



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 03:50 PM GMT

PDB ID : 4BTS
Title : THE CRYSTAL STRUCTURE OF THE EUKARYOTIC 40S RIBOSOMAL
SUBUNIT IN COMPLEX WITH EIF1 AND EIF1A
Authors : Weisser, M.; Voigts-Hoffmann, F.; Rabl, J.; Leibundgut, M.; Ban, N.
Deposited on : 2013-07-17
Resolution : 3.70 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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : **FAILED**
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

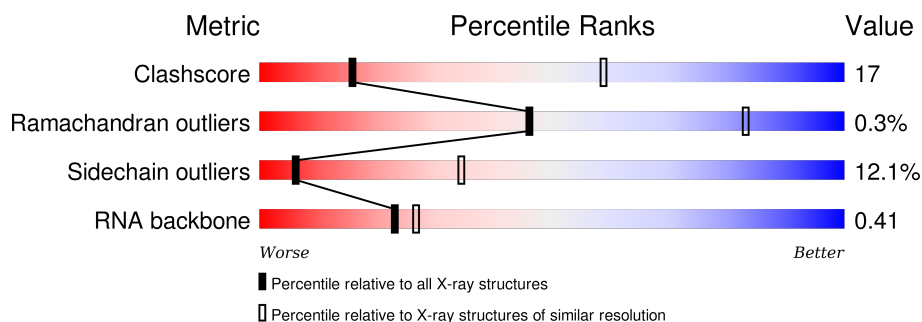
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.70 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))
Clashscore	102246	1224 (3.90-3.50)
Ramachandran outliers	100387	1172 (3.90-3.50)
Sidechain outliers	100360	1170 (3.90-3.50)
RNA backbone	2183	1067 (4.60-2.80)











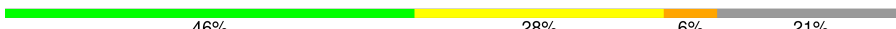
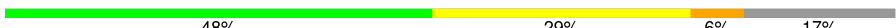




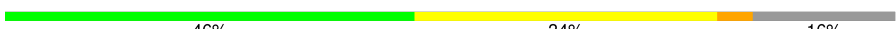
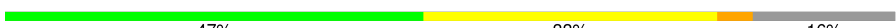




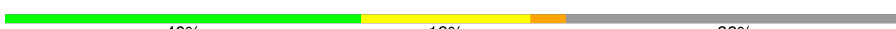


The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey 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.

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	A0	211	<div> <div>30%</div> <div>14%</div> <div>•</div> <div>53%</div> </div>
1	B0	211	<div> <div>28%</div> <div>15%</div> <div>•</div> <div>53%</div> </div>
1	C0	211	<div> <div>29%</div> <div>15%</div> <div>•</div> <div>53%</div> </div>
1	D0	211	<div> <div>31%</div> <div>13%</div> <div>•</div> <div>53%</div> </div>
2	A1	68	<div> <div>54%</div> <div>38%</div> <div>• •</div> </div>
2	B1	68	<div> <div>57%</div> <div>34%</div> <div>6% •</div> </div>

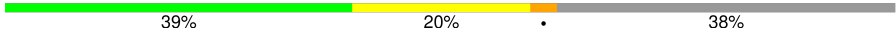


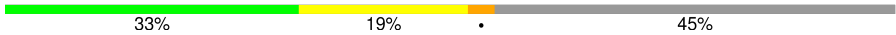





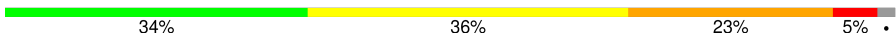
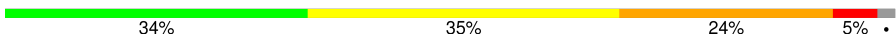
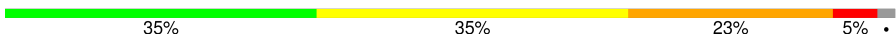
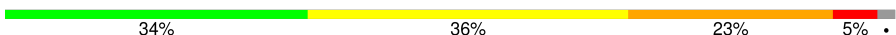
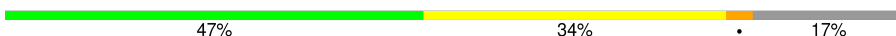











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Mol	Chain	Length	Quality of chain
2	C1	68	
2	D1	68	
3	A2	208	
3	B2	208	
3	C2	208	
3	D2	208	
4	A3	197	
4	B3	197	
4	C3	197	
4	D3	197	
5	A4	265	
5	B4	265	
5	C4	265	
5	D4	265	
6	A5	119	
6	B5	119	
6	C5	119	
6	D5	119	
7	A6	81	
7	B6	81	
7	C6	81	
7	D6	81	
8	A7	162	
8	B7	162	
8	C7	162	




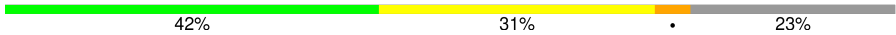





















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Mol	Chain	Length	Quality of chain
8	D7	162	
9	A8	143	
9	B8	143	
9	C8	143	
9	D8	143	
10	A9	189	
10	B9	189	
10	C9	189	
10	D9	189	
11	AA	1753	
11	BA	1753	
11	CA	1753	
11	DA	1753	
12	AB	241	
12	BB	241	
12	CB	241	
12	DB	241	
13	AC	243	
13	BC	243	
13	CC	243	
13	DC	243	
14	AD	181	
14	BD	181	
14	CD	181	
14	DD	181	

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Mol	Chain	Length	Quality of chain
15	AE	296	
15	BE	296	
15	CE	296	
15	DE	296	
16	AF	101	
16	BF	101	
16	CF	101	
16	DF	101	
17	AG	200	
17	BG	200	
17	CG	200	
17	DG	200	
18	AH	130	
18	BH	130	
18	CH	130	
18	DH	130	
19	AI	145	
19	BI	145	
19	CI	145	
19	DI	145	
20	AJ	120	
20	BJ	120	
20	CJ	120	
20	DJ	120	
21	AK	151	














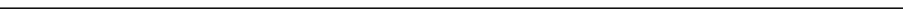











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Mol	Chain	Length	Quality of chain
21	BK	151	
21	CK	151	
21	DK	151	
22	AL	142	
22	BL	142	
22	CL	142	
22	DL	142	
23	AM	155	
23	BM	155	
23	CM	155	
23	DM	155	
24	AN	55	
24	BN	55	
24	CN	55	
24	DN	55	
25	AO	153	
25	BO	153	
25	CO	153	
25	DO	153	
26	AP	149	
26	BP	149	
26	CP	149	
26	DP	149	
27	AQ	157	
27	BQ	157	


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Mol	Chain	Length	Quality of chain
27	CQ	157	
27	DQ	157	
28	AR	343	
28	BR	343	
28	CR	343	
28	DR	343	
29	AS	144	
29	BS	144	
29	CS	144	
29	DS	144	
30	AT	155	
30	BT	155	
30	CT	155	
30	DT	155	
31	AU	126	
31	BU	126	
31	CU	126	
31	DU	126	
32	AV	130	
32	BV	130	
32	CV	130	
32	DV	130	
33	AW	259	
33	BW	259	
33	CW	259	

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Mol	Chain	Length	Quality of chain
33	DW	259	 58%36%6%
34	AX	80	 66%23%•8%
34	BX	80	 63%26%•8%
34	CX	80	 64%25%•8%
34	DX	80	 66%21%5%8%
35	AY	293	 46%28%•22%
35	BY	293	 45%29%•22%
35	CY	293	 46%28%•22%
35	DY	293	 46%29%•22%
36	AZ	97	 61%35%•
36	BZ	97	 59%35%6%
36	CZ	97	 58%38%•
36	DZ	97	 62%34%•

2 Entry composition

There are 39 unique types of molecules in this entry. The entry contains 315512 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 protein called TRANSLATION INITIATION FACTOR EIF-1A FAMILY PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A0	99	Total	C	N	O	S	0	0	0
			817	517	142	152	6			
1	B0	99	Total	C	N	O	S	0	0	0
			817	517	142	152	6			
1	C0	99	Total	C	N	O	S	0	0	0
			817	517	142	152	6			
1	D0	99	Total	C	N	O	S	0	0	0
			817	517	142	152	6			

There are 76 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A0	-17	MET	-	EXPRESSION TAG	UNP I7MK25
A0	-16	GLY	-	EXPRESSION TAG	UNP I7MK25
A0	-15	SER	-	EXPRESSION TAG	UNP I7MK25
A0	-14	SER	-	EXPRESSION TAG	UNP I7MK25
A0	-13	HIS	-	EXPRESSION TAG	UNP I7MK25
A0	-12	HIS	-	EXPRESSION TAG	UNP I7MK25
A0	-11	HIS	-	EXPRESSION TAG	UNP I7MK25
A0	-10	HIS	-	EXPRESSION TAG	UNP I7MK25
A0	-9	HIS	-	EXPRESSION TAG	UNP I7MK25
A0	-8	HIS	-	EXPRESSION TAG	UNP I7MK25
A0	-7	GLU	-	EXPRESSION TAG	UNP I7MK25
A0	-6	ASN	-	EXPRESSION TAG	UNP I7MK25
A0	-5	LEU	-	EXPRESSION TAG	UNP I7MK25
A0	-4	TYR	-	EXPRESSION TAG	UNP I7MK25
A0	-3	PHE	-	EXPRESSION TAG	UNP I7MK25
A0	-2	GLN	-	EXPRESSION TAG	UNP I7MK25
A0	-1	SER	-	EXPRESSION TAG	UNP I7MK25
A0	0	ASN	-	EXPRESSION TAG	UNP I7MK25
A0	1	ALA	-	EXPRESSION TAG	UNP I7MK25
B0	-17	MET	-	EXPRESSION TAG	UNP I7MK25

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Chain	Residue	Modelled	Actual	Comment	Reference
B0	-16	GLY	-	EXPRESSION TAG	UNP I7MK25
B0	-15	SER	-	EXPRESSION TAG	UNP I7MK25
B0	-14	SER	-	EXPRESSION TAG	UNP I7MK25
B0	-13	HIS	-	EXPRESSION TAG	UNP I7MK25
B0	-12	HIS	-	EXPRESSION TAG	UNP I7MK25
B0	-11	HIS	-	EXPRESSION TAG	UNP I7MK25
B0	-10	HIS	-	EXPRESSION TAG	UNP I7MK25
B0	-9	HIS	-	EXPRESSION TAG	UNP I7MK25
B0	-8	HIS	-	EXPRESSION TAG	UNP I7MK25
B0	-7	GLU	-	EXPRESSION TAG	UNP I7MK25
B0	-6	ASN	-	EXPRESSION TAG	UNP I7MK25
B0	-5	LEU	-	EXPRESSION TAG	UNP I7MK25
B0	-4	TYR	-	EXPRESSION TAG	UNP I7MK25
B0	-3	PHE	-	EXPRESSION TAG	UNP I7MK25
B0	-2	GLN	-	EXPRESSION TAG	UNP I7MK25
B0	-1	SER	-	EXPRESSION TAG	UNP I7MK25
B0	0	ASN	-	EXPRESSION TAG	UNP I7MK25
B0	1	ALA	-	EXPRESSION TAG	UNP I7MK25
C0	-17	MET	-	EXPRESSION TAG	UNP I7MK25
C0	-16	GLY	-	EXPRESSION TAG	UNP I7MK25
C0	-15	SER	-	EXPRESSION TAG	UNP I7MK25
C0	-14	SER	-	EXPRESSION TAG	UNP I7MK25
C0	-13	HIS	-	EXPRESSION TAG	UNP I7MK25
C0	-12	HIS	-	EXPRESSION TAG	UNP I7MK25
C0	-11	HIS	-	EXPRESSION TAG	UNP I7MK25
C0	-10	HIS	-	EXPRESSION TAG	UNP I7MK25
C0	-9	HIS	-	EXPRESSION TAG	UNP I7MK25
C0	-8	HIS	-	EXPRESSION TAG	UNP I7MK25
C0	-7	GLU	-	EXPRESSION TAG	UNP I7MK25
C0	-6	ASN	-	EXPRESSION TAG	UNP I7MK25
C0	-5	LEU	-	EXPRESSION TAG	UNP I7MK25
C0	-4	TYR	-	EXPRESSION TAG	UNP I7MK25
C0	-3	PHE	-	EXPRESSION TAG	UNP I7MK25
C0	-2	GLN	-	EXPRESSION TAG	UNP I7MK25
C0	-1	SER	-	EXPRESSION TAG	UNP I7MK25
C0	0	ASN	-	EXPRESSION TAG	UNP I7MK25
C0	1	ALA	-	EXPRESSION TAG	UNP I7MK25
D0	-17	MET	-	EXPRESSION TAG	UNP I7MK25
D0	-16	GLY	-	EXPRESSION TAG	UNP I7MK25
D0	-15	SER	-	EXPRESSION TAG	UNP I7MK25
D0	-14	SER	-	EXPRESSION TAG	UNP I7MK25
D0	-13	HIS	-	EXPRESSION TAG	UNP I7MK25

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Chain	Residue	Modelled	Actual	Comment	Reference
D0	-12	HIS	-	EXPRESSION TAG	UNP I7MK25
D0	-11	HIS	-	EXPRESSION TAG	UNP I7MK25
D0	-10	HIS	-	EXPRESSION TAG	UNP I7MK25
D0	-9	HIS	-	EXPRESSION TAG	UNP I7MK25
D0	-8	HIS	-	EXPRESSION TAG	UNP I7MK25
D0	-7	GLU	-	EXPRESSION TAG	UNP I7MK25
D0	-6	ASN	-	EXPRESSION TAG	UNP I7MK25
D0	-5	LEU	-	EXPRESSION TAG	UNP I7MK25
D0	-4	TYR	-	EXPRESSION TAG	UNP I7MK25
D0	-3	PHE	-	EXPRESSION TAG	UNP I7MK25
D0	-2	GLN	-	EXPRESSION TAG	UNP I7MK25
D0	-1	SER	-	EXPRESSION TAG	UNP I7MK25
D0	0	ASN	-	EXPRESSION TAG	UNP I7MK25
D0	1	ALA	-	EXPRESSION TAG	UNP I7MK25

- Molecule 2 is a protein called 40S RIBOSOMAL PROTEIN RPS28E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	A1	66	Total	C	N	O	S	0	0	0
			511	308	103	96	4			
2	B1	66	Total	C	N	O	S	0	0	0
			511	308	103	96	4			
2	C1	66	Total	C	N	O	S	0	0	0
			511	308	103	96	4			
2	D1	66	Total	C	N	O	S	0	0	0
			511	308	103	96	4			

- Molecule 3 is a protein called 40S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A2	207	Total	C	N	O	S	0	0	0
			1693	1057	336	296	4			
3	B2	207	Total	C	N	O	S	0	0	0
			1693	1057	336	296	4			
3	C2	207	Total	C	N	O	S	0	0	0
			1693	1057	336	296	4			
3	D2	207	Total	C	N	O	S	0	0	0
			1693	1057	336	296	4			

- Molecule 4 is a protein called 40S RIBOSOMAL PROTEIN RPS7E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	A3	196	Total	C	N	O	S	0	0	0
			1629	1048	286	294	1			
4	B3	196	Total	C	N	O	S	0	0	0
			1629	1048	286	294	1			
4	C3	196	Total	C	N	O	S	0	0	0
			1629	1048	286	294	1			
4	D3	196	Total	C	N	O	S	0	0	0
			1629	1048	286	294	1			

- Molecule 5 is a protein called 40S RIBOSOMAL PROTEIN S3A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	A4	209	Total	C	N	O	S	0	0	0
			1679	1061	304	310	4			
5	B4	221	Total	C	N	O	S	0	0	0
			1775	1121	319	331	4			
5	C4	221	Total	C	N	O	S	0	0	0
			1775	1121	319	331	4			
5	D4	221	Total	C	N	O	S	0	0	0
			1775	1121	319	331	4			

- Molecule 6 is a protein called 40S RIBOSOMAL PROTEIN RPS26E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	A5	100	Total	C	N	O	S	0	0	0
			812	496	172	138	6			
6	B5	100	Total	C	N	O	S	0	0	0
			812	496	172	138	6			
6	C5	100	Total	C	N	O	S	0	0	0
			812	496	172	138	6			
6	D5	100	Total	C	N	O	S	0	0	0
			812	496	172	138	6			

- Molecule 7 is a protein called 40S RIBOSOMAL PROTEIN S27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	A6	80	Total	C	N	O	S	0	0	0
			632	398	110	116	8			
7	B6	80	Total	C	N	O	S	0	0	0
			632	398	110	116	8			
7	C6	80	Total	C	N	O	S	0	0	0
			632	398	110	116	8			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	D6	80	Total	C	N	O	S	0	0	0
			632	398	110	116	8			

- Molecule 8 is a protein called 40S RIBOSOMAL PROTEIN RPS10E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	A7	101	Total	C	N	O	S	0	0	0
			833	546	139	146	2			
8	B7	101	Total	C	N	O	S	0	0	0
			833	546	139	146	2			
8	C7	101	Total	C	N	O	S	0	0	0
			833	546	139	146	2			
8	D7	101	Total	C	N	O	S	0	0	0
			833	546	139	146	2			

- Molecule 9 is a protein called 40S RIBOSOMAL PROTEIN RPS25E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	A8	79	Total	C	N	O	S	0	0	0
			615	388	112	113	2			
9	B8	79	Total	C	N	O	S	0	0	0
			615	388	112	113	2			
9	C8	79	Total	C	N	O	S	0	0	0
			615	388	112	113	2			
9	D8	79	Total	C	N	O	S	0	0	0
			615	388	112	113	2			

- Molecule 10 is a protein called 40S RIBOSOMAL PROTEIN RPS31E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	A9	93	Total	C	N	O	S	0	0	0
			751	477	143	126	5			
10	B9	93	Total	C	N	O	S	0	0	0
			751	477	143	126	5			
10	C9	93	Total	C	N	O	S	0	0	0
			751	477	143	126	5			
10	D9	93	Total	C	N	O	S	0	0	0
			751	477	143	126	5			

- Molecule 11 is a RNA chain called 18S RRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AA	1717	Total	C	N	O	P	0	0	0
			36629	16385	6539	11988	1717			
11	BA	1717	Total	C	N	O	P	0	0	0
			36629	16385	6539	11988	1717			
11	CA	1717	Total	C	N	O	P	0	0	0
			36629	16385	6539	11988	1717			
11	DA	1717	Total	C	N	O	P	0	0	0
			36629	16385	6539	11988	1717			

- Molecule 12 is a protein called 40S RIBOSOMAL PROTEIN SA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AB	201	Total	C	N	O	S	0	0	0
			1619	1023	285	301	10			
12	BB	201	Total	C	N	O	S	0	0	0
			1619	1023	285	301	10			
12	CB	201	Total	C	N	O	S	0	0	0
			1619	1023	285	301	10			
12	DB	201	Total	C	N	O	S	0	0	0
			1619	1023	285	301	10			

- Molecule 13 is a protein called 40S RIBOSOMAL PROTEIN RPS3E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AC	228	Total	C	N	O	S	0	0	0
			1811	1167	318	318	8			
13	BC	228	Total	C	N	O	S	0	0	0
			1811	1167	318	318	8			
13	CC	228	Total	C	N	O	S	0	0	0
			1811	1167	318	318	8			
13	DC	228	Total	C	N	O	S	0	0	0
			1811	1167	318	318	8			

- Molecule 14 is a protein called 40S RIBOSOMAL PROTEIN RPS9E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AD	180	Total	C	N	O	S	0	0	0
			1478	932	287	254	5			
14	BD	180	Total	C	N	O	S	0	0	0
			1478	932	287	254	5			
14	CD	180	Total	C	N	O	S	0	0	0
			1478	932	287	254	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	DD	180	Total	C	N	O	S	0	0	0
			1478	932	287	254	5			

- Molecule 15 is a protein called 40S RIBOSOMAL PROTEIN RPS2E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AE	229	Total	C	N	O	S	0	0	0
			1818	1171	321	323	3			
15	BE	229	Total	C	N	O	S	0	0	0
			1818	1171	321	323	3			
15	CE	229	Total	C	N	O	S	0	0	0
			1818	1171	321	323	3			
15	DE	229	Total	C	N	O	S	0	0	0
			1818	1171	321	323	3			

- Molecule 16 is a protein called EIF1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AF	89	Total	C	N	O	S	0	0	0
			736	465	131	137	3			
16	BF	89	Total	C	N	O	S	0	0	0
			736	465	131	137	3			
16	CF	89	Total	C	N	O	S	0	0	0
			736	465	131	137	3			
16	DF	89	Total	C	N	O	S	0	0	0
			736	465	131	137	3			

- Molecule 17 is a protein called 40S RIBOSOMAL PROTEIN RPS5E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AG	192	Total	C	N	O	S	0	0	0
			1520	961	281	270	8			
17	BG	192	Total	C	N	O	S	0	0	0
			1520	961	281	270	8			
17	CG	192	Total	C	N	O	S	0	0	0
			1520	961	281	270	8			
17	DG	192	Total	C	N	O	S	0	0	0
			1520	961	281	270	8			

- Molecule 18 is a protein called 40S RIBOSOMAL PROTEIN RPS22E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AH	129	Total	C	N	O	S	0	0	0
			1040	671	184	180	5			
18	BH	129	Total	C	N	O	S	0	0	0
			1040	671	184	180	5			
18	CH	129	Total	C	N	O	S	0	0	0
			1040	671	184	180	5			
18	DH	129	Total	C	N	O	S	0	0	0
			1040	671	184	180	5			

- Molecule 19 is a protein called 40S RIBOSOMAL PROTEIN RPS16E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AI	143	Total	C	N	O	S	0	0	0
			1135	715	217	198	5			
19	BI	143	Total	C	N	O	S	0	0	0
			1135	715	217	198	5			
19	CI	143	Total	C	N	O	S	0	0	0
			1135	715	217	198	5			
19	DI	143	Total	C	N	O	S	0	0	0
			1135	715	217	198	5			

- Molecule 20 is a protein called 40S RIBOSOMAL PROTEIN RPS20E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AJ	108	Total	C	N	O	S	0	0	0
			859	539	154	160	6			
20	BJ	108	Total	C	N	O	S	0	0	0
			859	539	154	160	6			
20	CJ	108	Total	C	N	O	S	0	0	0
			859	539	154	160	6			
20	DJ	108	Total	C	N	O	S	0	0	0
			859	539	154	160	6			

- Molecule 21 is a protein called 40S RIBOSOMAL PROTEIN RPS14E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AK	140	Total	C	N	O	S	0	0	0
			1063	654	206	197	6			
21	BK	140	Total	C	N	O	S	0	0	0
			1063	654	206	197	6			
21	CK	140	Total	C	N	O	S	0	0	0
			1063	654	206	197	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	DK	140	Total	C	N	O	S	0	0	0
			1063	654	206	197	6			

- Molecule 22 is a protein called 40S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AL	140	Total	C	N	O	S	0	0	0
			1086	685	217	179	5			
22	BL	140	Total	C	N	O	S	0	0	0
			1086	685	217	179	5			
22	CL	140	Total	C	N	O	S	0	0	0
			1086	685	217	179	5			
22	DL	140	Total	C	N	O	S	0	0	0
			1086	685	217	179	5			

- Molecule 23 is a protein called 40S RIBOSOMAL PROTEIN RPS18E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AM	153	Total	C	N	O	S	0	0	0
			1231	775	236	215	5			
23	BM	153	Total	C	N	O	S	0	0	0
			1231	775	236	215	5			
23	CM	153	Total	C	N	O	S	0	0	0
			1231	775	236	215	5			
23	DM	153	Total	C	N	O	S	0	0	0
			1231	775	236	215	5			

- Molecule 24 is a protein called 40S RIBOSOMAL PROTEIN RPS29E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AN	54	Total	C	N	O	S	0	0	0
			454	283	92	73	6			
24	BN	54	Total	C	N	O	S	0	0	0
			454	283	92	73	6			
24	CN	54	Total	C	N	O	S	0	0	0
			454	283	92	73	6			
24	DN	54	Total	C	N	O	S	0	0	0
			454	283	92	73	6			

- Molecule 25 is a protein called 40S RIBOSOMAL PROTEIN RPS13E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	AO	152	Total	C	N	O	S	0	0	0
			1229	790	233	202	4			
25	BO	152	Total	C	N	O	S	0	0	0
			1229	790	233	202	4			
25	CO	152	Total	C	N	O	S	0	0	0
			1229	790	233	202	4			
25	DO	152	Total	C	N	O	S	0	0	0
			1229	790	233	202	4			

- Molecule 26 is a protein called 40S RIBOSOMAL PROTEIN S24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	AP	148	Total	C	N	O		0	0	0
			1197	763	221	213				
26	BP	148	Total	C	N	O		0	0	0
			1197	763	221	213				
26	CP	148	Total	C	N	O		0	0	0
			1197	763	221	213				
26	DP	148	Total	C	N	O		0	0	0
			1197	763	221	213				

- Molecule 27 is a protein called 40S RIBOSOMAL PROTEIN RPS11E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	AQ	156	Total	C	N	O	S	0	0	0
			1267	813	234	216	4			
27	BQ	156	Total	C	N	O	S	0	0	0
			1267	813	234	216	4			
27	CQ	156	Total	C	N	O	S	0	0	0
			1267	813	234	216	4			
27	DQ	156	Total	C	N	O	S	0	0	0
			1267	813	234	216	4			

- Molecule 28 is a protein called 40S RIBOSOMAL PROTEIN RACK1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	AR	338	Total	C	N	O	S	0	0	0
			2682	1711	462	501	8			
28	BR	338	Total	C	N	O	S	0	0	0
			2682	1711	462	501	8			
28	CR	338	Total	C	N	O	S	0	0	0
			2682	1711	462	501	8			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	DR	338	Total	C	N	O	S	0	0	0
			2682	1711	462	501	8			

- Molecule 29 is a protein called 40S RIBOSOMAL PROTEIN RPS15E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	AS	128	Total	C	N	O	S	0	0	0
			1010	648	178	180	4			
29	BS	128	Total	C	N	O	S	0	0	0
			1010	648	178	180	4			
29	CS	128	Total	C	N	O	S	0	0	0
			1010	648	178	180	4			
29	DS	128	Total	C	N	O	S	0	0	0
			1010	648	178	180	4			

- Molecule 30 is a protein called 40S RIBOSOMAL PROTEIN RPS19E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	AT	154	Total	C	N	O	S	0	0	0
			1242	785	234	221	2			
30	BT	154	Total	C	N	O	S	0	0	0
			1242	785	234	221	2			
30	CT	154	Total	C	N	O	S	0	0	0
			1242	785	234	221	2			
30	DT	154	Total	C	N	O	S	0	0	0
			1242	785	234	221	2			

- Molecule 31 is a protein called 40S RIBOSOMAL PROTEIN RPS12E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	AU	124	Total	C	N	O	S	0	0	0
			952	599	166	182	5			
31	BU	124	Total	C	N	O	S	0	0	0
			952	599	166	182	5			
31	CU	124	Total	C	N	O	S	0	0	0
			952	599	166	182	5			
31	DU	124	Total	C	N	O	S	0	0	0
			952	599	166	182	5			

- Molecule 32 is a protein called 40S RIBOSOMAL PROTEIN RPS17E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	AV	119	Total	C	N	O	S	0	0	0
			968	613	180	173	2			
32	BV	119	Total	C	N	O	S	0	0	0
			968	613	180	173	2			
32	CV	119	Total	C	N	O	S	0	0	0
			968	613	180	173	2			
32	DV	119	Total	C	N	O	S	0	0	0
			968	613	180	173	2			

- Molecule 33 is a protein called 40S RIBOSOMAL PROTEIN RPS4E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	AW	259	Total	C	N	O	S	0	0	0
			2079	1322	383	370	4			
33	BW	259	Total	C	N	O	S	0	0	0
			2079	1322	383	370	4			
33	CW	259	Total	C	N	O	S	0	0	0
			2079	1322	383	370	4			
33	DW	259	Total	C	N	O	S	0	0	0
			2079	1322	383	370	4			

- Molecule 34 is a protein called 40S RIBOSOMAL PROTEIN RPS30E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	AX	74	Total	C	N	O	S	0	0	0
			599	376	124	96	3			
34	BX	74	Total	C	N	O	S	0	0	0
			599	376	124	96	3			
34	CX	74	Total	C	N	O	S	0	0	0
			599	376	124	96	3			
34	DX	74	Total	C	N	O	S	0	0	0
			599	376	124	96	3			

- Molecule 35 is a protein called 40S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	AY	228	Total	C	N	O	S	0	0	0
			1826	1157	340	318	11			
35	BY	228	Total	C	N	O	S	0	0	0
			1826	1157	340	318	11			
35	CY	228	Total	C	N	O	S	0	0	0
			1826	1157	340	318	11			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	DY	228	Total	C	N	O	S	0	0	0
			1826	1157	340	318	11			

- Molecule 36 is a protein called 40S RIBOSOMAL PROTEIN RPS21E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	AZ	97	Total	C	N	O	S	0	0	0
			747	458	139	146	4			
36	BZ	97	Total	C	N	O	S	0	0	0
			747	458	139	146	4			
36	CZ	97	Total	C	N	O	S	0	0	0
			747	458	139	146	4			
36	DZ	97	Total	C	N	O	S	0	0	0
			747	458	139	146	4			

- Molecule 37 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
37	B5	1	Total	Zn	0	0
			1	1		
37	D6	1	Total	Zn	0	0
			1	1		
37	CN	1	Total	Zn	0	0
			1	1		
37	BN	1	Total	Zn	0	0
			1	1		
37	C5	1	Total	Zn	0	0
			1	1		
37	C6	1	Total	Zn	0	0
			1	1		
37	B9	1	Total	Zn	0	0
			1	1		
37	A6	1	Total	Zn	0	0
			1	1		
37	C9	1	Total	Zn	0	0
			1	1		
37	D5	1	Total	Zn	0	0
			1	1		
37	DN	1	Total	Zn	0	0
			1	1		
37	D9	1	Total	Zn	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
37	AN	1	Total	Zn	0	0
			1	1		
37	A5	1	Total	Zn	0	0
			1	1		
37	A9	1	Total	Zn	0	0
			1	1		
37	B6	1	Total	Zn	0	0
			1	1		

- Molecule 38 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	AA	79	Total	Mg	0	0
			79	79		
38	BA	79	Total	Mg	0	0
			79	79		
38	CA	79	Total	Mg	0	0
			79	79		
38	DA	79	Total	Mg	0	0
			79	79		

- Molecule 39 is water.

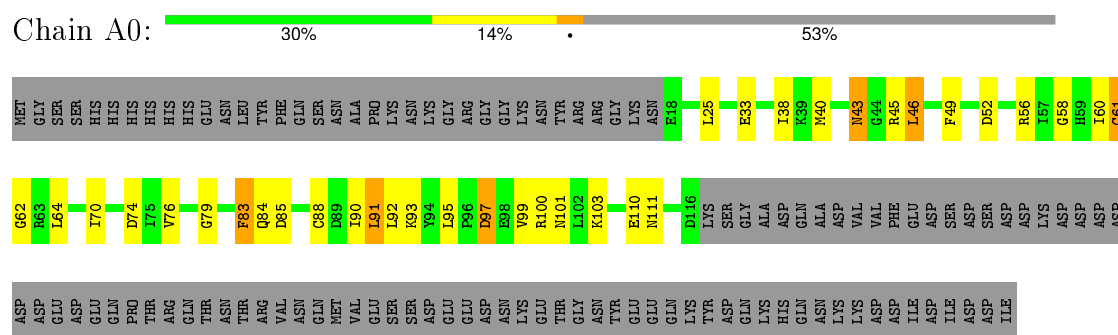
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
39	AA	474	Total	O	0	0
			474	474		
39	BA	474	Total	O	0	0
			474	474		
39	C2	2	Total	O	0	0
			2	2		
39	C4	2	Total	O	0	0
			2	2		
39	C5	3	Total	O	0	0
			3	3		
39	CA	467	Total	O	0	0
			467	467		
39	DA	474	Total	O	0	0
			474	474		

3 Residue-property plots [i](#)

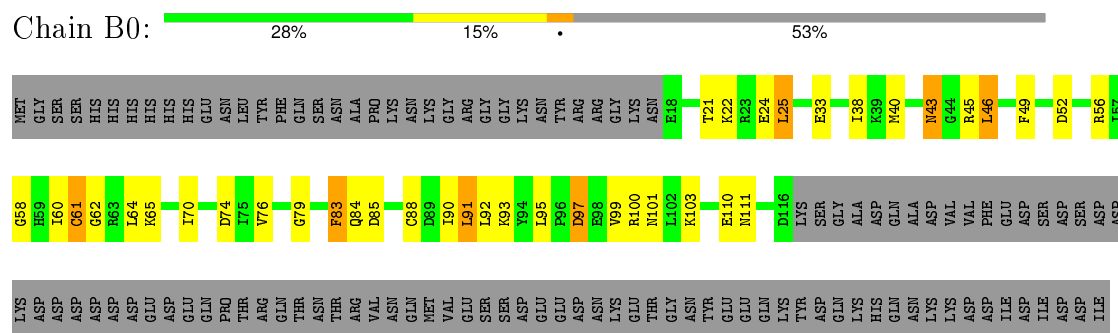
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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.

Note EDS failed to run properly.

• Molecule 1: TRANSLATION INITIATION FACTOR EIF-1A FAMILY PROTEIN



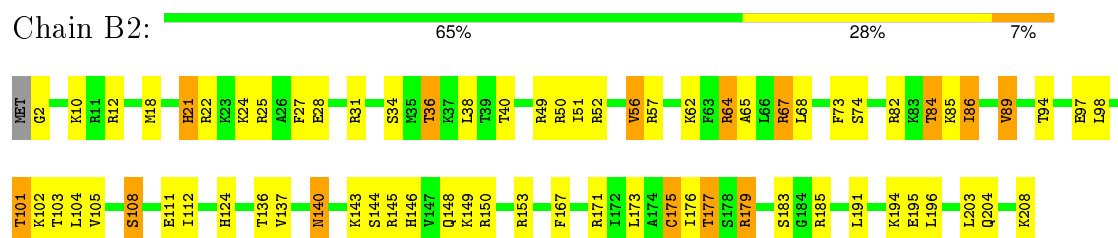
• Molecule 1: TRANSLATION INITIATION FACTOR EIF-1A FAMILY PROTEIN



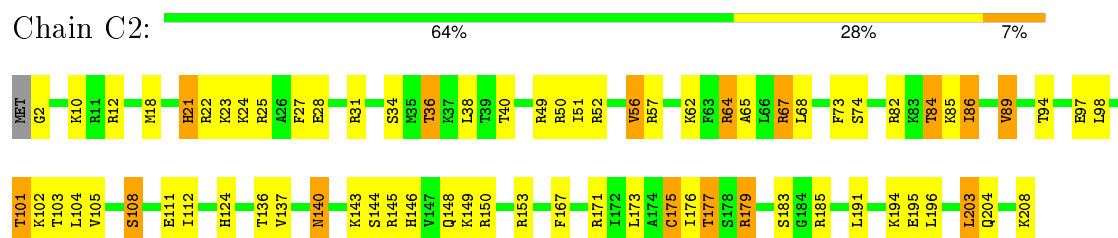
• Molecule 1: TRANSLATION INITIATION FACTOR EIF-1A FAMILY PROTEIN



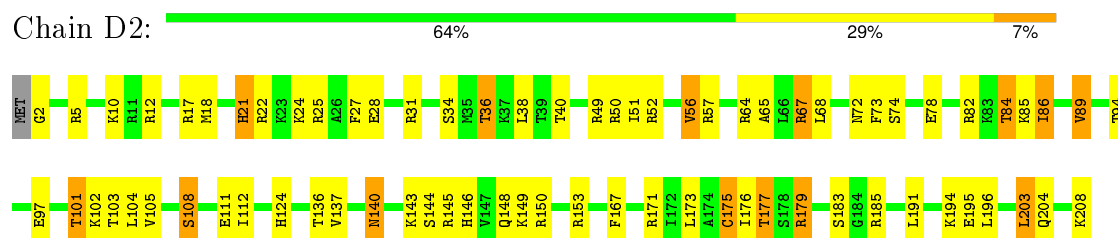
- Molecule 3: 40S RIBOSOMAL PROTEIN S8



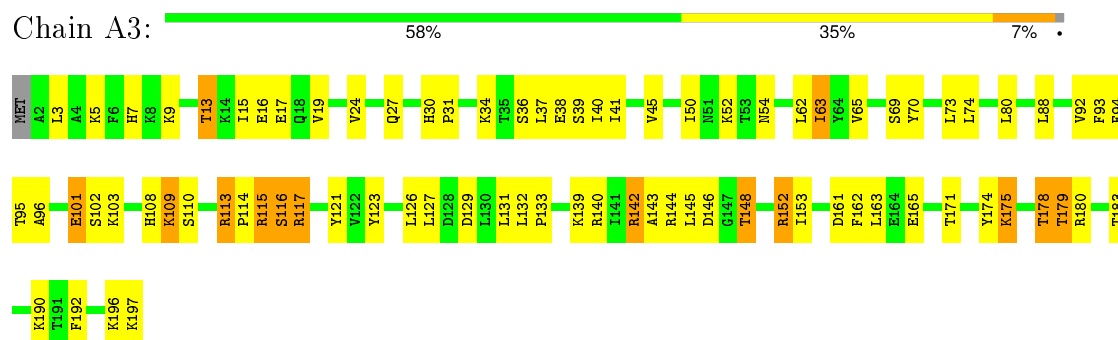
- Molecule 3: 40S RIBOSOMAL PROTEIN S8



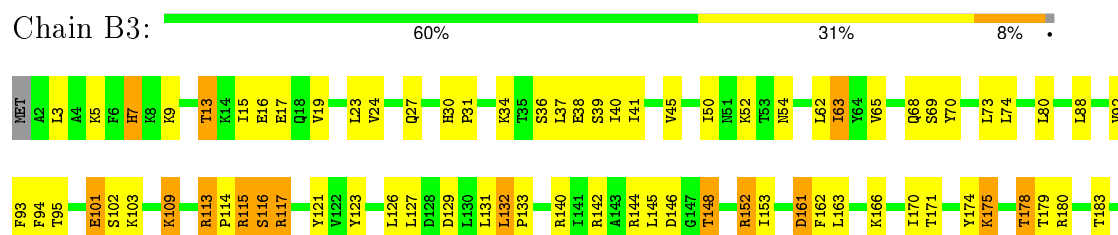
- Molecule 3: 40S RIBOSOMAL PROTEIN S8



- Molecule 4: 40S RIBOSOMAL PROTEIN RPS7E



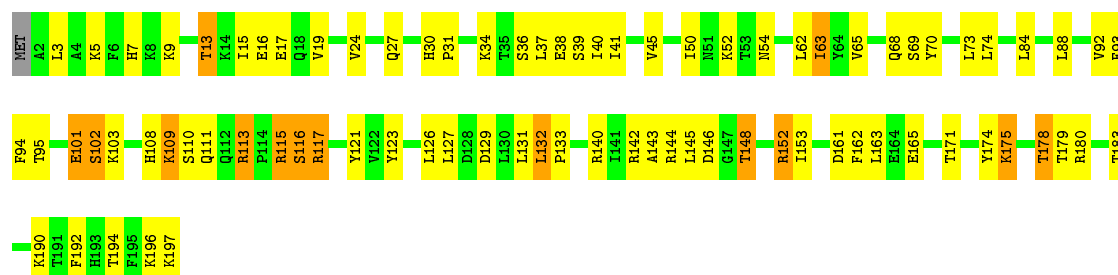
- Molecule 4: 40S RIBOSOMAL PROTEIN RPS7E





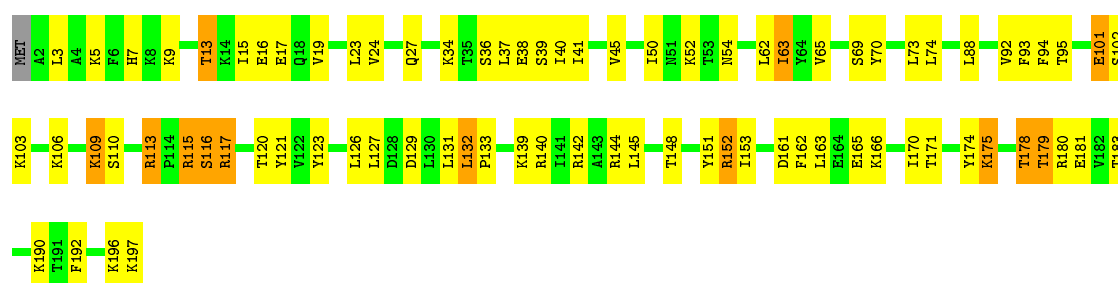
• Molecule 4: 40S RIBOSOMAL PROTEIN RPS7E

Chain C3: 58% 35% 7%



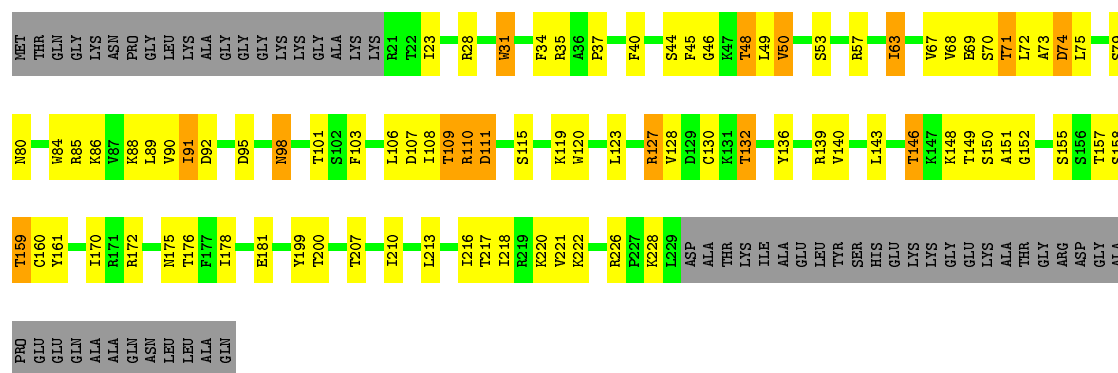
• Molecule 4: 40S RIBOSOMAL PROTEIN RPS7E

Chain D3: 58% 35% 7%



• Molecule 5: 40S RIBOSOMAL PROTEIN S3A

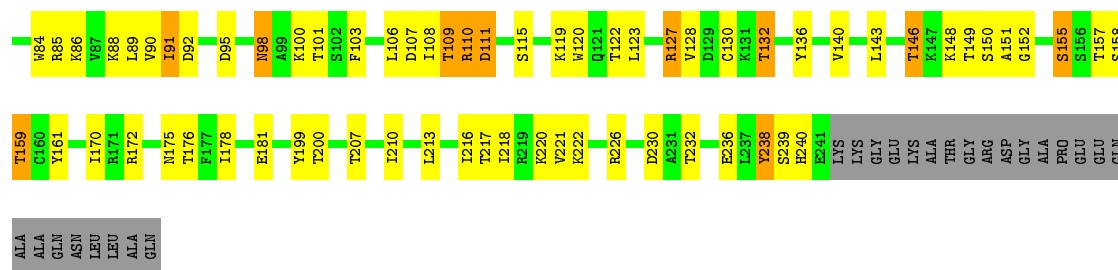
Chain A4: 46% 28% 6% 21%



• Molecule 5: 40S RIBOSOMAL PROTEIN S3A

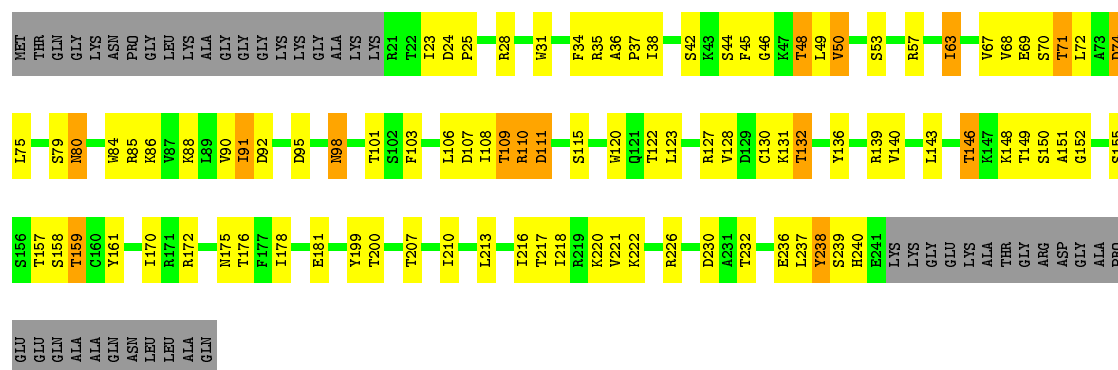
Chain B4: 48% 29% 6% 17%





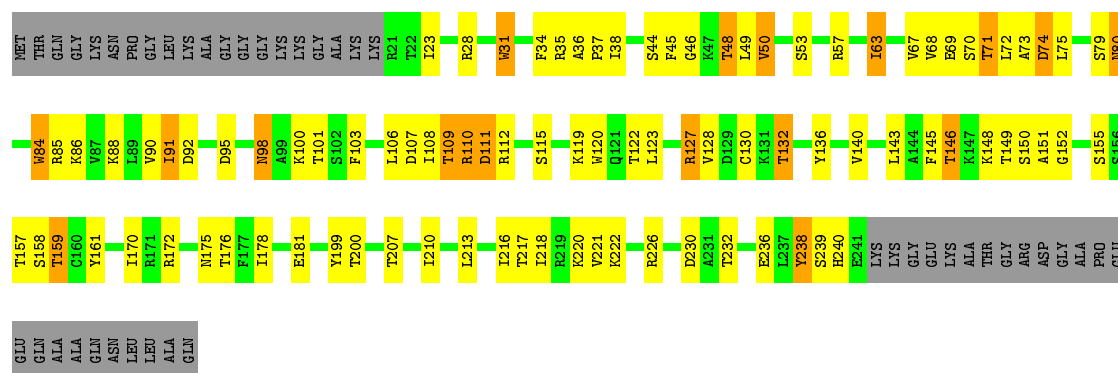
• Molecule 5: 40S RIBOSOMAL PROTEIN S3A

Chain C4: 47% 31% 6% 17%



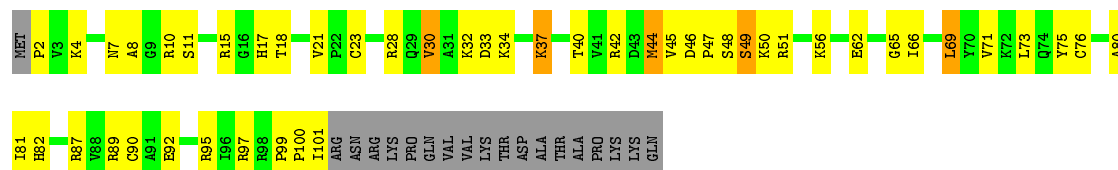
• Molecule 5: 40S RIBOSOMAL PROTEIN S3A

Chain D4: 48% 29% 7% 17%

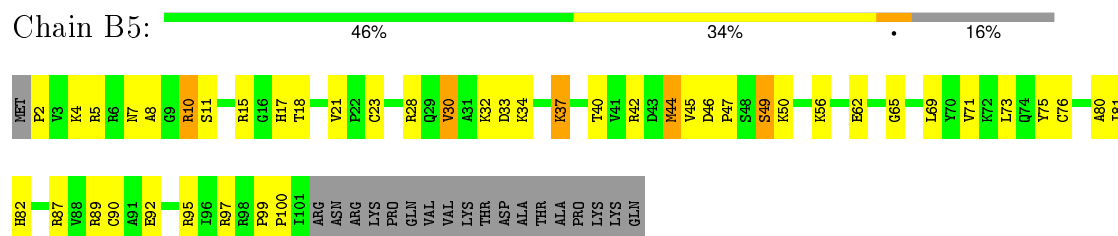


• Molecule 6: 40S RIBOSOMAL PROTEIN RPS26E

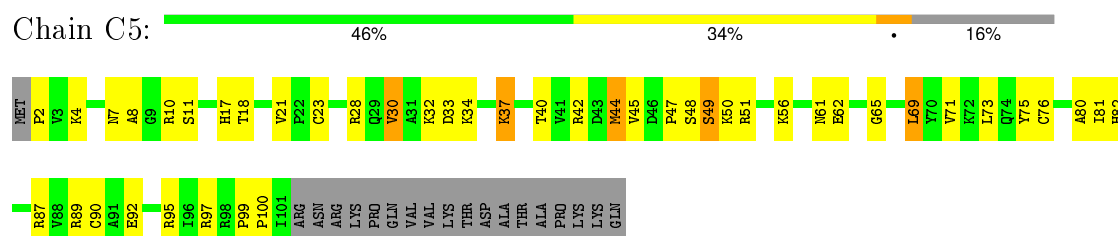
Chain A5: 44% 36% 16% 4%



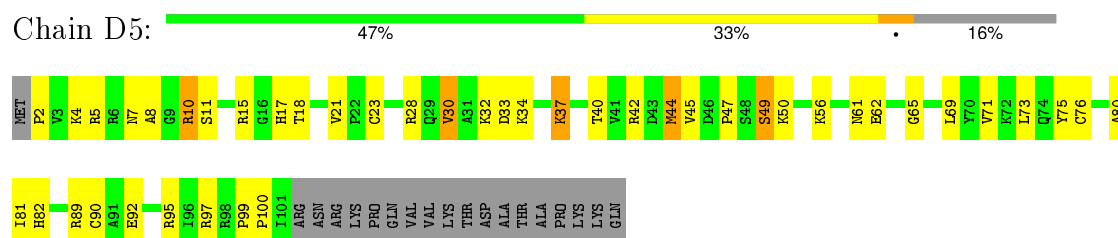
• Molecule 6: 40S RIBOSOMAL PROTEIN RPS26E



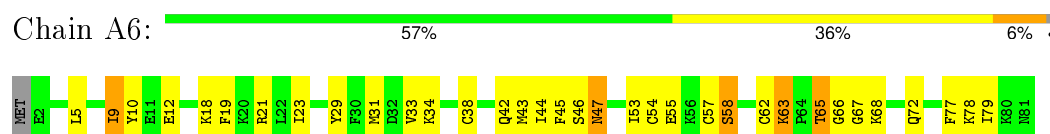
- Molecule 6: 40S RIBOSOMAL PROTEIN RPS26E



- Molecule 6: 40S RIBOSOMAL PROTEIN RPS26E



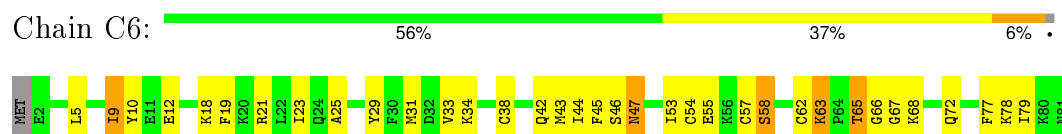
- Molecule 7: 40S RIBOSOMAL PROTEIN S27



- Molecule 7: 40S RIBOSOMAL PROTEIN S27

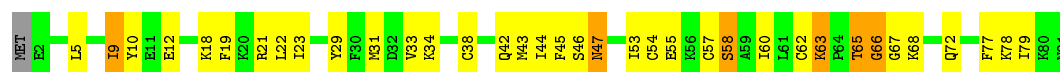


- Molecule 7: 40S RIBOSOMAL PROTEIN S27



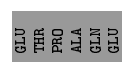
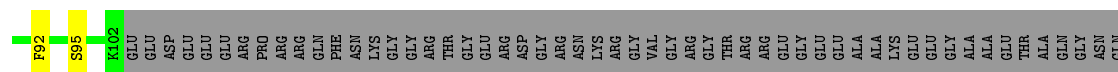
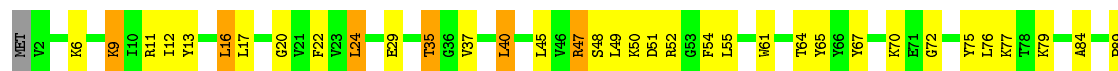
- Molecule 7: 40S RIBOSOMAL PROTEIN S27





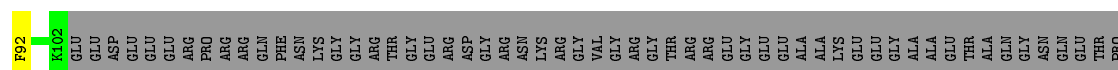
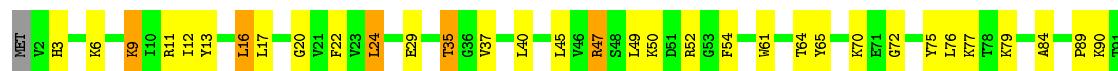
• Molecule 8: 40S RIBOSOMAL PROTEIN RPS10E

Chain A7: 40% 19% 38%



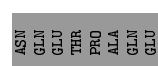
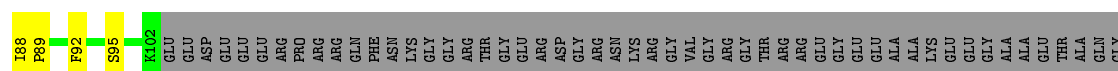
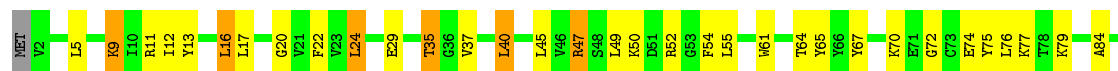
• Molecule 8: 40S RIBOSOMAL PROTEIN RPS10E

Chain B7: 41% 18% 38%



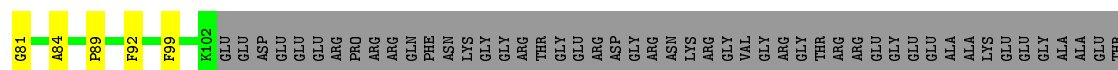
• Molecule 8: 40S RIBOSOMAL PROTEIN RPS10E

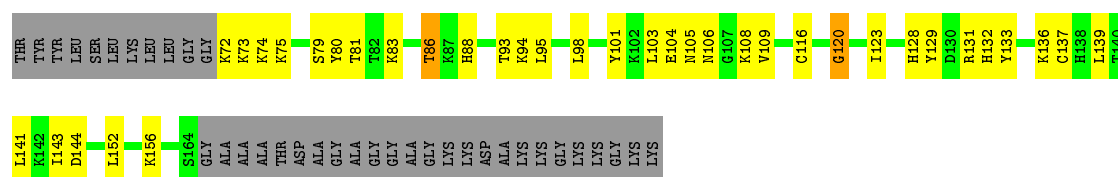
Chain C7: 40% 19% 38%



• Molecule 8: 40S RIBOSOMAL PROTEIN RPS10E

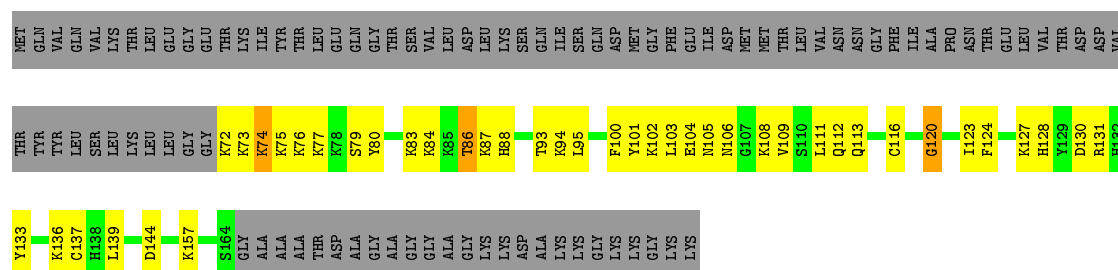
Chain D7: 39% 20% 38%





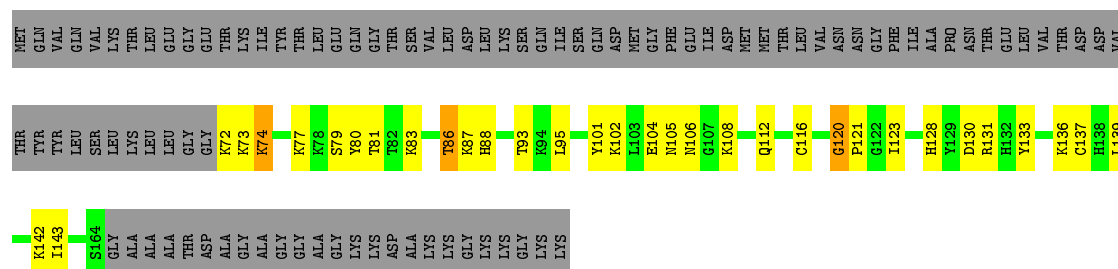
- Molecule 10: 40S RIBOSOMAL PROTEIN RPS31E

Chain B9: 27% 21% 51%



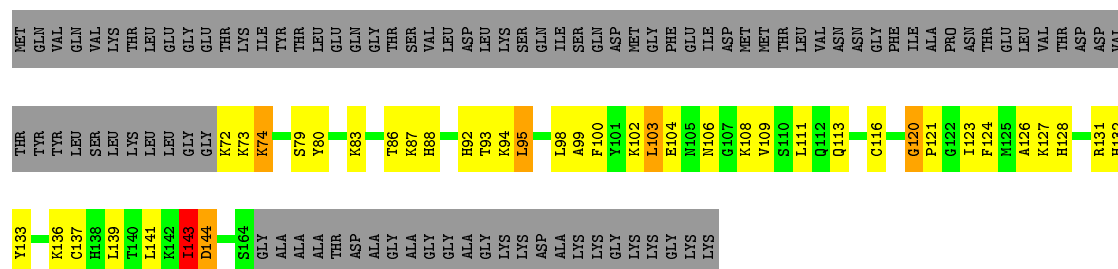
- Molecule 10: 40S RIBOSOMAL PROTEIN RPS31E

Chain C9: 32% 16% 51%



- Molecule 10: 40S RIBOSOMAL PROTEIN RPS31E

Chain D9: 28% 19% 51%

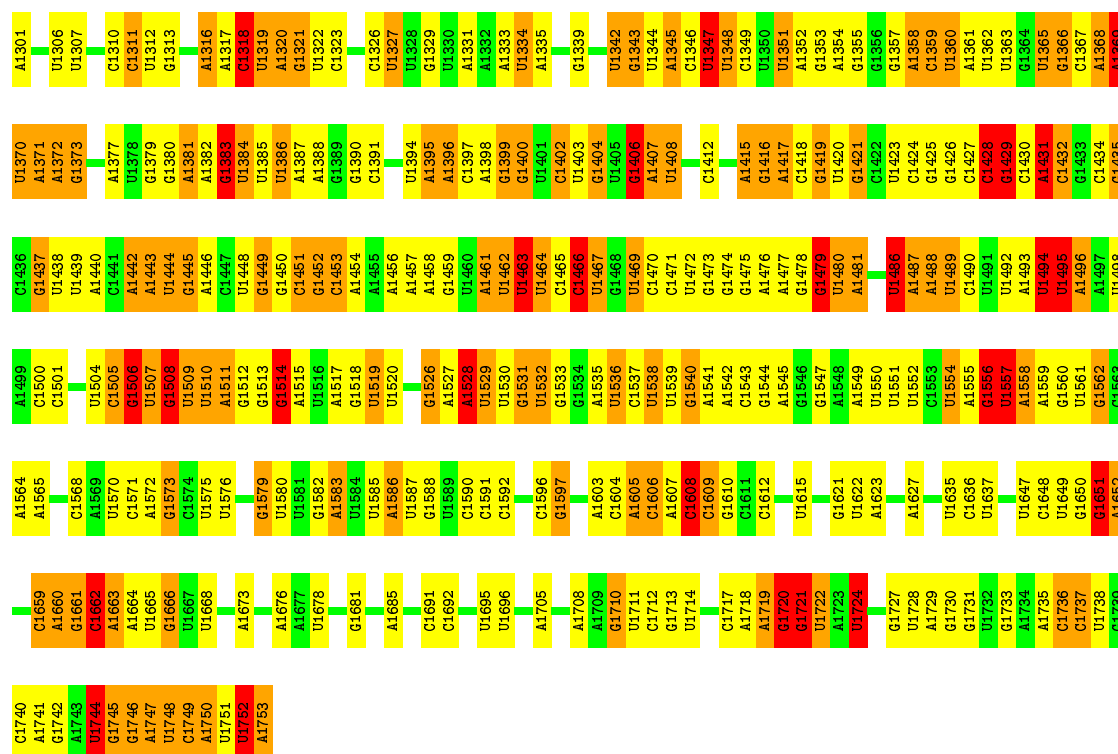


- Molecule 11: 18S RRNA

Chain AA: 34% 36% 23% 5%

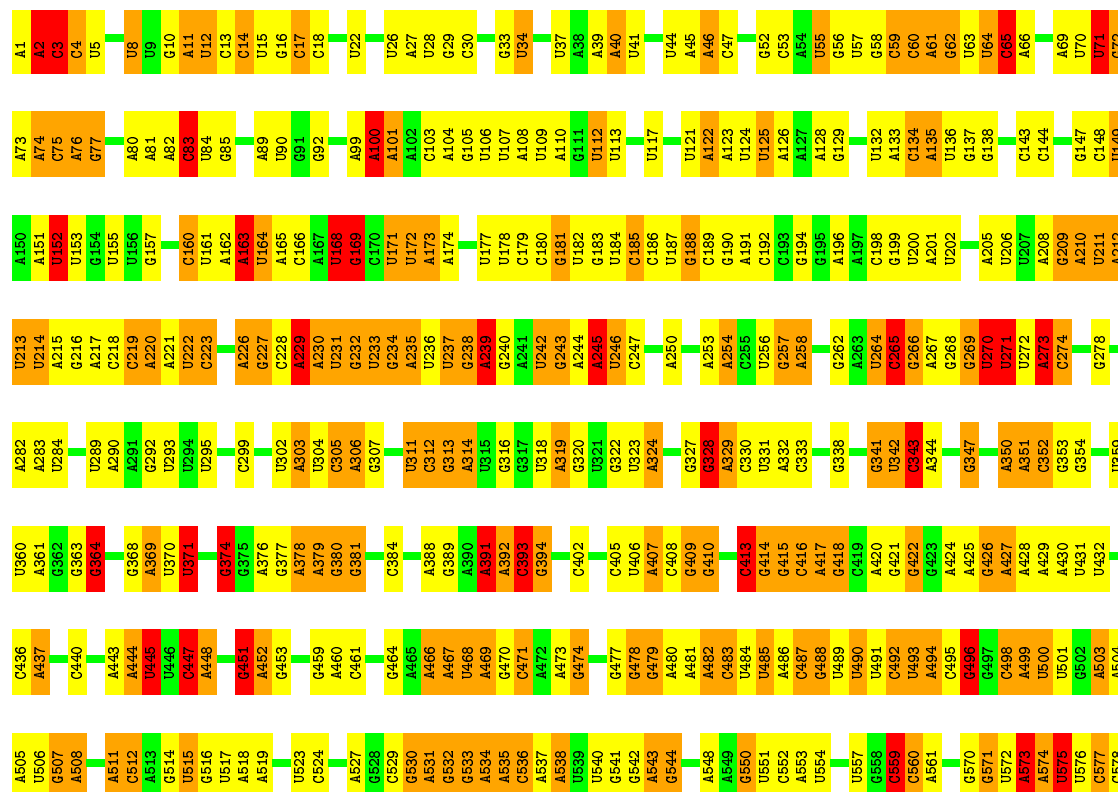


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U1234	A1166	A1098	A1014	U943	G873	U796	G	C655	C577	A508	C440	U360	A282	U211	G147	U71
G1235	C1167	A1099	G1017	A944	U874	A797	G	G656	C578	A509	C441	A361	A283	U212	U148	G72
G1236	A1168	G1099	G1018	C947	G875	G798	G	U657	U577	A511	C442	G364	U284	U213	U149	A73
G1237	C1169	U108	G1019	C948	G876	G799	A	C658	A585	A512	U443	G365	U289	U214	A150	A74
U1241	G1170	U108	G1020	A949	G877	A800		U659	A586	A513	U444	G366	U290	A215	A151	C75
G1242	G1171	A1111	G1021		A878	C801		U660	U587	G514	U445	G367	A290	G216	U152	A76
G1243	G1172	A1112	G1022	C953	G879	C802		U661	A588	U515	U446	G368	A291	A217	U153	G77
G1244	G1173	A1113	G1023	G880	A880	A803		U662	G589	U516	U447	U370	G292	C218	U154	A80
G1245	A1174	G1113	G1024	U881	A881	A804		G663	A589	U517	U448	U371	G293	C219	U155	A81
G1246	A1175	G1114	G1025	G882	A882	G805		U664	A590	U518	U449	G372	U294	A220	U156	A82
A1247	A1176	A1115	G1026	A956	A883	G806		U665	U594	A519	U450	G373	U295	A221	G157	G83
U1248	U1248	A1116	G1027	A957	A884	C808		U666	U597	U523	G451	G374	U296	U222	G158	A84
G1249	C1181	U1117	G1028	G958	A885			C667	U598		A452	G375	U297	C223	G159	U84
G1250	G1184	U1118	A1030		U886	U811		U668	U599	U527	G453	A376	C299	G224	G160	G85
C1251	G1185	U1119	A1031	G962	U887	U812		U669	A598	A527	G454	A377		C225	U161	
C1252	G1186	A1120	U1032	G963	U888	U813		G670	A599	G528	G455	A378	U302	A226	A162	A89
C1253	G1187	A1121	A1033		U889	A814		A671	U603	C529	G456	A379	A303	G227	A163	U90
C1254	G1188	G1122	U1034	A966	U890	U815		C672	G604	C530	C461	G381	U304	C228	U164	G91
C1255	A1188	G1123	A1035	U967	G891	U816		A673	U605	A531	A462	C384	C305	A229	A165	G92
C1256	A1189	G1124	A1036	C968	G892	U817		U674	U606	A532	A463	C385	A306	A230	C166	G93
C1257	G1190	A1125	G1037	A969	A893	G818		A675	G607	C533	G464	C386	G307	U231	U167	
C1258	A1191	C1126	U1038	A970	U894	U819		C676	C608	A534	A465	A388	U311	G232	A168	A99
C1259	C1192	A1127	U1039	A971	U895	U820		G677	U611	C535	A466	A389	C312	U233	G169	A100
C1260	A1198	G1128	G1042	C972	U896	C821		U678	U612	C536	A467	A390	C313	G234	C170	A101
C1261	G1199	C1131	U1043	A973	A897	U822		U679	U613	A537	U468	A391	C314	A235	U171	A102
C1262	G1200	A1132	C1044	C974	U898	U823		U680	A613	A538	A469	A392	C315	U236	U172	C103
C1263	G1201	A1133	G1045	G975	G899	G824		G681	U614	U539	G470	A393	U315	U237	A104	G105
C1264	G1202	C1134	G1046	A976	A899	G825		C682	A615	U540	G471	A401	C316	G238	A174	U106
C1265	A1203	A1135	C1049	C978	G903	A754		A	A616	G541		A402	G317	A239	U177	U107
C1266	U1204	G1136	C1050		A904	G755		A	A617	G542	C475	A403	U318	G240	U178	A108
C1267	G1205	A1137	G1051	A981	U906	A758		C	G618	G543	U476	A404	A319	U242	C179	U109
C1268	A1206	C1138	U1052	U982	G759	G759		U	G622	A548	G477	A405	G320	U243	U179	
C1269	C1207	G1139	A1053	A908	G760	G760		A	U623	A549	G478	A406	U323	G243	C180	
C1270	U1274	U1140	U1054	C909	U761	U761		A	A624	G550	A480	A407	U324	A244	A110	G111
C1271	G1208	G1141	U1055	U910	U762	U762		A	G625	U551	A481	A408	A324	A245	U182	U112
C1272	A1210	G1142	A1059	A911	U763	U763		A	U626	U552	A482	U411	G327	U246	G183	U113
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C1274	G1212	C1144	A1061	U913	A765	A765		C	U628	A553	U484	C413	A329	A251	C186	
C1275	U1213	C1145	U1061	G914	G766	G766		G	A629	U554	U485	G414	C330	A253	U187	U121
C1276	G1214	C1146	C1062	C994	G770	G770		C	U632	G555	A486	G415	U331	A254	C188	A122
C1277	A1215	U1147	A1063	U995	A919	A919		C	G633	U556	A487	C416	A332	G257	C189	A123
C1278	U1216	C1148	A1064	U996	A920	C848		U	U634	U557	G488	A417	C333	A258	A190	U124
C1279	G1217	C1149	A1065	A997	A921	A849		U	G635	C559	U489	G418	G338	G259	A191	U125
C1280	U1218	G1150	U1069	C998	A922	G850		C	U636	C560	C490	C419	G339	A259	C192	A126
C1281	G1219	C1151	U1070	C999	A776	G854		A	G637	A561	U490	G421	G341	G262	A196	A127
C1282	U1220	U1071	U1071	U923	U777	U777		C	G641	A562	U491	G422	U342	U263	A197	G129
C1283	G1221	U1153	U1072	C928	C781	C781		U	G642	A563	C492	G423	C343	G264	C198	
C1284	U1222	U1154	G1072	A931	G785	G785		G	C645	G565	G493	G424	A344	G265	G199	U132
C1285	U1223	A1155	U1076	A932	A859	C858		U	C646	C566	G494	G425	G347	A266	U200	A133
C1286	A1224	A1156	A1004	G933	A860	A860		G	U647	C567	C495	G426	U348	G267	A201	C134
C1287	U1225	U1157	A1005	A934	U861	U861		U	U648	U568	C496	A427	U349	G268	A135	A135
C1288	U1226	U1158	G1079	U934	A862	A862		U	U649	G570	U500	A428	A350	G269	U202	
C1289	G1227	U1159	G1080	G935	U863	U863		C	U650	U571	U501	A429	A351	G270	A205	G136
C1290	U1228	G1160	U1081	U936	A789	A789		A	C651	U572	A503	A430	C352	U271	U206	
C1291	U1229	A1161	G1082	U937	G792	G792		C	G652	A573	A504	U431	G353	U272	U207	C143
C1292	G1230	U1162	G1083	U938	G793	G793		U	U653	U575	U505		G354	C274	G209	
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• Molecule 11: 18S RRNA

