55	0.89
1:AS:1562:G:N2	1:AS:1564:U:O4	2.05	0.89
51:G:11:ARG:HH12	51:G:24:SER:HB3	1.38	0.89
65:U:24:GLY:HA2	65:U:58:ALA:HB3	1.53	0.89
50:CQ:118:ARG:NH1	45:CL:124:ASP:OD2	2.05	0.88
1:1:2070:A:O2'	20:z:114:LYS:NZ	2.07	0.88
1:1:1241:A:H3'	1:1:1242:G:H5''	1.53	0.88
1:1:666:G:O2'	19:y:164:ARG:NH1	2.07	0.88
46:CM:1218:G:N2	78:DS:184:GLY:O	2.07	0.88
1:AS:3262:U:O4	5:AX:124:LYS:NZ	2.07	0.87
46:B:1375:C:O5'	64:T:48:ASN:ND2	2.06	0.87
1:AS:2953:U:OP2	5:AX:244:ARG:NH2	2.07	0.87
8:n:71:ASN:ND2	8:n:159:LEU:O	2.08	0.87
35:AH:58:ARG:HD3	35:AH:59:PRO:HD2	1.57	0.87
1:AS:1652:A:OP2	35:CB:37:LYS:NZ	2.06	0.87
46:B:912:C:H1'	61:Q:120:SER:HB2	1.56	0.87
54:J:161:LYS:O	54:J:163:ASP:N	2.08	0.86
1:AS:617:A:H5'	1:AS:619:A:H1'	1.57	0.86
1:AS:1384:U:OP1	33:BZ:105:LYS:NZ	2.07	0.86
6:l:12:VAL:HG22	10:BC:119:GLU:HB3	1.56	0.86
46:B:512:G:H1	46:B:541:C:H5	1.19	0.86
1:AS:2334:A:N3	18:BK:131:ARG:NH2	2.23	0.86
46:B:500:U:O2'	46:B:501:G:N7	2.09	0.86
1:AS:710:G:OP1	14:BG:176:ARG:NH1	2.09	0.86
1:1:2086:C:H1'	1:1:3309:A:C8	2.11	0.86
4:j:27:ALA:O	4:j:128:ARG:NH2	2.09	0.85
45:i:90:ARG:NH1	46:B:1413:A:OP2	2.08	0.85
70:DK:107:PHE:HD2	70:DK:114:LYS:HD3	1.41	0.85
46:CM:1276:G:H1	46:CM:1309:G:H22	1.22	0.85
2:3:107:A:OP2	12:r:203:LYS:NZ	2.10	0.85
19:BL:96:PHE:O	19:BL:117:ASN:ND2	2.09	0.84
1:1:1253:C:H42	1:1:1257:G:N2	1.75	0.84
63:S:27:LEU:HB3	63:S:63:ASP:HB2	1.59	0.84
1:AS:1023:A:N6	1:AS:1025:G:N3	2.24	0.84
30:AC:8:THR:HG22	30:AC:10:HIS:H	1.43	0.84
1:1:1936:G:H21	1:1:3327:A:H8	1.25	0.84
77:g:43:ARG:HG2	77:g:54:ARG:HH22	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:151:G:O6	71:a:128:ARG:NH2	2.10	0.84
46:B:1400:U:H5''	64:T:3:ARG:HE	1.43	0.84
1:AS:2467:C:H3'	1:AS:2468:C:H2'	1.60	0.84
46:CM:484:G:N2	46:CM:501:G:O6	2.11	0.84
6:l:359:GLU:O	21:0:26:ARG:NH1	2.10	0.83
37:CD:58:GLU:O	37:CD:62:ASN:ND2	2.10	0.83
1:1:907:C:H42	4:j:3:ARG:HD3	1.42	0.83
1:1:1436:G:OP1	6:l:84:HIS:NE2	2.09	0.83
6:AY:303:ALA:HB2	19:BL:39:ARG:HH22	1.42	0.83
46:CM:1529:G:N2	46:CM:1556:A:OP2	2.12	0.83
46:CM:485:G:H1	46:CM:499:U:H3	0.86	0.83
46:B:217:A:N6	46:B:828:U:O2	2.11	0.83
13:s:101:ASN:HD22	13:s:130:VAL:HA	1.44	0.83
1:AS:483:U:H2'	1:AS:484:U:C6	2.14	0.82
46:CM:880:G:H1	46:CM:902:U:H3	1.26	0.82
46:CM:1211:A:O2'	46:CM:1241:A:N1	2.11	0.82
1:1:1233:G:N2	1:1:1247:A:N1	2.27	0.82
1:1:1387:C:C2	33:AF:104:ARG:HD3	2.14	0.82
1:1:1091:U:H4'	1:1:1092:U:H5'	1.62	0.82
1:AS:2516:U:O2'	1:AS:2519:A:N1	2.12	0.82
20:z:165:ARG:HG2	46:B:835:A:H5'	1.61	0.82
1:AS:834:G:O6	44:CK:4:ARG:NH2	2.12	0.82
45:i:114:GLU:OE2	50:F:117:ARG:NH2	2.12	0.82
46:CM:2:A:OP1	49:CP:171:LYS:NZ	2.12	0.82
46:CM:345:G:H5''	58:CY:85:ILE:HD11	1.62	0.81
56:L:31:ALA:HB2	56:L:42:ILE:HD11	1.62	0.81
75:e:8:THR:HG21	75:e:59:SER:HB2	1.63	0.81
1:AS:3244:A:H62	34:CA:54:ARG:HH21	1.28	0.81
46:CM:255:A:N3	55:CV:64:ASN:ND2	2.28	0.81
51:CR:45:VAL:HG23	51:CR:61:VAL:HG11	1.62	0.81
5:AX:292:ALA:HB1	5:AX:295:ALA:HB3	1.62	0.81
30:BW:8:THR:HG22	30:BW:10:HIS:H	1.45	0.81
35:CB:38:ALA:O	35:CB:58:ARG:NH2	2.14	0.81
1:AS:607:G:OP2	6:AY:316:LYS:NZ	2.14	0.81
5:AX:21:ARG:HE	5:AX:269:GLN:HG3	1.45	0.81
46:CM:1357:A:H61	67:DH:20:LYS:HE2	1.45	0.81
1:1:1248:A:H2'	1:1:1249:U:H5'	1.60	0.81
46:B:345:G:H5''	58:N:85:ILE:HD11	1.62	0.81
52:H:95:ASN:OD1	52:H:107:LYS:NZ	2.14	0.81
80:l:73:ASP:O	80:l:75:ASP:N	2.14	0.81
1:AS:437:G:H22	1:AS:620:A:H61	1.27	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:AR:42:LEU:HB2	79:AR:62:PHE:HB2	1.62	0.80
80:11:76:ARG:HG2	80:11:144:LEU:HD21	1.63	0.80
46:CM:238:U:H3'	46:CM:239:U:H4'	1.62	0.80
56:CW:169:ALA:O	56:CW:174:ARG:NH1	2.14	0.80
80:11:76:ARG:NH1	80:11:140:HIS:O	2.13	0.80
1:1:617:A:H5'	1:1:619:A:H1'	1.61	0.80
46:B:824:U:P	58:N:26:LYS:HB3	2.20	0.80
1:AS:564:G:H2'	1:AS:565:A:C8	2.17	0.80
1:1:1253:C:H42	1:1:1257:G:H22	1.29	0.80
46:B:1240:G:N7	59:O:46:ARG:NH2	2.29	0.80
83:B:1970:PAR:H13	83:B:1970:PAR:H241	1.44	0.80
47:C:30:GLN:NE2	47:C:151:SER:O	2.14	0.80
1:AS:2461:G:H22	1:AS:2464:A:H5''	1.45	0.80
1:1:2191:A:H2'	1:1:2192:A:C8	2.16	0.80
23:5:19:VAL:HG23	23:5:20:ALA:H	1.47	0.80
59:O:63:CYS:HB3	59:O:97:LEU:HD11	1.62	0.80
80:11:26:ARG:H	80:11:26:ARG:HD3	1.46	0.80
46:B:4:C:O2'	56:L:17:ARG:NH2	2.15	0.80
55:CV:22:ARG:HH21	55:CV:25:ARG:HG3	1.47	0.80
79:DT:257:ILE:HB	79:DT:271:LEU:HB2	1.63	0.80
1:AS:1091:U:H4'	1:AS:1092:U:H5'	1.63	0.79
54:CU:48:ASN:ND2	54:CU:167:GLN:OE1	2.14	0.79
25:BR:79:GLN:HG3	25:BR:87:LEU:HD11	1.64	0.79
46:B:869:A:H62	46:B:913:U:H3	1.30	0.79
46:B:1282:G:N2	46:B:1285:A:OP2	2.12	0.79
13:s:46:VAL:HG12	45:i:33:ASN:HB3	1.62	0.79
67:DH:26:THR:HG22	67:DH:87:LYS:HG3	1.64	0.79
46:B:635:C:O2	54:J:110:ARG:NH2	2.16	0.79
53:I:161:GLU:HB3	53:I:170:THR:HG22	1.63	0.79
1:AS:1657:G:H2'	1:AS:1658:G:C8	2.18	0.79
1:AS:2428:G:H22	1:AS:2475:U:H3	1.30	0.79
46:CM:485:G:N2	46:CM:499:U:O2	2.16	0.79
46:CM:748:G:OP2	56:CW:79:ARG:NH2	2.15	0.79
46:CM:1236:U:O2'	46:CM:1237:C:O2	1.99	0.79
30:BW:1:MET:O	30:BW:3:LYS:N	2.15	0.79
1:AS:3087:C:O2	1:AS:3089:C:N4	2.16	0.79
46:CM:696:U:H1'	54:CU:103:ARG:HG2	1.64	0.79
23:BP:43:VAL:HG22	23:BP:54:ILE:HD11	1.65	0.79
62:R:1:MET:HE2	65:U:18:LEU:HA	1.63	0.79
79:DT:202:SER:HB3	79:DT:207:LEU:HB2	1.65	0.79
1:AS:119:G:O6	10:BC:124:LYS:NZ	2.15	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:M:88:PRO:HD2	57:M:91:ARG:HB2	1.65	0.78
1:AS:185:U:H3	1:AS:229:C:H42	1.28	0.78
1:AS:3165:U:H2'	1:AS:3166:A:C8	2.18	0.78
46:CM:814:A:O2'	46:CM:815:U:OP2	2.01	0.78
46:CM:151:G:O6	71:DL:128:ARG:NH2	2.16	0.78
46:B:766:U:H4'	46:B:767:G:H5''	1.63	0.78
17:BJ:63:THR:HG21	17:BJ:69:LYS:HB2	1.66	0.78
36:CC:78:LYS:HA	36:CC:81:ARG:HD2	1.64	0.78
46:CM:697:U:O2	46:CM:724:G:N2	2.16	0.78
1:AS:2445:G:N2	1:AS:2467:C:O2	2.15	0.78
1:1:1020:G:H2'	1:1:1022:A:N7	1.99	0.78
79:AR:90:LEU:HD11	79:AR:125:SER:HB3	1.66	0.78
1:AS:1590:A:OP1	35:CB:36[B]:LYS:NZ	2.16	0.78
51:CR:11:ARG:HH12	51:CR:24:SER:HB2	1.47	0.78
57:CX:15:LEU:HD21	57:CX:68:LEU:HD13	1.64	0.78
11:q:92:PHE:HB2	11:q:142:ASP:HB3	1.66	0.78
1:AS:388:G:N7	83:AS:3789:PAR:H222	1.99	0.78
59:O:133:ARG:HA	59:O:133:ARG:HE	1.48	0.77
46:CM:79:C:OP1	53:CT:159:ARG:NH2	2.17	0.77
1:AS:438:A:N1	1:AS:489:G:O2'	2.18	0.77
1:AS:2713:C:O2'	43:CJ:20:HIS:ND1	2.17	0.77
1:AS:3165:U:H2'	1:AS:3166:A:H8	1.49	0.77
46:B:880:G:H1	46:B:902:U:H3	1.27	0.77
5:AX:10:ARG:NH2	5:AX:263:THR:O	2.18	0.77
1:AS:412:G:H21	18:BK:118:GLN:HE22	1.33	0.77
40:CG:24:PRO:HG2	40:CG:27:ILE:HD12	1.66	0.77
46:CM:1431:G:N2	78:DS:129:THR:O	2.16	0.77
51:CR:153:LEU:HD11	53:CT:215:ARG:HE	1.50	0.77
63:S:37:LEU:HD22	66:V:10:PRO:HG3	1.66	0.77
1:AS:115:A:OP2	16:BI:2:GLY:N	2.18	0.77
1:1:2155:G:OP2	4:j:128:ARG:NH1	2.16	0.77
65:U:16:ARG:NH1	65:U:21:ASN:OD1	2.18	0.77
1:AS:153:U:OP2	36:CC:103:LYS:NZ	2.17	0.77
46:CM:1487:C:OP1	66:DG:122:ARG:NH2	2.17	0.77
65:DF:36:ARG:HH22	65:DF:105:LEU:HD22	1.49	0.77
1:1:1279:C:H2'	1:1:1280:C:H6	1.49	0.76
47:C:124:THR:HG22	47:C:174:TRP:HE1	1.50	0.76
59:O:106:LEU:O	59:O:113:ARG:NH2	2.18	0.76
2:AT:39:U:H5'	45:CL:33:ASN:ND2	1.99	0.76
5:AX:211:GLN:NE2	5:AX:283:TYR:O	2.18	0.76
7:m:111:GLN:HE22	7:m:252:SER:HB2	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:985:C:H5	46:B:988:A:H5''	1.49	0.76
59:O:38:HIS:C	59:O:40:GLY:H	1.93	0.76
79:DT:91:ARG:HE	79:DT:100:THR:HG21	1.50	0.76
1:AS:2444:G:N2	1:AS:2467:C:O2'	2.18	0.76
13:BF:7:ASN:OD1	13:BF:10:ARG:HG3	1.86	0.76
46:CM:1156:A:H2'	46:CM:1157:G:C8	2.19	0.76
9:o:108:GLN:OE1	19:y:3:ARG:NH1	2.17	0.76
46:B:944:U:O2	60:P:61:SER:OG	2.04	0.76
57:M:15:LEU:O	57:M:19:GLY:HA2	1.85	0.76
15:BH:78:TRP:NE1	15:BH:84:ASP:OD1	2.19	0.76
27:BT:39:LEU:HD22	27:BT:43:TYR:HE2	1.50	0.76
65:DF:69:ILE:HG22	65:DF:73:MET:HE2	1.68	0.76
73:c:23:CYS:SG	73:c:24:LEU:N	2.58	0.76
1:AS:112:C:OP1	16:BI:147:ARG:NH2	2.19	0.76
1:AS:2199:G:N2	1:AS:2202:A:OP2	2.17	0.76
46:CM:1472:G:N2	46:CM:1580:A:OP1	2.14	0.76
76:DQ:19:ARG:HD2	76:DQ:32:ARG:HD3	1.66	0.76
79:DT:81:ALA:HB3	79:DT:93:TRP:HB2	1.66	0.76
55:K:11:ARG:O	58:N:133:LYS:NZ	2.18	0.76
6:AY:301:ARG:NH2	19:BL:38:ARG:O	2.18	0.76
1:1:1233:G:H1	1:1:1247:A:H61	0.77	0.76
1:AS:316:U:O2'	37:CD:29:LYS:NZ	2.18	0.76
46:CM:1275:U:H2'	46:CM:1276:G:C8	2.21	0.76
46:CM:1334:G:N3	46:CM:1365:C:N4	2.33	0.76
46:CM:850:A:N6	46:CM:950:U:O4	2.19	0.76
65:DF:45:LEU:HD21	65:DF:81:ILE:HG12	1.68	0.76
31:AD:19:THR:HG23	31:AD:97:ALA:HA	1.68	0.76
51:G:148:ARG:NH2	53:I:201:GLN:OE1	2.19	0.76
46:CM:1503:A:OP2	67:DH:60:LYS:NZ	2.20	0.76
60:DA:69:ASN:HB3	60:DA:73:ARG:HD2	1.66	0.75
78:DS:144:VAL:HA	78:DS:147:TYR:HD2	1.51	0.75
46:B:853:G:H1	46:B:945:U:H3	1.33	0.75
1:AS:71:C:O2'	14:BG:66:ASN:OD1	2.04	0.75
6:l:290:LEU:HD22	19:y:129:LEU:HD11	1.69	0.75
27:9:69:LYS:NZ	27:9:70:VAL:O	2.20	0.75
46:CM:352:C:H5''	55:CV:16:ALA:HB2	1.67	0.75
1:1:2163:G:O2'	1:1:2292:U:OP2	2.03	0.75
46:B:1084:U:OP1	69:Y:71:LYS:NZ	2.16	0.75
1:AS:3318:G:H5''	1:AS:3319:U:H4'	1.69	0.75
13:s:108:GLU:OE1	65:U:110:ARG:NH1	2.19	0.75
37:AJ:94:ALA:O	80:l:215:ARG:NH2	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:1334:G:N3	46:B:1365:C:N4	2.33	0.75
31:BX:11:ASN:HB3	31:BX:12:ILE:HD12	1.68	0.75
1:1:627:U:H2'	1:1:628:A:C8	2.22	0.75
46:B:553:A:N3	46:B:588:C:O2'	2.20	0.75
18:BK:50:GLN:OE1	18:BK:56:ARG:NH2	2.19	0.75
23:BP:28:PHE:CE1	23:BP:33:TYR:HB2	2.20	0.75
46:CM:1579:A:H2'	46:CM:1580:A:H8	1.50	0.75
19:y:96:PHE:O	19:y:117:ASN:ND2	2.19	0.75
50:F:60:LEU:HD13	57:M:96:PRO:HG3	1.68	0.75
49:CP:38:ARG:NH1	49:CP:243:ALA:O	2.20	0.75
63:DD:78:TYR:HA	63:DD:81:ARG:HD2	1.69	0.75
46:CM:271:G:N2	46:CM:281:U:O2	2.20	0.75
79:AR:52:ASP:O	79:AR:53:ASN:ND2	2.20	0.75
43:CJ:55:LYS:HD3	82:CJ:202:3K5:H34	1.67	0.75
46:CM:1230:G:H1	46:CM:1235:U:H3	1.33	0.75
75:DP:8:THR:HG21	75:DP:59:SER:HB2	1.67	0.75
1:1:976:A:H2'	1:1:977:U:H5'	1.67	0.74
1:1:2424:U:H5''	37:AJ:97:ARG:HH22	1.50	0.74
5:k:66:LYS:HZ1	24:6:9:ASN:H	1.33	0.74
46:CM:766:U:H4'	46:CM:767:G:H5''	1.69	0.74
80:l1:12:ASN:HB3	80:l1:206:ILE:HG21	1.68	0.74
51:G:45:VAL:HG23	51:G:61:VAL:HG11	1.68	0.74
1:AS:1631:G:N2	1:AS:1634:A:OP2	2.19	0.74
1:AS:2492:U:OP2	1:AS:2558:G:N2	2.19	0.74
46:CM:1511:A:H2'	46:CM:1512:A:C8	2.22	0.74
52:CS:164:PRO:HD3	75:DP:54:LEU:HB3	1.69	0.74
57:CX:77:ARG:NH1	57:CX:83:PRO:O	2.19	0.74
1:1:1657:G:H2'	1:1:1658:G:C8	2.23	0.74
32:AE:45:THR:HG21	32:AE:89:PHE:HA	1.68	0.74
1:1:480:G:H5''	1:1:481:G:N7	2.02	0.74
46:B:1238:U:H5''	78:h:172:ILE:HD12	1.67	0.74
61:Q:42:LYS:NZ	61:Q:61:ASP:OD2	2.15	0.74
46:CM:1042:U:H3'	46:CM:1043:U:H2'	1.69	0.74
79:DT:235:ALA:HB3	79:DT:253:THR:HB	1.69	0.74
70:Z:69:ARG:HG3	70:Z:117:ILE:HG12	1.69	0.74
64:DE:36:SER:OG	64:DE:47:ARG:NH1	2.21	0.74
46:B:1521:G:N7	72:b:77:ARG:NH2	2.36	0.74
59:O:55:ARG:HH12	59:O:82:PRO:HB3	1.52	0.74
1:AS:1561:U:O2'	1:AS:1562:G:OP1	2.06	0.74
30:BW:11:ASN:OD1	30:BW:14[B]:ARG:NH1	2.20	0.74
46:B:327:G:H5'	55:K:99:SER:OG	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:M:11:ILE:HD13	57:M:35:ILE:HG21	1.67	0.74
1:AS:531:G:HO2'	1:AS:552:G:H1	1.35	0.74
1:AS:1344:U:OP1	19:BL:39:ARG:NH2	2.21	0.74
1:AS:1628:A:OP1	28:BU:69:LYS:NZ	2.20	0.74
2:AT:68:C:O2	2:AT:110:G:N2	2.14	0.74
20:BM:163:ARG:NH2	46:CM:799:G:N7	2.36	0.74
83:B:1970:PAR:H21	48:D:107:SER:HA	1.70	0.74
80:l1:36:VAL:HA	80:l1:204:LEU:HA	1.69	0.74
1:l:1789:C:H2'	4:j:184:ARG:HH22	1.52	0.74
18:x:50:GLN:OE1	18:x:56:ARG:NH2	2.21	0.74
46:B:952:A:OP2	60:P:124:ARG:NH2	2.20	0.74
69:Y:15:ASN:ND2	69:Y:72:CYS:O	2.18	0.74
1:AS:1011:C:H4'	1:AS:1012:U:H6	1.53	0.74
1:AS:2455:G:O2'	1:AS:2456:C:O5'	2.06	0.74
4:AW:27:ALA:O	4:AW:128:ARG:NH2	2.21	0.74
46:B:1236:U:O2'	46:B:1237:C:O2	2.05	0.73
46:CM:761:G:O6	71:DL:11:LYS:NZ	2.17	0.73
46:CM:1266:G:O3'	67:DH:75:SER:OG	2.06	0.73
16:v:96:LYS:NZ	16:v:104:GLU:OE2	2.20	0.73
65:U:22:ILE:HG22	65:U:23:ASP:H	1.53	0.73
1:AS:2912:A:OP2	5:AX:2:SER:N	2.21	0.73
25:BR:80:ARG:HH22	46:CM:163:G:H4'	1.51	0.73
45:i:64:LEU:HA	45:i:67:LYS:CE	2.17	0.73
1:l:2482:U:H2'	1:l:2483:U:H5'	1.69	0.73
1:AS:2086:C:H1'	1:AS:3309:A:C8	2.23	0.73
4:AW:54:ARG:HH21	4:AW:58:LEU:HD11	1.53	0.73
46:CM:1445:C:OP2	65:DF:138:THR:OG1	2.06	0.73
45:CL:159:GLU:OE2	45:CL:163:GLN:NE2	2.20	0.73
1:l:662:U:H2'	1:l:663:A:C8	2.23	0.73
1:l:3040:U:OP2	20:z:62:ARG:NH2	2.22	0.73
46:CM:122:U:H2'	46:CM:123:G:H5''	1.69	0.73
80:l1:33:GLU:HA	80:l1:168:ALA:HB3	1.71	0.73
46:B:352:C:H5''	55:K:16:ALA:HB2	1.70	0.73
47:C:200:ASP:HB2	64:T:85:VAL:HG23	1.69	0.73
1:AS:2155:G:OP2	4:AW:128:ARG:NH1	2.21	0.73
54:CU:5:ILE:HG21	54:CU:10:PRO:HB3	1.69	0.73
67:DH:41:ILE:HD11	67:DH:54:PRO:HD3	1.70	0.73
7:m:289:LYS:HA	7:m:292:GLU:HG2	1.69	0.73
42:AO:7:LYS:NZ	46:B:1761:G:OP1	2.22	0.73
46:B:856:G:H2'	46:B:857:G:C8	2.24	0.73
1:AS:538:G:N2	1:AS:547:U:O2	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BQ:47:ASN:OD1	85:BQ:201:HOH:O	2.06	0.73
80:l1:93:LEU:HD21	80:l1:100:ILE:HG23	1.69	0.73
12:r:30:LYS:HG3	12:r:63:GLU:HG3	1.71	0.73
56:L:38:ASN:HA	77:g:36:MET:HE3	1.71	0.73
1:AS:662:U:H2'	1:AS:663:A:C8	2.24	0.73
83:AS:3790:PAR:HN61	83:AS:3790:PAR:H43	1.54	0.73
1:1:1208:A:O2'	21:0:92:LYS:NZ	2.21	0.73
66:V:66:TYR:HD1	66:V:67:LEU:HD23	1.54	0.73
79:DT:90:LEU:HD11	79:DT:125:SER:HB3	1.69	0.73
20:z:160:GLU:OE1	20:z:163:ARG:NH1	2.21	0.72
46:B:911:A:H2	61:Q:120:SER:HB3	1.53	0.72
46:CM:869:A:H62	46:CM:913:U:H3	1.33	0.72
46:CM:1198:G:H1	46:CM:1436:U:H3	1.35	0.72
52:CS:122:HIS:HB2	52:CS:129:PRO:HG3	1.70	0.72
45:CL:40:ASP:O	45:CL:42:ALA:N	2.21	0.72
1:1:2638:C:H4'	45:i:39:SER:HA	1.71	0.72
64:T:27:ASP:O	64:T:31:ASN:ND2	2.21	0.72
50:CQ:128:MET:HE2	50:CQ:135:VAL:HG12	1.70	0.72
1:1:572:U:H2'	1:1:573:G:H8	1.54	0.72
1:1:653:C:H2'	1:1:654:A:H8	1.52	0.72
1:AS:2423:A:H5'	37:CD:62:ASN:HA	1.71	0.72
16:BI:155:VAL:O	16:BI:162:ARG:NH2	2.22	0.72
1:1:831:G:O2'	1:1:853:G:N2	2.23	0.72
1:1:3194:G:H5'	15:u:129:VAL:HG21	1.70	0.72
3:4:20:U:OP1	85:4:301:HOH:O	2.08	0.72
79:AR:16:HIS:HE1	79:AR:37:SER:HB2	0.94	0.72
46:CM:1219:A:HO2'	78:DS:187:HIS:HD1	1.35	0.72
46:CM:1327:C:N4	46:CM:1369:G:O6	2.17	0.72
21:BN:3:ARG:NH1	21:BN:4:LEU:O	2.21	0.72
50:CQ:118:ARG:HE	45:CL:120:GLU:HG2	1.55	0.72
25:7:81:ALA:HB3	53:I:130:PRO:HB3	1.71	0.72
46:CM:1218:G:O6	46:CM:1237:C:N4	2.19	0.72
2:AT:39:U:H5'	45:CL:33:ASN:HD22	1.53	0.72
46:CM:812:C:O2'	58:CY:50:GLU:OE2	2.06	0.72
46:CM:1669:U:O4	46:CM:1707:G:N2	2.22	0.72
52:CS:159:ALA:HB3	52:CS:225:ARG:HB3	1.72	0.72
1:1:447:U:H2'	1:1:448:U:C6	2.25	0.72
46:B:1156:A:H2'	46:B:1157:G:C8	2.25	0.72
1:AS:3199:G:H1	1:AS:3218:U:H3	1.38	0.72
48:CO:190:PRO:HG2	48:CO:192:VAL:HG23	1.72	0.72
63:S:21:VAL:HG22	63:S:64:ILE:HG12	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D:190:PRO:HG2	48:D:192:VAL:HG23	1.72	0.72
1:AS:437:G:N2	1:AS:620:A:H61	1.87	0.72
46:CM:1214:G:N2	46:CM:1240:G:O2'	2.23	0.72
45:CL:64:LEU:O	45:CL:66:ASN:N	2.23	0.72
1:AS:1542:A:N7	16:BI:71:ARG:NH1	2.38	0.71
49:CP:55:SER:OG	68:DI:25:LYS:O	2.08	0.71
71:DL:90:ARG:HB3	71:DL:94:TYR:CE2	2.25	0.71
1:1:484:U:H2'	1:1:485:A:C8	2.25	0.71
46:B:854:A:H61	46:B:943:U:H5	1.38	0.71
1:AS:496:A:H4'	8:BA:27:GLN:HG3	1.70	0.71
56:CW:87:SER:OG	56:CW:89:ASP:OD1	2.07	0.71
1:1:2334:A:N3	18:x:131:ARG:NH2	2.37	0.71
1:AS:976:A:C2'	1:AS:977:U:H5'	2.20	0.71
46:CM:849:U:OP1	69:DJ:28:ARG:NH1	2.23	0.71
1:AS:583:A:H4'	34:CA:72:THR:HG22	1.71	0.71
1:AS:2423:A:H4'	37:CD:61:ARG:HB3	1.72	0.71
51:CR:148:ARG:NH2	53:CT:201:GLN:OE1	2.23	0.71
46:B:1470:G:H5'	63:S:14:THR:HG21	1.73	0.71
70:Z:62:LYS:H	70:Z:116:ASP:HB2	1.55	0.71
1:AS:1018:U:H2'	1:AS:1019:U:H5''	1.73	0.71
11:BD:107:ASP:O	11:BD:109:GLN:NE2	2.23	0.71
19:BL:181:SER:OG	19:BL:182:ARG:NH1	2.24	0.71
73:DN:23:CYS:SG	73:DN:28:ARG:HB3	2.30	0.71
80:l:53:LEU:HB3	80:l:189:PHE:CZ	2.19	0.71
45:i:64:LEU:CA	45:i:67:LYS:HE2	2.19	0.71
11:BD:92:PHE:HB2	11:BD:142:ASP:HB3	1.72	0.71
46:CM:211:A:H62	46:CM:250:U:H3	1.39	0.71
1:1:1642:G:O2'	1:1:1804:G:N2	2.23	0.71
45:i:90:ARG:CZ	46:B:1413:A:H5''	2.20	0.71
45:i:103:LEU:HB3	45:i:109:GLN:HG3	1.72	0.71
46:B:211:A:H62	46:B:250:U:H3	1.38	0.71
46:B:222:C:O2	58:N:26:LYS:NZ	2.23	0.71
46:B:1216:U:H3	46:B:1239:U:H3	1.39	0.71
1:AS:1088:C:O3'	22:BO:120:LYS:NZ	2.23	0.71
20:BM:162:ARG:HA	20:BM:165:ARG:HD3	1.73	0.71
53:CT:32:MET:HE2	53:CT:100:CYS:HB2	1.73	0.71
1:1:780:A:C2	19:y:69:ARG:HD3	2.25	0.71
1:1:2428:G:H22	1:1:2475:U:H3	1.38	0.71
46:B:871:U:OP1	48:D:214:LYS:NZ	2.23	0.71
72:DM:84:GLU:HG3	72:DM:91:PRO:HD3	1.73	0.71
83:1:3967:PAR:O44	83:1:3967:PAR:N64	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:l:12:VAL:CG2	10:BC:119:GLU:HB3	2.21	0.71
46:CM:724:G:H2'	46:CM:725:A:C8	2.26	0.71
1:1:1273:C:H2'	1:1:1274:A:H8	1.56	0.71
1:1:3287:A:H2'	1:1:3288:A:C8	2.26	0.71
46:B:219:A:H5''	46:B:818:U:H1'	1.73	0.71
46:B:685:C:H5''	69:Y:119:LYS:HG2	1.73	0.71
46:B:778:U:O2'	46:B:779:U:O2	2.09	0.71
47:C:63:ILE:HG12	68:X:36:ILE:HG12	1.72	0.71
50:F:12:LEU:HD12	67:W:85:ILE:HG12	1.73	0.71
1:AS:2655:U:H2'	1:AS:2656:C:C6	2.25	0.71
46:CM:786:G:H21	69:DJ:107:SER:HB3	1.54	0.71
53:CT:220:LYS:HA	53:CT:223:ARG:HB2	1.72	0.71
71:DL:132:ARG:HA	71:DL:132:ARG:HE	1.54	0.71
3:4:57:C:OP2	38:AK:68:LYS:NZ	2.24	0.70
43:AP:16:GLU:H	43:AP:16:GLU:CD	1.99	0.70
50:F:138:VAL:HG22	50:F:152:LYS:HG2	1.73	0.70
46:CM:480:U:H2'	46:CM:481:A:H8	1.56	0.70
46:CM:778:U:O2'	46:CM:779:U:O2	2.07	0.70
46:CM:881:U:H5'	48:CO:23:PRO:HG2	1.73	0.70
46:CM:903:U:H2'	46:CM:904:A:C8	2.25	0.70
51:CR:94:ALA:HB3	71:DL:17:LEU:HD23	1.72	0.70
1:1:3262:U:O4	5:k:124:LYS:NZ	2.24	0.70
3:4:89:A:OP1	36:AI:1:MET:N	2.23	0.70
15:u:20:LEU:HD21	15:u:23:ASN:HA	1.71	0.70
46:B:317:U:H4'	46:B:321:A:C8	2.26	0.70
48:D:128:LYS:HG2	48:D:134:VAL:HG22	1.71	0.70
15:BH:23:ASN:O	15:BH:23:ASN:ND2	2.20	0.70
1:1:2191:A:H2'	1:1:2192:A:H8	1.54	0.70
32:AE:45:THR:HG22	32:AE:47:ASP:H	1.56	0.70
46:B:701:G:H22	46:B:720:C:H42	1.40	0.70
46:CM:577:A:H61	50:CQ:180:GLN:HE22	1.39	0.70
46:B:1048:U:O2'	48:D:203:THR:OG1	2.09	0.70
46:B:1242:U:O2'	57:M:8:ARG:NH1	2.24	0.70
46:B:1579:A:H2'	46:B:1580:A:H8	1.56	0.70
80:l1:205:VAL:HG13	80:l1:213:SER:HB3	1.73	0.70
1:1:990:G:N2	1:1:991:U:O4	2.24	0.70
56:L:106:GLU:O	56:L:112:GLN:NE2	2.20	0.70
59:O:35:SER:OG	59:O:41:LEU:HB2	1.91	0.70
73:c:7:SER:OG	73:c:10:ARG:O	2.09	0.70
1:AS:1203:G:OP1	41:CH:43:ASN:ND2	2.24	0.70
5:AX:372:THR:HG22	5:AX:374:ALA:H	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:482:C:H2'	46:CM:483:A:C8	2.24	0.70
46:CM:1230:G:N2	46:CM:1235:U:O4	2.24	0.70
59:O:50:LYS:HB2	78:h:171:GLY:HA3	1.72	0.70
46:CM:869:A:OP1	48:CO:136:ARG:NH2	2.23	0.70
46:CM:1485:G:N2	46:CM:1496:C:O2	2.20	0.70
46:CM:1548:U:H4'	46:CM:1586:C:H4'	1.73	0.70
1:l:2370:C:H1'	5:k:266:ARG:HH21	1.57	0.70
1:l:2470:C:H1'	80:l:207:LYS:HE3	1.74	0.70
46:B:540:A:N6	77:g:25:GLU:OE2	2.25	0.70
1:AS:1830:U:OP2	40:CG:10:LYS:NZ	2.24	0.70
1:AS:2163:G:O2'	1:AS:2292:U:OP2	2.08	0.70
1:AS:3233:A:OP1	8:BA:45:ARG:NH2	2.24	0.70
46:CM:653:G:H4'	46:CM:654:G:H5'	1.72	0.70
1:l:2395:U:H5''	4:j:221:LYS:HE3	1.72	0.70
27:9:51:ARG:HG2	27:9:52:GLN:H	1.57	0.70
47:C:41:ARG:HD3	47:C:47:ILE:HD11	1.73	0.70
16:BI:143:ARG:O	16:BI:149:ASN:ND2	2.24	0.70
55:CV:136:VAL:O	55:CV:141:ARG:NH2	2.23	0.70
1:l:628:A:H2'	1:l:629:A:C8	2.27	0.70
1:l:2820:G:OP1	41:AN:24:TYR:OH	2.10	0.70
46:B:1578:C:H2'	46:B:1579:A:H8	1.57	0.70
79:AR:282:LYS:NZ	79:AR:285:GLU:OE2	2.25	0.70
10:BC:124:LYS:O	10:BC:126:VAL:N	2.25	0.70
46:CM:767:G:HO2'	46:CM:768:C:H6	1.40	0.70
46:B:1354:U:N3	46:B:1355:A:N7	2.40	0.70
49:E:97:VAL:HG11	49:E:124:ILE:HG12	1.74	0.70
70:Z:107:PHE:CE2	70:Z:114:LYS:HD3	2.26	0.70
7:AZ:50:ARG:NH2	7:AZ:72:ASP:OD2	2.25	0.70
4:j:22:LEU:O	4:j:24:LYS:NZ	2.24	0.69
45:i:136:ASN:OD1	50:F:91:ARG:NH1	2.25	0.69
46:B:648:U:H2'	46:B:649:G:C8	2.26	0.69
47:C:147:THR:HG21	47:C:159:ALA:HB1	1.72	0.69
1:AS:429:U:H2'	1:AS:430:G:H8	1.55	0.69
46:CM:1467:C:H4'	46:CM:1468:C:OP1	1.91	0.69
46:CM:1512:A:H4'	66:DG:83:ALA:HB2	1.73	0.69
1:l:1903:C:O2	5:k:240:ARG:NH2	2.25	0.69
51:G:100:ARG:NH2	51:G:121:TYR:O	2.24	0.69
75:e:12:VAL:HG22	75:e:52:ASP:H	1.57	0.69
6:l:30:PRO:HB3	19:y:25:TYR:HE2	1.57	0.69
8:n:59:ASP:HB2	8:n:102:VAL:HG22	1.72	0.69
77:g:50:THR:HB	77:g:53:LYS:HB3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BO:116:LYS:O	22:BO:120:LYS:HG3	1.90	0.69
46:CM:317:U:H4'	46:CM:321:A:C8	2.27	0.69
46:CM:1378:U:OP1	64:DE:59:LYS:NZ	2.21	0.69
37:AJ:97:ARG:H	80:l1:215:ARG:NH2	1.90	0.69
52:H:113:ILE:HG23	52:H:191:ALA:HA	1.74	0.69
30:BW:5:LYS:NZ	30:BW:8:THR:OG1	2.25	0.69
46:CM:1163:G:O2'	45:CL:80:ALA:O	2.07	0.69
57:CX:15:LEU:O	57:CX:19:GLY:HA2	1.93	0.69
1:1:1279:C:H2'	1:1:1280:C:C6	2.28	0.69
23:BP:16:VAL:HG12	23:BP:65:VAL:HG22	1.74	0.69
65:DF:35:ILE:HG23	65:DF:102:ALA:HB2	1.73	0.69
5:k:260:VAL:HG11	5:k:266:ARG:NH1	2.08	0.69
1:AS:1219:A:H1'	1:AS:1283:A:H2	1.58	0.69
25:BR:97:LYS:HG3	25:BR:98:PRO:HD3	1.74	0.69
46:CM:856:G:H2'	46:CM:857:G:C8	2.26	0.69
1:1:438:A:N1	1:1:489:G:O2'	2.26	0.69
1:1:1099:A:N6	1:1:1359:A:H1'	2.07	0.69
1:AS:2545:C:O2'	1:AS:2547:G:N3	2.26	0.69
7:AZ:91:GLY:O	7:AZ:94:ASN:ND2	2.26	0.69
12:BE:140:THR:HG21	12:BE:148:VAL:HG21	1.74	0.69
1:1:92:C:OP2	1:1:2736:C:O2'	2.11	0.69
1:1:2836:A:H5''	12:r:114:GLY:HA2	1.75	0.69
1:1:2932:C:H2'	1:1:2933:G:C8	2.28	0.69
15:u:20:LEU:HD21	15:u:23:ASN:CA	2.23	0.69
46:B:122:U:H2'	46:B:123:G:H5''	1.73	0.69
52:H:165:LEU:HD23	75:e:47:PRO:HG2	1.75	0.69
1:AS:627:U:H2'	1:AS:628:A:C8	2.27	0.69
1:AS:1591:U:OP2	35:CB:36[A]:LYS:NZ	2.26	0.69
1:AS:1713:U:H2'	1:AS:1714:G:C8	2.27	0.69
69:DJ:2:THR:HG22	69:DJ:3:ARG:H	1.56	0.69
5:k:123:TYR:CZ	5:k:124:LYS:HG3	2.26	0.69
46:B:1578:C:H2'	46:B:1579:A:C8	2.27	0.69
47:C:47:ILE:HD12	64:T:106:THR:HG22	1.74	0.69
53:I:159:ARG:HB2	53:I:170:THR:HB	1.75	0.69
62:R:1:MET:HA	65:U:18:LEU:H	1.57	0.69
1:1:1713:U:H2'	1:1:1714:G:C8	2.27	0.69
28:AA:57:MET:HG2	28:AA:61:LYS:HG2	1.73	0.69
29:AB:59:ARG:HH22	43:AP:38:GLN:HG2	1.58	0.69
46:B:330:U:P	55:K:56:ARG:HH22	2.15	0.69
46:B:1383:U:O2'	46:B:1386:A:N6	2.26	0.69
1:AS:485:A:H3'	1:AS:486:C:H6	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BJ:62:ALA:HA	17:BJ:71:PRO:HD2	1.74	0.69
33:BZ:106:ARG:NH2	33:BZ:122:ASN:O	2.26	0.69
53:CT:215:ARG:O	53:CT:219:ARG:HG2	1.93	0.69
62:DC:42:ARG:HH22	65:DF:90:LYS:HE3	1.57	0.69
63:DD:12:LYS:HG3	63:DD:13:LYS:H	1.58	0.69
1:1:833:A:OP2	44:AQ:4:ARG:NH1	2.25	0.68
1:1:3192:A:O3'	15:u:126:LYS:NZ	2.25	0.68
35:AH:105:LEU:O	35:AH:109:GLN:NE2	2.26	0.68
46:B:218:A:OP2	46:B:817:U:H5'	1.93	0.68
46:B:1511:A:H2'	46:B:1512:A:C8	2.29	0.68
59:O:59:LEU:HD12	59:O:133:ARG:NH1	2.08	0.68
46:CM:553:A:N3	46:CM:588:C:O2'	2.26	0.68
53:CT:159:ARG:NH1	53:CT:170:THR:OG1	2.25	0.68
67:DH:29:LYS:NZ	67:DH:110:GLY:HA3	2.08	0.68
1:1:892:A:H4'	4:j:186:PHE:CD2	2.27	0.68
1:1:1006:G:N2	12:r:193:ASP:O	2.22	0.68
1:1:1405:G:H21	8:n:1:MET:HG2	1.58	0.68
1:1:3316:U:C4	55:K:167:GLY:HA2	2.28	0.68
59:O:59:LEU:HD22	59:O:123:VAL:HG23	1.76	0.68
78:h:160:ARG:HB3	78:h:173:PHE:CD2	2.27	0.68
18:BK:122:ALA:HB3	18:BK:143:PRO:HB2	1.72	0.68
46:CM:870:G:H2'	46:CM:871:U:C6	2.29	0.68
68:DI:53:TYR:OH	68:DI:76:ASP:OD2	2.10	0.68
80:l:1:40:ASN:O	80:l:1:200:ASN:ND2	2.26	0.68
54:J:81:PHE:HB3	54:J:84:ARG:HG3	1.74	0.68
1:AS:595:G:OP2	9:BB:32:LYS:NZ	2.27	0.68
3:AU:126:A:O2'	3:AU:129:C:N4	2.27	0.68
6:AY:7:VAL:HG11	6:AY:150:PRO:HD2	1.75	0.68
80:L1:66:CYS:HB2	80:L1:83:ASP:HB2	1.75	0.68
3:4:21:C:H5''	6:l:195:LEU:HD21	1.75	0.68
16:v:143:ARG:O	16:v:149:ASN:ND2	2.24	0.68
31:AD:26:THR:HB	31:AD:31:SER:HB3	1.74	0.68
46:B:485:G:O6	46:B:499:U:O4	2.11	0.68
46:B:1198:G:H1	46:B:1436:U:H3	1.41	0.68
1:AS:907:C:N4	4:AW:3:ARG:HD3	2.08	0.68
1:AS:2580:G:OP1	4:AW:2:GLY:N	2.25	0.68
11:BD:48:ILE:HG22	11:BD:49:ASN:HD22	1.58	0.68
23:BP:28:PHE:CZ	23:BP:33:TYR:HB2	2.29	0.68
82:CJ:202:3K5:H39	82:CJ:202:3K5:H16	1.76	0.68
1:1:591:C:O2	9:o:24:ARG:NH1	2.26	0.68
62:R:125:PRO:HD2	62:R:127:ARG:HH12	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:1124:U:OP1	12:BE:4:ARG:NH1	2.22	0.68
1:1:907:C:H5''	4:j:15:ILE:HD13	1.76	0.68
1:1:2322:U:H2'	1:1:2323:A:C8	2.28	0.68
46:B:1719:A:H2'	46:B:1720:C:C6	2.28	0.68
1:AS:740:A:OP1	19:BL:66:ARG:NH2	2.26	0.68
46:CM:485:G:O6	46:CM:499:U:O4	2.12	0.68
47:CN:88:LYS:NZ	64:DE:82:ASP:O	2.26	0.68
73:DN:25:ASN:HB3	73:DN:77:CYS:SG	2.33	0.68
16:v:155:VAL:O	16:v:162:ARG:NH2	2.24	0.68
69:Y:28:ARG:HD3	69:Y:60:LYS:HE2	1.74	0.68
1:AS:1215:C:H2'	1:AS:1282:A:H62	1.59	0.68
1:AS:2435:G:H1	1:AS:2439:A:H61	1.41	0.68
1:AS:3153:A:H2	1:AS:3158:G:H4'	1.58	0.68
48:CO:111:ARG:HB3	73:DN:68:TYR:HB2	1.74	0.68
80:l:1:34:LEU:HD11	80:l:1:183:ILE:HG21	1.76	0.68
46:B:903:U:H2'	46:B:904:A:C8	2.29	0.68
59:O:106:LEU:HA	59:O:111:ASN:HA	1.75	0.68
1:AS:654:A:H2'	1:AS:655:A:C8	2.28	0.68
23:BP:107:LYS:HD2	23:BP:109:GLN:HG3	1.74	0.68
46:CM:787:A:O2'	54:CU:100:ARG:NE	2.27	0.68
54:CU:14:GLU:HA	54:CU:42:ILE:HD12	1.76	0.68
45:CL:42:ALA:O	45:CL:44:ALA:N	2.26	0.68
1:1:1253:C:N4	1:1:1257:G:H22	1.90	0.68
52:H:200:ASN:HB3	52:H:208:SER:HB3	1.76	0.68
79:AR:102:GLN:NE2	79:AR:103:ARG:O	2.26	0.68
1:AS:88:G:N7	19:BL:171:LYS:NZ	2.42	0.68
1:AS:538:G:O6	1:AS:547:U:O4	2.11	0.68
69:DJ:37:PHE:HE1	69:DJ:103:ILE:HG13	1.59	0.68
1:1:2812:C:N4	1:1:2817:A:O2'	2.27	0.68
46:B:222:C:C2	58:N:26:LYS:NZ	2.62	0.68
59:O:41:LEU:HA	59:O:123:VAL:HA	1.75	0.68
67:W:68:LYS:O	76:f:44:ARG:NH1	2.27	0.68
11:BD:129:HIS:ND1	11:BD:157:ASN:OD1	2.27	0.68
13:BF:82:ARG:HH22	13:BF:114:ILE:HD11	1.59	0.68
46:CM:189:G:N7	55:CV:143:ARG:NH2	2.41	0.68
53:CT:10:ASN:ND2	53:CT:127:THR:O	2.27	0.68
1:1:654:A:H2'	1:1:655:A:C8	2.28	0.67
46:B:68:A:N6	53:I:132:ARG:HG2	2.09	0.67
46:B:1774:C:OP1	61:Q:122:ARG:NH2	2.27	0.67
1:AS:662:U:H2'	1:AS:663:A:H8	1.59	0.67
12:BE:43:VAL:HG21	12:BE:197:VAL:HG13	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BP:19:VAL:HG13	23:BP:20:ALA:H	1.58	0.67
46:CM:575:G:O6	45:CL:97:THR:OG1	2.10	0.67
55:CV:22:ARG:NH2	55:CV:25:ARG:HG3	2.09	0.67
80:11:19:TYR:HD2	80:11:210:MET:HB3	1.57	0.67
59:O:104:CYS:SG	59:O:115:VAL:HG13	2.35	0.67
48:CO:33:LYS:HG3	48:CO:41:ARG:HB3	1.75	0.67
1:1:2442:U:O2'	1:1:2443:G:N7	2.27	0.67
73:c:63:ALA:O	73:c:64:LEU:C	2.37	0.67
1:AS:1434:U:H4'	6:AY:89:ALA:HB3	1.77	0.67
1:AS:3160:C:H2'	1:AS:3161:U:C6	2.29	0.67
46:CM:820:U:H2'	46:CM:821:U:C6	2.29	0.67
54:CU:5:ILE:HG22	54:CU:7:SER:H	1.59	0.67
69:DJ:88:ARG:O	69:DJ:92:ASN:ND2	2.27	0.67
70:DK:24:TRP:HE3	70:DK:30:LYS:HG3	1.59	0.67
1:1:693:C:H5''	6:l:272:LYS:HD3	1.75	0.67
1:AS:1744:G:OP1	39:CF:44:LYS:NZ	2.21	0.67
4:AW:10:LYS:HA	4:AW:16:PHE:HD2	1.58	0.67
46:CM:1452:G:O2'	46:CM:1589:C:OP1	2.12	0.67
60:P:54:LEU:HB3	60:P:60:VAL:HB	1.75	0.67
62:R:10:ARG:HE	62:R:13:LYS:HG2	1.60	0.67
65:U:63:GLN:O	65:U:67:GLU:HG3	1.95	0.67
42:CI:21:ARG:HH21	46:CM:1641:G:P	2.17	0.67
46:CM:482:C:H2'	46:CM:483:A:H8	1.60	0.67
59:O:27:ALA:HB1	59:O:132:GLU:HG2	1.77	0.67
79:AR:155:VAL:O	79:AR:156:ARG:NH1	2.28	0.67
79:AR:302:TYR:CE2	79:AR:308:ARG:HD2	2.30	0.67
1:AS:1662:G:H2'	1:AS:1663:A:H8	1.60	0.67
1:AS:1744:G:OP2	39:CF:42:LYS:NZ	2.22	0.67
23:BP:68:VAL:HG12	23:BP:69:SER:H	1.60	0.67
46:CM:518:A:H2'	46:CM:519:A:C8	2.30	0.67
46:CM:1073:A:O3'	73:DN:89:ARG:NH2	2.27	0.67
50:CQ:48:GLU:HG2	50:CQ:88:TYR:HE2	1.59	0.67
51:CR:100:ARG:NH1	51:CR:118:GLU:OE2	2.27	0.67
25:7:123:ARG:NE	46:B:270:U:OP1	2.27	0.67
43:AP:38:GLN:OE1	43:AP:41:ARG:NH2	2.28	0.67
46:B:960:C:H5''	60:P:109:LYS:HD3	1.77	0.67
46:B:1145:A:H2'	46:B:1146:C:H6	1.58	0.67
46:B:1277:G:H21	47:C:111:ILE:HD11	1.60	0.67
62:R:1:MET:HE3	65:U:19:ASN:OD1	1.94	0.67
62:R:60:LEU:HD21	62:R:94:VAL:HG12	1.76	0.67
1:AS:2419:A:H2'	1:AS:2420:G:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1156:A:H2'	46:CM:1157:G:H8	1.58	0.67
46:CM:1315:G:H2'	46:CM:1316:A:O4'	1.94	0.67
48:CO:58:ALA:HB1	48:CO:91:VAL:HG11	1.77	0.67
50:CQ:19:TYR:HE1	50:CQ:38:VAL:HG13	1.60	0.67
52:CS:25:LEU:HD12	63:DD:26:GLY:HA3	1.77	0.67
63:DD:98:GLU:HG3	63:DD:101:LYS:HE3	1.76	0.67
45:i:77:GLN:OE1	46:B:1446:A:N6	2.27	0.67
46:B:1324:C:O2'	46:B:1326:A:N7	2.28	0.67
46:B:1670:U:H3	46:B:1705:G:H1	1.43	0.67
59:O:127:GLY:HA2	59:O:130:SER:HB2	1.77	0.67
1:AS:1939:C:O2'	55:CV:92:ARG:NH1	2.28	0.67
1:AS:2191:A:H2'	1:AS:2192:A:C8	2.29	0.67
47:CN:59:LEU:HD22	68:DI:79:LEU:HD11	1.76	0.67
53:CT:57:ASP:HA	53:CT:106:LEU:HA	1.77	0.67
80:l1:41:TYR:HB3	80:l1:163:LEU:HD11	1.76	0.67
1:1:564:G:H2'	1:1:565:A:C8	2.30	0.67
52:H:150:GLY:HA2	52:H:156:ARG:CB	2.20	0.67
46:CM:1395:G:N2	46:CM:1398:G:OP2	2.27	0.67
64:DE:103:ASP:OD1	64:DE:104:ALA:N	2.27	0.67
1:1:1218:G:N1	1:1:1281:G:O2'	2.28	0.67
1:1:1401:U:OP2	33:AF:60:SER:OG	2.11	0.67
47:C:52:LYS:HD3	68:X:82:VAL:HG23	1.76	0.67
1:AS:358:G:N2	1:AS:361:A:OP2	2.28	0.67
1:AS:1500:A:N1	1:AS:1511:A:O2'	2.26	0.67
1:AS:1663:A:H2'	1:AS:1664:G:C8	2.28	0.67
1:AS:2634:G:H2'	1:AS:2635:A:H8	1.60	0.67
46:CM:1149:G:O2'	46:CM:1599:U:O2	2.11	0.67
57:CX:27:PHE:HB3	57:CX:40:LEU:HD13	1.74	0.67
79:DT:119:ASN:O	79:DT:121:ARG:HD2	1.95	0.67
1:1:3194:G:H4'	15:u:129:VAL:HG11	1.77	0.66
13:s:132:GLY:HA2	13:s:154:THR:HG21	1.76	0.66
31:AD:77:ASN:ND2	44:AQ:43:GLY:O	2.27	0.66
46:B:1276:G:H22	46:B:1309:G:N2	1.93	0.66
47:C:124:THR:O	47:C:164:ASN:ND2	2.29	0.66
10:BC:47:LEU:HD13	26:BS:30:THR:HG23	1.76	0.66
23:BP:19:VAL:O	23:BP:21:ALA:N	2.25	0.66
51:CR:18:TRP:O	51:CR:51:ARG:NH2	2.28	0.66
79:DT:5:GLU:HB3	79:DT:248:TRP:HH2	1.59	0.66
79:DT:90:LEU:HB2	79:DT:104:PHE:HB2	1.77	0.66
1:1:1251:C:H2'	1:1:1252:G:C8	2.30	0.66
7:m:60:ILE:HB	7:m:80:ALA:HB2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AB:59:ARG:NH2	43:AP:38:GLN:HG2	2.11	0.66
46:B:63:G:O2'	46:B:168:U:OP1	2.13	0.66
1:AS:281:G:N7	16:BI:182:LYS:NZ	2.43	0.66
1:AS:2932:C:H2'	1:AS:2933:G:H8	1.60	0.66
24:BQ:80:ARG:NH1	24:BQ:97:ASP:OD1	2.26	0.66
46:CM:636:C:OP2	69:DJ:32:LYS:NZ	2.22	0.66
1:1:72:A:C4	37:AJ:14:ARG:HD2	2.30	0.66
1:1:627:U:H2'	1:1:628:A:H8	1.59	0.66
1:1:2200:A:H2'	1:1:2201:A:C8	2.30	0.66
7:m:119:TYR:OH	7:m:139:PRO:O	2.08	0.66
45:i:64:LEU:HG	45:i:67:LYS:HE2	1.76	0.66
64:T:25:THR:HG23	64:T:27:ASP:H	1.58	0.66
1:AS:1011:C:H4'	1:AS:1012:U:C6	2.30	0.66
46:CM:853:G:H1	46:CM:945:U:H3	1.41	0.66
46:CM:1199:U:OP1	78:DS:132:LYS:HD2	1.95	0.66
46:CM:1265:C:H2'	46:CM:1266:G:H8	1.61	0.66
78:DS:168:CYS:HB3	78:DS:185:LYS:HE3	1.76	0.66
79:DT:62:PHE:HB3	79:DT:93:TRP:CZ3	2.31	0.66
1:1:480:G:H3'	1:1:481:G:H8	1.60	0.66
1:1:496:A:H4'	8:n:27:GLN:HG3	1.77	0.66
1:1:1240:A:O2'	1:1:1244:C:N4	2.28	0.66
1:1:2932:C:H2'	1:1:2933:G:H8	1.58	0.66
46:B:1265:C:O2'	67:W:69:THR:HG22	1.96	0.66
59:O:129:ASP:O	59:O:131:ASP:N	2.19	0.66
63:S:49:GLU:O	63:S:53:LEU:HG	1.95	0.66
1:AS:242:C:HO2'	1:AS:243:G:H8	1.44	0.66
1:AS:339:C:OP1	1:AS:1376:G:O2'	2.12	0.66
46:CM:1649:G:H2'	46:CM:1650:G:H8	1.60	0.66
55:CV:4:SER:OG	55:CV:6:ASP:OD1	2.13	0.66
62:DC:10:ARG:HH21	62:DC:13:LYS:HG2	1.61	0.66
1:1:115:A:OP2	16:v:2:GLY:N	2.29	0.66
1:1:2530:C:N4	31:AD:59:GLU:OE2	2.29	0.66
1:1:2974:C:OP1	5:k:26:ARG:NH1	2.27	0.66
50:F:214:ASP:OD1	50:F:215:GLU:N	2.21	0.66
20:BM:165:ARG:NE	46:CM:835:A:OP1	2.29	0.66
46:CM:272:G:O6	46:CM:280:C:N4	2.27	0.66
46:CM:1145:A:H2'	46:CM:1146:C:H6	1.61	0.66
58:CY:102:LYS:O	70:DK:13:ARG:NH2	2.26	0.66
79:DT:127:SER:OG	79:DT:129:ASP:OD1	2.13	0.66
1:1:660:U:H2'	1:1:661:C:C6	2.31	0.66
1:1:2233:A:O2'	46:B:1744:G:O2'	2.12	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:i:77:GLN:HE22	46:B:1165:C:H5'	1.60	0.66
46:B:477:C:OP1	56:L:121:SER:OG	2.13	0.66
46:B:627:U:OP1	60:P:127:ARG:NH2	2.27	0.66
46:B:1181:A:OP2	46:B:1450:G:N2	2.23	0.66
49:E:138:TYR:OH	49:E:144:GLY:O	2.12	0.66
23:BP:52:ASN:OD1	23:BP:53:ASP:N	2.28	0.66
70:DK:69:ARG:HG3	70:DK:117:ILE:HG12	1.77	0.66
1:1:3318:G:P	55:K:77:ARG:HH22	2.19	0.66
5:k:284:ARG:NH2	5:k:295:ALA:O	2.29	0.66
46:B:946:U:H5''	60:P:71:ILE:HD12	1.77	0.66
46:B:1275:U:H2'	46:B:1276:G:C8	2.29	0.66
1:AS:1214:U:H3	1:AS:1283:A:N6	1.94	0.66
9:BB:130:PRO:HG2	9:BB:131:TYR:CE1	2.30	0.66
11:BD:80:THR:HA	11:BD:83:THR:HG22	1.76	0.66
16:BI:177:GLY:O	16:BI:184:LYS:NZ	2.28	0.66
43:CJ:38:GLN:HA	43:CJ:41:ARG:HD3	1.75	0.66
46:CM:1579:A:H2'	46:CM:1580:A:C8	2.31	0.66
51:CR:126:VAL:HG13	51:CR:139:VAL:HG13	1.78	0.66
63:DD:30:ILE:HG12	63:DD:35:ILE:HG22	1.78	0.66
1:1:679:U:O2'	1:1:695:G:O6	2.09	0.66
1:1:1251:C:H2'	1:1:1252:G:H8	1.61	0.66
1:1:2655:U:H2'	1:1:2656:C:C6	2.30	0.66
1:1:2669:A:H2'	1:1:2670:G:C8	2.29	0.66
25:7:85:ALA:HB1	25:7:89:LEU:HD22	1.76	0.66
49:E:139:TRP:CE2	69:Y:97:ARG:HD2	2.31	0.66
6:AY:351:LYS:O	6:AY:354:LYS:HE2	1.94	0.66
39:CF:24:ILE:HB	39:CF:44:LYS:HB2	1.78	0.66
46:CM:1300:U:OP1	46:CM:1313:G:N2	2.29	0.66
1:1:1611:U:H2'	1:1:1612:U:C6	2.31	0.66
11:q:93:VAL:HG22	41:AN:6:LEU:HD13	1.77	0.66
18:x:122:ALA:HB3	18:x:143:PRO:HB2	1.77	0.66
46:B:518:A:H2'	46:B:519:A:C8	2.31	0.66
25:BR:82:ILE:HG13	53:CT:131:LYS:HG3	1.77	0.66
46:CM:501:G:H2'	46:CM:502:U:C6	2.31	0.66
54:CU:159:ASP:HA	54:CU:162:LEU:HD21	1.78	0.66
80:l1:49:PHE:HB2	80:l1:193:LEU:HD22	1.76	0.66
10:p:204:VAL:HG21	10:p:209:GLU:HB2	1.78	0.66
26:8:141:TYR:HB3	36:AI:33:VAL:HG13	1.76	0.66
45:i:86:LYS:HG3	45:i:93:ARG:NH2	2.10	0.66
46:B:511:U:H2'	46:B:512:G:C8	2.31	0.66
1:AS:389:A:H62	83:AS:3789:PAR:C22	2.00	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:437:G:H22	1:AS:620:A:N6	1.91	0.66
1:AS:2346:A:N7	85:AS:3806:HOH:O	2.29	0.66
3:AU:70:G:OP1	27:BT:121:ARG:NH2	2.29	0.66
1:1:628:A:H2'	1:1:629:A:H8	1.61	0.65
1:1:1099:A:H62	1:1:1338:G:H21	1.44	0.65
7:m:164:LYS:NZ	7:m:168:ASP:OD1	2.29	0.65
28:AA:57:MET:HB3	28:AA:61:LYS:HB3	1.77	0.65
46:B:1460:G:H2'	46:B:1461:A:H8	1.61	0.65
46:B:1463:G:H2'	46:B:1464:G:H8	1.61	0.65
59:O:38:HIS:C	59:O:40:GLY:N	2.53	0.65
1:AS:2589:U:H3	30:BW:1:MET:HE3	1.60	0.65
80:L1:28:PHE:HD1	80:L1:29:LEU:H	1.43	0.65
80:L1:160:LYS:H	80:L1:162:VAL:HG12	1.61	0.65
80:l1:44:GLN:HB3	80:l1:45:ARG:HE	1.60	0.65
1:1:538:G:H2'	1:1:539:G:C8	2.30	0.65
1:1:1249:U:H5''	1:1:1259:A:H2	1.60	0.65
1:1:1672:A:O2'	23:5:103:GLN:OE1	2.13	0.65
1:1:2079:C:HO2'	1:1:2080:U:H6	1.45	0.65
1:1:2634:G:H2'	1:1:2635:A:C8	2.31	0.65
6:l:42:ARG:HD2	6:l:114:VAL:HG22	1.78	0.65
46:B:721:C:HO2'	46:B:722:A:H8	1.44	0.65
46:B:784:U:H2'	46:B:785:G:H8	1.61	0.65
1:AS:215:G:H4'	27:BT:19:TYR:CE2	2.31	0.65
1:AS:284:A:OP2	43:CJ:41:ARG:NE	2.29	0.65
26:BS:115:ARG:HD3	26:BS:121:LYS:HE3	1.78	0.65
51:CR:129:VAL:HG22	51:CR:139:VAL:HG22	1.78	0.65
60:DA:54:LEU:HB3	60:DA:60:VAL:HB	1.78	0.65
61:DB:7:GLN:HG3	61:DB:9:PHE:HE1	1.61	0.65
65:DF:92:GLN:HE21	65:DF:115:ARG:NH2	1.94	0.65
73:DN:12:LYS:HA	73:DN:15:ARG:HH12	1.60	0.65
79:DT:65:HIS:CE1	79:DT:85:SER:HG	2.12	0.65
1:1:1021:A:H2'	1:1:1022:A:O4'	1.95	0.65
1:1:2634:G:H2'	1:1:2635:A:H8	1.59	0.65
1:1:2899:C:H2'	1:1:2900:C:C6	2.32	0.65
5:k:372:THR:HG22	5:k:374:ALA:H	1.61	0.65
46:B:4:C:H4'	49:E:176:SER:HB3	1.78	0.65
52:H:72:HIS:CD2	52:H:107:LYS:HD3	2.32	0.65
20:BM:53:LYS:HG2	20:BM:54:PRO:HD2	1.79	0.65
55:CV:109:PHE:CE2	55:CV:189:ILE:HD11	2.31	0.65
1:1:1600:A:H4'	1:1:1831:A:H4'	1.77	0.65
46:B:65:A:H2	46:B:84:A:H62	1.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:79:C:OP1	53:I:159:ARG:NH2	2.30	0.65
46:B:1205:C:H2'	46:B:1206:A:C8	2.31	0.65
54:J:5:ILE:HG21	54:J:10:PRO:HB3	1.79	0.65
1:AS:353:G:O6	38:CE:55:ARG:NH2	2.29	0.65
1:AS:2472:A:H1'	80:L1:163:LEU:HB2	1.78	0.65
46:CM:238:U:H3'	46:CM:239:U:C4'	2.25	0.65
47:CN:167:LYS:NZ	47:CN:204:TYR:O	2.25	0.65
65:DF:36:ARG:NH2	65:DF:105:LEU:HD22	2.11	0.65
80:L1:191:VAL:HG11	80:L1:198:TRP:CD1	2.32	0.65
2:3:81:U:H2'	2:3:82:G:H8	1.61	0.65
46:B:92:A:OP1	51:G:7:LYS:NZ	2.29	0.65
46:B:327:G:H5''	55:K:98:LYS:HB3	1.77	0.65
78:h:174:MET:HB3	78:h:181:GLN:HB3	1.78	0.65
5:AX:35:ASP:OD2	5:AX:191:LYS:NZ	2.21	0.65
47:CN:63:ILE:HG12	68:DI:36:ILE:HG22	1.76	0.65
80:L1:116:LEU:HA	80:L1:119:GLN:HB2	1.77	0.65
45:CL:103:LEU:HB3	45:CL:109:GLN:HG3	1.78	0.65
1:1:2334:A:H61	1:1:2955:C:H5	1.44	0.65
51:G:255:ARG:O	51:G:259:GLN:HG2	1.97	0.65
1:AS:1692:A:H2'	1:AS:1693:A:C8	2.30	0.65
1:AS:2449:U:O4	1:AS:2452:G:N2	2.25	0.65
27:BT:39:LEU:HD22	27:BT:43:TYR:CE2	2.31	0.65
46:CM:1699:G:N1	46:CM:1700:G:N3	2.44	0.65
49:CP:134:ILE:HD13	49:CP:186:ALA:HB1	1.77	0.65
79:DT:92:LEU:O	79:DT:101:THR:N	2.26	0.65
80:L1:10:ARG:HG2	80:L1:180:VAL:HG21	1.78	0.65
34:AG:9:VAL:HB	34:AG:100:ILE:HB	1.79	0.65
46:B:335:G:O2'	55:K:10:LYS:NZ	2.30	0.65
46:B:1665:C:OP1	55:K:59:ARG:NH2	2.23	0.65
78:h:160:ARG:HB3	78:h:173:PHE:HD2	1.62	0.65
79:AR:235:ALA:HB3	79:AR:253:THR:HB	1.78	0.65
1:AS:2483:U:H2'	1:AS:2484:U:C6	2.31	0.65
50:CQ:116:ILE:HD11	45:CL:108:GLY:H	1.62	0.65
54:CU:89:LEU:HD23	54:CU:124:ASP:HB2	1.79	0.65
58:CY:8:GLN:HE22	58:CY:14:GLN:HB2	1.61	0.65
21:O:44:PHE:O	21:O:48:LEU:HD12	1.97	0.65
50:F:61:GLY:O	50:F:65:ARG:N	2.28	0.65
53:I:57:ASP:HA	53:I:106:LEU:HA	1.79	0.65
1:AS:654:A:H2'	1:AS:655:A:H8	1.61	0.65
1:AS:1655:U:O4	83:AS:3790:PAR:H52	1.96	0.65
1:AS:1841:G:H5''	1:AS:1842:C:H5'	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:3163:U:H1'	1:AS:3165:U:C4	2.32	0.65
4:AW:36:GLU:OE1	4:AW:163:ARG:NH1	2.30	0.65
46:CM:723:G:H2'	46:CM:724:G:O4'	1.97	0.65
46:CM:924:A:H2'	46:CM:925:A:C8	2.32	0.65
48:CO:123:ALA:HB2	48:CO:165:ARG:HG3	1.77	0.65
79:DT:117:ALA:HB1	79:DT:119:ASN:OD1	1.96	0.65
1:1:2766:G:C4	82:1:3406:3K5:H1	2.32	0.65
3:4:155:G:H5'	10:p:186:ARG:HD2	1.77	0.65
46:B:813:U:H2'	46:B:814:A:C8	2.32	0.65
67:W:20:LYS:H	67:W:20:LYS:HD2	1.62	0.65
1:AS:1662:G:H2'	1:AS:1663:A:C8	2.32	0.65
1:AS:2873:G:O2'	1:AS:2996:A:N1	2.29	0.65
8:BA:39:LEU:HD11	8:BA:53:TYR:HB2	1.79	0.65
20:BM:160:GLU:OE2	20:BM:163:ARG:NH1	2.29	0.65
46:CM:577:A:H2'	50:CQ:144:ARG:HH22	1.62	0.65
1:1:2873:G:O2'	1:1:2996:A:N1	2.30	0.65
72:b:42:LEU:HD21	72:b:47:TYR:HD1	1.62	0.65
1:AS:2466:A:OP2	1:AS:2467:C:N4	2.28	0.65
46:CM:1400:U:H5''	64:DE:3:ARG:HE	1.62	0.65
46:CM:1460:G:H2'	46:CM:1461:A:H8	1.62	0.65
46:CM:1659:G:H2'	46:CM:1660:G:C8	2.32	0.65
1:1:480:G:H2'	1:1:480:G:N3	2.11	0.64
46:B:722:A:HO2'	46:B:723:G:H8	1.46	0.64
46:B:876:A:H2'	46:B:877:G:H8	1.61	0.64
46:B:1520:C:OP2	72:b:77:ARG:NH1	2.29	0.64
1:AS:117:U:O2	1:AS:120:A:H5'	1.97	0.64
1:AS:2174:C:O2'	1:AS:2248:A:N3	2.26	0.64
46:CM:1353:G:H5''	66:DG:69:LYS:HE3	1.77	0.64
46:CM:1672:G:H2'	46:CM:1674:U:C4	2.32	0.64
1:1:2244:U:H2'	1:1:2245:C:C6	2.32	0.64
46:B:988:A:H2'	46:B:990:A:N7	2.12	0.64
46:B:1026:G:H2'	46:B:1027:G:C8	2.33	0.64
51:G:99:PHE:HE1	51:G:113:ARG:HG2	1.62	0.64
1:AS:628:A:H2'	1:AS:629:A:C8	2.32	0.64
1:AS:1936:G:H21	1:AS:3327:A:H8	1.44	0.64
10:BC:147:LYS:HG3	10:BC:174:MET:HE3	1.80	0.64
46:CM:1463:G:H2'	46:CM:1464:G:H8	1.63	0.64
65:DF:76:PRO:O	65:DF:80:LYS:N	2.30	0.64
1:1:294:U:OP2	16:v:15:GLN:NE2	2.30	0.64
1:1:1218:G:HO2'	1:1:1281:G:H1	0.67	0.64
1:1:3159:A:H5'	1:1:3160:C:OP2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AF:84:ASP:OD1	33:AF:112:LYS:NZ	2.30	0.64
45:i:93:ARG:H	46:B:1259:C:H5	1.46	0.64
1:AS:1115:C:H2'	1:AS:1116:A:H8	1.61	0.64
46:CM:1350:C:O2'	63:DD:29:LYS:NZ	2.30	0.64
46:CM:1400:U:OP2	64:DE:2:GLY:N	2.29	0.64
56:CW:15:PRO:HD3	56:CW:43:TYR:CE1	2.32	0.64
1:1:2347:G:H2'	1:1:2348:G:C8	2.32	0.64
63:S:37:LEU:HA	63:S:44:ARG:HH21	1.62	0.64
1:AS:169:G:H1	1:AS:248:U:H3	1.46	0.64
46:CM:829:A:H2'	46:CM:830:G:C8	2.32	0.64
46:CM:1043:U:O2'	46:CM:1045:U:OP2	2.16	0.64
46:CM:1453:C:O2'	66:DG:88:PHE:O	2.14	0.64
15:u:20:LEU:CD2	15:u:23:ASN:HA	2.26	0.64
46:B:1579:A:H2'	46:B:1580:A:C8	2.33	0.64
1:AS:2592:G:OP1	30:BW:1:MET:N	2.30	0.64
7:AZ:41:LYS:NZ	22:BO:32:LYS:O	2.31	0.64
12:BE:193:ASP:OD2	12:BE:198:LYS:HE3	1.98	0.64
46:CM:680:C:H2'	46:CM:681:C:C6	2.33	0.64
1:1:572:U:H2'	1:1:573:G:C8	2.33	0.64
1:1:1019:U:H2'	1:1:1020:G:H1'	1.79	0.64
1:1:1473:A:OP1	1:1:3047:G:O2'	2.13	0.64
17:w:122:PRO:HA	17:w:125:LEU:HD12	1.79	0.64
23:5:30:GLN:NE2	23:5:58:ALA:HB1	2.12	0.64
46:B:1596:U:OP1	63:S:75:SER:N	2.29	0.64
57:M:86:ILE:HG13	57:M:87:LEU:N	2.07	0.64
1:AS:347:G:O6	38:CE:55:ARG:NH1	2.30	0.64
1:AS:362:U:O4	38:CE:24:ARG:NH2	2.31	0.64
1:AS:2244:U:H2'	1:AS:2245:C:C6	2.33	0.64
1:AS:2634:G:H2'	1:AS:2635:A:C8	2.33	0.64
46:CM:12:U:H2'	46:CM:13:C:C6	2.32	0.64
46:CM:63:G:O2'	46:CM:168:U:OP1	2.16	0.64
46:CM:184:C:OP1	55:CV:152:ARG:NH2	2.29	0.64
47:CN:13:ASP:OD2	47:CN:179:ARG:NH2	2.30	0.64
64:DE:66:VAL:HG22	64:DE:67:ARG:H	1.61	0.64
75:DP:12:VAL:HG12	75:DP:30:VAL:HG12	1.80	0.64
80:L1:54:LYS:HD2	80:L1:150:ASP:HB3	1.80	0.64
80:l1:87:VAL:HG12	80:l1:90:LEU:HD12	1.79	0.64
1:1:2516:U:O2'	1:1:2519:A:N6	2.30	0.64
46:B:1410:A:C2'	49:E:87:ALA:HB3	2.18	0.64
52:H:216:GLU:HG3	52:H:219:ARG:HH21	1.61	0.64
79:AR:218:ILE:HG23	79:AR:230:THR:HG22	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:756:G:O2'	1:AS:766:G:N2	2.28	0.64
1:AS:2370:C:H1'	5:AX:266:ARG:HH21	1.62	0.64
15:BH:20:LEU:HD23	15:BH:21:VAL:N	2.13	0.64
18:BK:18:ARG:NH1	18:BK:147:GLU:OE1	2.31	0.64
46:CM:405:A:H2'	46:CM:406:C:C6	2.33	0.64
46:CM:573:C:N4	70:DK:65:ASN:OD1	2.30	0.64
46:CM:696:U:H3'	46:CM:697:U:C5	2.32	0.64
1:1:283:G:OP2	43:AP:45:ARG:NH1	2.30	0.64
1:1:907:C:N4	4:j:3:ARG:HD3	2.10	0.64
17:w:62:ALA:HA	17:w:71:PRO:HD2	1.79	0.64
1:AS:1434:U:H4'	6:AY:89:ALA:CB	2.27	0.64
5:AX:331:VAL:HG22	5:AX:334:ARG:HG3	1.79	0.64
46:CM:826:U:H2'	46:CM:827:C:H5'	1.80	0.64
79:DT:158:SER:HA	79:DT:201:LEU:HD13	1.80	0.64
79:DT:261:LYS:HZ2	79:DT:268:LEU:HD13	1.63	0.64
80:L1:67:ILE:HG22	80:L1:68:PHE:H	1.62	0.64
1:1:429:U:H2'	1:1:430:G:H8	1.63	0.64
68:DI:11:LEU:HD23	68:DI:11:LEU:H	1.63	0.64
79:DT:88:ARG:HA	79:DT:111:VAL:HG23	1.80	0.64
45:i:90:ARG:HH12	46:B:1412:C:H5''	1.62	0.64
59:O:133:ARG:NH2	59:O:136:LEU:HD22	2.12	0.64
1:AS:976:A:H2	1:AS:1100:G:H21	1.46	0.64
20:BM:30:THR:O	20:BM:34:ASN:ND2	2.30	0.64
21:BN:8:GLN:HB2	21:BN:64:ILE:HD11	1.80	0.64
71:DL:27:VAL:O	71:DL:68:LYS:HA	1.98	0.64
72:DM:39:ILE:O	72:DM:72:GLY:N	2.28	0.64
79:DT:19:TRP:HB2	79:DT:38:ARG:HD2	1.79	0.64
80:L1:30:GLU:H	80:L1:172:VAL:HB	1.63	0.64
56:L:108:ARG:NH1	56:L:110:GLN:OE1	2.28	0.63
79:AR:127:SER:OG	79:AR:129:ASP:OD1	2.15	0.63
1:AS:2140:U:OP1	4:AW:234:LYS:NZ	2.30	0.63
1:AS:2456:C:O2	1:AS:2466:A:N6	2.31	0.63
35:CB:57:LEU:HB2	35:CB:62:TYR:HE1	1.64	0.63
80:l1:93:LEU:HD22	80:l1:99:LEU:HD13	1.80	0.63
1:1:1130:G:O2'	1:1:2614:A:N3	2.26	0.63
1:1:1239:G:N2	1:1:1266:A:O2'	2.20	0.63
1:1:1662:G:H2'	1:1:1663:A:C8	2.33	0.63
1:1:2239:G:O2'	1:1:2241:C:N4	2.31	0.63
48:D:145:ARG:NH2	48:D:151:LYS:O	2.32	0.63
1:AS:148:U:H4'	16:BI:56:LYS:HG2	1.80	0.63
1:AS:483:U:H2'	1:AS:484:U:H6	1.59	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:1099:A:H62	1:AS:1359:A:H1'	1.63	0.63
1:AS:3323:U:H2'	1:AS:3324:A:H8	1.63	0.63
46:CM:1232:U:H2'	46:CM:1233:C:H6	1.64	0.63
52:CS:187:ILE:HD13	72:DM:66:VAL:HG21	1.80	0.63
3:4:63:G:H1	3:4:97:A:H61	1.46	0.63
46:B:1130:U:O2'	49:E:84:GLN:O	2.16	0.63
59:O:52:LEU:HD22	59:O:86:ILE:HG21	1.80	0.63
67:W:34:GLU:OE2	67:W:88:ARG:NH2	2.31	0.63
1:AS:591:C:O2	9:BB:24:ARG:NH1	2.31	0.63
1:AS:3260:A:H2'	1:AS:3261:A:C8	2.33	0.63
11:BD:47:LYS:HE2	15:BH:3:SER:HB3	1.79	0.63
32:BY:45:THR:HG22	32:BY:47:ASP:H	1.64	0.63
35:CB:57:LEU:HB2	35:CB:62:TYR:CE1	2.34	0.63
46:CM:218:A:H3'	46:CM:219:A:C5'	2.27	0.63
64:DE:37:GLU:OE1	79:DT:151:TRP:NE1	2.29	0.63
66:DG:42:GLY:HA3	66:DG:94:VAL:HG21	1.79	0.63
80:L1:117:ILE:HD11	80:L1:137:PRO:HB3	1.79	0.63
46:B:1749:A:H1'	46:B:1770:C:H5'	1.80	0.63
1:AS:444:U:H2'	1:AS:445:A:C8	2.34	0.63
1:AS:2669:A:H2'	1:AS:2670:G:C8	2.34	0.63
4:AW:10:LYS:HA	4:AW:16:PHE:CD2	2.33	0.63
48:CO:90:GLU:HG2	48:CO:225:LEU:HD13	1.81	0.63
50:CQ:23:ASN:ND2	76:DQ:49:ASP:OD2	2.26	0.63
58:CY:7:VAL:HG23	58:CY:8:GLN:HG2	1.81	0.63
67:DH:70:PRO:HA	76:DQ:40:ARG:HH12	1.62	0.63
5:k:292:ALA:HB1	5:k:295:ALA:HB3	1.79	0.63
61:Q:120:SER:OG	61:Q:121:THR:N	2.31	0.63
1:AS:544:U:H5'	1:AS:546:C:H5''	1.79	0.63
1:AS:795:G:O2'	14:BG:18:TRP:NE1	2.31	0.63
1:AS:2347:G:H2'	1:AS:2348:G:C8	2.34	0.63
46:CM:1301:G:OP1	64:DE:7:LYS:N	2.24	0.63
46:CM:1468:C:H5''	46:CM:1508:G:H22	1.62	0.63
46:CM:1578:C:H2'	46:CM:1579:A:H8	1.63	0.63
46:CM:1715:U:H2'	46:CM:1716:C:C6	2.34	0.63
49:CP:177:PRO:HG3	56:CW:17:ARG:HH12	1.64	0.63
46:B:1487:C:OP1	66:V:122:ARG:NH2	2.28	0.63
75:e:14:LYS:HB3	75:e:29:ARG:HB3	1.80	0.63
21:BN:73:LYS:NZ	21:BN:97:VAL:O	2.31	0.63
46:CM:483:A:H2'	46:CM:484:G:H8	1.64	0.63
46:CM:972:G:N2	46:CM:998:A:OP1	2.31	0.63
46:CM:1117:A:OP1	70:DK:30:LYS:HE2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1324:C:O2'	46:CM:1326:A:N7	2.29	0.63
46:CM:1468:C:H5''	46:CM:1508:G:N2	2.14	0.63
46:CM:1520:C:OP2	72:DM:77:ARG:NH1	2.32	0.63
1:1:1019:U:H2'	1:1:1020:G:C1'	2.28	0.63
1:1:1587:G:OP1	35:AH:37:LYS:NZ	2.32	0.63
1:1:1663:A:H2'	1:1:1664:G:C8	2.34	0.63
23:5:34:VAL:HG13	23:5:56:ILE:HG22	1.80	0.63
46:B:148:C:H42	46:B:162:A:H61	1.46	0.63
46:B:1156:A:H2'	46:B:1157:G:H8	1.60	0.63
46:B:1241:A:H5'	46:B:1242:U:C6	2.34	0.63
1:AS:1259:A:H4'	1:AS:1260:G:H5''	1.80	0.63
46:CM:605:G:H5'	46:CM:611:G:N2	2.13	0.63
46:CM:821:U:H2'	46:CM:822:G:C8	2.34	0.63
46:CM:1276:G:H22	46:CM:1309:G:N2	1.96	0.63
57:CX:10:LYS:NZ	57:CX:36:ASP:O	2.30	0.63
59:CZ:81:GLU:HG3	78:DS:156:VAL:HG12	1.81	0.63
1:1:1560:U:H3	1:1:1571:G:H22	1.47	0.63
1:AS:588:G:OP1	33:BZ:63:LYS:NZ	2.28	0.63
1:AS:619:A:H2'	1:AS:620:A:C8	2.33	0.63
1:AS:2932:C:H2'	1:AS:2933:G:C8	2.34	0.63
46:CM:850:A:OP1	69:DJ:28:ARG:NH2	2.32	0.63
53:CT:222:GLU:HG2	53:CT:225:GLU:HB2	1.81	0.63
60:DA:48:SER:OG	60:DA:86:GLU:OE2	2.08	0.63
1:1:1561:U:H2'	1:1:1562:G:C8	2.33	0.63
13:s:32:ARG:HD3	13:s:120:ILE:HA	1.81	0.63
19:y:123:THR:OG1	19:y:125:ASP:OD1	2.12	0.63
1:AS:2888:U:H5	1:AS:2907:U:HO2'	1.47	0.63
7:AZ:85:ARG:NH2	7:AZ:250:ASP:OD2	2.31	0.63
46:CM:983:A:N6	46:CM:989:U:OP2	2.32	0.63
46:B:1230:G:N2	46:B:1235:U:O4	2.29	0.62
52:H:194:LEU:O	52:H:198:LEU:HG	1.98	0.62
64:T:72:LYS:HD2	64:T:76:GLU:OE1	1.97	0.62
1:AS:377:A:C4	83:AS:3789:PAR:H531	2.33	0.62
1:AS:1170:G:N2	17:BJ:88:MET:HE2	2.14	0.62
1:AS:2196:G:H2'	1:AS:2197:A:H8	1.64	0.62
46:CM:829:A:H2'	46:CM:830:G:H8	1.64	0.62
54:CU:109:PRO:HG2	54:CU:112:ARG:HD3	1.81	0.62
7:m:197:LYS:HG2	7:m:202:GLY:HA3	1.81	0.62
8:n:55:LYS:NZ	8:n:100:PHE:O	2.30	0.62
46:B:589:A:H2'	46:B:590:A:C8	2.34	0.62
46:B:701:G:N2	46:B:720:C:H42	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:1400:U:H5'	64:T:3:ARG:NE	2.14	0.62
46:CM:579:U:OP1	45:CL:101:LYS:NZ	2.32	0.62
46:CM:1202:A:H4'	57:CX:44:LYS:HD2	1.81	0.62
1:1:527:G:H2'	1:1:528:A:C8	2.35	0.62
1:1:935:U:OP2	29:AB:26:ARG:NH2	2.32	0.62
18:x:32:THR:HG21	18:x:87:SER:HB3	1.81	0.62
62:R:78:THR:OG1	62:R:80:LEU:HD23	2.00	0.62
1:AS:283:G:OP2	1:AS:285:A:O2'	2.17	0.62
1:AS:563:U:H2'	1:AS:564:G:C8	2.34	0.62
1:AS:1199:A:H2'	1:AS:1200:A:C8	2.33	0.62
1:AS:1251:C:H2'	1:AS:1252:G:C8	2.33	0.62
1:AS:1782:G:H2'	1:AS:1783:A:C8	2.34	0.62
16:BI:113:LEU:HB2	16:BI:134:LEU:HD23	1.81	0.62
1:1:1199:A:H2'	1:1:1200:A:C8	2.34	0.62
20:z:134:HIS:CE1	20:z:136:ARG:HB2	2.34	0.62
46:B:12:U:H2'	46:B:13:C:C6	2.34	0.62
46:B:1475:U:O2'	46:B:1501:A:N6	2.30	0.62
52:H:91:GLU:HA	52:H:94:THR:HG22	1.82	0.62
67:W:29:LYS:HE3	67:W:32:GLN:HB2	1.81	0.62
1:AS:307:A:H2'	1:AS:308:A:C8	2.34	0.62
1:AS:1692:A:H61	1:AS:1744:G:H2'	1.65	0.62
32:BY:45:THR:HG21	32:BY:89:PHE:HA	1.80	0.62
46:CM:390:G:OP1	55:CV:24:LYS:NZ	2.25	0.62
11:q:80:THR:HA	11:q:83:THR:HG22	1.81	0.62
33:AF:79:ASN:ND2	33:AF:81:LYS:HB3	2.15	0.62
46:B:853:G:OP1	60:P:121:ARG:NH1	2.31	0.62
57:M:86:ILE:CG1	57:M:87:LEU:H	2.06	0.62
62:R:26:VAL:HG23	62:R:27:GLU:HG3	1.81	0.62
79:AR:246:ARG:NH1	79:AR:296:GLN:OE1	2.21	0.62
80:l:1:49:PHE:CG	80:l:1:193:LEU:HB3	2.34	0.62
1:1:2171:U:H5'	1:1:2172:G:H5'	1.81	0.62
1:1:2832:U:C2	1:1:2910:G:H4'	2.34	0.62
46:B:79:C:H1'	53:I:174:LYS:HB2	1.81	0.62
46:B:405:A:H2'	46:B:406:C:C6	2.35	0.62
54:J:150:LEU:HB2	54:J:181:ILE:HG12	1.81	0.62
59:O:26:ASP:HA	59:O:29:LYS:CG	2.30	0.62
1:AS:1202:G:OP1	12:BE:157:TYR:OH	2.13	0.62
1:AS:1663:A:H2'	1:AS:1664:G:H8	1.63	0.62
8:BA:63:LEU:HD11	8:BA:75:LEU:HD22	1.82	0.62
46:CM:1181:A:OP2	46:CM:1450:G:N2	2.29	0.62
48:CO:27:LYS:HD2	48:CO:47:LEU:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:CO:30:PHE:O	48:CO:45:LYS:HA	2.00	0.62
61:DB:13:ARG:HH12	61:DB:77:LYS:HD2	1.64	0.62
65:DF:63:GLN:O	65:DF:67:GLU:HG3	1.99	0.62
70:DK:107:PHE:CD2	70:DK:114:LYS:HD3	2.28	0.62
1:1:2867:G:O2'	41:AN:24:TYR:O	2.18	0.62
8:n:70:VAL:HG13	8:n:160:ALA:HB2	1.82	0.62
36:AI:27:GLU:OE2	36:AI:43:ARG:NH2	2.33	0.62
58:N:7:VAL:HG23	58:N:8:GLN:HG2	1.82	0.62
1:AS:1575:A:OP1	1:AS:2500:G:N2	2.32	0.62
17:BJ:5:GLU:O	17:BJ:32:GLN:NE2	2.33	0.62
46:CM:16:G:H2'	46:CM:17:C:C6	2.34	0.62
46:CM:739:A:H5''	46:CM:740:A:H5'	1.82	0.62
46:CM:1265:C:O2'	67:DH:69:THR:HG22	2.00	0.62
1:1:337:G:O4'	6:l:49:GLN:NE2	2.33	0.62
32:AE:54:LEU:HB2	32:AE:94:PRO:HD3	1.80	0.62
46:B:1131:G:H2'	46:B:1132:A:C8	2.34	0.62
1:AS:93:G:H2'	1:AS:94:A:C8	2.35	0.62
1:AS:907:C:H42	4:AW:3:ARG:HD3	1.64	0.62
1:AS:2435:G:H1	1:AS:2439:A:N6	1.97	0.62
1:AS:3193:C:H4'	1:AS:3194:G:O5'	1.98	0.62
3:AU:122:U:H3	3:AU:131:G:H1	1.48	0.62
64:DE:14:LYS:HB2	64:DE:69:ILE:HG12	1.82	0.62
65:DF:87:ASN:HB2	65:DF:99:HIS:CE1	2.35	0.62
1:1:173:C:H2'	1:1:174:C:C6	2.35	0.62
1:1:478:G:C4	1:1:479:C:H1'	2.35	0.62
1:1:2199:G:N2	1:1:2202:A:OP2	2.28	0.62
3:4:9:A:H2'	3:4:10:A:C8	2.35	0.62
79:AR:16:HIS:HE1	79:AR:37:SER:CB	1.84	0.62
33:BZ:33:TRP:CH2	33:BZ:53:GLN:HG2	2.35	0.62
46:CM:1218:G:H1	46:CM:1237:C:H5	1.47	0.62
47:CN:58:VAL:HG12	47:CN:62:ARG:HH21	1.64	0.62
53:CT:217:HIS:O	53:CT:218:GLU:C	2.42	0.62
46:B:1603:G:OP1	52:H:81:ARG:NE	2.32	0.62
49:E:136:ARG:HB3	49:E:146:PRO:HB2	1.82	0.62
1:AS:831:G:O2'	1:AS:853:G:N2	2.29	0.62
1:AS:1611:U:H2'	1:AS:1612:U:C6	2.34	0.62
1:AS:1682:U:OP1	23:BP:42:LYS:NZ	2.33	0.62
1:AS:2601:U:O4	22:BO:2:GLY:N	2.33	0.62
1:AS:2981:G:OP1	17:BJ:67:LYS:NZ	2.33	0.62
4:AW:117:GLU:OE2	4:AW:163:ARG:NH2	2.32	0.62
10:BC:249:LYS:HE3	10:BC:253:ALA:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BD:47:LYS:HE3	11:BD:49:ASN:O	1.99	0.62
22:BO:142:SER:OG	22:BO:144:GLU:OE1	2.17	0.62
46:CM:1240:G:N7	59:CZ:46:ARG:NH2	2.47	0.62
66:DG:66:TYR:HD2	66:DG:67:LEU:HD23	1.63	0.62
1:1:307:A:H2'	1:1:308:A:C8	2.35	0.61
1:1:592:U:O2'	6:l:309:LYS:NZ	2.31	0.61
1:1:1908:U:O2'	1:1:2099:G:N7	2.27	0.61
45:i:65:LYS:HE3	62:R:119:PHE:HB3	1.81	0.61
46:B:426:A:N3	46:B:438:U:O2'	2.26	0.61
46:B:1301:G:OP1	64:T:7:LYS:N	2.33	0.61
46:B:1575:G:H1	46:B:1595:U:H3	1.46	0.61
60:P:69:ASN:HB3	60:P:73:ARG:HD2	1.82	0.61
1:AS:2322:U:H2'	1:AS:2323:A:C8	2.35	0.61
46:CM:200:A:H2'	46:CM:201:U:C6	2.34	0.61
56:CW:44:ARG:O	56:CW:48:GLN:HG3	1.99	0.61
65:DF:126:ARG:HB3	65:DF:133:VAL:HG12	1.82	0.61
69:DJ:81:VAL:O	69:DJ:122:SER:OG	2.17	0.61
1:1:2451:C:OP1	1:1:2452:G:N2	2.32	0.61
1:1:2545:C:O2'	1:1:2547:G:H1'	1.99	0.61
15:u:17:ARG:NH2	15:u:58:THR:O	2.33	0.61
45:i:113:ARG:HD2	46:B:556:U:H5	1.65	0.61
46:B:871:U:H2'	46:B:872:A:H8	1.65	0.61
47:C:88:LYS:HG3	47:C:201:LEU:HD11	1.81	0.61
49:E:96:VAL:HG22	49:E:110:ILE:HG12	1.80	0.61
79:AR:200:THR:HG21	79:AR:241:ALA:HA	1.82	0.61
3:AU:37:A:OP2	36:CC:86:ARG:HD2	2.00	0.61
7:AZ:278:THR:N	7:AZ:281:GLU:OE1	2.20	0.61
46:CM:43:A:O2'	46:CM:99:C:OP1	2.17	0.61
63:DD:89:VAL:HG13	63:DD:101:LYS:HG2	1.81	0.61
1:1:2484:U:H2'	1:1:2485:U:C6	2.35	0.61
46:B:1410:A:H2'	49:E:87:ALA:CB	2.20	0.61
59:O:58:GLN:H	59:O:125:ASN:HB2	1.65	0.61
1:AS:72:A:N7	14:BG:66:ASN:HB3	2.16	0.61
1:AS:269:G:OP2	16:BI:44:ARG:NH1	2.32	0.61
1:AS:1795:A:H2'	1:AS:1796:A:C8	2.36	0.61
46:CM:142:G:O2'	46:CM:143:A:O5'	2.19	0.61
46:CM:824:U:C5	46:CM:825:U:H5	2.18	0.61
14:t:124:VAL:HG21	36:AI:120:ALA:HB3	1.81	0.61
20:z:176:ARG:NH2	46:B:838:G:OP2	2.33	0.61
63:S:98:GLU:HG3	63:S:101:LYS:HE3	1.81	0.61
1:AS:653:C:H2'	1:AS:654:A:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:1589:A:OP1	35:CB:60:ARG:NH1	2.31	0.61
2:AT:100:C:OP2	21:BN:52:LYS:NZ	2.33	0.61
6:AY:204:ARG:NH2	6:AY:227:GLU:OE2	2.32	0.61
11:BD:47:LYS:HE2	15:BH:3:SER:CB	2.29	0.61
46:CM:768:C:H2'	46:CM:769:U:O4'	2.00	0.61
46:CM:904:A:H2'	46:CM:905:C:C6	2.35	0.61
46:CM:1131:G:H2'	46:CM:1132:A:C8	2.35	0.61
64:DE:26:LEU:HD11	64:DE:62:GLN:HG3	1.81	0.61
79:DT:102:GLN:NE2	79:DT:103:ARG:O	2.33	0.61
1:1:2244:U:H2'	1:1:2245:C:H6	1.65	0.61
5:k:339:ARG:NH2	5:k:342:LEU:HD11	2.14	0.61
1:AS:408:A:N3	1:AS:653:C:O2'	2.34	0.61
1:AS:2191:A:H2'	1:AS:2192:A:H8	1.65	0.61
1:AS:2370:C:O2'	5:AX:266:ARG:NH2	2.34	0.61
1:AS:2456:C:H3'	1:AS:2457:C:H5''	1.81	0.61
26:BS:58:ASP:OD2	36:CC:25:LYS:NZ	2.30	0.61
46:CM:322:U:OP1	58:CY:133:LYS:NZ	2.28	0.61
46:CM:834:C:H2'	46:CM:835:A:C8	2.35	0.61
46:CM:1399:U:O2'	46:CM:1400:U:OP1	2.19	0.61
46:CM:1536:C:OP1	62:DC:42:ARG:NH1	2.24	0.61
52:CS:57:SER:HA	75:DP:53:ILE:HB	1.83	0.61
1:1:2718:A:H5'	7:m:178:ASN:OD1	1.99	0.61
46:B:1220:C:H41	78:h:177:MET:HE1	1.65	0.61
1:AS:600:U:C2	1:AS:602:A:H1'	2.34	0.61
46:CM:1282:G:N2	46:CM:1285:A:OP2	2.28	0.61
70:DK:24:TRP:CE3	70:DK:30:LYS:HG3	2.35	0.61
80:L1:44:GLN:O	80:L1:46:ASP:N	2.33	0.61
1:1:3088:G:H4'	11:q:69:ARG:HH12	1.63	0.61
1:1:3287:A:H2'	1:1:3288:A:H8	1.65	0.61
8:n:7:LYS:H	8:n:10:GLN:HG3	1.65	0.61
16:v:96:LYS:HD2	16:v:100:SER:HB3	1.83	0.61
52:H:144:GLU:OE1	52:H:225:ARG:NH2	2.34	0.61
1:AS:896:G:H1'	1:AS:1585:A:N6	2.15	0.61
1:AS:2718:A:H5'	7:AZ:178:ASN:OD1	2.00	0.61
57:CX:17:GLN:HG2	45:CL:156:ALA:HB1	1.82	0.61
1:1:662:U:H2'	1:1:663:A:H8	1.66	0.61
1:1:3240:U:O2'	34:AG:99:ARG:NH1	2.32	0.61
7:m:187:ALA:O	7:m:189:GLU:N	2.33	0.61
23:5:19:VAL:O	23:5:21:ALA:N	2.34	0.61
35:AH:81:CYS:SG	35:AH:82:ALA:N	2.73	0.61
46:B:1138:G:OP1	73:c:85:ARG:NH1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:1669:U:O4	46:B:1707:G:N2	2.34	0.61
62:R:77:LYS:HB3	62:R:102:PHE:CE1	2.36	0.61
1:AS:3300:A:H2'	1:AS:3301:A:C8	2.35	0.61
7:AZ:60:ILE:HB	7:AZ:80:ALA:HB2	1.82	0.61
46:CM:327:G:H5''	55:CV:98:LYS:HB3	1.82	0.61
46:CM:1258:G:N7	46:CM:1416:U:H3'	2.15	0.61
74:DO:36:LYS:HZ3	74:DO:41:LEU:HB2	1.66	0.61
39:AL:58:ASP:OD1	39:AL:61:LYS:N	2.27	0.61
46:B:1419:G:O2'	76:f:24:CYS:SG	2.51	0.61
79:AR:88:ARG:NH1	79:AR:108:LYS:O	2.33	0.61
1:AS:2139:G:H5''	4:AW:227:ARG:HH12	1.65	0.61
1:AS:2419:A:H2'	1:AS:2420:G:H8	1.65	0.61
10:BC:90:GLN:HA	10:BC:93:LYS:HE3	1.82	0.61
46:CM:52:U:H2'	46:CM:53:G:C8	2.35	0.61
46:CM:736:G:H2'	46:CM:737:A:H8	1.65	0.61
46:CM:1425:C:H2'	46:CM:1426:C:H6	1.66	0.61
49:CP:170:GLY:O	56:CW:53:ARG:NH1	2.34	0.61
1:1:211:G:OP2	27:9:2:ALA:N	2.34	0.61
1:1:730:A:H4'	1:1:730:A:OP1	2.01	0.61
1:1:1249:U:H3'	1:1:1250:C:H5'	1.82	0.61
46:B:4:C:H5	46:B:20:G:H1	1.48	0.61
46:B:150:U:O2	53:I:4:ASN:ND2	2.30	0.61
46:B:746:G:O2'	56:L:72:GLU:OE2	2.14	0.61
46:B:1303:G:OP1	64:T:67:ARG:HD2	2.01	0.61
57:M:5:LYS:HZ2	59:O:38:HIS:HB3	1.66	0.61
1:AS:343:U:H1'	6:AY:96:ARG:HG3	1.82	0.61
1:AS:383:G:N2	1:AS:386:A:OP2	2.26	0.61
1:AS:2244:U:H2'	1:AS:2245:C:H6	1.65	0.61
59:CZ:33:ARG:O	59:CZ:37:VAL:HG23	2.01	0.61
1:1:2158:A:H2'	1:1:2159:C:C6	2.36	0.60
1:1:2384:C:H2'	1:1:2385:C:C6	2.36	0.60
1:1:2583:U:H2'	1:1:2584:U:C6	2.36	0.60
18:x:96:ARG:HG2	18:x:96:ARG:HH11	1.65	0.60
46:B:814:A:O2'	46:B:815:U:OP2	2.14	0.60
46:B:1145:A:H2'	46:B:1146:C:C6	2.35	0.60
60:P:48:SER:OG	60:P:86:GLU:OE2	2.15	0.60
64:T:96:THR:HG23	64:T:98:GLY:H	1.66	0.60
67:W:68:LYS:HE2	67:W:79:ASP:OD1	2.01	0.60
1:AS:120:A:C2	10:BC:130:PRO:HB3	2.36	0.60
1:AS:388:G:OP2	83:AS:3789:PAR:N32	2.32	0.60
1:AS:2734:A:H2'	1:AS:2735:U:H6	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BF:89:TYR:HD1	62:DC:12:PHE:HE1	1.46	0.60
46:CM:15:U:H2'	46:CM:16:G:O4'	2.01	0.60
46:CM:1068:G:HO2'	46:CM:1079:G:HO2'	1.49	0.60
80:L1:50:SER:HA	80:L1:158:GLN:HA	1.83	0.60
1:1:2128:G:O2'	1:1:2167:U:OP1	2.17	0.60
27:9:39:LEU:HD22	27:9:43:TYR:HE2	1.65	0.60
32:AE:78:ARG:HA	32:AE:88:LEU:HD23	1.83	0.60
59:O:28:LEU:HA	59:O:31:VAL:HG22	1.82	0.60
62:R:98:ASN:HB2	62:R:122:THR:HA	1.84	0.60
1:AS:1204:U:C5	41:CH:32:THR:HG21	2.36	0.60
1:AS:1801:C:H2'	1:AS:1802:A:H8	1.66	0.60
1:AS:3160:C:H42	1:AS:3167:G:H1	1.48	0.60
46:CM:543:A:H2'	77:DR:31:GLN:NE2	2.15	0.60
46:CM:815:U:O2'	46:CM:816:U:O5'	2.18	0.60
71:DL:88:ALA:O	71:DL:92:VAL:HG23	2.01	0.60
74:DO:47:PHE:HE1	74:DO:49:HIS:HB2	1.66	0.60
80:L1:104:ALA:HB2	80:L1:128:LEU:HD12	1.82	0.60
80:l1:160:LYS:HE3	80:l1:165:LEU:HD11	1.81	0.60
1:1:3046:G:H4'	32:AE:61:ARG:HD2	1.82	0.60
7:m:94:ASN:HB2	7:m:97:ALA:H	1.66	0.60
23:5:30:GLN:HE21	23:5:58:ALA:HB1	1.66	0.60
43:AP:61:LYS:NZ	43:AP:63:LYS:O	2.34	0.60
54:J:72:ARG:HG2	54:J:75:ARG:NH2	2.16	0.60
1:AS:1344:U:OP2	19:BL:38:ARG:NH1	2.33	0.60
1:AS:1560:U:H3	1:AS:1571:G:H1	1.48	0.60
1:AS:2434:A:H61	1:AS:2439:A:H62	1.49	0.60
46:CM:1448:G:OP2	65:DF:143:ARG:NH1	2.35	0.60
48:CO:81:TYR:HB2	48:CO:109:LYS:HG2	1.83	0.60
1:1:997:G:O2'	1:1:998:A:OP2	2.18	0.60
1:1:1841:G:H5''	1:1:1842:C:H5'	1.83	0.60
1:1:2458:G:H4'	80:l1:102:LYS:HZ1	1.65	0.60
1:1:3021:A:N1	24:6:86:ARG:NH2	2.49	0.60
46:B:1:U:H1'	49:E:174:VAL:HG13	1.83	0.60
46:B:108:A:H2'	46:B:109:G:C8	2.36	0.60
46:B:309:U:OP2	70:Z:20:ARG:HD3	2.01	0.60
59:O:99:GLU:HA	59:O:104:CYS:SG	2.41	0.60
66:V:10:PRO:HB2	66:V:13:ASP:OD1	2.01	0.60
1:AS:3166:A:H2'	1:AS:3167:G:C8	2.36	0.60
13:BF:106:ILE:HD11	13:BF:125:MET:HB3	1.83	0.60
46:CM:326:A:OP2	58:CY:56:LYS:NZ	2.28	0.60
59:CZ:54:LYS:HB2	59:CZ:56:GLU:HG2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1080:A:H2'	1:1:1081:A:C8	2.36	0.60
1:1:1265:U:H5'	1:1:1266:A:OP2	2.01	0.60
2:3:64:A:H61	12:r:200:LEU:HD21	1.66	0.60
8:n:30:ARG:NE	34:AG:107:ILE:O	2.33	0.60
24:6:135:VAL:HG11	25:7:26:SER:HB3	1.84	0.60
54:J:137:ARG:NH2	69:Y:49:GLU:OE1	2.34	0.60
46:CM:1578:C:H2'	46:CM:1579:A:C8	2.36	0.60
52:CS:98:MET:HB2	52:CS:103:ASN:O	2.00	0.60
52:CS:225:ARG:HD2	75:DP:58:GLU:CD	2.26	0.60
1:1:567:G:OP2	6:l:349:LYS:HE2	2.01	0.60
1:1:1268:C:H3'	1:1:1269:A:H8	1.65	0.60
1:1:1479:G:O6	35:AH:4:ARG:NH2	2.31	0.60
1:1:2669:A:H2'	1:1:2670:G:H8	1.65	0.60
3:4:63:G:N2	3:4:97:A:N1	2.48	0.60
45:i:64:LEU:O	45:i:65:LYS:C	2.45	0.60
45:i:124:ASP:OD2	50:F:118:ARG:NH1	2.34	0.60
46:B:1615:U:H2'	46:B:1616:G:C8	2.36	0.60
47:C:49:ASN:HD22	47:C:52:LYS:HG3	1.66	0.60
51:G:18:TRP:O	51:G:51:ARG:NH2	2.32	0.60
59:O:36:LEU:O	59:O:38:HIS:N	2.35	0.60
73:c:3:LYS:NZ	73:c:6:ALA:HA	2.17	0.60
1:AS:1060:A:H4'	1:AS:1061:A:O5'	2.01	0.60
16:BI:98:LEU:HD12	16:BI:128:LYS:HD2	1.84	0.60
46:CM:405:A:H2'	46:CM:406:C:H6	1.67	0.60
63:DD:27:LEU:HD11	63:DD:29:LYS:HE3	1.84	0.60
67:DH:69:THR:O	76:DQ:40:ARG:NH1	2.34	0.60
69:DJ:37:PHE:CE1	69:DJ:103:ILE:HG13	2.35	0.60
80:l1:59:PRO:HA	80:l1:170:GLY:HA2	1.83	0.60
1:1:1115:C:H2'	1:1:1116:A:H8	1.67	0.60
28:AA:15:ARG:HD2	28:AA:79:HIS:CD2	2.37	0.60
45:i:101:LYS:HD3	46:B:573:C:O3'	2.02	0.60
47:C:48:ILE:HD12	47:C:149:MET:HE3	1.82	0.60
50:F:65:ARG:HD3	57:M:91:ARG:CZ	2.31	0.60
57:M:80:LEU:HB3	57:M:82:ILE:HG23	1.83	0.60
1:AS:1489:G:OP2	1:AS:1489:G:N2	2.33	0.60
1:AS:2988:A:H2'	1:AS:2989:A:H8	1.67	0.60
46:CM:1485:G:N1	46:CM:1496:C:N3	2.38	0.60
50:CQ:114:LEU:HD23	50:CQ:118:ARG:HD3	1.83	0.60
59:CZ:96:LEU:O	59:CZ:99:GLU:HG3	2.00	0.60
73:DN:87:ARG:NH2	73:DN:94:ILE:O	2.34	0.60
1:1:619:A:H2'	1:1:620:A:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:2852:U:OP1	24:6:47:ASN:ND2	2.35	0.60
19:y:81:ILE:HB	19:y:101:ILE:HG12	1.83	0.60
46:B:870:G:P	48:D:136:ARG:HH11	2.25	0.60
46:B:1300:U:OP1	46:B:1313:G:N2	2.27	0.60
46:B:1715:U:H2'	46:B:1716:C:C6	2.36	0.60
54:J:72:ARG:HG2	54:J:75:ARG:HH21	1.66	0.60
63:S:98:GLU:OE1	79:AR:61:SER:N	2.35	0.60
66:V:53:TRP:HH2	66:V:100:ILE:HD12	1.67	0.60
1:AS:62:A:H5''	16:BI:174:ILE:HG21	1.83	0.60
1:AS:289:A:H2'	1:AS:290:G:H8	1.66	0.60
1:AS:547:U:H2'	1:AS:548:G:H8	1.65	0.60
1:AS:941:C:H2'	1:AS:942:U:C6	2.36	0.60
1:AS:2435:G:H3'	1:AS:2436:A:C5'	2.32	0.60
46:CM:1265:C:H2'	46:CM:1266:G:C8	2.36	0.60
46:CM:1464:G:OP1	66:DG:43:ASN:ND2	2.34	0.60
46:CM:1600:U:OP1	52:CS:169:ASN:HB2	2.02	0.60
46:CM:1749:A:H1'	46:CM:1770:C:H5'	1.82	0.60
55:CV:37:LYS:NZ	55:CV:93:THR:O	2.28	0.60
1:1:653:C:H2'	1:1:654:A:C8	2.34	0.60
1:1:2601:U:H3	1:1:2621:G:H1	1.50	0.60
46:B:1571:G:H22	46:B:1598:A:P	2.25	0.60
47:C:84:ARG:NH1	47:C:203:PHE:O	2.35	0.60
59:O:82:PRO:HG2	59:O:84:GLU:O	2.02	0.60
1:AS:173:C:H2'	1:AS:174:C:C6	2.36	0.60
1:AS:2370:C:H1'	5:AX:266:ARG:NH2	2.17	0.60
4:AW:20:THR:HA	4:AW:23:ARG:HG3	1.84	0.60
23:BP:37:LEU:HB3	23:BP:56:ILE:HD13	1.83	0.60
49:CP:211:ALA:O	49:CP:215:ASN:ND2	2.25	0.60
65:DF:91:ASP:OD1	65:DF:92:GLN:N	2.35	0.60
70:DK:107:PHE:CD2	70:DK:114:LYS:HB3	2.37	0.60
1:1:269:G:H5''	16:v:14:LYS:HE2	1.84	0.60
1:1:417:A:H2'	1:1:418:A:C8	2.37	0.60
1:1:716:G:OP1	29:AB:117:ARG:NH2	2.35	0.60
1:1:1020:G:N2	1:1:1023:A:H8	2.00	0.60
1:1:1099:A:H61	1:1:1359:A:H1'	1.66	0.60
2:3:81:U:H2'	2:3:82:G:C8	2.36	0.60
4:j:101:ILE:HG12	4:j:165:VAL:HG22	1.83	0.60
46:B:17:C:H2'	46:B:18:C:C6	2.37	0.60
46:B:880:G:HO2'	61:Q:33:THR:H	1.50	0.60
46:B:1463:G:H2'	46:B:1464:G:C8	2.37	0.60
83:B:1970:PAR:N21	83:B:1970:PAR:O43	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AU:21:C:OP1	6:AY:194:LYS:NZ	2.34	0.60
61:DB:117:PRO:HB2	61:DB:120:SER:HB3	1.84	0.60
78:DS:158:ARG:NH1	78:DS:162:GLU:OE2	2.34	0.60
79:DT:52:ASP:O	79:DT:53:ASN:ND2	2.35	0.60
1:1:2086:C:H1'	1:1:3309:A:H8	1.66	0.59
46:B:767:G:HO2'	46:B:768:C:H6	1.49	0.59
46:B:1460:G:H2'	46:B:1461:A:C8	2.37	0.59
50:F:209:ILE:HD12	64:T:16:LEU:HD21	1.84	0.59
59:O:123:VAL:O	59:O:125:ASN:N	2.33	0.59
79:AR:90:LEU:HB2	79:AR:104:PHE:HB2	1.83	0.59
1:AS:2331:G:H5''	18:BK:86:LYS:HB2	1.84	0.59
1:AS:2520:A:H1'	1:AS:2521:C:C5	2.36	0.59
2:AT:112:G:H2'	2:AT:113:C:C6	2.37	0.59
4:AW:107:CYS:O	4:AW:139:HIS:NE2	2.29	0.59
31:BX:59:GLU:OE1	31:BX:71:TYR:OH	2.19	0.59
38:CE:21:ARG:NH1	38:CE:37:CYS:O	2.35	0.59
69:DJ:11:LEU:HD11	69:DJ:37:PHE:HE2	1.65	0.59
1:1:594:C:OP1	9:o:31:ARG:NH1	2.35	0.59
1:1:1782:G:H2'	1:1:1783:A:C8	2.37	0.59
1:1:2404:U:H3	1:1:2575:G:H1	1.48	0.59
1:1:2685:U:OP1	43:AP:9:LYS:HD3	2.02	0.59
45:i:90:ARG:HH12	46:B:1412:C:H3'	1.66	0.59
46:B:94:U:O2'	51:G:8:HIS:ND1	2.32	0.59
46:B:1127:A:H5''	73:c:2:PRO:HB3	1.84	0.59
1:AS:660:U:H2'	1:AS:661:C:C6	2.37	0.59
1:AS:1258:G:O6	1:AS:1260:G:N2	2.35	0.59
1:AS:1903:C:O2	5:AX:240:ARG:NH2	2.35	0.59
1:AS:2520:A:H1'	1:AS:2521:C:H5	1.67	0.59
1:AS:3165:U:C2	1:AS:3166:A:C8	2.90	0.59
2:AT:23:A:H2'	2:AT:24:A:C8	2.37	0.59
46:CM:17:C:H2'	46:CM:18:C:C6	2.37	0.59
46:CM:65:A:O2'	46:CM:67:A:OP2	2.14	0.59
46:CM:336:C:H5''	55:CV:10:LYS:HD2	1.83	0.59
46:CM:648:U:H2'	46:CM:649:G:C8	2.37	0.59
80:L1:194:LEU:HD13	80:L1:200:ASN:HD22	1.66	0.59
1:1:252:U:H5'	1:1:253:A:C8	2.37	0.59
18:x:4:TYR:CZ	18:x:18:ARG:HG3	2.37	0.59
46:B:768:C:H2'	46:B:769:U:O4'	2.03	0.59
46:B:1159:C:OP2	65:U:141:THR:HG21	2.02	0.59
46:B:1445:C:OP2	65:U:138:THR:OG1	2.21	0.59
46:B:1669:U:HO2'	46:B:1670:U:H6	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:O:55:ARG:HG2	59:O:55:ARG:HH11	1.66	0.59
1:AS:297:G:N2	1:AS:297:G:OP2	2.29	0.59
1:AS:1034:U:H5''	7:AZ:5:LYS:HG2	1.85	0.59
1:AS:1303:G:H5'	17:BJ:61:LYS:HE3	1.84	0.59
1:AS:1592:C:H2'	1:AS:1593:C:C6	2.37	0.59
1:AS:2424:U:H5''	37:CD:97:ARG:HH12	1.67	0.59
14:BG:115:ARG:NH2	14:BG:147:PHE:O	2.35	0.59
46:CM:1325:U:O4	63:DD:8:THR:HA	2.02	0.59
50:CQ:166:ARG:NH2	76:DQ:54:LYS:O	2.28	0.59
79:DT:224:LYS:HE3	79:DT:226:LYS:HE2	1.84	0.59
80:L1:67:ILE:HB	80:L1:84:ALA:HA	1.84	0.59
1:1:1265:U:N3	1:1:1268:C:OP2	2.30	0.59
1:1:1592:C:H2'	1:1:1593:C:C6	2.37	0.59
1:1:1660:G:H2'	1:1:1661:U:C6	2.37	0.59
1:1:2345:A:H2'	1:1:2346:A:C8	2.37	0.59
1:1:2814:U:OP1	1:1:2816:C:N4	2.34	0.59
6:l:155:ASN:O	6:l:158:GLU:HB2	2.01	0.59
7:m:50:ARG:NH2	7:m:72:ASP:OD2	2.35	0.59
46:B:1470:G:H21	46:B:1593:C:H1'	1.67	0.59
46:B:1659:G:H2'	46:B:1660:G:C8	2.36	0.59
59:O:127:GLY:CA	59:O:130:SER:HB2	2.33	0.59
1:AS:1208:A:O3'	21:BN:92:LYS:NZ	2.34	0.59
1:AS:2814:U:OP1	1:AS:2816:C:N4	2.35	0.59
1:AS:3260:A:H2'	1:AS:3261:A:H8	1.68	0.59
15:BH:17:ARG:NH2	15:BH:58:THR:O	2.36	0.59
19:BL:158:HIS:CE1	19:BL:186:VAL:HG12	2.38	0.59
31:BX:42:LYS:HE2	31:BX:103:LEU:HD11	1.84	0.59
46:CM:58:U:O2'	46:CM:449:G:N3	2.34	0.59
46:CM:69:G:P	71:DL:123:ARG:HH12	2.25	0.59
49:CP:53:LEU:HA	68:DI:12:TYR:HE1	1.66	0.59
51:CR:59:ARG:HH22	71:DL:87:PRO:HG3	1.67	0.59
57:CX:83:PRO:HG3	45:CL:159:GLU:CD	2.27	0.59
1:1:541:U:H3	1:1:543:C:HO2'	1.45	0.59
1:1:1060:A:H4'	1:1:1061:A:O5'	2.01	0.59
1:1:2093:G:H22	1:1:2098:A:H1'	1.67	0.59
18:x:23:ARG:NE	18:x:125:GLN:OE1	2.35	0.59
45:i:62:ALA:O	45:i:63:ALA:C	2.44	0.59
46:B:1781:A:H1'	73:c:79:ILE:HD12	1.84	0.59
47:C:49:ASN:ND2	47:C:52:LYS:HG3	2.17	0.59
79:AR:71:ASP:HB3	79:AR:113:SER:HA	1.85	0.59
79:AR:175:VAL:HG23	79:AR:196:ILE:HD13	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:2079:C:HO2'	1:AS:2080:U:H6	1.49	0.59
46:CM:784:U:H2'	46:CM:785:G:H8	1.66	0.59
64:DE:99:GLN:OE1	64:DE:99:GLN:N	2.36	0.59
80:l1:138:VAL:HG13	80:l1:147:LYS:HZ1	1.66	0.59
1:l:1801:C:H2'	1:l:1802:A:H8	1.68	0.59
4:j:117:GLU:OE2	4:j:163:ARG:NE	2.35	0.59
8:n:39:LEU:HB3	8:n:83:VAL:HG13	1.84	0.59
46:B:52:U:H2'	46:B:53:G:C8	2.38	0.59
52:H:149:ILE:HG12	52:H:158:GLN:HB3	1.84	0.59
56:L:101:PRO:O	56:L:105:LEU:HD12	2.02	0.59
59:O:107:ASP:CG	59:O:112:ALA:H	2.10	0.59
66:V:37:VAL:HG21	66:V:100:ILE:HD11	1.84	0.59
1:AS:627:U:H2'	1:AS:628:A:H8	1.68	0.59
1:AS:2876:U:H2'	1:AS:2877:U:H6	1.67	0.59
46:CM:511:U:H2'	46:CM:512:G:C8	2.38	0.59
56:CW:40:ARG:HA	56:CW:43:TYR:HD2	1.66	0.59
1:l:563:U:H2'	1:l:564:G:C8	2.36	0.59
46:B:648:U:H2'	46:B:649:G:H8	1.67	0.59
46:B:1668:A:H8	53:I:65:GLN:HG3	1.68	0.59
1:AS:3315:C:O2'	1:AS:3316:U:H2'	2.02	0.59
46:CM:558:U:H2'	46:CM:559:G:H8	1.66	0.59
46:CM:561:U:O2'	77:DR:13:LYS:NZ	2.35	0.59
48:CO:36:THR:HG22	48:CO:41:ARG:HH12	1.68	0.59
50:CQ:49:VAL:HB	50:CQ:87:ILE:HD13	1.85	0.59
80:L1:124:LEU:HD22	80:L1:128:LEU:HD13	1.85	0.59
1:l:3133:G:H2'	1:l:3134:C:H6	1.68	0.59
6:l:171:LYS:HA	6:l:176:HIS:HB2	1.84	0.59
27:9:58:VAL:HA	27:9:104:VAL:HG12	1.84	0.59
46:B:829:A:H2'	46:B:830:G:H8	1.67	0.59
46:B:883:A:H5'	61:Q:41:MET:HE3	1.85	0.59
46:B:1245:U:H2'	46:B:1246:G:H8	1.68	0.59
53:I:163:THR:HA	53:I:168:THR:HG22	1.83	0.59
66:V:108:LEU:HB3	66:V:114:LEU:CD2	2.32	0.59
1:AS:647:A:OP2	1:AS:2840:U:O2'	2.21	0.59
1:AS:2138:G:H2'	1:AS:2139:G:H8	1.67	0.59
1:AS:2587:G:H2'	1:AS:2588:C:H6	1.66	0.59
23:BP:13:LYS:HA	23:BP:13:LYS:HE3	1.85	0.59
25:BR:107:SER:HB3	25:BR:111:LYS:HE3	1.83	0.59
46:CM:695:C:H3'	46:CM:696:U:C5'	2.31	0.59
46:CM:878:U:H5'	46:CM:879:U:OP2	2.03	0.59
46:CM:1205:C:H2'	46:CM:1206:A:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1376:U:OP2	64:DE:49:LYS:NZ	2.35	0.59
46:CM:1668:A:H8	53:CT:65:GLN:HG3	1.66	0.59
74:DO:56:CYS:HB3	74:DO:63:LEU:HD11	1.83	0.59
80:L1:23:THR:HG22	80:L1:24:LYS:H	1.68	0.59
1:1:2975:G:HO2'	5:k:92:TYR:HH	1.49	0.59
11:q:59:ASN:ND2	15:u:35:GLN:HE21	2.01	0.59
83:B:1970:PAR:N24	83:B:1970:PAR:O51	2.35	0.59
54:J:52:LYS:HD2	54:J:84:ARG:NH1	2.18	0.59
57:M:70:ASP:O	57:M:73:VAL:HG22	2.03	0.59
1:AS:371:G:N1	1:AS:374:A:OP2	2.35	0.59
1:AS:1219:A:H1'	1:AS:1283:A:C2	2.37	0.59
1:AS:1617:A:H2'	1:AS:1618:U:C6	2.37	0.59
1:AS:2345:A:H2'	1:AS:2346:A:C8	2.36	0.59
1:AS:3285:A:H2'	1:AS:3286:C:C6	2.36	0.59
20:BM:176:ARG:NH1	46:CM:837:C:OP1	2.31	0.59
21:BN:42:TRP:O	21:BN:46:GLN:HG3	2.02	0.59
21:BN:96:ASP:OD1	21:BN:97:VAL:N	2.35	0.59
46:CM:1489:G:N7	66:DG:102:ARG:NH2	2.51	0.59
53:CT:220:LYS:C	53:CT:222:GLU:H	2.11	0.59
57:CX:5:LYS:HE2	59:CZ:39:ASP:CG	2.28	0.59
65:DF:29:MET:HB2	65:DF:54:LEU:HD22	1.84	0.59
80:L1:87:VAL:HA	80:L1:90:LEU:HD12	1.85	0.59
80:l1:194:LEU:HD13	80:l1:200:ASN:HB2	1.84	0.59
1:1:1106:U:H2'	1:1:1107:U:C6	2.38	0.59
5:k:106:TRP:HB2	5:k:133:TYR:CE2	2.38	0.59
46:B:501:G:H2'	46:B:502:U:C6	2.38	0.59
78:h:158:ARG:O	78:h:161:ARG:NH2	2.36	0.59
78:h:168:CYS:HB3	78:h:172:ILE:HB	1.84	0.59
5:AX:95:THR:OG1	5:AX:98:GLY:O	2.20	0.59
12:BE:44:ASP:OD2	12:BE:185:LYS:NZ	2.36	0.59
1:1:1630:G:N7	28:AA:17:ARG:NH2	2.51	0.58
23:5:22:PRO:HB2	23:5:28:PHE:HB2	1.84	0.58
25:7:83:VAL:HG11	46:B:68:A:C2	2.38	0.58
46:B:1043:U:O2	46:B:1045:U:N3	2.30	0.58
46:B:1347:U:H1'	46:B:1348:U:O2	2.03	0.58
72:b:67:ASP:O	72:b:70:LYS:NZ	2.36	0.58
74:d:36:LYS:HE3	74:d:43:ILE:HD13	1.85	0.58
79:AR:16:HIS:CE1	79:AR:37:SER:HB3	2.35	0.58
1:AS:391:A:H62	83:AS:3789:PAR:H41	1.68	0.58
1:AS:1199:A:H2'	1:AS:1200:A:H8	1.67	0.58
3:AU:81:A:HO2'	36:CC:2:ALA:N	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AY:113:LYS:HG2	16:BI:202:TYR:HB3	1.84	0.58
48:CO:83:LYS:NZ	48:CO:105:PHE:O	2.35	0.58
1:1:248:U:H2'	1:1:249:G:H4'	1.84	0.58
1:1:504:G:OP2	9:o:209:ASN:ND2	2.34	0.58
1:1:541:U:N3	1:1:543:C:O2'	2.31	0.58
1:1:3235:A:N6	18:x:178:SER:OG	2.31	0.58
23:5:37:LEU:HB3	23:5:56:ILE:HD13	1.85	0.58
27:9:51:ARG:HG2	27:9:52:GLN:N	2.18	0.58
46:B:1064:U:H2'	46:B:1065:U:C6	2.39	0.58
46:B:1593:C:H2'	46:B:1594:G:C8	2.38	0.58
50:F:225:LYS:HG2	50:F:226:SER:H	1.67	0.58
62:R:18:LYS:N	65:U:92:GLN:O	2.27	0.58
72:b:50:ILE:HG12	72:b:69:LEU:HD13	1.84	0.58
1:AS:116:U:O2	1:AS:118:U:H2'	2.03	0.58
1:AS:2084:A:H2'	1:AS:2085:A:H8	1.68	0.58
1:AS:2093:G:O2'	20:BM:82:LYS:NZ	2.35	0.58
1:AS:3035:C:H2'	1:AS:3036:U:H6	1.68	0.58
1:AS:3161:U:H3	1:AS:3166:A:H61	1.51	0.58
2:AT:3:U:H2'	2:AT:4:U:H6	1.68	0.58
16:BI:192:LYS:O	16:BI:196:THR:OG1	2.18	0.58
46:CM:696:U:H3	46:CM:725:A:H61	1.51	0.58
46:CM:700:G:N2	46:CM:721:C:O2'	2.36	0.58
57:CX:46:LEU:HD23	57:CX:66:TYR:CG	2.38	0.58
1:1:249:G:N2	1:1:251:G:N7	2.50	0.58
1:1:654:A:H2'	1:1:655:A:H8	1.68	0.58
1:1:1344:U:OP1	19:y:39:ARG:NH2	2.36	0.58
1:1:1921:U:O2'	1:1:1923:G:N7	2.36	0.58
46:B:405:A:H2'	46:B:406:C:H6	1.67	0.58
46:B:728:U:P	54:J:104:LYS:H	2.26	0.58
50:F:210:ALA:O	64:T:19:ARG:NH1	2.36	0.58
1:AS:1837:A:H1'	40:CG:45:ARG:HH22	1.67	0.58
1:AS:2469:A:O5'	80:L1:212:PRO:HA	2.03	0.58
1:AS:2876:U:H2'	1:AS:2877:U:C6	2.39	0.58
8:BA:39:LEU:HD13	8:BA:83:VAL:HG11	1.85	0.58
46:CM:823:G:H4'	46:CM:824:U:OP2	2.03	0.58
46:CM:1624:C:C2	45:CL:90:ARG:HG3	2.38	0.58
49:CP:36:LEU:HD21	49:CP:51:ILE:HD12	1.85	0.58
67:DH:32:GLN:HB3	67:DH:108:GLU:HG2	1.84	0.58
1:1:431:A:H2'	1:1:432:G:C8	2.38	0.58
51:G:126:VAL:HG13	51:G:139:VAL:HG13	1.83	0.58
57:M:47:GLN:O	57:M:51:SER:HB3	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:W:56:ARG:HG3	67:W:88:ARG:HH11	1.69	0.58
1:AS:1635:C:OP2	35:CB:74:ARG:NH1	2.35	0.58
1:AS:2183:U:O2'	1:AS:2184:G:OP1	2.20	0.58
13:BF:93:SER:N	13:BF:172:LEU:O	2.36	0.58
15:BH:19:VAL:HG11	15:BH:55:ILE:HD12	1.85	0.58
33:BZ:43:VAL:HG22	33:BZ:50:THR:HB	1.85	0.58
43:CJ:90[B]:HIS:NE2	43:CJ:92:GLU:OE1	2.37	0.58
46:CM:483:A:H2'	46:CM:484:G:O4'	2.03	0.58
46:CM:648:U:H2'	46:CM:649:G:H8	1.68	0.58
75:DP:12:VAL:HG22	75:DP:52:ASP:H	1.68	0.58
1:1:782:A:H4'	1:1:783:G:H5'	1.85	0.58
1:1:1633:A:OP1	28:AA:73:LYS:HE2	2.03	0.58
1:1:2126:U:H2'	1:1:2127:A:C8	2.38	0.58
46:B:1644:U:O5'	46:B:1645:G:H5''	2.04	0.58
48:D:180:THR:HG22	48:D:183:GLN:CD	2.27	0.58
52:H:98:MET:O	52:H:99:MET:HE2	2.04	0.58
68:X:79:LEU:HD13	68:X:82:VAL:HG11	1.86	0.58
1:AS:297:G:H5'	37:CD:84:ARG:NH2	2.18	0.58
1:AS:628:A:H2'	1:AS:629:A:H8	1.68	0.58
1:AS:800:C:OP1	6:AY:99:ARG:NH2	2.35	0.58
1:AS:1530:A:H2'	1:AS:1531:A:C8	2.39	0.58
1:AS:2421:A:H5'	1:AS:2422:C:OP2	2.04	0.58
1:AS:2590:G:OP1	12:BE:116:ARG:HG3	2.04	0.58
1:AS:3310:G:OP1	55:CV:92:ARG:HG2	2.03	0.58
9:BB:9:THR:HA	9:BB:12:LYS:HE3	1.86	0.58
42:CI:15:ARG:O	42:CI:16:LYS:C	2.47	0.58
46:CM:483:A:H2'	46:CM:484:G:C8	2.37	0.58
46:CM:1219:A:O2'	78:DS:182:TYR:OH	2.17	0.58
51:CR:11:ARG:NH1	51:CR:21:ASP:O	2.33	0.58
52:CS:163:SER:HB2	75:DP:48:VAL:HG22	1.85	0.58
79:DT:65:HIS:HE2	79:DT:93:TRP:HZ2	1.52	0.58
1:1:641:U:O2'	1:1:1149:A:N1	2.35	0.58
46:B:142:G:O2'	46:B:143:A:O5'	2.18	0.58
69:Y:80:ASN:HD21	69:Y:124:LYS:HE2	1.67	0.58
1:AS:2638:C:H5''	45:CL:38:LYS:O	2.04	0.58
46:CM:1259:C:N4	45:CL:91:HIS:O	2.37	0.58
53:CT:218:GLU:HB3	53:CT:219:ARG:NH1	2.18	0.58
58:CY:118:GLU:OE1	58:CY:118:GLU:N	2.37	0.58
80:l1:41:TYR:HE1	80:l1:195:LYS:H	1.51	0.58
80:l1:103:LEU:HD12	80:l1:107:TYR:HE1	1.69	0.58
1:1:834:G:O6	44:AQ:4:ARG:NH2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:824:U:O5'	58:N:26:LYS:HD3	2.04	0.58
46:B:1487:C:P	66:V:122:ARG:HH22	2.26	0.58
46:B:1635:A:H2'	46:B:1636:C:C6	2.39	0.58
59:O:26:ASP:HA	59:O:29:LYS:HG2	1.86	0.58
17:BJ:15:HIS:HD2	17:BJ:20:LEU:HD13	1.69	0.58
46:CM:57:G:OP1	71:DL:112:LYS:NZ	2.37	0.58
80:11:35:GLN:HB2	80:11:205:VAL:HB	1.85	0.58
1:1:712:G:HO2'	1:1:749:C:HO2'	1.52	0.58
83:1:3969:PAR:H122	46:B:1713:G:H4'	1.68	0.58
46:B:1262:G:O3'	50:F:184:GLY:HA3	2.03	0.58
83:B:1970:PAR:O31	48:D:107:SER:HB3	2.04	0.58
47:C:167:LYS:NZ	47:C:204:TYR:O	2.34	0.58
1:AS:446:U:H2'	1:AS:447:U:C5	2.38	0.58
33:BZ:35:LYS:O	33:BZ:37:LYS:NZ	2.26	0.58
43:CJ:40:LYS:HD3	82:CJ:202:3K5:H30	1.85	0.58
46:CM:543:A:H2'	77:DR:31:GLN:HE22	1.69	0.58
46:CM:1463:G:H2'	46:CM:1464:G:C8	2.39	0.58
47:CN:53:THR:OG1	47:CN:161:PRO:HG2	2.04	0.58
64:DE:74:GLN:OE1	64:DE:78:ARG:NH2	2.27	0.58
80:11:103:LEU:HD12	80:11:107:TYR:CE1	2.37	0.58
1:1:531:G:OP1	21:O:146:LYS:NZ	2.34	0.58
1:1:2737:C:H1'	82:1:3406:3K5:H34	1.86	0.58
28:AA:54:THR:HG22	28:AA:57:MET:HE3	1.84	0.58
46:B:634:A:H5''	69:Y:31:SER:HB3	1.84	0.58
46:B:680:C:H2'	46:B:681:C:C6	2.39	0.58
46:B:826:U:H2'	46:B:827:C:O4'	2.03	0.58
46:B:829:A:H2'	46:B:830:G:C8	2.39	0.58
46:B:1237:C:O2'	78:h:184:GLY:N	2.36	0.58
46:B:1649:G:H2'	46:B:1650:G:H8	1.69	0.58
54:J:92:ARG:NH1	54:J:120:LYS:HB3	2.18	0.58
65:U:126:ARG:HB2	65:U:133:VAL:HG12	1.83	0.58
79:AR:19:TRP:HB2	79:AR:38:ARG:HD2	1.85	0.58
40:CG:20:ASN:ND2	40:CG:41:ARG:HE	2.01	0.58
43:CJ:61:LYS:NZ	43:CJ:63:LYS:O	2.36	0.58
46:CM:484:G:H2'	46:CM:485:G:C8	2.38	0.58
46:CM:1399:U:O2'	46:CM:1402:G:OP1	2.21	0.58
1:1:1468:U:H5'	20:z:4:LEU:HB2	1.85	0.58
1:1:1631:G:N2	1:1:1634:A:OP2	2.23	0.58
1:1:2985:U:H2'	1:1:2986:U:C6	2.38	0.58
2:3:65:G:O3'	12:r:204:GLY:HA2	2.04	0.58
3:4:23:U:OP1	27:9:16:ARG:NH1	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:k:147:GLU:OE1	5:k:150:ARG:NH1	2.33	0.58
13:s:92:ARG:HD3	13:s:174:LYS:HE3	1.85	0.58
1:AS:118:U:O2'	10:BC:139:HIS:NE2	2.23	0.58
1:AS:2210:A:H2'	1:AS:2211:A:C8	2.39	0.58
42:CI:20:VAL:O	42:CI:21:ARG:C	2.47	0.58
46:CM:1245:U:H2'	46:CM:1246:G:H8	1.68	0.58
46:CM:1254:U:H5'	46:CM:1418:U:OP2	2.04	0.58
46:CM:1315:G:H21	64:DE:8:THR:HG21	1.68	0.58
55:CV:120:THR:HG21	55:CV:133:ALA:HA	1.86	0.58
1:1:164:U:H2'	1:1:165:C:C6	2.39	0.57
1:1:988:A:H61	1:1:1053:A:H61	1.52	0.57
1:1:1273:C:H2'	1:1:1274:A:C8	2.36	0.57
1:1:1662:G:H2'	1:1:1663:A:H8	1.69	0.57
6:l:155:ASN:OD1	6:l:254:GLY:N	2.29	0.57
46:B:1472:G:N2	46:B:1580:A:OP1	2.29	0.57
46:B:1750:A:H5''	46:B:1758:U:H5''	1.85	0.57
54:J:8:GLU:H	54:J:8:GLU:CD	2.11	0.57
69:Y:87:GLU:OE1	69:Y:117:ARG:NH2	2.36	0.57
1:AS:671:U:H2'	1:AS:672:G:C8	2.39	0.57
1:AS:1720:U:OP1	20:BM:128:LYS:NZ	2.30	0.57
1:AS:2448:C:N3	1:AS:2467:C:H4'	2.19	0.57
16:BI:94:TYR:OH	16:BI:96:LYS:HE2	2.04	0.57
46:CM:52:U:H2'	46:CM:53:G:H8	1.69	0.57
46:CM:1132:A:O2'	46:CM:1623:C:OP2	2.22	0.57
47:CN:57:ILE:HG23	47:CN:177:LEU:HD23	1.85	0.57
47:CN:200:ASP:HB2	64:DE:85:VAL:HG23	1.85	0.57
80:L1:36:VAL:HG13	80:L1:204:LEU:HG	1.85	0.57
1:1:483:U:H2'	1:1:484:U:C6	2.38	0.57
1:1:1199:A:H2'	1:1:1200:A:H8	1.69	0.57
1:1:2933:G:H2'	1:1:2934:U:C6	2.39	0.57
23:5:92:ILE:HD12	23:5:96:ILE:HD12	1.86	0.57
46:B:302:U:H2'	46:B:303:C:C6	2.39	0.57
46:B:914:A:H61	83:B:1970:PAR:H222	1.67	0.57
46:B:940:A:H4'	46:B:1058:G:O2'	2.04	0.57
46:B:1312:C:H5'	50:F:157:PHE:HE1	1.67	0.57
46:B:1551:U:H2'	46:B:1552:C:C6	2.39	0.57
46:B:1600:U:OP1	52:H:169:ASN:HB2	2.04	0.57
73:c:25:ASN:HB3	73:c:77:CYS:SG	2.44	0.57
1:AS:1865:C:H4'	1:AS:3049:A:O2'	2.03	0.57
1:AS:3158:G:C2	1:AS:3159:A:C4	2.91	0.57
3:AU:52:A:H62	40:CG:27:ILE:HD13	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BF:85:LYS:NZ	62:DC:9:LYS:HD3	2.20	0.57
43:CJ:55:LYS:CD	82:CJ:202:3K5:H34	2.33	0.57
46:CM:520:U:O3'	71:DL:60:PHE:HB2	2.05	0.57
46:CM:1026:G:H2'	46:CM:1027:G:C8	2.39	0.57
46:CM:1205:C:H2'	46:CM:1206:A:C8	2.39	0.57
46:CM:1575:G:H1	46:CM:1595:U:H3	1.51	0.57
48:CO:56:ASN:OD1	48:CO:57:ALA:N	2.38	0.57
63:DD:73:HIS:O	63:DD:74:VAL:C	2.47	0.57
65:DF:132:LYS:HD3	65:DF:136:GLN:HB2	1.86	0.57
70:DK:37:ALA:HA	70:DK:41:SER:HB3	1.85	0.57
79:DT:40:LYS:HZ2	79:DT:67:HIS:HA	1.68	0.57
1:1:374:A:N3	1:1:376:G:H5''	2.20	0.57
1:1:1218:G:O2'	1:1:1281:G:N1	2.06	0.57
57:M:81:ASN:ND2	59:O:37:VAL:HG13	2.19	0.57
1:AS:172:C:O2'	1:AS:173:C:OP1	2.23	0.57
1:AS:1057:A:O2'	22:BO:102:ARG:NH2	2.37	0.57
1:AS:2334:A:H61	1:AS:2955:C:H5	1.48	0.57
1:AS:2461:G:OP2	80:L1:98:LYS:NZ	2.32	0.57
4:AW:5:ILE:HG12	4:AW:8:GLN:HG3	1.86	0.57
47:CN:79:ARG:O	47:CN:83:GLN:HG3	2.04	0.57
61:DB:107:ILE:HG21	73:DN:53:LEU:HD11	1.86	0.57
79:DT:132:VAL:O	79:DT:145:LEU:HB2	2.05	0.57
80:L1:48:ARG:NH1	80:L1:161:LYS:H	2.02	0.57
80:l1:48:ARG:HA	80:l1:159:LEU:HD23	1.85	0.57
1:1:590:A:N1	9:o:17:GLN:HG2	2.20	0.57
1:1:1408:G:H5''	33:AF:125:GLY:HA3	1.85	0.57
1:1:2957:C:H2'	1:1:2958:U:C6	2.39	0.57
1:1:2959:A:H2'	1:1:2960:C:H6	1.70	0.57
3:4:75:G:OP2	27:9:74:TYR:OH	2.19	0.57
5:k:71:GLU:OE2	5:k:357:LYS:NZ	2.37	0.57
10:p:261:SER:HB3	48:D:225:LEU:HB3	1.86	0.57
13:s:61:ARG:HG2	13:s:62:ASN:OD1	2.04	0.57
46:B:418:A:OP1	53:I:96:SER:OG	2.13	0.57
46:B:878:U:H5'	46:B:879:U:OP2	2.05	0.57
46:B:1551:U:H2'	46:B:1552:C:H6	1.69	0.57
63:S:39:GLN:O	63:S:41:GLU:N	2.38	0.57
64:T:18:GLU:HG2	64:T:70:SER:H	1.69	0.57
1:AS:1501:C:OP1	18:BK:23:ARG:NH2	2.37	0.57
1:AS:1735:U:O2'	35:CB:56:THR:OG1	2.21	0.57
1:AS:2126:U:H2'	1:AS:2127:A:C8	2.40	0.57
23:BP:43:VAL:CG2	23:BP:54:ILE:HD11	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BT:31:LEU:HB3	27:BT:101:PRO:HG2	1.85	0.57
46:CM:799:G:H8	46:CM:799:G:OP1	1.86	0.57
48:CO:33:LYS:HA	48:CO:41:ARG:O	2.03	0.57
80:L1:55:LEU:HD13	80:L1:182:GLN:HE21	1.70	0.57
12:r:38:ARG:NH2	12:r:45:GLU:OE1	2.29	0.57
46:B:17:C:O2'	46:B:1122:A:N1	2.35	0.57
46:B:151:G:H2'	46:B:152:G:C8	2.40	0.57
46:B:701:G:H22	46:B:720:C:N4	2.00	0.57
46:B:728:U:OP1	54:J:104:LYS:N	2.37	0.57
63:S:26:GLY:HA2	63:S:62:ILE:O	2.05	0.57
78:h:142:LEU:HB3	78:h:145:LEU:HG	1.86	0.57
1:AS:1774:G:O2'	1:AS:1776:G:OP2	2.22	0.57
1:AS:2669:A:H2'	1:AS:2670:G:H8	1.68	0.57
5:AX:50:LYS:NZ	5:AX:328:ILE:O	2.33	0.57
13:BF:28:ASP:OD2	13:BF:32:ARG:NH2	2.37	0.57
21:BN:8:GLN:HG3	21:BN:26:ARG:HD2	1.85	0.57
46:CM:696:U:H3'	46:CM:697:U:C6	2.39	0.57
46:CM:1302:C:H2'	46:CM:1303:G:O4'	2.05	0.57
46:CM:1551:U:H2'	46:CM:1552:C:C6	2.39	0.57
62:DC:45:PHE:CD2	62:DC:49:LEU:HD21	2.39	0.57
62:DC:60:LEU:HD22	62:DC:92:SER:HB3	1.85	0.57
65:DF:86:LEU:HD12	65:DF:97:ASP:HB3	1.85	0.57
1:l:581:A:H5''	34:AG:106:ASN:HD21	1.69	0.57
11:q:110:ASP:HB3	11:q:128:ILE:HD12	1.86	0.57
36:AI:64:GLU:HA	36:AI:67:ARG:HB2	1.86	0.57
45:i:61:GLU:C	45:i:63:ALA:H	2.12	0.57
49:E:173:ILE:HG21	49:E:180:LYS:HA	1.86	0.57
57:M:31:LYS:NZ	57:M:36:ASP:OD1	2.38	0.57
59:O:40:GLY:O	59:O:41:LEU:HB3	2.03	0.57
73:c:47:ALA:HA	73:c:50:VAL:HG13	1.87	0.57
75:e:34:GLU:OE1	75:e:34:GLU:N	2.31	0.57
79:AR:16:HIS:NE2	79:AR:37:SER:CB	2.67	0.57
1:AS:2086:C:H1'	1:AS:3309:A:H8	1.67	0.57
1:AS:2435:G:N1	1:AS:2439:A:N6	2.52	0.57
6:AY:290:LEU:HD22	19:BL:129:LEU:HD11	1.85	0.57
27:BT:51:ARG:HG2	27:BT:52:GLN:H	1.68	0.57
46:CM:165:U:H2'	46:CM:166:A:H5''	1.86	0.57
46:CM:1772:U:H2'	46:CM:1773:G:H8	1.68	0.57
48:CO:69:CYS:SG	48:CO:70:LEU:N	2.77	0.57
46:B:1220:C:H3'	46:B:1221:A:H8	1.67	0.57
46:B:1276:G:H22	46:B:1309:G:H22	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:K:4:SER:OG	55:K:6:ASP:OD1	2.22	0.57
1:AS:1035:U:H2'	1:AS:1036:A:C8	2.39	0.57
1:AS:1094:A:OP2	22:BO:130:ARG:NE	2.24	0.57
1:AS:1436:G:OP1	6:AY:84:HIS:NE2	2.37	0.57
1:AS:2134:U:OP1	4:AW:241:ARG:NH2	2.38	0.57
1:AS:2342:G:N2	1:AS:2374:G:O2'	2.37	0.57
28:BU:53:VAL:HG11	28:BU:62:VAL:HG13	1.87	0.57
51:CR:32:SER:OG	51:CR:81:THR:HG23	2.04	0.57
80:L1:175:GLU:HG3	80:L1:177:ASP:H	1.70	0.57
1:1:1795:A:H2'	1:1:1796:A:C8	2.40	0.57
1:1:2331:G:H5''	18:x:86:LYS:HB2	1.86	0.57
46:B:880:G:H4'	61:Q:32:GLU:OE1	2.04	0.57
1:AS:3256:G:H2'	1:AS:3257:A:C8	2.40	0.57
10:BC:68:LEU:HD22	10:BC:238:ILE:HD12	1.87	0.57
46:CM:589:A:H2'	46:CM:590:A:C8	2.39	0.57
46:CM:1145:A:H2'	46:CM:1146:C:C6	2.40	0.57
59:CZ:64:ASP:OD2	59:CZ:90:LYS:NZ	2.33	0.57
1:1:208:A:H4'	1:1:210:A:N7	2.20	0.57
1:1:299:G:C8	37:AJ:30:GLY:HA3	2.40	0.57
1:1:486:C:H2'	1:1:487:C:C6	2.40	0.57
1:1:1509:G:OP1	20:z:5:ARG:NH1	2.35	0.57
1:1:1949:G:O6	1:1:2070:A:H2'	2.05	0.57
1:1:2650:A:H5'	45:i:55:LYS:HA	1.87	0.57
1:1:2957:C:H2'	1:1:2958:U:H6	1.70	0.57
8:n:39:LEU:HD11	8:n:53:TYR:HB2	1.87	0.57
11:q:48:ILE:HG22	11:q:49:ASN:HD22	1.70	0.57
33:AF:79:ASN:HD21	33:AF:81:LYS:HB3	1.70	0.57
46:B:881:U:H5'	48:D:23:PRO:HG2	1.85	0.57
46:B:974:U:H2'	46:B:975:C:C6	2.40	0.57
53:I:57:ASP:O	53:I:107:SER:OG	2.20	0.57
57:M:59:PHE:CZ	57:M:62:GLN:HA	2.40	0.57
1:AS:269:G:H5''	16:BI:14:LYS:HE2	1.87	0.57
1:AS:712:G:O2'	1:AS:749:C:O2'	2.22	0.57
3:AU:34:U:H4'	36:CC:85:THR:HG21	1.86	0.57
46:CM:1220:C:H41	78:DS:180:ARG:HH21	1.52	0.57
46:CM:1486:G:OP2	66:DG:73:VAL:HG12	2.05	0.57
68:DI:36:ILE:HD12	68:DI:78:LEU:HD13	1.86	0.57
1:1:289:A:H2'	1:1:290:G:H8	1.69	0.57
1:1:788:G:H2'	1:1:789:C:C6	2.40	0.57
1:1:1248:A:C2'	1:1:1249:U:H5'	2.34	0.57
1:1:3196:U:H2'	1:1:3197:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:k:373:PRO:O	5:k:377:HIS:ND1	2.32	0.57
7:m:19:PRO:HG2	7:m:24:GLN:HB2	1.87	0.57
45:i:157:GLU:OE1	45:i:157:GLU:N	2.29	0.57
46:B:1144:C:N4	46:B:1270:U:OP1	2.38	0.57
50:F:114:LEU:HD23	50:F:118:ARG:HD3	1.86	0.57
66:V:84:LYS:HZ2	66:V:86:ARG:HG3	1.69	0.57
71:a:10:ARG:NH1	71:a:26:ASP:OD2	2.38	0.57
1:AS:1804:G:OP2	28:BU:133:LYS:NZ	2.38	0.57
1:AS:2742:G:H5''	43:CJ:79:THR:HG23	1.86	0.57
1:AS:3093:U:H1'	1:AS:3094:A:H5''	1.87	0.57
1:AS:3160:C:C4	1:AS:3161:U:C4	2.93	0.57
2:AT:118:A:H5''	7:AZ:253:PHE:CZ	2.40	0.57
14:BG:27:ASP:OD2	14:BG:31:LYS:HE3	2.04	0.57
46:CM:702:G:N3	46:CM:703:U:H1'	2.20	0.57
46:CM:876:A:H2'	46:CM:877:G:H8	1.69	0.57
52:CS:26:ALA:HB2	63:DD:25:LYS:HB3	1.87	0.57
54:CU:131:ILE:HG22	54:CU:133:GLY:H	1.70	0.57
72:DM:42:LEU:HD21	72:DM:47:TYR:HD1	1.70	0.57
45:CL:61:GLU:OE1	45:CL:61:GLU:N	2.37	0.57
1:1:2455:G:OP1	1:1:2465:U:O2'	2.23	0.56
1:1:3338:U:H5''	32:AE:68:ASN:HD22	1.70	0.56
46:B:912:C:H1'	61:Q:120:SER:CB	2.32	0.56
46:B:961:G:N1	46:B:1008:A:O2'	2.31	0.56
52:H:57:SER:HB2	75:e:53:ILE:O	2.05	0.56
54:J:5:ILE:HG22	54:J:7:SER:H	1.70	0.56
54:J:29:ASP:OD1	54:J:30:LEU:HD23	2.05	0.56
79:AR:202:SER:OG	79:AR:204:ASP:OD1	2.20	0.56
1:AS:583:A:H2'	1:AS:584:C:C6	2.40	0.56
1:AS:629:A:C2	34:CA:91:PRO:HG2	2.40	0.56
1:AS:1256:A:O2'	1:AS:1275:C:O2	2.23	0.56
4:AW:54:ARG:NH2	4:AW:58:LEU:HD11	2.20	0.56
46:CM:233:G:H2'	46:CM:234:G:C8	2.40	0.56
46:CM:652:C:H5''	46:CM:653:G:H8	1.70	0.56
46:CM:840:A:O2'	46:CM:841:A:H3'	2.05	0.56
46:CM:1174:A:N3	46:CM:1179:A:O2'	2.34	0.56
46:CM:1214:G:O2'	46:CM:1240:G:N2	2.27	0.56
50:CQ:107:LYS:HB2	50:CQ:176:VAL:HG22	1.87	0.56
58:CY:127:GLN:HA	58:CY:137:PHE:HD1	1.70	0.56
59:CZ:99:GLU:HB2	59:CZ:111:ASN:ND2	2.20	0.56
75:DP:29:ARG:HD2	75:DP:39:THR:HG22	1.87	0.56
1:1:1376:G:OP2	85:1:4001:HOH:O	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:2256:C:OP1	42:AO:23:ARG:NH2	2.38	0.56
1:1:2915:G:OP2	5:k:2:SER:OG	2.17	0.56
14:t:201:LYS:HE2	80:l1:51:GLY:HA2	1.87	0.56
23:5:19:VAL:C	23:5:21:ALA:H	2.13	0.56
38:AK:28:HIS:CG	38:AK:31:LYS:HB2	2.40	0.56
45:i:48:PRO:C	45:i:50:LYS:H	2.13	0.56
46:B:1307:A:O2'	47:C:104:PRO:HG2	2.04	0.56
46:B:1659:G:H2'	46:B:1660:G:H8	1.70	0.56
51:G:194:VAL:HG11	51:G:232:ALA:HB2	1.86	0.56
55:K:76:THR:HG21	55:K:104:ILE:HD12	1.87	0.56
57:M:5:LYS:HZ2	59:O:38:HIS:CB	2.19	0.56
1:AS:275:U:H2'	1:AS:276:U:C6	2.40	0.56
1:AS:485:A:H3'	1:AS:486:C:C6	2.39	0.56
1:AS:1576:A:H5''	1:AS:1577:C:H5	1.70	0.56
1:AS:1617:A:H2'	1:AS:1618:U:H6	1.70	0.56
11:BD:110:ASP:HB3	11:BD:128:ILE:HD12	1.87	0.56
20:BM:172:ARG:O	20:BM:176:ARG:HG3	2.05	0.56
46:CM:234:G:H2'	46:CM:235:C:C6	2.41	0.56
46:CM:698:C:H2'	46:CM:699:U:C6	2.40	0.56
46:CM:1193:A:H4'	46:CM:1255:G:P	2.45	0.56
53:CT:74:ARG:NH1	53:CT:96:SER:OG	2.35	0.56
55:CV:57:ALA:HB2	55:CV:183:GLY:HA2	1.86	0.56
61:DB:79:ARG:HB3	61:DB:113:VAL:HG23	1.87	0.56
75:DP:19:THR:HG23	75:DP:25:VAL:HG13	1.87	0.56
80:L1:180:VAL:O	80:L1:184:MET:HG2	2.05	0.56
1:1:72:A:N7	14:t:66:ASN:HB3	2.21	0.56
1:1:371:G:N1	1:1:374:A:OP2	2.36	0.56
1:1:1871:G:OP1	20:z:19:LYS:HG3	2.05	0.56
1:1:2107:U:H2'	1:1:2108:G:C8	2.40	0.56
1:1:2912:A:OP2	5:k:2:SER:N	2.38	0.56
6:l:326:LEU:O	9:o:39:ARG:NH2	2.38	0.56
24:6:13:MET:HE1	24:6:54:ALA:HB3	1.85	0.56
26:8:90:SER:O	26:8:120:LYS:NZ	2.36	0.56
38:AK:22:CYS:SG	38:AK:37:CYS:HB3	2.45	0.56
38:AK:36:SER:OG	38:AK:57:ARG:NH2	2.37	0.56
46:B:366:U:H2'	46:B:367:A:O4'	2.05	0.56
46:B:1265:C:H2'	46:B:1266:G:H8	1.70	0.56
46:B:1413:A:O2'	46:B:1414:G:OP1	2.19	0.56
46:B:1459:U:OP1	52:H:183:SER:OG	2.22	0.56
46:B:1477:U:H4'	46:B:1478:A:H5'	1.86	0.56
46:B:1584:A:C8	76:f:14:PHE:HD1	2.24	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:L:21:SER:C	56:L:23:ARG:H	2.13	0.56
56:L:37:LYS:HA	77:g:33:ARG:HA	1.86	0.56
59:O:74:LEU:O	59:O:78:LEU:HD13	2.05	0.56
1:AS:289:A:H2'	1:AS:290:G:C8	2.41	0.56
1:AS:856:G:O2'	1:AS:891:A:H4'	2.06	0.56
1:AS:1790:U:C2	4:AW:187:HIS:HD2	2.23	0.56
1:AS:2687:A:O2'	43:CJ:8:ARG:NH2	2.38	0.56
3:AU:52:A:OP1	40:CG:21:ARG:NH1	2.37	0.56
6:AY:260:ASP:OD1	6:AY:265:SER:HB3	2.06	0.56
27:BT:27:ARG:NH1	27:BT:76:LEU:HA	2.20	0.56
38:CE:21:ARG:NH2	38:CE:41:ALA:O	2.37	0.56
44:CK:28:LYS:O	44:CK:32:GLN:HG3	2.04	0.56
46:CM:1173:G:O2'	46:CM:1416:U:OP1	2.23	0.56
46:CM:1551:U:H2'	46:CM:1552:C:H6	1.71	0.56
46:CM:1635:A:H2'	46:CM:1636:C:C6	2.40	0.56
51:CR:100:ARG:HG2	51:CR:102:VAL:HG13	1.87	0.56
51:CR:141:THR:OG1	51:CR:143:ASP:OD1	2.23	0.56
52:CS:55:ASP:OD2	52:CS:57:SER:OG	2.21	0.56
61:DB:27:ASP:OD1	61:DB:30:GLY:N	2.31	0.56
71:DL:6:THR:HB	71:DL:28:LEU:HB2	1.85	0.56
80:l1:8:GLY:O	80:l1:12:ASN:ND2	2.38	0.56
1:1:2254:G:OP1	42:AO:16:LYS:NZ	2.30	0.56
1:1:3133:G:H2'	1:1:3134:C:C6	2.40	0.56
5:k:66:LYS:NZ	24:6:9:ASN:H	2.02	0.56
46:B:326:A:N3	55:K:86:SER:OG	2.33	0.56
50:F:141:GLY:HA3	50:F:183:LEU:HD23	1.86	0.56
53:I:159:ARG:NH1	53:I:170:THR:OG1	2.34	0.56
1:AS:92:C:OP2	1:AS:2736:C:O2'	2.24	0.56
1:AS:903:G:H2'	1:AS:922:A:H62	1.71	0.56
1:AS:1794:A:H2'	1:AS:1795:A:C8	2.41	0.56
42:CI:12:ARG:HA	42:CI:15:ARG:HD2	1.86	0.56
46:CM:335:G:H3'	58:CY:133:LYS:HB2	1.87	0.56
46:CM:1598:A:OP1	52:CS:107:LYS:NZ	2.37	0.56
64:DE:18:GLU:HG2	64:DE:70:SER:O	2.06	0.56
1:1:1611:U:H2'	1:1:1612:U:H6	1.70	0.56
1:1:2668:A:H2'	1:1:2669:A:C8	2.40	0.56
1:1:2720:A:H1'	7:m:36:LEU:HD23	1.87	0.56
1:1:3014:U:OP2	1:1:3064:C:N4	2.38	0.56
5:k:142:LYS:O	5:k:146:THR:OG1	2.19	0.56
20:z:132:PHE:CE2	20:z:138:LEU:HD13	2.40	0.56
45:i:42:ALA:HB3	45:i:43:PRO:HD3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:12:U:H5''	49:E:79:ARG:NH2	2.20	0.56
53:I:48:TYR:CD2	53:I:117:GLY:HA3	2.39	0.56
65:U:87:ASN:HB2	65:U:99:HIS:CE1	2.41	0.56
1:AS:7:C:H42	3:AU:150:G:H1	1.52	0.56
1:AS:113:A:H4'	16:BI:49:ARG:HB3	1.87	0.56
1:AS:1302:G:C5	17:BJ:63:THR:HA	2.40	0.56
1:AS:2434:A:O2'	1:AS:2435:G:OP1	2.21	0.56
1:AS:3066:A:H2'	1:AS:3067:U:C6	2.40	0.56
7:AZ:187:ALA:O	7:AZ:189:GLU:N	2.36	0.56
12:BE:156:ARG:HG3	12:BE:163:GLN:HB2	1.88	0.56
46:CM:739:A:H5''	46:CM:740:A:C5'	2.36	0.56
46:CM:741:A:H5'	51:CR:16:SER:HB3	1.87	0.56
62:DC:2:VAL:HG21	65:DF:70:VAL:HG11	1.86	0.56
64:DE:25:THR:HG23	64:DE:27:ASP:H	1.69	0.56
70:DK:86:PHE:HE1	70:DK:88:PRO:HA	1.69	0.56
1:1:1692:A:H2'	1:1:1693:A:C8	2.41	0.56
1:1:3207:G:OP1	17:w:160:LYS:NZ	2.30	0.56
46:B:839:U:O4	46:B:840:A:N6	2.38	0.56
46:B:1212:A:N7	59:O:103:LEU:HD21	2.21	0.56
51:G:123:LEU:HD23	51:G:159:THR:HG21	1.88	0.56
1:AS:284:A:C8	43:CJ:41:ARG:NH2	2.74	0.56
1:AS:992:A:N3	2:AT:80:G:O2'	2.37	0.56
1:AS:3136:C:H2'	1:AS:3137:A:C8	2.40	0.56
2:AT:107:A:OP2	12:BE:203:LYS:NZ	2.37	0.56
13:BF:77:GLU:OE1	13:BF:166:ARG:NH2	2.38	0.56
22:BO:41:ASP:HB2	22:BO:97:LYS:HE3	1.88	0.56
46:CM:752:U:H5	56:CW:143:ILE:HG12	1.70	0.56
46:CM:974:U:H2'	46:CM:975:C:C6	2.40	0.56
46:CM:1615:U:H2'	46:CM:1616:G:C8	2.41	0.56
50:CQ:226:SER:HB2	79:DT:186:ASN:O	2.05	0.56
57:CX:70:ASP:OD1	57:CX:71:GLU:N	2.38	0.56
79:DT:44:LYS:HD3	79:DT:95:LEU:HD12	1.87	0.56
1:1:671:U:H2'	1:1:672:G:H8	1.71	0.56
11:q:81:GLY:O	11:q:149:ASN:ND2	2.34	0.56
37:AJ:87:GLU:O	37:AJ:91:GLN:HG2	2.05	0.56
46:B:62:A:H8	46:B:285:G:H21	1.53	0.56
46:B:66:U:C5	53:I:173:PRO:HD3	2.41	0.56
46:B:472:A:H5''	56:L:144:PRO:HD2	1.88	0.56
46:B:1485:G:H2'	46:B:1486:G:H8	1.71	0.56
53:I:64:LYS:HB2	53:I:97:VAL:HG21	1.86	0.56
57:M:5:LYS:HZ2	59:O:38:HIS:CD2	2.24	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:P:16:LEU:HD11	60:P:62:GLN:NE2	2.20	0.56
1:AS:276:U:O2	16:BI:93:LYS:HE2	2.06	0.56
1:AS:619:A:H2'	1:AS:620:A:N7	2.21	0.56
1:AS:1014:G:H1	1:AS:1030:U:H3	1.53	0.56
1:AS:1301:U:C2	5:AX:257:PRO:HG3	2.40	0.56
1:AS:1610:C:OP1	39:CF:50:TYR:OH	2.24	0.56
1:AS:1628:A:OP1	28:BU:48:ARG:NH1	2.38	0.56
1:AS:1713:U:H2'	1:AS:1714:G:H8	1.71	0.56
1:AS:2171:U:H5'	1:AS:2172:G:H5'	1.87	0.56
1:AS:2384:C:H2'	1:AS:2385:C:C6	2.41	0.56
4:AW:80:GLU:HG3	44:CK:66:GLY:HA2	1.86	0.56
14:BG:126:PHE:CD1	36:CC:116:PHE:HA	2.41	0.56
46:CM:69:G:OP2	71:DL:123:ARG:NH1	2.39	0.56
46:CM:119:A:H1'	46:CM:395:A:C5	2.41	0.56
46:CM:1204:A:O2'	57:CX:48:SER:HA	2.06	0.56
50:CQ:124:LEU:HD11	50:CQ:153:TYR:HB3	1.88	0.56
59:CZ:64:ASP:N	59:CZ:92:SER:OG	2.39	0.56
80:II:112:ALA:O	80:II:116:LEU:HB2	2.06	0.56
1:1:269:G:N2	1:1:270:U:O4	2.33	0.56
1:1:454:G:H1'	1:1:476:C:H1'	1.88	0.56
1:1:1190:G:H2'	1:1:1191:A:C8	2.40	0.56
25:7:78:HIS:CE1	53:I:9:ALA:HA	2.41	0.56
46:B:1341:U:H2'	46:B:1342:A:C8	2.40	0.56
1:AS:1945:A:OP2	20:BM:135:LYS:NZ	2.24	0.56
1:AS:2530:C:N4	31:BX:59:GLU:OE2	2.39	0.56
1:AS:3261:A:H2'	1:AS:3262:U:H6	1.70	0.56
1:AS:3270:A:OP1	5:AX:334:ARG:NH2	2.39	0.56
7:AZ:233:SER:OG	7:AZ:234:GLU:N	2.39	0.56
13:BF:89:TYR:CD1	62:DC:12:PHE:HE1	2.24	0.56
21:BN:99:ARG:NH1	21:BN:126:VAL:O	2.36	0.56
46:CM:480:U:H2'	46:CM:481:A:C8	2.39	0.56
46:CM:708:A:H61	46:CM:711:U:H1'	1.71	0.56
46:CM:1138:G:OP1	73:DN:85:ARG:NH1	2.39	0.56
48:CO:120:LEU:HD13	48:CO:142:PHE:CE1	2.41	0.56
51:CR:19:MET:SD	51:CR:108:LYS:HD2	2.46	0.56
1:1:1313:A:O2'	1:1:1314:A:H3'	2.06	0.56
1:1:2419:A:H5''	1:1:2420:G:OP2	2.05	0.56
5:k:80:ASP:OD1	5:k:319:ASN:HB2	2.06	0.56
13:s:61:ARG:NH1	45:i:42:ALA:O	2.38	0.56
25:7:60:LYS:HA	25:7:63:ILE:HD12	1.88	0.56
31:AD:55:LYS:O	31:AD:59:GLU:HG2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AG:51:TYR:HD2	34:AG:67:ILE:HD12	1.71	0.56
45:i:113:ARG:HD2	46:B:556:U:C5	2.41	0.56
46:B:217:A:H2'	46:B:218:A:O4'	2.05	0.56
46:B:1213:G:OP1	59:O:118:ALA:HA	2.06	0.56
46:B:1416:U:H1'	67:W:71:ASN:HB3	1.88	0.56
53:I:135:PRO:HB2	53:I:141:ILE:HG12	1.88	0.56
63:S:124:GLU:HG2	63:S:133:ALA:HB1	1.88	0.56
1:AS:1018:U:C2'	1:AS:1019:U:H5''	2.36	0.56
1:AS:1795:A:H2'	1:AS:1796:A:H8	1.69	0.56
1:AS:2592:G:H5''	30:BW:1:MET:HE2	1.86	0.56
3:AU:36:G:OP1	38:CE:66:TYR:OH	2.22	0.56
23:BP:80:LYS:O	23:BP:84:LYS:HG3	2.05	0.56
25:BR:101:ARG:HB2	25:BR:105:ARG:HH21	1.70	0.56
26:BS:82:LEU:HB3	26:BS:84:PHE:HE1	1.71	0.56
46:CM:560:G:H2'	46:CM:561:U:O2	2.06	0.56
46:CM:1415:G:N3	67:DH:71:ASN:ND2	2.53	0.56
46:CM:1719:A:H2'	46:CM:1720:C:C6	2.41	0.56
53:CT:215:ARG:O	53:CT:216:LEU:C	2.48	0.56
54:CU:134:LYS:HE3	54:CU:146:GLN:HE22	1.69	0.56
1:1:783:G:H2'	1:1:784:C:C6	2.41	0.56
1:1:941:C:H2'	1:1:942:U:C6	2.41	0.56
1:1:2625:C:OP1	43:AP:89:LYS:HB2	2.06	0.56
1:1:2854:U:H2'	1:1:2855:U:C6	2.41	0.56
46:B:1258:G:N7	46:B:1416:U:H3'	2.21	0.56
58:N:102:LYS:O	70:Z:13:ARG:NH1	2.38	0.56
59:O:59:LEU:HD21	59:O:61:VAL:HG12	1.88	0.56
65:U:88:ARG:HH21	65:U:92:GLN:HG2	1.71	0.56
79:AR:119:ASN:HD21	79:AR:122:GLN:NE2	2.04	0.56
1:AS:1030:U:H2'	1:AS:1031:A:C8	2.41	0.56
18:BK:29:THR:HA	18:BK:32:THR:HG22	1.88	0.56
55:CV:103:GLN:HE21	55:CV:172:TYR:HE1	1.54	0.56
1:1:1863:A:H2'	1:1:1864:G:C8	2.41	0.55
1:1:2186:A:O2'	1:1:2187:U:H5'	2.06	0.55
6:l:12:VAL:HG22	10:BC:119:GLU:CB	2.33	0.55
46:B:16:G:H2'	46:B:17:C:C6	2.41	0.55
46:B:68:A:H61	53:I:132:ARG:HG2	1.69	0.55
1:AS:1779:U:H2'	1:AS:1780:A:C8	2.40	0.55
36:CC:12:LYS:HD3	36:CC:16:GLN:HB3	1.88	0.55
46:CM:825:U:O2'	46:CM:826:U:H5''	2.06	0.55
47:CN:33:ASN:ND2	47:CN:148:ASP:O	2.39	0.55
78:DS:159:LEU:HD23	78:DS:159:LEU:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:2520:A:H1'	1:1:2521:C:C5	2.41	0.55
16:v:119:TYR:OH	16:v:131:GLU:OE1	2.21	0.55
25:7:4:GLU:HB3	25:7:30:ARG:HD3	1.88	0.55
46:B:1149:G:O2'	46:B:1599:U:O2	2.21	0.55
46:B:1241:A:H5'	46:B:1242:U:H6	1.70	0.55
59:O:59:LEU:HD12	59:O:133:ARG:HH12	1.68	0.55
1:AS:411:U:H2'	1:AS:412:G:H8	1.70	0.55
1:AS:1157:G:O2'	33:BZ:55:ASN:OD1	2.19	0.55
1:AS:2143:G:O6	83:AS:3788:PAR:O62	2.24	0.55
1:AS:2206:A:H2'	1:AS:2207:A:C8	2.41	0.55
1:AS:2441:G:H4'	1:AS:2442:U:C5	2.41	0.55
1:AS:2444:G:N2	1:AS:2468:C:OP1	2.39	0.55
1:AS:3294:U:H5''	5:AX:308:MET:HE2	1.89	0.55
5:AX:218:ILE:HB	5:AX:337:THR:HB	1.89	0.55
7:AZ:143:LYS:HE3	7:AZ:145:PHE:CZ	2.42	0.55
42:CI:2:ARG:HD3	42:CI:5:TRP:CZ3	2.42	0.55
46:CM:1055:A:H4'	74:DO:17:LYS:NZ	2.21	0.55
46:CM:1074:U:O2'	46:CM:1078:A:N1	2.34	0.55
46:CM:1354:U:N3	46:CM:1355:A:N7	2.54	0.55
80:l1:129:SER:HA	80:l1:133:LYS:HB2	1.88	0.55
1:1:93:G:H2'	1:1:94:A:C8	2.41	0.55
1:1:454:G:C5	1:1:476:C:C2	2.95	0.55
1:1:1182:G:N3	21:0:112:ALA:HB1	2.21	0.55
1:1:1949:G:H22	20:z:114:LYS:HE3	1.72	0.55
1:1:2090:U:H4'	1:1:2091:A:O5'	2.06	0.55
2:3:23:A:H2'	2:3:24:A:C8	2.41	0.55
6:l:7:VAL:HG21	6:l:150:PRO:HD2	1.87	0.55
6:l:13:LYS:HE2	10:BC:115:ALA:HB1	1.88	0.55
19:y:96:PHE:CD1	19:y:97:PRO:HD2	2.41	0.55
30:AC:11:ASN:O	30:AC:11:ASN:ND2	2.39	0.55
38:AK:28:HIS:HB3	38:AK:31:LYS:HB2	1.89	0.55
46:B:739:A:H5''	46:B:740:A:H5'	1.87	0.55
50:F:65:ARG:HH21	57:M:93:LYS:NZ	2.03	0.55
59:O:130:SER:C	59:O:132:GLU:H	2.15	0.55
1:AS:290:G:H1'	16:BI:93:LYS:HD2	1.87	0.55
28:BU:3:LYS:NZ	28:BU:30:ASP:OD1	2.31	0.55
46:CM:149:G:O6	71:DL:124:ARG:NH2	2.39	0.55
46:CM:635:C:O2	54:CU:110:ARG:NH2	2.38	0.55
46:CM:733:U:O2'	69:DJ:122:SER:O	2.20	0.55
46:CM:863:G:O2'	60:DA:108:ASP:OD1	2.22	0.55
46:CM:977:A:O2'	46:CM:1772:U:O2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:DD:49:GLU:OE1	63:DD:81:ARG:NH2	2.39	0.55
80:L1:76:ARG:NH2	80:L1:139:SER:O	2.40	0.55
80:l1:26:ARG:HD3	80:l1:26:ARG:N	2.17	0.55
80:l1:189:PHE:O	80:l1:193:LEU:HG	2.06	0.55
1:1:171:G:H2'	1:1:172:C:C6	2.41	0.55
1:1:480:G:H3'	1:1:481:G:C8	2.42	0.55
1:1:1116:A:H2'	1:1:1117:U:H6	1.71	0.55
1:1:1931:G:O2'	46:B:1654:A:O2'	2.25	0.55
23:5:30:GLN:OE1	23:5:62:ASN:HA	2.06	0.55
46:B:822:G:H3'	46:B:823:G:C5'	2.35	0.55
46:B:1341:U:H1'	46:B:1353:G:N2	2.21	0.55
51:G:175:PHE:HE2	51:G:198:ARG:HD2	1.69	0.55
59:O:107:ASP:OD2	59:O:112:ALA:HB3	2.06	0.55
66:V:107:ALA:O	66:V:111:ILE:HG12	2.06	0.55
1:AS:516:U:OP1	6:AY:352:PRO:HD2	2.06	0.55
1:AS:689:A:N1	3:AU:28:C:O2'	2.38	0.55
1:AS:2435:G:H3'	1:AS:2436:A:H5''	1.87	0.55
7:AZ:233:SER:O	7:AZ:235:ASP:N	2.39	0.55
46:CM:17:C:O2'	46:CM:1122:A:N1	2.37	0.55
46:CM:509:A:OP2	56:CW:176:ASN:ND2	2.33	0.55
46:CM:1517:C:O5'	72:DM:96:SER:OG	2.23	0.55
46:CM:1652:U:O2	46:CM:1723:G:N2	2.35	0.55
48:CO:27:LYS:NZ	48:CO:49:ASN:OD1	2.40	0.55
48:CO:180:THR:HG23	48:CO:183:GLN:H	1.71	0.55
61:DB:52:PRO:HB3	61:DB:95:SER:OG	2.07	0.55
1:1:547:U:H2'	1:1:548:G:H8	1.70	0.55
1:1:1268:C:H2'	1:1:1269:A:O4'	2.06	0.55
1:1:1302:G:O6	1:1:2344:C:O2'	2.24	0.55
1:1:3199:G:H1	1:1:3218:U:H3	1.55	0.55
2:3:84:A:H2'	2:3:85:G:C8	2.41	0.55
22:2:52:MET:HA	22:2:95:HIS:CD2	2.42	0.55
42:AO:1:MET:HB3	46:B:1629:G:H5'	1.87	0.55
45:i:82:LYS:HB2	46:B:1164:G:OP1	2.07	0.55
46:B:1398:G:H4'	46:B:1399:U:O5'	2.05	0.55
57:M:81:ASN:HD22	59:O:37:VAL:HG13	1.71	0.55
1:AS:431:A:H2'	1:AS:432:G:C8	2.41	0.55
1:AS:547:U:H2'	1:AS:548:G:C8	2.41	0.55
1:AS:623:A:H2'	1:AS:624:U:C6	2.42	0.55
1:AS:1526:U:O2'	3:AU:114:G:O2'	2.23	0.55
1:AS:1714:G:H2'	1:AS:1715:G:H8	1.70	0.55
1:AS:3256:G:H2'	1:AS:3257:A:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BJ:11:ASP:HB2	17:BJ:118:ARG:HB3	1.88	0.55
46:CM:860:G:N2	46:CM:922:C:O2'	2.38	0.55
46:CM:880:G:O2'	61:DB:33:THR:N	2.25	0.55
46:CM:1248:G:H2'	46:CM:1249:G:O4'	2.06	0.55
52:CS:72:HIS:CD2	52:CS:107:LYS:HD3	2.41	0.55
53:CT:199:GLN:HA	53:CT:202:ARG:HG2	1.88	0.55
53:CT:214:LYS:O	53:CT:218:GLU:N	2.37	0.55
71:DL:60:PHE:CD1	71:DL:71:GLY:HA3	2.41	0.55
71:DL:95:GLY:O	71:DL:96:LEU:C	2.49	0.55
79:DT:118:LYS:HD2	79:DT:159:PRO:HA	1.89	0.55
29:AB:76:ASP:OD1	29:AB:76:ASP:N	2.39	0.55
33:AF:33:TRP:CH2	33:AF:53:GLN:HG2	2.42	0.55
46:B:1719:A:H2'	46:B:1720:C:H6	1.71	0.55
52:H:200:ASN:CB	52:H:208:SER:HB3	2.36	0.55
59:O:73:LYS:HE2	78:h:150:VAL:HG21	1.89	0.55
64:T:99:GLN:OE1	64:T:99:GLN:N	2.39	0.55
70:Z:48:HIS:CD2	70:Z:105:ALA:HB2	2.41	0.55
1:AS:139:U:H2'	1:AS:140:C:C6	2.42	0.55
1:AS:638:U:H2'	1:AS:639:C:C6	2.41	0.55
1:AS:2196:G:H2'	1:AS:2197:A:C8	2.41	0.55
1:AS:2503:G:OP2	4:AW:37:ARG:NH2	2.39	0.55
1:AS:2869:A:H2'	1:AS:2871:C:H5''	1.88	0.55
5:AX:214:MET:HE2	5:AX:281:LYS:HD2	1.87	0.55
8:BA:20:THR:HG22	8:BA:22:LYS:H	1.72	0.55
46:CM:457:G:OP2	71:DL:105:ARG:NH2	2.34	0.55
46:CM:721:C:H4'	46:CM:722:A:OP2	2.06	0.55
46:CM:740:A:O2'	46:CM:741:A:OP1	2.24	0.55
53:CT:208:TYR:CE2	53:CT:212:LEU:HD12	2.41	0.55
65:DF:36:ARG:NH1	65:DF:106:GLU:OE1	2.39	0.55
1:1:629:A:H2'	1:1:630:G:C8	2.41	0.55
1:1:1672:A:H4'	23:5:103:GLN:HE22	1.72	0.55
1:1:1863:A:H2'	1:1:1864:G:H8	1.71	0.55
1:1:2183:U:O2'	1:1:2184:G:OP1	2.25	0.55
1:1:2411:U:H1'	16:v:125:SER:HB3	1.89	0.55
1:1:2428:G:N2	1:1:2475:U:H3	2.04	0.55
1:1:2437:A:H3'	1:1:2438:U:H5''	1.88	0.55
1:1:3260:A:H2'	1:1:3261:A:C8	2.42	0.55
83:1:3968:PAR:HN61	83:1:3968:PAR:H43	1.71	0.55
16:v:73:ARG:HG2	16:v:75:VAL:HG13	1.87	0.55
46:B:12:U:H2'	46:B:13:C:H6	1.72	0.55
49:E:36:LEU:HD21	49:E:51:ILE:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:T:23:LYS:HE2	64:T:34:LEU:HD11	1.88	0.55
1:AS:941:C:H2'	1:AS:942:U:H6	1.70	0.55
1:AS:1376:G:OP1	6:AY:192:LYS:HG3	2.06	0.55
1:AS:2063:C:H3'	1:AS:2064:A:H8	1.72	0.55
1:AS:2464:A:O2'	1:AS:2465:U:H5'	2.07	0.55
1:AS:3039:C:OP2	20:BM:62:ARG:NH2	2.40	0.55
1:AS:3138:U:H2'	1:AS:3139:U:C6	2.42	0.55
1:AS:3162:U:C4	1:AS:3163:U:C4	2.94	0.55
2:AT:27:A:H2'	2:AT:28:C:C6	2.41	0.55
7:AZ:233:SER:O	7:AZ:236:VAL:N	2.40	0.55
24:BQ:23:MET:HE1	24:BQ:78:VAL:HG22	1.87	0.55
48:CO:136:ARG:HG3	48:CO:218:LEU:HD11	1.88	0.55
52:CS:91:GLU:HA	52:CS:94:THR:HG22	1.88	0.55
61:DB:98:ARG:HD2	73:DN:49:ALA:HB2	1.89	0.55
1:1:117:U:O2	1:1:120:A:H5''	2.06	0.55
1:1:1239:G:C2'	1:1:1240:A:H5'	2.36	0.55
1:1:1434:U:H4'	6:l:89:ALA:HB3	1.89	0.55
1:1:2888:U:H5	1:1:2907:U:HO2'	1.54	0.55
46:B:189:G:N7	55:K:143:ARG:NH2	2.48	0.55
46:B:526:U:H2'	46:B:527:A:O4'	2.07	0.55
46:B:1046:A:H2'	46:B:1047:U:C6	2.41	0.55
1:AS:1106:U:H2'	1:AS:1107:U:C6	2.42	0.55
1:AS:1302:G:C6	17:BJ:63:THR:HA	2.41	0.55
1:AS:1611:U:H2'	1:AS:1612:U:H6	1.72	0.55
1:AS:3129:C:H2'	1:AS:3130:C:H6	1.72	0.55
2:AT:3:U:H2'	2:AT:4:U:C6	2.42	0.55
42:CI:10:VAL:O	42:CI:11:ARG:C	2.49	0.55
46:CM:1024:A:O2'	46:CM:1025:G:O5'	2.24	0.55
46:CM:1436:U:H2'	46:CM:1437:C:C6	2.41	0.55
48:CO:23:PRO:HA	48:CO:26:ARG:HE	1.72	0.55
53:CT:135:PRO:HB2	53:CT:141:ILE:HG12	1.88	0.55
73:DN:35:ALA:O	73:DN:37:LYS:HD3	2.07	0.55
80:L1:76:ARG:HH22	80:L1:142:ASP:HB2	1.72	0.55
1:1:883:G:H2'	1:1:884:A:C8	2.41	0.55
1:1:1057:A:O2'	22:2:102:ARG:NH2	2.40	0.55
1:1:1218:G:H1'	1:1:1282:A:H62	1.72	0.55
1:1:1250:C:H2'	1:1:1251:C:H6	1.72	0.55
1:1:2391:A:H2'	1:1:2392:G:H8	1.72	0.55
1:1:2405:U:H2'	1:1:2406:U:C6	2.42	0.55
1:1:2740:U:O2	43:AP:82:GLN:NE2	2.37	0.55
3:4:9:A:H2'	3:4:10:A:H8	1.68	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:4:60:U:OP1	26:8:54:TYR:OH	2.19	0.55
9:o:39:ARG:HA	9:o:42:ILE:HG12	1.88	0.55
33:AF:60:SER:HB2	33:AF:65:LYS:HG3	1.87	0.55
46:B:446:C:OP1	51:G:29:PRO:HD3	2.07	0.55
46:B:932:U:H2'	46:B:933:A:H8	1.72	0.55
46:B:1668:A:N6	46:B:1707:G:O2'	2.40	0.55
52:H:122:HIS:O	52:H:126:GLU:HA	2.07	0.55
53:I:6:SER:O	53:I:113:ILE:HG13	2.06	0.55
61:Q:73:ALA:HB2	61:Q:106:ARG:HB2	1.88	0.55
75:e:8:THR:HG23	75:e:56:LEU:HB2	1.87	0.55
1:AS:2316:C:H1'	24:BQ:49:LEU:HD12	1.89	0.55
1:AS:3035:C:H2'	1:AS:3036:U:C6	2.42	0.55
1:AS:3207:G:O6	5:AX:150:ARG:NH2	2.40	0.55
13:BF:133:ARG:NH2	13:BF:153:LYS:O	2.40	0.55
31:BX:55:LYS:O	31:BX:59:GLU:HG2	2.07	0.55
46:CM:151:G:H2'	46:CM:152:G:C8	2.42	0.55
46:CM:1238:U:H2'	46:CM:1239:U:H6	1.72	0.55
62:DC:53:PRO:HB3	62:DC:83:MET:SD	2.47	0.55
62:DC:118:GLU:O	65:DF:122:HIS:N	2.38	0.55
80:l:14:HIS:O	80:l:18:GLU:N	2.39	0.55
1:1:172:C:O2'	1:1:173:C:OP1	2.25	0.55
1:1:968:A:OP1	19:y:12:ARG:NH2	2.39	0.55
1:1:1011:C:H2'	1:1:1012:U:OP1	2.07	0.55
1:1:1225:G:H2'	1:1:1226:G:C8	2.42	0.55
1:1:1807:G:H2'	1:1:1808:G:O4'	2.07	0.55
6:l:220:LEU:HD22	6:l:226:VAL:HG11	1.89	0.55
46:B:1193:A:H4'	46:B:1255:G:P	2.46	0.55
48:D:111:ARG:HB3	73:c:68:TYR:HB2	1.87	0.55
51:G:252:GLU:O	51:G:256:ARG:HG3	2.07	0.55
61:Q:65:LYS:O	61:Q:69:VAL:HG23	2.06	0.55
1:AS:842:A:N6	46:CM:956:A:N1	2.55	0.55
1:AS:1937:C:O2'	1:AS:3309:A:N6	2.40	0.55
6:AY:85:ARG:HG3	6:AY:85:ARG:O	2.07	0.55
21:BN:5:ASN:HB2	21:BN:7:TYR:CE1	2.42	0.55
46:CM:738:A:OP2	51:CR:187:ARG:HD3	2.07	0.55
46:CM:1354:U:C2	46:CM:1355:A:N7	2.75	0.55
53:CT:214:LYS:HE3	53:CT:215:ARG:HD3	1.88	0.55
54:CU:8:GLU:OE1	54:CU:9:ASN:ND2	2.35	0.55
64:DE:20:PHE:O	64:DE:24:LEU:HD12	2.07	0.55
65:DF:114:GLU:OE1	65:DF:114:GLU:N	2.40	0.55
1:1:1715:G:OP1	20:z:110:ARG:NH1	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1830:U:OP2	40:AM:10:LYS:NZ	2.35	0.54
1:1:2210:A:H2'	1:1:2211:A:C8	2.42	0.54
1:1:2370:C:O2'	5:k:266:ARG:NH2	2.40	0.54
18:x:11:PRO:O	18:x:105:LYS:NZ	2.38	0.54
46:B:71:A:H2'	46:B:72:A:C8	2.43	0.54
46:B:1301:G:O2'	64:T:10:LYS:NZ	2.38	0.54
46:B:1656:U:H2'	46:B:1657:G:O4'	2.06	0.54
55:K:191:GLU:HB3	58:N:23:PRO:HG3	1.88	0.54
1:AS:3153:A:H2'	1:AS:3154:A:C8	2.42	0.54
3:AU:37:A:H5''	3:AU:39:G:O4'	2.08	0.54
6:AY:60:GLN:O	38:CE:52:LYS:NZ	2.21	0.54
31:BX:53:LEU:HD13	35:CB:91[B]:ARG:HD3	1.88	0.54
46:CM:1409:U:OP1	50:CQ:152:LYS:NZ	2.39	0.54
62:DC:10:ARG:HE	62:DC:13:LYS:HE3	1.72	0.54
78:DS:144:VAL:HA	78:DS:147:TYR:CD2	2.38	0.54
1:1:1187:U:OP2	17:w:50:ARG:HD2	2.07	0.54
1:1:2672:G:H5''	22:2:17:ARG:HG2	1.88	0.54
44:AQ:49:ARG:HB2	44:AQ:55:TRP:CZ3	2.42	0.54
45:i:99:SER:OG	45:i:102:LYS:HD2	2.07	0.54
46:B:871:U:C2	46:B:872:A:C8	2.95	0.54
46:B:904:A:H2'	46:B:905:C:C6	2.42	0.54
61:Q:52:PRO:HB3	61:Q:95:SER:OG	2.07	0.54
1:AS:119:G:H21	1:AS:120:A:H62	1.53	0.54
1:AS:1148:G:N2	1:AS:1148:G:OP2	2.39	0.54
1:AS:2655:U:H2'	1:AS:2656:C:H6	1.68	0.54
1:AS:2832:U:O2	1:AS:2910:G:H4'	2.07	0.54
1:AS:2958:U:H2'	1:AS:2959:A:H8	1.73	0.54
3:AU:13:A:O2'	18:BK:121:HIS:O	2.23	0.54
5:AX:260:VAL:HG11	5:AX:266:ARG:NH1	2.21	0.54
20:BM:173:ARG:HH22	46:CM:839:U:H5	1.56	0.54
27:BT:47:SER:O	27:BT:122:LYS:HE2	2.08	0.54
42:CI:2:ARG:C	42:CI:4:LYS:H	2.15	0.54
46:CM:191:U:H4'	46:CM:192:U:H5'	1.89	0.54
46:CM:715:G:N2	46:CM:715:G:OP2	2.41	0.54
47:CN:30:GLN:HG3	47:CN:32:HIS:H	1.72	0.54
59:CZ:67:THR:O	59:CZ:68:GLU:HG3	2.08	0.54
1:1:581:A:H5''	34:AG:106:ASN:ND2	2.21	0.54
3:4:87:G:OP2	36:AI:5:LYS:HE2	2.07	0.54
33:AF:106:ARG:NH2	33:AF:122:ASN:O	2.39	0.54
37:AJ:97:ARG:HB2	80:l:215:ARG:HH22	1.71	0.54
43:AP:8:ARG:HG2	43:AP:10:THR:HG23	1.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:1452:G:O2'	46:B:1589:C:OP1	2.25	0.54
53:I:199:GLN:HG2	53:I:202:ARG:NH1	2.22	0.54
62:R:60:LEU:HD22	62:R:92:SER:OG	2.07	0.54
75:e:32:PHE:HZ	75:e:59:SER:HG	1.55	0.54
75:e:35:ASP:O	75:e:37:SER:N	2.40	0.54
1:AS:1870:A:OP2	20:BM:20:ARG:NH1	2.40	0.54
1:AS:3290:G:O3'	32:BY:102:GLY:HA2	2.05	0.54
2:AT:4:U:H2'	2:AT:5:G:H8	1.72	0.54
5:AX:58:ARG:HD2	5:AX:354:VAL:HG13	1.89	0.54
11:BD:129:HIS:H	11:BD:157:ASN:HD21	1.55	0.54
23:BP:25:ASN:HB3	23:BP:27:VAL:HG23	1.89	0.54
46:CM:697:U:O5'	46:CM:697:U:H6	1.90	0.54
47:CN:205:ARG:HD2	47:CN:209:GLU:HG3	1.89	0.54
1:1:925:A:H2'	1:1:926:U:C6	2.42	0.54
45:i:93:ARG:HG2	46:B:1259:C:C5	2.42	0.54
46:B:1129:U:H2'	46:B:1130:U:C6	2.42	0.54
46:B:1245:U:H2'	46:B:1246:G:C8	2.42	0.54
47:C:79:ARG:O	47:C:83:GLN:HG3	2.08	0.54
50:F:77:ARG:HB2	57:M:22:VAL:HG11	1.89	0.54
50:F:168:PHE:CE2	50:F:193:PRO:HB3	2.42	0.54
59:O:133:ARG:HH21	59:O:136:LEU:HD22	1.72	0.54
1:AS:388:G:C5	83:AS:3789:PAR:H222	2.43	0.54
1:AS:656:G:N2	6:AY:94:MET:HB2	2.22	0.54
1:AS:2441:G:H4'	1:AS:2442:U:C6	2.42	0.54
1:AS:3164:U:OP1	1:AS:3165:U:H1'	2.07	0.54
35:CB:8:ARG:HD2	35:CB:32:ALA:O	2.08	0.54
46:CM:1335:U:H2'	46:CM:1336:G:C8	2.42	0.54
80:l:29:LEU:HD13	80:l:173:ASP:HB2	1.89	0.54
1:1:2650:A:H8	45:i:55:LYS:HG2	1.72	0.54
1:1:2869:A:H2'	1:1:2871:C:H5''	1.88	0.54
6:l:4:ARG:NH1	6:l:23:LEU:O	2.41	0.54
12:r:50:ILE:HG12	12:r:167:ILE:HG12	1.89	0.54
45:i:91:HIS:O	46:B:1259:C:N4	2.37	0.54
46:B:217:A:N7	46:B:218:A:C8	2.76	0.54
46:B:265:U:H2'	46:B:266:C:H6	1.72	0.54
46:B:784:U:H2'	46:B:785:G:C8	2.40	0.54
46:B:1491:G:H5'	66:V:97:SER:HA	1.89	0.54
83:B:1970:PAR:H13	83:B:1970:PAR:N24	2.16	0.54
55:K:2:GLY:O	55:K:24:LYS:NZ	2.27	0.54
67:W:81:TYR:HB3	76:f:52:PHE:HB3	1.89	0.54
1:AS:504:G:OP1	85:AS:3802:HOH:O	2.18	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:1115:C:H2'	1:AS:1116:A:C8	2.42	0.54
1:AS:1762:G:O2'	1:AS:1763:C:OP1	2.25	0.54
1:AS:1949:G:H1	1:AS:2070:A:H2'	1.73	0.54
1:AS:2158:A:H2'	1:AS:2159:C:C6	2.43	0.54
1:AS:2186:A:O2'	1:AS:2187:U:H5'	2.07	0.54
1:AS:3088:G:H4'	11:BD:69:ARG:NH1	2.22	0.54
2:AT:6:C:OP1	7:AZ:54:ARG:NE	2.37	0.54
18:BK:40:LYS:HD2	18:BK:113:VAL:HG22	1.89	0.54
39:CF:46:ARG:NH1	39:CF:47:GLY:O	2.41	0.54
46:CM:704:A:O2'	46:CM:705:G:C8	2.60	0.54
46:CM:1774:C:OP1	61:DB:122:ARG:NH2	2.40	0.54
54:CU:59:PRO:HG2	54:CU:62:SER:HB3	1.88	0.54
65:DF:75:ASN:O	65:DF:78:ASN:O	2.24	0.54
1:1:448:U:H2'	1:1:481:G:H22	1.70	0.54
1:1:1922:C:H3'	44:AQ:7:LYS:HG2	1.90	0.54
1:1:3318:G:OP1	55:K:77:ARG:NH2	2.40	0.54
2:3:4:U:H2'	2:3:5:G:H8	1.73	0.54
36:AI:63:ARG:O	36:AI:67:ARG:HG3	2.08	0.54
46:B:336:C:H5''	55:K:10:LYS:HD2	1.90	0.54
46:B:1131:G:H1'	49:E:84:GLN:HG2	1.88	0.54
52:H:158:GLN:HG2	75:e:66:LEU:HD21	1.88	0.54
55:K:56:ARG:NH1	55:K:180:GLY:O	2.40	0.54
63:S:45:PHE:HA	63:S:48:TYR:HB2	1.90	0.54
70:Z:107:PHE:CD2	70:Z:114:LYS:HB3	2.43	0.54
70:Z:107:PHE:CD2	70:Z:114:LYS:HD3	2.42	0.54
1:AS:951:U:H2'	1:AS:952:U:C6	2.42	0.54
1:AS:1335:C:OP1	33:BZ:62:LYS:HB2	2.08	0.54
3:AU:157:U:O2'	3:AU:158:U:O4'	2.17	0.54
23:BP:107:LYS:HG2	23:BP:108:LEU:N	2.22	0.54
46:CM:1064:U:H2'	46:CM:1065:U:C6	2.43	0.54
46:CM:1192:C:N3	46:CM:1442:C:H5	2.05	0.54
47:CN:49:ASN:ND2	47:CN:52:LYS:HG3	2.23	0.54
49:CP:177:PRO:HD3	56:CW:17:ARG:HH22	1.72	0.54
73:DN:74:CYS:SG	73:DN:77:CYS:HB2	2.46	0.54
79:DT:5:GLU:HB3	79:DT:248:TRP:CH2	2.41	0.54
1:1:671:U:H2'	1:1:672:G:C8	2.43	0.54
1:1:1591:U:O2'	1:1:1602:U:O2	2.25	0.54
5:k:92:TYR:HB2	5:k:157:VAL:HB	1.89	0.54
15:u:20:LEU:CD2	15:u:23:ASN:CA	2.85	0.54
32:AE:43:MET:HE3	32:AE:76:ARG:HB2	1.90	0.54
36:AI:1:MET:HG2	36:AI:53:ARG:HH22	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:214:U:H4'	46:B:815:U:H4'	1.90	0.54
46:B:348:U:OP1	58:N:104:HIS:HE1	1.90	0.54
46:B:1341:U:H2'	46:B:1342:A:H8	1.73	0.54
46:B:1380:G:OP1	79:AR:281:ALA:N	2.41	0.54
54:J:40:LYS:HG3	54:J:59:PRO:HD3	1.90	0.54
63:S:39:GLN:O	63:S:40:PRO:C	2.51	0.54
1:AS:1206:U:H5'	11:BD:62:ARG:HD3	1.88	0.54
1:AS:2740:U:H2'	1:AS:2741:A:H8	1.73	0.54
1:AS:3164:U:H4'	1:AS:3165:U:O4'	2.08	0.54
5:AX:143:GLN:O	5:AX:147:GLU:HG2	2.07	0.54
36:CC:105:ARG:HG3	36:CC:108:ARG:NH2	2.23	0.54
46:CM:1659:G:H2'	46:CM:1660:G:H8	1.73	0.54
53:CT:180:THR:HG23	53:CT:183:THR:H	1.73	0.54
1:1:624:U:H2'	1:1:625:C:H6	1.72	0.54
1:1:2342:G:H22	1:1:2374:G:H1'	1.73	0.54
46:B:30:G:H2'	46:B:31:C:C6	2.43	0.54
46:B:653:G:H4'	46:B:654:G:H5'	1.89	0.54
46:B:1024:A:O2'	46:B:1025:G:O5'	2.22	0.54
49:E:53:LEU:HA	68:X:12:TYR:HE1	1.73	0.54
57:M:5:LYS:NZ	59:O:38:HIS:CD2	2.75	0.54
79:AR:272:LYS:HB2	79:AR:274:GLU:OE2	2.08	0.54
1:AS:437:G:O2'	1:AS:438:A:OP1	2.24	0.54
1:AS:1692:A:N6	1:AS:1744:G:H2'	2.22	0.54
1:AS:2483:U:H2'	1:AS:2484:U:H6	1.71	0.54
1:AS:3259:A:OP1	5:AX:128:LYS:NZ	2.40	0.54
1:AS:3287:A:H2'	1:AS:3288:A:C8	2.43	0.54
2:AT:39:U:C6	13:BF:46:VAL:HG11	2.43	0.54
6:AY:359:GLU:OE2	6:AY:363:ASN:ND2	2.41	0.54
12:BE:54:SER:HB2	12:BE:135:ILE:HD11	1.88	0.54
13:BF:85:LYS:HZ2	62:DC:9:LYS:HD3	1.73	0.54
46:CM:784:U:H2'	46:CM:785:G:C8	2.42	0.54
46:CM:1298:A:N3	46:CM:1300:U:H5'	2.23	0.54
48:CO:87:ARG:HB2	48:CO:101:HIS:HB2	1.89	0.54
49:CP:136:ARG:HB3	49:CP:146:PRO:HB2	1.90	0.54
79:DT:64:GLY:O	79:DT:91:ARG:NH1	2.41	0.54
80:L1:10:ARG:O	80:L1:14:HIS:ND1	2.41	0.54
80:11:92:LYS:HG3	80:11:93:LEU:H	1.73	0.54
1:1:1918:A:H3'	1:1:1919:C:H6	1.71	0.54
82:1:3406:3K5:H15	82:1:3406:3K5:C8	2.38	0.54
2:3:40:C:H5'	13:s:43:GLN:HG2	1.89	0.54
46:B:1582:U:H5'	46:B:1583:C:OP2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:J:109:PRO:HG2	54:J:112:ARG:HD3	1.90	0.54
79:AR:73:THR:OG1	79:AR:114:VAL:O	2.26	0.54
1:AS:429:U:H2'	1:AS:430:G:C8	2.41	0.54
1:AS:437:G:O2'	1:AS:438:A:H5''	2.08	0.54
1:AS:446:U:H2'	1:AS:447:U:C4	2.43	0.54
1:AS:1662:G:H1	1:AS:1779:U:H3	1.56	0.54
1:AS:1911:A:H2'	1:AS:1912:U:C6	2.42	0.54
1:AS:2628:A:C8	1:AS:2630:G:C8	2.96	0.54
1:AS:2650:A:O2'	45:CL:50:LYS:O	2.16	0.54
4:AW:84:THR:HG23	44:CK:63:THR:O	2.08	0.54
7:AZ:178:ASN:HA	7:AZ:183:TRP:CD2	2.43	0.54
23:BP:29:ASP:O	23:BP:32:SER:N	2.36	0.54
46:CM:518:A:H2'	46:CM:519:A:H8	1.72	0.54
46:CM:1072:A:H2'	46:CM:1073:A:C8	2.43	0.54
46:CM:1393:U:H2'	46:CM:1394:G:C8	2.43	0.54
50:CQ:143:LEU:HB2	45:CL:107:TRP:CE2	2.43	0.54
51:CR:152:PRO:HD2	53:CT:211:LEU:HD22	1.89	0.54
56:CW:27:GLU:OE1	56:CW:39:LYS:NZ	2.40	0.54
56:CW:70:LEU:O	56:CW:74:ASN:HB2	2.07	0.54
61:DB:7:GLN:HB2	61:DB:72:THR:OG1	2.08	0.54
80:11:49:PHE:CZ	80:11:159:LEU:HB2	2.43	0.54
1:1:951:U:H2'	1:1:952:U:C6	2.43	0.54
1:1:1568:U:C4	1:1:1569:C:H1'	2.44	0.54
1:1:2651:A:H1'	45:i:50:LYS:HE2	1.88	0.54
13:s:109:HIS:HD2	13:s:123:TYR:H	1.56	0.54
45:i:80:ALA:O	45:i:81:THR:OG1	2.24	0.54
46:B:15:U:H2'	46:B:16:G:O4'	2.08	0.54
46:B:638:U:H2'	46:B:639:G:O4'	2.08	0.54
46:B:914:A:OP2	46:B:916:C:N4	2.40	0.54
46:B:1455:A:H2'	46:B:1456:C:C6	2.43	0.54
1:AS:352:A:N7	1:AS:367:A:N6	2.56	0.54
1:AS:531:G:N2	1:AS:552:G:O2'	2.38	0.54
1:AS:1020:G:H4'	1:AS:1020:G:OP1	2.07	0.54
1:AS:1275:C:H2'	1:AS:1276:C:C6	2.42	0.54
1:AS:2201:A:H2'	1:AS:2202:A:C8	2.43	0.54
7:AZ:119:TYR:OH	7:AZ:139:PRO:O	2.25	0.54
16:BI:94:TYR:HD1	16:BI:95:GLN:H	1.56	0.54
22:BO:112:ASN:HB3	22:BO:128:LEU:HD13	1.89	0.54
23:BP:42:LYS:HE3	23:BP:45:GLY:O	2.08	0.54
46:CM:335:G:O2'	55:CV:10:LYS:NZ	2.41	0.54
46:CM:583:A:H2'	46:CM:584:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:847:A:O2'	46:CM:948:A:N1	2.41	0.54
46:CM:1635:A:H2'	46:CM:1636:C:H6	1.72	0.54
47:CN:93:THR:HA	47:CN:185:ARG:HH12	1.73	0.54
50:CQ:128:MET:HE1	50:CQ:134:GLY:HA2	1.90	0.54
79:DT:21:THR:OG1	79:DT:69:VAL:O	2.24	0.54
1:1:252:U:H5'	1:1:253:A:H8	1.73	0.53
1:1:680:U:H5''	1:1:681:U:H5	1.72	0.53
1:1:2420:G:H1	1:1:2483:U:H3	1.55	0.53
1:1:2740:U:H2'	1:1:2741:A:H8	1.74	0.53
1:1:2958:U:H2'	1:1:2959:A:H8	1.72	0.53
45:i:52:LYS:C	45:i:54:LYS:H	2.15	0.53
46:B:1648:U:H2'	46:B:1649:G:H8	1.73	0.53
47:C:179:ARG:HH21	47:C:183:ARG:HH12	1.54	0.53
54:J:6:LEU:HG	54:J:38:GLN:HB3	1.89	0.53
59:O:54:LYS:HE3	59:O:56:GLU:HB2	1.90	0.53
60:P:20:ARG:NH2	69:Y:56:HIS:HB3	2.23	0.53
65:U:4:VAL:HG22	72:b:82:GLN:OE1	2.07	0.53
1:AS:1493:C:H2'	1:AS:1494:A:H8	1.73	0.53
1:AS:1504:C:O2'	1:AS:2331:G:O2'	2.23	0.53
1:AS:1678:U:O2	23:BP:85:LYS:HG2	2.07	0.53
1:AS:2933:G:H2'	1:AS:2934:U:C6	2.43	0.53
5:AX:106:TRP:HB2	5:AX:133:TYR:CE1	2.43	0.53
5:AX:217:VAL:HG11	5:AX:328:ILE:HB	1.90	0.53
7:AZ:143:LYS:HE3	7:AZ:145:PHE:HZ	1.73	0.53
36:CC:62:GLN:O	36:CC:66:VAL:HG23	2.07	0.53
46:CM:220:A:C8	46:CM:221:U:H5	2.26	0.53
46:CM:1245:U:H2'	46:CM:1246:G:C8	2.43	0.53
46:CM:1609:G:H2'	46:CM:1610:C:C6	2.43	0.53
67:DH:29:LYS:HZ3	67:DH:110:GLY:HA3	1.72	0.53
80:L1:194:LEU:HD13	80:L1:200:ASN:HB2	1.89	0.53
45:CL:62:ALA:C	45:CL:64:LEU:H	2.15	0.53
1:1:547:U:H2'	1:1:548:G:C8	2.43	0.53
1:1:1762:G:O2'	1:1:1763:C:OP1	2.25	0.53
1:1:2084:A:H2'	1:1:2085:A:C8	2.43	0.53
7:m:155:THR:HG22	7:m:179:ARG:HD3	1.88	0.53
25:7:13:ILE:HD12	25:7:30:ARG:HB3	1.89	0.53
45:i:64:LEU:O	45:i:67:LYS:HB2	2.08	0.53
46:B:1192:C:N3	46:B:1442:C:H5	2.06	0.53
46:B:1423:U:O2'	50:F:182:VAL:HG23	2.08	0.53
46:B:1648:U:H2'	46:B:1649:G:C8	2.42	0.53
52:H:81:ARG:HH11	52:H:82:PHE:HE2	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:h:180:ARG:HA	78:h:190:LEU:O	2.09	0.53
79:AR:214:ASP:OD1	79:AR:214:ASP:N	2.41	0.53
1:AS:2210:A:N3	1:AS:2406:U:O2'	2.40	0.53
2:AT:77:G:H3'	21:BN:46:GLN:O	2.08	0.53
7:AZ:125:VAL:HG12	7:AZ:127:GLY:H	1.74	0.53
44:CK:33:GLN:HG3	44:CK:34:HIS:CD2	2.42	0.53
46:CM:151:G:H2'	46:CM:152:G:H8	1.72	0.53
46:CM:816:U:H2'	46:CM:817:U:C6	2.42	0.53
46:CM:1649:G:H2'	46:CM:1650:G:C8	2.42	0.53
59:CZ:30:VAL:HG21	59:CZ:131:ASP:HB3	1.90	0.53
65:DF:88:ARG:NH2	65:DF:91:ASP:OD1	2.42	0.53
65:DF:88:ARG:HH21	65:DF:92:GLN:H	1.55	0.53
74:DO:36:LYS:HB2	74:DO:78:SER:OG	2.09	0.53
1:1:1023:A:C6	1:1:1025:G:H1'	2.43	0.53
1:1:1176:A:C4	1:1:1178:G:C8	2.96	0.53
1:1:2138:G:H2'	1:1:2139:G:H8	1.73	0.53
1:1:3338:U:H5''	32:AE:68:ASN:ND2	2.24	0.53
1:1:3343:C:H4'	5:k:313:ARG:HG3	1.90	0.53
6:l:300:VAL:HB	19:y:39:ARG:HG2	1.89	0.53
35:AH:57:LEU:HB2	35:AH:62:TYR:CE1	2.44	0.53
46:B:1026:G:H2'	46:B:1027:G:H8	1.72	0.53
46:B:1529:G:H5''	66:V:87:GLY:C	2.33	0.53
62:R:10:ARG:NE	62:R:13:LYS:HG2	2.22	0.53
71:a:123:ARG:HG2	71:a:127:LYS:HE2	1.89	0.53
1:AS:730:A:H4'	1:AS:730:A:OP1	2.07	0.53
1:AS:878:A:OP1	1:AS:1843:A:N6	2.37	0.53
1:AS:3244:A:O2'	1:AS:3245:A:H5'	2.09	0.53
18:BK:32:THR:HG21	18:BK:87:SER:HB3	1.90	0.53
46:CM:872:A:H1'	61:DB:117:PRO:HB3	1.90	0.53
61:DB:55:ALA:HB1	61:DB:96:ALA:HB2	1.91	0.53
61:DB:76:ILE:HD12	61:DB:110:ILE:HG13	1.91	0.53
69:DJ:8:ALA:HB2	69:DJ:74:VAL:HG21	1.90	0.53
74:DO:13:ALA:O	74:DO:17:LYS:HG3	2.09	0.53
80:l1:68:PHE:H	80:l1:111:ILE:HG12	1.73	0.53
1:1:624:U:H2'	1:1:625:C:C6	2.42	0.53
1:1:1571:G:H2'	1:1:1572:G:C8	2.43	0.53
1:1:2206:A:H2'	1:1:2207:A:C8	2.43	0.53
1:1:3225:G:OP2	15:u:121:ARG:NH1	2.41	0.53
44:AQ:72:SER:OG	44:AQ:80:ARG:NH2	2.41	0.53
46:B:219:A:H3'	46:B:818:U:O2	2.07	0.53
46:B:220:A:H2'	46:B:221:U:C2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:1337:C:H2'	46:B:1338:U:O4'	2.08	0.53
47:C:30:GLN:HE21	47:C:33:ASN:ND2	2.06	0.53
63:S:34:PRO:HB2	63:S:36:THR:HG22	1.90	0.53
1:AS:729:C:H3'	1:AS:730:A:H5''	1.89	0.53
1:AS:1303:G:OP1	17:BJ:60:ARG:NH2	2.41	0.53
1:AS:1576:A:H5''	1:AS:1577:C:C5	2.42	0.53
1:AS:1714:G:H2'	1:AS:1715:G:C8	2.44	0.53
1:AS:2500:G:O6	4:AW:72:ARG:NH2	2.41	0.53
1:AS:3123:U:P	5:AX:132:LYS:HZ3	2.31	0.53
1:AS:3199:G:H2'	1:AS:3200:C:H6	1.74	0.53
1:AS:3240:U:OP2	34:CA:66:VAL:HG21	2.09	0.53
26:BS:75:LYS:HB3	26:BS:81:THR:HB	1.90	0.53
46:CM:212:G:N2	46:CM:250:U:O4	2.42	0.53
46:CM:222:C:N3	46:CM:823:G:N2	2.57	0.53
46:CM:676:G:N3	46:CM:677:G:N2	2.55	0.53
46:CM:746:G:H4'	56:CW:72:GLU:OE1	2.08	0.53
46:CM:1066:A:O2'	46:CM:1068:G:N7	2.37	0.53
46:CM:1219:A:OP1	76:DQ:2:ALA:N	2.42	0.53
79:DT:90:LEU:HB2	79:DT:104:PHE:CD2	2.43	0.53
1:1:79:G:H2'	1:1:80:C:H6	1.74	0.53
1:1:1141:G:H5'	33:AF:47:PHE:CE1	2.43	0.53
1:1:2408:A:H2'	1:1:2409:C:C6	2.43	0.53
1:1:2978:A:H2'	1:1:2979:U:O4'	2.08	0.53
1:1:3088:G:H4'	11:q:69:ARG:NH1	2.24	0.53
18:x:125:GLN:HB2	18:x:141:SER:HB2	1.89	0.53
46:B:1012:A:OP1	46:B:1776:G:O2'	2.20	0.53
46:B:1265:C:H2'	46:B:1266:G:C8	2.44	0.53
46:B:1276:G:N2	46:B:1309:G:H22	2.07	0.53
46:B:1344:C:OP1	66:V:130:ARG:HG3	2.08	0.53
47:C:11:PRO:HB3	64:T:117:ILE:HD11	1.90	0.53
50:F:124:LEU:HD11	50:F:153:TYR:HB3	1.90	0.53
50:F:171:ILE:HG12	50:F:188:LYS:HG3	1.91	0.53
52:H:58:LEU:HD12	52:H:138:VAL:HG12	1.89	0.53
75:e:60:GLU:OE1	75:e:60:GLU:N	2.37	0.53
79:AR:38:ARG:HA	79:AR:68:ILE:HG23	1.90	0.53
1:AS:18:U:H3	3:AU:140:G:H1	1.56	0.53
1:AS:184:C:H5'	27:BT:121:ARG:HD2	1.91	0.53
1:AS:925:A:H2'	1:AS:926:U:C6	2.44	0.53
1:AS:2206:A:H2'	1:AS:2207:A:H8	1.74	0.53
1:AS:2645:A:O2'	13:BF:126:ASP:OD1	2.14	0.53
1:AS:3323:U:H2'	1:AS:3324:A:C8	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AZ:164:LYS:HB2	7:AZ:180:PHE:CE1	2.44	0.53
23:BP:33:TYR:O	23:BP:37:LEU:HD23	2.07	0.53
29:BV:47:LYS:HG2	29:BV:48:TYR:CD1	2.44	0.53
42:CI:13:LEU:O	42:CI:14:LYS:C	2.51	0.53
46:CM:521:G:H5'	71:DL:60:PHE:O	2.09	0.53
46:CM:904:A:H2'	46:CM:905:C:H6	1.73	0.53
54:CU:122:LEU:HD11	54:CU:169:TYR:CE1	2.43	0.53
57:CX:76:LEU:O	57:CX:80:LEU:HB2	2.08	0.53
1:1:745:C:H5''	30:AC:32:LEU:HD12	1.90	0.53
1:1:1115:C:H2'	1:1:1116:A:C8	2.44	0.53
1:1:3254:G:H2'	1:1:3255:G:C8	2.43	0.53
32:AE:43:MET:CE	32:AE:76:ARG:HB2	2.39	0.53
45:i:86:LYS:HG3	45:i:93:ARG:HH22	1.74	0.53
46:B:652:C:H5''	46:B:653:G:H8	1.74	0.53
49:E:220:LEU:HD23	69:Y:68:ARG:HA	1.90	0.53
51:G:48:LEU:HD12	51:G:61:VAL:HG23	1.90	0.53
62:R:52:LYS:HB3	62:R:80:LEU:HD13	1.90	0.53
1:AS:46:C:H5''	14:BG:16:LYS:HG2	1.91	0.53
1:AS:545:G:O5'	1:AS:546:C:H4'	2.09	0.53
1:AS:925:A:O2'	38:CE:49:TRP:O	2.26	0.53
1:AS:1214:U:H3	1:AS:1283:A:H61	1.54	0.53
1:AS:1759:U:H5'	1:AS:1760:U:P	2.49	0.53
1:AS:2587:G:H2'	1:AS:2588:C:C6	2.44	0.53
46:CM:338:U:H2'	46:CM:339:A:H8	1.73	0.53
46:CM:1593:C:H2'	46:CM:1594:G:C8	2.44	0.53
54:CU:25:GLU:HG3	54:CU:35:ARG:HH12	1.74	0.53
57:CX:14:TYR:HD1	57:CX:21:VAL:HG22	1.74	0.53
80:L1:181:ASN:O	80:L1:185:MET:HG3	2.09	0.53
1:1:208:A:H4'	1:1:210:A:C8	2.44	0.53
1:1:411:U:H2'	1:1:412:G:C8	2.44	0.53
1:1:451:C:H2'	1:1:452:A:C8	2.43	0.53
1:1:1651:G:H5''	35:AH:58:ARG:NH1	2.24	0.53
1:1:3308:G:H21	1:1:3327:A:H2	1.56	0.53
27:9:11:SER:HB3	27:9:14:LYS:HB2	1.90	0.53
44:AQ:28:LYS:O	44:AQ:32:GLN:HG3	2.08	0.53
46:B:736:G:H2'	46:B:737:A:H8	1.74	0.53
46:B:870:G:H2'	46:B:871:U:C6	2.43	0.53
53:I:199:GLN:HG2	53:I:202:ARG:HH12	1.73	0.53
56:L:65:LYS:HA	56:L:70:LEU:HD11	1.90	0.53
63:S:9:PHE:CE1	63:S:11:LYS:HE3	2.44	0.53
67:W:17:GLN:O	67:W:95:PRO:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Z:107:PHE:HE2	70:Z:114:LYS:HD3	1.70	0.53
1:AS:1265:U:H5'	1:AS:1266:A:OP2	2.09	0.53
1:AS:1580:U:H2'	1:AS:1581:C:H6	1.74	0.53
1:AS:2734:A:H2'	1:AS:2735:U:C6	2.44	0.53
7:AZ:150:LEU:HD12	13:BF:143:ARG:HG3	1.91	0.53
26:BS:96:LYS:HG3	26:BS:107:ALA:HB3	1.91	0.53
42:CI:8:LYS:O	42:CI:9:ARG:C	2.52	0.53
46:CM:267:G:H2'	46:CM:268:C:C6	2.44	0.53
46:CM:477:C:OP1	56:CW:121:SER:OG	2.17	0.53
46:CM:638:U:H2'	46:CM:639:G:O4'	2.08	0.53
46:CM:1191:U:OP2	46:CM:1192:C:O2'	2.19	0.53
48:CO:97:LEU:HD22	48:CO:232:HIS:CD2	2.43	0.53
80:l1:70:ASP:HA	80:l1:74:VAL:HG12	1.91	0.53
1:1:1181:C:OP1	15:u:36:LYS:HD3	2.09	0.53
1:1:2221:A:H3'	4:j:244:GLY:HA2	1.91	0.53
1:1:2469:A:N3	80:l1:209:THR:HA	2.22	0.53
4:j:29:LEU:HD22	4:j:101:ILE:HD13	1.91	0.53
15:u:19:VAL:HG12	15:u:57:LEU:HA	1.90	0.53
52:H:42:LEU:HB3	52:H:46:TRP:HB2	1.90	0.53
53:I:196:LYS:O	53:I:200:GLN:HG2	2.08	0.53
59:O:132:GLU:HG3	59:O:133:ARG:H	1.74	0.53
79:AR:47:LEU:HD12	79:AR:55:TYR:CD1	2.44	0.53
1:AS:394:G:N1	1:AS:397:A:OP2	2.42	0.53
1:AS:607:G:C8	6:AY:311:SER:HA	2.44	0.53
1:AS:1134:U:O4	30:BW:10:HIS:NE2	2.36	0.53
2:AT:77:G:N7	21:BN:52:LYS:HD2	2.24	0.53
8:BA:59:ASP:OD2	8:BA:77:ARG:NH1	2.42	0.53
46:CM:472:A:H5''	56:CW:144:PRO:HD2	1.90	0.53
46:CM:1552:C:H5''	65:DF:41:ARG:HG2	1.90	0.53
46:CM:1637:U:H2'	46:CM:1638:A:C8	2.43	0.53
46:CM:1743:A:H8	46:CM:1743:A:OP2	1.91	0.53
47:CN:168:HIS:HA	47:CN:203:PHE:CE1	2.44	0.53
48:CO:88:VAL:HB	48:CO:98:THR:HG22	1.91	0.53
53:CT:203:ASP:O	53:CT:207:GLU:HG3	2.07	0.53
64:DE:71:PHE:CE1	64:DE:74:GLN:HB2	2.44	0.53
70:DK:70:LYS:HB3	70:DK:93:LEU:HD22	1.90	0.53
79:DT:67:HIS:CG	79:DT:68:ILE:H	2.27	0.53
79:DT:211:ALA:HB2	79:DT:217:ILE:HG12	1.90	0.53
80:l1:75:ASP:HA	80:l1:78:LYS:HD2	1.90	0.53
1:1:314:U:H2'	1:1:315:C:C6	2.44	0.53
1:1:386:A:C5	1:1:387:A:H1'	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:740:A:OP1	19:y:66:ARG:NH2	2.42	0.53
1:1:2941:A:N7	4:j:215:ASN:ND2	2.57	0.53
1:1:3038:U:H2'	1:1:3039:C:C6	2.44	0.53
1:1:3132:U:H2'	1:1:3133:G:C8	2.44	0.53
1:1:3157:A:N1	21:0:171:PHE:HB3	2.23	0.53
22:2:88:ARG:NH1	30:AC:33:LYS:O	2.42	0.53
46:B:1456:C:H3'	46:B:1560:A:H62	1.74	0.53
46:B:1479:A:H4'	46:B:1480:G:O5'	2.09	0.53
46:B:1776:G:OP1	73:c:17:HIS:NE2	2.41	0.53
63:S:6:VAL:HG13	63:S:95:TYR:HE2	1.74	0.53
1:AS:279:U:O4	43:CJ:45:ARG:NH2	2.42	0.53
1:AS:2557:G:O6	10:BC:48:SER:OG	2.27	0.53
1:AS:2668:A:N7	1:AS:2730:A:N6	2.57	0.53
46:CM:940:A:H4'	46:CM:1058:G:O2'	2.08	0.53
46:CM:1636:C:H2'	46:CM:1637:U:C6	2.44	0.53
62:DC:61:ARG:HD3	62:DC:88:GLU:OE2	2.08	0.53
65:DF:81:ILE:O	65:DF:82:PRO:O	2.27	0.53
79:DT:96:GLU:HG2	79:DT:97:THR:HG23	1.91	0.53
1:1:1029:U:H2'	1:1:1030:U:C6	2.44	0.53
1:1:1250:C:H2'	1:1:1251:C:C6	2.44	0.53
1:1:1593:C:P	35:AH:8:ARG:HH22	2.32	0.53
7:m:40:HIS:CE1	7:m:42:ALA:HB3	2.43	0.53
11:q:12:ILE:HD11	11:q:53:ILE:HG13	1.90	0.53
18:x:126:ARG:HG3	18:x:140:GLN:HG2	1.90	0.53
46:B:233:G:H2'	46:B:234:G:C8	2.44	0.53
46:B:797:U:H5'	60:P:76:LYS:NZ	2.23	0.53
46:B:924:A:H2'	46:B:925:A:C8	2.44	0.53
46:B:1317:C:O2'	50:F:163:GLN:HB3	2.09	0.53
46:B:1635:A:H2'	46:B:1636:C:H6	1.73	0.53
46:B:1754:G:OP2	46:B:1757:U:O2'	2.24	0.53
50:F:47:LEU:N	50:F:84:GLY:O	2.42	0.53
52:H:121:ILE:HD11	52:H:198:LEU:HD12	1.91	0.53
54:J:33:GLU:HG2	54:J:34:LEU:HD12	1.91	0.53
62:R:41:VAL:HG13	62:R:84:ILE:HD13	1.91	0.53
78:h:168:CYS:HB3	78:h:172:ILE:CB	2.39	0.53
1:AS:782:A:H4'	1:AS:783:G:H5'	1.89	0.53
1:AS:1050:A:H5''	1:AS:2609:A:H61	1.74	0.53
1:AS:2090:U:H4'	1:AS:2091:A:O5'	2.08	0.53
1:AS:2709:C:O2'	30:BW:36:ASP:OD1	2.26	0.53
16:BI:177:GLY:H	16:BI:184:LYS:NZ	2.06	0.53
27:BT:11:SER:HB3	27:BT:14:LYS:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:82:U:H2'	46:CM:83:G:O4'	2.09	0.53
46:CM:141:G:O6	53:CT:177:ARG:NH2	2.42	0.53
46:CM:638:U:C4	54:CU:114:LEU:HD21	2.44	0.53
46:CM:871:U:C2	46:CM:872:A:C8	2.97	0.53
57:CX:77:ARG:HD2	57:CX:84:GLU:HA	1.91	0.53
62:DC:1:MET:H1	65:DF:19:ASN:H	1.57	0.53
65:DF:36:ARG:HH12	65:DF:105:LEU:HB3	1.73	0.53
66:DG:51:GLU:OE1	66:DG:51:GLU:N	2.42	0.53
68:DI:38:LYS:HD3	68:DI:49:GLU:HG3	1.90	0.53
80:L1:17:LEU:O	80:L1:21:THR:HG22	2.09	0.53
80:L1:206:ILE:HB	80:L1:216:ILE:HD12	1.91	0.53
1:1:164:U:H2'	1:1:165:C:H6	1.74	0.52
1:1:2477:U:H2'	1:1:2478:A:H8	1.73	0.52
1:1:2632:G:OP1	1:1:2722:U:O2'	2.25	0.52
1:1:3300:A:H2'	1:1:3301:A:C8	2.44	0.52
14:t:164:PRO:O	29:AB:139:ARG:NH2	2.43	0.52
16:v:65:ARG:HG2	16:v:127:TYR:CD1	2.43	0.52
16:v:113:LEU:HB2	16:v:134:LEU:HD23	1.90	0.52
25:7:86:SER:O	25:7:90:ILE:HG12	2.10	0.52
28:AA:14:VAL:HB	35:AH:86:LYS:HG3	1.91	0.52
37:AJ:98:ARG:HB3	80:l1:215:ARG:NE	2.24	0.52
46:B:1375:C:O2'	64:T:52:GLY:HA3	2.09	0.52
83:B:1970:PAR:N24	83:B:1970:PAR:H52	2.24	0.52
61:Q:118:SER:N	61:Q:119:ASP:HA	2.24	0.52
64:T:72:LYS:HD2	64:T:76:GLU:CD	2.34	0.52
79:AR:5:GLU:OE1	79:AR:246:ARG:NH2	2.40	0.52
8:BA:39:LEU:HB3	8:BA:83:VAL:HG13	1.91	0.52
10:BC:162:GLU:OE2	16:BI:26:ARG:NH1	2.32	0.52
21:BN:7:TYR:HE2	21:BN:34:THR:HG22	1.72	0.52
46:CM:122:U:C2'	46:CM:123:G:H5''	2.38	0.52
46:CM:852:G:H21	60:DA:87:ASP:CG	2.17	0.52
46:CM:1277:G:H2'	46:CM:1278:U:C6	2.44	0.52
46:CM:1648:U:H2'	46:CM:1649:G:C8	2.44	0.52
57:CX:54:TYR:HD1	57:CX:72:GLY:HA2	1.75	0.52
74:DO:33:MET:HE1	74:DO:73:LEU:HD21	1.91	0.52
80:l1:26:ARG:HH21	80:l1:29:LEU:C	2.17	0.52
1:1:169:G:N1	1:1:249:G:H1'	2.25	0.52
1:1:1661:U:H2'	1:1:1662:G:H8	1.73	0.52
1:1:1761:U:C5	20:z:43:LYS:HE3	2.44	0.52
1:1:2429:G:H2'	1:1:2430:G:C8	2.44	0.52
1:1:2917:G:O2'	1:1:2920:C:OP2	2.20	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:4:66:A:H61	3:4:93:U:H3	1.58	0.52
4:j:147:ARG:NH2	4:j:155:LYS:HD3	2.23	0.52
4:j:204:MET:SD	4:j:209:HIS:HB2	2.50	0.52
9:o:100:VAL:HG13	9:o:124:LEU:HD22	1.91	0.52
19:y:3:ARG:HB2	19:y:5:HIS:CE1	2.44	0.52
46:B:29:U:H2'	46:B:30:G:H8	1.74	0.52
46:B:821:U:H2'	46:B:822:G:H5''	1.91	0.52
46:B:1511:A:N3	46:B:1577:G:O2'	2.37	0.52
79:AR:40:LYS:HG2	79:AR:67:HIS:O	2.10	0.52
1:AS:137:C:H2'	1:AS:138:G:H8	1.74	0.52
1:AS:183:U:O3'	27:BT:121:ARG:NH1	2.32	0.52
1:AS:1564:U:N3	1:AS:1568:U:O4	2.41	0.52
1:AS:2603:U:OP2	22:BO:4:SER:OG	2.27	0.52
11:BD:180:TYR:HD1	41:CH:13:TYR:HD2	1.58	0.52
21:BN:5:ASN:HB2	21:BN:7:TYR:HE1	1.75	0.52
29:BV:47:LYS:HG2	29:BV:48:TYR:CE1	2.44	0.52
42:CI:21:ARG:O	42:CI:22:ALA:C	2.51	0.52
46:CM:483:A:H8	46:CM:483:A:H5''	1.74	0.52
46:CM:1546:G:C5	65:DF:134:ARG:HD3	2.43	0.52
51:CR:104:ASP:HB3	51:CR:110:ALA:HB2	1.91	0.52
64:DE:96:THR:HG23	64:DE:98:GLY:H	1.73	0.52
69:DJ:106:THR:HA	69:DJ:123:GLY:HA3	1.92	0.52
1:1:1761:U:C6	20:z:43:LYS:HE3	2.44	0.52
1:1:3138:U:H2'	1:1:3139:U:C6	2.44	0.52
1:1:3153:A:H2	1:1:3158:G:H4'	1.74	0.52
15:u:39:LEU:HD22	21:O:72:VAL:HG23	1.91	0.52
46:B:151:G:H2'	46:B:152:G:H8	1.73	0.52
63:S:131:ARG:HG3	63:S:137:PHE:HE1	1.74	0.52
67:W:62:LEU:HB2	67:W:83:MET:HB3	1.90	0.52
1:AS:222:U:OP1	1:AS:224:C:N4	2.33	0.52
1:AS:1286:A:H2'	1:AS:1287:A:C8	2.44	0.52
4:AW:47:GLN:HG2	4:AW:49:ILE:HG23	1.90	0.52
11:BD:45:PHE:CE2	11:BD:55:ILE:HG12	2.44	0.52
11:BD:180:TYR:CD1	41:CH:13:TYR:HD2	2.28	0.52
32:BY:54:LEU:HA	32:BY:94:PRO:HG3	1.90	0.52
46:CM:1:U:C2	46:CM:3:U:C4	2.97	0.52
46:CM:1670:U:H3	46:CM:1705:G:H1	1.56	0.52
47:CN:180:GLU:OE2	47:CN:191:ARG:NH2	2.42	0.52
53:CT:48:TYR:CD1	53:CT:117:GLY:HA3	2.45	0.52
58:CY:27:ALA:O	58:CY:29:LYS:N	2.42	0.52
64:DE:96:THR:HG21	64:DE:99:GLN:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:L1:43:PRO:HB3	80:L1:161:LYS:HA	1.91	0.52
1:1:149:A:C4	1:1:150:A:C8	2.98	0.52
1:1:1232:G:N2	1:1:1241:A:N7	2.57	0.52
1:1:1255:A:H8	1:1:1255:A:OP1	1.93	0.52
1:1:1488:G:O2'	40:AM:48:LYS:NZ	2.41	0.52
1:1:1556:G:N7	26:8:36:LYS:HE2	2.24	0.52
15:u:62:LEU:HD12	15:u:83:ILE:HG13	1.90	0.52
45:i:64:LEU:HG	45:i:67:LYS:CE	2.39	0.52
59:O:55:ARG:NH1	59:O:82:PRO:HB3	2.24	0.52
78:h:149:LYS:HG2	78:h:150:VAL:N	2.25	0.52
79:AR:202:SER:C	79:AR:204:ASP:H	2.17	0.52
1:AS:37:U:H2'	1:AS:38:A:O4'	2.09	0.52
1:AS:2117:A:C4	38:CE:3:LYS:HE2	2.44	0.52
1:AS:2465:U:H4'	1:AS:2466:A:OP2	2.07	0.52
15:BH:17:ARG:HD2	15:BH:61:VAL:HG22	1.91	0.52
42:CI:2:ARG:NE	46:CM:1760:C:OP2	2.42	0.52
46:CM:349:C:OP1	46:CM:628:A:O2'	2.25	0.52
46:CM:415:A:H5'	46:CM:416:G:C4	2.44	0.52
46:CM:764:U:C2	71:DL:8:ARG:HD3	2.45	0.52
48:CO:29:TRP:HE3	48:CO:45:LYS:HG2	1.75	0.52
69:DJ:114:GLU:O	69:DJ:118:ARG:HG3	2.09	0.52
71:DL:93:ARG:C	71:DL:95:GLY:H	2.16	0.52
80:l1:49:PHE:CE1	80:l1:159:LEU:HB2	2.45	0.52
1:1:1895:G:O2'	1:1:2312:U:O4	2.22	0.52
3:4:126:A:O2'	3:4:129:C:N4	2.42	0.52
6:l:154:SER:HB3	10:BC:121:LYS:HE3	1.91	0.52
8:n:165:LEU:HD11	34:AG:102:LEU:HD11	1.90	0.52
16:v:38:ARG:HA	16:v:62:TYR:CD1	2.45	0.52
67:W:81:TYR:HE1	76:f:54:LYS:HZ2	1.55	0.52
1:AS:1937:C:H2'	1:AS:1938:U:C6	2.44	0.52
1:AS:2814:U:O2	1:AS:2814:U:H2'	2.09	0.52
1:AS:3038:U:H2'	1:AS:3039:C:C6	2.44	0.52
1:AS:3161:U:C2	1:AS:3167:G:N2	2.77	0.52
3:AU:9:A:H2'	3:AU:10:A:C8	2.45	0.52
25:BR:107:SER:O	25:BR:111:LYS:HG2	2.10	0.52
26:BS:141:TYR:HB3	36:CC:33:VAL:HG13	1.92	0.52
28:BU:68:VAL:O	28:BU:115:LYS:HE2	2.09	0.52
46:CM:257:U:OP1	55:CV:75:LYS:NZ	2.31	0.52
46:CM:814:A:HO2'	46:CM:815:U:P	2.32	0.52
46:CM:886:G:H2'	46:CM:887:G:C8	2.45	0.52
46:CM:1127:A:H5''	73:DN:2:PRO:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1774:C:H2'	46:CM:1775:G:C8	2.44	0.52
49:CP:171:LYS:HE2	56:CW:57:ARG:NH1	2.25	0.52
50:CQ:118:ARG:NE	45:CL:120:GLU:HG2	2.22	0.52
80:l1:208:SER:C	80:l1:210:MET:H	2.18	0.52
1:1:1478:A:H4'	1:1:1479:G:OP2	2.08	0.52
11:q:10:LEU:HD21	11:q:79:ILE:CD1	2.40	0.52
15:u:20:LEU:HD23	15:u:21:VAL:N	2.24	0.52
16:v:23:TYR:O	16:v:122:ASN:ND2	2.41	0.52
21:0:171:PHE:O	21:0:172:TYR:HB2	2.09	0.52
34:AG:38:PRO:O	34:AG:42:LYS:HG3	2.10	0.52
45:i:108:GLY:HA3	50:F:117:ARG:HG3	1.92	0.52
46:B:481:A:H2	46:B:504:A:N6	2.07	0.52
50:F:219:ILE:HD12	50:F:222:PRO:HG3	1.90	0.52
59:O:29:LYS:HE2	59:O:100:TRP:CE3	2.45	0.52
1:AS:1789:C:OP1	4:AW:177:LYS:NZ	2.42	0.52
1:AS:2583:U:H2'	1:AS:2584:U:C6	2.44	0.52
1:AS:2862:A:O2'	1:AS:2905:A:N3	2.40	0.52
3:AU:156:U:O2'	3:AU:157:U:P	2.68	0.52
15:BH:26:LEU:HD11	15:BH:87:TRP:CG	2.44	0.52
23:BP:28:PHE:HE1	23:BP:33:TYR:HB2	1.70	0.52
26:BS:62:ILE:HD13	26:BS:94:GLN:HB3	1.92	0.52
46:CM:1369:G:O2'	46:CM:1370:A:H8	1.91	0.52
47:CN:48:ILE:HG21	47:CN:161:PRO:HB2	1.92	0.52
1:1:788:G:O3'	29:AB:2:PRO:HD2	2.09	0.52
1:1:1241:A:H3'	1:1:1242:G:C5'	2.35	0.52
1:1:1519:U:OP1	1:1:1603:U:N3	2.33	0.52
1:1:1810:A:H4'	1:1:1811:U:O4'	2.10	0.52
1:1:2869:A:H5''	41:AN:49:LYS:HB2	1.91	0.52
1:1:3148:A:C2	17:w:116:LYS:HD2	2.45	0.52
10:p:34:ASN:ND2	10:p:39:GLN:OE1	2.42	0.52
45:i:53:LYS:C	45:i:55:LYS:H	2.17	0.52
46:B:605:G:H5'	46:B:611:G:N2	2.23	0.52
46:B:786:G:H21	69:Y:107:SER:HB3	1.75	0.52
46:B:1438:U:OP2	76:f:10:HIS:HD2	1.93	0.52
46:B:1753:A:H61	73:c:80:HIS:HA	1.74	0.52
52:H:114:VAL:O	52:H:118:LEU:HG	2.09	0.52
57:M:55:VAL:HG12	57:M:68:LEU:HA	1.92	0.52
1:AS:629:A:H2	34:CA:91:PRO:HG2	1.74	0.52
1:AS:3199:G:H2'	1:AS:3200:C:C6	2.45	0.52
11:BD:76:ALA:O	11:BD:79:ILE:HG22	2.09	0.52
20:BM:172:ARG:HH22	46:CM:836:U:H5''	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BU:78:ASN:OD1	31:BX:37:ARG:NH2	2.42	0.52
46:CM:415:A:H4'	46:CM:416:G:O5'	2.09	0.52
48:CO:87:ARG:HG2	48:CO:88:VAL:H	1.74	0.52
55:CV:2:GLY:O	55:CV:24:LYS:NZ	2.29	0.52
68:DI:86:SER:HB2	74:DO:9:HIS:O	2.10	0.52
71:DL:56:SER:OG	71:DL:94:TYR:CE2	2.62	0.52
79:DT:65:HIS:NE2	79:DT:91:ARG:HG3	2.24	0.52
80:L1:15:LYS:HB2	80:L1:214:PHE:CZ	2.43	0.52
80:L1:174:MET:HE3	80:L1:178:VAL:HG21	1.91	0.52
80:l1:19:TYR:CD2	80:l1:210:MET:HB3	2.40	0.52
1:1:493:A:O2'	1:1:3238:A:N1	2.41	0.52
1:1:780:A:H2'	1:1:780:A:N3	2.24	0.52
1:1:2407:G:H2'	1:1:2408:A:C8	2.44	0.52
1:1:3006:C:H1'	11:q:120:GLU:OE1	2.10	0.52
2:3:3:U:H2'	2:3:4:U:C6	2.45	0.52
11:q:22:ALA:O	11:q:39:LYS:NZ	2.42	0.52
46:B:219:A:H2'	46:B:220:A:C8	2.45	0.52
46:B:261:C:H4'	46:B:290:U:H5'	1.90	0.52
46:B:1610:C:H2'	46:B:1611:C:H6	1.73	0.52
51:G:31:PRO:HG3	51:G:43:PRO:HG3	1.90	0.52
53:I:220:LYS:HE3	53:I:221:GLU:OE2	2.10	0.52
1:AS:252:U:H5'	1:AS:253:A:H8	1.73	0.52
1:AS:624:U:OP1	33:BZ:15:THR:OG1	2.27	0.52
1:AS:783:G:H2'	1:AS:784:C:C6	2.45	0.52
1:AS:2515:G:H1'	1:AS:2516:U:O4'	2.10	0.52
1:AS:2672:G:H5''	22:BO:17:ARG:HG2	1.92	0.52
1:AS:3163:U:H1'	1:AS:3165:U:N3	2.25	0.52
20:BM:176:ARG:NH2	46:CM:838:G:OP2	2.42	0.52
46:CM:400:C:OP1	51:CR:3:ARG:NH1	2.42	0.52
46:CM:1597:G:N7	63:DD:13:LYS:NZ	2.58	0.52
59:CZ:97:LEU:HD21	59:CZ:118:ALA:O	2.10	0.52
79:DT:74:ILE:O	79:DT:75:SER:C	2.52	0.52
1:1:478:G:C5	1:1:479:C:H1'	2.45	0.52
1:1:1530:A:H2'	1:1:1531:A:C8	2.43	0.52
1:1:2367:C:O2'	1:1:3272:A:N1	2.43	0.52
3:4:37:A:H5''	3:4:39:G:O4'	2.10	0.52
3:4:75:G:H2'	3:4:76:C:C6	2.44	0.52
8:n:59:ASP:OD2	8:n:77:ARG:NH1	2.43	0.52
28:AA:116:LYS:O	28:AA:120:GLU:HG3	2.10	0.52
46:B:213:A:N6	46:B:241:G:OP2	2.42	0.52
46:B:530:U:OP1	71:a:64:PHE:HA	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:766:U:H1'	71:a:21:ARG:HD2	1.92	0.52
46:B:1369:G:H5''	67:W:88:ARG:HH12	1.74	0.52
46:B:1396:A:O2'	46:B:1397:A:OP1	2.25	0.52
46:B:1468:C:H5''	46:B:1508:G:H22	1.75	0.52
46:B:1610:C:H2'	46:B:1611:C:C6	2.45	0.52
51:G:59:ARG:NH1	71:a:87:PRO:HG3	2.24	0.52
1:AS:2385:C:H2'	1:AS:2386:U:H6	1.75	0.52
1:AS:2946:U:H2'	1:AS:2947:U:C6	2.45	0.52
1:AS:3314:C:H2'	1:AS:3315:C:C6	2.45	0.52
2:AT:68:C:N3	2:AT:110:G:N1	2.37	0.52
7:AZ:107:ARG:NH1	7:AZ:120:THR:O	2.43	0.52
17:BJ:23:ILE:HD11	17:BJ:123:GLN:HG3	1.92	0.52
46:CM:482:C:C2'	46:CM:483:A:H5''	2.39	0.52
46:CM:728:U:P	54:CU:104:LYS:H	2.32	0.52
46:CM:1750:A:H5''	46:CM:1758:U:H5''	1.92	0.52
79:DT:71:ASP:HB3	79:DT:113:SER:HA	1.92	0.52
79:DT:218:ILE:HG23	79:DT:230:THR:HG22	1.90	0.52
80:l1:66:CYS:SG	80:l1:103:LEU:HD11	2.50	0.52
1:1:448:U:H2'	1:1:449:U:C6	2.45	0.52
1:1:612:U:H2'	1:1:613:U:C6	2.45	0.52
1:1:1203:G:H4'	41:AN:41:HIS:O	2.10	0.52
1:1:1860:A:H5'	20:z:88:ARG:HG2	1.91	0.52
1:1:2116:A:C4	38:AK:3:LYS:HB3	2.45	0.52
1:1:2482:U:C2'	1:1:2483:U:H5'	2.39	0.52
1:1:2601:U:O2	1:1:2621:G:N2	2.36	0.52
1:1:2802:G:H1'	1:1:2833:U:C2	2.44	0.52
1:1:2988:A:H2'	1:1:2989:A:H8	1.74	0.52
2:3:4:U:H2'	2:3:5:G:C8	2.45	0.52
28:AA:41:ALA:HB2	28:AA:77:TYR:HE1	1.74	0.52
46:B:57:G:OP1	71:a:112:LYS:NZ	2.39	0.52
46:B:944:U:OP2	74:d:20:LYS:NZ	2.43	0.52
57:M:5:LYS:NZ	59:O:38:HIS:CB	2.73	0.52
62:R:68:GLU:N	62:R:69:PRO:HD3	2.25	0.52
67:W:25:LEU:CD2	67:W:113:VAL:HG22	2.40	0.52
1:AS:867:U:H2'	1:AS:868:U:C6	2.45	0.52
1:AS:1493:C:H2'	1:AS:1494:A:C8	2.45	0.52
1:AS:1863:A:H2'	1:AS:1864:G:C8	2.45	0.52
1:AS:1943:G:O2'	1:AS:1944:G:OP1	2.23	0.52
1:AS:1949:G:N1	1:AS:2070:A:H2'	2.25	0.52
1:AS:3028:U:O2	32:BY:27:ARG:NH2	2.42	0.52
1:AS:3079:U:H2'	1:AS:3080:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:3179:U:OP2	15:BH:121:ARG:NH2	2.43	0.52
1:AS:3218:U:H2'	1:AS:3219:G:C8	2.45	0.52
2:AT:4:U:H2'	2:AT:5:G:C8	2.44	0.52
38:CE:64:MET:O	38:CE:68:LYS:HB2	2.10	0.52
46:CM:123:G:OP1	51:CR:77:ARG:NH2	2.25	0.52
54:CU:11:THR:HG23	54:CU:14:GLU:H	1.74	0.52
54:CU:134:LYS:C	54:CU:135:ARG:HD2	2.34	0.52
65:DF:78:ASN:O	65:DF:79:TYR:HB2	2.10	0.52
80:l1:21:THR:HA	80:l1:25:LYS:HE3	1.91	0.52
1:1:358:G:N2	1:1:361:A:OP2	2.39	0.51
1:1:1035:U:H2'	1:1:1036:A:C8	2.45	0.51
1:1:1153:G:H2'	1:1:1154:A:O4'	2.10	0.51
1:1:1309:G:O2'	1:1:1314:A:N1	2.37	0.51
1:1:1672:A:H4'	23:5:103:GLN:NE2	2.25	0.51
1:1:3240:U:H5''	34:AG:68:TRP:HZ2	1.75	0.51
3:4:126:A:O2'	3:4:128:U:OP2	2.25	0.51
5:k:117:ARG:NH1	5:k:176:ALA:O	2.43	0.51
5:k:148:LEU:O	5:k:152:LYS:HG3	2.10	0.51
23:5:34:VAL:HG21	23:5:58:ALA:HB2	1.91	0.51
46:B:415:A:H4'	46:B:416:G:O5'	2.10	0.51
46:B:914:A:N1	83:B:1970:PAR:H221	2.23	0.51
46:B:1325:U:O4'	46:B:1364:U:H5''	2.10	0.51
66:V:73:VAL:O	66:V:77:ASN:ND2	2.43	0.51
79:AR:110:ASP:HB2	79:AR:128:ARG:HD2	1.92	0.51
1:AS:62:A:OP1	16:BI:169:LYS:HE3	2.09	0.51
1:AS:569:U:H2'	1:AS:570:A:H8	1.75	0.51
25:BR:101:ARG:HG2	53:CT:150:GLU:CD	2.35	0.51
46:CM:165:U:OP1	53:CT:131:LYS:NZ	2.43	0.51
46:CM:483:A:C4	46:CM:484:G:C8	2.99	0.51
46:CM:694:C:H1'	54:CU:96:PRO:HB2	1.91	0.51
46:CM:1308:C:H2'	46:CM:1309:G:O4'	2.10	0.51
46:CM:1739:U:H2'	46:CM:1740:A:H8	1.74	0.51
55:CV:47:ARG:NH1	55:CV:48:THR:O	2.43	0.51
57:CX:62:GLN:CD	76:DQ:25:SER:HB3	2.35	0.51
80:l1:175:GLU:HB3	80:l1:178:VAL:HG23	1.91	0.51
1:1:800:C:OP1	6:l:99:ARG:NH2	2.44	0.51
1:1:2424:U:H5''	37:AJ:97:ARG:NH2	2.23	0.51
11:q:135:GLU:O	11:q:144:LEU:HD12	2.10	0.51
24:6:75:PRO:HG2	24:6:103:VAL:O	2.09	0.51
29:AB:132:LYS:O	29:AB:136:GLU:HG3	2.11	0.51
39:AL:34:ASN:ND2	39:AL:34:ASN:O	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:521:G:H5'	71:a:60:PHE:O	2.10	0.51
46:B:876:A:H2'	46:B:877:G:C8	2.43	0.51
46:B:1046:A:H2'	46:B:1047:U:C5	2.45	0.51
46:B:1396:A:HO2'	46:B:1397:A:P	2.33	0.51
50:F:143:LEU:C	50:F:145:ALA:H	2.17	0.51
71:a:42:GLU:HG3	71:a:52:LYS:HE3	1.92	0.51
1:AS:169:G:N1	1:AS:249:G:H1'	2.25	0.51
1:AS:539:G:H8	1:AS:539:G:O5'	1.93	0.51
1:AS:1104:U:H2'	1:AS:1105:U:C6	2.45	0.51
1:AS:2232:U:H2'	1:AS:2239:G:N2	2.26	0.51
1:AS:2276:U:O2'	1:AS:2277:A:H5'	2.11	0.51
1:AS:2887:U:OP1	5:AX:9:PRO:HD3	2.09	0.51
1:AS:3261:A:H2'	1:AS:3262:U:C6	2.45	0.51
3:AU:8:C:H2'	3:AU:9:A:H8	1.74	0.51
46:CM:559:G:H2'	46:CM:560:G:H8	1.75	0.51
48:CO:90:GLU:HG2	48:CO:225:LEU:CD1	2.40	0.51
53:CT:115:LYS:HD3	53:CT:116:GLN:O	2.11	0.51
1:1:19:A:H2'	1:1:20:G:C8	2.45	0.51
1:1:120:A:C2	10:p:130:PRO:HB3	2.45	0.51
1:1:130:U:H2'	1:1:131:C:C6	2.45	0.51
1:1:623:A:H2'	1:1:624:U:C6	2.45	0.51
1:1:638:U:OP1	29:AB:21:ARG:NH1	2.44	0.51
1:1:1400:G:N2	1:1:1403:A:OP2	2.38	0.51
1:1:2681:C:H2'	1:1:2682:C:C6	2.45	0.51
1:1:2959:A:H2'	1:1:2960:C:C6	2.45	0.51
1:1:3039:C:H3'	20:z:62:ARG:NH2	2.24	0.51
1:1:3313:G:H2'	1:1:3314:C:C6	2.45	0.51
5:k:293:ASN:HB2	5:k:304:THR:HA	1.91	0.51
45:i:79:THR:HG22	45:i:80:ALA:H	1.76	0.51
46:B:1411:A:O4'	49:E:87:ALA:HB1	2.10	0.51
83:B:1970:PAR:H322	48:D:110:LEU:HD23	1.75	0.51
62:R:15:PHE:CE1	62:R:110:GLU:HG3	2.45	0.51
1:AS:377:A:H1'	1:AS:392:G:N2	2.25	0.51
1:AS:1882:A:O2'	5:AX:226:PHE:O	2.26	0.51
1:AS:2589:U:N3	30:BW:1:MET:HE3	2.24	0.51
1:AS:2943:A:H2'	1:AS:2943:A:N3	2.26	0.51
5:AX:212:ASP:O	5:AX:281:LYS:NZ	2.43	0.51
6:AY:4:ARG:NH2	6:AY:24:PRO:O	2.40	0.51
7:AZ:113:LEU:HD11	7:AZ:142:PHE:CD2	2.46	0.51
8:BA:54:LEU:HD21	8:BA:145:LEU:HD11	1.93	0.51
9:BB:182:LEU:HD12	9:BB:196:VAL:HG13	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BC:158:VAL:HG21	10:BC:164:VAL:CG2	2.40	0.51
30:BW:28:LYS:HG2	30:BW:29:TYR:CE1	2.44	0.51
46:CM:1198:G:N2	46:CM:1436:U:O2	2.38	0.51
46:CM:1594:G:C8	63:DD:123:MET:HE1	2.45	0.51
47:CN:123:VAL:HG13	47:CN:129:ASP:HB2	1.92	0.51
69:DJ:7:LEU:HD11	69:DJ:37:PHE:HD2	1.75	0.51
1:1:698:C:H2'	1:1:699:G:H8	1.75	0.51
39:AL:46:ARG:HD3	39:AL:47:GLY:O	2.11	0.51
46:B:1016:U:H4'	46:B:1017:G:OP2	2.09	0.51
46:B:1409:U:H5''	46:B:1410:A:OP2	2.11	0.51
49:E:163:ARG:HD3	49:E:165:ILE:HD11	1.92	0.51
63:S:28:ILE:HD13	63:S:64:ILE:HB	1.92	0.51
71:a:29:HIS:CE1	71:a:34:ASN:HA	2.45	0.51
1:AS:2435:G:H5'	1:AS:2460:U:O4'	2.10	0.51
1:AS:2958:U:H2'	1:AS:2959:A:C8	2.46	0.51
1:AS:3082:C:H2'	1:AS:3083:U:C6	2.46	0.51
22:BO:41:ASP:N	22:BO:97:LYS:O	2.41	0.51
46:CM:86:A:H5'	71:DL:119:PHE:CE1	2.44	0.51
46:CM:1233:C:C2	46:CM:1234:U:C5	2.99	0.51
46:CM:1425:C:H2'	46:CM:1426:C:C6	2.45	0.51
46:CM:1460:G:H2'	46:CM:1461:A:C8	2.44	0.51
46:CM:1573:A:H2'	46:CM:1574:A:O4'	2.09	0.51
48:CO:30:PHE:CZ	48:CO:61:LEU:HD11	2.45	0.51
51:CR:123:LEU:HD23	51:CR:159:THR:HG21	1.91	0.51
68:DI:60:ARG:HG2	68:DI:60:ARG:HH11	1.75	0.51
1:1:729:C:H3'	1:1:730:A:H5''	1.92	0.51
1:1:1180:A:H2'	1:1:1181:C:C6	2.46	0.51
1:1:1506:G:H8	1:1:1506:G:O5'	1.94	0.51
1:1:1936:G:N2	1:1:3327:A:H8	2.03	0.51
1:1:2196:G:H2'	1:1:2197:A:H8	1.75	0.51
1:1:2734:A:H2'	1:1:2735:U:H6	1.76	0.51
1:1:2853:C:H2'	1:1:2854:U:C6	2.45	0.51
1:1:2958:U:H2'	1:1:2959:A:C8	2.46	0.51
1:1:3005:A:H2'	1:1:3006:C:H6	1.76	0.51
2:3:7:G:O3'	7:m:33:ARG:NH2	2.42	0.51
5:k:283:TYR:CE1	5:k:354:VAL:HG21	2.45	0.51
7:m:106:ALA:HB2	7:m:166:ALA:HA	1.93	0.51
8:n:45:ARG:HH12	18:x:178:SER:HB3	1.76	0.51
9:o:198:ASN:O	9:o:199:PHE:C	2.52	0.51
12:r:68:ALA:HB1	12:r:155:ALA:HB1	1.91	0.51
32:AE:30:LYS:NZ	32:AE:34:GLU:OE2	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:C:140:ASN:ND2	68:X:31:SER:O	2.26	0.51
53:I:180:THR:HG23	53:I:183:THR:H	1.76	0.51
56:L:126:ARG:HD2	77:g:33:ARG:HD3	1.92	0.51
57:M:70:ASP:OD1	57:M:70:ASP:N	2.42	0.51
1:AS:582:G:H2'	1:AS:583:A:H8	1.75	0.51
1:AS:1079:G:H2'	1:AS:1080:A:H8	1.75	0.51
1:AS:1563:A:H2	1:AS:1569:C:N4	2.09	0.51
1:AS:2475:U:H2'	1:AS:2476:C:C5	2.46	0.51
14:BG:57:VAL:HG22	14:BG:69:VAL:HG22	1.92	0.51
36:CC:34:GLN:O	36:CC:38:ARG:HG2	2.11	0.51
42:CI:17:ARG:O	42:CI:18:ARG:C	2.53	0.51
46:CM:1083:U:OP1	49:CP:154:THR:OG1	2.23	0.51
46:CM:1238:U:H2'	46:CM:1239:U:C6	2.45	0.51
46:CM:1719:A:H2'	46:CM:1720:C:H6	1.74	0.51
52:CS:108:LEU:HD21	63:DD:43:LEU:HD11	1.92	0.51
63:DD:99:ALA:HB2	79:DT:57:ILE:HG23	1.93	0.51
79:DT:7:LEU:HG	79:DT:312:VAL:HG12	1.92	0.51
80:l1:4:ILE:HG23	80:l1:184:MET:SD	2.50	0.51
1:1:1363:G:H5'	33:AF:46:ARG:HH22	1.76	0.51
1:1:1642:G:H1'	1:1:1805:A:N6	2.26	0.51
1:1:1713:U:H2'	1:1:1714:G:H8	1.76	0.51
1:1:3254:G:H2'	1:1:3255:G:H8	1.74	0.51
1:1:3285:A:H2'	1:1:3286:C:C6	2.45	0.51
4:j:180:LEU:HD22	44:AQ:18:TYR:HB3	1.93	0.51
8:n:3:GLN:OE1	33:AF:78:LYS:NZ	2.43	0.51
10:p:79:PHE:HA	10:p:180:ILE:HD13	1.92	0.51
33:AF:77:VAL:HG13	33:AF:82:ASP:HB2	1.92	0.51
46:B:82:U:H2'	46:B:83:G:O4'	2.10	0.51
46:B:846:U:H5'	46:B:847:A:OP2	2.09	0.51
46:B:1552:C:H5''	65:U:41:ARG:HG2	1.92	0.51
74:d:31:PHE:CD2	74:d:81:ARG:HG3	2.45	0.51
76:f:12:ARG:HB2	76:f:12:ARG:HH11	1.76	0.51
1:AS:589:G:N2	1:AS:610:U:OP1	2.41	0.51
1:AS:1656:C:H2'	1:AS:1657:G:H8	1.75	0.51
5:AX:260:VAL:HG11	5:AX:266:ARG:HH11	1.75	0.51
28:BU:15:ARG:HD2	28:BU:79:HIS:CD2	2.45	0.51
37:CD:52:TYR:O	37:CD:56:LEU:HG	2.10	0.51
46:CM:824:U:OP2	58:CY:26:LYS:HB2	2.10	0.51
46:CM:876:A:H2'	46:CM:877:G:C8	2.45	0.51
46:CM:1740:A:H2'	46:CM:1741:A:H8	1.76	0.51
48:CO:65:VAL:HA	48:CO:86:LEU:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:CQ:9:LYS:HG2	67:DH:62:LEU:HD11	1.93	0.51
51:CR:185:GLY:HA3	51:CR:224:ASN:OD1	2.10	0.51
52:CS:139:ASN:O	52:CS:214:LYS:HE2	2.10	0.51
54:CU:29:ASP:OD1	54:CU:30:LEU:HD23	2.10	0.51
80:l1:174:MET:HB3	80:l1:178:VAL:HB	1.93	0.51
1:1:1663:A:H2'	1:1:1664:G:H8	1.74	0.51
1:1:1746:A:H1'	1:1:1748:A:N7	2.26	0.51
1:1:2183:U:O4	1:1:2216:G:N1	2.44	0.51
1:1:2185:A:N6	46:B:898:G:N3	2.59	0.51
1:1:3150:A:C4	17:w:115:LYS:HA	2.45	0.51
5:k:117:ARG:HD2	5:k:176:ALA:O	2.11	0.51
12:r:140:THR:HG21	12:r:148:VAL:HG21	1.92	0.51
46:B:481:A:H8	46:B:481:A:O5'	1.94	0.51
46:B:1099:G:O2'	46:B:1115:G:O6	2.28	0.51
46:B:1214:G:H3'	78:h:139:LYS:HE2	1.93	0.51
48:D:109:LYS:HE3	48:D:113:LEU:HD11	1.93	0.51
50:F:143:LEU:O	50:F:145:ALA:N	2.34	0.51
59:O:64:ASP:H	59:O:92:SER:HB3	1.76	0.51
64:T:103:ASP:OD1	64:T:104:ALA:N	2.44	0.51
1:AS:252:U:H5'	1:AS:253:A:C8	2.46	0.51
1:AS:258:U:H2'	1:AS:259:C:C6	2.46	0.51
1:AS:385:A:H2'	1:AS:386:A:C8	2.45	0.51
1:AS:1443:G:O6	18:BK:142:THR:OG1	2.29	0.51
1:AS:1561:U:C6	1:AS:1561:U:H5''	2.46	0.51
3:AU:150:G:OP1	26:BS:27:ARG:NH2	2.44	0.51
13:BF:92:ARG:HD3	13:BF:174:LYS:C	2.36	0.51
14:BG:158:LEU:HB3	29:BV:98:ALA:HB1	1.92	0.51
20:BM:38:ARG:O	20:BM:42:ARG:HG3	2.10	0.51
23:BP:39:GLU:O	23:BP:47:VAL:HG21	2.10	0.51
46:CM:485:G:H2'	46:CM:485:G:N3	2.25	0.51
46:CM:583:A:H2'	46:CM:584:G:C8	2.45	0.51
46:CM:903:U:H2'	46:CM:904:A:H8	1.70	0.51
46:CM:1149:G:H2'	46:CM:1150:G:C8	2.46	0.51
46:CM:1149:G:H2'	46:CM:1150:G:H8	1.76	0.51
46:CM:1277:G:H21	47:CN:111:ILE:HD11	1.76	0.51
58:CY:71:LEU:HD12	58:CY:137:PHE:CE2	2.46	0.51
59:CZ:138:GLU:HG2	59:CZ:139:HIS:HD2	1.76	0.51
80:L1:207:LYS:HD2	80:L1:208:SER:O	2.11	0.51
1:1:96:U:H2'	1:1:97:G:C8	2.46	0.51
1:1:498:C:H2'	1:1:499:G:C8	2.46	0.51
1:1:1069:U:H2'	1:1:1070:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:k:160:VAL:HB	5:k:183:ILE:HD11	1.93	0.51
21:0:96:ASP:OD1	21:0:97:VAL:N	2.44	0.51
38:AK:63:ARG:O	38:AK:68:LYS:HE3	2.09	0.51
46:B:237:C:O3'	46:B:238:U:H4'	2.10	0.51
46:B:578:A:O2'	46:B:580:U:OP1	2.28	0.51
46:B:1148:A:H2'	46:B:1149:G:O4'	2.10	0.51
46:B:1300:U:HO2'	46:B:1301:G:H8	1.59	0.51
62:R:10:ARG:HE	62:R:13:LYS:HE2	1.76	0.51
63:S:22:LYS:HG2	63:S:23:ALA:N	2.25	0.51
1:AS:229:C:H2'	1:AS:230:G:O4'	2.11	0.51
1:AS:243:G:H2'	1:AS:244:G:H8	1.75	0.51
1:AS:653:C:H2'	1:AS:654:A:C8	2.44	0.51
1:AS:844:A:C5	1:AS:845:C:H1'	2.45	0.51
1:AS:1165:A:H4'	9:BB:216:LYS:HD2	1.93	0.51
1:AS:2256:C:H2'	1:AS:2257:A:H5''	1.92	0.51
1:AS:2394:U:H2'	1:AS:2395:U:C6	2.45	0.51
5:AX:66:LYS:NZ	24:BQ:9:ASN:H	2.09	0.51
9:BB:146:VAL:HG12	9:BB:179:ILE:HD11	1.93	0.51
14:BG:63:VAL:HA	14:BG:66:ASN:ND2	2.26	0.51
25:BR:91:LYS:HA	25:BR:94:ARG:HD2	1.93	0.51
46:CM:147:C:OP1	71:DL:121:THR:OG1	2.24	0.51
46:CM:1243:U:C6	46:CM:1244:U:H5	2.28	0.51
46:CM:1668:A:H2'	46:CM:1669:U:H5'	1.92	0.51
51:CR:192:VAL:HG23	51:CR:244:GLY:HA3	1.93	0.51
52:CS:37:GLN:HA	63:DD:52:THR:OG1	2.11	0.51
57:CX:22:VAL:CG1	57:CX:63:TYR:HE2	2.23	0.51
67:DH:32:GLN:OE1	67:DH:32:GLN:N	2.43	0.51
1:1:95:G:H5'	14:t:15:ARG:CZ	2.41	0.51
1:1:716:G:O2'	1:1:717:A:OP1	2.23	0.51
1:1:3295:A:H4'	5:k:366:GLY:HA3	1.93	0.51
5:k:98:GLY:HA2	17:w:150:TYR:CE1	2.46	0.51
20:z:23:TRP:HB3	20:z:51:VAL:HG12	1.92	0.51
46:B:749:U:H3	46:B:757:G:H1	1.59	0.51
46:B:871:U:OP1	83:B:1970:PAR:O23	2.28	0.51
46:B:1335:U:H2'	46:B:1336:G:C8	2.45	0.51
52:H:29:ILE:HB	52:H:34:GLN:HE21	1.76	0.51
68:X:58:TYR:OH	69:Y:20:THR:HA	2.11	0.51
1:AS:119:G:N2	1:AS:120:A:H62	2.09	0.51
1:AS:950:U:H1'	30:BW:12:GLN:OE1	2.11	0.51
1:AS:1608:A:O2'	1:AS:1693:A:N1	2.41	0.51
1:AS:2183:U:O4	1:AS:2216:G:N1	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:2440:A:O5'	1:AS:2441:G:N2	2.43	0.51
1:AS:2919:G:C2	5:AX:250:ALA:HB1	2.46	0.51
1:AS:3271:U:H2'	1:AS:3272:A:H5''	1.93	0.51
1:AS:3344:U:H4'	5:AX:315:GLY:HA2	1.92	0.51
3:AU:57:C:H4'	3:AU:63:G:N7	2.26	0.51
10:BC:244:ASN:HA	10:BC:247:ILE:HD12	1.92	0.51
17:BJ:40:GLU:HG2	17:BJ:41:GLU:HG2	1.93	0.51
26:BS:60:HIS:ND1	36:CC:25:LYS:HB3	2.26	0.51
32:BY:18:ARG:HD3	32:BY:34:GLU:HB3	1.93	0.51
46:CM:1376:U:O4'	64:DE:3:ARG:NH1	2.44	0.51
65:DF:45:LEU:HD21	65:DF:81:ILE:HG21	1.93	0.51
80:l1:206:ILE:HG12	80:l1:216:ILE:HG13	1.91	0.51
1:1:426:G:H4'	33:AF:52:PRO:HD3	1.92	0.51
1:1:437:G:O2'	1:1:438:A:OP1	2.29	0.51
1:1:498:C:H2'	1:1:499:G:H8	1.75	0.51
1:1:1779:U:H2'	1:1:1780:A:C8	2.46	0.51
1:1:1949:G:H22	20:z:114:LYS:CE	2.23	0.51
1:1:2557:G:H2'	1:1:2557:G:N3	2.26	0.51
1:1:2655:U:H2'	1:1:2656:C:H6	1.72	0.51
1:1:3044:C:H2'	1:1:3045:A:O4'	2.11	0.51
1:1:3136:C:H2'	1:1:3137:A:C8	2.46	0.51
1:1:3190:C:H2'	1:1:3191:A:H8	1.76	0.51
1:1:3244:A:O2'	1:1:3245:A:H5'	2.11	0.51
14:t:201:LYS:HE2	80:l1:52:THR:H	1.76	0.51
16:v:183:THR:HG22	16:v:187:ARG:HB2	1.92	0.51
17:w:11:ASP:HB2	17:w:118:ARG:HB3	1.92	0.51
28:AA:40:HIS:CE1	28:AA:74:LEU:HD11	2.46	0.51
36:AI:14:LYS:O	36:AI:18:GLU:HG3	2.10	0.51
46:B:458:A:O2'	51:G:27:TYR:OH	2.13	0.51
46:B:953:U:H5''	46:B:1018:C:O2'	2.11	0.51
46:B:975:C:H1'	61:Q:122:ARG:HG2	1.93	0.51
51:G:258:ALA:C	51:G:260:GLN:H	2.19	0.51
52:H:116:HIS:HD2	72:b:98:GLN:HB3	1.76	0.51
52:H:157:ARG:HB3	52:H:224:ASN:OD1	2.10	0.51
53:I:113:ILE:HD11	53:I:124:LEU:HD21	1.93	0.51
1:AS:797:A:OP1	29:BV:27:LYS:HE3	2.10	0.51
1:AS:1790:U:C2	4:AW:187:HIS:CD2	2.99	0.51
1:AS:2498:A:H2'	1:AS:2499:U:C6	2.45	0.51
2:AT:26:C:H2'	2:AT:27:A:O4'	2.10	0.51
7:AZ:6:GLU:OE1	7:AZ:7:PHE:N	2.43	0.51
7:AZ:197:LYS:HG2	7:AZ:202:GLY:HA3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BO:113:ALA:O	22:BO:117:ARG:HG3	2.11	0.51
23:BP:90:ASN:O	23:BP:92:ILE:HG13	2.11	0.51
46:CM:1306:A:H4'	46:CM:1307:A:O5'	2.11	0.51
46:CM:1344:C:H2'	46:CM:1345:A:C8	2.45	0.51
46:CM:1354:U:H2'	46:CM:1355:A:H8	1.76	0.51
46:CM:1421:G:O6	57:CX:64:TYR:OH	2.27	0.51
47:CN:119:ARG:NH1	49:CP:235:LEU:HD12	2.26	0.51
53:CT:1:MET:HE2	53:CT:106:LEU:HB2	1.93	0.51
61:DB:24:HIS:CD2	61:DB:36:ARG:HB2	2.45	0.51
80:l1:42:ASP:OD1	80:l1:45:ARG:NH2	2.44	0.51
1:1:377:A:H2	1:1:391:A:H61	1.58	0.50
1:1:1526:U:O2'	3:4:114:G:O2'	2.27	0.50
1:1:1627:C:H5''	1:1:1628:A:H5''	1.94	0.50
1:1:2646:A:C2	13:s:124:GLY:HA3	2.46	0.50
2:3:91:G:H2'	2:3:92:A:C8	2.46	0.50
4:j:55:GLY:HA3	4:j:174:ARG:HH21	1.75	0.50
4:j:117:GLU:OE1	4:j:121:GLY:N	2.38	0.50
14:t:54:LEU:O	14:t:96:SER:OG	2.28	0.50
34:AG:68:TRP:O	34:AG:86:LYS:HG2	2.11	0.50
45:i:86:LYS:HG3	45:i:93:ARG:CZ	2.41	0.50
46:B:116:U:H2'	46:B:117:U:C6	2.46	0.50
46:B:296:C:H5''	51:G:38:LEU:HB2	1.92	0.50
46:B:1155:G:C2	46:B:1156:A:C8	2.99	0.50
46:B:1277:G:N2	47:C:111:ILE:HD11	2.26	0.50
46:B:1609:G:H2'	46:B:1610:C:C6	2.46	0.50
52:H:116:HIS:CD2	72:b:98:GLN:HB3	2.46	0.50
52:H:148:ARG:HH21	75:e:22:ARG:HH12	1.59	0.50
53:I:116:GLN:HE22	53:I:125:THR:HB	1.75	0.50
57:M:5:LYS:HZ1	59:O:43:ARG:HH21	1.60	0.50
57:M:50:THR:HB	57:M:55:VAL:HG23	1.92	0.50
63:S:12:LYS:HG3	63:S:13:LYS:HG3	1.92	0.50
66:V:86:ARG:NH2	66:V:92:LYS:HD2	2.26	0.50
78:h:149:LYS:HB3	78:h:157:GLU:HG2	1.93	0.50
79:AR:200:THR:HG21	79:AR:242:PHE:H	1.76	0.50
1:AS:179:C:H2'	1:AS:180:U:H6	1.76	0.50
1:AS:663:A:OP1	16:BI:203:ARG:HD2	2.11	0.50
1:AS:1616:U:H2'	1:AS:1617:A:C8	2.47	0.50
1:AS:1642:G:O2'	1:AS:1804:G:N2	2.35	0.50
1:AS:2403:G:OP1	16:BI:72:LYS:NZ	2.29	0.50
1:AS:2443:G:H1	1:AS:2468:C:H5	1.57	0.50
1:AS:2919:G:N3	5:AX:250:ALA:HB1	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BB:149:ARG:HD2	9:BB:205:LEU:HD23	1.91	0.50
13:BF:63:GLU:O	13:BF:65:ILE:HG12	2.11	0.50
25:BR:2:LYS:HE2	25:BR:4:GLU:OE2	2.12	0.50
33:BZ:67:LEU:HD23	33:BZ:73:LYS:HG2	1.93	0.50
46:CM:55:A:OP1	71:DL:112:LYS:NZ	2.37	0.50
46:CM:79:C:H1'	53:CT:174:LYS:HB2	1.93	0.50
46:CM:598:U:H2'	46:CM:599:A:C8	2.46	0.50
46:CM:642:C:H2'	46:CM:643:U:H6	1.75	0.50
52:CS:216:GLU:HG2	52:CS:219:ARG:HH21	1.76	0.50
53:CT:206:ALA:O	53:CT:210:GLN:HG2	2.11	0.50
64:DE:78:ARG:HH11	64:DE:81:LYS:HD3	1.76	0.50
69:DJ:81:VAL:HG21	69:DJ:125:ILE:HB	1.92	0.50
79:DT:24:ALA:CB	79:DT:74:ILE:HG13	2.40	0.50
1:1:2354:G:H2'	1:1:2355:G:C8	2.45	0.50
14:t:57:VAL:HG22	14:t:69:VAL:HG22	1.93	0.50
20:z:73:GLY:HA2	20:z:76:MET:HE2	1.92	0.50
42:AO:10:VAL:HG11	46:B:1100:U:H5''	1.93	0.50
45:i:64:LEU:O	45:i:67:LYS:N	2.44	0.50
46:B:504:A:O2'	46:B:505:U:OP1	2.28	0.50
46:B:932:U:H2'	46:B:933:A:C8	2.47	0.50
46:B:1032:G:H2'	46:B:1033:U:H6	1.76	0.50
51:G:45:VAL:HA	51:G:61:VAL:HG21	1.93	0.50
68:X:37:ALA:HA	68:X:50:ASN:OD1	2.11	0.50
78:h:147:TYR:HD2	78:h:173:PHE:CD2	2.28	0.50
1:AS:605:U:OP1	8:BA:23:THR:HB	2.11	0.50
1:AS:911:A:H4'	1:AS:2929:G:H4'	1.93	0.50
1:AS:2084:A:H2'	1:AS:2085:A:C8	2.45	0.50
1:AS:2371:G:O2'	1:AS:2954:A:N6	2.41	0.50
1:AS:2447:G:H1'	1:AS:2466:A:H2	1.77	0.50
1:AS:2468:C:H1'	1:AS:2469:A:H5''	1.93	0.50
1:AS:3032:C:H1'	1:AS:3297:U:H1'	1.93	0.50
5:AX:160:VAL:HG12	5:AX:181:ILE:O	2.10	0.50
7:AZ:83:LEU:HD13	7:AZ:88:ILE:HD12	1.92	0.50
12:BE:38:ARG:HH22	12:BE:45:GLU:CD	2.20	0.50
28:BU:58:ASP:OD2	28:BU:60:LYS:HG2	2.11	0.50
46:CM:66:U:H5''	53:CT:173:PRO:HA	1.93	0.50
46:CM:116:U:H2'	46:CM:117:U:C6	2.47	0.50
46:CM:263:A:OP2	53:CT:194:LYS:NZ	2.44	0.50
46:CM:1193:A:H8	46:CM:1254:U:H6	1.59	0.50
46:CM:1542:A:OP2	62:DC:47:ARG:NH2	2.35	0.50
53:CT:57:ASP:O	53:CT:107:SER:OG	2.17	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:l1:25:LYS:HE2	80:l1:27:ASN:O	2.11	0.50
1:1:407:A:C2	3:4:17:A:H1'	2.47	0.50
1:1:428:U:H2'	1:1:429:U:C6	2.46	0.50
1:1:1882:A:O2'	5:k:226:PHE:O	2.26	0.50
1:1:2130:A:H2'	1:1:2131:U:H6	1.76	0.50
1:1:2385:C:H2'	1:1:2386:U:H6	1.77	0.50
1:1:2937:U:O2	4:j:221:LYS:NZ	2.44	0.50
6:l:261:SER:O	6:l:271:ILE:HG23	2.11	0.50
19:y:176:ARG:HH22	29:AB:42:ARG:HH12	1.58	0.50
46:B:1336:G:H2'	46:B:1337:C:O4'	2.12	0.50
46:B:1425:C:H2'	46:B:1426:C:H6	1.76	0.50
83:B:1970:PAR:H44	61:Q:115:PRO:HA	1.94	0.50
65:U:91:ASP:OD1	65:U:92:GLN:N	2.44	0.50
67:W:32:GLN:HB3	67:W:108:GLU:HG2	1.93	0.50
71:a:55:VAL:HG22	71:a:75:ILE:HG12	1.93	0.50
71:a:112:LYS:O	71:a:116:LYS:HG3	2.11	0.50
73:c:64:LEU:HD13	73:c:65:PRO:HD2	1.94	0.50
74:d:55:THR:HG22	74:d:61:THR:O	2.12	0.50
78:h:149:LYS:HG2	78:h:150:VAL:H	1.76	0.50
1:AS:478:G:H5''	1:AS:479:C:H5''	1.94	0.50
1:AS:787:A:H2'	1:AS:788:G:H8	1.76	0.50
1:AS:1079:G:H2'	1:AS:1080:A:C8	2.46	0.50
1:AS:1116:A:H2'	1:AS:1117:U:H6	1.76	0.50
1:AS:1172:C:H2'	1:AS:1173:G:N2	2.26	0.50
1:AS:1189:A:H2'	1:AS:1190:G:C8	2.46	0.50
1:AS:2339:A:H2'	1:AS:2340:C:H6	1.76	0.50
1:AS:3166:A:C5	1:AS:3167:G:C5	2.99	0.50
2:AT:92:A:O2'	12:BE:57:LEU:O	2.28	0.50
10:BC:113:GLU:O	10:BC:117:ILE:HG13	2.11	0.50
14:BG:195:ALA:O	14:BG:199:LYS:HG2	2.10	0.50
46:CM:78:A:H2'	46:CM:79:C:C6	2.46	0.50
46:CM:309:U:OP2	70:DK:20:ARG:HD3	2.11	0.50
46:CM:398:A:H5''	55:CV:25:ARG:HA	1.92	0.50
46:CM:699:U:O2	46:CM:723:G:N2	2.43	0.50
46:CM:1571:G:O2'	46:CM:1597:G:O6	2.28	0.50
67:DH:101:ARG:O	67:DH:105:ILE:HG12	2.11	0.50
80:l1:3:LYS:HG3	80:l1:217:TYR:CE1	2.46	0.50
1:1:1141:G:OP1	33:AF:45:ARG:HD2	2.11	0.50
1:1:1617:A:H2'	1:1:1618:U:C6	2.47	0.50
1:1:3093:U:H1'	1:1:3094:A:H5''	1.93	0.50
6:l:31:VAL:HA	6:l:125:SER:OG	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:l:303:ALA:HB2	19:y:39:ARG:HH12	1.77	0.50
12:r:31:ILE:HA	12:r:66:GLU:OE1	2.11	0.50
13:s:62:ASN:HB2	43:AP:103:ALA:HA	1.92	0.50
14:t:2:ALA:HB1	29:AB:33:GLY:O	2.11	0.50
15:u:57:LEU:HG	21:0:172:TYR:OH	2.11	0.50
46:B:52:U:H2'	46:B:53:G:H8	1.76	0.50
46:B:822:G:H3'	46:B:823:G:H4'	1.93	0.50
46:B:1239:U:H2'	46:B:1240:G:C8	2.47	0.50
46:B:1637:U:H2'	46:B:1638:A:C8	2.46	0.50
51:G:253:ARG:HD3	56:L:71:PHE:HE1	1.76	0.50
52:H:63:GLN:HE22	52:H:66:ASN:HB2	1.77	0.50
57:M:8:ARG:HG2	57:M:12:HIS:NE2	2.27	0.50
62:R:64:ARG:C	62:R:66:ALA:H	2.18	0.50
79:AR:76:ALA:HB3	79:AR:120:LEU:HD11	1.94	0.50
1:AS:671:U:H2'	1:AS:672:G:H8	1.75	0.50
1:AS:2330:A:H5''	18:BK:83:TRP:O	2.11	0.50
1:AS:2433:U:H3'	1:AS:2434:A:H8	1.76	0.50
1:AS:2772:G:O6	29:BV:42:ARG:NH1	2.44	0.50
1:AS:2915:G:H2'	1:AS:2916:U:O4'	2.10	0.50
1:AS:3024:G:H2'	1:AS:3025:G:H8	1.76	0.50
7:AZ:7:PHE:O	7:AZ:9:THR:HG23	2.11	0.50
8:BA:34:VAL:HB	8:BA:89:LYS:HE3	1.93	0.50
46:CM:1300:U:HO2'	46:CM:1301:G:H8	1.60	0.50
51:CR:185:GLY:N	51:CR:189:LEU:HD12	2.26	0.50
61:DB:109:ARG:HH11	73:DN:62:TYR:HE1	1.60	0.50
63:DD:98:GLU:OE2	79:DT:61:SER:OG	2.29	0.50
80:l1:126:PRO:HA	80:l1:130:LYS:HE2	1.93	0.50
1:1:268:A:C4	16:v:12:ARG:HG2	2.46	0.50
1:1:406:G:H1'	3:4:16:G:N2	2.26	0.50
1:1:1079:G:H2'	1:1:1080:A:C8	2.47	0.50
1:1:1494:A:H2'	1:1:1495:U:C6	2.47	0.50
1:1:1714:G:H2'	1:1:1715:G:C8	2.46	0.50
1:1:2322:U:H1'	1:1:3051:C:H41	1.77	0.50
1:1:2718:A:H4'	7:m:176:SER:HB2	1.93	0.50
1:1:3344:U:H4'	5:k:315:GLY:HA2	1.94	0.50
6:l:30:PRO:HB3	19:y:25:TYR:CE2	2.42	0.50
16:v:164:LEU:O	16:v:169:LYS:NZ	2.42	0.50
22:2:82:ASN:HB2	30:AC:20:GLY:HA3	1.94	0.50
45:i:48:PRO:O	45:i:50:LYS:N	2.36	0.50
45:i:61:GLU:C	45:i:63:ALA:N	2.67	0.50
46:B:788:A:C8	69:Y:107:SER:HA	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:1315:G:H21	64:T:8:THR:HG21	1.76	0.50
46:B:1753:A:N1	73:c:80:HIS:ND1	2.58	0.50
54:J:134:LYS:HG2	54:J:148:VAL:HG22	1.93	0.50
75:e:12:VAL:HG12	75:e:30:VAL:HG12	1.92	0.50
1:AS:779:A:H5''	1:AS:780:A:H5''	1.94	0.50
1:AS:1312:C:H5'	1:AS:1313:A:H5''	1.94	0.50
1:AS:1899:U:OP1	85:AS:3801:HOH:O	2.18	0.50
1:AS:2078:A:H3'	1:AS:2078:A:N3	2.26	0.50
1:AS:2771:A:H1'	29:BV:42:ARG:NH1	2.26	0.50
1:AS:2802:G:H1'	1:AS:2833:U:C2	2.46	0.50
1:AS:3135:A:H2'	1:AS:3136:C:C6	2.47	0.50
9:BB:8:GLU:HG3	9:BB:9:THR:H	1.76	0.50
15:BH:11:ARG:NH1	15:BH:57:LEU:O	2.43	0.50
46:CM:269:A:C2	46:CM:283:G:C6	3.00	0.50
46:CM:874:U:H2'	46:CM:875:C:H6	1.76	0.50
46:CM:1161:G:C6	46:CM:1450:G:C6	3.00	0.50
47:CN:47:ILE:HD12	64:DE:106:THR:HG22	1.94	0.50
70:DK:52:ILE:HG22	70:DK:75:GLN:HB3	1.93	0.50
78:DS:160:ARG:HB3	78:DS:173:PHE:CD2	2.46	0.50
80:L1:174:MET:HB3	80:L1:178:VAL:HB	1.93	0.50
1:1:694:C:OP2	6:l:120:ARG:NH2	2.36	0.50
1:1:1714:G:H2'	1:1:1715:G:H8	1.77	0.50
1:1:2084:A:H2'	1:1:2085:A:H8	1.75	0.50
1:1:2700:G:N7	22:2:87:LYS:NZ	2.43	0.50
1:1:2713:C:O2	43:AP:20:HIS:HE1	1.95	0.50
10:p:162:GLU:OE2	16:v:26:ARG:NH1	2.40	0.50
16:v:91:GLN:O	16:v:93:LYS:NZ	2.44	0.50
19:y:24:VAL:HG23	19:y:25:TYR:CD1	2.47	0.50
46:B:345:G:C5'	58:N:80:MET:HE2	2.41	0.50
46:B:1486:G:OP2	66:V:73:VAL:HG12	2.11	0.50
61:Q:13:ARG:N	61:Q:24:HIS:O	2.41	0.50
61:Q:13:ARG:NH1	61:Q:77:LYS:HD2	2.26	0.50
65:U:22:ILE:HG22	65:U:23:ASP:N	2.23	0.50
66:V:74:GLY:HA2	66:V:77:ASN:HD22	1.77	0.50
68:X:55:LEU:HD11	68:X:69:LEU:HD21	1.92	0.50
73:c:52:ASP:N	73:c:52:ASP:OD1	2.40	0.50
1:AS:243:G:H2'	1:AS:244:G:C8	2.47	0.50
1:AS:248:U:H2'	1:AS:249:G:H4'	1.92	0.50
1:AS:1338:G:H2'	1:AS:1339:A:O4'	2.12	0.50
1:AS:2107:U:H2'	1:AS:2108:G:C8	2.47	0.50
1:AS:2415:G:C6	1:AS:2489:A:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:2573:A:OP2	16:BI:91:GLN:NE2	2.45	0.50
1:AS:2959:A:H2'	1:AS:2960:C:H6	1.76	0.50
1:AS:3163:U:H1'	1:AS:3165:U:O4	2.11	0.50
1:AS:3313:G:N2	1:AS:3322:U:O2	2.34	0.50
2:AT:107:A:H2'	2:AT:108:U:C6	2.47	0.50
12:BE:44:ASP:OD1	12:BE:181:TYR:OH	2.17	0.50
46:CM:852:G:H5''	60:DA:4:MET:HE2	1.93	0.50
46:CM:987:G:N2	46:CM:1747:G:O3'	2.44	0.50
51:CR:48:LEU:HD11	51:CR:70:VAL:HG21	1.94	0.50
52:CS:42:LEU:HB2	52:CS:48:PHE:CZ	2.46	0.50
79:DT:200:THR:HG21	79:DT:242:PHE:H	1.75	0.50
1:1:444:U:H3	1:1:485:A:H61	1.58	0.50
1:1:976:A:C2'	1:1:977:U:H5'	2.38	0.50
1:1:1225:G:H2'	1:1:1226:G:H8	1.76	0.50
1:1:1466:U:H2'	1:1:1467:U:C6	2.46	0.50
1:1:1611:U:H5''	35:AH:64:GLN:OE1	2.11	0.50
1:1:1774:G:O2'	1:1:1776:G:OP2	2.30	0.50
1:1:2679:U:O2'	45:i:37:LYS:O	2.29	0.50
1:1:2887:U:OP1	5:k:9:PRO:HD3	2.11	0.50
1:1:2915:G:H2'	1:1:2916:U:O4'	2.12	0.50
3:4:81:A:H2'	3:4:82:U:C6	2.46	0.50
6:l:61:THR:HG21	6:l:78:VAL:HG22	1.94	0.50
9:o:108:GLN:HG3	9:o:111:ALA:HB2	1.93	0.50
11:q:105:LYS:NZ	11:q:108:GLY:HA2	2.27	0.50
17:w:40:GLU:HG2	17:w:41:GLU:HG2	1.93	0.50
46:B:874:U:H2'	46:B:875:C:H6	1.77	0.50
46:B:1573:A:H2'	46:B:1574:A:O4'	2.12	0.50
62:R:41:VAL:HG13	62:R:84:ILE:HG21	1.93	0.50
63:S:4:GLN:HG2	63:S:95:TYR:CD1	2.47	0.50
66:V:125:SER:OG	66:V:128:GLY:N	2.45	0.50
67:W:56:ARG:HG3	67:W:88:ARG:NH1	2.27	0.50
73:c:5:ARG:HD3	73:c:9:GLY:N	2.26	0.50
1:AS:538:G:H2'	1:AS:539:G:N7	2.25	0.50
1:AS:2668:A:H2'	1:AS:2669:A:C8	2.46	0.50
1:AS:2869:A:OP2	41:CH:48:LYS:NZ	2.44	0.50
1:AS:3161:U:H2'	1:AS:3162:U:C6	2.46	0.50
1:AS:3195:G:H5''	15:BH:125:LYS:HE2	1.94	0.50
4:AW:146:THR:N	4:AW:158:ILE:O	2.38	0.50
5:AX:108:GLU:HG2	5:AX:109:HIS:CE1	2.47	0.50
5:AX:117:ARG:HD2	5:AX:176:ALA:O	2.11	0.50
6:AY:315:LYS:NZ	9:BB:148:LYS:O	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AZ:83:LEU:HB3	7:AZ:88:ILE:HB	1.94	0.50
14:BG:31:LYS:O	14:BG:35:ARG:HB2	2.11	0.50
21:BN:82:GLU:HG2	21:BN:87:ILE:HG12	1.93	0.50
23:BP:14:LYS:HD3	23:BP:16:VAL:HG13	1.94	0.50
23:BP:86:TYR:O	23:BP:90:ASN:ND2	2.42	0.50
30:BW:28:LYS:HG2	30:BW:29:TYR:CD1	2.46	0.50
46:CM:1262:G:O3'	50:CQ:184:GLY:HA3	2.12	0.50
46:CM:1375:C:O2'	64:DE:52:GLY:HA3	2.11	0.50
59:CZ:25:GLU:OE2	59:CZ:89:ILE:HD11	2.11	0.50
64:DE:93:LEU:HD12	64:DE:99:GLN:HA	1.93	0.50
73:DN:12:LYS:HA	73:DN:15:ARG:NH1	2.26	0.50
74:DO:38:GLN:HB2	74:DO:76:GLY:O	2.12	0.50
79:DT:41:THR:O	79:DT:42:LEU:HD23	2.10	0.50
45:CL:48:PRO:O	45:CL:50:LYS:N	2.45	0.50
1:1:411:U:H2'	1:1:412:G:H8	1.75	0.50
1:1:892:A:H5'	4:j:183:GLY:HA2	1.93	0.50
1:1:1325:U:O3'	34:AG:19:SER:OG	2.29	0.50
1:1:1360:C:H5''	19:y:3:ARG:HD2	1.93	0.50
1:1:1825:A:H5''	1:1:1826:G:H5'	1.93	0.50
1:1:2431:U:C6	1:1:2439:A:H5''	2.47	0.50
1:1:3241:G:N2	18:x:172:GLN:HE21	2.09	0.50
2:3:3:U:H2'	2:3:4:U:H6	1.75	0.50
8:n:45:ARG:HH12	18:x:178:SER:CB	2.25	0.50
8:n:167:ASN:OD1	34:AG:6:ARG:NH2	2.45	0.50
46:B:470:U:H5''	56:L:11:THR:HG23	1.94	0.50
46:B:883:A:N3	46:B:884:G:H1'	2.26	0.50
46:B:1469:A:H4'	63:S:70:GLY:HA2	1.93	0.50
46:B:1520:C:H5''	65:U:27:LYS:HD2	1.93	0.50
46:B:1674:U:H2'	46:B:1675:U:C5	2.47	0.50
54:J:11:THR:HG23	54:J:14:GLU:H	1.77	0.50
62:R:1:MET:HB2	65:U:19:ASN:H	1.77	0.50
64:T:80:ARG:HA	64:T:83:GLN:HG2	1.92	0.50
79:AR:13:LEU:HB2	79:AR:307:ILE:HB	1.94	0.50
1:AS:431:A:H2'	1:AS:432:G:H8	1.77	0.50
1:AS:565:A:H2'	1:AS:566:C:O4'	2.12	0.50
1:AS:583:A:H2'	1:AS:584:C:H6	1.76	0.50
1:AS:932:A:OP1	29:BV:27:LYS:HB3	2.12	0.50
1:AS:945:C:O2'	1:AS:967:G:OP1	2.25	0.50
1:AS:2335:A:H2'	1:AS:2336:A:H8	1.76	0.50
1:AS:2422:C:O2'	37:CD:62:ASN:OD1	2.25	0.50
1:AS:3038:U:H2'	1:AS:3039:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:3146:G:N2	1:AS:3178:A:H1'	2.26	0.50
1:AS:3153:A:C2	1:AS:3158:G:H4'	2.44	0.50
46:CM:25:C:H4'	46:CM:26:A:O5'	2.11	0.50
46:CM:644:U:H2'	46:CM:645:G:H8	1.77	0.50
46:CM:916:C:H5''	48:CO:116:LYS:HG2	1.93	0.50
46:CM:1511:A:N3	46:CM:1577:G:O2'	2.36	0.50
46:CM:1676:A:H1'	46:CM:1701:A:C2	2.47	0.50
52:CS:166:ARG:HB2	75:DP:46:GLY:HA3	1.93	0.50
1:1:976:A:H2	1:1:1100:G:H21	1.59	0.50
1:1:1557:U:O4	3:4:117:C:H1'	2.12	0.50
1:1:2197:A:H2'	1:1:2198:A:C8	2.47	0.50
1:1:2583:U:H2'	1:1:2584:U:H6	1.73	0.50
1:1:2632:G:O3'	1:1:2721:G:N2	2.45	0.50
1:1:2650:A:C8	45:i:55:LYS:HG2	2.47	0.50
1:1:2739:U:H2'	1:1:2740:U:C6	2.47	0.50
6:l:156:GLU:HB3	10:BC:119:GLU:O	2.12	0.50
34:AG:58:GLU:HG3	34:AG:63:LYS:HE3	1.94	0.50
46:B:813:U:H5'	46:B:813:U:H6	1.76	0.50
46:B:871:U:H5'	83:B:1970:PAR:O23	2.11	0.50
46:B:1516:C:H2'	46:B:1517:C:C6	2.47	0.50
46:B:1581:G:H2'	46:B:1582:U:O4'	2.12	0.50
46:B:1676:A:C8	46:B:1700:G:C2	3.00	0.50
59:O:68:GLU:C	59:O:70:SER:H	2.19	0.50
1:AS:185:U:H3	1:AS:229:C:N4	2.02	0.50
1:AS:538:G:H2'	1:AS:539:G:C8	2.46	0.50
1:AS:1163:U:P	34:CA:73:ARG:HH12	2.35	0.50
1:AS:1318:U:O2'	21:BN:108:GLN:OE1	2.21	0.50
1:AS:1443:G:OP1	18:BK:65:SER:HB2	2.12	0.50
1:AS:1755:U:H2'	1:AS:1756:A:H5''	1.93	0.50
1:AS:2116:A:C4	38:CE:3:LYS:HB3	2.47	0.50
1:AS:2479:U:H5''	1:AS:2480:A:C2	2.47	0.50
44:CK:41:PHE:CG	44:CK:62:LYS:HD2	2.47	0.50
46:CM:140:U:H2'	46:CM:141:G:H8	1.77	0.50
46:CM:331:A:OP2	55:CV:31:ARG:NH1	2.30	0.50
46:CM:1129:U:H2'	46:CM:1130:U:C6	2.47	0.50
46:CM:1276:G:H22	46:CM:1309:G:H21	1.58	0.50
46:CM:1485:G:H2'	46:CM:1486:G:H8	1.76	0.50
48:CO:26:ARG:O	48:CO:50:ARG:HB2	2.11	0.50
49:CP:39:LEU:HG	49:CP:242:ALA:HB2	1.94	0.50
56:CW:55:ALA:O	56:CW:59:LEU:HG	2.12	0.50
57:CX:64:TYR:HB3	57:CX:66:TYR:CE1	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:CZ:57:ALA:HB3	59:CZ:124:LYS:HA	1.93	0.50
59:CZ:57:ALA:HB1	59:CZ:126:TRP:HZ3	1.77	0.50
62:DC:7:PRO:C	62:DC:8:LYS:HD2	2.36	0.50
71:DL:53:ASP:CG	71:DL:96:LEU:HD21	2.37	0.50
1:1:716:G:H3'	1:1:717:A:H5''	1.94	0.49
1:1:1021:A:O5'	1:1:1021:A:H8	1.94	0.49
1:1:1239:G:O2'	1:1:1240:A:H5'	2.12	0.49
1:1:1377:A:H2'	1:1:1378:G:C8	2.47	0.49
1:1:1684:U:H2'	1:1:1685:U:C6	2.47	0.49
1:1:1696:G:H2'	1:1:1697:C:C6	2.47	0.49
1:1:2469:A:H2'	80:11:207:LYS:HE2	1.94	0.49
1:1:2587:G:H2'	1:1:2588:C:H6	1.77	0.49
1:1:2740:U:H2'	1:1:2741:A:C8	2.47	0.49
1:1:3315:C:H2'	1:1:3316:U:H4'	1.94	0.49
4:j:36:GLU:OE2	4:j:163:ARG:NH1	2.44	0.49
12:r:49:CYS:HB3	12:r:168:SER:HB3	1.93	0.49
46:B:1468:C:H5''	46:B:1508:G:N2	2.27	0.49
55:K:121:LEU:HD22	55:K:163:ASP:OD1	2.12	0.49
57:M:5:LYS:HZ2	59:O:38:HIS:CG	2.29	0.49
59:O:63:CYS:HA	59:O:92:SER:HB3	1.93	0.49
62:R:97:TYR:HE1	62:R:102:PHE:CZ	2.30	0.49
1:AS:640:U:OP1	29:BV:22:ILE:HG23	2.12	0.49
1:AS:1019:U:H3	1:AS:1025:G:H1	1.60	0.49
1:AS:1065:C:H2'	1:AS:1066:U:H6	1.77	0.49
1:AS:1069:U:H2'	1:AS:1070:U:C6	2.46	0.49
1:AS:1176:A:C4	1:AS:1178:G:C8	3.00	0.49
1:AS:1225:G:H2'	1:AS:1226:G:C8	2.47	0.49
1:AS:1363:G:OP1	33:BZ:46:ARG:NH2	2.44	0.49
1:AS:2435:G:C6	1:AS:2439:A:N6	2.78	0.49
2:AT:115:G:H2'	2:AT:116:C:C6	2.46	0.49
6:AY:284:ASN:HB3	6:AY:290:LEU:HD11	1.94	0.49
20:BM:161:ALA:O	20:BM:165:ARG:HG3	2.12	0.49
46:CM:302:U:H2'	46:CM:303:C:C6	2.47	0.49
46:CM:1259:C:H5	46:CM:1413:A:C8	2.29	0.49
46:CM:1413:A:O2'	46:CM:1414:G:OP1	2.23	0.49
48:CO:30:PHE:CE1	48:CO:96:LEU:HD11	2.47	0.49
48:CO:59:ASP:OD1	48:CO:60:GLY:N	2.45	0.49
63:DD:49:GLU:O	63:DD:53:LEU:HG	2.12	0.49
74:DO:36:LYS:HB2	74:DO:78:SER:HG	1.77	0.49
80:L1:73:ASP:CG	80:L1:113:SER:HB2	2.37	0.49
1:1:783:G:H2'	1:1:784:C:H6	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1456:A:H2'	1:1:1457:A:C8	2.47	0.49
1:1:2174:C:H2'	1:1:2220:A:H61	1.76	0.49
1:1:3091:U:H4'	41:AN:28:PRO:HG2	1.94	0.49
2:3:112:G:H2'	2:3:113:C:C6	2.47	0.49
7:m:153:THR:HG22	7:m:179:ARG:HE	1.76	0.49
18:x:29:THR:HA	18:x:32:THR:HG22	1.94	0.49
46:B:987:G:N2	46:B:1747:G:O3'	2.44	0.49
46:B:1043:U:O2'	46:B:1045:U:OP2	2.30	0.49
46:B:1102:U:H2'	46:B:1103:G:C8	2.48	0.49
74:d:41:LEU:O	74:d:42:ASN:ND2	2.45	0.49
1:AS:19:A:H2'	1:AS:20:G:C8	2.46	0.49
1:AS:118:U:H4'	1:AS:119:G:H3'	1.94	0.49
1:AS:206:U:H2'	1:AS:207:C:H6	1.77	0.49
1:AS:411:U:H2'	1:AS:412:G:C8	2.47	0.49
1:AS:647:A:H2'	1:AS:648:C:C6	2.47	0.49
1:AS:981:U:H2'	1:AS:982:U:H6	1.77	0.49
1:AS:1190:G:H2'	1:AS:1191:A:C8	2.47	0.49
1:AS:1686:C:N4	23:BP:77:LYS:HZ1	2.10	0.49
1:AS:2136:A:H5'	1:AS:2138:G:O4'	2.13	0.49
1:AS:2405:U:H2'	1:AS:2406:U:C6	2.48	0.49
1:AS:2854:U:H2'	1:AS:2855:U:C6	2.47	0.49
1:AS:3021:A:C5	5:AX:75:ALA:HB2	2.47	0.49
1:AS:3179:U:H6	8:BA:166:LYS:HE2	1.76	0.49
15:BH:23:ASN:HD22	15:BH:23:ASN:C	2.13	0.49
27:BT:27:ARG:HH12	27:BT:76:LEU:HA	1.77	0.49
31:BX:20:ILE:HG13	31:BX:83:CYS:HA	1.93	0.49
33:BZ:22:HIS:CE1	33:BZ:25:ARG:HE	2.30	0.49
35:CB:58:ARG:CD	35:CB:59:PRO:HD2	2.32	0.49
46:CM:1220:C:H5	78:DS:180:ARG:NE	2.10	0.49
46:CM:1583:C:O2'	46:CM:1585:U:OP2	2.26	0.49
51:CR:17:HIS:O	51:CR:108:LYS:HG2	2.11	0.49
68:DI:58:TYR:OH	69:DJ:20:THR:HA	2.11	0.49
80:L1:6:SER:HA	80:L1:9:VAL:HB	1.94	0.49
80:l1:5:THR:O	80:l1:9:VAL:HG23	2.13	0.49
45:CL:129:LEU:HA	45:CL:132:GLU:OE1	2.12	0.49
1:1:647:A:OP2	1:1:2840:U:O2'	2.30	0.49
1:1:672:G:O6	19:y:56:LYS:NZ	2.45	0.49
1:1:896:G:H1'	1:1:1585:A:N6	2.27	0.49
1:1:1493:C:H2'	1:1:1494:A:H8	1.77	0.49
1:1:1655:U:O4	83:1:3968:PAR:H52	2.11	0.49
1:1:2345:A:H2'	1:1:2346:A:H8	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:2852:U:H1'	5:k:250:ALA:HB3	1.92	0.49
1:1:3038:U:H2'	1:1:3039:C:H6	1.77	0.49
2:3:77:G:H3'	21:0:46:GLN:O	2.12	0.49
5:k:217:VAL:HG11	5:k:328:ILE:HB	1.94	0.49
5:k:284:ARG:HH11	5:k:356:LEU:HD12	1.76	0.49
6:l:156:GLU:HG3	10:BC:120:GLY:C	2.37	0.49
7:m:160:PHE:O	7:m:163:LEU:HB3	2.11	0.49
8:n:20:THR:HG22	8:n:22:LYS:H	1.77	0.49
31:AD:26:THR:HG23	31:AD:95:LEU:HD11	1.94	0.49
36:AI:85:THR:HG23	36:AI:88:LEU:HD12	1.94	0.49
45:i:98:ASP:OD2	50:F:146:ALA:N	2.45	0.49
46:B:227:C:H2'	46:B:228:C:O4'	2.11	0.49
46:B:257:U:OP1	55:K:75:LYS:NZ	2.29	0.49
46:B:1741:A:H2'	46:B:1742:A:C8	2.48	0.49
52:H:206:SER:O	52:H:212:LYS:NZ	2.33	0.49
1:AS:546:C:H2'	1:AS:547:U:O4'	2.13	0.49
1:AS:813:A:H8	38:CE:15:SER:HG	1.59	0.49
1:AS:849:G:OP2	44:CK:2:THR:HG21	2.12	0.49
1:AS:1035:U:OP2	7:AZ:5:LYS:NZ	2.45	0.49
1:AS:1556:G:O2'	1:AS:1557:U:H5'	2.12	0.49
1:AS:1787:U:O4	83:AS:3790:PAR:H222	2.12	0.49
1:AS:1917:A:OP2	1:AS:1926:A:N6	2.45	0.49
1:AS:2404:U:H2'	1:AS:2405:U:C6	2.47	0.49
1:AS:2646:A:C2	13:BF:124:GLY:HA3	2.47	0.49
1:AS:2853:C:H2'	1:AS:2854:U:C6	2.48	0.49
1:AS:2959:A:H2'	1:AS:2960:C:C6	2.47	0.49
1:AS:3153:A:H2'	1:AS:3154:A:H8	1.77	0.49
1:AS:3302:G:H2'	1:AS:3303:C:C6	2.47	0.49
4:AW:117:GLU:HG2	4:AW:124:GLY:H	1.77	0.49
8:BA:170:ARG:HB3	8:BA:172:HIS:CE1	2.47	0.49
9:BB:139:LEU:HD13	9:BB:187:TYR:CD2	2.47	0.49
27:BT:60:ARG:HB2	27:BT:103:LYS:HB3	1.93	0.49
46:CM:708:A:H3'	46:CM:709:U:H5''	1.94	0.49
46:CM:1127:A:H2'	46:CM:1128:A:C8	2.47	0.49
46:CM:1351:U:O2'	66:DG:7:ARG:NH1	2.44	0.49
46:CM:1469:A:H2'	46:CM:1470:G:C8	2.47	0.49
47:CN:41:ARG:CD	47:CN:47:ILE:HD11	2.43	0.49
55:CV:190:LEU:HD22	55:CV:194:GLU:HG2	1.94	0.49
58:CY:8:GLN:NE2	58:CY:14:GLN:HB2	2.28	0.49
72:DM:36:ALA:HB1	72:DM:38:HIS:CE1	2.46	0.49
80:L1:70:ASP:HB3	80:L1:87:VAL:HG21	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:353:G:O2'	1:1:364:G:O6	2.24	0.49
1:1:483:U:H2'	1:1:484:U:N1	2.28	0.49
1:1:1389:A:N3	1:1:1415:A:O2'	2.45	0.49
1:1:1559:C:O2'	1:1:1560:U:OP1	2.26	0.49
10:p:158:VAL:O	10:p:161:ILE:HG13	2.12	0.49
22:2:83:ARG:NH2	22:2:85:ILE:HD11	2.28	0.49
33:AF:33:TRP:HH2	33:AF:53:GLN:HG2	1.78	0.49
46:B:1571:G:O2'	46:B:1597:G:O6	2.26	0.49
52:H:55:ASP:OD1	52:H:57:SER:OG	2.23	0.49
54:J:48:ASN:OD1	54:J:167:GLN:NE2	2.44	0.49
67:W:32:GLN:OE1	67:W:32:GLN:N	2.45	0.49
79:AR:16:HIS:NE2	79:AR:37:SER:HB3	2.28	0.49
79:AR:96:GLU:HG2	79:AR:97:THR:HG23	1.95	0.49
1:AS:208:A:H4'	1:AS:210:A:N7	2.27	0.49
1:AS:2196:G:OP1	37:CD:67:ARG:NH1	2.45	0.49
1:AS:2197:A:H2'	1:AS:2198:A:C8	2.47	0.49
12:BE:194:GLY:C	12:BE:196:TYR:H	2.20	0.49
15:BH:20:LEU:CD2	15:BH:23:ASN:HA	2.42	0.49
20:BM:95:TRP:CZ2	20:BM:99:LEU:HD22	2.48	0.49
21:BN:7:TYR:CE2	21:BN:34:THR:HG22	2.47	0.49
24:BQ:30:GLY:HA3	24:BQ:66:LYS:HE2	1.93	0.49
46:CM:1092:G:O2'	46:CM:1093:G:H5'	2.13	0.49
46:CM:1323:C:H1'	46:CM:1396:A:C5	2.47	0.49
46:CM:1436:U:H2'	46:CM:1437:C:H6	1.76	0.49
46:CM:1457:A:H2	46:CM:1460:G:N3	2.10	0.49
51:CR:88:ASP:OD1	51:CR:122:LYS:NZ	2.46	0.49
57:CX:86:ILE:HG13	57:CX:86:ILE:O	2.13	0.49
62:DC:25:LEU:HD12	62:DC:28:MET:HE2	1.93	0.49
65:DF:87:ASN:HB2	65:DF:99:HIS:ND1	2.28	0.49
66:DG:105:VAL:HB	66:DG:122:ARG:HD3	1.94	0.49
77:DR:50:THR:OG1	77:DR:53:LYS:HB2	2.11	0.49
79:DT:247:TYR:HB3	79:DT:262:LEU:HB2	1.94	0.49
80:l1:120:ILE:HB	80:l1:121:PRO:HD3	1.92	0.49
1:1:590:A:H5'	8:n:16:ALA:O	2.12	0.49
1:1:647:A:H2'	1:1:648:C:C6	2.48	0.49
1:1:972:U:H2'	1:1:973:C:O4'	2.12	0.49
1:1:1255:A:N3	1:1:1276:C:O2'	2.39	0.49
1:1:2407:G:H2'	1:1:2408:A:H8	1.77	0.49
5:k:283:TYR:CE2	5:k:325:LYS:HB2	2.47	0.49
15:u:19:VAL:HG11	15:u:55:ILE:HD12	1.95	0.49
20:z:96:MET:HE3	20:z:100:ARG:NH1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:O:79:LEU:HD13	21:O:110:LEU:HD21	1.94	0.49
28:AA:71:PHE:HA	28:AA:111:LYS:HE2	1.94	0.49
46:B:86:A:H5'	71:a:119:PHE:CE1	2.47	0.49
46:B:139:U:OP2	53:I:149:LYS:HE3	2.12	0.49
46:B:560:G:H2'	46:B:561:U:O2	2.12	0.49
46:B:1094:G:H1	46:B:1121:U:H3	1.59	0.49
46:B:1495:U:H2'	46:B:1496:C:C6	2.47	0.49
47:C:147:THR:CG2	47:C:159:ALA:HB1	2.43	0.49
50:F:158:MET:SD	50:F:188:LYS:HD2	2.52	0.49
54:J:166:GLN:HA	54:J:177:VAL:CG1	2.42	0.49
77:g:43:ARG:HG2	77:g:54:ARG:NH2	2.18	0.49
79:AR:179:ASP:OD2	79:AR:181:ALA:HB3	2.12	0.49
1:AS:242:C:O2'	1:AS:243:G:H8	1.95	0.49
1:AS:1434:U:H2'	1:AS:1435:U:C6	2.48	0.49
1:AS:1435:U:OP1	6:AY:88:GLN:HA	2.12	0.49
1:AS:1525:A:P	1:AS:1588:G:H22	2.36	0.49
1:AS:1655:U:H2'	1:AS:1656:C:C6	2.48	0.49
1:AS:1760:U:OP1	20:BM:43:LYS:HE2	2.12	0.49
7:AZ:288:LYS:O	7:AZ:292:GLU:HG2	2.11	0.49
15:BH:20:LEU:HD21	15:BH:23:ASN:HA	1.94	0.49
15:BH:52:LEU:HD13	21:BN:152:LEU:HD11	1.93	0.49
18:BK:30:ARG:NH1	18:BK:31:GLU:OE1	2.45	0.49
19:BL:123:THR:OG1	19:BL:125:ASP:OD1	2.28	0.49
46:CM:62:A:H8	46:CM:285:G:H21	1.60	0.49
46:CM:184:C:H2'	46:CM:185:G:O4'	2.12	0.49
46:CM:1016:U:H4'	46:CM:1017:G:OP2	2.12	0.49
46:CM:1376:U:C5	64:DE:3:ARG:HG3	2.47	0.49
61:DB:47:ARG:HG3	61:DB:48:ASP:OD1	2.13	0.49
62:DC:68:GLU:N	62:DC:69:PRO:HD3	2.28	0.49
45:CL:53:LYS:C	45:CL:55:LYS:H	2.20	0.49
1:1:364:G:OP1	6:l:61:THR:HG23	2.13	0.49
1:1:409:A:H61	3:4:15:G:H1'	1.77	0.49
1:1:631:U:H2'	1:1:632:C:C6	2.48	0.49
1:1:712:G:N2	29:AB:72:GLU:OE1	2.44	0.49
1:1:942:U:H2'	1:1:943:G:H8	1.76	0.49
1:1:1233:G:H2'	1:1:1234:C:H6	1.78	0.49
1:1:2236:U:C2	1:1:2237:A:C8	3.00	0.49
1:1:2239:G:H21	1:1:2240:A:N6	2.09	0.49
1:1:2520:A:H1'	1:1:2521:C:H5	1.77	0.49
1:1:2608:A:H5''	1:1:2609:A:H5'	1.93	0.49
18:x:42:GLU:HG2	18:x:43:LYS:N	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:562:G:O2'	46:B:575:G:H4'	2.12	0.49
46:B:857:G:N2	46:B:1032:G:H4'	2.28	0.49
46:B:1238:U:H2'	46:B:1239:U:H6	1.77	0.49
46:B:1300:U:O2	64:T:4:VAL:HG11	2.13	0.49
46:B:1484:U:C2	46:B:1485:G:C8	3.01	0.49
46:B:1502:A:O2'	46:B:1504:U:OP2	2.24	0.49
46:B:1552:C:H2'	46:B:1553:U:H6	1.78	0.49
51:G:31:PRO:HD2	51:G:38:LEU:HD11	1.94	0.49
60:P:56:ASP:OD1	74:d:50:ALA:HA	2.13	0.49
62:R:13:LYS:HD3	62:R:14:GLN:N	2.27	0.49
63:S:2:SER:OG	63:S:3:THR:N	2.46	0.49
63:S:19:ALA:HA	63:S:66:VAL:HG12	1.95	0.49
64:T:71:PHE:HE1	64:T:74:GLN:HB2	1.77	0.49
1:AS:206:U:H2'	1:AS:207:C:C6	2.47	0.49
1:AS:730:A:H8	1:AS:733:A:H62	1.61	0.49
1:AS:1204:U:H5	41:CH:32:THR:HG21	1.75	0.49
1:AS:1870:A:OP2	20:BM:21:LYS:NZ	2.45	0.49
1:AS:2557:G:N3	1:AS:2557:G:H2'	2.28	0.49
1:AS:2936:G:N2	1:AS:2939:A:OP2	2.41	0.49
1:AS:2978:A:H2'	1:AS:2979:U:O4'	2.13	0.49
1:AS:2995:U:H2'	1:AS:2996:A:H8	1.78	0.49
1:AS:3168:U:C4	1:AS:3169:C:N4	2.80	0.49
2:AT:47:C:OP1	7:AZ:95:TRP:N	2.45	0.49
3:AU:66:A:H61	3:AU:93:U:H3	1.60	0.49
7:AZ:134:ALA:HA	7:AZ:141:PRO:HD3	1.94	0.49
12:BE:144:ASN:O	12:BE:148:VAL:HG23	2.12	0.49
24:BQ:75:PRO:HG2	24:BQ:103:VAL:O	2.11	0.49
37:CD:2:ALA:O	37:CD:11:ASN:ND2	2.40	0.49
39:CF:8:ILE:O	39:CF:12:VAL:HG23	2.12	0.49
46:CM:558:U:H2'	46:CM:559:G:C8	2.46	0.49
46:CM:1543:A:H1'	46:CM:1547:U:OP2	2.13	0.49
47:CN:41:ARG:HB3	47:CN:43:ASP:OD1	2.12	0.49
47:CN:205:ARG:HD2	47:CN:209:GLU:CG	2.42	0.49
49:CP:74:ASP:OD2	49:CP:181:ARG:NE	2.36	0.49
54:CU:69:VAL:HG12	54:CU:72:ARG:NH2	2.28	0.49
58:CY:44:THR:HG23	58:CY:60:PHE:CD1	2.46	0.49
68:DI:36:ILE:HG13	68:DI:51:ILE:HB	1.95	0.49
68:DI:37:ALA:HA	68:DI:50:ASN:OD1	2.13	0.49
71:DL:63:GLN:OE1	71:DL:68:LYS:HD3	2.13	0.49
80:11:6:SER:O	80:11:10:ARG:HG3	2.12	0.49
1:1:429:U:H4'	34:AG:88:ASN:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:487:C:H2'	1:1:488:G:O4'	2.12	0.49
1:1:1065:C:H2'	1:1:1066:U:H6	1.78	0.49
1:1:1191:A:H2'	1:1:1305:U:O2	2.12	0.49
1:1:2322:U:H2'	1:1:2323:A:H8	1.77	0.49
1:1:2529:U:OP1	35:AH:102:LYS:NZ	2.34	0.49
9:o:82:VAL:HG21	9:o:134:TYR:HD2	1.78	0.49
46:B:119:A:H1'	46:B:395:A:C5	2.47	0.49
46:B:655:U:H5'	46:B:676:G:N1	2.27	0.49
46:B:1298:A:N3	46:B:1300:U:H5'	2.28	0.49
46:B:1350:C:H5''	63:S:27:LEU:HD22	1.94	0.49
51:G:19:MET:HE2	51:G:108:LYS:HG2	1.94	0.49
51:G:150:PRO:O	53:I:208:TYR:HE1	1.96	0.49
53:I:48:TYR:OH	53:I:119:ASN:O	2.16	0.49
57:M:5:LYS:NZ	59:O:38:HIS:CG	2.81	0.49
75:e:42:ARG:NH1	75:e:58:GLU:O	2.45	0.49
1:AS:157:G:H2'	1:AS:158:A:H8	1.76	0.49
1:AS:527:G:H2'	1:AS:528:A:C8	2.48	0.49
1:AS:1313:A:O2'	1:AS:1314:A:H3'	2.13	0.49
1:AS:2956:C:H2'	1:AS:2957:C:H6	1.78	0.49
1:AS:3172:U:N3	21:BN:164:GLN:OE1	2.45	0.49
1:AS:3285:A:H2'	1:AS:3286:C:H6	1.78	0.49
3:AU:94:C:OP1	38:CE:75:LYS:NZ	2.46	0.49
10:BC:59:LEU:HD21	16:BI:33:LYS:HE2	1.94	0.49
16:BI:27:CYS:SG	16:BI:124:ASP:HB3	2.53	0.49
46:CM:17:C:H2'	46:CM:18:C:H6	1.78	0.49
46:CM:417:G:O5'	53:CT:72:ARG:NH2	2.46	0.49
46:CM:685:C:O2'	46:CM:686:G:OP1	2.30	0.49
57:CX:14:TYR:OH	57:CX:34:GLU:OE1	2.28	0.49
63:DD:28:ILE:HG22	63:DD:35:ILE:HG21	1.94	0.49
80:l1:12:ASN:ND2	80:l1:216:ILE:HD12	2.27	0.49
80:l1:113:SER:OG	80:l1:114:GLU:N	2.42	0.49
1:1:58:G:H2'	3:4:33:A:O2'	2.13	0.49
1:1:648:C:H2'	1:1:649:G:C8	2.48	0.49
1:1:2068:U:H4'	1:1:2069:U:H5'	1.94	0.49
1:1:2146:A:C6	1:1:2148:U:H1'	2.48	0.49
1:1:2196:G:H2'	1:1:2197:A:C8	2.47	0.49
1:1:2384:C:H2'	1:1:2385:C:H6	1.77	0.49
3:4:111:A:C6	38:AK:29:VAL:HG11	2.48	0.49
25:7:46:PRO:HG2	25:7:54:LEU:HD22	1.95	0.49
42:AO:22:ALA:HA	42:AO:25:LYS:HG3	1.94	0.49
45:i:90:ARG:NH1	46:B:1412:C:H3'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:55:A:OP1	71:a:112:LYS:NZ	2.43	0.49
46:B:721:C:O2'	46:B:722:A:H8	1.95	0.49
46:B:747:A:OP1	56:L:79:ARG:NH2	2.43	0.49
46:B:1029:U:H2'	46:B:1030:C:C6	2.47	0.49
46:B:1068:G:O2'	46:B:1079:G:O2'	2.24	0.49
46:B:1160:U:H2'	46:B:1161:G:H8	1.77	0.49
46:B:1596:U:H5''	63:S:74:VAL:HB	1.95	0.49
48:D:82:ARG:NH2	48:D:191:GLU:OE2	2.46	0.49
52:H:57:SER:HA	75:e:53:ILE:HB	1.94	0.49
53:I:68:MET:O	53:I:69:HIS:ND1	2.46	0.49
59:O:103:LEU:O	59:O:104:CYS:HB2	2.12	0.49
71:a:121:THR:HG22	71:a:123:ARG:H	1.78	0.49
1:AS:634:C:O2	1:AS:2355:G:O2'	2.25	0.49
1:AS:1090:A:C2	1:AS:1092:U:H2'	2.48	0.49
1:AS:1478:A:H4'	1:AS:1479:G:OP2	2.13	0.49
1:AS:1502:A:H1'	1:AS:1844:G:O6	2.13	0.49
1:AS:1524:G:O2'	1:AS:1584:A:N3	2.34	0.49
1:AS:2135:G:N2	1:AS:2155:G:O2'	2.46	0.49
1:AS:2475:U:H2'	1:AS:2476:C:H5	1.78	0.49
1:AS:3158:G:H3'	1:AS:3159:A:H8	1.77	0.49
1:AS:3249:G:H2'	1:AS:3250:C:C6	2.48	0.49
3:AU:75:G:OP2	27:BT:74:TYR:OH	2.26	0.49
10:BC:158:VAL:HG21	10:BC:164:VAL:HG22	1.95	0.49
21:BN:109:ASP:OD1	21:BN:113:ARG:NH1	2.40	0.49
37:CD:65:GLU:O	37:CD:69[B]:LYS:HG3	2.13	0.49
46:CM:78:A:H2'	46:CM:79:C:H6	1.76	0.49
46:CM:904:A:O4'	61:DB:30:GLY:HA3	2.13	0.49
46:CM:1237:C:O4'	78:DS:175:ALA:HB2	2.12	0.49
46:CM:1281:A:OP1	47:CN:138:TYR:OH	2.28	0.49
46:CM:1610:C:H2'	46:CM:1611:C:H6	1.78	0.49
47:CN:180:GLU:OE2	47:CN:183:ARG:NH1	2.45	0.49
52:CS:39:GLU:HG2	52:CS:40:VAL:N	2.27	0.49
61:DB:124:LYS:HG3	61:DB:125:GLY:N	2.27	0.49
62:DC:34:THR:HG21	62:DC:45:PHE:CD2	2.48	0.49
71:DL:132:ARG:HA	71:DL:132:ARG:NE	2.25	0.49
1:1:127:G:OP2	36:AI:74:LYS:NZ	2.46	0.49
1:1:1902:G:H1'	1:1:1904:A:N6	2.28	0.49
1:1:3352:U:H2'	1:1:3353:C:C6	2.47	0.49
5:k:50:LYS:NZ	5:k:328:ILE:O	2.46	0.49
9:o:185:GLU:HG2	9:o:196:VAL:HG21	1.95	0.49
13:s:109:HIS:ND1	13:s:114:ILE:HD11	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:6:38:ALA:O	24:6:58:VAL:HG13	2.12	0.49
33:AF:103:SER:O	33:AF:107:VAL:HG23	2.13	0.49
46:B:25:C:H4'	46:B:26:A:O5'	2.12	0.49
46:B:452:A:O4'	51:G:66:MET:HG3	2.12	0.49
46:B:558:U:H2'	46:B:559:G:H8	1.77	0.49
46:B:589:A:P	77:g:43:ARG:HH22	2.35	0.49
46:B:1198:G:N2	46:B:1436:U:O2	2.33	0.49
54:J:25:GLU:HB2	54:J:31:LYS:HG3	1.95	0.49
72:b:61:SER:H	72:b:64:VAL:HB	1.78	0.49
73:c:25:ASN:CB	73:c:77:CYS:SG	3.01	0.49
1:AS:438:A:C8	33:BZ:3:THR:HG23	2.48	0.49
1:AS:975:U:H4'	1:AS:976:A:O4'	2.12	0.49
1:AS:1124:U:H2'	1:AS:1125:A:O4'	2.13	0.49
1:AS:1444:U:H5''	18:BK:66:SER:O	2.13	0.49
1:AS:2408:A:H2'	1:AS:2409:C:C6	2.48	0.49
1:AS:3318:G:C6	1:AS:3321:G:C5	3.01	0.49
6:AY:17:GLY:O	6:AY:18:SER:OG	2.30	0.49
8:BA:91:ASN:O	8:BA:148:GLU:HG2	2.13	0.49
12:BE:184:LYS:HG2	12:BE:189:GLU:OE1	2.13	0.49
36:CC:105:ARG:HG3	36:CC:108:ARG:HH21	1.76	0.49
46:CM:623:C:H2'	46:CM:624:U:C6	2.48	0.49
46:CM:702:G:O3'	46:CM:703:U:H4'	2.12	0.49
46:CM:1648:U:H2'	46:CM:1649:G:H8	1.78	0.49
53:CT:218:GLU:CD	53:CT:219:ARG:HH22	2.20	0.49
54:CU:30:LEU:HD12	54:CU:34:LEU:HD21	1.95	0.49
64:DE:99:GLN:HB2	64:DE:118:PRO:O	2.11	0.49
79:DT:199:ILE:HD11	79:DT:208:CYS:SG	2.53	0.49
80:L1:205:VAL:HG11	80:L1:213:SER:HB2	1.95	0.49
1:1:591:C:OP2	8:n:18:LYS:HG2	2.13	0.49
1:1:2404:U:H2'	1:1:2405:U:C6	2.48	0.49
1:1:2869:A:OP2	41:AN:48:LYS:NZ	2.33	0.49
1:1:2889:G:OP1	24:6:47:ASN:N	2.34	0.49
1:1:2899:C:H2'	1:1:2900:C:H6	1.77	0.49
1:1:2938:G:H2'	1:1:2939:A:C8	2.48	0.49
1:1:3180:A:O2'	1:1:3224:U:N3	2.40	0.49
2:3:29:C:H4'	13:s:9:MET:HE1	1.93	0.49
2:3:43:U:OP1	13:s:137:ARG:HD2	2.12	0.49
8:n:170:ARG:HB3	8:n:172:HIS:CE1	2.48	0.49
18:x:103:GLU:OE2	18:x:109:SER:OG	2.29	0.49
25:7:114:GLU:O	25:7:117:LYS:HB3	2.13	0.49
46:B:110:U:OP1	46:B:738:A:O2'	2.24	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:236:U:H3'	46:B:238:U:OP1	2.12	0.49
46:B:797:U:H5'	60:P:76:LYS:HZ3	1.78	0.49
46:B:1399:U:O2'	46:B:1400:U:OP1	2.28	0.49
61:Q:20:ASP:OD1	61:Q:21:THR:N	2.45	0.49
70:Z:3:LYS:HD2	70:Z:7:ARG:HH21	1.77	0.49
1:AS:112:C:P	16:BI:147:ARG:HH21	2.35	0.49
1:AS:314:U:H2'	1:AS:315:C:C6	2.48	0.49
1:AS:337:G:O4'	6:AY:49:GLN:NE2	2.46	0.49
1:AS:1637:U:O2'	1:AS:1638:A:H3'	2.11	0.49
1:AS:3064:C:O2'	1:AS:3066:A:OP2	2.21	0.49
1:AS:3161:U:H2'	1:AS:3162:U:H6	1.78	0.49
3:AU:26:U:H2'	3:AU:27:U:C6	2.48	0.49
4:AW:132:ASN:ND2	4:AW:151:PRO:HB3	2.28	0.49
17:BJ:122:PRO:HA	17:BJ:125:LEU:HD12	1.93	0.49
21:BN:49:HIS:CD2	21:BN:50:LYS:H	2.31	0.49
46:CM:702:G:H1'	46:CM:703:U:H4'	1.95	0.49
46:CM:770:C:OP1	46:CM:770:C:H6	1.95	0.49
46:CM:985:C:H5	46:CM:988:A:H5''	1.78	0.49
46:CM:1165:C:O2'	62:DC:128:HIS:ND1	2.41	0.49
46:CM:1326:A:O2'	79:DT:103:ARG:NH1	2.46	0.49
52:CS:145:ASP:OD1	52:CS:146:SER:N	2.46	0.49
52:CS:174:LEU:HB3	52:CS:210:ALA:CB	2.43	0.49
80:11:57:GLN:O	80:11:59:PRO:HD3	2.11	0.49
80:11:156:LYS:HG2	80:11:157:PHE:H	1.78	0.49
45:CL:98:ASP:N	45:CL:98:ASP:OD1	2.43	0.49
1:1:69:A:N1	1:1:313:A:O2'	2.42	0.48
1:1:1249:U:OP2	1:1:1249:U:H2'	2.13	0.48
1:1:2472:A:H3'	1:1:2473:C:H5''	1.95	0.48
1:1:2628:A:C8	1:1:2630:G:C8	3.01	0.48
1:1:3103:U:H2'	1:1:3104:C:C6	2.48	0.48
3:4:10:A:H2'	3:4:11:C:C6	2.48	0.48
23:5:13:LYS:HD2	23:5:15:PHE:CZ	2.48	0.48
24:6:121:GLU:OE1	24:6:121:GLU:N	2.46	0.48
46:B:180:A:H2'	46:B:181:U:H6	1.78	0.48
47:C:157:ASP:O	68:X:66:ASP:HA	2.13	0.48
50:F:69:GLU:O	57:M:20:VAL:HG11	2.13	0.48
50:F:76:LYS:NZ	57:M:18:GLU:HG2	2.28	0.48
51:G:139:VAL:HG23	51:G:150:PRO:HG3	1.94	0.48
52:H:109:LYS:HE2	52:H:109:LYS:HB2	1.55	0.48
57:M:11:ILE:HD11	57:M:37:THR:HG21	1.94	0.48
57:M:77:ARG:HG3	57:M:86:ILE:CG2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:T:71:PHE:CE1	64:T:74:GLN:HB2	2.48	0.48
1:AS:307:A:H2'	1:AS:308:A:H8	1.78	0.48
1:AS:428:U:H2'	1:AS:429:U:C6	2.47	0.48
1:AS:755:U:H2'	1:AS:756:G:O4'	2.13	0.48
1:AS:780:A:OP2	19:BL:69:ARG:NH2	2.45	0.48
1:AS:1025:G:C2	1:AS:1026:A:C8	3.01	0.48
1:AS:1209:G:H4'	21:BN:90:MET:HB2	1.95	0.48
1:AS:3129:C:H2'	1:AS:3130:C:C6	2.48	0.48
19:BL:158:HIS:HE1	19:BL:186:VAL:HG12	1.76	0.48
21:BN:132:THR:O	21:BN:141:LYS:NZ	2.46	0.48
23:BP:104:ASN:HA	23:BP:106:TYR:CZ	2.48	0.48
46:CM:914:A:O4'	61:DB:119:ASP:HB3	2.12	0.48
50:CQ:140:SER:O	50:CQ:184:GLY:N	2.43	0.48
52:CS:200:ASN:HB3	52:CS:208:SER:HB3	1.95	0.48
60:DA:29:SER:O	60:DA:33:VAL:HG23	2.13	0.48
79:DT:242:PHE:CE1	79:DT:249:LEU:HD13	2.48	0.48
1:1:1012:U:H4'	1:1:1013:U:H4'	1.95	0.48
1:1:1356:U:O4'	6:l:308:GLN:HB2	2.12	0.48
1:1:1719:A:OP1	20:z:128:LYS:NZ	2.47	0.48
1:1:1937:C:H2'	1:1:1938:U:C6	2.48	0.48
1:1:2946:U:H2'	1:1:2947:U:C6	2.48	0.48
2:3:11:A:N1	2:3:67:G:O2'	2.44	0.48
3:4:78:G:H2'	3:4:79:A:N3	2.27	0.48
6:l:143:VAL:HG11	6:l:149:LEU:HD11	1.95	0.48
16:v:96:LYS:HD2	16:v:100:SER:CB	2.43	0.48
19:y:147:ARG:HB3	19:y:150:VAL:HG23	1.95	0.48
36:AI:118:ILE:HG22	36:AI:119:LYS:N	2.28	0.48
46:B:1127:A:H2'	46:B:1128:A:C8	2.48	0.48
46:B:1167:U:H4'	62:R:124:THR:HG23	1.95	0.48
46:B:1205:C:H2'	46:B:1206:A:H8	1.76	0.48
46:B:1215:A:H2	46:B:1243:U:O2	1.95	0.48
46:B:1512:A:H4'	66:V:83:ALA:HB2	1.96	0.48
50:F:143:LEU:HD11	50:F:183:LEU:HD11	1.95	0.48
59:O:38:HIS:CE1	59:O:43:ARG:NE	2.81	0.48
1:AS:169:G:C6	1:AS:249:G:H1'	2.48	0.48
1:AS:284:A:P	43:CJ:41:ARG:HH21	2.36	0.48
1:AS:1761:U:C5	20:BM:43:LYS:HE3	2.48	0.48
1:AS:2852:U:OP1	24:BQ:47:ASN:ND2	2.44	0.48
3:AU:140:G:O3'	16:BI:109:ARG:NH1	2.46	0.48
46:CM:4:C:H5	46:CM:20:G:H1	1.61	0.48
46:CM:341:C:H2'	46:CM:342:A:H8	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:714:G:H2'	46:CM:715:G:C4	2.48	0.48
46:CM:1128:A:O2'	46:CM:1285:A:N1	2.44	0.48
53:CT:102:VAL:HG13	53:CT:106:LEU:HD12	1.93	0.48
1:1:234:A:H2'	1:1:235:G:O4'	2.13	0.48
1:1:2375:A:H8	1:1:2913:A:N1	2.11	0.48
1:1:3060:G:OP1	5:k:313:ARG:NH1	2.46	0.48
1:1:3123:U:H4'	1:1:3259:A:H1'	1.94	0.48
45:i:65:LYS:HG2	65:U:120:ARG:HB3	1.95	0.48
46:B:473:A:OP1	56:L:126:ARG:HD3	2.14	0.48
46:B:655:U:P	46:B:676:G:H22	2.36	0.48
46:B:1783:C:OP2	73:c:5:ARG:NH2	2.46	0.48
52:H:51:VAL:HG21	52:H:130:ILE:HG13	1.93	0.48
57:M:76:LEU:O	57:M:80:LEU:HB2	2.13	0.48
61:Q:117:PRO:HB2	61:Q:119:ASP:HA	1.95	0.48
77:g:50:THR:O	77:g:53:LYS:HB2	2.13	0.48
1:AS:1141:G:O6	1:AS:1154:A:H2	1.96	0.48
1:AS:1189:A:P	17:BJ:50:ARG:HH22	2.36	0.48
1:AS:2432:G:H5'	1:AS:2433:U:OP2	2.13	0.48
1:AS:3195:G:H4'	15:BH:125:LYS:HZ3	1.78	0.48
6:AY:300:VAL:HB	19:BL:39:ARG:HG2	1.95	0.48
9:BB:158:ARG:HE	9:BB:201:TRP:CD1	2.30	0.48
10:BC:98:TYR:CE2	10:BC:204:VAL:HG12	2.48	0.48
14:BG:2:ALA:HB1	29:BV:33:GLY:O	2.14	0.48
24:BQ:17:LEU:HD13	24:BQ:23:MET:HE2	1.95	0.48
46:CM:226:G:C6	46:CM:819:G:C4	3.01	0.48
46:CM:481:A:N1	46:CM:503:A:N6	2.61	0.48
46:CM:728:U:OP1	54:CU:103:ARG:HA	2.12	0.48
46:CM:1259:C:C5	46:CM:1413:A:C8	3.02	0.48
46:CM:1417:C:O2'	46:CM:1423:U:O4	2.16	0.48
51:CR:36:HIS:CG	51:CR:85:GLY:HA3	2.48	0.48
53:CT:137:ARG:HD3	53:CT:177:ARG:HD2	1.95	0.48
54:CU:137:ARG:HA	69:DJ:51:GLU:HG3	1.95	0.48
60:DA:67:THR:OG1	60:DA:68:GLY:N	2.45	0.48
67:DH:21:ILE:HD13	67:DH:99:VAL:HG21	1.94	0.48
79:DT:82:LEU:HD12	79:DT:116:ILE:HG22	1.94	0.48
45:CL:67:LYS:HG3	45:CL:69:PHE:HD2	1.78	0.48
1:1:1239:G:OP2	1:1:1239:G:H8	1.96	0.48
1:1:2329:U:H2'	1:1:2330:A:H8	1.78	0.48
1:1:2443:G:H5''	1:1:2443:G:H8	1.78	0.48
1:1:3280:G:OP2	5:k:116:ARG:NH2	2.46	0.48
1:1:3316:U:H3	55:K:110:ARG:HH22	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:l:359:GLU:OE2	21:o:8:GLN:NE2	2.40	0.48
7:m:85:ARG:NH1	7:m:252:SER:O	2.30	0.48
9:o:135:GLY:HA3	9:o:233:ILE:HB	1.96	0.48
23:5:16:VAL:HG12	23:5:65:VAL:HG22	1.95	0.48
45:i:99:SER:OG	46:B:574:G:OP2	2.19	0.48
46:B:827:C:H5''	46:B:828:U:OP2	2.13	0.48
46:B:1318:C:H2'	46:B:1319:U:C6	2.49	0.48
66:V:64:HIS:O	66:V:68:ARG:HD3	2.13	0.48
79:AR:202:SER:O	79:AR:204:ASP:N	2.45	0.48
1:AS:631:U:H2'	1:AS:632:C:C6	2.49	0.48
1:AS:1580:U:H2'	1:AS:1581:C:C6	2.47	0.48
1:AS:3313:G:O6	1:AS:3322:U:O4	2.31	0.48
5:AX:57:VAL:HG22	5:AX:73:VAL:HG22	1.96	0.48
5:AX:293:ASN:HB2	5:AX:304:THR:HA	1.95	0.48
46:CM:12:U:HO2'	46:CM:1284:G:HO2'	1.61	0.48
46:CM:691:U:H5'	46:CM:692:U:H5''	1.95	0.48
46:CM:728:U:OP1	54:CU:104:LYS:N	2.45	0.48
46:CM:1378:U:H2'	46:CM:1379:C:C6	2.48	0.48
46:CM:1656:U:H2'	46:CM:1657:G:O4'	2.14	0.48
54:CU:37:LEU:HD22	54:CU:66:TYR:CE1	2.48	0.48
65:DF:126:ARG:CZ	65:DF:131:LEU:HD11	2.43	0.48
80:l:1:35:GLN:N	80:l:1:205:VAL:O	2.40	0.48
1:1:362:U:O4	38:AK:24:ARG:NH2	2.46	0.48
1:1:1756:A:C2	1:1:1759:U:H5	2.32	0.48
1:1:2458:G:H2'	1:1:2458:G:N3	2.29	0.48
1:1:2584:U:H2'	1:1:2585:U:O4'	2.14	0.48
1:1:2742:G:H5''	43:AP:79:THR:HG23	1.95	0.48
1:1:2874:A:H2'	1:1:2875:A:O4'	2.13	0.48
2:3:64:A:N6	12:r:200:LEU:HD21	2.28	0.48
7:m:96:SER:OG	7:m:198:TYR:O	2.31	0.48
11:q:10:LEU:HD23	11:q:11:ASP:N	2.28	0.48
16:v:68:ARG:HG2	16:v:128:LYS:HG3	1.96	0.48
20:z:23:TRP:CE3	20:z:51:VAL:HG12	2.49	0.48
46:B:644:U:H2'	46:B:645:G:H8	1.78	0.48
46:B:722:A:O2'	46:B:723:G:H8	1.95	0.48
46:B:1512:A:H2'	46:B:1513:A:C8	2.48	0.48
47:C:183:ARG:NH2	47:C:191:ARG:O	2.47	0.48
50:F:24:GLU:OE1	57:M:61:TRP:NE1	2.46	0.48
52:H:43:PHE:HE1	52:H:70:VAL:HG23	1.78	0.48
79:AR:135:TRP:HA	79:AR:140:GLU:O	2.14	0.48
1:AS:117:U:C5	1:AS:122:A:N6	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:1656:C:H2'	1:AS:1657:G:C8	2.49	0.48
1:AS:2391:A:H2'	1:AS:2392:G:H8	1.77	0.48
5:AX:210:GLU:HB2	5:AX:213:GLU:HG3	1.95	0.48
7:AZ:257:GLU:CD	7:AZ:257:GLU:H	2.22	0.48
10:BC:117:ILE:HG12	10:BC:122:THR:O	2.13	0.48
13:BF:109:HIS:HD2	13:BF:123:TYR:H	1.62	0.48
16:BI:65:ARG:HG2	16:BI:127:TYR:CD1	2.48	0.48
17:BJ:160:LYS:O	17:BJ:163:VAL:HG12	2.14	0.48
18:BK:123:PRO:O	18:BK:143:PRO:HG2	2.14	0.48
29:BV:38:GLN:O	29:BV:42:ARG:NH2	2.41	0.48
44:CK:46:THR:OG1	44:CK:57:CYS:SG	2.69	0.48
46:CM:415:A:H5'	46:CM:416:G:C5	2.48	0.48
46:CM:1740:A:H2'	46:CM:1741:A:C8	2.48	0.48
51:CR:100:ARG:HB2	51:CR:114:ILE:HD13	1.95	0.48
54:CU:150:LEU:HB2	54:CU:181:ILE:HG12	1.95	0.48
55:CV:65:PHE:CZ	55:CV:78:ILE:HD11	2.48	0.48
57:CX:62:GLN:OE1	76:DQ:20:GLN:NE2	2.47	0.48
60:DA:99:ARG:NH2	60:DA:119:GLU:OE2	2.46	0.48
79:DT:168:SER:HB3	79:DT:178:TRP:HE1	1.79	0.48
17:w:28:ILE:HD11	17:w:89:ILE:HD11	1.94	0.48
33:AF:42:CYS:HB2	33:AF:47:PHE:HD2	1.77	0.48
43:AP:65:THR:OG1	43:AP:87:ARG:HB3	2.14	0.48
46:B:94:U:H2'	46:B:95:G:O4'	2.13	0.48
46:B:965:G:H4'	46:B:1763:A:H4'	1.95	0.48
46:B:1045:U:H2'	46:B:1046:A:O4'	2.14	0.48
46:B:1102:U:H2'	46:B:1103:G:H8	1.79	0.48
46:B:1306:A:H4'	46:B:1307:A:O5'	2.13	0.48
55:K:121:LEU:HD13	55:K:166:PHE:CE2	2.48	0.48
60:P:92:ILE:HG12	60:P:122:ILE:HD13	1.94	0.48
64:T:75:GLU:HB2	64:T:76:GLU:OE1	2.14	0.48
1:AS:138:G:H2'	1:AS:139:U:C6	2.47	0.48
1:AS:282:G:H2'	1:AS:286:U:O4'	2.13	0.48
1:AS:374:A:N3	1:AS:376:G:H5''	2.29	0.48
1:AS:481:G:HO2'	1:AS:482:U:H6	1.59	0.48
1:AS:1747:G:H5'	39:CF:26:LYS:HE2	1.95	0.48
1:AS:3019:U:O2'	1:AS:3020:A:H5'	2.13	0.48
12:BE:150:GLU:O	12:BE:154:ARG:HG3	2.13	0.48
25:BR:97:LYS:O	25:BR:101:ARG:HG3	2.13	0.48
32:BY:15:LEU:HD12	32:BY:70:MET:HG3	1.95	0.48
46:CM:66:U:C5'	53:CT:173:PRO:HA	2.43	0.48
46:CM:108:A:H2'	46:CM:109:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:913:U:H2'	46:CM:930:U:OP2	2.13	0.48
46:CM:1253:G:H1'	46:CM:1434:G:H4'	1.95	0.48
46:CM:1716:C:H2'	46:CM:1717:A:O4'	2.13	0.48
47:CN:6:SER:O	47:CN:191:ARG:NH1	2.46	0.48
54:CU:29:ASP:OD1	54:CU:30:LEU:N	2.46	0.48
57:CX:17:GLN:CG	45:CL:156:ALA:HB1	2.42	0.48
59:CZ:59:LEU:HD22	59:CZ:133:ARG:NH1	2.29	0.48
67:DH:29:LYS:HZ1	67:DH:110:GLY:HA3	1.78	0.48
79:DT:29:HIS:C	79:DT:31:ASP:H	2.20	0.48
79:DT:62:PHE:HB3	79:DT:93:TRP:CE3	2.49	0.48
1:1:173:C:H2'	1:1:174:C:H6	1.78	0.48
1:1:981:U:H2'	1:1:982:U:H6	1.77	0.48
1:1:1477:A:N3	35:AH:4:ARG:NH1	2.61	0.48
46:B:338:U:H2'	46:B:339:A:C8	2.49	0.48
46:B:1232:U:H2'	46:B:1233:C:H6	1.79	0.48
46:B:1242:U:O2	46:B:1242:U:H2'	2.13	0.48
48:D:59:ASP:OD1	48:D:60:GLY:N	2.47	0.48
49:E:33:VAL:HG22	49:E:60:GLU:OE2	2.13	0.48
49:E:168:PRO:HG3	56:L:57:ARG:HD3	1.96	0.48
59:O:52:LEU:HG	59:O:122:VAL:HG21	1.94	0.48
79:AR:302:TYR:HE2	79:AR:308:ARG:HD2	1.76	0.48
1:AS:1674:G:OP2	23:BP:80:LYS:NZ	2.41	0.48
1:AS:2641:G:OP2	45:CL:50:LYS:NZ	2.39	0.48
1:AS:2719:A:H2'	1:AS:2720:A:C8	2.48	0.48
2:AT:39:U:O2'	13:BF:43:GLN:HB3	2.13	0.48
6:AY:4:ARG:HH22	6:AY:24:PRO:C	2.20	0.48
6:AY:40:PHE:CD2	6:AY:243:ALA:HB2	2.48	0.48
16:BI:88:GLY:HA3	43:CJ:50:TYR:CE2	2.49	0.48
19:BL:125:ASP:OD1	19:BL:126:GLN:N	2.46	0.48
34:CA:8:TYR:CE2	34:CA:99:ARG:HD3	2.49	0.48
46:CM:165:U:C2'	46:CM:166:A:H5''	2.44	0.48
46:CM:261:C:O2'	46:CM:262:G:H5'	2.13	0.48
46:CM:442:C:OP2	71:DL:105:ARG:HD2	2.14	0.48
46:CM:518:A:O2'	46:CM:519:A:OP1	2.26	0.48
46:CM:647:C:HO2'	46:CM:648:U:H6	1.61	0.48
46:CM:736:G:H2'	46:CM:737:A:C8	2.49	0.48
46:CM:1132:A:H2'	46:CM:1133:C:C6	2.49	0.48
50:CQ:172:ALA:HB1	50:CQ:174:ARG:NH1	2.28	0.48
51:CR:175:PHE:HE1	51:CR:198:ARG:HD2	1.79	0.48
58:CY:127:GLN:HA	58:CY:137:PHE:CD1	2.49	0.48
67:DH:100:LYS:HG3	67:DH:101:ARG:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:DJ:11:LEU:HD11	69:DJ:37:PHE:CE2	2.47	0.48
69:DJ:18:GLU:OE2	69:DJ:67:GLY:HA2	2.13	0.48
79:DT:26:THR:HG23	79:DT:29:HIS:H	1.78	0.48
1:1:696:U:H2'	1:1:697:A:O4'	2.14	0.48
1:1:1377:A:H2'	1:1:1378:G:H8	1.78	0.48
1:1:1482:G:N2	35:AH:6:THR:HG22	2.29	0.48
1:1:3236:G:O2'	8:n:107:ARG:NH1	2.46	0.48
1:1:3281:A:N1	5:k:124:LYS:HG2	2.28	0.48
3:4:8:C:H2'	3:4:9:A:H8	1.78	0.48
8:n:104:TYR:O	8:n:104:TYR:HD1	1.97	0.48
14:t:7:LEU:O	29:AB:49:HIS:NE2	2.47	0.48
16:v:122:ASN:OD1	16:v:123:GLN:N	2.40	0.48
17:w:76:ALA:HB3	17:w:79:ARG:HG2	1.96	0.48
46:B:518:A:O2'	46:B:519:A:OP1	2.30	0.48
46:B:874:U:H2'	46:B:875:C:C6	2.49	0.48
50:F:12:LEU:HD13	67:W:28:THR:HG23	1.95	0.48
54:J:43:LYS:HE2	54:J:57:PHE:CE2	2.49	0.48
79:AR:50:GLY:H	79:AR:55:TYR:HA	1.78	0.48
1:AS:179:C:H2'	1:AS:180:U:C6	2.49	0.48
1:AS:1013:U:H5'	45:CL:57:PRO:HB3	1.96	0.48
1:AS:1593:C:H2'	1:AS:1594:G:C8	2.48	0.48
1:AS:2138:G:H2'	1:AS:2139:G:C8	2.47	0.48
1:AS:2434:A:N6	1:AS:2439:A:H62	2.09	0.48
1:AS:3161:U:H2'	1:AS:3162:U:O4'	2.14	0.48
2:AT:97:A:OP1	21:BN:40:ARG:NH1	2.46	0.48
3:AU:22:U:H5''	27:BT:16:ARG:NH1	2.29	0.48
12:BE:96:VAL:HG22	12:BE:125:LEU:HD21	1.96	0.48
14:BG:28:GLN:HB3	16:BI:201:ARG:HD2	1.96	0.48
21:BN:77:ILE:HD12	21:BN:94:TYR:CD1	2.48	0.48
24:BQ:42:THR:HG21	24:BQ:50:PRO:HG3	1.96	0.48
46:CM:188:U:H2'	46:CM:189:G:H8	1.78	0.48
46:CM:282:G:O6	53:CT:188:ARG:NH2	2.47	0.48
54:CU:94:ILE:HD13	54:CU:114:LEU:HD12	1.95	0.48
62:DC:60:LEU:HD21	62:DC:94:VAL:HG12	1.94	0.48
76:DQ:21:CYS:HB3	76:DQ:25:SER:N	2.28	0.48
80:L1:55:LEU:HB2	80:L1:153:SER:HB2	1.95	0.48
45:CL:112:LYS:HG3	45:CL:113:ARG:H	1.77	0.48
1:1:25:A:N3	1:1:328:U:O2'	2.44	0.48
1:1:74:G:H5'	14:t:58:VAL:HB	1.96	0.48
1:1:79:G:H2'	1:1:80:C:C6	2.49	0.48
1:1:289:A:H2'	1:1:290:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:417:A:H2'	1:1:418:A:H8	1.78	0.48
1:1:634:C:O2	1:1:2355:G:O2'	2.26	0.48
1:1:779:A:H5''	1:1:780:A:H5''	1.96	0.48
1:1:2138:G:H2'	1:1:2139:G:C8	2.49	0.48
3:4:47:C:H1'	3:4:61:A:H2'	1.95	0.48
5:k:35:ASP:OD2	5:k:191:LYS:NZ	2.29	0.48
17:w:116:LYS:O	17:w:118:ARG:NH1	2.46	0.48
21:0:27:MET:HE1	22:2:153:PRO:HD3	1.96	0.48