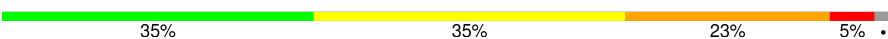
Chain BA: 34% 35% 24% 5%

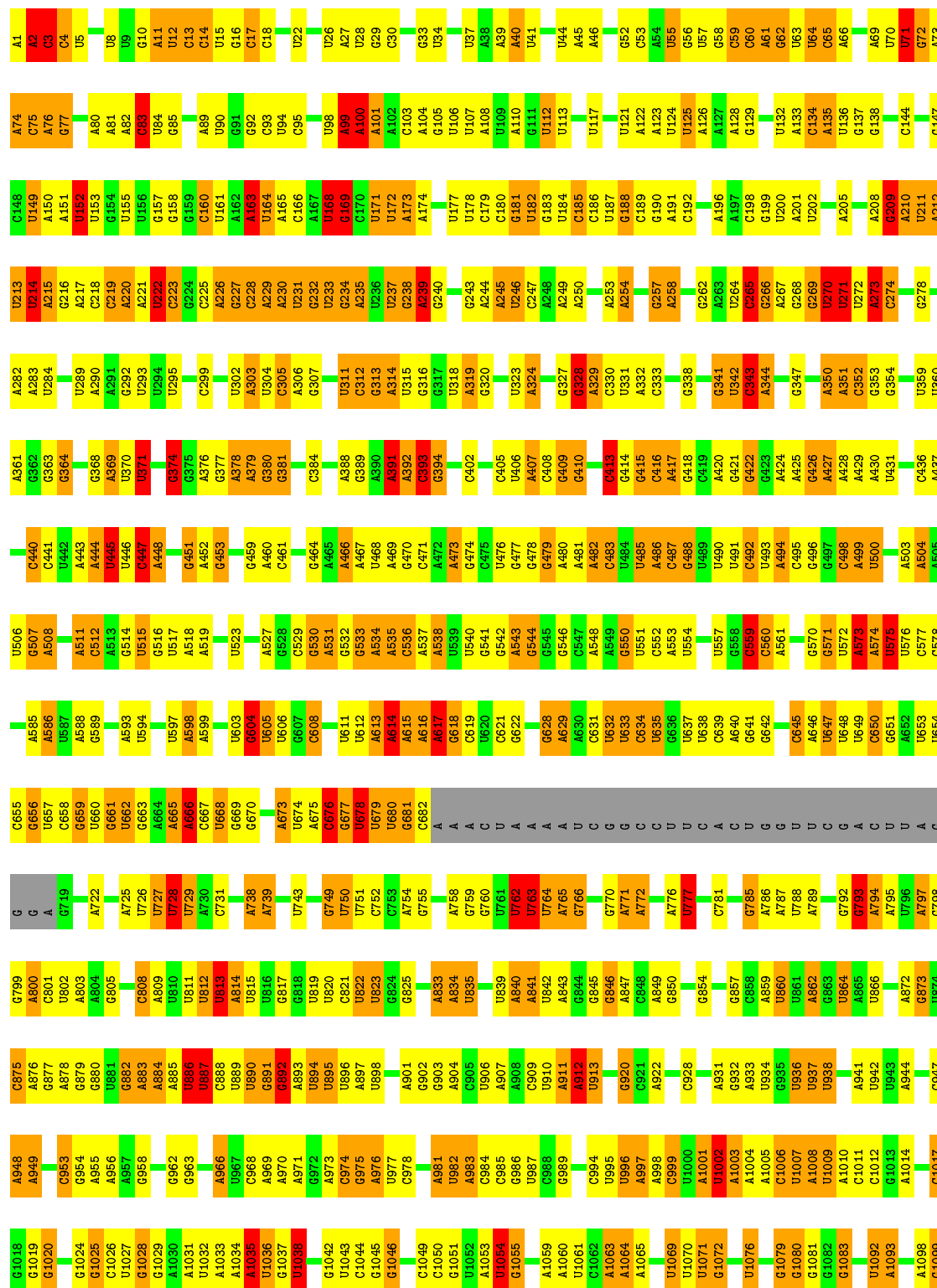


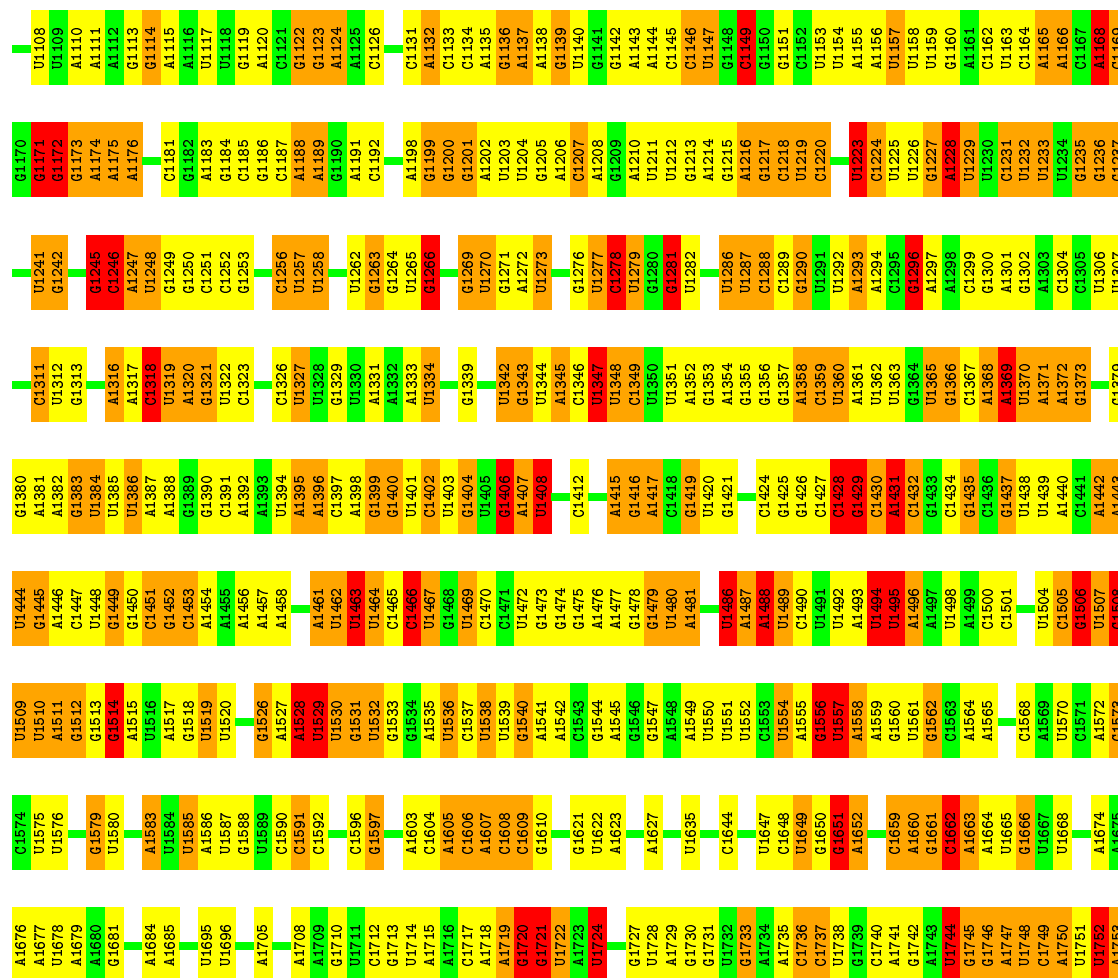
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A1753

• Molecule 11: 18S rRNA

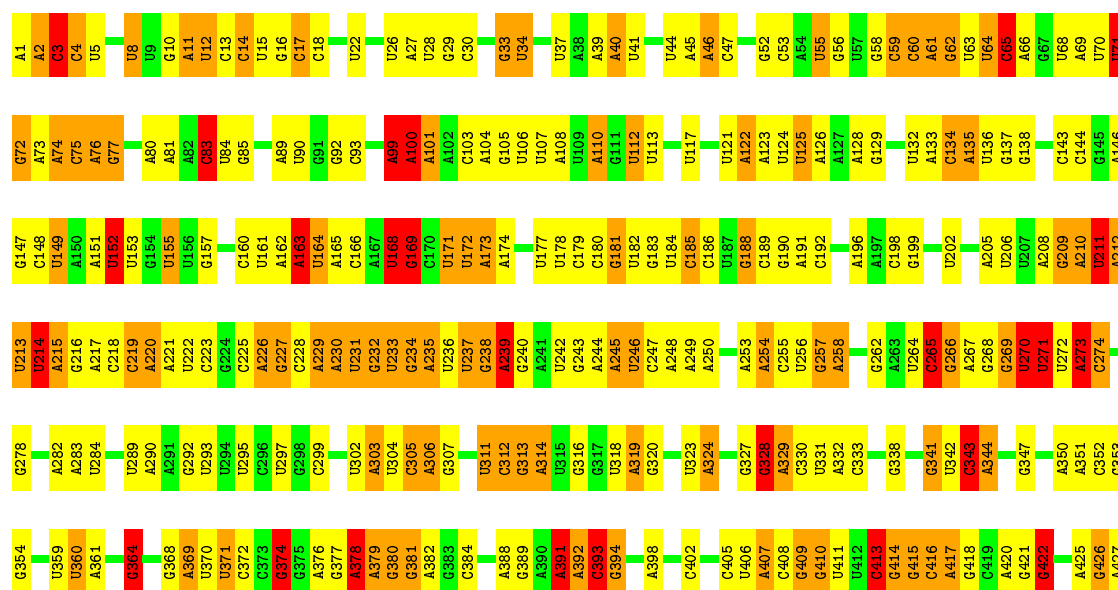
Chain CA: 



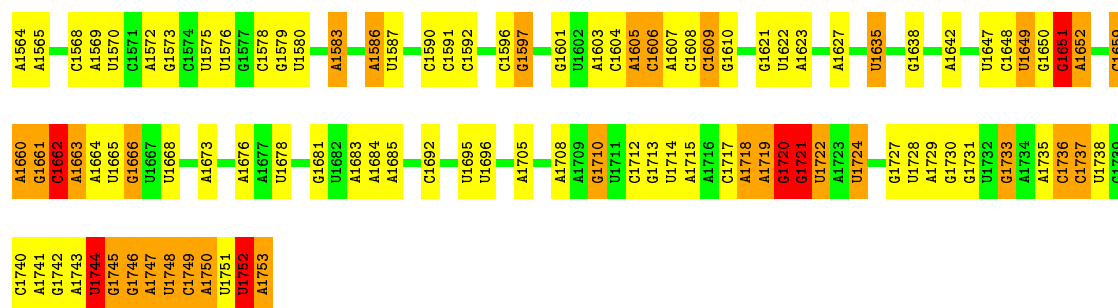


- Molecule 11: 18S rRNA

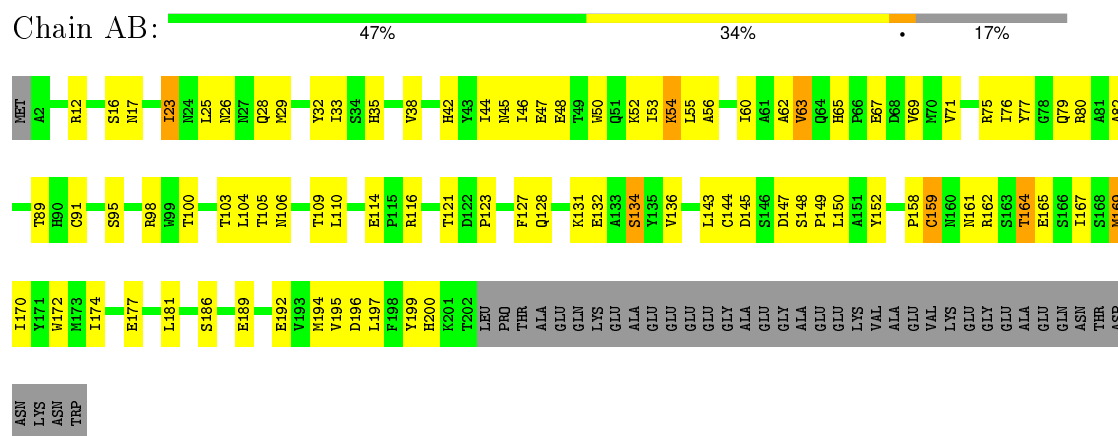
Chain DA: 34% 36% 23% 5%



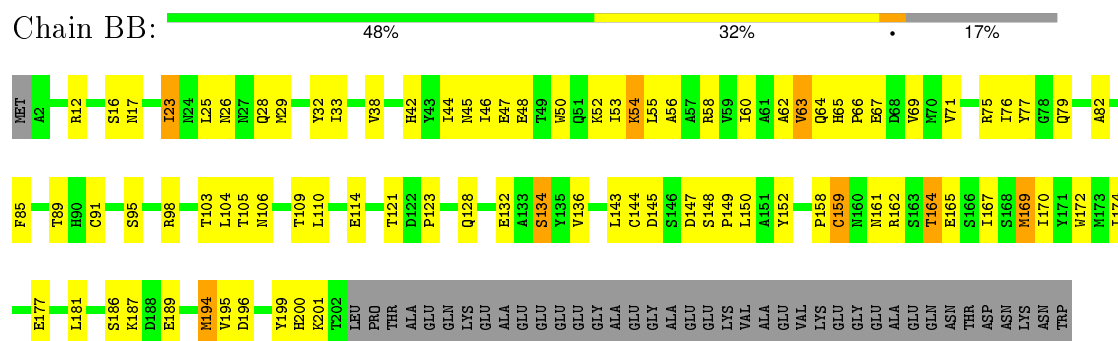
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A1504	A1440	G1373	U1312	G1243	A1175	A1110	U1244	A978	A878	U802	A	C657	C578	A503	A430
C1505	C1441	U1312	G1313	U1244	A1176	A1111	G1025	C953	G879	A803		C658		A504	U431
G1506	A1442	A1377	G1313	G1245	A1180	A1112	U1027	G954	G880	A804	G719	U650	A585	U506	U432
U1507	U1443	U1378	A1316	G1246	C1181	A1113	U1028	A955	U881	G805	U721	G661	U587	G507	C436
G1508	U1444	G1379	A1317	A1247	C1182	G1113	G1028	A956	G882	C808	A722	U662	U588	A508	A437
U1509	G1445	A1380	C1318	U1248	A1183	A1115	U1029	G958	A883	A809		G663	G589		
G1510	U1446	A1381	G1318	G1249	A1184	A1116	A1031	A885	A884	U810	U725	A664	A593	A511	C440
A1511	A1447	A1382	A1319	G1250	C1185	U1117	U1032	G962	U886	U811	U726	A665	A594	C512	C441
G1512	U1448	G1383	A1320	C1251	G1186	U1117	U1033	U887	U886	U812	U727	A666	U594	A513	A444
G1513	G1449	U1384	G1321	G1252	C1187	U1118	A1034	A966	C988	U813	U728	C667		G514	A445
G1514	G1450	U1385	U1322	G1253	C1187			A967	U889	A814	U729	U668		U515	U446
A1515	C1451	U1386	C1323	C1253	A1188	G1121	A1035	U967	C988	U815		G669		U516	U447
U1516	A1452	A1387	U1324	C1256	A1189	G1122	U1036	C968	U890	U816	A738	U670	A599	U517	C448
A1517	C1453	G1123	G1137	U1257	G1123	G1123	U1037	A969	G891	G817	A739	A671		A518	A448
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A1527	U1461	A1396	U1333		U1203	G1136		U977		G824	C752	U678		G530	A461
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G1534	U1468	A1403	U1340	U1275	G1210	A1143	G1055	C985	A907	U839	G760	A	A616	C536	U468
A1535	G1469	G1404	U1342	G1276	A1216	A1144		C986	A908	A840	U763	C	U618	A537	A469
U1536	C1470	A1405	G1343	U1277	G1217	A1145	A1058		C909	A841	U762	U	C619	A538	G470
C1537	U1471	G1406	A1344	C1278	G1218	C1146	A1059	A989	U910	U842	U763	A	U620	U539	A473
U1538	U1472	A1407	U1345	U1279	A1214	U1147	A1060	A997	A911	A843	U764	A	A621	G541	G474
G1539	G1473	U1408	C1346	U1280	G1215	G1148	U1061	C994	A912	G844	A765	A	G622	G542	G475
U1540	U1474	U1408	U1347	G1281	A1216	C1149	G1062	U995	U913	G845	G766	A		G543	U476
A1541	G1475		U1348	U1282	G1217	G1150	A1063	U996	G914	G846		U		A543	G477
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A1545	G1478	C1418	A1351	U1286	C1220	U1153	U1069	U1000	A922	G850	A772	G	C631	A548	A480
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A1549	U1486	U1423	G1356	U1291	U1225	U1157	G1072	A1003		G857		C		A553	U484
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U1560	U1498	C1434	C1367	G1302	G1236	C1169	A1097	A1017	U943	A872	U797	U	A652	A573	G496
U1561	A1499	G1435	A1368	A1303	G1237	G1170	A1097	C1017	A944	G873	A797	U	U653	A574	C497
G1562	C1500	C1436	A1369		G1237	G1171	A1098	G1018		U874	G798	U	A654	C498	
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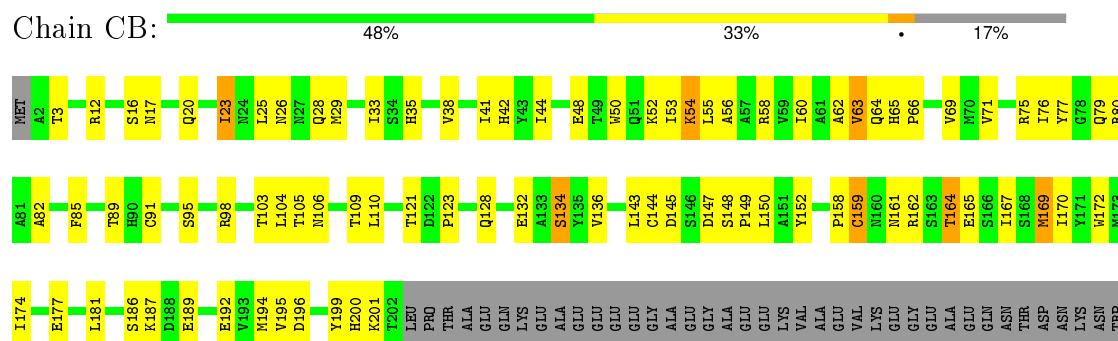
• Molecule 12: 40S RIBOSOMAL PROTEIN SA



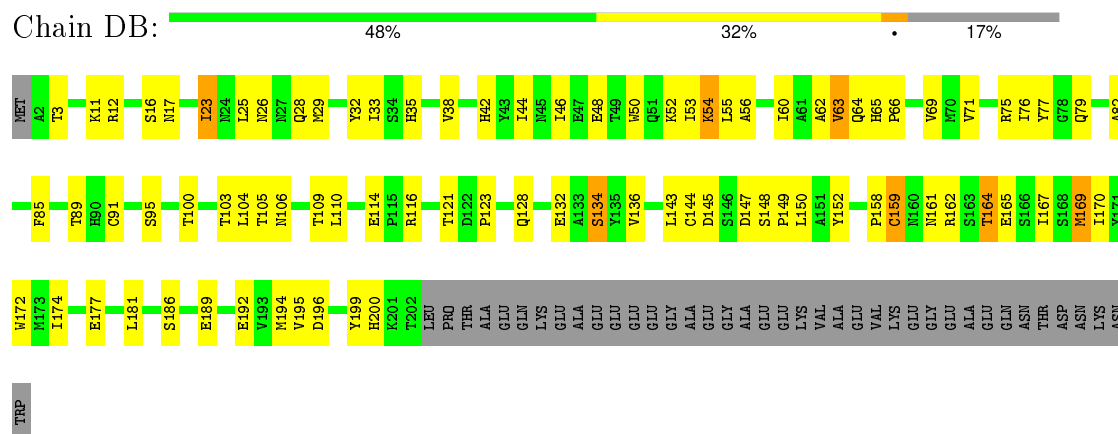
• Molecule 12: 40S RIBOSOMAL PROTEIN SA



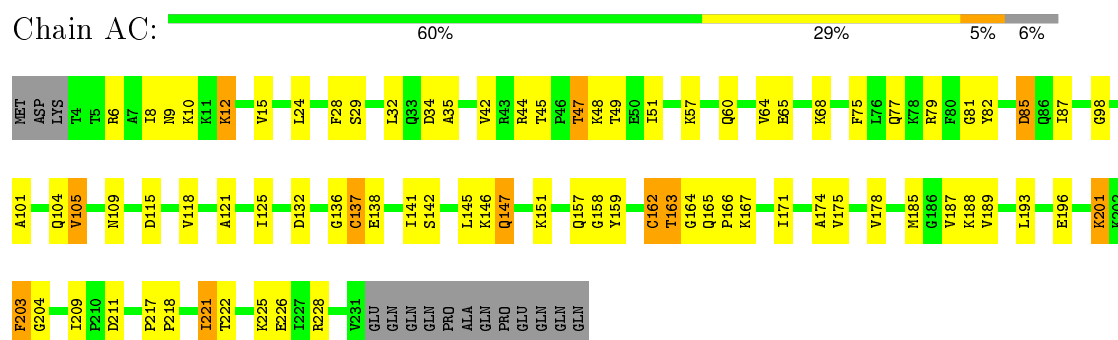
• Molecule 12: 40S RIBOSOMAL PROTEIN SA



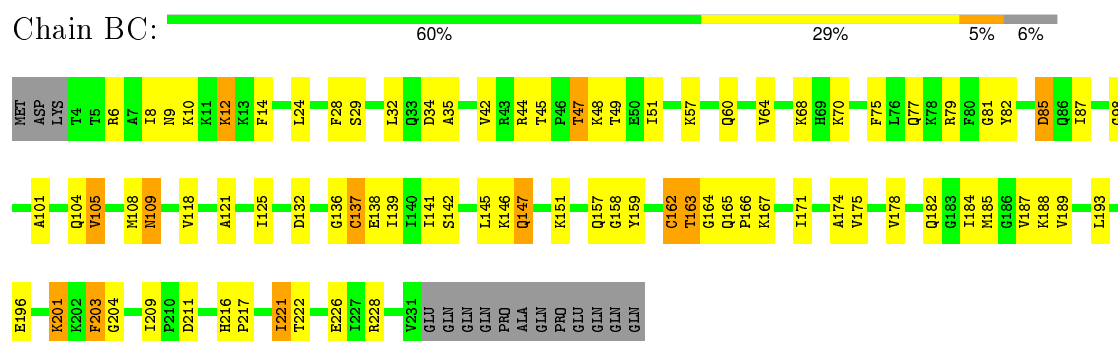
• Molecule 12: 40S RIBOSOMAL PROTEIN SA



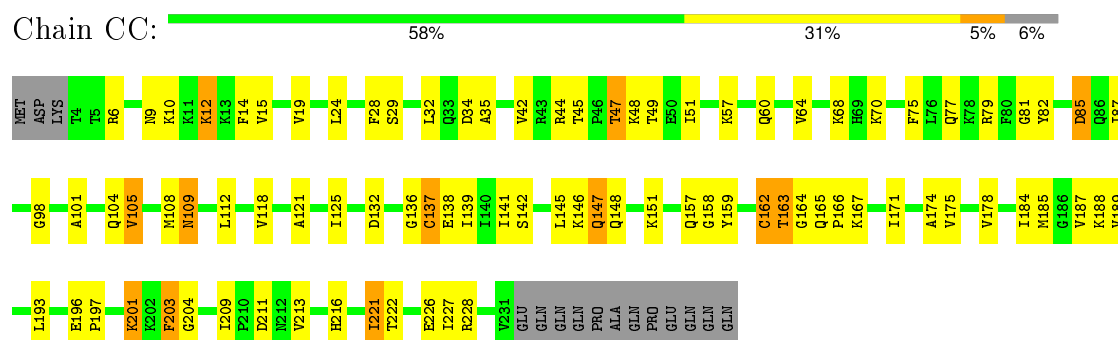
• Molecule 13: 40S RIBOSOMAL PROTEIN RPS3E



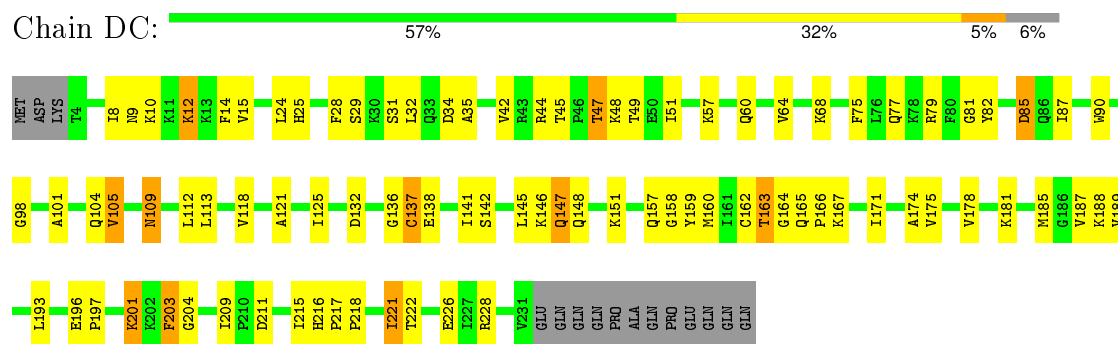
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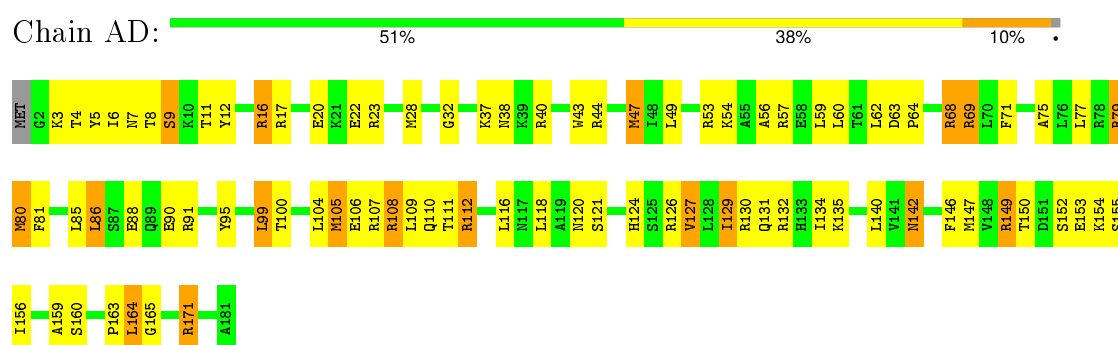
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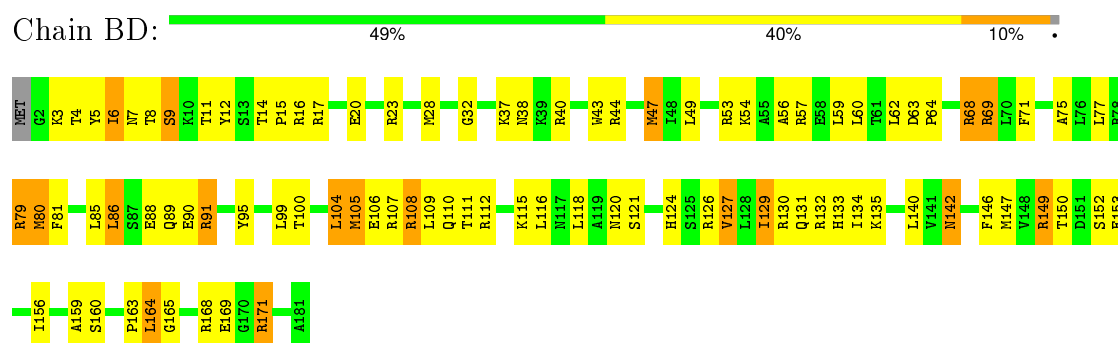
- Molecule 13: 40S RIBOSOMAL PROTEIN RPS3E



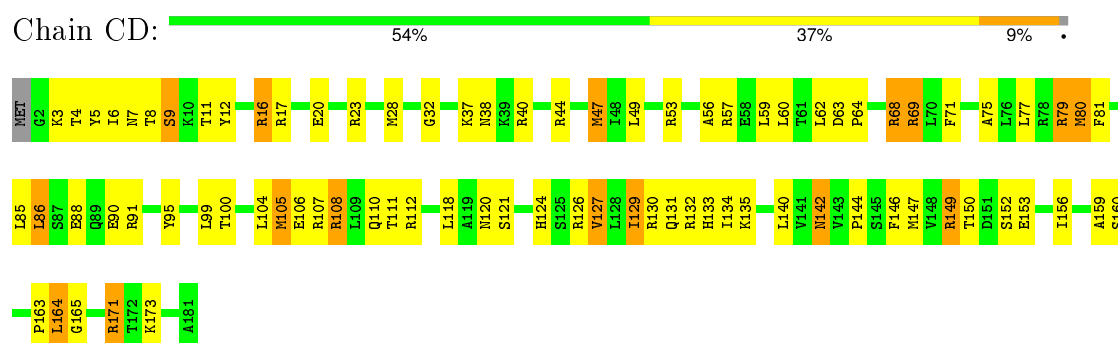
- Molecule 14: 40S RIBOSOMAL PROTEIN RPS9E



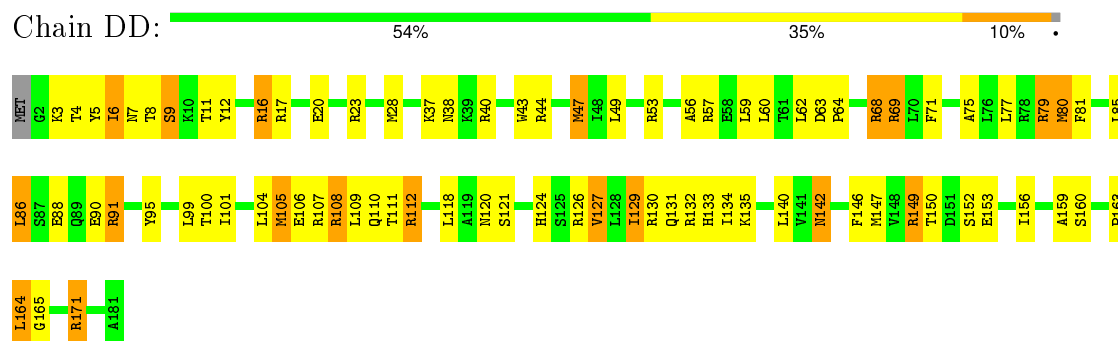
- Molecule 14: 40S RIBOSOMAL PROTEIN RPS9E



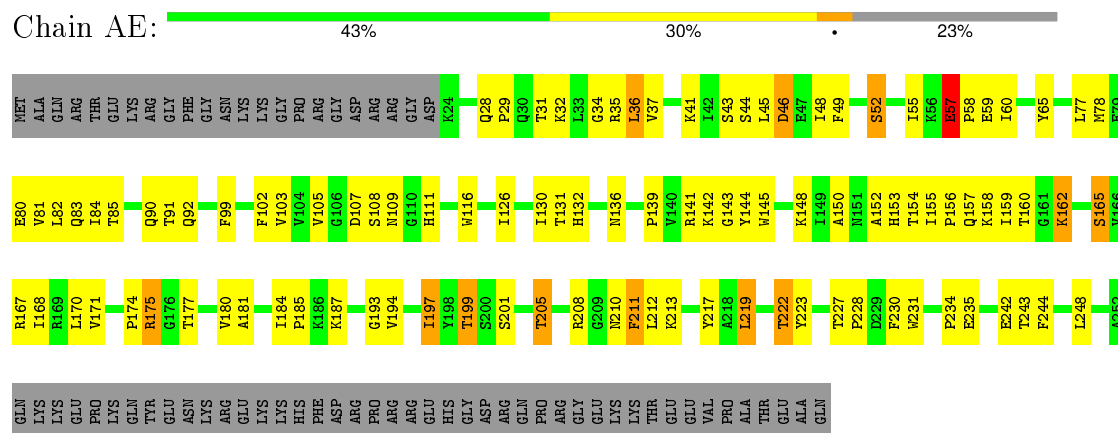
- Molecule 14: 40S RIBOSOMAL PROTEIN RPS9E



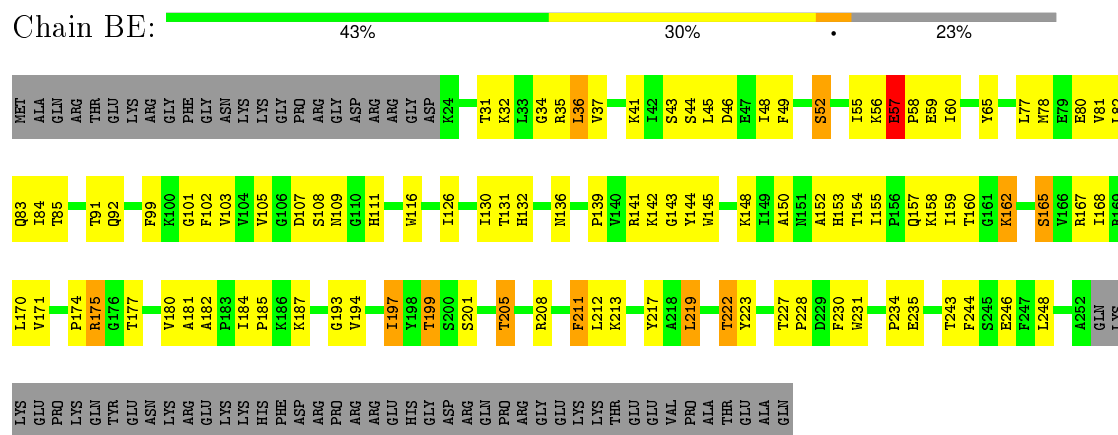
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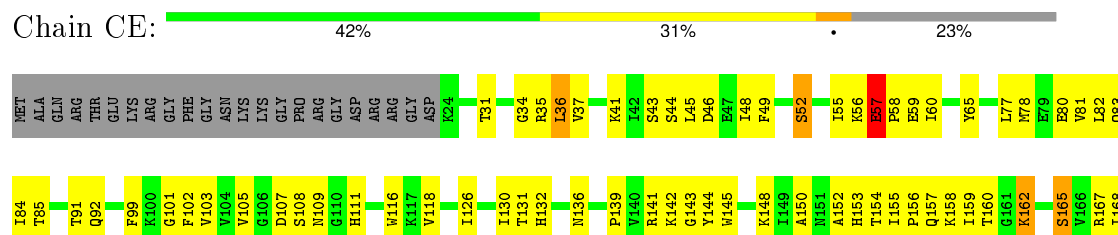
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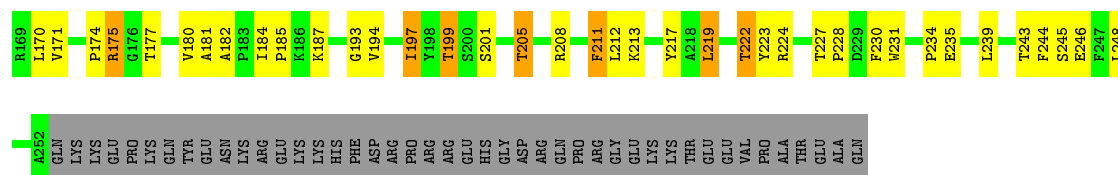


• Molecule 15: 40S RIBOSOMAL PROTEIN RPS2E



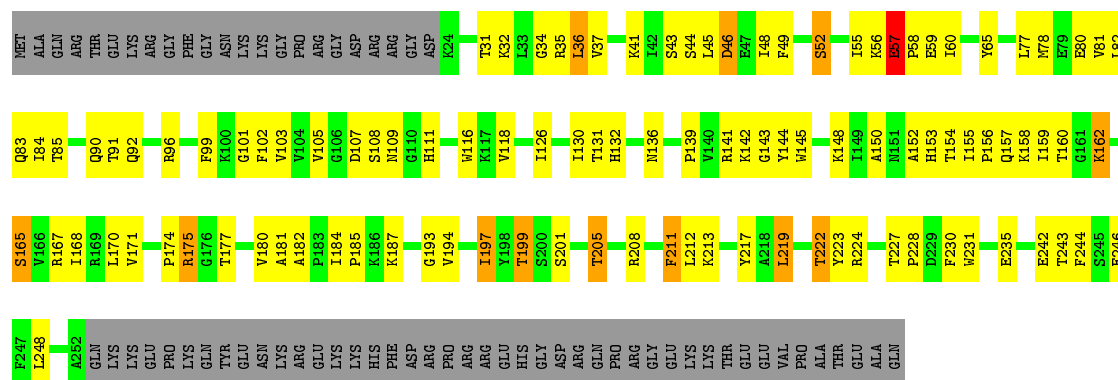
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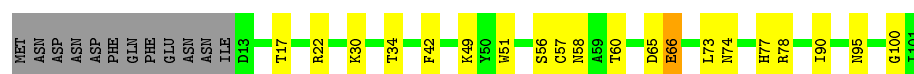
• Molecule 15: 40S RIBOSOMAL PROTEIN RPS2E

Chain DE: 42% 31% 23%



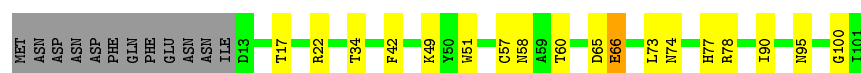
• Molecule 16: EIF1

Chain AF: 68% 19% 12%



• Molecule 16: EIF1

Chain BF: 70% 17% 12%



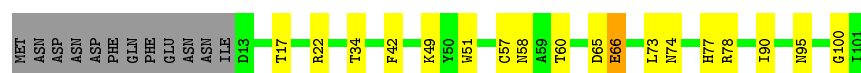
• Molecule 16: EIF1

Chain CF: 67% 20% 12%

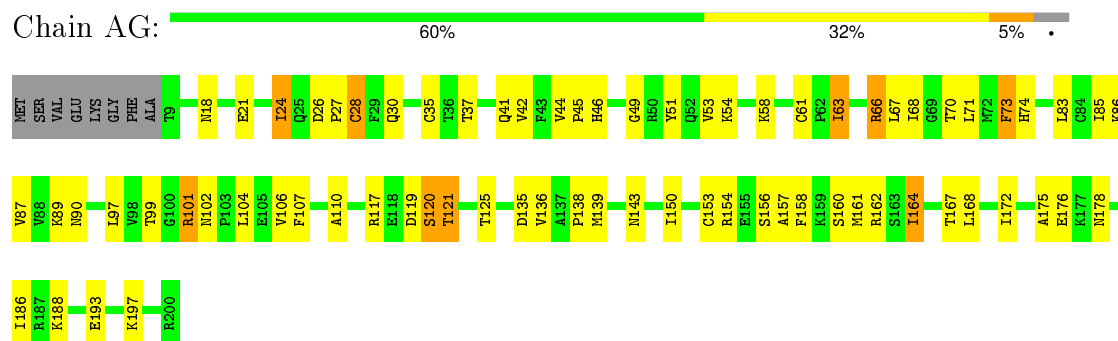


• Molecule 16: EIF1

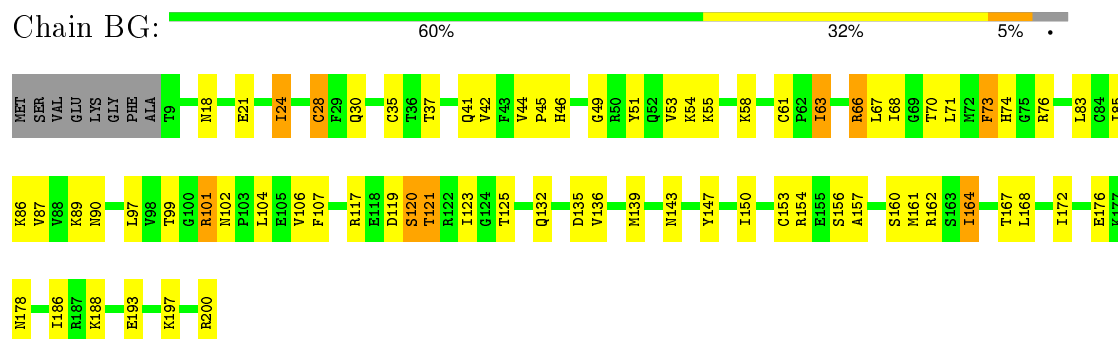
Chain DF: 70% 17% 12%



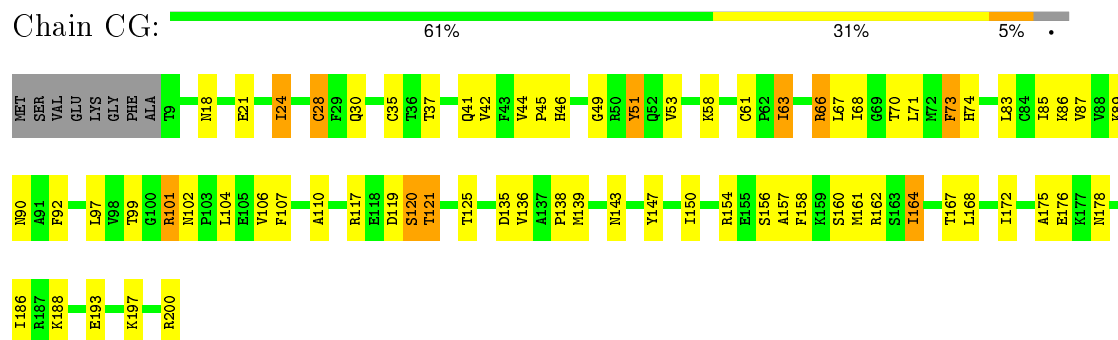
• Molecule 17: 40S RIBOSOMAL PROTEIN RPS5E



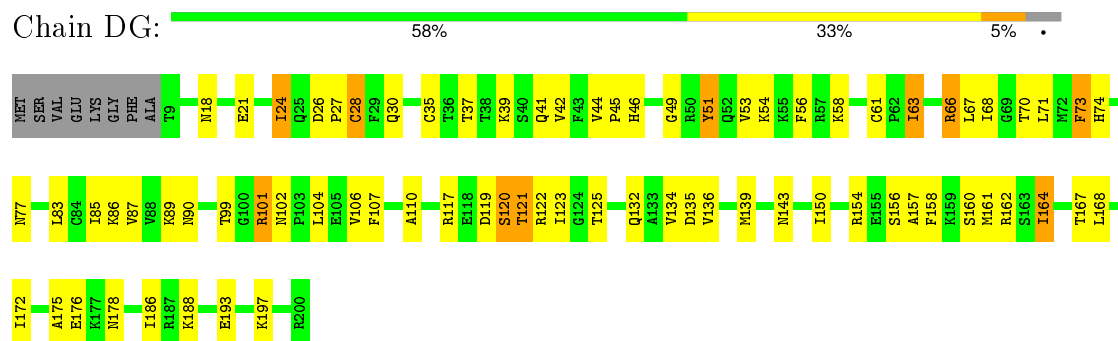
• Molecule 17: 40S RIBOSOMAL PROTEIN RPS5E



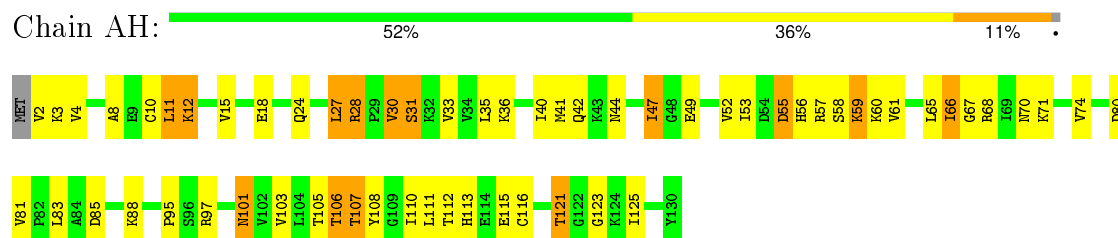
• Molecule 17: 40S RIBOSOMAL PROTEIN RPS5E



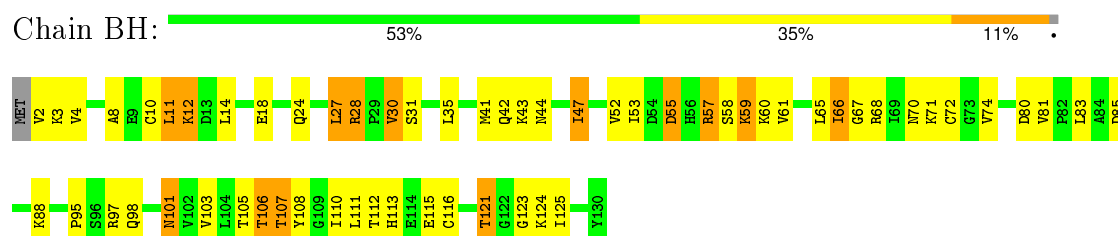
• Molecule 17: 40S RIBOSOMAL PROTEIN RPS5E



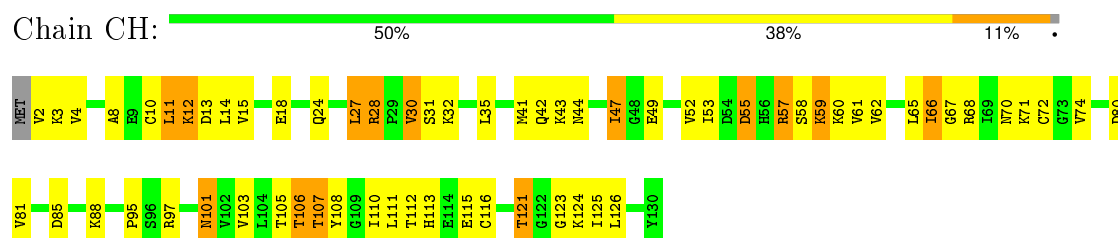
• Molecule 18: 40S RIBOSOMAL PROTEIN RPS22E



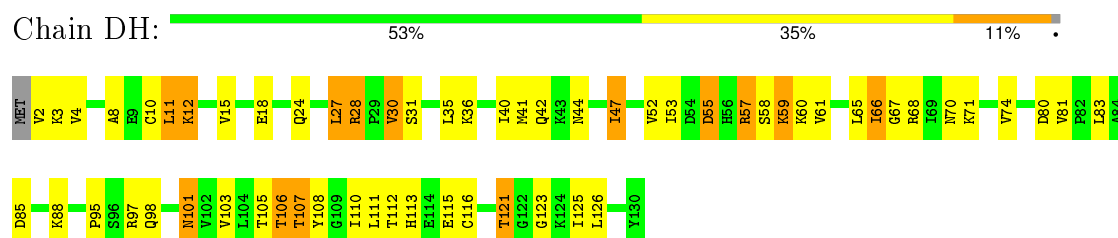
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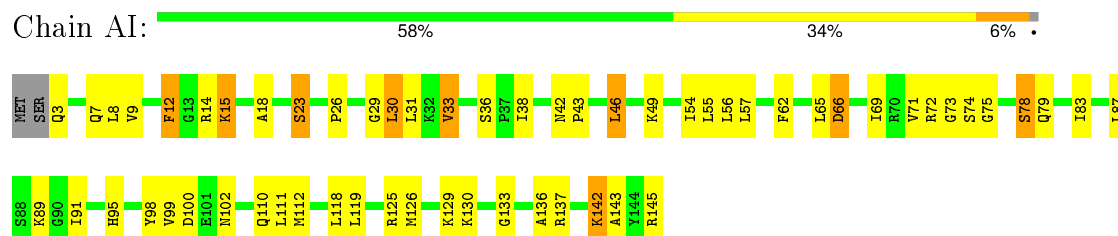
• Molecule 18: 40S RIBOSOMAL PROTEIN RPS22E



• Molecule 18: 40S RIBOSOMAL PROTEIN RPS22E

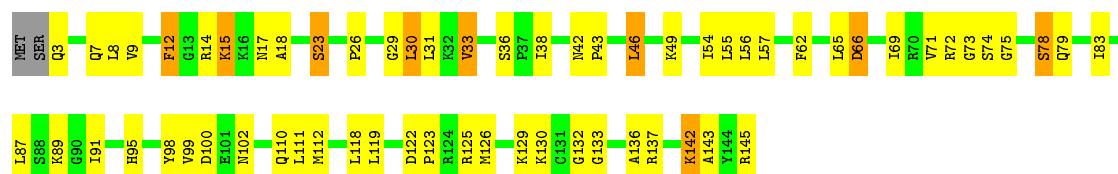


• Molecule 19: 40S RIBOSOMAL PROTEIN RPS16E



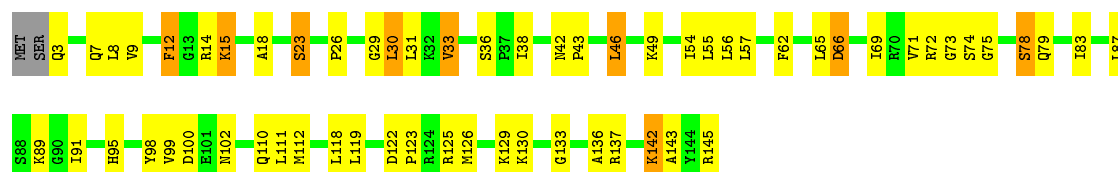
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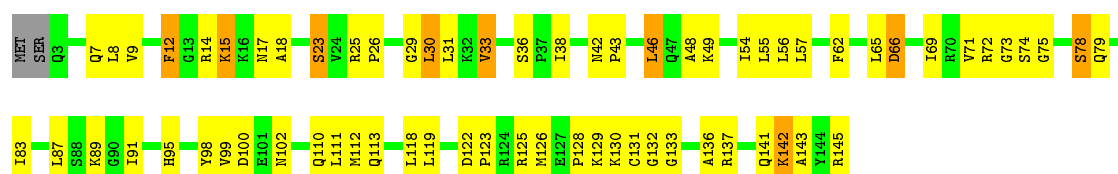
• Molecule 19: 40S RIBOSOMAL PROTEIN RPS16E

Chain CI: 57% 36% 6% .



• Molecule 19: 40S RIBOSOMAL PROTEIN RPS16E

Chain DI: 52% 41% 6% .



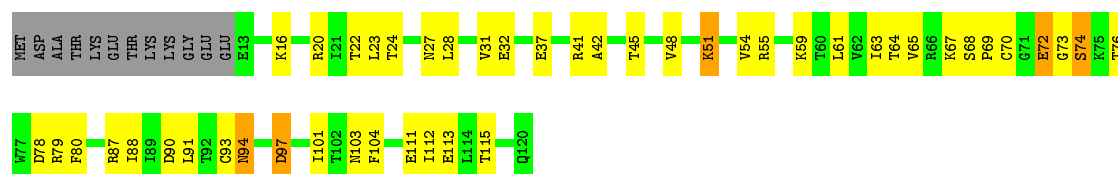
• Molecule 20: 40S RIBOSOMAL PROTEIN RPS20E

Chain AJ: 54% 32% 10% .



• Molecule 20: 40S RIBOSOMAL PROTEIN RPS20E

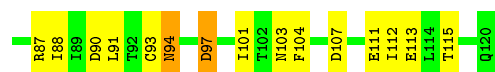
Chain BJ: 51% 35% 10% .



• Molecule 20: 40S RIBOSOMAL PROTEIN RPS20E

Chain CJ: 53% 33% 5% 10% .





• Molecule 20: 40S RIBOSOMAL PROTEIN RPS20E

Chain DJ: 53% 34% 10%



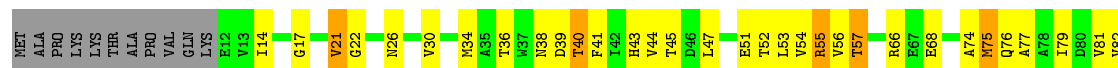
• Molecule 21: 40S RIBOSOMAL PROTEIN RPS14E

Chain AK: 51% 33% 9% 7%



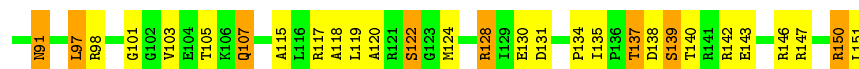
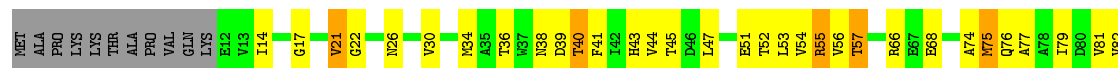
• Molecule 21: 40S RIBOSOMAL PROTEIN RPS14E

Chain BK: 54% 30% 9% 7%



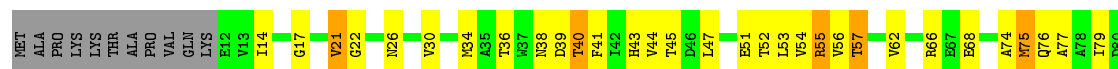
• Molecule 21: 40S RIBOSOMAL PROTEIN RPS14E

Chain CK: 52% 32% 9% 7%

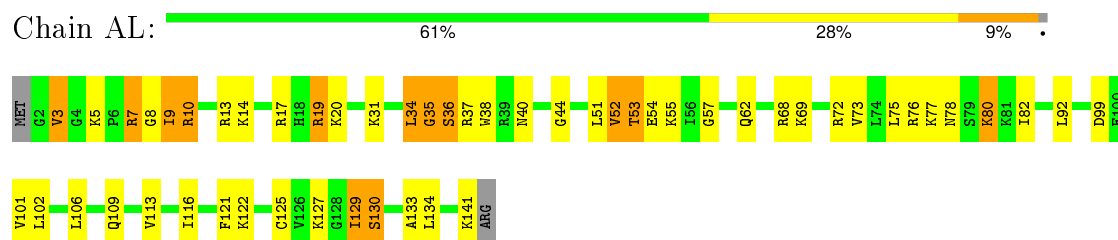


• Molecule 21: 40S RIBOSOMAL PROTEIN RPS14E

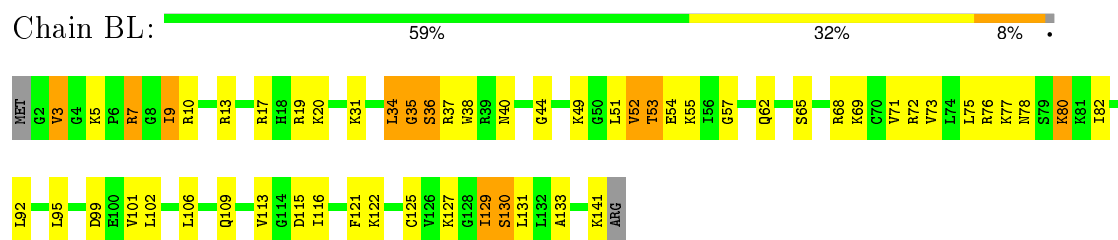
Chain DK: 50% 34% 9% 7%



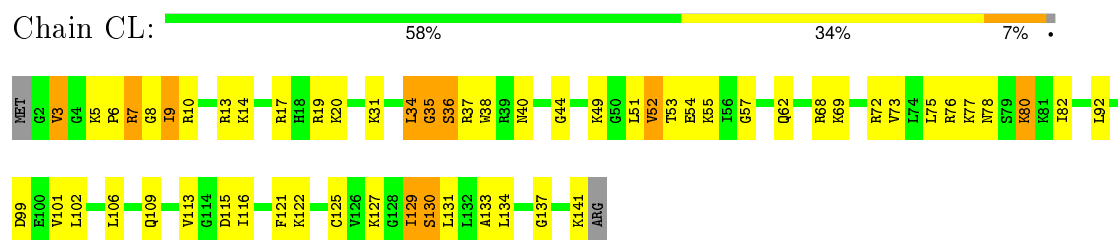
- Molecule 22: 40S RIBOSOMAL PROTEIN S12



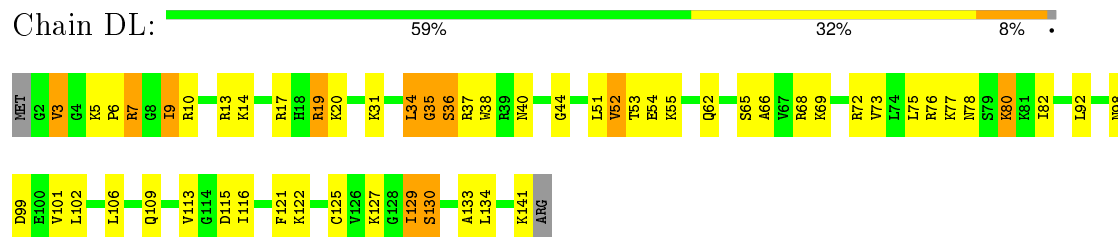
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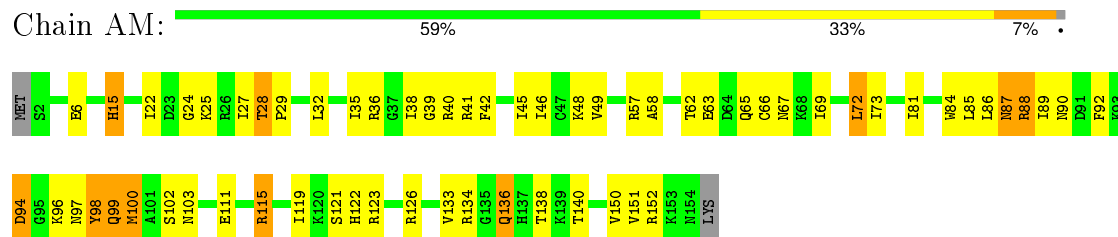
- Molecule 22: 40S RIBOSOMAL PROTEIN S12



- Molecule 22: 40S RIBOSOMAL PROTEIN S12

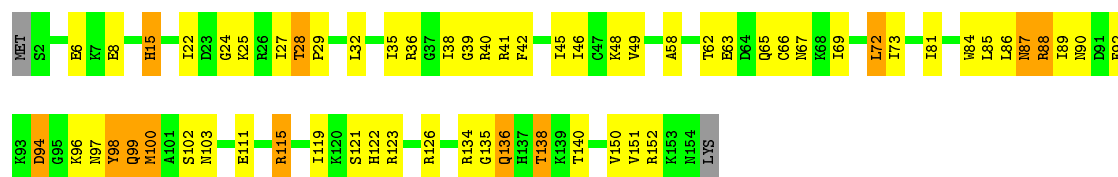


- Molecule 23: 40S RIBOSOMAL PROTEIN RPS18E



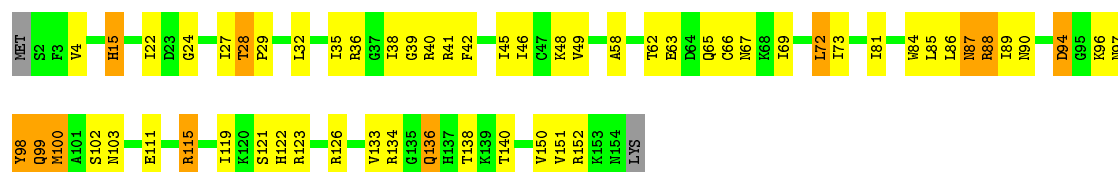
- Molecule 23: 40S RIBOSOMAL PROTEIN RPS18E





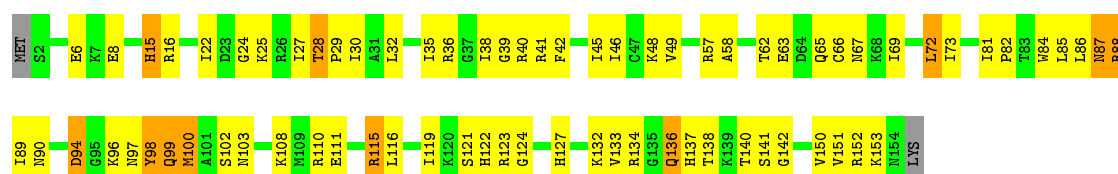
• Molecule 23: 40S RIBOSOMAL PROTEIN RPS18E

Chain CM: 61% 31% 7% .



• Molecule 23: 40S RIBOSOMAL PROTEIN RPS18E

Chain DM: 51% 41% 7% .



• Molecule 24: 40S RIBOSOMAL PROTEIN RPS29E

Chain AN: 58% 33% 7% .



• Molecule 24: 40S RIBOSOMAL PROTEIN RPS29E

Chain BN: 62% 29% 7% .



• Molecule 24: 40S RIBOSOMAL PROTEIN RPS29E

Chain CN: 58% 33% 7% .