26:8:62:ILE:CD1	26:8:94:GLN:HB3	2.44	0.48
36:AI:3:GLY:HA3	36:AI:50:ASN:OD1	2.13	0.48
42:AO:8:LYS:HD3	42:AO:12:ARG:NH2	2.28	0.48
46:B:30:G:H4'	70:Z:131:SER:HB2	1.96	0.48
46:B:261:C:O2'	46:B:262:G:H5'	2.14	0.48
46:B:333:U:O2'	58:N:130:PRO:O	2.21	0.48
46:B:1485:G:H4'	66:V:121:GLY:H	1.78	0.48
46:B:1566:U:H2'	46:B:1567:C:C6	2.48	0.48
48:D:56:ASN:OD1	48:D:57:ALA:N	2.46	0.48
59:O:57:ALA:HB1	59:O:125:ASN:CB	2.44	0.48
59:O:105:GLN:O	59:O:113:ARG:HB2	2.13	0.48
1:AS:176:G:C5	1:AS:177:C:C5	3.02	0.48
1:AS:787:A:H2'	1:AS:788:G:C8	2.49	0.48
1:AS:1007:A:H2'	1:AS:1008:A:C8	2.49	0.48
1:AS:2484:U:C2	1:AS:2485:U:C5	3.02	0.48
1:AS:2527:G:N7	10:BC:34:ASN:ND2	2.61	0.48
1:AS:2650:A:H8	45:CL:56:SER:OG	1.96	0.48
1:AS:3095:A:OP1	17:BJ:135:LYS:NZ	2.44	0.48
2:AT:96:U:H4'	21:BN:119:ARG:HB2	1.96	0.48
6:AY:17:GLY:O	6:AY:19:SER:N	2.47	0.48
21:BN:66:GLU:HB2	21:BN:98:THR:HG23	1.95	0.48
23:BP:38:VAL:HG22	23:BP:56:ILE:HB	1.96	0.48
28:BU:12:ILE:HB	28:BU:81:MET:HB3	1.96	0.48
46:CM:295:U:O2'	51:CR:33:ALA:HA	2.14	0.48
46:CM:446:C:OP1	51:CR:29:PRO:HD3	2.13	0.48
46:CM:699:U:H2'	46:CM:700:G:C8	2.49	0.48
46:CM:701:G:N2	46:CM:720:C:O2	2.47	0.48
46:CM:1225:U:O2'	46:CM:1227:A:N7	2.45	0.48
46:CM:1286:U:H5'	49:CP:83:LYS:HD2	1.96	0.48
46:CM:1584:A:C8	76:DQ:14:PHE:HD1	2.32	0.48
48:CO:71:ALA:HB3	61:DB:109:ARG:NH2	2.29	0.48
76:DQ:21:CYS:SG	76:DQ:39:CYS:HB3	2.53	0.48
79:DT:162:GLN:C	79:DT:164:SER:H	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1116:A:H2'	1:1:1117:U:C6	2.48	0.48
1:1:1456:A:H2'	1:1:1457:A:H8	1.78	0.48
1:1:1459:U:H2'	1:1:1460:G:O4'	2.14	0.48
1:1:1944:G:C2	1:1:2077:A:C2	3.02	0.48
1:1:3019:U:O2'	1:1:3020:A:H5'	2.14	0.48
23:5:38:VAL:HG22	23:5:56:ILE:HB	1.95	0.48
26:8:75:LYS:HB3	26:8:81:THR:CG2	2.35	0.48
46:B:213:A:O2'	46:B:816:U:OP1	2.24	0.48
46:B:562:G:H1'	46:B:575:G:H5''	1.95	0.48
46:B:1396:A:O2'	46:B:1397:A:P	2.72	0.48
46:B:1523:G:O2'	46:B:1524:C:OP1	2.28	0.48
56:L:41:GLU:HG2	56:L:44:ARG:NH2	2.29	0.48
59:O:63:CYS:CA	59:O:92:SER:HB3	2.44	0.48
1:AS:1810:A:H4'	1:AS:1811:U:O4'	2.14	0.48
1:AS:2590:G:C8	1:AS:2837:U:H5''	2.49	0.48
5:AX:80:ASP:OD1	5:AX:82:PRO:HD3	2.14	0.48
27:BT:58:VAL:HA	27:BT:104:VAL:HG12	1.96	0.48
38:CE:69:HIS:O	38:CE:73:ARG:HG3	2.13	0.48
46:CM:874:U:H2'	46:CM:875:C:C6	2.48	0.48
46:CM:1131:G:H2'	46:CM:1132:A:H8	1.78	0.48
50:CQ:144:ARG:H	50:CQ:180:GLN:HE21	1.61	0.48
54:CU:30:LEU:HD22	54:CU:72:ARG:HD2	1.96	0.48
57:CX:18:GLU:HG3	57:CX:89:LEU:HD23	1.95	0.48
79:DT:46:LYS:O	79:DT:56:GLY:HA2	2.14	0.48
1:1:25:A:H2'	1:1:26:C:H6	1.79	0.47
1:1:1368:C:P	29:AB:7:LYS:HE2	2.54	0.47
1:1:2108:G:O4'	1:1:2122:A:H4'	2.15	0.47
1:1:2853:C:H2'	1:1:2854:U:H6	1.78	0.47
1:1:2876:U:H2'	1:1:2877:U:C6	2.48	0.47
8:n:154:LEU:HA	8:n:157:GLN:OE1	2.14	0.47
9:o:86:ARG:NH1	9:o:106:LEU:O	2.37	0.47
14:t:195:ALA:O	14:t:199:LYS:HG2	2.14	0.47
15:u:12:PHE:O	15:u:17:ARG:HG3	2.15	0.47
19:y:89:ASP:OD1	19:y:90:ASP:N	2.46	0.47
20:z:166:ASN:HD21	20:z:170:ARG:HE	1.62	0.47
29:AB:59:ARG:HH22	43:AP:38:GLN:CG	2.26	0.47
29:AB:73:ILE:HB	29:AB:109:TYR:CD2	2.49	0.47
33:AF:96:GLU:HG3	33:AF:122:ASN:OD1	2.14	0.47
38:AK:21:ARG:HD3	38:AK:44:MET:SD	2.53	0.47
45:i:76:PRO:HA	46:B:1446:A:C8	2.49	0.47
46:B:652:C:H5''	46:B:653:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:767:G:O2'	46:B:768:C:H6	1.97	0.47
46:B:1241:A:H5'	46:B:1242:U:C5	2.49	0.47
46:B:1248:G:H2'	46:B:1249:G:O4'	2.13	0.47
46:B:1550:C:OP1	66:V:84:LYS:HE2	2.14	0.47
47:C:6:SER:O	47:C:191:ARG:NH1	2.47	0.47
54:J:13:LEU:HD21	54:J:54:LEU:HD11	1.96	0.47
56:L:75:ALA:O	56:L:79:ARG:HG3	2.14	0.47
59:O:33:ARG:O	59:O:33:ARG:HD3	2.13	0.47
64:T:5:ARG:O	64:T:10:LYS:HE3	2.14	0.47
1:AS:200:A:H2'	1:AS:201:G:H8	1.79	0.47
1:AS:277:G:H2'	1:AS:278:U:C6	2.48	0.47
1:AS:659:G:H4'	1:AS:660:U:C6	2.49	0.47
1:AS:807:U:H2'	1:AS:808:G:C8	2.49	0.47
1:AS:1186:A:H2'	1:AS:1186:A:N3	2.29	0.47
1:AS:1231:U:O3'	1:AS:1232:G:H3'	2.13	0.47
1:AS:1863:A:H2'	1:AS:1864:G:H8	1.78	0.47
1:AS:2236:U:C2	1:AS:2237:A:C8	3.02	0.47
1:AS:2474:C:H5'	1:AS:2475:U:OP2	2.14	0.47
1:AS:2853:C:H2'	1:AS:2854:U:H6	1.78	0.47
1:AS:2890:G:C2	1:AS:2891:A:N7	2.82	0.47
3:AU:8:C:H2'	3:AU:9:A:C8	2.48	0.47
32:BY:71:ARG:NH1	32:BY:103:LEU:HB3	2.29	0.47
35:CB:83:ASN:O	35:CB:87:GLU:HG2	2.14	0.47
46:CM:150:U:O2	53:CT:4:ASN:ND2	2.35	0.47
46:CM:246:U:C4'	58:CY:36:LYS:HD3	2.43	0.47
46:CM:822:G:H8	46:CM:822:G:O5'	1.97	0.47
46:CM:1495:U:H2'	46:CM:1496:C:C6	2.49	0.47
46:CM:1516:C:H2'	46:CM:1517:C:C6	2.49	0.47
46:CM:1566:U:H2'	46:CM:1567:C:C6	2.49	0.47
46:CM:1610:C:H2'	46:CM:1611:C:C6	2.49	0.47
50:CQ:41:ARG:NH1	50:CQ:48:GLU:OE2	2.47	0.47
52:CS:29:ILE:HB	52:CS:34:GLN:HE21	1.78	0.47
62:DC:127:ARG:HH12	45:CL:69:PHE:HE1	1.62	0.47
63:DD:45:PHE:HA	63:DD:48:TYR:HB2	1.96	0.47
63:DD:76:GLN:O	63:DD:80:ILE:HG13	2.14	0.47
77:DR:34:ALA:O	77:DR:37:ARG:HG2	2.14	0.47
79:DT:155:VAL:O	79:DT:156:ARG:NH1	2.44	0.47
79:DT:202:SER:HA	79:DT:242:PHE:HD2	1.79	0.47
80:I1:64:THR:HB	80:I1:108:ASN:HB2	1.96	0.47
1:1:130:U:H2'	1:1:131:C:H6	1.78	0.47
1:1:158:A:H2'	1:1:159:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:533:G:H2'	1:1:534:G:O4'	2.14	0.47
1:1:544:U:H5'	1:1:546:C:H5''	1.96	0.47
1:1:615:G:H4'	18:x:171:ARG:NH1	2.29	0.47
1:1:2483:U:H2'	1:1:2484:U:C6	2.49	0.47
1:1:2492:U:OP2	1:1:2558:G:N2	2.38	0.47
1:1:2681:C:H2'	1:1:2682:C:H6	1.79	0.47
1:1:2902:A:H2'	1:1:2903:C:C6	2.49	0.47
6:l:6:GLN:HB3	6:l:20:GLN:HB3	1.95	0.47
6:l:141:HIS:CD2	6:l:248:PHE:H	2.31	0.47
23:5:68:VAL:HG21	23:5:74:PHE:HB3	1.96	0.47
32:AE:18:ARG:HB3	32:AE:34:GLU:HG3	1.96	0.47
46:B:787:A:C4	54:J:100:ARG:HD2	2.48	0.47
46:B:885:A:H2'	46:B:886:G:H8	1.79	0.47
46:B:947:C:OP2	60:P:70:LYS:NZ	2.27	0.47
46:B:1086:G:H4'	69:Y:76:GLN:HG3	1.95	0.47
46:B:1243:U:H6	46:B:1244:U:H5	1.61	0.47
46:B:1277:G:H2'	46:B:1278:U:C6	2.49	0.47
50:F:112:SER:HB2	50:F:114:LEU:HD13	1.96	0.47
67:W:57:MET:HG3	67:W:87:LYS:HG2	1.95	0.47
70:Z:59:ILE:HD12	70:Z:71:CYS:SG	2.54	0.47
1:AS:69:A:N1	1:AS:313:A:O2'	2.43	0.47
1:AS:493:A:O2'	1:AS:3238:A:N1	2.43	0.47
1:AS:1065:C:H2'	1:AS:1066:U:C6	2.49	0.47
1:AS:1440:G:H2'	1:AS:1441:U:O4'	2.14	0.47
1:AS:1593:C:H2'	1:AS:1594:G:H8	1.79	0.47
1:AS:1695:A:C6	1:AS:1743:G:C6	3.02	0.47
1:AS:1743:G:H5''	39:CF:42:LYS:HE2	1.95	0.47
1:AS:3022:U:O2'	25:BR:16:GLY:O	2.30	0.47
1:AS:3165:U:H2'	1:AS:3166:A:O4'	2.14	0.47
4:AW:180:LEU:HD23	44:CK:18:TYR:CG	2.49	0.47
4:AW:180:LEU:HD23	44:CK:18:TYR:CD2	2.49	0.47
12:BE:30:LYS:HG3	12:BE:63:GLU:HG3	1.96	0.47
17:BJ:58:TYR:CE1	17:BJ:83:LYS:HE3	2.49	0.47
27:BT:51:ARG:HG2	27:BT:52:GLN:N	2.29	0.47
33:BZ:84:ASP:O	33:BZ:87:LEU:HG	2.14	0.47
38:CE:28:HIS:HB3	38:CE:31:LYS:HB2	1.95	0.47
46:CM:167:A:OP2	46:CM:167:A:H8	1.98	0.47
46:CM:277:G:C6	46:CM:279:G:C6	3.01	0.47
48:CO:36:THR:HG22	48:CO:41:ARG:NH1	2.27	0.47
59:CZ:56:GLU:HG3	59:CZ:124:LYS:HD3	1.95	0.47
64:DE:47:ARG:O	64:DE:50:ILE:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:DF:78:ASN:O	65:DF:79:TYR:CB	2.62	0.47
79:DT:195:TYR:CE1	79:DT:213:LYS:HB2	2.49	0.47
45:CL:37:LYS:H	45:CL:37:LYS:HD2	1.79	0.47
45:CL:112:LYS:C	45:CL:114:GLU:H	2.22	0.47
1:1:939:U:C4	29:AB:12:ARG:NH1	2.83	0.47
1:1:983:U:H4'	9:o:119:LYS:HG3	1.96	0.47
1:1:1228:C:H2'	1:1:1229:G:C8	2.49	0.47
1:1:1519:U:H4'	26:8:112:THR:O	2.14	0.47
1:1:1569:C:H2'	1:1:1570:A:C8	2.49	0.47
1:1:1639:A:H2'	1:1:1640:C:C2	2.49	0.47
1:1:1795:A:H2'	1:1:1796:A:H8	1.79	0.47
1:1:2408:A:H2'	1:1:2409:C:H6	1.77	0.47
6:l:139:ARG:HG3	6:l:139:ARG:O	2.14	0.47
7:m:85:ARG:NH2	7:m:250:ASP:OD2	2.47	0.47
13:s:93:SER:N	13:s:172:LEU:O	2.45	0.47
32:AE:45:THR:HG22	32:AE:47:ASP:N	2.26	0.47
46:B:68:A:C5	53:I:160:ARG:NH1	2.82	0.47
64:T:87:GLU:OE1	64:T:87:GLU:N	2.39	0.47
1:AS:426:G:H2'	1:AS:427:C:C6	2.49	0.47
1:AS:1558:G:H5'	1:AS:1559:C:OP2	2.14	0.47
1:AS:2384:C:H2'	1:AS:2385:C:H6	1.78	0.47
1:AS:2608:A:H5''	1:AS:2609:A:H5'	1.97	0.47
3:AU:63:G:H22	3:AU:97:A:H2	1.62	0.47
10:BC:150:LYS:O	10:BC:177:PRO:HD2	2.14	0.47
16:BI:180:PHE:C	16:BI:182:LYS:H	2.23	0.47
41:CH:23:CYS:HB2	41:CH:38:LYS:HD2	1.96	0.47
46:CM:478:G:H1	46:CM:506:U:H3	1.60	0.47
46:CM:1326:A:OP1	79:DT:64:GLY:HA2	2.13	0.47
46:CM:1398:G:H4'	46:CM:1399:U:O5'	2.14	0.47
54:CU:33:GLU:HG3	54:CU:69:VAL:HG11	1.97	0.47
57:CX:35:ILE:HG22	57:CX:37:THR:HG22	1.95	0.47
61:DB:59:ALA:HB1	61:DB:100:LEU:HG	1.95	0.47
63:DD:92:HIS:HD2	63:DD:96:VAL:HG21	1.79	0.47
79:DT:42:LEU:HD11	79:DT:83:SER:HB3	1.96	0.47
79:DT:214:ASP:N	79:DT:214:ASP:OD1	2.44	0.47
80:L1:206:ILE:HB	80:L1:216:ILE:CD1	2.44	0.47
1:1:95:G:H2'	1:1:96:U:O4'	2.14	0.47
1:1:538:G:C6	1:1:548:G:C6	3.03	0.47
1:1:777:G:OP1	19:y:151:ARG:HD2	2.14	0.47
1:1:1493:C:H2'	1:1:1494:A:C8	2.49	0.47
1:1:1496:G:H2'	1:1:1497:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:2330:A:H5''	18:x:83:TRP:O	2.14	0.47
1:1:2426:G:H22	1:1:2478:A:H1'	1.79	0.47
1:1:2527:G:C5	10:p:34:ASN:OD1	2.68	0.47
1:1:2753:U:H2'	1:1:2754:U:C6	2.50	0.47
3:4:83:U:H4'	3:4:85:G:N3	2.29	0.47
21:0:92:LYS:HE2	21:0:109:ASP:OD1	2.14	0.47
46:B:520:U:O3'	71:a:60:PHE:HB2	2.14	0.47
51:G:192:VAL:HG23	51:G:244:GLY:HA3	1.96	0.47
52:H:149:ILE:HD13	75:e:66:LEU:HG	1.95	0.47
69:Y:80:ASN:ND2	69:Y:124:LYS:HE2	2.29	0.47
70:Z:57:ILE:HG23	70:Z:58:GLY:H	1.79	0.47
1:AS:366:A:OP1	6:AY:96:ARG:NH2	2.40	0.47
1:AS:638:U:OP1	29:BV:21:ARG:NH1	2.45	0.47
1:AS:713:A:HO2'	1:AS:748:C:HO2'	1.62	0.47
1:AS:932:A:OP2	29:BV:27:LYS:HE2	2.14	0.47
1:AS:1494:A:H2'	1:AS:1495:U:C6	2.49	0.47
1:AS:2621:G:H4'	1:AS:2668:A:O4'	2.14	0.47
1:AS:2988:A:H2'	1:AS:2989:A:C8	2.48	0.47
25:BR:98:PRO:O	25:BR:102:LYS:HG3	2.13	0.47
46:CM:652:C:H5''	46:CM:653:G:C8	2.49	0.47
46:CM:1020:G:C2	46:CM:1086:G:C6	3.02	0.47
46:CM:1131:G:H1'	49:CP:84:GLN:HG2	1.96	0.47
46:CM:1335:U:O2'	46:CM:1336:G:OP1	2.30	0.47
46:CM:1455:A:H2'	46:CM:1456:C:C6	2.49	0.47
46:CM:1609:G:H2'	46:CM:1610:C:H6	1.79	0.47
46:CM:1636:C:H2'	46:CM:1637:U:H6	1.79	0.47
50:CQ:43:THR:CG2	50:CQ:46:LYS:HB3	2.44	0.47
54:CU:37:LEU:HD22	54:CU:66:TYR:CD1	2.49	0.47
80:l:93:LEU:HG	80:l:94:ASN:H	1.80	0.47
1:1:412:G:H2'	1:1:413:U:C6	2.49	0.47
1:1:431:A:H2'	1:1:432:G:H8	1.76	0.47
1:1:689:A:N6	6:l:49:GLN:OE1	2.47	0.47
1:1:2967:A:H2'	1:1:2968:U:O4'	2.15	0.47
1:1:3021:A:C5	5:k:75:ALA:HB2	2.49	0.47
6:l:11:SER:HB2	10:BC:119:GLU:CD	2.39	0.47
8:n:45:ARG:HD3	8:n:46:PHE:CZ	2.49	0.47
45:i:58:THR:C	45:i:60:ASN:H	2.22	0.47
45:i:158:LEU:HB3	45:i:162:LYS:HE2	1.96	0.47
46:B:1369:G:O2'	46:B:1370:A:H8	1.98	0.47
46:B:1469:A:N3	46:B:1594:G:O2'	2.29	0.47
47:C:35:PRO:HG3	68:X:87:ARG:NH2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D:82:ARG:NH2	48:D:188:LEU:O	2.44	0.47
56:L:106:GLU:HA	56:L:111:THR:HG21	1.97	0.47
59:O:103:LEU:HD22	59:O:116:VAL:HB	1.97	0.47
60:P:16:LEU:HG	60:P:17:PRO:HD2	1.96	0.47
66:V:64:HIS:CE1	66:V:68:ARG:HE	2.32	0.47
69:Y:77:PRO:HD2	69:Y:79:PHE:CZ	2.50	0.47
1:AS:480:G:H3'	1:AS:481:G:C8	2.49	0.47
1:AS:966:A:OP1	30:BW:18:ARG:HD2	2.13	0.47
1:AS:3208:A:H4'	5:AX:95:THR:HG22	1.97	0.47
12:BE:63:GLU:OE1	12:BE:63:GLU:N	2.45	0.47
13:BF:92:ARG:HG2	13:BF:94:LYS:H	1.78	0.47
14:BG:83:VAL:HG23	14:BG:85:ILE:HG13	1.96	0.47
27:BT:37:LYS:HE2	27:BT:37:LYS:HA	1.96	0.47
42:CI:22:ALA:O	42:CI:23:ARG:C	2.57	0.47
46:CM:520:U:H2'	46:CM:521:G:O4'	2.15	0.47
46:CM:919:C:C4	46:CM:1062:C:H4'	2.49	0.47
46:CM:1002:U:H2'	46:CM:1003:U:C6	2.49	0.47
46:CM:1232:U:H2'	46:CM:1233:C:C6	2.47	0.47
47:CN:13:ASP:CG	47:CN:179:ARG:HH22	2.22	0.47
59:CZ:77:ALA:HB1	78:DS:155:ASN:HA	1.96	0.47
72:DM:42:LEU:HB2	72:DM:75:LEU:HD21	1.95	0.47
80:II:33:GLU:H	80:II:208:SER:HA	1.80	0.47
1:1:283:G:O6	1:1:304:G:H1'	2.15	0.47
1:1:739:C:H5''	19:y:69:ARG:NH2	2.17	0.47
1:1:797:A:OP1	29:AB:27:LYS:HE3	2.14	0.47
1:1:830:U:H2'	1:1:831:G:O4'	2.14	0.47
1:1:875:U:O2'	18:x:131:ARG:HD2	2.15	0.47
1:1:1029:U:O2'	1:1:1030:U:OP1	2.30	0.47
1:1:2385:C:H2'	1:1:2386:U:C6	2.50	0.47
1:1:2598:A:N3	1:1:2616:C:H5'	2.30	0.47
5:k:123:TYR:CE2	5:k:124:LYS:HG3	2.49	0.47
9:o:86:ARG:O	9:o:110:ASN:N	2.41	0.47
10:p:254:ALA:O	10:p:258:VAL:HG12	2.15	0.47
19:y:78:GLU:OE1	19:y:78:GLU:N	2.46	0.47
25:7:109:LEU:HD22	46:B:278:U:C5	2.49	0.47
46:B:739:A:H5''	46:B:740:A:C5'	2.45	0.47
46:B:871:U:O3'	83:B:1970:PAR:H14	2.15	0.47
46:B:1672:G:H2'	46:B:1674:U:C4	2.49	0.47
62:R:52:LYS:HB2	62:R:53:PRO:HD3	1.97	0.47
63:S:19:ALA:HB2	63:S:83:ALA:HB1	1.97	0.47
64:T:89:SER:C	64:T:91:LEU:H	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:W:25:LEU:HD23	67:W:113:VAL:HG22	1.97	0.47
73:c:3:LYS:HZ3	73:c:6:ALA:HA	1.77	0.47
1:AS:209:C:C2	6:AY:218:LYS:HD2	2.50	0.47
1:AS:487:C:O5'	1:AS:487:C:H6	1.97	0.47
1:AS:783:G:H2'	1:AS:784:C:H6	1.79	0.47
8:BA:3:GLN:HG2	33:BZ:76:LEU:H	1.80	0.47
13:BF:87:LYS:HG2	13:BF:91:LEU:HD23	1.96	0.47
15:BH:78:TRP:CE2	15:BH:83:ILE:HB	2.50	0.47
28:BU:22:LYS:NZ	28:BU:129:TRP:O	2.42	0.47
46:CM:261:C:H4'	46:CM:290:U:H5'	1.95	0.47
46:CM:473:A:OP1	56:CW:126:ARG:HD3	2.14	0.47
46:CM:734:U:H2'	46:CM:735:U:C6	2.49	0.47
46:CM:1286:U:H5'	49:CP:83:LYS:CD	2.44	0.47
46:CM:1396:A:HO2'	46:CM:1397:A:P	2.37	0.47
52:CS:166:ARG:HA	52:CS:169:ASN:OD1	2.14	0.47
53:CT:159:ARG:HB3	53:CT:172:ALA:HB2	1.96	0.47
1:1:88:G:H21	1:1:281:G:C4'	2.28	0.47
1:1:179:C:H2'	1:1:180:U:H6	1.78	0.47
1:1:859:C:H2'	1:1:860:G:O4'	2.14	0.47
1:1:1099:A:H62	1:1:1338:G:N2	2.12	0.47
1:1:1233:G:O6	1:1:1259:A:O2'	2.30	0.47
1:1:1375:G:C6	1:1:1424:A:C2	3.02	0.47
1:1:1580:U:H2'	1:1:1581:C:H6	1.80	0.47
1:1:2078:A:N3	1:1:2078:A:H3'	2.30	0.47
1:1:2483:U:H2'	1:1:2484:U:C5	2.50	0.47
1:1:2826:U:P	12:r:3:ARG:HH22	2.38	0.47
1:1:3184:G:H4'	1:1:3185:G:H5'	1.97	0.47
1:1:3196:U:H2'	1:1:3197:G:C8	2.50	0.47
2:3:113:C:H2'	2:3:114:U:O4'	2.15	0.47
4:j:79:ASN:O	4:j:82:VAL:HG23	2.15	0.47
8:n:59:ASP:HB2	8:n:102:VAL:CG2	2.44	0.47
14:t:67:ARG:NH1	14:t:68:LYS:HE3	2.29	0.47
20:z:166:ASN:O	20:z:170:ARG:HG3	2.15	0.47
21:0:109:ASP:O	21:0:113:ARG:HG2	2.15	0.47
30:AC:28:LYS:HG2	30:AC:29:TYR:CE1	2.50	0.47
32:AE:95:VAL:HG12	32:AE:97:VAL:HG13	1.95	0.47
46:B:161:G:O2'	53:I:110:ALA:HB1	2.15	0.47
46:B:1038:G:H5''	46:B:1038:G:N3	2.29	0.47
46:B:1369:G:OP1	67:W:86:HIS:ND1	2.48	0.47
46:B:1375:C:H5'	64:T:49:LYS:HZ2	1.80	0.47
46:B:1670:U:O2'	46:B:1671:G:O5'	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:1780:G:H1'	46:B:1781:A:H2'	1.96	0.47
48:D:180:THR:HG22	48:D:183:GLN:OE1	2.14	0.47
54:J:29:ASP:OD1	54:J:30:LEU:N	2.47	0.47
54:J:169:TYR:HB3	54:J:177:VAL:CG1	2.45	0.47
59:O:107:ASP:HB3	59:O:112:ALA:O	2.15	0.47
59:O:130:SER:HB3	59:O:132:GLU:O	2.14	0.47
62:R:8:LYS:HD2	62:R:9:LYS:N	2.30	0.47
63:S:113:LYS:HG2	63:S:117:VAL:HB	1.97	0.47
64:T:7:LYS:O	64:T:11:ARG:HG2	2.15	0.47
66:V:109:GLN:OE1	66:V:122:ARG:NE	2.45	0.47
79:AR:126:ALA:HB1	79:AR:152:VAL:HG23	1.97	0.47
79:AR:273:PRO:O	79:AR:275:PHE:HD1	1.98	0.47
1:AS:122:A:C6	1:AS:149:A:C5	3.02	0.47
1:AS:178:U:H2'	1:AS:179:C:H6	1.80	0.47
1:AS:413:U:H2'	1:AS:414:U:H6	1.79	0.47
1:AS:422:A:C2	1:AS:2341:A:H4'	2.49	0.47
1:AS:430:G:H2'	1:AS:431:A:C8	2.50	0.47
1:AS:777:G:OP1	19:BL:151:ARG:HD2	2.15	0.47
1:AS:1189:A:OP1	17:BJ:50:ARG:NH2	2.41	0.47
1:AS:1632:C:H5''	28:BU:73:LYS:NZ	2.28	0.47
1:AS:1754:G:H2'	1:AS:1755:U:O4'	2.14	0.47
1:AS:2335:A:H2'	1:AS:2336:A:C8	2.49	0.47
1:AS:2385:C:H2'	1:AS:2386:U:C6	2.49	0.47
1:AS:2452:G:O2'	1:AS:2453:G:OP2	2.32	0.47
1:AS:2802:G:H1	1:AS:2830:U:H3	1.63	0.47
1:AS:3023:U:C2	1:AS:3024:G:C8	3.02	0.47
1:AS:3322:U:H2'	1:AS:3323:U:C6	2.50	0.47
2:AT:53:U:O2	2:AT:55:A:N6	2.46	0.47
3:AU:49:G:OP2	36:CC:48:ARG:NH1	2.48	0.47
10:BC:69:ARG:HD3	10:BC:238:ILE:O	2.15	0.47
11:BD:23:ARG:NH2	11:BD:39:LYS:O	2.48	0.47
11:BD:94:TYR:HA	11:BD:177:ASP:OD1	2.14	0.47
27:BT:85:LEU:HD23	27:BT:85:LEU:HA	1.77	0.47
44:CK:47:VAL:HA	44:CK:56:ASN:O	2.14	0.47
46:CM:357:A:H1'	70:DK:38:PHE:CE2	2.50	0.47
46:CM:382:G:H2'	46:CM:383:A:C8	2.50	0.47
46:CM:530:U:OP1	71:DL:64:PHE:HA	2.15	0.47
46:CM:600:U:H2'	46:CM:601:U:C6	2.50	0.47
46:CM:883:A:H5''	61:DB:41:MET:HE3	1.96	0.47
46:CM:885:A:H2'	46:CM:886:G:H8	1.79	0.47
46:CM:1063:C:H2'	46:CM:1064:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1160:U:H2'	46:CM:1161:G:H8	1.78	0.47
46:CM:1168:A:OP1	62:DC:124:THR:HG21	2.15	0.47
46:CM:1383:U:O2'	46:CM:1386:A:N6	2.35	0.47
46:CM:1388:G:OP1	64:DE:10:LYS:NZ	2.38	0.47
47:CN:48:ILE:CG2	47:CN:161:PRO:HB2	2.45	0.47
47:CN:84:ARG:NH2	64:DE:82:ASP:OD1	2.45	0.47
48:CO:29:TRP:CE3	48:CO:45:LYS:HG2	2.50	0.47
64:DE:90:ALA:HA	64:DE:95:HIS:CD2	2.48	0.47
64:DE:92:ASP:OD1	64:DE:93:LEU:HD23	2.14	0.47
65:DF:67:GLU:HA	65:DF:70:VAL:HG22	1.96	0.47
66:DG:42:GLY:HA2	66:DG:84:LYS:HD2	1.97	0.47
79:DT:42:LEU:HB2	79:DT:62:PHE:HB2	1.97	0.47
79:DT:245:ASN:HD21	79:DT:246:ARG:NH1	2.13	0.47
1:1:443:G:H2'	1:1:443:G:N3	2.29	0.47
1:1:514:G:H2'	1:1:516:U:H5'	1.97	0.47
1:1:725:G:O6	1:1:738:G:O2'	2.28	0.47
1:1:2330:A:H2'	1:1:2331:G:C8	2.50	0.47
1:1:2396:G:N3	1:1:2396:G:H2'	2.30	0.47
1:1:2933:G:H2'	1:1:2934:U:H6	1.77	0.47
5:k:313:ARG:O	5:k:333:LYS:HE3	2.14	0.47
9:o:198:ASN:O	9:o:200:LEU:N	2.48	0.47
18:x:14:SER:HA	18:x:150:LEU:O	2.14	0.47
29:AB:104:THR:OG1	29:AB:126:LYS:O	2.27	0.47
46:B:139:U:O4	53:I:187:LYS:HB2	2.15	0.47
46:B:911:A:H2	61:Q:120:SER:CB	2.22	0.47
1:AS:293:C:H4'	37:CD:75:ARG:HH21	1.80	0.47
1:AS:383:G:H5'	18:BK:96:ARG:HD3	1.97	0.47
1:AS:648:C:H2'	1:AS:649:G:C8	2.50	0.47
1:AS:1396:U:H2'	1:AS:1397:G:O4'	2.14	0.47
1:AS:2063:C:H3'	1:AS:2064:A:C8	2.50	0.47
1:AS:2650:A:C2	45:CL:53:LYS:HG2	2.50	0.47
1:AS:3167:G:N1	1:AS:3168:U:C4	2.83	0.47
1:AS:3259:A:H2'	1:AS:3260:A:O4'	2.15	0.47
13:BF:4:LYS:HG3	13:BF:6:GLN:H	1.79	0.47
13:BF:10:ARG:O	13:BF:133:ARG:HD3	2.15	0.47
13:BF:32:ARG:HD3	13:BF:120:ILE:HA	1.95	0.47
21:BN:60:SER:OG	21:BN:62:ASN:OD1	2.32	0.47
23:BP:51:GLY:O	23:BP:53:ASP:N	2.47	0.47
28:BU:101:LEU:HB3	28:BU:107:ARG:NH2	2.30	0.47
46:CM:12:U:H2'	46:CM:13:C:H6	1.77	0.47
46:CM:507:G:H2'	46:CM:508:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:988:A:H2'	46:CM:990:A:N7	2.29	0.47
46:CM:1026:G:H2'	46:CM:1027:G:H8	1.79	0.47
46:CM:1226:G:H4'	62:DC:78:THR:HA	1.96	0.47
46:CM:1341:U:H1'	46:CM:1353:G:N2	2.29	0.47
46:CM:1396:A:O2'	46:CM:1397:A:OP1	2.26	0.47
46:CM:1671:G:C6	46:CM:1705:G:C6	3.02	0.47
47:CN:55:GLU:HB3	68:DI:79:LEU:HD22	1.97	0.47
56:CW:101:PRO:O	56:CW:105:LEU:HD12	2.14	0.47
61:DB:9:PHE:CD1	61:DB:73:ALA:HB3	2.50	0.47
79:DT:22:SER:OG	79:DT:72:VAL:N	2.48	0.47
79:DT:40:LYS:NZ	79:DT:67:HIS:HA	2.30	0.47
80:L1:31:THR:O	80:L1:209:THR:N	2.47	0.47
1:1:242:C:O2'	1:1:243:G:H8	1.98	0.47
1:1:246:U:H2'	1:1:247:C:C6	2.50	0.47
1:1:815:U:H2'	1:1:816:A:H8	1.80	0.47
1:1:948:A:H4'	1:1:964:G:N2	2.29	0.47
1:1:975:U:H4'	1:1:976:A:O4'	2.15	0.47
1:1:997:G:HO2'	1:1:998:A:P	2.38	0.47
1:1:1012:U:H4'	1:1:1012:U:OP2	2.15	0.47
1:1:1302:G:C6	17:w:63:THR:HA	2.50	0.47
1:1:1787:U:H2'	1:1:1788:C:C6	2.49	0.47
1:1:3193:C:H4'	1:1:3194:G:O5'	2.13	0.47
3:4:83:U:O2	27:9:51:ARG:NH2	2.48	0.47
5:k:57:VAL:HG22	5:k:73:VAL:HG22	1.96	0.47
7:m:132:THR:HG21	7:m:170:GLY:O	2.14	0.47
11:q:48:ILE:HG22	11:q:49:ASN:ND2	2.29	0.47
13:s:12:LEU:HD11	13:s:158:ASP:HB3	1.97	0.47
14:t:124:VAL:CG2	36:AI:120:ALA:HB3	2.44	0.47
16:v:78:GLY:HA2	16:v:89:VAL:HG21	1.97	0.47
35:AH:100:ILE:O	35:AH:104:VAL:HG22	2.15	0.47
46:B:265:U:H2'	46:B:266:C:C6	2.49	0.47
46:B:397:A:H4'	51:G:3:ARG:HG2	1.97	0.47
46:B:1072:A:H2'	46:B:1073:A:C8	2.49	0.47
46:B:1187:A:H1'	46:B:1192:C:N4	2.30	0.47
46:B:1211:A:O2'	46:B:1241:A:N1	2.45	0.47
46:B:1414:G:H3'	46:B:1414:G:OP2	2.15	0.47
47:C:184:LEU:HB3	68:X:45:ALA:HB2	1.96	0.47
52:H:53:VAL:HA	52:H:134:VAL:HG11	1.97	0.47
62:R:14:GLN:HE22	62:R:22:LEU:N	1.94	0.47
62:R:30:THR:O	62:R:34:THR:HG23	2.13	0.47
63:S:98:GLU:N	79:AR:59:LYS:O	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:e:18:ARG:CD	75:e:26:THR:HG22	2.45	0.47
1:AS:707:A:N3	1:AS:2759:G:O2'	2.43	0.47
1:AS:772:U:H5	1:AS:2691:U:O2	1.97	0.47
1:AS:1634:A:N1	1:AS:1732:G:O2'	2.43	0.47
1:AS:1937:C:H42	1:AS:2085:A:H61	1.63	0.47
1:AS:2753:U:H2'	1:AS:2754:U:C6	2.50	0.47
1:AS:3262:U:H2'	1:AS:3263:C:H6	1.80	0.47
2:AT:45:A:H2'	2:AT:46:A:C8	2.49	0.47
2:AT:47:C:OP2	7:AZ:158:ARG:HD3	2.15	0.47
35:CB:36[B]:LYS:HE2	35:CB:36[B]:LYS:HB3	1.52	0.47
46:CM:186:A:P	55:CV:142:SER:HB3	2.55	0.47
46:CM:226:G:H2'	46:CM:227:C:O4'	2.15	0.47
46:CM:1235:U:O2'	78:DS:177:MET:SD	2.72	0.47
46:CM:1312:C:H5'	50:CQ:157:PHE:HE1	1.80	0.47
46:CM:1484:U:O4'	46:CM:1506:U:H4'	2.15	0.47
80:l1:87:VAL:HG23	80:l1:88:ASP:H	1.80	0.47
1:1:76:A:OP2	14:t:73:ARG:HD2	2.14	0.47
1:1:125:U:OP1	16:v:144:ARG:NH1	2.44	0.47
1:1:1065:C:H2'	1:1:1066:U:C6	2.51	0.47
1:1:1396:U:H2'	1:1:1397:G:O4'	2.15	0.47
1:1:2736:C:H42	82:1:3406:3K5:H2	1.80	0.47
1:1:3082:C:H2'	1:1:3083:U:C6	2.50	0.47
1:1:3132:U:H3	1:1:3253:G:H1	1.63	0.47
1:1:3336:G:H2'	1:1:3337:A:H8	1.80	0.47
3:4:63:G:H1	3:4:97:A:N6	2.10	0.47
3:4:95:G:N7	38:AK:83:ALA:HB2	2.30	0.47
10:p:122:THR:C	10:p:124:LYS:H	2.23	0.47
22:2:77:ASN:OD1	30:AC:24:PRO:HG3	2.15	0.47
46:B:338:U:H2'	46:B:339:A:H8	1.80	0.47
46:B:1071:A:H2'	46:B:1072:A:C8	2.49	0.47
55:K:38:ILE:HG12	55:K:96:LEU:HD11	1.96	0.47
55:K:190:LEU:HD22	55:K:194:GLU:HG2	1.96	0.47
79:AR:216:VAL:HA	79:AR:232:GLU:HA	1.97	0.47
1:AS:208:A:H4'	1:AS:210:A:C8	2.50	0.47
1:AS:1099:A:N6	1:AS:1359:A:H1'	2.29	0.47
1:AS:1191:A:H2'	1:AS:1305:U:O2	2.14	0.47
1:AS:1427:G:N7	29:BV:9:ARG:NH2	2.63	0.47
1:AS:1742:U:O2'	39:CF:4:GLU:OE2	2.33	0.47
1:AS:2899:C:H2'	1:AS:2900:C:C6	2.50	0.47
24:BQ:13:MET:HE1	24:BQ:54:ALA:HB3	1.97	0.47
29:BV:36:GLY:HA3	29:BV:40:HIS:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BX:36:LEU:HD13	31:BX:61:TYR:HB3	1.97	0.47
42:CI:15:ARG:NE	46:CM:1111:G:OP1	2.48	0.47
46:CM:707:C:N4	46:CM:715:G:H2'	2.31	0.47
46:CM:1279:G:H5''	49:CP:59:LYS:NZ	2.29	0.47
46:CM:1308:C:H2'	46:CM:1309:G:C8	2.50	0.47
46:CM:1783:C:O2'	73:DN:95:ARG:NE	2.47	0.47
49:CP:145:GLN:O	49:CP:169:ARG:NH2	2.47	0.47
52:CS:27:THR:OG1	63:DD:27:LEU:HD12	2.15	0.47
53:CT:159:ARG:HB2	53:CT:170:THR:HB	1.96	0.47
61:DB:50:SER:O	61:DB:91:PRO:HG2	2.15	0.47
65:DF:114:GLU:HA	65:DF:117:LYS:HB2	1.96	0.47
79:DT:75:SER:CB	79:DT:80:TYR:HB3	2.45	0.47
79:DT:150:ASP:HB3	79:DT:171:TRP:HB2	1.96	0.47
1:1:209:C:C2	6:1:218:LYS:HD3	2.50	0.46
1:1:538:G:O2'	1:1:539:G:OP1	2.30	0.46
1:1:662:U:H5'	6:1:108:ARG:HA	1.98	0.46
1:1:699:G:H2'	1:1:700:C:C6	2.50	0.46
1:1:1097:G:H5''	9:α:105:ARG:HD3	1.95	0.46
1:1:1592:C:H5'	35:AH:8:ARG:HH12	1.79	0.46
2:3:107:A:H2'	2:3:108:U:C6	2.50	0.46
21:0:80:ARG:HD3	21:0:122:HIS:ND1	2.29	0.46
26:8:108:LEU:N	26:8:125:ARG:O	2.42	0.46
32:AE:7:VAL:HG13	32:AE:43:MET:HE1	1.97	0.46
46:B:565:A:O2'	70:Z:90:ASP:OD1	2.31	0.46
46:B:583:A:H2'	46:B:584:G:C8	2.50	0.46
46:B:1068:G:HO2'	46:B:1079:G:HO2'	1.50	0.46
46:B:1470:G:H5'	63:S:14:THR:CG2	2.44	0.46
50:F:65:ARG:HD3	57:M:91:ARG:NE	2.30	0.46
53:I:20:ASP:OD1	53:I:22:HIS:HB3	2.15	0.46
60:P:52:VAL:HG22	60:P:55:ARG:NH2	2.29	0.46
79:AR:33:LEU:HB3	79:AR:45:TRP:HB2	1.97	0.46
1:AS:948:A:H4'	1:AS:964:G:N2	2.30	0.46
1:AS:1093:G:H4'	22:BO:129:LYS:HG2	1.96	0.46
1:AS:1658:G:H22	1:AS:1783:A:H2	1.62	0.46
1:AS:2749:G:H5'	1:AS:2751:A:OP2	2.15	0.46
1:AS:3136:C:H2'	1:AS:3137:A:H8	1.78	0.46
1:AS:3139:U:N3	1:AS:3247:A:C2	2.84	0.46
15:BH:20:LEU:HD23	15:BH:20:LEU:C	2.38	0.46
42:CI:7:LYS:HD3	42:CI:11:ARG:HH21	1.81	0.46
46:CM:482:C:H2'	46:CM:483:A:H5''	1.97	0.46
46:CM:642:C:H2'	46:CM:643:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1220:C:H3'	46:CM:1221:A:H8	1.80	0.46
48:CO:93:GLY:C	48:CO:95:ASN:N	2.72	0.46
50:CQ:128:MET:HE3	50:CQ:155:ASP:HB3	1.97	0.46
61:DB:10:GLY:H	61:DB:74:VAL:HA	1.79	0.46
62:DC:10:ARG:HG2	62:DC:11:THR:O	2.16	0.46
80:L1:119:GLN:HA	80:L1:122:ARG:HB2	1.96	0.46
80:l1:97:LYS:O	80:l1:101:LYS:HB3	2.16	0.46
1:1:476:C:C2	1:1:477:U:C6	3.03	0.46
1:1:1312:C:OP2	17:w:134:ARG:HG3	2.14	0.46
1:1:1794:A:H2'	1:1:1795:A:C8	2.50	0.46
1:1:2649:G:H2'	1:1:2649:G:N3	2.30	0.46
1:1:3123:U:OP1	5:k:128:LYS:NZ	2.47	0.46
1:1:3290:G:O3'	32:AE:102:GLY:HA2	2.15	0.46
4:j:150:LEU:HD11	4:j:156:LYS:HD2	1.97	0.46
5:k:218:ILE:HB	5:k:337:THR:HB	1.96	0.46
9:o:192:ASN:O	9:o:196:VAL:HG23	2.16	0.46
11:q:114:ILE:HB	11:q:124:ARG:HB2	1.97	0.46
32:AE:86:GLU:HG3	32:AE:88:LEU:O	2.15	0.46
43:AP:16:GLU:OE1	43:AP:16:GLU:N	2.44	0.46
45:i:65:LYS:C	45:i:67:LYS:H	2.22	0.46
46:B:122:U:C2'	46:B:123:G:H5''	2.43	0.46
46:B:792:U:H2'	46:B:793:A:C8	2.50	0.46
46:B:1457:A:H2	46:B:1460:G:N3	2.14	0.46
46:B:1740:A:H2'	46:B:1741:A:H8	1.79	0.46
48:D:32:ILE:HA	48:D:96:LEU:HB2	1.97	0.46
53:I:7:TYR:O	53:I:11:GLY:N	2.46	0.46
63:S:27:LEU:HD23	63:S:65:ARG:HH11	1.81	0.46
63:S:46:LYS:HD2	63:S:46:LYS:HA	1.75	0.46
64:T:78:ARG:NH2	64:T:81:LYS:HD3	2.30	0.46
71:a:110:GLN:HB3	71:a:114:ARG:NH1	2.30	0.46
78:h:160:ARG:O	78:h:162:GLU:N	2.48	0.46
78:h:162:GLU:HG3	78:h:173:PHE:CE1	2.50	0.46
1:AS:1181:C:OP1	15:BH:36:LYS:HD2	2.14	0.46
1:AS:1256:A:H1'	1:AS:1276:C:H1'	1.97	0.46
1:AS:1456:A:H5'	32:BY:50:LEU:O	2.15	0.46
1:AS:2197:A:H2'	1:AS:2198:A:H8	1.79	0.46
1:AS:2407:G:H2'	1:AS:2408:A:C8	2.50	0.46
1:AS:3084:G:O6	1:AS:3092:C:H5''	2.15	0.46
4:AW:118:GLU:HB2	4:AW:125:ALA:HB3	1.97	0.46
6:AY:155:ASN:OD1	6:AY:253:GLN:HB3	2.16	0.46
22:BO:16:GLN:HG2	22:BO:17:ARG:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CG:20:ASN:OD1	40:CG:42:ARG:HG2	2.15	0.46
46:CM:1273:G:N7	46:CM:1299:U:O2'	2.46	0.46
46:CM:1699:G:H21	46:CM:1699:G:P	2.38	0.46
51:CR:103:TYR:CD1	51:CR:189:LEU:HD21	2.49	0.46
1:1:150:A:C5	1:1:151:U:C5	3.03	0.46
1:1:683:G:OP2	14:t:35:ARG:NH1	2.48	0.46
1:1:1221:A:H2'	1:1:1222:G:C8	2.50	0.46
1:1:2273:A:N3	1:1:2901:C:O2'	2.45	0.46
1:1:3005:A:H2	11:q:120:GLU:HG2	1.79	0.46
21:0:42:TRP:O	21:0:46:GLN:HG3	2.15	0.46
43:AP:34:SER:O	43:AP:40:LYS:HG3	2.16	0.46
44:AQ:84:ARG:O	44:AQ:88:GLU:HG2	2.16	0.46
45:i:105:GLN:HG3	46:B:579:U:OP1	2.15	0.46
45:i:158:LEU:O	45:i:162:LYS:HG2	2.16	0.46
46:B:58:U:OP1	46:B:454:G:O2'	2.31	0.46
46:B:484:G:H2'	46:B:485:G:C8	2.50	0.46
46:B:1132:A:H2'	46:B:1133:C:C6	2.50	0.46
46:B:1220:C:N4	78:h:177:MET:HE1	2.29	0.46
46:B:1254:U:H5'	46:B:1418:U:OP2	2.16	0.46
46:B:1307:A:H2'	46:B:1308:C:C6	2.50	0.46
46:B:1485:G:H5''	66:V:72:GLY:HA3	1.97	0.46
46:B:1498:G:H2'	46:B:1499:G:H8	1.80	0.46
50:F:73:LEU:CD2	57:M:20:VAL:HB	2.45	0.46
50:F:124:LEU:HD11	50:F:153:TYR:CB	2.44	0.46
60:P:46:THR:O	60:P:50:ILE:HD12	2.15	0.46
69:Y:62:VAL:HG11	74:d:8:LEU:HD11	1.98	0.46
1:AS:249:G:H2'	1:AS:251:G:OP2	2.16	0.46
1:AS:413:U:H2'	1:AS:414:U:C6	2.51	0.46
1:AS:425:G:H2'	1:AS:426:G:H8	1.80	0.46
1:AS:559:C:H2'	1:AS:560:C:H6	1.80	0.46
1:AS:649:G:C6	1:AS:650:G:C6	3.03	0.46
1:AS:662:U:H5'	6:AY:108:ARG:HA	1.98	0.46
1:AS:870:U:OP2	5:AX:241:LYS:HE3	2.15	0.46
1:AS:987:G:C5	1:AS:1055:G:C6	3.03	0.46
1:AS:1180:A:H2'	1:AS:1181:C:C6	2.50	0.46
1:AS:3061:C:H2'	1:AS:3062:U:O4'	2.15	0.46
1:AS:3199:G:N2	1:AS:3218:U:O2	2.42	0.46
16:BI:59:PHE:HZ	16:BI:148:TYR:CE2	2.33	0.46
17:BJ:58:TYR:CZ	17:BJ:83:LYS:HE3	2.50	0.46
22:BO:119:ALA:HB1	22:BO:124:GLU:O	2.16	0.46
29:BV:112:VAL:HB	29:BV:130:VAL:HG12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BZ:10:ILE:HG12	33:BZ:64:THR:HB	1.96	0.46
46:CM:4:C:H5	46:CM:20:G:H22	1.64	0.46
46:CM:91:G:OP1	46:CM:395:A:N6	2.45	0.46
46:CM:339:A:H2'	46:CM:340:C:C6	2.50	0.46
46:CM:1032:G:H2'	46:CM:1033:U:H6	1.81	0.46
48:CO:48:ILE:HD13	48:CO:49:ASN:O	2.15	0.46
48:CO:70:LEU:HD23	48:CO:79:HIS:HB3	1.97	0.46
53:CT:207:GLU:HA	53:CT:210:GLN:HG2	1.97	0.46
53:CT:218:GLU:HB3	53:CT:219:ARG:HH12	1.81	0.46
53:CT:219:ARG:O	53:CT:222:GLU:N	2.47	0.46
59:CZ:29:LYS:HA	59:CZ:29:LYS:HD3	1.78	0.46
63:DD:93:GLN:NE2	79:DT:61:SER:O	2.48	0.46
63:DD:124:GLU:HG2	63:DD:133:ALA:HB1	1.97	0.46
64:DE:7:LYS:O	64:DE:11:ARG:HG2	2.15	0.46
1:1:88:G:H21	1:1:281:G:H4'	1.81	0.46
1:1:513:G:P	6:l:347:GLN:HE22	2.38	0.46
1:1:690:A:O4'	6:l:47:LYS:HG3	2.15	0.46
1:1:831:G:HO2'	1:1:853:G:H22	1.57	0.46
1:1:2478:A:N3	1:1:2478:A:H2'	2.30	0.46
1:1:2557:G:C6	26:8:24:LEU:HD21	2.50	0.46
1:1:3111:A:H4'	5:k:20:LYS:HD3	1.97	0.46
1:1:3256:G:H2'	1:1:3257:A:H8	1.80	0.46
2:3:26:C:H2'	2:3:27:A:O4'	2.16	0.46
3:4:19:C:H2'	3:4:20:U:C6	2.51	0.46
20:z:173:ARG:NH2	46:B:839:U:OP2	2.41	0.46
46:B:81:G:H2'	46:B:82:U:C6	2.50	0.46
46:B:822:G:H5''	46:B:822:G:H8	1.80	0.46
46:B:1753:A:N6	73:c:80:HIS:HA	2.31	0.46
52:H:216:GLU:HG3	52:H:219:ARG:NH2	2.29	0.46
71:a:6:THR:HB	71:a:28:LEU:HB2	1.98	0.46
73:c:51:ARG:O	73:c:54:SER:N	2.48	0.46
79:AR:119:ASN:OD1	79:AR:119:ASN:N	2.48	0.46
1:AS:45:U:O4	16:BI:83:LYS:NZ	2.40	0.46
1:AS:46:C:OP2	1:AS:47:A:O2'	2.24	0.46
1:AS:96:U:H2'	1:AS:97:G:C8	2.49	0.46
1:AS:251:G:H1'	1:AS:253:A:C5	2.51	0.46
1:AS:2740:U:H2'	1:AS:2741:A:C8	2.49	0.46
1:AS:3309:A:H2	1:AS:3326:G:H21	1.63	0.46
2:AT:13:A:H2	7:AZ:21:ARG:HB2	1.81	0.46
19:BL:96:PHE:CD1	19:BL:97:PRO:HD2	2.51	0.46
46:CM:81:G:H2'	46:CM:82:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:188:U:H2'	46:CM:189:G:C8	2.51	0.46
46:CM:310:A:C2	46:CM:312:C:H2'	2.50	0.46
46:CM:452:A:O4'	51:CR:66:MET:HG3	2.16	0.46
46:CM:1746:C:H2'	46:CM:1747:G:O4'	2.16	0.46
50:CQ:73:LEU:CD2	57:CX:20:VAL:HB	2.45	0.46
58:CY:71:LEU:HD12	58:CY:137:PHE:HE2	1.81	0.46
59:CZ:24:ILE:HG13	59:CZ:25:GLU:N	2.31	0.46
65:DF:110:ARG:O	65:DF:113:LEU:N	2.48	0.46
77:DR:37:ARG:O	77:DR:41:THR:HG23	2.15	0.46
80:11:196:LYS:HD2	80:11:200:ASN:HD21	1.80	0.46
1:1:1695:A:H2'	1:1:1696:G:H8	1.80	0.46
2:3:27:A:OP2	7:m:57:ASN:HB2	2.15	0.46
3:4:5:U:H2'	3:4:6:U:C6	2.51	0.46
6:l:181:LYS:O	6:l:185:SER:HB3	2.15	0.46
7:m:296:GLN:HG3	7:m:296:GLN:O	2.14	0.46
13:s:46:VAL:HG23	13:s:68:HIS:CD2	2.50	0.46
28:AA:9:LYS:HD2	28:AA:85:TYR:O	2.16	0.46
45:i:159:GLU:HB3	57:M:83:PRO:HG2	1.96	0.46
46:B:17:C:H2'	46:B:18:C:H6	1.77	0.46
46:B:1783:C:H5	73:c:6:ALA:HB3	1.81	0.46
48:D:61:LEU:HD21	48:D:96:LEU:HD21	1.97	0.46
52:H:61:TYR:OH	75:e:52:ASP:OD1	2.11	0.46
57:M:77:ARG:HG3	57:M:86:ILE:HG22	1.97	0.46
59:O:81:GLU:HG3	78:h:156:VAL:H	1.79	0.46
77:g:56:MET:C	77:g:58:PRO:HD3	2.41	0.46
79:AR:84:ALA:HA	79:AR:90:LEU:HD23	1.98	0.46
1:AS:762:U:H4'	1:AS:763:U:O4'	2.14	0.46
1:AS:1757:A:H8	1:AS:1757:A:OP2	1.99	0.46
1:AS:2354:G:H2'	1:AS:2355:G:C8	2.50	0.46
1:AS:3151:C:OP2	17:BJ:172:LYS:NZ	2.43	0.46
1:AS:3159:A:H2'	1:AS:3160:C:O4'	2.16	0.46
1:AS:3159:A:C6	1:AS:3160:C:C5	3.04	0.46
1:AS:3166:A:C2'	1:AS:3167:G:H5'	2.46	0.46
1:AS:3171:C:H5''	1:AS:3172:U:O5'	2.16	0.46
3:AU:12:A:C6	3:AU:13:A:N7	2.84	0.46
3:AU:27:U:H2'	3:AU:28:C:H6	1.81	0.46
46:CM:1670:U:O2'	46:CM:1671:G:O5'	2.29	0.46
51:CR:103:TYR:CG	51:CR:189:LEU:HD21	2.51	0.46
54:CU:33:GLU:HG2	54:CU:34:LEU:HD12	1.97	0.46
57:CX:35:ILE:O	57:CX:37:THR:N	2.48	0.46
69:DJ:14:ILE:HG12	69:DJ:25:VAL:HG11	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:DL:32:ARG:HH11	71:DL:35:VAL:HG22	1.80	0.46
74:DO:47:PHE:CE1	74:DO:49:HIS:HB2	2.49	0.46
79:DT:91:ARG:NE	79:DT:100:THR:HG21	2.25	0.46
1:1:157:G:H2'	1:1:158:A:H8	1.81	0.46
1:1:290:G:H1'	16:v:93:LYS:HD2	1.98	0.46
1:1:559:C:H2'	1:1:560:C:H6	1.81	0.46
1:1:605:U:OP1	8:n:23:THR:HB	2.15	0.46
1:1:1022:A:H8	1:1:1022:A:OP2	1.99	0.46
1:1:1580:U:H2'	1:1:1581:C:C6	2.51	0.46
1:1:1635:C:OP2	35:AH:74:ARG:NH1	2.40	0.46
1:1:3173:G:O2'	21:0:161:LYS:HE3	2.16	0.46
25:7:80:ARG:HE	53:I:131:LYS:HG2	1.81	0.46
45:i:66:ASN:HD21	65:U:120:ARG:HH11	1.63	0.46
46:B:4:C:H5	46:B:20:G:H22	1.63	0.46
46:B:53:G:H2'	46:B:54:C:C6	2.51	0.46
46:B:103:A:H4'	46:B:105:A:C8	2.50	0.46
46:B:691:U:H5'	46:B:692:U:H5''	1.96	0.46
46:B:871:U:H2'	46:B:872:A:C8	2.47	0.46
46:B:1318:C:H2'	46:B:1319:U:H6	1.81	0.46
46:B:1478:A:O2'	46:B:1479:A:O4'	2.27	0.46
46:B:1595:U:O3'	63:S:72:GLY:HA3	2.16	0.46
47:C:77:SER:HB2	47:C:124:THR:HG21	1.97	0.46
51:G:99:PHE:CE1	51:G:113:ARG:HG2	2.48	0.46
59:O:35:SER:OG	59:O:123:VAL:HG13	2.16	0.46
59:O:38:HIS:CE1	59:O:43:ARG:HE	2.33	0.46
59:O:62:LEU:HD22	59:O:75:VAL:HG11	1.96	0.46
73:c:62:TYR:O	73:c:64:LEU:N	2.46	0.46
1:AS:430:G:H2'	1:AS:431:A:H8	1.81	0.46
1:AS:1215:C:H2'	1:AS:1282:A:N6	2.28	0.46
1:AS:2434:A:H2'	1:AS:2435:G:C8	2.51	0.46
1:AS:3163:U:O2'	1:AS:3164:U:O4'	2.34	0.46
9:BB:149:ARG:HH21	9:BB:241:ASN:C	2.23	0.46
46:CM:483:A:C5	46:CM:484:G:C5	3.04	0.46
46:CM:598:U:OP2	70:DK:108:GLY:HA2	2.15	0.46
46:CM:707:C:C2	46:CM:708:A:H1'	2.51	0.46
46:CM:1183:G:O4'	67:DH:72:GLY:HA3	2.16	0.46
46:CM:1257:U:O2'	46:CM:1260:A:OP2	2.24	0.46
46:CM:1375:C:H4'	64:DE:49:LYS:HA	1.97	0.46
46:CM:1500:G:H1'	46:CM:1505:C:C2	2.51	0.46
46:CM:1540:G:O6	62:DC:43:ARG:NE	2.48	0.46
46:CM:1721:U:H2'	46:CM:1722:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:CQ:117:ARG:NH2	45:CL:114:GLU:OE2	2.49	0.46
80:L1:63:MET:HG2	80:L1:65:ILE:HG12	1.97	0.46
1:1:2204:U:H2'	1:1:2205:C:C6	2.51	0.46
1:1:3171:C:H5''	1:1:3172:U:O5'	2.16	0.46
2:3:7:G:OP1	7:m:33:ARG:NH1	2.48	0.46
5:k:84:MET:HE1	5:k:181:ILE:HD11	1.96	0.46
7:m:278:THR:HG22	7:m:280:ALA:H	1.81	0.46
15:u:18:VAL:HA	15:u:27:ALA:O	2.16	0.46
27:9:39:LEU:HD12	27:9:106:ILE:O	2.16	0.46
32:AE:73:ARG:NH1	32:AE:108:VAL:HG11	2.30	0.46
46:B:78:A:H2	53:I:174:LYS:HG3	1.81	0.46
46:B:740:A:O2'	46:B:741:A:OP1	2.31	0.46
46:B:975:C:O2'	61:Q:122:ARG:HG2	2.16	0.46
46:B:1469:A:H2'	46:B:1470:G:C8	2.50	0.46
47:C:10:THR:HG23	47:C:13:ASP:H	1.80	0.46
48:D:225:LEU:O	48:D:229:LEU:HG	2.15	0.46
59:O:55:ARG:HG2	59:O:55:ARG:NH1	2.30	0.46
62:R:9:LYS:HB2	62:R:9:LYS:HE2	1.36	0.46
64:T:14:LYS:HB2	64:T:69:ILE:CD1	2.46	0.46
64:T:93:LEU:O	64:T:93:LEU:HD12	2.16	0.46
66:V:105:VAL:O	66:V:109:GLN:HG3	2.16	0.46
67:W:101:ARG:O	67:W:105:ILE:HG12	2.16	0.46
70:Z:37:ALA:HA	70:Z:41:SER:HB3	1.96	0.46
1:AS:98:A:OP1	16:BI:194:HIS:HB3	2.16	0.46
1:AS:137:C:H2'	1:AS:138:G:C8	2.50	0.46
1:AS:386:A:C5	1:AS:387:A:H1'	2.51	0.46
1:AS:426:G:H2'	1:AS:427:C:H6	1.79	0.46
1:AS:480:G:H4'	1:AS:481:G:OP2	2.15	0.46
1:AS:716:G:H3'	1:AS:717:A:H5''	1.97	0.46
1:AS:1661:U:H2'	1:AS:1662:G:H8	1.80	0.46
11:BD:16:VAL:HG11	11:BD:79:ILE:HG13	1.97	0.46
11:BD:30:PRO:HD2	11:BD:82:VAL:O	2.16	0.46
21:BN:155:ARG:NE	21:BN:172:TYR:HD1	2.13	0.46
34:CA:42:LYS:HG3	34:CA:74:THR:HG21	1.97	0.46
46:CM:29:U:H2'	46:CM:30:G:H8	1.81	0.46
46:CM:699:U:C2	46:CM:723:G:N2	2.84	0.46
46:CM:953:U:H2'	46:CM:954:C:O4'	2.15	0.46
46:CM:1774:C:H2'	46:CM:1775:G:H8	1.80	0.46
47:CN:172:LEU:HD13	64:DE:91:LEU:HD21	1.96	0.46
53:CT:224:ALA:O	53:CT:225:GLU:C	2.58	0.46
62:DC:2:VAL:HG23	65:DF:17:LEU:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:DG:4:VAL:HG11	66:DG:137:ALA:HA	1.98	0.46
79:DT:75:SER:HA	79:DT:116:ILE:HD13	1.96	0.46
79:DT:173:LYS:HB3	79:DT:192:HIS:O	2.16	0.46
1:1:220:A:O2'	1:1:222:U:OP2	2.29	0.46
1:1:1124:U:H2'	1:1:1125:A:O4'	2.16	0.46
1:1:1612:U:H2'	1:1:1613:G:C8	2.50	0.46
1:1:2607:A:H4'	1:1:2608:A:O5'	2.15	0.46
2:3:90:A:H2'	2:3:91:G:O4'	2.16	0.46
2:3:100:C:OP2	21:0:52:LYS:HE3	2.16	0.46
3:4:8:C:H2'	3:4:9:A:C8	2.51	0.46
21:0:12:ARG:HB3	21:0:24:LEU:HD23	1.97	0.46
46:B:154:A:H2'	46:B:155:A:O4'	2.16	0.46
46:B:330:U:OP1	55:K:56:ARG:NH2	2.49	0.46
46:B:345:G:H5'	58:N:80:MET:HE2	1.98	0.46
46:B:770:C:H6	46:B:770:C:OP1	1.99	0.46
46:B:1167:U:H4'	62:R:124:THR:CG2	2.46	0.46
46:B:1375:C:H5'	64:T:49:LYS:NZ	2.31	0.46
46:B:1436:U:H2'	46:B:1437:C:C6	2.51	0.46
50:F:27:THR:O	50:F:31:ALA:HB2	2.15	0.46
54:J:42:ILE:HD13	54:J:56:VAL:HA	1.98	0.46
59:O:94:ALA:HB3	59:O:96:LEU:HD12	1.98	0.46
63:S:76:GLN:O	63:S:80:ILE:HG13	2.16	0.46
64:T:17:ILE:HB	64:T:69:ILE:HD12	1.98	0.46
1:AS:675:A:H4'	1:AS:676:G:O5'	2.16	0.46
1:AS:815:U:HO2'	1:AS:914:C:HO2'	1.62	0.46
1:AS:1275:C:H2'	1:AS:1276:C:H6	1.81	0.46
1:AS:3168:U:C4	1:AS:3169:C:C4	3.03	0.46
1:AS:3264:C:OP1	18:BK:72:GLN:NE2	2.40	0.46
1:AS:3317:U:H2'	55:CV:168:SER:O	2.16	0.46
1:AS:3336:G:H2'	1:AS:3337:A:H8	1.80	0.46
10:BC:160:PRO:HB2	10:BC:162:GLU:OE1	2.15	0.46
21:BN:44:PHE:HE1	21:BN:122:HIS:ND1	2.14	0.46
38:CE:84:LYS:HB2	38:CE:84:LYS:HE3	1.70	0.46
46:CM:965:G:H4'	46:CM:1763:A:H4'	1.98	0.46
46:CM:1105:U:H2'	46:CM:1106:C:C6	2.50	0.46
46:CM:1164:G:H4'	45:CL:80:ALA:HA	1.98	0.46
46:CM:1336:G:OP1	63:DD:20:HIS:NE2	2.49	0.46
46:CM:1484:U:C4	46:CM:1498:G:C2	3.03	0.46
46:CM:1515:U:H2'	46:CM:1516:C:C6	2.50	0.46
46:CM:1520:C:OP2	72:DM:77:ARG:NH2	2.48	0.46
49:CP:233:SER:OG	49:CP:236:GLU:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:DB:13:ARG:N	61:DB:24:HIS:O	2.49	0.46
63:DD:14:THR:HB	63:DD:71:GLY:HA2	1.98	0.46
65:DF:36:ARG:HG3	65:DF:102:ALA:HA	1.98	0.46
69:DJ:51:GLU:O	69:DJ:61:ILE:HA	2.15	0.46
75:DP:42:ARG:HH12	75:DP:58:GLU:HG3	1.80	0.46
79:DT:39:ASP:C	79:DT:40:LYS:HG3	2.41	0.46
79:DT:65:HIS:NE2	79:DT:93:TRP:HZ2	2.12	0.46
79:DT:177:SER:HB3	79:DT:189:PHE:HE2	1.80	0.46
1:1:2157:C:C4	4:j:131:GLY:HA3	2.51	0.46
1:1:2587:G:H2'	1:1:2588:C:C6	2.51	0.46
1:1:2732:C:N3	43:AP:63:LYS:HE3	2.31	0.46
2:3:27:A:H2'	2:3:28:C:C6	2.51	0.46
4:j:19:HIS:CD2	4:j:19:HIS:N	2.81	0.46
6:l:65:SER:HA	6:l:76:PRO:HA	1.98	0.46
11:q:3:TYR:HD1	11:q:3:TYR:H	1.62	0.46
20:z:73:GLY:HA2	20:z:76:MET:CE	2.46	0.46
25:7:124:LYS:HB3	25:7:124:LYS:HE2	1.79	0.46
33:AF:5:VAL:N	33:AF:91:LYS:O	2.46	0.46
45:i:55:LYS:HE2	45:i:55:LYS:HB3	1.80	0.46
46:B:382:G:H2'	46:B:383:A:C8	2.51	0.46
46:B:602:A:H2'	46:B:603:A:O4'	2.16	0.46
46:B:836:U:H2'	46:B:837:C:C6	2.51	0.46
46:B:1238:U:C2	46:B:1239:U:C5	3.04	0.46
46:B:1584:A:C8	76:f:14:PHE:CD1	3.04	0.46
61:Q:98:ARG:HD2	73:c:49:ALA:HB2	1.98	0.46
67:W:26:THR:HG22	67:W:87:LYS:HB2	1.98	0.46
1:AS:239:A:OP1	36:CC:94:LYS:NZ	2.39	0.46
1:AS:364:G:OP1	6:AY:61:THR:HG23	2.16	0.46
1:AS:706:G:N2	1:AS:709:A:OP2	2.40	0.46
1:AS:816:A:H2'	1:AS:817:U:C6	2.51	0.46
1:AS:1215:C:H4'	1:AS:1219:A:C4'	2.45	0.46
1:AS:1330:U:H2'	1:AS:1331:U:C6	2.51	0.46
1:AS:1485:A:H5''	40:CG:4:GLN:OE1	2.15	0.46
1:AS:1521:G:H5'	1:AS:1826:G:OP2	2.15	0.46
1:AS:1785:G:O6	83:AS:3790:PAR:O62	2.28	0.46
1:AS:2656:C:H2'	1:AS:2657:C:C6	2.51	0.46
12:BE:41:ALA:O	12:BE:195:ALA:HA	2.16	0.46
13:BF:16:LYS:HB3	13:BF:72:ARG:HG2	1.98	0.46
18:BK:4:TYR:CE2	18:BK:16:SER:HB3	2.50	0.46
21:BN:13:ASN:O	21:BN:22:PRO:HG2	2.16	0.46
23:BP:47:VAL:HG22	23:BP:48:GLY:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:CE:17:THR:O	38:CE:25:ARG:HA	2.16	0.46
46:CM:91:G:H2'	46:CM:92:A:O4'	2.16	0.46
46:CM:272:G:C2	46:CM:281:U:H1'	2.51	0.46
46:CM:291:U:H2'	46:CM:292:C:C6	2.51	0.46
46:CM:718:A:H4'	46:CM:719:A:N7	2.31	0.46
46:CM:873:U:H2'	46:CM:874:U:C6	2.51	0.46
46:CM:1482:C:O2'	46:CM:1506:U:O2	2.32	0.46
46:CM:1582:U:H5'	46:CM:1583:C:OP2	2.15	0.46
47:CN:200:ASP:HA	47:CN:203:PHE:CD2	2.51	0.46
48:CO:81:TYR:CE1	48:CO:82:ARG:HD2	2.50	0.46
48:CO:174:ARG:NH2	48:CO:196:GLU:OE2	2.43	0.46
53:CT:2:LYS:O	53:CT:108:VAL:HA	2.16	0.46
57:CX:4:PRO:HG2	57:CX:7:ASP:HB2	1.98	0.46
66:DG:69:LYS:HB2	66:DG:70:GLN:OE1	2.15	0.46
75:DP:35:ASP:O	75:DP:37:SER:N	2.48	0.46
1:1:454:G:C4	1:1:476:C:H1'	2.51	0.46
1:1:542:U:H6	1:1:542:U:OP1	1.99	0.46
1:1:788:G:H2'	1:1:789:C:H6	1.81	0.46
1:1:983:U:H2'	1:1:984:U:C6	2.51	0.46
1:1:1278:G:C5	1:1:1279:C:C5	3.04	0.46
1:1:1615:A:H2'	1:1:1616:U:O4'	2.16	0.46
1:1:1905:A:H2'	1:1:1906:A:C8	2.51	0.46
1:1:2322:U:C1'	1:1:3051:C:H41	2.29	0.46
1:1:2564:G:H4'	1:1:2566:C:C2	2.51	0.46
3:4:49:G:OP1	36:AI:45:HIS:HB2	2.16	0.46
13:s:32:ARG:HB2	13:s:123:TYR:OH	2.15	0.46
46:B:544:U:H2'	46:B:545:U:C6	2.51	0.46
46:B:840:A:O2'	46:B:841:A:H3'	2.16	0.46
46:B:1227:A:OP1	62:R:59:LYS:NZ	2.32	0.46
50:F:28:ARG:HD2	57:M:60:SER:HB2	1.97	0.46
63:S:50:PRO:HG3	63:S:115:LEU:CD2	2.46	0.46
70:Z:63:GLN:OE1	70:Z:64:PRO:HA	2.16	0.46
79:AR:88:ARG:HA	79:AR:111:VAL:HG23	1.97	0.46
1:AS:151:U:OP2	36:CC:103:LYS:HB2	2.16	0.46
1:AS:212:A:OP1	27:BT:2:ALA:N	2.49	0.46
1:AS:1561:U:H5''	1:AS:1561:U:H6	1.80	0.46
1:AS:2417:A:H2'	1:AS:2418:A:C8	2.51	0.46
1:AS:2771:A:H5''	1:AS:2772:G:O5'	2.15	0.46
1:AS:2785:A:H2'	1:AS:2786:G:O4'	2.16	0.46
1:AS:2957:C:H2'	1:AS:2958:U:C6	2.50	0.46
1:AS:3144:A:OP1	34:CA:97:SER:OG	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AU:5:U:H2'	3:AU:6:U:H6	1.80	0.46
7:AZ:107:ARG:HH12	7:AZ:120:THR:HA	1.81	0.46
8:BA:30:ARG:NE	34:CA:107:ILE:O	2.48	0.46
10:BC:94:LEU:HD12	10:BC:97:LYS:HZ1	1.81	0.46
13:BF:30:LEU:HD13	13:BF:65:ILE:O	2.14	0.46
16:BI:28:TRP:HA	16:BI:31:ARG:HH21	1.82	0.46
16:BI:46:ASP:OD2	16:BI:50:ARG:NH2	2.47	0.46
21:BN:57:GLU:OE2	22:BO:139:ARG:HD2	2.16	0.46
22:BO:97:LYS:HE2	22:BO:97:LYS:HB3	1.55	0.46
24:BQ:10:LYS:NZ	24:BQ:54:ALA:O	2.49	0.46
46:CM:1344:C:O2	66:DG:3:GLY:HA3	2.16	0.46
46:CM:1350:C:H5''	63:DD:27:LEU:HD22	1.98	0.46
53:CT:58:LYS:HA	53:CT:107:SER:HB3	1.97	0.46
58:CY:28:ASN:C	58:CY:30:LYS:H	2.25	0.46
61:DB:15:PHE:HB3	61:DB:22:PHE:HB2	1.98	0.46
1:1:147:G:OP2	16:v:4:TYR:OH	2.20	0.45
1:1:383:G:N2	1:1:385:A:H3'	2.31	0.45
1:1:430:G:H2'	1:1:431:A:H8	1.81	0.45
1:1:635:C:C2	1:1:636:C:C5	3.04	0.45
1:1:1262:G:N2	1:1:1272:U:H1'	2.31	0.45
1:1:1764:C:H2'	1:1:1765:G:H8	1.81	0.45
1:1:3057:G:OP1	25:7:34:SER:OG	2.28	0.45
1:1:3148:A:OP2	17:w:6:LYS:HD2	2.16	0.45
2:3:39:U:O2'	13:s:43:GLN:HB3	2.15	0.45
15:u:14:GLU:HG2	15:u:17:ARG:HG2	1.98	0.45
25:7:87:LEU:HD23	25:7:87:LEU:H	1.80	0.45
46:B:226:G:H2'	46:B:227:C:C6	2.51	0.45
46:B:857:G:H2'	46:B:858:U:O4'	2.17	0.45
46:B:886:G:H2'	46:B:887:G:C8	2.51	0.45
49:E:94:LYS:HE2	49:E:110:ILE:HG21	1.99	0.45
1:AS:445:A:H3'	1:AS:446:U:C5	2.51	0.45
1:AS:982:U:O2'	9:BB:120:ALA:O	2.32	0.45
1:AS:1017:G:H2'	1:AS:1018:U:C6	2.50	0.45
1:AS:1116:A:H2'	1:AS:1117:U:C6	2.51	0.45
1:AS:1676:G:H2'	1:AS:1677:U:H6	1.81	0.45
1:AS:1707:U:C4	1:AS:1708:G:C6	3.04	0.45
1:AS:1779:U:H2'	1:AS:1780:A:H8	1.80	0.45
1:AS:2720:A:H1'	7:AZ:36:LEU:HD23	1.98	0.45
1:AS:3357:U:H5'	18:BK:56:ARG:NH2	2.31	0.45
83:AS:3789:PAR:H321	83:AS:3789:PAR:H121	1.64	0.45
2:AT:84:A:H2'	2:AT:85:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BE:202:ARG:NH2	12:BE:216:TYR:OH	2.49	0.45
14:BG:122:LYS:HB3	36:CC:118:ILE:HG23	1.98	0.45
22:BO:8:ARG:HG2	22:BO:11:THR:OG1	2.14	0.45
23:BP:59:GLU:OE1	23:BP:60:SER:N	2.47	0.45
46:CM:565:A:H5''	70:DK:70:LYS:NZ	2.31	0.45
46:CM:565:A:H1'	77:DR:14:VAL:HG23	1.99	0.45
46:CM:992:C:OP1	61:DB:130:ARG:HA	2.16	0.45
46:CM:1490:A:H2'	46:CM:1491:G:O4'	2.16	0.45
47:CN:50:ILE:HA	47:CN:53:THR:HB	1.98	0.45
53:CT:217:HIS:O	53:CT:219:ARG:N	2.48	0.45
54:CU:118:HIS:O	54:CU:122:LEU:HD13	2.15	0.45
63:DD:82:GLN:HB3	63:DD:86:LYS:HE2	1.98	0.45
66:DG:108:LEU:HA	66:DG:111:ILE:HG22	1.97	0.45
79:DT:128:ARG:HB3	79:DT:151:TRP:CD1	2.52	0.45
80:L1:37:GLY:O	80:L1:202:GLY:HA3	2.15	0.45
80:l1:99:LEU:O	80:l1:103:LEU:N	2.43	0.45
1:1:495:C:H2'	1:1:496:A:H8	1.81	0.45
1:1:856:G:C5	4:j:181:LYS:HB3	2.50	0.45
1:1:925:A:H2'	1:1:926:U:H6	1.81	0.45
1:1:1184:U:OP1	1:1:1206:U:O2'	2.25	0.45
1:1:1653:C:O2'	1:1:1793:A:OP2	2.24	0.45
1:1:2136:A:O2'	4:j:118:GLU:OE1	2.30	0.45
1:1:2925:U:H2'	1:1:2926:U:H2'	1.98	0.45
1:1:3313:G:H2'	1:1:3314:C:H6	1.81	0.45
12:r:189:GLU:OE2	12:r:200:LEU:HD22	2.15	0.45
16:v:146:ALA:HA	16:v:149:ASN:OD1	2.16	0.45
31:AD:77:ASN:O	31:AD:81:THR:HG23	2.16	0.45
33:AF:82:ASP:O	33:AF:85:VAL:HG22	2.15	0.45
46:B:67:A:O2'	46:B:69:G:OP1	2.35	0.45
46:B:1296:U:C2	46:B:1300:U:C4	3.03	0.45
46:B:1453:C:O2'	66:V:88:PHE:O	2.21	0.45
46:B:1545:U:O4	62:R:122:THR:HG22	2.16	0.45
46:B:1703:C:HO2'	46:B:1704:C:H6	1.64	0.45
52:H:217:LEU:HD23	52:H:217:LEU:HA	1.75	0.45
59:O:64:ASP:N	59:O:92:SER:HB3	2.30	0.45
59:O:126:TRP:CG	59:O:127:GLY:N	2.85	0.45
75:e:66:LEU:HD12	75:e:66:LEU:HA	1.77	0.45
78:h:181:GLN:O	78:h:189:THR:HA	2.14	0.45
79:AR:132:VAL:O	79:AR:145:LEU:HB2	2.16	0.45
1:AS:163:A:H2'	1:AS:164:U:O4'	2.17	0.45
1:AS:641:U:O2'	1:AS:1149:A:N1	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:677:U:H2'	1:AS:678:G:C8	2.51	0.45
1:AS:744:U:H2'	1:AS:745:C:C6	2.52	0.45
1:AS:859:C:H2'	1:AS:860:G:O4'	2.16	0.45
1:AS:943:G:H2'	1:AS:944:C:C6	2.52	0.45
1:AS:976:A:C3'	1:AS:977:U:H5'	2.45	0.45
1:AS:2525:A:H2'	1:AS:2526:C:O4'	2.16	0.45
1:AS:2569:U:H2'	1:AS:2570:G:H8	1.80	0.45
1:AS:2584:U:H2'	1:AS:2585:U:O4'	2.17	0.45
1:AS:2957:C:H2'	1:AS:2958:U:H6	1.81	0.45
2:AT:89:G:N2	2:AT:92:A:OP2	2.47	0.45
2:AT:119:U:OP1	7:AZ:256:THR:HG23	2.17	0.45
6:AY:153:VAL:O	6:AY:253:GLN:N	2.49	0.45
13:BF:47:GLN:O	45:CL:35:SER:N	2.45	0.45
16:BI:88:GLY:HA3	43:CJ:50:TYR:CD2	2.52	0.45
27:BT:46:LYS:HG3	27:BT:47:SER:N	2.31	0.45
46:CM:1213:G:H1'	78:DS:142:LEU:HD11	1.98	0.45
46:CM:1374:A:N6	46:CM:1397:A:N7	2.63	0.45
46:CM:1721:U:H2'	46:CM:1722:U:C6	2.52	0.45
50:CQ:218:VAL:HG21	79:DT:193:THR:HB	1.98	0.45
57:CX:27:PHE:O	57:CX:40:LEU:HB2	2.17	0.45
65:DF:22:ILE:HD11	65:DF:35:ILE:HG13	1.98	0.45
73:DN:51:ARG:NH2	75:DP:60:GLU:HG3	2.32	0.45
80:L1:116:LEU:HD23	80:L1:119:GLN:HB2	1.97	0.45
1:1:37:U:H2'	1:1:38:A:O4'	2.15	0.45
1:1:1761:U:H2'	1:1:1762:G:C4'	2.47	0.45
1:1:2079:C:O2'	1:1:2080:U:H6	1.99	0.45
1:1:2096:C:H2'	1:1:2097:A:O4'	2.17	0.45
1:1:2658:A:H2'	1:1:2659:G:O4'	2.15	0.45
7:m:41:LYS:HD3	7:m:41:LYS:HA	1.77	0.45
12:r:170:LYS:NZ	12:r:177:ASN:OD1	2.50	0.45
13:s:19:LEU:O	13:s:68:HIS:HA	2.16	0.45
26:8:34:LEU:HD12	26:8:35:PRO:HD2	1.98	0.45
31:AD:59:GLU:OE1	31:AD:71:TYR:OH	2.30	0.45
35:AH:83:ASN:O	35:AH:87:GLU:HG3	2.17	0.45
46:B:180:A:H2'	46:B:181:U:C6	2.50	0.45
46:B:583:A:H2'	46:B:584:G:H8	1.82	0.45
46:B:963:A:H2'	46:B:964:A:O4'	2.15	0.45
46:B:1002:U:H2'	46:B:1003:U:C6	2.50	0.45
46:B:1302:C:H2'	46:B:1303:G:O4'	2.15	0.45
46:B:1594:G:N7	63:S:123:MET:HE1	2.31	0.45
50:F:70:LEU:O	50:F:74:ILE:HD12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:M:18:GLU:C	57:M:20:VAL:H	2.25	0.45
59:O:38:HIS:CE1	59:O:43:ARG:HG2	2.50	0.45
59:O:135:ILE:HG22	59:O:135:ILE:O	2.15	0.45
65:U:106:GLU:O	65:U:110:ARG:HB2	2.17	0.45
65:U:132:LYS:HE3	65:U:142:SER:HB3	1.98	0.45
65:U:140:THR:HG23	65:U:141:THR:HG23	1.98	0.45
66:V:11:ALA:HB1	66:V:63:ARG:HE	1.81	0.45
79:AR:50:GLY:N	79:AR:55:TYR:HA	2.31	0.45
1:AS:401:U:H1'	1:AS:403:C:C4	2.50	0.45
1:AS:502:U:H2'	1:AS:503:U:C6	2.51	0.45
1:AS:1576:A:H3'	1:AS:1577:C:H6	1.80	0.45
1:AS:1945:A:H2'	1:AS:1946:U:C6	2.52	0.45
1:AS:2262:C:C4	1:AS:2286:C:O4'	2.69	0.45
1:AS:2361:C:OP2	17:BJ:86:ARG:NH2	2.49	0.45
1:AS:2463:A:OP1	80:L1:101:LYS:NZ	2.47	0.45
1:AS:2493:A:H5''	16:BI:28:TRP:CD1	2.52	0.45
3:AU:39:G:H1'	3:AU:104:A:N6	2.32	0.45
9:BB:13:LYS:O	9:BB:17:GLN:HG3	2.17	0.45
10:BC:95:LEU:HD22	10:BC:133:VAL:HG21	1.98	0.45
15:BH:19:VAL:HG12	15:BH:57:LEU:HD23	1.98	0.45
16:BI:94:TYR:HD1	16:BI:95:GLN:N	2.12	0.45
29:BV:28:HIS:CD2	29:BV:32:ARG:HG2	2.51	0.45
29:BV:95:SER:OG	29:BV:96:ALA:N	2.50	0.45
33:BZ:10:ILE:HA	33:BZ:64:THR:HG21	1.98	0.45
34:CA:20:LYS:HB2	34:CA:20:LYS:HE2	1.75	0.45
46:CM:236:U:O2'	46:CM:237:C:H5''	2.15	0.45
46:CM:849:U:H3'	69:DJ:28:ARG:HH22	1.82	0.45
46:CM:1431:G:C8	78:DS:131:LYS:HD2	2.51	0.45
46:CM:1454:U:H1'	66:DG:88:PHE:CD1	2.51	0.45
52:CS:225:ARG:HD2	75:DP:58:GLU:OE2	2.16	0.45
57:CX:22:VAL:HG12	57:CX:63:TYR:HE2	1.81	0.45
57:CX:59:PHE:CZ	57:CX:62:GLN:HA	2.50	0.45
73:DN:88:SER:O	73:DN:92:ARG:HG3	2.16	0.45
1:1:149:A:C5	1:1:150:A:C8	3.05	0.45
1:1:422:A:C2	1:1:2341:A:H4'	2.51	0.45
1:1:436:A:H2'	1:1:437:G:C8	2.52	0.45
1:1:641:U:H5''	85:1:4002:HOH:O	2.16	0.45
1:1:892:A:H5'	4:j:183:GLY:CA	2.46	0.45
1:1:1006:G:OP1	12:r:39:LYS:NZ	2.34	0.45
1:1:1661:U:H2'	1:1:1662:G:C8	2.50	0.45
1:1:1911:A:H2'	1:1:1912:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:3000:G:H2'	1:1:3001:A:C8	2.52	0.45
6:l:360:VAL:HG22	21:0:64:ILE:HG12	1.97	0.45
8:n:63:LEU:HD11	8:n:75:LEU:HD22	1.97	0.45
8:n:100:PHE:HD1	8:n:104:TYR:CD2	2.35	0.45
16:v:62:TYR:HD2	16:v:106:VAL:HG13	1.81	0.45
26:8:62:ILE:HD13	26:8:94:GLN:HB3	1.98	0.45
46:B:193:G:N7	55:K:147:ARG:NH2	2.64	0.45
46:B:234:G:H2'	46:B:235:C:C6	2.51	0.45
46:B:327:G:H2'	46:B:328:G:H8	1.82	0.45
46:B:863:G:O2'	60:P:108:ASP:OD1	2.28	0.45
46:B:1537:A:H2'	46:B:1538:U:C6	2.51	0.45
46:B:1581:G:O2'	46:B:1582:U:OP1	2.32	0.45
47:C:53:THR:OG1	47:C:161:PRO:HG2	2.16	0.45
47:C:88:LYS:HD3	47:C:88:LYS:HA	1.69	0.45
52:H:225:ARG:HH11	75:e:58:GLU:HG2	1.81	0.45
56:L:29:LYS:HA	77:g:40:TYR:CE1	2.50	0.45
59:O:33:ARG:HD3	59:O:33:ARG:C	2.42	0.45
59:O:68:GLU:O	59:O:70:SER:N	2.49	0.45
70:Z:3:LYS:HD2	70:Z:7:ARG:NH2	2.31	0.45
1:AS:25:A:C4	1:AS:330:G:C8	3.04	0.45
1:AS:174:C:H2'	1:AS:175:G:O4'	2.17	0.45
1:AS:276:U:H2'	1:AS:277:G:C8	2.51	0.45
1:AS:478:G:H2'	1:AS:478:G:N3	2.32	0.45
1:AS:713:A:H8	29:BV:115:LYS:HG3	1.80	0.45
1:AS:1758:U:C6	1:AS:1759:U:H4'	2.52	0.45
1:AS:3250:C:H2'	1:AS:3251:G:C8	2.52	0.45
2:AT:22:A:H2'	2:AT:23:A:C8	2.51	0.45
3:AU:2:A:C4	3:AU:3:A:C8	3.04	0.45
3:AU:40:A:H2'	3:AU:41:A:C8	2.51	0.45
3:AU:112:U:OP1	40:CG:8:ARG:NH1	2.47	0.45
4:AW:29:LEU:HA	4:AW:76:PHE:CE1	2.51	0.45
6:AY:65:SER:HA	6:AY:76:PRO:HA	1.97	0.45
6:AY:303:ALA:CB	19:BL:39:ARG:HH22	2.23	0.45
11:BD:89:LYS:HB2	11:BD:183:GLU:HB3	1.97	0.45
14:BG:126:PHE:HD1	36:CC:116:PHE:HA	1.78	0.45
33:BZ:33:TRP:HH2	33:BZ:53:GLN:HG2	1.80	0.45
41:CH:32:THR:HG23	41:CH:33:ASN:OD1	2.16	0.45
46:CM:444:A:C6	46:CM:445:U:C4	3.04	0.45
46:CM:529:C:O2'	46:CM:530:U:OP1	2.24	0.45
46:CM:582:C:C4	46:CM:583:A:N7	2.84	0.45
46:CM:696:U:H3	46:CM:725:A:N6	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:704:A:H2'	46:CM:704:A:OP2	2.16	0.45
46:CM:824:U:C5	46:CM:825:U:C5	3.01	0.45
46:CM:849:U:O2	74:DO:21:LEU:HB3	2.16	0.45
46:CM:1049:G:H21	48:CO:206:PRO:HG3	1.81	0.45
46:CM:1062:C:H2'	46:CM:1063:C:H6	1.80	0.45
46:CM:1394:G:H2'	46:CM:1395:G:O4'	2.15	0.45
46:CM:1424:G:H2'	46:CM:1425:C:C6	2.51	0.45
46:CM:1668:A:H1'	53:CT:66:GLY:HA2	1.99	0.45
53:CT:18:ILE:HG21	53:CT:24:LEU:HD21	1.98	0.45
58:CY:55:ASP:OD2	58:CY:58:CYS:N	2.49	0.45
63:DD:46:LYS:HD2	63:DD:46:LYS:HA	1.70	0.45
70:DK:111:GLY:O	70:DK:121:ARG:HD3	2.17	0.45
71:DL:94:TYR:C	71:DL:96:LEU:H	2.24	0.45
1:1:231:A:H1'	1:AS:246:U:OP1	2.15	0.45
1:1:306:A:C2	1:1:2756:G:H1'	2.51	0.45
1:1:606:A:O3'	6:l:327:ARG:NH2	2.49	0.45
1:1:798:C:H2'	1:1:799:C:C6	2.52	0.45
1:1:982:U:O2'	9:o:123:GLU:HB2	2.16	0.45
1:1:1690:U:O2'	1:1:1691:U:H5'	2.16	0.45
1:1:2469:A:H5'	1:1:2470:C:OP2	2.17	0.45
1:1:2771:A:H5''	1:1:2772:G:O5'	2.17	0.45
6:l:142:ARG:HB3	6:l:177:LYS:HE2	1.98	0.45
7:m:83:LEU:HD13	7:m:88:ILE:HD12	1.98	0.45
15:u:109:GLU:HG2	17:w:198:PHE:CE1	2.50	0.45
20:z:162:ARG:HD2	46:B:799:G:O4'	2.17	0.45
22:2:44:ALA:HB2	22:2:53:PRO:HG2	1.98	0.45
46:B:740:A:H2'	46:B:741:A:H8	1.80	0.45
46:B:804:U:C6	46:B:805:U:H5	2.35	0.45
46:B:1192:C:H42	46:B:1442:C:N4	2.15	0.45
50:F:72:SER:O	50:F:75:VAL:HG22	2.17	0.45
51:G:11:ARG:HA	51:G:28:ALA:HB2	1.97	0.45
52:H:136:ALA:HA	52:H:202:ALA:HA	1.99	0.45
52:H:161:ASP:HB2	75:e:43:ASN:O	2.17	0.45
59:O:103:LEU:O	59:O:104:CYS:CB	2.65	0.45
63:S:30:ILE:HG12	63:S:35:ILE:HG22	1.98	0.45
70:Z:89:ASN:HB2	70:Z:92:CYS:SG	2.56	0.45
1:AS:142:G:H4'	3:AU:145:U:OP1	2.17	0.45
1:AS:498:C:H2'	1:AS:499:G:C8	2.51	0.45
1:AS:656:G:H21	6:AY:94:MET:HB2	1.81	0.45
1:AS:892:A:H5'	4:AW:183:GLY:HA2	1.98	0.45
1:AS:1385:G:H5''	33:BZ:102:SER:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:2796:G:H2'	1:AS:2797:C:H6	1.81	0.45
1:AS:3152:G:OP1	17:BJ:118:ARG:NH2	2.50	0.45
7:AZ:98:ALA:HB1	7:AZ:162:VAL:HG23	1.99	0.45
8:BA:53:TYR:CE1	8:BA:62:LEU:HB3	2.51	0.45
9:BB:8:GLU:HG3	9:BB:9:THR:N	2.30	0.45
24:BQ:87:ARG:HH22	24:BQ:137:VAL:C	2.24	0.45
32:BY:95:VAL:HG12	32:BY:97:VAL:HG13	1.99	0.45
38:CE:27:PHE:HA	38:CE:34:CYS:HA	1.99	0.45
46:CM:338:U:H2'	46:CM:339:A:C8	2.50	0.45
46:CM:584:G:H2'	46:CM:585:C:C6	2.52	0.45
46:CM:1188:A:C2	46:CM:1543:A:C4	3.05	0.45
57:CX:80:LEU:HB3	57:CX:82:ILE:HG23	1.97	0.45
65:DF:36:ARG:NH1	65:DF:105:LEU:HB3	2.32	0.45
72:DM:55:PRO:O	72:DM:103:ARG:NH2	2.44	0.45
72:DM:89:ILE:HG22	72:DM:101:TYR:HD2	1.81	0.45
79:DT:25:THR:HG21	79:DT:292:SER:HA	1.99	0.45
1:1:188:G:C6	1:1:205:G:C5	3.05	0.45
1:1:393:U:H2'	1:1:394:G:O4'	2.16	0.45
1:1:1007:A:H2'	1:1:1008:A:C8	2.52	0.45
1:1:1021:A:H8	1:1:1021:A:P	2.39	0.45
1:1:1552:C:H5''	1:1:2147:G:N2	2.31	0.45
1:1:2184:G:H4'	1:1:2185:A:C8	2.51	0.45
1:1:2433:U:C2	1:1:2434:A:C8	3.05	0.45
1:1:3208:A:H4'	5:k:95:THR:HG22	1.98	0.45
1:1:3334:G:O5'	25:7:56:ARG:NH2	2.50	0.45
14:t:126:PHE:CD1	14:t:126:PHE:N	2.85	0.45
19:y:64:VAL:HG23	19:y:88:THR:O	2.17	0.45
46:B:69:G:H1	46:B:82:U:H3	1.64	0.45
46:B:326:A:H2'	46:B:327:G:O4'	2.17	0.45
46:B:796:A:N6	46:B:843:G:H2'	2.32	0.45
46:B:1148:A:C6	46:B:1149:G:C5	3.05	0.45
46:B:1236:U:O2'	46:B:1237:C:H5''	2.17	0.45
46:B:1305:U:O2	46:B:1307:A:H5'	2.17	0.45
46:B:1354:U:C2	46:B:1355:A:N7	2.84	0.45
48:D:115:ARG:HA	48:D:115:ARG:HD3	1.69	0.45
50:F:225:LYS:HB3	50:F:225:LYS:HE2	1.68	0.45
52:H:145:ASP:OD1	52:H:146:SER:N	2.48	0.45
59:O:129:ASP:C	59:O:131:ASP:H	2.17	0.45
78:h:172:ILE:C	78:h:173:PHE:HD1	2.24	0.45
1:AS:83:C:O2'	1:AS:100:G:O6	2.26	0.45
1:AS:623:A:H2'	1:AS:624:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:1028:C:H2'	1:AS:1029:U:O4'	2.17	0.45
1:AS:1760:U:P	20:BM:43:LYS:HE2	2.57	0.45
1:AS:3110:U:OP1	5:AX:274:HIS:ND1	2.49	0.45
3:AU:22:U:H5''	27:BT:16:ARG:HH12	1.82	0.45
5:AX:284:ARG:HH11	5:AX:356:LEU:HD12	1.79	0.45
20:BM:44:LEU:HB3	20:BM:49:THR:HB	1.99	0.45
38:CE:17:THR:C	38:CE:25:ARG:HA	2.42	0.45
40:CG:23:LEU:HD12	40:CG:24:PRO:HD2	1.99	0.45
46:CM:597:A:H2'	46:CM:598:U:C6	2.51	0.45
46:CM:645:G:C4	46:CM:686:G:C2	3.04	0.45
46:CM:813:U:O2'	46:CM:814:A:H5'	2.15	0.45
46:CM:1003:U:OP1	60:DA:107:LYS:NZ	2.50	0.45
46:CM:1083:U:H1'	69:DJ:71:LYS:HD2	1.98	0.45
46:CM:1293:G:H2'	46:CM:1294:C:C6	2.52	0.45
46:CM:1351:U:H5'	63:DD:32:GLY:HA2	1.99	0.45
46:CM:1515:U:OP1	52:CS:109:LYS:HG3	2.16	0.45
46:CM:1519:U:OP2	72:DM:77:ARG:HD2	2.17	0.45
46:CM:1580:A:O2'	46:CM:1581:G:H5'	2.17	0.45
47:CN:33:ASN:HD22	47:CN:149:MET:HA	1.81	0.45
54:CU:162:LEU:O	54:CU:166:GLN:HG3	2.17	0.45
56:CW:63:ASP:OD1	56:CW:64:GLU:N	2.50	0.45
60:DA:141:TYR:HE1	60:DA:146:ALA:HB2	1.82	0.45
66:DG:35:ASP:OD1	66:DG:35:ASP:N	2.42	0.45
66:DG:63:ARG:HH12	66:DG:67:LEU:HD11	1.80	0.45
1:1:35:C:H41	1:1:46:C:H6	1.64	0.45
1:1:284:A:OP2	43:AP:41:ARG:NE	2.48	0.45
1:1:449:U:C2	1:1:481:G:N2	2.85	0.45
1:1:496:A:H2'	1:1:497:U:C6	2.52	0.45
1:1:667:U:HO2'	1:1:1105:U:HO2'	1.64	0.45
1:1:1936:G:OP1	20:z:80:LYS:HE3	2.16	0.45
1:1:2330:A:H2'	1:1:2331:G:H8	1.80	0.45
1:1:2502:A:H1'	1:1:2503:G:C8	2.51	0.45
1:1:3304:A:H2'	1:1:3305:G:C8	2.52	0.45
1:1:3336:G:H2'	1:1:3337:A:C8	2.51	0.45
5:k:230:THR:HB	5:k:247:ARG:NH2	2.32	0.45
11:q:23:ARG:HE	11:q:39:LYS:HA	1.82	0.45
13:s:4:LYS:HG3	13:s:6:GLN:H	1.80	0.45
15:u:17:ARG:HD2	15:u:61:VAL:HG22	1.98	0.45
16:v:120:TRP:HZ2	16:v:123:GLN:HG2	1.81	0.45
20:z:38:ARG:O	20:z:42:ARG:HG3	2.16	0.45
40:AM:9:THR:O	40:AM:13:LEU:HG	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:413:C:O2'	46:B:416:G:O6	2.30	0.45
46:B:985:C:O2'	46:B:987:G:N7	2.45	0.45
46:B:1032:G:H2'	46:B:1033:U:C6	2.51	0.45
46:B:1168:A:C2	62:R:100:LYS:HB2	2.52	0.45
52:H:81:ARG:NH1	52:H:82:PHE:CE2	2.85	0.45
69:Y:10:ALA:HB1	69:Y:27:ILE:HD13	1.99	0.45
1:AS:105:A:N3	1:AS:325:A:O2'	2.44	0.45
1:AS:624:U:H2'	1:AS:625:C:H6	1.81	0.45
1:AS:1040:U:H1'	12:BE:92:HIS:CD2	2.52	0.45
1:AS:2130:A:H2'	1:AS:2131:U:H6	1.82	0.45
1:AS:2527:G:C8	10:BC:34:ASN:ND2	2.85	0.45
1:AS:3135:A:H2'	1:AS:3136:C:H6	1.81	0.45
1:AS:3166:A:C6	1:AS:3167:G:C6	3.05	0.45
4:AW:77:ILE:CD1	4:AW:128:ARG:HB3	2.46	0.45
7:AZ:84:PRO:HG3	7:AZ:89:LYS:HA	1.99	0.45
16:BI:172:ARG:NH1	16:BI:174:ILE:HG13	2.32	0.45
16:BI:180:PHE:O	16:BI:184:LYS:HG3	2.15	0.45
31:BX:101:ASP:N	31:BX:101:ASP:OD1	2.50	0.45
36:CC:118:ILE:HG22	36:CC:119:LYS:N	2.32	0.45
37:CD:87:GLU:O	37:CD:91:GLN:HG2	2.17	0.45
46:CM:677:G:H2'	46:CM:678:A:C8	2.51	0.45
48:CO:191:GLU:O	48:CO:195:ARG:HG3	2.17	0.45
51:CR:58:GLY:O	51:CR:61:VAL:HG12	2.16	0.45
51:CR:97:GLU:OE2	51:CR:113:ARG:NH1	2.49	0.45
52:CS:25:LEU:CD1	63:DD:26:GLY:HA3	2.46	0.45
53:CT:213:ALA:HA	53:CT:216:LEU:HD23	1.98	0.45
79:DT:12:THR:O	79:DT:53:ASN:HA	2.17	0.45
1:1:593:G:C8	1:1:607:G:C6	3.05	0.45
1:1:1358:C:H2'	1:1:1359:A:C8	2.51	0.45
1:1:1468:U:H2'	1:1:1469:G:H8	1.82	0.45
1:1:1756:A:C5	1:1:1762:G:C6	3.05	0.45
1:1:2094:G:OP1	1:1:2096:C:N4	2.48	0.45
1:1:2978:A:C2	1:1:3113:A:C4	3.05	0.45
4:j:27:ALA:HB1	4:j:77:ILE:HG13	1.97	0.45
4:j:77:ILE:HD13	4:j:128:ARG:HB3	1.99	0.45
8:n:154:LEU:HD23	8:n:157:GLN:OE1	2.17	0.45
9:o:13:LYS:HG3	9:o:17:GLN:HE22	1.82	0.45
11:q:134:MET:SD	11:q:146:VAL:HG22	2.56	0.45
20:z:39:SER:HA	20:z:42:ARG:HH11	1.82	0.45
38:AK:39:TYR:CD1	38:AK:40:PRO:HA	2.52	0.45
46:B:156:U:O2'	46:B:157:U:H3'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:805:U:H5''	46:B:806:A:OP2	2.16	0.45
46:B:1503:A:O2'	46:B:1504:U:H5'	2.17	0.45
46:B:1649:G:H2'	46:B:1650:G:C8	2.49	0.45
47:C:77:SER:HB2	47:C:124:THR:CG2	2.47	0.45
60:P:102:LEU:HD11	60:P:112:LYS:HA	1.99	0.45
63:S:89:VAL:HG21	63:S:116:LEU:HD11	1.99	0.45
71:a:20:ARG:HB3	71:a:76:TYR:CD1	2.51	0.45
1:AS:114:A:H5''	16:BI:4:TYR:HB2	1.97	0.45
1:AS:559:C:H2'	1:AS:560:C:C6	2.52	0.45
1:AS:1330:U:OP1	9:BB:108:GLN:NE2	2.44	0.45
1:AS:1466:U:H2'	1:AS:1467:U:H6	1.82	0.45
1:AS:2201:A:H8	1:AS:2201:A:OP2	1.99	0.45
1:AS:2747:U:O2'	1:AS:2749:G:N1	2.49	0.45
1:AS:2925:U:H2'	1:AS:2926:U:H2'	1.98	0.45
1:AS:2966:A:O2'	3:AU:1:A:N1	2.47	0.45
1:AS:2972:A:H2'	1:AS:2973:U:C6	2.52	0.45
1:AS:3287:A:H2'	1:AS:3288:A:H8	1.82	0.45
2:AT:29:C:H4'	13:BF:9:MET:HE1	1.98	0.45
10:BC:134:LYS:HD2	10:BC:139:HIS:HE1	1.82	0.45
12:BE:4:ARG:NH1	12:BE:99:ILE:HG13	2.31	0.45
28:BU:29:HIS:HD2	28:BU:40:HIS:NE2	2.13	0.45
46:CM:53:G:H2'	46:CM:54:C:C6	2.52	0.45
46:CM:903:U:H4'	61:DB:13:ARG:HD2	1.98	0.45
46:CM:1067:C:H4'	68:DI:58:TYR:CE1	2.52	0.45
46:CM:1260:A:C2	46:CM:1424:G:C4	3.04	0.45
46:CM:1401:U:H5''	64:DE:3:ARG:HH21	1.82	0.45
46:CM:1604:U:H2'	46:CM:1605:C:C6	2.52	0.45
48:CO:71:ALA:HB1	48:CO:77:GLU:HA	1.97	0.45
48:CO:87:ARG:HG2	48:CO:88:VAL:N	2.32	0.45
57:CX:15:LEU:HD23	57:CX:76:LEU:HD11	1.99	0.45
59:CZ:93:ASP:OD2	59:CZ:96:LEU:HD21	2.17	0.45
73:DN:22:ARG:HE	73:DN:22:ARG:HB3	1.61	0.45
73:DN:82:ARG:HD3	73:DN:85:ARG:HH12	1.82	0.45
79:DT:179:ASP:HB2	79:DT:186:ASN:OD1	2.17	0.45
1:1:726:G:H5''	19:y:43:PRO:HB2	1.99	0.45
1:1:1221:A:H2'	1:1:1222:G:H8	1.82	0.45
1:1:1491:U:H5	1:1:1831:A:N1	2.14	0.45
1:1:1701:U:O2	1:1:1783:A:H5'	2.17	0.45
1:1:1827:U:H2'	1:1:1828:C:C6	2.52	0.45
4:j:30:ARG:HG2	4:j:74:GLU:HG3	1.98	0.45
6:l:141:HIS:HA	6:l:178:ASP:OD1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:o:37:GLU:OE1	9:o:37:GLU:HA	2.17	0.45
16:v:45:PRO:O	16:v:49:ARG:HG3	2.17	0.45
41:AN:43:ASN:OD1	41:AN:43:ASN:N	2.46	0.45
45:i:53:LYS:C	45:i:55:LYS:N	2.73	0.45
46:B:325:U:H2'	46:B:326:A:C8	2.51	0.45
46:B:818:U:H3'	46:B:819:G:H5'	1.99	0.45
46:B:1105:U:H2'	46:B:1106:C:C6	2.52	0.45
46:B:1484:U:O4'	46:B:1506:U:H4'	2.17	0.45
46:B:1596:U:O2'	52:H:105:GLY:O	2.32	0.45
47:C:157:ASP:OD1	68:X:60:ARG:NH1	2.46	0.45
59:O:58:GLN:HG3	59:O:125:ASN:ND2	2.31	0.45
62:R:121:ILE:HD11	65:U:125:ILE:HD13	1.99	0.45
72:b:65:LEU:O	72:b:69:LEU:HB2	2.17	0.45
76:f:10:HIS:ND1	76:f:11:PRO:HD2	2.32	0.45
76:f:12:ARG:HB2	76:f:12:ARG:NH1	2.32	0.45
79:AR:22:SER:OG	79:AR:72:VAL:N	2.49	0.45
79:AR:67:HIS:CG	79:AR:68:ILE:H	2.35	0.45
1:AS:208:A:O2'	1:AS:210:A:OP2	2.33	0.45
1:AS:481:G:C2	1:AS:482:U:C2	3.05	0.45
1:AS:1706:C:H2'	1:AS:1707:U:C6	2.52	0.45
1:AS:1814:U:O2'	1:AS:1815:U:O5'	2.35	0.45
1:AS:1929:A:OP1	1:AS:2099:G:N1	2.34	0.45
1:AS:2927:U:H2'	1:AS:2928:A:O4'	2.17	0.45
1:AS:3196:U:H2'	1:AS:3197:G:H8	1.80	0.45
28:BU:39:PRO:HB2	28:BU:77:TYR:CD2	2.51	0.45
38:CE:60:GLY:HA2	38:CE:64:MET:SD	2.57	0.45
44:CK:49:ARG:HB2	44:CK:55:TRP:CZ3	2.52	0.45
46:CM:14:C:H2'	46:CM:15:U:C6	2.52	0.45
46:CM:222:C:C2	46:CM:823:G:N2	2.85	0.45
46:CM:222:C:H2'	46:CM:223:A:C8	2.52	0.45
46:CM:815:U:H5'	46:CM:815:U:O2	2.17	0.45
46:CM:845:U:O4'	54:CU:110:ARG:HG3	2.17	0.45
46:CM:907:G:O2'	46:CM:908:A:H5'	2.17	0.45
46:CM:931:U:H2'	46:CM:932:U:C6	2.51	0.45
46:CM:1049:G:O2'	48:CO:204:ILE:O	2.34	0.45
46:CM:1181:A:H4'	46:CM:1182:C:H5''	1.98	0.45
46:CM:1581:G:H2'	46:CM:1582:U:O4'	2.16	0.45
48:CO:36:THR:CG2	48:CO:41:ARG:HH12	2.30	0.45
58:CY:127:GLN:HG3	58:CY:137:PHE:HE1	1.82	0.45
63:DD:92:HIS:CD2	63:DD:96:VAL:HG21	2.52	0.45
67:DH:41:ILE:CD1	67:DH:54:PRO:HD3	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:DN:87:ARG:HE	73:DN:92:ARG:HA	1.82	0.45
80:L1:2:SER:HA	80:L1:198:TRP:CD2	2.52	0.45
80:L1:3:LYS:HD3	80:L1:3:LYS:HA	1.71	0.45
80:L1:15:LYS:HB2	80:L1:214:PHE:HZ	1.82	0.45
1:1:99:A:H3'	1:1:100:G:H21	1.82	0.45
1:1:370:U:H4'	1:1:403:C:H2'	1.99	0.45
1:1:449:U:N3	1:1:481:G:N1	2.65	0.45
1:1:502:U:H2'	1:1:503:U:C6	2.52	0.45
1:1:571:C:H2'	1:1:572:U:C6	2.52	0.45
1:1:1104:U:H2'	1:1:1105:U:C6	2.52	0.45
1:1:1258:G:O6	1:1:1260:G:N2	2.50	0.45
1:1:2247:U:H2'	1:1:2249:A:OP2	2.17	0.45
1:1:2484:U:H2'	1:1:2485:U:H6	1.79	0.45
1:1:2545:C:H4'	1:1:2546:U:OP1	2.17	0.45
4:j:102:LEU:HD13	4:j:166:ILE:CD1	2.46	0.45
28:AA:119:GLU:O	28:AA:123:GLN:HG2	2.16	0.45
46:B:286:A:H2'	46:B:287:U:O4'	2.17	0.45
46:B:1206:A:H2'	46:B:1207:C:O4'	2.16	0.45
46:B:1432:A:O2'	46:B:1433:C:H3'	2.17	0.45
46:B:1476:A:H4'	46:B:1478:A:C1'	2.47	0.45
50:F:67:ILE:HD11	50:F:87:ILE:HG22	1.99	0.45
51:G:21:ASP:OD2	51:G:24:SER:HB2	2.17	0.45
53:I:225:GLU:HG3	53:I:226:ILE:N	2.32	0.45
62:R:100:LYS:HG2	62:R:101:VAL:HG13	1.99	0.45
63:S:41:GLU:C	63:S:43:LEU:N	2.73	0.45
64:T:99:GLN:HB2	64:T:118:PRO:O	2.17	0.45
1:AS:94:A:H5''	29:BV:34:LYS:HB2	1.99	0.45
1:AS:120:A:C5	10:BC:130:PRO:HG3	2.52	0.45
1:AS:1825:A:H5''	1:AS:1826:G:H5'	1.98	0.45
1:AS:2184:G:H5'	1:AS:2185:A:C2	2.52	0.45
1:AS:2430:G:O2'	1:AS:2431:U:OP2	2.31	0.45
1:AS:2469:A:H2'	1:AS:2470:C:C6	2.52	0.45
2:AT:45:A:H2'	2:AT:46:A:H8	1.82	0.45
9:BB:79:PRO:O	9:BB:117:LEU:HD23	2.17	0.45
12:BE:68:ALA:HB1	12:BE:155:ALA:HB1	1.99	0.45
20:BM:173:ARG:O	20:BM:177:LEU:HG	2.17	0.45
21:BN:98:THR:HG22	21:BN:100:VAL:H	1.82	0.45
28:BU:70:PRO:HG2	28:BU:111:LYS:HB3	1.98	0.45
34:CA:52:VAL:HG22	34:CA:66:VAL:HG12	1.99	0.45
46:CM:589:A:P	77:DR:43:ARG:HH22	2.39	0.45
46:CM:830:G:C6	46:CM:831:G:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1071:A:H2'	46:CM:1072:A:C8	2.51	0.45
46:CM:1168:A:H2'	46:CM:1169:A:C8	2.52	0.45
46:CM:1262:G:C5	46:CM:1422:A:C2	3.04	0.45
46:CM:1776:G:OP2	61:DB:127:ARG:NH2	2.42	0.45
50:CQ:28:ARG:HB3	57:CX:58:GLN:HE21	1.82	0.45
52:CS:213:LYS:HA	52:CS:213:LYS:HD3	1.58	0.45
55:CV:107:THR:N	55:CV:108:PRO:HD2	2.32	0.45
69:DJ:115:GLU:O	69:DJ:119:LYS:HG2	2.16	0.45
80:L1:100:ILE:HB	80:L1:124:LEU:HD23	1.99	0.45
80:l1:27:ASN:HB3	80:l1:28:PHE:HD1	1.82	0.45
45:CL:112:LYS:HG3	45:CL:113:ARG:N	2.31	0.45
1:1:649:G:C6	1:1:650:G:C6	3.05	0.44
1:1:1042:A:H2'	1:1:1045:C:C5	2.52	0.44
1:1:1172:C:H2'	1:1:1173:G:N2	2.31	0.44
1:1:1621:A:H4'	1:1:1639:A:C5	2.52	0.44
1:1:1777:C:H2'	1:1:1778:U:C6	2.52	0.44
1:1:2857:C:O2'	1:1:2858:U:H5'	2.17	0.44
83:1:3969:PAR:C43	83:1:3969:PAR:HN61	2.30	0.44
4:j:32:LEU:HD13	4:j:163:ARG:HD3	1.99	0.44
5:k:260:VAL:HG11	5:k:266:ARG:HH12	1.79	0.44
14:t:60:ALA:HB3	14:t:65:TYR:O	2.17	0.44
15:u:87:TRP:CE2	15:u:93:ALA:HB2	2.52	0.44
17:w:160:LYS:O	17:w:164:GLN:HG3	2.17	0.44
26:8:117:ASN:O	40:AM:18:LYS:NZ	2.35	0.44
27:9:46:LYS:HE3	27:9:46:LYS:HB2	1.87	0.44
45:i:70:ASN:HB3	45:i:72:ASP:OD1	2.16	0.44
46:B:512:G:N3	46:B:513:A:C8	2.85	0.44
46:B:986:A:H2'	46:B:987:G:C8	2.52	0.44
46:B:1604:U:H2'	46:B:1605:C:C6	2.53	0.44
49:E:44:LYS:HA	49:E:44:LYS:HD3	1.90	0.44
53:I:211:LEU:O	53:I:215:ARG:HG2	2.17	0.44
59:O:36:LEU:HG	59:O:102:GLY:HA2	1.99	0.44
60:P:27:LYS:HA	60:P:27:LYS:HD2	1.85	0.44
62:R:81:ARG:NH1	62:R:98:ASN:HA	2.32	0.44
63:S:72:GLY:H	63:S:75:SER:HB3	1.81	0.44
65:U:49:LYS:HD3	65:U:49:LYS:HA	1.78	0.44
69:Y:11:LEU:HD12	69:Y:74:VAL:HG13	1.99	0.44
79:AR:224:LYS:HE3	79:AR:226:LYS:HE3	1.99	0.44
79:AR:264:GLU:HG3	79:AR:264:GLU:O	2.17	0.44
1:AS:97:G:OP1	14:BG:16:LYS:NZ	2.37	0.44
1:AS:496:A:OP1	8:BA:81:ARG:NH1	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:593:G:C8	1:AS:607:G:C6	3.05	0.44
1:AS:1018:U:C3'	1:AS:1019:U:H5''	2.47	0.44
1:AS:1153:G:H2'	1:AS:1154:A:O4'	2.17	0.44
1:AS:1165:A:H4'	9:BB:216:LYS:CD	2.47	0.44
1:AS:1467:U:OP1	20:BM:5:ARG:NH2	2.49	0.44
1:AS:2254:G:H1	1:AS:2288:U:H3	1.65	0.44
1:AS:2852:U:O2	5:AX:250:ALA:HB3	2.18	0.44
1:AS:2917:G:O2'	1:AS:2920:C:OP2	2.23	0.44
4:AW:4:VAL:HG13	4:AW:8:GLN:HB2	1.99	0.44
6:AY:6:GLN:HB2	6:AY:20:GLN:OE1	2.17	0.44
12:BE:36:LEU:HD12	12:BE:87:LEU:HD23	1.97	0.44
19:BL:91:ASN:ND2	29:BV:80:THR:HG21	2.32	0.44
26:BS:88:ILE:HA	26:BS:120:LYS:HE3	1.99	0.44
46:CM:875:C:H2'	46:CM:876:A:H8	1.82	0.44
46:CM:1378:U:H2'	46:CM:1379:C:H6	1.82	0.44
46:CM:1663:U:H5''	55:CV:58:LEU:HD21	1.98	0.44
47:CN:24:LEU:HB3	47:CN:45:MET:HE3	2.00	0.44
48:CO:94:LYS:H	48:CO:94:LYS:HD2	1.81	0.44
49:CP:49:GLU:OE2	68:DI:11:LEU:HD12	2.18	0.44
62:DC:50:ASP:O	62:DC:53:PRO:HD2	2.17	0.44
66:DG:30:VAL:HG13	66:DG:34:VAL:HG11	1.99	0.44
79:DT:107:HIS:NE2	79:DT:125:SER:OG	2.41	0.44
1:1:270:U:H2'	1:1:271:C:H6	1.81	0.44
1:1:380:U:H2'	1:1:381:U:C6	2.52	0.44
1:1:385:A:H2'	1:1:386:A:C8	2.52	0.44
1:1:756:G:O2'	1:1:766:G:N2	2.42	0.44
1:1:929:A:C2	6:l:99:ARG:NH2	2.84	0.44
1:1:1434:U:H4'	6:l:89:ALA:CB	2.46	0.44
1:1:1625:U:P	28:AA:112:LYS:HE2	2.58	0.44
1:1:1787:U:O4	83:1:3968:PAR:H222	2.17	0.44
1:1:2176:A:C2	1:1:2177:G:C8	3.06	0.44
1:1:2854:U:H2'	1:1:2855:U:H6	1.81	0.44
3:4:85:G:H4'	3:4:86:U:OP1	2.18	0.44
4:j:70:LYS:HG3	4:j:71:LEU:N	2.31	0.44
10:p:74:PRO:HD3	10:p:234:TRP:CE2	2.52	0.44
13:s:101:ASN:ND2	13:s:130:VAL:HG13	2.33	0.44
19:y:76:ALA:HA	19:y:79:LYS:HG3	2.00	0.44
27:9:37:LYS:HZ3	27:9:40:ARG:HH11	1.65	0.44
32:AE:71:ARG:HH11	32:AE:103:LEU:HD13	1.83	0.44
36:AI:1:MET:N	36:AI:1:MET:SD	2.90	0.44
45:i:80:ALA:HB1	46:B:1164:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:i:90:ARG:NH1	46:B:1413:A:H5''	2.32	0.44
45:i:113:ARG:CD	46:B:556:U:H5	2.30	0.44
46:B:20:G:H5'	46:B:569:G:C8	2.52	0.44
46:B:1238:U:H2'	46:B:1239:U:C6	2.52	0.44
46:B:1344:C:O2	66:V:3:GLY:HA3	2.18	0.44
46:B:1387:A:OP1	64:T:56:HIS:NE2	2.31	0.44
47:C:183:ARG:NE	47:C:191:ARG:HA	2.33	0.44
48:D:36:THR:HG23	48:D:231:LEU:O	2.17	0.44
50:F:12:LEU:HD23	50:F:12:LEU:HA	1.84	0.44
66:V:108:LEU:HB3	66:V:114:LEU:HD22	1.99	0.44
79:AR:90:LEU:O	79:AR:104:PHE:HD1	2.00	0.44
1:AS:687:U:N3	6:AY:228:THR:OG1	2.43	0.44
1:AS:713:A:O2'	1:AS:748:C:O2'	2.33	0.44
1:AS:988:A:O2'	1:AS:989:G:H5'	2.17	0.44
1:AS:1029:U:O2'	1:AS:1030:U:OP1	2.32	0.44
1:AS:1759:U:H5'	1:AS:1760:U:OP2	2.17	0.44
1:AS:1936:G:OP1	20:BM:80:LYS:HE3	2.18	0.44
1:AS:2457:C:C4	1:AS:2458:G:C6	3.04	0.44
1:AS:2466:A:H5'	1:AS:2467:C:C2	2.52	0.44
1:AS:2627:U:H4'	1:AS:2628:A:O4'	2.17	0.44
1:AS:3023:U:H2'	1:AS:3024:G:H8	1.82	0.44
1:AS:3207:G:N2	1:AS:3210:A:OP2	2.50	0.44
3:AU:126:A:O2'	3:AU:128:U:OP2	2.26	0.44
7:AZ:84:PRO:HB3	7:AZ:89:LYS:HG2	1.99	0.44
15:BH:78:TRP:NE1	15:BH:83:ILE:HB	2.32	0.44
15:BH:111:PHE:O	15:BH:114:MET:HB3	2.18	0.44
20:BM:158:GLU:O	20:BM:162:ARG:HG3	2.16	0.44
21:BN:27:MET:HE2	21:BN:27:MET:HB3	1.79	0.44
21:BN:73:LYS:HD2	21:BN:75:PHE:CZ	2.52	0.44
46:CM:744:U:C2	46:CM:745:A:C8	3.06	0.44
46:CM:1138:G:P	73:DN:82:ARG:HE	2.40	0.44
46:CM:1370:A:H2'	46:CM:1371:G:O4'	2.18	0.44
46:CM:1396:A:H2'	46:CM:1397:A:C8	2.52	0.44
46:CM:1543:A:OP1	62:DC:115:TYR:OH	2.32	0.44
53:CT:207:GLU:O	53:CT:210:GLN:HB2	2.18	0.44
56:CW:150:LEU:HD23	56:CW:150:LEU:HA	1.78	0.44
64:DE:102:ILE:O	64:DE:121:THR:HA	2.18	0.44
1:1:87:A:H2'	1:1:88:G:O4'	2.16	0.44
1:1:259:C:H2'	1:1:260:C:H6	1.81	0.44
1:1:594:C:P	9:o:31:ARG:HH12	2.40	0.44
1:1:638:U:OP2	33:AF:39:ILE:HG12	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1132:A:OP2	30:AC:8:THR:HG23	2.17	0.44
1:1:1918:A:H3'	1:1:1919:C:C6	2.51	0.44
1:1:2420:G:H2'	1:1:2421:A:C8	2.53	0.44
1:1:2749:G:H5'	1:1:2751:A:OP2	2.17	0.44
1:1:2796:G:H2'	1:1:2797:C:H6	1.82	0.44
1:1:3216:U:H2'	1:1:3217:G:C8	2.53	0.44
5:k:159:ARG:HG2	5:k:182:GLN:HA	1.99	0.44
6:l:12:VAL:N	10:BC:119:GLU:OE1	2.47	0.44
10:p:149:ALA:HA	10:p:202:THR:HG22	1.99	0.44
13:s:88:GLU:HB3	62:R:10:ARG:CZ	2.47	0.44
33:AF:81:LYS:HG3	33:AF:81:LYS:O	2.16	0.44
40:AM:23:LEU:HD12	40:AM:24:PRO:HD2	1.98	0.44
46:B:97:C:H2'	46:B:98:U:C6	2.53	0.44
46:B:167:A:H8	46:B:167:A:OP2	2.00	0.44
46:B:191:U:H4'	46:B:192:U:H5'	1.99	0.44
46:B:518:A:H2'	46:B:519:A:H8	1.81	0.44
46:B:655:U:H4'	46:B:675:U:H3	1.81	0.44
46:B:810:U:H2'	46:B:811:U:H6	1.81	0.44
46:B:917:U:OP2	48:D:155:TYR:OH	2.30	0.44
46:B:1654:A:H2'	46:B:1655:G:C8	2.52	0.44
46:B:1716:C:H2'	46:B:1717:A:O4'	2.17	0.44
49:E:135:ARG:HH21	68:X:1:MET:HB2	1.82	0.44
51:G:67:GLN:NE2	71:a:17:LEU:O	2.50	0.44
57:M:27:PHE:N	57:M:27:PHE:HD1	2.15	0.44
62:R:18:LYS:HD2	62:R:36:LEU:O	2.17	0.44
78:h:156:VAL:HG22	78:h:158:ARG:HG2	1.97	0.44
1:AS:1706:C:H2'	1:AS:1707:U:H6	1.83	0.44
1:AS:2460:U:H2'	1:AS:2461:G:C8	2.52	0.44
1:AS:2480:A:H4'	1:AS:2481:G:C8	2.53	0.44
1:AS:2702:G:H4'	19:BL:184:PHE:CG	2.53	0.44
1:AS:2764:A:H2'	1:AS:2765:G:C8	2.52	0.44
1:AS:3005:A:H2'	1:AS:3006:C:H6	1.83	0.44
1:AS:3111:A:H4'	5:AX:20:LYS:HD3	1.99	0.44
1:AS:3159:A:N6	1:AS:3160:C:C4	2.85	0.44
1:AS:3165:U:N3	1:AS:3166:A:C5	2.86	0.44
2:AT:113:C:H2'	2:AT:114:U:O4'	2.16	0.44
19:BL:133:LYS:HB2	19:BL:135:GLN:NE2	2.31	0.44
42:CI:7:LYS:HD3	42:CI:11:ARG:NH2	2.32	0.44
49:CP:96:VAL:HG22	49:CP:110:ILE:HG12	1.99	0.44
49:CP:236:GLU:HA	49:CP:236:GLU:OE1	2.17	0.44
53:CT:126:ASP:OD1	53:CT:127:THR:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CU:139:LEU:HB2	54:CU:143:ASN:OD1	2.17	0.44
59:CZ:132:GLU:OE1	59:CZ:132:GLU:HA	2.16	0.44
64:DE:89:SER:C	64:DE:91:LEU:H	2.26	0.44
66:DG:15:ILE:HD11	66:DG:63:ARG:HD2	1.99	0.44
66:DG:65:ILE:HG12	66:DG:71:VAL:CG2	2.47	0.44
72:DM:76:ALA:O	72:DM:80:LEU:HD12	2.18	0.44
79:DT:88:ARG:HG2	79:DT:109:GLY:C	2.42	0.44
1:1:444:U:H3	1:1:485:A:N6	2.15	0.44
1:1:962:U:H2'	1:1:963:A:C8	2.52	0.44
1:1:1070:U:O2'	30:AC:42:ASN:OD1	2.28	0.44
1:1:1616:U:H2'	1:1:1617:A:C8	2.52	0.44
1:1:2164:U:OP2	4:j:200:ARG:HD2	2.17	0.44
1:1:2650:A:C5	45:i:52:LYS:HD2	2.53	0.44
6:l:11:SER:HB2	10:BC:119:GLU:OE1	2.17	0.44
8:n:58:GLU:OE2	8:n:101:ASN:HB2	2.18	0.44
19:y:54:LEU:HD22	19:y:58:ASN:HB3	1.99	0.44
31:AD:101:ASP:OD1	31:AD:101:ASP:N	2.50	0.44
43:AP:72:LEU:HD11	43:AP:83:LEU:HD12	1.99	0.44
46:B:330:U:H5''	55:K:31:ARG:NH1	2.33	0.44
46:B:1445:C:H2'	65:U:138:THR:OG1	2.18	0.44
46:B:1609:G:H2'	46:B:1610:C:H6	1.83	0.44
46:B:1740:A:H2'	46:B:1741:A:C8	2.53	0.44
47:C:120:LEU:HD21	47:C:144:ILE:HD12	1.99	0.44
50:F:143:LEU:HA	50:F:180:GLN:HE21	1.83	0.44
57:M:32:HIS:O	57:M:32:HIS:CG	2.71	0.44
59:O:124:LYS:O	59:O:125:ASN:C	2.60	0.44
61:Q:12:ALA:HB3	61:Q:76:ILE:HD13	1.99	0.44
1:AS:210:A:OP2	6:AY:222:ASN:HB2	2.18	0.44
1:AS:275:U:H2'	1:AS:276:U:H6	1.82	0.44
1:AS:417:A:H2'	1:AS:418:A:C8	2.52	0.44
1:AS:544:U:H5'	1:AS:546:C:C5'	2.47	0.44
1:AS:796:G:H22	6:AY:102:ALA:HA	1.82	0.44
1:AS:962:U:H2'	1:AS:963:A:C8	2.52	0.44
1:AS:1149:A:O2'	1:AS:1150:A:H5'	2.18	0.44
1:AS:1276:C:C2	1:AS:1277:G:C8	3.06	0.44
1:AS:1560:U:H2'	1:AS:1561:U:O4'	2.17	0.44
1:AS:1857:G:O2'	1:AS:3038:U:OP1	2.27	0.44
1:AS:1905:A:H2'	1:AS:1906:A:C8	2.52	0.44
1:AS:2290:A:OP1	1:AS:2292:U:H5	2.01	0.44
1:AS:2339:A:H2'	1:AS:2340:C:C6	2.52	0.44
1:AS:2557:G:C6	26:BS:24:LEU:HD21	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:2933:G:H2'	1:AS:2934:U:H6	1.81	0.44
1:AS:3118:G:H2'	1:AS:3119:A:C8	2.52	0.44
1:AS:3166:A:H2'	1:AS:3167:G:H8	1.81	0.44
1:AS:3197:G:H2'	1:AS:3198:C:C6	2.52	0.44
3:AU:81:A:H4'	36:CC:2:ALA:N	2.32	0.44
14:BG:42:LYS:O	14:BG:46:ILE:HG12	2.18	0.44
17:BJ:53:LEU:HD23	17:BJ:53:LEU:HA	1.87	0.44
26:BS:82:LEU:HB3	26:BS:84:PHE:CE1	2.50	0.44
46:CM:368:A:H2'	46:CM:369:G:C8	2.52	0.44
46:CM:834:C:H2'	46:CM:835:A:H8	1.80	0.44
46:CM:1305:U:O2	46:CM:1307:A:H5'	2.17	0.44
46:CM:1749:A:C1'	46:CM:1770:C:H5'	2.47	0.44
47:CN:63:ILE:HG12	68:DI:36:ILE:CG2	2.46	0.44
48:CO:136:ARG:NE	48:CO:218:LEU:HD11	2.33	0.44
55:CV:26:LYS:HG2	55:CV:29:LEU:HD23	2.00	0.44
55:CV:55:PHE:HB2	55:CV:182:SER:C	2.43	0.44
61:DB:117:PRO:CB	61:DB:120:SER:HB3	2.48	0.44
78:DS:163:CYS:HA	78:DS:174:MET:HE2	1.99	0.44
1:1:206:U:H2'	1:1:207:C:C6	2.53	0.44
1:1:236:A:OP1	3:4:95:G:N2	2.36	0.44
1:1:788:G:H5''	29:AB:2:PRO:HD3	1.99	0.44
1:1:911:A:H4'	1:1:2929:G:H4'	2.00	0.44
1:1:954:C:O2'	29:AB:39:HIS:HB3	2.17	0.44
1:1:1099:A:N3	1:1:1099:A:H2'	2.33	0.44
1:1:2473:C:OP1	80:11:39:LYS:NZ	2.49	0.44
1:1:3221:G:C6	1:1:3222:C:C4	3.05	0.44
1:1:3335:A:H2'	1:1:3336:G:C8	2.52	0.44
27:9:51:ARG:HD2	27:9:115:ARG:HH11	1.83	0.44
28:AA:12:ILE:HB	28:AA:81:MET:HB3	1.99	0.44
36:AI:51:ILE:O	36:AI:55:LEU:HD12	2.18	0.44
45:i:101:LYS:NZ	46:B:579:U:P	2.90	0.44
46:B:69:G:H2'	46:B:70:C:C6	2.52	0.44
46:B:1376:U:C6	64:T:3:ARG:HG3	2.52	0.44
46:B:1527:G:C5	46:B:1528:G:C5	3.06	0.44
47:C:14:ALA:O	47:C:18:LEU:HD12	2.17	0.44
50:F:60:LEU:HD12	50:F:60:LEU:O	2.18	0.44
50:F:116:ILE:HG13	50:F:117:ARG:N	2.31	0.44
53:I:164:LYS:HB3	53:I:167:LYS:O	2.18	0.44
60:P:87:ASP:N	60:P:87:ASP:OD1	2.49	0.44
62:R:68:GLU:N	62:R:69:PRO:CD	2.80	0.44
63:S:41:GLU:O	63:S:42:ILE:C	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:h:151:ASP:OD2	78:h:154:GLY:HA3	2.17	0.44
1:AS:78:U:H2'	1:AS:79:G:H8	1.83	0.44
1:AS:671:U:OP1	19:BL:21:SER:OG	2.34	0.44
1:AS:2115:U:C6	1:AS:2119:U:C4	3.06	0.44
1:AS:2367:C:H2'	1:AS:2368:A:C8	2.52	0.44
1:AS:3146:G:C6	1:AS:3178:A:C2	3.06	0.44
1:AS:3315:C:HO2'	1:AS:3316:U:H2'	1.81	0.44
3:AU:13:A:C5	3:AU:14:C:C4	3.06	0.44
3:AU:49:G:OP1	36:CC:45:HIS:HB2	2.18	0.44
3:AU:90:U:H1'	27:BT:25:VAL:HG23	1.99	0.44
32:BY:78:ARG:NH1	32:BY:87:LYS:HE2	2.32	0.44
32:BY:82:GLU:HA	32:BY:83:ASP:HA	1.53	0.44
46:CM:390:G:H5''	46:CM:1716:C:O2'	2.17	0.44
46:CM:579:U:OP1	45:CL:105:GLN:HG3	2.18	0.44
46:CM:756:A:H4'	56:CW:7:THR:O	2.17	0.44
46:CM:805:U:H5''	46:CM:806:A:OP2	2.17	0.44
46:CM:876:A:C6	46:CM:907:G:C6	3.06	0.44
46:CM:1226:G:H4'	62:DC:77:LYS:O	2.17	0.44
53:CT:198:ALA:O	53:CT:202:ARG:HG2	2.17	0.44
53:CT:199:GLN:HA	53:CT:202:ARG:CG	2.48	0.44
61:DB:53:TYR:CE2	61:DB:57:LEU:HD11	2.53	0.44
64:DE:75:GLU:O	64:DE:79:GLU:HG3	2.17	0.44
79:DT:75:SER:OG	79:DT:80:TYR:HB3	2.17	0.44
80:l1:9:VAL:HB	80:l1:180:VAL:HG13	1.98	0.44
1:1:94:A:C5	1:1:95:G:H1'	2.53	0.44
1:1:155:A:P	37:AJ:26:SER:HG	2.41	0.44
1:1:185:U:H3	1:1:229:C:H42	1.65	0.44
1:1:630:G:H2'	1:1:631:U:C6	2.53	0.44
1:1:827:G:O2'	1:1:1860:A:N3	2.42	0.44
1:1:1021:A:H2'	1:1:1022:A:C8	2.52	0.44
1:1:1303:G:H5'	17:w:61:LYS:HE3	1.99	0.44
1:1:1556:G:C2	1:1:1575:A:C8	3.05	0.44
1:1:1695:A:H2'	1:1:1696:G:C8	2.53	0.44
1:1:1813:G:C2'	1:1:1814:U:H5'	2.47	0.44
1:1:2394:U:H2'	1:1:2395:U:C6	2.52	0.44
1:1:2736:C:O2	82:1:3406:3K5:H36	2.16	0.44
1:1:2979:U:H2'	1:1:2980:A:C8	2.52	0.44
5:k:212:ASP:OD2	5:k:354:VAL:N	2.29	0.44
6:l:84:HIS:ND1	6:l:84:HIS:O	2.50	0.44
6:l:157:PHE:O	6:l:157:PHE:CD1	2.71	0.44
12:r:47:PRO:HB3	12:r:171:TRP:CZ2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:t:154:PRO:HB3	29:AB:106:ALA:CB	2.47	0.44
31:AD:44:VAL:HB	31:AD:69:VAL:HG22	2.00	0.44
45:i:112:LYS:HG2	45:i:113:ARG:N	2.33	0.44
46:B:806:A:H3'	46:B:806:A:OP1	2.16	0.44
46:B:1130:U:H2'	46:B:1131:G:O4'	2.18	0.44
46:B:1157:G:H2'	46:B:1158:C:C6	2.53	0.44
46:B:1500:G:H1'	46:B:1505:C:O2	2.17	0.44
46:B:1668:A:H2'	46:B:1669:U:H5'	1.99	0.44
47:C:102:PHE:CE2	47:C:132:ALA:HA	2.53	0.44
55:K:120:THR:HG21	55:K:133:ALA:HA	1.99	0.44
59:O:97:LEU:HA	59:O:100:TRP:CH2	2.52	0.44
68:X:15:ARG:NH1	68:X:33:GLN:OE1	2.51	0.44
79:AR:118:LYS:HD2	79:AR:159:PRO:C	2.41	0.44
1:AS:58:G:H2'	3:AU:33:A:O2'	2.18	0.44
1:AS:200:A:H2'	1:AS:201:G:C8	2.53	0.44
1:AS:435:C:O2'	1:AS:1397:G:H4'	2.17	0.44
1:AS:1180:A:C6	1:AS:1319:G:C6	3.05	0.44
1:AS:1571:G:H2'	1:AS:1572:G:C8	2.53	0.44
1:AS:1725:A:C6	44:CK:42:CYS:HA	2.52	0.44
1:AS:1756:A:H3'	1:AS:1757:A:C8	2.53	0.44
1:AS:2089:G:C8	25:BR:49:ILE:HD13	2.52	0.44
1:AS:2603:U:H2'	1:AS:2604:G:H8	1.81	0.44
1:AS:2874:A:H2'	1:AS:2875:A:O4'	2.18	0.44
2:AT:59:U:H2'	2:AT:60:G:C8	2.53	0.44
3:AU:132:G:OP1	26:BS:91:ASN:ND2	2.43	0.44
4:AW:51:ASP:OD2	4:AW:54:ARG:NH2	2.50	0.44
5:AX:165:GLN:NE2	5:AX:202:GLU:OE2	2.38	0.44
9:BB:135:GLY:N	9:BB:233:ILE:HD12	2.33	0.44
13:BF:57:PHE:N	13:BF:57:PHE:CD1	2.86	0.44
44:CK:13:LYS:HG3	44:CK:14:PHE:CD1	2.52	0.44
46:CM:339:A:H4'	55:CV:87:ASN:ND2	2.33	0.44
46:CM:518:A:HO2'	46:CM:519:A:P	2.41	0.44
46:CM:641:G:H2'	46:CM:642:C:H6	1.83	0.44
46:CM:685:C:H5'	69:DJ:119:LYS:HE2	1.98	0.44
46:CM:1099:G:O2'	46:CM:1115:G:O6	2.32	0.44
46:CM:1238:U:C2	46:CM:1239:U:C5	3.05	0.44
48:CO:135:LEU:HD21	48:CO:217:LEU:HD23	2.00	0.44
52:CS:58:LEU:HD12	52:CS:138:VAL:HG12	1.99	0.44
52:CS:128:ASN:OD1	52:CS:130:ILE:HG12	2.17	0.44
54:CU:52:LYS:O	54:CU:84:ARG:HA	2.18	0.44
59:CZ:108:ARG:HD3	59:CZ:108:ARG:H	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:DC:18:LYS:HE2	65:DF:92:GLN:OE1	2.17	0.44
67:DH:37:SER:O	67:DH:41:ILE:HG13	2.17	0.44
80:11:26:ARG:HG2	80:11:27:ASN:N	2.33	0.44
80:11:41:TYR:HE1	80:11:195:LYS:N	2.15	0.44
1:1:35:C:H4'	1:1:804:A:C2	2.53	0.44
1:1:592:U:H2'	1:1:607:G:O6	2.17	0.44
1:1:593:G:OP1	9:o:31:ARG:NH2	2.50	0.44
1:1:684:G:C2	1:1:693:C:C2	3.06	0.44
1:1:867:U:H2'	1:1:868:U:C6	2.53	0.44
1:1:1079:G:C6	1:1:1080:A:C6	3.05	0.44
1:1:1218:G:O2'	1:1:1219:A:OP2	2.35	0.44
1:1:1591:U:C2	1:1:1592:C:C5	3.06	0.44
3:4:29:U:H5''	14:t:27:ASP:HB3	1.98	0.44
6:l:61:THR:HG22	6:l:63:ALA:N	2.33	0.44
9:o:49:TYR:OH	9:o:181:ASP:OD1	2.19	0.44
10:p:65:ILE:O	10:p:69:ARG:HG2	2.17	0.44
14:t:56:PRO:HG3	14:t:74:GLY:O	2.18	0.44
21:0:99:ARG:NH1	21:0:126:VAL:O	2.51	0.44
30:AC:52:LYS:O	30:AC:56:LYS:HG2	2.17	0.44
39:AL:24:ILE:HB	39:AL:44:LYS:HB2	2.00	0.44
46:B:446:C:H2'	46:B:447:C:H6	1.82	0.44
46:B:761:G:O6	71:a:11:LYS:HE2	2.17	0.44
46:B:1354:U:C2'	46:B:1355:A:H5'	2.47	0.44
46:B:1368:A:H1'	67:W:56:ARG:HG2	1.98	0.44
46:B:1435:U:H2'	46:B:1436:U:C6	2.52	0.44
46:B:1484:U:C4	46:B:1498:G:C2	3.05	0.44
53:I:84:TYR:HE1	53:I:93:LYS:HE3	1.81	0.44
57:M:17:GLN:O	57:M:18:GLU:HB2	2.17	0.44
57:M:77:ARG:CZ	57:M:84:GLU:HB3	2.48	0.44
1:AS:48:A:N7	16:BI:187:ARG:HD2	2.31	0.44
1:AS:143:A:H2'	1:AS:144:G:O4'	2.18	0.44
1:AS:148:U:O2'	16:BI:56:LYS:NZ	2.45	0.44
1:AS:716:G:OP1	29:BV:117:ARG:NH2	2.50	0.44
1:AS:961:A:O2'	29:BV:44:ASN:HB2	2.18	0.44
1:AS:1225:G:H2'	1:AS:1226:G:H8	1.82	0.44
1:AS:1231:U:H1'	1:AS:1233:G:OP2	2.18	0.44
1:AS:1459:U:H2'	1:AS:1460:G:O4'	2.17	0.44
1:AS:2533:G:N7	35:CB:95:ILE:HD12	2.33	0.44
1:AS:2974:C:OP1	5:AX:26:ARG:NH1	2.50	0.44
1:AS:3321:G:C6	1:AS:3322:U:C4	3.06	0.44
2:AT:77:G:N2	2:AT:102:A:OP2	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AU:5:U:H2'	3:AU:6:U:C6	2.52	0.44
3:AU:45:C:H3'	40:CG:15:LYS:NZ	2.33	0.44
3:AU:155:G:C6	3:AU:156:U:C4	3.06	0.44
7:AZ:164:LYS:NZ	7:AZ:168:ASP:OD2	2.47	0.44
12:BE:19:LYS:HE2	12:BE:19:LYS:HB3	1.78	0.44
13:BF:23:VAL:HG11	13:BF:30:LEU:HA	1.99	0.44
14:BG:155:GLU:CD	29:BV:101:VAL:HG11	2.42	0.44
29:BV:48:TYR:C	29:BV:49:HIS:HD1	2.26	0.44
46:CM:598:U:H2'	46:CM:599:A:H8	1.82	0.44
46:CM:937:A:O2'	60:DA:114:ARG:HG3	2.18	0.44
46:CM:1029:U:H2'	46:CM:1030:C:C6	2.52	0.44
46:CM:1365:C:O2	63:DD:18:VAL:HG21	2.18	0.44
46:CM:1669:U:O2'	46:CM:1670:U:O5'	2.36	0.44
65:DF:75:ASN:HB3	65:DF:78:ASN:OD1	2.18	0.44
80:11:116:LEU:HB3	80:11:120:ILE:HD11	1.99	0.44
1:1:430:G:H2'	1:1:431:A:C8	2.53	0.44
1:1:912:G:C6	4:j:207:VAL:HG11	2.52	0.44
1:1:941:C:H2'	1:1:942:U:H6	1.81	0.44
1:1:1093:G:H2'	1:1:1093:G:N3	2.33	0.44
1:1:2339:A:H2'	1:1:2340:C:H6	1.83	0.44
1:1:2855:U:H2'	1:1:2856:C:C6	2.53	0.44
1:1:3172:U:O4	21:0:159:SER:HB3	2.18	0.44
7:m:289:LYS:HD2	12:r:206:LEU:HD23	1.99	0.44
12:r:193:ASP:OD2	12:r:198:LYS:HE3	2.18	0.44
18:x:28:ASN:O	18:x:32:THR:HG22	2.18	0.44
46:B:399:A:O2'	46:B:400:C:H4'	2.18	0.44
46:B:481:A:H2	46:B:504:A:C6	2.36	0.44
46:B:681:C:H2'	46:B:682:A:C8	2.53	0.44
46:B:1311:A:H2'	46:B:1312:C:H6	1.83	0.44
46:B:1508:G:O2'	46:B:1510:G:OP2	2.28	0.44
46:B:1529:G:H3'	66:V:87:GLY:HA3	1.98	0.44
46:B:1579:A:HO2'	46:B:1580:A:P	2.40	0.44
47:C:13:ASP:OD2	47:C:179:ARG:NH2	2.51	0.44
47:C:124:THR:HG22	47:C:174:TRP:NE1	2.25	0.44
56:L:37:LYS:HA	77:g:33:ARG:CA	2.48	0.44
67:W:29:LYS:HE2	67:W:110:GLY:HA3	2.00	0.44
67:W:33:LEU:CD2	67:W:88:ARG:HE	2.31	0.44
1:AS:27:C:C2	1:AS:56:A:C6	3.06	0.44
1:AS:37:U:H4'	29:BV:32:ARG:HD2	2.00	0.44
1:AS:480:G:H3'	1:AS:480:G:P	2.57	0.44
1:AS:989:G:N3	1:AS:2609:A:H2'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:1166:A:OP1	9:BB:215:ARG:HA	2.18	0.44
1:AS:3067:U:H2'	1:AS:3068:C:H6	1.83	0.44
3:AU:47:C:H1'	3:AU:61:A:H2'	2.00	0.44
3:AU:142:C:H2'	3:AU:143:U:C6	2.52	0.44
4:AW:3:ARG:HG2	4:AW:4:VAL:N	2.33	0.44
9:BB:11:GLN:OE1	9:BB:11:GLN:N	2.49	0.44
24:BQ:68:GLU:OE1	24:BQ:68:GLU:N	2.49	0.44
26:BS:115:ARG:HD3	26:BS:121:LYS:CE	2.46	0.44
43:CJ:8:ARG:HG2	43:CJ:10:THR:HG23	2.00	0.44
46:CM:1055:A:H4'	74:DO:17:LYS:HZ1	1.81	0.44
50:CQ:71:THR:O	50:CQ:75:VAL:HG13	2.18	0.44
52:CS:99:MET:O	52:CS:103:ASN:HB2	2.18	0.44
61:DB:84:THR:O	61:DB:123:ARG:HD2	2.17	0.44
63:DD:78:TYR:O	63:DD:81:ARG:HG2	2.18	0.44
67:DH:52:LYS:HB3	67:DH:91:ASP:HB2	2.00	0.44
80:ll:128:LEU:O	80:ll:130:LYS:N	2.51	0.44
1:1:30:C:OP2	16:v:188:ARG:NH1	2.51	0.44
1:1:523:G:H1	1:1:563:U:H3	1.65	0.44
1:1:762:U:H4'	1:1:763:U:O4'	2.18	0.44
1:1:816:A:H2'	1:1:817:U:C6	2.53	0.44
1:1:1131:A:OP2	30:AC:5:LYS:HE3	2.18	0.44
1:1:1671:G:OP1	23:5:75:SER:HB3	2.18	0.44
1:1:2186:A:O2'	1:1:2187:U:H6	2.01	0.44
1:1:2335:A:H2'	1:1:2336:A:C8	2.53	0.44
14:t:64:LYS:HD3	29:AB:66:ASN:OD1	2.18	0.44
14:t:126:PHE:HE2	14:t:135:VAL:HG13	1.83	0.44
15:u:20:LEU:HD22	15:u:23:ASN:H	1.83	0.44
20:z:72:ALA:O	20:z:74:ARG:NH1	2.51	0.44
29:AB:114:GLY:O	29:AB:137:LYS:NZ	2.47	0.44
45:i:90:ARG:NH1	46:B:1412:C:H5''	2.32	0.44
46:B:1283:U:H2'	46:B:1284:G:O4'	2.18	0.44
48:D:103:LEU:HD13	48:D:188:LEU:HD13	2.00	0.44
57:M:56:LYS:HB2	57:M:67:THR:CG2	2.48	0.44
59:O:103:LEU:HD13	59:O:116:VAL:HB	1.99	0.44
59:O:132:GLU:OE2	59:O:135:ILE:HB	2.17	0.44
62:R:77:LYS:HD2	62:R:102:PHE:CD2	2.52	0.44
65:U:136:GLN:OE1	65:U:136:GLN:N	2.44	0.44
73:c:49:ALA:C	73:c:51:ARG:N	2.76	0.44
78:h:139:LYS:HG3	78:h:140:HIS:N	2.32	0.44
78:h:148:TYR:CZ	78:h:173:PHE:HZ	2.36	0.44
79:AR:110:ASP:HB2	79:AR:128:ARG:HG3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:103:G:H4'	1:AS:696:U:O2	2.18	0.44
1:AS:158:A:H2'	1:AS:159:A:C8	2.53	0.44
1:AS:792:U:H2'	1:AS:793:U:C6	2.53	0.44
1:AS:814:C:H2'	1:AS:815:U:O4'	2.17	0.44
1:AS:912:G:H5'	1:AS:913:A:OP1	2.18	0.44
1:AS:1151:C:H2'	1:AS:1152:C:C6	2.53	0.44
1:AS:1152:C:OP2	9:BB:92:LYS:NZ	2.45	0.44
1:AS:1444:U:OP1	18:BK:67:ILE:HG22	2.18	0.44
1:AS:2739:U:H3	1:AS:2763:G:H1	1.66	0.44
3:AU:85:G:N1	27:BT:112:ASP:OD2	2.50	0.44
8:BA:70:VAL:HG12	8:BA:71:ASN:OD1	2.18	0.44
12:BE:49:CYS:HB3	12:BE:168:SER:HB3	2.00	0.44
18:BK:51:VAL:HA	18:BK:56:ARG:O	2.17	0.44
28:BU:8:GLY:N	28:BU:25:ILE:O	2.39	0.44
28:BU:57:MET:HE2	28:BU:61:LYS:HE3	2.00	0.44
35:CB:100:ILE:O	35:CB:104:VAL:HG22	2.18	0.44
46:CM:544:U:H2'	46:CM:545:U:C6	2.53	0.44
46:CM:679:C:O5'	46:CM:679:C:H6	2.01	0.44
46:CM:697:U:O2'	46:CM:698:C:O5'	2.36	0.44
46:CM:852:G:C5'	60:DA:4:MET:HE2	2.48	0.44
46:CM:1496:C:H2'	46:CM:1497:U:C6	2.52	0.44
46:CM:1529:G:N2	46:CM:1555:C:H1'	2.33	0.44
47:CN:52:LYS:HD3	68:DI:82:VAL:HG23	1.99	0.44
57:CX:12:HIS:HB3	57:CX:80:LEU:HD21	1.99	0.44
63:DD:135:ALA:O	63:DD:136:ARG:NE	2.44	0.44
65:DF:65:GLU:HG2	65:DF:68:ARG:NH2	2.32	0.44
67:DH:70:PRO:CA	76:DQ:40:ARG:HH12	2.31	0.44
68:DI:64:GLU:OE2	74:DO:2:VAL:N	2.50	0.44
1:1:381:U:H2'	1:1:382:U:C6	2.53	0.43
1:1:2182:C:H2'	1:1:2183:U:C6	2.52	0.43
1:1:2326:A:O2'	1:1:2369:G:OP1	2.32	0.43
1:1:2418:A:H2'	1:1:2419:A:C8	2.53	0.43
1:1:2627:U:H4'	1:1:2628:A:O4'	2.17	0.43
1:1:2956:C:C2	1:1:2957:C:C5	3.06	0.43
1:1:3136:C:H2'	1:1:3137:A:H8	1.83	0.43
2:3:16:U:H2'	2:3:17:A:C8	2.53	0.43
5:k:214:MET:CE	5:k:350:ALA:HA	2.48	0.43
14:t:115:ARG:HH22	14:t:148:PRO:C	2.26	0.43
15:u:20:LEU:CD2	15:u:23:ASN:N	2.81	0.43
15:u:20:LEU:CD2	15:u:23:ASN:H	2.30	0.43
16:v:36:ILE:HG12	16:v:64:ILE:HG13	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:2:39:ILE:HG12	22:2:63:ILE:CD1	2.48	0.43
27:9:31:LEU:HB3	27:9:101:PRO:HG2	2.00	0.43
45:i:47:ASP:HB3	45:i:50:LYS:HE3	2.00	0.43
46:B:30:G:H2'	46:B:31:C:H6	1.81	0.43
46:B:445:U:H2'	46:B:446:C:O4'	2.18	0.43
46:B:447:C:H2'	46:B:448:C:C6	2.53	0.43
46:B:526:U:C2	46:B:527:A:C8	3.05	0.43
46:B:597:A:H2'	46:B:598:U:C6	2.53	0.43
46:B:685:C:O2'	46:B:686:G:OP1	2.30	0.43
46:B:728:U:OP1	54:J:103:ARG:HA	2.18	0.43
50:F:62:GLU:HB3	50:F:65:ARG:CZ	2.48	0.43
52:H:100:ASN:O	52:H:102:ARG:N	2.49	0.43
54:J:67:ARG:HD2	54:J:127:PHE:CE1	2.52	0.43
57:M:27:PHE:N	57:M:27:PHE:CD1	2.85	0.43
59:O:38:HIS:CE1	59:O:41:LEU:HD23	2.53	0.43
64:T:71:PHE:HE1	64:T:74:GLN:N	2.16	0.43
66:V:124:ILE:HD11	66:V:132:LEU:HD12	2.00	0.43
70:Z:24:TRP:O	70:Z:30:LYS:HE3	2.18	0.43
79:AR:104:PHE:CE2	79:AR:139:GLY:HA2	2.53	0.43
1:AS:109:G:OP2	14:BG:73:ARG:NH2	2.51	0.43
1:AS:239:A:N6	36:CC:97:ALA:HB1	2.32	0.43
1:AS:972:U:H2'	1:AS:973:C:O4'	2.18	0.43
1:AS:1123:G:O5'	1:AS:1123:G:H8	1.99	0.43
1:AS:1250:C:H41	1:AS:1259:A:P	2.41	0.43
1:AS:2242:U:H2'	1:AS:2243:C:H6	1.83	0.43
1:AS:3044:C:H2'	1:AS:3045:A:O4'	2.18	0.43
1:AS:3160:C:OP1	1:AS:3160:C:H4'	2.18	0.43
1:AS:3166:A:H2'	1:AS:3167:G:O4'	2.17	0.43
2:AT:70:A:H2'	2:AT:71:U:C6	2.52	0.43
4:AW:186:PHE:HB2	4:AW:196:TRP:CZ3	2.54	0.43
5:AX:123:TYR:CZ	5:AX:124:LYS:HG3	2.53	0.43
8:BA:176:PHE:O	15:BH:106:SER:HB3	2.17	0.43
42:CI:22:ALA:O	42:CI:24:SER:N	2.50	0.43
46:CM:125:U:OP1	53:CT:201:GLN:NE2	2.47	0.43
46:CM:825:U:HO2'	46:CM:826:U:H6	1.63	0.43
46:CM:1002:U:C2	46:CM:1003:U:C5	3.06	0.43
46:CM:1148:A:H2'	46:CM:1149:G:O4'	2.16	0.43
46:CM:1220:C:H6	78:DS:189:THR:HG21	1.83	0.43
46:CM:1446:A:C8	45:CL:76:PRO:HA	2.53	0.43
51:CR:158:ASP:OD1	51:CR:175:PHE:N	2.45	0.43
70:DK:79:ASN:N	70:DK:79:ASN:OD1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:DP:32:PHE:CD2	75:DP:38:ARG:HB2	2.53	0.43
80:l1:140:HIS:O	80:l1:142:ASP:N	2.51	0.43
1:1:259:C:H2'	1:1:260:C:C6	2.52	0.43
1:1:437:G:O2'	1:1:438:A:H5''	2.18	0.43
1:1:778:U:H2'	1:1:779:A:O4'	2.18	0.43
1:1:1004:U:C4	1:1:1039:C:C4	3.06	0.43
1:1:1466:U:H2'	1:1:1467:U:H6	1.82	0.43
1:1:2077:A:O2'	1:1:2078:A:H5'	2.17	0.43
1:1:2195:U:H2'	1:1:2196:G:H8	1.83	0.43
1:1:2698:C:O2'	1:1:2699:A:H2'	2.18	0.43
1:1:2979:U:H2'	1:1:2980:A:H8	1.83	0.43
1:1:3133:G:H2'	1:1:3134:C:O4'	2.18	0.43
1:1:3314:C:H2'	1:1:3315:C:C6	2.53	0.43
4:j:117:GLU:OE2	4:j:163:ARG:HB2	2.18	0.43
5:k:283:TYR:CZ	5:k:325:LYS:HB2	2.53	0.43
6:l:123:THR:HG23	6:l:239:LEU:CD1	2.49	0.43
11:q:86:TYR:CE2	11:q:151:LEU:HB2	2.53	0.43
28:AA:72:VAL:H	28:AA:111:LYS:HE2	1.82	0.43
35:AH:106:LYS:HB2	35:AH:106:LYS:HE2	1.79	0.43
46:B:747:A:C8	46:B:773:A:N6	2.86	0.43
46:B:915:A:H2'	48:D:114:VAL:HG11	2.00	0.43
46:B:1369:G:O2'	46:B:1370:A:O5'	2.29	0.43
46:B:1537:A:H2'	46:B:1538:U:H6	1.83	0.43
47:C:24:LEU:HB3	47:C:45:MET:CE	2.49	0.43
48:D:26:ARG:HA	48:D:50:ARG:HH12	1.83	0.43
54:J:3:SER:O	54:J:38:GLN:NE2	2.50	0.43
57:M:79:GLU:OE1	57:M:80:LEU:HD22	2.18	0.43
58:N:77:SER:HB3	58:N:85:ILE:HB	1.99	0.43
59:O:36:LEU:O	59:O:36:LEU:HD13	2.18	0.43
62:R:30:THR:HA	62:R:33:PHE:HB3	1.99	0.43
63:S:40:PRO:O	63:S:42:ILE:N	2.52	0.43
70:Z:70:LYS:HD3	77:g:8:LEU:HD22	1.99	0.43
79:AR:152:VAL:HA	79:AR:170:SER:HA	2.00	0.43
79:AR:164:SER:O	79:AR:180:LEU:HB2	2.19	0.43
79:AR:192:HIS:CD2	79:AR:218:ILE:HD12	2.54	0.43
1:AS:264:G:OP1	37:CD:33:SER:HB2	2.18	0.43
1:AS:642:G:H2'	1:AS:2350:A:N7	2.33	0.43
1:AS:1428:C:O2'	1:AS:1430:G:OP2	2.33	0.43
1:AS:1651:G:OP1	35:CB:40:SER:OG	2.33	0.43
1:AS:2809:A:H2	1:AS:2823:A:N7	2.16	0.43
1:AS:3162:U:C2	1:AS:3163:U:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:3318:G:H3'	1:AS:3319:U:O3'	2.19	0.43
5:AX:283:TYR:CE1	5:AX:354:VAL:HG21	2.53	0.43
7:AZ:110:LEU:HB3	7:AZ:115:LEU:O	2.18	0.43
15:BH:11:ARG:HB3	15:BH:17:ARG:NH2	2.33	0.43
35:CB:37:LYS:HB3	35:CB:58:ARG:NH2	2.33	0.43
36:CC:56:THR:O	36:CC:60:LEU:HG	2.17	0.43
46:CM:561:U:H4'	77:DR:17:GLN:NE2	2.33	0.43
46:CM:778:U:O2'	46:CM:779:U:H5''	2.17	0.43
46:CM:815:U:O2'	46:CM:816:U:C6	2.67	0.43
46:CM:857:G:N2	46:CM:1032:G:H4'	2.33	0.43
46:CM:860:G:H5'	46:CM:861:G:P	2.58	0.43
46:CM:1155:G:C2	46:CM:1156:A:C8	3.05	0.43
46:CM:1783:C:OP1	73:DN:87:ARG:NE	2.51	0.43
49:CP:213:ILE:HD12	49:CP:213:ILE:HA	1.90	0.43
55:CV:48:THR:HG22	55:CV:52:ASN:C	2.43	0.43
63:DD:128:PHE:O	63:DD:136:ARG:NH1	2.48	0.43
72:DM:61:SER:H	72:DM:64:VAL:HB	1.83	0.43
79:DT:88:ARG:HG2	79:DT:109:GLY:O	2.18	0.43
79:DT:113:SER:HB3	79:DT:154:ALA:HA	2.00	0.43
1:1:273:A:H2'	1:1:274:G:C8	2.52	0.43
1:1:787:A:H2'	1:1:788:G:H8	1.83	0.43
1:1:1163:U:P	34:AG:73:ARG:HH12	2.40	0.43
1:1:2068:U:H4'	1:1:2069:U:C5'	2.48	0.43
1:1:2423:A:O2'	37:AJ:61:ARG:HD3	2.18	0.43
5:k:67:MET:HE2	24:6:88:ARG:HB2	2.00	0.43
17:w:126:ARG:HG2	17:w:130:LEU:HD12	2.00	0.43
19:y:152:HIS:CB	19:y:164:ARG:HE	2.31	0.43
27:9:82:VAL:HG12	27:9:83:ASP:H	1.82	0.43
46:B:125:U:OP1	53:I:201:GLN:NE2	2.46	0.43
46:B:149:G:N3	53:I:13:GLN:NE2	2.64	0.43
46:B:1065:U:H3	46:B:1076:A:H2	1.65	0.43
46:B:1227:A:O2'	46:B:1229:A:OP1	2.28	0.43
46:B:1634:U:H2'	46:B:1635:A:H8	1.83	0.43
46:B:1654:A:H2'	46:B:1655:G:H8	1.83	0.43
47:C:36:TYR:CD2	47:C:161:PRO:HB3	2.53	0.43
50:F:176:VAL:HB	50:F:183:LEU:HB2	2.00	0.43
51:G:12:LEU:HD23	51:G:12:LEU:HA	1.83	0.43
51:G:163:ASP:C	51:G:165:ALA:H	2.26	0.43
56:L:123:HIS:CE1	77:g:37:ARG:HB2	2.52	0.43
64:T:90:ALA:HA	64:T:95:HIS:NE2	2.34	0.43
66:V:66:TYR:CD1	66:V:67:LEU:HD23	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:g:59:SER:O	77:g:61:ALA:N	2.50	0.43
79:AR:92:LEU:HB2	79:AR:104:PHE:HE1	1.82	0.43
1:AS:1664:G:C6	1:AS:1665:C:C4	3.06	0.43
1:AS:1705:C:H2'	1:AS:1706:C:C6	2.53	0.43
1:AS:2138:G:N7	83:AS:3788:PAR:H642	2.33	0.43
1:AS:2182:C:H2'	1:AS:2183:U:H6	1.84	0.43
1:AS:2236:U:H2'	1:AS:2237:A:H8	1.83	0.43
1:AS:3019:U:H5'	5:AX:329:PRO:HA	2.00	0.43
83:AS:3790:PAR:H34	83:AS:3790:PAR:H642	1.87	0.43
4:AW:54:ARG:HG2	4:AW:56:ALA:H	1.83	0.43
6:AY:236:LEU:HD12	6:AY:236:LEU:HA	1.85	0.43
47:CN:125:ASP:OD1	47:CN:127:ARG:HB3	2.19	0.43
50:CQ:8:LYS:HD3	50:CQ:8:LYS:HA	1.67	0.43
50:CQ:117:ARG:NE	45:CL:114:GLU:HG2	2.34	0.43
51:CR:199:GLU:CD	51:CR:209:HIS:HE2	2.23	0.43
62:DC:1:MET:N	65:DF:19:ASN:H	2.16	0.43
66:DG:66:TYR:CD2	66:DG:67:LEU:HD23	2.50	0.43
80:l1:36:VAL:H	80:l1:166:ALA:HB1	1.83	0.43
80:l1:93:LEU:CG	80:l1:94:ASN:H	2.31	0.43
1:1:119:G:H5'	10:p:130:PRO:HG2	2.00	0.43
1:1:249:G:H2'	1:1:251:G:OP2	2.19	0.43
1:1:559:C:H2'	1:1:560:C:C6	2.53	0.43
1:1:1351:A:H2'	19:y:31:LYS:HE3	2.00	0.43
1:1:1644:A:H2'	1:1:1645:U:O4'	2.18	0.43
1:1:1747:G:H5'	39:AL:26:LYS:HE2	2.01	0.43
1:1:2257:A:C8	1:1:2266:G:C8	3.06	0.43
1:1:2636:C:O2'	1:1:2637:U:H5'	2.18	0.43
5:k:133:TYR:O	5:k:136:LYS:HB2	2.18	0.43
12:r:47:PRO:HB3	12:r:171:TRP:CH2	2.53	0.43
15:u:116:LEU:HD13	17:w:194:LYS:HB3	2.01	0.43
17:w:165:SER:O	17:w:168:TYR:HB3	2.18	0.43
18:x:122:ALA:HA	18:x:145:HIS:CE1	2.54	0.43
31:AD:12:ILE:H	31:AD:12:ILE:HD12	1.83	0.43
46:B:85:A:N3	46:B:146:A:O2'	2.39	0.43
46:B:944:U:H5'	60:P:15:ALA:O	2.18	0.43
46:B:1214:G:N2	46:B:1240:G:O2'	2.51	0.43
46:B:1406:C:O2	50:F:162:GLY:N	2.52	0.43
46:B:1548:U:H4'	46:B:1586:C:H4'	2.00	0.43
49:E:56:LEU:HA	49:E:57:PRO:HD3	1.92	0.43
52:H:97:LEU:HD23	52:H:97:LEU:HA	1.82	0.43
52:H:142:ALA:HA	52:H:214:LYS:HG2	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:I:61:PHE:HD2	53:I:72:ARG:HD3	1.83	0.43
57:M:70:ASP:HB3	57:M:91:ARG:HH21	1.83	0.43
59:O:67:THR:C	59:O:69:GLU:H	2.25	0.43
62:R:57:ILE:HG21	62:R:88:GLU:OE2	2.18	0.43
62:R:94:VAL:HG21	62:R:116:LEU:HD11	1.99	0.43
70:Z:59:ILE:HG12	77:g:4:VAL:HG11	1.99	0.43
79:AR:136:ASN:OD1	79:AR:136:ASN:N	2.51	0.43
79:AR:160:SER:HB3	79:AR:204:ASP:O	2.17	0.43
1:AS:168:U:C4	1:AS:251:G:C6	3.07	0.43
1:AS:224:C:OP1	27:BT:47:SER:OG	2.34	0.43
1:AS:412:G:H2'	1:AS:413:U:C6	2.54	0.43
1:AS:571:C:H2'	1:AS:572:U:C6	2.54	0.43
1:AS:624:U:H2'	1:AS:625:C:C6	2.53	0.43
1:AS:1151:C:O2'	1:AS:1193:A:N1	2.41	0.43
1:AS:2432:G:N3	1:AS:2432:G:H2'	2.33	0.43
1:AS:2641:G:P	45:CL:50:LYS:HZ2	2.40	0.43
1:AS:3024:G:H2'	1:AS:3025:G:C8	2.53	0.43
1:AS:3133:G:C6	1:AS:3253:G:C6	3.06	0.43
1:AS:3166:A:C6	1:AS:3167:G:C5	3.06	0.43
5:AX:262:TRP:H	5:AX:262:TRP:CD1	2.36	0.43
27:BT:66:SER:HB3	27:BT:85:LEU:HD21	2.00	0.43
29:BV:27:LYS:HA	29:BV:27:LYS:HD2	1.75	0.43
32:BY:71:ARG:HH11	32:BY:103:LEU:HD13	1.83	0.43
46:CM:176:U:O2'	46:CM:177:A:OP2	2.36	0.43
46:CM:180:A:H2'	46:CM:181:U:C6	2.54	0.43
46:CM:1494:G:H2'	46:CM:1495:U:C6	2.54	0.43
46:CM:1628:C:H2'	46:CM:1629:G:C8	2.53	0.43
48:CO:97:LEU:O	48:CO:98:THR:HG23	2.18	0.43
49:CP:171:LYS:HE3	49:CP:192:TYR:OH	2.18	0.43
64:DE:59:LYS:O	64:DE:63:LYS:HG3	2.19	0.43
64:DE:90:ALA:HA	64:DE:95:HIS:NE2	2.33	0.43
80:L1:147:LYS:O	80:L1:151:VAL:HG23	2.18	0.43
80:l1:98:LYS:O	80:l1:100:ILE:N	2.52	0.43
1:1:139:U:H2'	1:1:140:C:C6	2.53	0.43
1:1:158:A:H2'	1:1:159:A:H8	1.83	0.43
1:1:180:U:H4'	38:AK:75:LYS:CG	2.48	0.43
1:1:653:C:H5''	33:AF:27:HIS:HB3	2.00	0.43
1:1:1019:U:H3	1:1:1025:G:H1	1.65	0.43
1:1:1231:U:H4'	1:1:1232:G:H5'	2.00	0.43
1:1:1240:A:H5''	1:1:1241:A:N7	2.33	0.43
1:1:1338:G:H2'	1:1:1339:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1696:G:H2'	1:1:1697:C:H6	1.84	0.43
1:1:1943:G:O2'	1:1:1944:G:OP1	2.24	0.43
1:1:2182:C:H2'	1:1:2183:U:H6	1.83	0.43
1:1:2184:G:H4'	1:1:2185:A:N7	2.33	0.43
1:1:3040:U:H5	20:z:62:ARG:HH12	1.65	0.43
1:1:3316:U:O2	55:K:110:ARG:NH2	2.52	0.43
2:3:13:A:H2	7:m:21:ARG:HB2	1.84	0.43
2:3:65:G:H4'	12:r:204:GLY:C	2.44	0.43
9:o:171:LEU:HB3	9:o:176:ILE:HB	2.00	0.43
22:2:136:ARG:HB2	22:2:139:ARG:NH2	2.33	0.43
46:B:189:G:H1'	46:B:193:G:N2	2.33	0.43
46:B:399:A:H4'	51:G:3:ARG:HD2	2.00	0.43
46:B:822:G:H3'	46:B:823:G:C4'	2.48	0.43
46:B:953:U:H2'	46:B:954:C:O4'	2.17	0.43
46:B:1517:C:O5'	72:b:96:SER:OG	2.36	0.43
83:B:1970:PAR:C51	83:B:1970:PAR:H242	2.31	0.43
57:M:35:ILE:O	57:M:37:THR:N	2.49	0.43
64:T:67:ARG:HH11	64:T:67:ARG:HG3	1.83	0.43
70:Z:111:GLY:O	70:Z:121:ARG:HD2	2.18	0.43
1:AS:72:A:C5	37:CD:14:ARG:HD2	2.53	0.43
1:AS:79:G:O2'	1:AS:326:U:H4'	2.19	0.43
1:AS:377:A:N9	83:AS:3789:PAR:H531	2.32	0.43
1:AS:563:U:H2'	1:AS:564:G:H8	1.80	0.43
1:AS:674:G:H1	19:BL:61:PRO:HG3	1.81	0.43
1:AS:1466:U:H2'	1:AS:1467:U:C6	2.53	0.43
1:AS:1852:C:H2'	1:AS:1853:C:H6	1.82	0.43
1:AS:2351:A:N3	1:AS:2796:G:O2'	2.50	0.43
1:AS:2514:G:C4	1:AS:2515:G:N2	2.86	0.43
1:AS:2854:U:H2'	1:AS:2855:U:H6	1.83	0.43
1:AS:3184:G:N7	34:CA:2:ALA:HB1	2.33	0.43
3:AU:6:U:H2'	3:AU:7:U:H6	1.84	0.43
3:AU:156:U:H2'	3:AU:157:U:C6	2.54	0.43
9:BB:134:TYR:HA	9:BB:233:ILE:HD12	1.99	0.43
10:BC:82:THR:OG1	10:BC:182:LYS:HG3	2.18	0.43
13:BF:92:ARG:HG2	13:BF:93:SER:N	2.32	0.43
43:CJ:58:PHE:HD1	43:CJ:59:HIS:N	2.16	0.43
46:CM:1007:C:H4'	46:CM:1110:A:H61	1.83	0.43
46:CM:1063:C:H2'	46:CM:1064:U:H6	1.83	0.43
46:CM:1216:U:H3	46:CM:1239:U:H3	1.67	0.43
46:CM:1512:A:H2'	46:CM:1513:A:C8	2.53	0.43
46:CM:1531:U:H5"	65:DF:132:LYS:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1652:U:H3	46:CM:1723:G:H1	1.67	0.43
48:CO:28:ASP:O	48:CO:29:TRP:HB2	2.19	0.43
48:CO:97:LEU:HD22	48:CO:232:HIS:CG	2.53	0.43
50:CQ:180:GLN:OE1	50:CQ:180:GLN:N	2.47	0.43
54:CU:15:LEU:HD23	54:CU:15:LEU:HA	1.83	0.43
57:CX:77:ARG:HH22	57:CX:86:ILE:N	2.16	0.43
59:CZ:29:LYS:HE2	59:CZ:100:TRP:CE2	2.53	0.43
63:DD:93:GLN:O	79:DT:60:LYS:HG2	2.18	0.43
65:DF:75:ASN:HB3	65:DF:78:ASN:CG	2.43	0.43
66:DG:74:GLY:O	66:DG:78:LYS:HD3	2.19	0.43
79:DT:27:PRO:HA	79:DT:293:ALA:CB	2.48	0.43
79:DT:59:LYS:HD3	79:DT:59:LYS:HA	1.80	0.43
79:DT:245:ASN:OD1	79:DT:245:ASN:N	2.52	0.43
80:L1:5:THR:O	80:L1:9:VAL:HG23	2.19	0.43
80:L1:212:PRO:HB2	80:L1:213:SER:H	1.53	0.43
80:l1:204:LEU:HB3	80:l1:217:TYR:HB3	2.01	0.43
1:1:27:C:C2	1:1:56:A:C6	3.07	0.43
1:1:619:A:N1	1:1:620:A:N6	2.66	0.43
1:1:629:A:H2'	1:1:630:G:H8	1.84	0.43
1:1:1614:G:H5'	3:4:129:C:H4'	2.01	0.43
1:1:1911:A:H5'	20:z:82:LYS:O	2.18	0.43
1:1:2807:U:H2'	1:1:2808:C:H6	1.84	0.43
2:3:48:C:OP1	7:m:94:ASN:ND2	2.51	0.43
2:3:56:A:H4'	13:s:152:HIS:HB2	2.00	0.43
4:j:130:SER:HB2	4:j:171:GLY:C	2.43	0.43
14:t:182:LYS:HE3	14:t:186:GLU:OE2	2.18	0.43
23:5:59:GLU:N	23:5:63:LYS:O	2.50	0.43
24:6:110:LYS:HB2	24:6:110:LYS:HE3	1.74	0.43
28:AA:23:VAL:HG12	28:AA:45:GLY:HA3	2.00	0.43
43:AP:28:TYR:HB3	43:AP:69:VAL:HB	2.00	0.43
46:B:553:A:H2'	46:B:554:A:C8	2.54	0.43
46:B:726:C:OP1	58:N:43:LYS:HE3	2.19	0.43
46:B:736:G:H2'	46:B:737:A:C8	2.53	0.43
46:B:781:G:H4'	58:N:69:LYS:NZ	2.33	0.43
48:D:117:TRP:CE2	48:D:152:LYS:HE2	2.53	0.43
61:Q:98:ARG:CD	73:c:49:ALA:HB2	2.48	0.43
65:U:6:GLN:OE1	65:U:6:GLN:N	2.49	0.43
66:V:15:ILE:HD11	66:V:63:ARG:HD2	2.00	0.43
67:W:52:LYS:HB2	67:W:91:ASP:HB2	1.99	0.43
71:a:113:ASN:HA	71:a:116:LYS:HE2	2.01	0.43
1:AS:445:A:N1	1:AS:485:A:C6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:487:C:H2'	1:AS:488:G:O4'	2.19	0.43
1:AS:712:G:N7	29:BV:111:LYS:HE2	2.34	0.43
1:AS:1358:C:H2'	1:AS:1359:A:C8	2.53	0.43
1:AS:1467:U:H2'	1:AS:1468:U:C6	2.54	0.43
1:AS:1911:A:H2'	1:AS:1912:U:H6	1.82	0.43
1:AS:3179:U:C6	15:BH:114:MET:HE1	2.54	0.43
3:AU:78:G:H2'	3:AU:79:A:N3	2.33	0.43
3:AU:139:U:H2'	3:AU:140:G:H8	1.83	0.43
4:AW:219:ILE:HD13	4:AW:223:SER:HB2	2.01	0.43
13:BF:49:LYS:NZ	43:CJ:101:GLY:O	2.41	0.43
13:BF:86:VAL:HG21	13:BF:112:LEU:HD22	2.01	0.43
14:BG:2:ALA:HB2	29:BV:31:GLY:O	2.19	0.43
16:BI:36:ILE:HG12	16:BI:64:ILE:HG13	2.01	0.43
17:BJ:97:LYS:O	17:BJ:101:GLU:HG2	2.18	0.43
25:BR:1:MET:HE2	25:BR:15:PRO:HG2	2.00	0.43
25:BR:86:SER:H	25:BR:89:LEU:HB2	1.84	0.43
37:CD:66:LYS:HA	37:CD:69[A]:LYS:HE3	2.01	0.43
42:CI:22:ALA:C	42:CI:24:SER:N	2.74	0.43
46:CM:1146:C:H2'	46:CM:1147:C:H6	1.83	0.43
46:CM:1172:U:H2'	46:CM:1173:G:C8	2.53	0.43
48:CO:32:ILE:O	48:CO:32:ILE:HG13	2.19	0.43
49:CP:169:ARG:HB2	56:CW:97:LEU:HD13	2.00	0.43
50:CQ:144:ARG:O	45:CL:102:LYS:HB3	2.19	0.43
59:CZ:87:PRO:HB3	59:CZ:139:HIS:C	2.43	0.43
79:DT:24:ALA:HB1	79:DT:74:ILE:HG13	2.00	0.43
79:DT:75:SER:HA	79:DT:116:ILE:HG21	2.00	0.43
79:DT:128:ARG:O	79:DT:151:TRP:HD1	2.01	0.43
80:II:66:CYS:HB2	80:II:107:TYR:CG	2.54	0.43
45:CL:70:ASN:OD1	45:CL:70:ASN:N	2.52	0.43
1:1:273:A:H2'	1:1:274:G:H8	1.82	0.43
1:1:448:U:O2	1:1:481:G:N2	2.52	0.43
1:1:595:G:H21	6:l:323:GLN:CD	2.26	0.43
1:1:677:U:H2'	1:1:678:G:C8	2.54	0.43
1:1:976:A:H8	1:1:976:A:H3'	1.83	0.43
1:1:1427:G:OP2	29:AB:9:ARG:NH2	2.50	0.43
1:1:1584:A:C6	40:AM:4:GLN:HB3	2.53	0.43
1:1:1625:U:O5'	28:AA:112:LYS:HE2	2.18	0.43
1:1:2130:A:H2'	1:1:2131:U:C6	2.53	0.43
1:1:2318:U:OP2	5:k:237:LYS:HG3	2.18	0.43
1:1:2956:C:H2'	1:1:2957:C:H6	1.83	0.43
1:1:2963:A:O2'	1:1:3274:G:N7	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:3066:A:H2'	1:1:3067:U:C6	2.54	0.43
1:1:3197:G:H2'	1:1:3198:C:C6	2.54	0.43
82:1:3406:3K5:H30	43:AP:40:LYS:HD3	2.01	0.43
3:4:5:U:H2'	3:4:6:U:H6	1.84	0.43
12:r:168:SER:HA	22:2:160:ILE:O	2.19	0.43
14:t:46:ILE:O	14:t:49:ARG:HB2	2.19	0.43
15:u:52:LEU:HD23	15:u:55:ILE:HD11	2.00	0.43
23:5:29:ASP:HB3	23:5:32:SER:OG	2.18	0.43
36:AI:29:ALA:O	36:AI:33:VAL:HG23	2.19	0.43
46:B:123:G:OP1	51:G:77:ARG:NH1	2.42	0.43
46:B:123:G:C6	46:B:293:A:C6	3.07	0.43
46:B:677:G:H2'	46:B:678:A:H8	1.83	0.43
46:B:744:U:C2	46:B:745:A:C8	3.06	0.43
46:B:927:G:OP1	46:B:962:A:H1'	2.18	0.43
46:B:1214:G:OP1	78:h:141:LYS:HD2	2.19	0.43
52:H:103:ASN:HA	52:H:106:LYS:HD2	1.99	0.43
57:M:35:ILE:HG22	57:M:37:THR:HG22	2.00	0.43
59:O:32:LEU:HD23	59:O:100:TRP:CD1	2.53	0.43
79:AR:231:LEU:HD23	79:AR:231:LEU:H	1.83	0.43
1:AS:164:U:H2'	1:AS:165:C:C6	2.52	0.43
1:AS:1615:A:H2'	1:AS:1616:U:O4'	2.19	0.43
1:AS:2183:U:HO2'	1:AS:2184:G:P	2.38	0.43
1:AS:2345:A:H2'	1:AS:2346:A:H8	1.81	0.43
1:AS:2448:C:H4'	1:AS:2449:U:OP2	2.15	0.43
8:BA:59:ASP:HB2	8:BA:102:VAL:HG22	1.99	0.43
9:BB:81:LEU:HD11	9:BB:114:PHE:HD2	1.84	0.43
9:BB:205:LEU:HB3	9:BB:240:MET:O	2.18	0.43
12:BE:75:TYR:CZ	12:BE:79:VAL:HG21	2.53	0.43
16:BI:48:ALA:HB1	16:BI:53:TYR:HB3	2.00	0.43
16:BI:80:THR:HG21	16:BI:87:GLN:HA	2.00	0.43
23:BP:95:TRP:CD1	23:BP:110:PHE:HE1	2.37	0.43
46:CM:221:U:N3	46:CM:823:G:N2	2.66	0.43
46:CM:584:G:H2'	46:CM:585:C:H6	1.84	0.43
46:CM:622:G:H2'	46:CM:623:C:C6	2.53	0.43
46:CM:708:A:H3'	46:CM:708:A:N3	2.33	0.43
46:CM:738:A:OP1	51:CR:187:ARG:N	2.47	0.43
46:CM:806:A:OP1	46:CM:806:A:H3'	2.19	0.43
46:CM:1354:U:H2'	46:CM:1355:A:C8	2.53	0.43
46:CM:1579:A:O2'	46:CM:1580:A:OP1	2.33	0.43
47:CN:164:ASN:O	47:CN:170:ILE:HD11	2.19	0.43
62:DC:15:PHE:CE1	62:DC:110:GLU:HG3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:DF:3:LEU:HB2	72:DM:82:GLN:CD	2.43	0.43
79:DT:261:LYS:NZ	79:DT:268:LEU:HB2	2.33	0.43
80:11:179:LEU:HB3	80:11:180:VAL:H	1.46	0.43
1:1:214:G:H5''	27:9:12:ARG:HG3	2.01	0.43
1:1:516:U:H3'	6:l:351:LYS:NZ	2.34	0.43
1:1:947:A:H5''	1:1:1139:A:N1	2.34	0.43
1:1:1165:A:H4'	9:o:216:LYS:HD2	2.01	0.43
1:1:1434:U:H2'	1:1:1435:U:C6	2.54	0.43
1:1:1837:A:H1'	40:AM:45:ARG:HH22	1.84	0.43
1:1:2453:G:OP2	1:1:2454:C:N4	2.45	0.43
1:1:2504:C:OP1	4:j:37:ARG:NH2	2.43	0.43
1:1:3191:A:C4	1:1:3192:A:C8	3.06	0.43
5:k:29:VAL:HG13	5:k:339:ARG:HD3	2.00	0.43
7:m:260:PHE:HB2	7:m:265:TYR:CZ	2.52	0.43
10:p:83:LEU:HD23	10:p:83:LEU:HA	1.79	0.43
14:t:63:VAL:HA	14:t:66:ASN:ND2	2.34	0.43
25:7:90:ILE:HG22	25:7:94:ARG:HD3	2.01	0.43
46:B:479:A:H2'	46:B:480:U:C6	2.54	0.43
46:B:814:A:H2	46:B:815:U:H3	1.65	0.43
46:B:824:U:H2'	46:B:825:U:C6	2.54	0.43
46:B:1161:G:C6	46:B:1450:G:C6	3.07	0.43
46:B:1727:A:H2'	46:B:1728:U:C6	2.53	0.43
46:B:1757:U:H2'	46:B:1758:U:C6	2.54	0.43
50:F:77:ARG:CB	57:M:22:VAL:HG11	2.49	0.43
51:G:71:GLN:HG2	51:G:76:VAL:HG22	2.01	0.43
51:G:196:VAL:CG2	51:G:211:LYS:HB2	2.48	0.43
71:a:60:PHE:CE1	71:a:71:GLY:HA3	2.54	0.43
75:e:38:ARG:O	75:e:40:ILE:HG13	2.19	0.43
79:AR:173:LYS:NZ	79:AR:194:GLY:HA2	2.34	0.43
1:AS:25:A:H2'	1:AS:26:C:H6	1.84	0.43
1:AS:267:G:N2	16:BI:50:ARG:O	2.50	0.43
1:AS:484:U:H3'	1:AS:485:A:H8	1.84	0.43
1:AS:612:U:H2'	1:AS:613:U:C6	2.53	0.43
1:AS:997:G:O2'	1:AS:1037:U:OP2	2.36	0.43
1:AS:1130:G:O2'	1:AS:2614:A:N3	2.42	0.43
1:AS:1261:U:N3	1:AS:1273:C:O2	2.52	0.43
1:AS:2628:A:C4	1:AS:2630:G:N7	2.87	0.43
8:BA:33:LEU:HD23	8:BA:33:LEU:HA	1.84	0.43
10:BC:114:ALA:O	10:BC:118:ALA:N	2.46	0.43
19:BL:175:ALA:HB3	29:BV:53:PHE:O	2.19	0.43
21:BN:66:GLU:OE2	21:BN:73:LYS:HE2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BS:88:ILE:HD12	26:BS:120:LYS:HE3	2.00	0.43
46:CM:39:A:OP1	56:CW:3:ARG:NH2	2.52	0.43
46:CM:708:A:H62	46:CM:712:A:H2	1.67	0.43
46:CM:711:U:H5'	46:CM:713:U:C2	2.54	0.43
46:CM:946:U:C2	46:CM:947:C:C5	3.07	0.43
46:CM:1160:U:H2'	46:CM:1161:G:C8	2.54	0.43
46:CM:1377:A:H2'	46:CM:1378:U:C6	2.54	0.43
48:CO:26:ARG:HB3	48:CO:50:ARG:HH21	1.83	0.43
59:CZ:67:THR:C	59:CZ:68:GLU:HG3	2.44	0.43
80:I1:32:VAL:HB	80:I1:169:VAL:O	2.17	0.43
80:I1:111:ILE:HA	80:I1:136:THR:HB	2.01	0.43
1:1:486:C:H2'	1:1:487:C:H6	1.79	0.43
1:1:1330:U:H2'	1:1:1331:U:C6	2.54	0.43
1:1:1494:A:H2'	1:1:1495:U:H6	1.83	0.43
1:1:1562:G:C4	1:1:1563:A:H1'	2.53	0.43
1:1:1852:C:H2'	1:1:1853:C:C6	2.53	0.43
1:1:1923:G:C8	44:AQ:16:VAL:HG12	2.53	0.43
1:1:2366:U:O3'	18:x:80:LYS:NZ	2.47	0.43
1:1:2498:A:H2'	1:1:2499:U:C6	2.53	0.43
1:1:2996:A:H4'	11:q:97:PHE:CE2	2.54	0.43
1:1:3035:C:H2'	1:1:3036:U:H6	1.84	0.43
9:o:182:LEU:HD21	9:o:200:LEU:HD11	2.00	0.43
15:u:106:SER:N	15:u:109:GLU:OE1	2.48	0.43
23:5:19:VAL:HG12	23:5:108:LEU:HG	2.01	0.43
32:AE:18:ARG:HD3	32:AE:34:GLU:HB3	2.00	0.43
38:AK:79:GLN:H	38:AK:79:GLN:HG3	1.68	0.43
46:B:78:A:H2'	46:B:79:C:H6	1.83	0.43
46:B:178:A:H2'	46:B:179:A:O4'	2.19	0.43
46:B:255:A:H1'	55:K:73:SER:HB2	2.00	0.43
46:B:269:A:H5'	46:B:270:U:OP2	2.19	0.43
46:B:830:G:H2'	46:B:831:G:O4'	2.18	0.43
46:B:916:C:O2	48:D:120:LEU:HB3	2.19	0.43
46:B:1543:A:H1'	46:B:1547:U:OP2	2.18	0.43
46:B:1592:G:OP2	63:S:126:LYS:NZ	2.42	0.43
67:W:21:ILE:HD13	67:W:99:VAL:HG21	2.01	0.43
79:AR:200:THR:OG1	79:AR:240:LEU:O	2.36	0.43
1:AS:1059:G:C6	22:BO:109:VAL:HG22	2.54	0.43
1:AS:1227:A:H5''	1:AS:1228:C:C5'	2.49	0.43
9:BB:230:GLU:HG3	21:BN:35:VAL:HG22	2.01	0.43
10:BC:141:VAL:HG21	16:BI:3:ALA:HB2	2.01	0.43
11:BD:12:ILE:HD11	11:BD:53:ILE:HG13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BH:20:LEU:HD21	15:BH:23:ASN:CA	2.48	0.43
15:BH:30:VAL:HG22	15:BH:39:LEU:O	2.18	0.43
20:BM:134:HIS:HE1	20:BM:136:ARG:NE	2.17	0.43
20:BM:168:ALA:O	20:BM:172:ARG:HG3	2.18	0.43
31:BX:45:ILE:HD12	31:BX:92:LEU:HD11	2.01	0.43
37:CD:74:LYS:HD2	37:CD:74:LYS:HA	1.86	0.43
46:CM:236:U:C3'	46:CM:237:C:H5''	2.48	0.43
46:CM:271:G:C2	46:CM:282:G:C4	3.07	0.43
46:CM:583:A:OP1	77:DR:15:LYS:NZ	2.50	0.43
46:CM:962:A:H2'	46:CM:963:A:O4'	2.18	0.43
46:CM:1167:U:O3'	62:DC:124:THR:OG1	2.31	0.43
47:CN:205:ARG:HE	47:CN:205:ARG:HB3	1.67	0.43
48:CO:36:THR:HG23	48:CO:231:LEU:O	2.19	0.43
51:CR:139:VAL:HG23	51:CR:150:PRO:HG3	2.01	0.43
51:CR:194:VAL:HG11	51:CR:232:ALA:HB2	2.01	0.43
62:DC:10:ARG:HG2	62:DC:11:THR:N	2.33	0.43
62:DC:111:MET:HE2	62:DC:119:PHE:CE2	2.54	0.43
72:DM:78:VAL:HG12	72:DM:81:ARG:HH21	1.84	0.43
79:DT:156:ARG:HD3	79:DT:156:ARG:HA	1.69	0.43
45:CL:53:LYS:O	45:CL:55:LYS:N	2.51	0.43
1:1:708:A:H2'	1:1:709:A:C8	2.54	0.43
1:1:922:A:H2'	1:1:923:C:C6	2.54	0.43
1:1:1079:G:H2'	1:1:1080:A:H8	1.83	0.43
1:1:1347:U:O2	1:1:1347:U:H2'	2.19	0.43
1:1:1633:A:P	28:AA:73:LYS:HE2	2.59	0.43
1:1:1705:C:H2'	1:1:1706:C:H6	1.84	0.43
1:1:1757:A:O2'	1:1:1759:U:OP2	2.22	0.43
1:1:2465:U:H1'	1:1:2466:A:OP1	2.19	0.43
1:1:3025:G:H2'	1:1:3026:U:H6	1.84	0.43
13:s:92:ARG:HD3	13:s:174:LYS:CE	2.48	0.43
14:t:126:PHE:CD2	14:t:135:VAL:HG22	2.54	0.43
16:v:27:CYS:HB2	16:v:122:ASN:ND2	2.33	0.43
32:AE:73:ARG:HH12	32:AE:108:VAL:HG11	1.83	0.43
36:AI:86:ARG:O	36:AI:90:ARG:HD3	2.19	0.43
46:B:565:A:N3	77:g:14:VAL:HG21	2.33	0.43
46:B:584:G:C6	46:B:585:C:C4	3.06	0.43
46:B:1312:C:C5'	50:F:157:PHE:HE1	2.32	0.43
46:B:1354:U:C4	46:B:1355:A:N7	2.86	0.43
83:B:1970:PAR:O51	83:B:1970:PAR:H32	2.18	0.43
49:E:52:TYR:CE1	49:E:133:PRO:HD3	2.54	0.43
49:E:233:SER:HB3	49:E:236:GLU:HG3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:H:98:MET:HB2	52:H:103:ASN:O	2.18	0.43
53:I:2:LYS:HE3	53:I:2:LYS:HB2	1.90	0.43
54:J:74:THR:HG22	54:J:88:PHE:HE1	1.83	0.43
62:R:1:MET:N	65:U:17:LEU:HA	2.33	0.43
66:V:57:ARG:NH2	66:V:101:ASN:OD1	2.38	0.43
78:h:174:MET:HE3	78:h:181:GLN:O	2.19	0.43
1:AS:284:A:C4	43:CJ:41:ARG:NH1	2.87	0.43
1:AS:712:G:C5	29:BV:113:LEU:HD21	2.54	0.43
1:AS:1591:U:C2	1:AS:1592:C:C5	3.07	0.43
1:AS:1600:A:H4'	1:AS:1831:A:H4'	2.01	0.43
1:AS:1762:G:HO2'	1:AS:1763:C:P	2.42	0.43
1:AS:2435:G:H2'	1:AS:2437:A:N7	2.33	0.43
1:AS:2658:A:H2'	1:AS:2659:G:O4'	2.18	0.43
1:AS:2852:U:H5''	5:AX:236:LYS:HG2	2.00	0.43
1:AS:3039:C:H5''	20:BM:58:HIS:CE1	2.53	0.43
3:AU:9:A:H2'	3:AU:10:A:H8	1.82	0.43
8:BA:42:LEU:HD12	8:BA:82:TYR:O	2.18	0.43
19:BL:76:ALA:HA	19:BL:79:LYS:HG3	1.99	0.43
20:BM:39:SER:HA	20:BM:42:ARG:HH11	1.82	0.43
23:BP:99:VAL:HG11	23:BP:109:GLN:CD	2.43	0.43
46:CM:79:C:P	53:CT:159:ARG:HH22	2.42	0.43
46:CM:327:G:H2'	46:CM:328:G:H8	1.84	0.43
46:CM:1379:C:H2'	46:CM:1380:G:H8	1.84	0.43
49:CP:221:THR:HB	49:CP:222:PRO:HD2	2.00	0.43
51:CR:95:THR:HG22	71:DL:16:PRO:HG2	2.01	0.43
61:DB:76:ILE:HD11	61:DB:107:ILE:HG23	2.00	0.43
62:DC:34:THR:HG21	62:DC:45:PHE:CG	2.54	0.43
64:DE:5:ARG:O	64:DE:10:LYS:HE2	2.18	0.43
66:DG:103:LYS:HA	66:DG:103:LYS:HD3	1.84	0.43
70:DK:29:TYR:HA	70:DK:32:ARG:NH1	2.34	0.43
79:DT:71:ASP:CB	79:DT:113:SER:HA	2.49	0.43
80:l1:179:LEU:O	80:l1:181:ASN:N	2.51	0.43
80:l1:183:ILE:H	80:l1:183:ILE:HG13	1.70	0.43
1:1:33:A:N3	1:1:806:A:O2'	2.47	0.42
1:1:182:G:C6	1:1:233:G:C6	3.07	0.42
1:1:291:C:H2'	1:1:292:U:C6	2.54	0.42
1:1:1059:G:N3	1:1:1062:G:H1'	2.34	0.42
1:1:1171:C:O2	17:w:88:MET:HG2	2.19	0.42
1:1:1286:A:H2'	1:1:1287:A:C8	2.54	0.42
1:1:1322:A:O2'	34:AG:77:ASN:OD1	2.25	0.42
1:1:1380:U:OP2	6:l:203:ARG:HA	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1500:A:C5	1:1:1501:C:C5	3.07	0.42
1:1:1579:A:H2'	1:1:1580:U:O4'	2.18	0.42
1:1:1617:A:H2'	1:1:1618:U:H6	1.83	0.42
1:1:1907:A:H2	1:1:2100:G:C8	2.37	0.42
1:1:2544:U:O2'	1:1:2545:C:O5'	2.34	0.42
1:1:2718:A:H2'	1:1:2719:A:O4'	2.19	0.42
1:1:2988:A:H2'	1:1:2989:A:C8	2.52	0.42
1:1:3085:A:OP1	11:q:73:SER:OG	2.27	0.42
1:1:3302:G:H2'	1:1:3303:C:C6	2.54	0.42
3:4:156:U:O2'	3:4:157:U:P	2.77	0.42
11:q:105:LYS:HZ3	11:q:108:GLY:HA2	1.82	0.42
12:r:88:ARG:NH1	12:r:173:PHE:HD2	2.17	0.42
21:0:27:MET:HE2	21:0:27:MET:HB3	1.75	0.42
24:6:80:ARG:HD2	24:6:97:ASP:OD1	2.18	0.42
27:9:32:SER:HA	27:9:49:PRO:HA	2.00	0.42
34:AG:49:ILE:HG12	34:AG:100:ILE:HD13	2.01	0.42
46:B:60:U:H4'	46:B:452:A:OP1	2.19	0.42
46:B:99:C:O2'	46:B:376:A:H4'	2.18	0.42
46:B:844:A:C4	60:P:73:ARG:NH1	2.88	0.42
46:B:933:A:H2'	46:B:934:C:C6	2.54	0.42
46:B:1064:U:H2'	46:B:1065:U:H6	1.83	0.42
46:B:1323:C:H1'	46:B:1396:A:C5	2.54	0.42
46:B:1749:A:C1'	46:B:1770:C:H5'	2.48	0.42
50:F:178:MET:HE3	50:F:183:LEU:HD12	2.00	0.42
64:T:90:ALA:HA	64:T:95:HIS:CD2	2.54	0.42
68:X:64:GLU:OE2	74:d:2:VAL:N	2.52	0.42
79:AR:16:HIS:O	79:AR:305:ASN:HB3	2.18	0.42
79:AR:71:ASP:CB	79:AR:113:SER:HA	2.49	0.42
1:AS:539:G:H2'	1:AS:540:C:O4'	2.19	0.42
1:AS:620:A:OP1	34:CA:59:ILE:HD11	2.19	0.42
1:AS:663:A:H1'	14:BG:14:PHE:CZ	2.54	0.42
1:AS:696:U:H2'	1:AS:697:A:O4'	2.18	0.42
1:AS:987:G:C6	1:AS:1055:G:C6	3.07	0.42
1:AS:1004:U:O2'	12:BE:35:ASP:OD2	2.32	0.42
1:AS:1756:A:C6	1:AS:1762:G:C5	3.07	0.42
1:AS:1900:C:H2'	1:AS:1901:G:O4'	2.19	0.42
1:AS:2273:A:N3	1:AS:2901:C:O2'	2.40	0.42
1:AS:2990:C:C4	1:AS:2991:U:C4	3.07	0.42
1:AS:3181:G:OP2	34:CA:2:ALA:HB2	2.19	0.42
11:BD:16:VAL:HG11	11:BD:79:ILE:CG1	2.49	0.42
46:CM:325:U:H2'	46:CM:326:A:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:563:C:O2'	46:CM:575:G:N2	2.52	0.42
46:CM:1446:A:H62	45:CL:77:GLN:HG3	1.83	0.42
46:CM:1510:G:OP2	46:CM:1510:G:N2	2.39	0.42
46:CM:1523:G:O2'	46:CM:1524:C:OP1	2.28	0.42
46:CM:1612:C:H2'	46:CM:1613:U:H6	1.84	0.42
47:CN:157:ASP:O	68:DI:66:ASP:HA	2.19	0.42
50:CQ:110:LEU:HD21	50:CQ:116:ILE:HG22	2.01	0.42
50:CQ:183:LEU:HD23	50:CQ:183:LEU:H	1.83	0.42
51:CR:105:VAL:HG22	51:CR:246:LYS:HD2	2.01	0.42
52:CS:32:ASP:OD1	52:CS:33:VAL:N	2.52	0.42
55:CV:87:ASN:HB3	55:CV:90:LEU:HG	2.01	0.42
57:CX:69:THR:O	57:CX:73:VAL:HG23	2.19	0.42
70:DK:24:TRP:O	70:DK:30:LYS:HD2	2.19	0.42
80:L1:44:GLN:HG3	80:L1:45:ARG:H	1.83	0.42
45:CL:158:LEU:O	45:CL:162:LYS:NZ	2.41	0.42
1:1:6:C:H2'	1:1:7:C:C6	2.54	0.42
1:1:196:G:N2	1:1:372:A:C8	2.87	0.42
1:1:1141:G:H5'	33:AF:47:PHE:CD1	2.53	0.42
1:1:2403:G:H2'	1:1:2404:U:O4'	2.19	0.42
1:1:2801:U:C4	1:1:2802:G:N7	2.87	0.42
1:1:2927:U:H2'	1:1:2928:A:O4'	2.19	0.42
24:6:80:ARG:HG2	24:6:99:ALA:HB3	2.00	0.42
29:AB:21:ARG:O	29:AB:24:LYS:HE3	2.19	0.42
31:AD:46:ILE:HG21	31:AD:55:LYS:HG3	2.01	0.42
35:AH:58:ARG:CD	35:AH:59:PRO:HD2	2.40	0.42
46:B:1220:C:C6	46:B:1221:A:C8	3.07	0.42
46:B:1664:C:H2'	46:B:1665:C:O4'	2.19	0.42
46:B:1701:A:H2'	46:B:1702:A:O4'	2.20	0.42
47:C:164:ASN:O	47:C:170:ILE:HD11	2.18	0.42
49:E:30:TRP:HZ2	49:E:60:GLU:OE1	2.00	0.42
52:H:99:MET:O	52:H:103:ASN:HB2	2.19	0.42
60:P:55:ARG:O	74:d:47:PHE:HB2	2.18	0.42
65:U:89:GLN:HA	65:U:97:ASP:HA	2.01	0.42
66:V:69:LYS:HB2	66:V:70:GLN:OE1	2.18	0.42
75:e:8:THR:CG2	75:e:56:LEU:HB2	2.49	0.42
75:e:27:GLN:HE22	75:e:65:ARG:HD2	1.84	0.42
1:AS:25:A:H4'	1:AS:329:U:H2'	2.00	0.42
1:AS:421:G:O6	1:AS:2361:C:O2'	2.25	0.42
1:AS:679:U:O2'	1:AS:695:G:O6	2.34	0.42
1:AS:1224:C:O5'	1:AS:1224:C:H6	2.02	0.42
1:AS:1572:G:H2'	1:AS:1573:C:C6	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:2066:G:H2'	1:AS:2067:U:O4'	2.19	0.42
1:AS:2407:G:H2'	1:AS:2408:A:H8	1.84	0.42
1:AS:2603:U:H2'	1:AS:2604:G:C8	2.54	0.42
13:BF:108:GLU:HB3	13:BF:122:ILE:HD11	2.01	0.42
13:BF:164:LYS:HG2	13:BF:171:VAL:HG23	2.00	0.42
14:BG:57:VAL:HG22	14:BG:69:VAL:CG2	2.49	0.42
25:BR:86:SER:O	25:BR:90:ILE:HG12	2.19	0.42
27:BT:52:GLN:O	27:BT:70:VAL:HB	2.19	0.42
46:CM:78:A:H1'	53:CT:175:ILE:HG13	2.01	0.42
46:CM:144:U:H5	46:CM:166:A:N7	2.18	0.42
46:CM:302:U:H2'	46:CM:303:C:H6	1.84	0.42
46:CM:383:A:H2'	46:CM:384:G:C8	2.54	0.42
46:CM:598:U:P	70:DK:108:GLY:HA2	2.59	0.42
46:CM:724:G:H2'	46:CM:725:A:H8	1.81	0.42
46:CM:826:U:C6	46:CM:827:C:H5	2.38	0.42
46:CM:1373:G:OP1	64:DE:32:LYS:NZ	2.47	0.42
50:CQ:219:ILE:HB	50:CQ:220:PRO:HD2	2.00	0.42
52:CS:61:TYR:OH	75:DP:52:ASP:OD1	2.29	0.42
57:CX:46:LEU:HB3	57:CX:66:TYR:CE2	2.54	0.42
59:CZ:79:CYS:CB	59:CZ:88:LEU:HD21	2.49	0.42
59:CZ:105:GLN:HE22	59:CZ:114:LYS:HE2	1.85	0.42
61:DB:7:GLN:NE2	73:DN:58:VAL:HG12	2.34	0.42
67:DH:70:PRO:HA	76:DQ:40:ARG:NH1	2.32	0.42
79:DT:171:TRP:CD2	79:DT:195:TYR:HB2	2.54	0.42
1:1:171:G:H2'	1:1:172:C:H6	1.82	0.42
1:1:413:U:H2'	1:1:414:U:C6	2.54	0.42
1:1:596:G:H4'	6:l:326:LEU:HD13	2.01	0.42
1:1:2919:G:N3	5:k:250:ALA:HB1	2.34	0.42
1:1:3129:C:H2'	1:1:3130:C:H6	1.83	0.42
7:m:179:ARG:HD3	7:m:179:ARG:HA	1.80	0.42
16:v:28:TRP:CE2	16:v:32:GLN:HG3	2.55	0.42
35:AH:9:ARG:HD2	35:AH:34:HIS:CE1	2.54	0.42
38:AK:44:MET:HB3	38:AK:44:MET:HE3	1.79	0.42
44:AQ:49:ARG:NH1	44:AQ:52:THR:HG22	2.33	0.42
45:i:93:ARG:CG	46:B:1259:C:C5	3.02	0.42
46:B:218:A:N1	46:B:219:A:C5	2.87	0.42
46:B:302:U:H2'	46:B:303:C:H6	1.81	0.42
46:B:913:U:OP1	73:c:19:LYS:HE3	2.19	0.42
46:B:1087:G:OP2	70:Z:7:ARG:NH1	2.47	0.42
46:B:1140:G:H2'	46:B:1141:C:C6	2.54	0.42
46:B:1149:G:H2'	46:B:1150:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:G:253:ARG:HH11	56:L:71:PHE:HD1	1.65	0.42
61:Q:82:GLY:HA3	61:Q:115:PRO:HG2	2.00	0.42
70:Z:79:ASN:N	70:Z:79:ASN:OD1	2.52	0.42
74:d:36:LYS:O	74:d:77:CYS:HA	2.18	0.42
79:AR:179:ASP:C	79:AR:181:ALA:H	2.26	0.42
79:AR:183:TYR:N	79:AR:183:TYR:CD1	2.83	0.42
1:AS:308:A:H1'	1:AS:2200:A:C2	2.53	0.42
1:AS:602:A:H2'	1:AS:603:C:C6	2.54	0.42
1:AS:630:G:C6	1:AS:631:U:C4	3.07	0.42
1:AS:636:C:N4	1:AS:637:G:O6	2.52	0.42
1:AS:1153:G:O2'	1:AS:1165:A:N3	2.47	0.42
1:AS:2728:C:H1'	22:BO:8:ARG:NH1	2.34	0.42
1:AS:2810:A:H4'	12:BE:74:LYS:HD3	2.02	0.42
1:AS:2846:G:C6	1:AS:2917:G:C8	3.08	0.42
1:AS:3167:G:C2	1:AS:3168:U:C4	3.08	0.42
1:AS:3208:A:OP1	17:BJ:160:LYS:NZ	2.37	0.42
2:AT:90:A:H2'	2:AT:91:G:O4'	2.19	0.42
3:AU:6:U:H2'	3:AU:7:U:C6	2.54	0.42
6:AY:303:ALA:HB2	19:BL:39:ARG:NH2	2.23	0.42
20:BM:20:ARG:O	20:BM:53:LYS:NZ	2.51	0.42
24:BQ:104:ASN:HD22	24:BQ:108:GLU:HB2	1.84	0.42
38:CE:21:ARG:HD2	38:CE:37:CYS:SG	2.59	0.42
46:CM:181:U:H2'	46:CM:182:C:C6	2.55	0.42
46:CM:722:A:H1'	46:CM:723:G:O4'	2.19	0.42
46:CM:814:A:O2'	46:CM:815:U:P	2.77	0.42
46:CM:1233:C:H2'	46:CM:1234:U:H6	1.84	0.42
46:CM:1307:A:O2'	47:CN:104:PRO:HG2	2.20	0.42
46:CM:1326:A:H4'	79:DT:64:GLY:O	2.19	0.42
46:CM:1500:G:H1'	46:CM:1505:C:O2	2.19	0.42
48:CO:30:PHE:HZ	48:CO:61:LEU:HD11	1.85	0.42
48:CO:131:ASP:OD2	48:CO:180:THR:OG1	2.36	0.42
52:CS:82:PHE:CZ	75:DP:49:ARG:HB2	2.54	0.42
56:CW:148:VAL:HG11	56:CW:156:ILE:HD11	2.01	0.42
61:DB:65:LYS:O	61:DB:69:VAL:HG23	2.19	0.42
1:1:425:G:H2'	1:1:426:G:H8	1.84	0.42
1:1:1444:U:OP1	18:x:67:ILE:HG22	2.19	0.42
1:1:1499:A:C4	1:1:1500:A:C8	3.06	0.42
1:1:2260:U:O2	1:1:2288:U:H4'	2.20	0.42
1:1:2686:G:OP2	43:AP:10:THR:HG22	2.18	0.42
1:1:2749:G:H5''	1:1:2750:G:OP1	2.19	0.42
1:1:2961:U:H2'	1:1:2962:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:3023:U:C2	1:1:3024:G:C8	3.08	0.42
1:1:3045:A:H2'	1:1:3046:G:O4'	2.18	0.42
3:4:132:G:H5''	26:8:94:GLN:HE21	1.84	0.42
6:l:24:PRO:HD2	6:l:27:PHE:CD1	2.54	0.42
9:o:82:VAL:HG21	9:o:134:TYR:CD2	2.54	0.42
10:p:48:SER:HA	10:p:51:VAL:HG23	2.00	0.42
22:2:83:ARG:HB2	30:AC:22:LYS:HE2	2.01	0.42
25:7:38:SER:O	25:7:42:GLN:HG3	2.19	0.42
25:7:80:ARG:HH12	53:I:10:ASN:C	2.28	0.42
45:i:108:GLY:H	50:F:116:ILE:HD11	1.83	0.42
46:B:165:U:H2'	46:B:166:A:H5''	2.00	0.42
46:B:1210:U:O2	46:B:1215:A:H4'	2.20	0.42
46:B:1233:C:C2	46:B:1234:U:C5	3.08	0.42
46:B:1415:G:H2'	46:B:1416:U:O2	2.20	0.42
52:H:26:ALA:HB3	63:S:26:GLY:C	2.44	0.42
62:R:69:PRO:HD2	62:R:71:GLU:OE1	2.20	0.42
72:b:54:VAL:HA	72:b:57:TYR:CD2	2.53	0.42
1:AS:340:C:H2'	1:AS:341:G:C8	2.55	0.42
1:AS:481:G:C5	1:AS:482:U:C4	3.07	0.42
1:AS:657:G:H2'	1:AS:1428:C:H42	1.84	0.42
1:AS:2193:A:C4	1:AS:2194:G:C8	3.07	0.42
1:AS:3158:G:C2	1:AS:3159:A:C5	3.08	0.42
9:BB:19:LYS:O	9:BB:23:GLU:HG3	2.20	0.42
25:BR:101:ARG:HG2	53:CT:150:GLU:OE2	2.19	0.42
39:CF:46:ARG:HD2	39:CF:47:GLY:O	2.20	0.42
39:CF:70:PRO:HD2	39:CF:73:LEU:HD11	2.01	0.42
46:CM:704:A:H61	46:CM:716:C:H2'	1.84	0.42
46:CM:975:C:H2'	46:CM:976:G:O4'	2.19	0.42
46:CM:1220:C:C6	78:DS:189:THR:HG21	2.54	0.42
46:CM:1537:A:H2'	46:CM:1538:U:H6	1.84	0.42
46:CM:1634:U:H2'	46:CM:1635:A:H8	1.85	0.42
52:CS:164:PRO:O	52:CS:168:VAL:HG23	2.19	0.42
63:DD:4:GLN:HG2	63:DD:95:TYR:CD1	2.54	0.42
63:DD:73:HIS:O	63:DD:76:GLN:N	2.53	0.42
73:DN:59:TYR:HB2	73:DN:62:TYR:HB2	2.01	0.42
79:DT:17:ASN:HB3	79:DT:39:ASP:CG	2.44	0.42
79:DT:190:ILE:O	79:DT:220:TRP:HH2	2.02	0.42
79:DT:261:LYS:HZ2	79:DT:268:LEU:HB2	1.83	0.42
80:l1:118:LYS:HB3	80:l1:118:LYS:HE3	1.86	0.42
1:1:98:A:OP1	16:v:194:HIS:HB3	2.20	0.42
1:1:222:U:OP1	1:1:224:C:N4	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1219:A:N7	1:1:1282:A:C6	2.87	0.42
1:1:1852:C:H2'	1:1:1853:C:H6	1.85	0.42
1:1:1900:C:H2'	1:1:1901:G:O4'	2.19	0.42
1:1:2201:A:H2'	1:1:2202:A:C8	2.54	0.42
1:1:3260:A:H2'	1:1:3261:A:H8	1.84	0.42
83:1:3969:PAR:H122	46:B:1713:G:C5'	2.32	0.42
4:j:97:ASN:HB2	4:j:100:ASN:ND2	2.34	0.42
5:k:283:TYR:OH	5:k:325:LYS:HD2	2.19	0.42
9:o:36:LYS:HE2	9:o:36:LYS:HB2	1.88	0.42
12:r:150:GLU:O	12:r:154:ARG:HG3	2.19	0.42
24:6:80:ARG:HB2	24:6:95:PHE:CG	2.55	0.42
28:AA:85:TYR:OH	35:AH:97:GLU:OE2	2.29	0.42
34:AG:38:PRO:HD3	34:AG:77:ASN:O	2.19	0.42
46:B:109:G:H5''	46:B:739:A:H4'	2.01	0.42
46:B:151:G:C6	46:B:160:A:C6	3.07	0.42
46:B:231:C:H4'	46:B:232:G:C2	2.55	0.42
46:B:593:G:H5'	56:L:40:ARG:HH22	1.85	0.42
46:B:598:U:P	70:Z:108:GLY:HA2	2.60	0.42
46:B:638:U:HO2'	46:B:639:G:P	2.42	0.42
46:B:809:G:C2	46:B:834:C:C2	3.08	0.42
46:B:904:A:H2'	46:B:905:C:H6	1.82	0.42
48:D:191:GLU:O	48:D:195:ARG:HG3	2.19	0.42
50:F:223:THR:HG21	79:AR:225:ASN:HB3	2.02	0.42
51:G:72:VAL:HA	51:G:89:VAL:O	2.18	0.42
51:G:94:ALA:HB3	71:a:17:LEU:HD23	2.02	0.42
51:G:103:TYR:CD1	51:G:189:LEU:HD21	2.54	0.42
63:S:128:PHE:CE2	67:W:77:THR:HA	2.54	0.42
1:AS:694:C:OP2	6:AY:120:ARG:NH2	2.49	0.42
1:AS:778:U:H2'	1:AS:779:A:O4'	2.20	0.42
1:AS:886:C:O2	1:AS:2302:A:H2	2.02	0.42
1:AS:1465:C:C2	1:AS:1505:A:C2	3.07	0.42
1:AS:2348:G:C6	1:AS:2349:G:C6	3.07	0.42
1:AS:2638:C:O2'	1:AS:2663:A:N3	2.53	0.42
4:AW:242:ARG:NH1	4:AW:246:LEU:HD23	2.35	0.42
5:AX:66:LYS:HZ1	24:BQ:9:ASN:H	1.67	0.42
10:BC:110:LEU:HD23	10:BC:110:LEU:HA	1.73	0.42
12:BE:156:ARG:HD2	12:BE:163:GLN:O	2.19	0.42
13:BF:33:ALA:HB2	13:BF:123:TYR:CE2	2.55	0.42
15:BH:39:LEU:HD12	15:BH:48:GLN:O	2.20	0.42
16:BI:193:LYS:HE2	16:BI:193:LYS:HB3	1.83	0.42
18:BK:138:ALA:HB1	18:BK:140:GLN:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BV:48:TYR:O	29:BV:49:HIS:ND1	2.43	0.42
46:CM:239:U:H5''	46:CM:240:U:C5	2.54	0.42
46:CM:1491:G:H5'	66:DG:97:SER:HA	2.02	0.42
47:CN:54:TRP:HZ2	47:CN:191:ARG:HH22	1.68	0.42
48:CO:34:ALA:O	48:CO:41:ARG:HG2	2.19	0.42
48:CO:34:ALA:HB1	48:CO:35:PRO:HD2	2.01	0.42
48:CO:82:ARG:HH21	48:CO:188:LEU:HD23	1.85	0.42
51:CR:153:LEU:HD12	53:CT:215:ARG:HH21	1.84	0.42
53:CT:220:LYS:C	53:CT:222:GLU:N	2.77	0.42
68:DI:78:LEU:HD23	68:DI:78:LEU:HA	1.80	0.42
80:L1:60:ARG:HE	80:L1:63:MET:HE3	1.85	0.42
80:l1:49:PHE:CD1	80:l1:193:LEU:HD13	2.54	0.42
80:l1:70:ASP:OD1	80:l1:87:VAL:N	2.53	0.42
80:l1:118:LYS:O	80:l1:122:ARG:HB2	2.20	0.42
80:l1:216:ILE:HG22	80:l1:217:TYR:H	1.83	0.42
1:1:335:G:OP1	27:9:9:SER:HB2	2.20	0.42
1:1:583:A:H2'	1:1:584:C:C6	2.54	0.42
1:1:751:A:C5	1:1:752:U:C5	3.08	0.42
1:1:1614:G:H4'	3:4:129:C:C1'	2.49	0.42
1:1:2533:G:C6	1:1:2534:C:C4	3.08	0.42
1:1:2785:A:H2'	1:1:2786:G:O4'	2.20	0.42
1:1:3259:A:H2'	1:1:3260:A:O4'	2.20	0.42
5:k:215:ILE:HD12	5:k:338:LEU:HB3	2.00	0.42
11:q:7:ASP:OD1	11:q:56:THR:HG23	2.19	0.42
29:AB:28:HIS:CD2	29:AB:32:ARG:HG2	2.54	0.42
45:i:93:ARG:H	45:i:93:ARG:HG2	1.63	0.42
46:B:206:U:H2'	46:B:207:U:H6	1.84	0.42
46:B:391:C:H2'	46:B:392:C:C6	2.55	0.42
46:B:586:U:OP2	77:g:26:LYS:HE2	2.20	0.42
46:B:812:C:H2'	46:B:813:U:C5	2.55	0.42
46:B:1067:C:H1'	68:X:62:ARG:NH2	2.35	0.42
46:B:1326:A:H1'	79:AR:66:SER:HB2	2.00	0.42
46:B:1375:C:P	64:T:48:ASN:ND2	2.93	0.42
47:C:123:VAL:HG21	47:C:133:ILE:CG1	2.50	0.42
53:I:121:ILE:HB	53:I:124:LEU:HB3	2.01	0.42
59:O:54:LYS:HG2	59:O:54:LYS:O	2.19	0.42
63:S:37:LEU:HA	63:S:44:ARG:NH2	2.32	0.42
64:T:24:LEU:HD23	64:T:34:LEU:HD23	2.02	0.42
65:U:110:ARG:O	65:U:113:LEU:N	2.52	0.42
71:a:60:PHE:CD1	71:a:71:GLY:HA3	2.55	0.42
75:e:12:VAL:HG23	75:e:50:GLU:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:156:A:N7	37:CD:25:ILE:HG12	2.35	0.42
1:AS:606:A:C5	8:BA:21:ARG:HD3	2.54	0.42
1:AS:635:C:C2	1:AS:636:C:C5	3.08	0.42
1:AS:684:G:C2	1:AS:693:C:C2	3.08	0.42
1:AS:788:G:H2'	1:AS:789:C:C6	2.53	0.42
1:AS:1108:A:N3	1:AS:1366:G:O2'	2.52	0.42
1:AS:2257:A:C8	1:AS:2266:G:C8	3.07	0.42
83:AS:3789:PAR:H43	83:AS:3789:PAR:H14	1.60	0.42
5:AX:45:ALA:O	5:AX:181:ILE:HD13	2.19	0.42
15:BH:17:ARG:O	15:BH:28:THR:HA	2.20	0.42
18:BK:172:GLN:NE2	34:CA:60:ARG:O	2.48	0.42
20:BM:106:LEU:HD23	20:BM:106:LEU:HA	1.90	0.42
24:BQ:38:ALA:O	24:BQ:58:VAL:HG13	2.20	0.42
26:BS:62:ILE:CD1	26:BS:94:GLN:HB3	2.49	0.42
32:BY:78:ARG:HA	32:BY:88:LEU:HD23	2.02	0.42
43:CJ:40:LYS:HE2	82:CJ:202:3K5:O8	2.20	0.42
46:CM:48:G:C6	46:CM:430:G:C2	3.08	0.42
46:CM:81:G:C6	46:CM:82:U:C4	3.08	0.42
46:CM:1032:G:H2'	46:CM:1033:U:C6	2.55	0.42
46:CM:1036:U:O2	46:CM:1052:G:N2	2.43	0.42
46:CM:1318:C:H2'	46:CM:1319:U:H6	1.84	0.42
46:CM:1649:G:C2	46:CM:1650:G:C5	3.08	0.42
51:CR:114:ILE:HG22	51:CR:238:SER:OG	2.20	0.42
59:CZ:71:ILE:HD12	59:CZ:71:ILE:H	1.85	0.42
65:DF:30:TYR:O	65:DF:33:THR:OG1	2.35	0.42
66:DG:63:ARG:HH12	66:DG:67:LEU:CD1	2.32	0.42
67:DH:43:ASN:HD21	67:DH:105:ILE:HG21	1.83	0.42
79:DT:39:ASP:O	79:DT:41:THR:HG23	2.18	0.42
80:11:201:VAL:HB	80:11:217:TYR:HE2	1.84	0.42
1:1:268:A:N1	1:1:295:A:H5'	2.35	0.42
1:1:412:G:H5'	18:x:26:PHE:HZ	1.85	0.42
1:1:454:G:N9	1:1:476:C:H1'	2.35	0.42
1:1:669:U:H2'	1:1:670:A:C8	2.54	0.42
1:1:690:A:C4	1:1:691:A:C8	3.08	0.42
1:1:749:C:H2'	1:1:750:G:H8	1.84	0.42
1:1:787:A:H2'	1:1:788:G:C8	2.55	0.42
1:1:904:G:H4'	1:1:905:G:O5'	2.20	0.42
1:1:1632:C:O2'	28:AA:79:HIS:ND1	2.49	0.42
1:1:2391:A:H2'	1:1:2392:G:C8	2.51	0.42
3:4:71:A:N1	3:4:82:U:O2'	2.50	0.42
4:j:82:VAL:HA	4:j:86:GLN:OE1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:l:12:VAL:O	6:l:172:ALA:HB3	2.20	0.42
9:o:208:PRO:HB3	9:o:239:GLN:HB3	2.02	0.42
12:r:5:PRO:HB2	12:r:7:ARG:HG2	2.01	0.42
20:z:105:LEU:HD12	20:z:135:LYS:HE2	2.02	0.42
21:0:40:ARG:HA	21:0:40:ARG:HD2	1.85	0.42
21:0:106:MET:HE3	21:0:106:MET:HB3	1.96	0.42
25:7:129:LYS:HD3	25:7:129:LYS:C	2.45	0.42
32:AE:61:ARG:HH12	32:AE:67:GLU:CD	2.27	0.42
35:AH:61:GLN:HA	35:AH:64:GLN:NE2	2.34	0.42
45:i:101:LYS:HZ3	46:B:579:U:H3'	1.85	0.42
46:B:159:U:O2'	46:B:160:A:H5'	2.19	0.42
46:B:278:U:H4'	46:B:279:G:O5'	2.19	0.42
46:B:741:A:H5'	51:G:16:SER:OG	2.19	0.42
46:B:1350:C:O3'	63:S:29:LYS:NZ	2.52	0.42
46:B:1628:C:H2'	46:B:1629:G:C8	2.54	0.42
47:C:147:THR:OG1	47:C:151:SER:HB2	2.20	0.42
50:F:58:GLY:O	50:F:66:ARG:HD3	2.20	0.42
54:J:6:LEU:HD21	54:J:38:GLN:OE1	2.19	0.42
55:K:122:GLY:HA2	55:K:163:ASP:O	2.20	0.42
57:M:8:ARG:O	57:M:12:HIS:CD2	2.72	0.42
67:W:57:MET:HB2	67:W:87:LYS:O	2.19	0.42
70:Z:133:LEU:HG	70:Z:137:LYS:HD2	2.02	0.42
78:h:182:TYR:CE1	78:h:187:HIS:HA	2.54	0.42
1:AS:291:C:C2	1:AS:292:U:C5	3.07	0.42
1:AS:520:G:C4	1:AS:521:G:C8	3.08	0.42
1:AS:933:G:C6	1:AS:2388:U:H5''	2.54	0.42
1:AS:1090:A:H2	1:AS:1092:U:H2'	1.84	0.42
1:AS:1172:C:H4'	17:BJ:90:PRO:HD3	2.01	0.42
1:AS:1827:U:O2'	3:AU:114:G:OP1	2.25	0.42
1:AS:2326:A:O2'	1:AS:2369:G:OP1	2.28	0.42
1:AS:2469:A:H4'	80:L1:212:PRO:HA	2.01	0.42
3:AU:79:A:C6	3:AU:81:A:C5	3.08	0.42
9:BB:186:ILE:HD11	9:BB:196:VAL:HG12	2.00	0.42
13:BF:50:ALA:HB2	13:BF:65:ILE:HG13	2.01	0.42
43:CJ:47:GLN:HE22	43:CJ:53:GLN:CD	2.27	0.42
46:CM:330:U:P	55:CV:56:ARG:HH22	2.42	0.42
46:CM:391:C:H2'	46:CM:392:C:C6	2.55	0.42
46:CM:504:A:HO2'	46:CM:505:U:P	2.43	0.42
46:CM:814:A:H2'	46:CM:814:A:OP2	2.19	0.42
46:CM:857:G:H2'	46:CM:858:U:O4'	2.19	0.42
46:CM:1311:A:H2'	46:CM:1312:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:1414:G:C2'	46:CM:1415:G:H5'	2.49	0.42
48:CO:198:GLU:O	48:CO:202:GLN:HG2	2.19	0.42
50:CQ:105:ALA:O	50:CQ:109:LYS:HG2	2.19	0.42
56:CW:59:LEU:HD13	56:CW:69:ARG:HA	2.02	0.42
57:CX:86:ILE:HG22	45:CL:154:TYR:HB2	2.01	0.42
59:CZ:104:CYS:SG	59:CZ:105:GLN:N	2.93	0.42
79:DT:19:TRP:CE2	79:DT:303:THR:HB	2.55	0.42
79:DT:130:LYS:HG2	79:DT:150:ASP:C	2.44	0.42
79:DT:291:TRP:HB3	79:DT:292:SER:H	1.60	0.42
80:l1:55:LEU:HD23	80:l1:55:LEU:HA	1.86	0.42
80:l1:118:LYS:HB2	80:l1:119:GLN:OE1	2.19	0.42
1:1:206:U:H2'	1:1:207:C:H6	1.85	0.42
1:1:304:G:OP2	1:1:304:G:H3'	2.20	0.42
1:1:452:A:N6	1:1:476:C:H42	2.18	0.42
1:1:486:C:O2'	1:1:487:C:H5'	2.19	0.42
1:1:964:G:O2'	30:AC:15:LYS:HE2	2.19	0.42
1:1:3035:C:H2'	1:1:3036:U:C6	2.55	0.42
1:1:3046:G:H4'	32:AE:61:ARG:CD	2.48	0.42
1:1:3201:U:H1'	1:1:3217:G:N2	2.35	0.42
4:j:71:LEU:HD23	4:j:71:LEU:HA	1.88	0.42
5:k:58:ARG:NE	5:k:74:GLU:OE1	2.40	0.42
7:m:127:GLY:O	7:m:195:LEU:HD23	2.20	0.42
11:q:173:ARG:HH11	41:AN:51:LEU:N	2.17	0.42
17:w:53:LEU:HD23	17:w:53:LEU:HA	1.83	0.42
21:0:154:HIS:HA	21:0:170:THR:HB	2.01	0.42
28:AA:8:GLY:N	28:AA:25:ILE:O	2.40	0.42
35:AH:21:LYS:HG2	35:AH:22:VAL:N	2.35	0.42
46:B:39:A:O2'	46:B:467:C:N4	2.53	0.42
46:B:207:U:O3'	55:K:176:SER:OG	2.32	0.42
46:B:558:U:H2'	46:B:559:G:C8	2.54	0.42
46:B:824:U:O5'	58:N:26:LYS:HB3	2.19	0.42
46:B:1002:U:C2	46:B:1003:U:C5	3.08	0.42
46:B:1021:A:H2'	46:B:1022:C:H6	1.84	0.42
46:B:1118:A:N3	46:B:1637:U:O2'	2.48	0.42
46:B:1395:G:N2	46:B:1398:G:OP2	2.45	0.42
46:B:1575:G:H5'	46:B:1576:C:OP2	2.20	0.42
49:E:73:ASP:HB3	49:E:99:ILE:HD13	2.01	0.42
51:G:63:ALA:O	51:G:67:GLN:HG2	2.19	0.42
51:G:91:THR:HG23	51:G:98:HIS:CD2	2.54	0.42
60:P:83:GLU:OE1	60:P:83:GLU:N	2.47	0.42
64:T:9:VAL:HG23	64:T:50:ILE:HG12	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:V:49:GLU:O	66:V:53:TRP:HB3	2.20	0.42
1:AS:277:G:H2'	1:AS:278:U:H6	1.85	0.42
1:AS:512:A:C6	1:AS:573:G:C6	3.07	0.42
1:AS:533:G:H2'	1:AS:534:G:O4'	2.19	0.42
1:AS:772:U:OP1	30:BW:41:ARG:NH2	2.52	0.42
1:AS:1559:C:C2	1:AS:1560:U:C5	3.07	0.42
1:AS:2184:G:H4'	1:AS:2185:A:C4	2.54	0.42
1:AS:2234:A:H3'	1:AS:2234:A:N3	2.34	0.42
1:AS:2911:G:OP2	5:AX:3:HIS:HD2	2.03	0.42
1:AS:3166:A:O2'	1:AS:3167:G:H5'	2.19	0.42
3:AU:4:C:H2'	3:AU:5:U:H6	1.85	0.42
39:CF:42:LYS:HD3	39:CF:44:LYS:NZ	2.35	0.42
46:CM:69:G:H2'	46:CM:70:C:C6	2.55	0.42
46:CM:623:C:H2'	46:CM:624:U:H6	1.85	0.42
46:CM:722:A:H1'	46:CM:723:G:C1'	2.49	0.42
46:CM:1167:U:H2'	46:CM:1168:A:O3'	2.19	0.42
46:CM:1548:U:H2'	46:CM:1549:G:H8	1.84	0.42
46:CM:1742:A:OP1	70:DK:63:GLN:HG2	2.20	0.42
49:CP:53:LEU:HA	68:DI:12:TYR:CE1	2.49	0.42
56:CW:109:LEU:HB2	56:CW:146:PHE:HB3	2.01	0.42
62:DC:73:PRO:HD2	62:DC:93:VAL:HG23	2.02	0.42
65:DF:7:GLU:HG3	65:DF:10:SER:OG	2.19	0.42
80:L1:126:PRO:HB2	80:L1:130:LYS:HD3	2.01	0.42
1:1:563:U:H2'	1:1:564:G:H8	1.80	0.42
1:1:606:A:N1	8:n:21:ARG:NH2	2.68	0.42
1:1:1228:C:H2'	1:1:1229:G:H8	1.84	0.42
1:1:1469:G:H5''	20:z:23:TRP:CD1	2.54	0.42
1:1:1945:A:H2'	1:1:1946:U:C6	2.55	0.42
1:1:2855:U:H2'	1:1:2856:C:H6	1.85	0.42
3:4:7:U:H2'	3:4:8:C:C6	2.55	0.42
8:n:164:SER:OG	8:n:166:LYS:NZ	2.53	0.42
10:p:123:ALA:HA	10:p:126:VAL:HG22	2.01	0.42
10:p:193:LYS:HD3	10:p:193:LYS:HA	1.81	0.42
13:s:148:ILE:HG23	13:s:152:HIS:HB3	2.01	0.42
14:t:167:THR:HB	29:AB:135:GLU:OE1	2.19	0.42
16:v:9:GLU:OE1	16:v:9:GLU:HA	2.20	0.42
17:w:63:THR:H	17:w:70:GLY:HA3	1.84	0.42
45:i:63:ALA:O	45:i:64:LEU:C	2.62	0.42
46:B:30:G:OP1	70:Z:126:LYS:NZ	2.53	0.42
46:B:627:U:C2	46:B:628:A:C8	3.07	0.42
46:B:1181:A:H4'	46:B:1182:C:H5''	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:C:26:ALA:O	47:C:46:ASN:ND2	2.43	0.42
48:D:26:ARG:HA	48:D:50:ARG:NH1	2.34	0.42
59:O:126:TRP:H	59:O:126:TRP:HE3	1.68	0.42
79:AR:10:ARG:NH1	79:AR:311:GLN:OE1	2.52	0.42
1:AS:1516:G:H2'	1:AS:1517:G:O4'	2.20	0.42
1:AS:1664:G:C5	1:AS:1665:C:C5	3.08	0.42
1:AS:1705:C:H2'	1:AS:1706:C:H6	1.85	0.42
1:AS:1777:C:H2'	1:AS:1778:U:C6	2.54	0.42
1:AS:2571:U:H2'	1:AS:2572:C:C6	2.55	0.42
1:AS:2918:A:H1'	1:AS:2953:U:C4	2.55	0.42
1:AS:3159:A:C6	1:AS:3160:C:C4	3.08	0.42
3:AU:27:U:H2'	3:AU:28:C:C6	2.55	0.42
4:AW:204:MET:HB3	4:AW:208:ASP:HB2	2.01	0.42
11:BD:114:ILE:HB	11:BD:124:ARG:HB2	2.02	0.42
12:BE:66:GLU:OE1	12:BE:69:ARG:NH1	2.52	0.42
27:BT:69:LYS:HG2	27:BT:70:VAL:O	2.20	0.42
46:CM:714:G:H3'	46:CM:715:G:C2	2.55	0.42
46:CM:901:U:H3	61:DB:36:ARG:CZ	2.33	0.42
46:CM:1470:G:H21	46:CM:1593:C:H1'	1.83	0.42
46:CM:1648:U:C2	46:CM:1649:G:C8	3.08	0.42
50:CQ:65:ARG:HD3	57:CX:91:ARG:HE	1.84	0.42
53:CT:14:LYS:HB2	53:CT:124:LEU:HD13	2.01	0.42
54:CU:101:LYS:O	54:CU:103:ARG:NH1	2.53	0.42
54:CU:125:LEU:HD23	54:CU:125:LEU:HA	1.82	0.42
57:CX:18:GLU:HA	57:CX:89:LEU:HB3	2.01	0.42
67:DH:62:LEU:HB2	67:DH:83:MET:HB3	2.01	0.42
75:DP:58:GLU:HG3	75:DP:58:GLU:O	2.20	0.42
80:l1:4:ILE:HG12	80:l1:198:TRP:CZ2	2.55	0.42
80:l1:61:PRO:HG3	80:l1:171:ASN:HB3	2.02	0.42
1:1:109:G:C2	1:1:110:C:H1'	2.54	0.42
1:1:146:U:OP1	10:p:196:SER:HA	2.20	0.42
1:1:317:A:H2'	1:1:318:A:C8	2.55	0.42
1:1:401:U:H2'	40:AM:36:ARG:NH2	2.35	0.42
1:1:1019:U:H2'	1:1:1020:G:O4'	2.20	0.42
1:1:1022:A:OP2	1:1:1022:A:C8	2.72	0.42
1:1:1660:G:H2'	1:1:1661:U:H6	1.81	0.42
1:1:1789:C:O2	4:j:174:ARG:HD2	2.20	0.42
1:1:2578:G:H2'	1:1:2578:G:N3	2.35	0.42
1:1:2734:A:H2'	1:1:2735:U:C6	2.54	0.42
83:1:3969:PAR:H13	83:1:3969:PAR:O11	2.20	0.42
3:4:27:U:H2'	3:4:28:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:4:41:A:H4'	38:AK:59:THR:HG23	2.01	0.42
4:j:51:ASP:OD2	4:j:54:ARG:NH2	2.53	0.42
4:j:192:LYS:HB3	4:j:193:ARG:CZ	2.50	0.42
5:k:266:ARG:HA	5:k:266:ARG:HD2	1.81	0.42
7:m:41:LYS:HB2	22:2:68:THR:O	2.20	0.42
8:n:7:LYS:HB2	8:n:10:GLN:HG2	2.02	0.42
11:q:23:ARG:HH21	11:q:39:LYS:HA	1.85	0.42
14:t:143:VAL:HG13	14:t:147:PHE:HD2	1.85	0.42
16:v:48:ALA:HB1	16:v:53:TYR:HB3	2.02	0.42
16:v:143:ARG:HB3	36:AI:96:GLU:OE1	2.20	0.42
26:8:56:ARG:O	26:8:61:LYS:HD2	2.20	0.42
26:8:105:VAL:HG23	26:8:130:TYR:CG	2.54	0.42
29:AB:86:LYS:HB2	29:AB:90:TYR:CE2	2.55	0.42
32:AE:7:VAL:CG1	32:AE:43:MET:HE1	2.50	0.42
34:AG:49:ILE:HD11	34:AG:71:VAL:HG22	2.02	0.42
45:i:132:GLU:CD	50:F:95:ARG:HD2	2.44	0.42
46:B:267:G:H2'	46:B:268:C:H6	1.84	0.42
46:B:1168:A:H2'	46:B:1169:A:C8	2.54	0.42
46:B:1262:G:H1'	50:F:182:VAL:HG11	2.02	0.42
46:B:1368:A:C4	46:B:1369:G:N2	2.88	0.42
46:B:1414:G:C2'	46:B:1415:G:H5'	2.50	0.42
49:E:85:THR:OG1	49:E:88:GLY:O	2.28	0.42
50:F:183:LEU:HD23	50:F:183:LEU:HA	1.85	0.42
54:J:134:LYS:C	54:J:135:ARG:HD2	2.44	0.42
56:L:29:LYS:HG3	77:g:40:TYR:HE1	1.85	0.42
56:L:63:ASP:OD1	56:L:64:GLU:N	2.53	0.42
57:M:37:THR:OG1	57:M:41:PHE:HD2	2.02	0.42
58:N:125:VAL:HG12	58:N:139:VAL:HA	2.01	0.42
60:P:25:TRP:CE3	74:d:82:LYS:HE3	2.55	0.42
62:R:13:LYS:O	62:R:14:GLN:HB2	2.19	0.42
64:T:21:TYR:CE1	64:T:73:LEU:HD22	2.55	0.42
64:T:71:PHE:HE1	64:T:74:GLN:H	1.66	0.42
66:V:29:GLU:OE2	66:V:110:LYS:NZ	2.31	0.42
1:AS:116:U:O2'	1:AS:118:U:OP2	2.29	0.42
1:AS:498:C:H2'	1:AS:499:G:H8	1.84	0.42
1:AS:589:G:H1'	8:BA:18:LYS:HG3	2.02	0.42
1:AS:714:A:C6	29:BV:117:ARG:HD2	2.55	0.42
1:AS:963:A:H2'	1:AS:964:G:H8	1.84	0.42
1:AS:1012:U:H1'	1:AS:1013:U:C5	2.55	0.42
1:AS:1023:A:C6	1:AS:1025:G:H1'	2.54	0.42
1:AS:1128:C:H2'	1:AS:1129:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AS:1221:A:H1'	1:AS:3088:G:N3	2.35	0.42
1:AS:1496:G:H2'	1:AS:1497:U:O4'	2.20	0.42
1:AS:1606:G:H2'	1:AS:1607:G:O4'	2.20	0.42
1:AS:2279:U:H2'	1:AS:2280:G:H8	1.85	0.42
1:AS:2434:A:C6	1:AS:2435:G:O6	2.73	0.42
1:AS:2681:C:H2'	1:AS:2682:C:C6	2.54	0.42
1:AS:2739:U:H2'	1:AS:2740:U:C6	2.54	0.42
1:AS:2759:G:C4	1:AS:2760:C:C5	3.08	0.42
1:AS:2812:C:N4	1:AS:2817:A:O2'	2.47	0.42
4:AW:53:GLY:O	4:AW:192:LYS:NZ	2.52	0.42
4:AW:109:GLU:HG3	4:AW:138:GLY:HA2	2.02	0.42
4:AW:178:PRO:O	4:AW:180:LEU:HD12	2.20	0.42
8:BA:57:LEU:HD23	8:BA:57:LEU:HA	1.86	0.42
16:BI:6:TYR:CZ	37:CD:39:VAL:HG22	2.54	0.42
21:BN:79:LEU:HD13	21:BN:110:LEU:HD21	2.01	0.42
31:BX:63:MET:HE3	31:BX:63:MET:HB3	1.88	0.42
40:CG:28:ARG:HA	40:CG:33:ASN:OD1	2.20	0.42
46:CM:53:G:H2'	46:CM:54:C:H6	1.84	0.42
48:CO:82:ARG:NH2	48:CO:188:LEU:O	2.53	0.42
48:CO:164:VAL:HG12	48:CO:168:MET:HE3	2.01	0.42
51:CR:100:ARG:HH12	51:CR:118:GLU:HG2	1.84	0.42
65:DF:65:GLU:HG2	65:DF:68:ARG:HH21	1.84	0.42
80:L1:189:PHE:O	80:L1:193:LEU:HD12	2.20	0.42
1:1:72:A:C5	37:AJ:14:ARG:HD2	2.54	0.41
1:1:269:G:OP2	16:v:44:ARG:NH2	2.54	0.41
1:1:379:C:H2'	1:1:380:U:C6	2.55	0.41
1:1:772:U:H5	1:1:2691:U:O2	2.02	0.41
1:1:846:U:H2'	1:1:847:C:H6	1.85	0.41
1:1:856:G:N7	4:j:181:LYS:HB3	2.35	0.41
1:1:987:G:C5	1:1:1055:G:C6	3.08	0.41
1:1:1800:A:H2'	1:1:1801:C:C6	2.55	0.41
1:1:1834:C:H4'	1:1:1835:A:O4'	2.20	0.41
1:1:2234:A:H3'	1:1:2234:A:N3	2.35	0.41
1:1:2504:C:H2'	1:1:2505:G:C8	2.55	0.41
1:1:3261:A:H2'	1:1:3262:U:H6	1.85	0.41
5:k:262:TRP:CD1	5:k:262:TRP:H	2.37	0.41
17:w:131:LYS:HB3	17:w:134:ARG:HG2	2.01	0.41
18:x:4:TYR:OH	18:x:18:ARG:HG3	2.20	0.41
18:x:119:VAL:HA	18:x:145:HIS:O	2.19	0.41
20:z:81:ARG:HG2	20:z:88:ARG:NH1	2.34	0.41
24:6:106:LYS:HA	24:6:106:LYS:HE2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:7:107:SER:O	25:7:111:LYS:HG2	2.20	0.41
26:8:142:ILE:HD12	26:8:142:ILE:HA	1.80	0.41
35:AH:20:ILE:HG22	35:AH:34:HIS:CD2	2.55	0.41
38:AK:28:HIS:CB	38:AK:31:LYS:HB2	2.50	0.41
45:i:64:LEU:CG	45:i:67:LYS:HE2	2.49	0.41
46:B:380:C:N4	85:B:2002:HOH:O	2.52	0.41
46:B:451:C:O2	46:B:451:C:H2'	2.20	0.41
46:B:793:A:H2'	46:B:794:G:C8	2.55	0.41
46:B:1105:U:H2'	46:B:1106:C:H6	1.85	0.41
46:B:1293:G:H2'	46:B:1294:C:C6	2.55	0.41
46:B:1375:C:P	64:T:48:ASN:HD21	2.43	0.41
53:I:10:ASN:ND2	53:I:127:THR:O	2.53	0.41
54:J:95:LEU:HD23	54:J:95:LEU:HA	1.78	0.41
79:AR:75:SER:HA	79:AR:116:ILE:HD13	2.02	0.41
79:AR:156:ARG:HA	79:AR:156:ARG:HD3	1.79	0.41
79:AR:265:ARG:O	79:AR:265:ARG:HG3	2.20	0.41
1:AS:440:U:O2'	1:AS:442:G:H5''	2.20	0.41
1:AS:513:G:O2'	1:AS:514:G:H5'	2.20	0.41
1:AS:528:A:O2'	1:AS:529:A:H5'	2.20	0.41
1:AS:582:G:H2'	1:AS:583:A:C8	2.54	0.41
1:AS:867:U:H5''	1:AS:2120:A:OP1	2.20	0.41
1:AS:964:G:H2'	1:AS:965:C:C6	2.55	0.41
1:AS:1025:G:H2'	1:AS:1026:A:H5''	2.02	0.41
1:AS:1227:A:H8	1:AS:1227:A:O5'	2.03	0.41
1:AS:1386:A:H5'	1:AS:1386:A:N3	2.34	0.41
1:AS:1719:A:OP1	20:BM:128:LYS:NZ	2.53	0.41
1:AS:1813:G:C4	1:AS:1814:U:H5	2.38	0.41
1:AS:2233:A:O2'	46:CM:1744:G:O2'	2.29	0.41
1:AS:2514:G:C8	1:AS:2515:G:N1	2.88	0.41
1:AS:2872:A:C4	1:AS:2873:G:C8	3.08	0.41
1:AS:3160:C:H2'	1:AS:3161:U:H6	1.80	0.41
1:AS:3247:A:H2'	1:AS:3248:U:C6	2.55	0.41
2:AT:70:A:H2'	2:AT:71:U:H6	1.84	0.41
3:AU:4:C:H2'	3:AU:5:U:C6	2.55	0.41
3:AU:29:U:H5''	14:BG:27:ASP:HB3	2.02	0.41
6:AY:24:PRO:HD3	6:AY:256:PHE:CE1	2.55	0.41
6:AY:251:TRP:CZ3	6:AY:259:LEU:HD21	2.55	0.41
9:BB:108:GLN:HG2	9:BB:109:ILE:O	2.20	0.41
10:BC:150:LYS:HE3	10:BC:202:THR:O	2.19	0.41
13:BF:17:LEU:HD12	13:BF:128:TYR:O	2.20	0.41
14:BG:57:VAL:HG23	14:BG:149:VAL:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BY:61:ARG:HB2	32:BY:65:GLY:HA3	2.02	0.41
42:CI:8:LYS:O	42:CI:12:ARG:HG2	2.19	0.41
43:CJ:3:ASN:OD1	43:CJ:95:GLY:N	2.51	0.41
43:CJ:57:ILE:HA	82:CJ:202:3K5:H17	2.02	0.41
46:CM:559:G:N3	46:CM:560:G:C8	2.88	0.41
46:CM:795:A:N6	54:CU:109:PRO:HD3	2.35	0.41
46:CM:1020:G:C2	46:CM:1021:A:N7	2.88	0.41
46:CM:1236:U:O2'	46:CM:1237:C:H5''	2.20	0.41
46:CM:1296:U:C2	46:CM:1300:U:C4	3.07	0.41
46:CM:1594:G:C2	46:CM:1595:U:C5	3.08	0.41
49:CP:149:LEU:O	49:CP:166:PRO:HB3	2.20	0.41
64:DE:23:LYS:HB3	64:DE:34:LEU:HD11	2.02	0.41
66:DG:4:VAL:HG21	66:DG:140:LEU:CD2	2.50	0.41
69:DJ:11:LEU:HD12	69:DJ:74:VAL:HG13	2.02	0.41
70:DK:103:LEU:HD22	70:DK:126:LYS:HE2	2.02	0.41
77:DR:13:LYS:O	77:DR:17:GLN:HG2	2.20	0.41
77:DR:24:GLN:OE1	77:DR:24:GLN:N	2.53	0.41
79:DT:44:LYS:HE2	79:DT:95:LEU:O	2.20	0.41
80:L1:176:GLU:O	80:L1:180:VAL:HG23	2.20	0.41
80:l1:59:PRO:HG2	80:l1:153:SER:HA	2.01	0.41
1:1:109:G:OP2	14:t:73:ARG:NH2	2.53	0.41
1:1:379:C:H2'	1:1:380:U:H6	1.85	0.41
1:1:429:U:H2'	1:1:430:G:C8	2.49	0.41
1:1:476:C:H3'	1:1:477:U:C6	2.55	0.41
1:1:673:C:H2'	1:1:674:G:O4'	2.20	0.41
1:1:843:A:H2'	1:1:844:A:C8	2.54	0.41
1:1:1062:G:H2'	1:1:1063:U:C6	2.55	0.41
1:1:1165:A:H2'	1:1:1166:A:C8	2.56	0.41
1:1:1239:G:H2'	1:1:1240:A:H5'	2.01	0.41
1:1:1303:G:C4	17:w:61:LYS:HD3	2.55	0.41
1:1:1612:U:H2'	1:1:1613:G:H8	1.85	0.41
1:1:1614:G:H4'	3:4:129:C:H1'	2.01	0.41
1:1:1634:A:N1	1:1:1732:G:O2'	2.45	0.41
1:1:1767:G:H2'	1:1:1768:U:O4'	2.19	0.41
1:1:1808:G:O2'	1:1:1814:U:H5''	2.20	0.41
1:1:2516:U:O2'	1:1:2519:A:C6	2.72	0.41
1:1:2656:C:H2'	1:1:2657:C:H6	1.84	0.41
3:4:27:U:H2'	3:4:28:C:H6	1.84	0.41
13:s:20:ASN:HB3	13:s:126:ASP:HB3	2.02	0.41
14:t:83:VAL:HG23	14:t:85:ILE:HG13	2.03	0.41
16:v:114:ARG:NH2	16:v:157:LYS:HG2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AC:28:LYS:HG2	30:AC:29:TYR:CD1	2.54	0.41
36:AI:59:ASN:O	36:AI:63:ARG:HG3	2.20	0.41
46:B:53:G:H2'	46:B:54:C:H6	1.84	0.41
46:B:87:C:O2'	46:B:167:A:N1	2.46	0.41
46:B:236:U:O3'	46:B:237:C:H3'	2.19	0.41
46:B:267:G:H2'	46:B:268:C:C6	2.55	0.41
46:B:504:A:O2'	46:B:505:U:P	2.79	0.41
46:B:678:A:H2'	46:B:679:C:O4'	2.20	0.41
46:B:1636:C:H2'	46:B:1637:U:C6	2.55	0.41
47:C:163:ASN:OD1	47:C:166:GLY:N	2.53	0.41
50:F:165:THR:HA	50:F:169:ILE:HD12	2.02	0.41
53:I:115:LYS:HD3	53:I:116:GLN:O	2.20	0.41
63:S:34:PRO:HD2	66:V:7:ARG:O	2.21	0.41
63:S:36:THR:HG23	63:S:37:LEU:HG	2.01	0.41
69:Y:8:ALA:HB2	69:Y:74:VAL:HG21	2.02	0.41
79:AR:261:LYS:HB3	79:AR:263:GLN:O	2.19	0.41
1:AS:106:A:O2'	1:AS:324:A:N3	2.45	0.41
1:AS:154:G:H5''	1:AS:155:A:H2'	2.01	0.41
1:AS:725:G:O6	1:AS:738:G:O2'	2.35	0.41
1:AS:1309:G:O2'	1:AS:1314:A:N1	2.38	0.41
1:AS:2332:C:H2'	1:AS:2333:G:O4'	2.21	0.41
1:AS:3134:C:H2'	1:AS:3135:A:C8	2.55	0.41
1:AS:3142:A:H1'	17:BJ:102:ARG:HH22	1.85	0.41
2:AT:115:G:H2'	2:AT:116:C:H6	1.85	0.41
3:AU:19:C:H2'	3:AU:20:U:C6	2.55	0.41
8:BA:29:LEU:HD23	8:BA:29:LEU:HA	1.77	0.41
11:BD:13:PRO:HG2	11:BD:16:VAL:HG21	2.02	0.41
19:BL:18:ALA:HA	19:BL:53:PHE:CE1	2.55	0.41
19:BL:34:SER:HA	19:BL:49:LEU:HD22	2.01	0.41
19:BL:147:ARG:HG2	19:BL:149:ALA:H	1.85	0.41
31:BX:12:ILE:HD12	31:BX:12:ILE:H	1.85	0.41
46:CM:46:A:N6	46:CM:431:C:H4'	2.34	0.41
46:CM:94:U:H2'	46:CM:95:G:O4'	2.19	0.41
46:CM:127:G:N7	53:CT:202:ARG:NH2	2.68	0.41
46:CM:267:G:H2'	46:CM:268:C:H6	1.84	0.41
46:CM:483:A:C2'	46:CM:484:G:H8	2.31	0.41
46:CM:556:U:C2	45:CL:105:GLN:OE1	2.73	0.41
46:CM:826:U:C2'	46:CM:827:C:H5'	2.49	0.41
46:CM:1209:A:C5	46:CM:1210:U:C5	3.08	0.41
46:CM:1502:A:OP2	50:CQ:8:LYS:HB2	2.20	0.41
46:CM:1624:C:N3	45:CL:90:ARG:HG3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:CN:163:ASN:OD1	47:CN:166:GLY:N	2.53	0.41
48:CO:180:THR:HG22	48:CO:183:GLN:CD	2.45	0.41
49:CP:203:GLU:O	49:CP:207:LYS:HG3	2.20	0.41
50:CQ:46:LYS:HD2	50:CQ:86:ALA:HB3	2.01	0.41
60:DA:110:ASP:O	60:DA:114:ARG:HG2	2.20	0.41
62:DC:111:MET:HE2	62:DC:119:PHE:CD2	2.55	0.41
64:DE:93:LEU:HD23	64:DE:93:LEU:H	1.85	0.41
80:L1:59:PRO:HD3	80:L1:153:SER:HA	2.02	0.41
80:L1:86:SER:O	80:L1:89:ASP:HB2	2.20	0.41
1:1:151:U:H2'	1:1:152:U:C6	2.55	0.41
1:1:366:A:H2'	1:1:367:A:O4'	2.20	0.41
1:1:452:A:H62	1:1:476:C:H42	1.68	0.41
1:1:644:A:C2	1:1:2353:G:C2	3.08	0.41
1:1:907:C:OP2	4:j:9:ARG:HD2	2.20	0.41
1:1:2536:U:H5''	10:p:41:ILE:HD12	2.01	0.41
1:1:2567:A:H3'	1:1:2568:U:H6	1.85	0.41
1:1:2661:A:H2'	1:1:2661:A:N3	2.36	0.41
1:1:3333:U:H4'	1:1:3334:G:H5'	2.03	0.41
13:s:85:LYS:O	62:R:8:LYS:NZ	2.54	0.41
17:w:59:LEU:HA	17:w:73:HIS:CD2	2.55	0.41
24:6:32:ARG:HH21	24:6:64:LYS:HD3	1.84	0.41
24:6:69:LEU:HA	24:6:69:LEU:HD23	1.80	0.41
39:AL:24:ILE:HD13	39:AL:76:THR:HB	2.01	0.41
46:B:81:G:C5	46:B:82:U:C4	3.08	0.41
46:B:861:G:H2'	46:B:921:G:N2	2.35	0.41
46:B:1423:U:H2'	46:B:1424:G:C8	2.55	0.41
46:B:1436:U:H2'	46:B:1437:C:H6	1.85	0.41
50:F:193:PRO:HG3	50:F:203:LEU:HD12	2.02	0.41
54:J:60:PRO:N	54:J:61:PRO:HD2	2.34	0.41
54:J:169:TYR:OH	54:J:175:LYS:HE3	2.20	0.41
64:T:73:LEU:HD23	64:T:74:GLN:NE2	2.35	0.41
1:AS:352:A:N1	1:AS:365:A:H5''	2.35	0.41
1:AS:751:A:C5	1:AS:752:U:C5	3.09	0.41
1:AS:1034:U:H5''	7:AZ:5:LYS:N	2.35	0.41
1:AS:1406:C:O2'	33:BZ:96:GLU:OE1	2.27	0.41
1:AS:1586:G:C2	1:AS:1587:G:C8	3.09	0.41
1:AS:2656:C:H2'	1:AS:2657:C:H6	1.84	0.41
1:AS:2886:G:H5''	5:AX:9:PRO:HG3	2.02	0.41
1:AS:2902:A:H2'	1:AS:2903:C:H6	1.85	0.41
1:AS:3160:C:N4	1:AS:3167:G:H1	2.14	0.41
1:AS:3316:U:O2'	1:AS:3317:U:OP1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AU:143:U:H2'	3:AU:144:G:O4'	2.19	0.41
7:AZ:132:THR:HG21	7:AZ:170:GLY:O	2.21	0.41
11:BD:13:PRO:HG2	11:BD:16:VAL:CG2	2.50	0.41
11:BD:105:LYS:HD2	11:BD:110:ASP:OD1	2.19	0.41
24:BQ:77:ILE:HD12	24:BQ:103:VAL:HG11	2.02	0.41
34:CA:8:TYR:CG	34:CA:99:ARG:HB3	2.55	0.41
43:CJ:43:TYR:CE2	82:CJ:202:3K5:H21	2.55	0.41
46:CM:46:A:C6	46:CM:431:C:H4'	2.56	0.41
46:CM:379:C:OP1	51:CR:10:LYS:NZ	2.53	0.41
46:CM:708:A:H3'	46:CM:709:U:C5'	2.50	0.41
46:CM:873:U:H1'	61:DB:121:THR:HG21	2.02	0.41
46:CM:1097:G:N2	46:CM:1119:C:N4	2.69	0.41
46:CM:1131:G:C6	46:CM:1132:A:C6	3.08	0.41
46:CM:1571:G:H22	46:CM:1598:A:P	2.41	0.41
48:CO:74:GLN:C	48:CO:76:SER:H	2.27	0.41
53:CT:154:ARG:HG2	53:CT:155:ASP:OD1	2.20	0.41
57:CX:16:PHE:CD1	57:CX:17:GLN:N	2.88	0.41
59:CZ:134:ASN:ND2	59:CZ:135:ILE:HG23	2.35	0.41
70:DK:86:PHE:CE1	70:DK:88:PRO:HA	2.54	0.41
71:DL:93:ARG:C	71:DL:95:GLY:N	2.78	0.41
78:DS:160:ARG:HB3	78:DS:173:PHE:HD2	1.85	0.41
80:l1:49:PHE:CD1	80:l1:193:LEU:HB3	2.55	0.41
1:1:486:C:OP2	1:1:486:C:H6	2.03	0.41
1:1:913:A:C6	1:1:914:C:C4	3.08	0.41
1:1:1133:C:H2'	1:1:1134:U:O4'	2.21	0.41
1:1:1799:C:H2'	1:1:1800:A:C8	2.55	0.41
1:1:1853:C:O2	35:AH:4:ARG:HB2	2.20	0.41
1:1:2185:A:C8	1:1:2186:A:N7	2.89	0.41
1:1:2631:G:H4'	1:1:2723:G:O2'	2.20	0.41
6:l:149:LEU:HA	6:l:150:PRO:C	2.45	0.41
7:m:125:VAL:HG11	7:m:199:ILE:HG21	2.02	0.41
9:o:198:ASN:C	9:o:200:LEU:N	2.76	0.41
28:AA:134:LEU:HD12	28:AA:135:HIS:N	2.35	0.41
32:AE:19:LEU:HD23	32:AE:19:LEU:HA	1.88	0.41
46:B:2:A:OP1	49:E:171:LYS:NZ	2.47	0.41
46:B:446:C:H2'	46:B:447:C:C6	2.55	0.41
46:B:507:G:H2'	46:B:508:G:C8	2.55	0.41
46:B:1222:G:H2'	46:B:1223:A:H8	1.86	0.41
46:B:1277:G:H21	47:C:111:ILE:CD1	2.28	0.41
46:B:1403:A:H2'	46:B:1404:G:O4'	2.20	0.41
46:B:1553:U:N3	46:B:1554:U:C5	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:F:180:GLN:OE1	50:F:180:GLN:N	2.53	0.41
51:G:141:THR:OG1	51:G:143:ASP:OD1	2.33	0.41
54:J:57:PHE:HE1	54:J:89:LEU:HD12	1.86	0.41
56:L:36:LEU:HD11	56:L:105:LEU:HD21	2.01	0.41
65:U:139:LYS:HE3	65:U:139:LYS:HB2	1.83	0.41
68:X:1:MET:O	68:X:8:LEU:HD12	2.20	0.41
68:X:27:LYS:HA	68:X:29:HIS:CE1	2.55	0.41
75:e:10:ALA:HB2	75:e:32:PHE:HE1	1.85	0.41
79:AR:130:LYS:HG2	79:AR:150:ASP:C	2.46	0.41
79:AR:216:VAL:HG12	79:AR:232:GLU:HB3	2.01	0.41
1:AS:757:A:H2'	1:AS:758:U:C6	2.54	0.41
1:AS:1457:A:H2'	1:AS:1458:A:H8	1.85	0.41
1:AS:1692:A:H2'	1:AS:1693:A:H8	1.79	0.41
1:AS:2184:G:N2	1:AS:2186:A:H61	2.19	0.41
1:AS:2530:C:OP1	35:CB:102:LYS:NZ	2.47	0.41
1:AS:2602:C:C5	22:BO:4:SER:HB2	2.55	0.41
1:AS:3038:U:C2	1:AS:3039:C:C5	3.08	0.41
1:AS:3079:U:H2'	1:AS:3080:G:H8	1.85	0.41
1:AS:3158:G:H2'	1:AS:3159:A:C8	2.56	0.41
83:AS:3789:PAR:O52	83:AS:3789:PAR:N12	2.53	0.41
83:AS:3789:PAR:O53	83:AS:3789:PAR:H52	2.20	0.41
5:AX:188:VAL:O	5:AX:192:VAL:HG23	2.20	0.41
6:AY:238:GLN:O	6:AY:247:ARG:NH1	2.52	0.41
9:BB:143:ARG:HG3	9:BB:183:ILE:HD13	2.02	0.41
16:BI:151:ILE:HD12	16:BI:156:HIS:HB3	2.01	0.41
27:BT:47:SER:O	27:BT:48:LEU:HD23	2.19	0.41
28:BU:52:LYS:O	28:BU:65:ARG:NH2	2.31	0.41
29:BV:48:TYR:C	29:BV:49:HIS:ND1	2.78	0.41
31:BX:60:TYR:OH	35:CB:97:GLU:OE2	2.30	0.41
35:CB:101:VAL:O	35:CB:105:LEU:HB2	2.20	0.41
46:CM:29:U:H2'	46:CM:30:G:C8	2.54	0.41
46:CM:154:A:H2'	46:CM:155:A:O4'	2.21	0.41
46:CM:203:U:C2	46:CM:204:A:C8	3.08	0.41
46:CM:472:A:OP1	56:CW:145:SER:OG	2.33	0.41
46:CM:482:C:H3'	46:CM:483:A:C5'	2.50	0.41
46:CM:704:A:N6	46:CM:719:A:C6	2.89	0.41
46:CM:721:C:H2'	46:CM:722:A:C8	2.56	0.41
46:CM:1105:U:H2'	46:CM:1106:C:H6	1.84	0.41
47:CN:200:ASP:HB3	64:DE:86:PRO:HD2	2.01	0.41
48:CO:135:LEU:HD23	48:CO:216:LYS:O	2.19	0.41
51:CR:37:LYS:O	51:CR:41:SER:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CT:214:LYS:O	53:CT:215:ARG:C	2.63	0.41
54:CU:137:ARG:HG2	69:DJ:51:GLU:CD	2.45	0.41
63:DD:124:GLU:HG3	63:DD:125:PRO:HD2	2.02	0.41
65:DF:79:TYR:O	65:DF:80:LYS:C	2.63	0.41
75:DP:46:GLY:O	75:DP:48:VAL:HG23	2.20	0.41
80:l1:14:HIS:NE2	80:l1:176:GLU:HG2	2.35	0.41
80:l1:30:GLU:HB3	80:l1:31:THR:H	1.62	0.41
1:1:120:A:N1	10:p:130:PRO:HB3	2.36	0.41
1:1:342:A:C4	1:1:368:G:N7	2.88	0.41
1:1:451:C:N3	1:1:452:A:N6	2.68	0.41
1:1:500:G:C6	1:1:501:U:C4	3.09	0.41
1:1:661:C:H2'	1:1:662:U:C6	2.55	0.41
1:1:1199:A:N3	1:1:2827:U:O2'	2.51	0.41
1:1:1217:A:H5''	1:1:1218:G:H5''	2.03	0.41
1:1:1467:U:H2'	1:1:1468:U:C6	2.55	0.41
1:1:1516:G:H2'	1:1:1517:G:O4'	2.19	0.41
1:1:1813:G:H2'	1:1:1814:U:H5'	2.01	0.41
1:1:2635:A:H4'	7:m:152:ARG:NH1	2.36	0.41
1:1:3182:C:N4	18:x:182:LEU:O	2.54	0.41
2:3:99:G:C6	2:3:100:C:C4	3.08	0.41
8:n:39:LEU:HB3	8:n:83:VAL:CG1	2.51	0.41
8:n:44:GLY:O	8:n:47:ARG:NH1	2.47	0.41
17:w:42:LEU:C	17:w:43:ASN:HD22	2.28	0.41
18:x:47:TYR:O	18:x:51:VAL:HG23	2.20	0.41
21:0:119:ARG:H	21:0:119:ARG:HG3	1.66	0.41
22:2:12:ARG:O	22:2:16:GLN:HG3	2.21	0.41
31:AD:45:ILE:HA	31:AD:70:TYR:O	2.19	0.41
36:AI:4:VAL:HG11	36:AI:9:LEU:HD21	2.02	0.41
46:B:341:C:H2'	46:B:342:A:H8	1.86	0.41
46:B:875:C:H2'	46:B:876:A:H8	1.85	0.41
46:B:1063:C:H2'	46:B:1064:U:H6	1.85	0.41
46:B:1209:A:OP2	59:O:114:LYS:HE2	2.20	0.41
46:B:1218:G:N2	78:h:184:GLY:O	2.54	0.41
46:B:1315:G:H2'	46:B:1316:A:O4'	2.20	0.41
46:B:1422:A:OP2	50:F:28:ARG:NH2	2.38	0.41
48:D:48:ILE:HA	61:Q:32:GLU:OE2	2.21	0.41
49:E:203:GLU:O	49:E:207:LYS:HG3	2.21	0.41
51:G:51:ARG:HD3	51:G:51:ARG:HA	1.75	0.41
52:H:150:GLY:CA	52:H:156:ARG:HB2	2.27	0.41
76:f:3:HIS:CE1	76:f:7:TRP:HB2	2.56	0.41
78:h:160:ARG:CG	78:h:173:PHE:HB3	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:AR:153:SER:OG	79:AR:197:SER:O	2.34	0.41
1:AS:79:G:H2'	1:AS:80:C:H6	1.85	0.41
1:AS:158:A:H2'	1:AS:159:A:H8	1.85	0.41
1:AS:166:U:H2'	1:AS:167:U:H6	1.85	0.41
1:AS:983:U:H2'	1:AS:984:U:C6	2.55	0.41
1:AS:1829:G:OP1	26:BS:114:ILE:HD12	2.21	0.41
1:AS:2411:U:H1'	16:BI:125:SER:HB3	2.03	0.41
1:AS:3023:U:H1'	24:BQ:92:TYR:CE2	2.55	0.41
1:AS:3146:G:OP1	34:CA:6:ARG:HB2	2.21	0.41
3:AU:142:C:H2'	3:AU:143:U:H6	1.86	0.41
5:AX:292:ALA:HB1	5:AX:295:ALA:CB	2.42	0.41
7:AZ:48:LYS:HG2	7:AZ:145:PHE:HE2	1.84	0.41
7:AZ:164:LYS:HB2	7:AZ:180:PHE:HE1	1.84	0.41
8:BA:70:VAL:HG13	8:BA:160:ALA:HB2	2.02	0.41
11:BD:17:THR:HG22	15:BH:2:SER:HA	2.03	0.41
37:CD:38:PHE:CE2	37:CD:42:ILE:HD11	2.55	0.41
46:CM:62:A:C8	46:CM:267:G:H1'	2.56	0.41
46:CM:211:A:N6	46:CM:250:U:H3	2.11	0.41
46:CM:445:U:H2'	46:CM:446:C:O4'	2.20	0.41
46:CM:445:U:OP1	51:CR:49:ARG:NH1	2.54	0.41
46:CM:481:A:N1	46:CM:503:A:C6	2.88	0.41
46:CM:502:U:H2'	46:CM:503:A:C4	2.55	0.41
46:CM:563:C:C4	46:CM:575:G:C6	3.09	0.41
51:CR:12:LEU:HA	51:CR:12:LEU:HD23	1.79	0.41
53:CT:39:ASP:OD1	53:CT:46:LYS:HG3	2.20	0.41
54:CU:60:PRO:N	54:CU:61:PRO:HD2	2.35	0.41
59:CZ:29:LYS:HE2	59:CZ:100:TRP:CZ2	2.55	0.41
60:DA:135:LEU:HD13	60:DA:139:TRP:CE3	2.55	0.41
62:DC:42:ARG:HH22	65:DF:90:LYS:CE	2.30	0.41
75:DP:49:ARG:HG2	75:DP:50:GLU:O	2.20	0.41
79:DT:125:SER:O	79:DT:132:VAL:HG13	2.21	0.41
80:I1:21:THR:CA	80:I1:25:LYS:HE3	2.49	0.41
80:I1:34:LEU:HD21	80:I1:183:ILE:HG21	2.02	0.41
80:I1:156:LYS:HB3	80:I1:156:LYS:HE2	1.73	0.41
45:CL:86:LYS:HB3	45:CL:93:ARG:HH12	1.84	0.41
1:1:21:G:H1'	3:4:104:A:N3	2.36	0.41
1:1:1402:A:H5'	33:AF:18:PHE:CD2	2.56	0.41
1:1:1625:U:O3'	28:AA:115:LYS:HE3	2.21	0.41
1:1:1717:U:OP2	20:z:124:TYR:OH	2.38	0.41
1:1:2262:C:C4	1:1:2286:C:O4'	2.73	0.41
1:1:3207:G:H5'	1:1:3210:A:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:3234:U:H3	8:n:134:ARG:NH1	2.18	0.41
1:1:3243:C:H2'	1:1:3243:C:O2	2.20	0.41
4:j:102:LEU:HD13	4:j:166:ILE:HD12	2.02	0.41
5:k:194:TRP:HA	5:k:197:GLU:HG2	2.02	0.41
7:m:55:PHE:CZ	7:m:158:ARG:HB3	2.55	0.41
7:m:110:LEU:HB3	7:m:115:LEU:O	2.21	0.41
10:p:155:ALA:HB2	10:p:187:LEU:HD12	2.03	0.41
15:u:20:LEU:HD21	15:u:23:ASN:C	2.46	0.41
36:AI:17:LEU:HD23	36:AI:17:LEU:HA	1.92	0.41
43:AP:26:THR:HB	43:AP:71:ARG:HB3	2.02	0.41
45:i:134:GLU:OE2	45:i:138:GLU:HG2	2.20	0.41
46:B:4:C:H5	46:B:20:G:N1	2.15	0.41
46:B:48:G:C6	46:B:430:G:C2	3.08	0.41
46:B:203:U:C2	46:B:204:A:C8	3.08	0.41
46:B:221:U:HO2'	46:B:222:C:H6	1.66	0.41
46:B:591:A:H5''	56:L:40:ARG:HH21	1.85	0.41
46:B:769:U:O2'	46:B:770:C:OP2	2.34	0.41
46:B:1260:A:O2'	50:F:146:ALA:O	2.29	0.41
46:B:1262:G:C5	46:B:1422:A:C2	3.08	0.41
46:B:1357:A:C8	46:B:1359:U:C5	3.09	0.41
46:B:1725:U:H2'	46:B:1726:C:C6	2.56	0.41
49:E:185:LEU:HD23	49:E:185:LEU:HA	1.84	0.41
52:H:225:ARG:NH1	75:e:58:GLU:HG2	2.36	0.41
53:I:23:LYS:HB3	53:I:41:VAL:O	2.20	0.41
56:L:51:LYS:HE3	56:L:51:LYS:HB2	1.86	0.41
59:O:135:ILE:O	59:O:136:LEU:HD12	2.21	0.41
1:AS:1005:A:H2'	1:AS:1006:G:C8	2.56	0.41
1:AS:1007:A:H2'	1:AS:1008:A:H8	1.85	0.41
1:AS:1115:C:C2	1:AS:1116:A:N7	2.88	0.41
1:AS:1132:A:OP2	30:BW:8:THR:HG23	2.21	0.41
1:AS:1163:U:H2'	1:AS:1164:U:O4'	2.20	0.41
1:AS:1410:G:C6	1:AS:1411:U:C4	3.09	0.41
1:AS:1632:C:H5''	28:BU:73:LYS:HZ1	1.86	0.41
1:AS:2385:C:H1'	1:AS:2790:U:C2	2.55	0.41
1:AS:2967:A:H2'	1:AS:2968:U:O4'	2.21	0.41
1:AS:3166:A:C4	1:AS:3167:G:C8	3.09	0.41
2:AT:59:U:H2'	2:AT:60:G:H8	1.85	0.41
3:AU:4:C:C2	3:AU:5:U:C5	3.09	0.41
3:AU:13:A:C6	3:AU:14:C:C4	3.09	0.41
7:AZ:40:HIS:CE1	7:AZ:42:ALA:HB3	2.55	0.41
7:AZ:41:LYS:HB2	22:BO:68:THR:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BG:60:ALA:HB3	14:BG:65:TYR:O	2.21	0.41
22:BO:39:ILE:HG12	22:BO:63:ILE:CD1	2.51	0.41
29:BV:114:GLY:O	29:BV:137:LYS:NZ	2.53	0.41
32:BY:45:THR:HG22	32:BY:47:ASP:N	2.32	0.41
36:CC:3:GLY:CA	36:CC:50:ASN:HD21	2.33	0.41
46:CM:644:U:H2'	46:CM:645:G:C8	2.55	0.41
46:CM:803:G:H2'	46:CM:806:A:H8	1.84	0.41
46:CM:908:A:H2'	46:CM:909:A:C8	2.56	0.41
46:CM:1142:A:H2'	46:CM:1145:A:N7	2.34	0.41
46:CM:1200:C:O2'	46:CM:1201:C:H5'	2.20	0.41
46:CM:1200:C:H2'	46:CM:1201:C:C6	2.55	0.41
46:CM:1229:A:H2'	46:CM:1231:C:O2	2.21	0.41
46:CM:1347:U:H1'	46:CM:1348:U:O2	2.21	0.41
46:CM:1354:U:C2'	46:CM:1355:A:H5'	2.50	0.41
46:CM:1425:C:C2	46:CM:1426:C:C5	3.09	0.41
46:CM:1539:U:H2'	46:CM:1540:G:C8	2.55	0.41
46:CM:1669:U:HO2'	46:CM:1670:U:H6	1.67	0.41
49:CP:220:LEU:HD23	69:DJ:68:ARG:HA	2.03	0.41
54:CU:94:ILE:HD13	54:CU:114:LEU:CD1	2.51	0.41
56:CW:62:ARG:CZ	56:CW:68:LYS:HD3	2.50	0.41
56:CW:81:VAL:HG21	56:CW:91:MET:HE2	2.02	0.41
62:DC:78:THR:OG1	62:DC:80:LEU:HD23	2.20	0.41
63:DD:10:GLY:HA3	63:DD:82:GLN:HB2	2.03	0.41
66:DG:83:ALA:HA	66:DG:92:LYS:O	2.21	0.41
79:DT:19:TRP:HB2	79:DT:38:ARG:CD	2.48	0.41
80:l1:144:LEU:HB3	80:l1:145:TYR:H	1.61	0.41
1:1:194:U:H2'	1:1:195:G:O4'	2.20	0.41
1:1:260:C:H2'	1:1:261:U:C6	2.56	0.41
1:1:378:A:H1'	27:9:90:SER:O	2.21	0.41
1:1:619:A:H8	1:1:619:A:OP2	2.03	0.41
1:1:792:U:H2'	1:1:793:U:C6	2.55	0.41
1:1:988:A:O2'	1:1:989:G:H5'	2.21	0.41
1:1:1021:A:C6	62:R:74:ALA:HA	2.56	0.41
1:1:1360:C:OP1	19:y:3:ARG:NE	2.54	0.41
1:1:1421:U:O2'	6:l:37:HIS:NE2	2.49	0.41
1:1:1487:A:H5''	38:AK:14:LYS:HE3	2.02	0.41
1:1:1725:A:C6	44:AQ:42:CYS:HA	2.55	0.41
1:1:1922:C:H5''	44:AQ:8:VAL:CG1	2.50	0.41
1:1:2140:U:H5''	4:j:238:ILE:HD13	2.02	0.41
1:1:3061:C:H2'	1:1:3062:U:O4'	2.21	0.41
1:1:3331:G:H2'	1:1:3332:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3:7:G:H5''	7:m:22:ARG:HD3	2.03	0.41
2:3:16:U:H2'	2:3:17:A:H8	1.85	0.41
10:p:114:ALA:HA	10:p:117:ILE:HG22	2.02	0.41
11:q:173:ARG:HH11	41:AN:50:LYS:C	2.29	0.41
20:z:158:GLU:HG2	20:z:162:ARG:HH21	1.85	0.41
33:AF:80:VAL:HG12	33:AF:112:LYS:HD2	2.02	0.41
34:AG:57:LYS:HB3	34:AG:57:LYS:HE2	1.85	0.41
41:AN:27:LEU:HD11	41:AN:34:CYS:HA	2.02	0.41
46:B:140:U:C4	53:I:177:ARG:NH1	2.87	0.41
46:B:226:G:C6	46:B:819:G:C8	3.09	0.41
46:B:764:U:H4'	46:B:765:U:O4'	2.20	0.41
46:B:1457:A:N3	46:B:1460:G:H1'	2.36	0.41
83:B:1970:PAR:H31	83:B:1970:PAR:H43	2.01	0.41
50:F:18:PHE:HE1	50:F:78:PHE:CD1	2.39	0.41
51:G:255:ARG:HE	51:G:255:ARG:HB2	1.76	0.41
59:O:36:LEU:HD23	59:O:102:GLY:HA3	2.03	0.41
59:O:41:LEU:H	59:O:124:LYS:H	1.68	0.41
60:P:62:GLN:HB2	60:P:65:VAL:HG22	2.03	0.41
1:AS:843:A:H2'	1:AS:844:A:C8	2.56	0.41
1:AS:1126:A:O2'	1:AS:2797:C:O2	2.31	0.41
1:AS:1474:C:H2'	1:AS:1475:U:C6	2.55	0.41
1:AS:1610:C:H2'	1:AS:1611:U:C6	2.55	0.41
1:AS:1908:U:H2'	1:AS:1909:A:O4'	2.21	0.41
1:AS:2429:G:N3	1:AS:2429:G:H2'	2.36	0.41
1:AS:2718:A:H8	1:AS:2718:A:O5'	2.03	0.41
1:AS:2734:A:C4	1:AS:2735:U:C5	3.08	0.41
1:AS:3158:G:C3'	1:AS:3159:A:H8	2.33	0.41
1:AS:3161:U:O2	1:AS:3167:G:N2	2.53	0.41
1:AS:3250:C:H2'	1:AS:3251:G:H8	1.86	0.41
5:AX:236:LYS:HB2	5:AX:236:LYS:HE2	1.85	0.41
6:AY:135:LEU:HD23	6:AY:135:LEU:HA	1.91	0.41
9:BB:182:LEU:CD1	9:BB:196:VAL:HG13	2.50	0.41
14:BG:100:ARG:O	14:BG:102:GLN:NE2	2.53	0.41
16:BI:42:PRO:HD3	16:BI:61:ILE:HG13	2.03	0.41
18:BK:94:LEU:HD23	18:BK:94:LEU:HA	1.90	0.41
23:BP:32:SER:OG	23:BP:86:TYR:OH	2.29	0.41
23:BP:36:TYR:OH	23:BP:85:LYS:HB3	2.21	0.41
23:BP:41:VAL:HG21	23:BP:56:ILE:HD11	2.02	0.41
37:CD:3:LYS:HD2	37:CD:12:LYS:O	2.21	0.41
44:CK:84:ARG:O	44:CK:88:GLU:HG3	2.20	0.41
46:CM:399:A:O2'	46:CM:400:C:H4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:721:C:H2'	46:CM:722:A:C5	2.56	0.41
62:DC:10:ARG:HE	62:DC:13:LYS:CE	2.34	0.41
65:DF:66:LEU:HD23	65:DF:66:LEU:HA	1.88	0.41
70:DK:54:LEU:HD23	70:DK:54:LEU:HA	1.89	0.41
71:DL:91:LEU:HB3	71:DL:97:ALA:HB3	2.02	0.41
75:DP:64:ARG:HA	75:DP:64:ARG:NE	2.36	0.41
80:l1:22:GLU:HG2	80:l1:23:THR:H	1.85	0.41
1:1:232:U:H2'	1:1:233:G:H8	1.86	0.41
1:1:513:G:OP1	9:o:65:ARG:NH2	2.47	0.41
1:1:1020:G:N2	1:1:1023:A:C8	2.84	0.41
1:1:1157:G:O2'	33:AF:55:ASN:OD1	2.31	0.41
1:1:1202:G:OP1	12:r:157:TYR:OH	2.25	0.41
1:1:2087:U:OP2	83:1:3969:PAR:N32	2.54	0.41
1:1:2381:G:H2'	1:1:2842:C:O2'	2.21	0.41
1:1:2492:U:H5'	10:p:69:ARG:HG3	2.03	0.41
1:1:2876:U:H2'	1:1:2877:U:H6	1.85	0.41
1:1:3005:A:H2'	1:1:3006:C:C6	2.53	0.41
1:1:3297:U:H2'	1:1:3298:G:O4'	2.20	0.41
4:j:79:ASN:ND2	4:j:165:VAL:HG12	2.36	0.41
9:o:75:VAL:HG22	21:0:59:VAL:HA	2.02	0.41
20:z:152:GLU:O	20:z:156:LYS:HB2	2.21	0.41
21:0:46:GLN:HG2	21:0:51:VAL:O	2.21	0.41
24:6:93:LEU:HA	25:7:20:LEU:O	2.20	0.41
35:AH:54:ILE:HD11	35:AH:78:GLY:HA2	2.03	0.41
46:B:31:C:O2'	46:B:545:U:OP1	2.38	0.41
46:B:536:A:H1'	46:B:539:A:C8	2.55	0.41
46:B:1221:A:H2'	46:B:1222:G:C8	2.56	0.41
46:B:1378:U:H2'	46:B:1379:C:C6	2.56	0.41
46:B:1772:U:H2'	46:B:1773:G:H8	1.85	0.41
50:F:211:GLU:HA	64:T:19:ARG:HH11	1.85	0.41
53:I:126:ASP:OD1	53:I:127:THR:N	2.53	0.41
59:O:57:ALA:HB1	59:O:125:ASN:HB2	2.01	0.41
60:P:15:ALA:O	74:d:28:PRO:HD3	2.21	0.41
67:W:46:GLN:HG3	67:W:47:TYR:H	1.86	0.41
67:W:97:SER:O	67:W:100:LYS:HG3	2.21	0.41
1:AS:169:G:H5''	36:CC:109:ILE:HD13	2.02	0.41
1:AS:175:G:C4	1:AS:176:G:C8	3.08	0.41
1:AS:538:G:C2	1:AS:539:G:C6	3.09	0.41
1:AS:798:C:C2	1:AS:799:C:C5	3.09	0.41
1:AS:2404:U:H2'	1:AS:2405:U:H6	1.86	0.41
1:AS:3245:A:O2'	1:AS:3246:C:H6	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AU:113:U:H5''	40:CG:7:PHE:HB3	2.02	0.41
5:AX:312:VAL:O	5:AX:332:LYS:HD3	2.20	0.41
10:BC:97:LYS:HE2	10:BC:97:LYS:HB2	1.83	0.41
15:BH:14:GLU:HG2	15:BH:17:ARG:HG2	2.03	0.41
17:BJ:4:PHE:CE2	34:CA:33:GLU:HB2	2.56	0.41
20:BM:10:LEU:HD23	20:BM:10:LEU:HA	1.86	0.41
33:BZ:3:THR:O	33:BZ:91:LYS:HE2	2.21	0.41
40:CG:9:THR:O	40:CG:13:LEU:HG	2.21	0.41
46:CM:76:A:N6	46:CM:80:A:O2'	2.54	0.41
46:CM:593:G:H2'	46:CM:594:C:C6	2.56	0.41
46:CM:704:A:C6	46:CM:719:A:C6	3.08	0.41
46:CM:770:C:P	46:CM:770:C:O4'	2.78	0.41
46:CM:831:G:C6	46:CM:832:A:C5	3.09	0.41
46:CM:855:C:HO2'	46:CM:856:G:P	2.44	0.41
46:CM:940:A:OP1	60:DA:3:ARG:HD2	2.20	0.41
46:CM:1414:G:H3'	46:CM:1414:G:OP2	2.21	0.41
46:CM:1416:U:H1'	67:DH:71:ASN:HD22	1.85	0.41
46:CM:1543:A:C5	46:CM:1547:U:C2	3.09	0.41
46:CM:1637:U:H2'	46:CM:1638:A:H8	1.85	0.41
48:CO:46:THR:HG21	48:CO:66:PHE:HE1	1.85	0.41
51:CR:51:ARG:HD3	51:CR:51:ARG:HA	1.83	0.41
52:CS:102:ARG:HG3	52:CS:103:ASN:OD1	2.21	0.41
53:CT:203:ASP:OD1	53:CT:204:ALA:N	2.54	0.41
58:CY:16:GLN:HE22	58:CY:33:ARG:HA	1.86	0.41
59:CZ:31:VAL:HG11	59:CZ:132:GLU:HB3	2.02	0.41
75:DP:53:ILE:O	75:DP:53:ILE:HG22	2.21	0.41
78:DS:178:LYS:O	78:DS:180:ARG:HG2	2.21	0.41
79:DT:42:LEU:HB2	79:DT:62:PHE:CD2	2.55	0.41
1:1:48:A:N7	16:v:187:ARG:HD2	2.35	0.41
1:1:111:U:C2	1:1:320:G:C2	3.09	0.41
1:1:179:C:H2'	1:1:180:U:C6	2.55	0.41
1:1:275:U:H2'	1:1:276:U:C6	2.56	0.41
1:1:308:A:H5''	37:AJ:79:HIS:CG	2.56	0.41
1:1:495:C:H2'	1:1:496:A:C8	2.56	0.41
1:1:640:U:OP1	29:AB:22:ILE:HG23	2.20	0.41
1:1:663:A:OP1	16:v:203:ARG:HD2	2.20	0.41
1:1:697:A:H2'	1:1:698:C:O4'	2.21	0.41
1:1:739:C:C5'	19:y:69:ARG:HH22	2.20	0.41
1:1:943:G:H2'	1:1:944:C:C6	2.55	0.41
1:1:1242:G:C8	1:1:1260:G:C6	3.09	0.41
1:1:1254:U:O2	1:1:1257:G:C6	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1424:A:H2'	29:AB:3:THR:HG21	2.02	0.41
1:1:1460:G:N2	1:1:1462:G:H3'	2.35	0.41
1:1:1562:G:C2	1:1:1563:A:H1'	2.56	0.41
1:1:1762:G:H2'	1:1:1763:C:H6	1.85	0.41
1:1:1764:C:H2'	1:1:1765:G:C8	2.56	0.41
1:1:2108:G:H1'	1:1:2122:A:H5''	2.03	0.41
1:1:2115:U:C6	1:1:2119:U:C4	3.09	0.41
1:1:2504:C:H2'	1:1:2505:G:H8	1.86	0.41
1:1:2589:U:OP1	30:AC:3:LYS:HA	2.21	0.41
1:1:2598:A:C4	1:1:2616:C:H5'	2.56	0.41
1:1:2708:A:H4'	22:2:71:SER:CB	2.51	0.41
1:1:2848:C:H6	1:1:2848:C:O5'	2.04	0.41
1:1:3047:G:H5''	32:AE:61:ARG:O	2.21	0.41
1:1:3122:A:OP1	5:k:132:LYS:HB2	2.21	0.41
2:3:1:G:C2	2:3:2:G:C8	3.09	0.41
2:3:43:U:C4	2:3:44:C:C4	3.09	0.41
3:4:103:G:OP2	3:4:105:A:O2'	2.33	0.41
3:4:125:U:O2'	3:4:126:A:P	2.78	0.41
4:j:206:PRO:HG3	4:j:213:GLY:HA3	2.02	0.41
13:s:43:GLN:OE1	13:s:71:VAL:HG12	2.21	0.41
15:u:14:GLU:HG2	15:u:17:ARG:CG	2.51	0.41
15:u:124:THR:HA	17:w:186:THR:HG21	2.02	0.41
22:2:28:SER:O	22:2:32:LYS:HG3	2.20	0.41
23:5:42:LYS:HG2	23:5:47:VAL:HG12	2.02	0.41
28:AA:50:PRO:HD3	28:AA:68:VAL:HG22	2.03	0.41
39:AL:14:LEU:HD21	39:AL:52:TYR:CG	2.56	0.41
39:AL:31:VAL:HG22	39:AL:33:ALA:H	1.85	0.41
43:AP:17:CYS:O	43:AP:19:LYS:HG2	2.21	0.41
45:i:105:GLN:OE1	46:B:556:U:C2	2.73	0.41
45:i:136:ASN:CG	50:F:91:ARG:NH1	2.79	0.41
46:B:232:G:C2	46:B:233:G:H1'	2.56	0.41
46:B:505:U:O2'	46:B:506:U:O5'	2.28	0.41
46:B:733:U:O2'	69:Y:122:SER:O	2.26	0.41
46:B:855:C:HO2'	46:B:856:G:P	2.43	0.41
46:B:946:U:H2'	46:B:947:C:H6	1.86	0.41
46:B:982:G:C6	46:B:993:G:C6	3.09	0.41
46:B:989:U:H3'	46:B:990:A:H5''	2.02	0.41
46:B:1050:A:H2'	46:B:1051:C:O4'	2.21	0.41
46:B:1131:G:H2'	46:B:1132:A:H8	1.81	0.41
46:B:1456:C:H3'	46:B:1560:A:N6	2.35	0.41
46:B:1476:A:H4'	46:B:1478:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B:1502:A:O2'	46:B:1505:C:N4	2.54	0.41
46:B:1581:G:H5'	76:f:33:LYS:HD2	2.02	0.41
46:B:1612:C:H2'	46:B:1613:U:H6	1.86	0.41
50:F:74:ILE:HD13	50:F:87:ILE:HD11	2.03	0.41
54:J:43:LYS:HE2	54:J:57:PHE:HE2	1.86	0.41
59:O:60:CYS:SG	59:O:86:ILE:HG22	2.60	0.41
60:P:110:ASP:O	60:P:114:ARG:HG2	2.20	0.41
64:T:21:TYR:N	64:T:22:PRO:HD2	2.36	0.41
65:U:33:THR:HA	65:U:38:VAL:O	2.21	0.41
71:a:132:ARG:HD2	71:a:132:ARG:HA	1.90	0.41
78:h:175:ALA:HB1	78:h:177:MET:HG3	2.02	0.41
1:AS:63:G:O2'	1:AS:76:A:N3	2.47	0.41
1:AS:278:U:H3	1:AS:287:G:H1	1.66	0.41
1:AS:426:G:H1	1:AS:631:U:H3	1.69	0.41
1:AS:496:A:H2'	1:AS:497:U:C6	2.56	0.41
1:AS:897:G:OP1	38:CE:13:ASN:ND2	2.34	0.41
1:AS:1293:C:H2'	1:AS:1294:C:H6	1.86	0.41
1:AS:1345:G:C5	6:AY:297:GLN:HG2	2.56	0.41
1:AS:1387:C:C2	33:BZ:104:ARG:HD3	2.55	0.41
1:AS:1456:A:H2'	1:AS:1457:A:C8	2.56	0.41
1:AS:1494:A:OP1	20:BM:6:THR:OG1	2.35	0.41
1:AS:1521:G:N3	1:AS:1521:G:H2'	2.35	0.41
1:AS:1767:G:H2'	1:AS:1768:U:O4'	2.20	0.41
1:AS:1813:G:C5	1:AS:1814:U:H5	2.39	0.41
1:AS:1931:G:O2'	46:CM:1654:A:O2'	2.34	0.41
1:AS:2128:G:O2'	1:AS:2167:U:OP1	2.32	0.41
1:AS:2130:A:C6	1:AS:2163:G:C6	3.09	0.41
1:AS:2431:U:H1'	1:AS:2432:G:H5''	2.02	0.41
1:AS:2686:G:OP2	43:CJ:10:THR:HG22	2.20	0.41
1:AS:2855:U:H2'	1:AS:2856:C:H6	1.86	0.41
1:AS:2961:U:H2'	1:AS:2962:G:O4'	2.20	0.41
1:AS:3005:A:H2'	1:AS:3006:C:C6	2.56	0.41
1:AS:3087:C:H1'	1:AS:3089:C:H41	1.86	0.41
1:AS:3108:G:C5	1:AS:3109:C:C5	3.08	0.41
1:AS:3156:A:O2'	11:BD:23:ARG:NH1	2.49	0.41
1:AS:3216:U:H2'	1:AS:3217:G:C8	2.55	0.41
1:AS:3219:G:H2'	1:AS:3220:C:C6	2.56	0.41
3:AU:39:G:N3	3:AU:105:A:C2	2.89	0.41
3:AU:141:C:O3'	16:BI:62:TYR:OH	2.39	0.41
3:AU:155:G:C5	3:AU:156:U:C4	3.08	0.41
4:AW:132:ASN:HD22	4:AW:151:PRO:HB3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AW:227:ARG:HB2	4:AW:239:ALA:HB2	2.02	0.41
5:AX:358:TRP:CZ2	5:AX:360:ASP:HA	2.56	0.41
6:AY:24:PRO:HB3	6:AY:260:ASP:HB2	2.03	0.41
6:AY:251:TRP:CZ3	6:AY:259:LEU:HD11	2.56	0.41
7:AZ:40:HIS:CE1	22:BO:69:LYS:HA	2.56	0.41
9:BB:138:SER:N	9:BB:234:ASN:OD1	2.41	0.41
10:BC:113:GLU:OE1	10:BC:126:VAL:HB	2.21	0.41
11:BD:3:TYR:H	11:BD:3:TYR:HD1	1.69	0.41
11:BD:141:LYS:HE3	11:BD:141:LYS:HB3	1.90	0.41
11:BD:167:VAL:HB	11:BD:172:ILE:HG22	2.02	0.41
12:BE:96:VAL:HA	12:BE:125:LEU:HD23	2.03	0.41
13:BF:25:GLU:OE2	13:BF:29:ARG:HD3	2.20	0.41
14:BG:31:LYS:HB3	14:BG:35:ARG:HH21	1.86	0.41
20:BM:172:ARG:NH2	46:CM:836:U:H5'	2.36	0.41
21:BN:125:LYS:HB3	21:BN:125:LYS:HE2	1.91	0.41
33:BZ:98:ALA:HB3	33:BZ:101:VAL:HG23	2.03	0.41
37:CD:69[A]:LYS:HE3	37:CD:69[A]:LYS:HB2	1.81	0.41
38:CE:21:ARG:HB2	38:CE:39:TYR:CD2	2.56	0.41
40:CG:41:ARG:HD2	40:CG:41:ARG:HA	1.76	0.41
46:CM:15:U:O2'	46:CM:618:A:N6	2.53	0.41
46:CM:98:U:H2'	46:CM:99:C:C6	2.55	0.41
46:CM:614:G:C2	46:CM:1091:U:C2	3.09	0.41
46:CM:769:U:O2'	46:CM:770:C:OP2	2.31	0.41
46:CM:844:A:C4	60:DA:73:ARG:NH1	2.89	0.41
46:CM:871:U:H2'	46:CM:872:A:H8	1.86	0.41
46:CM:887:G:H2'	46:CM:888:U:C6	2.55	0.41
46:CM:933:A:H2'	46:CM:934:C:C6	2.55	0.41
46:CM:1063:C:C2	46:CM:1064:U:C5	3.09	0.41
46:CM:1305:U:H3'	47:CN:101:ARG:HH12	1.86	0.41
46:CM:1339:G:O6	46:CM:1354:U:O2	2.39	0.41
46:CM:1427:C:H2'	46:CM:1428:U:C6	2.56	0.41
46:CM:1739:U:H2'	46:CM:1740:A:C8	2.55	0.41
46:CM:1757:U:H2'	46:CM:1758:U:C6	2.56	0.41
47:CN:15:LYS:HE3	64:DE:93:LEU:HD22	2.03	0.41
48:CO:71:ALA:HB2	48:CO:80:SER:HA	2.03	0.41
50:CQ:116:ILE:HG13	50:CQ:117:ARG:N	2.36	0.41
51:CR:186:GLY:C	51:CR:188:ASN:H	2.29	0.41
58:CY:36:LYS:HG3	58:CY:37:ASP:N	2.36	0.41
58:CY:43:LYS:HE2	58:CY:43:LYS:HA	2.03	0.41
61:DB:109:ARG:NH1	73:DN:62:TYR:HE1	2.19	0.41
62:DC:26:VAL:HG23	62:DC:27:GLU:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:DC:30:THR:O	62:DC:34:THR:HG23	2.21	0.41
62:DC:110:GLU:CD	65:DF:118:LYS:HE3	2.45	0.41
65:DF:126:ARG:NH1	65:DF:131:LEU:HD11	2.36	0.41
65:DF:131:LEU:HD12	65:DF:132:LYS:O	2.21	0.41
67:DH:54:PRO:HA	67:DH:90:ILE:HG12	2.03	0.41
74:DO:5:GLN:HE21	74:DO:7:LEU:HD21	1.85	0.41
75:DP:53:ILE:O	75:DP:54:LEU:C	2.64	0.41
79:DT:27:PRO:HA	79:DT:293:ALA:HB1	2.02	0.41
80:L1:9:VAL:HG22	80:L1:216:ILE:CG2	2.51	0.41
1:1:4:G:C6	3:4:155:G:C6	3.09	0.41
1:1:144:G:N1	10:p:193:LYS:HE3	2.36	0.41
1:1:145:U:C5	10:p:193:LYS:HE2	2.55	0.41
1:1:435:C:H2'	1:1:436:A:C8	2.56	0.41
1:1:448:U:H3	1:1:482:U:H3	1.68	0.41
1:1:690:A:OP1	16:v:201:ARG:NH2	2.46	0.41
1:1:698:C:H2'	1:1:699:G:C8	2.54	0.41
1:1:1182:G:OP2	15:u:36:LYS:NZ	2.43	0.41
1:1:1767:G:H4'	23:5:103:GLN:OE1	2.21	0.41
1:1:2497:A:H2'	1:1:2498:A:C8	2.56	0.41
1:1:2686:G:H4'	1:1:2687:A:H5''	2.02	0.41
1:1:2839:C:H2'	1:1:2840:U:H6	1.85	0.41
1:1:3207:G:O4'	1:1:3210:A:H1'	2.21	0.41
2:3:24:A:H2'	2:3:25:G:O4'	2.21	0.41
3:4:53:A:C2	40:AM:35:ILE:HD11	2.56	0.41
5:k:286:GLY:HA3	5:k:321:PHE:CE1	2.56	0.41
6:l:137:LEU:HD23	6:l:137:LEU:HA	1.98	0.41
9:o:13:LYS:HG3	9:o:17:GLN:OE1	2.21	0.41
13:s:139:THR:HG22	13:s:146:SER:O	2.20	0.41
18:x:19:GLY:HA3	18:x:22:LEU:HD11	2.02	0.41
20:z:82:LYS:HB3	20:z:82:LYS:HE2	1.90	0.41
38:AK:24:ARG:O	38:AK:25:ARG:HB3	2.21	0.41
46:B:517:C:H5'	46:B:518:A:OP2	2.21	0.41
46:B:774:U:H2'	46:B:775:A:H8	1.86	0.41
46:B:945:U:H5'	60:P:55:ARG:HE	1.85	0.41
46:B:977:A:O2'	46:B:1772:U:O2	2.33	0.41
46:B:1063:C:H2'	46:B:1064:U:C6	2.56	0.41
46:B:1094:G:O2'	46:B:1123:A:N1	2.51	0.41
46:B:1149:G:H2'	46:B:1150:G:H8	1.85	0.41
46:B:1336:G:C2	46:B:1337:C:C2	3.09	0.41
53:I:220:LYS:HE2	53:I:220:LYS:HB3	1.88	0.41
71:a:63:GLN:OE1	71:a:68:LYS:HD3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:AR:118:LYS:HE2	79:AR:118:LYS:HB3	1.83	0.41
1:AS:78:U:C2	1:AS:79:G:C8	3.09	0.41
1:AS:166:U:H2'	1:AS:167:U:C6	2.56	0.41
1:AS:357:A:O4'	6:AY:82:GLY:HA3	2.21	0.41
1:AS:606:A:O3'	6:AY:327:ARG:NH2	2.54	0.41
1:AS:1089:A:N3	1:AS:1092:U:C4	2.89	0.41
1:AS:1170:G:H21	17:BJ:88:MET:HE2	1.85	0.41
1:AS:1435:U:H5''	6:AY:88:GLN:CD	2.46	0.41
1:AS:1718:U:OP1	20:BM:100:ARG:NE	2.54	0.41
1:AS:2164:U:H2'	1:AS:2165:G:O4'	2.21	0.41
1:AS:2786:G:OP1	6:AY:74:ARG:NH1	2.40	0.41
1:AS:3164:U:H4'	1:AS:3165:U:C1'	2.51	0.41
1:AS:3168:U:O4	1:AS:3169:C:N4	2.54	0.41
6:AY:354:LYS:HE3	6:AY:354:LYS:HB2	1.94	0.41
11:BD:86:TYR:CE2	11:BD:151:LEU:HB2	2.56	0.41
13:BF:46:VAL:HG12	45:CL:33:ASN:HB2	2.03	0.41
28:BU:46:ILE:HG23	28:BU:68:VAL:HG13	2.02	0.41
46:CM:233:G:H2'	46:CM:234:G:H8	1.83	0.41
46:CM:716:C:O2'	46:CM:717:G:H4'	2.20	0.41
46:CM:917:U:O2	73:DN:32:LYS:HE3	2.21	0.41
46:CM:1244:U:H2'	46:CM:1245:U:C6	2.56	0.41
46:CM:1368:A:C4	46:CM:1369:G:C2	3.09	0.41
46:CM:1626:C:H2'	46:CM:1627:C:O4'	2.20	0.41
46:CM:1760:C:H2'	46:CM:1761:G:C8	2.55	0.41
48:CO:187:LYS:O	48:CO:190:PRO:HD2	2.21	0.41
51:CR:123:LEU:HD13	51:CR:237:VAL:HG13	2.01	0.41
53:CT:145:PHE:HB2	53:CT:147:LEU:HG	2.03	0.41
53:CT:217:HIS:C	53:CT:219:ARG:N	2.79	0.41
53:CT:219:ARG:O	53:CT:223:ARG:N	2.54	0.41
54:CU:13:LEU:HD22	54:CU:44:GLU:HG2	2.03	0.41
59:CZ:69:GLU:O	59:CZ:69:GLU:HG2	2.20	0.41
62:DC:95:GLY:HA2	62:DC:103:ASN:O	2.21	0.41
66:DG:57:ARG:HH22	66:DG:80:TYR:HB2	1.85	0.41
70:DK:82:LYS:HE2	70:DK:82:LYS:HB3	1.87	0.41
73:DN:82:ARG:HB3	73:DN:85:ARG:CZ	2.51	0.41
79:DT:84:ALA:HA	79:DT:90:LEU:HD23	2.02	0.41
80:L1:44:GLN:C	80:L1:45:ARG:HG2	2.46	0.41
80:l1:41:TYR:HD1	80:l1:200:ASN:ND2	2.19	0.41
80:l1:67:ILE:HB	80:l1:84:ALA:HA	2.03	0.41
1:1:314:U:H2'	1:1:315:C:H6	1.85	0.40
1:1:366:A:OP1	6:l:96:ARG:NH2	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:815:U:H2'	1:1:816:A:C8	2.55	0.40
1:1:2181:U:H2'	1:1:2182:C:C6	2.57	0.40
1:1:2276:U:O2'	1:1:2277:A:H5'	2.21	0.40
1:1:2972:A:H2'	1:1:2973:U:C6	2.56	0.40
1:1:2975:G:O2'	5:k:92:TYR:OH	2.23	0.40
1:1:3261:A:H2'	1:1:3262:U:C6	2.56	0.40
3:4:24:G:H2'	3:4:25:G:O4'	2.21	0.40
6:l:11:SER:HB2	10:BC:119:GLU:OE2	2.22	0.40
8:n:39:LEU:HD13	8:n:83:VAL:HG11	2.03	0.40
21:0:81:TYR:HA	21:0:120:SER:O	2.21	0.40
28:AA:4:PHE:O	28:AA:9:LYS:NZ	2.54	0.40
29:AB:119:PRO:O	29:AB:121:VAL:N	2.52	0.40
34:AG:43:PHE:HZ	34:AG:107:ILE:HD11	1.86	0.40
36:AI:31:LEU:HB3	36:AI:44:ILE:HG12	2.02	0.40
36:AI:62:GLN:O	36:AI:66:VAL:HG23	2.20	0.40
46:B:17:C:H4'	46:B:1094:G:C8	2.56	0.40
46:B:475:A:H5'	77:g:34:ALA:CB	2.51	0.40
46:B:561:U:C5	46:B:578:A:N7	2.89	0.40
46:B:752:U:H5	56:L:142:ASN:OD1	2.04	0.40
46:B:1214:G:HO2'	46:B:1240:G:H22	1.61	0.40
46:B:1399:U:OP2	64:T:3:ARG:NH2	2.54	0.40
46:B:1481:C:H2'	46:B:1482:C:C6	2.55	0.40
46:B:1512:A:N3	46:B:1576:C:O2'	2.48	0.40
46:B:1544:U:OP2	46:B:1546:G:O2'	2.32	0.40
49:E:53:LEU:O	68:X:15:ARG:NE	2.51	0.40
62:R:33:PHE:O	62:R:36:LEU:HG	2.22	0.40
1:AS:15:A:H2'	1:AS:16:G:O4'	2.21	0.40
1:AS:427:C:OP1	33:BZ:14:TYR:OH	2.18	0.40
1:AS:745:C:H5''	30:BW:32:LEU:HD12	2.02	0.40
1:AS:847:C:OP2	44:CK:3:LYS:HD2	2.21	0.40
1:AS:1452:A:N1	1:AS:1472:G:O2'	2.50	0.40
1:AS:2270:U:H2'	1:AS:2271:C:C6	2.56	0.40
1:AS:3195:G:H4'	15:BH:125:LYS:NZ	2.36	0.40
5:AX:4:ARG:HD3	5:AX:7:GLU:HG2	2.02	0.40
6:AY:136:VAL:HA	6:AY:246:GLY:O	2.20	0.40
10:BC:162:GLU:OE2	16:BI:22:LEU:HD13	2.21	0.40
12:BE:86:HIS:ND1	12:BE:139:ARG:HD3	2.36	0.40
14:BG:29:ALA:HB2	16:BI:201:ARG:HH12	1.86	0.40
19:BL:79:LYS:HE3	19:BL:138:LEU:HD12	2.02	0.40
27:BT:45:VAL:HG11	27:BT:48:LEU:HD21	2.03	0.40
27:BT:63:LYS:HD3	27:BT:63:LYS:HA	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BU:134:LEU:HG	28:BU:136:PHE:HD2	1.86	0.40
42:CI:2:ARG:C	42:CI:4:LYS:N	2.79	0.40
46:CM:23:G:O2'	46:CM:366:U:H5''	2.21	0.40
46:CM:206:U:H2'	46:CM:207:U:H6	1.86	0.40
46:CM:512:G:O2'	46:CM:513:A:H8	2.04	0.40
46:CM:529:C:HO2'	46:CM:530:U:P	2.39	0.40
46:CM:859:C:OP1	48:CO:159:SER:OG	2.28	0.40
46:CM:982:G:C4	46:CM:983:A:C8	3.10	0.40
46:CM:1112:G:C5	46:CM:1113:C:C5	3.09	0.40
46:CM:1140:G:H2'	46:CM:1141:C:C6	2.56	0.40
46:CM:1293:G:H2'	46:CM:1294:C:H6	1.85	0.40
46:CM:1720:C:H2'	46:CM:1721:U:C6	2.56	0.40
48:CO:29:TRP:N	48:CO:29:TRP:CD1	2.87	0.40
50:CQ:72:SER:O	50:CQ:75:VAL:HG22	2.21	0.40
53:CT:214:LYS:CE	53:CT:215:ARG:HD3	2.52	0.40
57:CX:32:HIS:HB2	57:CX:39:ASN:HA	2.03	0.40
58:CY:127:GLN:HG3	58:CY:137:PHE:CE1	2.56	0.40
61:DB:76:ILE:HD13	61:DB:97:LEU:HD11	2.03	0.40
65:DF:49:LYS:HD3	65:DF:49:LYS:HA	1.79	0.40
67:DH:100:LYS:HG3	67:DH:101:ARG:H	1.85	0.40
79:DT:60:LYS:NZ	79:DT:97:THR:HA	2.36	0.40
79:DT:113:SER:OG	79:DT:155:VAL:N	2.54	0.40
79:DT:160:SER:HB3	79:DT:205:GLY:HA3	2.03	0.40
80:l1:196:LYS:HD2	80:l1:196:LYS:H	1.85	0.40
1:1:79:G:O2'	1:1:326:U:H4'	2.21	0.40
1:1:663:A:H1'	14:t:14:PHE:CZ	2.56	0.40
1:1:1406:C:O2'	33:AF:96:GLU:OE1	2.33	0.40
1:1:1740:G:H2'	1:1:1741:C:C6	2.56	0.40
1:1:1860:A:OP1	20:z:88:ARG:HD2	2.20	0.40
1:1:2206:A:H2'	1:1:2207:A:H8	1.84	0.40
1:1:2470:C:H2'	1:1:2471:U:O4'	2.21	0.40
1:1:2492:U:OP1	10:p:69:ARG:NE	2.54	0.40
1:1:2628:A:C4	1:1:2630:G:N7	2.90	0.40
1:1:2814:U:C4	1:1:2815:U:C5	3.09	0.40
1:1:2872:A:H5'	41:AN:51:LEU:HD21	2.04	0.40
1:1:3190:C:C2	1:1:3191:A:C8	3.09	0.40
3:4:69:U:H3	3:4:89:A:H61	1.67	0.40
5:k:47:LEU:HD23	5:k:47:LEU:HA	1.85	0.40
5:k:148:LEU:CD1	5:k:196:LYS:HD2	2.51	0.40
11:q:90:MET:O	11:q:143:GLU:HA	2.21	0.40
14:t:80:LEU:HD11	14:t:97:VAL:HG22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:y:40:THR:C	19:y:42:ALA:H	2.29	0.40
22:2:83:ARG:CB	30:AC:22:LYS:HE2	2.52	0.40
34:AG:20:LYS:HB2	34:AG:20:LYS:HE2	1.61	0.40
34:AG:43:PHE:CZ	34:AG:107:ILE:HD11	2.57	0.40
38:AK:17:THR:O	38:AK:25:ARG:HA	2.21	0.40
45:i:48:PRO:C	45:i:50:LYS:N	2.79	0.40
45:i:52:LYS:HG3	45:i:53:LYS:N	2.36	0.40
46:B:29:U:H2'	46:B:30:G:C8	2.53	0.40
46:B:223:A:C6	46:B:224:A:N7	2.89	0.40
46:B:875:C:H2'	46:B:876:A:C8	2.56	0.40
46:B:887:G:H2'	46:B:888:U:C6	2.56	0.40
46:B:935:C:H2'	46:B:936:A:C8	2.56	0.40
46:B:1342:A:H3'	46:B:1343:G:H8	1.86	0.40
46:B:1380:G:C6	46:B:1391:G:C6	3.09	0.40
46:B:1504:U:OP2	46:B:1505:C:N4	2.31	0.40
46:B:1534:A:H4'	65:U:88:ARG:NE	2.36	0.40
83:B:1970:PAR:O53	83:B:1970:PAR:N64	2.54	0.40
48:D:109:LYS:O	48:D:113:LEU:HG	2.21	0.40
51:G:248:SER:O	51:G:252:GLU:HG3	2.21	0.40
52:H:32:ASP:OD1	52:H:33:VAL:N	2.54	0.40
58:N:4:GLU:O	58:N:5:LEU:HB2	2.21	0.40
59:O:127:GLY:O	59:O:128:ALA:C	2.64	0.40
60:P:135:LEU:HD13	60:P:139:TRP:CE3	2.56	0.40
68:X:58:TYR:CD1	68:X:58:TYR:C	2.99	0.40
68:X:71:ARG:O	68:X:75:GLN:HG3	2.21	0.40
75:e:19:THR:HG23	75:e:25:VAL:HG13	2.02	0.40
1:AS:119:G:O2'	1:AS:120:A:OP2	2.37	0.40
1:AS:122:A:OP1	10:BC:106:LYS:NZ	2.40	0.40
1:AS:520:G:C6	1:AS:521:G:C5	3.10	0.40
1:AS:907:C:OP1	4:AW:14:SER:OG	2.37	0.40
1:AS:1141:G:OP1	33:BZ:45:ARG:HD2	2.21	0.40
1:AS:1218:G:O2'	1:AS:1219:A:OP2	2.37	0.40
1:AS:1486:A:O2'	38:CE:12:HIS:O	2.29	0.40
1:AS:1598:A:H4'	20:BM:10:LEU:HD11	2.04	0.40
1:AS:1695:A:H2'	1:AS:1696:G:H8	1.87	0.40
1:AS:2108:G:O4'	1:AS:2122:A:H4'	2.21	0.40
1:AS:2855:U:H2'	1:AS:2856:C:C6	2.56	0.40
1:AS:3101:A:H2'	1:AS:3102:A:H5''	2.04	0.40
2:AT:61:C:H2'	2:AT:62:U:H6	1.86	0.40
3:AU:53:A:H2'	3:AU:54:A:H8	1.86	0.40
4:AW:79:ASN:ND2	4:AW:165:VAL:HG12	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AX:313:ARG:O	5:AX:333:LYS:HE3	2.22	0.40
7:AZ:278:THR:HG22	7:AZ:280:ALA:H	1.87	0.40
12:BE:142:ASP:CG	12:BE:178:ARG:HH22	2.29	0.40
14:BG:51:ILE:HG13	14:BG:52:ASP:OD1	2.21	0.40
16:BI:94:TYR:CD1	16:BI:95:GLN:N	2.89	0.40
18:BK:62:ARG:HG2	18:BK:63:TYR:CD1	2.56	0.40
28:BU:23:VAL:HG12	28:BU:45:GLY:HA3	2.04	0.40
28:BU:33:THR:HG23	28:BU:40:HIS:HE1	1.85	0.40
34:CA:89:LEU:HD23	34:CA:89:LEU:HA	1.89	0.40
42:CI:7:LYS:O	42:CI:8:LYS:C	2.65	0.40
46:CM:2:A:C2	49:CP:165:ILE:HD12	2.56	0.40
46:CM:272:G:N2	46:CM:280:C:C2	2.79	0.40
46:CM:283:G:H2'	46:CM:284:C:C6	2.56	0.40
46:CM:707:C:H42	46:CM:715:G:H2'	1.86	0.40
46:CM:816:U:C6	46:CM:817:U:H5	2.40	0.40
46:CM:944:U:H5'	60:DA:15:ALA:O	2.21	0.40
46:CM:1034:U:H5''	74:DO:70:LYS:HD2	2.03	0.40
46:CM:1094:G:H1	46:CM:1121:U:H3	1.68	0.40
46:CM:1157:G:H2'	46:CM:1158:C:C6	2.57	0.40
46:CM:1218:G:N2	46:CM:1238:U:H1'	2.36	0.40
46:CM:1298:A:C4	46:CM:1300:U:H5'	2.56	0.40
46:CM:1351:U:H5'	63:DD:32:GLY:CA	2.52	0.40
46:CM:1376:U:C6	64:DE:3:ARG:HG3	2.56	0.40
46:CM:1465:A:H2'	46:CM:1466:G:H8	1.86	0.40
46:CM:1623:C:O2	46:CM:1752:A:N6	2.53	0.40
48:CO:71:ALA:HB2	48:CO:80:SER:CA	2.51	0.40
48:CO:78:ASP:OD2	48:CO:79:HIS:CE1	2.74	0.40
51:CR:104:ASP:OD1	51:CR:106:LYS:HB2	2.21	0.40
52:CS:42:LEU:HB3	52:CS:46:TRP:HB2	2.02	0.40
66:DG:70:GLN:HB3	66:DG:117:SER:CB	2.52	0.40
78:DS:162:GLU:HA	78:DS:173:PHE:HA	2.03	0.40
80:II:93:LEU:HD11	80:II:100:ILE:HG12	2.03	0.40
1:1:15:A:H2'	1:1:16:G:O4'	2.22	0.40
1:1:126:G:H2'	1:1:127:G:H8	1.85	0.40
1:1:191:C:H2'	1:1:192:C:C6	2.56	0.40
1:1:1247:A:N7	1:1:1248:A:C8	2.90	0.40
1:1:1279:C:C2	1:1:1280:C:C5	3.10	0.40
1:1:1630:G:C6	1:1:1636:G:C6	3.09	0.40
1:1:2383:C:O2	1:1:2791:A:N1	2.54	0.40
1:1:2451:C:H3'	1:1:2452:G:O4'	2.21	0.40
1:1:2956:C:H2'	1:1:2957:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:3085:A:H2'	1:1:3086:A:O4'	2.22	0.40
1:1:3132:U:H2'	1:1:3133:G:H8	1.87	0.40
5:k:260:VAL:HG11	5:k:266:ARG:HH11	1.82	0.40
6:l:37:HIS:O	6:l:41:VAL:HG23	2.22	0.40
6:l:90:ALA:O	6:l:91:PHE:HB2	2.22	0.40
6:l:352:PRO:HB2	9:o:69:ALA:HB2	2.04	0.40
8:n:99:LYS:HD2	8:n:137:ASP:OD2	2.21	0.40
14:t:201:LYS:HE2	80:l1:52:THR:N	2.37	0.40
15:u:17:ARG:O	15:u:28:THR:HA	2.22	0.40
19:y:152:HIS:HB2	19:y:164:ARG:HE	1.87	0.40
24:6:61:THR:HG22	24:6:72:LYS:O	2.22	0.40
37:AJ:74:LYS:HD2	37:AJ:74:LYS:HA	1.92	0.40
37:AJ:97:ARG:HB2	80:l1:215:ARG:NH2	2.36	0.40
46:B:68:A:C4	53:I:160:ARG:NH1	2.89	0.40
46:B:734:U:C4	46:B:785:G:C6	3.09	0.40
46:B:1040:U:H3	46:B:1049:G:H1	1.69	0.40
49:E:76:MET:HE2	49:E:178:VAL:HA	2.03	0.40
50:F:143:LEU:C	50:F:145:ALA:N	2.77	0.40
52:H:80:LYS:HB2	52:H:83:ARG:NH1	2.36	0.40
57:M:24:LYS:HG2	57:M:25:LYS:N	2.37	0.40
63:S:115:LEU:HD23	63:S:115:LEU:HA	1.91	0.40
64:T:32:LYS:HD2	64:T:33:ARG:HH11	1.87	0.40
65:U:50:ALA:HB2	65:U:72:ILE:HD12	2.04	0.40
65:U:87:ASN:HB2	65:U:99:HIS:ND1	2.36	0.40
79:AR:59:LYS:HD3	79:AR:59:LYS:HA	1.43	0.40
79:AR:209:ALA:HB1	79:AR:240:LEU:HD13	2.02	0.40
1:AS:283:G:O6	1:AS:304:G:H1'	2.21	0.40
1:AS:1329:C:OP1	19:BL:2:GLY:N	2.54	0.40
1:AS:1494:A:H2'	1:AS:1495:U:H6	1.84	0.40
1:AS:1887:A:H2'	1:AS:1888:G:O4'	2.22	0.40
1:AS:2426:G:O6	1:AS:2477:U:O2	2.39	0.40
1:AS:2427:A:C6	1:AS:2428:G:C4	3.09	0.40
1:AS:2738:U:H2'	1:AS:2739:U:C6	2.56	0.40
1:AS:3156:A:C8	11:BD:42:ASP:HB3	2.56	0.40
3:AU:37:A:OP1	36:CC:89:ARG:NH2	2.41	0.40
3:AU:119:C:H2'	3:AU:120:U:H6	1.87	0.40
6:AY:181:LYS:O	6:AY:185:SER:HB3	2.22	0.40
13:BF:89:TYR:CD1	62:DC:12:PHE:CE1	3.06	0.40
18:BK:103:GLU:OE2	18:BK:109:SER:OG	2.38	0.40
19:BL:161:LYS:HA	19:BL:161:LYS:HD2	1.88	0.40
28:BU:5:ILE:HG23	28:BU:25:ILE:HD13	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CM:79:C:OP1	53:CT:172:ALA:HB3	2.21	0.40
46:CM:158:C:H2'	46:CM:159:U:O4'	2.22	0.40
46:CM:260:U:O2'	46:CM:261:C:H5'	2.21	0.40
46:CM:504:A:O2'	46:CM:505:U:OP1	2.36	0.40
46:CM:585:C:H2'	46:CM:586:U:C6	2.56	0.40
46:CM:1220:C:H6	46:CM:1220:C:H2'	1.65	0.40
46:CM:1520:C:H4'	46:CM:1526:G:O6	2.21	0.40
48:CO:135:LEU:HD22	48:CO:215:VAL:CG1	2.51	0.40
58:CY:80:MET:HB2	58:CY:83:THR:O	2.22	0.40
62:DC:60:LEU:HD23	62:DC:60:LEU:HA	1.85	0.40
63:DD:93:GLN:HB2	63:DD:101:LYS:HG3	2.04	0.40
64:DE:93:LEU:HD12	64:DE:98:GLY:C	2.46	0.40
79:DT:57:ILE:HD13	79:DT:57:ILE:HA	1.98	0.40
80:L1:24:LYS:H	80:L1:24:LYS:HG2	1.66	0.40
80:L1:115:VAL:O	80:L1:119:GLN:HG2	2.21	0.40
80:11:215:ARG:C	80:11:216:ILE:HD13	2.46	0.40
45:CL:53:LYS:C	45:CL:55:LYS:N	2.79	0.40
45:CL:62:ALA:C	45:CL:64:LEU:N	2.79	0.40
1:1:548:G:C6	1:1:549:U:C4	3.10	0.40
1:1:1077:U:H5'	1:1:1078:U:H5	1.86	0.40
1:1:1170:G:C6	1:1:1314:A:C2	3.10	0.40
1:1:1518:U:N3	1:1:1831:A:C8	2.89	0.40
1:1:1632:C:H4'	28:AA:74:LEU:O	2.22	0.40
1:1:2079:C:O2'	1:1:2080:U:H5''	2.21	0.40
1:1:2195:U:H2'	1:1:2196:G:C8	2.57	0.40
1:1:2429:G:O2'	1:1:2430:G:O4'	2.31	0.40
1:1:2470:C:OP1	80:11:212:PRO:HB3	2.22	0.40
1:1:2623:G:H5''	1:1:2624:U:O4'	2.22	0.40
1:1:2747:U:H2'	1:1:2748:C:C6	2.56	0.40
12:r:179:ASP:OD1	12:r:180:GLU:N	2.54	0.40
17:w:8:VAL:HG11	21:0:163:PHE:CE1	2.56	0.40
17:w:13:LYS:HD2	17:w:38:ARG:NH2	2.37	0.40
19:y:67:ILE:HG12	19:y:81:ILE:HG21	2.03	0.40
27:9:87:LYS:O	27:9:94:SER:HA	2.20	0.40
43:AP:37:ALA:HB3	43:AP:40:LYS:HG2	2.03	0.40
46:B:1062:C:H2'	46:B:1063:C:H6	1.87	0.40
46:B:1503:A:H8	67:W:57:MET:HE1	1.86	0.40
49:E:97:VAL:HG11	49:E:124:ILE:CG1	2.48	0.40
51:G:185:GLY:HA2	51:G:189:LEU:HD12	2.02	0.40
59:O:25:GLU:O	59:O:29:LYS:HG2	2.21	0.40
59:O:97:LEU:HD23	59:O:100:TRP:CH2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:Q:55:ALA:HB1	61:Q:96:ALA:HB2	2.03	0.40
64:T:50:ILE:O	64:T:54:THR:OG1	2.30	0.40
65:U:23:ASP:HB3	65:U:26:ILE:HG13	2.02	0.40
67:W:68:LYS:HB2	67:W:77:THR:OG1	2.21	0.40
68:X:1:MET:HB3	68:X:10:GLU:HB2	2.04	0.40
69:Y:27:ILE:HB	69:Y:61:ILE:HB	2.04	0.40
69:Y:100:GLY:HA2	69:Y:130:TYR:HB3	2.04	0.40
73:c:4:LYS:HE3	73:c:92:ARG:NH1	2.37	0.40
1:AS:699:G:H2'	1:AS:700:C:C6	2.56	0.40
1:AS:713:A:C8	29:BV:115:LYS:HG3	2.56	0.40
1:AS:870:U:H5''	1:AS:2922:G:OP1	2.20	0.40
1:AS:1695:A:H2'	1:AS:1696:G:C8	2.56	0.40
1:AS:2122:A:OP1	1:AS:2301:G:N2	2.45	0.40
1:AS:2394:U:H2'	1:AS:2395:U:H6	1.85	0.40
1:AS:2749:G:H5''	1:AS:2750:G:OP1	2.22	0.40
1:AS:2864:A:H2'	1:AS:2865:C:C6	2.56	0.40
1:AS:2958:U:C2	1:AS:2959:A:C8	3.09	0.40
3:AU:56:G:H2'	3:AU:57:C:O4'	2.21	0.40
4:AW:64:ARG:NH2	10:BC:39:GLN:O	2.53	0.40
7:AZ:51:LEU:HD12	7:AZ:51:LEU:HA	1.91	0.40
17:BJ:144:SER:OG	17:BJ:151:GLU:HB2	2.22	0.40
18:BK:31:GLU:OE2	18:BK:63:TYR:N	2.43	0.40
19:BL:94:LEU:HD22	29:BV:119:PRO:HG3	2.03	0.40
23:BP:99:VAL:HG12	23:BP:107:LYS:O	2.21	0.40
37:CD:49:LEU:HD23	37:CD:49:LEU:HA	1.88	0.40
46:CM:71:A:H2'	46:CM:72:A:C8	2.57	0.40
46:CM:147:C:C2	46:CM:148:C:C5	3.10	0.40
46:CM:178:A:H2'	46:CM:179:A:O4'	2.21	0.40
46:CM:289:G:H2'	46:CM:290:U:C6	2.56	0.40
46:CM:452:A:H4'	51:CR:62:LYS:HE3	2.03	0.40
46:CM:524:A:H2'	46:CM:525:A:O4'	2.21	0.40
46:CM:871:U:H2'	46:CM:872:A:O4'	2.21	0.40
46:CM:1064:U:H2'	46:CM:1065:U:H6	1.86	0.40
46:CM:1309:G:H8	46:CM:1309:G:O5'	2.05	0.40
46:CM:1443:C:H1'	65:DF:137:HIS:CD2	2.56	0.40
49:CP:75:VAL:HG21	49:CP:120:ILE:HD13	2.04	0.40
51:CR:108:LYS:HE3	51:CR:108:LYS:HB2	1.83	0.40
51:CR:147:ILE:HG21	51:CR:169:ILE:HG13	2.03	0.40
52:CS:119:GLU:O	52:CS:123:VAL:HG13	2.22	0.40
54:CU:95:LEU:HA	54:CU:95:LEU:HD23	1.86	0.40
57:CX:7:ASP:O	57:CX:11:ILE:HG13	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:DD:75:SER:O	63:DD:76:GLN:C	2.64	0.40
65:DF:38:VAL:HG13	65:DF:42:TYR:HD2	1.85	0.40
71:DL:60:PHE:CE1	71:DL:71:GLY:HA3	2.56	0.40
71:DL:94:TYR:O	71:DL:96:LEU:HD23	2.22	0.40
74:DO:34:ASP:OD1	74:DO:43:ILE:HG23	2.22	0.40
79:DT:130:LYS:HA	79:DT:152:VAL:HG23	2.02	0.40
1:1:169:G:H5''	36:AI:109:ILE:HD13	2.03	0.40
1:1:171:G:C2	1:1:247:C:C2	3.10	0.40
1:1:238:G:C2	1:1:241:C:N4	2.90	0.40
1:1:426:G:H2'	1:1:427:C:C6	2.57	0.40
1:1:454:G:N3	1:1:454:G:H2'	2.36	0.40
1:1:1017:G:H2'	1:1:1018:U:C6	2.57	0.40
1:1:1230:G:C8	1:1:1231:U:H2'	2.56	0.40
1:1:1949:G:C6	1:1:2070:A:H2'	2.56	0.40
1:1:2397:A:H1'	1:1:2776:A:O4'	2.21	0.40
1:1:2401:U:H2'	1:1:2402:A:C8	2.57	0.40
1:1:2481:G:H2'	1:1:2482:U:C6	2.56	0.40
1:1:2588:C:H2'	1:1:2589:U:O4'	2.22	0.40
1:1:3056:C:H2'	1:1:3057:G:O4'	2.21	0.40
82:1:3406:3K5:H27	43:AP:43:TYR:CD2	2.55	0.40
3:4:13:A:C6	3:4:14:C:C4	3.09	0.40
3:4:104:A:C8	3:4:105:A:C8	3.10	0.40
13:s:61:ARG:NH2	45:i:42:ALA:O	2.53	0.40
16:v:156:HIS:HB3	16:v:159:ARG:HD2	2.04	0.40
18:x:96:ARG:HH11	18:x:96:ARG:CG	2.34	0.40
25:7:94:ARG:HG3	53:I:145:PHE:HD1	1.87	0.40
30:AC:19:ASN:OD1	30:AC:19:ASN:N	2.52	0.40
36:AI:45:HIS:ND1	36:AI:45:HIS:C	2.80	0.40
45:i:64:LEU:HG	45:i:67:LYS:NZ	2.36	0.40
45:i:64:LEU:O	45:i:67:LYS:CB	2.70	0.40
45:i:117:GLY:O	50:F:118:ARG:HA	2.22	0.40
46:B:93:A:O2'	51:G:4:GLY:HA3	2.21	0.40
46:B:1425:C:H2'	46:B:1426:C:C6	2.54	0.40
46:B:1470:G:H2'	46:B:1471:C:H6	1.86	0.40
46:B:1552:C:C2	46:B:1553:U:C6	3.10	0.40
54:J:59:PRO:HG2	54:J:62:SER:HB3	2.02	0.40
54:J:146:GLN:O	54:J:178:VAL:HB	2.20	0.40
57:M:18:GLU:H	57:M:89:LEU:CB	2.34	0.40
59:O:108:ARG:HD3	59:O:108:ARG:H	1.86	0.40
62:R:14:GLN:NE2	62:R:21:ASP:HB2	2.36	0.40
70:Z:97:ASP:O	70:Z:100:ASP:HB2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:c:97:PRO:HA	73:c:98:PRO:HD3	1.95	0.40
74:d:36:LYS:CE	74:d:43:ILE:HD13	2.51	0.40
1:AS:50:A:C4	1:AS:51:A:C8	3.09	0.40
1:AS:807:U:H2'	1:AS:808:G:H8	1.86	0.40
1:AS:1096:U:H2'	1:AS:1097:G:O4'	2.21	0.40
1:AS:1141:G:C5	1:AS:1142:C:C5	3.09	0.40
1:AS:1346:U:H1'	1:AS:1347:U:OP2	2.22	0.40
1:AS:1852:C:C2	1:AS:1853:C:C5	3.09	0.40
1:AS:2322:U:H2'	1:AS:2323:A:H8	1.84	0.40
3:AU:145:U:H2'	3:AU:146:U:C6	2.57	0.40
11:BD:173:ARG:HE	11:BD:173:ARG:HB2	1.68	0.40
14:BG:126:PHE:O	14:BG:127:ASP:C	2.64	0.40
14:BG:154:PRO:HB3	29:BV:106:ALA:CB	2.51	0.40
26:BS:73:MET:O	26:BS:77:GLU:HG2	2.22	0.40
46:CM:325:U:H2'	46:CM:326:A:H8	1.86	0.40
46:CM:482:C:H3'	46:CM:483:A:H5''	2.04	0.40
46:CM:526:U:H2'	46:CM:527:A:O4'	2.22	0.40
46:CM:641:G:H2'	46:CM:642:C:C6	2.56	0.40
46:CM:677:G:H8	46:CM:678:A:N7	2.19	0.40
46:CM:1513:A:OP2	46:CM:1514:C:H5	2.04	0.40
46:CM:1634:U:H2'	46:CM:1635:A:C8	2.57	0.40
46:CM:1668:A:O3'	53:CT:31:ARG:NH2	2.55	0.40
46:CM:1720:C:H2'	46:CM:1721:U:H6	1.86	0.40
52:CS:216:GLU:HG2	52:CS:219:ARG:NH2	2.35	0.40
54:CU:38:GLN:O	54:CU:66:TYR:OH	2.33	0.40
58:CY:82:ARG:HE	58:CY:113:PRO:HG3	1.86	0.40
59:CZ:24:ILE:C	59:CZ:26:ASP:H	2.30	0.40
63:DD:96:VAL:HG12	63:DD:97:ASP:N	2.36	0.40
73:DN:72:HIS:CD2	73:DN:72:HIS:N	2.89	0.40
80:L1:198:TRP:HE3	80:L1:201:VAL:HG11	1.86	0.40
80:l1:95:LYS:HA	80:l1:95:LYS:HD3	1.77	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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	
4	AW	247/254 (97%)	239 (97%)	8 (3%)	0	100	100
4	j	247/254 (97%)	239 (97%)	8 (3%)	0	100	100
5	AX	384/389 (99%)	373 (97%)	11 (3%)	0	100	100
5	k	384/389 (99%)	372 (97%)	12 (3%)	0	100	100
6	AY	359/363 (99%)	348 (97%)	11 (3%)	0	100	100
6	l	359/363 (99%)	346 (96%)	13 (4%)	0	100	100
7	AZ	290/298 (97%)	275 (95%)	12 (4%)	3 (1%)	12	40
7	m	294/298 (99%)	281 (96%)	13 (4%)	0	100	100
8	BA	149/176 (85%)	146 (98%)	3 (2%)	0	100	100
8	n	153/176 (87%)	149 (97%)	4 (3%)	0	100	100
9	BB	232/241 (96%)	225 (97%)	6 (3%)	1 (0%)	30	60
9	o	232/241 (96%)	223 (96%)	8 (3%)	1 (0%)	30	60
10	BC	231/262 (88%)	220 (95%)	9 (4%)	2 (1%)	14	43
10	p	236/262 (90%)	224 (95%)	9 (4%)	3 (1%)	9	35
11	BD	188/191 (98%)	182 (97%)	6 (3%)	0	100	100
11	q	188/191 (98%)	184 (98%)	4 (2%)	0	100	100
12	BE	204/220 (93%)	199 (98%)	5 (2%)	0	100	100
12	r	204/220 (93%)	201 (98%)	3 (2%)	0	100	100
13	BF	169/174 (97%)	163 (96%)	6 (4%)	0	100	100
13	s	169/174 (97%)	161 (95%)	8 (5%)	0	100	100
14	BG	198/202 (98%)	194 (98%)	3 (2%)	1 (0%)	24	55
14	t	198/202 (98%)	196 (99%)	2 (1%)	0	100	100
15	BH	128/131 (98%)	123 (96%)	5 (4%)	0	100	100
15	u	128/131 (98%)	125 (98%)	3 (2%)	0	100	100
16	BI	201/204 (98%)	195 (97%)	6 (3%)	0	100	100
16	v	201/204 (98%)	196 (98%)	5 (2%)	0	100	100
17	BJ	197/200 (98%)	195 (99%)	2 (1%)	0	100	100
17	w	197/200 (98%)	195 (99%)	2 (1%)	0	100	100
18	BK	172/185 (93%)	167 (97%)	5 (3%)	0	100	100
18	x	169/185 (91%)	166 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	BL	183/186 (98%)	178 (97%)	5 (3%)	0	100	100
19	y	183/186 (98%)	177 (97%)	6 (3%)	0	100	100
20	BM	177/190 (93%)	171 (97%)	6 (3%)	0	100	100
20	z	177/190 (93%)	174 (98%)	3 (2%)	0	100	100
21	0	168/172 (98%)	165 (98%)	3 (2%)	0	100	100
21	BN	168/172 (98%)	166 (99%)	2 (1%)	0	100	100
22	2	157/160 (98%)	153 (98%)	4 (2%)	0	100	100
22	BO	157/160 (98%)	151 (96%)	6 (4%)	0	100	100
23	5	101/124 (82%)	95 (94%)	5 (5%)	1 (1%)	12	40
23	BP	100/124 (81%)	85 (85%)	13 (13%)	2 (2%)	6	27
24	6	129/137 (94%)	126 (98%)	3 (2%)	0	100	100
24	BQ	129/137 (94%)	126 (98%)	3 (2%)	0	100	100
25	7	114/155 (74%)	100 (88%)	13 (11%)	1 (1%)	14	43
25	BR	94/155 (61%)	90 (96%)	4 (4%)	0	100	100
26	8	119/142 (84%)	117 (98%)	2 (2%)	0	100	100
26	BS	117/142 (82%)	114 (97%)	3 (3%)	0	100	100
27	9	124/127 (98%)	123 (99%)	1 (1%)	0	100	100
27	BT	124/127 (98%)	124 (100%)	0	0	100	100
28	AA	133/136 (98%)	132 (99%)	1 (1%)	0	100	100
28	BU	133/136 (98%)	132 (99%)	1 (1%)	0	100	100
29	AB	146/149 (98%)	139 (95%)	7 (5%)	0	100	100
29	BV	146/149 (98%)	139 (95%)	7 (5%)	0	100	100
30	AC	60/63 (95%)	57 (95%)	1 (2%)	2 (3%)	3	19
30	BW	62/63 (98%)	60 (97%)	1 (2%)	1 (2%)	7	31
31	AD	94/106 (89%)	91 (97%)	2 (2%)	1 (1%)	11	39
31	BX	94/106 (89%)	92 (98%)	2 (2%)	0	100	100
32	AE	108/112 (96%)	104 (96%)	4 (4%)	0	100	100
32	BY	106/112 (95%)	105 (99%)	1 (1%)	0	100	100
33	AF	122/131 (93%)	121 (99%)	1 (1%)	0	100	100
33	BZ	124/131 (95%)	122 (98%)	2 (2%)	0	100	100
34	AG	104/107 (97%)	102 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	CA	107/107 (100%)	103 (96%)	4 (4%)	0	100	100
35	AH	110/113 (97%)	106 (96%)	4 (4%)	0	100	100
35	CB	113/113 (100%)	109 (96%)	4 (4%)	0	100	100
36	AI	118/120 (98%)	114 (97%)	4 (3%)	0	100	100
36	CC	116/120 (97%)	114 (98%)	2 (2%)	0	100	100
37	AJ	95/99 (96%)	94 (99%)	1 (1%)	0	100	100
37	CD	96/99 (97%)	95 (99%)	1 (1%)	0	100	100
38	AK	84/90 (93%)	82 (98%)	2 (2%)	0	100	100
38	CE	84/90 (93%)	81 (96%)	3 (4%)	0	100	100
39	AL	75/78 (96%)	70 (93%)	5 (7%)	0	100	100
39	CF	76/78 (97%)	73 (96%)	3 (4%)	0	100	100
40	AM	48/51 (94%)	46 (96%)	1 (2%)	1 (2%)	5	26
40	CG	48/51 (94%)	45 (94%)	3 (6%)	0	100	100
41	AN	50/52 (96%)	49 (98%)	1 (2%)	0	100	100
41	CH	51/52 (98%)	49 (96%)	2 (4%)	0	100	100
42	AO	23/25 (92%)	21 (91%)	2 (9%)	0	100	100
42	CI	22/25 (88%)	7 (32%)	13 (59%)	2 (9%)	0	3
43	AP	101/106 (95%)	100 (99%)	1 (1%)	0	100	100
43	CJ	103/106 (97%)	101 (98%)	2 (2%)	0	100	100
44	AQ	89/92 (97%)	85 (96%)	4 (4%)	0	100	100
44	CK	89/92 (97%)	85 (96%)	4 (4%)	0	100	100
45	CL	117/267 (44%)	92 (79%)	21 (18%)	4 (3%)	3	18
45	i	117/267 (44%)	89 (76%)	25 (21%)	3 (3%)	4	23
47	C	206/261 (79%)	200 (97%)	6 (3%)	0	100	100
47	CN	206/261 (79%)	200 (97%)	6 (3%)	0	100	100
48	CO	212/256 (83%)	198 (93%)	14 (7%)	0	100	100
48	D	212/256 (83%)	208 (98%)	4 (2%)	0	100	100
49	CP	214/249 (86%)	205 (96%)	8 (4%)	1 (0%)	24	55
49	E	215/249 (86%)	210 (98%)	5 (2%)	0	100	100
50	CQ	221/251 (88%)	215 (97%)	6 (3%)	0	100	100
50	F	221/251 (88%)	214 (97%)	7 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	CR	258/262 (98%)	246 (95%)	12 (5%)	0	100	100
51	G	257/262 (98%)	251 (98%)	5 (2%)	1 (0%)	30	60
52	CS	191/225 (85%)	180 (94%)	11 (6%)	0	100	100
52	H	204/225 (91%)	187 (92%)	15 (7%)	2 (1%)	12	40
53	CT	224/236 (95%)	208 (93%)	11 (5%)	5 (2%)	5	26
53	I	224/236 (95%)	218 (97%)	6 (3%)	0	100	100
54	CU	180/186 (97%)	168 (93%)	10 (6%)	2 (1%)	11	39
54	J	183/186 (98%)	171 (93%)	11 (6%)	1 (0%)	24	55
55	CV	201/206 (98%)	200 (100%)	1 (0%)	0	100	100
55	K	201/206 (98%)	200 (100%)	1 (0%)	0	100	100
56	CW	176/189 (93%)	174 (99%)	2 (1%)	0	100	100
56	L	176/189 (93%)	173 (98%)	2 (1%)	1 (1%)	21	52
57	CX	91/118 (77%)	84 (92%)	7 (8%)	0	100	100
57	M	96/118 (81%)	83 (86%)	11 (12%)	2 (2%)	5	26
58	CY	139/155 (90%)	136 (98%)	3 (2%)	0	100	100
58	N	142/155 (92%)	132 (93%)	9 (6%)	1 (1%)	18	49
59	CZ	114/143 (80%)	98 (86%)	16 (14%)	0	100	100
59	O	114/143 (80%)	82 (72%)	26 (23%)	6 (5%)	1	10
60	DA	148/151 (98%)	143 (97%)	5 (3%)	0	100	100
60	P	148/151 (98%)	146 (99%)	2 (1%)	0	100	100
61	DB	125/132 (95%)	118 (94%)	6 (5%)	1 (1%)	16	45
61	Q	125/132 (95%)	122 (98%)	2 (2%)	1 (1%)	16	45
62	DC	127/142 (89%)	110 (87%)	16 (13%)	1 (1%)	16	45
62	R	127/142 (89%)	110 (87%)	16 (13%)	1 (1%)	16	45
63	DD	138/142 (97%)	131 (95%)	5 (4%)	2 (1%)	9	33
63	S	138/142 (97%)	131 (95%)	5 (4%)	2 (1%)	9	33
64	DE	123/137 (90%)	118 (96%)	5 (4%)	0	100	100
64	T	122/137 (89%)	116 (95%)	6 (5%)	0	100	100
65	DF	140/145 (97%)	132 (94%)	6 (4%)	2 (1%)	9	33
65	U	142/145 (98%)	133 (94%)	9 (6%)	0	100	100
66	DG	139/145 (96%)	135 (97%)	4 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
66	V	139/145 (96%)	136 (98%)	3 (2%)	0	100	100
67	DH	98/119 (82%)	95 (97%)	3 (3%)	0	100	100
67	W	100/119 (84%)	95 (95%)	5 (5%)	0	100	100
68	DI	85/87 (98%)	83 (98%)	2 (2%)	0	100	100
68	X	85/87 (98%)	83 (98%)	2 (2%)	0	100	100
69	DJ	127/130 (98%)	126 (99%)	1 (1%)	0	100	100
69	Y	127/130 (98%)	124 (98%)	3 (2%)	0	100	100
70	DK	141/145 (97%)	137 (97%)	4 (3%)	0	100	100
70	Z	141/145 (97%)	137 (97%)	4 (3%)	0	100	100
71	DL	130/135 (96%)	125 (96%)	3 (2%)	2 (2%)	8	32
71	a	132/135 (98%)	129 (98%)	3 (2%)	0	100	100
72	DM	69/105 (66%)	65 (94%)	4 (6%)	0	100	100
72	b	70/105 (67%)	69 (99%)	1 (1%)	0	100	100
73	DN	95/119 (80%)	93 (98%)	2 (2%)	0	100	100
73	c	96/119 (81%)	87 (91%)	8 (8%)	1 (1%)	12	40
74	DO	79/82 (96%)	73 (92%)	6 (8%)	0	100	100
74	d	79/82 (96%)	74 (94%)	5 (6%)	0	100	100
75	DP	57/67 (85%)	51 (90%)	6 (10%)	0	100	100
75	e	60/67 (90%)	56 (93%)	4 (7%)	0	100	100
76	DQ	53/56 (95%)	51 (96%)	2 (4%)	0	100	100
76	f	53/56 (95%)	51 (96%)	2 (4%)	0	100	100
77	DR	54/63 (86%)	51 (94%)	3 (6%)	0	100	100
77	g	58/63 (92%)	52 (90%)	6 (10%)	0	100	100
78	DS	68/193 (35%)	60 (88%)	8 (12%)	0	100	100
78	h	61/193 (32%)	49 (80%)	9 (15%)	3 (5%)	1	12
79	AR	309/317 (98%)	281 (91%)	25 (8%)	3 (1%)	12	40
79	DT	309/317 (98%)	285 (92%)	22 (7%)	2 (1%)	21	52
80	L1	215/217 (99%)	166 (77%)	45 (21%)	4 (2%)	6	28
80	l1	215/217 (99%)	124 (58%)	81 (38%)	10 (5%)	2	12
All	All	22518/24692 (91%)	21437 (95%)	995 (4%)	86 (0%)	30	60