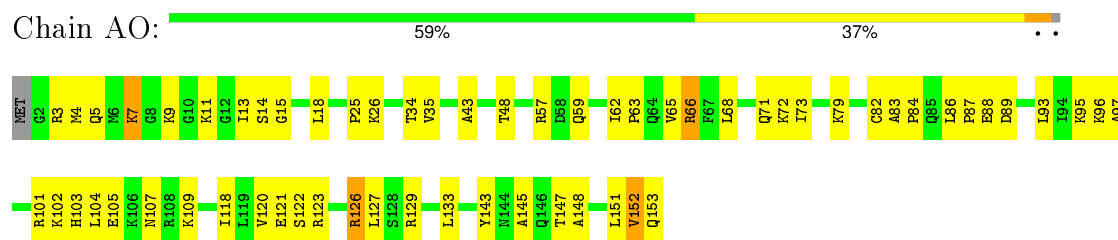


• Molecule 24: 40S RIBOSOMAL PROTEIN RPS29E

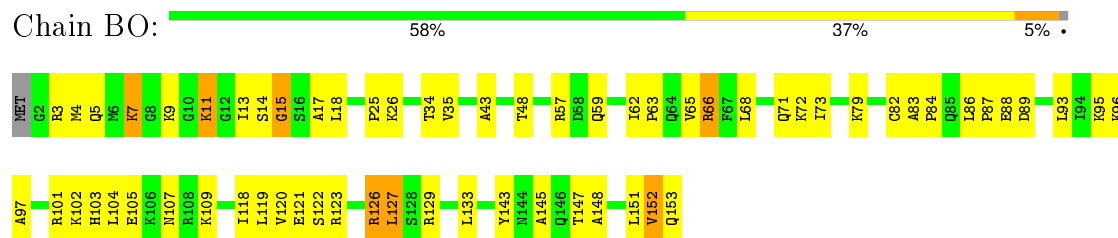
Chain DN: 58% 33% 7% .



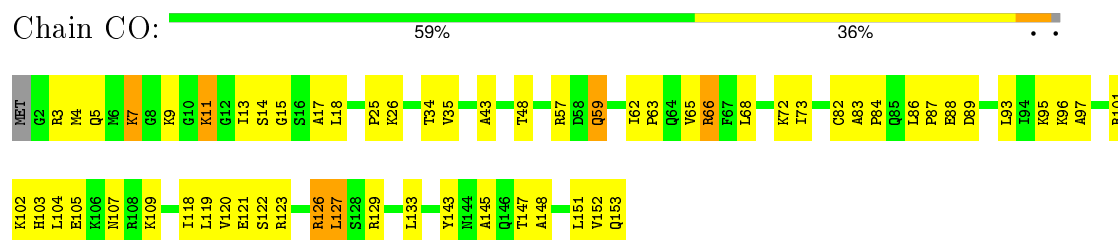
- Molecule 25: 40S RIBOSOMAL PROTEIN RPS13E



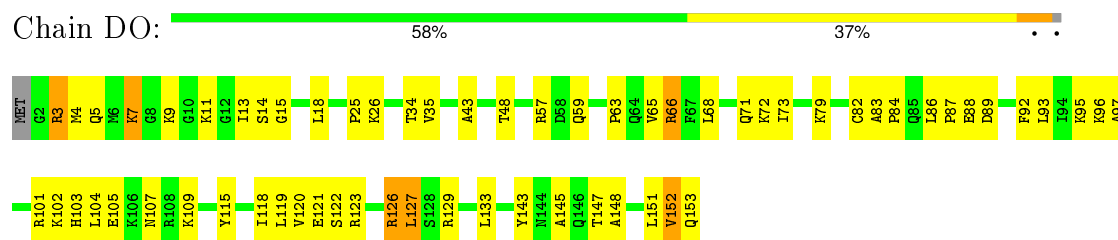
- Molecule 25: 40S RIBOSOMAL PROTEIN RPS13E



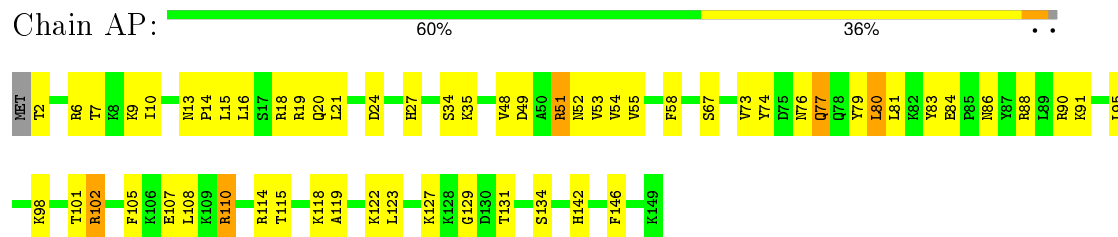
- Molecule 25: 40S RIBOSOMAL PROTEIN RPS13E



- Molecule 25: 40S RIBOSOMAL PROTEIN RPS13E

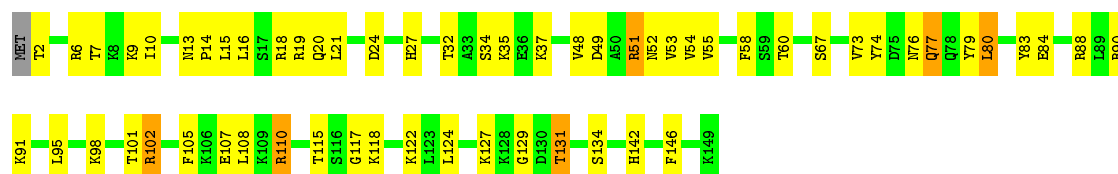


- Molecule 26: 40S RIBOSOMAL PROTEIN S24

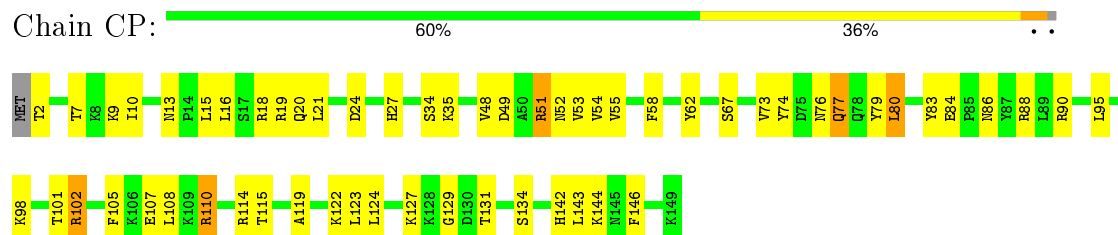


- Molecule 26: 40S RIBOSOMAL PROTEIN S24

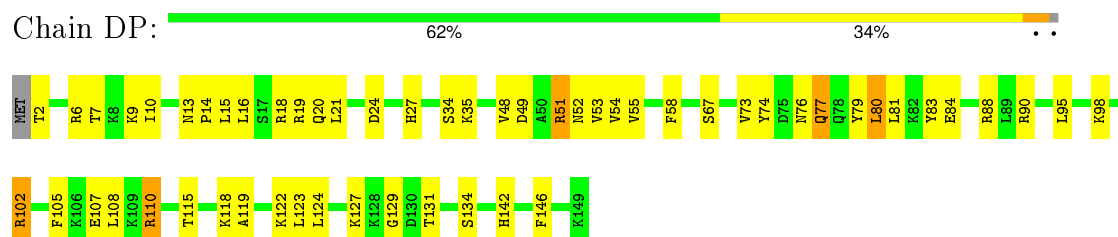




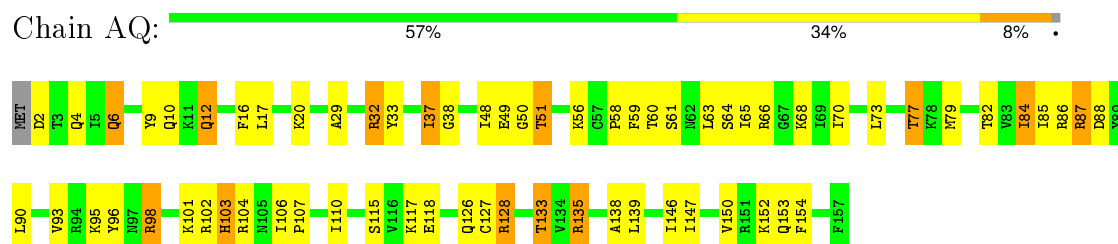
- Molecule 26: 40S RIBOSOMAL PROTEIN S24



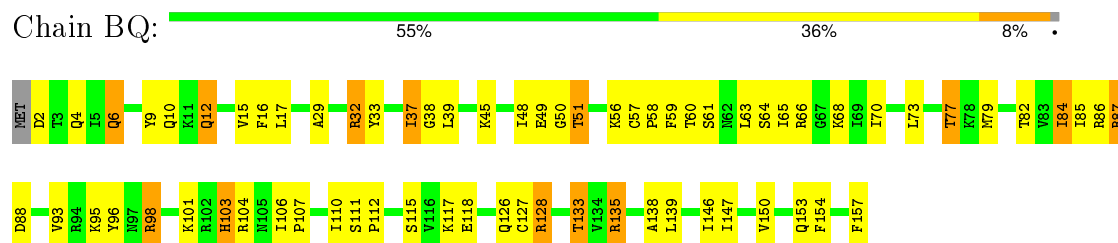
- Molecule 26: 40S RIBOSOMAL PROTEIN S24



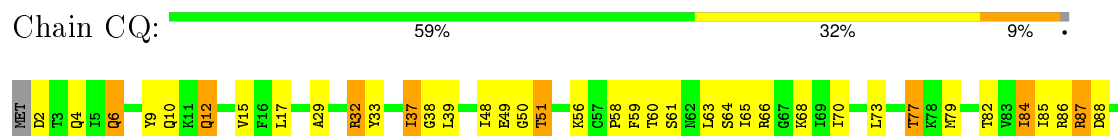
- Molecule 27: 40S RIBOSOMAL PROTEIN RPS11E



- Molecule 27: 40S RIBOSOMAL PROTEIN RPS11E

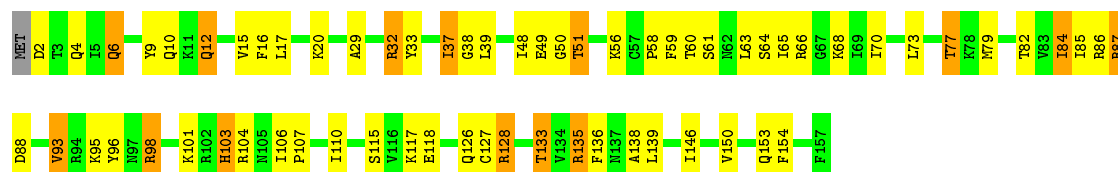


- Molecule 27: 40S RIBOSOMAL PROTEIN RPS11E

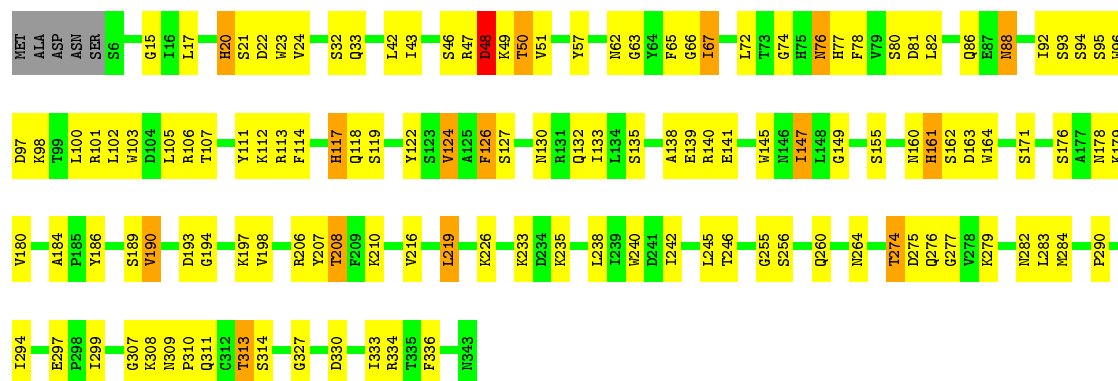




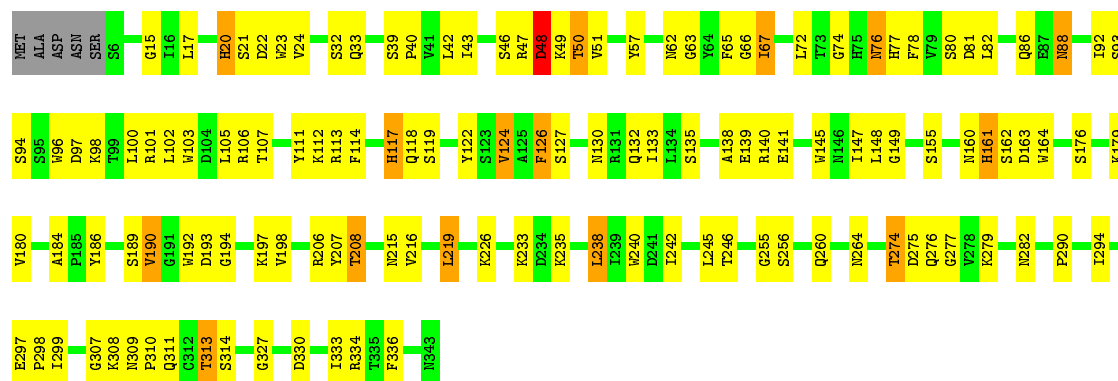
• Molecule 27: 40S RIBOSOMAL PROTEIN RPS11E



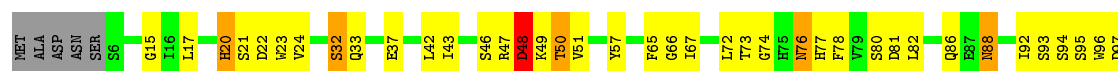
• Molecule 28: 40S RIBOSOMAL PROTEIN RACK1

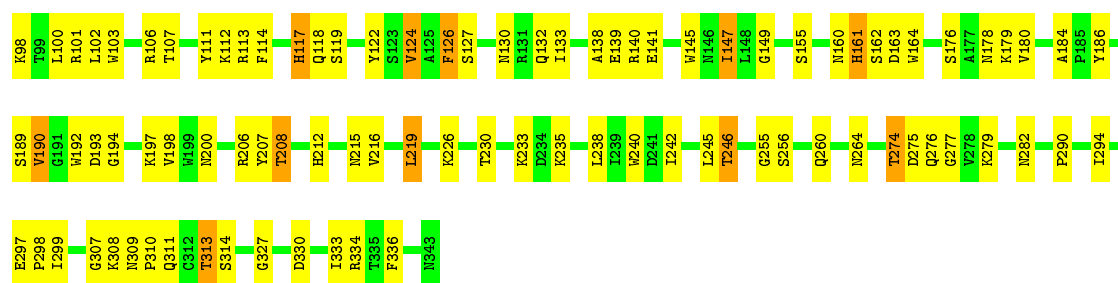


• Molecule 28: 40S RIBOSOMAL PROTEIN RACK1



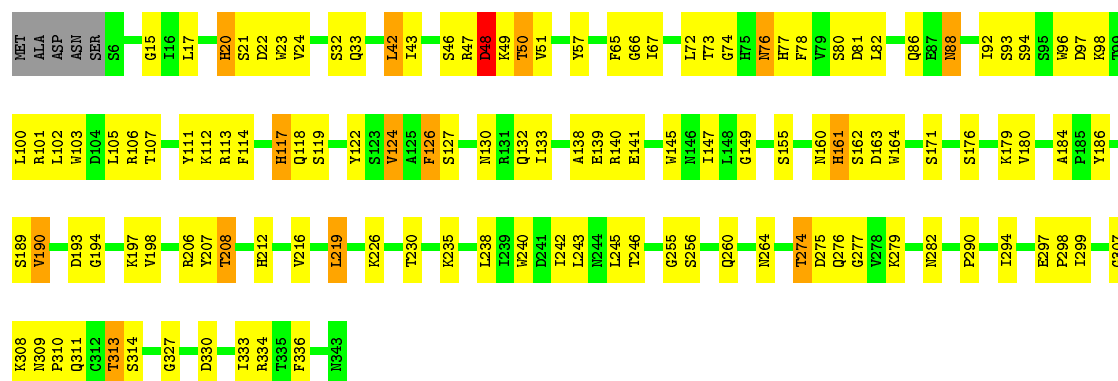
• Molecule 28: 40S RIBOSOMAL PROTEIN RACK1





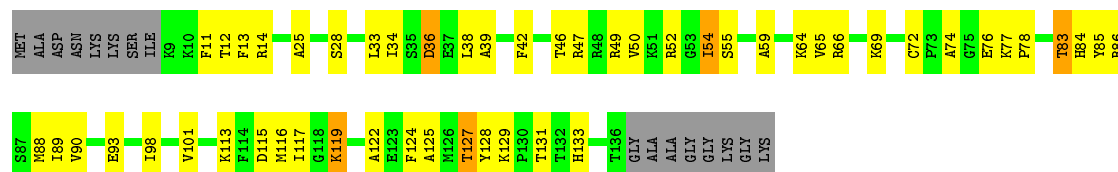
• Molecule 28: 40S RIBOSOMAL PROTEIN RACK1

Chain DR: 62% 32%



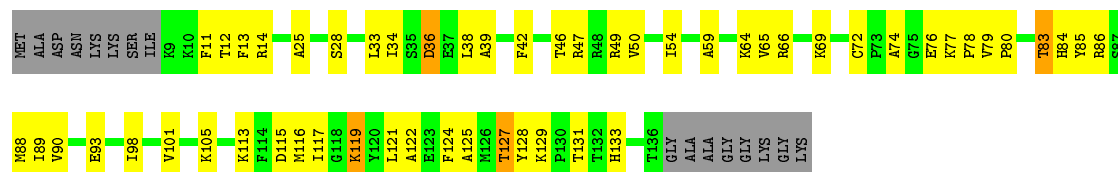
• Molecule 29: 40S RIBOSOMAL PROTEIN RPS15E

Chain AS: 53% 33% 11%



• Molecule 29: 40S RIBOSOMAL PROTEIN RPS15E

Chain BS: 51% 35% 11%



• Molecule 29: 40S RIBOSOMAL PROTEIN RPS15E

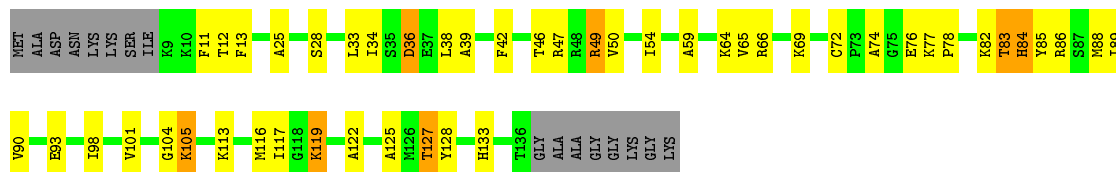
Chain CS: 51% 35% 11%





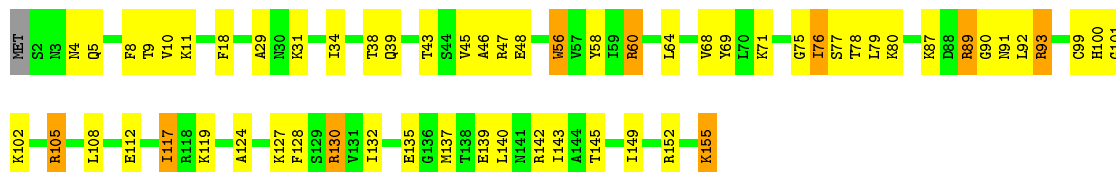
• Molecule 29: 40S RIBOSOMAL PROTEIN RPS15E

Chain DS: 56% 28% 5% 11%



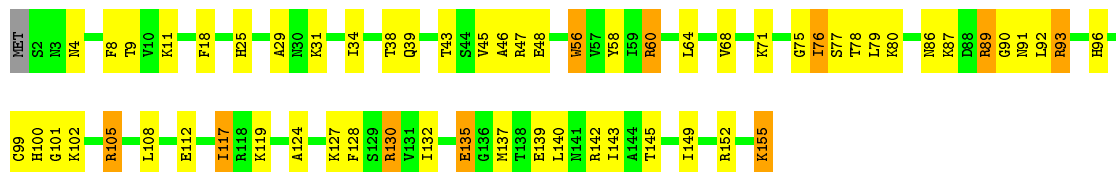
• Molecule 30: 40S RIBOSOMAL PROTEIN RPS19E

Chain AT: 61% 33% 6%



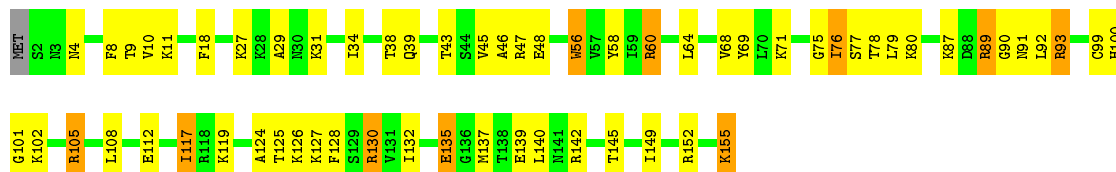
• Molecule 30: 40S RIBOSOMAL PROTEIN RPS19E

Chain BT: 61% 32% 6%



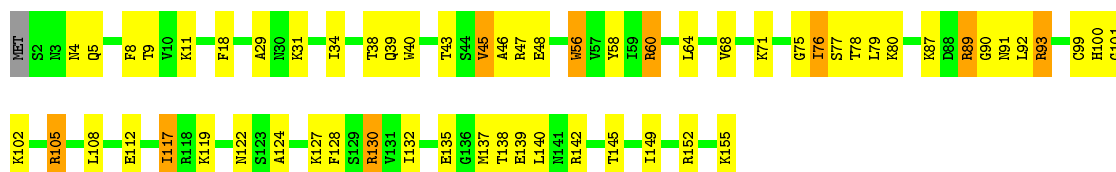
• Molecule 30: 40S RIBOSOMAL PROTEIN RPS19E

Chain CT: 60% 33% 6%

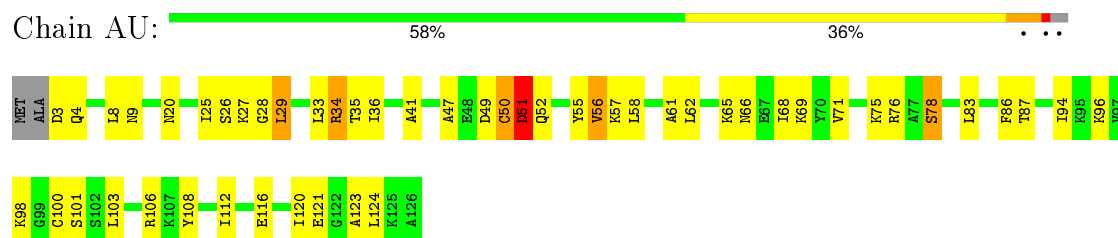


• Molecule 30: 40S RIBOSOMAL PROTEIN RPS19E

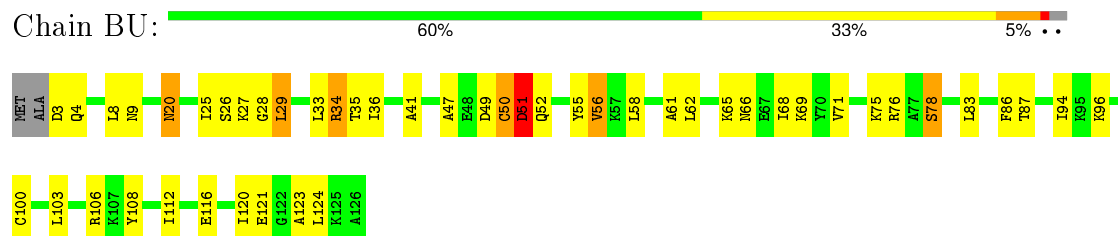
Chain DT: 61% 33% 6%



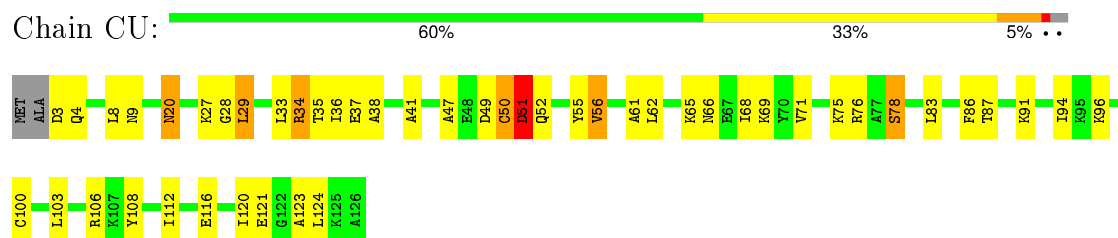
- Molecule 31: 40S RIBOSOMAL PROTEIN RPS12E



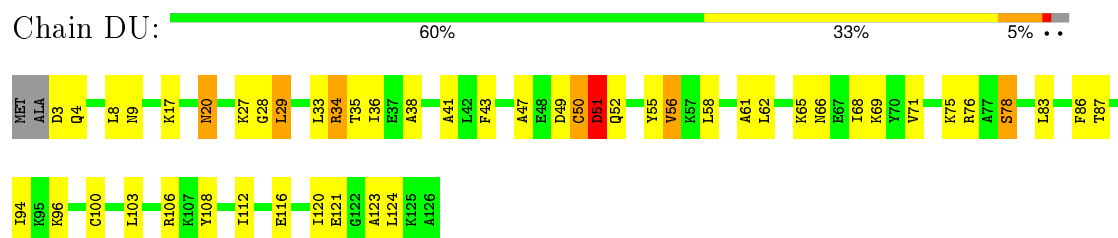
- Molecule 31: 40S RIBOSOMAL PROTEIN RPS12E



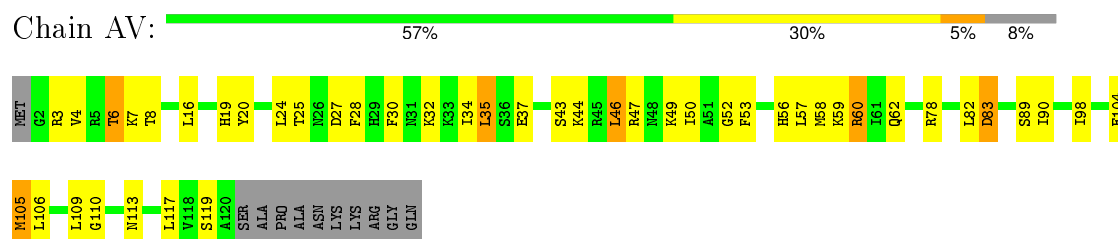
- Molecule 31: 40S RIBOSOMAL PROTEIN RPS12E



- Molecule 31: 40S RIBOSOMAL PROTEIN RPS12E

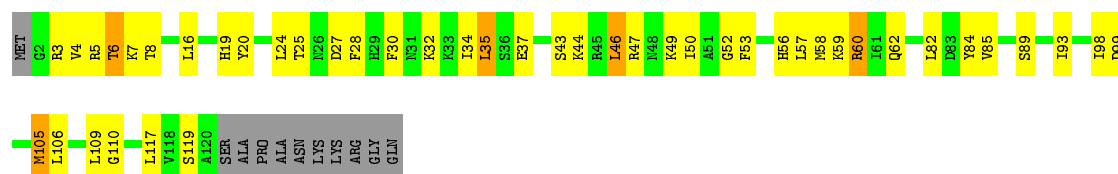


- Molecule 32: 40S RIBOSOMAL PROTEIN RPS17E



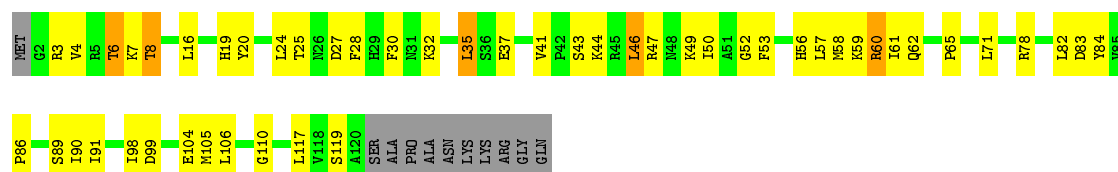
- Molecule 32: 40S RIBOSOMAL PROTEIN RPS17E





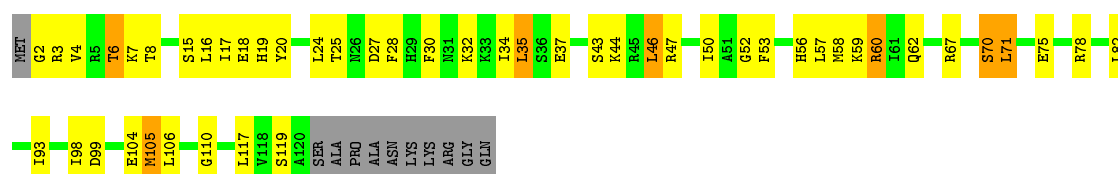
• Molecule 32: 40S RIBOSOMAL PROTEIN RPS17E

Chain CV: 53% 35% 8%



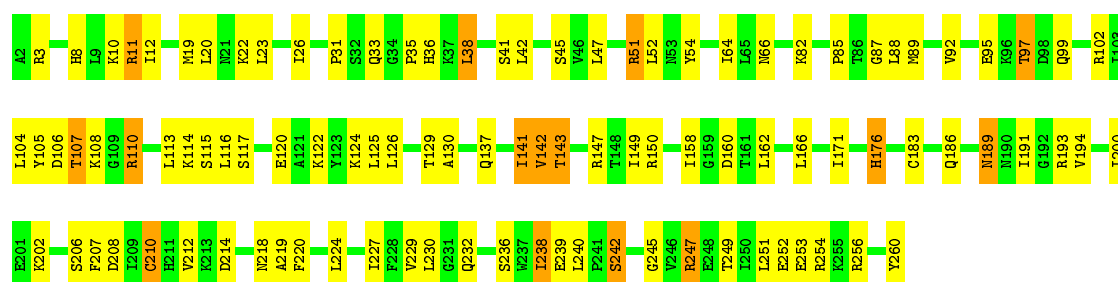
• Molecule 32: 40S RIBOSOMAL PROTEIN RPS17E

Chain DV: 54% 32% 5% 8%



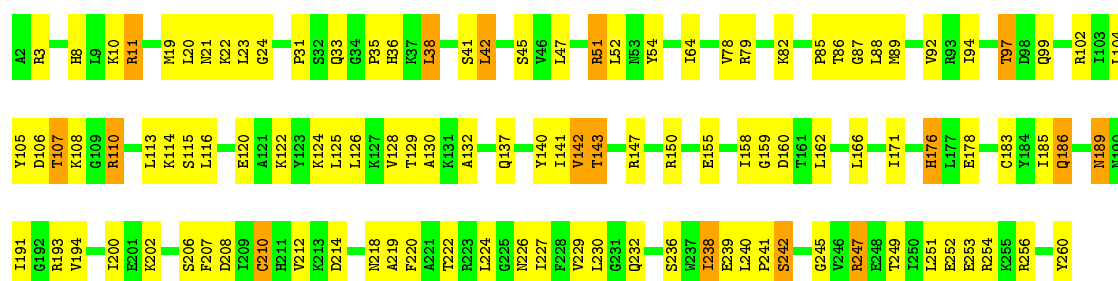
• Molecule 33: 40S RIBOSOMAL PROTEIN RPS4E

Chain AW: 61% 33% 6%

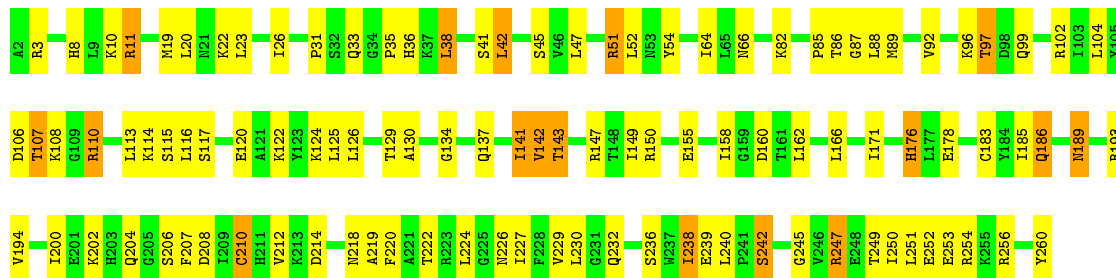


• Molecule 33: 40S RIBOSOMAL PROTEIN RPS4E

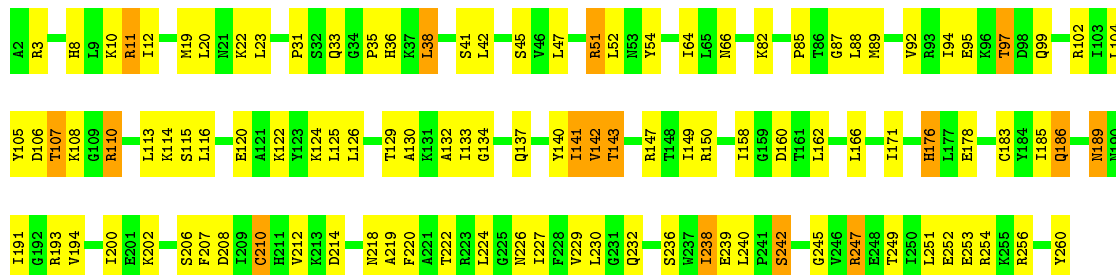
Chain BW: 57% 37% 6%



● Molecule 33: 40S RIBOSOMAL PROTEIN RPS4E

Chain CW: 

● Molecule 33: 40S RIBOSOMAL PROTEIN RPS4E

Chain DW: 

● Molecule 34: 40S RIBOSOMAL PROTEIN RPS30E

Chain AX: 

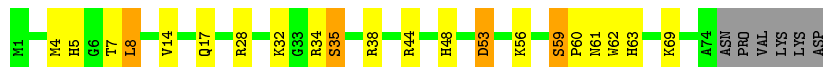
● Molecule 34: 40S RIBOSOMAL PROTEIN RPS30E

Chain BX: 

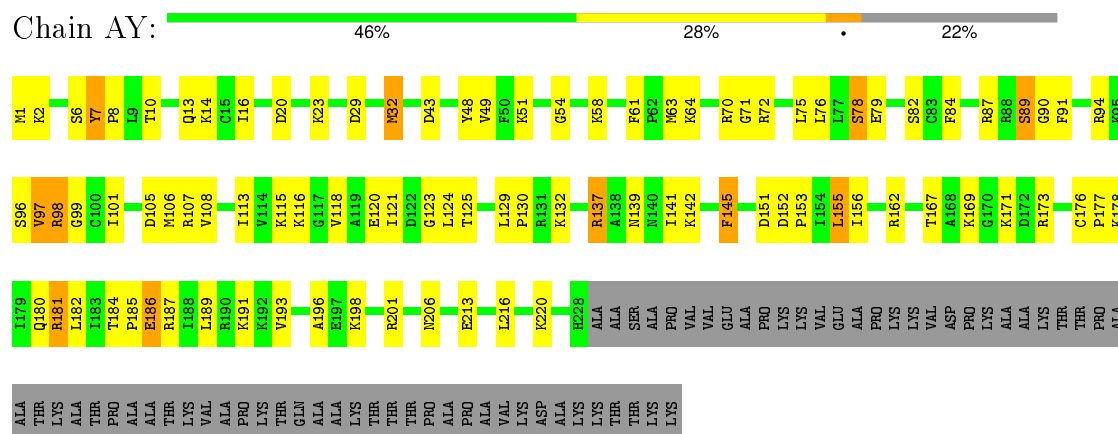
● Molecule 34: 40S RIBOSOMAL PROTEIN RPS30E

Chain CX: 

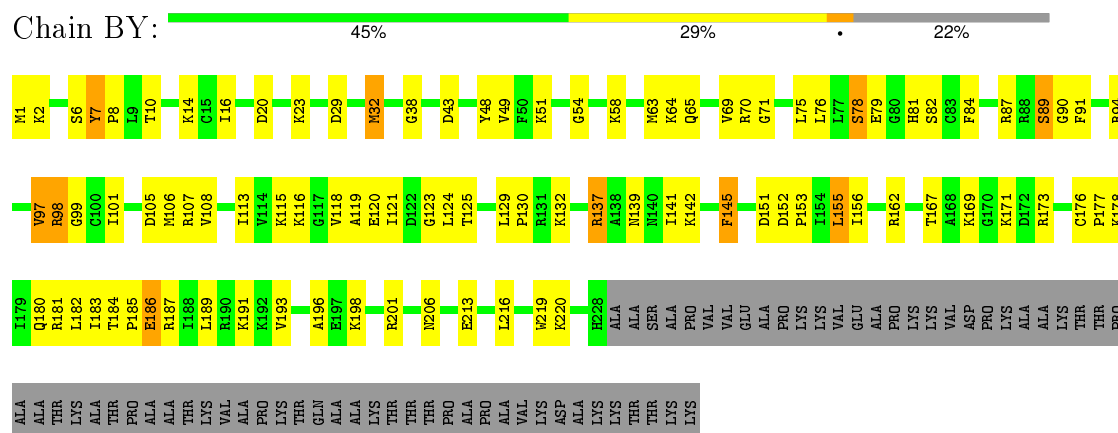
● Molecule 34: 40S RIBOSOMAL PROTEIN RPS30E

Chain DX: 

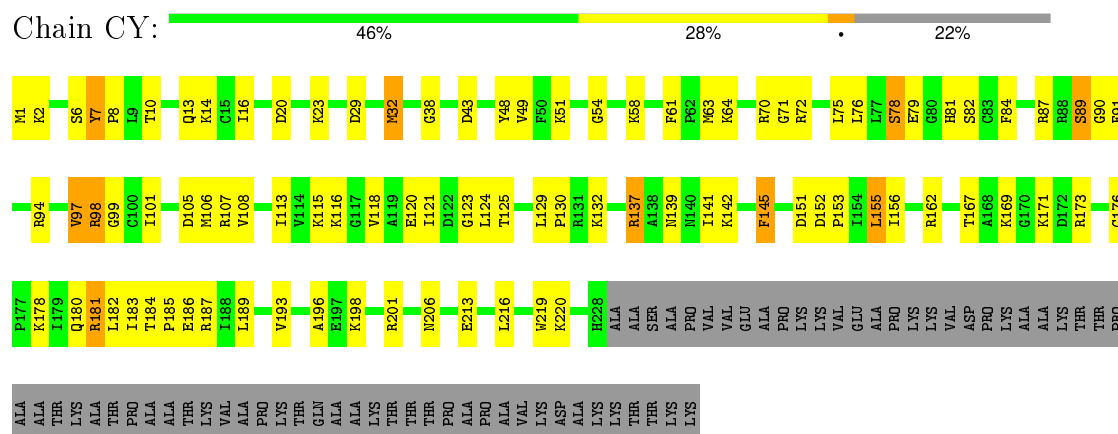
- Molecule 35: 40S RIBOSOMAL PROTEIN S6



- Molecule 35: 40S RIBOSOMAL PROTEIN S6

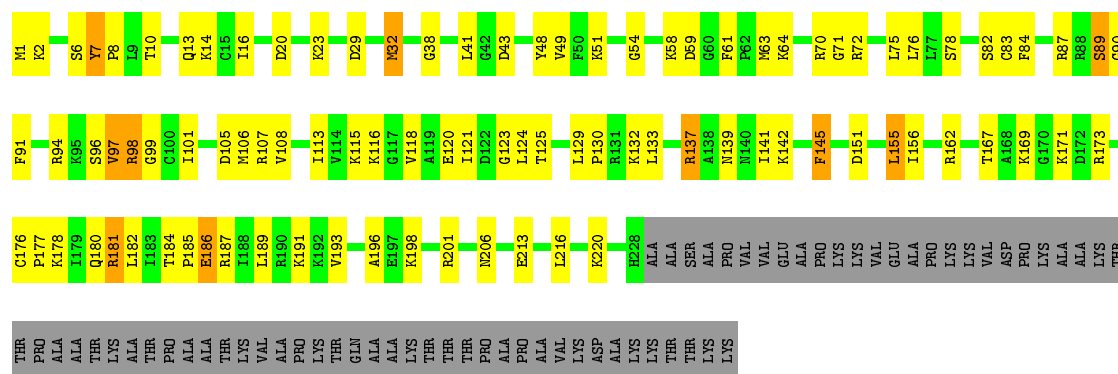


- Molecule 35: 40S RIBOSOMAL PROTEIN S6



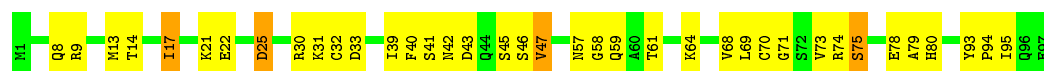
- Molecule 35: 40S RIBOSOMAL PROTEIN S6





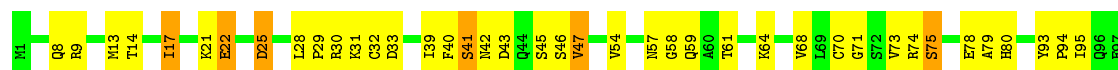
- Molecule 36: 40S RIBOSOMAL PROTEIN RPS21E

Chain AZ: 61% 35% .



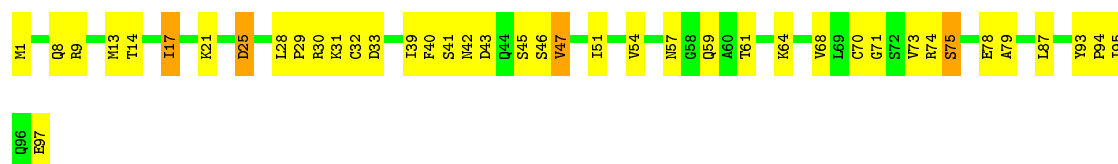
- Molecule 36: 40S RIBOSOMAL PROTEIN RPS21E

Chain BZ: 59% 35% 6% .



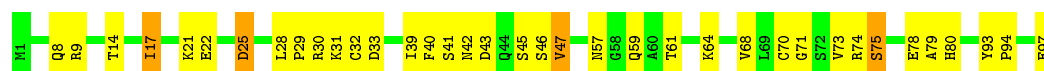
- Molecule 36: 40S RIBOSOMAL PROTEIN RPS21E

Chain CZ: 58% 38% .



- Molecule 36: 40S RIBOSOMAL PROTEIN RPS21E

Chain DZ: 62% 34% .



4 Data and refinement statistics

EDS failed to run properly - this section will therefore be incomplete.

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	209.99Å 471.55Å 298.54Å 90.00° 91.02° 90.00°	Depositor
Resolution (Å)	49.75 – 3.70	Depositor
% Data completeness (in resolution range)	91.0 (49.75-3.70)	Depositor
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.43 (at 3.67Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE)	Depositor
R, R_{free}	0.202 , 0.229	Depositor
Wilson B-factor (Å ²)	97.6	Xtriage
Anisotropy	0.570	Xtriage
Estimated twinning fraction	0.045 for h,-k,-l	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtriage
Outliers	0 of 607573 reflections	Xtriage
Total number of atoms	315512	wwPDB-VP
Average B, all atoms (Å ²)	138.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.57% 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, 0.375 respectively for untwinned datasets, and 0.333, 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: ZN, 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	A0	0.31	0/827	0.56	0/1103
1	B0	0.31	0/827	0.56	0/1103
1	C0	0.31	0/827	0.56	0/1103
1	D0	0.31	0/827	0.57	0/1103
2	A1	0.31	0/510	0.66	0/677
2	B1	0.30	0/510	0.65	0/677
2	C1	0.31	0/510	0.66	0/677
2	D1	0.28	0/510	0.65	0/677
3	A2	0.35	0/1717	0.62	0/2288
3	B2	0.33	0/1717	0.61	0/2288
3	C2	0.34	0/1717	0.61	0/2288
3	D2	0.32	0/1717	0.61	0/2288
4	A3	0.34	0/1656	0.60	0/2223
4	B3	0.34	0/1656	0.61	0/2223
4	C3	0.33	0/1656	0.60	0/2223
4	D3	0.32	0/1656	0.60	0/2223
5	A4	0.49	2/1703 (0.1%)	0.75	4/2284 (0.2%)
5	B4	0.42	0/1801	0.68	0/2417
5	C4	0.34	0/1801	0.67	0/2417
5	D4	0.54	4/1801 (0.2%)	0.70	2/2417 (0.1%)
6	A5	0.42	0/823	0.68	0/1100
6	B5	0.41	0/823	0.68	0/1100
6	C5	0.39	0/823	0.67	0/1100
6	D5	0.35	0/823	0.67	0/1100
7	A6	0.36	0/640	0.56	0/855
7	B6	0.39	0/640	0.56	0/855
7	C6	0.34	0/640	0.54	0/855
7	D6	0.32	0/640	0.55	0/855
8	A7	0.31	0/853	0.55	0/1148
8	B7	0.32	0/853	0.55	0/1148
8	C7	0.32	0/853	0.55	0/1148
8	D7	0.30	0/853	0.56	0/1148

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
9	A8	0.32	0/620	0.61	0/831
9	B8	0.36	0/620	0.62	0/831
9	C8	0.32	0/620	0.61	0/831
9	D8	0.31	0/620	0.62	0/831
10	A9	0.28	0/764	0.56	1/1007 (0.1%)
10	B9	0.29	0/764	0.54	1/1007 (0.1%)
10	C9	0.31	0/764	0.57	1/1007 (0.1%)
10	D9	0.31	0/764	0.67	1/1007 (0.1%)
11	AA	0.51	3/40993 (0.0%)	1.15	225/63880 (0.4%)
11	BA	0.51	1/40993 (0.0%)	1.14	222/63880 (0.3%)
11	CA	0.47	1/40993 (0.0%)	1.13	221/63880 (0.3%)
11	DA	0.44	1/40993 (0.0%)	1.12	219/63880 (0.3%)
12	AB	0.32	0/1652	0.59	0/2240
12	BB	0.31	0/1652	0.59	0/2240
12	CB	0.31	0/1652	0.59	0/2240
12	DB	0.29	0/1652	0.58	0/2240
13	AC	0.33	0/1846	0.59	1/2479 (0.0%)
13	BC	0.34	0/1846	0.59	1/2479 (0.0%)
13	CC	0.34	0/1846	0.59	1/2479 (0.0%)
13	DC	0.31	0/1846	0.58	1/2479 (0.0%)
14	AD	0.33	0/1501	0.65	0/2003
14	BD	0.33	0/1501	0.64	0/2003
14	CD	0.33	0/1501	0.64	0/2003
14	DD	0.33	0/1501	0.65	0/2003
15	AE	0.38	0/1864	0.63	0/2521
15	BE	0.37	0/1864	0.63	0/2521
15	CE	0.35	0/1864	0.62	0/2521
15	DE	0.35	0/1864	0.62	0/2521
16	AF	0.31	0/751	0.60	0/1010
16	BF	0.32	0/751	0.59	0/1010
16	CF	0.29	0/751	0.59	0/1010
16	DF	0.30	0/751	0.60	0/1010
17	AG	0.34	0/1546	0.63	1/2079 (0.0%)
17	BG	0.34	0/1546	0.63	1/2079 (0.0%)
17	CG	0.34	0/1546	0.63	1/2079 (0.0%)
17	DG	0.31	0/1546	0.62	1/2079 (0.0%)
18	AH	0.42	0/1058	0.74	1/1421 (0.1%)
18	BH	0.42	0/1058	0.75	1/1421 (0.1%)
18	CH	0.39	0/1058	0.74	1/1421 (0.1%)
18	DH	0.36	0/1058	0.73	1/1421 (0.1%)
19	AI	0.34	0/1151	0.62	0/1540
19	BI	0.34	0/1151	0.61	0/1540
19	CI	0.34	0/1151	0.62	0/1540

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
19	DI	0.31	0/1151	0.61	0/1540
20	AJ	0.38	1/868 (0.1%)	0.63	0/1168
20	BJ	0.39	1/868 (0.1%)	0.64	1/1168 (0.1%)
20	CJ	0.37	1/868 (0.1%)	0.63	0/1168
20	DJ	0.37	1/868 (0.1%)	0.63	0/1168
21	AK	0.38	0/1078	0.72	0/1452
21	BK	0.36	0/1078	0.71	0/1452
21	CK	0.34	0/1078	0.70	0/1452
21	DK	0.33	0/1078	0.70	0/1452
22	AL	0.36	0/1103	0.65	0/1471
22	BL	0.36	0/1103	0.66	0/1471
22	CL	0.35	0/1103	0.64	0/1471
22	DL	0.34	0/1103	0.64	0/1471
23	AM	0.29	0/1252	0.61	0/1680
23	BM	0.30	0/1252	0.61	0/1680
23	CM	0.29	0/1252	0.60	0/1680
23	DM	0.28	0/1252	0.60	0/1680
24	AN	0.36	0/465	0.63	0/619
24	BN	0.37	0/465	0.64	0/619
24	CN	0.32	0/465	0.62	0/619
24	DN	0.34	0/465	0.63	0/619
25	AO	0.36	0/1253	0.63	0/1677
25	BO	0.36	0/1253	0.64	0/1677
25	CO	0.34	0/1253	0.63	0/1677
25	DO	0.32	0/1253	0.62	0/1677
26	AP	0.31	0/1215	0.60	0/1626
26	BP	0.32	0/1215	0.61	0/1626
26	CP	0.30	0/1215	0.60	0/1626
26	DP	0.31	0/1215	0.60	0/1626
27	AQ	0.39	0/1290	0.66	0/1731
27	BQ	0.36	0/1290	0.67	0/1731
27	CQ	0.36	0/1290	0.66	0/1731
27	DQ	0.33	0/1290	0.65	0/1731
28	AR	0.31	0/2750	0.60	0/3726
28	BR	0.30	0/2750	0.61	0/3726
28	CR	0.30	0/2750	0.61	0/3726
28	DR	0.29	0/2750	0.60	0/3726
29	AS	0.27	0/1028	0.54	0/1374
29	BS	0.29	0/1028	0.55	0/1374
29	CS	0.28	0/1028	0.54	0/1374
29	DS	0.27	0/1028	0.54	0/1374
30	AT	0.34	0/1264	0.58	0/1698
30	BT	0.35	0/1264	0.58	0/1698

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
30	CT	0.32	0/1264	0.57	0/1698
30	DT	0.33	0/1264	0.57	0/1698
31	AU	0.28	0/961	0.56	0/1288
31	BU	0.29	0/961	0.56	0/1288
31	CU	0.29	0/961	0.56	0/1288
31	DU	0.30	0/961	0.58	0/1288
32	AV	0.32	0/981	0.59	0/1311
32	BV	0.30	0/981	0.56	0/1311
32	CV	0.32	0/981	0.56	0/1311
32	DV	0.30	0/981	0.57	0/1311
33	AW	0.36	0/2119	0.62	0/2849
33	BW	0.34	0/2119	0.62	0/2849
33	CW	0.34	0/2119	0.62	0/2849
33	DW	0.34	0/2119	0.62	0/2849
34	AX	0.29	0/612	0.54	0/812
34	BX	0.29	0/612	0.55	0/812
34	CX	0.28	0/612	0.54	0/812
34	DX	0.28	0/612	0.54	0/812
35	AY	0.31	0/1852	0.55	0/2462
35	BY	0.31	0/1852	0.55	0/2462
35	CY	0.31	0/1852	0.55	0/2462
35	DY	0.31	0/1852	0.55	0/2462
36	AZ	0.36	0/755	0.61	0/1013
36	BZ	0.35	0/755	0.61	0/1013
36	CZ	0.34	0/755	0.60	0/1013
36	DZ	0.33	0/755	0.61	0/1013
All	All	0.41	16/333578 (0.0%)	0.93	910/482983 (0.2%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
4	A3	0	1
4	B3	0	1
4	C3	0	1
4	D3	0	1
5	A4	0	1
5	B4	0	2
5	C4	0	2
5	D4	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
7	A6	0	1
7	B6	0	1
7	C6	0	1
7	D6	0	1
9	A8	0	1
9	B8	0	1
9	C8	0	1
9	D8	0	1
17	AG	0	1
17	BG	0	1
17	CG	0	1
17	DG	0	1
18	AH	0	2
18	BH	0	2
18	CH	0	2
18	DH	0	2
20	AJ	0	1
20	BJ	0	1
20	CJ	0	1
20	DJ	0	1
21	AK	0	1
21	BK	0	1
21	CK	0	1
21	DK	0	1
24	CN	0	1
25	AO	0	1
25	BO	0	1
25	CO	0	1
25	DO	0	1
29	AS	0	1
29	BS	0	1
29	CS	0	1
29	DS	0	2
31	AU	0	2
31	BU	0	2
31	CU	0	2
31	DU	0	2
32	DV	0	1
33	AW	0	1
33	BW	0	1
33	CW	0	1
33	DW	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
All	All	0	62

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	D4	31	TRP	NE1-CE2	-10.69	1.23	1.37
5	D4	31	TRP	CD1-NE1	8.48	1.52	1.38
5	A4	31	TRP	CG-CD1	7.86	1.47	1.36
11	DA	1586	A	O3'-P	7.60	1.70	1.61
5	D4	31	TRP	CD2-CE2	7.60	1.50	1.41
5	D4	31	TRP	CG-CD2	6.46	1.54	1.43
20	CJ	70	CYS	CB-SG	-5.57	1.72	1.81
11	BA	229	A	N9-C4	5.46	1.41	1.37
5	A4	31	TRP	CE2-CZ2	5.30	1.48	1.39
20	DJ	70	CYS	CB-SG	-5.20	1.73	1.81
11	CA	1369	A	N9-C4	5.19	1.41	1.37
20	BJ	70	CYS	CB-SG	-5.17	1.73	1.81
11	AA	1369	A	N9-C4	5.15	1.41	1.37
20	AJ	70	CYS	CB-SG	-5.13	1.73	1.81
11	AA	1586	A	O3'-P	-5.06	1.55	1.61
11	AA	1263	G	N3-C4	-5.03	1.31	1.35