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
10	p	208	ASP
45	i	43	PRO
45	i	55	LYS
52	H	151	SER
54	J	162	LEU
59	O	130	SER
78	h	161	ARG
78	h	178	LYS
7	AZ	234	GLU
10	BC	125	ASP
14	BG	127	ASP
30	BW	2	ALA
49	CP	243	ALA
65	DF	82	PRO
79	DT	291	TRP
80	L1	45	ARG
80	l1	71	ALA
80	l1	74	VAL
80	l1	129	SER
80	l1	157	PHE
80	l1	179	LEU
80	l1	212	PRO
45	CL	41	ALA
45	CL	43	PRO
45	CL	72	ASP
10	p	206	SER
40	AM	49	LEU
45	i	76	PRO
56	L	22	ALA
57	M	88	PRO
58	N	50	GLU
59	O	104	CYS
10	BC	128	PRO
23	BP	25	ASN
53	CT	122	GLU
53	CT	222	GLU
62	DC	12	PHE
71	DL	96	LEU
80	L1	212	PRO
80	l1	27	ASN
80	l1	59	PRO
80	l1	87	VAL
80	l1	180	VAL

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Mol	Chain	Res	Type
9	o	230	GLU
23	5	20	ALA
25	7	98	PRO
52	H	150	GLY
59	O	127	GLY
63	S	41	GLU
78	h	139	LYS
79	AR	49	GLY
9	BB	230	GLU
23	BP	52	ASN
53	CT	214	LYS
65	DF	80	LYS
80	L1	56	PRO
80	L1	59	PRO
31	AD	99	ASP
59	O	102	GLY
63	S	40	PRO
79	AR	147	GLY
79	AR	203	PRO
7	AZ	226	TYR
7	AZ	233	SER
42	CI	3	ASP
53	CT	218	GLU
53	CT	219	ARG
79	DT	75	SER
10	p	207	ALA
59	O	37	VAL
59	O	41	LEU
73	c	63	ALA
54	CU	156	THR
63	DD	73	HIS
63	DD	74	VAL
71	DL	94	TYR
45	CL	48	PRO
30	AC	3	LYS
51	G	259	GLN
61	Q	121	THR
62	R	65	ALA
61	DB	119	ASP
57	M	86	ILE
42	CI	20	VAL
54	CU	142	GLY