All (910) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	515	U	N1-C2-O2	12.79	131.75	122.80
11	BA	515	U	N1-C2-O2	12.46	131.52	122.80
11	DA	515	U	N1-C2-O2	12.24	131.37	122.80
11	CA	515	U	N1-C2-O2	12.05	131.23	122.80
11	BA	1296	G	N3-C2-N2	-11.69	111.72	119.90
11	DA	1296	G	N3-C2-N2	-11.41	111.91	119.90
11	CA	1296	G	N3-C2-N2	-10.70	112.41	119.90
11	AA	1296	G	N3-C2-N2	-10.45	112.59	119.90
11	BA	559	C	O5'-P-OP1	9.84	122.51	110.70
11	AA	634	C	C5-C6-N1	9.72	125.86	121.00
11	AA	1263	G	N3-C2-N2	-9.67	113.13	119.90
11	AA	887	U	C5-C6-N1	9.45	127.42	122.70
11	DA	447	C	C2-N1-C1'	9.34	129.08	118.80
5	A4	31	TRP	CG-CD1-NE1	-9.29	100.81	110.10
11	CA	447	C	C2-N1-C1'	9.28	129.01	118.80
11	DA	573	A	C6-N1-C2	9.27	124.16	118.60
11	AA	447	C	C2-N1-C1'	9.22	128.94	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	447	C	C2-N1-C1'	9.11	128.82	118.80
11	DA	493	U	O4'-C1'-N1	9.11	115.48	108.20
11	AA	763	U	C2-N1-C1'	9.10	128.62	117.70
11	BA	763	U	C2-N1-C1'	9.06	128.57	117.70
11	BA	633	U	P-O3'-C3'	9.06	130.57	119.70
11	AA	559	C	O5'-P-OP1	9.04	121.54	110.70
11	CA	1009	U	C4-C5-C6	9.01	125.11	119.70
11	DA	559	C	O5'-P-OP1	8.96	121.45	110.70
11	CA	559	C	O5'-P-OP1	8.91	121.40	110.70
11	DA	763	U	C2-N1-C1'	8.91	128.39	117.70
11	CA	763	U	C2-N1-C1'	8.90	128.38	117.70
11	BA	633	U	C5-C6-N1	8.85	127.12	122.70
11	DA	1134	C	OP2-P-O3'	8.80	124.55	105.20
11	AA	604	G	C4-N9-C1'	8.78	137.91	126.50
11	DA	1296	G	N1-C2-N2	8.74	124.07	116.20
11	AA	445	U	C2-N1-C1'	8.72	128.16	117.70
11	CA	604	G	C4-N9-C1'	8.72	137.83	126.50
11	CA	1296	G	N1-C2-N2	8.65	123.98	116.20
11	CA	445	U	C2-N1-C1'	8.59	128.01	117.70
11	AA	1009	U	C4-C5-C6	8.58	124.85	119.70
11	CA	1263	G	N3-C2-N2	-8.46	113.98	119.90
11	AA	1296	G	N1-C2-N2	8.45	123.81	116.20
11	BA	1263	G	N3-C2-N2	-8.44	114.00	119.90
11	CA	393	C	C5-C6-N1	8.42	125.21	121.00
11	AA	1529	U	C2-N1-C1'	8.42	127.80	117.70
11	DA	393	C	C2-N1-C1'	8.41	128.05	118.80
11	BA	1296	G	N1-C2-N2	8.40	123.76	116.20
11	BA	1529	U	C2-N1-C1'	8.40	127.78	117.70
11	BA	604	G	C4-N9-C1'	8.38	137.40	126.50
11	BA	445	U	C2-N1-C1'	8.37	127.75	117.70
11	DA	445	U	C2-N1-C1'	8.35	127.72	117.70
11	DA	1263	G	N3-C2-N2	-8.29	114.09	119.90
11	CA	1229	U	C2-N1-C1'	8.28	127.63	117.70
11	BA	1263	G	N1-C2-N3	8.27	128.86	123.90
11	BA	887	U	C5-C6-N1	8.26	126.83	122.70
11	DA	1529	U	C2-N1-C1'	8.25	127.60	117.70
11	CA	1529	U	C2-N1-C1'	8.23	127.57	117.70
11	AA	1229	U	C2-N1-C1'	8.22	127.57	117.70
11	BA	393	C	C2-N1-C1'	8.21	127.83	118.80
11	AA	393	C	C2-N1-C1'	8.18	127.80	118.80
11	DA	604	G	C4-N9-C1'	8.18	137.13	126.50
11	BA	1009	U	C4-C5-C6	8.17	124.60	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	CA	222	U	N3-C2-O2	-8.08	116.54	122.20
11	CA	1225	U	N1-C2-O2	8.06	128.44	122.80
11	CA	393	C	C2-N1-C1'	8.02	127.62	118.80
11	BA	763	U	N1-C2-O2	7.96	128.37	122.80
11	CA	763	U	N1-C2-O2	7.95	128.36	122.80
11	DA	1229	U	C2-N1-C1'	7.95	127.24	117.70
11	DA	1009	U	C4-C5-C6	7.92	124.45	119.70
11	CA	391	A	P-O3'-C3'	7.90	129.18	119.70
11	AA	1749	C	C6-N1-C2	-7.89	117.14	120.30
11	DA	763	U	N1-C2-O2	7.87	128.31	122.80
11	CA	887	U	C5-C6-N1	7.85	126.63	122.70
11	BA	1009	U	C5-C6-N1	-7.85	118.77	122.70
11	BA	391	A	P-O3'-C3'	7.83	129.10	119.70
11	DA	1225	U	N1-C2-O2	7.82	128.27	122.80
11	CA	1009	U	C5-C6-N1	-7.80	118.80	122.70
11	CA	1752	U	O4'-C1'-N1	7.79	114.44	108.20
11	AA	391	A	P-O3'-C3'	7.77	129.03	119.70
11	DA	393	C	C5-C6-N1	7.76	124.88	121.00
11	DA	445	U	N1-C2-O2	7.75	128.22	122.80
11	AA	1752	U	O4'-C1'-N1	7.75	114.40	108.20
11	AA	763	U	N1-C2-O2	7.73	128.21	122.80
11	BA	1225	U	N1-C2-O2	7.73	128.21	122.80
11	AA	393	C	C5-C6-N1	7.71	124.86	121.00
11	DA	391	A	P-O3'-C3'	7.69	128.93	119.70
11	BA	1229	U	C2-N1-C1'	7.68	126.91	117.70
11	BA	270	U	C2-N1-C1'	7.67	126.90	117.70
11	BA	445	U	N3-C2-O2	-7.66	116.84	122.20
11	CA	1263	G	N1-C2-N3	7.65	128.49	123.90
11	AA	1263	G	N1-C2-N3	7.65	128.49	123.90
11	BA	270	U	N1-C2-O2	7.63	128.14	122.80
11	BA	1752	U	N3-C2-O2	-7.63	116.86	122.20
11	CA	559	C	N1-C2-O2	7.62	123.47	118.90
11	AA	493	U	C6-N1-C2	7.62	125.57	121.00
11	AA	270	U	C2-N1-C1'	7.60	126.82	117.70
11	AA	559	C	N1-C2-O2	7.59	123.46	118.90
11	AA	559	C	C2-N1-C1'	7.59	127.15	118.80
11	BA	1263	G	C2-N3-C4	-7.59	108.10	111.90
11	BA	1752	U	O4'-C1'-N1	7.58	114.27	108.20
11	AA	1225	U	N1-C2-O2	7.58	128.10	122.80
11	DA	559	C	C2-N1-C1'	7.57	127.13	118.80
11	BA	445	U	N1-C2-O2	7.57	128.10	122.80
11	CA	270	U	C2-N1-C1'	7.56	126.77	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	DA	445	U	N3-C2-O2	-7.53	116.93	122.20
11	DA	270	U	C2-N1-C1'	7.52	126.73	117.70
11	BA	393	C	C5-C6-N1	7.50	124.75	121.00
11	BA	559	C	N1-C2-O2	7.50	123.40	118.90
11	DA	887	U	C5-C6-N1	7.48	126.44	122.70
11	DA	559	C	N1-C2-O2	7.48	123.39	118.90
11	CA	445	U	N3-C2-O2	-7.43	117.00	122.20
11	CA	515	U	C2-N3-C4	7.42	131.45	127.00
11	CA	559	C	C2-N1-C1'	7.42	126.96	118.80
11	AA	270	U	N1-C2-O2	7.40	127.98	122.80
11	CA	445	U	N1-C2-O2	7.40	127.98	122.80
11	DA	1256	C	OP1-P-O3'	7.39	121.46	105.20
11	BA	777	U	C2-N1-C1'	7.37	126.55	117.70
11	DA	1752	U	O4'-C1'-N1	7.36	114.09	108.20
11	CA	777	U	C2-N1-C1'	7.35	126.52	117.70
11	CA	270	U	N1-C2-O2	7.35	127.94	122.80
11	AA	1752	U	N3-C2-O2	-7.34	117.06	122.20
11	DA	270	U	N1-C2-O2	7.32	127.92	122.80
11	DA	573	A	N1-C2-N3	-7.32	125.64	129.30
11	DA	777	U	C2-N1-C1'	7.30	126.47	117.70
11	AA	777	U	C2-N1-C1'	7.30	126.46	117.70
11	CA	328	G	P-O3'-C3'	7.29	128.45	119.70
11	AA	515	U	C2-N3-C4	7.29	131.37	127.00
11	CA	515	U	N3-C2-O2	-7.26	117.12	122.20
11	BA	559	C	C2-N1-C1'	7.22	126.75	118.80
11	AA	515	U	N3-C2-O2	-7.22	117.15	122.20
11	AA	445	U	N3-C2-O2	-7.19	117.17	122.20
11	CA	523	U	C2-N3-C4	-7.16	122.71	127.00
11	DA	515	U	C2-N3-C4	7.11	131.27	127.00
11	CA	763	U	N3-C2-O2	-7.10	117.23	122.20
11	BA	763	U	N3-C2-O2	-7.08	117.25	122.20
11	AA	152	U	N3-C2-O2	-7.08	117.25	122.20
11	AA	793	G	N3-C4-C5	7.07	132.13	128.60
11	AA	445	U	N1-C2-O2	7.06	127.74	122.80
11	AA	634	C	O5'-P-OP2	-7.04	99.37	105.70
11	AA	523	U	C5-C4-O4	-7.02	121.69	125.90
11	DA	523	U	C2-N3-C4	-7.02	122.79	127.00
11	BA	1494	U	P-O3'-C3'	7.00	128.10	119.70
11	CA	1752	U	N3-C2-O2	-7.00	117.30	122.20
11	AA	763	U	N3-C2-O2	-6.99	117.31	122.20
11	CA	887	U	C2-N1-C1'	6.97	126.06	117.70
11	CA	1149	C	C5-C6-N1	6.97	124.48	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	DA	1009	U	C5-C6-N1	-6.94	119.23	122.70
11	BA	152	U	N3-C2-O2	-6.93	117.35	122.20
11	CA	515	U	C2-N1-C1'	6.93	126.02	117.70
11	CA	604	G	C8-N9-C1'	-6.92	118.00	127.00
11	BA	447	C	C5-C6-N1	6.91	124.46	121.00
11	DA	152	U	N3-C2-O2	-6.90	117.37	122.20
11	AA	634	C	C6-N1-C2	-6.90	117.54	120.30
11	BA	1149	C	C5-C6-N1	6.90	124.45	121.00
11	BA	100	A	P-O3'-C3'	6.89	127.97	119.70
11	CA	887	U	O5'-P-OP1	6.88	118.95	110.70
11	AA	1149	C	C5-C6-N1	6.87	124.43	121.00
11	DA	763	U	N3-C2-O2	-6.87	117.39	122.20
11	CA	1246	C	P-O3'-C3'	6.87	127.94	119.70
11	DA	1246	C	P-O3'-C3'	6.86	127.93	119.70
11	AA	1263	G	N3-C4-N9	-6.85	121.89	126.00
10	C9	120	GLY	N-CA-C	6.85	130.23	113.10
11	CA	222	U	N1-C2-O2	6.84	127.59	122.80
11	AA	3	C	N1-C2-O2	6.84	123.00	118.90
11	AA	604	G	C8-N9-C1'	-6.83	118.11	127.00
11	DA	1263	G	N1-C2-N3	6.81	127.98	123.90
11	BA	604	G	C8-N9-C1'	-6.80	118.16	127.00
11	CA	447	C	C6-N1-C1'	-6.80	112.64	120.80
11	AA	1009	U	C5-C6-N1	-6.79	119.30	122.70
11	AA	447	C	C6-N1-C1'	-6.79	112.65	120.80
11	DA	1752	U	N3-C2-O2	-6.79	117.45	122.20
11	BA	728	U	C2-N1-C1'	6.78	125.84	117.70
11	CA	374	G	C6-C5-N7	-6.78	126.33	130.40
11	CA	447	C	N1-C2-O2	6.77	122.96	118.90
11	CA	152	U	N3-C2-O2	-6.76	117.46	122.20
11	BA	1246	C	P-O3'-C3'	6.76	127.81	119.70
11	DA	1303	A	OP2-P-O3'	6.76	120.08	105.20
10	B9	120	GLY	N-CA-C	6.76	130.00	113.10
10	A9	120	GLY	N-CA-C	6.75	129.98	113.10
11	AA	271	U	OP1-P-O3'	6.75	120.05	105.20
11	BA	341	G	N7-C8-N9	6.74	116.47	113.10
11	AA	523	U	C2-N3-C4	-6.74	122.96	127.00
11	BA	393	C	C6-N1-C1'	-6.74	112.72	120.80
11	BA	523	U	C2-N3-C4	-6.74	122.96	127.00
11	BA	1296	G	N3-C4-N9	-6.74	121.96	126.00
11	AA	393	C	C6-N1-C1'	-6.73	112.72	120.80
11	CA	1263	G	C2-N3-C4	-6.73	108.54	111.90
11	AA	1494	U	P-O3'-C3'	6.73	127.77	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	515	U	C2-N3-C4	6.73	131.04	127.00
11	BA	887	U	O5'-P-OP1	6.72	118.77	110.70
10	D9	120	GLY	N-CA-C	6.72	129.91	113.10
11	DA	447	C	C6-N1-C1'	-6.72	112.73	120.80
11	AA	1749	C	C2-N1-C1'	6.71	126.19	118.80
11	CA	676	C	P-O3'-C3'	6.71	127.75	119.70
11	AA	887	U	C2-N1-C1'	6.70	125.74	117.70
11	BA	515	U	N3-C2-O2	-6.70	117.51	122.20
11	CA	1494	U	P-O3'-C3'	6.70	127.73	119.70
11	AA	100	A	P-O3'-C3'	6.69	127.73	119.70
11	CA	728	U	C2-N1-C1'	6.69	125.73	117.70
11	DA	1038	U	C5-C6-N1	6.69	126.04	122.70
11	DA	447	C	C5-C6-N1	6.68	124.34	121.00
11	DA	271	U	OP1-P-O3'	6.68	119.89	105.20
11	AA	71	U	C2-N1-C1'	6.67	125.70	117.70
11	BA	71	U	C2-N1-C1'	6.66	125.70	117.70
11	AA	229	A	P-O3'-C3'	6.64	127.67	119.70
11	CA	271	U	OP1-P-O3'	6.64	119.82	105.20
11	DA	887	U	O5'-P-OP1	6.64	118.67	110.70
11	AA	152	U	C2-N1-C1'	6.63	125.66	117.70
11	AA	728	U	C2-N1-C1'	6.63	125.65	117.70
11	DA	493	U	N1-C1'-C2'	6.61	122.59	114.00
11	DA	1149	C	C5-C6-N1	6.60	124.30	121.00
11	BA	887	U	C2-N1-C1'	6.59	125.61	117.70
11	CA	71	U	C2-N1-C1'	6.58	125.60	117.70
11	DA	887	U	C2-N1-C1'	6.56	125.57	117.70
11	BA	1256	C	P-O3'-C3'	6.56	127.57	119.70
11	BA	515	U	N1-C2-N3	-6.55	110.97	114.90
11	DA	515	U	N1-C2-N3	-6.55	110.97	114.90
11	DA	559	C	C6-N1-C1'	-6.55	112.94	120.80
11	BA	447	C	C6-N1-C1'	-6.55	112.94	120.80
11	CA	559	C	C6-N1-C1'	-6.54	112.95	120.80
11	AA	328	G	P-O3'-C3'	6.54	127.55	119.70
11	AA	416	C	C6-N1-C2	6.54	122.92	120.30
11	DA	393	C	C6-N1-C1'	-6.54	112.95	120.80
11	DA	71	U	C2-N1-C1'	6.54	125.54	117.70
11	AA	1466	C	C2-N1-C1'	6.52	125.97	118.80
11	BA	328	G	P-O3'-C3'	6.52	127.52	119.70
11	AA	1263	G	C2-N3-C4	-6.52	108.64	111.90
11	BA	1038	U	C5-C6-N1	6.51	125.96	122.70
11	AA	1246	C	P-O3'-C3'	6.51	127.51	119.70
11	AA	559	C	C6-N1-C1'	-6.50	112.99	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	1168	A	P-O3'-C3'	6.50	127.50	119.70
11	AA	172	U	P-O3'-C3'	6.49	127.49	119.70
11	BA	762	U	C2-N1-C1'	6.49	125.48	117.70
11	AA	447	C	N1-C2-O2	6.48	122.79	118.90
11	DA	515	U	N3-C2-O2	-6.48	117.66	122.20
11	CA	1168	A	P-O3'-C3'	6.47	127.47	119.70
11	DA	1263	G	N9-C4-C5	6.47	107.99	105.40
11	AA	343	C	C2-N1-C1'	6.46	125.91	118.80
11	AA	1453	C	C6-N1-C2	-6.46	117.72	120.30
11	DA	728	U	C2-N1-C1'	6.46	125.45	117.70
11	CA	65	C	C6-N1-C2	-6.46	117.72	120.30
11	DA	152	U	C2-N1-C1'	6.46	125.45	117.70
11	AA	762	U	C2-N1-C1'	6.45	125.44	117.70
11	AA	374	G	C6-C5-N7	-6.45	126.53	130.40
11	BA	1263	G	N3-C4-N9	-6.45	122.13	126.00
11	DA	1168	A	P-O3'-C3'	6.42	127.41	119.70
11	BA	3	C	N1-C2-O2	6.42	122.75	118.90
11	CA	152	U	C2-N1-C1'	6.41	125.40	117.70
11	BA	1278	C	N3-C2-O2	-6.41	117.41	121.90
11	BA	152	U	C2-N1-C1'	6.40	125.38	117.70
11	DA	1296	G	N3-C4-N9	-6.40	122.16	126.00
11	CA	231	U	C5-C6-N1	6.40	125.90	122.70
11	BA	447	C	N1-C2-O2	6.39	122.74	118.90
11	CA	393	C	C6-N1-C1'	-6.39	113.14	120.80
11	DA	1225	U	C2-N1-C1'	6.38	125.36	117.70
5	A4	31	TRP	CG-CD2-CE3	-6.38	128.16	133.90
11	DA	604	G	C8-N9-C1'	-6.38	118.70	127.00
11	DA	515	U	C2-N1-C1'	6.38	125.36	117.70
11	DA	447	C	N1-C2-O2	6.38	122.73	118.90
11	AA	1225	U	C2-N1-C1'	6.37	125.34	117.70
11	DA	1508	G	O4'-C1'-N9	6.36	113.29	108.20
11	BA	229	A	P-O3'-C3'	6.36	127.33	119.70
11	CA	762	U	C2-N1-C1'	6.36	125.33	117.70
11	DA	523	U	C5-C4-O4	-6.35	122.09	125.90
11	CA	1225	U	C2-N1-C1'	6.35	125.32	117.70
11	AA	1737	C	O5'-P-OP2	-6.34	99.99	105.70
11	CA	777	U	N1-C2-O2	6.34	127.24	122.80
11	BA	515	U	C2-N1-C1'	6.34	125.31	117.70
11	BA	777	U	N1-C2-O2	6.34	127.24	122.80
11	CA	447	C	C5-C6-N1	6.34	124.17	121.00
11	AA	515	U	N1-C2-N3	-6.33	111.10	114.90
11	DA	1721	G	C8-N9-C4	-6.33	103.87	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	CA	1263	G	N3-C4-N9	-6.32	122.21	126.00
11	BA	1662	C	C6-N1-C2	-6.30	117.78	120.30
11	DA	328	G	P-O3'-C3'	6.30	127.26	119.70
11	AA	515	U	C2-N1-C1'	6.29	125.25	117.70
11	CA	1278	C	P-O3'-C3'	6.29	127.25	119.70
11	DA	1721	G	N7-C8-N9	6.29	116.25	113.10
11	BA	271	U	OP1-P-O3'	6.29	119.03	105.20
11	BA	271	U	P-O3'-C3'	6.29	127.24	119.70
11	AA	777	U	N1-C2-O2	6.28	127.20	122.80
11	BA	1532	U	N3-C2-O2	-6.28	117.80	122.20
11	CA	1035	A	C2-N3-C4	6.28	113.74	110.60
11	DA	762	U	C2-N1-C1'	6.28	125.24	117.70
11	AA	632	U	P-O3'-C3'	6.26	127.22	119.70
11	AA	1278	C	P-O3'-C3'	6.26	127.22	119.70
11	BA	633	U	C6-N1-C2	-6.25	117.25	121.00
11	DA	777	U	N1-C2-O2	6.25	127.17	122.80
11	AA	1263	G	N9-C4-C5	6.24	107.90	105.40
11	BA	559	C	C6-N1-C1'	-6.24	113.31	120.80
11	DA	1263	G	C8-N9-C4	-6.24	103.91	106.40
5	A4	31	TRP	NE1-CE2-CD2	-6.23	101.07	107.30
11	BA	1225	U	C2-N1-C1'	6.22	125.16	117.70
11	BA	1171	G	C2-N3-C4	6.20	115.00	111.90
11	AA	887	U	O5'-P-OP1	6.19	118.13	110.70
11	DA	1744	U	OP1-P-O3'	6.19	118.83	105.20
11	CA	1229	U	C6-N1-C1'	-6.18	112.54	121.20
11	AA	1168	A	P-O3'-C3'	6.18	127.12	119.70
11	BA	1749	C	C2-N1-C1'	6.18	125.60	118.80
11	AA	1721	G	P-O3'-C3'	6.18	127.11	119.70
11	AA	447	C	C5-C6-N1	6.17	124.09	121.00
11	CA	1508	G	O4'-C1'-N9	6.17	113.14	108.20
11	DA	271	U	C2-N1-C1'	6.16	125.09	117.70
11	AA	270	U	N3-C2-O2	-6.15	117.89	122.20
11	AA	604	G	C8-N9-C4	-6.14	103.94	106.40
11	CA	793	G	N3-C4-C5	6.14	131.67	128.60
11	DA	1408	U	C2-N1-C1'	6.14	125.06	117.70
11	AA	371	U	C2-N1-C1'	6.13	125.06	117.70
11	CA	1386	U	C2-N1-C1'	6.13	125.06	117.70
11	AA	813	U	O5'-P-OP1	6.13	118.06	110.70
11	CA	515	U	C5-C6-N1	6.13	125.76	122.70
11	CA	100	A	P-O3'-C3'	6.12	127.05	119.70
11	DA	100	A	P-O3'-C3'	6.12	127.04	119.70
11	CA	271	U	C2-N1-C1'	6.11	125.03	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	CA	1278	C	N3-C2-O2	-6.11	117.63	121.90
11	CA	1466	C	C2-N1-C1'	6.11	125.52	118.80
11	DA	374	G	C6-C5-N7	-6.10	126.74	130.40
11	AA	676	C	P-O3'-C3'	6.09	127.01	119.70
11	BA	860	U	C5-C6-N1	6.08	125.74	122.70
11	AA	1229	U	C6-N1-C1'	-6.08	112.69	121.20
11	DA	1529	U	N1-C2-O2	6.08	127.05	122.80
11	AA	1508	G	O4'-C1'-N9	6.07	113.06	108.20
11	BA	374	G	C6-C5-N7	-6.06	126.77	130.40
11	DA	3	C	N1-C2-O2	6.05	122.53	118.90
11	CA	65	C	C5-C6-N1	6.05	124.03	121.00
11	BA	813	U	O5'-P-OP1	6.05	117.96	110.70
11	DA	1207	C	C2-N1-C1'	6.04	125.45	118.80
11	AA	1582	G	C6-C5-N7	-6.04	126.78	130.40
11	CA	371	U	C2-N1-C1'	6.04	124.95	117.70
11	DA	1263	G	N3-C4-N9	-6.04	122.38	126.00
11	DA	763	U	C6-N1-C1'	-6.04	112.75	121.20
11	BA	763	U	C6-N1-C1'	-6.04	112.75	121.20
11	DA	1386	U	C2-N1-C1'	6.03	124.94	117.70
11	BA	270	U	N3-C2-O2	-6.03	117.98	122.20
11	AA	1532	U	N3-C2-O2	-6.02	117.98	122.20
11	AA	271	U	C2-N1-C1'	6.02	124.92	117.70
11	BA	343	C	C2-N1-C1'	6.01	125.41	118.80
11	CA	1038	U	C5-C6-N1	6.01	125.70	122.70
11	AA	239	A	C4-N9-C1'	6.00	137.10	126.30
11	DA	371	U	C2-N1-C1'	6.00	124.89	117.70
11	DA	860	U	C5-C6-N1	5.99	125.70	122.70
11	CA	270	U	N3-C2-O2	-5.99	118.01	122.20
11	DA	833	A	P-O3'-C3'	5.99	126.88	119.70
11	AA	1171	G	C2-N3-C4	5.98	114.89	111.90
11	DA	1278	C	P-O3'-C3'	5.98	126.87	119.70
11	DA	1662	C	C6-N1-C2	-5.97	117.91	120.30
11	BA	559	C	C5-C6-N1	5.97	123.98	121.00
11	DA	813	U	O5'-P-OP1	5.97	117.86	110.70
11	CA	523	U	C5-C4-O4	-5.96	122.32	125.90
11	CA	1171	G	C2-N3-C4	5.96	114.88	111.90
11	BA	371	U	C2-N1-C1'	5.96	124.85	117.70
5	D4	31	TRP	CD2-CE2-CZ2	-5.96	115.15	122.30
11	CA	152	U	O4'-C1'-N1	5.95	112.96	108.20
11	CA	678	U	C2-N1-C1'	5.95	124.84	117.70
11	DA	270	U	N3-C2-O2	-5.95	118.03	122.20
11	AA	1386	U	C2-N1-C1'	5.95	124.83	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	833	A	P-O3'-C3'	5.95	126.84	119.70
11	AA	444	A	P-O3'-C3'	5.94	126.83	119.70
11	CA	762	U	N1-C2-O2	5.94	126.96	122.80
11	BA	523	U	C5-C4-O4	-5.94	122.34	125.90
11	BA	1278	C	P-O3'-C3'	5.94	126.82	119.70
11	DA	1035	A	C2-N3-C4	5.93	113.57	110.60
11	CA	1296	G	N3-C4-N9	-5.93	122.44	126.00
11	AA	1296	G	N3-C4-N9	-5.93	122.44	126.00
11	BA	1386	U	C2-N1-C1'	5.93	124.82	117.70
11	DA	604	G	N7-C8-N9	5.93	116.06	113.10
11	CA	763	U	C6-N1-C1'	-5.93	112.90	121.20
11	AA	559	C	C5-C6-N1	5.92	123.96	121.00
11	AA	1744	U	OP1-P-O3'	5.92	118.23	105.20
11	AA	1035	A	C2-N3-C4	5.92	113.56	110.60
11	AA	152	U	O4'-C1'-N1	5.91	112.93	108.20
11	CA	833	A	P-O3'-C3'	5.90	126.78	119.70
11	BA	1508	G	O4'-C1'-N9	5.90	112.92	108.20
11	AA	152	U	C6-N1-C2	-5.89	117.46	121.00
11	DA	413	C	C2-N1-C1'	5.89	125.28	118.80
11	BA	1429	G	N3-C4-C5	-5.89	125.65	128.60
11	BA	152	U	O4'-C1'-N1	5.89	112.91	108.20
11	DA	1429	G	N3-C4-C5	-5.89	125.66	128.60
11	DA	1506	G	P-O3'-C3'	5.89	126.76	119.70
11	BA	676	C	P-O3'-C3'	5.88	126.76	119.70
11	AA	1721	G	C8-N9-C4	-5.86	104.06	106.40
11	BA	667	C	C2-N1-C1'	5.86	125.25	118.80
11	CA	617	A	O4'-C1'-N9	5.86	112.89	108.20
11	BA	152	U	N1-C2-O2	5.86	126.90	122.80
11	BA	1744	U	P-O3'-C3'	5.86	126.73	119.70
11	CA	1721	G	P-O3'-C3'	5.86	126.73	119.70
11	CA	222	U	C2-N1-C1'	5.86	124.73	117.70
11	AA	1263	G	C8-N9-C4	-5.86	104.06	106.40
11	DA	1229	U	C6-N1-C1'	-5.86	113.00	121.20
11	DA	762	U	N1-C2-O2	5.85	126.90	122.80
11	BA	229	A	C8-N9-C4	-5.85	103.46	105.80
11	AA	573	A	OP1-P-O3'	5.85	118.07	105.20
11	BA	1035	A	C2-N3-C4	5.84	113.52	110.60
11	CA	214	U	OP1-P-O3'	5.84	118.05	105.20
11	AA	763	U	C6-N1-C1'	-5.84	113.02	121.20
11	CA	1529	U	N1-C2-O2	5.83	126.88	122.80
11	DA	271	U	P-O3'-C3'	5.83	126.70	119.70
11	DA	666	A	N7-C8-N9	5.83	116.72	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	1529	U	N1-C2-O2	5.82	126.87	122.80
11	CA	813	U	O5'-P-OP1	5.82	117.68	110.70
11	DA	1749	C	C2-N1-C1'	5.82	125.20	118.80
11	CA	1428	C	P-O3'-C3'	5.81	126.67	119.70
11	AA	239	A	C8-N9-C1'	-5.81	117.25	127.70
11	AA	678	U	C5-C6-N1	5.81	125.60	122.70
11	CA	777	U	N3-C2-O2	-5.81	118.14	122.20
11	DA	661	G	C4-N9-C1'	5.81	134.05	126.50
11	AA	515	U	C5-C6-N1	5.80	125.60	122.70
11	CA	271	U	P-O3'-C3'	5.80	126.67	119.70
11	CA	1495	U	P-O3'-C3'	5.80	126.66	119.70
11	AA	1054	U	P-O3'-C3'	5.79	126.65	119.70
11	AA	1408	U	C2-N1-C1'	5.79	124.65	117.70
11	AA	1009	U	N1-C2-N3	5.79	118.37	114.90
11	BA	1508	G	N3-C4-C5	-5.79	125.71	128.60
11	AA	1556	G	P-O3'-C3'	5.79	126.64	119.70
11	BA	777	U	N3-C2-O2	-5.79	118.15	122.20
11	AA	1662	C	C6-N1-C2	-5.78	117.99	120.30
11	CA	1532	U	N3-C2-O2	-5.77	118.16	122.20
11	CA	573	A	OP1-P-O3'	5.77	117.89	105.20
11	AA	860	U	C5-C6-N1	5.76	125.58	122.70
11	DA	1172	G	P-O3'-C3'	5.76	126.62	119.70
11	DA	676	C	P-O3'-C3'	5.76	126.61	119.70
11	DA	661	G	C8-N9-C1'	-5.76	119.51	127.00
11	AA	65	C	C5-C6-N1	5.76	123.88	121.00
11	CA	1506	G	P-O3'-C3'	5.75	126.59	119.70
11	CA	3	C	N1-C2-O2	5.74	122.35	118.90
11	AA	1038	U	C5-C6-N1	5.74	125.57	122.70
11	BA	1488	A	P-O3'-C3'	5.74	126.59	119.70
11	CA	1744	U	P-O3'-C3'	5.74	126.59	119.70
11	CA	604	G	N3-C4-C5	-5.73	125.73	128.60
11	BA	1428	C	P-O3'-C3'	5.72	126.57	119.70
11	DA	573	A	OP1-P-O3'	5.72	117.79	105.20
11	CA	1207	C	C2-N1-C1'	5.72	125.09	118.80
11	DA	65	C	C5-C6-N1	5.72	123.86	121.00
11	DA	559	C	C5-C6-N1	5.72	123.86	121.00
11	CA	860	U	C5-C6-N1	5.72	125.56	122.70
11	DA	1176	A	C8-N9-C4	-5.72	103.51	105.80
11	BA	1229	U	C6-N1-C1'	-5.71	113.20	121.20
11	CA	1429	G	N3-C4-C5	-5.71	125.74	128.60
11	AA	393	C	C4-C5-C6	-5.71	114.55	117.40
11	CA	1408	U	C2-N1-C1'	5.71	124.55	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	DA	364	G	C4-N9-C1'	5.71	133.92	126.50
11	BA	634	C	C6-N1-C2	-5.70	118.02	120.30
11	CA	1508	G	N3-C4-C5	-5.70	125.75	128.60
11	BA	1486	U	N3-C2-O2	-5.70	118.21	122.20
11	DA	892	G	C8-N9-C4	5.70	108.68	106.40
11	BA	573	A	P-O3'-C3'	5.70	126.54	119.70
11	CA	1556	G	P-O3'-C3'	5.69	126.53	119.70
11	DA	1347	U	P-O3'-C3'	5.69	126.53	119.70
11	AA	271	U	P-O3'-C3'	5.69	126.53	119.70
11	DA	211	U	O4'-C1'-N1	5.69	112.75	108.20
11	CA	1744	U	OP1-P-O3'	5.68	117.71	105.20
11	AA	886	U	C5-C6-N1	5.68	125.54	122.70
11	AA	1506	G	P-O3'-C3'	5.68	126.52	119.70
11	AA	1554	U	N1-C2-O2	-5.68	118.82	122.80
11	BA	515	U	C5-C6-N1	5.68	125.54	122.70
11	CA	169	G	N3-C4-N9	5.68	129.41	126.00
11	AA	1207	C	C2-N1-C1'	5.68	125.05	118.80
11	BA	1466	C	C2-N1-C1'	5.68	125.05	118.80
11	DA	1511	A	N1-C6-N6	5.68	122.01	118.60
11	AA	833	A	P-O3'-C3'	5.67	126.51	119.70
11	CA	1149	C	C6-N1-C2	-5.67	118.03	120.30
13	DC	81	GLY	N-CA-C	-5.67	98.93	113.10
11	AA	1724	U	C5-C6-N1	5.67	125.53	122.70
11	BA	1495	U	P-O3'-C3'	5.66	126.50	119.70
11	DA	447	C	C6-N1-C2	-5.66	118.03	120.30
11	DA	515	U	C5-C6-N1	5.66	125.53	122.70
11	CA	152	U	N1-C2-O2	5.66	126.76	122.80
11	DA	152	U	O4'-C1'-N1	5.66	112.73	108.20
11	AA	762	U	N1-C2-O2	5.66	126.76	122.80
11	DA	777	U	N3-C2-O2	-5.66	118.24	122.20
17	CG	74	HIS	N-CA-C	-5.65	95.74	111.00
11	DA	1278	C	N3-C2-O2	-5.65	117.94	121.90
11	CA	1744	U	C2-N1-C1'	5.65	124.48	117.70
11	DA	1466	C	C2-N1-C1'	5.65	125.01	118.80
11	CA	604	G	C8-N9-C4	-5.64	104.14	106.40
11	BA	762	U	N1-C2-O2	5.64	126.75	122.80
11	BA	271	U	C2-N1-C1'	5.63	124.46	117.70
11	BA	1347	U	P-O3'-C3'	5.63	126.46	119.70
11	AA	1495	U	P-O3'-C3'	5.63	126.45	119.70
11	DA	1532	U	N3-C2-O2	-5.63	118.26	122.20
11	DA	860	U	C2-N1-C1'	5.62	124.45	117.70
11	AA	1347	U	P-O3'-C3'	5.62	126.45	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	1744	U	OP1-P-O3'	5.62	117.56	105.20
11	AA	83	C	C2-N1-C1'	5.62	124.98	118.80
11	BA	341	G	C6-C5-N7	-5.62	127.03	130.40
11	BA	364	G	C4-N9-C1'	5.62	133.80	126.50
11	AA	1508	G	N3-C4-C5	-5.62	125.79	128.60
11	CA	393	C	C4-C5-C6	-5.62	114.59	117.40
11	AA	1281	G	C6-C5-N7	-5.61	127.03	130.40
11	DA	604	G	C8-N9-C4	-5.61	104.16	106.40
11	DA	1207	C	N1-C2-O2	5.61	122.27	118.90
11	DA	1263	G	C2-N3-C4	-5.61	109.09	111.90
11	AA	632	U	C2-N1-C1'	5.61	124.43	117.70
11	AA	341	G	C6-C5-N7	-5.61	127.03	130.40
11	BA	65	C	C5-C6-N1	5.61	123.80	121.00
11	CA	1347	U	P-O3'-C3'	5.61	126.43	119.70
11	CA	1662	C	C6-N1-C2	-5.61	118.06	120.30
11	DA	343	C	C2-N1-C1'	5.61	124.97	118.80
11	CA	1223	U	P-O3'-C3'	5.61	126.43	119.70
11	DA	163	A	P-O3'-C3'	5.60	126.42	119.70
11	AA	364	G	C8-N9-C1'	-5.60	119.72	127.00
11	AA	163	A	P-O3'-C3'	5.59	126.41	119.70
11	DA	617	A	O4'-C1'-N9	5.59	112.67	108.20
11	DA	1176	A	N7-C8-N9	5.59	116.59	113.80
11	BA	573	A	OP1-P-O3'	5.58	117.49	105.20
11	BA	1529	U	N1-C2-O2	5.58	126.71	122.80
11	BA	575	U	C2-N1-C1'	5.58	124.40	117.70
11	CA	575	U	C2-N1-C1'	5.58	124.40	117.70
11	DA	632	U	P-O3'-C3'	5.58	126.40	119.70
11	DA	1662	C	C5-C6-N1	5.58	123.79	121.00
11	AA	575	U	C2-N1-C1'	5.58	124.40	117.70
11	AA	667	C	C2-N1-C1'	5.58	124.94	118.80
11	AA	1744	U	P-O3'-C3'	5.58	126.39	119.70
11	AA	1429	G	N3-C4-C5	-5.58	125.81	128.60
11	CA	912	A	N9-C4-C5	-5.58	103.57	105.80
11	BA	617	A	O4'-C1'-N9	5.57	112.66	108.20
11	BA	1408	U	C2-N1-C1'	5.57	124.39	117.70
11	AA	1662	C	C5-C6-N1	5.57	123.79	121.00
11	AA	1529	U	N3-C2-O2	-5.57	118.30	122.20
11	AA	3	C	P-O3'-C3'	5.57	126.38	119.70
17	AG	74	HIS	N-CA-C	-5.57	95.97	111.00
11	DA	1744	U	P-O3'-C3'	5.57	126.38	119.70
11	BA	413	C	C2-N1-C1'	5.56	124.92	118.80
11	BA	447	C	C6-N1-C2	-5.56	118.08	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	DA	1171	G	C2-N3-C4	5.56	114.68	111.90
11	BA	678	U	C2-N1-C1'	5.56	124.37	117.70
11	BA	1207	C	C2-N1-C1'	5.55	124.91	118.80
5	A4	31	TRP	CE2-CD2-CG	-5.55	102.86	107.30
11	AA	666	A	N7-C8-N9	5.54	116.57	113.80
11	BA	1556	G	P-O3'-C3'	5.54	126.35	119.70
11	DA	1494	U	P-O3'-C3'	5.54	126.35	119.70
11	CA	1651	G	P-O3'-C3'	5.54	126.35	119.70
11	AA	617	A	O4'-C1'-N9	5.54	112.63	108.20
11	BA	1567	U	N1-C2-O2	-5.53	118.93	122.80
11	BA	271	U	C6-N1-C1'	-5.53	113.46	121.20
17	BG	74	HIS	N-CA-C	-5.53	96.08	111.00
11	BA	1529	U	C6-N1-C1'	-5.52	113.47	121.20
11	CA	573	A	P-O3'-C3'	5.52	126.33	119.70
11	CA	886	U	C5-C6-N1	5.52	125.46	122.70
11	AA	1009	U	O4'-C1'-N1	5.51	112.61	108.20
11	DA	152	U	N1-C2-O2	5.51	126.66	122.80
17	DG	74	HIS	N-CA-C	-5.51	96.14	111.00
11	AA	906	U	C5-C6-N1	-5.50	119.95	122.70
11	CA	1453	C	C5-C6-N1	5.50	123.75	121.00
11	CA	1463	U	P-O3'-C3'	5.50	126.30	119.70
11	DA	573	A	P-O3'-C3'	5.50	126.29	119.70
11	BA	833	A	OP1-P-O3'	5.49	117.28	105.20
11	DA	1529	U	N3-C2-O2	-5.49	118.36	122.20
11	CA	1514	G	O4'-C1'-N9	5.49	112.59	108.20
11	AA	364	G	C4-N9-C1'	5.48	133.63	126.50
11	CA	343	C	C2-N1-C1'	5.48	124.83	118.80
11	DA	168	U	P-O3'-C3'	5.48	126.28	119.70
11	BA	306	A	O4'-C1'-N9	5.48	112.58	108.20
11	CA	413	C	C2-N1-C1'	5.48	124.83	118.80
11	BA	1278	C	N1-C2-O2	5.48	122.19	118.90
11	DA	1463	U	P-O3'-C3'	5.48	126.27	119.70
11	AA	604	G	N3-C4-C5	-5.47	125.86	128.60
13	CC	81	GLY	N-CA-C	-5.47	99.42	113.10
11	BA	777	U	C5-C6-N1	5.47	125.44	122.70
11	CA	364	G	C4-N9-C1'	5.47	133.61	126.50
11	AA	493	U	N3-C4-C5	5.47	117.88	114.60
11	CA	1720	G	C8-N9-C4	-5.47	104.21	106.40
11	BA	34	U	C2-N1-C1'	5.47	124.26	117.70
11	BA	1463	U	P-O3'-C3'	5.47	126.26	119.70
11	CA	1721	G	C8-N9-C4	-5.47	104.21	106.40
11	BA	163	A	P-O3'-C3'	5.46	126.26	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	1051	G	C6-C5-N7	-5.46	127.12	130.40
11	CA	1488	A	P-O3'-C3'	5.46	126.26	119.70
11	AA	1463	U	P-O3'-C3'	5.46	126.25	119.70
11	BA	1054	U	P-O3'-C3'	5.46	126.25	119.70
13	BC	81	GLY	N-CA-C	-5.46	99.46	113.10
11	AA	168	U	P-O3'-C3'	5.45	126.24	119.70
13	AC	81	GLY	N-CA-C	-5.45	99.46	113.10
11	CA	1529	U	C5-C6-N1	5.45	125.43	122.70
11	AA	833	A	OP1-P-O3'	5.45	117.19	105.20
11	AA	573	A	P-O3'-C3'	5.45	126.24	119.70
11	CA	209	G	C6-C5-N7	-5.45	127.13	130.40
11	CA	1486	U	P-O3'-C3'	5.45	126.24	119.70
11	DA	3	C	P-O3'-C3'	5.45	126.24	119.70
11	DA	34	U	C2-N1-C1'	5.45	124.24	117.70
11	AA	1463	U	N1-C2-O2	5.45	126.61	122.80
11	CA	1054	U	P-O3'-C3'	5.44	126.23	119.70
11	AA	152	U	N1-C2-O2	5.44	126.61	122.80
18	DH	55	ASP	N-CA-C	-5.44	96.32	111.00
11	BA	1651	G	P-O3'-C3'	5.44	126.22	119.70
11	CA	1172	G	P-O3'-C3'	5.43	126.22	119.70
11	CA	1720	G	N7-C8-N9	5.43	115.82	113.10
11	DA	1229	U	N1-C2-O2	5.43	126.60	122.80
11	DA	762	U	N3-C2-O2	-5.43	118.40	122.20
11	AA	1334	U	C2-N1-C1'	5.42	124.21	117.70
11	CA	1529	U	C6-N1-C1'	-5.42	113.61	121.20
11	BA	1207	C	N1-C2-O2	5.42	122.15	118.90
11	CA	515	U	N1-C2-N3	-5.42	111.65	114.90
11	DA	1431	A	P-O3'-C3'	5.42	126.20	119.70
11	CA	1009	U	N1-C2-N3	5.42	118.15	114.90
11	DA	306	A	O4'-C1'-N9	5.42	112.53	108.20
11	BA	1429	G	C2-N3-C4	5.42	114.61	111.90
11	BA	1122	G	P-O3'-C3'	5.41	126.19	119.70
11	AA	34	U	C2-N1-C1'	5.41	124.19	117.70
11	AA	633	U	P-O3'-C3'	5.41	126.19	119.70
11	AA	777	U	N3-C2-O2	-5.41	118.41	122.20
11	AA	912	A	N9-C4-C5	-5.41	103.64	105.80
11	CA	413	C	P-O3'-C3'	5.41	126.19	119.70
11	CA	1002	U	P-O3'-C3'	5.41	126.19	119.70
11	AA	1278	C	N3-C2-O2	-5.40	118.12	121.90
11	CA	1281	G	C4-N9-C1'	5.40	133.53	126.50
11	BA	1009	U	N1-C2-N3	5.40	118.14	114.90
11	CA	1749	C	C2-N1-C1'	5.40	124.74	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	1122	G	OP1-P-O3'	5.40	117.08	105.20
11	BA	1749	C	C6-N1-C2	-5.40	118.14	120.30
11	DA	1529	U	C6-N1-C1'	-5.40	113.64	121.20
11	DA	1557	U	P-O3'-C3'	5.40	126.18	119.70
11	CA	1720	G	P-O3'-C3'	5.39	126.17	119.70
11	AA	1278	C	C3'-C2'-C1'	5.39	105.81	101.50
11	BA	1744	U	C2-N1-C1'	5.39	124.17	117.70
11	BA	273	A	P-O3'-C3'	5.39	126.17	119.70
11	BA	265	C	C2-N1-C1'	5.39	124.73	118.80
11	BA	1721	G	C8-N9-C4	-5.38	104.25	106.40
11	CA	1585	U	C5-C4-O4	5.38	129.13	125.90
11	AA	1486	U	P-O3'-C3'	5.38	126.16	119.70
11	AA	1651	G	P-O3'-C3'	5.38	126.16	119.70
11	BA	168	U	P-O3'-C3'	5.38	126.16	119.70
11	BA	364	G	C6-C5-N7	-5.38	127.17	130.40
11	DA	833	A	OP1-P-O3'	5.38	117.03	105.20
11	BA	270	U	C6-N1-C1'	-5.38	113.67	121.20
11	DA	1054	U	P-O3'-C3'	5.38	126.15	119.70
11	CA	445	U	C6-N1-C1'	-5.37	113.68	121.20
11	CA	666	A	N7-C8-N9	5.37	116.49	113.80
11	CA	1245	G	C4-N9-C1'	5.37	133.49	126.50
18	CH	55	ASP	N-CA-C	-5.37	96.50	111.00
11	AA	1529	U	C6-N1-C1'	-5.37	113.69	121.20
11	AA	1720	G	N3-C4-C5	-5.37	125.92	128.60
11	BA	3	C	P-O3'-C3'	5.37	126.14	119.70
11	BA	1724	U	C5-C6-N1	5.37	125.38	122.70
11	CA	168	U	P-O3'-C3'	5.37	126.14	119.70
11	DA	445	U	C6-N1-C1'	-5.37	113.69	121.20
11	BA	1506	G	P-O3'-C3'	5.36	126.14	119.70
11	CA	1207	C	N1-C2-O2	5.36	122.12	118.90
11	BA	245	A	N3-C4-N9	-5.36	123.11	127.40
11	AA	273	A	P-O3'-C3'	5.36	126.13	119.70
11	DA	169	G	N3-C4-N9	5.36	129.22	126.00
11	DA	1744	U	C2-N1-C1'	5.36	124.13	117.70
11	CA	1453	C	C6-N1-C2	-5.36	118.16	120.30
11	AA	1207	C	N1-C2-O2	5.35	122.11	118.90
11	DA	632	U	C2-N1-C1'	5.35	124.12	117.70
11	AA	793	G	N3-C4-N9	-5.35	122.79	126.00
11	CA	860	U	C2-N1-C1'	5.35	124.12	117.70
11	AA	1453	C	C5-C6-N1	5.35	123.67	121.00
11	DA	1281	G	C4-N9-C1'	5.35	133.45	126.50
11	DA	1495	U	P-O3'-C3'	5.35	126.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	762	U	N3-C2-O2	-5.34	118.46	122.20
11	CA	273	A	P-O3'-C3'	5.34	126.11	119.70
11	BA	451	G	C4-N9-C1'	5.34	133.44	126.50
11	BA	953	C	C2-N1-C1'	5.34	124.67	118.80
11	BA	1278	C	C6-N1-C2	-5.34	118.17	120.30
11	AA	1352	A	O4'-C1'-N9	5.33	112.47	108.20
11	BA	1334	U	C2-N1-C1'	5.33	124.10	117.70
11	BA	886	U	C5-C6-N1	5.33	125.37	122.70
11	DA	573	A	C5-C6-N1	-5.33	115.03	117.70
11	AA	341	G	N7-C8-N9	5.33	115.77	113.10
11	CA	163	A	P-O3'-C3'	5.33	126.10	119.70
11	CA	614	A	C8-N9-C4	-5.33	103.67	105.80
11	CA	447	C	C6-N1-C2	-5.32	118.17	120.30
11	CA	1724	U	C5-C6-N1	5.32	125.36	122.70
11	BA	604	G	P-O3'-C3'	5.32	126.08	119.70
11	CA	239	A	C4-N9-C1'	5.32	135.88	126.30
11	CA	1406	G	P-O3'-C3'	5.32	126.08	119.70
11	DA	152	U	C6-N1-C2	-5.32	117.81	121.00
11	DA	575	U	C2-N1-C1'	5.32	124.08	117.70
11	DA	1749	C	C6-N1-C2	-5.31	118.17	120.30
11	AA	1557	U	P-O3'-C3'	5.31	126.08	119.70
18	BH	55	ASP	N-CA-C	-5.31	96.66	111.00
11	BA	347	G	C4-N9-C1'	5.31	133.40	126.50
11	BA	1002	U	P-O3'-C3'	5.31	126.07	119.70
11	CA	182	U	C2-N1-C1'	5.31	124.07	117.70
11	CA	833	A	OP1-P-O3'	5.31	116.87	105.20
11	CA	1334	U	C2-N1-C1'	5.31	124.07	117.70
11	AA	1463	U	N3-C2-O2	-5.30	118.49	122.20
11	AA	1608	C	N1-C2-O2	-5.30	115.72	118.90
11	DA	1228	A	P-O3'-C3'	5.30	126.07	119.70
11	BA	1318	C	P-O3'-C3'	5.30	126.06	119.70
11	CA	1721	G	N7-C8-N9	5.30	115.75	113.10
11	DA	347	G	C4-N9-C1'	5.30	133.39	126.50
11	DA	1651	G	P-O3'-C3'	5.30	126.06	119.70
11	AA	1228	A	P-O3'-C3'	5.30	126.06	119.70
11	AA	234	G	C3'-C2'-C1'	5.29	105.74	101.50
11	CA	341	G	N7-C8-N9	5.29	115.75	113.10
11	CA	793	G	C4-N9-C1'	-5.29	119.62	126.50
11	BA	364	G	C8-N9-C1'	-5.29	120.12	127.00
11	BA	1278	C	OP1-P-O3'	5.28	116.82	105.20
11	BA	1662	C	C5-C6-N1	5.28	123.64	121.00
11	DA	99	A	P-O3'-C3'	5.28	126.04	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	CA	1278	C	N1-C2-O2	5.28	122.07	118.90
11	AA	2	A	C4-C5-C6	5.28	119.64	117.00
11	BA	239	A	C4-N9-C1'	5.28	135.80	126.30
11	CA	3	C	P-O3'-C3'	5.28	126.03	119.70
11	AA	1223	U	P-O3'-C3'	5.28	126.03	119.70
11	BA	169	G	N3-C4-N9	5.28	129.16	126.00
11	DA	273	A	P-O3'-C3'	5.28	126.03	119.70
11	AA	306	A	O4'-C1'-N9	5.27	112.42	108.20
11	AA	1176	A	N7-C8-N9	5.27	116.44	113.80
11	DA	214	U	OP1-P-O3'	5.27	116.80	105.20
11	AA	1229	U	N1-C2-O2	5.27	126.49	122.80
11	BA	83	C	C2-N1-C1'	5.27	124.60	118.80
11	DA	1556	G	P-O3'-C3'	5.27	126.03	119.70
11	CA	912	A	C4-C5-N7	5.27	113.33	110.70
11	CA	265	C	C2-N1-C1'	5.27	124.59	118.80
11	AA	445	U	C6-N1-C1'	-5.26	113.83	121.20
11	CA	1225	U	N3-C2-O2	-5.26	118.52	122.20
11	BA	1281	G	C4-N9-C1'	5.26	133.34	126.50
11	AA	1428	C	P-O3'-C3'	5.26	126.01	119.70
11	BA	188	G	C4-N9-C1'	5.26	133.34	126.50
11	BA	1720	G	N3-C4-C5	-5.26	125.97	128.60
11	BA	1223	U	P-O3'-C3'	5.26	126.01	119.70
11	CA	83	C	C2-N1-C1'	5.26	124.58	118.80
11	DA	1429	G	C2-N3-C4	5.26	114.53	111.90
11	AA	233	U	C5-C6-N1	5.25	125.33	122.70
11	DA	1369	A	C2-N3-C4	5.25	113.23	110.60
11	CA	1171	G	N3-C4-C5	-5.25	125.97	128.60
11	DA	793	G	N3-C4-C5	5.25	131.22	128.60
11	AA	1281	G	C4-N9-C1'	5.25	133.32	126.50
11	CA	271	U	C6-N1-C1'	-5.25	113.85	121.20
11	BA	1122	G	OP1-P-O3'	5.24	116.74	105.20
11	DA	1278	C	OP1-P-O3'	5.24	116.74	105.20
11	AA	271	U	C6-N1-C1'	-5.24	113.86	121.20
11	DA	239	A	C4-N9-C1'	5.24	135.74	126.30
11	BA	1463	U	N1-C2-O2	5.24	126.47	122.80
11	AA	1176	A	C8-N9-C4	-5.24	103.70	105.80
11	CA	1266	G	N3-C4-C5	-5.24	125.98	128.60
11	DA	1002	U	P-O3'-C3'	5.24	125.98	119.70
11	AA	265	C	C2-N1-C1'	5.23	124.56	118.80
11	BA	1229	U	N1-C2-O2	5.23	126.46	122.80
11	DA	1334	U	C2-N1-C1'	5.23	123.98	117.70
11	DA	1488	A	P-O3'-C3'	5.23	125.98	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	1122	G	N9-C1'-C2'	-5.23	106.25	112.00
11	AA	763	U	C5-C6-N1	5.23	125.31	122.70
11	CA	559	C	C5-C6-N1	5.23	123.61	121.00
11	AA	1245	G	C4-N9-C1'	5.22	133.29	126.50
11	BA	341	G	C4-N9-C1'	5.22	133.29	126.50
11	CA	604	G	N7-C8-N9	5.22	115.71	113.10
11	CA	1278	C	C6-N1-C2	-5.22	118.21	120.30
11	BA	634	C	C5-C6-N1	5.22	123.61	121.00
11	CA	1266	G	N3-C4-N9	5.22	129.13	126.00
11	BA	604	G	N3-C4-N9	5.21	129.13	126.00
11	CA	1122	G	OP1-P-O3'	5.21	116.67	105.20
11	BA	239	A	N1-C2-N3	5.21	131.91	129.30
11	BA	604	G	N7-C8-N9	5.21	115.71	113.10
5	D4	31	TRP	CE2-CD2-CG	-5.21	103.13	107.30
11	BA	1662	C	C2-N1-C1'	5.21	124.53	118.80
11	CA	1229	U	N1-C2-O2	5.21	126.44	122.80
11	CA	1585	U	N1-C2-O2	5.21	126.45	122.80
11	AA	447	C	C6-N1-C2	-5.21	118.22	120.30
11	DA	777	U	C5-C6-N1	5.21	125.30	122.70
11	DA	1223	U	P-O3'-C3'	5.21	125.95	119.70
11	DA	1514	G	O4'-C1'-N9	5.21	112.36	108.20
11	CA	188	G	C4-N9-C1'	5.21	133.27	126.50
11	AA	413	C	C2-N1-C1'	5.20	124.52	118.80
11	CA	1431	A	P-O3'-C3'	5.20	125.94	119.70
11	DA	1318	C	P-O3'-C3'	5.20	125.94	119.70
11	AA	270	U	C6-N1-C1'	-5.20	113.93	121.20
11	BA	1278	C	C3'-C2'-C1'	5.19	105.66	101.50
11	CA	1554	U	C2-N3-C4	-5.19	123.88	127.00
11	CA	1724	U	C2-N1-C1'	5.19	123.93	117.70
11	DA	271	U	C6-N1-C1'	-5.19	113.94	121.20
11	CA	1463	U	N3-C2-O2	-5.18	118.57	122.20
11	DA	270	U	C6-N1-C1'	-5.18	113.94	121.20
11	DA	341	G	C4-N9-C1'	5.18	133.24	126.50
11	AA	1171	G	N3-C4-C5	-5.18	126.01	128.60
11	BA	1528	A	N7-C8-N9	-5.18	111.21	113.80
11	BA	1228	A	P-O3'-C3'	5.18	125.92	119.70
11	AA	1383	G	N3-C4-N9	-5.18	122.89	126.00
11	AA	1431	A	P-O3'-C3'	5.17	125.91	119.70
11	DA	953	C	C2-N1-C1'	5.17	124.49	118.80
11	AA	3	C	OP1-P-O3'	5.17	116.58	105.20
11	BA	775	C	P-O3'-C3'	5.17	125.91	119.70
11	AA	347	G	C4-N9-C1'	5.17	133.22	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	393	C	N1-C2-O2	5.17	122.00	118.90
11	AA	953	C	C2-N1-C1'	5.17	124.49	118.80
11	DA	1245	G	C4-N9-C1'	5.17	133.22	126.50
11	BA	496	G	C4-N9-C1'	5.17	133.22	126.50
11	DA	1508	G	N3-C4-C5	-5.17	126.02	128.60
11	AA	1402	C	C3'-C2'-C1'	5.17	105.63	101.50
11	CA	1054	U	C2-N1-C1'	5.17	123.90	117.70
11	DA	3	C	C2-N1-C1'	5.17	124.48	118.80
11	BA	1001	A	P-O3'-C3'	5.17	125.90	119.70
11	AA	1122	G	P-O3'-C3'	5.16	125.90	119.70
11	CA	1223	U	C3'-C2'-C1'	5.16	105.63	101.50
11	CA	953	C	C2-N1-C1'	5.16	124.48	118.80
11	DA	188	G	C4-N9-C1'	5.16	133.21	126.50
11	DA	371	U	C6-N1-C1'	-5.16	113.98	121.20
11	DA	1278	C	C6-N1-C2	-5.16	118.24	120.30
11	CA	1429	G	C2-N3-C4	5.16	114.48	111.90
11	DA	413	C	P-O3'-C3'	5.16	125.89	119.70
11	DA	1009	U	N1-C2-N3	5.16	117.99	114.90
11	DA	1486	U	P-O3'-C3'	5.16	125.89	119.70
11	BA	413	C	P-O3'-C3'	5.16	125.89	119.70
11	AA	1318	C	P-O3'-C3'	5.15	125.88	119.70
11	DA	1554	U	N1-C2-O2	-5.15	119.19	122.80
11	AA	1406	G	P-O3'-C3'	5.15	125.88	119.70
11	DA	1662	C	C2-N1-C1'	5.15	124.46	118.80
11	CA	1263	G	N9-C4-C5	5.15	107.46	105.40
11	BA	1508	G	C2-N3-C4	5.15	114.47	111.90
11	CA	1463	U	N1-C2-O2	5.15	126.40	122.80
11	DA	1720	G	C8-N9-C4	-5.15	104.34	106.40
11	BA	1009	U	O4'-C1'-N1	5.14	112.31	108.20
11	BA	577	C	C2-N1-C1'	5.14	124.46	118.80
11	AA	604	G	N7-C8-N9	5.14	115.67	113.10
18	AH	55	ASP	N-CA-C	-5.14	97.13	111.00
11	CA	912	A	N1-C6-N6	5.14	121.68	118.60
11	CA	1720	G	C4-N9-C1'	5.14	133.18	126.50
11	DA	887	U	C6-N1-C1'	-5.14	114.01	121.20
11	BA	1149	C	C6-N1-C2	-5.13	118.25	120.30
11	BA	1486	U	P-O3'-C3'	5.13	125.86	119.70
11	CA	214	U	P-O3'-C3'	5.13	125.86	119.70
11	DA	892	G	N3-C4-C5	5.13	131.17	128.60
11	BA	1585	U	C5-C4-O4	5.13	128.98	125.90
11	DA	1223	U	C3'-C2'-C1'	5.13	105.60	101.50
11	AA	1514	G	O4'-C1'-N9	5.12	112.30	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AA	341	G	C4-N9-C1'	5.12	133.16	126.50
11	BA	1303	A	OP2-P-O3'	5.12	116.47	105.20
11	DA	378	A	C8-N9-C4	-5.12	103.75	105.80
11	AA	413	C	P-O3'-C3'	5.12	125.84	119.70
11	AA	793	G	C4-N9-C1'	-5.12	119.85	126.50
11	BA	229	A	C4-N9-C1'	5.12	135.51	126.30
11	BA	666	A	C8-N9-C4	-5.12	103.75	105.80
11	AA	364	G	C6-C5-N7	-5.12	127.33	130.40
11	BA	1402	C	C3'-C2'-C1'	5.12	105.59	101.50
11	CA	1228	A	P-O3'-C3'	5.12	125.84	119.70
11	DA	890	U	P-O3'-C3'	5.12	125.84	119.70
11	BA	374	G	C4-C5-N7	5.11	112.84	110.80
11	BA	1431	A	P-O3'-C3'	5.11	125.83	119.70
11	CA	1318	C	P-O3'-C3'	5.11	125.83	119.70
11	CA	1662	C	C2-N1-C1'	5.11	124.42	118.80
11	DA	1122	G	P-O3'-C3'	5.11	125.83	119.70
11	CA	1369	A	C2-N3-C4	5.11	113.16	110.60
20	BJ	70	CYS	CA-CB-SG	-5.11	104.81	114.00
11	CA	762	U	N3-C2-O2	-5.10	118.63	122.20
11	CA	1149	C	C2-N1-C1'	5.10	124.41	118.80
11	AA	1223	U	C3'-C2'-C1'	5.10	105.58	101.50
11	AA	1149	C	C6-N1-C2	-5.10	118.26	120.30
11	DA	451	G	C4-N9-C1'	5.10	133.13	126.50
11	DA	1509	U	P-O3'-C3'	5.10	125.82	119.70
11	CA	1557	U	P-O3'-C3'	5.10	125.81	119.70
11	BA	1557	U	P-O3'-C3'	5.09	125.81	119.70
11	DA	265	C	C2-N1-C1'	5.09	124.40	118.80
11	BA	1171	G	N3-C4-C5	-5.09	126.06	128.60
11	DA	1149	C	C2-N1-C1'	5.09	124.40	118.80
11	DA	1406	G	P-O3'-C3'	5.09	125.81	119.70
11	CA	1528	A	O4'-C1'-N9	5.09	112.27	108.20
11	DA	83	C	C2-N1-C1'	5.09	124.40	118.80
11	BA	840	A	P-O3'-C3'	5.09	125.81	119.70
11	AA	1582	G	N1-C6-O6	5.08	122.95	119.90
11	CA	270	U	C6-N1-C1'	-5.08	114.08	121.20
11	DA	422	G	N7-C8-N9	5.08	115.64	113.10
11	BA	1223	U	C3'-C2'-C1'	5.08	105.57	101.50
11	BA	559	C	C2-N3-C4	5.08	122.44	119.90
11	CA	347	G	C4-N9-C1'	5.08	133.10	126.50
11	CA	1402	C	C3'-C2'-C1'	5.08	105.56	101.50
11	BA	1225	U	C6-N1-C1'	-5.07	114.10	121.20
11	DA	1463	U	N1-C2-O2	5.07	126.35	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	229	A	C4-C5-C6	5.07	119.53	117.00
11	DA	886	U	C5-C6-N1	5.07	125.23	122.70
11	DA	1225	U	C6-N1-C1'	-5.07	114.10	121.20
11	AA	1278	C	OP1-P-O3'	5.07	116.35	105.20
11	BA	1369	A	C2-N3-C4	5.07	113.13	110.60
11	BA	2	A	C4-C5-C6	5.06	119.53	117.00
11	CA	1508	G	C2-N3-C4	5.06	114.43	111.90
11	AA	1529	U	C5-C6-N1	5.06	125.23	122.70
11	CA	152	U	C6-N1-C2	-5.06	117.96	121.00
11	DA	1256	C	P-O3'-C3'	5.06	125.77	119.70
11	AA	1429	G	C2-N3-C4	5.05	114.43	111.90
11	AA	1054	U	C2-N1-C1'	5.05	123.76	117.70
11	BA	169	G	C4-N9-C1'	5.05	133.07	126.50
11	CA	892	G	C4-N9-C1'	-5.05	119.93	126.50
11	BA	229	A	N3-C4-C5	-5.05	123.27	126.80
11	BA	1720	G	C4-N9-C1'	5.05	133.06	126.50
11	CA	341	G	C4-N9-C1'	5.05	133.06	126.50
11	DA	666	A	C8-N9-C4	-5.05	103.78	105.80
11	BA	393	C	C4-C5-C6	-5.04	114.88	117.40
11	AA	1528	A	O4'-C1'-N9	5.04	112.23	108.20
11	BA	1514	G	O4'-C1'-N9	5.04	112.23	108.20
11	DA	1009	U	O4'-C1'-N1	5.04	112.23	108.20
11	CA	34	U	C2-N1-C1'	5.04	123.75	117.70
11	DA	214	U	P-O3'-C3'	5.04	125.75	119.70
11	DA	1529	U	C5-C6-N1	5.04	125.22	122.70
11	BA	1463	U	N3-C2-O2	-5.04	118.67	122.20
11	CA	2	A	C4-C5-C6	5.04	119.52	117.00
11	CA	1352	A	O4'-C1'-N9	5.04	112.23	108.20
11	CA	3	C	OP1-P-O3'	5.04	116.28	105.20
11	BA	793	G	N3-C4-C5	5.03	131.12	128.60
11	DA	1463	U	N3-C2-O2	-5.03	118.68	122.20
11	AA	1662	C	C2-N1-C1'	5.03	124.33	118.80
11	BA	350	A	O4'-C1'-N9	-5.03	104.18	108.20
11	CA	99	A	P-O3'-C3'	5.03	125.73	119.70
11	DA	1054	U	C2-N1-C1'	5.02	123.72	117.70
11	DA	1296	G	N9-C4-C5	5.02	107.41	105.40
11	BA	3	C	OP1-P-O3'	5.02	116.24	105.20
11	CA	1529	U	N3-C2-O2	-5.02	118.69	122.20
11	CA	350	A	O4'-C1'-N9	-5.01	104.19	108.20
11	CA	1122	G	P-O3'-C3'	5.01	125.72	119.70
11	AA	666	A	C8-N9-C4	-5.01	103.80	105.80
11	AA	860	U	C2-N1-C1'	5.01	123.71	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	BA	1172	G	P-O3'-C3'	5.01	125.71	119.70
11	DA	1122	G	N9-C1'-C2'	-5.01	106.49	112.00
11	DA	1508	G	C2-N3-C4	5.01	114.40	111.90
11	AA	890	U	P-O3'-C3'	5.01	125.71	119.70
11	DA	1479	G	C4-N9-C1'	5.01	133.01	126.50
11	BA	1352	A	O4'-C1'-N9	5.00	112.20	108.20
11	DA	1402	C	C3'-C2'-C1'	5.00	105.50	101.50
11	AA	1479	G	C4-N9-C1'	5.00	133.00	126.50
11	BA	445	U	C6-N1-C1'	-5.00	114.20	121.20
11	BA	860	U	C2-N1-C1'	5.00	123.70	117.70
11	CA	777	U	C5-C6-N1	5.00	125.20	122.70

There are no chirality outliers.

All (62) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	A3	131	LEU	Peptide
5	A4	71	THR	Peptide
7	A6	65	THR	Peptide
9	A8	99	ASN	Peptide
17	AG	73	PHE	Peptide
18	AH	58	SER	Peptide
18	AH	66	ILE	Peptide
20	AJ	72	GLU	Peptide
21	AK	137	THR	Peptide
25	AO	15	GLY	Peptide
29	AS	133	HIS	Peptide
31	AU	51	ASP	Peptide
31	AU	66	ASN	Peptide
33	AW	242	SER	Peptide
4	B3	131	LEU	Peptide
5	B4	238	TYR	Peptide
5	B4	71	THR	Peptide
7	B6	65	THR	Peptide
9	B8	99	ASN	Peptide
17	BG	73	PHE	Peptide
18	BH	58	SER	Peptide
18	BH	66	ILE	Peptide
20	BJ	72	GLU	Peptide
21	BK	137	THR	Peptide
25	BO	15	GLY	Peptide
29	BS	133	HIS	Peptide

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Mol	Chain	Res	Type	Group
31	BU	51	ASP	Peptide
31	BU	66	ASN	Peptide
33	BW	242	SER	Peptide
4	C3	131	LEU	Peptide
5	C4	238	TYR	Peptide
5	C4	71	THR	Peptide
7	C6	65	THR	Peptide
9	C8	99	ASN	Peptide
17	CG	73	PHE	Peptide
18	CH	58	SER	Peptide
18	CH	66	ILE	Peptide
20	CJ	72	GLU	Peptide
21	CK	137	THR	Peptide
24	CN	54	TYR	Peptide
25	CO	15	GLY	Peptide
29	CS	133	HIS	Peptide
31	CU	51	ASP	Peptide
31	CU	66	ASN	Peptide
33	CW	242	SER	Peptide
4	D3	131	LEU	Peptide
5	D4	238	TYR	Peptide
5	D4	71	THR	Peptide
7	D6	65	THR	Peptide
9	D8	99	ASN	Peptide
17	DG	73	PHE	Peptide
18	DH	58	SER	Peptide
18	DH	66	ILE	Peptide
20	DJ	72	GLU	Peptide
21	DK	137	THR	Peptide
25	DO	15	GLY	Peptide
29	DS	105	LYS	Peptide
29	DS	133	HIS	Peptide
31	DU	51	ASP	Peptide
31	DU	66	ASN	Peptide
32	DV	70	SER	Mainchain
33	DW	242	SER	Peptide

5.2 Too-close contacts

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

the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A0	817	0	829	24	0
1	B0	817	0	829	48	0
1	C0	817	0	829	33	0
1	D0	817	0	829	29	0
2	A1	511	0	544	24	0
2	B1	511	0	544	18	0
2	C1	511	0	544	23	1
2	D1	511	0	544	22	0
3	A2	1693	0	1795	75	1
3	B2	1693	0	1795	61	0
3	C2	1693	0	1795	65	0
3	D2	1693	0	1795	67	0
4	A3	1629	0	1708	63	0
4	B3	1629	0	1708	63	0
4	C3	1629	0	1708	64	0
4	D3	1629	0	1708	58	0
5	A4	1679	0	1762	60	0
5	B4	1775	0	1851	64	0
5	C4	1775	0	1851	60	0
5	D4	1775	0	1851	68	0
6	A5	812	0	854	46	0
6	B5	812	0	854	41	0
6	C5	812	0	854	40	0
6	D5	812	0	854	39	0
7	A6	632	0	646	28	0
7	B6	632	0	646	31	1
7	C6	632	0	646	29	0
7	D6	632	0	646	33	0
8	A7	833	0	844	37	0
8	B7	833	0	844	28	0
8	C7	833	0	844	36	0
8	D7	833	0	844	47	0
9	A8	615	0	660	25	0
9	B8	615	0	660	27	1
9	C8	615	0	660	20	0
9	D8	615	0	660	36	0
10	A9	751	0	807	55	0
10	B9	751	0	809	76	0
10	C9	751	0	809	41	0
10	D9	751	0	809	56	0
11	AA	36629	0	18413	1086	0
11	BA	36629	0	18413	1119	3

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	CA	36629	0	18413	1054	2
11	DA	36629	0	18413	1112	1
12	AB	1619	0	1623	70	0
12	BB	1619	0	1623	75	0
12	CB	1619	0	1623	66	0
12	DB	1619	0	1623	61	0
13	AC	1811	0	1907	64	0
13	BC	1811	0	1907	68	0
13	CC	1811	0	1907	78	0
13	DC	1811	0	1907	84	0
14	AD	1478	0	1569	74	0
14	BD	1478	0	1569	72	0
14	CD	1478	0	1569	65	0
14	DD	1478	0	1569	64	0
15	AE	1818	0	1853	76	0
15	BE	1818	0	1853	75	0
15	CE	1818	0	1853	80	0
15	DE	1818	0	1853	78	0
16	AF	736	0	722	16	0
16	BF	736	0	722	13	0
16	CF	736	0	722	14	0
16	DF	736	0	722	12	0
17	AG	1520	0	1572	58	0
17	BG	1520	0	1572	57	0
17	CG	1520	0	1572	52	0
17	DG	1520	0	1572	54	0
18	AH	1040	0	1096	42	0
18	BH	1040	0	1096	42	0
18	CH	1040	0	1096	49	0
18	DH	1040	0	1096	43	0
19	AI	1135	0	1204	46	0
19	BI	1135	0	1204	48	0
19	CI	1135	0	1204	47	0
19	DI	1135	0	1204	50	0
20	AJ	859	0	921	36	0
20	BJ	859	0	921	41	0
20	CJ	859	0	921	39	0
20	DJ	859	0	921	39	0
21	AK	1063	0	1088	62	0
21	BK	1063	0	1088	59	0
21	CK	1063	0	1088	57	0
21	DK	1063	0	1088	61	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	AL	1086	0	1156	46	0
22	BL	1086	0	1156	42	0
22	CL	1086	0	1156	48	0
22	DL	1086	0	1156	44	0
23	AM	1231	0	1276	57	0
23	BM	1231	0	1276	60	0
23	CM	1231	0	1276	55	0
23	DM	1231	0	1276	78	0
24	AN	454	0	453	32	0
24	BN	454	0	453	30	0
24	CN	454	0	453	27	0
24	DN	454	0	453	32	0
25	AO	1229	0	1338	47	0
25	BO	1229	0	1338	49	0
25	CO	1229	0	1338	48	0
25	DO	1229	0	1338	50	0
26	AP	1197	0	1285	45	0
26	BP	1197	0	1285	51	0
26	CP	1197	0	1285	41	1
26	DP	1197	0	1285	44	0
27	AQ	1267	0	1342	60	0
27	BQ	1267	0	1342	60	0
27	CQ	1267	0	1342	55	0
27	DQ	1267	0	1342	56	0
28	AR	2682	0	2629	104	0
28	BR	2682	0	2629	103	0
28	CR	2682	0	2629	116	0
28	DR	2682	0	2629	100	0
29	AS	1010	0	1059	42	0
29	BS	1010	0	1059	40	0
29	CS	1010	0	1059	39	0
29	DS	1010	0	1059	39	0
30	AT	1242	0	1290	52	0
30	BT	1242	0	1290	57	0
30	CT	1242	0	1290	50	0
30	DT	1242	0	1290	53	1
31	AU	952	0	993	50	0
31	BU	952	0	993	42	0
31	CU	952	0	993	37	0
31	DU	952	0	993	48	0
32	AV	968	0	1031	41	0
32	BV	968	0	1031	44	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	CV	968	0	1031	44	0
32	DV	968	0	1031	42	0
33	AW	2079	0	2151	85	0
33	BW	2079	0	2151	91	0
33	CW	2079	0	2151	87	0
33	DW	2079	0	2151	86	0
34	AX	599	0	651	19	0
34	BX	599	0	651	22	0
34	CX	599	0	651	21	0
34	DX	599	0	651	18	0
35	AY	1826	0	1954	72	0
35	BY	1826	0	1954	80	0
35	CY	1826	0	1954	67	0
35	DY	1826	0	1954	80	0
36	AZ	747	0	758	31	0
36	BZ	747	0	758	33	0
36	CZ	747	0	758	33	0
36	DZ	747	0	758	28	0
37	A5	1	0	0	0	0
37	A6	1	0	0	0	0
37	A9	1	0	0	0	0
37	AN	1	0	0	0	0
37	B5	1	0	0	0	0
37	B6	1	0	0	0	0
37	B9	1	0	0	0	0
37	BN	1	0	0	0	0
37	C5	1	0	0	0	0
37	C6	1	0	0	0	0
37	C9	1	0	0	0	0
37	CN	1	0	0	0	0
37	D5	1	0	0	0	0
37	D6	1	0	0	0	0
37	D9	1	0	0	0	0
37	DN	1	0	0	0	0
38	AA	79	0	0	0	0
38	BA	79	0	0	0	0
38	CA	79	0	0	0	0
38	DA	79	0	0	0	0
39	AA	474	0	0	51	0
39	BA	474	0	0	48	0
39	C2	2	0	0	0	0
39	C4	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	C5	3	0	0	1	0
39	CA	467	0	0	47	0
39	DA	474	0	0	54	0
All	All	315512	0	247405	9493	6

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 17.