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Mol	Chain	Res	Type
30	AC	21	ILE

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 X-ray entries followed by that with respect to entries of similar resolution.

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	
4	AW	190/194 (98%)	190 (100%)	0	100	100
4	j	190/194 (98%)	190 (100%)	0	100	100
5	AX	325/328 (99%)	325 (100%)	0	100	100
5	k	325/328 (99%)	324 (100%)	1 (0%)	86	86
6	AY	290/292 (99%)	290 (100%)	0	100	100
6	l	290/292 (99%)	290 (100%)	0	100	100
7	AZ	247/252 (98%)	247 (100%)	0	100	100
7	m	250/252 (99%)	250 (100%)	0	100	100
8	BA	132/154 (86%)	132 (100%)	0	100	100
8	n	136/154 (88%)	136 (100%)	0	100	100
9	BB	198/204 (97%)	198 (100%)	0	100	100
9	o	198/204 (97%)	196 (99%)	2 (1%)	68	76
10	BC	193/216 (89%)	192 (100%)	1 (0%)	81	83
10	p	198/216 (92%)	198 (100%)	0	100	100
11	BD	169/170 (99%)	169 (100%)	0	100	100
11	q	169/170 (99%)	169 (100%)	0	100	100
12	BE	178/186 (96%)	178 (100%)	0	100	100
12	r	178/186 (96%)	178 (100%)	0	100	100
13	BF	146/149 (98%)	146 (100%)	0	100	100
13	s	146/149 (98%)	146 (100%)	0	100	100
14	BG	166/168 (99%)	166 (100%)	0	100	100
14	t	166/168 (99%)	166 (100%)	0	100	100
15	BH	108/109 (99%)	108 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	u	108/109 (99%)	108 (100%)	0	100	100
16	BI	177/178 (99%)	177 (100%)	0	100	100
16	v	177/178 (99%)	177 (100%)	0	100	100
17	BJ	166/167 (99%)	166 (100%)	0	100	100
17	w	166/167 (99%)	166 (100%)	0	100	100
18	BK	145/154 (94%)	145 (100%)	0	100	100
18	x	144/154 (94%)	144 (100%)	0	100	100
19	BL	153/154 (99%)	153 (100%)	0	100	100
19	y	153/154 (99%)	153 (100%)	0	100	100
20	BM	146/153 (95%)	144 (99%)	2 (1%)	59	73
20	z	146/153 (95%)	146 (100%)	0	100	100
21	0	155/157 (99%)	155 (100%)	0	100	100
21	BN	155/157 (99%)	155 (100%)	0	100	100
22	2	133/134 (99%)	133 (100%)	0	100	100
22	BO	133/134 (99%)	133 (100%)	0	100	100
23	5	93/112 (83%)	93 (100%)	0	100	100
23	BP	93/112 (83%)	93 (100%)	0	100	100
24	6	101/104 (97%)	101 (100%)	0	100	100
24	BQ	101/104 (97%)	101 (100%)	0	100	100
25	7	97/127 (76%)	97 (100%)	0	100	100
25	BR	86/127 (68%)	86 (100%)	0	100	100
26	8	108/121 (89%)	108 (100%)	0	100	100
26	BS	107/121 (88%)	107 (100%)	0	100	100
27	9	111/112 (99%)	111 (100%)	0	100	100
27	BT	111/112 (99%)	111 (100%)	0	100	100
28	AA	117/118 (99%)	117 (100%)	0	100	100
28	BU	117/118 (99%)	117 (100%)	0	100	100
29	AB	120/121 (99%)	119 (99%)	1 (1%)	73	79
29	BV	120/121 (99%)	120 (100%)	0	100	100
30	AC	48/49 (98%)	48 (100%)	0	100	100
30	BW	50/49 (102%)	50 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
31	AD	81/90 (90%)	81 (100%)	0	100	100
31	BX	81/90 (90%)	81 (100%)	0	100	100
32	AE	98/100 (98%)	98 (100%)	0	100	100
32	BY	97/100 (97%)	97 (100%)	0	100	100
33	AF	109/115 (95%)	109 (100%)	0	100	100
33	BZ	111/115 (96%)	109 (98%)	2 (2%)	51	70
34	AG	91/92 (99%)	91 (100%)	0	100	100
34	CA	94/92 (102%)	94 (100%)	0	100	100
35	AH	95/96 (99%)	95 (100%)	0	100	100
35	CB	98/96 (102%)	98 (100%)	0	100	100
36	AI	106/106 (100%)	106 (100%)	0	100	100
36	CC	105/106 (99%)	105 (100%)	0	100	100
37	AJ	77/79 (98%)	77 (100%)	0	100	100
37	CD	78/79 (99%)	78 (100%)	0	100	100
38	AK	70/73 (96%)	70 (100%)	0	100	100
38	CE	70/73 (96%)	70 (100%)	0	100	100
39	AL	68/69 (99%)	68 (100%)	0	100	100
39	CF	69/69 (100%)	69 (100%)	0	100	100
40	AM	46/47 (98%)	46 (100%)	0	100	100
40	CG	46/47 (98%)	46 (100%)	0	100	100
41	AN	47/47 (100%)	47 (100%)	0	100	100
41	CH	48/47 (102%)	47 (98%)	1 (2%)	47	67
42	AO	24/24 (100%)	24 (100%)	0	100	100
42	CI	23/24 (96%)	20 (87%)	3 (13%)	4	17
43	AP	88/91 (97%)	88 (100%)	0	100	100
43	CJ	90/91 (99%)	90 (100%)	0	100	100
44	AQ	72/73 (99%)	71 (99%)	1 (1%)	59	73
44	CK	72/73 (99%)	72 (100%)	0	100	100
45	CL	100/212 (47%)	98 (98%)	2 (2%)	48	68
45	i	100/212 (47%)	94 (94%)	6 (6%)	17	46
47	C	176/215 (82%)	176 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
47	CN	176/215 (82%)	176 (100%)	0	100	100
48	CO	194/229 (85%)	183 (94%)	11 (6%)	18	47
48	D	194/229 (85%)	194 (100%)	0	100	100
49	CP	174/198 (88%)	174 (100%)	0	100	100
49	E	175/198 (88%)	175 (100%)	0	100	100
50	CQ	174/196 (89%)	174 (100%)	0	100	100
50	F	174/196 (89%)	173 (99%)	1 (1%)	78	81
51	CR	218/220 (99%)	217 (100%)	1 (0%)	81	83
51	G	218/220 (99%)	218 (100%)	0	100	100
52	CS	169/197 (86%)	168 (99%)	1 (1%)	78	81
52	H	178/197 (90%)	177 (99%)	1 (1%)	78	81
53	CT	195/204 (96%)	184 (94%)	11 (6%)	19	47
53	I	195/204 (96%)	195 (100%)	0	100	100
54	CU	163/167 (98%)	162 (99%)	1 (1%)	78	81
54	J	166/167 (99%)	164 (99%)	2 (1%)	63	75
55	CV	157/160 (98%)	157 (100%)	0	100	100
55	K	157/160 (98%)	157 (100%)	0	100	100
56	CW	153/160 (96%)	153 (100%)	0	100	100
56	L	153/160 (96%)	153 (100%)	0	100	100
57	CX	87/104 (84%)	87 (100%)	0	100	100
57	M	90/104 (86%)	89 (99%)	1 (1%)	65	76
58	CY	122/134 (91%)	122 (100%)	0	100	100
58	N	124/134 (92%)	121 (98%)	3 (2%)	43	65
59	CZ	98/123 (80%)	98 (100%)	0	100	100
59	O	98/123 (80%)	91 (93%)	7 (7%)	13	40
60	DA	129/130 (99%)	129 (100%)	0	100	100
60	P	129/130 (99%)	129 (100%)	0	100	100
61	DB	97/102 (95%)	97 (100%)	0	100	100
61	Q	97/102 (95%)	97 (100%)	0	100	100
62	DC	111/121 (92%)	111 (100%)	0	100	100
62	R	111/121 (92%)	106 (96%)	5 (4%)	24	53

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
63	DD	114/116 (98%)	114 (100%)	0	100	100
63	S	114/116 (98%)	111 (97%)	3 (3%)	40	64
64	DE	112/122 (92%)	112 (100%)	0	100	100
64	T	112/122 (92%)	112 (100%)	0	100	100
65	DF	126/129 (98%)	126 (100%)	0	100	100
65	U	128/129 (99%)	128 (100%)	0	100	100
66	DG	113/117 (97%)	113 (100%)	0	100	100
66	V	113/117 (97%)	113 (100%)	0	100	100
67	DH	90/105 (86%)	90 (100%)	0	100	100
67	W	92/105 (88%)	92 (100%)	0	100	100
68	DI	71/71 (100%)	71 (100%)	0	100	100
68	X	71/71 (100%)	71 (100%)	0	100	100
69	DJ	112/113 (99%)	112 (100%)	0	100	100
69	Y	112/113 (99%)	112 (100%)	0	100	100
70	DK	116/118 (98%)	116 (100%)	0	100	100
70	Z	116/118 (98%)	116 (100%)	0	100	100
71	DL	109/112 (97%)	103 (94%)	6 (6%)	19	48
71	a	111/112 (99%)	111 (100%)	0	100	100
72	DM	63/85 (74%)	63 (100%)	0	100	100
72	b	64/85 (75%)	64 (100%)	0	100	100
73	DN	83/102 (81%)	81 (98%)	2 (2%)	43	65
73	c	84/102 (82%)	76 (90%)	8 (10%)	8	29
74	DO	72/73 (99%)	72 (100%)	0	100	100
74	d	72/73 (99%)	72 (100%)	0	100	100
75	DP	51/58 (88%)	51 (100%)	0	100	100
75	e	54/58 (93%)	54 (100%)	0	100	100
76	DQ	47/48 (98%)	47 (100%)	0	100	100
76	f	47/48 (98%)	46 (98%)	1 (2%)	47	67
77	DR	48/54 (89%)	48 (100%)	0	100	100
77	g	51/54 (94%)	51 (100%)	0	100	100
78	DS	62/175 (35%)	62 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
78	h	55/175 (31%)	55 (100%)	0	100	100
79	AR	259/263 (98%)	259 (100%)	0	100	100
79	DT	259/263 (98%)	257 (99%)	2 (1%)	73	79
80	L1	196/196 (100%)	196 (100%)	0	100	100
80	l1	196/196 (100%)	196 (100%)	0	100	100
All	All	19326/20828 (93%)	19237 (100%)	89 (0%)	81	83

All (89) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	k	7	GLU
9	o	197	SER
9	o	198	ASN
29	AB	86	LYS
44	AQ	60	CYS
45	i	33	ASN
45	i	34	THR
45	i	61	GLU
45	i	83	HIS
45	i	84	SER
45	i	85	LYS
50	F	152	LYS
52	H	149	ILE
54	J	176	GLN
54	J	178	VAL
57	M	92	LEU
58	N	49	ILE
58	N	50	GLU
58	N	52	SER
59	O	38	HIS
59	O	39	ASP
59	O	41	LEU
59	O	103	LEU
59	O	124	LYS
59	O	125	ASN
59	O	126	TRP
62	R	9	LYS
62	R	10	ARG
62	R	11	THR
62	R	13	LYS

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Mol	Chain	Res	Type
62	R	14	GLN
63	S	39	GLN
63	S	40	PRO
63	S	42	ILE
73	c	24	LEU
73	c	50	VAL
73	c	51	ARG
73	c	61	GLU
73	c	64	LEU
73	c	66	LYS
73	c	77	CYS
73	c	79	ILE
76	f	24	CYS
10	BC	206	SER
20	BM	130	ASN
20	BM	131	THR
33	BZ	17[A]	LYS
33	BZ	17[B]	LYS
41	CH	1	MET
42	CI	1	MET
42	CI	13	LEU
42	CI	17	ARG
48	CO	45	LYS
48	CO	46	THR
48	CO	47	LEU
48	CO	48	ILE
48	CO	91	VAL
48	CO	92	GLN
48	CO	94	LYS
48	CO	95	ASN
48	CO	96	LEU
48	CO	97	LEU
48	CO	98	THR
51	CR	187	ARG
52	CS	183	SER
53	CT	153	VAL
53	CT	154	ARG
53	CT	155	ASP
53	CT	212	LEU
53	CT	216	LEU
53	CT	218	GLU
53	CT	220	LYS

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Mol	Chain	Res	Type
53	CT	222	GLU
53	CT	223	ARG
53	CT	225	GLU
53	CT	226	ILE
54	CU	132	ILE
71	DL	91	LEU
71	DL	96	LEU
71	DL	99	LYS
71	DL	100	VAL
71	DL	101	GLU
71	DL	102	LYS
73	DN	22	ARG
73	DN	24	LEU
79	DT	73	THR
79	DT	74	ILE
45	CL	82	LYS
45	CL	85	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (178) such sidechains are listed below:

Mol	Chain	Res	Type
4	j	205	ASN
5	k	256	HIS
5	k	259	ASN
5	k	316	ASN
6	l	20	GLN
6	l	312	HIS
7	m	17	GLN
7	m	32	GLN
7	m	45	ASN
7	m	111	GLN
7	m	151	GLN
7	m	264	GLN
9	o	91	ASN
9	o	144	GLN
9	o	175	ASN
9	o	198	ASN
9	o	222	GLN
10	p	192	HIS
11	q	102	ASN
11	q	116	ASN
13	s	101	ASN

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Mol	Chain	Res	Type
14	t	117	GLN
15	u	35	GLN
17	w	123	GLN
18	x	133	HIS
18	x	179	GLN
19	y	5	HIS
19	y	9	GLN
19	y	45	ASN
20	z	118	HIS
21	0	49	HIS
22	2	54	HIS
22	2	131	GLN
25	7	42	GLN
25	7	45	ASN
25	7	78	HIS
26	8	111	ASN
27	9	53	ASN
27	9	81	GLN
27	9	86	GLN
27	9	98	ASN
28	AA	135	HIS
30	AC	6	ASN
32	AE	42	HIS
32	AE	68	ASN
34	AG	31	GLN
36	AI	20	GLN
36	AI	107	GLN
36	AI	113	GLN
38	AK	47	HIS
39	AL	40	GLN
39	AL	57	ASN
39	AL	77	ASN
40	AM	33	ASN
45	i	33	ASN
45	i	163	GLN
47	C	21	ASN
47	C	30	GLN
47	C	168	HIS
48	D	124	ASN
48	D	178	ASN
49	E	54	HIS
51	G	98	HIS

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Mol	Chain	Res	Type
52	H	63	GLN
52	H	116	HIS
53	I	119	ASN
53	I	199	GLN
54	J	19	GLN
55	K	116	HIS
56	L	131	GLN
56	L	176	ASN
59	O	38	HIS
59	O	125	ASN
62	R	14	GLN
63	S	93	GLN
65	U	92	GLN
65	U	127	HIS
66	V	23	GLN
67	W	16	GLN
68	X	21	ASN
68	X	29	HIS
69	Y	76	GLN
69	Y	80	ASN
70	Z	94	ASN
71	a	126	GLN
76	f	23	HIS
79	AR	53	ASN
79	AR	102	GLN
79	AR	122	GLN
4	AW	97	ASN
4	AW	132	ASN
4	AW	187	HIS
4	AW	205	ASN
5	AX	198	HIS
5	AX	259	ASN
6	AY	16	GLN
6	AY	117	ASN
6	AY	202	GLN
7	AZ	24	GLN
8	BA	10	GLN
9	BB	18	GLN
11	BD	102	ASN
11	BD	140	GLN
11	BD	162	GLN
12	BE	55	ASN

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Mol	Chain	Res	Type
12	BE	162	GLN
12	BE	187	ASN
13	BF	95	ASN
13	BF	109	HIS
13	BF	161	GLN
15	BH	35	GLN
16	BI	117	ASN
16	BI	175	ASN
16	BI	189	HIS
17	BJ	56	HIS
17	BJ	193	GLN
18	BK	118	GLN
18	BK	120	ASN
19	BL	27	GLN
19	BL	158	HIS
20	BM	58	HIS
20	BM	134	HIS
21	BN	8	GLN
21	BN	46	GLN
22	BO	77	ASN
24	BQ	9	ASN
24	BQ	81	GLN
25	BR	59	HIS
25	BR	79	GLN
26	BS	111	ASN
26	BS	137	ASN
27	BT	86	GLN
28	BU	29	HIS
28	BU	36	HIS
31	BX	73	GLN
32	BY	20	HIS
33	BZ	36	GLN
36	CC	59	ASN
36	CC	62	GLN
36	CC	113	GLN
38	CE	79	GLN
39	CF	67	GLN
44	CK	34	HIS
47	CN	33	ASN
48	CO	74	GLN
48	CO	124	ASN
48	CO	202	GLN

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Mol	Chain	Res	Type
49	CP	50	GLN
51	CR	130	GLN
53	CT	22	HIS
53	CT	182	GLN
53	CT	210	GLN
54	CU	19	GLN
54	CU	48	ASN
54	CU	146	GLN
54	CU	176	GLN
56	CW	153	GLN
57	CX	39	ASN
57	CX	58	GLN
57	CX	81	ASN
58	CY	16	GLN
58	CY	81	HIS
58	CY	92	HIS
58	CY	138	ASN
59	CZ	139	HIS
64	DE	83	GLN
65	DF	136	GLN
68	DI	21	ASN
72	DM	44	GLN
74	DO	5	GLN
77	DR	17	GLN
78	DS	181	GLN
79	DT	102	GLN
79	DT	311	GLN
80	L1	35	GLN
80	L1	40	ASN
80	L1	182	GLN
80	l1	181	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1	3213/3359 (95%)	608 (18%)	43 (1%)
1	AS	3195/3359 (95%)	618 (19%)	51 (1%)
2	3	120/121 (99%)	9 (7%)	0
2	AT	120/121 (99%)	9 (7%)	0
3	4	156/158 (98%)	23 (14%)	3 (1%)
3	AU	157/158 (99%)	23 (14%)	3 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
46	B	1706/1787 (95%)	407 (23%)	46 (2%)
46	CM	1720/1787 (96%)	434 (25%)	51 (2%)
All	All	10387/10850 (95%)	2131 (20%)	197 (1%)

All (2131) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1	15	A
1	1	24	U
1	1	25	A
1	1	29	G
1	1	39	A
1	1	42	A
1	1	48	A
1	1	56	A
1	1	58	G
1	1	59	A
1	1	64	A
1	1	65	A
1	1	91	G
1	1	98	A
1	1	104	C
1	1	108	A
1	1	109	G
1	1	110	C
1	1	121	A
1	1	134	U
1	1	135	G
1	1	155	A
1	1	156	A
1	1	164	U
1	1	169	G
1	1	172	C
1	1	173	C
1	1	175	G
1	1	186	A
1	1	189	U
1	1	190	U
1	1	199	C
1	1	205	G
1	1	209	C
1	1	212	A

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Mol	Chain	Res	Type
1	1	217	G
1	1	218	A
1	1	219	G
1	1	230	G
1	1	236	A
1	1	239	A
1	1	240	C
1	1	243	G
1	1	245	G
1	1	249	G
1	1	250	U
1	1	251	G
1	1	269	G
1	1	286	U
1	1	295	A
1	1	305	U
1	1	311	C
1	1	323	A
1	1	329	U
1	1	337	G
1	1	338	A
1	1	339	C
1	1	349	A
1	1	350	C
1	1	376	G
1	1	377	A
1	1	387	A
1	1	395	A
1	1	398	A
1	1	402	A
1	1	403	C
1	1	404	G
1	1	420	G
1	1	421	G
1	1	422	A
1	1	438	A
1	1	439	C
1	1	443	G
1	1	451	C
1	1	453	U
1	1	454	G
1	1	478	G

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Mol	Chain	Res	Type
1	1	479	C
1	1	480	G
1	1	482	U
1	1	483	U
1	1	485	A
1	1	486	C
1	1	506	A
1	1	517	A
1	1	519	U
1	1	531	G
1	1	538	G
1	1	539	G
1	1	540	C
1	1	541	U
1	1	542	U
1	1	543	C
1	1	544	U
1	1	545	G
1	1	546	C
1	1	555	A
1	1	556	U
1	1	557	A
1	1	564	G
1	1	576	A
1	1	577	G
1	1	589	G
1	1	590	A
1	1	598	U
1	1	609	A
1	1	618	U
1	1	619	A
1	1	620	A
1	1	635	C
1	1	647	A
1	1	658	A
1	1	675	A
1	1	679	U
1	1	681	U
1	1	688	A
1	1	689	A
1	1	703	A
1	1	710	G

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Mol	Chain	Res	Type
1	1	713	A
1	1	717	A
1	1	723	G
1	1	730	A
1	1	732	U
1	1	760	U
1	1	763	U
1	1	772	U
1	1	773	U
1	1	776	A
1	1	777	G
1	1	780	A
1	1	781	G
1	1	802	A
1	1	813	A
1	1	826	A
1	1	845	C
1	1	857	C
1	1	870	U
1	1	875	U
1	1	892	A
1	1	903	G
1	1	904	G
1	1	910	A
1	1	912	G
1	1	913	A
1	1	917	A
1	1	919	C
1	1	921	A
1	1	933	G
1	1	940	C
1	1	949	G
1	1	955	C
1	1	956	U
1	1	959	G
1	1	970	G
1	1	977	U
1	1	990	G
1	1	991	U
1	1	996	C
1	1	997	G
1	1	998	A

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Mol	Chain	Res	Type
1	1	1006	G
1	1	1011	C
1	1	1012	U
1	1	1013	U
1	1	1014	G
1	1	1017	G
1	1	1019	U
1	1	1020	G
1	1	1021	A
1	1	1023	A
1	1	1024	U
1	1	1025	G
1	1	1027	C
1	1	1030	U
1	1	1033	C
1	1	1043	A
1	1	1045	C
1	1	1060	A
1	1	1061	A
1	1	1068	G
1	1	1077	U
1	1	1078	U
1	1	1089	A
1	1	1090	A
1	1	1091	U
1	1	1092	U
1	1	1094	A
1	1	1099	A
1	1	1100	G
1	1	1113	G
1	1	1127	G
1	1	1140	U
1	1	1149	A
1	1	1150	A
1	1	1151	C
1	1	1155	A
1	1	1156	C
1	1	1164	U
1	1	1174	G
1	1	1176	A
1	1	1177	U
1	1	1178	G

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Mol	Chain	Res	Type
1	1	1188	C
1	1	1189	A
1	1	1192	C
1	1	1197	C
1	1	1204	U
1	1	1205	G
1	1	1215	C
1	1	1218	G
1	1	1223	C
1	1	1224	C
1	1	1231	U
1	1	1232	G
1	1	1236	A
1	1	1239	G
1	1	1240	A
1	1	1241	A
1	1	1242	G
1	1	1244	C
1	1	1245	G
1	1	1246	G
1	1	1247	A
1	1	1249	U
1	1	1250	C
1	1	1252	G
1	1	1254	U
1	1	1255	A
1	1	1257	G
1	1	1258	G
1	1	1259	A
1	1	1261	U
1	1	1262	G
1	1	1263	U
1	1	1264	G
1	1	1265	U
1	1	1266	A
1	1	1267	A
1	1	1270	A
1	1	1271	C
1	1	1273	C
1	1	1274	A
1	1	1278	G
1	1	1282	A

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Mol	Chain	Res	Type
1	1	1283	A
1	1	1303	G
1	1	1304	A
1	1	1305	U
1	1	1309	G
1	1	1312	C
1	1	1326	A
1	1	1345	G
1	1	1346	U
1	1	1347	U
1	1	1348	U
1	1	1349	U
1	1	1382	A
1	1	1395	U
1	1	1415	A
1	1	1417	G
1	1	1421	U
1	1	1427	G
1	1	1430	G
1	1	1433	C
1	1	1442	A
1	1	1446	G
1	1	1465	C
1	1	1471	A
1	1	1477	A
1	1	1484	G
1	1	1498	C
1	1	1504	C
1	1	1520	A
1	1	1523	C
1	1	1525	A
1	1	1526	U
1	1	1532	G
1	1	1535	A
1	1	1552	C
1	1	1556	G
1	1	1558	G
1	1	1559	C
1	1	1560	U
1	1	1561	U
1	1	1562	G
1	1	1563	A

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Mol	Chain	Res	Type
1	1	1565	U
1	1	1566	U
1	1	1567	U
1	1	1568	U
1	1	1569	C
1	1	1571	G
1	1	1572	G
1	1	1574	C
1	1	1576	A
1	1	1577	C
1	1	1578	C
1	1	1585	A
1	1	1589	A
1	1	1601	A
1	1	1603	U
1	1	1624	C
1	1	1625	U
1	1	1635	C
1	1	1638	A
1	1	1639	A
1	1	1641	U
1	1	1648	G
1	1	1653	C
1	1	1670	G
1	1	1679	A
1	1	1720	U
1	1	1721	C
1	1	1732	G
1	1	1746	A
1	1	1747	G
1	1	1755	U
1	1	1757	A
1	1	1758	U
1	1	1759	U
1	1	1760	U
1	1	1761	U
1	1	1762	G
1	1	1763	C
1	1	1776	G
1	1	1793	A
1	1	1804	G
1	1	1809	A

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Mol	Chain	Res	Type
1	1	1810	A
1	1	1811	U
1	1	1812	A
1	1	1814	U
1	1	1815	U
1	1	1816	U
1	1	1817	U
1	1	1837	A
1	1	1838	A
1	1	1842	C
1	1	1844	G
1	1	1845	C
1	1	1862	C
1	1	1874	G
1	1	1882	A
1	1	1889	A
1	1	1902	G
1	1	1944	G
1	1	1949	G
1	1	2068	U
1	1	2069	U
1	1	2070	A
1	1	2071	A
1	1	2078	A
1	1	2088	G
1	1	2089	G
1	1	2090	U
1	1	2091	A
1	1	2092	C
1	1	2099	G
1	1	2100	G
1	1	2109	A
1	1	2118	U
1	1	2122	A
1	1	2136	A
1	1	2147	G
1	1	2149	G
1	1	2183	U
1	1	2184	G
1	1	2185	A
1	1	2186	A
1	1	2187	U

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Mol	Chain	Res	Type
1	1	2188	G
1	1	2222	A
1	1	2227	G
1	1	2233	A
1	1	2234	A
1	1	2235	C
1	1	2250	G
1	1	2251	G
1	1	2259	A
1	1	2260	U
1	1	2276	U
1	1	2285	G
1	1	2286	C
1	1	2288	U
1	1	2291	A
1	1	2292	U
1	1	2293	G
1	1	2313	G
1	1	2314	U
1	1	2341	A
1	1	2351	A
1	1	2352	C
1	1	2353	G
1	1	2363	G
1	1	2366	U
1	1	2371	G
1	1	2372	G
1	1	2375	A
1	1	2380	A
1	1	2381	G
1	1	2382	A
1	1	2389	U
1	1	2396	G
1	1	2397	A
1	1	2413	G
1	1	2420	G
1	1	2421	A
1	1	2422	C
1	1	2427	A
1	1	2430	G
1	1	2431	U
1	1	2432	G

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Mol	Chain	Res	Type
1	1	2433	U
1	1	2437	A
1	1	2438	U
1	1	2439	A
1	1	2440	A
1	1	2441	G
1	1	2442	U
1	1	2443	G
1	1	2444	G
1	1	2445	G
1	1	2446	A
1	1	2448	C
1	1	2449	U
1	1	2450	U
1	1	2452	G
1	1	2454	C
1	1	2455	G
1	1	2456	C
1	1	2457	C
1	1	2459	G
1	1	2460	U
1	1	2464	A
1	1	2465	U
1	1	2466	A
1	1	2467	C
1	1	2468	C
1	1	2470	C
1	1	2471	U
1	1	2472	A
1	1	2473	C
1	1	2475	U
1	1	2476	C
1	1	2477	U
1	1	2480	A
1	1	2482	U
1	1	2483	U
1	1	2489	A
1	1	2492	U
1	1	2493	A
1	1	2511	G
1	1	2513	A
1	1	2515	G

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Mol	Chain	Res	Type
1	1	2516	U
1	1	2517	C
1	1	2518	A
1	1	2519	A
1	1	2520	A
1	1	2521	C
1	1	2529	U
1	1	2530	C
1	1	2533	G
1	1	2536	U
1	1	2538	A
1	1	2545	C
1	1	2546	U
1	1	2548	G
1	1	2554	C
1	1	2557	G
1	1	2565	A
1	1	2566	C
1	1	2578	G
1	1	2579	G
1	1	2586	G
1	1	2598	A
1	1	2607	A
1	1	2623	G
1	1	2624	U
1	1	2628	A
1	1	2638	C
1	1	2644	G
1	1	2646	A
1	1	2649	G
1	1	2661	A
1	1	2662	G
1	1	2663	A
1	1	2664	A
1	1	2666	A
1	1	2668	A
1	1	2676	A
1	1	2677	A
1	1	2686	G
1	1	2699	A
1	1	2700	G
1	1	2701	U

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Mol	Chain	Res	Type
1	1	2724	U
1	1	2725	G
1	1	2734	A
1	1	2745	C
1	1	2749	G
1	1	2750	G
1	1	2768	G
1	1	2771	A
1	1	2772	G
1	1	2773	A
1	1	2774	A
1	1	2782	C
1	1	2786	G
1	1	2789	A
1	1	2790	U
1	1	2814	U
1	1	2817	A
1	1	2833	U
1	1	2839	C
1	1	2843	G
1	1	2844	A
1	1	2847	U
1	1	2859	A
1	1	2861	C
1	1	2866	C
1	1	2870	G
1	1	2871	C
1	1	2886	G
1	1	2895	U
1	1	2900	C
1	1	2907	U
1	1	2908	A
1	1	2911	G
1	1	2914	C
1	1	2919	G
1	1	2920	C
1	1	2923	G
1	1	2926	U
1	1	2943	A
1	1	2955	C
1	1	2962	G
1	1	2969	G

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Mol	Chain	Res	Type
1	1	2984	A
1	1	3021	A
1	1	3028	U
1	1	3031	G
1	1	3050	A
1	1	3051	C
1	1	3052	G
1	1	3058	A
1	1	3064	C
1	1	3073	G
1	1	3094	A
1	1	3101	A
1	1	3102	A
1	1	3103	U
1	1	3114	A
1	1	3115	C
1	1	3127	U
1	1	3134	C
1	1	3143	G
1	1	3144	A
1	1	3146	G
1	1	3149	U
1	1	3151	C
1	1	3157	A
1	1	3159	A
1	1	3160	C
1	1	3162	U
1	1	3166	A
1	1	3171	C
1	1	3172	U
1	1	3182	C
1	1	3183	A
1	1	3184	G
1	1	3190	C
1	1	3194	G
1	1	3208	A
1	1	3210	A
1	1	3212	G
1	1	3214	U
1	1	3221	G
1	1	3224	U
1	1	3228	G

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Mol	Chain	Res	Type
1	1	3235	A
1	1	3241	G
1	1	3246	C
1	1	3252	C
1	1	3259	A
1	1	3260	A
1	1	3268	G
1	1	3269	C
1	1	3272	A
1	1	3278	U
1	1	3281	A
1	1	3284	U
1	1	3285	A
1	1	3306	U
1	1	3307	A
1	1	3309	A
1	1	3310	G
1	1	3316	U
1	1	3317	U
1	1	3318	G
1	1	3319	U
1	1	3320	U
1	1	3321	G
1	1	3334	G
1	1	3343	C
1	1	3351	G
1	1	3361	U
2	3	7	G
2	3	22	A
2	3	54	U
2	3	55	A
2	3	65	G
2	3	73	C
2	3	76	A
2	3	102	A
2	3	112	G
3	4	23	U
3	4	34	U
3	4	35	C
3	4	59	A
3	4	62	C
3	4	63	G

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Mol	Chain	Res	Type
3	4	81	A
3	4	84	C
3	4	85	G
3	4	86	U
3	4	87	G
3	4	92	A
3	4	95	G
3	4	102	U
3	4	104	A
3	4	106	C
3	4	111	A
3	4	113	U
3	4	125	U
3	4	126	A
3	4	148	G
3	4	152	G
3	4	157	U
46	B	17	C
46	B	25	C
46	B	26	A
46	B	27	U
46	B	34	G
46	B	47	A
46	B	57	G
46	B	66	U
46	B	74	U
46	B	75	U
46	B	76	A
46	B	79	C
46	B	81	G
46	B	84	A
46	B	93	A
46	B	104	A
46	B	114	C
46	B	115	G
46	B	123	G
46	B	126	A
46	B	127	G
46	B	128	U
46	B	129	A
46	B	130	C
46	B	138	C

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Mol	Chain	Res	Type
46	B	139	U
46	B	142	G
46	B	143	A
46	B	150	U
46	B	151	G
46	B	152	G
46	B	154	A
46	B	159	U
46	B	166	A
46	B	168	U
46	B	173	G
46	B	174	C
46	B	176	U
46	B	177	A
46	B	179	A
46	B	190	U
46	B	191	U
46	B	193	G
46	B	199	G
46	B	200	A
46	B	202	G
46	B	206	U
46	B	211	A
46	B	215	A
46	B	216	A
46	B	217	A
46	B	218	A
46	B	220	A
46	B	221	U
46	B	224	A
46	B	226	G
46	B	229	U
46	B	230	U
46	B	231	C
46	B	233	G
46	B	236	U
46	B	237	C
46	B	238	U
46	B	247	U
46	B	255	A
46	B	259	U
46	B	260	U

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Mol	Chain	Res	Type
46	B	261	C
46	B	262	G
46	B	266	C
46	B	269	A
46	B	270	U
46	B	274	C
46	B	276	U
46	B	277	G
46	B	278	U
46	B	279	G
46	B	283	G
46	B	285	G
46	B	297	A
46	B	312	C
46	B	314	A
46	B	318	U
46	B	319	C
46	B	320	G
46	B	335	G
46	B	336	C
46	B	350	A
46	B	357	A
46	B	358	A
46	B	359	C
46	B	388	G
46	B	398	A
46	B	400	C
46	B	402	G
46	B	414	A
46	B	416	G
46	B	421	G
46	B	422	C
46	B	423	A
46	B	424	G
46	B	432	G
46	B	437	U
46	B	442	C
46	B	446	C
46	B	452	A
46	B	458	A
46	B	466	A
46	B	475	A

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Mol	Chain	Res	Type
46	B	480	U
46	B	482	C
46	B	483	A
46	B	485	G
46	B	486	G
46	B	501	G
46	B	502	U
46	B	503	A
46	B	504	A
46	B	505	U
46	B	506	U
46	B	509	A
46	B	512	G
46	B	513	A
46	B	515	U
46	B	518	A
46	B	519	A
46	B	525	A
46	B	530	U
46	B	534	C
46	B	536	A
46	B	537	G
46	B	539	A
46	B	540	A
46	B	547	G
46	B	553	A
46	B	554	A
46	B	555	G
46	B	556	U
46	B	557	C
46	B	563	C
46	B	566	G
46	B	573	C
46	B	574	G
46	B	575	G
46	B	576	U
46	B	580	U
46	B	592	A
46	B	593	G
46	B	604	A
46	B	609	U
46	B	617	A

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Mol	Chain	Res	Type
46	B	618	A
46	B	620	A
46	B	621	A
46	B	639	G
46	B	648	U
46	B	650	G
46	B	652	C
46	B	653	G
46	B	654	G
46	B	656	C
46	B	675	U
46	B	682	A
46	B	686	G
46	B	688	G
46	B	694	C
46	B	695	C
46	B	696	U
46	B	701	G
46	B	721	C
46	B	722	A
46	B	723	G
46	B	729	U
46	B	739	A
46	B	740	A
46	B	741	A
46	B	750	G
46	B	751	U
46	B	756	A
46	B	759	A
46	B	760	G
46	B	762	C
46	B	764	U
46	B	765	U
46	B	766	U
46	B	767	G
46	B	768	C
46	B	770	C
46	B	771	G
46	B	773	A
46	B	778	U
46	B	779	U
46	B	796	A

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Mol	Chain	Res	Type
46	B	798	A
46	B	799	G
46	B	802	C
46	B	803	G
46	B	804	U
46	B	805	U
46	B	807	U
46	B	808	G
46	B	811	U
46	B	813	U
46	B	815	U
46	B	817	U
46	B	819	G
46	B	820	U
46	B	821	U
46	B	822	G
46	B	823	G
46	B	824	U
46	B	825	U
46	B	826	U
46	B	828	U
46	B	829	A
46	B	831	G
46	B	840	A
46	B	842	U
46	B	847	A
46	B	848	A
46	B	856	G
46	B	857	G
46	B	869	A
46	B	871	U
46	B	875	C
46	B	877	G
46	B	878	U
46	B	879	U
46	B	881	U
46	B	883	A
46	B	891	A
46	B	909	A
46	B	910	G
46	B	911	A
46	B	918	A

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Mol	Chain	Res	Type
46	B	920	U
46	B	927	G
46	B	945	U
46	B	951	A
46	B	958	A
46	B	973	A
46	B	975	C
46	B	977	A
46	B	988	A
46	B	989	U
46	B	990	A
46	B	997	U
46	B	998	A
46	B	1004	A
46	B	1005	A
46	B	1011	A
46	B	1013	C
46	B	1017	G
46	B	1024	A
46	B	1025	G
46	B	1039	U
46	B	1042	U
46	B	1043	U
46	B	1044	U
46	B	1047	U
46	B	1055	A
46	B	1056	U
46	B	1057	C
46	B	1058	G
46	B	1059	G
46	B	1060	C
46	B	1061	A
46	B	1067	C
46	B	1077	A
46	B	1081	C
46	B	1085	G
46	B	1123	A
46	B	1135	G
46	B	1143	C
46	B	1145	A
46	B	1152	G
46	B	1168	A

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Mol	Chain	Res	Type
46	B	1169	A
46	B	1170	U
46	B	1179	A
46	B	1181	A
46	B	1184	G
46	B	1185	G
46	B	1187	A
46	B	1193	A
46	B	1202	A
46	B	1203	G
46	B	1206	A
46	B	1207	C
46	B	1212	A
46	B	1215	A
46	B	1219	A
46	B	1220	C
46	B	1221	A
46	B	1229	A
46	B	1230	G
46	B	1231	C
46	B	1236	U
46	B	1243	U
46	B	1250	G
46	B	1270	U
46	B	1299	U
46	B	1300	U
46	B	1301	G
46	B	1306	A
46	B	1325	U
46	B	1330	A
46	B	1336	G
46	B	1339	G
46	B	1342	A
46	B	1343	G
46	B	1345	A
46	B	1346	U
46	B	1348	U
46	B	1349	G
46	B	1352	G
46	B	1355	A
46	B	1356	U
46	B	1357	A

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Mol	Chain	Res	Type
46	B	1359	U
46	B	1360	C
46	B	1364	U
46	B	1369	G
46	B	1370	A
46	B	1376	U
46	B	1380	G
46	B	1381	A
46	B	1382	U
46	B	1384	U
46	B	1385	C
46	B	1392	A
46	B	1397	A
46	B	1398	G
46	B	1399	U
46	B	1400	U
46	B	1401	U
46	B	1410	A
46	B	1413	A
46	B	1414	G
46	B	1415	G
46	B	1422	A
46	B	1431	G
46	B	1433	C
46	B	1445	C
46	B	1446	A
46	B	1455	A
46	B	1457	A
46	B	1458	C
46	B	1461	A
46	B	1462	C
46	B	1463	G
46	B	1468	C
46	B	1476	A
46	B	1477	U
46	B	1480	G
46	B	1483	U
46	B	1485	G
46	B	1491	G
46	B	1502	A
46	B	1503	A
46	B	1508	G

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Mol	Chain	Res	Type
46	B	1510	G
46	B	1511	A
46	B	1523	G
46	B	1524	C
46	B	1529	G
46	B	1530	A
46	B	1541	U
46	B	1544	U
46	B	1546	G
46	B	1560	A
46	B	1561	G
46	B	1571	G
46	B	1574	A
46	B	1575	G
46	B	1577	G
46	B	1580	A
46	B	1582	U
46	B	1584	A
46	B	1588	G
46	B	1621	C
46	B	1644	U
46	B	1645	G
46	B	1665	C
46	B	1667	G
46	B	1670	U
46	B	1671	G
46	B	1672	G
46	B	1673	U
46	B	1674	U
46	B	1677	G
46	B	1700	G
46	B	1704	C
46	B	1729	U
46	B	1737	A
46	B	1743	A
46	B	1747	G
46	B	1749	A
46	B	1753	A
46	B	1756	U
46	B	1767	G
46	B	1770	C
46	B	1779	G

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Mol	Chain	Res	Type
46	B	1780	G
46	B	1781	A
46	B	1782	U
46	B	1783	C
1	AS	24	U
1	AS	25	A
1	AS	29	G
1	AS	39	A
1	AS	42	A
1	AS	48	A
1	AS	56	A
1	AS	58	G
1	AS	59	A
1	AS	64	A
1	AS	65	A
1	AS	91	G
1	AS	98	A
1	AS	104	C
1	AS	108	A
1	AS	109	G
1	AS	110	C
1	AS	120	A
1	AS	121	A
1	AS	134	U
1	AS	135	G
1	AS	155	A
1	AS	156	A
1	AS	164	U
1	AS	169	G
1	AS	172	C
1	AS	173	C
1	AS	175	G
1	AS	186	A
1	AS	189	U
1	AS	190	U
1	AS	199	C
1	AS	205	G
1	AS	209	C
1	AS	212	A
1	AS	217	G
1	AS	218	A
1	AS	219	G

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Mol	Chain	Res	Type
1	AS	230	G
1	AS	236	A
1	AS	239	A
1	AS	240	C
1	AS	243	G
1	AS	245	G
1	AS	249	G
1	AS	250	U
1	AS	251	G
1	AS	269	G
1	AS	286	U
1	AS	295	A
1	AS	305	U
1	AS	311	C
1	AS	323	A
1	AS	329	U
1	AS	337	G
1	AS	338	A
1	AS	339	C
1	AS	343	U
1	AS	349	A
1	AS	350	C
1	AS	376	G
1	AS	377	A
1	AS	395	A
1	AS	398	A
1	AS	402	A
1	AS	403	C
1	AS	404	G
1	AS	420	G
1	AS	421	G
1	AS	422	A
1	AS	438	A
1	AS	439	C
1	AS	440	U
1	AS	441	U
1	AS	442	G
1	AS	443	G
1	AS	444	U
1	AS	445	A
1	AS	446	U
1	AS	447	U

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Mol	Chain	Res	Type
1	AS	479	C
1	AS	480	G
1	AS	481	G
1	AS	482	U
1	AS	485	A
1	AS	486	C
1	AS	487	C
1	AS	506	A
1	AS	517	A
1	AS	519	U
1	AS	531	G
1	AS	532	U
1	AS	538	G
1	AS	539	G
1	AS	541	U
1	AS	542	U
1	AS	543	C
1	AS	544	U
1	AS	545	G
1	AS	546	C
1	AS	555	A
1	AS	556	U
1	AS	557	A
1	AS	564	G
1	AS	577	G
1	AS	589	G
1	AS	590	A
1	AS	598	U
1	AS	600	U
1	AS	601	U
1	AS	602	A
1	AS	609	A
1	AS	618	U
1	AS	619	A
1	AS	620	A
1	AS	635	C
1	AS	647	A
1	AS	658	A
1	AS	675	A
1	AS	679	U
1	AS	688	A
1	AS	689	A

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Mol	Chain	Res	Type
1	AS	703	A
1	AS	710	G
1	AS	713	A
1	AS	717	A
1	AS	723	G
1	AS	730	A
1	AS	732	U
1	AS	760	U
1	AS	763	U
1	AS	772	U
1	AS	773	U
1	AS	776	A
1	AS	777	G
1	AS	780	A
1	AS	781	G
1	AS	802	A
1	AS	812	A
1	AS	813	A
1	AS	826	A
1	AS	845	C
1	AS	857	C
1	AS	861	U
1	AS	870	U
1	AS	875	U
1	AS	893	U
1	AS	903	G
1	AS	904	G
1	AS	910	A
1	AS	912	G
1	AS	913	A
1	AS	917	A
1	AS	919	C
1	AS	921	A
1	AS	933	G
1	AS	940	C
1	AS	949	G
1	AS	955	C
1	AS	956	U
1	AS	959	G
1	AS	970	G
1	AS	976	A
1	AS	977	U

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Mol	Chain	Res	Type
1	AS	990	G
1	AS	991	U
1	AS	996	C
1	AS	997	G
1	AS	998	A
1	AS	1006	G
1	AS	1011	C
1	AS	1012	U
1	AS	1014	G
1	AS	1019	U
1	AS	1020	G
1	AS	1022	A
1	AS	1023	A
1	AS	1024	U
1	AS	1025	G
1	AS	1026	A
1	AS	1027	C
1	AS	1030	U
1	AS	1033	C
1	AS	1043	A
1	AS	1045	C
1	AS	1060	A
1	AS	1061	A
1	AS	1068	G
1	AS	1077	U
1	AS	1078	U
1	AS	1089	A
1	AS	1090	A
1	AS	1091	U
1	AS	1092	U
1	AS	1094	A
1	AS	1099	A
1	AS	1100	G
1	AS	1113	G
1	AS	1127	G
1	AS	1140	U
1	AS	1149	A
1	AS	1150	A
1	AS	1151	C
1	AS	1155	A
1	AS	1156	C
1	AS	1164	U

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Mol	Chain	Res	Type
1	AS	1174	G
1	AS	1176	A
1	AS	1177	U
1	AS	1178	G
1	AS	1188	C
1	AS	1189	A
1	AS	1192	C
1	AS	1197	C
1	AS	1204	U
1	AS	1205	G
1	AS	1217	A
1	AS	1218	G
1	AS	1219	A
1	AS	1220	C
1	AS	1224	C
1	AS	1228	C
1	AS	1231	U
1	AS	1232	G
1	AS	1233	G
1	AS	1252	G
1	AS	1254	U
1	AS	1255	A
1	AS	1256	A
1	AS	1258	G
1	AS	1259	A
1	AS	1260	G
1	AS	1261	U
1	AS	1263	U
1	AS	1264	G
1	AS	1265	U
1	AS	1266	A
1	AS	1271	C
1	AS	1273	C
1	AS	1278	G
1	AS	1281	G
1	AS	1282	A
1	AS	1283	A
1	AS	1303	G
1	AS	1304	A
1	AS	1305	U
1	AS	1309	G
1	AS	1312	C

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Mol	Chain	Res	Type
1	AS	1326	A
1	AS	1345	G
1	AS	1346	U
1	AS	1347	U
1	AS	1348	U
1	AS	1350	G
1	AS	1351	A
1	AS	1382	A
1	AS	1388	G
1	AS	1395	U
1	AS	1415	A
1	AS	1417	G
1	AS	1421	U
1	AS	1427	G
1	AS	1430	G
1	AS	1433	C
1	AS	1442	A
1	AS	1446	G
1	AS	1465	C
1	AS	1471	A
1	AS	1477	A
1	AS	1484	G
1	AS	1498	C
1	AS	1504	C
1	AS	1520	A
1	AS	1523	C
1	AS	1532	G
1	AS	1535	A
1	AS	1552	C
1	AS	1556	G
1	AS	1558	G
1	AS	1559	C
1	AS	1560	U
1	AS	1561	U
1	AS	1562	G
1	AS	1563	A
1	AS	1564	U
1	AS	1565	U
1	AS	1566	U
1	AS	1567	U
1	AS	1568	U
1	AS	1569	C

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Mol	Chain	Res	Type
1	AS	1571	G
1	AS	1572	G
1	AS	1574	C
1	AS	1576	A
1	AS	1577	C
1	AS	1585	A
1	AS	1589	A
1	AS	1601	A
1	AS	1603	U
1	AS	1624	C
1	AS	1625	U
1	AS	1635	C
1	AS	1638	A
1	AS	1639	A
1	AS	1641	U
1	AS	1648	G
1	AS	1654	G
1	AS	1679	A
1	AS	1720	U
1	AS	1721	C
1	AS	1732	G
1	AS	1746	A
1	AS	1747	G
1	AS	1755	U
1	AS	1756	A
1	AS	1757	A
1	AS	1758	U
1	AS	1759	U
1	AS	1761	U
1	AS	1762	G
1	AS	1763	C
1	AS	1776	G
1	AS	1793	A
1	AS	1804	G
1	AS	1809	A
1	AS	1810	A
1	AS	1811	U
1	AS	1812	A
1	AS	1814	U
1	AS	1815	U
1	AS	1816	U
1	AS	1817	U

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Mol	Chain	Res	Type
1	AS	1835	A
1	AS	1837	A
1	AS	1838	A
1	AS	1842	C
1	AS	1845	C
1	AS	1862	C
1	AS	1874	G
1	AS	1882	A
1	AS	1889	A
1	AS	1902	G
1	AS	1931	G
1	AS	1944	G
1	AS	1949	G
1	AS	2063	C
1	AS	2064	A
1	AS	2065	C
1	AS	2066	G
1	AS	2067	U
1	AS	2068	U
1	AS	2069	U
1	AS	2070	A
1	AS	2071	A
1	AS	2078	A
1	AS	2088	G
1	AS	2089	G
1	AS	2091	A
1	AS	2092	C
1	AS	2099	G
1	AS	2100	G
1	AS	2109	A
1	AS	2118	U
1	AS	2122	A
1	AS	2136	A
1	AS	2147	G
1	AS	2149	G
1	AS	2183	U
1	AS	2184	G
1	AS	2185	A
1	AS	2186	A
1	AS	2187	U
1	AS	2188	G
1	AS	2201	A

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Mol	Chain	Res	Type
1	AS	2222	A
1	AS	2227	G
1	AS	2233	A
1	AS	2234	A
1	AS	2235	C
1	AS	2250	G
1	AS	2251	G
1	AS	2257	A
1	AS	2259	A
1	AS	2260	U
1	AS	2276	U
1	AS	2285	G
1	AS	2286	C
1	AS	2288	U
1	AS	2291	A
1	AS	2292	U
1	AS	2293	G
1	AS	2312	U
1	AS	2313	G
1	AS	2314	U
1	AS	2351	A
1	AS	2352	C
1	AS	2353	G
1	AS	2363	G
1	AS	2366	U
1	AS	2371	G
1	AS	2372	G
1	AS	2375	A
1	AS	2380	A
1	AS	2381	G
1	AS	2382	A
1	AS	2389	U
1	AS	2413	G
1	AS	2421	A
1	AS	2422	C
1	AS	2423	A
1	AS	2425	G
1	AS	2426	G
1	AS	2427	A
1	AS	2428	G
1	AS	2429	G
1	AS	2430	G

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Mol	Chain	Res	Type
1	AS	2431	U
1	AS	2432	G
1	AS	2433	U
1	AS	2434	A
1	AS	2435	G
1	AS	2436	A
1	AS	2437	A
1	AS	2439	A
1	AS	2440	A
1	AS	2441	G
1	AS	2442	U
1	AS	2443	G
1	AS	2444	G
1	AS	2445	G
1	AS	2446	A
1	AS	2447	G
1	AS	2448	C
1	AS	2449	U
1	AS	2450	U
1	AS	2452	G
1	AS	2453	G
1	AS	2455	G
1	AS	2456	C
1	AS	2457	C
1	AS	2458	G
1	AS	2459	G
1	AS	2464	A
1	AS	2465	U
1	AS	2466	A
1	AS	2467	C
1	AS	2468	C
1	AS	2469	A
1	AS	2471	U
1	AS	2472	A
1	AS	2473	C
1	AS	2474	C
1	AS	2475	U
1	AS	2476	C
1	AS	2477	U
1	AS	2478	A
1	AS	2480	A
1	AS	2481	G

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Mol	Chain	Res	Type
1	AS	2482	U
1	AS	2483	U
1	AS	2489	A
1	AS	2492	U
1	AS	2493	A
1	AS	2511	G
1	AS	2513	A
1	AS	2515	G
1	AS	2516	U
1	AS	2517	C
1	AS	2518	A
1	AS	2519	A
1	AS	2520	A
1	AS	2521	C
1	AS	2529	U
1	AS	2530	C
1	AS	2533	G
1	AS	2536	U
1	AS	2538	A
1	AS	2545	C
1	AS	2546	U
1	AS	2554	C
1	AS	2557	G
1	AS	2565	A
1	AS	2566	C
1	AS	2578	G
1	AS	2579	G
1	AS	2586	G
1	AS	2598	A
1	AS	2607	A
1	AS	2623	G
1	AS	2624	U
1	AS	2628	A
1	AS	2646	A
1	AS	2649	G
1	AS	2661	A
1	AS	2662	G
1	AS	2663	A
1	AS	2666	A
1	AS	2676	A
1	AS	2677	A
1	AS	2686	G

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Mol	Chain	Res	Type
1	AS	2699	A
1	AS	2700	G
1	AS	2701	U
1	AS	2724	U
1	AS	2725	G
1	AS	2734	A
1	AS	2745	C
1	AS	2749	G
1	AS	2750	G
1	AS	2768	G
1	AS	2770	C
1	AS	2771	A
1	AS	2772	G
1	AS	2773	A
1	AS	2774	A
1	AS	2782	C
1	AS	2786	G
1	AS	2789	A
1	AS	2790	U
1	AS	2814	U
1	AS	2815	U
1	AS	2817	A
1	AS	2833	U
1	AS	2839	C
1	AS	2843	G
1	AS	2844	A
1	AS	2847	U
1	AS	2859	A
1	AS	2861	C
1	AS	2866	C
1	AS	2870	G
1	AS	2871	C
1	AS	2886	G
1	AS	2895	U
1	AS	2907	U
1	AS	2908	A
1	AS	2911	G
1	AS	2914	C
1	AS	2919	G
1	AS	2920	C
1	AS	2923	G
1	AS	2926	U

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Mol	Chain	Res	Type
1	AS	2943	A
1	AS	2955	C
1	AS	2960	C
1	AS	2962	G
1	AS	2969	G
1	AS	2984	A
1	AS	3021	A
1	AS	3028	U
1	AS	3031	G
1	AS	3050	A
1	AS	3051	C
1	AS	3052	G
1	AS	3058	A
1	AS	3064	C
1	AS	3076	U
1	AS	3094	A
1	AS	3101	A
1	AS	3102	A
1	AS	3103	U
1	AS	3114	A
1	AS	3115	C
1	AS	3134	C
1	AS	3143	G
1	AS	3144	A
1	AS	3146	G
1	AS	3149	U
1	AS	3151	C
1	AS	3157	A
1	AS	3159	A
1	AS	3160	C
1	AS	3161	U
1	AS	3162	U
1	AS	3163	U
1	AS	3164	U
1	AS	3165	U
1	AS	3167	G
1	AS	3168	U
1	AS	3171	C
1	AS	3172	U
1	AS	3182	C
1	AS	3183	A
1	AS	3184	G

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Mol	Chain	Res	Type
1	AS	3194	G
1	AS	3208	A
1	AS	3210	A
1	AS	3212	G
1	AS	3214	U
1	AS	3224	U
1	AS	3228	G
1	AS	3235	A
1	AS	3241	G
1	AS	3246	C
1	AS	3252	C
1	AS	3259	A
1	AS	3260	A
1	AS	3268	G
1	AS	3269	C
1	AS	3272	A
1	AS	3278	U
1	AS	3281	A
1	AS	3284	U
1	AS	3285	A
1	AS	3306	U
1	AS	3307	A
1	AS	3309	A
1	AS	3310	G
1	AS	3316	U
1	AS	3317	U
1	AS	3318	G
1	AS	3319	U
1	AS	3320	U
1	AS	3321	G
1	AS	3334	G
1	AS	3343	C
1	AS	3351	G
1	AS	3361	U
2	AT	7	G
2	AT	22	A
2	AT	54	U
2	AT	55	A
2	AT	65	G
2	AT	73	C
2	AT	76	A
2	AT	102	A

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Mol	Chain	Res	Type
2	AT	112	G
3	AU	23	U
3	AU	34	U
3	AU	35	C
3	AU	59	A
3	AU	62	C
3	AU	63	G
3	AU	81	A
3	AU	84	C
3	AU	85	G
3	AU	86	U
3	AU	87	G
3	AU	92	A
3	AU	95	G
3	AU	102	U
3	AU	104	A
3	AU	105	A
3	AU	106	C
3	AU	111	A
3	AU	113	U
3	AU	125	U
3	AU	126	A
3	AU	152	G
3	AU	157	U
46	CM	17	C
46	CM	25	C
46	CM	26	A
46	CM	27	U
46	CM	34	G
46	CM	47	A
46	CM	57	G
46	CM	65	A
46	CM	66	U
46	CM	74	U
46	CM	75	U
46	CM	76	A
46	CM	78	A
46	CM	79	C
46	CM	81	G
46	CM	84	A
46	CM	114	C
46	CM	115	G

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Mol	Chain	Res	Type
46	CM	123	G
46	CM	126	A
46	CM	127	G
46	CM	128	U
46	CM	129	A
46	CM	138	C
46	CM	139	U
46	CM	141	G
46	CM	142	G
46	CM	143	A
46	CM	150	U
46	CM	151	G
46	CM	152	G
46	CM	154	A
46	CM	159	U
46	CM	166	A
46	CM	168	U
46	CM	173	G
46	CM	176	U
46	CM	177	A
46	CM	190	U
46	CM	191	U
46	CM	193	G
46	CM	199	G
46	CM	200	A
46	CM	201	U
46	CM	202	G
46	CM	206	U
46	CM	211	A
46	CM	213	A
46	CM	214	U
46	CM	215	A
46	CM	217	A
46	CM	218	A
46	CM	219	A
46	CM	220	A
46	CM	221	U
46	CM	222	C
46	CM	223	A
46	CM	226	G
46	CM	229	U
46	CM	230	U

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Mol	Chain	Res	Type
46	CM	231	C
46	CM	232	G
46	CM	236	U
46	CM	237	C
46	CM	238	U
46	CM	239	U
46	CM	247	U
46	CM	255	A
46	CM	259	U
46	CM	260	U
46	CM	261	C
46	CM	262	G
46	CM	266	C
46	CM	269	A
46	CM	270	U
46	CM	273	C
46	CM	274	C
46	CM	275	U
46	CM	276	U
46	CM	277	G
46	CM	278	U
46	CM	279	G
46	CM	283	G
46	CM	285	G
46	CM	297	A
46	CM	312	C
46	CM	314	A
46	CM	318	U
46	CM	319	C
46	CM	320	G
46	CM	335	G
46	CM	336	C
46	CM	350	A
46	CM	357	A
46	CM	358	A
46	CM	359	C
46	CM	388	G
46	CM	398	A
46	CM	400	C
46	CM	402	G
46	CM	414	A
46	CM	416	G