All (9493) 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)
10:B9:87:LYS:NZ	11:BA:1187:C:OP2	1.62	1.32
11:DA:1377:A:OP2	17:DG:54:LYS:NZ	1.65	1.29
11:BA:1377:A:OP2	17:BG:54:LYS:NZ	1.67	1.25
11:DA:1214:A:OP1	29:DS:64:LYS:NZ	1.71	1.23
9:D8:81:ARG:NH2	11:DA:1505:C:OP2	1.73	1.20
15:CE:141:ARG:NH1	36:CZ:25:ASP:OD2	1.76	1.17
10:C9:87:LYS:NZ	11:CA:1187:C:OP2	1.77	1.17
15:BE:141:ARG:NH1	36:BZ:25:ASP:OD2	1.75	1.17
15:DE:141:ARG:NH1	36:DZ:25:ASP:OD2	1.76	1.15
36:DZ:45:SER:O	36:DZ:74:ARG:NH1	1.81	1.14
36:AZ:45:SER:O	36:AZ:74:ARG:NH1	1.81	1.13
11:CA:1214:A:OP1	29:CS:64:LYS:NZ	1.80	1.12
36:BZ:45:SER:O	36:BZ:74:ARG:NH1	1.83	1.11
36:CZ:45:SER:O	36:CZ:74:ARG:NH1	1.83	1.10
15:AE:141:ARG:NH1	36:AZ:25:ASP:OD2	1.84	1.10
11:CA:1266:G:O6	39:CA:2240:HOH:O	1.71	1.09
3:A2:145:ARG:NH1	11:AA:183:G:O6	1.86	1.08
11:DA:1400:G:OP2	39:DA:8216:HOH:O	1.74	1.05
2:A1:68:ARG:HH12	6:A5:101:ILE:HD11	1.16	1.04
10:A9:156:LYS:NZ	7:D6:58:SER:O	1.91	1.02
11:AA:391:A:O2'	11:AA:392:A:OP2	1.80	1.00
11:CA:1580:U:H5''	19:CI:74:SER:HB2	1.43	1.00
13:BC:196:GLU:HG3	13:BC:203:PHE:HB3	1.44	0.99
11:AA:1400:G:OP2	39:AA:2388:HOH:O	1.79	0.99
13:CC:196:GLU:HG3	13:CC:203:PHE:HB3	1.44	0.99
11:CA:676:C:O2'	11:CA:677:G:OP2	1.80	0.99
11:BA:1200:G:O6	31:CU:91:LYS:NZ	1.94	0.98
11:AA:229:A:O2'	11:AA:230:A:OP2	1.80	0.98
11:BA:391:A:O2'	11:BA:392:A:OP2	1.81	0.98
11:BA:1214:A:OP1	29:BS:64:LYS:NZ	1.95	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:391:A:O2'	11:DA:392:A:OP2	1.80	0.98
11:CA:391:A:O2'	11:CA:392:A:OP2	1.80	0.98
6:D5:8:ALA:HB1	11:DA:1744:U:H5'	1.44	0.98
11:AA:416:C:O2'	11:AA:417:A:OP2	1.81	0.97
11:DA:416:C:O2'	11:DA:417:A:OP2	1.82	0.97
13:AC:196:GLU:HG3	13:AC:203:PHE:HB3	1.45	0.97
11:CA:416:C:O2'	11:CA:417:A:OP2	1.81	0.97
11:CA:1400:G:OP2	39:CA:2236:HOH:O	1.83	0.96
13:DC:196:GLU:HG3	13:DC:203:PHE:HB3	1.44	0.96
11:DA:1213:G:H4'	29:DS:83:THR:HA	1.47	0.96
13:DC:9:ASN:HB3	13:DC:12:LYS:HB3	1.46	0.96
11:DA:873:G:H1	11:DA:895:U:H3	1.13	0.96
11:DA:1318:C:OP2	20:DJ:51:LYS:NZ	1.98	0.96
11:DA:1580:U:H5''	19:DI:74:SER:HB2	1.46	0.96
11:CA:873:G:H1	11:CA:895:U:H3	1.13	0.96
11:BA:416:C:O2'	11:BA:417:A:OP2	1.82	0.96
11:BA:873:G:H1	11:BA:895:U:H3	1.12	0.96
11:CA:797:A:H61	11:CA:835:U:H3	1.14	0.96
11:AA:647:U:O2'	11:AA:649:U:OP2	1.83	0.95
11:CA:273:A:O2'	11:CA:274:C:OP2	1.84	0.95
11:CA:947:C:OP2	25:CO:7:LYS:NZ	2.00	0.95
11:AA:873:G:H1	11:AA:895:U:H3	1.12	0.95
11:AA:654:U:H1'	11:AA:656:G:H21	1.28	0.95
10:D9:73:LYS:NZ	11:DA:1157:U:OP1	1.98	0.95
11:AA:1226:U:OP1	31:AU:34:ARG:NH1	2.00	0.95
10:D9:87:LYS:NZ	11:DA:1187:C:OP2	2.00	0.95
11:CA:647:U:O2'	11:CA:649:U:OP2	1.83	0.95
28:CR:118:GLN:N	28:CR:139:GLU:OE2	1.99	0.94
11:DA:1166:A:OP2	20:DJ:73:GLY:HA3	1.67	0.94
28:CR:23:TRP:HB2	28:CR:47:ARG:HG3	1.48	0.94
11:DA:273:A:O2'	11:DA:274:C:OP2	1.84	0.94
28:DR:118:GLN:N	28:DR:139:GLU:OE2	2.00	0.94
11:DA:947:C:OP2	25:DO:7:LYS:NZ	2.00	0.94
11:AA:500:U:OP1	34:AX:28:ARG:NH2	2.01	0.94
11:BA:1226:U:OP1	31:BU:34:ARG:NH1	2.01	0.94
11:AA:273:A:O2'	11:AA:274:C:OP2	1.86	0.94
11:DA:797:A:H61	11:DA:835:U:H3	1.13	0.94
11:AA:1580:U:H5''	19:AI:74:SER:HB2	1.49	0.94
19:CI:71:VAL:HG21	19:CI:83:ILE:HG12	1.50	0.94
11:AA:4:C:O2'	14:AD:17:ARG:NH2	2.01	0.94
8:A7:6:LYS:NZ	31:AU:27:LYS:HZ1	1.64	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CC:9:ASN:HB3	13:CC:12:LYS:HB3	1.49	0.93
8:D7:6:LYS:HZ1	31:DU:27:LYS:NZ	1.65	0.93
15:DE:80:GLU:OE2	15:DE:187:LYS:NZ	1.99	0.93
15:AE:80:GLU:OE2	15:AE:187:LYS:NZ	2.01	0.93
19:BI:71:VAL:HG21	19:BI:83:ILE:HG12	1.51	0.93
11:AA:1486:U:O2'	11:AA:1487:A:OP2	1.86	0.93
36:DZ:40:PHE:HB2	36:DZ:43:ASP:HB2	1.50	0.93
36:AZ:40:PHE:HB2	36:AZ:43:ASP:HB2	1.51	0.93
11:DA:81:A:OP2	39:DA:7767:HOH:O	1.85	0.93
19:AI:71:VAL:HG21	19:AI:83:ILE:HG12	1.51	0.93
28:DR:23:TRP:HB2	28:DR:47:ARG:HG3	1.50	0.93
6:B5:8:ALA:HB1	11:BA:1744:U:H5'	1.50	0.93
11:DA:1486:U:O2'	11:DA:1487:A:OP2	1.85	0.93
28:AR:23:TRP:HB2	28:AR:47:ARG:HG3	1.49	0.92
28:BR:118:GLN:N	28:BR:139:GLU:OE2	2.01	0.92
11:AA:1214:A:OP1	29:AS:64:LYS:NZ	2.02	0.92
11:DA:229:A:O2'	11:DA:230:A:OP2	1.86	0.92
11:CA:1452:G:O6	30:CT:11:LYS:NZ	2.02	0.92
28:AR:118:GLN:N	28:AR:139:GLU:OE2	2.01	0.92
15:BE:80:GLU:OE2	15:BE:187:LYS:NZ	2.02	0.92
36:CZ:40:PHE:HB2	36:CZ:43:ASP:HB2	1.52	0.92
12:AB:152:TYR:HA	36:AZ:74:ARG:HG2	1.51	0.92
11:BA:1486:U:O2'	11:BA:1487:A:OP2	1.87	0.92
11:CA:500:U:OP2	34:CX:28:ARG:NH2	2.01	0.92
13:BC:9:ASN:HB3	13:BC:12:LYS:HB3	1.51	0.92
13:AC:9:ASN:HB3	13:AC:12:LYS:HB3	1.49	0.92
28:BR:23:TRP:HB2	28:BR:47:ARG:HG3	1.51	0.92
19:DI:71:VAL:HG21	19:DI:83:ILE:HG12	1.51	0.92
11:AA:1166:A:OP2	20:AJ:73:GLY:HA3	1.70	0.91
15:CE:80:GLU:OE2	15:CE:187:LYS:NZ	2.01	0.91
6:C5:62:GLU:HB2	6:C5:65:GLY:HA3	1.52	0.91
11:BA:273:A:O2'	11:BA:274:C:OP2	1.85	0.91
11:BA:1450:G:OP1	30:BT:60:ARG:NH1	2.02	0.91
11:BA:1580:U:H5''	19:BI:74:SER:HB2	1.48	0.91
11:CA:1226:U:OP1	31:CU:34:ARG:NH1	2.02	0.91
6:A5:62:GLU:HB2	6:A5:65:GLY:HA3	1.53	0.91
11:CA:4:C:O2'	14:CD:17:ARG:NH2	2.02	0.91
11:DA:1494:U:O2'	11:DA:1495:U:OP2	1.87	0.91
11:BA:508:A:OP1	39:BA:6162:HOH:O	1.87	0.91
36:BZ:40:PHE:HB2	36:BZ:43:ASP:HB2	1.52	0.91
28:BR:93:SER:HG	28:BR:103:TRP:HE1	1.15	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D5:62:GLU:HB2	6:D5:65:GLY:HA3	1.53	0.91
11:CA:1486:U:O2'	11:CA:1487:A:OP2	1.89	0.90
11:DA:604:G:O2'	11:DA:605:U:OP2	1.88	0.90
11:BA:63:U:H5'	11:BA:64:U:OP2	1.71	0.90
6:C5:7:ASN:ND2	11:CA:1750:A:OP1	2.04	0.90
11:BA:1012:C:HO2'	18:BH:2:VAL:N	1.69	0.90
10:A9:73:LYS:NZ	11:AA:1159:U:OP1	2.04	0.90
2:B1:21:ARG:NH1	11:BA:1591:C:O2	2.05	0.90
11:AA:797:A:H61	11:AA:835:U:H3	1.13	0.90
6:B5:7:ASN:ND2	11:BA:1750:A:OP1	2.03	0.90
28:CR:178:ASN:HD22	23:DM:110:ARG:HH11	1.18	0.90
11:BA:469:A:H2'	11:BA:470:G:H8	1.37	0.90
11:AA:63:U:H5'	11:AA:64:U:OP2	1.72	0.90
11:BA:1608:C:H4'	11:BA:1609:C:H5''	1.54	0.90
11:DA:1311:C:O2'	11:DA:1313:G:N7	2.05	0.89
6:A5:7:ASN:ND2	11:AA:1750:A:OP1	2.04	0.89
11:DA:63:U:H5'	11:DA:64:U:OP2	1.73	0.89
11:AA:797:A:N6	11:AA:835:U:H3	1.70	0.89
11:BA:1506:G:O2'	11:BA:1507:U:OP2	1.91	0.89
11:CA:229:A:O2'	11:CA:230:A:OP2	1.90	0.89
11:DA:989:G:N7	39:DA:7205:HOH:O	2.06	0.89
11:BA:947:C:OP2	25:BO:7:LYS:NZ	2.05	0.89
8:A7:6:LYS:HZ1	31:AU:27:LYS:HZ1	0.90	0.89
11:BA:797:A:N6	11:BA:835:U:H3	1.70	0.89
11:CA:797:A:N6	11:CA:835:U:H3	1.71	0.89
6:A5:42:ARG:HH22	21:AK:107:GLN:HG3	1.38	0.89
11:DA:797:A:N6	11:DA:835:U:H3	1.71	0.88
11:CA:11:A:OP1	39:CA:2006:HOH:O	1.89	0.88
6:D5:7:ASN:ND2	11:DA:1750:A:OP1	2.06	0.88
11:BA:1318:C:OP2	20:BJ:51:LYS:NZ	2.06	0.88
11:DA:1428:C:OP1	39:DA:8116:HOH:O	1.92	0.88
6:B5:62:GLU:HB2	6:B5:65:GLY:HA3	1.53	0.88
6:A5:45:VAL:HG13	6:A5:49:SER:HB3	1.56	0.88
11:AA:1032:U:H3	11:AA:1035:A:H62	1.22	0.88
5:C4:222:LYS:NZ	11:CA:864:U:OP2	2.07	0.88
11:CA:1608:C:H4'	11:CA:1609:C:H5''	1.56	0.88
3:A2:153:ARG:NH1	11:AA:189:C:O2	2.07	0.88
11:AA:604:G:O2'	11:AA:605:U:OP2	1.90	0.88
6:D5:45:VAL:HG13	6:D5:49:SER:HB3	1.54	0.88
11:DA:108:A:O2'	27:DQ:66:ARG:NH1	2.07	0.88
6:C5:8:ALA:HB1	11:CA:1744:U:H5'	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B5:45:VAL:HG13	6:B5:49:SER:HB3	1.55	0.88
11:DA:1608:C:H4'	11:DA:1609:C:H5''	1.57	0.87
15:DE:155:ILE:HD11	15:DE:197:ILE:HD11	1.55	0.87
11:AA:947:C:OP2	25:AO:7:LYS:NZ	2.07	0.87
15:BE:155:ILE:HD11	15:BE:197:ILE:HD11	1.56	0.87
11:AA:559:C:OP1	11:AA:559:C:H4'	1.74	0.87
11:CA:1311:C:O2'	11:CA:1313:G:N7	2.06	0.87
11:BA:1185:C:N4	39:BA:6569:HOH:O	2.08	0.87
11:DA:469:A:H2'	11:DA:470:G:H8	1.38	0.87
6:C5:45:VAL:HG13	6:C5:49:SER:HB3	1.57	0.87
11:CA:1263:G:N2	11:CA:1296:G:H22	1.72	0.87
11:CA:211:U:H4'	11:CA:212:A:OP2	1.75	0.87
11:CA:63:U:H5'	11:CA:64:U:OP2	1.74	0.87
28:BR:282:ASN:H	28:BR:290:PRO:HG2	1.40	0.87
11:BA:1032:U:H3	11:BA:1035:A:H62	1.23	0.87
9:A8:81:ARG:NH2	11:AA:1505:C:OP2	2.08	0.87
11:BA:1319:U:OP2	20:BJ:20:ARG:NH2	2.08	0.87
11:CA:108:A:O2'	27:CQ:66:ARG:NH1	2.08	0.86
11:AA:1452:G:O6	30:AT:11:LYS:NZ	2.07	0.86
11:BA:789:A:OP1	39:BA:6170:HOH:O	1.93	0.86
10:D9:103:LEU:HG	31:DU:58:LEU:HD23	1.57	0.86
11:BA:559:C:H4'	11:BA:559:C:OP1	1.75	0.86
11:CA:1420:U:OP2	39:CA:2269:HOH:O	1.93	0.86
11:AA:1399:G:OP1	39:AA:2388:HOH:O	1.92	0.86
11:DA:1486:U:O2'	13:DC:9:ASN:HA	1.75	0.86
11:AA:1450:G:OP1	30:AT:60:ARG:NH1	2.08	0.86
11:AA:1311:C:O2'	11:AA:1313:G:N7	2.07	0.86
11:AA:1608:C:H4'	11:AA:1609:C:H5''	1.55	0.86
11:DA:676:C:O2'	11:DA:677:G:OP2	1.91	0.86
12:DB:152:TYR:HA	36:DZ:74:ARG:HG2	1.55	0.86
11:DA:789:A:OP1	39:DA:7828:HOH:O	1.93	0.86
11:DA:1506:G:O2'	11:DA:1507:U:OP2	1.94	0.86
11:DA:654:U:H1'	11:DA:656:G:H21	1.40	0.86
11:AA:1012:C:HO2'	18:AH:2:VAL:N	1.73	0.86
15:CE:155:ILE:HD11	15:CE:197:ILE:HD11	1.54	0.86
11:CA:1506:G:O2'	11:CA:1507:U:OP2	1.92	0.86
11:BA:797:A:H61	11:BA:835:U:H3	1.14	0.86
6:D5:97:ARG:O	11:DA:1750:A:O2'	1.94	0.86
11:BA:413:C:OP2	35:BY:87:ARG:NH2	2.09	0.86
28:DR:47:ARG:O	28:DR:49:LYS:N	2.09	0.86
28:DR:93:SER:HG	28:DR:103:TRP:HE1	1.22	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1012:C:HO2'	18:CH:2:VAL:N	1.73	0.86
11:AA:673:A:H2'	11:AA:675:A:H62	1.41	0.86
11:DA:1450:G:OP1	30:DT:60:ARG:NH1	2.08	0.86
10:A9:88:HIS:CD2	11:AA:1219:U:H5''	2.10	0.86
33:AW:108:LYS:HB2	33:AW:110:ARG:HE	1.41	0.86
11:DA:1032:U:H3	11:DA:1035:A:H62	1.23	0.86
11:AA:211:U:H4'	11:AA:212:A:OP2	1.74	0.86
11:CA:1494:U:O2'	11:CA:1495:U:OP2	1.93	0.86
33:CW:108:LYS:HB2	33:CW:110:ARG:HE	1.40	0.86
12:BB:77:TYR:HD1	12:BB:164:THR:HG23	1.41	0.86
9:D8:43:VAL:HG21	23:DM:25:LYS:HB2	1.57	0.85
12:DB:77:TYR:HD1	12:DB:164:THR:HG23	1.40	0.85
23:BM:136:GLN:H	23:BM:136:GLN:HE21	1.24	0.85
11:DA:4:C:O2'	14:DD:17:ARG:NH2	2.07	0.85
11:CA:604:G:O2'	11:CA:605:U:OP2	1.92	0.85
11:AA:1494:U:O2'	11:AA:1495:U:OP2	1.93	0.85
11:BA:1311:C:O2'	11:BA:1313:G:N7	2.09	0.85
28:BR:47:ARG:O	28:BR:49:LYS:N	2.09	0.85
11:BA:265:C:OP1	35:BY:180:GLN:NE2	2.07	0.85
11:BA:1452:G:O6	30:BT:11:LYS:NZ	2.09	0.85
11:BA:1399:G:OP1	39:BA:6592:HOH:O	1.95	0.85
28:CR:282:ASN:H	28:CR:290:PRO:HG2	1.41	0.85
11:BA:229:A:H1'	11:BA:230:A:C8	2.09	0.85
11:AA:1263:G:N2	11:AA:1296:G:H22	1.74	0.85
11:BA:1263:G:N2	11:BA:1296:G:H22	1.74	0.85
12:CB:77:TYR:HD1	12:CB:164:THR:HG23	1.39	0.85
11:BA:604:G:O2'	11:BA:605:U:OP2	1.93	0.85
11:DA:1263:G:N2	11:DA:1296:G:H22	1.74	0.85
6:C5:87:ARG:NH1	11:CA:1126:C:OP1	2.10	0.85
11:DA:1452:G:O6	30:DT:11:LYS:NZ	2.09	0.85
28:AR:47:ARG:O	28:AR:49:LYS:N	2.08	0.85
28:AR:282:ASN:H	28:AR:290:PRO:HG2	1.42	0.85
11:AA:1001:A:O2'	11:AA:1002:U:OP2	1.94	0.85
11:AA:121:U:H4'	33:AW:150:ARG:NH1	1.91	0.85
11:BA:1166:A:OP2	20:BJ:73:GLY:HA3	1.77	0.85
11:DA:559:C:H4'	11:DA:559:C:OP1	1.76	0.85
11:BA:1473:G:OP1	30:BT:102:LYS:NZ	2.09	0.85
28:DR:282:ASN:H	28:DR:290:PRO:HG2	1.41	0.85
14:CD:106:GLU:HA	14:CD:111:THR:HG21	1.59	0.85
11:CA:10:G:O6	11:CA:1117:U:N3	2.10	0.85
11:BA:227:G:OP2	11:BA:227:G:H4'	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:559:C:OP1	11:CA:559:C:H4'	1.76	0.85
15:AE:155:ILE:HD11	15:AE:197:ILE:HD11	1.57	0.85
28:CR:47:ARG:O	28:CR:49:LYS:N	2.09	0.84
11:AA:1185:C:N4	39:AA:2382:HOH:O	2.10	0.84
11:CA:1032:U:H3	11:CA:1035:A:H62	1.23	0.84
11:DA:467:A:OP2	14:DD:126:ARG:NH2	2.10	0.84
11:AA:1506:G:O2'	11:AA:1507:U:OP2	1.94	0.84
11:BA:755:G:H5''	14:BD:7:ASN:HB2	1.58	0.84
14:DD:62:LEU:HD11	14:DD:68:ARG:NH1	1.92	0.84
11:DA:1226:U:OP1	31:DU:34:ARG:NH1	2.11	0.84
11:DA:1001:A:O2'	11:DA:1002:U:OP2	1.96	0.84
11:BA:211:U:H4'	11:BA:212:A:OP2	1.76	0.84
11:AA:1189:A:N6	24:AN:3:ASN:OD1	2.10	0.84
14:CD:62:LEU:HD11	14:CD:68:ARG:NH1	1.91	0.84
10:D9:132:HIS:CD2	10:D9:143:ILE:HB	2.13	0.84
11:CA:1001:A:O2'	11:CA:1002:U:OP2	1.96	0.84
11:CA:654:U:H1'	11:CA:656:G:H21	1.42	0.84
11:DA:413:C:OP2	35:DY:87:ARG:NH2	2.08	0.84
33:DW:108:LYS:HB2	33:DW:110:ARG:HE	1.41	0.84
10:C9:95:LEU:HD11	31:CU:29:LEU:HD12	1.60	0.84
11:BA:608:C:OP1	39:BA:6373:HOH:O	1.95	0.84
11:DA:1505:C:H4'	11:DA:1511:A:N6	1.93	0.84
14:AD:106:GLU:HA	14:AD:111:THR:HG21	1.60	0.84
23:BM:126:ARG:NH1	29:BS:128:TYR:OH	2.10	0.84
33:AW:200:ILE:HG12	33:AW:210:CYS:HB2	1.60	0.84
12:BB:201:LYS:NZ	32:BV:82:LEU:HD22	1.93	0.84
3:B2:145:ARG:NH1	11:BA:183:G:O6	2.11	0.84
14:BD:106:GLU:HA	14:BD:111:THR:HG21	1.59	0.83
11:CA:391:A:HO2'	11:CA:392:A:P	2.01	0.83
11:CA:1166:A:OP2	20:CJ:73:GLY:HA3	1.79	0.83
14:BD:62:LEU:HD11	14:BD:68:ARG:NH1	1.93	0.83
6:C5:97:ARG:O	11:CA:1750:A:O2'	1.95	0.83
33:BW:108:LYS:HB2	33:BW:110:ARG:HE	1.41	0.83
22:CL:7:ARG:HH11	22:CL:7:ARG:HG3	1.43	0.83
11:CA:81:A:OP2	39:CA:2023:HOH:O	1.94	0.83
11:DA:770:G:H2'	11:DA:771:A:C8	2.13	0.83
11:BA:1494:U:O2'	11:BA:1495:U:OP2	1.94	0.83
11:BA:209:G:H5'	11:BA:210:A:H5'	1.60	0.83
9:D8:44:PHE:HE2	23:DM:8:GLU:HG3	1.42	0.83
11:DA:1185:C:N4	39:DA:8148:HOH:O	2.11	0.83
11:CA:1164:C:O3'	19:CI:142:LYS:NZ	2.10	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:986:G:OP1	39:DA:7879:HOH:O	1.95	0.83
35:BY:167:THR:HG22	35:BY:169:LYS:H	1.44	0.83
11:DA:894:U:H3	21:DK:55:ARG:HH22	1.27	0.83
2:B1:7:THR:HG23	2:B1:33:SER:HB2	1.60	0.83
33:BW:200:ILE:HG12	33:BW:210:CYS:HB2	1.61	0.83
28:CR:255:GLY:H	28:CR:279:LYS:NZ	1.76	0.83
14:DD:106:GLU:HA	14:DD:111:THR:HG21	1.60	0.83
39:C5:2002:HOH:O	11:CA:920:G:OP2	1.95	0.83
11:BA:1556:G:N2	11:BA:1583:A:OP2	2.12	0.83
11:AA:246:U:OP2	27:AQ:33:TYR:OH	1.96	0.83
5:A4:222:LYS:NZ	11:AA:864:U:OP2	2.10	0.82
8:D7:6:LYS:HZ1	31:DU:27:LYS:HZ1	1.25	0.82
11:BA:406:U:O2	11:BA:409:G:N2	2.11	0.82
35:CY:167:THR:HG22	35:CY:169:LYS:H	1.44	0.82
12:BB:152:TYR:HA	36:BZ:74:ARG:HG2	1.62	0.82
23:DM:136:GLN:HE21	23:DM:136:GLN:H	1.26	0.82
6:B5:42:ARG:HH22	21:BK:107:GLN:HG3	1.42	0.82
2:A1:7:THR:HG23	2:A1:33:SER:HB2	1.61	0.82
11:BA:220:A:H3'	11:BA:221:A:H8	1.45	0.82
11:DA:1399:G:OP1	39:DA:8216:HOH:O	1.97	0.82
10:A9:156:LYS:HB3	7:D6:60:ILE:HD11	1.60	0.82
11:BA:469:A:N6	39:BA:6084:HOH:O	2.12	0.82
11:AA:1473:G:OP1	30:AT:102:LYS:NZ	2.11	0.82
11:CA:378:A:OP2	11:CA:378:A:H8	1.62	0.82
11:AA:770:G:H2'	11:AA:771:A:C8	2.14	0.82
11:AA:406:U:O2	11:AA:409:G:N2	2.12	0.82
12:AB:77:TYR:HD1	12:AB:164:THR:HG23	1.43	0.82
24:DN:39:ARG:HH11	24:DN:39:ARG:HG2	1.45	0.82
11:CA:1556:G:N2	11:CA:1583:A:OP2	2.13	0.82
11:CA:353:G:OP1	39:CA:2061:HOH:O	1.97	0.82
11:AA:755:G:H5''	14:AD:7:ASN:HB2	1.61	0.82
11:BA:108:A:O2'	27:BQ:66:ARG:NH1	2.11	0.82
11:BA:482:A:H5'	11:BA:483:C:OP2	1.79	0.82
11:CA:1318:C:OP2	20:CJ:51:LYS:NZ	2.12	0.82
11:CA:406:U:O2	11:CA:409:G:N2	2.12	0.82
11:CA:232:G:O2'	11:CA:233:U:OP2	1.96	0.82
33:CW:200:ILE:HG12	33:CW:210:CYS:HB2	1.60	0.82
11:CA:770:G:H2'	11:CA:771:A:C8	2.14	0.82
28:BR:255:GLY:H	28:BR:279:LYS:NZ	1.78	0.82
14:CD:53:ARG:NH2	15:CE:175:ARG:O	2.13	0.82
2:C1:7:THR:HG23	2:C1:33:SER:HB2	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AY:167:THR:HG22	35:AY:169:LYS:H	1.44	0.82
23:AM:136:GLN:HE21	23:AM:136:GLN:H	1.26	0.82
12:CB:152:TYR:HA	36:CZ:74:ARG:HG2	1.60	0.81
6:B5:97:ARG:O	11:BA:1750:A:O2'	1.97	0.81
11:DA:391:A:HO2'	11:DA:392:A:P	2.03	0.81
11:CA:679:U:H3	11:CA:722:A:H61	1.26	0.81
35:DY:167:THR:HG22	35:DY:169:LYS:H	1.44	0.81
11:BA:770:G:H2'	11:BA:771:A:C8	2.15	0.81
11:CA:1265:U:O4	39:CA:2238:HOH:O	1.99	0.81
28:DR:255:GLY:H	28:DR:279:LYS:NZ	1.78	0.81
11:AA:615:A:H5'	11:AA:616:A:OP2	1.81	0.81
2:D1:7:THR:HG23	2:D1:33:SER:HB2	1.61	0.81
11:BA:378:A:OP2	11:BA:378:A:H8	1.62	0.81
14:AD:62:LEU:HD11	14:AD:68:ARG:NH1	1.94	0.81
28:DR:297:GLU:HG3	28:DR:310:PRO:HD3	1.63	0.81
23:CM:136:GLN:H	23:CM:136:GLN:HE21	1.25	0.81
11:AA:1123:G:H4'	11:AA:1124:A:OP2	1.80	0.81
11:BA:81:A:OP2	39:BA:6142:HOH:O	1.97	0.81
3:D2:140:ASN:H	3:D2:140:ASN:HD22	1.29	0.81
11:DA:1505:C:H4'	11:DA:1511:A:H61	1.44	0.81
11:AA:378:A:OP2	11:AA:378:A:H8	1.64	0.81
11:AA:413:C:OP2	35:AY:87:ARG:NH2	2.13	0.81
3:A2:175:CYS:HB3	3:A2:191:LEU:HD21	1.60	0.81
11:CA:1123:G:H4'	11:CA:1124:A:OP2	1.79	0.81
11:CA:121:U:H4'	33:CW:150:ARG:NH1	1.95	0.81
11:AA:629:A:OP1	39:AA:2136:HOH:O	1.99	0.81
4:B3:113:ARG:NH2	11:BA:633:U:OP1	2.14	0.81
13:AC:146:LYS:HD2	13:AC:151:LYS:HZ2	1.46	0.81
35:CY:137:ARG:NH1	35:CY:181:ARG:HE	1.79	0.81
3:C2:175:CYS:HB3	3:C2:191:LEU:HD21	1.60	0.81
33:DW:200:ILE:HG12	33:DW:210:CYS:HB2	1.62	0.81
17:AG:58:LYS:HE2	17:AG:66:ARG:HH21	1.46	0.81
11:DA:920:G:OP2	39:DA:7043:HOH:O	1.98	0.81
24:AN:39:ARG:HH11	24:AN:39:ARG:HG2	1.44	0.81
11:CA:222:U:O2	11:CA:814:A:N6	2.13	0.81
11:DA:378:A:H8	11:DA:378:A:OP2	1.63	0.81
30:CT:29:ALA:HB1	30:CT:31:LYS:HG3	1.62	0.81
3:D2:175:CYS:HB3	3:D2:191:LEU:HD21	1.60	0.81
11:DA:393:C:O2'	11:DA:394:G:H5'	1.80	0.80
11:AA:1508:G:O2'	11:AA:1509:U:OP2	1.99	0.80
24:BN:39:ARG:HH11	24:BN:39:ARG:HG2	1.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1479:G:H3'	11:BA:1480:U:H6	1.46	0.80
20:CJ:41:ARG:NH1	20:CJ:104:PHE:HB3	1.97	0.80
11:BA:963:G:N7	39:BA:6228:HOH:O	2.13	0.80
3:C2:140:ASN:HD22	3:C2:140:ASN:H	1.29	0.80
11:BA:515:U:O4	39:BA:6061:HOH:O	1.99	0.80
35:AY:137:ARG:NH1	35:AY:181:ARG:HE	1.80	0.80
6:D5:42:ARG:HH22	21:DK:107:GLN:HG3	1.46	0.80
11:AA:1449:G:OP1	30:AT:43:THR:OG1	1.98	0.80
11:BA:1123:G:H4'	11:BA:1124:A:OP2	1.79	0.80
11:AA:1556:G:N2	11:AA:1583:A:OP2	2.15	0.80
11:DA:846:G:OP2	25:DO:123:ARG:NH1	2.14	0.80
17:CG:58:LYS:HE2	17:CG:66:ARG:HH21	1.47	0.80
20:CJ:41:ARG:HH12	20:CJ:104:PHE:HB3	1.46	0.80
11:CA:1479:G:H3'	11:CA:1480:U:H6	1.46	0.80
11:AA:608:C:OP1	39:AA:2132:HOH:O	1.98	0.80
11:DA:1123:G:H4'	11:DA:1124:A:OP2	1.80	0.80
28:AR:297:GLU:HG3	28:AR:310:PRO:HD3	1.63	0.80
11:DA:11:A:OP1	39:DA:7094:HOH:O	1.98	0.80
11:CA:1647:U:H3	11:CA:1678:U:H3	1.29	0.80
20:DJ:41:ARG:HH12	20:DJ:104:PHE:HB3	1.46	0.80
22:DL:7:ARG:HG3	22:DL:7:ARG:HH11	1.47	0.80
3:A2:140:ASN:HD22	3:A2:140:ASN:H	1.30	0.80
11:DA:211:U:H4'	11:DA:212:A:OP2	1.78	0.80
3:D2:2:GLY:N	11:DA:384:C:OP1	2.15	0.80
1:D0:22:LYS:HB2	10:D9:74:LYS:NZ	1.97	0.80
11:DA:406:U:O2	11:DA:409:G:N2	2.14	0.80
11:AA:1647:U:H3	11:AA:1678:U:H3	1.30	0.80
11:DA:615:A:H5'	11:DA:616:A:OP2	1.82	0.80
14:BD:38:ASN:HD21	14:BD:40:ARG:NH1	1.80	0.80
11:AA:392:A:H1'	33:AW:3:ARG:NH1	1.97	0.80
11:CA:1508:G:O2'	11:CA:1509:U:OP2	1.99	0.80
11:BA:920:G:OP2	39:BA:6012:HOH:O	2.00	0.80
3:B2:175:CYS:HB3	3:B2:191:LEU:HD21	1.61	0.80
11:CA:789:A:OP1	39:CA:2148:HOH:O	1.98	0.80
6:A5:8:ALA:HB1	11:AA:1744:U:H5'	1.62	0.80
11:DA:613:A:OP1	39:DA:7988:HOH:O	2.00	0.80
11:BA:654:U:H1'	11:BA:656:G:H21	1.46	0.80
1:A0:103:LYS:NZ	1:A0:110:GLU:O	2.15	0.80
20:BJ:41:ARG:HH12	20:BJ:104:PHE:HB3	1.46	0.80
11:BA:1400:G:OP2	39:BA:6592:HOH:O	1.99	0.80
11:BA:1263:G:H22	11:BA:1296:G:H1	1.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1001:A:O2'	11:BA:1002:U:OP2	1.99	0.80
14:CD:38:ASN:HD21	14:CD:40:ARG:NH1	1.79	0.80
11:BA:1486:U:O2'	13:BC:9:ASN:HA	1.81	0.79
11:BA:469:A:H2'	11:BA:470:G:C8	2.18	0.79
11:BA:1508:G:O2'	11:BA:1509:U:OP2	2.00	0.79
11:CA:1263:G:H22	11:CA:1296:G:H1	1.30	0.79
11:DA:1479:G:H3'	11:DA:1480:U:H6	1.46	0.79
11:DA:1473:G:OP1	30:DT:102:LYS:NZ	2.14	0.79
3:D2:22:ARG:HD2	3:D2:25:ARG:HE	1.47	0.79
20:BJ:41:ARG:NH1	20:BJ:104:PHE:HB3	1.96	0.79
11:BA:1647:U:H3	11:BA:1678:U:H3	1.29	0.79
11:CA:1450:G:OP1	30:CT:60:ARG:NH1	2.14	0.79
28:AR:94:SER:HB3	28:AR:124:VAL:HG22	1.63	0.79
1:B0:103:LYS:NZ	1:B0:110:GLU:O	2.15	0.79
28:BR:94:SER:HB3	28:BR:124:VAL:HG22	1.64	0.79
33:CW:35:PRO:HD2	33:CW:85:PRO:HG2	1.64	0.79
11:BA:1428:C:OP1	39:BA:6555:HOH:O	1.99	0.79
5:D4:222:LYS:NZ	11:DA:864:U:OP2	2.15	0.79
11:DA:1263:G:H22	11:DA:1296:G:H1	1.30	0.79
20:DJ:41:ARG:NH1	20:DJ:104:PHE:HB3	1.96	0.79
33:DW:35:PRO:HD2	33:DW:85:PRO:HG2	1.65	0.79
11:BA:1708:A:H5'	22:BL:62:GLN:HG3	1.62	0.79
33:AW:35:PRO:HD2	33:AW:85:PRO:HG2	1.64	0.79
22:AL:7:ARG:HH11	22:AL:7:ARG:HG3	1.46	0.79
24:CN:39:ARG:HG2	24:CN:39:ARG:HH11	1.45	0.79
11:BA:615:A:H5'	11:BA:616:A:OP2	1.81	0.79
20:AJ:41:ARG:NH1	20:AJ:104:PHE:HB3	1.96	0.79
10:B9:73:LYS:NZ	11:BA:1159:U:OP1	2.16	0.79
3:B2:140:ASN:H	3:B2:140:ASN:HD22	1.30	0.79
1:D0:103:LYS:NZ	1:D0:110:GLU:O	2.16	0.79
11:CA:1399:G:OP1	39:CA:2236:HOH:O	2.01	0.79
10:A9:95:LEU:HD11	31:AU:29:LEU:HD12	1.64	0.79
11:CA:649:U:H2'	11:CA:650:C:O4'	1.83	0.79
30:BT:29:ALA:HB1	30:BT:31:LYS:HG3	1.64	0.79
32:DV:17:ILE:HG22	32:DV:71:LEU:HD21	1.65	0.79
20:AJ:41:ARG:HH12	20:AJ:104:PHE:HB3	1.46	0.79
11:AA:353:G:OP1	39:AA:2064:HOH:O	1.99	0.79
28:AR:255:GLY:H	28:AR:279:LYS:NZ	1.78	0.79
11:AA:1299:C:OP1	13:AC:159:TYR:OH	1.99	0.79
11:BA:70:U:OP1	35:BY:171:LYS:NZ	2.16	0.79
3:B2:2:GLY:N	11:BA:384:C:OP1	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B0:22:LYS:NZ	10:B9:76:LYS:HG2	1.98	0.79
11:AA:393:C:O2'	11:AA:394:G:H5'	1.83	0.79
6:A5:97:ARG:O	11:AA:1750:A:O2'	2.00	0.79
11:DA:1428:C:O2'	11:DA:1429:G:OP1	2.00	0.79
35:BY:137:ARG:NH1	35:BY:181:ARG:HE	1.81	0.79
30:AT:29:ALA:HB1	30:AT:31:LYS:HG3	1.64	0.79
35:DY:137:ARG:NH1	35:DY:181:ARG:HE	1.81	0.79
11:BA:760:G:N7	26:BP:9:LYS:NZ	2.30	0.79
11:AA:219:C:H5'	11:AA:220:A:OP2	1.83	0.79
1:B0:22:LYS:HG3	10:B9:74:LYS:HD3	1.65	0.78
29:CS:83:THR:HG23	29:CS:85:TYR:H	1.48	0.78
11:AA:1428:C:OP1	39:AA:2377:HOH:O	2.00	0.78
10:A9:128:HIS:HD1	11:AA:1222:U:HO2'	1.30	0.78
11:DA:1508:G:O2'	11:DA:1509:U:OP2	2.00	0.78
10:D9:92:HIS:CE1	11:DA:1201:G:OP2	2.36	0.78
11:BA:608:C:OP1	39:BA:6374:HOH:O	2.01	0.78
11:AA:1479:G:H3'	11:AA:1480:U:H6	1.46	0.78
11:DA:608:C:OP1	39:DA:7253:HOH:O	2.01	0.78
11:CA:70:U:OP1	35:CY:171:LYS:NZ	2.16	0.78
28:DR:94:SER:HB3	28:DR:124:VAL:HG22	1.64	0.78
11:DA:755:G:H5''	14:DD:7:ASN:HB2	1.66	0.78
11:BA:121:U:H4'	33:BW:150:ARG:NH1	1.97	0.78
11:AA:81:A:OP2	39:AA:2023:HOH:O	2.00	0.78
28:CR:94:SER:HB3	28:CR:124:VAL:HG22	1.64	0.78
11:AA:508:A:OP1	39:AA:2017:HOH:O	2.00	0.78
11:DA:209:G:H4'	11:DA:210:A:H5'	1.66	0.78
11:CA:608:C:OP1	39:CA:2130:HOH:O	2.00	0.78
9:D8:47:LYS:HB2	23:DM:6:GLU:HA	1.65	0.78
3:B2:22:ARG:HD2	3:B2:25:ARG:HE	1.47	0.78
21:AK:34:MET:SD	21:AK:98:ARG:NH1	2.56	0.78
11:DA:1556:G:N2	11:DA:1583:A:OP2	2.14	0.78
28:AR:93:SER:HG	28:AR:103:TRP:HE1	1.28	0.78
3:C2:153:ARG:NH1	11:CA:189:C:O2	2.17	0.78
11:DA:1211:U:O2	11:DA:1218:C:N4	2.17	0.78
11:BA:393:C:O2'	11:BA:394:G:H5'	1.84	0.78
11:CA:615:A:H5'	11:CA:616:A:OP2	1.83	0.78
6:C5:42:ARG:HH22	21:CK:107:GLN:HG3	1.49	0.78
12:CB:62:ALA:O	36:CZ:64:LYS:NZ	2.17	0.78
11:CA:846:G:H1	11:CA:938:U:H3	1.32	0.78
23:CM:126:ARG:NH1	29:CS:128:TYR:OH	2.16	0.78
11:AA:11:A:OP1	39:AA:2007:HOH:O	2.02	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D7:6:LYS:NZ	31:DU:27:LYS:NZ	2.32	0.78
23:DM:89:ILE:O	23:DM:97:ASN:ND2	2.17	0.78
28:CR:297:GLU:HG3	28:CR:310:PRO:HD3	1.64	0.78
17:CG:70:THR:HB	17:CG:150:ILE:HD12	1.65	0.78
28:BR:297:GLU:HG3	28:BR:310:PRO:HD3	1.64	0.78
29:AS:83:THR:HG23	29:AS:85:TYR:H	1.48	0.78
11:DA:1647:U:H3	11:DA:1678:U:H3	1.30	0.78
29:DS:83:THR:HG23	29:DS:85:TYR:H	1.49	0.78
11:AA:70:U:OP1	35:AY:171:LYS:NZ	2.15	0.78
14:AD:38:ASN:HD21	14:AD:40:ARG:NH1	1.81	0.77
11:BA:232:G:O2'	11:BA:233:U:OP2	2.02	0.77
3:C2:22:ARG:HD2	3:C2:25:ARG:HE	1.48	0.77
11:DA:215:A:N6	11:DA:811:U:O4	2.18	0.77
11:BA:894:U:H3	21:BK:55:ARG:HH22	1.31	0.77
30:DT:29:ALA:HB1	30:DT:31:LYS:HG3	1.64	0.77
12:AB:80:ARG:NH2	32:AV:83:ASP:OD1	2.16	0.77
21:DK:34:MET:SD	21:DK:98:ARG:NH1	2.58	0.77
29:BS:83:THR:HG23	29:BS:85:TYR:H	1.47	0.77
11:CA:393:C:O2'	11:CA:394:G:H5'	1.83	0.77
11:DA:269:G:O6	11:DA:273:A:N6	2.18	0.77
11:DA:265:C:OP1	35:DY:180:GLN:NE2	2.16	0.77
11:AA:1277:U:OP1	39:AA:2392:HOH:O	2.00	0.77
11:DA:121:U:H4'	33:DW:150:ARG:NH1	1.98	0.77
11:BA:1211:U:O2	11:BA:1218:C:N4	2.18	0.77
33:BW:35:PRO:HD2	33:BW:85:PRO:HG2	1.65	0.77
11:CA:904:A:OP1	11:CA:994:C:O2'	2.00	0.77
9:C8:62:LYS:HG2	9:C8:111:VAL:HG21	1.67	0.77
28:AR:46:SER:OG	28:AR:48:ASP:OD1	2.02	0.77
26:AP:90:ARG:NH1	26:AP:98:LYS:HB2	1.99	0.77
11:BA:3:C:O2'	11:BA:4:C:OP1	2.02	0.77
11:CA:755:G:H5"	14:CD:7:ASN:HB2	1.65	0.77
14:DD:38:ASN:HD21	14:DD:40:ARG:NH1	1.82	0.77
28:CR:46:SER:OG	28:CR:48:ASP:OD1	2.02	0.77
11:DA:3:C:O2'	11:DA:4:C:OP1	2.02	0.77
1:D0:22:LYS:HB2	10:D9:74:LYS:HZ1	1.50	0.77
23:CM:89:ILE:O	23:CM:97:ASN:ND2	2.18	0.77
11:CA:1449:G:OP1	30:CT:43:THR:OG1	2.02	0.77
17:DG:58:LYS:HE2	17:DG:66:ARG:HH21	1.49	0.77
1:B0:22:LYS:N	10:B9:74:LYS:HZ3	1.82	0.77
17:BG:58:LYS:HE2	17:BG:66:ARG:HH21	1.49	0.77
19:CI:66:ASP:OD1	19:CI:66:ASP:N	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:613:A:OP1	39:AA:2366:HOH:O	2.02	0.77
17:DG:70:THR:HB	17:DG:150:ILE:HD12	1.66	0.77
23:AM:94:ASP:OD2	23:AM:98:TYR:OH	2.02	0.77
11:CA:1419:G:OP1	39:CA:2270:HOH:O	2.02	0.77
33:BW:224:LEU:HD23	33:BW:227:ILE:HD12	1.67	0.77
3:A2:22:ARG:HD2	3:A2:25:ARG:HE	1.48	0.77
11:AA:1720:G:O2'	11:AA:1721:G:OP2	2.02	0.77
14:BD:80:MET:HG2	14:BD:86:LEU:HD22	1.67	0.77
11:CA:613:A:OP1	39:CA:2139:HOH:O	2.02	0.77
12:BB:62:ALA:O	36:BZ:64:LYS:NZ	2.18	0.77
11:CA:1185:C:N4	39:CA:2230:HOH:O	2.16	0.77
26:BP:90:ARG:NH1	26:BP:98:LYS:HB2	2.00	0.77
22:BL:7:ARG:HG3	22:BL:7:ARG:HH11	1.48	0.77
13:DC:35:ALA:HB2	13:DC:60:GLN:HB3	1.67	0.77
31:BU:4:GLN:HB2	31:BU:9:ASN:HD21	1.50	0.77
11:BA:1245:G:O2'	11:BA:1246:C:OP2	2.03	0.77
1:C0:103:LYS:NZ	1:C0:110:GLU:O	2.17	0.77
11:DA:1399:G:H21	20:DJ:72:GLU:HG2	1.50	0.76
11:BA:1720:G:O2'	11:BA:1721:G:OP2	2.02	0.76
11:BA:1189:A:N6	24:BN:3:ASN:OD1	2.18	0.76
11:CA:1319:U:OP2	20:CJ:20:ARG:NH2	2.17	0.76
11:BA:245:A:H4'	11:BA:246:U:OP2	1.83	0.76
11:BA:211:U:H3	11:BA:238:G:H22	1.32	0.76
11:BA:1171:G:OP1	24:BN:40:ARG:NH2	2.18	0.76
11:CA:894:U:H3	21:CK:55:ARG:HH22	1.33	0.76
23:DM:94:ASP:OD2	23:DM:98:TYR:OH	2.02	0.76
11:DA:1269:G:H5'	11:DA:1270:U:OP2	1.85	0.76
3:D2:145:ARG:NH1	11:DA:183:G:O6	2.18	0.76
11:AA:1486:U:O2'	13:AC:9:ASN:HA	1.85	0.76
10:D9:92:HIS:HE1	11:DA:1201:G:OP2	1.69	0.76
27:BQ:66:ARG:HH21	27:BQ:128:ARG:HA	1.50	0.76
7:D6:5:LEU:H	18:DH:24:GLN:NE2	1.81	0.76
14:DD:80:MET:HG2	14:DD:86:LEU:HD22	1.67	0.76
11:BA:511:A:H2'	11:BA:512:C:H5''	1.67	0.76
11:CA:269:G:O6	11:CA:273:A:N6	2.18	0.76
11:AA:3:C:O2'	11:AA:4:C:OP1	2.04	0.76
11:BA:470:G:H1	11:BA:503:A:H61	1.33	0.76
27:AQ:66:ARG:HH21	27:AQ:128:ARG:HA	1.49	0.76
26:DP:90:ARG:NH1	26:DP:98:LYS:HB2	2.00	0.76
11:BA:109:U:OP1	39:BA:6145:HOH:O	2.03	0.76
11:AA:789:A:OP1	39:AA:2142:HOH:O	2.03	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DV:43:SER:HB2	32:DV:46:LEU:HB2	1.67	0.76
11:CA:1211:U:O2	11:CA:1218:C:N4	2.18	0.76
11:CA:222:U:H3	11:CA:235:A:H61	1.28	0.76
11:CA:1531:G:N7	39:CA:2289:HOH:O	2.18	0.76
27:BQ:2:ASP:HA	27:BQ:51:THR:HG21	1.68	0.76
10:B9:112:GLN:O	11:CA:534:A:N6	2.19	0.76
29:BS:86:ARG:HB3	29:BS:122:ALA:HB2	1.67	0.76
31:CU:4:GLN:HB2	31:CU:9:ASN:HD21	1.51	0.76
11:AA:1211:U:O2	11:AA:1218:C:N4	2.18	0.76
11:BA:531:A:N3	39:BA:6082:HOH:O	2.18	0.76
11:DA:892:G:HO2'	11:DA:893:A:H8	1.31	0.76
11:CA:1299:C:OP1	13:CC:159:TYR:OH	2.03	0.76
11:BA:846:G:OP2	25:BO:123:ARG:NH1	2.19	0.76
28:CR:240:TRP:HE3	28:CR:245:LEU:HD22	1.51	0.76
33:CW:125:LEU:HD12	33:CW:238:ILE:HD11	1.67	0.76
19:BI:31:LEU:HD13	19:BI:38:ILE:HD11	1.68	0.76
11:AA:1143:A:H2'	11:AA:1144:A:C8	2.21	0.76
33:DW:224:LEU:HD23	33:DW:227:ILE:HD12	1.67	0.76
11:CA:1171:G:OP1	24:CN:40:ARG:NH2	2.19	0.76
11:BA:1269:G:H5'	11:BA:1270:U:OP2	1.86	0.76
11:CA:1269:G:H5'	11:CA:1270:U:OP2	1.85	0.76
6:A5:56:LYS:HG3	21:AK:120:ALA:HB1	1.68	0.76
26:CP:90:ARG:NH1	26:CP:98:LYS:HB2	1.99	0.76
11:AA:846:G:H1	11:AA:938:U:H3	1.33	0.76
11:AA:392:A:H1'	33:AW:3:ARG:HH11	1.51	0.76
11:AA:232:G:O2'	11:AA:233:U:OP2	2.03	0.76
17:CG:66:ARG:HG3	17:CG:66:ARG:HH11	1.51	0.76
25:AO:86:LEU:HD12	25:AO:87:PRO:HD2	1.67	0.76
14:CD:80:MET:HG2	14:CD:86:LEU:HD22	1.68	0.76
9:A8:62:LYS:HG2	9:A8:111:VAL:HG21	1.68	0.76
11:AA:1444:U:OP2	17:AG:164:ILE:HG13	1.85	0.76
23:AM:89:ILE:O	23:AM:97:ASN:ND2	2.19	0.76
11:BA:1186:G:H1	11:BA:1420:U:H3	1.34	0.76
11:CA:392:A:H1'	33:CW:3:ARG:NH1	2.01	0.76
10:D9:94:LYS:HA	11:DA:1201:G:OP2	1.86	0.76
11:AA:265:C:OP1	35:AY:180:GLN:NE2	2.19	0.76
1:C0:101:ASN:HD21	10:C9:77:LYS:NZ	1.84	0.76
28:DR:46:SER:OG	28:DR:48:ASP:OD1	2.02	0.75
19:AI:31:LEU:HD13	19:AI:38:ILE:HD11	1.68	0.75
19:AI:66:ASP:OD1	19:AI:66:ASP:N	2.17	0.75
28:BR:46:SER:OG	28:BR:48:ASP:OD1	2.03	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:846:G:H1	11:DA:938:U:H3	1.33	0.75
17:AG:70:THR:HB	17:AG:150:ILE:HD12	1.68	0.75
3:B2:89:VAL:HG21	3:B2:102:LYS:HA	1.69	0.75
11:DA:511:A:H2'	11:DA:512:C:H5''	1.67	0.75
23:CM:94:ASP:OD2	23:CM:98:TYR:OH	2.03	0.75
13:BC:35:ALA:HB2	13:BC:60:GLN:HB3	1.67	0.75
31:AU:4:GLN:HB2	31:AU:9:ASN:HD21	1.49	0.75
3:C2:31:ARG:NH2	11:CA:324:A:OP1	2.19	0.75
11:CA:3:C:O2'	11:CA:4:C:OP1	2.03	0.75
27:DQ:66:ARG:HH21	27:DQ:128:ARG:HA	1.50	0.75
11:DA:1441:C:O2	11:DA:1543:C:O2'	2.05	0.75
28:AR:240:TRP:HE3	28:AR:245:LEU:HD22	1.52	0.75
27:CQ:66:ARG:HH21	27:CQ:128:ARG:HA	1.49	0.75
33:AW:224:LEU:HD23	33:AW:227:ILE:HD12	1.68	0.75
11:CA:511:A:H2'	11:CA:512:C:H5''	1.67	0.75
33:BW:125:LEU:HD12	33:BW:238:ILE:HD11	1.68	0.75
15:CE:82:LEU:HD12	15:CE:212:LEU:HD21	1.69	0.75
11:DA:172:U:H4'	11:DA:173:A:OP2	1.85	0.75
15:DE:82:LEU:HD12	15:DE:212:LEU:HD21	1.68	0.75
31:DU:4:GLN:HB2	31:DU:9:ASN:HD21	1.49	0.75
28:CR:178:ASN:HD22	23:DM:110:ARG:NH1	1.84	0.75
11:CA:846:G:OP2	25:CO:123:ARG:NH1	2.19	0.75
10:B9:127:LYS:NZ	11:CA:534:A:N1	2.35	0.75
11:DA:1462:U:H4'	11:DA:1463:U:OP2	1.87	0.75
2:A1:62:ARG:HH11	6:A5:48:SER:HB3	1.52	0.75
11:AA:511:A:H2'	11:AA:512:C:H5''	1.67	0.75
11:DA:469:A:H2'	11:DA:470:G:C8	2.22	0.75
11:AA:121:U:H4'	33:AW:150:ARG:HH12	1.50	0.75
23:AM:48:LYS:HD3	30:AT:39:GLN:HG2	1.68	0.75
11:CA:1200:G:OP1	31:CU:28:GLY:HA2	1.87	0.75
3:A2:89:VAL:HG21	3:A2:102:LYS:HA	1.69	0.75
32:CV:43:SER:HB2	32:CV:46:LEU:HB2	1.68	0.75
3:C2:89:VAL:HG21	3:C2:102:LYS:HA	1.69	0.75
3:A2:2:GLY:N	11:AA:384:C:OP1	2.20	0.75
20:BJ:51:LYS:HB3	20:BJ:90:ASP:HB2	1.68	0.75
11:BA:237:U:H1'	11:BA:238:G:OP2	1.86	0.75
11:BA:754:A:H4'	14:BD:9:SER:HB3	1.68	0.75
11:BA:1462:U:H4'	11:BA:1463:U:OP2	1.86	0.75
19:DI:31:LEU:HD13	19:DI:38:ILE:HD11	1.67	0.75
14:DD:5:TYR:HB3	33:DW:22:LYS:HE2	1.67	0.75
20:DJ:51:LYS:HB3	20:DJ:90:ASP:HB2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:229:A:O2'	11:BA:230:A:OP2	2.05	0.75
11:BA:1164:C:O3'	19:BI:142:LYS:NZ	2.20	0.75
27:CQ:2:ASP:HA	27:CQ:51:THR:HG21	1.69	0.75
33:DW:125:LEU:HD12	33:DW:238:ILE:HD11	1.69	0.75
27:DQ:77:THR:O	27:DQ:77:THR:OG1	2.04	0.75
11:DA:1245:G:O2'	11:DA:1246:C:OP2	2.05	0.75
11:AA:269:G:O6	11:AA:273:A:N6	2.19	0.75
11:DA:245:A:H4'	11:DA:246:U:OP2	1.87	0.75
13:AC:35:ALA:HB2	13:AC:60:GLN:HB3	1.67	0.75
19:CI:31:LEU:HD13	19:CI:38:ILE:HD11	1.69	0.75
10:B9:95:LEU:HD11	31:BU:29:LEU:HD12	1.67	0.75
11:BA:1143:A:H2'	11:BA:1144:A:C8	2.22	0.75
27:AQ:2:ASP:HA	27:AQ:51:THR:HG21	1.69	0.75
11:DA:589:G:OP2	39:DA:7366:HOH:O	2.04	0.75
10:B9:73:LYS:NZ	11:BA:1157:U:OP1	2.19	0.74
6:A5:37:LYS:NZ	11:AA:911:A:OP2	2.20	0.74
11:CA:1189:A:N6	24:CN:3:ASN:OD1	2.20	0.74
11:DA:69:A:H3'	35:DY:173:ARG:HH22	1.52	0.74
29:DS:86:ARG:HB3	29:DS:122:ALA:HB2	1.68	0.74
11:DA:1319:U:OP2	20:DJ:20:ARG:NH2	2.14	0.74
11:AA:327:G:H2'	11:AA:328:G:H5''	1.70	0.74
14:AD:5:TYR:HB3	33:AW:22:LYS:HE2	1.69	0.74
11:CA:1143:A:H2'	11:CA:1144:A:C8	2.21	0.74
11:AA:1399:G:H21	20:AJ:72:GLU:HG2	1.52	0.74
11:BA:269:G:O6	11:BA:273:A:N6	2.19	0.74
11:BA:219:C:H5'	11:BA:220:A:OP2	1.87	0.74
32:AV:43:SER:HB2	32:AV:46:LEU:HB2	1.69	0.74
27:AQ:77:THR:O	27:AQ:77:THR:OG1	2.05	0.74
11:AA:1269:G:H5'	11:AA:1270:U:OP2	1.87	0.74
15:BE:82:LEU:HD12	15:BE:212:LEU:HD21	1.69	0.74
11:DA:1012:C:HO2'	18:DH:2:VAL:N	1.85	0.74
20:AJ:51:LYS:HB3	20:AJ:90:ASP:HB2	1.69	0.74
29:CS:86:ARG:HB3	29:CS:122:ALA:HB2	1.69	0.74
28:BR:240:TRP:HE3	28:BR:245:LEU:HD22	1.52	0.74
11:BA:846:G:H1	11:BA:938:U:H3	1.33	0.74
27:DQ:2:ASP:HA	27:DQ:51:THR:HG21	1.68	0.74
29:AS:86:ARG:HB3	29:AS:122:ALA:HB2	1.68	0.74
11:CA:1186:G:H1	11:CA:1420:U:H3	1.35	0.74
20:CJ:51:LYS:HB3	20:CJ:90:ASP:HB2	1.68	0.74
11:BA:11:A:OP1	39:BA:6039:HOH:O	2.05	0.74
11:AA:234:G:O2'	11:AA:235:A:O4'	2.06	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:608:C:OP1	39:CA:2132:HOH:O	2.05	0.74
11:AA:846:G:OP2	25:AO:123:ARG:NH1	2.21	0.74
23:BM:89:ILE:O	23:BM:97:ASN:ND2	2.21	0.74
23:BM:94:ASP:OD2	23:BM:98:TYR:OH	2.03	0.74
13:CC:146:LYS:HD2	13:CC:151:LYS:HZ1	1.53	0.74
11:CA:172:U:H4'	11:CA:173:A:OP2	1.86	0.74
11:CA:1362:U:OP1	32:CV:59:LYS:NZ	2.20	0.74
19:DI:66:ASP:N	19:DI:66:ASP:OD1	2.17	0.74
13:CC:35:ALA:HB2	13:CC:60:GLN:HB3	1.68	0.74
11:BA:765:A:C6	26:BP:19:ARG:NH1	2.55	0.74
1:B0:62:GLY:N	11:BA:560:C:OP1	2.20	0.74
4:D3:113:ARG:NH2	11:DA:633:U:OP1	2.21	0.74
17:BG:66:ARG:HH11	17:BG:66:ARG:HG3	1.53	0.74
28:DR:240:TRP:HE3	28:DR:245:LEU:HD22	1.51	0.74
11:BA:676:C:O2'	11:BA:677:G:OP2	2.06	0.74
25:BO:86:LEU:HD12	25:BO:87:PRO:HD2	1.69	0.74
11:DA:1535:A:OP1	30:DT:87:LYS:NZ	2.21	0.74
8:D7:6:LYS:NZ	31:DU:27:LYS:HZ1	1.86	0.74
11:BA:1176:A:N3	24:BN:9:HIS:NE2	2.33	0.74
11:AA:108:A:O2'	27:AQ:66:ARG:NH1	2.19	0.74
13:CC:228:ARG:HG3	28:CR:245:LEU:H	1.53	0.74
11:AA:1186:G:H1	11:AA:1420:U:H3	1.35	0.74
3:D2:89:VAL:HG21	3:D2:102:LYS:HA	1.70	0.74
4:A3:115:ARG:NH1	11:AA:632:U:C4	2.56	0.74
15:AE:82:LEU:HD12	15:AE:212:LEU:HD21	1.70	0.74
10:C9:88:HIS:CD2	11:CA:1219:U:H5''	2.22	0.74
9:B8:81:ARG:NH2	11:BA:1505:C:OP2	2.20	0.74
11:DA:1155:A:N3	11:DA:1182:G:O2'	2.17	0.74
11:AA:1661:G:H4'	11:AA:1662:C:H5''	1.70	0.74
11:AA:1318:C:OP2	20:AJ:51:LYS:NZ	2.21	0.73
11:CA:629:A:OP1	39:CA:2141:HOH:O	2.04	0.73
21:CK:34:MET:SD	21:CK:98:ARG:NH1	2.61	0.73
8:A7:6:LYS:HZ1	31:AU:27:LYS:NZ	1.78	0.73
11:CA:589:G:OP2	39:CA:2120:HOH:O	2.05	0.73
6:D5:2:PRO:HD3	11:DA:1115:A:OP1	1.88	0.73
11:DA:840:A:OP2	25:DO:66:ARG:NH2	2.22	0.73
21:BK:34:MET:SD	21:BK:98:ARG:NH1	2.61	0.73
32:BV:43:SER:HB2	32:BV:46:LEU:HB2	1.69	0.73
11:DA:948:A:H3'	11:DA:949:A:H5''	1.69	0.73
11:CA:847:A:H61	11:CA:936:U:H3	1.37	0.73
11:CA:1154:U:O2'	11:CA:1156:A:N7	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:1154:U:O2'	11:DA:1156:A:N7	2.17	0.73
11:DA:1518:G:OP2	23:DM:134:ARG:NH1	2.21	0.73
11:BA:1661:G:H4'	11:BA:1662:C:H5''	1.70	0.73
25:DO:86:LEU:HD12	25:DO:87:PRO:HD2	1.69	0.73
9:D8:62:LYS:HG2	9:D8:111:VAL:HG21	1.69	0.73
27:CQ:77:THR:O	27:CQ:77:THR:OG1	2.03	0.73
11:DA:1186:G:H1	11:DA:1420:U:H3	1.35	0.73
11:AA:1263:G:H22	11:AA:1296:G:H1	1.35	0.73
11:DA:608:C:OP1	39:DA:7252:HOH:O	2.06	0.73
11:DA:508:A:OP1	39:DA:7814:HOH:O	2.04	0.73
11:DA:1274:U:O4	39:DA:7943:HOH:O	2.07	0.73
11:AA:1168:A:O2'	11:AA:1169:C:OP2	2.06	0.73
28:BR:255:GLY:H	28:BR:279:LYS:HZ2	1.34	0.73
11:DA:246:U:OP2	27:DQ:33:TYR:OH	2.05	0.73
13:AC:175:VAL:HG22	13:AC:188:LYS:HG2	1.69	0.73
29:AS:78:PRO:HG2	29:AS:98:ILE:HG12	1.71	0.73
11:CA:531:A:N3	39:CA:2089:HOH:O	2.21	0.73
17:BG:70:THR:HB	17:BG:150:ILE:HD12	1.69	0.73
5:B4:222:LYS:NZ	11:BA:864:U:OP2	2.19	0.73
4:A3:113:ARG:NH2	11:AA:633:U:OP1	2.22	0.73
3:C2:10:LYS:HD2	11:CA:329:A:H5''	1.70	0.73
8:D7:6:LYS:NZ	31:DU:20:ASN:HD21	1.86	0.73
11:BA:194:G:O6	39:BA:6378:HOH:O	2.04	0.73
11:AA:1495:U:H4'	11:AA:1496:A:OP2	1.89	0.73
17:DG:66:ARG:HG3	17:DG:66:ARG:HH11	1.53	0.73
11:CA:1428:C:OP1	39:CA:2225:HOH:O	2.05	0.73
23:DM:86:LEU:HD22	23:DM:99:GLN:HG3	1.70	0.73
11:BA:1154:U:O2'	11:BA:1156:A:N7	2.18	0.73
11:AA:649:U:H2'	11:AA:650:C:O4'	1.88	0.73
6:A5:42:ARG:NH2	21:AK:107:GLN:HG3	2.04	0.73
11:DA:470:G:H1	11:DA:503:A:H61	1.36	0.73
11:DA:1143:A:H2'	11:DA:1144:A:C8	2.23	0.73
11:DA:1335:A:N3	30:DT:5:GLN:NE2	2.36	0.73
11:CA:1462:U:H4'	11:CA:1463:U:OP2	1.88	0.73
11:AA:92:G:OP1	33:AW:10:LYS:NZ	2.22	0.73
27:BQ:32:ARG:NH1	27:BQ:50:GLY:O	2.22	0.73
33:AW:125:LEU:HD12	33:AW:238:ILE:HD11	1.71	0.73
11:AA:948:A:H3'	11:AA:949:A:H5''	1.70	0.73
6:C5:2:PRO:HD3	11:CA:1115:A:OP1	1.89	0.72
11:AA:1368:A:H3'	11:AA:1369:A:H5'	1.71	0.72
2:D1:24:ILE:HD11	17:DG:121:THR:HB	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:121:U:H4'	33:CW:150:ARG:HH12	1.53	0.72
11:AA:1462:U:H4'	11:AA:1463:U:OP2	1.87	0.72
5:D4:90:VAL:CG1	5:D4:226:ARG:HH12	2.02	0.72
11:DA:1005:A:OP2	39:DA:7044:HOH:O	2.06	0.72
11:AA:1164:C:O3'	19:AI:142:LYS:NZ	2.19	0.72
11:DA:1495:U:H4'	11:DA:1496:A:OP2	1.88	0.72
6:C5:37:LYS:NZ	11:CA:911:A:OP2	2.22	0.72
12:AB:62:ALA:O	36:AZ:64:LYS:NZ	2.21	0.72
10:D9:80:TYR:HB2	11:DA:1416:G:O6	1.89	0.72
11:CA:1560:G:H1	11:CA:1580:U:H3	1.37	0.72
11:AA:1428:C:O2'	11:AA:1429:G:OP1	2.06	0.72
11:DA:70:U:OP1	35:DY:171:LYS:NZ	2.22	0.72
11:BA:1449:G:OP1	30:BT:43:THR:OG1	2.05	0.72
11:BA:1266:G:O6	39:BA:6215:HOH:O	2.06	0.72
11:CA:617:A:H4'	11:CA:618:G:OP2	1.89	0.72
11:DA:660:U:H2'	11:DA:661:G:O4'	1.89	0.72
11:AA:760:G:N7	26:AP:9:LYS:NZ	2.34	0.72
25:CO:86:LEU:HD12	25:CO:87:PRO:HD2	1.70	0.72
5:C4:90:VAL:CG1	5:C4:226:ARG:HH12	2.02	0.72
11:CA:413:C:OP2	35:CY:87:ARG:NH2	2.21	0.72
3:A2:31:ARG:NH2	11:AA:324:A:OP1	2.22	0.72
4:A3:192:PHE:CG	7:A6:21:ARG:NH1	2.58	0.72
11:DA:1661:G:H4'	11:DA:1662:C:H5''	1.70	0.72
11:AA:1531:G:N7	39:AA:2427:HOH:O	2.22	0.72
11:DA:765:A:C6	26:DP:19:ARG:NH1	2.57	0.72
11:AA:608:C:OP1	39:AA:2135:HOH:O	2.06	0.72
7:A6:34:LYS:NZ	7:A6:78:LYS:HE3	2.04	0.72
5:B4:90:VAL:CG1	5:B4:226:ARG:HH12	2.02	0.72
19:BI:66:ASP:OD1	19:BI:66:ASP:N	2.17	0.72
11:AA:1245:G:O2'	11:AA:1246:C:OP2	2.06	0.72
11:AA:793:G:H5''	11:AA:794:A:OP2	1.89	0.72
11:CA:229:A:H1'	11:CA:230:A:C8	2.24	0.72
9:D8:46:GLU:HG3	23:DM:8:GLU:HB2	1.70	0.72
11:AA:81:A:OP2	39:AA:2025:HOH:O	2.07	0.72
27:CQ:32:ARG:NH1	27:CQ:50:GLY:O	2.22	0.72
11:AA:847:A:H61	11:AA:936:U:H3	1.36	0.72
11:BA:948:A:H3'	11:BA:949:A:H5''	1.72	0.72
11:AA:1360:U:O2'	11:AA:1361:A:OP2	2.06	0.72
29:BS:78:PRO:HG2	29:BS:98:ILE:HG12	1.71	0.72
33:CW:224:LEU:HD23	33:CW:227:ILE:HD12	1.69	0.72
22:DL:78:ASN:HB3	22:DL:80:LYS:H	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B2:10:LYS:HD2	11:BA:329:A:H5''	1.71	0.72
11:CA:1661:G:H4'	11:CA:1662:C:H5''	1.70	0.72
14:AD:80:MET:HG2	14:AD:86:LEU:HD22	1.71	0.72
11:BA:1560:G:H1	11:BA:1580:U:H3	1.38	0.72
11:BA:10:G:O6	11:BA:1117:U:N3	2.17	0.72
11:DA:847:A:H61	11:DA:936:U:H3	1.38	0.72
11:CA:1444:U:OP2	17:CG:164:ILE:HG13	1.89	0.72
9:B8:62:LYS:HG2	9:B8:111:VAL:HG21	1.71	0.72
11:AA:531:A:N3	39:AA:2093:HOH:O	2.23	0.72
12:DB:63:VAL:HG21	12:DB:69:VAL:HG23	1.72	0.72
11:DA:327:G:H2'	11:DA:328:G:H5''	1.72	0.72
11:AA:894:U:H3	21:AK:55:ARG:HH22	1.34	0.71
17:AG:66:ARG:HH11	17:AG:66:ARG:HG3	1.52	0.71
21:BK:128:ARG:CG	21:BK:128:ARG:HH11	2.04	0.71
12:CB:80:ARG:NH2	32:CV:83:ASP:OD1	2.22	0.71
2:A1:43:ARG:NH2	2:A1:59:GLU:O	2.23	0.71
11:BA:531:A:N3	39:BA:6084:HOH:O	2.23	0.71
11:CA:11:A:N3	11:CA:1272:A:O2'	2.23	0.71
11:BA:617:A:H4'	11:BA:618:G:OP2	1.88	0.71
10:C9:73:LYS:NZ	11:CA:1157:U:OP1	2.22	0.71
5:A4:90:VAL:CG1	5:A4:226:ARG:HH12	2.03	0.71
3:C2:145:ARG:NH1	11:CA:183:G:O6	2.23	0.71
11:AA:969:A:OP2	39:AA:2175:HOH:O	2.06	0.71
22:BL:78:ASN:HB3	22:BL:80:LYS:H	1.56	0.71
11:DA:1720:G:O2'	11:DA:1721:G:OP2	2.04	0.71
11:CA:1368:A:H3'	11:CA:1369:A:H5'	1.71	0.71
12:AB:63:VAL:HG21	12:AB:69:VAL:HG23	1.72	0.71
11:CA:1469:U:OP1	30:CT:78:THR:OG1	2.07	0.71
11:DA:649:U:H2'	11:DA:650:C:O4'	1.91	0.71
11:CA:1473:G:OP1	30:CT:102:LYS:NZ	2.23	0.71
11:DA:1165:A:H4'	11:DA:1166:A:OP2	1.90	0.71
11:AA:1518:G:OP2	23:AM:134:ARG:NH1	2.23	0.71
11:CA:1256:C:H4'	11:CA:1257:U:OP1	1.87	0.71
2:C1:43:ARG:NH2	2:C1:59:GLU:O	2.23	0.71
11:DA:1368:A:H3'	11:DA:1369:A:H5'	1.71	0.71
3:C2:12:ARG:NH1	11:CA:101:A:OP2	2.22	0.71
11:CA:948:A:H3'	11:CA:949:A:H5''	1.71	0.71
11:BA:4:C:O2'	14:BD:17:ARG:NH2	2.23	0.71
11:BA:1444:U:OP2	17:BG:164:ILE:HG13	1.91	0.71
13:CC:98:GLY:HA2	13:CC:104:GLN:HE21	1.54	0.71
11:BA:1368:A:H3'	11:BA:1369:A:H5'	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B1:43:ARG:NH2	2:B1:59:GLU:O	2.23	0.71
11:BA:613:A:OP1	39:BA:6237:HOH:O	2.08	0.71
11:BA:1399:G:H21	20:BJ:72:GLU:HG2	1.55	0.71
11:DA:209:G:O2'	11:DA:210:A:OP2	2.07	0.71
3:C2:149:LYS:O	3:C2:153:ARG:HG2	1.90	0.71
11:AA:1420:U:OP2	39:AA:2409:HOH:O	2.07	0.71
6:A5:87:ARG:NH1	11:AA:1126:C:OP1	2.24	0.71
11:AA:589:G:OP2	39:AA:2123:HOH:O	2.09	0.71
11:DA:1651:G:O2'	11:DA:1652:A:OP2	2.06	0.71
1:B0:21:THR:HA	10:B9:74:LYS:HG2	1.72	0.71
11:DA:353:G:OP1	39:DA:7605:HOH:O	2.08	0.71
13:BC:175:VAL:HG22	13:BC:188:LYS:HG2	1.73	0.71
21:AK:128:ARG:HH11	21:AK:128:ARG:CG	2.02	0.71
3:A2:149:LYS:O	3:A2:153:ARG:HG2	1.91	0.71
22:CL:7:ARG:NH1	22:CL:7:ARG:HG3	2.05	0.71
11:AA:469:A:H2'	11:AA:470:G:H8	1.55	0.71
14:CD:132:ARG:HD3	14:CD:140:LEU:HD21	1.73	0.71
21:DK:128:ARG:HH11	21:DK:128:ARG:CG	2.02	0.71
6:D5:37:LYS:NZ	11:DA:911:A:OP2	2.23	0.71
11:AA:1560:G:H1	11:AA:1580:U:H3	1.37	0.71
3:D2:10:LYS:HD2	11:DA:329:A:H5''	1.71	0.71
11:AA:1651:G:O2'	11:AA:1652:A:OP2	2.09	0.71
11:BA:92:G:OP1	33:BW:10:LYS:NZ	2.24	0.71
16:DF:78:ARG:NH1	16:DF:100:GLY:HA3	2.06	0.71
3:D2:149:LYS:O	3:D2:153:ARG:HG2	1.91	0.71
23:AM:86:LEU:HD22	23:AM:99:GLN:HG3	1.72	0.71
11:CA:754:A:O2'	14:CD:9:SER:OG	2.08	0.71
10:A9:88:HIS:HD2	11:AA:1219:U:H5''	1.55	0.71
11:BA:1153:U:H3	11:BA:1157:U:H5	1.39	0.71
11:DA:121:U:H4'	33:DW:150:ARG:HH12	1.56	0.71
11:AA:556:G:N7	39:AA:2110:HOH:O	2.22	0.71
7:C6:34:LYS:NZ	7:C6:78:LYS:HE3	2.06	0.71
21:CK:128:ARG:CG	21:CK:128:ARG:HH11	2.02	0.71
11:AA:1710:G:O6	39:AA:2224:HOH:O	2.07	0.71
11:CA:1479:G:N7	39:CA:2282:HOH:O	2.23	0.70
11:BA:327:G:H2'	11:BA:328:G:H5''	1.72	0.70
13:DC:98:GLY:HA2	13:DC:104:GLN:HE21	1.55	0.70
6:B5:56:LYS:HG3	21:BK:120:ALA:HB1	1.72	0.70
22:CL:78:ASN:HB3	22:CL:80:LYS:H	1.56	0.70
23:CM:86:LEU:HD22	23:CM:99:GLN:HG3	1.71	0.70
11:DA:1360:U:O2'	11:DA:1361:A:OP2	2.08	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D1:43:ARG:NH2	2:D1:59:GLU:O	2.23	0.70
1:B0:22:LYS:HZ3	10:B9:76:LYS:HG2	1.56	0.70
7:B6:34:LYS:NZ	7:B6:78:LYS:HE3	2.05	0.70
11:AA:273:A:HO2'	11:AA:274:C:P	2.13	0.70
11:BA:1495:U:H4'	11:BA:1496:A:OP2	1.91	0.70
27:AQ:32:ARG:NH1	27:AQ:50:GLY:O	2.23	0.70
5:B4:220:LYS:NZ	11:BA:864:U:OP1	2.24	0.70
16:BF:78:ARG:NH1	16:BF:100:GLY:HA3	2.07	0.70
11:BA:1469:U:OP1	30:BT:78:THR:OG1	2.08	0.70
11:DA:1168:A:O2'	11:DA:1169:C:OP2	2.10	0.70
11:DA:904:A:OP1	11:DA:994:C:O2'	2.04	0.70
14:BD:5:TYR:HB3	33:BW:22:LYS:HE2	1.73	0.70
23:CM:48:LYS:HD3	30:CT:39:GLN:HG2	1.71	0.70
6:B5:37:LYS:NZ	11:BA:911:A:OP2	2.24	0.70
11:AA:1153:U:H3	11:AA:1157:U:H5	1.39	0.70
11:AA:378:A:H5''	11:AA:380:G:OP2	1.92	0.70
27:DQ:32:ARG:NH1	27:DQ:50:GLY:O	2.24	0.70
11:AA:920:G:OP2	39:AA:2343:HOH:O	2.08	0.70
14:DD:132:ARG:HD3	14:DD:140:LEU:HD21	1.73	0.70
23:AM:126:ARG:NH1	29:AS:128:TYR:OH	2.25	0.70
11:DA:1171:G:OP1	24:DN:40:ARG:NH2	2.24	0.70
4:B3:144:ARG:O	18:BH:42:GLN:NE2	2.24	0.70
11:AA:125:U:H4'	11:AA:125:U:OP2	1.90	0.70
29:DS:78:PRO:HG2	29:DS:98:ILE:HG12	1.72	0.70
11:DA:232:G:O2'	11:DA:233:U:OP2	2.06	0.70
11:AA:1171:G:OP1	24:AN:40:ARG:NH2	2.24	0.70
6:A5:2:PRO:HD3	11:AA:1115:A:OP1	1.91	0.70
12:BB:63:VAL:HG21	12:BB:69:VAL:HG23	1.72	0.70
11:DA:498:C:H4'	11:DA:499:A:OP2	1.89	0.70
11:CA:1486:U:O2'	13:CC:9:ASN:HA	1.89	0.70
11:CA:235:A:O2'	11:CA:814:A:H5'	1.92	0.70
8:B7:29:GLU:OE2	24:BN:7:ARG:NH1	2.23	0.70
33:CW:102:ARG:HB2	33:CW:116:LEU:HD11	1.74	0.70
12:CB:63:VAL:HG21	12:CB:69:VAL:HG23	1.72	0.70
9:C8:63:VAL:HG22	17:CG:97:LEU:HB3	1.74	0.70
11:BA:125:U:H4'	11:BA:125:U:OP2	1.91	0.70
28:DR:15:GLY:HA3	28:DR:65:PHE:HB2	1.73	0.70
11:DA:1560:G:H1	11:DA:1580:U:H3	1.38	0.70
11:DA:1153:U:H3	11:DA:1157:U:H5	1.39	0.70
11:CA:234:G:O2'	11:CA:235:A:O5'	2.10	0.70
11:BA:1009:U:H4'	11:BA:1010:A:OP2	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1495:U:H4'	11:CA:1496:A:OP2	1.90	0.70
13:DC:10:LYS:NZ	20:DJ:113:GLU:OE2	2.25	0.70
3:A2:10:LYS:HD2	11:AA:329:A:H5''	1.74	0.70
11:BA:444:A:O2'	11:BA:445:U:OP1	2.08	0.70
33:BW:194:VAL:HB	33:BW:245:GLY:HA3	1.73	0.70
8:C7:52:ARG:NH2	11:CA:1192:C:OP1	2.24	0.70
11:BA:1674:A:H4'	35:BY:81:HIS:CE1	2.27	0.70
15:DE:231:TRP:CE2	18:DH:68:ARG:HG2	2.27	0.70
11:AA:391:A:H4'	11:AA:392:A:H5''	1.73	0.70
11:BA:1531:G:N7	39:BA:6602:HOH:O	2.24	0.70
14:BD:132:ARG:HD3	14:BD:140:LEU:HD21	1.73	0.70
19:CI:130:LYS:HE3	19:CI:136:ALA:O	1.91	0.70
28:CR:15:GLY:HA3	28:CR:65:PHE:HB2	1.74	0.70
13:AC:98:GLY:HA2	13:AC:104:GLN:HE21	1.56	0.70
15:BE:49:PHE:HD1	36:BZ:41:SER:HB2	1.57	0.70
27:BQ:77:THR:OG1	27:BQ:77:THR:O	2.06	0.70
11:CA:963:G:N7	39:CA:2176:HOH:O	2.24	0.70
28:DR:21:SER:HB2	28:DR:48:ASP:HB2	1.74	0.69
11:AA:1188:A:H2	11:AA:1417:A:H62	1.40	0.69
4:B3:145:LEU:HA	18:BH:42:GLN:HE21	1.56	0.69
31:CU:120:ILE:HG22	31:CU:124:LEU:HD21	1.74	0.69
11:BA:353:G:OP1	39:BA:6070:HOH:O	2.10	0.69
15:AE:49:PHE:HD1	36:AZ:41:SER:HB2	1.56	0.69
11:DA:1176:A:OP1	11:DA:1427:C:N4	2.26	0.69
11:DA:1531:G:N7	39:DA:8229:HOH:O	2.25	0.69
7:A6:18:LYS:HA	7:A6:21:ARG:HE	1.57	0.69
15:BE:116:TRP:H	15:BE:132:HIS:HD2	1.40	0.69
33:BW:102:ARG:HB2	33:BW:116:LEU:HD11	1.74	0.69
11:AA:986:G:OP1	39:AA:2155:HOH:O	2.09	0.69
11:AA:229:A:H1'	11:AA:230:A:C8	2.26	0.69
23:BM:86:LEU:HD22	23:BM:99:GLN:HG3	1.73	0.69
11:BA:100:A:O2'	39:BA:6405:HOH:O	2.10	0.69
11:DA:573:A:N1	13:DC:148:GLN:HG2	2.07	0.69
14:AD:132:ARG:HD3	14:AD:140:LEU:HD21	1.73	0.69
14:CD:5:TYR:HB3	33:CW:22:LYS:HE2	1.74	0.69
4:C3:192:PHE:CG	7:C6:21:ARG:NH1	2.61	0.69
19:AI:130:LYS:HE3	19:AI:136:ALA:O	1.91	0.69
7:C6:18:LYS:HA	7:C6:21:ARG:HE	1.58	0.69
11:AA:243:G:O2'	27:AQ:38:GLY:O	2.09	0.69
3:B2:149:LYS:O	3:B2:153:ARG:HG2	1.92	0.69
11:BA:1360:U:O2'	11:BA:1361:A:OP2	2.10	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:649:U:H2'	11:BA:650:C:O4'	1.93	0.69
11:DA:444:A:O2'	11:DA:445:U:OP1	2.11	0.69
29:CS:78:PRO:HG2	29:CS:98:ILE:HG12	1.74	0.69
11:CA:273:A:HO2'	11:CA:274:C:P	2.14	0.69
11:CA:378:A:H5''	11:CA:380:G:OP2	1.92	0.69
1:B0:22:LYS:H	10:B9:74:LYS:HG2	1.58	0.69
11:AA:1168:A:H4'	11:AA:1169:C:H5''	1.74	0.69
15:AE:116:TRP:H	15:AE:132:HIS:HD2	1.40	0.69
13:BC:98:GLY:HA2	13:BC:104:GLN:HE21	1.56	0.69
11:CA:444:A:O2'	11:CA:445:U:OP1	2.09	0.69
11:DA:1708:A:N6	39:DA:7701:HOH:O	2.26	0.69
5:A4:159:THR:HG23	5:A4:161:TYR:CD2	2.27	0.69
11:AA:1154:U:O2'	11:AA:1156:A:N7	2.20	0.69
6:B5:2:PRO:HD3	11:BA:1115:A:OP1	1.92	0.69
4:B3:196:LYS:HE2	7:B6:77:PHE:HZ	1.58	0.69
11:AA:1172:G:H4'	11:AA:1173:G:O5'	1.92	0.69
11:DA:391:A:H4'	11:DA:392:A:H5''	1.72	0.69
28:BR:21:SER:HB2	28:BR:48:ASP:HB2	1.75	0.69
15:CE:116:TRP:H	15:CE:132:HIS:HD2	1.41	0.69
11:CA:543:A:H4'	11:CA:544:G:OP2	1.91	0.69
6:B5:87:ARG:HH11	11:BA:1126:C:H5'	1.55	0.69
11:BA:1419:G:OP1	39:BA:6517:HOH:O	2.11	0.69
11:AA:233:U:H2'	11:AA:234:G:C8	2.27	0.69
3:C2:2:GLY:N	11:CA:384:C:OP1	2.25	0.69
11:DA:228:C:H1'	11:DA:229:A:H5''	1.73	0.69
11:AA:1165:A:H4'	11:AA:1166:A:OP2	1.92	0.69
11:CA:221:A:H3'	11:CA:222:U:H4'	1.75	0.69
22:AL:7:ARG:NH1	22:AL:7:ARG:HG3	2.07	0.69
10:B9:127:LYS:NZ	11:CA:534:A:C2	2.60	0.69
11:BA:347:G:OP2	39:BA:6400:HOH:O	2.10	0.69
33:DW:194:VAL:HB	33:DW:245:GLY:HA3	1.73	0.69
27:AQ:107:PRO:HG3	27:AQ:133:THR:HB	1.75	0.69
11:BA:1651:G:O2'	11:BA:1652:A:OP2	2.09	0.69
31:AU:120:ILE:HG22	31:AU:124:LEU:HD21	1.75	0.69
3:D2:31:ARG:NH2	11:DA:324:A:OP1	2.26	0.69
13:BC:146:LYS:HD2	13:BC:151:LYS:HZ2	1.57	0.69
23:DM:40:ARG:NH2	30:DT:48:GLU:OE1	2.23	0.69
16:CF:78:ARG:NH1	16:CF:100:GLY:HA3	2.08	0.69
11:CA:487:C:H3'	11:CA:488:G:C8	2.28	0.69
13:DC:175:VAL:HG22	13:DC:188:LYS:HG2	1.73	0.69
15:CE:49:PHE:HD1	36:CZ:41:SER:HB2	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1556:G:H3'	19:BI:125:ARG:O	1.92	0.69
11:BA:1428:C:O2'	11:BA:1429:G:OP1	2.11	0.69
11:BA:754:A:O2'	14:BD:9:SER:OG	2.08	0.69
11:BA:1168:A:H4'	11:BA:1169:C:H5''	1.75	0.69
11:BA:1711:U:O4	39:BA:6114:HOH:O	2.09	0.69
19:CI:18:ALA:HA	19:CI:73:GLY:HA3	1.75	0.69
11:CA:1651:G:O2'	11:CA:1652:A:OP2	2.10	0.69
4:B3:115:ARG:NH1	11:BA:632:U:C4	2.61	0.69
1:A0:62:GLY:N	11:AA:560:C:OP1	2.22	0.69
11:BA:1518:G:OP2	23:BM:134:ARG:NH1	2.26	0.69
33:AW:102:ARG:HB2	33:AW:116:LEU:HD11	1.75	0.69
1:B0:40:MET:HE2	1:B0:46:LEU:HB3	1.74	0.69
13:DC:226:GLU:HB2	28:DR:207:TYR:HA	1.73	0.69
10:A9:95:LEU:HD13	11:AA:1200:G:H4'	1.75	0.68
28:CR:21:SER:HB2	28:CR:48:ASP:HB2	1.75	0.68
3:A2:150:ARG:NH2	11:AA:181:G:OP1	2.23	0.68
11:AA:754:A:H4'	14:AD:9:SER:HB3	1.75	0.68
5:B4:159:THR:HG23	5:B4:161:TYR:CD2	2.28	0.68
11:BA:589:G:OP2	39:BA:6418:HOH:O	2.09	0.68
13:CC:175:VAL:HG22	13:CC:188:LYS:HG2	1.73	0.68
31:BU:120:ILE:HG22	31:BU:124:LEU:HD21	1.74	0.68
11:CA:1009:U:H4'	11:CA:1010:A:OP2	1.93	0.68
10:D9:92:HIS:NE2	11:DA:1201:G:N7	2.41	0.68
11:CA:1518:G:OP2	23:CM:134:ARG:NH1	2.26	0.68
11:BA:1480:U:O2'	11:BA:1481:A:O5'	2.11	0.68
5:D4:220:LYS:NZ	11:DA:864:U:OP1	2.26	0.68
19:DI:56:LEU:HD23	19:DI:111:LEU:HD23	1.76	0.68
7:C6:65:THR:O	7:C6:67:GLY:N	2.26	0.68
11:CA:125:U:H4'	11:CA:125:U:OP2	1.91	0.68
11:CA:1621:G:H2'	11:CA:1622:U:O4'	1.93	0.68
11:BA:1165:A:H4'	11:BA:1166:A:OP2	1.94	0.68
11:DA:647:U:O2'	11:DA:649:U:OP2	2.05	0.68
9:C8:63:VAL:HG13	17:CG:97:LEU:HD12	1.74	0.68
11:AA:1736:C:H2'	11:AA:1737:C:H6	1.58	0.68
33:AW:194:VAL:HB	33:AW:245:GLY:HA3	1.75	0.68
33:CW:194:VAL:HB	33:CW:245:GLY:HA3	1.74	0.68
7:D6:65:THR:O	7:D6:67:GLY:N	2.27	0.68
11:CA:1505:C:H4'	11:CA:1511:A:H61	1.58	0.68
6:A5:32:LYS:NZ	11:AA:910:U:O2	2.25	0.68
33:CW:239:GLU:CD	33:CW:239:GLU:H	1.97	0.68
11:BA:1621:G:H2'	11:BA:1622:U:O4'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:982:U:H4'	11:DA:983:A:OP2	1.93	0.68
11:BA:222:U:H1'	11:BA:814:A:H61	1.57	0.68
24:AN:39:ARG:NH1	24:AN:39:ARG:HG2	2.09	0.68
11:CA:469:A:H2'	11:CA:470:G:H8	1.55	0.68
11:CA:1176:A:OP1	11:CA:1427:C:N4	2.27	0.68
6:A5:11:SER:HB2	11:AA:912:A:H5'	1.76	0.68
1:C0:40:MET:HE2	1:C0:46:LEU:HB3	1.75	0.68
19:BI:130:LYS:HE3	19:BI:136:ALA:O	1.93	0.68
11:CA:391:A:H4'	11:CA:392:A:H5''	1.75	0.68
33:DW:102:ARG:HB2	33:DW:116:LEU:HD11	1.75	0.68
11:BA:543:A:H4'	11:BA:544:G:OP2	1.92	0.68
11:DA:487:C:H3'	11:DA:488:G:C8	2.29	0.68
5:C4:159:THR:HG23	5:C4:161:TYR:CD2	2.28	0.68
11:DA:125:U:H4'	11:DA:125:U:OP2	1.92	0.68
3:B2:153:ARG:NH1	11:BA:189:C:O2	2.26	0.68
7:D6:34:LYS:NZ	7:D6:78:LYS:HE3	2.08	0.68
21:BK:36:THR:HG22	21:BK:38:ASN:H	1.59	0.68
11:DA:10:G:O6	11:DA:1117:U:N3	2.18	0.68
32:BV:16:LEU:HD13	32:BV:35:LEU:HG	1.76	0.68
11:CA:1168:A:H4'	11:CA:1169:C:H5''	1.76	0.68
11:DA:234:G:O2'	11:DA:235:A:O4'	2.11	0.68
11:CA:230:A:H2'	11:CA:231:U:H5'	1.76	0.68
3:A2:146:HIS:ND1	11:AA:181:G:H2'	2.08	0.68
11:DA:1446:A:O2'	11:DA:1512:G:OP1	2.11	0.68
11:CA:327:G:H2'	11:CA:328:G:H5''	1.76	0.68
11:CA:1153:U:H3	11:CA:1157:U:H5	1.39	0.68
11:AA:904:A:OP1	11:AA:994:C:O2'	2.06	0.68
11:AA:184:U:H5'	11:AA:185:C:OP2	1.94	0.68
10:D9:108:LYS:HA	31:DU:65:LYS:HE2	1.74	0.68
28:AR:57:TYR:HD1	28:AR:66:GLY:HA2	1.58	0.68
28:CR:57:TYR:HD1	28:CR:66:GLY:HA2	1.59	0.68
11:DA:92:G:OP1	33:DW:10:LYS:NZ	2.26	0.68
11:AA:238:G:O2'	11:AA:239:A:OP1	2.10	0.68
33:AW:239:GLU:CD	33:AW:239:GLU:H	1.97	0.68
11:BA:1137:A:H2'	11:BA:1138:A:C8	2.29	0.68
11:DA:1213:G:H1'	29:DS:84:HIS:CG	2.28	0.68
11:DA:392:A:H1'	33:DW:3:ARG:NH1	2.07	0.68
11:CA:233:U:H2'	11:CA:234:G:C8	2.29	0.68
11:CA:1165:A:H4'	11:CA:1166:A:OP2	1.94	0.68
11:BA:490:U:H2'	11:BA:491:U:C6	2.29	0.68
31:BU:52:GLN:O	31:BU:55:TYR:HD1	1.77	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1505:C:H4'	11:CA:1511:A:N6	2.09	0.68
3:C2:51:ILE:HD11	3:C2:68:LEU:HD21	1.76	0.68
28:BR:57:TYR:HD1	28:BR:66:GLY:HA2	1.58	0.68
11:DA:378:A:H5''	11:DA:380:G:OP2	1.93	0.68
11:CA:1360:U:O2'	11:CA:1361:A:OP2	2.09	0.68
11:BA:1661:G:O2'	11:BA:1662:C:OP2	2.10	0.68
11:DA:1168:A:H4'	11:DA:1169:C:H5''	1.75	0.68
19:AI:56:LEU:HD23	19:AI:111:LEU:HD23	1.76	0.68
11:DA:1621:G:H2'	11:DA:1622:U:O4'	1.93	0.68
15:DE:49:PHE:HD1	36:DZ:41:SER:HB2	1.58	0.68
31:DU:52:GLN:O	31:DU:55:TYR:HD1	1.77	0.68
11:BA:1188:A:H2	11:BA:1417:A:H62	1.41	0.68
11:CA:190:G:H2'	11:CA:191:A:H8	1.59	0.68
11:AA:1621:G:H2'	11:AA:1622:U:O4'	1.93	0.68
7:A6:45:PHE:CG	25:AO:57:ARG:HD3	2.29	0.68
11:CA:793:G:H5''	11:CA:794:A:OP2	1.94	0.67
11:DA:235:A:O2'	11:DA:814:A:H5'	1.94	0.67
22:DL:7:ARG:NH1	22:DL:7:ARG:HG3	2.08	0.67
15:BE:116:TRP:H	15:BE:132:HIS:CD2	2.12	0.67
11:CA:1168:A:O2'	11:CA:1169:C:OP2	2.12	0.67
28:AR:15:GLY:HA3	28:AR:65:PHE:HB2	1.73	0.67
28:AR:233:LYS:NZ	32:AV:24:LEU:O	2.25	0.67
28:BR:15:GLY:HA3	28:BR:65:PHE:HB2	1.74	0.67
11:DA:1449:G:OP2	30:DT:47:ARG:NH1	2.28	0.67
11:CA:1736:C:H2'	11:CA:1737:C:H6	1.59	0.67
33:BW:239:GLU:CD	33:BW:239:GLU:H	1.97	0.67
19:DI:130:LYS:HE3	19:DI:136:ALA:O	1.94	0.67
28:AR:21:SER:HB2	28:AR:48:ASP:HB2	1.74	0.67
11:DA:75:C:O2'	35:DY:178:LYS:HE2	1.94	0.67
11:BA:1035:A:H2'	11:BA:1035:A:N3	2.08	0.67
12:CB:77:TYR:CD1	12:CB:164:THR:HG23	2.28	0.67
11:CA:1188:A:H2	11:CA:1417:A:H62	1.41	0.67
11:CA:1661:G:O2'	11:CA:1662:C:OP2	2.10	0.67
11:BA:1168:A:O2'	11:BA:1169:C:OP2	2.11	0.67
16:AF:78:ARG:NH1	16:AF:100:GLY:HA3	2.08	0.67
7:D6:18:LYS:HA	7:D6:21:ARG:HE	1.59	0.67
7:A6:65:THR:O	7:A6:67:GLY:N	2.27	0.67
32:AV:16:LEU:HD13	32:AV:35:LEU:HG	1.75	0.67
27:CQ:107:PRO:HG3	27:CQ:133:THR:HB	1.76	0.67
11:AA:658:C:H2'	11:AA:659:G:C8	2.29	0.67
36:AZ:57:ASN:HB2	36:AZ:59:GLN:HG2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AL:78:ASN:HB3	22:AL:80:LYS:H	1.57	0.67
9:B8:95:LYS:HG2	9:B8:105:TYR:CE1	2.29	0.67
11:DA:543:A:H4'	11:DA:544:G:OP2	1.93	0.67
11:BA:847:A:H61	11:BA:936:U:H3	1.40	0.67
10:B9:100:PHE:HD1	10:B9:113:GLN:HG3	1.60	0.67
11:CA:1045:G:H2'	11:CA:1046:G:H5''	1.77	0.67
4:D3:34:LYS:O	4:D3:38:GLU:HG2	1.95	0.67
11:DA:1744:U:H4'	11:DA:1745:G:OP1	1.94	0.67
11:AA:1035:A:N3	11:AA:1035:A:H2'	2.10	0.67
12:DB:77:TYR:CD1	12:DB:164:THR:HG23	2.28	0.67
11:CA:1480:U:O2'	11:CA:1481:A:O5'	2.12	0.67
1:D0:22:LYS:CB	10:D9:74:LYS:HZ1	2.07	0.67
11:CA:1257:U:H4'	11:CA:1258:U:O5'	1.94	0.67
31:DU:120:ILE:HG22	31:DU:124:LEU:HD21	1.75	0.67
11:BA:190:G:H2'	11:BA:191:A:H8	1.60	0.67
4:C3:140:ARG:HD3	18:CH:53:ILE:HG23	1.76	0.67
11:BA:1005:A:OP2	39:BA:6013:HOH:O	2.12	0.67
11:CA:392:A:H1'	33:CW:3:ARG:HH11	1.59	0.67
31:AU:52:GLN:O	31:AU:55:TYR:HD1	1.76	0.67
9:D8:44:PHE:CE2	23:DM:8:GLU:HG3	2.26	0.67
27:DQ:107:PRO:HG3	27:DQ:133:THR:HB	1.76	0.67
11:DA:1137:A:H2'	11:DA:1138:A:C8	2.29	0.67
4:A3:140:ARG:HD3	18:AH:53:ILE:HG23	1.77	0.67
31:CU:52:GLN:O	31:CU:55:TYR:HD1	1.77	0.67
11:DA:1736:C:H2'	11:DA:1737:C:H6	1.59	0.67
11:AA:1257:U:H4'	11:AA:1258:U:O5'	1.93	0.67
11:CA:1137:A:H2'	11:CA:1138:A:C8	2.29	0.67
15:CE:41:LYS:HB3	15:CE:244:PHE:CE2	2.30	0.67
11:BA:969:A:OP2	39:BA:6319:HOH:O	2.11	0.67
19:CI:30:LEU:HG	19:CI:66:ASP:HB3	1.76	0.67
32:AV:32:LYS:HD2	32:AV:47:ARG:HH21	1.59	0.67
11:CA:1720:G:O2'	11:CA:1721:G:OP2	2.09	0.67
3:D2:82:ARG:NH1	11:DA:254:A:OP1	2.28	0.67
28:AR:260:GLN:HG3	28:AR:314:SER:HA	1.77	0.67
11:CA:498:C:H4'	11:CA:499:A:OP2	1.93	0.67
9:D8:43:VAL:HG12	23:DM:57:ARG:HG3	1.77	0.67
11:BA:1744:U:H4'	11:BA:1745:G:OP1	1.94	0.67
11:AA:986:G:OP1	39:AA:2179:HOH:O	2.12	0.67
7:D6:47:ASN:N	7:D6:47:ASN:OD1	2.28	0.67
6:B5:32:LYS:NZ	11:BA:910:U:O2	2.28	0.67
15:DE:116:TRP:H	15:DE:132:HIS:CD2	2.13	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B6:47:ASN:OD1	7:B6:47:ASN:N	2.28	0.67
11:AA:1137:A:H2'	11:AA:1138:A:C8	2.29	0.67
28:DR:57:TYR:HD1	28:DR:66:GLY:HA2	1.58	0.67
11:CA:1024:G:H2'	11:CA:1025:G:H5''	1.77	0.67
4:C3:34:LYS:O	4:C3:38:GLU:HG2	1.95	0.67
11:CA:1399:G:H21	20:CJ:72:GLU:HG2	1.59	0.67
11:AA:1744:U:H4'	11:AA:1745:G:OP1	1.94	0.67
11:AA:543:A:H4'	11:AA:544:G:OP2	1.94	0.67
11:DA:969:A:OP2	39:DA:7204:HOH:O	2.12	0.67
11:CA:986:G:OP1	39:CA:2160:HOH:O	2.12	0.67
1:A0:40:MET:HE2	1:A0:46:LEU:HB3	1.75	0.67
9:A8:95:LYS:HG2	9:A8:105:TYR:CE1	2.30	0.67
11:AA:642:G:N2	11:AA:667:C:O2	2.28	0.67
11:AA:866:U:H3	11:AA:902:G:H22	1.42	0.67
10:A9:75:LYS:HD3	11:AA:1418:C:C6	2.30	0.67
39:AA:2355:HOH:O	26:AP:90:ARG:NH2	2.26	0.67
15:DE:116:TRP:H	15:DE:132:HIS:HD2	1.41	0.67
5:D4:63:ILE:HG22	5:D4:91:ILE:HD12	1.77	0.67
11:AA:10:G:O6	11:AA:1117:U:N3	2.17	0.67
33:DW:239:GLU:H	33:DW:239:GLU:CD	1.98	0.67
11:BA:391:A:H4'	11:BA:392:A:H5''	1.74	0.67
11:DA:1009:U:H4'	11:DA:1010:A:OP2	1.94	0.67
11:AA:1480:U:O2'	11:AA:1481:A:O5'	2.12	0.67
19:DI:30:LEU:HG	19:DI:66:ASP:HB3	1.77	0.67
11:AA:1661:G:O2'	11:AA:1662:C:OP2	2.09	0.67
11:BA:1449:G:OP2	30:BT:47:ARG:NH1	2.28	0.67
11:DA:1661:G:O2'	11:DA:1662:C:OP2	2.10	0.67
11:AA:1176:A:OP1	11:AA:1427:C:N4	2.27	0.67
5:C4:63:ILE:HG22	5:C4:91:ILE:HD12	1.77	0.67
11:DA:1045:G:H2'	11:DA:1046:G:H5''	1.76	0.67
19:DI:18:ALA:HA	19:DI:73:GLY:HA3	1.77	0.67
11:BA:1736:C:H2'	11:BA:1737:C:H6	1.60	0.67
15:AE:162:LYS:HB3	15:AE:167:ARG:HH11	1.60	0.67
11:DA:617:A:H4'	11:DA:618:G:OP2	1.94	0.67
11:DA:1576:U:OP1	19:DI:132:GLY:N	2.27	0.67
19:CI:56:LEU:HD23	19:CI:111:LEU:HD23	1.76	0.67
11:BA:231:U:H2'	11:BA:232:G:O4'	1.95	0.66
11:BA:1369:A:H3'	11:BA:1369:A:N3	2.11	0.66
11:DA:573:A:N6	13:DC:147:GLN:OE1	2.28	0.66
15:AE:116:TRP:H	15:AE:132:HIS:CD2	2.12	0.66
32:BV:32:LYS:HD2	32:BV:47:ARG:HH21	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AD:146:PHE:HZ	14:AD:149:ARG:HE	1.43	0.66
11:BA:866:U:H3	11:BA:902:G:H22	1.42	0.66
19:BI:56:LEU:HD23	19:BI:111:LEU:HD23	1.76	0.66
36:CZ:57:ASN:HB2	36:CZ:59:GLN:HG2	1.76	0.66
11:DA:273:A:HO2'	11:DA:274:C:P	2.16	0.66
11:BA:954:G:N1	11:BA:1001:A:O2'	2.26	0.66
22:BL:7:ARG:NH1	22:BL:7:ARG:HG3	2.09	0.66
11:DA:1188:A:H2	11:DA:1417:A:H62	1.41	0.66
15:CE:116:TRP:H	15:CE:132:HIS:CD2	2.12	0.66
11:CA:1621:G:O6	39:CA:2304:HOH:O	2.12	0.66
3:D2:51:ILE:HD11	3:D2:68:LEU:HD21	1.77	0.66
11:BA:184:U:H5'	11:BA:185:C:OP2	1.95	0.66
11:CA:184:U:H5'	11:CA:185:C:OP2	1.95	0.66
9:C8:95:LYS:HG2	9:C8:105:TYR:CE1	2.30	0.66
11:AA:75:C:O2'	35:AY:178:LYS:HE2	1.95	0.66
11:CA:989:G:N7	39:CA:2179:HOH:O	2.28	0.66
19:BI:30:LEU:HG	19:BI:66:ASP:HB3	1.77	0.66
11:CA:1369:A:H3'	11:CA:1369:A:N3	2.11	0.66
27:BQ:107:PRO:HG3	27:BQ:133:THR:HB	1.78	0.66
9:C8:73:LEU:HB2	9:C8:75:VAL:HG23	1.78	0.66
2:C1:61:GLU:O	6:C5:51:ARG:NH1	2.29	0.66
33:CW:126:LEU:HB3	33:CW:143:THR:HG21	1.77	0.66
11:AA:487:C:H3'	11:AA:488:G:C8	2.30	0.66
11:DA:190:G:H2'	11:DA:191:A:H8	1.60	0.66
11:BA:230:A:H2'	11:BA:231:U:H5'	1.76	0.66
10:D9:92:HIS:CE1	11:DA:1201:G:C8	2.84	0.66
11:CA:537:A:OP2	11:CA:538:A:OP2	2.14	0.66
21:AK:26:ASN:HA	21:AK:91:ASN:ND2	2.11	0.66
19:AI:18:ALA:HA	19:AI:73:GLY:HA3	1.78	0.66
28:CR:260:GLN:HG3	28:CR:314:SER:HA	1.78	0.66
22:AL:52:VAL:HG23	22:AL:99:ASP:H	1.61	0.66
11:DA:901:A:N7	39:DA:7559:HOH:O	2.28	0.66
11:BA:133:A:H4'	11:BA:134:C:H5'	1.78	0.66
11:AA:444:A:O2'	11:AA:445:U:OP1	2.13	0.66
17:AG:101:ARG:NH2	17:AG:176:GLU:OE1	2.28	0.66
11:AA:1009:U:H4'	11:AA:1010:A:OP2	1.96	0.66
3:D2:150:ARG:NH2	11:DA:181:G:OP1	2.25	0.66
11:AA:982:U:H4'	11:AA:983:A:OP2	1.94	0.66
11:DA:573:A:N1	13:DC:147:GLN:OE1	2.28	0.66
7:B6:18:LYS:HA	7:B6:21:ARG:HE	1.60	0.66
36:DZ:57:ASN:HB2	36:DZ:59:GLN:HG2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B8:73:LEU:HB2	9:B8:75:VAL:HG23	1.78	0.66
11:BA:71:U:O2'	11:BA:72:G:OP2	2.12	0.66
11:AA:171:U:H4'	11:AA:172:U:OP2	1.96	0.66
28:DR:255:GLY:H	28:DR:279:LYS:HZ2	1.43	0.66
3:D2:153:ARG:NH1	11:DA:189:C:O2	2.28	0.66
11:DA:311:U:H5'	11:DA:312:C:H5'	1.78	0.66
11:AA:1005:A:OP2	39:AA:2188:HOH:O	2.13	0.66
15:AE:41:LYS:HB3	15:AE:244:PHE:CE2	2.31	0.66
4:B3:34:LYS:O	4:B3:38:GLU:HG2	1.96	0.66
5:D4:159:THR:HG23	5:D4:161:TYR:CD2	2.30	0.66
11:DA:392:A:H1'	33:DW:3:ARG:HH11	1.61	0.66
12:BB:201:LYS:HZ3	32:BV:82:LEU:HD22	1.58	0.66
17:CG:66:ARG:HG3	17:CG:66:ARG:NH1	2.11	0.66
11:CA:754:A:H4'	14:CD:9:SER:HB3	1.78	0.66
27:DQ:4:GLN:NE2	27:DQ:10:GLN:O	2.29	0.66
4:C3:113:ARG:NH2	11:CA:633:U:OP1	2.28	0.66
1:A0:38:ILE:HD11	1:A0:49:PHE:HB2	1.78	0.66
4:A3:34:LYS:O	4:A3:38:GLU:HG2	1.95	0.66
32:DV:32:LYS:HD2	32:DV:47:ARG:HH21	1.59	0.66
9:D8:43:VAL:HA	9:D8:79:LEU:HD11	1.76	0.66
8:D7:6:LYS:HZ1	31:DU:20:ASN:HD21	1.42	0.66
11:DA:1035:A:H2'	11:DA:1035:A:N3	2.10	0.66
11:BA:210:A:OP2	11:BA:210:A:C8	2.48	0.66
11:BA:220:A:H5'	11:BA:221:A:OP2	1.96	0.66
11:CA:377:G:O2'	11:CA:378:A:H5'	1.96	0.66
20:BJ:41:ARG:HH21	20:BJ:103:ASN:HB3	1.61	0.66
11:BA:1176:A:OP1	11:BA:1427:C:N4	2.29	0.66
11:DA:1173:G:O5'	39:DA:8020:HOH:O	2.13	0.66
33:BW:11:ARG:NH1	33:BW:20:LEU:HB3	2.10	0.66
14:DD:146:PHE:HZ	14:DD:149:ARG:HE	1.44	0.66
4:D3:109:LYS:HE2	4:D3:109:LYS:H	1.61	0.66
11:DA:184:U:H5'	11:DA:185:C:OP2	1.96	0.66
11:BA:1024:G:H2'	11:BA:1025:G:H5''	1.77	0.66
11:AA:1711:U:O4	39:AA:2223:HOH:O	2.10	0.66
6:C5:99:PRO:HD2	6:C5:100:PRO:HD3	1.78	0.66
11:CA:74:A:H5''	35:CY:162:ARG:HH22	1.60	0.66
19:AI:30:LEU:HG	19:AI:66:ASP:HB3	1.77	0.66
11:DA:1449:G:OP1	30:DT:43:THR:OG1	2.08	0.66
7:C6:5:LEU:H	18:CH:24:GLN:NE2	1.93	0.66
14:BD:153:GLU:HA	14:BD:156:ILE:HD11	1.77	0.66
6:D5:32:LYS:NZ	11:DA:910:U:O2	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AL:69:LYS:HB3	22:AL:92:LEU:HD22	1.76	0.66
11:AA:887:U:OP1	11:AA:887:U:H4'	1.96	0.66
11:AA:500:U:P	34:AX:28:ARG:HH21	2.18	0.65
11:DA:1480:U:O2'	11:DA:1481:A:O5'	2.12	0.65
17:DG:66:ARG:NH1	17:DG:66:ARG:HG3	2.11	0.65
27:AQ:4:GLN:NE2	27:AQ:10:GLN:O	2.28	0.65
11:CA:1292:U:H3'	12:CB:98:ARG:HH12	1.62	0.65
11:DA:244:A:H5'	27:DQ:38:GLY:HA3	1.76	0.65
15:BE:158:LYS:HG2	15:BE:171:VAL:HG22	1.78	0.65
11:DA:866:U:H3	11:DA:902:G:H22	1.43	0.65
11:CA:302:U:OP2	22:CL:20:LYS:HE3	1.96	0.65
24:BN:23:CYS:HB3	24:BN:41:CYS:SG	2.36	0.65
11:CA:92:G:OP1	33:CW:10:LYS:NZ	2.29	0.65
23:BM:46:ILE:HG12	23:BM:72:LEU:HD12	1.77	0.65
33:CW:11:ARG:NH1	33:CW:20:LEU:HB3	2.10	0.65
4:A3:110:SER:OG	11:AA:794:A:OP1	2.15	0.65
11:BA:230:A:N6	11:BA:231:U:O2	2.30	0.65
11:CA:982:U:H4'	11:CA:983:A:OP2	1.95	0.65
11:AA:190:G:H2'	11:AA:191:A:H8	1.61	0.65
11:BA:1299:C:OP1	13:BC:159:TYR:OH	2.10	0.65
26:DP:18:ARG:HE	26:DP:20:GLN:HE21	1.44	0.65
36:BZ:57:ASN:HB2	36:BZ:59:GLN:HG2	1.76	0.65
32:AV:89:SER:OG	32:AV:90:ILE:N	2.28	0.65
11:DA:1213:G:C4'	29:DS:83:THR:HA	2.25	0.65
10:B9:128:HIS:HE2	10:B9:133:TYR:HB3	1.60	0.65
11:CA:220:A:H3'	11:CA:221:A:H8	1.60	0.65
3:A2:146:HIS:HD1	11:AA:181:G:H2'	1.61	0.65
13:CC:157:GLN:HE21	13:CC:158:GLY:H	1.44	0.65
11:CA:238:G:O2'	11:CA:239:A:OP1	2.12	0.65
11:CA:514:G:H4'	26:CP:34:SER:HB3	1.78	0.65
17:BG:101:ARG:NH2	17:BG:176:GLU:OE1	2.30	0.65
33:AW:36:HIS:CG	33:AW:87:GLY:HA3	2.31	0.65
23:CM:46:ILE:HG12	23:CM:72:LEU:HD12	1.78	0.65
11:DA:1024:G:H2'	11:DA:1025:G:H5''	1.78	0.65
33:DW:11:ARG:NH1	33:DW:20:LEU:HB3	2.11	0.65
28:DR:260:GLN:HG3	28:DR:314:SER:HA	1.76	0.65
26:CP:18:ARG:HE	26:CP:20:GLN:HE21	1.44	0.65
12:BB:201:LYS:HZ1	32:BV:82:LEU:HD22	1.61	0.65
33:BW:193:ARG:HD3	33:BW:247:ARG:HB2	1.78	0.65
33:AW:193:ARG:HD3	33:AW:247:ARG:HB2	1.78	0.65
35:BY:89:SER:OG	35:BY:90:GLY:N	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:887:U:H4'	11:BA:887:U:OP1	1.96	0.65
11:BA:982:U:H4'	11:BA:983:A:OP2	1.96	0.65
11:BA:1045:G:H2'	11:BA:1046:G:H5''	1.78	0.65
11:CA:677:G:N2	11:CA:725:A:H1'	2.10	0.65
6:B5:42:ARG:NH2	21:BK:107:GLN:HG3	2.09	0.65
11:DA:377:G:O2'	11:DA:378:A:H5'	1.96	0.65
11:DA:1479:G:N7	39:DA:8084:HOH:O	2.29	0.65
11:AA:1369:A:N3	11:AA:1369:A:H3'	2.11	0.65
7:D6:68:LYS:HB3	11:DA:1027:U:OP1	1.97	0.65
11:CA:5:U:OP2	15:CE:205:THR:HG22	1.97	0.65
9:D8:95:LYS:HG2	9:D8:105:TYR:CE1	2.31	0.65
11:AA:1024:G:H2'	11:AA:1025:G:H5''	1.79	0.65
14:CD:146:PHE:HZ	14:CD:149:ARG:HE	1.44	0.65
11:DA:1281:G:H2'	11:DA:1372:A:C2	2.31	0.65
3:A2:51:ILE:HD11	3:A2:68:LEU:HD21	1.78	0.65
23:DM:48:LYS:HD3	30:DT:39:GLN:HG2	1.78	0.65
11:DA:231:U:H5'	11:DA:232:G:OP2	1.96	0.65
3:A2:146:HIS:CE1	11:AA:181:G:H2'	2.32	0.65
11:CA:1744:U:H4'	11:CA:1745:G:OP1	1.95	0.65
24:DN:39:ARG:NH1	24:DN:39:ARG:HG2	2.08	0.65
4:B3:196:LYS:HE2	7:B6:77:PHE:CZ	2.31	0.65
7:C6:47:ASN:OD1	7:C6:47:ASN:N	2.29	0.65
11:DA:1514:G:O2'	11:DA:1541:A:N6	2.30	0.65
11:DA:1257:U:H4'	11:DA:1258:U:O5'	1.96	0.65
1:C0:38:ILE:HD11	1:C0:49:PHE:HB2	1.79	0.65
33:DW:193:ARG:HD3	33:DW:247:ARG:HB2	1.79	0.65
1:D0:38:ILE:HD11	1:D0:49:PHE:HB2	1.79	0.65
1:A0:43:ASN:HB3	1:A0:45:ARG:NH1	2.12	0.65
12:BB:128:GLN:HE21	12:BB:132:GLU:HG3	1.62	0.65
17:CG:101:ARG:NH2	17:CG:176:GLU:OE1	2.30	0.65
17:AG:66:ARG:NH1	17:AG:66:ARG:HG3	2.12	0.65
32:DV:16:LEU:HD13	32:DV:35:LEU:HG	1.78	0.65
11:BA:996:U:H5'	11:BA:997:A:OP2	1.96	0.65
11:DA:1320:A:H5'	11:DA:1321:G:OP2	1.97	0.65
9:A8:43:VAL:HA	9:A8:79:LEU:HD11	1.78	0.65
6:C5:56:LYS:HG3	21:CK:120:ALA:HB1	1.79	0.65
11:DA:760:G:N7	26:DP:9:LYS:NZ	2.44	0.65
1:D0:40:MET:HE2	1:D0:46:LEU:HB3	1.77	0.65
11:BA:1200:G:OP1	31:BU:28:GLY:HA2	1.97	0.65
11:AA:1200:G:N7	31:AU:76:ARG:NH1	2.45	0.65
11:CA:1035:A:N3	11:CA:1035:A:H2'	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:617:A:H4'	11:AA:618:G:OP2	1.95	0.65
11:BA:378:A:H5''	11:BA:380:G:OP2	1.95	0.65
11:BA:1444:U:H5''	17:BG:164:ILE:HD11	1.77	0.65
11:BA:100:A:H61	11:BA:299:C:H5''	1.62	0.65
11:BA:1168:A:H4'	11:BA:1169:C:C5'	2.27	0.65
5:A4:63:ILE:HG22	5:A4:91:ILE:HD12	1.78	0.65
11:DA:813:U:OP1	11:DA:813:U:H4'	1.97	0.65
3:B2:51:ILE:HD11	3:B2:68:LEU:HD21	1.77	0.65
11:AA:235:A:H4'	11:AA:236:U:OP2	1.97	0.65
11:AA:1168:A:H4'	11:AA:1169:C:C5'	2.27	0.65
11:DA:100:A:H61	11:DA:299:C:H5''	1.62	0.65
23:AM:46:ILE:HG12	23:AM:72:LEU:HD12	1.78	0.65
33:AW:11:ARG:NH1	33:AW:20:LEU:HB3	2.12	0.65
24:AN:23:CYS:HB3	24:AN:41:CYS:SG	2.36	0.65
33:CW:193:ARG:HD3	33:CW:247:ARG:HB2	1.79	0.65
22:DL:69:LYS:HB3	22:DL:92:LEU:HD22	1.77	0.65
27:CQ:12:GLN:HE21	27:CQ:60:THR:HG23	1.62	0.65
11:DA:535:A:O2'	11:DA:536:C:O5'	2.14	0.65
11:DA:1444:U:OP2	17:DG:164:ILE:HG13	1.97	0.65
11:DA:171:U:H4'	11:DA:172:U:OP2	1.97	0.65
11:CA:311:U:H5'	11:CA:312:C:H5'	1.78	0.65
11:BA:645:C:H2'	11:BA:646:A:C8	2.31	0.65
11:BA:813:U:H4'	11:BA:813:U:OP1	1.97	0.65
11:AA:1045:G:H2'	11:AA:1046:G:H5''	1.78	0.65
6:C5:32:LYS:NZ	11:CA:910:U:O2	2.29	0.65
27:CQ:104:ARG:HH11	27:CQ:104:ARG:HG2	1.61	0.65
11:DA:891:G:H4'	11:DA:892:G:OP2	1.97	0.64
11:BA:840:A:OP2	25:BO:66:ARG:NH2	2.30	0.64
27:AQ:12:GLN:HE21	27:AQ:60:THR:HG23	1.62	0.64
27:DQ:12:GLN:HE21	27:DQ:60:THR:HG23	1.62	0.64
11:BA:270:U:H4'	11:BA:271:U:OP2	1.97	0.64
27:AQ:79:MET:HG3	27:AQ:82:THR:HB	1.79	0.64
33:BW:126:LEU:HB3	33:BW:143:THR:HG21	1.79	0.64
15:BE:41:LYS:HB3	15:BE:244:PHE:CE2	2.33	0.64
11:AA:963:G:N7	39:AA:2171:HOH:O	2.29	0.64
11:CA:866:U:H3	11:CA:902:G:H22	1.44	0.64
11:CA:1472:U:OP2	30:CT:105:ARG:NH2	2.30	0.64
11:CA:969:A:OP2	39:CA:2180:HOH:O	2.13	0.64
11:BA:74:A:H5''	35:BY:162:ARG:HH22	1.62	0.64
6:D5:99:PRO:HD2	6:D5:100:PRO:HD3	1.79	0.64
5:A4:220:LYS:NZ	11:AA:864:U:OP1	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:1369:A:H3'	11:DA:1369:A:N3	2.11	0.64
13:DC:146:LYS:HD2	13:DC:151:LYS:HZ2	1.62	0.64
7:B6:65:THR:O	7:B6:67:GLY:N	2.30	0.64
11:AA:1092:U:H4'	11:AA:1093:A:OP2	1.97	0.64
11:DA:1288:C:OP2	32:DV:7:LYS:HE3	1.97	0.64
16:DF:22:ARG:HB2	16:DF:34:THR:HB	1.80	0.64
17:DG:101:ARG:NH2	17:DG:176:GLU:OE1	2.30	0.64
15:BE:145:TRP:H	15:BE:153:HIS:HE1	1.46	0.64
27:BQ:12:GLN:HE21	27:BQ:60:THR:HG23	1.62	0.64
11:AA:765:A:C6	26:AP:19:ARG:NH1	2.65	0.64
4:A3:109:LYS:H	4:A3:109:LYS:HE2	1.62	0.64
11:DA:666:A:H2'	11:DA:667:C:O4'	1.96	0.64
9:C8:43:VAL:HA	9:C8:79:LEU:HD11	1.80	0.64
11:CA:660:U:H2'	11:CA:661:G:O4'	1.97	0.64
22:BL:52:VAL:HG23	22:BL:99:ASP:H	1.62	0.64
11:AA:1320:A:H5'	11:AA:1321:G:OP2	1.97	0.64
27:BQ:4:GLN:NE2	27:BQ:10:GLN:O	2.30	0.64
11:AA:879:G:N2	21:AK:68:GLU:OE1	2.30	0.64
11:DA:5:U:OP2	15:DE:205:THR:HG22	1.98	0.64
22:DL:52:VAL:HG23	22:DL:99:ASP:H	1.62	0.64
11:DA:1357:G:OP1	32:DV:32:LYS:NZ	2.30	0.64
11:BA:1257:U:H4'	11:BA:1258:U:O5'	1.97	0.64
23:DM:46:ILE:HG12	23:DM:72:LEU:HD12	1.78	0.64
11:AA:840:A:H62	25:AO:72:LYS:NZ	1.95	0.64
32:CV:32:LYS:HD2	32:CV:47:ARG:HH21	1.61	0.64
15:DE:41:LYS:HB3	15:DE:244:PHE:CE2	2.32	0.64
4:C3:109:LYS:HE2	4:C3:109:LYS:H	1.63	0.64
6:A5:99:PRO:HD2	6:A5:100:PRO:HD3	1.79	0.64
11:AA:377:G:O2'	11:AA:378:A:H5'	1.97	0.64
11:AA:1172:G:H4'	11:AA:1173:G:C5'	2.28	0.64
11:CA:1514:G:O2'	11:CA:1541:A:N6	2.30	0.64
13:AC:226:GLU:HB2	28:AR:207:TYR:HA	1.79	0.64
21:DK:36:THR:HG22	21:DK:38:ASN:H	1.62	0.64
16:CF:22:ARG:HB2	16:CF:34:THR:HB	1.79	0.64
22:BL:69:LYS:HB3	22:BL:92:LEU:HD22	1.78	0.64
11:CA:2:A:O2'	11:CA:3:C:OP2	2.13	0.64
12:BB:77:TYR:CD1	12:BB:164:THR:HG23	2.29	0.64
13:AC:157:GLN:HE21	13:AC:158:GLY:H	1.46	0.64
11:BA:69:A:H3'	35:BY:173:ARG:HH22	1.62	0.64
11:AA:633:U:H4'	11:AA:634:C:H5''	1.78	0.64
11:DA:1168:A:H4'	11:DA:1169:C:C5'	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:47:ASN:N	7:A6:47:ASN:OD1	2.31	0.64
11:AA:1137:A:H2'	11:AA:1138:A:H8	1.63	0.64
33:AW:130:ALA:HA	33:AW:158:ILE:HD11	1.80	0.64
33:AW:126:LEU:HB3	33:AW:143:THR:HG21	1.79	0.64
19:BI:18:ALA:HA	19:BI:73:GLY:HA3	1.78	0.64
21:CK:36:THR:HG22	21:CK:38:ASN:H	1.62	0.64
9:A8:99:ASN:HD22	17:AG:90:ASN:HD21	1.46	0.64
11:AA:1419:G:OP1	39:AA:2410:HOH:O	2.14	0.64
14:DD:53:ARG:NH2	15:DE:175:ARG:O	2.31	0.64
22:CL:69:LYS:HB3	22:CL:92:LEU:HD22	1.79	0.64
11:CA:379:A:OP1	11:CA:415:G:O2'	2.16	0.64
11:AA:234:G:H2'	11:AA:235:A:C8	2.32	0.64
11:CA:1245:G:O2'	11:CA:1246:C:OP2	2.14	0.64
1:B0:43:ASN:HB3	1:B0:45:ARG:NH1	2.12	0.64
11:CA:171:U:H4'	11:CA:172:U:OP2	1.96	0.64
11:AA:1708:A:N6	39:AA:2233:HOH:O	2.29	0.64
11:DA:883:A:H5'	21:DK:66:ARG:HB3	1.79	0.64
11:AA:302:U:OP2	22:AL:20:LYS:HE3	1.98	0.64
4:C3:145:LEU:HA	18:CH:42:GLN:HE21	1.63	0.64
11:CA:813:U:H4'	11:CA:813:U:OP1	1.97	0.64
15:BE:162:LYS:HB3	15:BE:167:ARG:HH11	1.62	0.64
11:BA:1320:A:H5'	11:BA:1321:G:OP2	1.98	0.64
11:DA:887:U:OP1	11:DA:887:U:H4'	1.96	0.64
9:D8:73:LEU:HB2	9:D8:75:VAL:HG23	1.78	0.64
11:AA:654:U:H1'	11:AA:656:G:N2	2.08	0.64
6:B5:99:PRO:HD2	6:B5:100:PRO:HD3	1.78	0.64
4:B3:109:LYS:H	4:B3:109:LYS:HE2	1.63	0.64
5:B4:63:ILE:HG22	5:B4:91:ILE:HD12	1.80	0.64
3:B2:97:GLU:O	3:B2:101:THR:OG1	2.15	0.64
11:CA:1434:C:H2'	11:CA:1435:G:H5''	1.79	0.64
11:DA:1092:U:H4'	11:DA:1093:A:OP2	1.97	0.64
11:DA:473:A:H2'	11:DA:474:G:H8	1.63	0.64
27:DQ:104:ARG:HH11	27:DQ:104:ARG:HG2	1.62	0.64
11:CA:89:A:H4'	11:CA:90:U:OP2	1.97	0.64
11:BA:535:A:O2'	11:BA:536:C:O5'	2.16	0.64
10:D9:132:HIS:HB2	10:D9:141:LEU:HB2	1.79	0.64
11:BA:377:G:O2'	11:BA:378:A:H5'	1.98	0.64
11:DA:209:G:C4'	11:DA:210:A:H5'	2.28	0.64
11:AA:535:A:O2'	11:AA:536:C:O5'	2.15	0.64
1:A0:43:ASN:HA	11:AA:1708:A:O2'	1.98	0.64
21:BK:26:ASN:HA	21:BK:91:ASN:ND2	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AD:154:LYS:NZ	11:BA:473:A:O3'	2.22	0.64
13:BC:226:GLU:HB2	28:BR:207:TYR:HA	1.79	0.64
11:DA:149:U:OP1	35:DY:107:ARG:HG2	1.98	0.64
22:CL:52:VAL:HG23	22:CL:99:ASP:H	1.63	0.64
11:DA:477:G:H2'	11:DA:478:G:O4'	1.97	0.64
11:DA:840:A:H62	25:DO:72:LYS:NZ	1.96	0.64
11:AA:885:A:N3	11:AA:975:G:O2'	2.27	0.64
11:DA:754:A:H4'	14:DD:9:SER:HB3	1.78	0.64
16:BF:22:ARG:HB2	16:BF:34:THR:HB	1.80	0.64
11:CA:270:U:H4'	11:CA:271:U:OP2	1.98	0.64
9:A8:73:LEU:HB2	9:A8:75:VAL:HG23	1.79	0.64
3:D2:97:GLU:O	3:D2:101:THR:OG1	2.14	0.64
5:B4:148:LYS:HZ3	5:B4:152:GLY:C	2.00	0.64
11:AA:133:A:H4'	11:AA:134:C:H5'	1.79	0.64
33:DW:126:LEU:HB3	33:DW:143:THR:HG21	1.78	0.64
26:AP:18:ARG:HE	26:AP:20:GLN:HE21	1.45	0.64
23:BM:29:PRO:HA	23:BM:32:LEU:HD12	1.80	0.64
11:AA:1002:U:H2'	11:AA:1003:A:H5''	1.80	0.64
20:BJ:69:PRO:O	24:BN:40:ARG:NH1	2.30	0.64
11:BA:1092:U:H4'	11:BA:1093:A:OP2	1.98	0.64
11:DA:999:C:N4	39:DA:7716:HOH:O	2.31	0.64
33:DW:36:HIS:CG	33:DW:87:GLY:HA3	2.33	0.64