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Mol	Chain	Res	Type
46	CM	421	G
46	CM	422	C
46	CM	423	A
46	CM	424	G
46	CM	432	G
46	CM	437	U
46	CM	442	C
46	CM	446	C
46	CM	452	A
46	CM	458	A
46	CM	466	A
46	CM	475	A
46	CM	480	U
46	CM	482	C
46	CM	483	A
46	CM	485	G
46	CM	486	G
46	CM	501	G
46	CM	502	U
46	CM	503	A
46	CM	504	A
46	CM	505	U
46	CM	506	U
46	CM	509	A
46	CM	512	G
46	CM	513	A
46	CM	515	U
46	CM	518	A
46	CM	519	A
46	CM	525	A
46	CM	530	U
46	CM	534	C
46	CM	536	A
46	CM	537	G
46	CM	539	A
46	CM	540	A
46	CM	547	G
46	CM	553	A
46	CM	554	A
46	CM	555	G
46	CM	556	U
46	CM	557	C

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Mol	Chain	Res	Type
46	CM	563	C
46	CM	566	G
46	CM	575	G
46	CM	576	U
46	CM	592	A
46	CM	593	G
46	CM	604	A
46	CM	609	U
46	CM	617	A
46	CM	618	A
46	CM	620	A
46	CM	621	A
46	CM	633	A
46	CM	639	G
46	CM	648	U
46	CM	650	G
46	CM	652	C
46	CM	653	G
46	CM	654	G
46	CM	656	C
46	CM	675	U
46	CM	682	A
46	CM	686	G
46	CM	687	A
46	CM	688	G
46	CM	694	C
46	CM	695	C
46	CM	696	U
46	CM	697	U
46	CM	698	C
46	CM	699	U
46	CM	701	G
46	CM	702	G
46	CM	703	U
46	CM	704	A
46	CM	705	G
46	CM	706	C
46	CM	707	C
46	CM	708	A
46	CM	709	U
46	CM	711	U
46	CM	712	A

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Mol	Chain	Res	Type
46	CM	713	U
46	CM	716	C
46	CM	717	G
46	CM	719	A
46	CM	720	C
46	CM	721	C
46	CM	722	A
46	CM	723	G
46	CM	724	G
46	CM	725	A
46	CM	729	U
46	CM	739	A
46	CM	740	A
46	CM	741	A
46	CM	750	G
46	CM	751	U
46	CM	756	A
46	CM	759	A
46	CM	760	G
46	CM	762	C
46	CM	764	U
46	CM	765	U
46	CM	766	U
46	CM	767	G
46	CM	768	C
46	CM	770	C
46	CM	771	G
46	CM	773	A
46	CM	775	A
46	CM	778	U
46	CM	779	U
46	CM	796	A
46	CM	798	A
46	CM	799	G
46	CM	802	C
46	CM	803	G
46	CM	804	U
46	CM	805	U
46	CM	807	U
46	CM	808	G
46	CM	812	C
46	CM	814	A

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Mol	Chain	Res	Type
46	CM	815	U
46	CM	816	U
46	CM	818	U
46	CM	819	G
46	CM	820	U
46	CM	821	U
46	CM	823	G
46	CM	824	U
46	CM	825	U
46	CM	826	U
46	CM	827	C
46	CM	828	U
46	CM	829	A
46	CM	840	A
46	CM	842	U
46	CM	848	A
46	CM	856	G
46	CM	857	G
46	CM	869	A
46	CM	871	U
46	CM	875	C
46	CM	877	G
46	CM	878	U
46	CM	879	U
46	CM	881	U
46	CM	891	A
46	CM	899	G
46	CM	909	A
46	CM	910	G
46	CM	911	A
46	CM	918	A
46	CM	920	U
46	CM	927	G
46	CM	945	U
46	CM	951	A
46	CM	973	A
46	CM	975	C
46	CM	977	A
46	CM	988	A
46	CM	989	U
46	CM	997	U
46	CM	998	A

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Mol	Chain	Res	Type
46	CM	1004	A
46	CM	1005	A
46	CM	1011	A
46	CM	1013	C
46	CM	1017	G
46	CM	1024	A
46	CM	1025	G
46	CM	1039	U
46	CM	1042	U
46	CM	1043	U
46	CM	1044	U
46	CM	1047	U
46	CM	1055	A
46	CM	1056	U
46	CM	1057	C
46	CM	1058	G
46	CM	1059	G
46	CM	1060	C
46	CM	1061	A
46	CM	1067	C
46	CM	1074	U
46	CM	1077	A
46	CM	1081	C
46	CM	1085	G
46	CM	1123	A
46	CM	1135	G
46	CM	1143	C
46	CM	1145	A
46	CM	1152	G
46	CM	1168	A
46	CM	1169	A
46	CM	1170	U
46	CM	1179	A
46	CM	1181	A
46	CM	1184	G
46	CM	1185	G
46	CM	1186	G
46	CM	1187	A
46	CM	1193	A
46	CM	1202	A
46	CM	1203	G
46	CM	1207	C

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Mol	Chain	Res	Type
46	CM	1212	A
46	CM	1215	A
46	CM	1219	A
46	CM	1220	C
46	CM	1221	A
46	CM	1229	A
46	CM	1230	G
46	CM	1231	C
46	CM	1234	U
46	CM	1236	U
46	CM	1243	U
46	CM	1250	G
46	CM	1253	G
46	CM	1270	U
46	CM	1284	G
46	CM	1299	U
46	CM	1300	U
46	CM	1301	G
46	CM	1306	A
46	CM	1325	U
46	CM	1330	A
46	CM	1336	G
46	CM	1339	G
46	CM	1342	A
46	CM	1343	G
46	CM	1345	A
46	CM	1346	U
46	CM	1348	U
46	CM	1349	G
46	CM	1352	G
46	CM	1355	A
46	CM	1356	U
46	CM	1357	A
46	CM	1358	G
46	CM	1359	U
46	CM	1360	C
46	CM	1364	U
46	CM	1365	C
46	CM	1369	G
46	CM	1370	A
46	CM	1376	U
46	CM	1380	G

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Mol	Chain	Res	Type
46	CM	1381	A
46	CM	1382	U
46	CM	1384	U
46	CM	1385	C
46	CM	1392	A
46	CM	1397	A
46	CM	1398	G
46	CM	1399	U
46	CM	1400	U
46	CM	1401	U
46	CM	1410	A
46	CM	1413	A
46	CM	1414	G
46	CM	1415	G
46	CM	1422	A
46	CM	1431	G
46	CM	1433	C
46	CM	1445	C
46	CM	1446	A
46	CM	1455	A
46	CM	1457	A
46	CM	1458	C
46	CM	1461	A
46	CM	1462	C
46	CM	1463	G
46	CM	1468	C
46	CM	1476	A
46	CM	1483	U
46	CM	1491	G
46	CM	1502	A
46	CM	1503	A
46	CM	1508	G
46	CM	1510	G
46	CM	1511	A
46	CM	1523	G
46	CM	1524	C
46	CM	1529	G
46	CM	1530	A
46	CM	1541	U
46	CM	1544	U
46	CM	1546	G
46	CM	1556	A

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Mol	Chain	Res	Type
46	CM	1560	A
46	CM	1561	G
46	CM	1571	G
46	CM	1574	A
46	CM	1575	G
46	CM	1577	G
46	CM	1580	A
46	CM	1582	U
46	CM	1584	A
46	CM	1588	G
46	CM	1589	C
46	CM	1621	C
46	CM	1644	U
46	CM	1645	G
46	CM	1665	C
46	CM	1667	G
46	CM	1670	U
46	CM	1671	G
46	CM	1672	G
46	CM	1673	U
46	CM	1674	U
46	CM	1677	G
46	CM	1700	G
46	CM	1704	C
46	CM	1737	A
46	CM	1743	A
46	CM	1744	G
46	CM	1747	G
46	CM	1749	A
46	CM	1753	A
46	CM	1756	U
46	CM	1767	G
46	CM	1770	C
46	CM	1779	G
46	CM	1780	G
46	CM	1781	A
46	CM	1782	U
46	CM	1783	C

All (197) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type

Mol	Chain	Res	Type
1	1	172	C
1	1	403	C
1	1	476	C
1	1	480	G
1	1	485	A
1	1	538	G
1	1	563	U
1	1	759	G
1	1	912	G
1	1	997	G
1	1	1012	U
1	1	1029	U
1	1	1060	A
1	1	1099	A
1	1	1346	U
1	1	1347	U
1	1	1559	C
1	1	1561	U
1	1	1576	A
1	1	1762	G
1	1	1815	U
1	1	1943	G
1	1	2090	U
1	1	2182	C
1	1	2183	U
1	1	2441	G
1	1	2442	U
1	1	2447	G
1	1	2455	G
1	1	2465	U
1	1	2476	C
1	1	2515	G
1	1	2519	A
1	1	2545	C
1	1	2663	A
1	1	2789	A
1	1	3093	U
1	1	3193	C
1	1	3234	U
1	1	3240	U
1	1	3284	U

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Mol	Chain	Res	Type
1	1	3309	A
1	1	3317	U
3	4	85	G
3	4	125	U
3	4	156	U
46	B	25	C
46	B	78	A
46	B	129	A
46	B	137	A
46	B	151	G
46	B	176	U
46	B	214	U
46	B	215	A
46	B	216	A
46	B	235	C
46	B	259	U
46	B	265	U
46	B	278	U
46	B	415	A
46	B	451	C
46	B	502	U
46	B	504	A
46	B	505	U
46	B	514	G
46	B	518	A
46	B	529	C
46	B	533	A
46	B	553	A
46	B	556	U
46	B	638	U
46	B	685	C
46	B	740	A
46	B	763	C
46	B	769	U
46	B	814	A
46	B	855	C
46	B	874	U
46	B	876	A
46	B	1168	A
46	B	1335	U
46	B	1369	G
46	B	1396	A

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Mol	Chain	Res	Type
46	B	1398	G
46	B	1457	A
46	B	1467	C
46	B	1479	A
46	B	1484	U
46	B	1523	G
46	B	1573	A
46	B	1579	A
46	B	1581	G
1	AS	172	C
1	AS	403	C
1	AS	443	G
1	AS	478	G
1	AS	479	C
1	AS	480	G
1	AS	538	G
1	AS	563	U
1	AS	601	U
1	AS	759	G
1	AS	912	G
1	AS	1029	U
1	AS	1060	A
1	AS	1099	A
1	AS	1217	A
1	AS	1346	U
1	AS	1347	U
1	AS	1559	C
1	AS	1576	A
1	AS	1762	G
1	AS	1815	U
1	AS	1943	G
1	AS	2090	U
1	AS	2182	C
1	AS	2183	U
1	AS	2430	G
1	AS	2431	U
1	AS	2434	A
1	AS	2447	G
1	AS	2448	C
1	AS	2449	U
1	AS	2452	G
1	AS	2455	G

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Mol	Chain	Res	Type
1	AS	2458	G
1	AS	2465	U
1	AS	2476	C
1	AS	2515	G
1	AS	2519	A
1	AS	2545	C
1	AS	2789	A
1	AS	2790	U
1	AS	3093	U
1	AS	3160	C
1	AS	3162	U
1	AS	3193	C
1	AS	3234	U
1	AS	3240	U
1	AS	3284	U
1	AS	3309	A
1	AS	3315	C
1	AS	3317	U
3	AU	85	G
3	AU	125	U
3	AU	156	U
46	CM	25	C
46	CM	65	A
46	CM	78	A
46	CM	137	A
46	CM	151	G
46	CM	176	U
46	CM	216	A
46	CM	238	U
46	CM	259	U
46	CM	265	U
46	CM	278	U
46	CM	415	A
46	CM	451	C
46	CM	482	C
46	CM	502	U
46	CM	504	A
46	CM	505	U
46	CM	514	G
46	CM	518	A
46	CM	529	C
46	CM	533	A

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Mol	Chain	Res	Type
46	CM	553	A
46	CM	556	U
46	CM	638	U
46	CM	685	C
46	CM	702	G
46	CM	711	U
46	CM	719	A
46	CM	740	A
46	CM	763	C
46	CM	769	U
46	CM	814	A
46	CM	817	U
46	CM	823	G
46	CM	855	C
46	CM	874	U
46	CM	876	A
46	CM	1168	A
46	CM	1335	U
46	CM	1357	A
46	CM	1359	U
46	CM	1369	G
46	CM	1396	A
46	CM	1398	G
46	CM	1457	A
46	CM	1467	C
46	CM	1523	G
46	CM	1555	C
46	CM	1573	A
46	CM	1579	A
46	CM	1581	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 1476 ligands modelled in this entry, 1466 are monoatomic - leaving 10 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
82	3K5	CJ	202	-	63,63,63	0.32	0	84,95,95	0.61	2 (2%)
83	PAR	B	1970	-	44,45,45	0.57	0	63,67,67	1.76	13 (20%)
83	PAR	CM	1946	-	44,45,45	0.44	0	63,67,67	0.77	2 (3%)
83	PAR	1	3967	-	44,45,45	0.49	0	63,67,67	1.19	5 (7%)
82	3K5	1	3406	-	63,63,63	2.89	33 (52%)	84,95,95	2.00	22 (26%)
83	PAR	AS	3788	-	44,45,45	0.61	1 (2%)	63,67,67	1.10	3 (4%)
83	PAR	AS	3790	-	44,45,45	0.54	0	63,67,67	1.29	5 (7%)
83	PAR	1	3969	-	44,45,45	0.68	1 (2%)	63,67,67	1.72	12 (19%)
83	PAR	1	3968	-	44,45,45	0.53	0	63,67,67	1.12	5 (7%)
83	PAR	AS	3789	-	44,45,45	0.50	0	63,67,67	0.74	1 (1%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
82	3K5	CJ	202	-	-	13/29/121/121	0/7/7/7
83	PAR	B	1970	-	-	13/18/94/94	0/4/4/4
83	PAR	CM	1946	-	-	4/18/94/94	0/4/4/4
83	PAR	1	3967	-	-	9/18/94/94	0/4/4/4
82	3K5	1	3406	-	-	6/29/121/121	0/7/7/7
83	PAR	AS	3788	-	-	6/18/94/94	0/4/4/4
83	PAR	AS	3790	-	-	8/18/94/94	1/4/4/4
83	PAR	1	3969	-	-	10/18/94/94	0/4/4/4
83	PAR	1	3968	-	-	7/18/94/94	1/4/4/4
83	PAR	AS	3789	-	-	10/18/94/94	0/4/4/4

All (35) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	1	3406	3K5	C17-C22	-8.62	1.35	1.53
82	1	3406	3K5	O4-C22	7.55	1.60	1.43
82	1	3406	3K5	C21-C22	5.72	1.62	1.52
82	1	3406	3K5	C37-C36	-4.89	1.39	1.51
82	1	3406	3K5	O6-C23	4.70	1.45	1.34
82	1	3406	3K5	C29-C28	-4.64	1.40	1.51
82	1	3406	3K5	O12-C36	4.61	1.55	1.44
82	1	3406	3K5	O4-C3	-4.27	1.32	1.42
82	1	3406	3K5	O1-C6	4.25	1.43	1.34
82	1	3406	3K5	O-C2	4.24	1.49	1.43
82	1	3406	3K5	C21-C20	-3.96	1.45	1.53
82	1	3406	3K5	O7-C28	3.79	1.53	1.44
82	1	3406	3K5	C18-C17	3.66	1.59	1.53
82	1	3406	3K5	C20-C23	3.59	1.60	1.51
82	1	3406	3K5	C26-C25	-3.40	1.45	1.52
82	1	3406	3K5	O14-C38	3.36	1.42	1.35
82	1	3406	3K5	O9-C30	3.27	1.42	1.35
83	1	3969	PAR	C11-C21	-3.12	1.46	1.52
82	1	3406	3K5	O14-C34	3.10	1.49	1.44
82	1	3406	3K5	C7-C6	2.93	1.54	1.48
82	1	3406	3K5	O9-C26	2.85	1.49	1.44
82	1	3406	3K5	C9-C8	2.65	1.55	1.47
82	1	3406	3K5	C4-C3	2.60	1.57	1.52
83	AS	3788	PAR	C11-C21	2.59	1.57	1.52
82	1	3406	3K5	O11-C25	2.58	1.50	1.43
82	1	3406	3K5	C2-C1	2.44	1.55	1.51
82	1	3406	3K5	O-C3	2.40	1.45	1.42
82	1	3406	3K5	C15-C3	2.35	1.60	1.52
82	1	3406	3K5	C1-C5	-2.33	1.47	1.52
82	1	3406	3K5	O16-C33	2.25	1.48	1.43
82	1	3406	3K5	C-C1	2.11	1.58	1.53
82	1	3406	3K5	O12-C32	2.10	1.47	1.41
82	1	3406	3K5	C4-C5	-2.06	1.48	1.52
82	1	3406	3K5	O7-C24	2.04	1.47	1.41
82	1	3406	3K5	O6-C24	-2.01	1.39	1.43

All (70) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	B	1970	PAR	C13-C23-C33	-8.07	92.40	102.10
82	1	3406	3K5	O14-C38-C39	6.75	123.12	111.09
82	1	3406	3K5	C9-C8-C7	-6.64	112.41	126.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	AS	3788	PAR	O11-C11-C21	5.81	117.58	108.08
83	1	3969	PAR	C52-C42-C32	-5.67	100.80	111.31
83	1	3969	PAR	O54-C54-C64	5.40	116.45	106.07
83	1	3969	PAR	O11-C11-C21	-5.37	99.29	108.08
83	AS	3790	PAR	O54-C14-C24	5.12	121.41	110.08
83	AS	3790	PAR	O11-C11-C21	5.12	116.45	108.08
82	1	3406	3K5	O-C3-C4	5.08	115.63	110.75
83	1	3967	PAR	C13-C23-C33	-4.87	96.24	102.10
82	1	3406	3K5	O9-C30-C31	4.87	119.77	111.09
83	1	3967	PAR	O11-C11-C21	4.27	115.06	108.08
83	1	3968	PAR	O11-C11-C21	4.01	114.63	108.08
83	AS	3789	PAR	O11-C11-C21	3.89	114.44	108.08
82	1	3406	3K5	C37-C36-C35	-3.81	106.12	113.08
83	1	3968	PAR	O54-C14-C24	3.80	118.48	110.08
83	AS	3788	PAR	O33-C14-C24	3.76	114.22	108.08
83	AS	3790	PAR	O33-C14-C24	-3.74	101.95	108.08
83	B	1970	PAR	C13-O52-C52	-3.71	109.19	117.98
83	B	1970	PAR	O54-C14-C24	3.59	118.01	110.08
83	CM	1946	PAR	O11-C11-C21	3.57	113.92	108.08
82	1	3406	3K5	O7-C24-C25	3.52	116.32	109.49
83	B	1970	PAR	O33-C33-C23	-3.45	100.24	111.32
83	1	3969	PAR	O33-C14-C24	3.42	113.68	108.08
82	1	3406	3K5	C21-C20-C23	-3.42	103.53	111.43
82	1	3406	3K5	O6-C23-C20	3.39	118.09	111.79
82	1	3406	3K5	C32-C33-C34	3.32	115.90	110.11
82	1	3406	3K5	C35-C34-C33	3.26	115.39	110.86
82	1	3406	3K5	C2-O-C3	-3.16	111.47	113.51
83	1	3969	PAR	C62-C52-C42	-3.12	104.69	111.72
83	1	3968	PAR	O33-C14-C24	-3.04	103.09	108.08
83	1	3969	PAR	O52-C52-C42	2.96	114.95	107.42
83	B	1970	PAR	C44-C34-C24	2.92	115.85	110.99
83	1	3968	PAR	C32-C22-C12	2.92	116.02	111.02
83	B	1970	PAR	O52-C52-C62	2.91	114.62	107.23
83	B	1970	PAR	C13-O43-C43	-2.84	94.93	105.76
83	1	3969	PAR	O52-C52-C62	2.84	114.45	107.23
82	1	3406	3K5	C24-O6-C23	-2.80	112.84	116.93
82	1	3406	3K5	C32-O11-C25	-2.66	111.67	117.98
82	1	3406	3K5	O4-C22-C21	2.64	118.41	111.53
83	1	3969	PAR	O54-C14-C24	2.63	115.91	110.08
83	B	1970	PAR	O52-C13-O43	2.63	114.05	111.37
83	B	1970	PAR	C32-C22-C12	2.63	115.52	111.02
82	1	3406	3K5	O7-C28-C27	-2.60	104.87	109.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	1	3406	3K5	O1-C5-C1	-2.57	103.58	107.23
82	1	3406	3K5	C5-O1-C6	2.51	121.20	117.50
82	1	3406	3K5	O4-C3-C4	-2.50	105.67	109.89
83	B	1970	PAR	C52-C42-C32	2.46	115.86	111.31
83	AS	3790	PAR	C32-C22-C12	2.39	115.11	111.02
83	B	1970	PAR	O52-C52-C42	2.33	113.34	107.42
83	1	3967	PAR	O54-C54-C64	2.27	110.43	106.07
82	1	3406	3K5	O-C3-O4	-2.23	109.37	112.09
83	AS	3790	PAR	O33-C33-C23	-2.22	104.16	111.32
83	1	3969	PAR	C14-O54-C54	2.22	118.06	113.72
83	AS	3788	PAR	O51-C11-C21	2.22	114.98	110.08
83	1	3967	PAR	C52-C42-C32	2.22	115.41	111.31
83	1	3968	PAR	O51-C11-C21	2.20	114.95	110.08
83	B	1970	PAR	C52-C62-C12	-2.20	104.63	109.93
82	1	3406	3K5	C32-O12-C36	-2.19	109.89	113.63
83	1	3969	PAR	C11-O51-C51	2.12	117.86	113.72
82	CJ	202	3K5	C3-C15-C17	2.12	107.65	103.30
83	1	3967	PAR	O33-C14-C24	-2.11	104.63	108.08
83	B	1970	PAR	O11-C11-O51	2.10	116.22	110.69
82	1	3406	3K5	O15-C38-C39	-2.09	117.36	124.77
83	1	3969	PAR	O11-C11-O51	-2.07	105.24	110.69
82	1	3406	3K5	O1-C6-C7	2.07	115.89	111.39
82	CJ	202	3K5	C32-O11-C25	-2.05	113.12	117.98
83	1	3969	PAR	O11-C42-C32	2.04	114.04	109.18
83	CM	1946	PAR	O54-C54-C64	2.01	109.92	106.07

There are no chirality outliers.

All (86) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
82	1	3406	3K5	O15-C38-O14-C34
82	CJ	202	3K5	C39-C38-O14-C34
82	CJ	202	3K5	C35-C34-O14-C38
82	CJ	202	3K5	C31-C30-O9-C26
82	CJ	202	3K5	C6-C7-C8-C9
83	1	3967	PAR	C23-C13-O52-C52
83	1	3967	PAR	O43-C13-O52-C52
83	1	3967	PAR	C43-C33-O33-C14
83	1	3967	PAR	C24-C14-O33-C33
83	1	3967	PAR	C44-C54-C64-N64
83	1	3968	PAR	C44-C54-C64-N64
83	1	3968	PAR	O54-C54-C64-N64

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Mol	Chain	Res	Type	Atoms
83	1	3969	PAR	C23-C13-O52-C52
83	1	3969	PAR	O43-C13-O52-C52
83	1	3969	PAR	C44-C54-C64-N64
83	1	3969	PAR	O54-C54-C64-N64
83	B	1970	PAR	C32-C42-O11-C11
83	B	1970	PAR	C23-C13-O52-C52
83	B	1970	PAR	C24-C14-O33-C33
83	B	1970	PAR	O54-C54-C64-N64
83	AS	3788	PAR	C23-C13-O52-C52
83	AS	3788	PAR	O54-C54-C64-N64
83	AS	3789	PAR	C21-C11-O11-C42
83	AS	3789	PAR	C23-C13-O52-C52
83	AS	3789	PAR	O43-C13-O52-C52
83	AS	3789	PAR	C43-C33-O33-C14
83	AS	3790	PAR	O54-C54-C64-N64
83	CM	1946	PAR	C23-C13-O52-C52
82	1	3406	3K5	C39-C38-O14-C34
82	CJ	202	3K5	O10-C30-O9-C26
83	B	1970	PAR	O54-C14-O33-C33
82	CJ	202	3K5	O15-C38-O14-C34
83	B	1970	PAR	O51-C11-O11-C42
83	AS	3789	PAR	O51-C11-O11-C42
83	1	3968	PAR	O54-C14-O33-C33
83	B	1970	PAR	C41-C51-C61-O61
83	AS	3790	PAR	O43-C43-C53-O53
83	B	1970	PAR	O51-C51-C61-O61
83	AS	3790	PAR	O54-C14-O33-C33
83	AS	3790	PAR	O51-C51-C61-O61
83	1	3967	PAR	O51-C51-C61-O61
83	1	3968	PAR	O51-C51-C61-O61
83	AS	3789	PAR	O51-C51-C61-O61
83	1	3968	PAR	C41-C51-C61-O61
83	AS	3789	PAR	C41-C51-C61-O61
83	AS	3790	PAR	C41-C51-C61-O61
83	AS	3790	PAR	C33-C43-C53-O53
83	1	3969	PAR	O43-C43-C53-O53
82	CJ	202	3K5	O1-C6-C7-C8
83	AS	3790	PAR	C62-C52-O52-C13
82	1	3406	3K5	C1-C5-O1-C6
83	1	3968	PAR	C62-C52-O52-C13
82	CJ	202	3K5	O2-C6-O1-C5
82	CJ	202	3K5	O2-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
83	1	3968	PAR	C42-C52-O52-C13
83	1	3969	PAR	C33-C43-C53-O53
83	AS	3790	PAR	C42-C52-O52-C13
83	1	3969	PAR	O51-C51-C61-O61
83	B	1970	PAR	O43-C13-O52-C52
83	AS	3788	PAR	O43-C13-O52-C52
83	CM	1946	PAR	O43-C13-O52-C52
82	1	3406	3K5	C4-C5-O1-C6
83	1	3967	PAR	C42-C52-O52-C13
83	1	3967	PAR	C41-C51-C61-O61
83	1	3969	PAR	C52-C42-O11-C11
83	1	3967	PAR	C62-C52-O52-C13
82	CJ	202	3K5	C7-C6-O1-C5
83	AS	3789	PAR	C42-C52-O52-C13
83	AS	3789	PAR	C62-C52-O52-C13
82	1	3406	3K5	O2-C6-O1-C5
82	1	3406	3K5	O7-C24-O6-C23
83	1	3969	PAR	C42-C52-O52-C13
83	AS	3788	PAR	C41-C51-C61-O61
83	1	3969	PAR	C62-C52-O52-C13
83	CM	1946	PAR	O54-C54-C64-N64
83	B	1970	PAR	C44-C54-C64-N64
83	CM	1946	PAR	C44-C54-C64-N64
82	CJ	202	3K5	C7-C8-C9-C14
82	CJ	202	3K5	C7-C8-C9-C10
83	B	1970	PAR	O43-C43-C53-O53
83	AS	3788	PAR	O51-C51-C61-O61
83	B	1970	PAR	C52-C42-O11-C11
82	CJ	202	3K5	C21-C20-C23-O6
83	B	1970	PAR	C43-C33-O33-C14
83	AS	3788	PAR	C23-C33-O33-C14
83	AS	3789	PAR	C23-C33-O33-C14

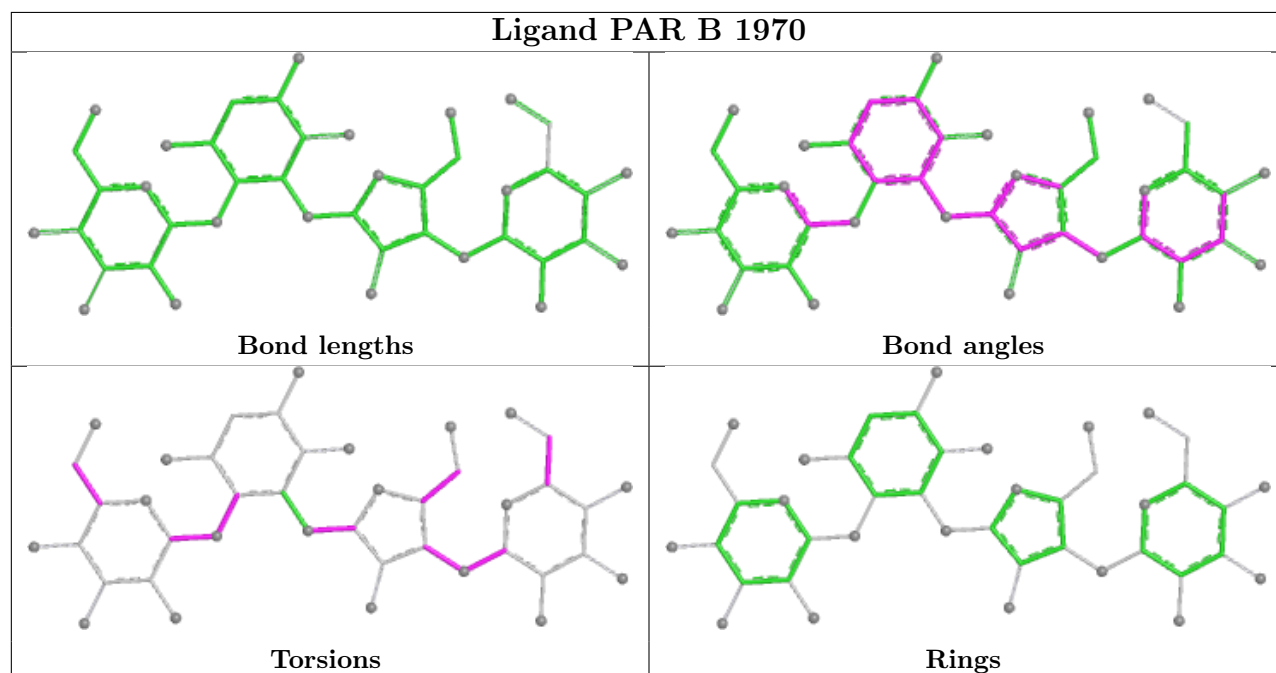
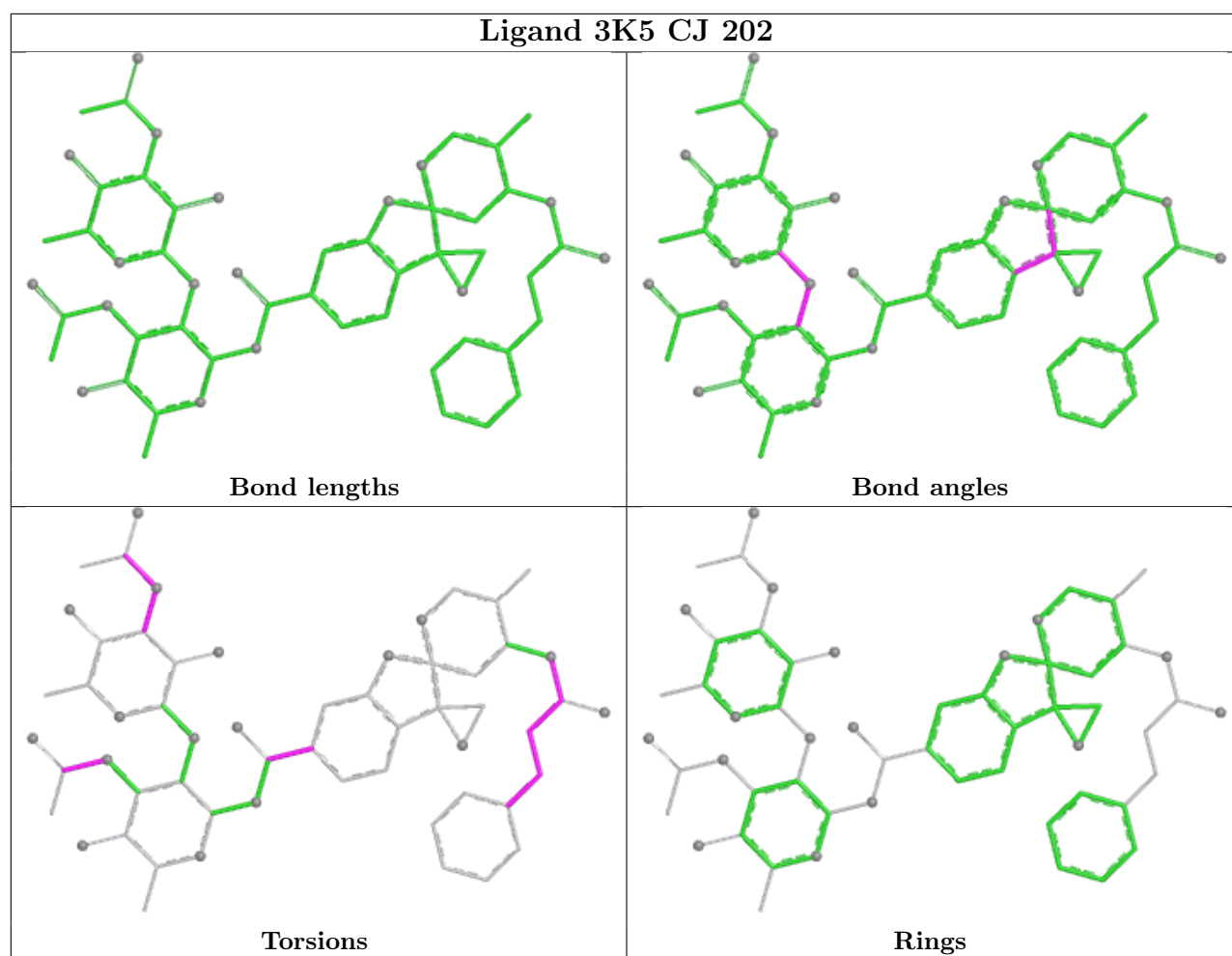
All (2) ring outliers are listed below:

Mol	Chain	Res	Type	Atoms
83	1	3968	PAR	C12-C22-C32-C42-C52-C62
83	AS	3790	PAR	C12-C22-C32-C42-C52-C62

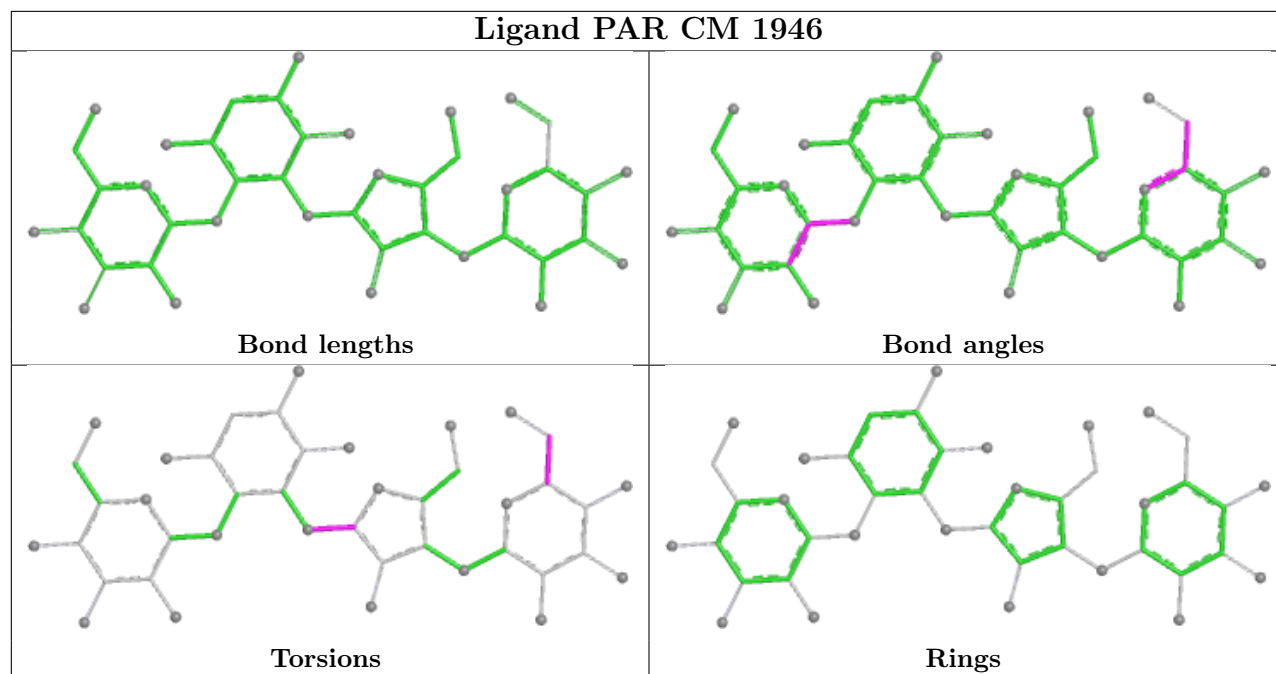
9 monomers are involved in 61 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
82	CJ	202	3K5	7	0
83	B	1970	PAR	18	0
83	1	3967	PAR	1	0
82	1	3406	3K5	7	0
83	AS	3788	PAR	2	0
83	AS	3790	PAR	5	0
83	1	3969	PAR	5	0
83	1	3968	PAR	3	0
83	AS	3789	PAR	13	0

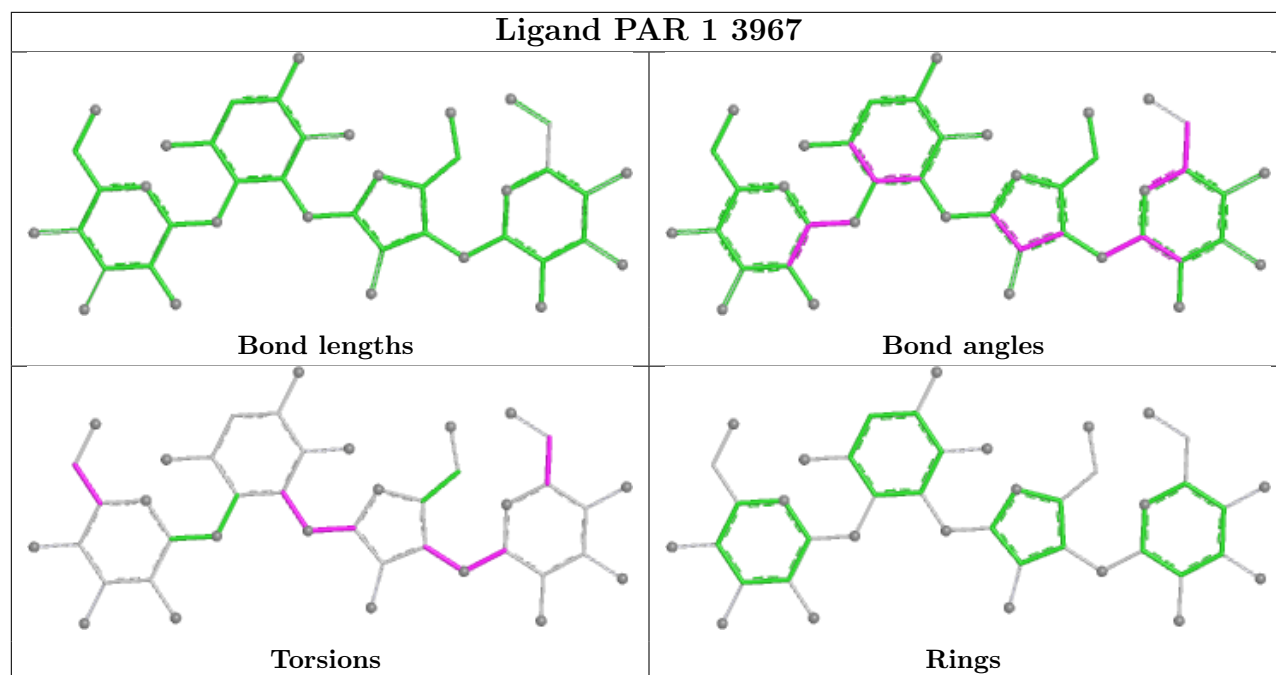
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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



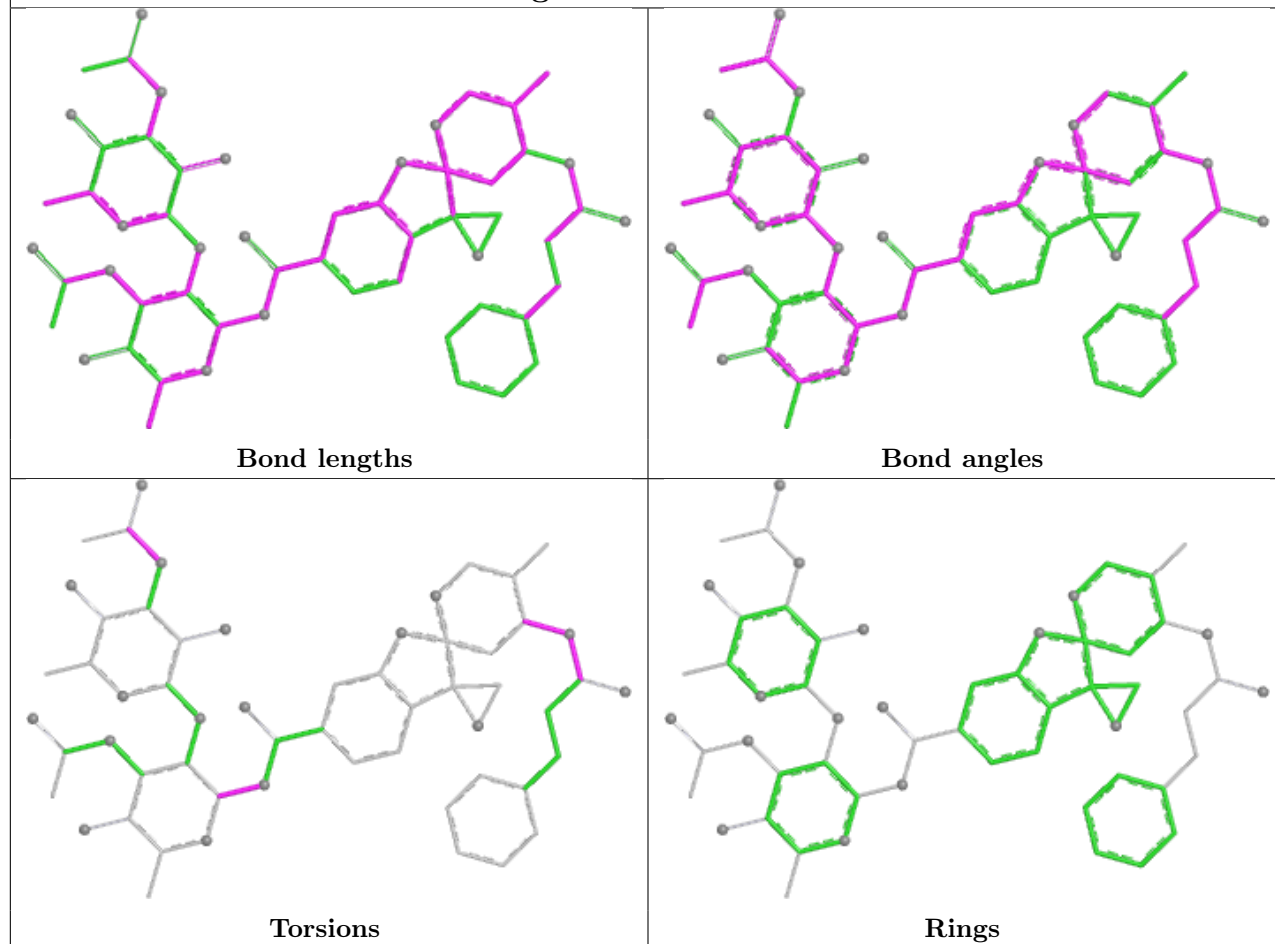
Ligand PAR CM 1946



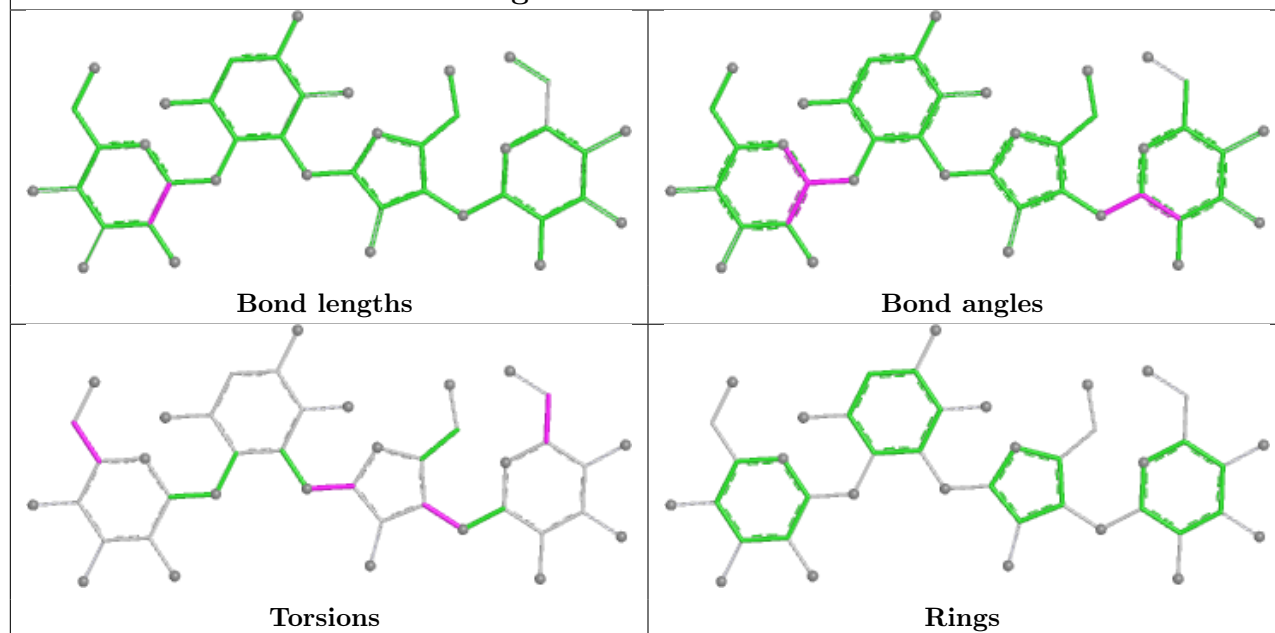
Ligand PAR 1 3967



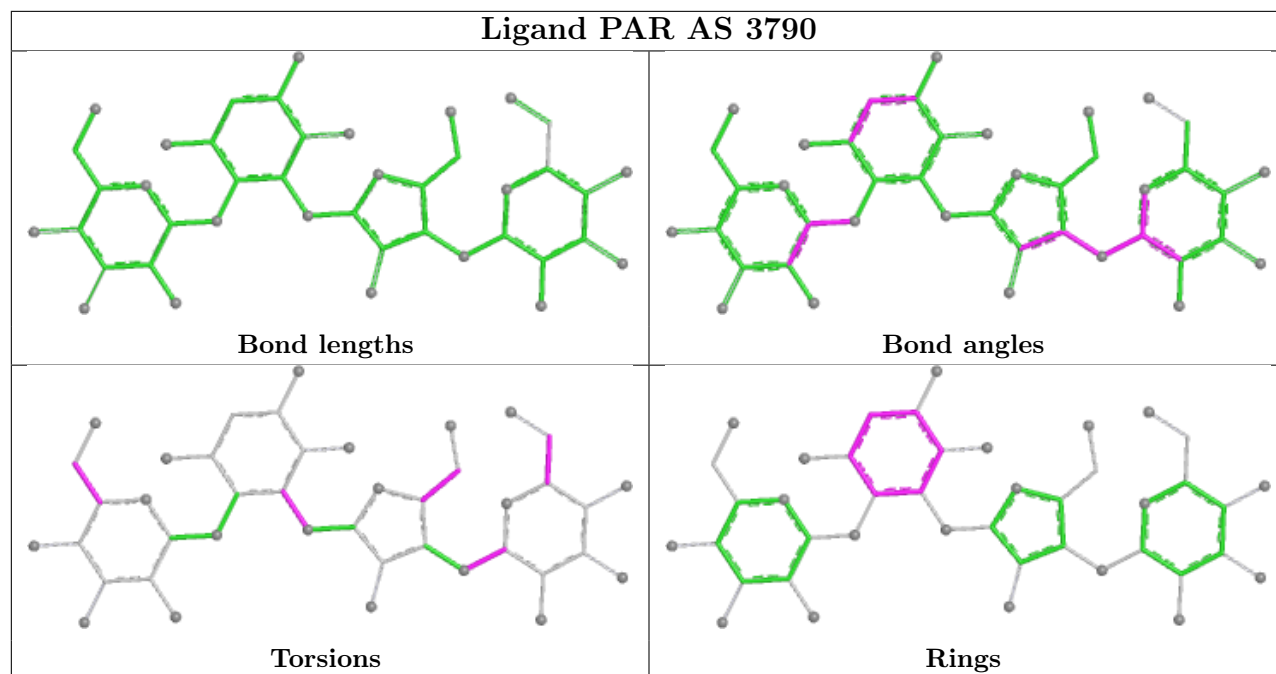
Ligand 3K5 1 3406



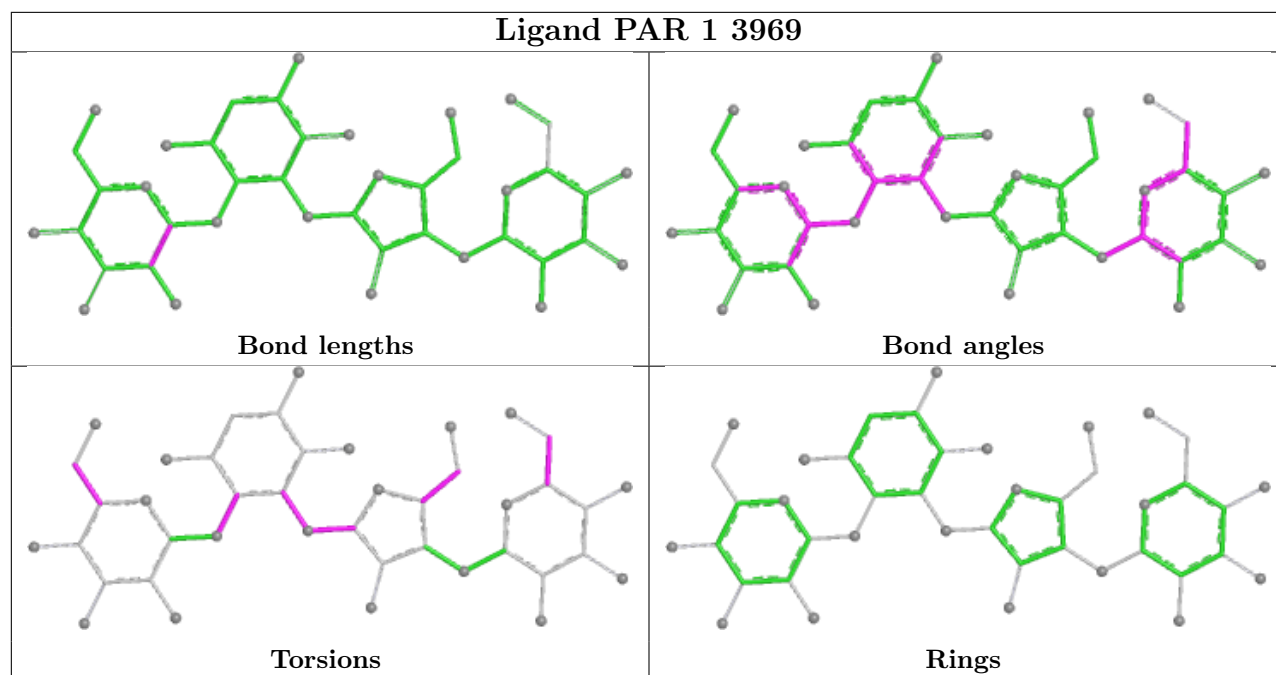
Ligand PAR AS 3788

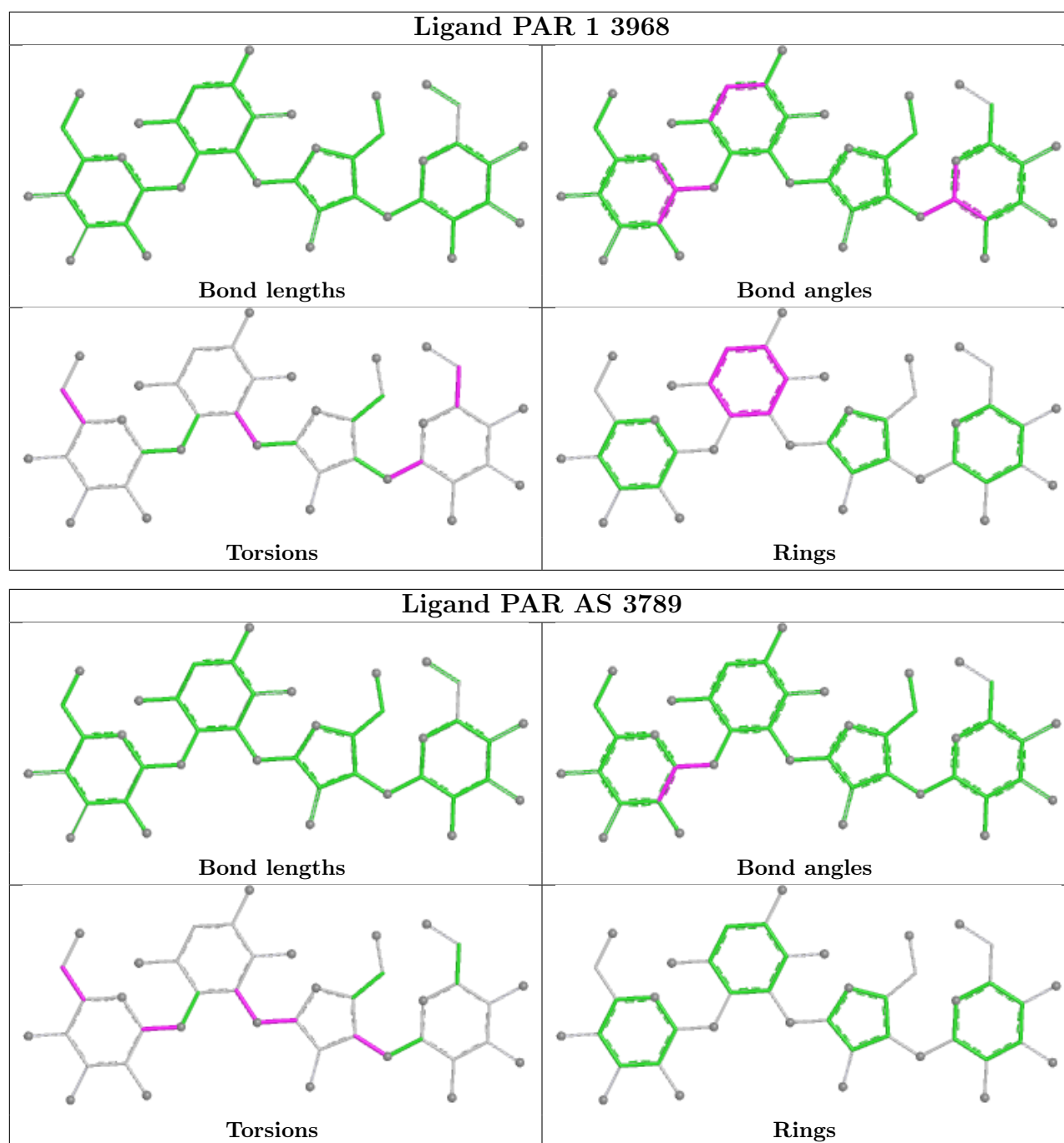


Ligand PAR AS 3790



Ligand PAR 1 3969





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	1	3217/3359 (95%)	-0.43	12 (0%) 88 79	33, 71, 185, 393	0
1	AS	3199/3359 (95%)	-0.21	36 (1%) 78 60	49, 89, 219, 337	0
2	3	121/121 (100%)	-0.54	0 100 100	53, 92, 111, 143	0
2	AT	121/121 (100%)	-0.24	0 100 100	53, 98, 122, 145	0
3	4	157/158 (99%)	-0.57	0 100 100	48, 71, 125, 166	0
3	AU	158/158 (100%)	-0.21	1 (0%) 85 73	68, 108, 154, 217	0
4	AW	249/254 (98%)	0.50	15 (6%) 27 19	50, 91, 113, 132	0
4	j	249/254 (98%)	0.17	5 (2%) 65 46	26, 53, 80, 240	0
5	AX	386/389 (99%)	0.16	5 (1%) 75 56	47, 76, 110, 158	0
5	k	386/389 (99%)	0.22	10 (2%) 57 38	40, 67, 91, 136	0
6	AY	361/363 (99%)	0.87	39 (10%) 11 9	63, 95, 129, 159	0
6	l	361/363 (99%)	0.24	12 (3%) 49 33	38, 79, 114, 146	0
7	AZ	292/298 (97%)	1.00	40 (13%) 6 5	63, 120, 153, 172	0
7	m	296/298 (99%)	0.34	7 (2%) 59 40	64, 100, 125, 148	0
8	BA	153/176 (86%)	0.55	7 (4%) 37 25	66, 99, 128, 152	0
8	n	157/176 (89%)	0.21	1 (0%) 85 73	69, 92, 119, 145	0
9	BB	234/241 (97%)	0.33	3 (1%) 75 56	49, 79, 140, 187	0
9	o	234/241 (97%)	0.11	1 (0%) 88 79	48, 74, 120, 164	0
10	BC	233/262 (88%)	0.60	10 (4%) 40 25	100, 128, 169, 189	0
10	p	238/262 (90%)	0.09	6 (2%) 58 39	54, 81, 127, 159	0
11	BD	190/191 (99%)	0.45	4 (2%) 63 44	71, 101, 131, 160	0
11	q	190/191 (99%)	0.31	2 (1%) 78 60	69, 90, 115, 139	0
12	BE	208/220 (94%)	0.13	2 (0%) 79 63	50, 79, 129, 163	0
12	r	208/220 (94%)	0.29	5 (2%) 59 40	46, 79, 114, 131	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	BF	171/174 (98%)	0.65	3 (1%) 67 49	85, 125, 151, 166	0
13	s	171/174 (98%)	0.35	2 (1%) 76 58	68, 103, 125, 135	0
14	BG	200/202 (99%)	0.55	6 (3%) 52 35	60, 112, 148, 175	0
14	t	200/202 (99%)	0.06	2 (1%) 79 63	48, 85, 119, 152	0
15	BH	130/131 (99%)	0.38	7 (5%) 31 21	62, 93, 126, 146	0
15	u	130/131 (99%)	0.08	4 (3%) 51 35	67, 86, 106, 121	0
16	BI	203/204 (99%)	1.06	23 (11%) 10 8	64, 101, 120, 130	0
16	v	203/204 (99%)	0.29	3 (1%) 72 53	41, 60, 77, 96	0
17	BJ	199/200 (99%)	0.25	3 (1%) 72 53	49, 72, 111, 148	0
17	w	199/200 (99%)	0.26	2 (1%) 79 63	44, 68, 101, 129	0
18	BK	176/185 (95%)	0.63	7 (3%) 42 28	51, 84, 115, 143	0
18	x	173/185 (93%)	0.33	4 (2%) 61 42	41, 68, 111, 132	0
19	BL	185/186 (99%)	0.51	8 (4%) 40 25	63, 90, 111, 128	0
19	y	185/186 (99%)	0.40	2 (1%) 78 60	50, 75, 97, 121	0
20	BM	179/190 (94%)	0.61	12 (6%) 24 16	68, 98, 166, 190	0
20	z	179/190 (94%)	0.32	7 (3%) 43 29	49, 75, 130, 160	0
21	0	170/172 (98%)	0.08	1 (0%) 85 73	56, 76, 97, 141	0
21	BN	170/172 (98%)	0.38	2 (1%) 76 58	54, 78, 109, 127	0
22	2	159/160 (99%)	0.34	8 (5%) 34 23	49, 74, 119, 141	0
22	BO	159/160 (99%)	0.74	13 (8%) 17 13	57, 84, 139, 157	0
23	5	103/124 (83%)	0.31	0 100 100	82, 112, 136, 152	0
23	BP	102/124 (82%)	0.28	1 (0%) 79 63	101, 139, 160, 183	0
24	6	131/137 (95%)	0.36	7 (5%) 32 22	40, 65, 90, 106	0
24	BQ	131/137 (95%)	0.48	2 (1%) 72 53	49, 70, 99, 123	0
25	7	118/155 (76%)	0.23	1 (0%) 82 68	44, 91, 134, 145	0
25	BR	98/155 (63%)	0.69	6 (6%) 27 18	62, 93, 145, 155	0
26	8	121/142 (85%)	0.29	3 (2%) 58 39	56, 76, 94, 135	0
26	BS	119/142 (83%)	0.73	5 (4%) 40 26	84, 109, 128, 137	0
27	9	126/127 (99%)	0.42	4 (3%) 50 34	60, 86, 110, 122	0
27	BT	126/127 (99%)	0.51	5 (3%) 42 28	71, 109, 138, 164	0
28	AA	135/136 (99%)	0.33	2 (1%) 72 53	55, 91, 112, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	BU	135/136 (99%)	0.53	3 (2%) 62 43	98, 127, 145, 166	0
29	AB	148/149 (99%)	0.27	3 (2%) 65 46	37, 70, 95, 125	0
29	BV	148/149 (99%)	0.79	12 (8%) 18 13	53, 95, 123, 144	0
30	AC	62/63 (98%)	0.80	5 (8%) 18 13	55, 87, 122, 137	0
30	BW	63/63 (100%)	1.27	13 (20%) 2 2	53, 105, 146, 167	1 (1%)
31	AD	96/106 (90%)	-0.13	0 100 100	52, 79, 107, 130	0
31	BX	96/106 (90%)	0.46	1 (1%) 79 63	90, 116, 148, 155	0
32	AE	110/112 (98%)	0.10	0 100 100	53, 74, 122, 137	0
32	BY	108/112 (96%)	0.56	3 (2%) 55 36	63, 96, 138, 172	0
33	AF	124/131 (94%)	0.42	3 (2%) 59 40	51, 75, 95, 108	0
33	BZ	125/131 (95%)	0.65	7 (5%) 30 20	52, 84, 111, 128	1 (0%)
34	AG	106/107 (99%)	0.17	1 (0%) 81 65	51, 72, 97, 109	0
34	CA	106/107 (99%)	0.38	3 (2%) 55 36	44, 73, 98, 118	3 (2%)
35	AH	112/113 (99%)	0.47	4 (3%) 46 31	51, 72, 119, 139	0
35	CB	111/113 (98%)	0.99	18 (16%) 4 4	71, 109, 145, 171	4 (3%)
36	AI	120/120 (100%)	0.30	2 (1%) 69 50	62, 86, 116, 137	0
36	CC	118/120 (98%)	0.86	12 (10%) 12 10	87, 116, 139, 160	0
37	AJ	97/99 (97%)	0.12	0 100 100	52, 78, 109, 153	0
37	CD	97/99 (97%)	1.08	13 (13%) 7 6	90, 120, 159, 176	1 (1%)
38	AK	86/90 (95%)	0.32	1 (1%) 76 58	33, 56, 93, 130	0
38	CE	86/90 (95%)	0.68	10 (11%) 9 8	63, 88, 128, 161	0
39	AL	77/78 (98%)	0.31	1 (1%) 75 56	75, 97, 121, 146	0
39	CF	77/78 (98%)	0.54	2 (2%) 57 38	93, 129, 166, 184	1 (1%)
40	AM	50/51 (98%)	0.25	1 (2%) 65 46	44, 65, 96, 97	0
40	CG	50/51 (98%)	1.08	6 (12%) 9 7	78, 95, 117, 129	0
41	AN	52/52 (100%)	0.94	7 (13%) 7 6	90, 109, 125, 140	0
41	CH	52/52 (100%)	0.71	2 (3%) 44 30	81, 121, 140, 160	1 (1%)
42	AO	25/25 (100%)	1.16	4 (16%) 5 4	69, 80, 96, 100	0
42	CI	24/25 (96%)	0.90	4 (16%) 4 4	72, 81, 96, 109	0
43	AP	103/106 (97%)	0.08	2 (1%) 66 48	39, 71, 108, 129	0
43	CJ	103/106 (97%)	0.59	4 (3%) 43 29	63, 100, 134, 159	2 (1%)

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	AQ	91/92 (98%)	0.16	1 (1%) 78 60	37, 59, 101, 127	0
44	CK	91/92 (98%)	0.41	3 (3%) 49 33	60, 93, 141, 151	0
45	CL	121/267 (45%)	1.12	22 (18%) 3 3	79, 119, 153, 163	0
45	i	121/267 (45%)	1.12	21 (17%) 4 4	88, 117, 147, 157	0
46	B	1712/1787 (95%)	-0.24	3 (0%) 91 86	52, 102, 183, 234	0
46	CM	1726/1787 (96%)	0.15	37 (2%) 63 44	60, 114, 210, 260	0
47	C	208/261 (79%)	0.40	3 (1%) 73 55	86, 116, 138, 150	0
47	CN	208/261 (79%)	0.61	10 (4%) 35 24	85, 128, 158, 190	0
48	CO	214/256 (83%)	0.76	23 (10%) 11 9	99, 136, 168, 188	0
48	D	214/256 (83%)	0.15	1 (0%) 87 76	69, 96, 117, 128	0
49	CP	216/249 (86%)	0.39	12 (5%) 30 20	52, 98, 135, 160	0
49	E	217/249 (87%)	0.45	10 (4%) 37 25	74, 100, 128, 146	0
50	CQ	223/251 (88%)	0.88	22 (9%) 13 10	99, 123, 165, 199	0
50	F	223/251 (88%)	0.53	9 (4%) 42 28	85, 116, 144, 157	0
51	CR	260/262 (99%)	0.68	16 (6%) 26 18	69, 108, 134, 170	0
51	G	259/262 (98%)	0.54	12 (4%) 37 25	76, 101, 118, 127	0
52	CS	195/225 (86%)	0.81	21 (10%) 11 9	108, 135, 155, 164	0
52	H	206/225 (91%)	0.54	17 (8%) 17 13	89, 111, 140, 166	0
53	CT	226/236 (95%)	0.67	18 (7%) 18 14	74, 121, 172, 204	0
53	I	226/236 (95%)	0.39	7 (3%) 51 35	65, 109, 141, 157	0
54	CU	182/186 (97%)	0.56	14 (7%) 19 14	81, 142, 173, 184	0
54	J	185/186 (99%)	0.49	6 (3%) 50 34	85, 119, 141, 156	0
55	CV	203/206 (98%)	0.98	21 (10%) 12 10	65, 100, 153, 194	0
55	K	203/206 (98%)	0.22	1 (0%) 87 76	46, 86, 131, 146	0
56	CW	178/189 (94%)	0.86	17 (9%) 13 11	81, 116, 146, 160	0
56	L	178/189 (94%)	0.90	13 (7%) 21 15	78, 110, 129, 140	0
57	CX	93/118 (78%)	0.97	14 (15%) 5 5	103, 137, 163, 177	0
57	M	98/118 (83%)	0.55	5 (5%) 33 22	94, 123, 141, 148	0
58	CY	141/155 (90%)	0.83	14 (9%) 13 10	68, 93, 131, 177	0
58	N	144/155 (92%)	0.43	3 (2%) 63 44	60, 85, 116, 178	0
59	CZ	116/143 (81%)	0.61	4 (3%) 48 32	165, 183, 200, 209	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
59	O	116/143 (81%)	0.76	12 (10%) 12 10	132, 157, 173, 175	0
60	DA	150/151 (99%)	0.82	8 (5%) 32 22	79, 113, 136, 154	0
60	P	150/151 (99%)	0.36	5 (3%) 49 33	58, 89, 115, 122	0
61	DB	127/132 (96%)	0.57	8 (6%) 26 17	84, 125, 146, 153	0
61	Q	127/132 (96%)	0.05	1 (0%) 82 68	59, 85, 104, 117	0
62	DC	129/142 (90%)	1.70	44 (34%) 1 1	113, 139, 164, 181	0
62	R	129/142 (90%)	0.63	8 (6%) 26 18	83, 113, 146, 157	0
63	DD	140/142 (98%)	1.48	34 (24%) 2 1	112, 140, 160, 173	0
63	S	140/142 (98%)	0.95	12 (8%) 16 12	90, 118, 138, 151	0
64	DE	125/137 (91%)	0.91	12 (9%) 13 11	102, 141, 182, 190	0
64	T	124/137 (90%)	0.67	7 (5%) 30 20	98, 122, 152, 158	0
65	DF	142/145 (97%)	1.24	24 (16%) 4 4	104, 136, 161, 196	0
65	U	144/145 (99%)	0.42	5 (3%) 47 31	85, 104, 126, 153	0
66	DG	141/145 (97%)	1.12	25 (17%) 4 3	105, 135, 160, 186	0
66	V	141/145 (97%)	0.57	6 (4%) 40 25	99, 118, 138, 163	0
67	DH	100/119 (84%)	1.12	15 (15%) 5 5	91, 136, 168, 175	0
67	W	102/119 (85%)	0.85	15 (14%) 6 5	86, 125, 141, 156	0
68	DI	87/87 (100%)	0.32	2 (2%) 61 42	83, 112, 147, 169	0
68	X	87/87 (100%)	0.38	3 (3%) 48 32	76, 104, 128, 144	0
69	DJ	129/130 (99%)	0.57	2 (1%) 70 52	70, 93, 113, 121	0
69	Y	129/130 (99%)	0.57	8 (6%) 26 18	71, 88, 108, 117	0
70	DK	143/145 (98%)	0.90	8 (5%) 30 20	64, 88, 115, 142	0
70	Z	143/145 (98%)	0.19	1 (0%) 84 70	65, 86, 108, 128	0
71	DL	132/135 (97%)	0.34	2 (1%) 72 53	98, 127, 151, 176	0
71	a	134/135 (99%)	0.49	4 (2%) 52 35	84, 114, 131, 142	0
72	DM	71/105 (67%)	0.35	2 (2%) 55 36	125, 148, 169, 177	0
72	b	72/105 (68%)	0.06	0 100 100	94, 122, 140, 143	0
73	DN	97/119 (81%)	0.92	14 (14%) 6 5	85, 105, 154, 166	0
73	c	98/119 (82%)	0.65	8 (8%) 17 13	71, 91, 127, 138	0
74	DO	81/82 (98%)	0.64	4 (4%) 35 23	92, 128, 173, 190	0
74	d	81/82 (98%)	0.37	2 (2%) 58 39	74, 101, 144, 158	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
75	DP	59/67 (88%)	0.51	3 (5%) 33 22	112, 139, 163, 178	0
75	e	62/67 (92%)	0.57	6 (9%) 13 11	100, 120, 139, 145	0
76	DQ	55/56 (98%)	1.56	16 (29%) 1 1	99, 119, 163, 182	0
76	f	55/56 (98%)	0.92	3 (5%) 30 21	88, 104, 133, 144	0
77	DR	56/63 (88%)	1.11	6 (10%) 11 9	91, 125, 176, 199	0
77	g	60/63 (95%)	0.61	6 (10%) 12 10	89, 116, 141, 158	0
78	DS	70/193 (36%)	1.35	15 (21%) 2 2	166, 184, 197, 204	0
78	h	63/193 (32%)	0.77	4 (6%) 26 17	132, 154, 164, 169	0
79	AR	311/317 (98%)	0.57	11 (3%) 47 31	112, 141, 163, 176	0
79	DT	311/317 (98%)	0.67	15 (4%) 35 24	131, 161, 184, 208	0
80	L1	217/217 (100%)	0.60	6 (2%) 55 36	116, 148, 185, 242	0
80	l1	217/217 (100%)	0.73	10 (4%) 37 25	132, 158, 182, 217	0
All	All	33241/35542 (93%)	0.29	1307 (3%) 43 29	26, 98, 166, 393	14 (0%)

All (1307) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
63	DD	131	ARG	9.2
51	G	110	ALA	8.5
48	CO	55	LYS	6.6
6	AY	363	ASN	6.3
46	CM	1480	G	6.3
65	DF	120	ARG	6.1
67	W	81	TYR	6.1
29	BV	20	GLY	5.9
56	CW	12	TYR	5.6
63	DD	132	GLY	5.5
59	O	74	LEU	5.5
45	i	84	SER	5.5
1	AS	1262	G	5.5
53	I	80	GLY	5.4
48	CO	156	ALA	5.3
6	AY	66	TRP	5.3
5	k	12	GLY	5.0
5	k	330	GLY	5.0
73	DN	26	CYS	5.0
73	c	69	ASN	4.9
59	O	49	SER	4.9

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Mol	Chain	Res	Type	RSRZ
46	CM	695	C	4.9
67	DH	81	TYR	4.9
65	DF	81	ILE	4.8
6	AY	361	LEU	4.8
56	L	116	LEU	4.8
65	DF	94	ASP	4.8
57	M	64	TYR	4.7
7	AZ	151	GLN	4.7
46	CM	1476	A	4.7
7	AZ	7	PHE	4.7
49	CP	86	ARG	4.7
33	BZ	17[A]	LYS	4.7
6	AY	197	GLY	4.7
12	r	55	ASN	4.6
63	DD	128	PHE	4.5
43	CJ	51	GLY	4.5
52	CS	76	LYS	4.5
20	BM	33	ALA	4.5
49	E	86	ARG	4.5
1	AS	1263	U	4.5
22	BO	82	ASN	4.4
40	CG	33	ASN	4.4
37	CD	7	ALA	4.4
73	c	29	CYS	4.4
73	DN	3	LYS	4.4
59	CZ	89	ILE	4.4
67	DH	78	TRP	4.4
30	BW	33	LYS	4.4
63	DD	68	VAL	4.4
10	BC	119	GLU	4.3
63	DD	129	GLY	4.3
7	m	150	LEU	4.3
65	DF	76	PRO	4.3
63	DD	124	GLU	4.3
46	CM	1583	C	4.2
50	CQ	149	LYS	4.2
56	L	138	LYS	4.2
4	j	250	GLN	4.2
35	CB	61	GLN	4.2
67	W	78	TRP	4.2
13	s	142	LYS	4.2
65	DF	121	SER	4.2

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Mol	Chain	Res	Type	RSRZ
65	DF	116	LEU	4.2
18	BK	2	VAL	4.2
38	CE	29	VAL	4.2
62	DC	61	ARG	4.2
71	a	135	ASP	4.2
79	AR	260	PHE	4.2
62	DC	103	ASN	4.1
18	BK	81	ALA	4.1
6	AY	109	ARG	4.1
26	BS	110	VAL	4.1
76	DQ	37	ASP	4.1
53	CT	226	ILE	4.1
62	DC	80	LEU	4.1
77	DR	35	TYR	4.1
63	DD	32	GLY	4.1
63	DD	141	TYR	4.0
30	BW	10	HIS	4.0
48	CO	24	PHE	4.0
30	BW	11	ASN	4.0
30	BW	14[A]	ARG	4.0
56	CW	70	LEU	4.0
18	BK	89	ASN	4.0
48	CO	54	LEU	4.0
7	AZ	109	ALA	4.0
76	DQ	28	SER	4.0
40	CG	34	LYS	4.0
55	CV	185	CYS	3.9
45	i	41	ALA	3.9
19	y	159	LYS	3.9
45	CL	81	THR	3.9
45	CL	115	LEU	3.9
57	CX	2	LEU	3.9
1	AS	1261	U	3.9
7	AZ	78	ALA	3.9
52	H	70	VAL	3.9
76	DQ	17	GLY	3.9
53	CT	190	LEU	3.9
58	CY	95	PRO	3.9
56	CW	10	LYS	3.9
1	AS	1222	G	3.8
49	CP	78	ILE	3.8
27	BT	20	PHE	3.8

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Mol	Chain	Res	Type	RSRZ
54	J	179	PHE	3.8
52	H	152	SER	3.8
67	W	80	ALA	3.8
7	m	7	PHE	3.8
45	i	49	ALA	3.8
16	BI	198	SER	3.8
30	BW	1	MET	3.8
62	DC	113	GLY	3.8
58	CY	60	PHE	3.8
63	DD	126	LYS	3.8
73	c	39	VAL	3.8
4	AW	247	ARG	3.8
7	AZ	226	TYR	3.8
48	CO	152	LYS	3.7
54	CU	146	GLN	3.7
6	AY	65	SER	3.7
75	e	24	GLY	3.7
80	l1	68	PHE	3.7
73	DN	29	CYS	3.7
80	l1	34	LEU	3.7
73	DN	77	CYS	3.7
62	DC	125	PRO	3.6
7	AZ	82	GLU	3.6
77	DR	36	MET	3.6
4	j	71	LEU	3.6
77	DR	6	GLY	3.6
50	F	202	ALA	3.6
45	CL	84	SER	3.6
65	U	145	ARG	3.6
6	AY	75	ILE	3.6
57	CX	80	LEU	3.6
66	DG	92	LYS	3.6
1	AS	2396	G	3.6
53	I	135	PRO	3.6
63	S	141	TYR	3.6
10	BC	151	LEU	3.6
78	DS	169	GLY	3.6
15	u	131	ALA	3.6
35	CB	31	VAL	3.6
15	u	130	LYS	3.6
10	BC	67	SER	3.6
58	N	49	ILE	3.6

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Mol	Chain	Res	Type	RSRZ
46	CM	726	C	3.6
31	BX	95	LEU	3.6
59	O	45	LEU	3.6
59	O	71	ILE	3.6
50	CQ	167	ASP	3.6
4	AW	250	GLN	3.5
46	CM	1546	G	3.5
45	CL	103	LEU	3.5
16	BI	62	TYR	3.5
33	AF	50	THR	3.5
62	DC	104	THR	3.5
50	CQ	168	PHE	3.5
33	BZ	27	HIS	3.5
36	AI	84	LYS	3.5
52	CS	70	VAL	3.5
50	CQ	173	ILE	3.5
6	AY	64	GLU	3.5
6	I	12	VAL	3.5
29	BV	21	ARG	3.5
6	AY	356	GLN	3.5
35	CB	33	GLN	3.5
58	CY	145	GLY	3.5
69	Y	127	GLY	3.5
16	BI	118	SER	3.5
51	CR	247	LEU	3.5
13	BF	74	PRO	3.5
60	DA	106	ARG	3.5
51	G	40	GLU	3.4
61	DB	124	LYS	3.4
51	CR	44	LEU	3.4
63	S	42	ILE	3.4
79	DT	164	SER	3.4
45	CL	102	LYS	3.4
36	CC	75	TYR	3.4
66	DG	55	TYR	3.4
49	CP	97	VAL	3.4
16	BI	146	ALA	3.4
20	BM	87	ALA	3.4
32	BY	26	LYS	3.4
36	CC	84	LYS	3.4
66	V	38	LYS	3.4
66	V	84	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
62	DC	15	PHE	3.4
22	BO	77	ASN	3.4
67	DH	66	THR	3.4
51	CR	245	ILE	3.4
4	j	70	LYS	3.4
1	1	2453	G	3.4
24	6	7	SER	3.4
45	CL	99	SER	3.4
6	AY	91	PHE	3.4
6	AY	112	VAL	3.4
36	CC	109	ILE	3.4
50	F	149	LYS	3.4
76	DQ	8	PHE	3.4
6	AY	245	LEU	3.4
62	DC	74	ALA	3.4
47	C	173	ILE	3.4
37	CD	51	PRO	3.4
52	H	72	HIS	3.4
62	DC	30	THR	3.4
52	CS	112	ARG	3.3
1	AS	3319	U	3.3
62	DC	37	CYS	3.3
56	CW	37	LYS	3.3
80	ll	100	ILE	3.3
6	AY	230	SER	3.3
67	W	76	LYS	3.3
7	AZ	147	ASP	3.3
76	DQ	11	PRO	3.3
45	CL	90	ARG	3.3
52	CS	199	ILE	3.3
56	L	137	GLY	3.3
63	DD	133	ALA	3.3
24	6	35	TYR	3.3
5	k	96	PRO	3.3
1	AS	1265	U	3.3
53	CT	144	PHE	3.3
52	H	80	LYS	3.3
65	DF	73	MET	3.3
35	CB	39	ALA	3.3
73	DN	23	CYS	3.3
5	k	178	LEU	3.3
35	CB	3	GLN	3.3

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Mol	Chain	Res	Type	RSRZ
74	DO	18	GLN	3.3
67	W	63	LYS	3.3
42	CI	5	TRP	3.3
65	DF	82	PRO	3.2
54	CU	168	LEU	3.2
7	AZ	34	LYS	3.2
53	I	79	LYS	3.2
48	CO	21	VAL	3.2
59	CZ	71	ILE	3.2
22	BO	86	GLU	3.2
57	CX	63	TYR	3.2
77	g	47	VAL	3.2
6	AY	111	ASN	3.2
55	CV	27	PHE	3.2
51	G	39	ARG	3.2
33	BZ	31	GLU	3.2
59	O	121	VAL	3.2
6	AY	105	LYS	3.2
30	BW	22	LYS	3.2
63	DD	139	LYS	3.2
38	CE	10	LYS	3.1
4	AW	2	GLY	3.1
6	AY	189	ARG	3.1
47	CN	61	ALA	3.1
62	DC	46	SER	3.1
63	DD	137	PHE	3.1
66	DG	33	TYR	3.1
7	AZ	36	LEU	3.1
70	DK	40	SER	3.1
71	DL	72	PHE	3.1
25	7	63	ILE	3.1
46	CM	75	U	3.1
46	CM	278	U	3.1
46	CM	989	U	3.1
76	f	54	LYS	3.1
78	DS	125	LYS	3.1
73	DN	35	ALA	3.1
27	BT	30	LEU	3.1
62	DC	129	GLY	3.1
35	CB	17	SER	3.1
7	AZ	8	ARG	3.1
46	CM	694	C	3.1

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Mol	Chain	Res	Type	RSRZ
76	f	56	ARG	3.1
59	O	120	CYS	3.1
50	CQ	5	ILE	3.1
52	CS	170	GLN	3.1
40	CG	21	ARG	3.1
59	O	75	VAL	3.1
60	DA	33	VAL	3.1
19	BL	168	LYS	3.1
33	BZ	126	LYS	3.1
78	DS	164	PRO	3.1
1	1	2476	C	3.0
3	AU	21	C	3.0
12	BE	205	ASN	3.0
14	BG	2	ALA	3.0
30	AC	47	LEU	3.0
1	AS	1264	G	3.0
4	AW	228	GLY	3.0
65	U	115	ARG	3.0
61	DB	23	VAL	3.0
62	DC	126	VAL	3.0
39	CF	43	PHE	3.0
12	r	166	ILE	3.0
4	AW	62	ALA	3.0
15	BH	131	ALA	3.0
79	AR	32	LEU	3.0
80	ll	124	LEU	3.0
6	AY	70	ARG	3.0
44	CK	61	LYS	3.0
45	CL	96	LYS	3.0
62	DC	22	LEU	3.0
7	AZ	119	TYR	3.0
53	CT	80	GLY	3.0
70	DK	27	GLN	3.0
7	AZ	55	PHE	3.0
27	9	4	ILE	3.0
66	DG	36	ILE	3.0
43	CJ	72	LEU	3.0
48	CO	119	SER	3.0
67	DH	75	SER	3.0
76	DQ	30	LEU	3.0
35	AH	32	ALA	3.0
49	CP	95	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
63	DD	79	ALA	3.0
73	DN	6	ALA	3.0
1	AS	1557	U	3.0
42	AO	16	LYS	3.0
53	CT	220	LYS	3.0
22	2	2	GLY	3.0
64	DE	110	VAL	3.0
9	BB	93	ILE	3.0
37	CD	57	ILE	3.0
6	AY	107	TRP	3.0
9	BB	139	LEU	3.0
53	CT	184	LEU	3.0
78	DS	190	LEU	3.0
57	CX	23	ALA	3.0
66	DG	41	ALA	3.0
55	CV	41	LYS	3.0
22	2	18	ASP	3.0
67	W	79	ASP	3.0
51	G	111	VAL	3.0
7	m	24	GLN	3.0
24	6	33	ASN	3.0
67	DH	77	THR	3.0
6	AY	195	LEU	2.9
37	CD	76	LEU	2.9
55	CV	8	ARG	2.9
65	DF	115	ARG	2.9
65	DF	123	ARG	2.9
52	CS	115	LYS	2.9
58	CY	114	ALA	2.9
67	DH	63	LYS	2.9
6	AY	200	PHE	2.9
71	a	63	GLN	2.9
16	BI	108	ARG	2.9
61	DB	132	LEU	2.9
17	w	101	GLU	2.9
30	BW	23	LYS	2.9
56	CW	2	PRO	2.9
66	DG	69	LYS	2.9
50	F	119	ALA	2.9
52	H	71	SER	2.9
29	AB	39	HIS	2.9
37	CD	55	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
66	DG	79	LEU	2.9
25	BR	27	LYS	2.9
67	W	60	LYS	2.9
15	BH	129	VAL	2.9
16	v	6	TYR	2.9
28	AA	113	VAL	2.9
38	CE	82	VAL	2.9
64	T	21	TYR	2.9
55	CV	118	GLY	2.9
33	BZ	18	PHE	2.9
30	AC	14	ARG	2.9
36	CC	108	ARG	2.9
54	CU	132	ILE	2.9
55	CV	32	GLN	2.9
57	CX	44	LYS	2.9
76	DQ	16	LYS	2.9
30	BW	2	ALA	2.9
62	DC	7	PRO	2.9
62	DC	82	ASN	2.9
53	I	83	CYS	2.9
78	h	144	VAL	2.9
80	ll	167	VAL	2.9
48	CO	63	GLY	2.9
58	N	145	GLY	2.9
42	AO	6	ARG	2.9
79	DT	299	PHE	2.9
45	i	103	LEU	2.9
47	CN	16	LEU	2.9
53	CT	193	LYS	2.9
7	AZ	62	ALA	2.9
50	CQ	146	ALA	2.9
52	CS	147	THR	2.9
62	DC	94	VAL	2.9
49	E	172	GLY	2.9
30	AC	21	ILE	2.9
46	CM	725	A	2.9
76	DQ	43	PHE	2.9
35	CB	30	LEU	2.9
66	V	92	LYS	2.9
78	DS	129	THR	2.8
66	DG	71	VAL	2.8
35	CB	36[A]	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
60	P	2	GLY	2.8
70	DK	45	GLY	2.8
71	a	72	PHE	2.8
76	DQ	54	LYS	2.8
77	DR	39	LEU	2.8
77	g	36	MET	2.8
45	i	83	HIS	2.8
42	CI	24	SER	2.8
52	CS	96	SER	2.8
5	AX	75	ALA	2.8
1	AS	2450	U	2.8
51	G	43	PRO	2.8
66	DG	90	PRO	2.8
75	e	47	PRO	2.8
35	CB	16	ARG	2.8
64	T	9	VAL	2.8
78	DS	156	VAL	2.8
7	AZ	95	TRP	2.8
61	DB	85	LYS	2.8
78	DS	191	LYS	2.8
12	r	165	ILE	2.8
63	DD	30	ILE	2.8
64	DE	68	GLY	2.8
79	DT	180	LEU	2.8
59	O	118	ALA	2.8
65	DF	83	ALA	2.8
6	AY	226	VAL	2.8
45	i	65	LYS	2.8
65	DF	77	THR	2.8
1	AS	824	A	2.8
1	AS	3320	U	2.8
21	BN	30	PHE	2.8
58	CY	5	LEU	2.8
26	BS	88	ILE	2.8
69	Y	80	ASN	2.8
15	BH	104	GLN	2.8
25	BR	41	GLN	2.8
56	CW	55	ALA	2.8
76	DQ	12	ARG	2.8
6	l	352	PRO	2.8
52	CS	84	LYS	2.8
56	CW	14	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
63	DD	13	LYS	2.8
17	BJ	101	GLU	2.8
55	CV	114	GLU	2.8
51	G	47	PHE	2.8
51	G	109	PHE	2.8
8	n	1	MET	2.8
56	CW	134	ILE	2.8
63	DD	64	ILE	2.8
51	G	107	GLY	2.8
53	CT	81	HIS	2.8
6	AY	199	ARG	2.8
57	M	25	LYS	2.8
62	DC	58	LYS	2.8
73	DN	13	LYS	2.8
50	F	182	VAL	2.8
50	CQ	200	PRO	2.8
62	R	109	PRO	2.8
37	CD	96	SER	2.8
52	H	79	SER	2.8
60	DA	7	SER	2.8
14	BG	85	ILE	2.8
22	BO	75	ILE	2.8
52	H	153	GLY	2.7
64	DE	2	GLY	2.7
65	DF	124	GLY	2.7
22	2	82	ASN	2.7
4	AW	24	LYS	2.7
14	t	2	ALA	2.7
26	8	36	LYS	2.7
45	i	51	ALA	2.7
45	CL	85	LYS	2.7
49	E	161	ALA	2.7
16	BI	132	VAL	2.7
67	DH	89	VAL	2.7
77	g	39	LEU	2.7
1	1	2467	C	2.7
1	AS	240	C	2.7
64	T	8	THR	2.7
46	B	701	G	2.7
79	DT	269	ASP	2.7
76	DQ	56	ARG	2.7
14	BG	89	TYR	2.7

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Mol	Chain	Res	Type	RSRZ
51	CR	246	LYS	2.7
63	DD	105	LYS	2.7
52	CS	90	VAL	2.7
62	DC	101	VAL	2.7
37	CD	49	LEU	2.7
70	DK	34	LEU	2.7
79	AR	284	PRO	2.7
1	AS	484	U	2.7
63	S	2	SER	2.7
70	DK	58	GLY	2.7
74	DO	29	ARG	2.7
22	2	56	TYR	2.7
10	BC	133	VAL	2.7
54	J	148	VAL	2.7
78	DS	126	VAL	2.7
53	I	76	LEU	2.7
12	r	162	GLN	2.7
44	AQ	25	GLN	2.7
22	BO	88	ARG	2.7
60	P	7	SER	2.7
6	AY	229	ALA	2.7
22	BO	93	VAL	2.7
35	CB	57	LEU	2.7
48	CO	120	LEU	2.7
33	BZ	36	GLN	2.7
46	CM	1586	C	2.7
59	O	89	ILE	2.7
66	DG	118	PRO	2.7
74	DO	27	GLN	2.7
56	L	35	GLY	2.7
48	CO	186	SER	2.7
52	H	78	ALA	2.7
7	AZ	204	VAL	2.7
35	CB	42	VAL	2.7
67	W	61	VAL	2.7
79	DT	82	LEU	2.7
45	i	66	ASN	2.7
50	CQ	116	ILE	2.6
16	BI	26	ARG	2.6
37	CD	67	ARG	2.6
41	AN	37	ARG	2.6
45	CL	69	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
63	DD	65	ARG	2.6
76	DQ	14	PHE	2.6
6	AY	47	LYS	2.6
1	1	2454	C	2.6
46	CM	1443	C	2.6
20	BM	30	THR	2.6
65	DF	129	TRP	2.6
45	i	64	LEU	2.6
47	CN	143	VAL	2.6
51	CR	192	VAL	2.6
64	DE	4	VAL	2.6
67	DH	55	VAL	2.6
6	AY	210	TYR	2.6
62	DC	121	ILE	2.6
57	M	27	PHE	2.6
62	DC	89	MET	2.6
62	DC	109	PRO	2.6
50	F	181	GLY	2.6
22	2	91	LEU	2.6
66	DG	53	TRP	2.6
49	CP	194	SER	2.6
22	BO	63	ILE	2.6
25	BR	47	ARG	2.6
52	H	84	LYS	2.6
65	DF	119	ILE	2.6
66	DG	84	LYS	2.6
67	DH	90	ILE	2.6
73	DN	89	ARG	2.6
56	CW	104	PHE	2.6
62	DC	33	PHE	2.6
36	CC	107	GLN	2.6
45	CL	60	ASN	2.6
45	CL	68	ASN	2.6
55	CV	111	GLN	2.6
66	DG	51	GLU	2.6
6	AY	68	THR	2.6
50	CQ	97	LEU	2.6
51	CR	9	LEU	2.6
56	L	93	LEU	2.6
19	y	180	ARG	2.6
63	DD	12	LYS	2.6
67	DH	87	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
22	BO	34	TYR	2.6
45	i	36	SER	2.6
7	AZ	59	ASP	2.6
13	BF	158	ASP	2.6
48	CO	59	ASP	2.6
4	AW	7	ASN	2.6
6	AY	97	GLY	2.6
64	T	68	GLY	2.6
37	CD	65	GLU	2.6
50	CQ	143	LEU	2.6
6	l	190	ALA	2.6
10	BC	152	VAL	2.6
36	AI	120	ALA	2.6
52	H	154	THR	2.6
60	DA	151	ALA	2.6
63	DD	117	VAL	2.6
80	ll	172	VAL	2.6
63	DD	16	THR	2.6
44	CK	28	LYS	2.6
45	CL	67	LYS	2.6
48	CO	94	LYS	2.6
5	k	177	HIS	2.6
36	CC	111	PHE	2.6
29	BV	108	GLY	2.6
45	i	115	LEU	2.6
51	CR	23	LEU	2.6
8	BA	135	VAL	2.6
15	BH	115	VAL	2.6
46	CM	1451	C	2.6
47	CN	65	ALA	2.6
51	CR	39	ARG	2.6
54	J	178	VAL	2.6
63	DD	18	VAL	2.6
67	W	67	ARG	2.6
63	DD	69	THR	2.6
14	BG	93	ILE	2.5
12	BE	199	PHE	2.5
54	CU	21	PHE	2.5
54	CU	81	PHE	2.5
46	CM	1730	U	2.5
16	BI	204	SER	2.5
45	i	39	SER	2.5

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Mol	Chain	Res	Type	RSRZ
54	CU	105	GLN	2.5
10	p	153	LEU	2.5
66	DG	28	LEU	2.5
1	AS	2062	G	2.5
6	l	199	ARG	2.5
35	AH	31	VAL	2.5
40	CG	32	ASP	2.5
45	CL	100	LYS	2.5
46	CM	1184	G	2.5
10	BC	115	ALA	2.5
20	BM	31	GLU	2.5
50	CQ	176	VAL	2.5
67	DH	76	LYS	2.5
77	g	29	LYS	2.5
80	ll	151	VAL	2.5
52	CS	173	ALA	2.5
16	BI	61	ILE	2.5
61	DB	84	THR	2.5
22	BO	19	PHE	2.5
49	CP	151	CYS	2.5
7	AZ	212	LEU	2.5
15	u	35	GLN	2.5
38	AK	2	GLY	2.5
56	CW	48	GLN	2.5
58	CY	41	GLY	2.5
62	R	80	LEU	2.5
70	DK	33	LEU	2.5
77	DR	7	SER	2.5
79	DT	153	SER	2.5
64	DE	42	GLN	2.5
19	BL	180	ARG	2.5
49	CP	79	ARG	2.5
4	AW	73	GLU	2.5
5	k	7	GLU	2.5
51	G	50	ASN	2.5
4	AW	199	THR	2.5
5	k	233	TRP	2.5
67	W	66	THR	2.5
46	CM	1135	G	2.5
1	AS	3051	C	2.5
45	i	37	LYS	2.5
50	CQ	22	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
65	DF	135	GLY	2.5
14	t	4	SER	2.5
28	BU	105	SER	2.5
63	DD	21	VAL	2.5
66	DG	37	VAL	2.5
66	DG	50	ALA	2.5
67	DH	80	ALA	2.5
11	BD	48	ILE	2.5
60	DA	87	ASP	2.5
6	l	91	PHE	2.5
24	6	34	LEU	2.5
45	CL	65	LYS	2.5
57	CX	65	TYR	2.5
80	L1	16	LEU	2.5
1	AS	1099	A	2.5
1	AS	1217	A	2.5
38	CE	81	GLY	2.5
48	CO	20	VAL	2.5
65	DF	93	VAL	2.5
13	s	48	SER	2.5
41	AN	15	CYS	2.5
56	L	56	ALA	2.5
66	V	5	SER	2.5
75	e	55	CYS	2.5
46	B	1339	G	2.5
7	AZ	88	ILE	2.5
36	CC	118	ILE	2.5
49	E	110	ILE	2.5
69	Y	27	ILE	2.5
57	CX	26	ASP	2.5
62	DC	98	ASN	2.5
70	Z	122	PHE	2.5
13	BF	31	THR	2.5
46	CM	1047	U	2.5
67	W	65	THR	2.5
48	CO	50	ARG	2.5
55	CV	17	LYS	2.5
75	e	45	LYS	2.5
50	CQ	111	LEU	2.5
72	DM	75	LEU	2.5
79	AR	271	LEU	2.5
56	CW	19	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
68	X	58	TYR	2.5
57	CX	73	VAL	2.5
75	e	48	VAL	2.5
54	CU	176	GLN	2.5
55	CV	53	GLN	2.5
65	DF	136	GLN	2.5
5	k	179	ALA	2.4
63	DD	118	ALA	2.4
79	DT	181	ALA	2.4
32	BY	99	SER	2.4
35	CB	40	SER	2.4
62	DC	31	GLU	2.4
52	H	82	PHE	2.4
65	U	49	LYS	2.4
78	DS	124	LYS	2.4
6	AY	110	TRP	2.4
4	j	246	LEU	2.4
7	AZ	150	LEU	2.4
27	9	35	LEU	2.4
33	BZ	76	LEU	2.4
46	CM	717	G	2.4
75	DP	19	THR	2.4
76	DQ	38	LEU	2.4
78	DS	128	THR	2.4
14	BG	87	PRO	2.4
16	BI	30	TYR	2.4
18	BK	51	VAL	2.4
63	DD	138	GLN	2.4
52	CS	89	ILE	2.4
38	CE	32	LYS	2.4
15	BH	4	THR	2.4
18	x	79	THR	2.4
6	l	197	GLY	2.4
55	CV	188	TYR	2.4
59	O	61	VAL	2.4
62	DC	75	VAL	2.4
40	CG	51	ILE	2.4
52	CS	99	MET	2.4
29	BV	111	LYS	2.4
51	CR	6	LYS	2.4
62	DC	8	LYS	2.4
16	BI	59	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
52	CS	82	PHE	2.4
53	CT	145	PHE	2.4
69	DJ	58	SER	2.4
11	BD	10	LEU	2.4
69	DJ	38	LEU	2.4
18	x	183	THR	2.4
45	i	33	ASN	2.4
48	CO	25	THR	2.4
62	DC	73	PRO	2.4
20	BM	139	VAL	2.4
22	BO	72	VAL	2.4
52	H	155	VAL	2.4
79	AR	77	ASP	2.4
29	BV	110	GLY	2.4
58	CY	93	TYR	2.4
66	DG	91	HIS	2.4
78	DS	171	GLY	2.4
30	BW	21	ILE	2.4
52	CS	110	ALA	2.4
57	CX	45	ALA	2.4
46	CM	479	A	2.4
46	CM	712	A	2.4
46	CM	1618	A	2.4
57	CX	82	ILE	2.4
33	AF	36	GLN	2.4
38	CE	84	LYS	2.4
58	CY	32	LYS	2.4
7	AZ	171	LEU	2.4
8	BA	108	GLU	2.4
8	BA	154	LEU	2.4
49	CP	203	GLU	2.4
60	DA	119	GLU	2.4
52	CS	71	SER	2.4
54	J	185	SER	2.4
1	AS	368	G	2.4
78	DS	168	CYS	2.4
49	E	191	VAL	2.4
62	DC	34	THR	2.4
62	DC	124	THR	2.4
75	DP	25	VAL	2.4
38	CE	77	GLY	2.4
55	CV	183	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
62	DC	114	HIS	2.4
7	AZ	290	ILE	2.4
37	CD	2	ALA	2.4
64	DE	107	ALA	2.4
7	AZ	58	LYS	2.4
62	DC	52	LYS	2.4
56	L	6	ARG	2.4
62	DC	54	MET	2.4
6	AY	202	GLN	2.4
64	T	42	GLN	2.4
62	R	17	PHE	2.4
62	DC	102	PHE	2.4
76	f	43	PHE	2.4
5	k	387	LEU	2.4
50	CQ	110	LEU	2.4
63	S	116	LEU	2.4
79	DT	34	LEU	2.4
1	AS	402	A	2.4
28	BU	98	SER	2.4
1	AS	1197	C	2.3
1	AS	1223	C	2.3
35	CB	77	GLY	2.3
79	DT	73	THR	2.3
4	AW	190	LYS	2.3
7	AZ	205	ALA	2.3
16	BI	176	LYS	2.3
51	G	2	ALA	2.3
56	L	140	ILE	2.3
66	DG	119	LYS	2.3
73	c	37	LYS	2.3
62	DC	50	ASP	2.3
66	DG	89	ARG	2.3
1	AS	1281	G	2.3
46	CM	1588	G	2.3
7	AZ	180	PHE	2.3
10	p	66	LEU	2.3
27	9	120	GLN	2.3
38	CE	30	GLN	2.3
50	F	177	LEU	2.3
63	S	53	LEU	2.3
66	DG	114	LEU	2.3
70	DK	133	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
79	DT	120	LEU	2.3
80	L1	190	LEU	2.3
17	BJ	24	VAL	2.3
62	R	112	VAL	2.3
1	AS	2436	A	2.3
10	BC	75	SER	2.3
21	BN	60	SER	2.3
5	AX	139	THR	2.3
7	AZ	70	THR	2.3
12	r	101	LYS	2.3
24	6	43	GLY	2.3
45	CL	71	LYS	2.3
64	DE	117	ILE	2.3
67	DH	65	THR	2.3
73	DN	16	GLY	2.3
50	CQ	67	ILE	2.3
11	BD	3	TYR	2.3
46	CM	727	U	2.3
78	DS	127	TYR	2.3
79	DT	80	TYR	2.3
7	AZ	75	PHE	2.3
64	DE	46	LEU	2.3
20	BM	68	GLU	2.3
1	AS	2459	G	2.3
7	AZ	125	VAL	2.3
35	AH	22	VAL	2.3
74	d	4	VAL	2.3
36	CC	91	LYS	2.3
63	DD	67	LYS	2.3
7	AZ	181	PRO	2.3
35	CB	8	ARG	2.3
62	DC	44	ARG	2.3
79	DT	38	ARG	2.3
6	l	154	SER	2.3
29	AB	20	GLY	2.3
29	BV	30	GLY	2.3
16	BI	79	ALA	2.3
19	BL	167	SER	2.3
20	z	13	SER	2.3
50	F	185	ILE	2.3
67	W	72	GLY	2.3
30	AC	2	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
53	CT	189	ALA	2.3
63	DD	17	ALA	2.3
7	AZ	219	TYR	2.3
16	BI	53	TYR	2.3
73	c	73	TYR	2.3
79	AR	80	TYR	2.3
50	CQ	177	LEU	2.3
56	CW	128	LEU	2.3
54	CU	179	PHE	2.3
68	X	67	ASP	2.3
20	BM	7	GLN	2.3
55	CV	103	GLN	2.3
45	CL	61	GLU	2.3
36	CC	57	VAL	2.3
42	AO	25	LYS	2.3
52	H	76	LYS	2.3
59	CZ	91	VAL	2.3
4	AW	184	ARG	2.3
42	AO	12	ARG	2.3
45	CL	87	PRO	2.3
65	DF	130	GLY	2.3
73	c	79	ILE	2.3
6	AY	251	TRP	2.3
47	C	99	ALA	2.3
78	DS	170	ALA	2.3
42	CI	1	MET	2.3
6	l	353	SER	2.3
7	AZ	13	HIS	2.3
62	R	116	LEU	2.3
74	d	24	LEU	2.3
80	L1	179	LEU	2.3
1	1	1264	G	2.3
17	w	48	PHE	2.3
58	CY	20	PHE	2.3
56	L	58	ASP	2.3
6	l	186	LYS	2.3
35	AH	21	LYS	2.3
66	V	119	LYS	2.3
1	1	2436	A	2.3
10	p	204	VAL	2.3
50	CQ	17	VAL	2.3
46	CM	696	U	2.3

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Mol	Chain	Res	Type	RSRZ
30	BW	24	PRO	2.3
49	CP	120	ILE	2.3
64	T	69	ILE	2.3
67	W	64	ILE	2.3
6	l	175	ALA	2.3
39	AL	2	ALA	2.3
45	i	117	GLY	2.3
66	V	42	GLY	2.3
8	BA	75	LEU	2.3
9	BB	103	LEU	2.3
72	DM	93	LEU	2.3
75	e	33	LEU	2.3
30	BW	31	SER	2.3
55	CV	12	SER	2.3
29	AB	19	LYS	2.3
20	z	71	ARG	2.3
32	BY	18	ARG	2.3
47	C	127	ARG	2.3
27	9	45	VAL	2.3
45	CL	98	ASP	2.3
66	DG	8	ASP	2.3
46	CM	1441	G	2.2
56	CW	140	ILE	2.2
6	l	80	GLY	2.2
43	CJ	84	PRO	2.2
7	AZ	146	LEU	2.2
21	0	162	LEU	2.2
46	CM	1178	A	2.2
46	CM	1322	A	2.2
54	CU	89	LEU	2.2
61	DB	28	LEU	2.2
5	k	274	HIS	2.2
25	BR	58	HIS	2.2
45	i	69	PHE	2.2
54	J	21	PHE	2.2
62	R	30	THR	2.2
65	U	127	HIS	2.2
7	AZ	44	TYR	2.2
11	q	63	LYS	2.2
19	BL	159	LYS	2.2
40	CG	18	LYS	2.2
47	CN	155	TYR	2.2

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Mol	Chain	Res	Type	RSRZ
49	E	194	SER	2.2
56	CW	51	LYS	2.2
40	AM	21	ARG	2.2
24	BQ	22	VAL	2.2
28	BU	13	VAL	2.2
30	AC	19	ASN	2.2
52	H	44	ASN	2.2
33	AF	42	CYS	2.2
11	q	75	ILE	2.2
22	BO	26	PRO	2.2
45	i	48	PRO	2.2
48	CO	35	PRO	2.2
7	AZ	113	LEU	2.2
10	p	175	GLY	2.2
15	BH	128	LEU	2.2
19	BL	169	GLY	2.2
22	2	81	GLY	2.2
63	DD	85	ALA	2.2
77	DR	60	PRO	2.2
51	G	12	LEU	2.2
56	L	118	LEU	2.2
29	BV	61	PHE	2.2
51	CR	109	PHE	2.2
57	CX	24	LYS	2.2
63	S	128	PHE	2.2
46	CM	1592	G	2.2
64	T	6	THR	2.2
26	BS	48	ARG	2.2
47	CN	110	TYR	2.2
48	CO	26	ARG	2.2
65	U	120	ARG	2.2
34	CA	4	SER	2.2
19	BL	140	VAL	2.2
79	AR	277	VAL	2.2
53	CT	182	GLN	2.2
41	AN	23	CYS	2.2
41	AN	34	CYS	2.2
49	E	203	GLU	2.2
1	1	3051	C	2.2
1	AS	2468	C	2.2
46	CM	1177	C	2.2
46	CM	1589	C	2.2

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Mol	Chain	Res	Type	RSRZ
6	AY	52	ALA	2.2
10	p	200	ALA	2.2
18	BK	59	PRO	2.2
20	z	89	MET	2.2
20	BM	63	ALA	2.2
59	CZ	59	LEU	2.2
62	DC	48	GLY	2.2
77	g	49	LEU	2.2
20	BM	52	LYS	2.2
35	CB	29[A]	LYS	2.2
50	CQ	9	LYS	2.2
58	N	15	LYS	2.2
6	AY	248	PHE	2.2
58	CY	116	ARG	2.2
73	c	89	ARG	2.2
16	BI	101	THR	2.2
22	2	29	THR	2.2
45	CL	79	THR	2.2
53	CT	71	THR	2.2
62	R	114	HIS	2.2
73	DN	21	VAL	2.2
29	BV	65	GLN	2.2
80	L1	111	ILE	2.2
6	AY	317	ASN	2.2
43	AP	104	LEU	2.2
46	CM	1357	A	2.2
52	CS	165	LEU	2.2
54	CU	54	LEU	2.2
62	DC	49	LEU	2.2
62	DC	118	GLU	2.2
50	F	154	ALA	2.2
63	S	19	ALA	2.2
44	CK	13	LYS	2.2
55	CV	75	LYS	2.2
7	AZ	145	PHE	2.2
23	BP	15	PHE	2.2
63	S	108	PHE	2.2
69	Y	37	PHE	2.2
1	1	2474	C	2.2
51	CR	18	TRP	2.2
51	CR	184	THR	2.2
52	H	23	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
62	DC	26	VAL	2.2
35	CB	79	SER	2.2
64	DE	124	ILE	2.2
10	BC	59	LEU	2.2
45	CL	64	LEU	2.2
53	I	77	LEU	2.2
57	CX	87	LEU	2.2
59	O	78	LEU	2.2
28	AA	109	GLU	2.2
4	j	190	LYS	2.2
8	BA	131	LYS	2.2
14	BG	88	LYS	2.2
20	z	63	ALA	2.2
36	CC	119	LYS	2.2
45	i	100	LYS	2.2
45	i	133	ALA	2.2
50	CQ	145	ALA	2.2
58	CY	27	ALA	2.2
63	DD	19	ALA	2.2
1	1	2067	U	2.2
1	AS	977	U	2.2
46	CM	1582	U	2.2
80	ll	28	PHE	2.2
16	BI	106	VAL	2.1
29	BV	130	VAL	2.1
30	BW	26	THR	2.1
48	CO	126	THR	2.1
57	M	57	THR	2.1
64	DE	30	THR	2.1
22	2	84	TYR	2.1
1	AS	2448	C	2.1
18	x	136	ILE	2.1
52	CS	62	ILE	2.1
68	X	34	ILE	2.1
10	p	143	LEU	2.1
27	BT	76	LEU	2.1
51	CR	239	LEU	2.1
52	H	174	LEU	2.1
55	CV	96	LEU	2.1
68	DI	55	LEU	2.1
6	AY	50	ALA	2.1
22	BO	28	SER	2.1

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Mol	Chain	Res	Type	RSRZ
25	BR	36	SER	2.1
45	i	45	SER	2.1
58	CY	69	LYS	2.1
48	CO	90	GLU	2.1
50	CQ	147	ARG	2.1
55	CV	159	GLU	2.1
76	DQ	48	ALA	2.1
7	m	169	GLY	2.1
73	DN	25	ASN	2.1
5	AX	379	PHE	2.1
69	Y	79	PHE	2.1
7	m	13	HIS	2.1
53	CT	157	VAL	2.1
65	DF	4	VAL	2.1
71	DL	100	VAL	2.1
41	CH	32	THR	2.1
79	DT	101	THR	2.1
1	AS	2472	A	2.1
36	CC	76	ILE	2.1
46	CM	704	A	2.1
46	CM	1702	A	2.1
48	CO	155	TYR	2.1
78	h	148	TYR	2.1
56	CW	60	LEU	2.1
60	DA	80	LEU	2.1
63	S	43	LEU	2.1
69	Y	26	LEU	2.1
7	AZ	208	MET	2.1
20	z	87	ALA	2.1
26	BS	107	ALA	2.1
37	CD	98	ARG	2.1
41	CH	37	ARG	2.1
76	DQ	2	ALA	2.1
79	AR	79	ALA	2.1
7	AZ	281	GLU	2.1
17	BJ	122	PRO	2.1
41	AN	28	PRO	2.1
62	DC	32	GLU	2.1
79	AR	58	PRO	2.1
26	8	32	PHE	2.1
47	CN	33	ASN	2.1
49	CP	210	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
53	I	50	PHE	2.1
53	CT	156	PHE	2.1
49	E	58	VAL	2.1
50	CQ	49	VAL	2.1
64	DE	15	VAL	2.1
19	BL	158	HIS	2.1
6	AY	184	LYS	2.1
7	AZ	79	TYR	2.1
16	v	62	TYR	2.1
16	BI	81	TYR	2.1
19	BL	20	LYS	2.1
30	BW	40	LYS	2.1
55	CV	107	THR	2.1
56	CW	49	LEU	2.1
73	DN	4	LYS	2.1
52	CS	102	ARG	2.1
37	CD	47	ALA	2.1
39	CF	2	ALA	2.1
52	CS	195	ALA	2.1
63	S	133	ALA	2.1
71	a	134	ALA	2.1
6	AY	69	GLY	2.1
24	6	107	GLY	2.1
35	CB	78	GLY	2.1
36	CC	102	GLU	2.1
53	CT	122	GLU	2.1
54	J	141	GLY	2.1
54	CU	128	PRO	2.1
56	CW	18	PRO	2.1
9	o	199	PHE	2.1
16	BI	111	SER	2.1
26	8	50	SER	2.1
56	L	21	SER	2.1
60	DA	111	SER	2.1
79	AR	62	PHE	2.1
79	DT	75	SER	2.1
15	u	129	VAL	2.1
66	DG	6	VAL	2.1
75	DP	48	VAL	2.1
1	AS	2470	C	2.1
1	AS	2473	C	2.1
46	B	694	C	2.1

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Mol	Chain	Res	Type	RSRZ
11	BD	37	ASP	2.1
16	BI	158	HIS	2.1
18	BK	58	ILE	2.1
22	BO	25	ILE	2.1
24	6	15	LEU	2.1
48	CO	89	ASP	2.1
54	CU	122	LEU	2.1
63	S	119	ASP	2.1
16	BI	63	ARG	2.1
63	DD	122	ARG	2.1
6	AY	51	TYR	2.1
27	BT	43	TYR	2.1
73	DN	73	TYR	2.1
5	AX	8	ALA	2.1
48	CO	34	ALA	2.1
5	AX	143	GLN	2.1
34	CA	31	GLN	2.1
4	AW	153	GLY	2.1
24	BQ	30	GLY	2.1
35	CB	28	GLY	2.1
53	CT	146	GLY	2.1
16	BI	76	PRO	2.1
55	CV	61	GLU	2.1
56	L	104	PHE	2.1
62	R	12	PHE	2.1
69	Y	77	PRO	2.1
10	BC	48	SER	2.1
80	L1	20	SER	2.1
8	BA	90	VAL	2.1
60	P	150	VAL	2.1
65	DF	100	VAL	2.1
8	BA	156	LYS	2.1
16	BI	153	ASN	2.1
46	CM	1743	A	2.1
49	CP	77	LYS	2.1
78	DS	123	LYS	2.1
34	CA	32	ILE	2.1
43	CJ	83	LEU	2.1
51	G	90	ILE	2.1
52	H	199	ILE	2.1
76	DQ	31	ILE	2.1
78	h	190	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
62	DC	128	HIS	2.1
18	x	7	THR	2.1
29	BV	43	THR	2.1
62	DC	123	TYR	2.1
68	DI	58	TYR	2.1
80	ll	21	THR	2.1
1	AS	2467	C	2.1
50	CQ	148	ALA	2.1
79	DT	293	ALA	2.1
80	ll	71	ALA	2.1
6	AY	235	GLY	2.1
20	BM	16	GLY	2.1
51	CR	25	GLY	2.1
55	CV	20	GLN	2.1
57	CX	13	GLN	2.1
59	O	102	GLY	2.1
61	DB	93	GLY	2.1
25	BR	88	GLU	2.1
49	E	210	PHE	2.1
1	1	2465	U	2.0
1	AS	1204	U	2.0
6	l	194	LYS	2.0
7	AZ	236	VAL	2.0
16	v	155	VAL	2.0
16	BI	56	LYS	2.0
47	CN	121	VAL	2.0
49	E	77	LYS	2.0
57	CX	21	VAL	2.0
58	CY	141	LYS	2.0
47	CN	137	SER	2.0
7	AZ	69	ILE	2.0
7	AZ	92	LEU	2.0
15	BH	23	ASN	2.0
26	BS	24	LEU	2.0
38	CE	57	ARG	2.0
41	AN	51	LEU	2.0
54	CU	145	ILE	2.0
55	CV	22	ARG	2.0
57	M	87	LEU	2.0
60	P	149	LEU	2.0
67	W	84	ARG	2.0
69	Y	57	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
53	CT	69	HIS	2.0
65	DF	84	TRP	2.0
4	AW	142	ASP	2.0
4	AW	189	TYR	2.0
20	z	111	ASP	2.0
20	BM	2	ALA	2.0
52	CS	78	ALA	2.0
61	Q	88	THR	2.0
62	DC	24	ASP	2.0
63	DD	114	THR	2.0
63	DD	135	ALA	2.0
64	DE	35	THR	2.0
74	DO	13	ALA	2.0
79	AR	283	ASP	2.0
45	CL	95	GLY	2.0
54	CU	183	GLY	2.0
63	DD	76	GLN	2.0
70	DK	86	PHE	2.0
73	c	16	GLY	2.0
77	g	44	PHE	2.0
1	AS	1224	C	2.0
20	z	70	LYS	2.0
41	AN	52	LYS	2.0
43	AP	40	LYS	2.0
51	CR	106	LYS	2.0
53	CT	79	LYS	2.0
58	CY	15	LYS	2.0
65	DF	132	LYS	2.0
67	DH	29	LYS	2.0
67	DH	73	GLU	2.0
46	CM	1593	C	2.0
51	CR	102	VAL	2.0
6	AY	151	LEU	2.0
7	m	113	LEU	2.0
48	CO	218	LEU	2.0
60	P	84	ILE	2.0
66	DG	116	ILE	2.0
1	AS	2183	U	2.0
1	AS	2442	U	2.0
29	BV	66	ASN	2.0
66	DG	85	ASN	2.0
67	W	48	ASN	2.0

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Mol	Chain	Res	Type	RSRZ
20	BM	56	THR	2.0
65	DF	79	TYR	2.0
42	CI	3	ASP	2.0
61	DB	27	ASP	2.0
29	BV	68	PHE	2.0
45	i	108	GLY	2.0
55	K	185	CYS	2.0
56	L	32	GLY	2.0
80	L1	211	GLY	2.0
49	CP	89	GLN	2.0
63	S	40	PRO	2.0
66	DG	78	LYS	2.0
1	1	2466	A	2.0
18	BK	42	GLU	2.0
27	BT	16	ARG	2.0
37	CD	46	VAL	2.0
50	F	104	GLU	2.0
4	AW	71	LEU	2.0
7	m	146	LEU	2.0
10	BC	201	LEU	2.0
38	CE	67	LEU	2.0
48	D	54	LEU	2.0
78	h	188	LEU	2.0
34	AG	49	ILE	2.0
47	CN	173	ILE	2.0
1	1	2448	C	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	B	1855	1/1	0.23	0.20	106,106,106,106	0
81	MG	B	1834	1/1	0.30	0.23	241,241,241,241	0
81	MG	B	1848	1/1	0.40	0.14	57,57,57,57	0
81	MG	1	3470	1/1	0.42	0.26	48,48,48,48	0
81	MG	CM	1811	1/1	0.44	0.33	73,73,73,73	0
81	MG	8	201	1/1	0.46	0.14	55,55,55,55	0
81	MG	B	1932	1/1	0.49	0.25	81,81,81,81	0
81	MG	B	1805	1/1	0.49	0.32	82,82,82,82	0
81	MG	g	101	1/1	0.51	0.28	66,66,66,66	0
81	MG	AS	3588	1/1	0.51	0.30	79,79,79,79	0
81	MG	B	1960	1/1	0.51	0.17	41,41,41,41	0
81	MG	AS	3581	1/1	0.52	0.09	66,66,66,66	0
81	MG	AS	3647	1/1	0.53	0.20	62,62,62,62	0
81	MG	AS	3484	1/1	0.53	0.16	43,43,43,43	0
81	MG	1	3694	1/1	0.54	0.16	120,120,120,120	0
81	MG	1	3800	1/1	0.54	0.23	95,95,95,95	0
81	MG	1	3603	1/1	0.54	0.23	64,64,64,64	0
81	MG	1	3783	1/1	0.55	0.14	36,36,36,36	0
81	MG	B	1919	1/1	0.55	0.14	110,110,110,110	0
81	MG	CM	1833	1/1	0.55	0.32	69,69,69,69	0
81	MG	1	3677	1/1	0.56	0.12	55,55,55,55	0
81	MG	B	1966	1/1	0.56	0.15	99,99,99,99	0
81	MG	AS	3595	1/1	0.56	0.19	47,47,47,47	0
81	MG	CM	1871	1/1	0.56	0.17	99,99,99,99	0
81	MG	CM	1925	1/1	0.56	0.27	61,61,61,61	0
81	MG	1	3457	1/1	0.57	0.18	44,44,44,44	0
81	MG	1	3869	1/1	0.57	0.23	61,61,61,61	0
81	MG	B	1854	1/1	0.57	0.15	96,96,96,96	0
81	MG	AS	3632	1/1	0.58	0.15	91,91,91,91	0
81	MG	1	3879	1/1	0.59	0.19	63,63,63,63	0
81	MG	1	3755	1/1	0.59	0.13	51,51,51,51	0
81	MG	k	403	1/1	0.60	0.28	78,78,78,78	0
81	MG	AS	3497	1/1	0.62	0.23	75,75,75,75	0
81	MG	CM	1883	1/1	0.62	0.17	65,65,65,65	0
81	MG	B	1836	1/1	0.62	0.32	78,78,78,78	0
81	MG	B	1801	1/1	0.63	0.18	54,54,54,54	0
81	MG	4	212	1/1	0.63	0.13	81,81,81,81	0
81	MG	AS	3737	1/1	0.63	0.28	60,60,60,60	0
81	MG	AS	3528	1/1	0.63	0.15	97,97,97,97	0
84	ZN	AP	201	1/1	0.63	0.26	234,234,234,234	0
81	MG	B	1843	1/1	0.64	0.09	83,83,83,83	0
81	MG	B	1925	1/1	0.64	0.12	76,76,76,76	0
81	MG	1	3433	1/1	0.64	0.31	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3844	1/1	0.64	0.17	75,75,75,75	0
81	MG	1	3857	1/1	0.64	0.14	49,49,49,49	0
81	MG	CL	302	1/1	0.64	0.30	43,43,43,43	0
81	MG	AS	3762	1/1	0.64	0.09	57,57,57,57	0
81	MG	AS	3550	1/1	0.65	0.23	48,48,48,48	0
81	MG	B	1931	1/1	0.65	0.23	72,72,72,72	0
81	MG	B	1871	1/1	0.65	0.21	64,64,64,64	0
81	MG	CM	1822	1/1	0.65	0.19	81,81,81,81	0
81	MG	AS	3671	1/1	0.65	0.20	46,46,46,46	0
81	MG	1	3802	1/1	0.66	0.08	89,89,89,89	0
81	MG	3	211	1/1	0.66	0.16	64,64,64,64	0
81	MG	1	3415	1/1	0.66	0.26	23,23,23,23	0
81	MG	AT	203	1/1	0.66	0.27	71,71,71,71	0
81	MG	1	3423	1/1	0.67	0.20	55,55,55,55	0
81	MG	CM	1897	1/1	0.67	0.22	105,105,105,105	0
81	MG	B	1893	1/1	0.67	0.14	69,69,69,69	0
81	MG	CM	1940	1/1	0.67	0.26	59,59,59,59	0
81	MG	DB	201	1/1	0.67	0.18	67,67,67,67	0
81	MG	1	3668	1/1	0.67	0.21	57,57,57,57	0
81	MG	B	1956	1/1	0.67	0.11	67,67,67,67	0
81	MG	DC	201	1/1	0.68	0.29	42,42,42,42	0
81	MG	BH	201	1/1	0.68	0.09	54,54,54,54	0
81	MG	B	1889	1/1	0.68	0.21	71,71,71,71	0
81	MG	B	1923	1/1	0.69	0.14	92,92,92,92	0
81	MG	AS	3729	1/1	0.69	0.42	79,79,79,79	0
81	MG	D	301	1/1	0.69	0.29	69,69,69,69	0
81	MG	1	3584	1/1	0.69	0.21	61,61,61,61	0
81	MG	AS	3765	1/1	0.69	0.15	44,44,44,44	0
81	MG	AS	3649	1/1	0.69	0.10	54,54,54,54	0
81	MG	CM	1890	1/1	0.69	0.13	57,57,57,57	0
81	MG	B	1922	1/1	0.70	0.14	65,65,65,65	0
81	MG	CM	1857	1/1	0.70	0.17	99,99,99,99	0
81	MG	AS	3464	1/1	0.70	0.20	81,81,81,81	0
83	PAR	AS	3789	42/42	0.70	0.14	69,100,118,123	42
81	MG	AU	203	1/1	0.70	0.14	100,100,100,100	0
81	MG	1	3894	1/1	0.71	0.20	52,52,52,52	0
81	MG	1	3904	1/1	0.71	0.13	57,57,57,57	0
81	MG	B	1915	1/1	0.71	0.18	76,76,76,76	0
81	MG	B	1967	1/1	0.71	0.07	71,71,71,71	0
81	MG	1	3754	1/1	0.71	0.12	59,59,59,59	0
81	MG	4	208	1/1	0.71	0.15	57,57,57,57	0
81	MG	1	3852	1/1	0.71	0.30	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3789	1/1	0.71	0.27	46,46,46,46	0
81	MG	1	3748	1/1	0.71	0.13	27,27,27,27	0
81	MG	1	3766	1/1	0.71	0.12	63,63,63,63	0
81	MG	F	301	1/1	0.72	0.18	69,69,69,69	0
81	MG	1	3890	1/1	0.72	0.08	45,45,45,45	0
81	MG	CM	1912	1/1	0.72	0.20	62,62,62,62	0
81	MG	CM	1801	1/1	0.72	0.20	36,36,36,36	0
81	MG	AS	3704	1/1	0.72	0.20	49,49,49,49	0
81	MG	AR	401	1/1	0.72	0.15	83,83,83,83	0
81	MG	1	3597	1/1	0.72	0.41	78,78,78,78	0
81	MG	1	3464	1/1	0.72	0.25	34,34,34,34	0
81	MG	3	207	1/1	0.72	0.21	87,87,87,87	0
81	MG	AS	3507	1/1	0.72	0.26	72,72,72,72	0
84	ZN	CB	201	1/1	0.72	0.23	255,255,255,255	0
81	MG	1	3864	1/1	0.73	0.09	62,62,62,62	0
81	MG	1	3931	1/1	0.73	0.09	58,58,58,58	0
81	MG	CM	1862	1/1	0.73	0.22	64,64,64,64	0
81	MG	DB	203	1/1	0.73	0.17	117,117,117,117	0
81	MG	B	1945	1/1	0.73	0.13	61,61,61,61	0
81	MG	1	3502	1/1	0.73	0.16	55,55,55,55	0
81	MG	1	3788	1/1	0.73	0.15	57,57,57,57	0
83	PAR	AS	3790	42/42	0.73	0.16	81,107,127,140	0
81	MG	1	3555	1/1	0.73	0.14	53,53,53,53	0
81	MG	1	3490	1/1	0.73	0.13	45,45,45,45	0
81	MG	CM	1915	1/1	0.74	0.20	66,66,66,66	0
81	MG	AS	3535	1/1	0.74	0.16	88,88,88,88	0
81	MG	1	3635	1/1	0.74	0.14	61,61,61,61	0
81	MG	AS	3457	1/1	0.74	0.26	37,37,37,37	0
81	MG	1	3420	1/1	0.74	0.10	38,38,38,38	0
81	MG	B	1911	1/1	0.74	0.17	58,58,58,58	0
81	MG	AS	3598	1/1	0.74	0.16	69,69,69,69	0
83	PAR	B	1970	42/42	0.74	0.15	82,119,132,143	0
81	MG	AS	3615	1/1	0.74	0.17	50,50,50,50	0
81	MG	1	3769	1/1	0.74	0.17	37,37,37,37	0
81	MG	1	3425	1/1	0.74	0.26	40,40,40,40	0
81	MG	1	3839	1/1	0.74	0.12	50,50,50,50	0
81	MG	AS	3585	1/1	0.75	0.29	58,58,58,58	0
81	MG	1	3509	1/1	0.75	0.14	30,30,30,30	0
81	MG	1	3842	1/1	0.75	0.10	27,27,27,27	0
81	MG	1	3649	1/1	0.75	0.10	53,53,53,53	0
81	MG	y	202	1/1	0.75	0.11	45,45,45,45	0
81	MG	1	3798	1/1	0.75	0.18	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	B	1874	1/1	0.75	0.21	51,51,51,51	0
81	MG	B	1946	1/1	0.75	0.09	72,72,72,72	0
81	MG	DJ	202	1/1	0.75	0.09	53,53,53,53	0
81	MG	AP	203	1/1	0.75	0.16	32,32,32,32	0
81	MG	1	3909	1/1	0.75	0.11	44,44,44,44	0
81	MG	CM	1864	1/1	0.75	0.19	54,54,54,54	0
81	MG	1	3667	1/1	0.75	0.10	50,50,50,50	0
84	ZN	AH	201	1/1	0.75	0.13	213,213,213,213	0
81	MG	1	3535	1/1	0.75	0.21	84,84,84,84	0
81	MG	1	3811	1/1	0.75	0.12	38,38,38,38	0
81	MG	CM	1945	1/1	0.76	0.16	49,49,49,49	0
81	MG	AT	208	1/1	0.76	0.27	49,49,49,49	0
81	MG	j	304	1/1	0.76	0.16	42,42,42,42	0
81	MG	CM	1873	1/1	0.76	0.30	40,40,40,40	0
81	MG	AS	3516	1/1	0.76	0.32	48,48,48,48	0
81	MG	1	3471	1/1	0.76	0.15	41,41,41,41	0
83	PAR	1	3969	42/42	0.76	0.13	47,103,124,126	0
81	MG	1	3585	1/1	0.76	0.10	53,53,53,53	0
81	MG	1	3843	1/1	0.76	0.21	63,63,63,63	0
81	MG	4	213	1/1	0.76	0.12	49,49,49,49	0
81	MG	CM	1917	1/1	0.76	0.13	86,86,86,86	0
81	MG	AS	3781	1/1	0.76	0.11	49,49,49,49	0
81	MG	B	1879	1/1	0.76	0.11	94,94,94,94	0
81	MG	1	3552	1/1	0.77	0.17	75,75,75,75	0
81	MG	B	1957	1/1	0.77	0.08	31,31,31,31	0
81	MG	AS	3618	1/1	0.77	0.14	58,58,58,58	0
81	MG	AS	3424	1/1	0.77	0.18	52,52,52,52	0
81	MG	1	3888	1/1	0.77	0.12	55,55,55,55	0
81	MG	1	3560	1/1	0.77	0.21	73,73,73,73	0
81	MG	AS	3583	1/1	0.77	0.15	61,61,61,61	0
81	MG	AS	3682	1/1	0.77	0.22	77,77,77,77	0
83	PAR	AS	3788	42/42	0.77	0.13	84,114,125,131	0
81	MG	B	1901	1/1	0.77	0.11	74,74,74,74	0
81	MG	CM	1818	1/1	0.77	0.17	40,40,40,40	0
81	MG	B	1909	1/1	0.77	0.07	62,62,62,62	0
81	MG	CM	1830	1/1	0.77	0.21	81,81,81,81	0
81	MG	B	1949	1/1	0.77	0.15	75,75,75,75	0
81	MG	AS	3743	1/1	0.78	0.14	41,41,41,41	0
81	MG	1	3823	1/1	0.78	0.15	48,48,48,48	0
81	MG	4	215	1/1	0.78	0.12	56,56,56,56	0
81	MG	AS	3779	1/1	0.78	0.20	57,57,57,57	0
81	MG	V	201	1/1	0.78	0.11	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3782	1/1	0.78	0.10	37,37,37,37	0
81	MG	AT	202	1/1	0.78	0.23	43,43,43,43	0
81	MG	Y	201	1/1	0.78	0.17	69,69,69,69	0
81	MG	1	3556	1/1	0.78	0.14	66,66,66,66	0
81	MG	CQ	304	1/1	0.78	0.09	71,71,71,71	0
81	MG	1	3771	1/1	0.78	0.15	109,109,109,109	0
81	MG	1	3558	1/1	0.78	0.12	65,65,65,65	0
81	MG	1	3532	1/1	0.78	0.24	37,37,37,37	0
81	MG	1	3611	1/1	0.78	0.13	50,50,50,50	0
81	MG	1	3561	1/1	0.78	0.23	53,53,53,53	0
83	PAR	1	3968	42/42	0.78	0.14	56,91,119,122	0
81	MG	1	3578	1/1	0.78	0.11	41,41,41,41	0
81	MG	B	1815	1/1	0.78	0.28	59,59,59,59	0
81	MG	B	1903	1/1	0.78	0.16	61,61,61,61	0
81	MG	B	1819	1/1	0.78	0.17	30,30,30,30	0
81	MG	AS	3707	1/1	0.78	0.08	27,27,27,27	0
81	MG	AS	3721	1/1	0.78	0.11	64,64,64,64	0
81	MG	1	3764	1/1	0.78	0.30	63,63,63,63	0
81	MG	1	3484	1/1	0.78	0.17	60,60,60,60	0
81	MG	CM	1891	1/1	0.79	0.11	48,48,48,48	0
81	MG	1	3590	1/1	0.79	0.08	36,36,36,36	0
81	MG	AS	3469	1/1	0.79	0.17	55,55,55,55	0
81	MG	B	1959	1/1	0.79	0.22	44,44,44,44	0
81	MG	w	303	1/1	0.79	0.39	64,64,64,64	0
81	MG	1	3960	1/1	0.79	0.16	35,35,35,35	0
81	MG	AS	3667	1/1	0.79	0.14	28,28,28,28	0
81	MG	1	3961	1/1	0.79	0.15	85,85,85,85	0
81	MG	1	3870	1/1	0.79	0.12	54,54,54,54	0
81	MG	DA	202	1/1	0.79	0.18	70,70,70,70	0
81	MG	CM	1810	1/1	0.79	0.23	45,45,45,45	0
81	MG	1	3574	1/1	0.79	0.20	53,53,53,53	0
81	MG	I	301	1/1	0.79	0.15	85,85,85,85	0
81	MG	AS	3709	1/1	0.79	0.07	52,52,52,52	0
81	MG	1	3644	1/1	0.79	0.11	56,56,56,56	0
81	MG	CM	1832	1/1	0.79	0.14	63,63,63,63	0
81	MG	AS	3727	1/1	0.79	0.23	73,73,73,73	0
81	MG	B	1813	1/1	0.79	0.16	42,42,42,42	0
81	MG	1	3466	1/1	0.79	0.32	47,47,47,47	0
81	MG	1	3715	1/1	0.79	0.22	51,51,51,51	0
81	MG	AS	3746	1/1	0.79	0.20	71,71,71,71	0
81	MG	1	3730	1/1	0.79	0.18	48,48,48,48	0
81	MG	1	3660	1/1	0.79	0.11	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3612	1/1	0.79	0.16	52,52,52,52	0
81	MG	1	3866	1/1	0.80	0.13	81,81,81,81	0
81	MG	1	3416	1/1	0.80	0.21	30,30,30,30	0
81	MG	CM	1907	1/1	0.80	0.12	103,103,103,103	0
81	MG	AT	212	1/1	0.80	0.11	41,41,41,41	0
81	MG	1	3926	1/1	0.80	0.09	37,37,37,37	0
81	MG	1	3477	1/1	0.80	0.15	18,18,18,18	0
81	MG	1	3707	1/1	0.80	0.08	82,82,82,82	0
81	MG	1	3860	1/1	0.80	0.12	70,70,70,70	0
81	MG	AS	3717	1/1	0.80	0.21	64,64,64,64	0
81	MG	CM	1816	1/1	0.80	0.20	45,45,45,45	0
81	MG	1	3863	1/1	0.80	0.13	85,85,85,85	0
81	MG	AS	3603	1/1	0.80	0.18	44,44,44,44	0
81	MG	AS	3605	1/1	0.80	0.11	72,72,72,72	0
81	MG	CM	1831	1/1	0.80	0.20	36,36,36,36	0
81	MG	AS	3609	1/1	0.80	0.21	55,55,55,55	0
81	MG	AS	3495	1/1	0.80	0.24	51,51,51,51	0
81	MG	B	1880	1/1	0.80	0.12	49,49,49,49	0
81	MG	CM	1858	1/1	0.80	0.15	113,113,113,113	0
81	MG	B	1883	1/1	0.80	0.24	82,82,82,82	0
81	MG	AS	3620	1/1	0.80	0.10	110,110,110,110	0
81	MG	1	3796	1/1	0.80	0.11	62,62,62,62	0
81	MG	AS	3636	1/1	0.80	0.16	69,69,69,69	0
81	MG	5	201	1/1	0.80	0.13	65,65,65,65	0
81	MG	CM	1885	1/1	0.80	0.20	57,57,57,57	0
81	MG	B	1841	1/1	0.80	0.15	55,55,55,55	0
81	MG	AS	3774	1/1	0.81	0.17	49,49,49,49	0
81	MG	AS	3775	1/1	0.81	0.14	47,47,47,47	0
81	MG	1	3838	1/1	0.81	0.12	35,35,35,35	0
81	MG	1	3699	1/1	0.81	0.12	43,43,43,43	0
81	MG	AS	3436	1/1	0.81	0.17	65,65,65,65	0
81	MG	B	1924	1/1	0.81	0.06	89,89,89,89	0
81	MG	B	1862	1/1	0.81	0.09	80,80,80,80	0
81	MG	AT	204	1/1	0.81	0.13	85,85,85,85	0
81	MG	B	1863	1/1	0.81	0.08	103,103,103,103	0
81	MG	B	1869	1/1	0.81	0.23	59,59,59,59	0
81	MG	AS	3492	1/1	0.81	0.08	24,24,24,24	0
81	MG	AI	201	1/1	0.81	0.11	66,66,66,66	0
81	MG	1	3898	1/1	0.81	0.21	52,52,52,52	0
81	MG	1	3758	1/1	0.81	0.14	40,40,40,40	0
81	MG	AS	3677	1/1	0.81	0.08	65,65,65,65	0
81	MG	1	3777	1/1	0.81	0.15	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	DB	204	1/1	0.81	0.13	26,26,26,26	0
81	MG	AS	3522	1/1	0.81	0.21	36,36,36,36	0
81	MG	B	1809	1/1	0.81	0.12	37,37,37,37	0
81	MG	1	3760	1/1	0.81	0.15	43,43,43,43	0
81	MG	B	1890	1/1	0.81	0.14	87,87,87,87	0
81	MG	1	3545	1/1	0.81	0.14	34,34,34,34	0
81	MG	1	3856	1/1	0.81	0.13	54,54,54,54	0
81	MG	o	304	1/1	0.81	0.16	47,47,47,47	0
81	MG	B	1906	1/1	0.81	0.21	43,43,43,43	0
81	MG	1	3623	1/1	0.81	0.10	44,44,44,44	0
81	MG	x	202	1/1	0.81	0.08	25,25,25,25	0
81	MG	3	206	1/1	0.81	0.17	55,55,55,55	0
81	MG	0	202	1/1	0.81	0.29	87,87,87,87	0
81	MG	1	3772	1/1	0.82	0.20	49,49,49,49	0
81	MG	AS	3783	1/1	0.82	0.11	65,65,65,65	0
81	MG	AS	3784	1/1	0.82	0.12	54,54,54,54	0
81	MG	1	3750	1/1	0.82	0.21	46,46,46,46	0
81	MG	1	3782	1/1	0.82	0.16	66,66,66,66	0
81	MG	AS	3702	1/1	0.82	0.10	72,72,72,72	0
81	MG	1	3918	1/1	0.82	0.07	43,43,43,43	0
81	MG	AS	3410	1/1	0.82	0.29	25,25,25,25	0
81	MG	AS	3513	1/1	0.82	0.20	36,36,36,36	0
81	MG	AW	303	1/1	0.82	0.10	82,82,82,82	0
81	MG	AX	401	1/1	0.82	0.09	43,43,43,43	0
81	MG	1	3544	1/1	0.82	0.28	47,47,47,47	0
81	MG	CM	1942	1/1	0.82	0.10	42,42,42,42	0
81	MG	BS	201	1/1	0.82	0.13	83,83,83,83	0
81	MG	1	3892	1/1	0.82	0.07	71,71,71,71	0
81	MG	CM	1808	1/1	0.82	0.24	63,63,63,63	0
81	MG	AS	3437	1/1	0.82	0.20	36,36,36,36	0
81	MG	B	1882	1/1	0.82	0.09	56,56,56,56	0
81	MG	AS	3731	1/1	0.82	0.10	49,49,49,49	0
81	MG	AS	3735	1/1	0.82	0.15	56,56,56,56	0
81	MG	AS	3548	1/1	0.82	0.15	49,49,49,49	0
81	MG	AS	3742	1/1	0.82	0.09	72,72,72,72	0
81	MG	1	3893	1/1	0.82	0.10	34,34,34,34	0
81	MG	AS	3554	1/1	0.82	0.14	44,44,44,44	0
81	MG	AS	3641	1/1	0.82	0.13	80,80,80,80	0
81	MG	CM	1855	1/1	0.82	0.07	131,131,131,131	0
81	MG	AS	3561	1/1	0.82	0.12	42,42,42,42	0
81	MG	1	3483	1/1	0.82	0.17	30,30,30,30	0
81	MG	AS	3651	1/1	0.82	0.10	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3483	1/1	0.82	0.23	31,31,31,31	0
81	MG	AS	3670	1/1	0.82	0.12	63,63,63,63	0
81	MG	AS	3506	1/1	0.83	0.18	40,40,40,40	0
81	MG	B	1884	1/1	0.83	0.15	107,107,107,107	0
81	MG	4	216	1/1	0.83	0.10	42,42,42,42	0
81	MG	AS	3733	1/1	0.83	0.10	89,89,89,89	0
81	MG	Z	202	1/1	0.83	0.29	69,69,69,69	0
81	MG	Z	203	1/1	0.83	0.17	62,62,62,62	0
81	MG	1	3572	1/1	0.83	0.10	44,44,44,44	0
81	MG	CM	1939	1/1	0.83	0.18	82,82,82,82	0
81	MG	B	1936	1/1	0.83	0.11	59,59,59,59	0
81	MG	1	3503	1/1	0.83	0.06	62,62,62,62	0
81	MG	B	1899	1/1	0.83	0.18	38,38,38,38	0
81	MG	1	3840	1/1	0.83	0.17	52,52,52,52	0
81	MG	w	301	1/1	0.83	0.28	39,39,39,39	0
81	MG	AS	3576	1/1	0.83	0.28	84,84,84,84	0
81	MG	1	3403	1/1	0.83	0.31	31,31,31,31	0
81	MG	3	212	1/1	0.83	0.19	46,46,46,46	0
81	MG	CM	1849	1/1	0.83	0.23	53,53,53,53	0
81	MG	DG	201	1/1	0.83	0.18	49,49,49,49	0
81	MG	CM	1854	1/1	0.83	0.17	90,90,90,90	0
81	MG	1	3925	1/1	0.83	0.12	39,39,39,39	0
81	MG	AS	3698	1/1	0.83	0.18	48,48,48,48	0
81	MG	AS	3700	1/1	0.83	0.14	59,59,59,59	0
81	MG	AS	3787	1/1	0.83	0.16	66,66,66,66	0
81	MG	B	1829	1/1	0.83	0.29	28,28,28,28	0
81	MG	1	3434	1/1	0.83	0.23	25,25,25,25	0
81	MG	1	3563	1/1	0.83	0.29	46,46,46,46	0
81	MG	B	1837	1/1	0.83	0.12	78,78,78,78	0
81	MG	1	3711	1/1	0.83	0.15	54,54,54,54	0
81	MG	AS	3498	1/1	0.83	0.23	33,33,33,33	0
81	MG	1	3805	1/1	0.84	0.10	28,28,28,28	0
81	MG	AS	3596	1/1	0.84	0.19	43,43,43,43	0
81	MG	1	3737	1/1	0.84	0.20	43,43,43,43	0
81	MG	1	3813	1/1	0.84	0.12	71,71,71,71	0
81	MG	AT	207	1/1	0.84	0.11	80,80,80,80	0
81	MG	1	3648	1/1	0.84	0.12	51,51,51,51	0
81	MG	AS	3608	1/1	0.84	0.20	65,65,65,65	0
81	MG	CM	1903	1/1	0.84	0.13	38,38,38,38	0
81	MG	1	3911	1/1	0.84	0.10	39,39,39,39	0
81	MG	CM	1911	1/1	0.84	0.08	63,63,63,63	0
81	MG	1	3827	1/1	0.84	0.07	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	Z	201	1/1	0.84	0.18	61,61,61,61	0
81	MG	AS	3728	1/1	0.84	0.12	21,21,21,21	0
81	MG	1	3830	1/1	0.84	0.13	28,28,28,28	0
81	MG	B	1926	1/1	0.84	0.15	70,70,70,70	0
81	MG	AS	3628	1/1	0.84	0.22	73,73,73,73	0
81	MG	AS	3734	1/1	0.84	0.13	37,37,37,37	0
81	MG	o	302	1/1	0.84	0.17	37,37,37,37	0
81	MG	CN	301	1/1	0.84	0.13	54,54,54,54	0
81	MG	1	3765	1/1	0.84	0.15	49,49,49,49	0
81	MG	AS	3639	1/1	0.84	0.15	59,59,59,59	0
81	MG	1	3598	1/1	0.84	0.08	44,44,44,44	0
81	MG	AS	3643	1/1	0.84	0.23	37,37,37,37	0
81	MG	1	3877	1/1	0.84	0.29	36,36,36,36	0
81	MG	1	3768	1/1	0.84	0.12	38,38,38,38	0
81	MG	1	3965	1/1	0.84	0.09	42,42,42,42	0
81	MG	CM	1848	1/1	0.84	0.22	61,61,61,61	0
81	MG	AS	3653	1/1	0.84	0.08	47,47,47,47	0
81	MG	AS	3778	1/1	0.84	0.07	38,38,38,38	0
81	MG	1	3579	1/1	0.84	0.22	47,47,47,47	0
81	MG	1	3693	1/1	0.84	0.11	36,36,36,36	0
81	MG	1	3661	1/1	0.84	0.18	63,63,63,63	0
81	MG	B	1907	1/1	0.84	0.15	54,54,54,54	0
81	MG	CM	1863	1/1	0.84	0.14	15,15,15,15	0
81	MG	1	3774	1/1	0.84	0.13	46,46,46,46	0
81	MG	CM	1869	1/1	0.84	0.11	55,55,55,55	0
81	MG	CM	1870	1/1	0.84	0.11	73,73,73,73	0
81	MG	1	3853	1/1	0.85	0.12	63,63,63,63	0
81	MG	CM	1841	1/1	0.85	0.08	118,118,118,118	0
81	MG	1	3524	1/1	0.85	0.09	58,58,58,58	0
81	MG	1	3923	1/1	0.85	0.14	36,36,36,36	0
81	MG	CM	1850	1/1	0.85	0.19	55,55,55,55	0
81	MG	1	3411	1/1	0.85	0.21	24,24,24,24	0
81	MG	1	3807	1/1	0.85	0.05	39,39,39,39	0
81	MG	1	3629	1/1	0.85	0.29	60,60,60,60	0
81	MG	B	1887	1/1	0.85	0.08	51,51,51,51	0
81	MG	1	3950	1/1	0.85	0.42	50,50,50,50	0
81	MG	1	3959	1/1	0.85	0.10	48,48,48,48	0
81	MG	i	301	1/1	0.85	0.19	59,59,59,59	0
81	MG	1	3812	1/1	0.85	0.21	58,58,58,58	0
81	MG	AS	3747	1/1	0.85	0.20	48,48,48,48	0
81	MG	AS	3748	1/1	0.85	0.16	60,60,60,60	0
81	MG	B	1803	1/1	0.85	0.21	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	c	202	1/1	0.85	0.10	60,60,60,60	0
81	MG	CM	1884	1/1	0.85	0.12	31,31,31,31	0
81	MG	1	3595	1/1	0.85	0.10	52,52,52,52	0
81	MG	1	3674	1/1	0.85	0.16	53,53,53,53	0
81	MG	1	3550	1/1	0.85	0.13	35,35,35,35	0
81	MG	1	3678	1/1	0.85	0.15	38,38,38,38	0
81	MG	CM	1901	1/1	0.85	0.09	53,53,53,53	0
81	MG	CM	1902	1/1	0.85	0.09	63,63,63,63	0
81	MG	B	1910	1/1	0.85	0.14	76,76,76,76	0
81	MG	1	3831	1/1	0.85	0.15	38,38,38,38	0
81	MG	AS	3442	1/1	0.85	0.17	41,41,41,41	0
81	MG	B	1914	1/1	0.85	0.15	62,62,62,62	0
81	MG	B	1820	1/1	0.85	0.21	38,38,38,38	0
81	MG	1	3880	1/1	0.85	0.11	30,30,30,30	0
81	MG	CM	1922	1/1	0.85	0.17	49,49,49,49	0
81	MG	AS	3476	1/1	0.85	0.18	37,37,37,37	0
81	MG	CM	1936	1/1	0.85	0.09	62,62,62,62	0
81	MG	1	3882	1/1	0.85	0.10	31,31,31,31	0
81	MG	B	1835	1/1	0.85	0.13	52,52,52,52	0
81	MG	1	3837	1/1	0.85	0.07	59,59,59,59	0
81	MG	1	3682	1/1	0.85	0.24	60,60,60,60	0
81	MG	1	3787	1/1	0.85	0.16	43,43,43,43	0
81	MG	1	3690	1/1	0.85	0.20	45,45,45,45	0
81	MG	1	3512	1/1	0.85	0.19	45,45,45,45	0
81	MG	AX	402	1/1	0.85	0.22	34,34,34,34	0
81	MG	1	3543	1/1	0.85	0.12	39,39,39,39	0
81	MG	l	402	1/1	0.85	0.10	51,51,51,51	0
81	MG	BZ	201	1/1	0.85	0.26	67,67,67,67	0
81	MG	AS	3687	1/1	0.85	0.14	44,44,44,44	0
81	MG	CM	1804	1/1	0.85	0.29	48,48,48,48	0
81	MG	CM	1806	1/1	0.85	0.20	68,68,68,68	0
81	MG	1	3901	1/1	0.85	0.05	39,39,39,39	0
81	MG	1	3650	1/1	0.85	0.09	30,30,30,30	0
81	MG	AS	3523	1/1	0.85	0.29	49,49,49,49	0
81	MG	B	1952	1/1	0.85	0.18	64,64,64,64	0
81	MG	AS	3531	1/1	0.85	0.16	51,51,51,51	0
81	MG	B	1955	1/1	0.85	0.21	45,45,45,45	0
81	MG	AS	3712	1/1	0.85	0.14	45,45,45,45	0
81	MG	s	201	1/1	0.85	0.15	49,49,49,49	0
81	MG	1	3653	1/1	0.85	0.09	47,47,47,47	0
81	MG	1	3914	1/1	0.86	0.14	31,31,31,31	0
81	MG	AS	3776	1/1	0.86	0.10	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3829	1/1	0.86	0.19	61,61,61,61	0
81	MG	B	1902	1/1	0.86	0.19	51,51,51,51	0
81	MG	B	1968	1/1	0.86	0.06	48,48,48,48	0
81	MG	1	3419	1/1	0.86	0.15	19,19,19,19	0
81	MG	AS	3526	1/1	0.86	0.14	50,50,50,50	0
81	MG	AS	3654	1/1	0.86	0.22	34,34,34,34	0
81	MG	1	3553	1/1	0.86	0.10	43,43,43,43	0
81	MG	AS	3668	1/1	0.86	0.15	78,78,78,78	0
81	MG	1	3832	1/1	0.86	0.07	46,46,46,46	0
81	MG	1	3795	1/1	0.86	0.13	60,60,60,60	0
81	MG	AS	3672	1/1	0.86	0.18	58,58,58,58	0
81	MG	u	202	1/1	0.86	0.07	55,55,55,55	0
81	MG	AT	209	1/1	0.86	0.06	24,24,24,24	0
81	MG	1	3946	1/1	0.86	0.05	40,40,40,40	0
81	MG	1	3460	1/1	0.86	0.15	23,23,23,23	0
81	MG	B	1846	1/1	0.86	0.18	56,56,56,56	0
81	MG	1	3953	1/1	0.86	0.19	57,57,57,57	0
81	MG	x	203	1/1	0.86	0.18	70,70,70,70	0
81	MG	1	3722	1/1	0.86	0.09	45,45,45,45	0
81	MG	BJ	302	1/1	0.86	0.09	42,42,42,42	0
81	MG	1	3728	1/1	0.86	0.12	53,53,53,53	0
81	MG	CM	1933	1/1	0.86	0.18	69,69,69,69	0
81	MG	1	3841	1/1	0.86	0.14	55,55,55,55	0
81	MG	1	3624	1/1	0.86	0.24	32,32,32,32	0
81	MG	B	1929	1/1	0.86	0.20	70,70,70,70	0
81	MG	1	3803	1/1	0.86	0.15	24,24,24,24	0
81	MG	1	3402	1/1	0.86	0.24	16,16,16,16	0
81	MG	CM	1809	1/1	0.86	0.22	34,34,34,34	0
81	MG	AQ	102	1/1	0.86	0.11	27,27,27,27	0
81	MG	1	3745	1/1	0.86	0.13	42,42,42,42	0
81	MG	1	3685	1/1	0.86	0.23	38,38,38,38	0
81	MG	AS	3611	1/1	0.86	0.07	29,29,29,29	0
81	MG	CM	1820	1/1	0.86	0.12	34,34,34,34	0
81	MG	B	1948	1/1	0.86	0.12	44,44,44,44	0
81	MG	B	1802	1/1	0.86	0.22	33,33,33,33	0
81	MG	AS	3617	1/1	0.86	0.12	62,62,62,62	0
81	MG	1	3654	1/1	0.86	0.10	49,49,49,49	0
81	MG	AS	3494	1/1	0.86	0.16	63,63,63,63	0
81	MG	AS	3621	1/1	0.86	0.14	60,60,60,60	0
81	MG	1	3566	1/1	0.86	0.09	24,24,24,24	0
81	MG	AS	3630	1/1	0.86	0.12	41,41,41,41	0
81	MG	AS	3751	1/1	0.86	0.11	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3760	1/1	0.86	0.10	146,146,146,146	0
81	MG	1	3636	1/1	0.86	0.10	34,34,34,34	0
81	MG	1	3910	1/1	0.86	0.09	50,50,50,50	0
81	MG	1	3638	1/1	0.86	0.23	48,48,48,48	0
81	MG	1	3847	1/1	0.87	0.24	50,50,50,50	0
81	MG	1	3630	1/1	0.87	0.14	34,34,34,34	0
81	MG	1	3907	1/1	0.87	0.17	77,77,77,77	0
81	MG	1	3665	1/1	0.87	0.21	25,25,25,25	0
81	MG	1	3721	1/1	0.87	0.14	42,42,42,42	0
81	MG	1	3528	1/1	0.87	0.08	45,45,45,45	0
81	MG	AS	3412	1/1	0.87	0.27	41,41,41,41	0
81	MG	o	303	1/1	0.87	0.14	52,52,52,52	0
81	MG	1	3858	1/1	0.87	0.13	62,62,62,62	0
81	MG	1	3859	1/1	0.87	0.20	43,43,43,43	0
81	MG	1	3723	1/1	0.87	0.14	51,51,51,51	0
81	MG	B	1847	1/1	0.87	0.09	28,28,28,28	0
81	MG	1	3565	1/1	0.87	0.20	31,31,31,31	0
81	MG	AS	3468	1/1	0.87	0.19	44,44,44,44	0
81	MG	B	1851	1/1	0.87	0.08	64,64,64,64	0
81	MG	1	3467	1/1	0.87	0.22	37,37,37,37	0
81	MG	AS	3764	1/1	0.87	0.14	72,72,72,72	0
81	MG	1	3776	1/1	0.87	0.12	63,63,63,63	0
81	MG	1	3943	1/1	0.87	0.09	61,61,61,61	0
81	MG	1	3867	1/1	0.87	0.12	45,45,45,45	0
81	MG	B	1865	1/1	0.87	0.14	95,95,95,95	0
81	MG	1	3570	1/1	0.87	0.17	61,61,61,61	0
81	MG	1	3952	1/1	0.87	0.19	33,33,33,33	0
81	MG	CM	1894	1/1	0.87	0.32	49,49,49,49	0
81	MG	CM	1896	1/1	0.87	0.11	32,32,32,32	0
81	MG	1	3738	1/1	0.87	0.10	22,22,22,22	0
81	MG	AF	201	1/1	0.87	0.17	82,82,82,82	0
81	MG	AS	3645	1/1	0.87	0.12	45,45,45,45	0
81	MG	AF	204	1/1	0.87	0.10	55,55,55,55	0
81	MG	1	3873	1/1	0.87	0.05	57,57,57,57	0
81	MG	1	3646	1/1	0.87	0.09	73,73,73,73	0
81	MG	AS	3517	1/1	0.87	0.21	34,34,34,34	0
81	MG	1	3747	1/1	0.87	0.16	34,34,34,34	0
81	MG	AS	3655	1/1	0.87	0.07	33,33,33,33	0
81	MG	B	1886	1/1	0.87	0.12	52,52,52,52	0
81	MG	1	3409	1/1	0.87	0.28	29,29,29,29	0
81	MG	1	3427	1/1	0.87	0.23	36,36,36,36	0
81	MG	AT	213	1/1	0.87	0.07	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3794	1/1	0.87	0.15	30,30,30,30	0
81	MG	AU	207	1/1	0.87	0.10	49,49,49,49	0
81	MG	1	3577	1/1	0.87	0.26	53,53,53,53	0
81	MG	AS	3540	1/1	0.87	0.25	55,55,55,55	0
81	MG	AS	3544	1/1	0.87	0.15	34,34,34,34	0
81	MG	AS	3683	1/1	0.87	0.20	49,49,49,49	0
81	MG	AS	3686	1/1	0.87	0.11	50,50,50,50	0
81	MG	BO	201	1/1	0.87	0.15	65,65,65,65	0
81	MG	B	1898	1/1	0.87	0.08	50,50,50,50	0
81	MG	AS	3549	1/1	0.87	0.19	34,34,34,34	0
81	MG	G	301	1/1	0.87	0.11	49,49,49,49	0
81	MG	CM	1802	1/1	0.87	0.27	18,18,18,18	0
81	MG	AS	3701	1/1	0.87	0.12	43,43,43,43	0
81	MG	1	3485	1/1	0.87	0.16	54,54,54,54	0
83	PAR	1	3967	42/42	0.87	0.15	62,83,103,110	0
81	MG	1	3514	1/1	0.87	0.14	22,22,22,22	0
81	MG	AS	3705	1/1	0.87	0.24	58,58,58,58	0
81	MG	AS	3566	1/1	0.87	0.24	37,37,37,37	0
81	MG	AS	3574	1/1	0.87	0.12	48,48,48,48	0
81	MG	AS	3711	1/1	0.87	0.17	51,51,51,51	0
81	MG	AS	3575	1/1	0.87	0.38	30,30,30,30	0
83	PAR	CM	1946	42/42	0.87	0.26	80,100,118,130	42
81	MG	1	3655	1/1	0.87	0.08	40,40,40,40	0
81	MG	AS	3719	1/1	0.87	0.07	48,48,48,48	0
81	MG	1	3473	1/1	0.87	0.26	18,18,18,18	0
81	MG	AS	3502	1/1	0.88	0.17	41,41,41,41	0
81	MG	CM	1845	1/1	0.88	0.20	60,60,60,60	0
81	MG	1	3917	1/1	0.88	0.17	27,27,27,27	0
81	MG	AS	3634	1/1	0.88	0.19	19,19,19,19	0
81	MG	1	3643	1/1	0.88	0.11	50,50,50,50	0
81	MG	AS	3755	1/1	0.88	0.05	45,45,45,45	0
81	MG	j	302	1/1	0.88	0.08	35,35,35,35	0
81	MG	AS	3761	1/1	0.88	0.10	54,54,54,54	0
81	MG	AS	3640	1/1	0.88	0.16	59,59,59,59	0
81	MG	B	1962	1/1	0.88	0.11	29,29,29,29	0
81	MG	1	3548	1/1	0.88	0.11	54,54,54,54	0
81	MG	AS	3766	1/1	0.88	0.05	29,29,29,29	0
81	MG	AS	3519	1/1	0.88	0.09	73,73,73,73	0
81	MG	1	3810	1/1	0.88	0.14	32,32,32,32	0
81	MG	AS	3648	1/1	0.88	0.08	43,43,43,43	0
81	MG	AS	3777	1/1	0.88	0.12	82,82,82,82	0
81	MG	1	3604	1/1	0.88	0.11	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	B	1969	1/1	0.88	0.12	50,50,50,50	0
81	MG	B	1823	1/1	0.88	0.16	32,32,32,32	0
81	MG	1	3929	1/1	0.88	0.07	87,87,87,87	0
81	MG	1	3438	1/1	0.88	0.17	30,30,30,30	0
81	MG	1	3933	1/1	0.88	0.07	35,35,35,35	0
81	MG	CM	1895	1/1	0.88	0.06	30,30,30,30	0
81	MG	1	3447	1/1	0.88	0.16	96,96,96,96	0
81	MG	1	3849	1/1	0.88	0.34	50,50,50,50	0
81	MG	CM	1899	1/1	0.88	0.15	65,65,65,65	0
81	MG	1	3818	1/1	0.88	0.10	75,75,75,75	0
81	MG	1	3410	1/1	0.88	0.33	42,42,42,42	0
81	MG	1	3826	1/1	0.88	0.13	53,53,53,53	0
81	MG	1	3495	1/1	0.88	0.10	50,50,50,50	0
81	MG	f	102	1/1	0.88	0.07	53,53,53,53	0
81	MG	1	3895	1/1	0.88	0.13	54,54,54,54	0
81	MG	z	201	1/1	0.88	0.07	51,51,51,51	0
81	MG	B	1920	1/1	0.88	0.20	50,50,50,50	0
81	MG	AS	3699	1/1	0.88	0.06	46,46,46,46	0
81	MG	1	3896	1/1	0.88	0.06	36,36,36,36	0
81	MG	CM	1932	1/1	0.88	0.14	78,78,78,78	0
81	MG	AS	3582	1/1	0.88	0.15	49,49,49,49	0
81	MG	1	3594	1/1	0.88	0.13	46,46,46,46	0
81	MG	B	1860	1/1	0.88	0.18	42,42,42,42	0
81	MG	3	201	1/1	0.88	0.14	62,62,62,62	0
81	MG	AC	101	1/1	0.88	0.10	43,43,43,43	0
81	MG	1	3691	1/1	0.88	0.06	35,35,35,35	0
81	MG	AS	3461	1/1	0.88	0.10	38,38,38,38	0
81	MG	BZ	203	1/1	0.88	0.18	83,83,83,83	0
81	MG	CK	102	1/1	0.88	0.14	50,50,50,50	0
81	MG	B	1867	1/1	0.88	0.18	65,65,65,65	0
81	MG	AS	3714	1/1	0.88	0.07	81,81,81,81	0
81	MG	AS	3604	1/1	0.88	0.12	61,61,61,61	0
81	MG	1	3632	1/1	0.88	0.07	45,45,45,45	0
81	MG	1	3429	1/1	0.88	0.24	13,13,13,13	0
81	MG	AS	3725	1/1	0.88	0.05	38,38,38,38	0
81	MG	B	1938	1/1	0.88	0.05	51,51,51,51	0
81	MG	AS	3481	1/1	0.88	0.34	38,38,38,38	0
81	MG	1	3833	1/1	0.88	0.12	47,47,47,47	0
81	MG	AS	3614	1/1	0.88	0.14	32,32,32,32	0
81	MG	3	214	1/1	0.88	0.16	48,48,48,48	0
81	MG	4	205	1/1	0.88	0.11	76,76,76,76	0
81	MG	CM	1824	1/1	0.88	0.19	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	CM	1829	1/1	0.88	0.14	76,76,76,76	0
81	MG	B	1881	1/1	0.88	0.21	53,53,53,53	0
81	MG	1	3525	1/1	0.88	0.17	46,46,46,46	0
81	MG	1	3546	1/1	0.88	0.21	54,54,54,54	0
81	MG	1	3804	1/1	0.88	0.16	26,26,26,26	0
81	MG	x	201	1/1	0.89	0.19	11,11,11,11	0
81	MG	CM	1840	1/1	0.89	0.18	35,35,35,35	0
81	MG	AS	3480	1/1	0.89	0.14	23,23,23,23	0
81	MG	CM	1842	1/1	0.89	0.22	41,41,41,41	0
81	MG	B	1856	1/1	0.89	0.10	65,65,65,65	0
81	MG	1	3734	1/1	0.89	0.10	44,44,44,44	0
81	MG	1	3510	1/1	0.89	0.13	14,14,14,14	0
81	MG	AS	3487	1/1	0.89	0.09	48,48,48,48	0
81	MG	AS	3623	1/1	0.89	0.14	89,89,89,89	0
81	MG	AS	3488	1/1	0.89	0.18	35,35,35,35	0
81	MG	1	3689	1/1	0.89	0.13	33,33,33,33	0
81	MG	1	3955	1/1	0.89	0.24	61,61,61,61	0
81	MG	AS	3763	1/1	0.89	0.05	38,38,38,38	0
81	MG	1	3743	1/1	0.89	0.20	34,34,34,34	0
81	MG	B	1951	1/1	0.89	0.10	67,67,67,67	0
81	MG	0	203	1/1	0.89	0.13	57,57,57,57	0
81	MG	AS	3501	1/1	0.89	0.13	60,60,60,60	0
81	MG	1	3814	1/1	0.89	0.14	41,41,41,41	0
81	MG	1	3421	1/1	0.89	0.22	17,17,17,17	0
81	MG	CM	1881	1/1	0.89	0.18	34,34,34,34	0
81	MG	1	3659	1/1	0.89	0.08	40,40,40,40	0
81	MG	1	3583	1/1	0.89	0.15	30,30,30,30	0
81	MG	AS	3515	1/1	0.89	0.26	55,55,55,55	0
81	MG	AS	3780	1/1	0.89	0.12	22,22,22,22	0
81	MG	AF	203	1/1	0.89	0.16	43,43,43,43	0
81	MG	3	202	1/1	0.89	0.21	50,50,50,50	0
81	MG	B	1964	1/1	0.89	0.10	39,39,39,39	0
81	MG	1	3906	1/1	0.89	0.06	69,69,69,69	0
81	MG	AP	202	1/1	0.89	0.17	37,37,37,37	0
81	MG	AS	3658	1/1	0.89	0.07	49,49,49,49	0
81	MG	CM	1900	1/1	0.89	0.10	86,86,86,86	0
81	MG	1	3500	1/1	0.89	0.16	37,37,37,37	0
81	MG	1	3908	1/1	0.89	0.16	47,47,47,47	0
81	MG	1	3501	1/1	0.89	0.19	33,33,33,33	0
81	MG	AS	3532	1/1	0.89	0.11	62,62,62,62	0
81	MG	1	3612	1/1	0.89	0.12	21,21,21,21	0
81	MG	4	204	1/1	0.89	0.06	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3680	1/1	0.89	0.14	31,31,31,31	0
81	MG	AS	3541	1/1	0.89	0.11	60,60,60,60	0
81	MG	CM	1918	1/1	0.89	0.09	86,86,86,86	0
81	MG	1	3757	1/1	0.89	0.16	38,38,38,38	0
81	MG	AS	3547	1/1	0.89	0.11	36,36,36,36	0
81	MG	1	3621	1/1	0.89	0.08	35,35,35,35	0
81	MG	AS	3696	1/1	0.89	0.20	66,66,66,66	0
81	MG	4	209	1/1	0.89	0.18	45,45,45,45	0
81	MG	1	3454	1/1	0.89	0.16	29,29,29,29	0
81	MG	BN	201	1/1	0.89	0.07	33,33,33,33	0
81	MG	1	3591	1/1	0.89	0.09	35,35,35,35	0
81	MG	CM	1943	1/1	0.89	0.06	38,38,38,38	0
81	MG	AS	3557	1/1	0.89	0.09	28,28,28,28	0
81	MG	1	3922	1/1	0.89	0.33	52,52,52,52	0
81	MG	1	3487	1/1	0.89	0.14	44,44,44,44	0
81	MG	CW	201	1/1	0.89	0.16	83,83,83,83	0
81	MG	CJ	203	1/1	0.89	0.18	51,51,51,51	0
81	MG	1	3875	1/1	0.89	0.07	32,32,32,32	0
81	MG	1	3681	1/1	0.89	0.09	20,20,20,20	0
81	MG	B	1832	1/1	0.89	0.12	63,63,63,63	0
81	MG	AS	3404	1/1	0.89	0.28	33,33,33,33	0
81	MG	AS	3407	1/1	0.89	0.10	37,37,37,37	0
81	MG	1	3724	1/1	0.89	0.20	44,44,44,44	0
81	MG	1	3408	1/1	0.89	0.20	39,39,39,39	0
81	MG	1	3684	1/1	0.89	0.09	35,35,35,35	0
81	MG	AS	3430	1/1	0.89	0.18	39,39,39,39	0
81	MG	1	3934	1/1	0.89	0.10	20,20,20,20	0
81	MG	1	3936	1/1	0.89	0.23	43,43,43,43	0
81	MG	1	3941	1/1	0.89	0.19	50,50,50,50	0
81	MG	1	3808	1/1	0.89	0.26	42,42,42,42	0
81	MG	v	301	1/1	0.89	0.16	21,21,21,21	0
81	MG	v	302	1/1	0.89	0.15	54,54,54,54	0
81	MG	AS	3466	1/1	0.89	0.18	46,46,46,46	0
81	MG	1	3944	1/1	0.89	0.08	52,52,52,52	0
81	MG	1	3809	1/1	0.89	0.07	56,56,56,56	0
81	MG	B	1833	1/1	0.90	0.23	25,25,25,25	0
81	MG	B	1900	1/1	0.90	0.21	42,42,42,42	0
81	MG	AS	3754	1/1	0.90	0.10	51,51,51,51	0
81	MG	1	3942	1/1	0.90	0.13	44,44,44,44	0
81	MG	CM	1851	1/1	0.90	0.19	45,45,45,45	0
81	MG	1	3468	1/1	0.90	0.17	28,28,28,28	0
81	MG	1	3582	1/1	0.90	0.10	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	2	201	1/1	0.90	0.24	49,49,49,49	0
81	MG	1	3478	1/1	0.90	0.14	25,25,25,25	0
81	MG	6	201	1/1	0.90	0.22	38,38,38,38	0
81	MG	1	3947	1/1	0.90	0.25	83,83,83,83	0
81	MG	1	3948	1/1	0.90	0.09	35,35,35,35	0
81	MG	AS	3527	1/1	0.90	0.19	64,64,64,64	0
81	MG	1	3497	1/1	0.90	0.24	15,15,15,15	0
81	MG	1	3518	1/1	0.90	0.14	26,26,26,26	0
81	MG	B	1917	1/1	0.90	0.10	28,28,28,28	0
81	MG	CM	1877	1/1	0.90	0.14	35,35,35,35	0
81	MG	AS	3533	1/1	0.90	0.22	19,19,19,19	0
81	MG	CM	1882	1/1	0.90	0.07	36,36,36,36	0
81	MG	B	1918	1/1	0.90	0.13	111,111,111,111	0
81	MG	AS	3536	1/1	0.90	0.09	27,27,27,27	0
81	MG	B	1853	1/1	0.90	0.19	37,37,37,37	0
81	MG	1	3883	1/1	0.90	0.17	35,35,35,35	0
81	MG	AS	3403	1/1	0.90	0.26	18,18,18,18	0
81	MG	B	1921	1/1	0.90	0.10	84,84,84,84	0
81	MG	1	3886	1/1	0.90	0.14	57,57,57,57	0
81	MG	k	404	1/1	0.90	0.13	49,49,49,49	0
81	MG	AS	3673	1/1	0.90	0.07	10,10,10,10	0
81	MG	CM	1898	1/1	0.90	0.16	60,60,60,60	0
81	MG	B	1857	1/1	0.90	0.11	51,51,51,51	0
81	MG	AS	3553	1/1	0.90	0.08	23,23,23,23	0
81	MG	1	3956	1/1	0.90	0.13	55,55,55,55	0
81	MG	AS	3425	1/1	0.90	0.14	24,24,24,24	0
81	MG	1	3587	1/1	0.90	0.17	37,37,37,37	0
81	MG	1	3920	1/1	0.90	0.07	53,53,53,53	0
81	MG	AS	3688	1/1	0.90	0.06	37,37,37,37	0
81	MG	AS	3695	1/1	0.90	0.16	36,36,36,36	0
81	MG	AS	3570	1/1	0.90	0.22	37,37,37,37	0
81	MG	AS	3697	1/1	0.90	0.15	49,49,49,49	0
81	MG	1	3537	1/1	0.90	0.26	52,52,52,52	0
81	MG	BB	301	1/1	0.90	0.14	25,25,25,25	0
81	MG	r	302	1/1	0.90	0.07	64,64,64,64	0
81	MG	AS	3444	1/1	0.90	0.06	5,5,5,5	0
81	MG	AS	3579	1/1	0.90	0.16	77,77,77,77	0
81	MG	AS	3451	1/1	0.90	0.15	35,35,35,35	0
81	MG	CM	1937	1/1	0.90	0.07	33,33,33,33	0
81	MG	1	3538	1/1	0.90	0.18	51,51,51,51	0
81	MG	B	1804	1/1	0.90	0.17	55,55,55,55	0
81	MG	AS	3706	1/1	0.90	0.05	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	B	1939	1/1	0.90	0.15	87,87,87,87	0
81	MG	B	1943	1/1	0.90	0.09	65,65,65,65	0
81	MG	AS	3594	1/1	0.90	0.13	46,46,46,46	0
81	MG	1	3539	1/1	0.90	0.19	28,28,28,28	0
81	MG	1	3573	1/1	0.90	0.20	40,40,40,40	0
81	MG	1	3596	1/1	0.90	0.09	31,31,31,31	0
81	MG	1	3522	1/1	0.90	0.20	44,44,44,44	0
81	MG	B	1818	1/1	0.90	0.17	36,36,36,36	0
81	MG	1	3430	1/1	0.90	0.22	34,34,34,34	0
81	MG	AS	3606	1/1	0.90	0.22	38,38,38,38	0
81	MG	B	1953	1/1	0.90	0.08	37,37,37,37	0
81	MG	1	3600	1/1	0.90	0.20	20,20,20,20	0
81	MG	AS	3730	1/1	0.90	0.23	44,44,44,44	0
82	3K5	CJ	202	57/57	0.90	0.13	51,79,102,115	0
81	MG	B	1822	1/1	0.90	0.17	34,34,34,34	0
81	MG	3	213	1/1	0.90	0.07	26,26,26,26	0
81	MG	B	1827	1/1	0.90	0.23	32,32,32,32	0
81	MG	1	3645	1/1	0.90	0.13	56,56,56,56	0
81	MG	B	1961	1/1	0.90	0.06	48,48,48,48	0
81	MG	AS	3739	1/1	0.90	0.20	17,17,17,17	0
81	MG	B	1891	1/1	0.90	0.25	26,26,26,26	0
81	MG	CM	1838	1/1	0.90	0.14	32,32,32,32	0
81	MG	B	1830	1/1	0.90	0.18	39,39,39,39	0
81	MG	1	3559	1/1	0.90	0.17	39,39,39,39	0
81	MG	AS	3504	1/1	0.90	0.15	44,44,44,44	0
81	MG	1	3536	1/1	0.91	0.13	48,48,48,48	0
81	MG	1	3452	1/1	0.91	0.22	22,22,22,22	0
81	MG	4	211	1/1	0.91	0.09	59,59,59,59	0
81	MG	1	3779	1/1	0.91	0.06	40,40,40,40	0
81	MG	AF	202	1/1	0.91	0.15	26,26,26,26	0
81	MG	AS	3757	1/1	0.91	0.08	29,29,29,29	0
81	MG	1	3639	1/1	0.91	0.24	28,28,28,28	0
81	MG	AS	3644	1/1	0.91	0.08	22,22,22,22	0
81	MG	4	214	1/1	0.91	0.07	25,25,25,25	0
81	MG	CM	1861	1/1	0.91	0.09	57,57,57,57	0
81	MG	AS	3401	1/1	0.91	0.23	10,10,10,10	0
81	MG	AH	202	1/1	0.91	0.07	59,59,59,59	0
81	MG	1	3854	1/1	0.91	0.10	88,88,88,88	0
81	MG	B	1858	1/1	0.91	0.07	77,77,77,77	0
81	MG	1	3698	1/1	0.91	0.13	26,26,26,26	0
81	MG	1	3822	1/1	0.91	0.14	42,42,42,42	0
81	MG	AS	3416	1/1	0.91	0.28	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3419	1/1	0.91	0.23	26,26,26,26	0
81	MG	AS	3664	1/1	0.91	0.13	31,31,31,31	0
81	MG	AS	3665	1/1	0.91	0.11	24,24,24,24	0
81	MG	1	3426	1/1	0.91	0.34	31,31,31,31	0
81	MG	B	1930	1/1	0.91	0.14	60,60,60,60	0
81	MG	AS	3669	1/1	0.91	0.16	12,12,12,12	0
81	MG	AS	3427	1/1	0.91	0.17	22,22,22,22	0
81	MG	1	3704	1/1	0.91	0.11	79,79,79,79	0
81	MG	1	3418	1/1	0.91	0.18	18,18,18,18	0
81	MG	B	1933	1/1	0.91	0.17	50,50,50,50	0
81	MG	AS	3439	1/1	0.91	0.17	22,22,22,22	0
81	MG	AS	3562	1/1	0.91	0.07	33,33,33,33	0
81	MG	AS	3681	1/1	0.91	0.17	64,64,64,64	0
81	MG	l	401	1/1	0.91	0.07	31,31,31,31	0
81	MG	B	1870	1/1	0.91	0.09	106,106,106,106	0
81	MG	AS	3685	1/1	0.91	0.11	25,25,25,25	0
81	MG	AS	3572	1/1	0.91	0.14	58,58,58,58	0
81	MG	AU	201	1/1	0.91	0.16	34,34,34,34	0
81	MG	1	3494	1/1	0.91	0.19	20,20,20,20	0
81	MG	1	3401	1/1	0.91	0.30	24,24,24,24	0
81	MG	B	1878	1/1	0.91	0.08	86,86,86,86	0
81	MG	CM	1913	1/1	0.91	0.16	60,60,60,60	0
81	MG	1	3954	1/1	0.91	0.10	17,17,17,17	0
81	MG	B	1806	1/1	0.91	0.15	42,42,42,42	0
81	MG	1	3720	1/1	0.91	0.10	47,47,47,47	0
81	MG	BG	302	1/1	0.91	0.07	28,28,28,28	0
81	MG	CM	1924	1/1	0.91	0.18	40,40,40,40	0
81	MG	1	3496	1/1	0.91	0.07	31,31,31,31	0
81	MG	r	303	1/1	0.91	0.10	42,42,42,42	0
81	MG	B	1817	1/1	0.91	0.21	19,19,19,19	0
81	MG	B	1954	1/1	0.91	0.10	63,63,63,63	0
81	MG	1	3461	1/1	0.91	0.22	14,14,14,14	0
81	MG	1	3836	1/1	0.91	0.07	49,49,49,49	0
81	MG	AS	3485	1/1	0.91	0.14	47,47,47,47	0
81	MG	AS	3600	1/1	0.91	0.06	43,43,43,43	0
81	MG	AS	3602	1/1	0.91	0.23	49,49,49,49	0
81	MG	CM	1944	1/1	0.91	0.12	60,60,60,60	0
81	MG	1	3871	1/1	0.91	0.07	93,93,93,93	0
81	MG	1	3962	1/1	0.91	0.08	24,24,24,24	0
81	MG	CP	301	1/1	0.91	0.17	19,19,19,19	0
81	MG	1	3442	1/1	0.91	0.23	33,33,33,33	0
81	MG	B	1892	1/1	0.91	0.17	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3607	1/1	0.91	0.10	63,63,63,63	0
81	MG	1	3874	1/1	0.91	0.12	48,48,48,48	0
81	MG	1	3481	1/1	0.91	0.19	44,44,44,44	0
81	MG	AS	3610	1/1	0.91	0.14	64,64,64,64	0
81	MG	1	3726	1/1	0.91	0.21	59,59,59,59	0
81	MG	AS	3499	1/1	0.91	0.19	42,42,42,42	0
81	MG	B	1831	1/1	0.91	0.16	37,37,37,37	0
81	MG	1	3878	1/1	0.91	0.06	40,40,40,40	0
81	MG	1	3529	1/1	0.91	0.12	10,10,10,10	0
81	MG	CM	1826	1/1	0.91	0.09	87,87,87,87	0
81	MG	1	3729	1/1	0.91	0.20	30,30,30,30	0
81	MG	0	201	1/1	0.91	0.27	59,59,59,59	0
81	MG	AS	3508	1/1	0.91	0.10	62,62,62,62	0
81	MG	1	3445	1/1	0.91	0.20	35,35,35,35	0
81	MG	AS	3740	1/1	0.91	0.09	33,33,33,33	0
81	MG	CM	1835	1/1	0.91	0.13	15,15,15,15	0
81	MG	1	3930	1/1	0.91	0.14	79,79,79,79	0
81	MG	1	3732	1/1	0.91	0.12	24,24,24,24	0
81	MG	AS	3745	1/1	0.91	0.07	41,41,41,41	0
84	ZN	c	201	1/1	0.91	0.08	91,91,91,91	0
81	MG	1	3413	1/1	0.91	0.17	9,9,9,9	0
81	MG	AS	3545	1/1	0.92	0.19	22,22,22,22	0
81	MG	AS	3546	1/1	0.92	0.08	45,45,45,45	0
81	MG	AS	3693	1/1	0.92	0.09	77,77,77,77	0
81	MG	1	3708	1/1	0.92	0.11	10,10,10,10	0
81	MG	CM	1813	1/1	0.92	0.16	22,22,22,22	0
81	MG	1	3963	1/1	0.92	0.09	35,35,35,35	0
81	MG	1	3479	1/1	0.92	0.17	21,21,21,21	0
81	MG	1	3966	1/1	0.92	0.07	63,63,63,63	0
81	MG	1	3713	1/1	0.92	0.21	29,29,29,29	0
81	MG	CM	1823	1/1	0.92	0.20	33,33,33,33	0
81	MG	1	3517	1/1	0.92	0.07	66,66,66,66	0
81	MG	3	204	1/1	0.92	0.12	39,39,39,39	0
81	MG	CM	1828	1/1	0.92	0.18	41,41,41,41	0
81	MG	1	3540	1/1	0.92	0.09	33,33,33,33	0
81	MG	AS	3703	1/1	0.92	0.15	32,32,32,32	0
81	MG	1	3662	1/1	0.92	0.14	71,71,71,71	0
81	MG	3	208	1/1	0.92	0.14	35,35,35,35	0
81	MG	AS	3568	1/1	0.92	0.08	61,61,61,61	0
81	MG	1	3663	1/1	0.92	0.04	83,83,83,83	0
81	MG	1	3905	1/1	0.92	0.04	39,39,39,39	0
81	MG	CM	1839	1/1	0.92	0.17	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3627	1/1	0.92	0.19	25,25,25,25	0
81	MG	AS	3406	1/1	0.92	0.23	16,16,16,16	0
81	MG	1	3456	1/1	0.92	0.10	6,6,6,6	0
81	MG	1	3448	1/1	0.92	0.26	20,20,20,20	0
81	MG	CM	1847	1/1	0.92	0.08	32,32,32,32	0
81	MG	1	3671	1/1	0.92	0.14	9,9,9,9	0
81	MG	AS	3413	1/1	0.92	0.18	18,18,18,18	0
81	MG	B	1904	1/1	0.92	0.08	72,72,72,72	0
81	MG	AS	3418	1/1	0.92	0.18	25,25,25,25	0
81	MG	CM	1853	1/1	0.92	0.12	79,79,79,79	0
81	MG	AS	3586	1/1	0.92	0.11	11,11,11,11	0
81	MG	1	3848	1/1	0.92	0.21	29,29,29,29	0
81	MG	1	3673	1/1	0.92	0.10	55,55,55,55	0
81	MG	B	1908	1/1	0.92	0.10	35,35,35,35	0
81	MG	B	1816	1/1	0.92	0.16	49,49,49,49	0
81	MG	4	210	1/1	0.92	0.08	49,49,49,49	0
81	MG	AS	3432	1/1	0.92	0.10	24,24,24,24	0
81	MG	1	3913	1/1	0.92	0.14	43,43,43,43	0
81	MG	CM	1865	1/1	0.92	0.09	32,32,32,32	0
81	MG	1	3450	1/1	0.92	0.15	82,82,82,82	0
81	MG	1	3916	1/1	0.92	0.14	29,29,29,29	0
81	MG	1	3797	1/1	0.92	0.24	23,23,23,23	0
81	MG	1	3731	1/1	0.92	0.42	30,30,30,30	0
81	MG	1	3675	1/1	0.92	0.10	69,69,69,69	0
81	MG	AS	3453	1/1	0.92	0.15	82,82,82,82	0
81	MG	1	3405	1/1	0.92	0.19	16,16,16,16	0
81	MG	1	3569	1/1	0.92	0.11	46,46,46,46	0
81	MG	1	3637	1/1	0.92	0.14	45,45,45,45	0
81	MG	1	3463	1/1	0.92	0.19	12,12,12,12	0
81	MG	CM	1886	1/1	0.92	0.07	25,25,25,25	0
81	MG	1	3928	1/1	0.92	0.14	43,43,43,43	0
81	MG	AS	3756	1/1	0.92	0.05	47,47,47,47	0
81	MG	1	3862	1/1	0.92	0.14	23,23,23,23	0
81	MG	1	3505	1/1	0.92	0.14	24,24,24,24	0
81	MG	B	1927	1/1	0.92	0.16	39,39,39,39	0
81	MG	1	3551	1/1	0.92	0.07	57,57,57,57	0
81	MG	1	3686	1/1	0.92	0.11	36,36,36,36	0
81	MG	B	1838	1/1	0.92	0.18	68,68,68,68	0
81	MG	AS	3624	1/1	0.92	0.11	67,67,67,67	0
81	MG	AS	3627	1/1	0.92	0.07	17,17,17,17	0
81	MG	AS	3769	1/1	0.92	0.10	45,45,45,45	0
81	MG	AS	3772	1/1	0.92	0.10	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3773	1/1	0.92	0.07	29,29,29,29	0
81	MG	1	3506	1/1	0.92	0.16	13,13,13,13	0
81	MG	1	3935	1/1	0.92	0.04	31,31,31,31	0
81	MG	B	1934	1/1	0.92	0.07	69,69,69,69	0
81	MG	AS	3633	1/1	0.92	0.04	15,15,15,15	0
81	MG	CM	1916	1/1	0.92	0.19	37,37,37,37	0
81	MG	B	1935	1/1	0.92	0.19	56,56,56,56	0
81	MG	1	3576	1/1	0.92	0.18	29,29,29,29	0
81	MG	AS	3637	1/1	0.92	0.07	61,61,61,61	0
81	MG	CM	1923	1/1	0.92	0.12	71,71,71,71	0
81	MG	1	3938	1/1	0.92	0.13	30,30,30,30	0
81	MG	1	3940	1/1	0.92	0.10	44,44,44,44	0
81	MG	CM	1929	1/1	0.92	0.09	61,61,61,61	0
81	MG	1	3476	1/1	0.92	0.17	49,49,49,49	0
81	MG	B	1944	1/1	0.92	0.23	51,51,51,51	0
81	MG	1	3692	1/1	0.92	0.06	35,35,35,35	0
81	MG	1	3417	1/1	0.92	0.17	15,15,15,15	0
81	MG	1	3816	1/1	0.92	0.13	51,51,51,51	0
81	MG	1	3945	1/1	0.92	0.12	30,30,30,30	0
81	MG	1	3606	1/1	0.92	0.16	35,35,35,35	0
81	MG	AS	3650	1/1	0.92	0.06	40,40,40,40	0
81	MG	y	201	1/1	0.92	0.10	32,32,32,32	0
81	MG	B	1859	1/1	0.92	0.20	45,45,45,45	0
81	MG	AS	3514	1/1	0.92	0.14	18,18,18,18	0
81	MG	1	3821	1/1	0.92	0.06	56,56,56,56	0
81	MG	CQ	302	1/1	0.92	0.07	99,99,99,99	0
81	MG	1	3763	1/1	0.92	0.19	40,40,40,40	0
81	MG	AU	206	1/1	0.92	0.12	30,30,30,30	0
81	MG	AS	3659	1/1	0.92	0.08	25,25,25,25	0
81	MG	AW	302	1/1	0.92	0.11	23,23,23,23	0
81	MG	AS	3660	1/1	0.92	0.14	34,34,34,34	0
81	MG	AS	3663	1/1	0.92	0.17	31,31,31,31	0
81	MG	1	3697	1/1	0.92	0.08	35,35,35,35	0
81	MG	1	3455	1/1	0.92	0.20	22,22,22,22	0
81	MG	B	1958	1/1	0.92	0.11	29,29,29,29	0
81	MG	CL	301	1/1	0.92	0.05	22,22,22,22	0
81	MG	1	3580	1/1	0.92	0.14	44,44,44,44	0
82	3K5	1	3406	57/57	0.92	0.14	46,67,95,99	0
81	MG	B	1868	1/1	0.92	0.12	39,39,39,39	0
81	MG	BJ	304	1/1	0.92	0.08	21,21,21,21	0
81	MG	1	3828	1/1	0.92	0.05	19,19,19,19	0
81	MG	1	3767	1/1	0.92	0.22	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3887	1/1	0.92	0.06	18,18,18,18	0
81	MG	B	1873	1/1	0.92	0.16	50,50,50,50	0
81	MG	6	202	1/1	0.92	0.07	8,8,8,8	0
81	MG	AS	3534	1/1	0.92	0.15	30,30,30,30	0
81	MG	B	1876	1/1	0.92	0.13	33,33,33,33	0
81	MG	1	3616	1/1	0.92	0.10	44,44,44,44	0
84	ZN	AK	101	1/1	0.92	0.17	42,42,42,42	0
81	MG	9	202	1/1	0.92	0.20	93,93,93,93	0
81	MG	1	3705	1/1	0.92	0.08	37,37,37,37	0
81	MG	1	3617	1/1	0.92	0.16	29,29,29,29	0
81	MG	1	3414	1/1	0.93	0.21	12,12,12,12	0
81	MG	AS	3694	1/1	0.93	0.14	62,62,62,62	0
81	MG	1	3751	1/1	0.93	0.11	28,28,28,28	0
81	MG	AS	3405	1/1	0.93	0.31	18,18,18,18	0
81	MG	1	3702	1/1	0.93	0.12	34,34,34,34	0
81	MG	1	3586	1/1	0.93	0.08	54,54,54,54	0
81	MG	k	401	1/1	0.93	0.10	41,41,41,41	0
81	MG	AS	3411	1/1	0.93	0.07	12,12,12,12	0
81	MG	CM	1827	1/1	0.93	0.17	20,20,20,20	0
81	MG	1	3625	1/1	0.93	0.17	20,20,20,20	0
81	MG	B	1828	1/1	0.93	0.17	41,41,41,41	0
81	MG	1	3474	1/1	0.93	0.21	16,16,16,16	0
81	MG	AS	3417	1/1	0.93	0.19	24,24,24,24	0
81	MG	1	3932	1/1	0.93	0.07	27,27,27,27	0
81	MG	B	1916	1/1	0.93	0.11	44,44,44,44	0
81	MG	AS	3420	1/1	0.93	0.13	18,18,18,18	0
81	MG	CM	1836	1/1	0.93	0.13	41,41,41,41	0
81	MG	1	3759	1/1	0.93	0.35	28,28,28,28	0
81	MG	m	301	1/1	0.93	0.09	60,60,60,60	0
81	MG	AS	3426	1/1	0.93	0.15	16,16,16,16	0
81	MG	o	301	1/1	0.93	0.12	29,29,29,29	0
81	MG	AS	3716	1/1	0.93	0.08	85,85,85,85	0
81	MG	AS	3584	1/1	0.93	0.05	37,37,37,37	0
81	MG	1	3588	1/1	0.93	0.12	31,31,31,31	0
81	MG	AS	3720	1/1	0.93	0.06	41,41,41,41	0
81	MG	1	3761	1/1	0.93	0.10	33,33,33,33	0
81	MG	AS	3723	1/1	0.93	0.18	50,50,50,50	0
81	MG	AS	3587	1/1	0.93	0.12	37,37,37,37	0
81	MG	AS	3726	1/1	0.93	0.16	39,39,39,39	0
81	MG	AS	3434	1/1	0.93	0.08	19,19,19,19	0
81	MG	AS	3592	1/1	0.93	0.06	29,29,29,29	0
81	MG	AS	3593	1/1	0.93	0.16	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3709	1/1	0.93	0.27	12,12,12,12	0
81	MG	CM	1859	1/1	0.93	0.11	34,34,34,34	0
81	MG	CM	1860	1/1	0.93	0.15	45,45,45,45	0
81	MG	1	3819	1/1	0.93	0.06	34,34,34,34	0
81	MG	1	3876	1/1	0.93	0.14	40,40,40,40	0
81	MG	AS	3597	1/1	0.93	0.14	37,37,37,37	0
81	MG	1	3475	1/1	0.93	0.21	16,16,16,16	0
81	MG	AS	3599	1/1	0.93	0.06	40,40,40,40	0
81	MG	1	3523	1/1	0.93	0.09	28,28,28,28	0
81	MG	AS	3450	1/1	0.93	0.16	9,9,9,9	0
81	MG	B	1845	1/1	0.93	0.18	30,30,30,30	0
81	MG	1	3714	1/1	0.93	0.16	21,21,21,21	0
81	MG	1	3825	1/1	0.93	0.04	31,31,31,31	0
81	MG	1	3881	1/1	0.93	0.10	39,39,39,39	0
81	MG	1	3633	1/1	0.93	0.16	33,33,33,33	0
81	MG	1	3716	1/1	0.93	0.17	25,25,25,25	0
81	MG	1	3884	1/1	0.93	0.09	43,43,43,43	0
81	MG	1	3486	1/1	0.93	0.14	29,29,29,29	0
81	MG	AS	3472	1/1	0.93	0.13	16,16,16,16	0
81	MG	CM	1888	1/1	0.93	0.14	35,35,35,35	0
81	MG	AS	3473	1/1	0.93	0.14	33,33,33,33	0
81	MG	AS	3613	1/1	0.93	0.06	46,46,46,46	0
81	MG	CM	1893	1/1	0.93	0.22	32,32,32,32	0
81	MG	x	204	1/1	0.93	0.09	32,32,32,32	0
81	MG	AS	3478	1/1	0.93	0.15	28,28,28,28	0
81	MG	1	3571	1/1	0.93	0.11	38,38,38,38	0
81	MG	1	3412	1/1	0.93	0.25	26,26,26,26	0
81	MG	B	1940	1/1	0.93	0.07	61,61,61,61	0
81	MG	B	1942	1/1	0.93	0.12	49,49,49,49	0
81	MG	1	3526	1/1	0.93	0.16	34,34,34,34	0
81	MG	1	3488	1/1	0.93	0.22	10,10,10,10	0
81	MG	AS	3625	1/1	0.93	0.07	51,51,51,51	0
81	MG	AS	3626	1/1	0.93	0.16	51,51,51,51	0
81	MG	CM	1904	1/1	0.93	0.06	28,28,28,28	0
81	MG	CM	1906	1/1	0.93	0.13	48,48,48,48	0
81	MG	1	3641	1/1	0.93	0.13	31,31,31,31	0
81	MG	1	3778	1/1	0.93	0.09	49,49,49,49	0
81	MG	1	3575	1/1	0.93	0.08	25,25,25,25	0
81	MG	AS	3631	1/1	0.93	0.30	65,65,65,65	0
81	MG	1	3781	1/1	0.93	0.05	22,22,22,22	0
81	MG	1	3897	1/1	0.93	0.16	29,29,29,29	0
81	MG	1	3601	1/1	0.93	0.27	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3899	1/1	0.93	0.12	48,48,48,48	0
81	MG	9	201	1/1	0.93	0.26	36,36,36,36	0
81	MG	1	3489	1/1	0.93	0.11	41,41,41,41	0
81	MG	AS	3503	1/1	0.93	0.17	10,10,10,10	0
81	MG	1	3903	1/1	0.93	0.37	67,67,67,67	0
81	MG	AS	3505	1/1	0.93	0.16	23,23,23,23	0
81	MG	1	3784	1/1	0.93	0.10	45,45,45,45	0
81	MG	3	203	1/1	0.93	0.17	31,31,31,31	0
81	MG	1	3507	1/1	0.93	0.12	17,17,17,17	0
81	MG	AS	3510	1/1	0.93	0.20	26,26,26,26	0
81	MG	CM	1938	1/1	0.93	0.08	20,20,20,20	0
81	MG	3	205	1/1	0.93	0.10	42,42,42,42	0
81	MG	AT	211	1/1	0.93	0.18	41,41,41,41	0
81	MG	1	3647	1/1	0.93	0.15	50,50,50,50	0
81	MG	1	3534	1/1	0.93	0.08	30,30,30,30	0
81	MG	1	3735	1/1	0.93	0.07	28,28,28,28	0
81	MG	1	3609	1/1	0.93	0.13	63,63,63,63	0
81	MG	AU	205	1/1	0.93	0.15	50,50,50,50	0
81	MG	AS	3518	1/1	0.93	0.05	27,27,27,27	0
81	MG	1	3458	1/1	0.93	0.14	10,10,10,10	0
81	MG	CQ	303	1/1	0.93	0.07	12,12,12,12	0
81	MG	AS	3520	1/1	0.93	0.17	29,29,29,29	0
81	MG	1	3739	1/1	0.93	0.14	22,22,22,22	0
81	MG	B	1888	1/1	0.93	0.11	52,52,52,52	0
81	MG	1	3740	1/1	0.93	0.09	28,28,28,28	0
81	MG	4	203	1/1	0.93	0.12	29,29,29,29	0
81	MG	BE	302	1/1	0.93	0.15	45,45,45,45	0
81	MG	1	3443	1/1	0.93	0.15	53,53,53,53	0
81	MG	1	3855	1/1	0.93	0.05	96,96,96,96	0
81	MG	K	301	1/1	0.93	0.05	35,35,35,35	0
81	MG	Q	201	1/1	0.93	0.03	10,10,10,10	0
81	MG	1	3436	1/1	0.93	0.11	20,20,20,20	0
81	MG	B	1895	1/1	0.93	0.04	5,5,5,5	0
81	MG	B	1896	1/1	0.93	0.13	23,23,23,23	0
81	MG	AS	3537	1/1	0.93	0.10	38,38,38,38	0
81	MG	AS	3538	1/1	0.93	0.16	27,27,27,27	0
81	MG	BZ	204	1/1	0.93	0.09	57,57,57,57	0
81	MG	B	1897	1/1	0.93	0.14	35,35,35,35	0
81	MG	1	3746	1/1	0.93	0.23	34,34,34,34	0
81	MG	1	3919	1/1	0.93	0.16	34,34,34,34	0
81	MG	AS	3684	1/1	0.93	0.07	57,57,57,57	0
81	MG	1	3437	1/1	0.93	0.16	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3516	1/1	0.93	0.18	34,34,34,34	0
81	MG	1	3806	1/1	0.93	0.09	28,28,28,28	0
81	MG	1	3924	1/1	0.93	0.06	24,24,24,24	0
81	MG	AS	3689	1/1	0.93	0.08	52,52,52,52	0
81	MG	AS	3690	1/1	0.93	0.09	33,33,33,33	0
81	MG	CM	1846	1/1	0.94	0.16	29,29,29,29	0
81	MG	B	1963	1/1	0.94	0.08	33,33,33,33	0
81	MG	AS	3569	1/1	0.94	0.17	29,29,29,29	0
81	MG	AS	3661	1/1	0.94	0.16	27,27,27,27	0
81	MG	AS	3662	1/1	0.94	0.12	39,39,39,39	0
81	MG	1	3688	1/1	0.94	0.11	14,14,14,14	0
81	MG	CM	1852	1/1	0.94	0.10	47,47,47,47	0
81	MG	1	3562	1/1	0.94	0.19	12,12,12,12	0
81	MG	AS	3767	1/1	0.94	0.06	56,56,56,56	0
81	MG	AS	3768	1/1	0.94	0.10	38,38,38,38	0
81	MG	4	202	1/1	0.94	0.08	29,29,29,29	0
81	MG	AS	3771	1/1	0.94	0.09	37,37,37,37	0
81	MG	AS	3474	1/1	0.94	0.12	29,29,29,29	0
81	MG	1	3610	1/1	0.94	0.19	34,34,34,34	0
81	MG	1	3435	1/1	0.94	0.16	10,10,10,10	0
81	MG	1	3727	1/1	0.94	0.13	39,39,39,39	0
81	MG	E	302	1/1	0.94	0.13	22,22,22,22	0
81	MG	1	3541	1/1	0.94	0.20	15,15,15,15	0
81	MG	B	1912	1/1	0.94	0.08	59,59,59,59	0
81	MG	CM	1866	1/1	0.94	0.06	24,24,24,24	0
81	MG	AS	3675	1/1	0.94	0.11	54,54,54,54	0
81	MG	AS	3676	1/1	0.94	0.05	43,43,43,43	0
81	MG	B	1913	1/1	0.94	0.09	37,37,37,37	0
81	MG	AS	3679	1/1	0.94	0.07	62,62,62,62	0
81	MG	CM	1874	1/1	0.94	0.09	48,48,48,48	0
81	MG	CM	1875	1/1	0.94	0.17	48,48,48,48	0
81	MG	1	3615	1/1	0.94	0.07	10,10,10,10	0
81	MG	CM	1880	1/1	0.94	0.15	13,13,13,13	0
81	MG	1	3845	1/1	0.94	0.13	34,34,34,34	0
81	MG	AS	3490	1/1	0.94	0.14	27,27,27,27	0
81	MG	1	3846	1/1	0.94	0.06	27,27,27,27	0
81	MG	1	3891	1/1	0.94	0.16	48,48,48,48	0
81	MG	1	3542	1/1	0.94	0.13	42,42,42,42	0
81	MG	AS	3496	1/1	0.94	0.20	21,21,21,21	0
81	MG	CM	1887	1/1	0.94	0.19	8,8,8,8	0
81	MG	1	3666	1/1	0.94	0.16	41,41,41,41	0
81	MG	1	3567	1/1	0.94	0.14	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3850	1/1	0.94	0.06	28,28,28,28	0
81	MG	1	3851	1/1	0.94	0.12	25,25,25,25	0
81	MG	1	3568	1/1	0.94	0.19	29,29,29,29	0
81	MG	AS	3601	1/1	0.94	0.08	82,82,82,82	0
81	MG	AU	202	1/1	0.94	0.12	47,47,47,47	0
81	MG	1	3701	1/1	0.94	0.09	25,25,25,25	0
81	MG	1	3581	1/1	0.94	0.12	12,12,12,12	0
81	MG	1	3703	1/1	0.94	0.07	49,49,49,49	0
81	MG	1	3815	1/1	0.94	0.09	38,38,38,38	0
81	MG	1	3951	1/1	0.94	0.16	32,32,32,32	0
81	MG	1	3480	1/1	0.94	0.20	15,15,15,15	0
81	MG	1	3439	1/1	0.94	0.24	25,25,25,25	0
81	MG	AS	3511	1/1	0.94	0.11	28,28,28,28	0
81	MG	AY	401	1/1	0.94	0.08	45,45,45,45	0
81	MG	B	1811	1/1	0.94	0.17	42,42,42,42	0
81	MG	BB	302	1/1	0.94	0.05	36,36,36,36	0
81	MG	B	1877	1/1	0.94	0.17	30,30,30,30	0
81	MG	BF	201	1/1	0.94	0.11	49,49,49,49	0
81	MG	CM	1914	1/1	0.94	0.17	49,49,49,49	0
81	MG	1	3742	1/1	0.94	0.06	29,29,29,29	0
81	MG	1	3706	1/1	0.94	0.43	77,77,77,77	0
81	MG	BI	301	1/1	0.94	0.09	53,53,53,53	0
81	MG	BJ	301	1/1	0.94	0.10	47,47,47,47	0
81	MG	CM	1919	1/1	0.94	0.06	16,16,16,16	0
81	MG	CM	1920	1/1	0.94	0.10	58,58,58,58	0
81	MG	AS	3415	1/1	0.94	0.20	17,17,17,17	0
81	MG	1	3626	1/1	0.94	0.18	27,27,27,27	0
81	MG	BK	202	1/1	0.94	0.06	45,45,45,45	0
81	MG	AS	3616	1/1	0.94	0.08	52,52,52,52	0
81	MG	CM	1927	1/1	0.94	0.08	41,41,41,41	0
81	MG	CM	1928	1/1	0.94	0.11	78,78,78,78	0
81	MG	1	3958	1/1	0.94	0.14	24,24,24,24	0
81	MG	1	3491	1/1	0.94	0.22	37,37,37,37	0
81	MG	BV	201	1/1	0.94	0.12	51,51,51,51	0
81	MG	1	3824	1/1	0.94	0.05	29,29,29,29	0
81	MG	1	3602	1/1	0.94	0.19	20,20,20,20	0
81	MG	AS	3422	1/1	0.94	0.17	13,13,13,13	0
81	MG	B	1885	1/1	0.94	0.09	34,34,34,34	0
81	MG	B	1821	1/1	0.94	0.18	30,30,30,30	0
81	MG	AS	3529	1/1	0.94	0.06	91,91,91,91	0
81	MG	AS	3724	1/1	0.94	0.07	43,43,43,43	0
81	MG	1	3785	1/1	0.94	0.10	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	CM	1805	1/1	0.94	0.11	16,16,16,16	0
81	MG	1	3786	1/1	0.94	0.23	33,33,33,33	0
81	MG	AS	3428	1/1	0.94	0.17	23,23,23,23	0
81	MG	AS	3429	1/1	0.94	0.23	30,30,30,30	0
81	MG	B	1947	1/1	0.94	0.12	62,62,62,62	0
81	MG	1	3915	1/1	0.94	0.10	43,43,43,43	0
81	MG	1	3680	1/1	0.94	0.13	26,26,26,26	0
81	MG	1	3652	1/1	0.94	0.04	38,38,38,38	0
81	MG	CM	1817	1/1	0.94	0.18	48,48,48,48	0
81	MG	1	3872	1/1	0.94	0.05	42,42,42,42	0
81	MG	1	3493	1/1	0.94	0.06	22,22,22,22	0
81	MG	AS	3736	1/1	0.94	0.06	35,35,35,35	0
81	MG	1	3753	1/1	0.94	0.14	44,44,44,44	0
81	MG	AS	3738	1/1	0.94	0.09	17,17,17,17	0
81	MG	1	3451	1/1	0.94	0.07	12,12,12,12	0
81	MG	1	3530	1/1	0.94	0.14	19,19,19,19	0
81	MG	1	3834	1/1	0.94	0.10	18,18,18,18	0
81	MG	AS	3452	1/1	0.94	0.13	8,8,8,8	0
81	MG	AS	3646	1/1	0.94	0.12	36,36,36,36	0
81	MG	1	3656	1/1	0.94	0.10	64,64,64,64	0
81	MG	AS	3454	1/1	0.94	0.07	48,48,48,48	0
81	MG	AS	3551	1/1	0.94	0.19	42,42,42,42	0
81	MG	AS	3750	1/1	0.94	0.05	21,21,21,21	0
81	MG	AS	3456	1/1	0.94	0.17	13,13,13,13	0
81	MG	3	210	1/1	0.94	0.13	38,38,38,38	0
81	MG	AS	3460	1/1	0.94	0.11	26,26,26,26	0
81	MG	1	3687	1/1	0.94	0.14	32,32,32,32	0
81	MG	B	1840	1/1	0.94	0.11	34,34,34,34	0
81	MG	AS	3758	1/1	0.94	0.08	22,22,22,22	0
81	MG	CM	1843	1/1	0.94	0.09	41,41,41,41	0
81	MG	1	3927	1/1	0.94	0.12	45,45,45,45	0
84	ZN	CE	101	1/1	0.94	0.07	119,119,119,119	0
81	MG	1	3889	1/1	0.95	0.12	35,35,35,35	0
81	MG	1	3631	1/1	0.95	0.08	37,37,37,37	0
81	MG	AS	3638	1/1	0.95	0.17	14,14,14,14	0
81	MG	AS	3560	1/1	0.95	0.11	34,34,34,34	0
81	MG	1	3472	1/1	0.95	0.12	29,29,29,29	0
81	MG	CM	1876	1/1	0.95	0.18	19,19,19,19	0
81	MG	1	3664	1/1	0.95	0.12	54,54,54,54	0
81	MG	BB	303	1/1	0.95	0.20	28,28,28,28	0
81	MG	BE	301	1/1	0.95	0.15	34,34,34,34	0
81	MG	AS	3563	1/1	0.95	0.15	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3790	1/1	0.95	0.07	33,33,33,33	0
81	MG	AS	3567	1/1	0.95	0.14	9,9,9,9	0
81	MG	1	3792	1/1	0.95	0.08	20,20,20,20	0
81	MG	1	3733	1/1	0.95	0.05	33,33,33,33	0
81	MG	1	3422	1/1	0.95	0.18	1,1,1,1	0
81	MG	AS	3571	1/1	0.95	0.14	35,35,35,35	0
81	MG	B	1937	1/1	0.95	0.07	70,70,70,70	0
81	MG	BK	201	1/1	0.95	0.14	27,27,27,27	0
81	MG	CM	1892	1/1	0.95	0.09	50,50,50,50	0
81	MG	AS	3408	1/1	0.95	0.18	1,1,1,1	0
81	MG	AS	3652	1/1	0.95	0.12	57,57,57,57	0
81	MG	BN	202	1/1	0.95	0.06	31,31,31,31	0
81	MG	B	1826	1/1	0.95	0.09	54,54,54,54	0
81	MG	1	3634	1/1	0.95	0.15	27,27,27,27	0
81	MG	1	3861	1/1	0.95	0.05	54,54,54,54	0
81	MG	AS	3657	1/1	0.95	0.13	19,19,19,19	0
81	MG	4	201	1/1	0.95	0.06	29,29,29,29	0
81	MG	AS	3741	1/1	0.95	0.16	43,43,43,43	0
81	MG	1	3939	1/1	0.95	0.13	22,22,22,22	0
81	MG	AS	3500	1/1	0.95	0.03	42,42,42,42	0
81	MG	1	3736	1/1	0.95	0.13	42,42,42,42	0
81	MG	1	3900	1/1	0.95	0.08	45,45,45,45	0
81	MG	CM	1803	1/1	0.95	0.12	19,19,19,19	0
81	MG	1	3441	1/1	0.95	0.12	20,20,20,20	0
81	MG	4	206	1/1	0.95	0.07	32,32,32,32	0
81	MG	1	3651	1/1	0.95	0.21	29,29,29,29	0
81	MG	AS	3666	1/1	0.95	0.18	17,17,17,17	0
81	MG	AS	3752	1/1	0.95	0.07	33,33,33,33	0
81	MG	AS	3589	1/1	0.95	0.15	37,37,37,37	0
81	MG	1	3801	1/1	0.95	0.06	19,19,19,19	0
81	MG	CM	1812	1/1	0.95	0.12	47,47,47,47	0
81	MG	1	3669	1/1	0.95	0.13	48,48,48,48	0
81	MG	CM	1814	1/1	0.95	0.18	22,22,22,22	0
81	MG	CM	1921	1/1	0.95	0.12	38,38,38,38	0
81	MG	1	3868	1/1	0.95	0.08	67,67,67,67	0
81	MG	AS	3509	1/1	0.95	0.09	33,33,33,33	0
81	MG	B	1839	1/1	0.95	0.13	24,24,24,24	0
81	MG	CM	1819	1/1	0.95	0.08	20,20,20,20	0
81	MG	1	3482	1/1	0.95	0.18	26,26,26,26	0
81	MG	1	3835	1/1	0.95	0.08	44,44,44,44	0
81	MG	B	1842	1/1	0.95	0.10	25,25,25,25	0
81	MG	CM	1931	1/1	0.95	0.10	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AD	201	1/1	0.95	0.10	88,88,88,88	0
81	MG	CM	1825	1/1	0.95	0.18	37,37,37,37	0
81	MG	1	3949	1/1	0.95	0.06	42,42,42,42	0
81	MG	1	3770	1/1	0.95	0.15	25,25,25,25	0
81	MG	1	3513	1/1	0.95	0.11	36,36,36,36	0
81	MG	1	3717	1/1	0.95	0.12	37,37,37,37	0
81	MG	AG	201	1/1	0.95	0.09	59,59,59,59	0
81	MG	AS	3770	1/1	0.95	0.06	40,40,40,40	0
81	MG	1	3773	1/1	0.95	0.07	40,40,40,40	0
81	MG	1	3744	1/1	0.95	0.08	45,45,45,45	0
81	MG	AS	3446	1/1	0.95	0.18	36,36,36,36	0
81	MG	1	3719	1/1	0.95	0.15	15,15,15,15	0
81	MG	1	3407	1/1	0.95	0.15	14,14,14,14	0
81	MG	k	405	1/1	0.95	0.16	61,61,61,61	0
81	MG	1	3696	1/1	0.95	0.09	50,50,50,50	0
81	MG	AS	3692	1/1	0.95	0.08	47,47,47,47	0
81	MG	1	3608	1/1	0.95	0.08	24,24,24,24	0
81	MG	DA	201	1/1	0.95	0.14	38,38,38,38	0
81	MG	1	3431	1/1	0.95	0.18	20,20,20,20	0
81	MG	1	3658	1/1	0.95	0.14	20,20,20,20	0
81	MG	AS	3459	1/1	0.95	0.19	6,6,6,6	0
81	MG	1	3921	1/1	0.95	0.11	33,33,33,33	0
81	MG	1	3432	1/1	0.95	0.23	21,21,21,21	0
81	MG	B	1866	1/1	0.95	0.07	63,63,63,63	0
81	MG	AS	3465	1/1	0.95	0.07	41,41,41,41	0
81	MG	1	3564	1/1	0.95	0.10	15,15,15,15	0
81	MG	AS	3543	1/1	0.95	0.15	17,17,17,17	0
81	MG	Q	202	1/1	0.95	0.07	62,62,62,62	0
81	MG	B	1808	1/1	0.95	0.17	54,54,54,54	0
81	MG	1	3817	1/1	0.95	0.07	87,87,87,87	0
81	MG	CM	1856	1/1	0.95	0.08	36,36,36,36	0
81	MG	AT	210	1/1	0.95	0.12	27,27,27,27	0
81	MG	B	1810	1/1	0.95	0.08	11,11,11,11	0
81	MG	AS	3629	1/1	0.95	0.07	41,41,41,41	0
81	MG	1	3424	1/1	0.95	0.20	7,7,7,7	0
81	MG	AS	3710	1/1	0.95	0.09	27,27,27,27	0
81	MG	1	3683	1/1	0.95	0.11	28,28,28,28	0
81	MG	AS	3477	1/1	0.95	0.11	16,16,16,16	0
81	MG	AS	3713	1/1	0.95	0.10	36,36,36,36	0
81	MG	1	3820	1/1	0.95	0.07	48,48,48,48	0
81	MG	AS	3715	1/1	0.95	0.06	73,73,73,73	0
81	MG	CM	1867	1/1	0.95	0.15	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3479	1/1	0.95	0.14	25,25,25,25	0
81	MG	1	3620	1/1	0.96	0.04	27,27,27,27	0
81	MG	AS	3759	1/1	0.96	0.04	39,39,39,39	0
81	MG	w	302	1/1	0.96	0.10	60,60,60,60	0
81	MG	1	3670	1/1	0.96	0.20	25,25,25,25	0
81	MG	1	3521	1/1	0.96	0.15	32,32,32,32	0
81	MG	AS	3423	1/1	0.96	0.15	10,10,10,10	0
81	MG	1	3672	1/1	0.96	0.05	8,8,8,8	0
81	MG	AS	3691	1/1	0.96	0.07	51,51,51,51	0
81	MG	CM	1807	1/1	0.96	0.12	28,28,28,28	0
81	MG	AS	3486	1/1	0.96	0.12	32,32,32,32	0
81	MG	1	3622	1/1	0.96	0.15	8,8,8,8	0
81	MG	1	3718	1/1	0.96	0.11	42,42,42,42	0
81	MG	x	205	1/1	0.96	0.17	30,30,30,30	0
81	MG	AS	3558	1/1	0.96	0.14	25,25,25,25	0
81	MG	1	3492	1/1	0.96	0.08	43,43,43,43	0
81	MG	1	3741	1/1	0.96	0.06	42,42,42,42	0
81	MG	CM	1815	1/1	0.96	0.13	19,19,19,19	0
81	MG	1	3912	1/1	0.96	0.06	24,24,24,24	0
81	MG	AS	3431	1/1	0.96	0.18	16,16,16,16	0
81	MG	AS	3564	1/1	0.96	0.13	47,47,47,47	0
81	MG	B	1849	1/1	0.96	0.16	28,28,28,28	0
81	MG	CM	1909	1/1	0.96	0.10	56,56,56,56	0
81	MG	CM	1910	1/1	0.96	0.09	46,46,46,46	0
81	MG	AS	3635	1/1	0.96	0.17	13,13,13,13	0
81	MG	CM	1821	1/1	0.96	0.09	16,16,16,16	0
81	MG	1	3469	1/1	0.96	0.22	33,33,33,33	0
81	MG	AS	3435	1/1	0.96	0.06	73,73,73,73	0
81	MG	B	1852	1/1	0.96	0.10	27,27,27,27	0
81	MG	1	3657	1/1	0.96	0.07	20,20,20,20	0
81	MG	AS	3438	1/1	0.96	0.14	15,15,15,15	0
81	MG	B	1894	1/1	0.96	0.05	21,21,21,21	0
81	MG	1	3640	1/1	0.96	0.16	37,37,37,37	0
81	MG	AS	3443	1/1	0.96	0.06	36,36,36,36	0
81	MG	AT	201	1/1	0.96	0.17	13,13,13,13	0
81	MG	1	3865	1/1	0.96	0.07	53,53,53,53	0
81	MG	AS	3578	1/1	0.96	0.14	74,74,74,74	0
81	MG	AS	3445	1/1	0.96	0.22	54,54,54,54	0
81	MG	CM	1834	1/1	0.96	0.05	38,38,38,38	0
81	MG	1	3504	1/1	0.96	0.14	27,27,27,27	0
81	MG	AS	3449	1/1	0.96	0.14	28,28,28,28	0
81	MG	CM	1837	1/1	0.96	0.07	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3508	1/1	0.96	0.11	27,27,27,27	0
81	MG	1	3599	1/1	0.96	0.09	19,19,19,19	0
81	MG	3	209	1/1	0.96	0.12	25,25,25,25	0
81	MG	AS	3722	1/1	0.96	0.09	43,43,43,43	0
81	MG	1	3799	1/1	0.96	0.08	15,15,15,15	0
81	MG	B	1861	1/1	0.96	0.10	62,62,62,62	0
81	MG	AS	3455	1/1	0.96	0.16	26,26,26,26	0
81	MG	AS	3656	1/1	0.96	0.31	19,19,19,19	0
81	MG	1	3628	1/1	0.96	0.07	17,17,17,17	0
81	MG	AS	3591	1/1	0.96	0.05	28,28,28,28	0
81	MG	AB	201	1/1	0.96	0.16	64,64,64,64	0
81	MG	AW	301	1/1	0.96	0.06	41,41,41,41	0
81	MG	AS	3458	1/1	0.96	0.12	11,11,11,11	0
81	MG	AS	3402	1/1	0.96	0.25	16,16,16,16	0
81	MG	CP	302	1/1	0.96	0.09	54,54,54,54	0
81	MG	B	1824	1/1	0.96	0.04	32,32,32,32	0
81	MG	1	3519	1/1	0.96	0.26	45,45,45,45	0
81	MG	AS	3524	1/1	0.96	0.09	38,38,38,38	0
81	MG	AS	3462	1/1	0.96	0.17	40,40,40,40	0
81	MG	AS	3463	1/1	0.96	0.18	25,25,25,25	0
81	MG	1	3614	1/1	0.96	0.13	49,49,49,49	0
81	MG	1	3520	1/1	0.96	0.05	14,14,14,14	0
81	MG	DB	202	1/1	0.96	0.09	35,35,35,35	0
81	MG	AS	3530	1/1	0.96	0.10	52,52,52,52	0
81	MG	r	301	1/1	0.96	0.13	41,41,41,41	0
81	MG	BG	301	1/1	0.96	0.07	56,56,56,56	0
81	MG	AS	3467	1/1	0.96	0.11	19,19,19,19	0
81	MG	1	3592	1/1	0.96	0.08	68,68,68,68	0
81	MG	DQ	101	1/1	0.96	0.08	61,61,61,61	0
81	MG	AS	3744	1/1	0.96	0.10	49,49,49,49	0
81	MG	1	3593	1/1	0.96	0.13	14,14,14,14	0
81	MG	CL	303	1/1	0.96	0.07	66,66,66,66	0
81	MG	AS	3674	1/1	0.96	0.07	22,22,22,22	0
81	MG	BJ	303	1/1	0.96	0.11	20,20,20,20	0
81	MG	AS	3470	1/1	0.96	0.16	18,18,18,18	0
81	MG	AS	3471	1/1	0.96	0.13	9,9,9,9	0
81	MG	CM	1872	1/1	0.96	0.04	26,26,26,26	0
81	MG	AS	3749	1/1	0.96	0.06	51,51,51,51	0
81	MG	B	1872	1/1	0.96	0.06	12,12,12,12	0
81	MG	1	3756	1/1	0.96	0.10	20,20,20,20	0
81	MG	AS	3539	1/1	0.96	0.09	57,57,57,57	0
81	MG	AS	3753	1/1	0.96	0.09	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	CM	1879	1/1	0.96	0.14	18,18,18,18	0
81	MG	u	201	1/1	0.96	0.05	42,42,42,42	0
81	MG	1	3902	1/1	0.96	0.04	32,32,32,32	0
81	MG	BZ	202	1/1	0.96	0.15	102,102,102,102	0
84	ZN	f	101	1/1	0.96	0.09	123,123,123,123	0
81	MG	1	3619	1/1	0.96	0.10	39,39,39,39	0
81	MG	1	3957	1/1	0.96	0.20	46,46,46,46	0
81	MG	1	3557	1/1	0.97	0.11	33,33,33,33	0
81	MG	AS	3475	1/1	0.97	0.10	10,10,10,10	0
81	MG	CM	1905	1/1	0.97	0.12	29,29,29,29	0
81	MG	1	3499	1/1	0.97	0.13	11,11,11,11	0
81	MG	AS	3732	1/1	0.97	0.09	74,74,74,74	0
81	MG	AU	204	1/1	0.97	0.06	39,39,39,39	0
81	MG	AD	202	1/1	0.97	0.12	17,17,17,17	0
81	MG	1	3444	1/1	0.97	0.12	18,18,18,18	0
81	MG	1	3459	1/1	0.97	0.15	16,16,16,16	0
81	MG	B	1965	1/1	0.97	0.11	35,35,35,35	0
81	MG	1	3642	1/1	0.97	0.14	18,18,18,18	0
81	MG	AS	3482	1/1	0.97	0.07	54,54,54,54	0
81	MG	AS	3542	1/1	0.97	0.17	15,15,15,15	0
81	MG	1	3885	1/1	0.97	0.06	33,33,33,33	0
81	MG	1	3589	1/1	0.97	0.08	44,44,44,44	0
81	MG	1	3710	1/1	0.97	0.13	26,26,26,26	0
81	MG	CM	1844	1/1	0.97	0.09	34,34,34,34	0
81	MG	1	3605	1/1	0.97	0.13	17,17,17,17	0
81	MG	AS	3433	1/1	0.97	0.16	12,12,12,12	0
81	MG	AS	3678	1/1	0.97	0.20	16,16,16,16	0
81	MG	E	301	1/1	0.97	0.06	63,63,63,63	0
81	MG	1	3712	1/1	0.97	0.15	20,20,20,20	0
81	MG	AS	3491	1/1	0.97	0.06	28,28,28,28	0
81	MG	1	3547	1/1	0.97	0.14	24,24,24,24	0
81	MG	AS	3552	1/1	0.97	0.08	39,39,39,39	0
81	MG	CM	1930	1/1	0.97	0.04	29,29,29,29	0
81	MG	1	3607	1/1	0.97	0.04	13,13,13,13	0
81	MG	H	1001	1/1	0.97	0.04	79,79,79,79	0
81	MG	AS	3622	1/1	0.97	0.04	22,22,22,22	0
81	MG	CM	1935	1/1	0.97	0.07	109,109,109,109	0
81	MG	B	1928	1/1	0.97	0.03	17,17,17,17	0
81	MG	AS	3440	1/1	0.97	0.05	21,21,21,21	0
81	MG	AS	3441	1/1	0.97	0.17	22,22,22,22	0
81	MG	1	3465	1/1	0.97	0.11	17,17,17,17	0
81	MG	1	3549	1/1	0.97	0.13	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	CM	1941	1/1	0.97	0.05	29,29,29,29	0
81	MG	4	207	1/1	0.97	0.07	35,35,35,35	0
81	MG	B	1844	1/1	0.97	0.10	15,15,15,15	0
81	MG	1	3527	1/1	0.97	0.19	33,33,33,33	0
81	MG	AS	3447	1/1	0.97	0.12	16,16,16,16	0
81	MG	1	3453	1/1	0.97	0.10	6,6,6,6	0
81	MG	1	3511	1/1	0.97	0.17	16,16,16,16	0
81	MG	1	3613	1/1	0.97	0.10	22,22,22,22	0
81	MG	CQ	301	1/1	0.97	0.10	16,16,16,16	0
81	MG	B	1807	1/1	0.97	0.06	101,101,101,101	0
81	MG	CA	201	1/1	0.97	0.07	46,46,46,46	0
81	MG	1	3695	1/1	0.97	0.09	29,29,29,29	0
81	MG	AS	3573	1/1	0.97	0.22	16,16,16,16	0
81	MG	1	3780	1/1	0.97	0.10	33,33,33,33	0
81	MG	1	3446	1/1	0.97	0.09	5,5,5,5	0
81	MG	AS	3512	1/1	0.97	0.14	17,17,17,17	0
81	MG	AS	3577	1/1	0.97	0.11	20,20,20,20	0
81	MG	AS	3642	1/1	0.97	0.04	99,99,99,99	0
81	MG	CM	1878	1/1	0.97	0.08	13,13,13,13	0
81	MG	1	3554	1/1	0.97	0.09	36,36,36,36	0
81	MG	AS	3708	1/1	0.97	0.17	43,43,43,43	0
81	MG	DJ	201	1/1	0.97	0.12	17,17,17,17	0
81	MG	B	1812	1/1	0.97	0.12	24,24,24,24	0
81	MG	1	3752	1/1	0.97	0.18	47,47,47,47	0
81	MG	B	1814	1/1	0.97	0.06	79,79,79,79	0
81	MG	j	301	1/1	0.97	0.06	11,11,11,11	0
81	MG	1	3531	1/1	0.97	0.04	25,25,25,25	0
81	MG	j	303	1/1	0.97	0.08	13,13,13,13	0
81	MG	1	3725	1/1	0.97	0.08	6,6,6,6	0
81	MG	B	1950	1/1	0.97	0.06	54,54,54,54	0
81	MG	CM	1889	1/1	0.97	0.07	62,62,62,62	0
81	MG	1	3676	1/1	0.97	0.09	12,12,12,12	0
81	MG	AS	3718	1/1	0.97	0.04	7,7,7,7	0
81	MG	k	402	1/1	0.97	0.07	55,55,55,55	0
81	MG	AS	3590	1/1	0.97	0.06	55,55,55,55	0
81	MG	AS	3525	1/1	0.97	0.13	25,25,25,25	0
81	MG	B	1864	1/1	0.97	0.12	49,49,49,49	0
81	MG	AT	205	1/1	0.97	0.09	13,13,13,13	0
81	MG	1	3700	1/1	0.97	0.07	41,41,41,41	0
81	MG	1	3937	1/1	0.97	0.06	64,64,64,64	0
84	ZN	AQ	101	1/1	0.97	0.05	95,95,95,95	0
81	MG	8	202	1/1	0.97	0.11	34,34,34,34	0

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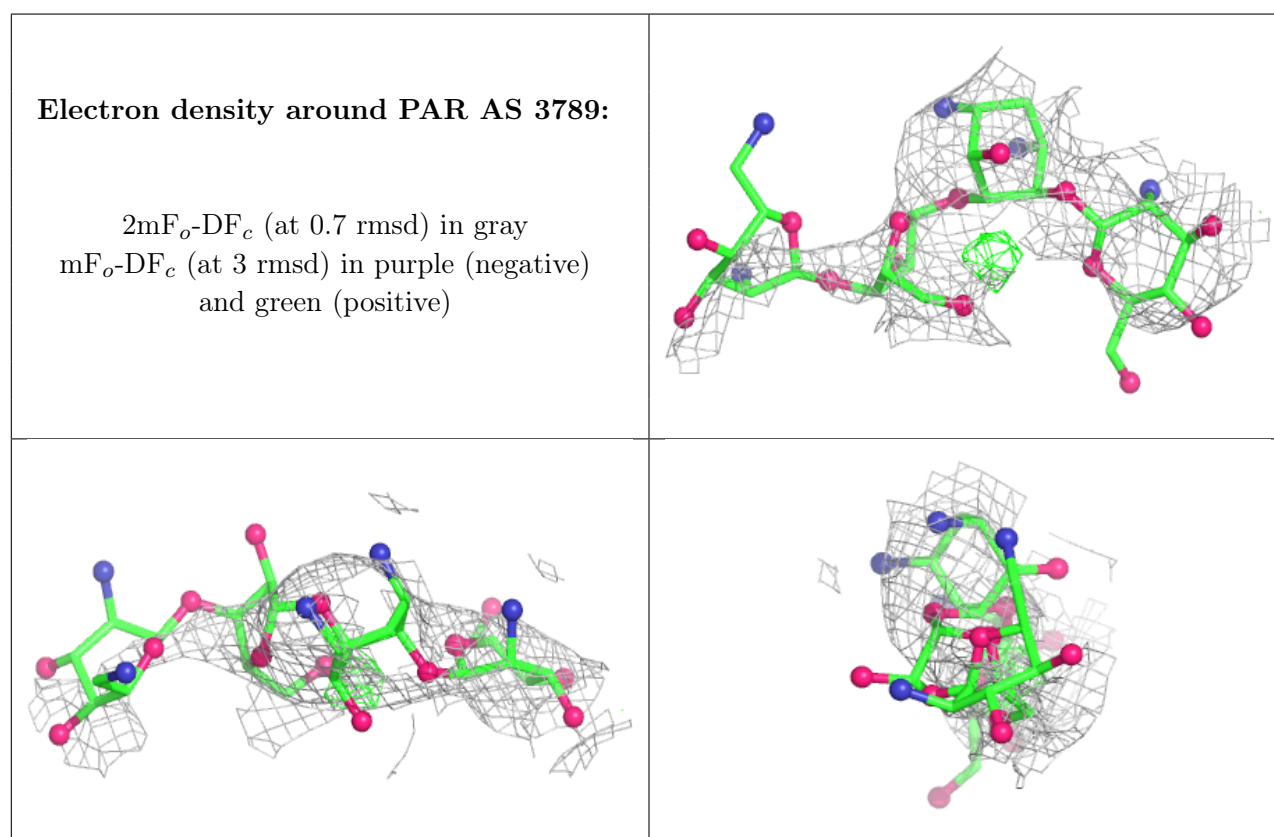
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	1	3498	1/1	0.97	0.10	73,73,73,73	0
81	MG	1	3618	1/1	0.97	0.10	11,11,11,11	0
81	MG	1	3679	1/1	0.97	0.23	21,21,21,21	0
81	MG	AS	3619	1/1	0.98	0.07	47,47,47,47	0
81	MG	AS	3414	1/1	0.98	0.06	71,71,71,71	0
81	MG	1	3449	1/1	0.98	0.20	14,14,14,14	0
81	MG	1	3462	1/1	0.98	0.11	13,13,13,13	0
81	MG	AT	206	1/1	0.98	0.11	50,50,50,50	0
81	MG	1	3791	1/1	0.98	0.10	22,22,22,22	0
81	MG	CM	1934	1/1	0.98	0.05	49,49,49,49	0
81	MG	AS	3555	1/1	0.98	0.08	39,39,39,39	0
81	MG	AS	3556	1/1	0.98	0.06	38,38,38,38	0
81	MG	CM	1908	1/1	0.98	0.06	23,23,23,23	0
81	MG	AG	202	1/1	0.98	0.03	43,43,43,43	0
81	MG	AS	3580	1/1	0.98	0.05	42,42,42,42	0
81	MG	1	3749	1/1	0.98	0.11	24,24,24,24	0
81	MG	AS	3559	1/1	0.98	0.11	17,17,17,17	0
81	MG	AS	3521	1/1	0.98	0.08	59,59,59,59	0
81	MG	AH	203	1/1	0.98	0.06	79,79,79,79	0
81	MG	B	1825	1/1	0.98	0.12	22,22,22,22	0
81	MG	1	3428	1/1	0.98	0.29	16,16,16,16	0
81	MG	AS	3489	1/1	0.98	0.06	23,23,23,23	0
81	MG	AS	3565	1/1	0.98	0.09	19,19,19,19	0
81	MG	1	3404	1/1	0.98	0.14	13,13,13,13	0
81	MG	B	1850	1/1	0.98	0.05	44,44,44,44	0
81	MG	CM	1868	1/1	0.98	0.12	37,37,37,37	0
84	ZN	AN	101	1/1	0.98	0.08	149,149,149,149	0
81	MG	AS	3409	1/1	0.98	0.05	91,91,91,91	0
81	MG	B	1941	1/1	0.98	0.03	48,48,48,48	0
81	MG	B	1875	1/1	0.98	0.05	103,103,103,103	0
81	MG	1	3964	1/1	0.98	0.06	76,76,76,76	0
81	MG	CM	1926	1/1	0.98	0.05	36,36,36,36	0
81	MG	AP	204	1/1	0.98	0.04	49,49,49,49	0
84	ZN	CK	101	1/1	0.98	0.05	137,137,137,137	0
84	ZN	DQ	102	1/1	0.98	0.04	47,47,47,47	0
81	MG	1	3775	1/1	0.99	0.04	31,31,31,31	0
81	MG	1	3515	1/1	0.99	0.12	11,11,11,11	0
81	MG	AS	3421	1/1	0.99	0.03	63,63,63,63	0
81	MG	1	3440	1/1	0.99	0.09	50,50,50,50	0
81	MG	B	1905	1/1	0.99	0.05	93,93,93,93	0
81	MG	AS	3493	1/1	0.99	0.06	7,7,7,7	0
81	MG	AS	3448	1/1	0.99	0.05	6,6,6,6	0

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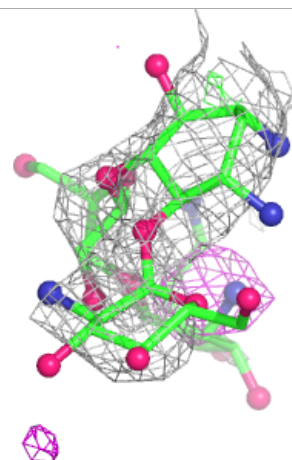
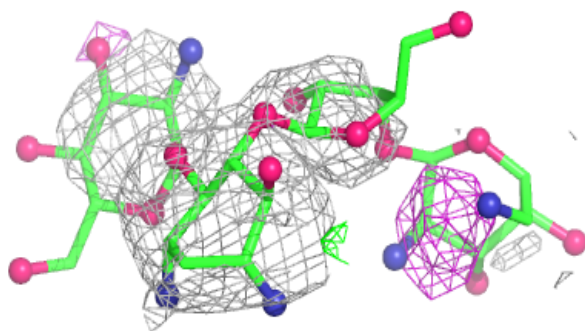
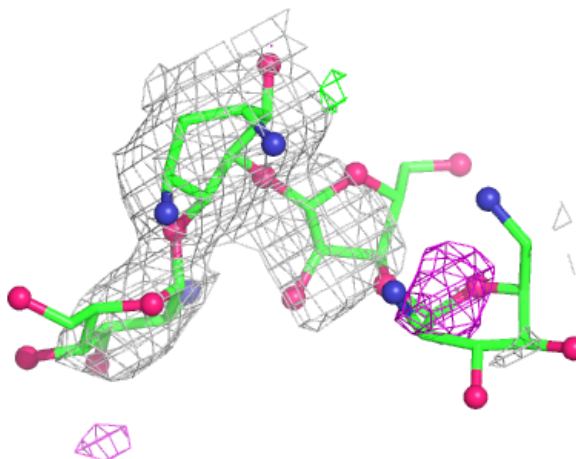
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
81	MG	AS	3785	1/1	0.99	0.06	13,13,13,13	0
81	MG	AS	3786	1/1	0.99	0.03	31,31,31,31	0
81	MG	1	3793	1/1	0.99	0.03	26,26,26,26	0
81	MG	1	3533	1/1	0.99	0.11	15,15,15,15	0
81	MG	1	3762	1/1	0.99	0.04	50,50,50,50	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.



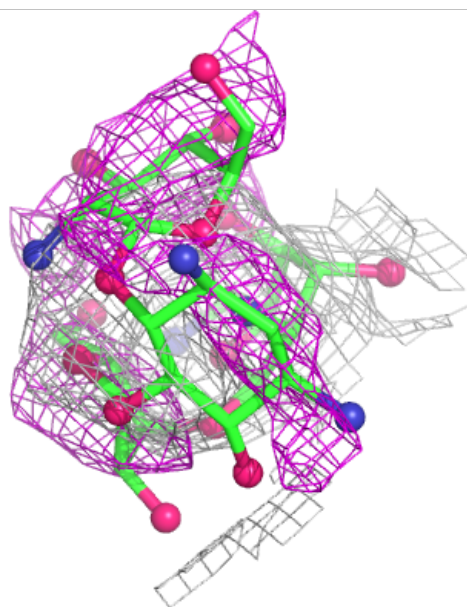
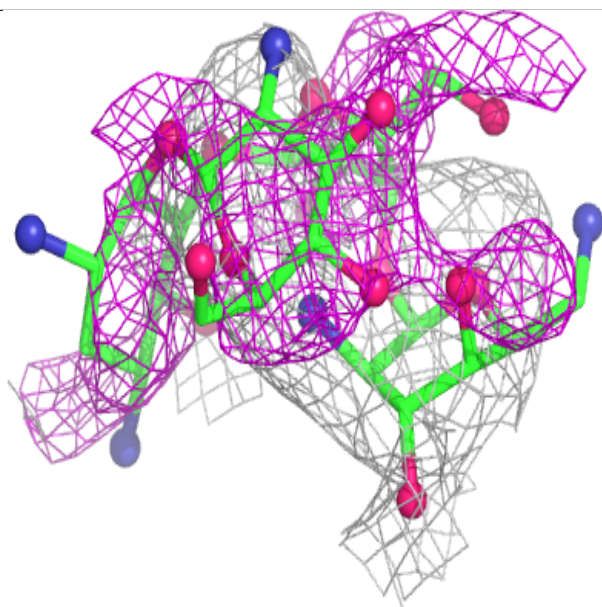
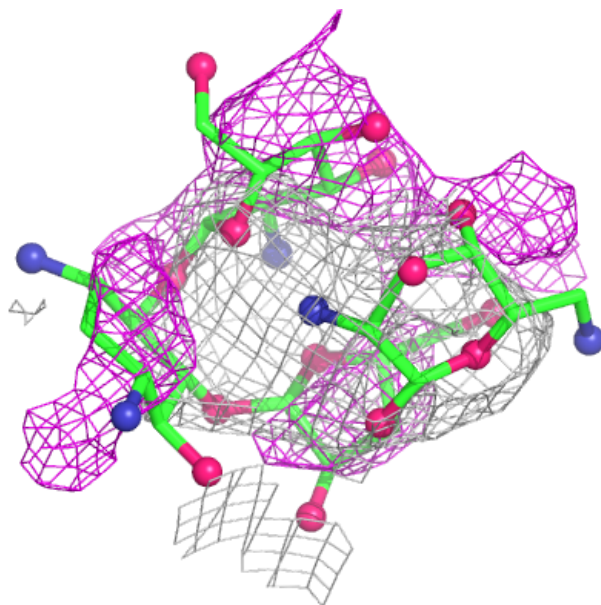
Electron density around PAR AS 3790:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



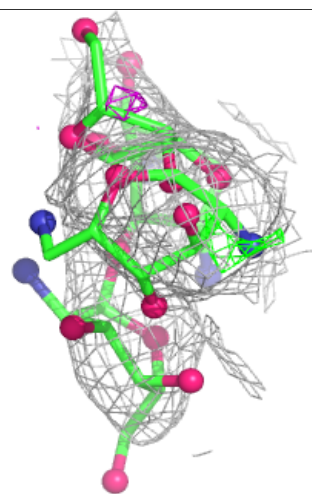
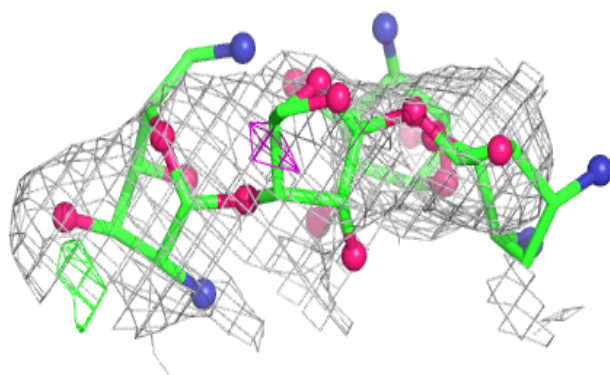
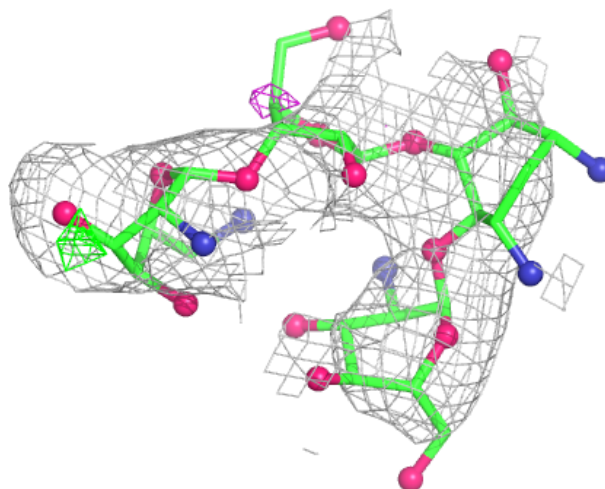
Electron density around PAR B 1970:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



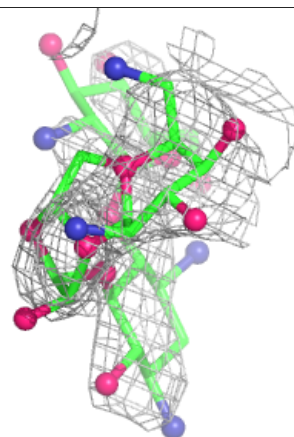
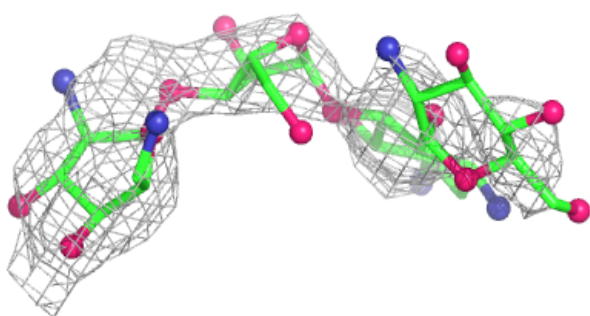
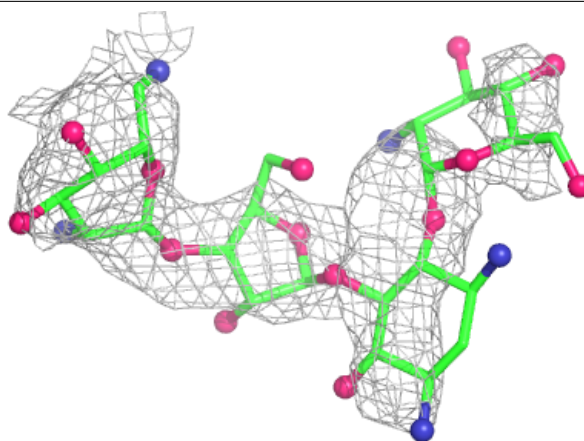
Electron density around PAR 1 3969:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

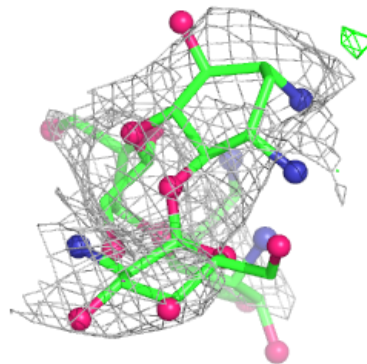
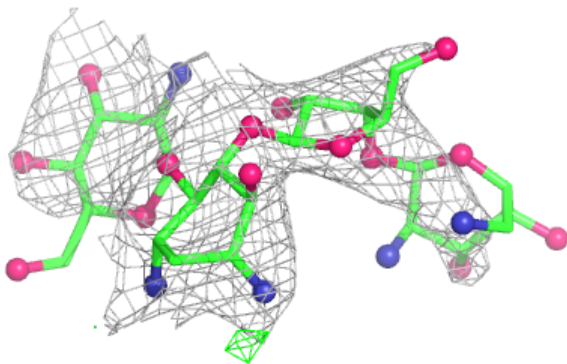
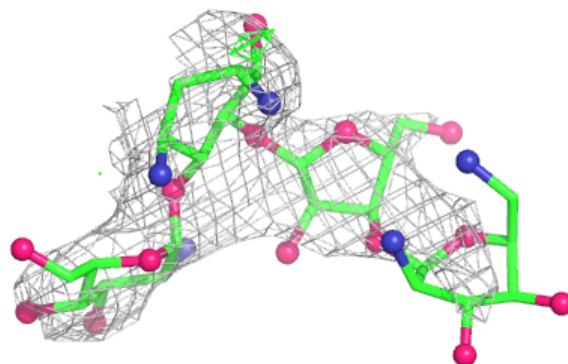


Electron density around PAR AS 3788:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

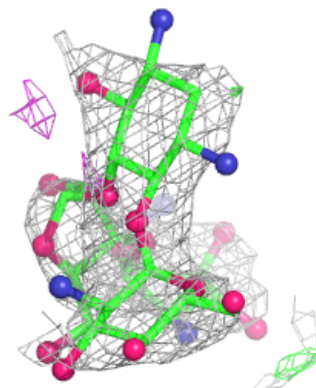
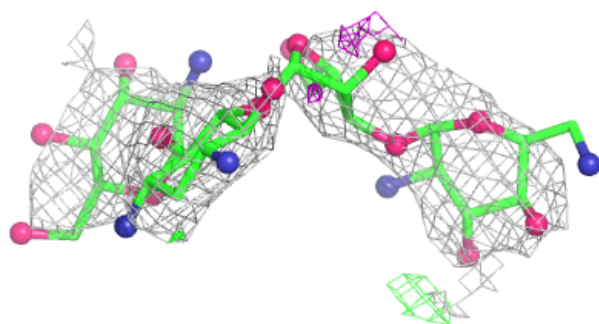
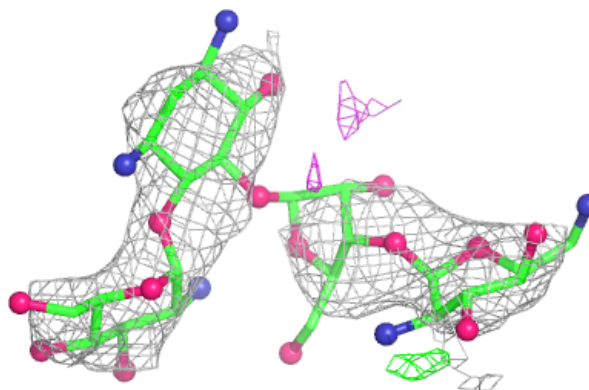
**Electron density around PAR 1 3968:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

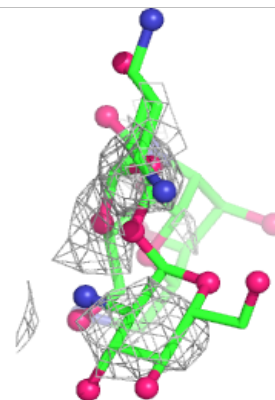
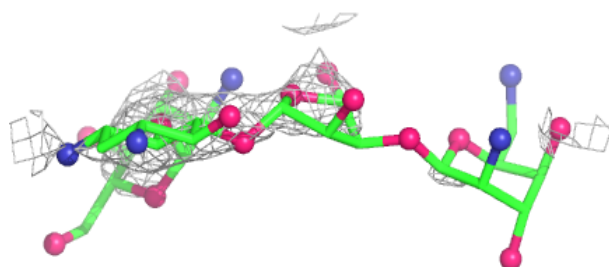
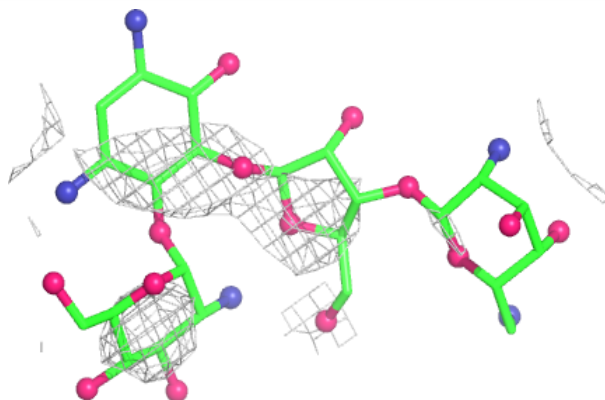


Electron density around PAR 1 3967:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

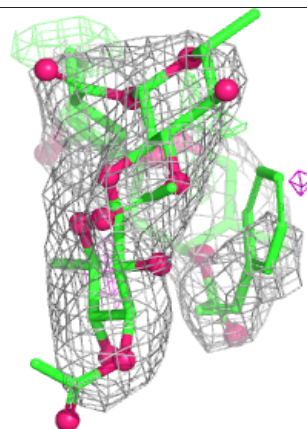
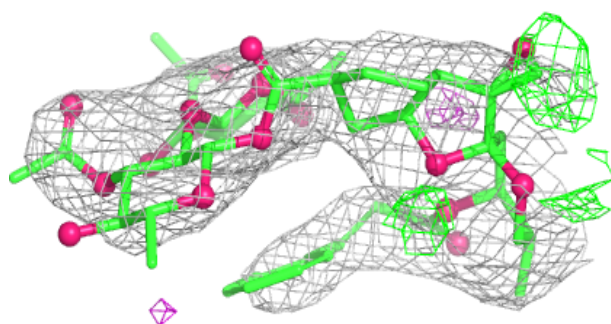
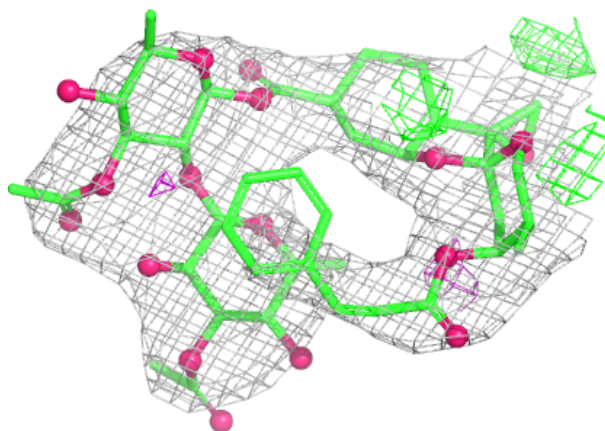
**Electron density around PAR CM 1946:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



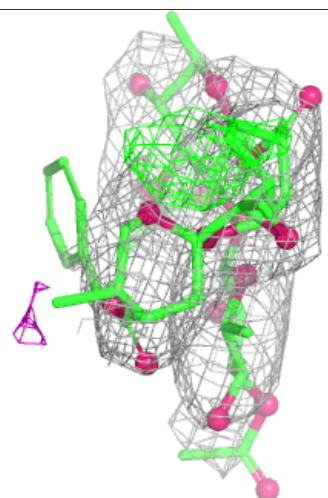
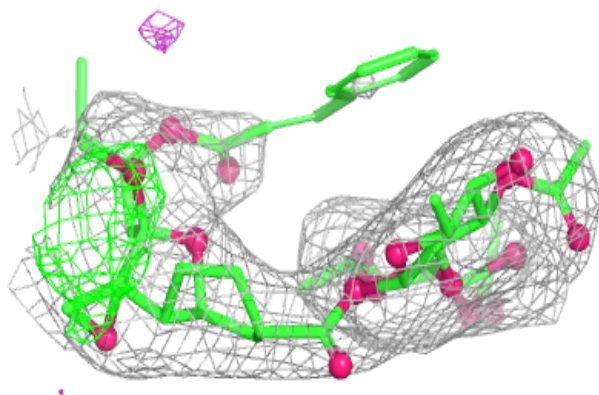
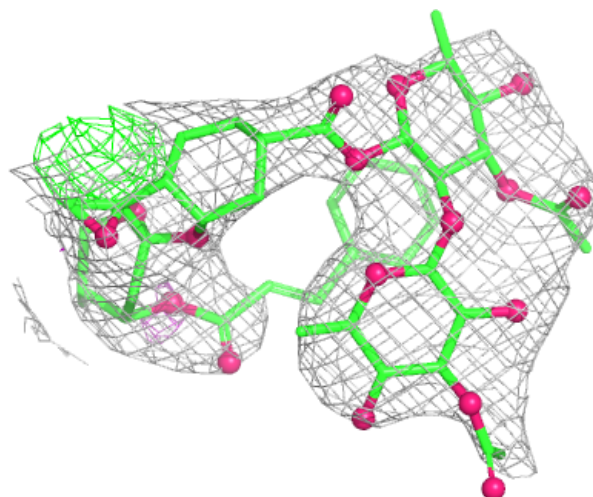
Electron density around 3K5 CJ 202:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around 3K5 1 3406:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers ⓘ

There are no such residues in this entry.