35:DY:89:SER:OG	35:DY:90:GLY:N	2.30	0.64
11:DA:219:C:H5'	11:DA:220:A:OP2	1.97	0.64
11:DA:834:A:O2'	11:DA:835:U:H4'	1.98	0.63
11:BA:633:U:H4'	11:BA:634:C:H5''	1.80	0.63
11:BA:634:C:H5'	11:BA:634:C:H6	1.64	0.63
11:CA:1428:C:O2'	11:CA:1429:G:OP1	2.12	0.63
13:BC:157:GLN:HE21	13:BC:158:GLY:H	1.46	0.63
11:DA:1282:U:O3'	11:DA:1373:G:O2'	2.17	0.63
11:DA:133:A:H4'	11:DA:134:C:H5'	1.79	0.63
11:AA:1071:U:OP1	18:AH:71:LYS:NZ	2.32	0.63
11:AA:100:A:OP1	11:AA:299:C:N4	2.31	0.63
11:CA:1365:U:H4'	11:CA:1366:G:OP2	1.98	0.63
11:DA:533:G:N2	39:DA:7640:HOH:O	2.29	0.63
11:AA:813:U:OP1	11:AA:813:U:H4'	1.97	0.63
27:BQ:104:ARG:HH11	27:BQ:104:ARG:HG2	1.63	0.63
11:CA:508:A:OP1	39:CA:2017:HOH:O	2.14	0.63
11:CA:1263:G:N2	11:CA:1296:G:N2	2.45	0.63
11:CA:75:C:O2'	35:CY:178:LYS:HE2	1.99	0.63
11:DA:1263:G:N2	11:DA:1296:G:N2	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AI:54:ILE:HG22	19:AI:55:LEU:HD23	1.79	0.63
11:CA:469:A:H5''	34:CX:35:SER:OG	1.98	0.63
11:DA:1362:U:OP1	32:DV:59:LYS:NZ	2.24	0.63
11:BA:1172:G:H4'	11:BA:1173:G:O5'	1.97	0.63
9:B8:43:VAL:HA	9:B8:79:LEU:HD11	1.79	0.63
14:CD:153:GLU:HA	14:CD:156:ILE:HD11	1.79	0.63
13:DC:157:GLN:HE21	13:DC:158:GLY:H	1.46	0.63
11:DA:1568:C:OP2	24:DN:18:LYS:NZ	2.31	0.63
3:A2:82:ARG:NH1	11:AA:254:A:OP1	2.31	0.63
11:AA:16:G:H2'	11:AA:17:C:C6	2.33	0.63
11:AA:227:G:OP2	11:AA:227:G:H4'	1.98	0.63
11:BA:490:U:OP2	11:BA:490:U:H6	1.81	0.63
20:CJ:41:ARG:HH21	20:CJ:103:ASN:HB3	1.63	0.63
11:CA:100:A:H61	11:CA:299:C:H5''	1.64	0.63
11:DA:1147:U:OP2	23:DM:137:HIS:CE1	2.52	0.63
11:AA:981:A:H2'	11:AA:983:A:N7	2.13	0.63
32:CV:16:LEU:HD13	32:CV:35:LEU:HG	1.80	0.63
10:C9:128:HIS:HE2	10:C9:133:TYR:HB3	1.61	0.63
11:AA:1514:G:O2'	11:AA:1541:A:N6	2.31	0.63
14:BD:146:PHE:HZ	14:BD:149:ARG:HE	1.44	0.63
28:BR:260:GLN:HG3	28:BR:314:SER:HA	1.81	0.63
11:BA:1515:A:N1	23:BM:151:VAL:HG21	2.13	0.63
3:A2:97:GLU:O	3:A2:101:THR:OG1	2.15	0.63
11:BA:1137:A:H2'	11:BA:1138:A:H8	1.64	0.63
11:BA:1434:C:H2'	11:BA:1435:G:H5''	1.80	0.63
11:BA:533:G:N2	39:BA:6083:HOH:O	2.30	0.63
21:AK:36:THR:HG22	21:AK:38:ASN:H	1.62	0.63
33:CW:36:HIS:CG	33:CW:87:GLY:HA3	2.34	0.63
1:D0:43:ASN:HB3	1:D0:45:ARG:NH1	2.14	0.63
11:CA:1320:A:H5'	11:CA:1321:G:OP2	1.98	0.63
10:A9:129:TYR:HB3	10:A9:152:LEU:HD13	1.79	0.63
11:BA:891:G:H4'	11:BA:892:G:OP2	1.99	0.63
11:CA:1137:A:H2'	11:CA:1138:A:H8	1.63	0.63
4:C3:115:ARG:NH1	11:CA:632:U:C4	2.66	0.63
11:CA:840:A:H62	25:CO:72:LYS:NZ	1.95	0.63
1:C0:43:ASN:HB3	1:C0:45:ARG:NH1	2.13	0.63
10:C9:121:PRO:HB2	31:CU:38:ALA:HA	1.79	0.63
11:BA:75:C:O2'	35:BY:178:LYS:HE2	1.98	0.63
5:C4:220:LYS:NZ	11:CA:864:U:OP1	2.32	0.63
11:BA:121:U:H4'	33:BW:150:ARG:HH12	1.62	0.63
11:CA:840:A:OP2	25:CO:66:ARG:NH2	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B0:38:ILE:HD11	1:B0:49:PHE:HB2	1.80	0.63
27:CQ:4:GLN:NE2	27:CQ:10:GLN:O	2.31	0.63
13:CC:10:LYS:NZ	20:CJ:113:GLU:OE2	2.31	0.63
5:B4:67:VAL:HG21	11:BA:898:U:H4'	1.80	0.63
11:DA:11:A:H2'	11:DA:12:U:H5'	1.80	0.63
19:CI:54:ILE:HG22	19:CI:55:LEU:HD23	1.80	0.63
11:CA:100:A:OP1	11:CA:299:C:N4	2.31	0.63
11:AA:1059:A:N3	11:AA:1115:A:O2'	2.30	0.63
11:CA:1722:U:H5'	21:CK:151:LEU:HD12	1.81	0.63
33:CW:97:THR:HB	33:CW:99:GLN:HG2	1.80	0.63
16:AF:22:ARG:HB2	16:AF:34:THR:HB	1.81	0.63
11:CA:887:U:H4'	11:CA:887:U:OP1	1.97	0.63
11:DA:1213:G:H22	11:DA:1423:U:H4'	1.63	0.63
19:DI:54:ILE:HG22	19:DI:55:LEU:HD23	1.79	0.63
11:AA:270:U:H4'	11:AA:271:U:OP2	1.98	0.63
11:BA:171:U:H4'	11:BA:172:U:OP2	1.97	0.63
7:B6:42:GLN:NE2	7:B6:55:GLU:H	1.97	0.63
35:CY:89:SER:OG	35:CY:90:GLY:N	2.30	0.63
27:AQ:104:ARG:HG2	27:AQ:104:ARG:HH11	1.64	0.63
11:CA:133:A:H4'	11:CA:134:C:H5'	1.79	0.63
9:D8:81:ARG:HA	9:D8:84:MET:HG3	1.81	0.63
3:C2:27:PHE:CE1	11:CA:292:G:H4'	2.34	0.63
3:C2:82:ARG:NH1	11:CA:254:A:OP1	2.32	0.63
11:CA:253:A:H5'	11:CA:254:A:OP2	1.99	0.63
15:BE:231:TRP:CE2	18:BH:68:ARG:HG2	2.34	0.63
11:CA:901:A:N7	39:CA:2161:HOH:O	2.30	0.63
15:CE:162:LYS:HB3	15:CE:167:ARG:HH11	1.64	0.63
11:AA:1217:G:O2'	11:AA:1218:C:OP2	2.17	0.62
4:B3:103:LYS:HA	4:B3:113:ARG:NH1	2.14	0.62
11:DA:10:G:OP1	11:DA:1605:A:H2'	1.99	0.62
11:BA:981:A:H2'	11:BA:983:A:C8	2.34	0.62
4:C3:144:ARG:O	18:CH:42:GLN:NE2	2.32	0.62
21:CK:26:ASN:HA	21:CK:91:ASN:ND2	2.13	0.62
11:AA:60:C:O2	11:AA:266:G:O2'	2.13	0.62
11:DA:16:G:H2'	11:DA:17:C:C6	2.34	0.62
11:AA:479:G:OP2	11:AA:479:G:H8	1.81	0.62
11:AA:493:U:O4	14:BD:169:GLU:N	2.31	0.62
36:AZ:47:VAL:HB	36:AZ:74:ARG:CZ	2.30	0.62
11:CA:834:A:O2'	11:CA:835:U:H4'	1.98	0.62
11:CA:1002:U:H2'	11:CA:1003:A:H5''	1.81	0.62
11:CA:1367:C:H2'	11:CA:1368:A:O4'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:213:U:H4'	11:AA:214:U:H5'	1.80	0.62
29:DS:39:ALA:HA	29:DS:42:PHE:HD2	1.64	0.62
6:D5:56:LYS:HG3	21:DK:120:ALA:HB1	1.82	0.62
7:B6:45:PHE:CG	25:BO:57:ARG:HD3	2.34	0.62
8:A7:52:ARG:NH2	11:AA:1192:C:OP1	2.32	0.62
29:AS:39:ALA:HA	29:AS:42:PHE:HD2	1.64	0.62
28:BR:161:HIS:HB2	28:BR:193:ASP:OD2	2.00	0.62
11:DA:1122:G:H1'	11:DA:1718:A:C4	2.33	0.62
29:BS:39:ALA:HA	29:BS:42:PHE:HD2	1.63	0.62
11:DA:1355:G:H21	28:DR:76:ASN:HD21	1.47	0.62
10:C9:102:LYS:NZ	10:C9:112:GLN:HB3	2.14	0.62
12:CB:128:GLN:HE21	12:CB:132:GLU:HG3	1.63	0.62
11:AA:1486:U:HO2'	11:AA:1487:A:P	2.22	0.62
33:BW:210:CYS:HB3	33:BW:227:ILE:HD11	1.81	0.62
24:BN:39:ARG:NH1	24:BN:39:ARG:HG2	2.10	0.62
20:DJ:41:ARG:HH21	20:DJ:103:ASN:HB3	1.63	0.62
19:BI:54:ILE:HG22	19:BI:55:LEU:HD23	1.79	0.62
11:AA:311:U:H5'	11:AA:312:C:H5'	1.81	0.62
11:CA:1176:A:N3	24:CN:9:HIS:NE2	2.38	0.62
11:BA:100:A:OP1	11:BA:299:C:N4	2.30	0.62
11:BA:981:A:H2'	11:BA:983:A:N7	2.15	0.62
11:CA:1708:A:N6	39:CA:2311:HOH:O	2.32	0.62
11:AA:1469:U:OP1	30:AT:78:THR:OG1	2.12	0.62
35:AY:89:SER:OG	35:AY:90:GLY:N	2.30	0.62
15:DE:162:LYS:HB3	15:DE:167:ARG:HH11	1.63	0.62
11:CA:11:A:H2'	11:CA:12:U:H5'	1.81	0.62
11:DA:1200:G:OP1	31:DU:28:GLY:HA2	1.98	0.62
11:CA:654:U:H1'	11:CA:656:G:N2	2.14	0.62
11:DA:1722:U:H5'	21:DK:151:LEU:HD12	1.80	0.62
20:AJ:41:ARG:HH21	20:AJ:103:ASN:HB3	1.62	0.62
11:AA:11:A:H2'	11:AA:12:U:H5'	1.81	0.62
19:BI:31:LEU:HD11	19:BI:54:ILE:HD11	1.82	0.62
7:C6:34:LYS:HZ3	7:C6:78:LYS:HE3	1.63	0.62
11:AA:379:A:OP1	11:AA:415:G:O2'	2.17	0.62
33:BW:97:THR:HB	33:BW:99:GLN:HG2	1.81	0.62
11:CA:209:G:H4'	11:CA:210:A:H5'	1.80	0.62
4:A3:197:LYS:N	11:AA:1029:G:OP1	2.33	0.62
11:AA:1223:U:O2'	11:AA:1224:C:O4'	2.17	0.62
22:CL:34:LEU:O	22:CL:36:SER:N	2.33	0.62
13:DC:216:HIS:O	32:DV:20:TYR:OH	2.18	0.62
33:DW:130:ALA:HA	33:DW:158:ILE:HD11	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1223:U:O2'	11:CA:1224:C:O4'	2.17	0.62
11:CA:1415:A:H4'	11:CA:1416:G:H5'	1.81	0.62
36:BZ:47:VAL:HB	36:BZ:74:ARG:CZ	2.30	0.62
36:CZ:47:VAL:HB	36:CZ:74:ARG:CZ	2.28	0.62
11:DA:75:C:H5'	35:DY:176:CYS:HB2	1.81	0.62
11:BA:234:G:O2'	11:BA:235:A:O5'	2.17	0.62
11:CA:1556:G:H3'	19:CI:125:ARG:O	1.98	0.62
11:BA:1188:A:O2'	11:BA:1189:A:H3'	1.99	0.62
7:D6:47:ASN:HB3	7:D6:67:GLY:HA2	1.81	0.62
11:AA:666:A:H2'	11:AA:667:C:O4'	1.98	0.62
11:DA:257:G:H5''	11:DA:258:A:OP2	2.00	0.62
8:C7:29:GLU:OE2	24:CN:7:ARG:NH1	2.32	0.62
21:DK:26:ASN:HA	21:DK:91:ASN:ND2	2.14	0.62
13:AC:141:ILE:HG12	13:AC:187:VAL:HG12	1.82	0.62
28:CR:161:HIS:HB2	28:CR:193:ASP:OD2	1.99	0.62
22:DL:13:ARG:NH2	27:DQ:101:LYS:O	2.32	0.62
25:BO:133:LEU:HA	27:BQ:147:ILE:HG21	1.80	0.62
11:BA:213:U:H4'	11:BA:214:U:H5'	1.81	0.62
26:BP:18:ARG:HE	26:BP:20:GLN:HE21	1.46	0.62
11:DA:605:U:OP2	22:DL:5:LYS:NZ	2.30	0.62
3:D2:140:ASN:H	3:D2:140:ASN:ND2	1.98	0.62
17:BG:66:ARG:HG3	17:BG:66:ARG:NH1	2.13	0.62
11:CA:891:G:H4'	11:CA:892:G:OP2	1.99	0.62
11:DA:1137:A:H2'	11:DA:1138:A:H8	1.64	0.62
11:BA:840:A:H62	25:BO:72:LYS:NZ	1.98	0.62
7:B6:45:PHE:CD2	25:BO:57:ARG:HD3	2.35	0.62
11:BA:17:C:O2'	11:BA:1110:A:N1	2.27	0.62
11:DA:553:A:C2	13:DC:181:LYS:NZ	2.66	0.62
11:AA:5:U:OP2	15:AE:205:THR:HG22	1.99	0.62
4:B3:140:ARG:HD3	18:BH:53:ILE:HG23	1.80	0.62
6:C5:34:LYS:NZ	11:CA:1746:G:N7	2.38	0.62
11:BA:1223:U:O2'	11:BA:1224:C:O4'	2.18	0.62
11:CA:760:G:N7	26:CP:9:LYS:NZ	2.45	0.62
28:BR:140:ARG:NH1	28:BR:162:SER:HA	2.15	0.62
2:A1:68:ARG:NH1	6:A5:101:ILE:HD11	2.01	0.62
9:C8:81:ARG:HA	9:C8:84:MET:HG3	1.81	0.62
11:CA:1168:A:H4'	11:CA:1169:C:C5'	2.28	0.62
15:DE:132:HIS:CE1	15:DE:136:ASN:HD21	2.18	0.62
11:DA:1515:A:N1	23:DM:151:VAL:HG21	2.14	0.62
13:CC:141:ILE:HG12	13:CC:187:VAL:HG12	1.82	0.62
11:BA:822:U:H5'	11:BA:823:U:OP2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1372:A:OP2	32:BV:56:HIS:HE1	1.81	0.62
11:DA:1434:C:H2'	11:DA:1435:G:H5''	1.81	0.62
15:DE:91:THR:HG22	15:DE:92:GLN:HG2	1.82	0.62
14:DD:153:GLU:HA	14:DD:156:ILE:HD11	1.81	0.62
11:CA:673:A:H2'	11:CA:675:A:H62	1.63	0.62
23:DM:29:PRO:HA	23:DM:32:LEU:HD12	1.82	0.62
7:B6:5:LEU:H	18:BH:24:GLN:NE2	1.97	0.62
7:A6:5:LEU:H	18:AH:24:GLN:NE2	1.97	0.62
11:AA:891:G:H4'	11:AA:892:G:OP2	2.00	0.62
1:D0:62:GLY:N	11:DA:560:C:OP1	2.31	0.62
31:DU:50:CYS:HB2	31:DU:76:ARG:HD3	1.82	0.62
4:B3:103:LYS:HD2	11:BA:633:U:H3'	1.82	0.62
4:A3:103:LYS:HA	4:A3:113:ARG:NH1	2.14	0.62
11:BA:311:U:H5'	11:BA:312:C:H5'	1.81	0.62
11:BA:1649:U:H3	11:BA:1676:A:H61	1.48	0.62
15:AE:231:TRP:CE2	18:AH:68:ARG:HG2	2.34	0.62
11:BA:1355:G:H21	28:BR:76:ASN:HD21	1.48	0.62
5:D4:46:GLY:HA3	21:DK:47:LEU:HD12	1.82	0.62
15:AE:145:TRP:H	15:AE:153:HIS:HE1	1.48	0.62
33:CW:130:ALA:HA	33:CW:158:ILE:HD11	1.81	0.62
25:BO:96:LYS:HG2	25:BO:120:VAL:HG11	1.82	0.62
27:DQ:79:MET:HG3	27:DQ:82:THR:HB	1.82	0.62
33:CW:189:ASN:OD1	33:CW:189:ASN:N	2.33	0.62
5:B4:46:GLY:HA3	21:BK:47:LEU:HD12	1.82	0.62
11:DA:1223:U:O2'	11:DA:1224:C:O4'	2.17	0.62
31:AU:50:CYS:HB2	31:AU:76:ARG:HD3	1.82	0.62
11:DA:1164:C:O3'	19:DI:142:LYS:NZ	2.32	0.62
11:AA:1556:G:H3'	19:AI:125:ARG:O	1.99	0.62
12:AB:80:ARG:HH12	32:AV:82:LEU:HB2	1.64	0.62
11:BA:2:A:O2'	11:BA:3:C:OP2	2.17	0.62
15:CE:132:HIS:CE1	15:CE:136:ASN:HD21	2.17	0.62
11:BA:1514:G:O2'	11:BA:1541:A:N6	2.32	0.62
15:CE:91:THR:HG22	15:CE:92:GLN:HG2	1.82	0.62
11:DA:379:A:OP1	11:DA:415:G:O2'	2.18	0.62
11:CA:666:A:H2'	11:CA:667:C:O4'	2.00	0.62
11:BA:1037:G:H2'	11:BA:1038:U:H5''	1.82	0.62
11:DA:302:U:OP2	22:DL:20:LYS:HE3	1.99	0.62
11:BA:834:A:O2'	11:BA:835:U:H4'	1.99	0.62
11:DA:981:A:H2'	11:DA:983:A:C8	2.35	0.62
9:D8:47:LYS:CB	23:DM:6:GLU:HA	2.29	0.62
11:BA:1367:C:H2'	11:BA:1368:A:O4'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:676:C:O2'	11:AA:677:G:OP2	2.18	0.62
1:C0:64:LEU:HD11	1:C0:92:LEU:HA	1.82	0.62
12:DB:128:GLN:HE21	12:DB:132:GLU:HG3	1.63	0.62
15:BE:84:ILE:HD11	15:BE:126:ILE:HD11	1.82	0.62
14:AD:153:GLU:HA	14:AD:156:ILE:HD11	1.81	0.62
11:CA:822:U:H5'	11:CA:823:U:OP2	2.00	0.62
33:AW:97:THR:HB	33:AW:99:GLN:HG2	1.81	0.62
11:BA:495:C:H2'	11:BA:496:G:O4'	2.00	0.62
2:D1:50:ARG:HH21	17:DG:56:PHE:HB3	1.65	0.62
8:D7:6:LYS:HZ1	31:DU:27:LYS:HZ3	1.46	0.61
9:B8:81:ARG:HA	9:B8:84:MET:HG3	1.82	0.61
11:CA:1001:A:HO2'	11:CA:1002:U:P	2.23	0.61
11:CA:678:U:H5'	11:CA:679:U:OP2	2.00	0.61
11:AA:1362:U:OP1	32:AV:59:LYS:NZ	2.25	0.61
11:AA:1736:C:H2'	11:AA:1737:C:C6	2.35	0.61
10:B9:100:PHE:CD1	10:B9:113:GLN:HG3	2.34	0.61
7:B6:47:ASN:HB3	7:B6:67:GLY:HA2	1.82	0.61
11:CA:981:A:H2'	11:CA:983:A:C8	2.35	0.61
5:A4:67:VAL:HG21	11:AA:898:U:H4'	1.81	0.61
28:DR:161:HIS:HB2	28:DR:193:ASP:OD2	1.99	0.61
6:B5:34:LYS:NZ	11:BA:1746:G:N7	2.36	0.61
4:D3:144:ARG:O	18:DH:42:GLN:NE2	2.32	0.61
5:C4:46:GLY:HA3	21:CK:47:LEU:HD12	1.82	0.61
7:A6:9:ILE:HB	7:A6:12:GLU:HG3	1.82	0.61
24:DN:23:CYS:HB3	24:DN:41:CYS:SG	2.39	0.61
11:BA:879:G:N2	21:BK:68:GLU:OE1	2.32	0.61
3:D2:24:LYS:O	11:DA:391:A:H8	1.83	0.61
11:DA:233:U:H2'	11:DA:234:G:C8	2.36	0.61
11:AA:1479:G:H3'	11:AA:1480:U:C6	2.33	0.61
26:AP:90:ARG:HH12	26:AP:98:LYS:HB2	1.65	0.61
11:AA:1367:C:H2'	11:AA:1368:A:O4'	2.01	0.61
10:D9:80:TYR:HE2	10:D9:83:LYS:HZ3	1.46	0.61
11:BA:444:A:HO2'	11:BA:445:U:P	2.23	0.61
4:C3:103:LYS:HA	4:C3:113:ARG:NH1	2.15	0.61
33:AW:193:ARG:HD2	33:AW:220:PHE:CZ	2.36	0.61
11:AA:785:G:N3	18:AH:107:THR:HG21	2.15	0.61
11:CA:71:U:O2'	11:CA:72:G:OP2	2.13	0.61
11:AA:822:U:H5'	11:AA:823:U:OP2	2.01	0.61
33:BW:130:ALA:HA	33:BW:158:ILE:HD11	1.81	0.61
14:CD:129:ILE:HG22	14:CD:134:ILE:HG12	1.81	0.61
11:CA:1092:U:H4'	11:CA:1093:A:OP2	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:273:A:HO2'	11:BA:274:C:P	2.19	0.61
28:BR:282:ASN:N	28:BR:290:PRO:HG2	2.15	0.61
28:BR:274:THR:HG22	28:BR:277:GLY:H	1.64	0.61
5:A4:46:GLY:HA3	21:AK:47:LEU:HD12	1.81	0.61
27:BQ:86:ARG:HE	27:BQ:103:HIS:HD2	1.47	0.61
13:AC:28:PHE:O	13:AC:32:LEU:HB2	2.01	0.61
11:DA:1365:U:H4'	11:DA:1366:G:OP2	2.00	0.61
11:DA:270:U:H4'	11:DA:271:U:OP2	1.99	0.61
11:AA:996:U:H5'	11:AA:997:A:OP2	2.00	0.61
29:CS:39:ALA:HA	29:CS:42:PHE:HD2	1.64	0.61
3:C2:97:GLU:O	3:C2:101:THR:OG1	2.17	0.61
36:DZ:47:VAL:HB	36:DZ:74:ARG:CZ	2.30	0.61
11:AA:834:A:O2'	11:AA:835:U:H4'	1.99	0.61
11:BA:1263:G:H21	11:BA:1296:G:H22	1.48	0.61
33:DW:210:CYS:HB3	33:DW:227:ILE:HD11	1.81	0.61
11:BA:11:A:H2'	11:BA:12:U:H5'	1.83	0.61
11:CA:535:A:O2'	11:CA:536:C:O5'	2.16	0.61
11:DA:642:G:N2	11:DA:667:C:O2	2.33	0.61
14:BD:149:ARG:HG3	14:BD:152:SER:HB2	1.82	0.61
34:CX:63:HIS:HD2	34:CX:69:LYS:HE2	1.66	0.61
3:C2:143:LYS:HA	3:C2:148:GLN:HE21	1.65	0.61
11:DA:996:U:H5'	11:DA:997:A:OP2	2.00	0.61
13:BC:141:ILE:HG12	13:BC:187:VAL:HG12	1.81	0.61
11:AA:1434:C:H2'	11:AA:1435:G:H5''	1.81	0.61
11:AA:257:G:H5''	11:AA:258:A:OP2	2.00	0.61
24:CN:23:CYS:HB3	24:CN:41:CYS:SG	2.39	0.61
11:DA:1037:G:H2'	11:DA:1038:U:H5''	1.82	0.61
11:AA:236:U:O2'	11:AA:237:U:OP1	2.16	0.61
27:CQ:66:ARG:NH2	27:CQ:128:ARG:HA	2.15	0.61
11:DA:986:G:OP1	39:DA:7877:HOH:O	2.16	0.61
23:CM:136:GLN:H	23:CM:136:GLN:NE2	1.96	0.61
11:BA:765:A:C5	26:BP:19:ARG:NH1	2.68	0.61
7:A6:34:LYS:HZ1	7:A6:78:LYS:HE3	1.63	0.61
13:CC:98:GLY:HA2	13:CC:104:GLN:NE2	2.16	0.61
3:B2:12:ARG:NH1	11:BA:101:A:OP2	2.34	0.61
11:CA:239:A:H3'	11:CA:239:A:P	2.40	0.61
11:DA:473:A:H2'	11:DA:474:G:C8	2.35	0.61
11:AA:100:A:H61	11:AA:299:C:H5''	1.65	0.61
15:AE:143:GLY:N	15:AE:154:THR:O	2.33	0.61
13:DC:141:ILE:HG12	13:DC:187:VAL:HG12	1.81	0.61
5:D4:67:VAL:HG21	11:DA:898:U:H4'	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BW:36:HIS:CG	33:BW:87:GLY:HA3	2.35	0.61
23:DM:122:HIS:HE1	29:DS:128:TYR:OH	1.83	0.61
11:BA:238:G:O2'	11:BA:239:A:OP1	2.19	0.61
11:DA:1337:C:O2'	30:DT:11:LYS:HG3	2.00	0.61
23:AM:136:GLN:NE2	23:AM:136:GLN:H	1.98	0.61
7:A6:47:ASN:HB3	7:A6:67:GLY:HA2	1.81	0.61
11:BA:144:C:O4'	35:BY:132:LYS:NZ	2.34	0.61
8:D7:65:TYR:HB3	13:DC:75:PHE:CE1	2.36	0.61
11:CA:1071:U:OP1	18:CH:71:LYS:NZ	2.33	0.61
11:BA:302:U:OP2	22:BL:20:LYS:HE3	2.00	0.61
18:CH:101:ASN:HB3	18:CH:112:THR:HG23	1.83	0.61
11:CA:658:C:H2'	11:CA:659:G:C8	2.35	0.61
11:BA:392:A:H1'	33:BW:3:ARG:NH1	2.15	0.61
4:D3:103:LYS:HA	4:D3:113:ARG:NH1	2.14	0.61
17:DG:71:LEU:HG	17:DG:150:ILE:HD13	1.83	0.61
11:AA:1368:A:H3'	11:AA:1369:A:C5'	2.31	0.61
11:CA:1368:A:H3'	11:CA:1369:A:C5'	2.31	0.61
11:CA:1736:C:H2'	11:CA:1737:C:C6	2.36	0.61
9:B8:95:LYS:HG2	9:B8:105:TYR:HE1	1.65	0.61
5:B4:109:THR:HG22	21:BK:130:GLU:HG3	1.81	0.61
3:B2:82:ARG:NH1	11:BA:254:A:OP1	2.34	0.61
11:CA:257:G:H5''	11:CA:258:A:OP2	2.01	0.61
15:BE:91:THR:HG22	15:BE:92:GLN:HG2	1.81	0.61
32:CV:6:THR:OG1	32:CV:7:LYS:N	2.34	0.61
11:AA:1415:A:H4'	11:AA:1416:G:H5'	1.82	0.61
11:DA:1071:U:OP1	18:DH:71:LYS:NZ	2.33	0.61
11:AA:537:A:OP2	11:AA:538:A:OP2	2.18	0.61
23:BM:136:GLN:H	23:BM:136:GLN:NE2	1.95	0.61
11:DA:2:A:O2'	11:DA:3:C:OP2	2.18	0.61
28:DR:282:ASN:N	28:DR:290:PRO:HG2	2.15	0.61
11:DA:981:A:H2'	11:DA:983:A:N7	2.16	0.61
6:D5:42:ARG:NH2	21:DK:107:GLN:HG3	2.14	0.61
11:CA:892:G:HO2'	11:CA:893:A:H8	1.49	0.61
13:CC:228:ARG:HG3	28:CR:245:LEU:N	2.15	0.61
5:D4:90:VAL:HG12	5:D4:226:ARG:HH12	1.66	0.61
11:AA:981:A:H2'	11:AA:983:A:C8	2.34	0.61
11:CA:1515:A:N1	23:CM:151:VAL:HG21	2.16	0.61
11:CA:506:U:H2'	11:CA:507:G:C8	2.36	0.61
15:BE:228:PRO:HA	15:BE:231:TRP:NE1	2.15	0.61
22:AL:34:LEU:O	22:AL:36:SER:N	2.33	0.61
12:AB:128:GLN:HE21	12:AB:132:GLU:HG3	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1415:A:H4'	11:BA:1416:G:H5'	1.82	0.61
10:B9:75:LYS:HD3	11:BA:1418:C:C6	2.36	0.61
11:DA:1217:G:O2'	11:DA:1218:C:OP2	2.16	0.61
11:AA:1277:U:H4'	11:AA:1278:C:OP2	2.01	0.61
11:AA:1444:U:H5''	17:AG:164:ILE:HD11	1.81	0.61
11:CA:328:G:H4'	11:CA:329:A:O5'	2.01	0.61
15:BE:132:HIS:CE1	15:BE:136:ASN:HD21	2.19	0.61
11:DA:1736:C:H2'	11:DA:1737:C:C6	2.36	0.61
28:AR:161:HIS:HB2	28:AR:193:ASP:OD2	2.01	0.61
4:D3:115:ARG:NH1	11:DA:632:U:C4	2.69	0.61
11:BA:1752:U:O2'	11:BA:1753:A:O5'	2.18	0.61
3:D2:143:LYS:HA	3:D2:148:GLN:HE21	1.66	0.61
21:CK:44:VAL:HG23	21:CK:53:LEU:HB2	1.82	0.61
3:B2:204:GLN:HE21	3:B2:208:LYS:HE3	1.66	0.61
11:DA:144:C:O4'	35:DY:132:LYS:NZ	2.34	0.61
5:D4:49:LEU:HD23	21:DK:51:GLU:HB3	1.83	0.61
27:BQ:66:ARG:NH2	27:BQ:128:ARG:HA	2.16	0.61
11:CA:1479:G:H3'	11:CA:1480:U:C6	2.34	0.61
11:BA:1002:U:H2'	11:BA:1003:A:H5''	1.81	0.61
17:AG:71:LEU:HG	17:AG:150:ILE:HD13	1.82	0.61
19:DI:31:LEU:HD11	19:DI:54:ILE:HD11	1.82	0.61
11:DA:680:U:O2'	11:DA:681:G:OP1	2.18	0.61
1:D0:43:ASN:O	1:D0:43:ASN:ND2	2.27	0.61
27:BQ:48:ILE:HG22	27:BQ:49:GLU:HG3	1.82	0.61
11:BA:1147:U:O4	23:BM:140:THR:HG21	2.00	0.61
11:AA:209:G:C8	11:AA:209:G:H5''	2.36	0.61
11:CA:1282:U:O4	39:CA:2257:HOH:O	2.10	0.61
11:DA:1299:C:H5''	13:DC:160:MET:O	2.01	0.61
13:DC:28:PHE:O	13:DC:32:LEU:HB2	2.01	0.61
33:BW:189:ASN:N	33:BW:189:ASN:OD1	2.34	0.61
23:DM:35:ILE:HD12	23:DM:38:ILE:HD12	1.83	0.61
11:AA:533:G:N2	39:AA:2092:HOH:O	2.34	0.61
11:BA:75:C:H5'	35:BY:176:CYS:HB2	1.83	0.60
11:BA:222:U:H1'	11:BA:814:A:N6	2.15	0.60
3:C2:52:ARG:HB2	3:C2:64:ARG:HB2	1.83	0.60
11:AA:209:G:H4'	11:AA:210:A:H5'	1.83	0.60
23:AM:29:PRO:HA	23:AM:32:LEU:HD12	1.82	0.60
11:DA:550:G:OP1	34:DX:59:SER:OG	2.13	0.60
11:CA:1649:U:H3	11:CA:1676:A:H61	1.48	0.60
5:D4:210:ILE:O	11:DA:1036:U:O2'	2.12	0.60
11:AA:235:A:O2'	11:AA:814:A:OP2	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A4:49:LEU:HD23	21:AK:51:GLU:HB3	1.82	0.60
10:A9:95:LEU:N	11:AA:1201:G:OP2	2.34	0.60
11:DA:1011:C:H4'	25:DO:7:LYS:HG2	1.84	0.60
11:AA:1216:A:H2'	11:AA:1218:C:H5'	1.83	0.60
11:DA:673:A:H2'	11:DA:675:A:H62	1.66	0.60
11:DA:1368:A:H3'	11:DA:1369:A:C5'	2.31	0.60
11:DA:8:U:O2	11:DA:1111:A:H3'	2.00	0.60
12:AB:23:ILE:HA	12:AB:42:HIS:HD2	1.66	0.60
7:D6:9:ILE:HB	7:D6:12:GLU:HG3	1.83	0.60
11:AA:989:G:N7	39:AA:2183:HOH:O	2.30	0.60
7:C6:42:GLN:NE2	7:C6:55:GLU:H	1.99	0.60
11:DA:1710:G:O6	39:DA:7703:HOH:O	2.13	0.60
11:AA:71:U:O2'	11:AA:72:G:OP2	2.13	0.60
31:CU:36:ILE:HG12	31:CU:68:ILE:HD12	1.83	0.60
11:BA:506:U:H2'	11:BA:507:G:C8	2.37	0.60
11:BA:1505:C:H4'	11:BA:1511:A:N6	2.17	0.60
4:B3:117:ARG:NH1	11:BA:834:A:C5	2.70	0.60
11:CA:468:U:H2'	34:CX:32:LYS:HB2	1.84	0.60
7:A6:18:LYS:HE2	7:A6:19:PHE:CE1	2.36	0.60
11:AA:975:G:H5'	11:AA:976:A:OP2	2.01	0.60
31:CU:50:CYS:SG	31:CU:51:ASP:N	2.75	0.60
11:BA:1028:G:O6	39:BA:6055:HOH:O	2.15	0.60
11:DA:1515:A:N6	11:DA:1540:G:H1'	2.17	0.60
33:DW:193:ARG:HD2	33:DW:220:PHE:CZ	2.36	0.60
3:A2:143:LYS:HA	3:A2:148:GLN:HE21	1.65	0.60
7:B6:9:ILE:HB	7:B6:12:GLU:HG3	1.83	0.60
5:C4:148:LYS:HZ3	5:C4:152:GLY:C	2.04	0.60
27:CQ:79:MET:HG3	27:CQ:82:THR:HB	1.83	0.60
11:DA:822:U:H5'	11:DA:823:U:OP2	2.00	0.60
11:CA:1216:A:H2'	11:CA:1218:C:H5'	1.84	0.60
11:AA:2:A:O2'	11:AA:3:C:OP2	2.20	0.60
27:DQ:66:ARG:NH2	27:DQ:128:ARG:HA	2.16	0.60
11:DA:975:G:H5'	11:DA:976:A:OP2	2.01	0.60
32:DV:70:SER:HA	32:DV:75:GLU:OE2	2.01	0.60
11:DA:506:U:H2'	11:DA:507:G:C8	2.36	0.60
5:C4:90:VAL:HG12	5:C4:226:ARG:HH12	1.67	0.60
14:DD:129:ILE:HG22	14:DD:134:ILE:HG12	1.83	0.60
33:CW:193:ARG:HD2	33:CW:220:PHE:CZ	2.37	0.60
12:BB:23:ILE:HA	12:BB:42:HIS:HD2	1.66	0.60
28:DR:140:ARG:NH1	28:DR:162:SER:HA	2.16	0.60
11:BA:1373:G:OP1	32:BV:4:VAL:HA	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DU:36:ILE:HG12	31:DU:68:ILE:HD12	1.82	0.60
7:D6:42:GLN:NE2	7:D6:55:GLU:H	1.99	0.60
9:B8:99:ASN:HD22	17:BG:90:ASN:HD21	1.50	0.60
11:DA:1277:U:H4'	11:DA:1278:C:OP2	2.00	0.60
33:DW:97:THR:HB	33:DW:99:GLN:HG2	1.81	0.60
15:DE:145:TRP:H	15:DE:153:HIS:HE1	1.48	0.60
26:AP:48:VAL:HG12	26:AP:49:ASP:H	1.66	0.60
28:CR:140:ARG:NH1	28:CR:162:SER:HA	2.16	0.60
11:AA:230:A:H2'	11:AA:231:U:H5'	1.83	0.60
4:D3:110:SER:OG	11:DA:794:A:OP1	2.18	0.60
11:CA:1506:G:H4'	11:CA:1508:G:O6	2.02	0.60
28:AR:255:GLY:H	28:AR:279:LYS:HZ2	1.47	0.60
19:CI:31:LEU:HD11	19:CI:54:ILE:HD11	1.82	0.60
11:BA:16:G:H2'	11:BA:17:C:C6	2.36	0.60
11:AA:1365:U:H4'	11:AA:1366:G:OP2	2.00	0.60
3:B2:143:LYS:HA	3:B2:148:GLN:HE21	1.67	0.60
4:C3:16:GLU:HG2	4:C3:45:VAL:HB	1.83	0.60
11:AA:1649:U:H3	11:AA:1676:A:H61	1.50	0.60
25:DO:35:VAL:HG21	25:DO:68:LEU:HD23	1.84	0.60
28:DR:274:THR:HG22	28:DR:277:GLY:H	1.65	0.60
25:AO:35:VAL:HG21	25:AO:68:LEU:HD23	1.83	0.60
3:B2:31:ARG:NH2	11:BA:324:A:OP1	2.34	0.60
11:DA:60:C:O2	11:DA:266:G:O2'	2.14	0.60
11:BA:392:A:H1'	33:BW:3:ARG:HH11	1.67	0.60
11:CA:605:U:OP2	22:CL:5:LYS:NZ	2.34	0.60
11:AA:1263:G:H22	11:AA:1296:G:N2	2.00	0.60
11:AA:220:A:H5'	11:AA:221:A:OP2	2.01	0.60
11:DA:1556:G:O2'	11:DA:1557:U:OP1	2.20	0.60
11:DA:622:G:H5'	25:DO:122:SER:OG	2.02	0.60
11:CA:469:A:N6	39:CA:2089:HOH:O	2.34	0.60
14:BD:129:ILE:HG22	14:BD:134:ILE:HG12	1.84	0.60
11:BA:257:G:H5''	11:BA:258:A:OP2	2.01	0.60
11:BA:1277:U:H4'	11:BA:1278:C:OP2	2.01	0.60
4:A3:65:VAL:HG21	4:A3:73:LEU:HD22	1.84	0.60
33:BW:155:GLU:HG3	35:BY:219:TRP:HZ2	1.67	0.60
27:BQ:146:ILE:HD12	27:BQ:153:GLN:HG2	1.84	0.60
11:DA:71:U:O2'	11:DA:72:G:OP2	2.12	0.60
1:D0:64:LEU:HD11	1:D0:92:LEU:HA	1.83	0.60
11:CA:1216:A:H5'	11:CA:1217:G:OP2	2.01	0.60
11:AA:232:G:HO2'	11:AA:233:U:P	2.24	0.60
9:A8:81:ARG:HA	9:A8:84:MET:HG3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1263:G:N2	11:BA:1296:G:N2	2.46	0.60
11:AA:1001:A:HO2'	11:AA:1002:U:P	2.24	0.60
11:BA:491:U:H2'	11:BA:492:C:C1'	2.32	0.60
11:DA:845:G:H5''	25:DO:4:MET:HE2	1.84	0.60
26:DP:90:ARG:HH12	26:DP:98:LYS:HB2	1.66	0.60
11:BA:1368:A:H3'	11:BA:1369:A:C5'	2.31	0.60
16:DF:78:ARG:HH12	16:DF:100:GLY:HA3	1.66	0.60
33:AW:89:MET:HE1	33:AW:102:ARG:HD3	1.83	0.60
31:CU:50:CYS:HB2	31:CU:76:ARG:HD3	1.83	0.60
9:D8:95:LYS:HG2	9:D8:105:TYR:HE1	1.67	0.60
11:DA:1372:A:OP2	32:DV:56:HIS:HE1	1.84	0.60
11:BA:168:U:H2'	11:BA:169:G:C8	2.37	0.60
11:BA:904:A:OP1	11:BA:994:C:O2'	2.10	0.60
11:CA:16:G:H2'	11:CA:17:C:C6	2.37	0.60
7:C6:45:PHE:CG	25:CO:57:ARG:HD3	2.36	0.60
21:BK:44:VAL:HG23	21:BK:53:LEU:HB2	1.83	0.60
30:AT:139:GLU:O	30:AT:142:ARG:HG3	2.02	0.60
11:DA:1216:A:H2'	11:DA:1218:C:H5'	1.84	0.60
11:AA:559:C:O2'	11:AA:560:C:H5''	2.02	0.60
11:CA:772:A:O2'	33:CW:108:LYS:NZ	2.33	0.60
33:CW:210:CYS:HB3	33:CW:227:ILE:HD11	1.81	0.60
8:C7:12:ILE:HD11	8:C7:37:VAL:HG11	1.84	0.60
9:A8:95:LYS:HG2	9:A8:105:TYR:HE1	1.66	0.60
22:AL:55:LYS:HG2	22:AL:92:LEU:HD11	1.83	0.60
11:CA:209:G:O2'	11:CA:210:A:OP2	2.17	0.60
15:AE:91:THR:HG22	15:AE:92:GLN:HG2	1.82	0.60
25:AO:96:LYS:HG2	25:AO:120:VAL:HG11	1.83	0.60
4:D3:16:GLU:HG2	4:D3:45:VAL:HB	1.84	0.60
11:BA:1216:A:H2'	11:BA:1218:C:H5'	1.83	0.60
11:CA:220:A:H5'	11:CA:221:A:OP2	2.02	0.60
11:BA:1171:G:H5''	24:BN:39:ARG:NH1	2.16	0.60
11:AA:506:U:H2'	11:AA:507:G:C8	2.37	0.60
11:CA:845:G:H5''	25:CO:4:MET:HE2	1.84	0.60
11:CA:531:A:H1'	39:CA:2089:HOH:O	2.01	0.60
11:DA:1415:A:H4'	11:DA:1416:G:H5'	1.82	0.60
21:AK:128:ARG:HH11	21:AK:128:ARG:HG2	1.67	0.60
21:DK:128:ARG:HH11	21:DK:128:ARG:HG2	1.65	0.60
15:AE:132:HIS:CE1	15:AE:136:ASN:HD21	2.19	0.60
11:DA:1752:U:O2'	11:DA:1753:A:O5'	2.19	0.60
11:BA:1555:A:H5'	19:BI:137:ARG:HH12	1.67	0.60
31:AU:36:ILE:HG12	31:AU:68:ILE:HD12	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C5:11:SER:HB2	11:CA:912:A:H5'	1.84	0.60
12:DB:23:ILE:HA	12:DB:42:HIS:HD2	1.67	0.60
11:CA:1037:G:H2'	11:CA:1038:U:H5''	1.82	0.60
22:CL:37:ARG:HG3	22:CL:44:GLY:HA2	1.84	0.60
28:AR:274:THR:HG22	28:AR:277:GLY:H	1.66	0.60
11:CA:646:A:H2'	11:CA:647:U:O4'	2.02	0.60
11:CA:1263:G:H22	11:CA:1296:G:N2	2.00	0.60
28:CR:255:GLY:H	28:CR:279:LYS:HZ1	1.50	0.60
19:AI:31:LEU:HD11	19:AI:54:ILE:HD11	1.84	0.60
11:DA:662:U:H2'	11:DA:663:G:C8	2.37	0.60
11:CA:1444:U:H5''	17:CG:164:ILE:HD11	1.83	0.60
23:CM:29:PRO:HA	23:CM:32:LEU:HD12	1.83	0.60
7:A6:45:PHE:CD2	25:AO:57:ARG:HD3	2.36	0.60
4:D3:192:PHE:CG	7:D6:21:ARG:NH1	2.70	0.60
11:AA:486:A:H2'	11:AA:487:C:C4	2.36	0.60
11:DA:1281:G:H2'	11:DA:1372:A:H2	1.66	0.60
11:CA:1515:A:N6	11:CA:1540:G:H1'	2.16	0.60
11:AA:209:G:H8	11:AA:209:G:H5''	1.67	0.60
34:BX:63:HIS:HD2	34:BX:69:LYS:HE2	1.67	0.60
11:BA:1365:U:H4'	11:BA:1366:G:OP2	2.01	0.60
11:BA:379:A:OP1	11:BA:415:G:O2'	2.19	0.60
16:CF:57:CYS:SG	16:CF:77:HIS:NE2	2.75	0.60
7:C6:9:ILE:HB	7:C6:12:GLU:HG3	1.84	0.60
11:DA:168:U:H2'	11:DA:169:G:C8	2.37	0.60
12:CB:23:ILE:HA	12:CB:42:HIS:HD2	1.65	0.60
11:DA:1359:C:O2'	32:DV:52:GLY:HA3	2.02	0.60
34:AX:63:HIS:HD2	34:AX:69:LYS:HE2	1.66	0.60
11:BA:1217:G:O2'	11:BA:1218:C:OP2	2.20	0.59
13:DC:228:ARG:HG3	28:DR:245:LEU:H	1.68	0.59
3:B2:149:LYS:HE3	3:B2:150:ARG:HH11	1.67	0.59
33:DW:89:MET:HE1	33:DW:102:ARG:HD3	1.84	0.59
11:AA:1515:A:N6	11:AA:1540:G:H1'	2.17	0.59
11:BA:149:U:OP1	35:BY:107:ARG:HG2	2.01	0.59
35:BY:64:LYS:HB2	35:BY:97:VAL:HG11	1.84	0.59
33:DW:189:ASN:OD1	33:DW:189:ASN:N	2.34	0.59
4:B3:16:GLU:HG2	4:B3:45:VAL:HB	1.84	0.59
1:D0:22:LYS:HD2	10:D9:74:LYS:HZ2	1.67	0.59
11:BA:328:G:H4'	11:BA:329:A:O5'	2.02	0.59
11:DA:328:G:H4'	11:DA:329:A:O5'	2.02	0.59
21:CK:128:ARG:HG2	21:CK:128:ARG:HH11	1.66	0.59
13:AC:98:GLY:HA2	13:AC:104:GLN:NE2	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BW:89:MET:HE1	33:BW:102:ARG:HD3	1.83	0.59
3:B2:149:LYS:HE3	3:B2:150:ARG:NH1	2.17	0.59
11:BA:1737:C:H2'	11:BA:1738:U:C6	2.37	0.59
14:DD:149:ARG:HG3	14:DD:152:SER:HB2	1.83	0.59
14:CD:149:ARG:HG3	14:CD:152:SER:HB2	1.84	0.59
30:CT:139:GLU:O	30:CT:142:ARG:HG3	2.02	0.59
8:A7:12:ILE:HD11	8:A7:37:VAL:HG11	1.84	0.59
11:BA:1288:C:OP2	32:BV:7:LYS:HE3	2.02	0.59
21:CK:147:ARG:HH11	21:CK:150:ARG:NH2	1.99	0.59
11:DA:250:A:H4'	33:DW:137:GLN:HE21	1.67	0.59
11:BA:537:A:OP2	11:BA:538:A:OP2	2.20	0.59
34:DX:63:HIS:HD2	34:DX:69:LYS:HE2	1.66	0.59
5:D4:148:LYS:HZ3	5:D4:152:GLY:C	2.05	0.59
27:BQ:79:MET:HG3	27:BQ:82:THR:HB	1.83	0.59
15:CE:145:TRP:H	15:CE:153:HIS:HE1	1.48	0.59
18:DH:105:THR:HG22	18:DH:110:ILE:HG12	1.83	0.59
27:DQ:86:ARG:HE	27:DQ:103:HIS:HD2	1.50	0.59
11:DA:1002:U:H2'	11:DA:1003:A:H5''	1.82	0.59
3:C2:149:LYS:HE3	3:C2:150:ARG:HH11	1.67	0.59
11:AA:312:C:H4'	11:AA:313:G:OP1	2.01	0.59
7:C6:18:LYS:HE2	7:C6:19:PHE:CE1	2.37	0.59
11:BA:1515:A:N6	11:BA:1540:G:H1'	2.17	0.59
11:AA:209:G:C5'	11:AA:210:A:H5'	2.32	0.59
11:BA:1587:U:C4	17:BG:55:LYS:HA	2.37	0.59
11:BA:318:U:O2'	27:BQ:6:GLN:HG2	2.02	0.59
22:BL:13:ARG:NH2	27:BQ:101:LYS:O	2.36	0.59
11:DA:749:G:H4'	11:DA:750:U:OP2	2.01	0.59
28:DR:275:ASP:HA	28:DR:311:GLN:HB3	1.84	0.59
8:D7:12:ILE:HD11	8:D7:37:VAL:HG11	1.84	0.59
35:AY:29:ASP:OD1	35:AY:70:ARG:NH2	2.36	0.59
22:CL:102:LEU:HB3	22:CL:125:CYS:HB2	1.83	0.59
11:DA:1591:C:H2'	11:DA:1592:C:H6	1.67	0.59
10:B9:88:HIS:CD2	11:BA:1219:U:H5''	2.37	0.59
11:DA:469:A:N6	39:DA:7637:HOH:O	2.34	0.59
33:AW:210:CYS:HB3	33:AW:227:ILE:HD11	1.82	0.59
11:AA:1171:G:H5''	24:AN:39:ARG:NH1	2.17	0.59
1:C0:101:ASN:HD21	10:C9:77:LYS:HZ2	1.48	0.59
5:B4:90:VAL:HG12	5:B4:226:ARG:HH12	1.66	0.59
7:C6:47:ASN:HB3	7:C6:67:GLY:HA2	1.82	0.59
11:DA:1419:G:OP1	39:DA:8037:HOH:O	2.17	0.59
3:D2:204:GLN:HE21	3:D2:208:LYS:HE3	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A3:152:ARG:HB2	4:A3:183:THR:HB	1.84	0.59
22:DL:34:LEU:O	22:DL:36:SER:N	2.36	0.59
28:AR:275:ASP:HA	28:AR:311:GLN:HB3	1.83	0.59
2:B1:6:THR:HG21	2:B1:56:GLU:OE2	2.03	0.59
23:AM:119:ILE:HG23	29:AS:124:PHE:HE2	1.66	0.59
27:CQ:86:ARG:HE	27:CQ:103:HIS:HD2	1.49	0.59
5:A4:109:THR:HG22	21:AK:130:GLU:HG3	1.83	0.59
11:DA:1649:U:H3	11:DA:1676:A:H61	1.49	0.59
27:CQ:17:LEU:HD22	27:CQ:29:ALA:HA	1.85	0.59
10:B9:86:THR:O	11:BA:1219:U:H5'	2.03	0.59
11:AA:1216:A:H5'	11:AA:1217:G:OP2	2.02	0.59
6:A5:97:ARG:O	6:A5:99:PRO:HD3	2.03	0.59
28:CR:282:ASN:N	28:CR:290:PRO:HG2	2.15	0.59
11:AA:1263:G:N2	11:AA:1296:G:N2	2.47	0.59
11:DA:1263:G:H22	11:DA:1296:G:N2	2.00	0.59
11:CA:559:C:O2'	11:CA:560:C:H5''	2.03	0.59
11:AA:845:G:H5''	25:AO:4:MET:HE2	1.84	0.59
11:DA:1367:C:H2'	11:DA:1368:A:O4'	2.01	0.59
3:D2:149:LYS:HE3	3:D2:150:ARG:NH1	2.17	0.59
11:BA:1469:U:H5'	30:BT:75:GLY:HA3	1.85	0.59
14:AD:149:ARG:HG3	14:AD:152:SER:HB2	1.83	0.59
9:C8:95:LYS:HG2	9:C8:105:TYR:HE1	1.65	0.59
2:D1:21:ARG:HA	11:DA:1591:C:C2	2.38	0.59
13:DC:105:VAL:HG22	13:DC:189:VAL:HB	1.83	0.59
3:C2:204:GLN:HE21	3:C2:208:LYS:HE3	1.66	0.59
28:AR:140:ARG:NH1	28:AR:162:SER:HA	2.17	0.59
15:CE:84:ILE:HD11	15:CE:126:ILE:HD11	1.83	0.59
27:CQ:48:ILE:HG22	27:CQ:49:GLU:HG3	1.83	0.59
11:BA:1276:G:H5'	11:BA:1294:A:OP2	2.03	0.59
23:BM:102:SER:OG	23:BM:103:ASN:N	2.35	0.59
13:CC:28:PHE:O	13:CC:32:LEU:HB2	2.02	0.59
25:CO:96:LYS:HG2	25:CO:120:VAL:HG11	1.83	0.59
22:DL:37:ARG:HG3	22:DL:44:GLY:HA2	1.83	0.59
11:AA:1505:C:H4'	11:AA:1511:A:N6	2.17	0.59
11:AA:1002:U:C2'	11:AA:1003:A:H5''	2.33	0.59
21:BK:128:ARG:HG2	21:BK:128:ARG:HH11	1.67	0.59
11:BA:1736:C:H2'	11:BA:1737:C:C6	2.37	0.59
3:D2:52:ARG:HB2	3:D2:64:ARG:HB2	1.85	0.59
22:DL:55:LYS:HG2	22:DL:92:LEU:HD11	1.85	0.59
11:AA:1515:A:N1	23:AM:151:VAL:HG21	2.18	0.59
11:CA:1288:C:O2'	11:CA:1372:A:O2'	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:996:U:H5'	11:CA:997:A:OP2	2.02	0.59
11:DA:59:C:N4	11:DA:62:G:OP1	2.35	0.59
17:AG:73:PHE:HB2	17:AG:154:ARG:NH2	2.18	0.59
11:DA:585:A:OP2	34:DX:44:ARG:NH2	2.33	0.59
11:DA:1538:U:H5'	23:DM:39:GLY:N	2.18	0.59
17:DG:73:PHE:HB2	17:DG:154:ARG:NH2	2.17	0.59
25:CO:35:VAL:HG21	25:CO:68:LEU:HD23	1.84	0.59
11:BA:89:A:H4'	11:BA:90:U:OP2	2.01	0.59
5:C4:57:ARG:NH1	11:CA:873:G:OP1	2.36	0.59
4:C3:110:SER:OG	11:CA:794:A:OP1	2.21	0.59
4:D3:117:ARG:NH1	11:DA:834:A:C5	2.71	0.59
31:DU:50:CYS:SG	31:DU:51:ASP:N	2.76	0.59
23:DM:136:GLN:NE2	23:DM:136:GLN:H	1.97	0.59
11:DA:1556:G:H3'	19:DI:125:ARG:O	2.02	0.59
31:BU:50:CYS:HB2	31:BU:76:ARG:HD3	1.82	0.59
11:AA:1108:U:OP1	11:AA:1621:G:O2'	2.20	0.59
7:D6:18:LYS:HE2	7:D6:19:PHE:CE1	2.38	0.59
11:DA:243:G:O2'	27:DQ:38:GLY:O	2.20	0.59
32:DV:6:THR:OG1	32:DV:7:LYS:N	2.36	0.59
26:CP:48:VAL:HG12	26:CP:49:ASP:H	1.67	0.59
14:AD:53:ARG:NH2	15:AE:175:ARG:O	2.35	0.59
4:A3:16:GLU:HG2	4:A3:45:VAL:HB	1.83	0.59
11:AA:857:G:O2'	25:AO:107:ASN:HB3	2.02	0.59
11:BA:5:U:OP2	15:BE:205:THR:HG22	2.02	0.59
11:CA:1752:U:O2'	11:CA:1753:A:O5'	2.19	0.59
25:DO:96:LYS:HG2	25:DO:120:VAL:HG11	1.83	0.59
4:C3:123:TYR:CG	4:C3:178:THR:HG23	2.38	0.59
25:DO:101:ARG:HH12	25:DO:145:ALA:CB	2.16	0.59
21:AK:147:ARG:HH11	21:AK:150:ARG:NH2	2.00	0.59
2:D1:6:THR:HG21	2:D1:56:GLU:OE2	2.03	0.59
11:BA:633:U:H6	11:BA:633:U:H5''	1.68	0.59
24:CN:39:ARG:HG2	24:CN:39:ARG:NH1	2.09	0.59
17:AG:68:ILE:HD13	17:AG:85:ILE:HG12	1.84	0.59
22:BL:55:LYS:HG2	22:BL:92:LEU:HD11	1.85	0.59
11:AA:213:U:H4'	11:AA:214:U:C5'	2.33	0.59
11:CA:658:C:H2'	11:CA:659:G:H8	1.67	0.59
2:C1:6:THR:HG21	2:C1:56:GLU:OE2	2.03	0.59
25:BO:35:VAL:HG21	25:BO:68:LEU:HD23	1.85	0.59
35:DY:64:LYS:HB2	35:DY:97:VAL:HG11	1.84	0.59
27:AQ:146:ILE:HD12	27:AQ:153:GLN:HG2	1.84	0.59
11:CA:60:C:O2	11:CA:266:G:O2'	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:74:A:H5''	35:AY:162:ARG:HH22	1.68	0.59
11:CA:219:C:H5'	11:CA:220:A:OP2	2.03	0.59
3:A2:149:LYS:HE3	3:A2:150:ARG:NH1	2.18	0.59
11:AA:1505:C:H4'	11:AA:1511:A:H61	1.68	0.59
11:BA:59:C:H5'	11:BA:447:C:N4	2.18	0.59
11:DA:559:C:O2'	11:DA:560:C:H5''	2.03	0.59
11:DA:1145:C:OP2	23:DM:142:GLY:N	2.32	0.59
11:BA:490:U:OP2	11:BA:490:U:C6	2.56	0.59
11:CA:680:U:O2'	11:CA:681:G:OP1	2.15	0.59
23:AM:90:ASN:HD21	29:AS:14:ARG:HD2	1.66	0.59
22:CL:55:LYS:HG2	22:CL:92:LEU:HD11	1.85	0.59
4:D3:65:VAL:HG21	4:D3:73:LEU:HD22	1.83	0.59
21:DK:44:VAL:HG23	21:DK:53:LEU:HB2	1.83	0.59
15:BE:213:LYS:O	15:BE:217:TYR:HD1	1.85	0.59
27:DQ:17:LEU:HD22	27:DQ:29:ALA:HA	1.85	0.59
5:A4:148:LYS:HZ3	5:A4:152:GLY:C	2.06	0.59
13:AC:10:LYS:NZ	20:AJ:113:GLU:OE2	2.35	0.59
22:BL:34:LEU:O	22:BL:36:SER:N	2.36	0.59
6:B5:17:HIS:HE1	11:BA:1742:G:OP1	1.86	0.59
1:B0:64:LEU:HD11	1:B0:92:LEU:HA	1.84	0.59
31:BU:36:ILE:HG12	31:BU:68:ILE:HD12	1.82	0.59
31:AU:50:CYS:SG	31:AU:51:ASP:N	2.76	0.59
11:BA:1720:G:C8	11:BA:1720:G:H5''	2.38	0.59
11:DA:1188:A:H4'	11:DA:1189:A:OP2	2.03	0.59
11:DA:661:G:H3'	11:DA:662:U:H6	1.67	0.59
9:C8:81:ARG:NH2	11:CA:1505:C:OP2	2.34	0.59
7:A6:68:LYS:HB3	11:AA:1027:U:OP1	2.03	0.59
11:AA:493:U:H4'	11:AA:494:A:O5'	2.02	0.59
11:AA:495:C:H2'	11:AA:496:G:O4'	2.03	0.59
11:CA:209:G:H5'	11:CA:210:A:H5'	1.84	0.59
3:C2:148:GLN:NE2	11:CA:187:U:O4	2.34	0.59
22:BL:31:LYS:O	22:BL:36:SER:HB2	2.03	0.59
12:CB:75:ARG:O	12:CB:79:GLN:HG2	2.03	0.59
11:CA:168:U:H2'	11:CA:169:G:C8	2.38	0.59
11:CA:1537:C:OP1	23:CM:41:ARG:NH1	2.36	0.59
27:AQ:96:TYR:O	27:AQ:98:ARG:HG2	2.03	0.59
4:B3:123:TYR:CG	4:B3:178:THR:HG23	2.38	0.59
27:AQ:17:LEU:HD22	27:AQ:29:ALA:HA	1.84	0.59
11:DA:1216:A:H5'	11:DA:1217:G:OP2	2.01	0.58
11:AA:1245:G:HO2'	11:AA:1246:C:P	2.26	0.58
6:B5:97:ARG:O	6:B5:99:PRO:HD3	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CR:178:ASN:ND2	23:DM:110:ARG:HH11	1.97	0.58
14:BD:62:LEU:HD11	14:BD:68:ARG:HH12	1.68	0.58
28:AR:81:ASP:N	28:AR:94:SER:OG	2.36	0.58
3:B2:140:ASN:ND2	3:B2:140:ASN:H	1.99	0.58
27:AQ:66:ARG:NH2	27:AQ:128:ARG:HA	2.15	0.58
11:AA:328:G:H4'	11:AA:329:A:O5'	2.03	0.58
3:D2:149:LYS:HE3	3:D2:150:ARG:HH11	1.67	0.58
13:BC:98:GLY:HA2	13:BC:104:GLN:NE2	2.17	0.58
11:AA:1737:C:H2'	11:AA:1738:U:C6	2.38	0.58
7:B6:18:LYS:HE2	7:B6:19:PHE:CE1	2.38	0.58
33:BW:193:ARG:HD2	33:BW:220:PHE:CZ	2.38	0.58
11:CA:1289:C:O2'	11:CA:1371:A:H1'	2.03	0.58
8:A7:9:LYS:HG3	8:A7:45:LEU:HD21	1.85	0.58
27:AQ:85:ILE:HG22	27:AQ:106:ILE:HB	1.83	0.58
18:AH:30:VAL:HG21	18:AH:61:VAL:HG23	1.85	0.58
33:AW:249:THR:HG22	33:AW:251:LEU:H	1.68	0.58
18:BH:105:THR:HG22	18:BH:110:ILE:HG12	1.85	0.58
27:AQ:86:ARG:HE	27:AQ:103:HIS:HD2	1.48	0.58
11:BA:1071:U:OP1	18:BH:71:LYS:NZ	2.36	0.58
11:AA:1037:G:H2'	11:AA:1038:U:H5''	1.84	0.58
11:AA:1591:C:H2'	11:AA:1592:C:H6	1.68	0.58
3:A2:204:GLN:HE21	3:A2:208:LYS:HE3	1.67	0.58
11:CA:785:G:N3	18:CH:107:THR:HG21	2.18	0.58
7:A6:42:GLN:NE2	7:A6:55:GLU:H	2.00	0.58
15:AE:84:ILE:HD11	15:AE:126:ILE:HD11	1.85	0.58
11:AA:89:A:H4'	11:AA:90:U:OP2	2.03	0.58
5:D4:57:ARG:NH1	11:DA:873:G:OP1	2.36	0.58
11:DA:1166:A:P	20:DJ:73:GLY:HA3	2.42	0.58
28:CR:47:ARG:C	28:CR:49:LYS:H	2.06	0.58
11:CA:771:A:P	33:CW:110:ARG:HH22	2.25	0.58
11:BA:209:G:C5'	11:BA:210:A:H5'	2.32	0.58
11:CA:1002:U:C2'	11:CA:1003:A:H5''	2.33	0.58
9:D8:46:GLU:CG	23:DM:8:GLU:HB2	2.33	0.58
13:DC:98:GLY:HA2	13:DC:104:GLN:NE2	2.17	0.58
13:DC:147:GLN:OE1	13:DC:147:GLN:HA	2.02	0.58
11:BA:1059:A:N3	11:BA:1115:A:O2'	2.33	0.58
31:AU:69:LYS:HB3	31:AU:124:LEU:HB3	1.86	0.58
11:CA:975:G:H5'	11:CA:976:A:OP2	2.03	0.58
33:CW:212:VAL:HB	33:CW:220:PHE:HB2	1.85	0.58
8:D7:9:LYS:HG3	8:D7:45:LEU:HD21	1.85	0.58
13:AC:105:VAL:HG22	13:AC:189:VAL:HB	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DL:102:LEU:HB3	22:DL:125:CYS:HB2	1.85	0.58
11:DA:89:A:H4'	11:DA:90:U:OP2	2.03	0.58
26:DP:48:VAL:HG12	26:DP:49:ASP:H	1.67	0.58
13:BC:28:PHE:O	13:BC:32:LEU:HB2	2.01	0.58
1:A0:64:LEU:HD11	1:A0:92:LEU:HA	1.83	0.58
2:A1:6:THR:HG21	2:A1:56:GLU:OE2	2.02	0.58
4:C3:152:ARG:HB2	4:C3:183:THR:HB	1.85	0.58
11:DA:912:A:O2'	11:DA:913:U:OP1	2.21	0.58
6:A5:44:MET:HE2	21:AK:97:LEU:HD12	1.84	0.58
4:C3:109:LYS:NZ	11:CA:725:A:O3'	2.36	0.58
28:BR:47:ARG:C	28:BR:49:LYS:H	2.06	0.58
11:AA:1506:G:H4'	11:AA:1508:G:O6	2.03	0.58
14:CD:127:VAL:O	14:CD:131:GLN:HG2	2.03	0.58
11:BA:1362:U:OP1	32:BV:59:LYS:NZ	2.28	0.58
11:AA:1256:C:H4'	11:AA:1257:U:OP1	2.02	0.58
11:CA:981:A:H2'	11:CA:983:A:N7	2.18	0.58
1:C0:43:ASN:ND2	1:C0:43:ASN:O	2.31	0.58
11:CA:209:G:C4'	11:CA:210:A:H5'	2.34	0.58
4:D3:145:LEU:HA	18:DH:42:GLN:HE21	1.67	0.58
11:CA:912:A:O2'	11:CA:913:U:OP1	2.22	0.58
12:DB:75:ARG:O	12:DB:79:GLN:HG2	2.03	0.58
14:BD:127:VAL:O	14:BD:131:GLN:HG2	2.03	0.58
11:DA:879:G:N2	21:DK:68:GLU:OE1	2.35	0.58
13:BC:10:LYS:NZ	20:BJ:113:GLU:OE2	2.35	0.58
11:AA:1286:U:O2'	11:AA:1287:U:OP2	2.17	0.58
15:DE:108:SER:O	15:DE:193:GLY:HA3	2.03	0.58
11:AA:1752:U:O2'	11:AA:1753:A:O5'	2.19	0.58
15:CE:228:PRO:HA	15:CE:231:TRP:NE1	2.18	0.58
15:AE:174:PRO:O	15:AE:177:THR:OG1	2.21	0.58
27:DQ:48:ILE:HG22	27:DQ:49:GLU:HG3	1.85	0.58
5:A4:172:ARG:O	5:A4:176:THR:OG1	2.19	0.58
11:BA:561:A:H1'	34:BX:14:VAL:HB	1.84	0.58
4:A3:5:LYS:NZ	4:A3:37:LEU:O	2.35	0.58
2:B1:65:ARG:NH1	17:BG:125:THR:HG21	2.19	0.58
13:CC:105:VAL:HG22	13:CC:189:VAL:HB	1.84	0.58
4:D3:123:TYR:CG	4:D3:178:THR:HG23	2.38	0.58
11:DA:561:A:H1'	34:DX:14:VAL:HB	1.85	0.58
11:AA:1263:G:H21	11:AA:1296:G:H22	1.51	0.58
11:AA:1263:G:H22	11:AA:1296:G:H22	1.50	0.58
11:BA:1263:G:H22	11:BA:1296:G:N2	2.02	0.58
4:B3:103:LYS:HA	4:B3:113:ARG:HH12	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B0:43:ASN:ND2	1:B0:43:ASN:O	2.31	0.58
2:A1:62:ARG:NH1	6:A5:48:SER:HB3	2.19	0.58
10:C9:88:HIS:HD2	11:CA:1219:U:H5''	1.67	0.58
32:BV:6:THR:OG1	32:BV:7:LYS:N	2.37	0.58
15:CE:231:TRP:CE2	18:CH:68:ARG:HG2	2.39	0.58
11:AA:1292:U:H3'	12:AB:98:ARG:HH12	1.68	0.58
11:CA:59:C:N4	11:CA:62:G:OP1	2.34	0.58
22:AL:37:ARG:HG3	22:AL:44:GLY:HA2	1.85	0.58
3:A2:52:ARG:HB2	3:A2:64:ARG:HB2	1.84	0.58
27:CQ:96:TYR:O	27:CQ:98:ARG:HG2	2.02	0.58
23:DM:36:ARG:HH12	23:DM:152:ARG:HG2	1.69	0.58
6:C5:97:ARG:O	6:C5:99:PRO:HD3	2.02	0.58
11:BA:559:C:O2'	11:BA:560:C:H5''	2.04	0.58
11:DA:1171:G:N3	11:DA:1171:G:H2'	2.17	0.58
11:AA:1171:G:N3	11:AA:1171:G:H2'	2.17	0.58
28:CR:94:SER:HA	28:CR:100:LEU:HD12	1.85	0.58
28:CR:81:ASP:N	28:CR:94:SER:OG	2.36	0.58
11:CA:469:A:H2'	11:CA:470:G:C8	2.37	0.58
14:AD:127:VAL:O	14:AD:131:GLN:HG2	2.02	0.58
16:AF:78:ARG:HH12	16:AF:100:GLY:HA3	1.67	0.58
11:CA:239:A:OP2	11:CA:239:A:C8	2.56	0.58
11:BA:1172:G:H4'	11:BA:1173:G:C5'	2.33	0.58
11:CA:1289:C:O2'	11:CA:1371:A:N3	2.36	0.58
33:BW:52:LEU:HD21	33:BW:113:LEU:HD12	1.85	0.58
26:DP:16:LEU:HD21	33:DW:64:ILE:HG12	1.85	0.58
9:B8:47:LYS:HB2	23:BM:6:GLU:HA	1.85	0.58
18:BH:30:VAL:HG21	18:BH:61:VAL:HG23	1.86	0.58
21:DK:147:ARG:HH11	21:DK:150:ARG:NH2	2.01	0.58
11:BA:1568:C:OP2	24:BN:18:LYS:NZ	2.37	0.58
33:CW:52:LEU:HD21	33:CW:113:LEU:HD12	1.84	0.58
18:AH:105:THR:HG22	18:AH:110:ILE:HG12	1.86	0.58
11:BA:1406:G:H4'	11:BA:1407:A:O5'	2.03	0.58
11:AA:482:A:H5'	11:AA:483:C:OP2	2.02	0.58
11:AA:425:A:H5''	11:AA:426:G:OP2	2.04	0.58
11:AA:892:G:HO2'	11:AA:893:A:H8	1.51	0.58
11:AA:1452:G:H1'	30:AT:71:LYS:HE2	1.85	0.58
11:AA:770:G:H2'	11:AA:771:A:H8	1.68	0.58
11:BA:605:U:OP2	22:BL:5:LYS:NZ	2.32	0.58
11:DA:1479:G:H3'	11:DA:1480:U:C6	2.34	0.58
11:CA:1171:G:N3	11:CA:1171:G:H2'	2.18	0.58
17:CG:68:ILE:HD13	17:CG:85:ILE:HG12	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:754:A:H4'	14:BD:9:SER:CB	2.32	0.58
10:B9:101:TYR:HE1	31:BU:33:LEU:HD21	1.68	0.58
11:AA:469:A:N6	39:AA:2093:HOH:O	2.37	0.58
11:CA:1737:C:H2'	11:CA:1738:U:C6	2.39	0.58
31:DU:69:LYS:HB3	31:DU:124:LEU:HB3	1.86	0.58
7:C6:45:PHE:CD2	25:CO:57:ARG:HD3	2.39	0.58
16:BF:57:CYS:SG	16:BF:77:HIS:NE2	2.77	0.58
11:CA:1347:U:O2'	11:CA:1348:U:OP2	2.22	0.58
16:DF:57:CYS:SG	16:DF:77:HIS:NE2	2.76	0.58
12:AB:54:LYS:HB2	36:AZ:95:ILE:HD13	1.86	0.58
27:AQ:48:ILE:HG22	27:AQ:49:GLU:HG3	1.84	0.58
3:B2:24:LYS:O	11:BA:391:A:H8	1.85	0.58
3:A2:149:LYS:HE3	3:A2:150:ARG:HH11	1.69	0.58
11:CA:771:A:H5''	11:CA:772:A:O5'	2.03	0.58
14:BD:59:LEU:HA	14:BD:62:LEU:HD12	1.84	0.58
17:CG:71:LEU:HG	17:CG:150:ILE:HD13	1.85	0.58
5:A4:90:VAL:HG12	5:A4:226:ARG:HH12	1.68	0.58
11:BA:975:G:H5'	11:BA:976:A:OP2	2.03	0.58
1:A0:43:ASN:HB3	1:A0:45:ARG:HH12	1.68	0.58
11:CA:666:A:H5''	18:CH:43:LYS:NZ	2.18	0.58
5:C4:49:LEU:HD23	21:CK:51:GLU:HB3	1.86	0.58
27:BQ:85:ILE:HG22	27:BQ:106:ILE:HB	1.86	0.58
1:C0:18:GLU:N	10:C9:74:LYS:HE2	2.18	0.58
11:DA:1353:G:OP1	20:DJ:87:ARG:NH2	2.37	0.58
5:B4:172:ARG:O	5:B4:176:THR:OG1	2.19	0.58
11:DA:1017:C:H4'	11:DA:1017:C:OP2	2.04	0.58
31:CU:20:ASN:HD21	31:CU:27:LYS:HZ3	1.52	0.58
6:D5:97:ARG:O	6:D5:99:PRO:HD3	2.03	0.58
33:AW:254:ARG:NH1	33:AW:260:TYR:CG	2.71	0.58
11:BA:59:C:N4	11:BA:62:G:OP1	2.37	0.58
11:CA:1171:G:H5''	24:CN:39:ARG:NH1	2.19	0.58
11:CA:1463:U:O2'	11:CA:1464:U:O5'	2.22	0.58
31:BU:69:LYS:HB3	31:BU:124:LEU:HB3	1.86	0.58
11:DA:311:U:H4'	11:DA:312:C:O4'	2.04	0.58
26:BP:48:VAL:HG12	26:BP:49:ASP:H	1.68	0.58
15:CE:213:LYS:O	15:CE:217:TYR:HD1	1.87	0.58
28:CR:274:THR:HG22	28:CR:277:GLY:H	1.67	0.58
8:D7:29:GLU:OE2	24:DN:7:ARG:NH1	2.36	0.58
6:D5:4:LYS:NZ	11:DA:1747:A:OP1	2.35	0.58
12:AB:75:ARG:O	12:AB:79:GLN:HG2	2.03	0.58
11:BA:1057:G:N7	39:BA:6209:HOH:O	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AW:52:LEU:HD21	33:AW:113:LEU:HD12	1.86	0.58
23:CM:102:SER:OG	23:CM:103:ASN:N	2.36	0.58
28:DR:47:ARG:NH1	32:DV:27:ASP:OD2	2.34	0.58
11:DA:1506:G:H4'	11:DA:1508:G:O6	2.04	0.58
14:DD:59:LEU:HA	14:DD:62:LEU:HD12	1.84	0.58
14:CD:62:LEU:HD11	14:CD:68:ARG:HH12	1.67	0.58
11:BA:1480:U:HO2'	11:BA:1481:A:H8	1.50	0.58
3:C2:149:LYS:HE3	3:C2:150:ARG:NH1	2.18	0.58
11:CA:1449:G:OP2	30:CT:47:ARG:NH1	2.37	0.58
26:CP:90:ARG:HH12	26:CP:98:LYS:HB2	1.66	0.58
11:DA:1444:U:H5''	17:DG:164:ILE:HD11	1.85	0.58
32:BV:46:LEU:HD22	32:BV:50:ILE:HD11	1.86	0.58
11:BA:1531:G:C4	23:BM:134:ARG:HD2	2.39	0.58
34:CX:63:HIS:CD2	34:CX:69:LYS:HE2	2.39	0.58
33:CW:47:LEU:HD11	33:CW:113:LEU:HD21	1.86	0.58
17:CG:73:PHE:HB2	17:CG:154:ARG:NH2	2.19	0.58
23:AM:40:ARG:NH2	30:AT:48:GLU:OE1	2.33	0.58
23:CM:36:ARG:HH12	23:CM:152:ARG:HG2	1.69	0.58
11:DA:1347:U:O2'	11:DA:1348:U:OP2	2.20	0.58
11:BA:76:A:H4'	11:BA:77:G:OP2	2.03	0.58
6:B5:11:SER:HB2	11:BA:912:A:H5'	1.86	0.58
11:BA:206:U:H5''	27:BQ:16:PHE:CG	2.38	0.58
30:BT:139:GLU:O	30:BT:142:ARG:HG3	2.04	0.58
8:B7:12:ILE:HD11	8:B7:37:VAL:HG11	1.84	0.58
4:D3:152:ARG:HB2	4:D3:183:THR:HB	1.86	0.58
11:CA:3:C:N4	14:CD:16:ARG:HB2	2.19	0.58
11:AA:1296:G:N7	39:AA:2398:HOH:O	2.32	0.58
33:DW:212:VAL:HB	33:DW:220:PHE:HB2	1.86	0.58
11:BA:253:A:H5'	11:BA:254:A:OP2	2.04	0.58
4:C3:5:LYS:NZ	4:C3:37:LEU:O	2.37	0.58
11:AA:1275:U:O4	39:AA:2214:HOH:O	2.17	0.58
9:C8:96:VAL:HB	9:C8:104:VAL:HG12	1.86	0.58
2:B1:45:VAL:HG11	2:B1:55:LEU:HD21	1.86	0.58
18:DH:101:ASN:HB3	18:DH:112:THR:HG23	1.84	0.58
11:AA:168:U:H2'	11:AA:169:G:C8	2.38	0.58
15:CE:108:SER:O	15:CE:193:GLY:HA3	2.04	0.58
11:BA:1069:U:H4'	11:BA:1070:U:H5''	1.85	0.58
11:BA:1420:U:OP2	39:BA:6518:HOH:O	2.17	0.57
11:BA:1591:C:H2'	11:BA:1592:C:H6	1.68	0.57
11:CA:231:U:H6	11:CA:231:U:O5'	1.87	0.57
4:D3:103:LYS:HA	4:D3:113:ARG:HH12	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:1263:G:H21	11:DA:1296:G:H22	1.48	0.57
11:CA:265:C:OP1	35:CY:180:GLN:NE2	2.37	0.57
3:C2:140:ASN:H	3:C2:140:ASN:ND2	1.98	0.57
1:B0:22:LYS:NZ	10:B9:76:LYS:CG	2.66	0.57
11:AA:1479:G:N7	39:AA:2421:HOH:O	2.32	0.57
28:DR:81:ASP:N	28:DR:94:SER:OG	2.37	0.57
6:C5:42:ARG:NH2	21:CK:107:GLN:HG3	2.16	0.57
26:BP:90:ARG:HH12	26:BP:98:LYS:HB2	1.67	0.57
11:AA:1443:A:H4'	11:AA:1444:U:H5'	1.86	0.57
19:DI:112:MET:HG3	19:DI:119:LEU:HD13	1.86	0.57
25:AO:101:ARG:HH12	25:AO:145:ALA:CB	2.17	0.57
11:BA:1301:A:P	13:BC:163:THR:HG21	2.43	0.57
11:CA:1277:U:H4'	11:CA:1278:C:OP2	2.03	0.57
32:DV:78:ARG:O	32:DV:82:LEU:HG	2.04	0.57
23:AM:35:ILE:HD12	23:AM:38:ILE:HD12	1.86	0.57
11:CA:1568:C:OP2	24:CN:18:LYS:NZ	2.37	0.57
4:B3:65:VAL:HG21	4:B3:73:LEU:HD22	1.86	0.57
11:DA:958:G:H4'	11:DA:1729:A:H4'	1.85	0.57
11:BA:1506:G:H4'	11:BA:1508:G:O6	2.03	0.57
14:DD:62:LEU:HD11	14:DD:68:ARG:HH12	1.67	0.57
12:AB:77:TYR:CD1	12:AB:164:THR:HG23	2.31	0.57
3:A2:140:ASN:ND2	3:A2:140:ASN:H	1.99	0.57
11:BA:3:C:HO2'	11:BA:4:C:P	2.26	0.57
3:D2:12:ARG:NH1	11:DA:101:A:OP2	2.33	0.57
11:AA:840:A:OP2	25:AO:66:ARG:NH2	2.37	0.57
11:DA:1752:U:O2'	11:DA:1753:A:H3'	2.03	0.57
30:CT:132:ILE:HD12	30:CT:137:MET:HB2	1.86	0.57
19:AI:46:LEU:O	19:AI:49:LYS:HB2	2.04	0.57
11:CA:1172:G:H4'	11:CA:1173:G:O5'	2.02	0.57
30:DT:139:GLU:O	30:DT:142:ARG:HG3	2.03	0.57
23:BM:35:ILE:HD12	23:BM:38:ILE:HD12	1.86	0.57
9:A8:96:VAL:HB	9:A8:104:VAL:HG12	1.86	0.57
11:DA:1213:G:N2	11:DA:1423:U:H4'	2.19	0.57
11:DA:1452:G:H1'	30:DT:71:LYS:HE2	1.85	0.57
11:DA:1002:U:C2'	11:DA:1003:A:H5''	2.33	0.57
10:D9:132:HIS:NE2	10:D9:143:ILE:HB	2.18	0.57
14:AD:59:LEU:HA	14:AD:62:LEU:HD12	1.84	0.57
11:BA:1479:G:H3'	11:BA:1480:U:C6	2.34	0.57
11:DA:409:G:O2'	11:DA:410:G:O5'	2.21	0.57
32:AV:46:LEU:HD22	32:AV:50:ILE:HD11	1.86	0.57
11:CA:470:G:H5'	34:CX:34:ARG:NH2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DP:13:ASN:ND2	33:DW:54:TYR:O	2.37	0.57
33:BW:212:VAL:HB	33:BW:220:PHE:HB2	1.86	0.57
11:BA:986:G:OP1	39:BA:6187:HOH:O	2.17	0.57
11:DA:100:A:OP1	11:DA:299:C:N4	2.30	0.57
22:AL:17:ARG:HH11	22:AL:20:LYS:HG2	1.68	0.57
33:AW:47:LEU:HD11	33:AW:113:LEU:HD11	1.86	0.57
4:D3:5:LYS:NZ	4:D3:37:LEU:O	2.37	0.57
35:AY:64:LYS:HB2	35:AY:97:VAL:HG11	1.85	0.57
28:CR:275:ASP:HA	28:CR:311:GLN:HB3	1.86	0.57
34:DX:53:ASP:N	34:DX:53:ASP:OD1	2.37	0.57
21:BK:147:ARG:HH11	21:BK:150:ARG:NH2	2.02	0.57
35:CY:64:LYS:HB2	35:CY:97:VAL:HG11	1.85	0.57
13:BC:105:VAL:HG22	13:BC:189:VAL:HB	1.84	0.57
11:DA:221:A:H61	11:DA:815:U:H3	1.52	0.57
15:DE:143:GLY:N	15:DE:154:THR:O	2.33	0.57
23:AM:102:SER:OG	23:AM:103:ASN:N	2.35	0.57
5:C4:172:ARG:O	5:C4:176:THR:OG1	2.18	0.57
11:AA:331:U:H2'	11:AA:332:A:C8	2.40	0.57
11:CA:1051:G:O6	39:CA:2202:HOH:O	2.14	0.57
9:B8:70:VAL:HG11	17:BG:161:MET:SD	2.44	0.57
11:CA:1263:G:H22	11:CA:1296:G:H22	1.52	0.57
11:DA:878:A:OP1	21:DK:57:THR:HB	2.05	0.57
28:CR:255:GLY:H	28:CR:279:LYS:HZ2	1.50	0.57
11:DA:1145:C:H5''	23:DM:132:LYS:NZ	2.19	0.57
11:BA:487:C:H3'	11:BA:488:G:C8	2.40	0.57
26:BP:55:VAL:HG13	26:BP:58:PHE:CE1	2.40	0.57
1:B0:22:LYS:HZ3	10:B9:76:LYS:CG	2.17	0.57
11:BA:1439:U:H4'	30:BT:91:ASN:HA	1.87	0.57
25:BO:101:ARG:HH12	25:BO:145:ALA:CB	2.17	0.57
15:BE:108:SER:O	15:BE:193:GLY:HA3	2.04	0.57
11:AA:1406:G:H4'	11:AA:1407:A:O5'	2.04	0.57
11:CA:573:A:OP1	13:CC:148:GLN:NE2	2.37	0.57
11:BA:1505:C:H4'	11:BA:1511:A:H61	1.69	0.57
11:AA:1007:U:HO2'	11:AA:1009:U:H5	1.49	0.57
14:AD:62:LEU:HD11	14:AD:68:ARG:HH12	1.67	0.57
28:DR:94:SER:HA	28:DR:100:LEU:HD12	1.86	0.57
34:DX:63:HIS:CD2	34:DX:69:LYS:HE2	2.40	0.57
11:AA:561:A:H1'	34:AX:14:VAL:HB	1.86	0.57
27:CQ:146:ILE:HD12	27:CQ:153:GLN:HG2	1.84	0.57
28:CR:93:SER:HG	28:CR:103:TRP:HE1	1.50	0.57
11:CA:1591:C:H2'	11:CA:1592:C:H6	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:1290:G:OP1	32:DV:67:ARG:HG2	2.04	0.57
14:AD:129:ILE:HG22	14:AD:134:ILE:HG12	1.85	0.57
11:DA:1171:G:H5'	24:DN:39:ARG:NH1	2.20	0.57
11:AA:1660:A:H5'	11:AA:1661:G:OP2	2.05	0.57
17:BG:71:LEU:HG	17:BG:150:ILE:HD13	1.86	0.57
10:B9:75:LYS:NZ	11:BA:1418:C:OP2	2.34	0.57
11:DA:1419:G:OP1	39:DA:8040:HOH:O	2.17	0.57
4:C3:65:VAL:HG21	4:C3:73:LEU:HD22	1.86	0.57
25:CO:101:ARG:HH12	25:CO:145:ALA:CB	2.17	0.57
14:DD:127:VAL:O	14:DD:131:GLN:HG2	2.05	0.57
21:AK:44:VAL:HG23	21:AK:53:LEU:HB2	1.85	0.57
22:AL:102:LEU:HB3	22:AL:125:CYS:HB2	1.87	0.57
27:BQ:17:LEU:HD22	27:BQ:29:ALA:HA	1.85	0.57
11:CA:1406:G:H4'	11:CA:1407:A:O5'	2.05	0.57
27:DQ:146:ILE:HD12	27:DQ:153:GLN:HG2	1.84	0.57
11:AA:1032:U:H3	11:AA:1035:A:N6	1.98	0.57
11:BA:1171:G:H2'	11:BA:1171:G:N3	2.18	0.57
11:BA:654:U:H1'	11:BA:656:G:N2	2.16	0.57
11:AA:311:U:H4'	11:AA:312:C:O4'	2.05	0.57
4:A3:103:LYS:HA	4:A3:113:ARG:HH12	1.70	0.57
23:AM:87:ASN:OD1	23:AM:99:GLN:NE2	2.37	0.57
7:B6:34:LYS:HZ3	7:B6:78:LYS:HE3	1.66	0.57
16:BF:78:ARG:HH12	16:BF:100:GLY:HA3	1.67	0.57
11:BA:1172:G:N2	39:BA:6549:HOH:O	2.31	0.57
11:BA:749:G:H4'	11:BA:750:U:OP2	2.03	0.57
34:BX:63:HIS:CD2	34:BX:69:LYS:HE2	2.40	0.57
11:AA:1373:G:OP1	32:AV:4:VAL:HA	2.04	0.57
30:DT:112:GLU:OE2	30:DT:119:LYS:HE3	2.05	0.57
11:DA:1406:G:H4'	11:DA:1407:A:O5'	2.04	0.57
34:CX:53:ASP:OD1	34:CX:53:ASP:N	2.37	0.57
2:A1:65:ARG:NH1	17:AG:125:THR:HG21	2.18	0.57
15:AE:158:LYS:HG2	15:AE:171:VAL:HG22	1.87	0.57
35:DY:184:THR:HB	35:DY:185:PRO:HD2	1.87	0.57
11:DA:515:U:O2'	26:DP:58:PHE:O	2.19	0.57
12:AB:106:ASN:O	12:AB:109:THR:HG22	2.04	0.57
22:BL:37:ARG:HG3	22:BL:44:GLY:HA2	1.85	0.57
19:CI:112:MET:HG3	19:CI:119:LEU:HD13	1.86	0.57
28:BR:275:ASP:HA	28:BR:311:GLN:HB3	1.85	0.57
11:CA:1550:U:H4'	19:CI:145:ARG:NH2	2.19	0.57
30:CT:112:GLU:OE2	30:CT:119:LYS:HE3	2.05	0.57
5:D4:172:ARG:O	5:D4:176:THR:OG1	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:233:U:H2'	11:AA:234:G:N9	2.19	0.57
11:BA:1216:A:H5'	11:BA:1217:G:OP2	2.04	0.57
11:DA:1121:C:H4'	11:DA:1608:C:OP2	2.05	0.57
14:CD:59:LEU:HA	14:CD:62:LEU:HD12	1.85	0.57
14:CD:62:LEU:HD11	14:CD:68:ARG:HH11	1.69	0.57
3:C2:22:ARG:NH2	11:CA:293:U:OP1	2.33	0.57
1:B0:43:ASN:HB3	1:B0:45:ARG:HH12	1.69	0.57
11:DA:1189:A:N6	24:DN:3:ASN:OD1	2.38	0.57
11:CA:425:A:H5''	11:CA:426:G:OP2	2.05	0.57
29:DS:127:THR:HG22	29:DS:128:TYR:HD2	1.70	0.57
11:DA:785:G:N3	18:DH:107:THR:HG21	2.20	0.57
5:C4:200:THR:HG23	5:C4:216:ILE:HB	1.87	0.57
5:C4:210:ILE:O	11:CA:1036:U:O2'	2.17	0.57
28:BR:233:LYS:NZ	32:BV:24:LEU:O	2.29	0.57
11:CA:464:G:H5''	14:CD:11:THR:HG23	1.87	0.57
11:AA:411:U:OP1	35:AY:96:SER:OG	2.20	0.57
25:DO:95:LYS:HB2	25:DO:153:GLN:NE2	2.20	0.57
12:BB:75:ARG:O	12:BB:79:GLN:HG2	2.04	0.57
4:A3:123:TYR:CG	4:A3:178:THR:HG23	2.40	0.57
7:A6:33:VAL:HG21	7:A6:44:ILE:HD12	1.86	0.57
2:D1:45:VAL:HG11	2:D1:55:LEU:HD21	1.86	0.57
11:AA:1247:A:H3'	11:AA:1248:U:H5''	1.87	0.57
4:A3:117:ARG:NH1	11:AA:834:A:C5	2.73	0.57
28:AR:282:ASN:N	28:AR:290:PRO:HG2	2.16	0.57
11:CA:409:G:O2'	11:CA:410:G:O5'	2.22	0.57
6:D5:40:THR:HB	6:D5:71:VAL:HB	1.87	0.57
11:DA:1463:U:O2'	11:DA:1464:U:O5'	2.21	0.57
31:BU:50:CYS:SG	31:BU:51:ASP:N	2.77	0.57
17:BG:68:ILE:HD13	17:BG:85:ILE:HG12	1.87	0.57
11:CA:311:U:H4'	11:CA:312:C:O4'	2.04	0.57
4:B3:145:LEU:HA	18:BH:42:GLN:NE2	2.18	0.57
8:C7:9:LYS:HG3	8:C7:45:LEU:HD21	1.85	0.57
11:CA:1708:A:H5'	22:CL:62:GLN:HG3	1.87	0.57
11:BA:1370:U:OP2	11:BA:1370:U:H2'	2.05	0.57
21:CK:101:GLY:HA3	21:CK:134:PRO:HG2	1.87	0.57
15:CE:103:VAL:HG11	15:CE:130:ILE:HA	1.87	0.57
26:AP:131:THR:HG23	26:AP:134:SER:H	1.70	0.57
22:DL:130:SER:HB2	22:DL:133:ALA:H	1.70	0.57
2:C1:45:VAL:HG11	2:C1:55:LEU:HD21	1.86	0.57
21:AK:101:GLY:HA3	21:AK:134:PRO:HG2	1.87	0.57
19:BI:112:MET:HG3	19:BI:119:LEU:HD13	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:DE:84:ILE:HD11	15:DE:126:ILE:HD11	1.87	0.57
18:DH:30:VAL:HG21	18:DH:61:VAL:HG23	1.86	0.57
5:A4:35:ARG:O	5:A4:101:THR:OG1	2.22	0.57
11:AA:1501:C:OP2	17:AG:86:LYS:NZ	2.36	0.57
8:B7:16:LEU:O	8:B7:20:GLY:N	2.37	0.57
15:AE:108:SER:O	15:AE:193:GLY:HA3	2.04	0.57
11:AA:628:G:H4'	18:AH:4:VAL:HG13	1.87	0.57
29:CS:25:ALA:HB1	29:CS:93:GLU:OE2	2.05	0.57
11:BA:64:U:H3'	35:BY:178:LYS:NZ	2.20	0.57
33:CW:106:ASP:OD2	33:CW:110:ARG:HD2	2.05	0.57
11:BA:770:G:H2'	11:BA:771:A:H8	1.70	0.57
33:BW:106:ASP:OD2	33:BW:110:ARG:HD2	2.05	0.57
11:BA:1722:U:H5'	21:BK:151:LEU:HD12	1.86	0.57
28:BR:94:SER:HA	28:BR:100:LEU:HD12	1.86	0.57
11:AA:1445:G:H2'	11:AA:1446:A:C8	2.40	0.57
32:AV:58:MET:O	32:AV:62:GLN:HG2	2.05	0.57
11:DA:1370:U:OP2	11:DA:1370:U:H2'	2.05	0.57
11:AA:253:A:H5'	11:AA:254:A:OP2	2.05	0.57
22:DL:17:ARG:HH11	22:DL:20:LYS:HG2	1.70	0.57
15:BE:143:GLY:N	15:BE:154:THR:O	2.36	0.57
27:CQ:85:ILE:HG22	27:CQ:106:ILE:HB	1.85	0.57
29:BS:25:ALA:HB1	29:BS:93:GLU:OE2	2.05	0.57
12:DB:106:ASN:O	12:DB:109:THR:HG22	2.05	0.57
11:BA:604:G:HO2'	11:BA:605:U:P	2.20	0.56
33:DW:106:ASP:OD2	33:DW:110:ARG:HD2	2.04	0.56
11:BA:409:G:O2'	11:BA:410:G:O5'	2.22	0.56
17:DG:68:ILE:HD13	17:DG:85:ILE:HG12	1.86	0.56
11:BA:1660:A:H5'	11:BA:1661:G:OP2	2.05	0.56
10:C9:73:LYS:NZ	11:CA:1159:U:OP1	2.25	0.56
15:AE:45:LEU:HG	15:AE:49:PHE:CE2	2.40	0.56
11:CA:1720:G:H5''	11:CA:1720:G:C8	2.39	0.56
3:A2:51:ILE:HD13	3:A2:65:ALA:HA	1.87	0.56
11:AA:1708:A:H5'	22:AL:62:GLN:HG3	1.85	0.56
34:AX:63:HIS:CD2	34:AX:69:LYS:HE2	2.40	0.56
33:AW:47:LEU:HD11	33:AW:113:LEU:HD21	1.87	0.56
6:C5:44:MET:HE2	21:CK:97:LEU:HD12	1.86	0.56
27:CQ:37:ILE:HD11	27:CQ:59:PHE:CE1	2.40	0.56
23:CM:35:ILE:HD12	23:CM:38:ILE:HD12	1.86	0.56
15:BE:174:PRO:O	15:BE:177:THR:OG1	2.20	0.56
32:AV:6:THR:OG1	32:AV:7:LYS:N	2.36	0.56
16:AF:57:CYS:SG	16:AF:77:HIS:NE2	2.78	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BL:102:LEU:HB3	22:BL:125:CYS:HB2	1.86	0.56
27:DQ:85:ILE:HG22	27:DQ:106:ILE:HB	1.87	0.56
15:DE:36:LEU:HD13	15:DE:248:LEU:HD21	1.87	0.56
26:AP:55:VAL:HG13	26:AP:58:PHE:CE1	2.39	0.56
11:DA:1247:A:H3'	11:DA:1248:U:H5''	1.87	0.56
3:A2:141:LYS:HG3	11:AA:182:U:H3	1.69	0.56
11:AA:409:G:O2'	11:AA:410:G:O5'	2.24	0.56
28:AR:94:SER:HA	28:AR:100:LEU:HD12	1.86	0.56
7:D6:5:LEU:H	18:DH:24:GLN:HE22	1.50	0.56
33:CW:88:LEU:HG	33:CW:89:MET:HG2	1.87	0.56
11:BA:647:U:O2'	11:BA:649:U:OP2	2.04	0.56
11:AA:444:A:H5'	11:AA:445:U:C5	2.40	0.56
6:C5:4:LYS:NZ	11:CA:1747:A:OP1	2.38	0.56
11:CA:331:U:H2'	11:CA:332:A:C8	2.40	0.56
33:DW:47:LEU:HD11	33:DW:113:LEU:HD21	1.86	0.56
4:B3:152:ARG:HB2	4:B3:183:THR:HB	1.87	0.56
23:AM:36:ARG:HH12	23:AM:152:ARG:HG2	1.70	0.56
11:BA:60:C:O2	11:BA:266:G:O2'	2.13	0.56
30:AT:119:LYS:HD3	30:AT:128:PHE:HB3	1.87	0.56
11:AA:99:A:H2'	39:AA:2033:HOH:O	2.03	0.56
30:BT:112:GLU:OE2	30:BT:119:LYS:HE3	2.05	0.56
11:BA:1042:G:H5'	11:BA:1043:U:OP2	2.05	0.56
6:B5:44:MET:HE2	21:BK:97:LEU:HD12	1.86	0.56
9:B8:81:ARG:NH1	11:BA:1506:G:N7	2.51	0.56
33:AW:106:ASP:OD2	33:AW:110:ARG:HD2	2.04	0.56
33:CW:108:LYS:HD2	33:CW:110:ARG:HH21	1.70	0.56
11:BA:211:U:H3	11:BA:238:G:N2	2.00	0.56
11:CA:1551:U:H4'	19:CI:142:LYS:O	2.06	0.56
6:B5:40:THR:HB	6:B5:71:VAL:HB	1.87	0.56
11:BA:1002:U:C2'	11:BA:1003:A:H5''	2.35	0.56
20:CJ:69:PRO:O	24:CN:40:ARG:NH1	2.39	0.56
17:CG:44:VAL:HG12	17:CG:46:HIS:H	1.69	0.56
14:BD:80:MET:HG3	14:BD:85:LEU:HB2	1.87	0.56
11:CA:1362:U:P	32:CV:59:LYS:HZ1	2.27	0.56
23:DM:87:ASN:OD1	23:DM:99:GLN:NE2	2.36	0.56
11:AA:1463:U:O2'	11:AA:1464:U:O5'	2.21	0.56
11:BA:311:U:H4'	11:BA:312:C:O4'	2.04	0.56
11:AA:984:C:H5''	11:AA:985:C:OP2	2.05	0.56
16:CF:78:ARG:HH12	16:CF:100:GLY:HA3	1.68	0.56
11:AA:912:A:O2'	11:AA:913:U:OP1	2.23	0.56
31:CU:47:ALA:HB1	31:CU:76:ARG:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:312:C:H4'	11:DA:313:G:OP1	2.05	0.56
14:AD:154:LYS:HZ3	11:BA:474:G:P	2.27	0.56
11:BA:1173:G:O5'	39:BA:6511:HOH:O	2.18	0.56
11:BA:532:G:C8	39:BA:6083:HOH:O	2.53	0.56
1:D0:43:ASN:HB3	1:D0:45:ARG:HH12	1.70	0.56
11:BA:172:U:H4'	11:BA:173:A:OP2	2.03	0.56
11:BA:1752:U:O2'	11:BA:1753:A:H3'	2.06	0.56
22:DL:31:LYS:O	22:DL:36:SER:HB2	2.05	0.56
11:CA:1277:U:OP1	39:CA:2254:HOH:O	2.17	0.56
11:DA:331:U:H2'	11:DA:332:A:C8	2.40	0.56
11:DA:425:A:H5''	11:DA:426:G:OP2	2.05	0.56
11:DA:1069:U:H4'	11:DA:1070:U:H5''	1.87	0.56
8:B7:52:ARG:NH2	11:BA:1192:C:OP1	2.38	0.56
26:BP:131:THR:HG23	26:BP:134:SER:H	1.70	0.56
19:CI:33:VAL:HA	19:CI:69:ILE:O	2.05	0.56
23:BM:119:ILE:HG23	29:BS:124:PHE:HE2	1.70	0.56
35:AY:184:THR:HB	35:AY:185:PRO:HD2	1.87	0.56
39:AA:2474:HOH:O	30:AT:93:ARG:NH1	2.21	0.56
28:AR:171:SER:OG	28:AR:186:TYR:O	2.18	0.56
22:AL:13:ARG:NH2	27:AQ:101:LYS:O	2.38	0.56
29:DS:25:ALA:HB1	29:DS:93:GLU:OE2	2.05	0.56
19:BI:46:LEU:O	19:BI:49:LYS:HB2	2.05	0.56
12:CB:106:ASN:O	12:CB:109:THR:HG22	2.06	0.56
35:CY:29:ASP:OD1	35:CY:70:ARG:NH2	2.38	0.56
11:DA:1276:G:H5'	11:DA:1294:A:OP2	2.06	0.56
35:BY:184:THR:HB	35:BY:185:PRO:HD2	1.87	0.56
35:AY:58:LYS:HG2	35:AY:105:ASP:O	2.05	0.56
11:AA:231:U:H2'	11:AA:232:G:O4'	2.06	0.56
11:BA:268:G:H2'	11:BA:269:G:O4'	2.04	0.56
35:AY:162:ARG:NH1	35:AY:176:CYS:SG	2.78	0.56
11:CA:64:U:H3'	35:CY:178:LYS:NZ	2.20	0.56
11:AA:1188:A:O2'	11:AA:1189:A:H3'	2.05	0.56
29:BS:127:THR:HG22	29:BS:128:TYR:HD2	1.71	0.56
11:BA:771:A:P	33:BW:110:ARG:HH22	2.27	0.56
11:CA:136:U:P	35:CY:139:ASN:HD21	2.29	0.56
11:DA:1720:G:H5''	11:DA:1720:G:C8	2.40	0.56
11:AA:1720:G:C8	11:AA:1720:G:H5''	2.40	0.56
5:B4:90:VAL:HG11	5:B4:226:ARG:HH12	1.70	0.56
11:AA:754:A:H4'	14:AD:9:SER:CB	2.35	0.56
3:B2:52:ARG:HB2	3:B2:64:ARG:HB2	1.87	0.56
11:AA:677:G:N2	11:AA:725:A:H1'	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:493:U:C5	14:BD:168:ARG:HG3	2.40	0.56
2:D1:21:ARG:HH21	17:DG:122:ARG:NH1	2.02	0.56
11:CA:1752:U:O2'	11:CA:1753:A:H3'	2.04	0.56
33:BW:47:LEU:HD11	33:BW:113:LEU:HD21	1.87	0.56
35:AY:64:LYS:NZ	35:AY:82:SER:H	2.03	0.56
11:CA:516:G:OP2	26:CP:35:LYS:HE2	2.06	0.56
18:AH:101:ASN:HB3	18:AH:112:THR:HG23	1.86	0.56
15:DE:103:VAL:HG11	15:DE:130:ILE:HA	1.86	0.56
11:CA:1538:U:H5'	23:CM:39:GLY:N	2.19	0.56
18:BH:101:ASN:HB3	18:BH:112:THR:HG23	1.87	0.56
4:D3:140:ARG:HD3	18:DH:53:ILE:HG23	1.86	0.56
26:CP:131:THR:HG23	26:CP:134:SER:H	1.70	0.56
11:CA:128:A:H2'	11:CA:129:G:O4'	2.06	0.56
10:A9:132:HIS:HB2	10:A9:141:LEU:HB2	1.87	0.56
4:B3:5:LYS:NZ	4:B3:37:LEU:O	2.37	0.56
18:DH:106:THR:HG21	18:DH:121:THR:HB	1.86	0.56
11:DA:128:A:H2'	11:DA:129:G:O4'	2.06	0.56
11:BA:229:A:OP2	11:BA:229:A:C4	2.59	0.56
14:CD:80:MET:HG3	14:CD:85:LEU:HB2	1.87	0.56
32:CV:46:LEU:HD22	32:CV:50:ILE:HD11	1.86	0.56
23:CM:87:ASN:OD1	23:CM:99:GLN:NE2	2.38	0.56
7:C6:68:LYS:HB3	11:CA:1027:U:OP1	2.06	0.56
11:CA:1137:A:OP1	17:CG:147:TYR:OH	2.20	0.56
11:DA:253:A:H5'	11:DA:254:A:OP2	2.05	0.56
33:DW:130:ALA:H	33:DW:142:VAL:HG12	1.71	0.56
11:CA:1069:U:H4'	11:CA:1070:U:H5''	1.86	0.56
12:CB:123:PRO:HD3	12:CB:143:LEU:O	2.06	0.56
23:DM:102:SER:OG	23:DM:103:ASN:N	2.36	0.56
12:CB:64:GLN:NE2	15:CE:246:GLU:HG2	2.20	0.56
11:CA:1373:G:OP1	32:CV:4:VAL:HA	2.06	0.56
36:CZ:32:CYS:HA	36:CZ:68:VAL:HG12	1.88	0.56
28:CR:102:LEU:O	28:CR:111:TYR:N	2.32	0.56
11:CA:749:G:H4'	11:CA:750:U:OP2	2.04	0.56
11:BA:519:A:OP1	26:BP:91:LYS:NZ	2.25	0.56
12:DB:62:ALA:O	36:DZ:64:LYS:NZ	2.37	0.56
15:BE:141:ARG:HB3	15:BE:222:THR:HG22	1.88	0.56
11:BA:469:A:OP2	34:BX:29:LYS:NZ	2.32	0.56
11:CA:1263:G:H21	11:CA:1296:G:H22	1.47	0.56
11:BA:1263:G:H22	11:BA:1296:G:H22	1.54	0.56
6:C5:40:THR:HB	6:C5:71:VAL:HB	1.87	0.56
11:DA:1445:G:H2'	11:DA:1446:A:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:DC:228:ARG:NH1	28:DR:242:ILE:O	2.39	0.56
11:DA:1659:C:H5'	11:DA:1660:A:OP2	2.06	0.56
5:A4:90:VAL:HG11	5:A4:226:ARG:HH12	1.71	0.56
12:AB:60:ILE:HG23	12:AB:69:VAL:HG21	1.88	0.56
33:BW:130:ALA:H	33:BW:142:VAL:HG12	1.70	0.56
35:BY:64:LYS:NZ	35:BY:82:SER:H	2.03	0.56
26:DP:55:VAL:HG13	26:DP:58:PHE:CE1	2.41	0.56
33:DW:47:LEU:HD11	33:DW:113:LEU:HD11	1.88	0.56
21:DK:56:VAL:HG11	21:DK:77:ALA:HA	1.88	0.56
14:AD:159:ALA:O	14:AD:165:GLY:HA3	2.06	0.56
22:CL:130:SER:HB2	22:CL:133:ALA:H	1.70	0.56
10:D9:72:LYS:NZ	11:DA:1243:G:OP1	2.25	0.56
19:AI:112:MET:HG3	19:AI:119:LEU:HD13	1.88	0.56
11:CA:1586:A:H5'	11:CA:1587:U:OP2	2.06	0.56
18:CH:105:THR:HG22	18:CH:110:ILE:HG12	1.85	0.56
5:D4:200:THR:HG23	5:D4:216:ILE:HB	1.88	0.56
22:AL:130:SER:HB2	22:AL:133:ALA:H	1.70	0.56
15:AE:36:LEU:HD13	15:AE:248:LEU:HD21	1.86	0.56
11:CA:1033:A:H4'	11:CA:1034:A:OP2	2.04	0.56
25:CO:95:LYS:HB2	25:CO:153:GLN:NE2	2.21	0.56
11:DA:1562:G:N7	39:DA:8102:HOH:O	2.33	0.56
33:AW:189:ASN:OD1	33:AW:189:ASN:N	2.37	0.56
22:BL:73:VAL:HB	22:BL:82:ILE:HG22	1.85	0.56
11:AA:14:C:O5'	15:AE:165:SER:HB3	2.06	0.56
5:A4:200:THR:HG23	5:A4:216:ILE:HB	1.87	0.56
11:DA:1744:U:H5''	11:DA:1744:U:H6	1.70	0.56
22:CL:7:ARG:HH11	22:CL:7:ARG:CG	2.18	0.56
11:DA:864:U:O2	21:DK:137:THR:N	2.29	0.56
25:AO:5:GLN:NE2	25:AO:123:ARG:HE	2.04	0.56
4:B3:109:LYS:HZ3	11:BA:726:U:P	2.27	0.56
11:CA:1660:A:H5'	11:CA:1661:G:OP2	2.05	0.56
11:CA:1443:A:H4'	11:CA:1444:U:H5'	1.88	0.56
31:CU:69:LYS:HB3	31:CU:124:LEU:HB3	1.86	0.56
11:DA:1737:C:H2'	11:DA:1738:U:C6	2.40	0.56
11:DA:1514:G:C5'	30:DT:90:GLY:HA2	2.35	0.56
11:CA:1288:C:OP1	32:CV:7:LYS:N	2.38	0.56
8:B7:9:LYS:HG3	8:B7:45:LEU:HD21	1.86	0.56
35:DY:29:ASP:OD1	35:DY:70:ARG:NH2	2.38	0.56
11:AA:749:G:H4'	11:AA:750:U:OP2	2.05	0.56
23:BM:48:LYS:HD3	30:BT:39:GLN:HG2	1.87	0.56
11:BA:128:A:H2'	11:BA:129:G:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1538:U:H5'	23:AM:39:GLY:N	2.19	0.56
10:A9:129:TYR:CD2	10:A9:152:LEU:HD22	2.40	0.56
11:DA:793:G:H5''	11:DA:794:A:OP2	2.06	0.56
11:BA:1450:G:P	30:BT:60:ARG:NH1	2.78	0.56
11:DA:74:A:H5''	35:DY:162:ARG:HH22	1.71	0.56
9:A8:70:VAL:HG11	17:AG:161:MET:SD	2.46	0.56
14:DD:62:LEU:HD11	14:DD:68:ARG:HH11	1.69	0.56
33:DW:108:LYS:HD2	33:DW:110:ARG:HH21	1.70	0.56
19:BI:12:PHE:H	19:BI:12:PHE:HD1	1.54	0.56
11:AA:1449:G:OP2	30:AT:47:ARG:NH1	2.39	0.56
11:BA:845:G:H5''	25:BO:4:MET:HE2	1.87	0.56
11:AA:487:C:H3'	11:AA:488:G:N7	2.21	0.56
22:CL:17:ARG:HH11	22:CL:20:LYS:HG2	1.70	0.56
33:AW:130:ALA:H	33:AW:142:VAL:HG12	1.69	0.56
3:A2:12:ARG:NH1	11:AA:101:A:OP2	2.36	0.56
1:C0:43:ASN:HB3	1:C0:45:ARG:HH12	1.71	0.56
15:AE:228:PRO:HA	15:AE:231:TRP:NE1	2.21	0.56
30:AT:112:GLU:OE2	30:AT:119:LYS:HE3	2.06	0.56
35:BY:29:ASP:OD1	35:BY:70:ARG:NH2	2.38	0.56
33:BW:249:THR:HG22	33:BW:251:LEU:H	1.71	0.56
35:DY:198:LYS:HA	35:DY:201:ARG:HD2	1.87	0.56
23:BM:36:ARG:HH12	23:BM:152:ARG:HG2	1.70	0.56
5:D4:106:LEU:HB2	5:D4:221:VAL:HB	1.88	0.56
15:BE:36:LEU:HD13	15:BE:248:LEU:HD21	1.88	0.56
11:AA:1342:U:H4'	11:AA:1343:G:OP2	2.06	0.56
11:DA:1205:G:OP1	24:DN:2:PRO:HG3	2.06	0.56
21:CK:56:VAL:HG11	21:CK:77:ALA:HA	1.88	0.56
15:CE:141:ARG:NH1	15:CE:230:PHE:CZ	2.74	0.56
28:DR:47:ARG:C	28:DR:49:LYS:H	2.06	0.56
15:BE:45:LEU:HG	15:BE:49:PHE:CE2	2.40	0.56
31:DU:47:ALA:HB1	31:DU:76:ARG:HG2	1.88	0.56
11:CA:1164:C:OP2	11:CA:1165:A:O2'	2.16	0.56
11:CA:1585:U:OP1	17:CG:143:ASN:ND2	2.39	0.56
14:DD:80:MET:HG3	14:DD:85:LEU:HB2	1.87	0.56
11:CA:1659:C:H5'	11:CA:1660:A:OP2	2.06	0.56
7:B6:18:LYS:HZ2	11:BA:936:U:H5'	1.71	0.56
11:AA:1752:U:O2'	11:AA:1753:A:H3'	2.05	0.56
25:BO:101:ARG:HG3	25:BO:101:ARG:HH11	1.71	0.56
5:B4:238:TYR:O	5:B4:240:HIS:N	2.39	0.56
2:A1:45:VAL:HG11	2:A1:55:LEU:HD21	1.86	0.56
18:BH:80:ASP:HA	18:BH:123:GLY:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:765:A:C6	26:CP:19:ARG:NH1	2.73	0.56
26:DP:76:ASN:OD1	26:DP:77:GLN:N	2.39	0.56
39:BA:6548:HOH:O	30:BT:93:ARG:NH1	2.14	0.56
10:B9:108:LYS:HA	31:BU:65:LYS:HE2	1.88	0.56
11:DA:229:A:H1'	11:DA:230:A:C8	2.40	0.56
33:BW:108:LYS:HD2	33:BW:110:ARG:HH21	1.70	0.56
13:BC:34:ASP:HB3	13:BC:60:GLN:HE22	1.71	0.56
3:C2:51:ILE:HD13	3:C2:65:ALA:HA	1.87	0.56
11:CA:1158:U:O4	11:CA:1172:G:N2	2.36	0.56
12:CB:64:GLN:HE22	15:CE:246:GLU:HG2	1.70	0.56
35:AY:198:LYS:HA	35:AY:201:ARG:HD2	1.88	0.56
26:CP:55:VAL:HG13	26:CP:58:PHE:CE1	2.41	0.56
17:DG:44:VAL:HG12	17:DG:46:HIS:H	1.70	0.56
5:D4:35:ARG:O	5:D4:101:THR:OG1	2.24	0.56
18:CH:30:VAL:HG21	18:CH:61:VAL:HG23	1.86	0.56
15:DE:213:LYS:O	15:DE:217:TYR:HD1	1.89	0.56
33:CW:249:THR:HG22	33:CW:251:LEU:H	1.71	0.56
11:AA:144:C:O4'	35:AY:132:LYS:NZ	2.39	0.56
15:AE:103:VAL:HG11	15:AE:130:ILE:HA	1.88	0.56
22:BL:130:SER:HB2	22:BL:133:ALA:H	1.71	0.56
35:CY:162:ARG:NH1	35:CY:176:CYS:SG	2.79	0.55
11:BA:239:A:OP2	11:BA:239:A:C8	2.59	0.55
1:C0:62:GLY:N	11:CA:560:C:OP1	2.31	0.55
11:DA:1001:A:HO2'	11:DA:1002:U:P	2.25	0.55
3:C2:25:ARG:O	3:C2:28:GLU:HG2	2.06	0.55
29:CS:127:THR:HG22	29:CS:128:TYR:HD2	1.69	0.55
25:BO:5:GLN:NE2	25:BO:123:ARG:HE	2.04	0.55
17:AG:45:PRO:HB2	17:AG:68:ILE:HD12	1.88	0.55
31:BU:47:ALA:HB1	31:BU:76:ARG:HG2	1.88	0.55
11:BA:1659:C:H5'	11:BA:1660:A:OP2	2.06	0.55
11:BA:312:C:H4'	11:BA:313:G:OP1	2.05	0.55
29:AS:127:THR:HG22	29:AS:128:TYR:HD2	1.71	0.55
11:DA:573:A:O2'	11:DA:574:A:OP1	2.22	0.55
11:CA:62:G:H4'	11:CA:164:U:C5	2.41	0.55
5:B4:35:ARG:O	5:B4:101:THR:OG1	2.23	0.55
28:DR:102:LEU:O	28:DR:111:TYR:N	2.32	0.55
11:DA:1526:G:H5'	11:DA:1527:A:OP2	2.06	0.55
15:CE:143:GLY:N	15:CE:154:THR:O	2.35	0.55
28:DR:171:SER:OG	28:DR:186:TYR:O	2.19	0.55
6:C5:75:TYR:HB3	6:C5:80:ALA:HB2	1.89	0.55
27:BQ:96:TYR:O	27:BQ:98:ARG:HG2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AM:28:THR:HG23	23:AM:58:ALA:HA	1.89	0.55
11:CA:1395:A:H5''	11:CA:1396:A:OP2	2.06	0.55
4:C3:197:LYS:N	11:CA:1029:G:OP1	2.38	0.55
34:AX:53:ASP:OD1	34:AX:53:ASP:N	2.37	0.55
11:BA:1051:G:O6	39:BA:6096:HOH:O	2.18	0.55
15:BE:103:VAL:HG11	15:BE:130:ILE:HA	1.88	0.55
11:AA:550:G:OP1	34:AX:59:SER:OG	2.15	0.55
11:DA:1164:C:OP2	11:DA:1165:A:O2'	2.17	0.55
11:DA:1452:G:O4'	11:DA:1452:G:OP2	2.24	0.55
11:BA:771:A:H5''	11:BA:772:A:O5'	2.06	0.55
33:BW:254:ARG:NH1	33:BW:260:TYR:CG	2.74	0.55
28:BR:81:ASP:N	28:BR:94:SER:OG	2.38	0.55
7:D6:5:LEU:HD12	18:DH:24:GLN:HG3	1.88	0.55
11:DA:1660:A:H5'	11:DA:1661:G:OP2	2.05	0.55
33:CW:89:MET:HE1	33:CW:102:ARG:HD3	1.88	0.55
11:BA:1454:A:H4'	19:BI:73:GLY:O	2.06	0.55
26:AP:13:ASN:HD22	26:AP:20:GLN:NE2	2.04	0.55
33:CW:130:ALA:H	33:CW:142:VAL:HG12	1.71	0.55
22:BL:17:ARG:HH11	22:BL:20:LYS:HG2	1.70	0.55
11:AA:209:G:C4'	11:AA:210:A:H5'	2.34	0.55
30:CT:119:LYS:HD3	30:CT:128:PHE:HB3	1.88	0.55
12:DB:123:PRO:HD3	12:DB:143:LEU:O	2.07	0.55
30:CT:89:ARG:NH1	30:CT:92:LEU:HB3	2.22	0.55
14:DD:105:MET:HE2	14:DD:108:ARG:HD2	1.88	0.55
9:D8:96:VAL:HB	9:D8:104:VAL:HG12	1.86	0.55
14:DD:120:ASN:H	14:DD:124:HIS:CD2	2.24	0.55
33:DW:249:THR:HG22	33:DW:251:LEU:H	1.71	0.55
32:CV:58:MET:O	32:CV:62:GLN:HG2	2.06	0.55
5:B4:128:VAL:HG22	5:B4:175:ASN:ND2	2.21	0.55
5:C4:35:ARG:O	5:C4:101:THR:OG1	2.25	0.55
11:DA:1033:A:H4'	11:DA:1034:A:OP2	2.05	0.55
11:CA:679:U:H4'	11:CA:680:U:OP2	2.06	0.55
17:DG:45:PRO:HB2	17:DG:68:ILE:HD12	1.88	0.55
13:DC:34:ASP:HB3	13:DC:60:GLN:HE22	1.71	0.55
11:CA:534:A:H3'	11:CA:534:A:N3	2.22	0.55
11:CA:312:C:H4'	11:CA:313:G:OP1	2.03	0.55
11:AA:470:G:H5'	34:AX:34:ARG:NH2	2.20	0.55
13:DC:146:LYS:HG2	13:DC:147:GLN:HB2	1.88	0.55
11:BA:984:C:H5''	11:BA:985:C:OP2	2.05	0.55
26:DP:14:PRO:HG3	33:DW:97:THR:HG23	1.87	0.55
11:CA:912:A:HO2'	11:CA:913:U:P	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A4:148:LYS:HZ2	5:A4:158:SER:HB3	1.70	0.55
11:BA:1712:C:O2	11:BA:1733:G:N2	2.28	0.55
2:A1:24:ILE:HD11	17:AG:121:THR:HB	1.88	0.55
18:AH:106:THR:HG21	18:AH:121:THR:HB	1.87	0.55
11:AA:1319:U:O2	11:AA:1488:A:H2'	2.07	0.55
28:AR:102:LEU:O	28:AR:111:TYR:N	2.32	0.55
10:B9:80:TYR:HE2	10:B9:83:LYS:NZ	2.05	0.55
30:AT:89:ARG:NH1	30:AT:92:LEU:HB3	2.21	0.55
31:BU:20:ASN:HD21	31:BU:27:LYS:HZ3	1.53	0.55
28:DR:51:VAL:HB	28:DR:72:LEU:HB2	1.89	0.55
10:A9:88:HIS:CE1	11:AA:1220:C:OP2	2.59	0.55
11:DA:986:G:H5''	39:DA:7879:HOH:O	2.07	0.55
35:AY:137:ARG:HG2	35:AY:181:ARG:HG3	1.87	0.55
11:DA:765:A:C5	26:DP:19:ARG:NH1	2.74	0.55
10:D9:108:LYS:HG2	31:DU:65:LYS:NZ	2.21	0.55
22:AL:31:LYS:O	22:AL:36:SER:HB2	2.06	0.55
11:BA:1751:U:H4'	11:BA:1752:U:OP1	2.06	0.55
18:CH:68:ARG:NH2	36:CZ:8:GLN:HG3	2.22	0.55
11:BA:14:C:O5'	15:BE:165:SER:HB3	2.06	0.55
8:C7:16:LEU:O	8:C7:20:GLY:N	2.38	0.55
14:CD:77:LEU:HD13	14:CD:91:ARG:O	2.06	0.55
7:D6:33:VAL:HG21	7:D6:44:ILE:HD12	1.87	0.55
11:CA:879:G:N2	21:CK:68:GLU:OE1	2.37	0.55
11:DA:628:G:H4'	18:DH:4:VAL:HG13	1.87	0.55
6:D5:75:TYR:HB3	6:D5:80:ALA:HB2	1.89	0.55
17:BG:73:PHE:HB2	17:BG:154:ARG:NH2	2.21	0.55
11:DA:1383:G:O2'	11:DA:1384:U:OP1	2.22	0.55
29:AS:25:ALA:HB1	29:AS:93:GLU:OE2	2.05	0.55
5:A4:49:LEU:O	21:AK:51:GLU:HG3	2.06	0.55
15:BE:45:LEU:HG	15:BE:49:PHE:HE2	1.70	0.55
11:BA:1452:G:H5''	11:BA:1452:G:H8	1.70	0.55
11:DA:211:U:H3	11:DA:238:G:N2	2.04	0.55
11:BA:1001:A:HO2'	11:BA:1002:U:P	2.26	0.55
11:CA:1360:U:H5''	32:CV:3:ARG:NH1	2.21	0.55
13:CC:34:ASP:HB3	13:CC:60:GLN:NE2	2.22	0.55
5:C4:90:VAL:HG11	5:C4:226:ARG:HH12	1.71	0.55
33:BW:88:LEU:HG	33:BW:89:MET:HG2	1.88	0.55
7:B6:18:LYS:NZ	11:BA:936:U:H5'	2.22	0.55
11:DA:1373:G:OP1	32:DV:4:VAL:HA	2.07	0.55
11:CA:209:G:C5'	11:CA:210:A:H5'	2.37	0.55
11:DA:1358:A:H4'	11:DA:1359:C:O5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1751:U:H4'	11:AA:1752:U:OP1	2.06	0.55
11:CA:59:C:H5'	11:CA:447:C:N4	2.21	0.55
33:BW:47:LEU:HD11	33:BW:113:LEU:HD11	1.89	0.55
35:CY:184:THR:HB	35:CY:185:PRO:HD2	1.89	0.55
30:DT:132:ILE:HD12	30:DT:137:MET:HB2	1.89	0.55
9:B8:96:VAL:HB	9:B8:104:VAL:HG12	1.87	0.55
11:AA:76:A:H4'	11:AA:77:G:OP2	2.07	0.55
27:DQ:37:ILE:HD11	27:DQ:59:PHE:CE1	2.42	0.55
5:C4:238:TYR:O	5:C4:240:HIS:N	2.40	0.55
14:BD:77:LEU:HD13	14:BD:91:ARG:O	2.07	0.55
11:CA:268:G:H2'	11:CA:269:G:O4'	2.07	0.55
11:BA:1032:U:H3	11:BA:1035:A:N6	1.98	0.55
11:AA:1507:U:C6	17:AG:161:MET:HG2	2.42	0.55
11:DA:661:G:H3'	11:DA:662:U:C6	2.41	0.55
11:CA:1445:G:H2'	11:CA:1446:A:C8	2.42	0.55
18:DH:68:ARG:NH2	36:DZ:8:GLN:HG3	2.21	0.55
30:DT:119:LYS:HD3	30:DT:128:PHE:HB3	1.88	0.55
11:DA:1342:U:H4'	11:DA:1343:G:OP2	2.07	0.55
11:AA:1370:U:OP2	11:AA:1370:U:H2'	2.06	0.55
18:DH:80:ASP:HA	18:DH:123:GLY:O	2.07	0.55
11:CA:1247:A:H3'	11:CA:1248:U:H5''	1.88	0.55
31:AU:47:ALA:HB1	31:AU:76:ARG:HG2	1.87	0.55
11:DA:268:G:H2'	11:DA:269:G:O4'	2.07	0.55
11:BA:1428:C:OP1	39:BA:6550:HOH:O	2.18	0.55
28:AR:51:VAL:HB	28:AR:72:LEU:HB2	1.89	0.55
17:BG:45:PRO:HB2	17:BG:68:ILE:HD12	1.89	0.55
14:AD:80:MET:HG3	14:AD:85:LEU:HB2	1.88	0.55
3:B2:51:ILE:HD13	3:B2:65:ALA:HA	1.89	0.55
23:CM:119:ILE:HG23	29:CS:124:PHE:HE2	1.72	0.55
30:BT:124:ALA:O	30:BT:127:LYS:HE2	2.06	0.55
27:BQ:37:ILE:HD11	27:BQ:59:PHE:CE1	2.41	0.55
27:AQ:88:ASP:HB3	27:AQ:154:PHE:CE2	2.42	0.55
11:BA:1564:A:H2'	11:BA:1565:A:C8	2.42	0.55
19:BI:33:VAL:HA	19:BI:69:ILE:O	2.07	0.55
16:AF:51:TRP:HE3	16:AF:73:LEU:HD21	1.72	0.55
5:C4:106:LEU:HB2	5:C4:221:VAL:HB	1.89	0.55
15:CE:158:LYS:HG2	15:CE:171:VAL:HG22	1.88	0.55
11:DA:1395:A:H5''	11:DA:1396:A:OP2	2.07	0.55
18:CH:106:THR:HG21	18:CH:121:THR:HB	1.88	0.55
11:DA:738:A:O2'	11:DA:739:A:OP1	2.24	0.55
8:A7:29:GLU:OE2	24:AN:7:ARG:NH1	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C1:65:ARG:NH1	17:CG:125:THR:HG21	2.22	0.55
11:BA:331:U:H2'	11:BA:332:A:C8	2.41	0.55
27:DQ:96:TYR:O	27:DQ:98:ARG:HG2	2.06	0.55
7:B6:33:VAL:HG21	7:B6:44:ILE:HD12	1.88	0.55
11:DA:1223:U:O2'	11:DA:1224:C:O5'	2.25	0.55
15:CE:45:LEU:HG	15:CE:49:PHE:CE2	2.42	0.55
36:CZ:41:SER:OG	36:CZ:42:ASN:N	2.40	0.55
11:CA:680:U:HO2'	11:CA:681:G:P	2.28	0.55
11:BA:1123:G:H3'	11:BA:1721:G:H21	1.71	0.55
13:DC:34:ASP:HB3	13:DC:60:GLN:NE2	2.22	0.55
23:AM:90:ASN:OD1	29:AS:14:ARG:NH1	2.40	0.55
17:AG:68:ILE:HA	17:AG:71:LEU:HD12	1.89	0.55
11:BA:676:C:HO2'	11:BA:677:G:P	2.30	0.55
7:D6:65:THR:HB	7:D6:68:LYS:HG3	1.89	0.55
11:CA:1147:U:O4	23:CM:140:THR:HG21	2.06	0.55
26:BP:14:PRO:HG3	33:BW:97:THR:HG23	1.88	0.55
11:DA:1751:U:H4'	11:DA:1752:U:OP1	2.06	0.55
25:AO:101:ARG:HH11	25:AO:101:ARG:HG3	1.72	0.55
11:BA:466:A:H4'	14:BD:130:ARG:NH1	2.22	0.55
11:CA:1355:G:H21	28:CR:76:ASN:HD21	1.54	0.55
5:D4:109:THR:HG22	21:DK:130:GLU:HG3	1.89	0.55
11:AA:128:A:H2'	11:AA:129:G:O4'	2.06	0.55
14:DD:159:ALA:O	14:DD:165:GLY:HA3	2.06	0.55
11:BA:1538:U:H5'	23:BM:39:GLY:N	2.22	0.55
30:AT:132:ILE:HD12	30:AT:137:MET:HB2	1.89	0.55
30:BT:89:ARG:NH1	30:BT:92:LEU:HB3	2.22	0.55
15:CE:141:ARG:HB2	15:CE:223:TYR:CD1	2.42	0.55
10:A9:94:LYS:HB2	11:AA:1201:G:OP1	2.07	0.55
15:CE:45:LEU:HG	15:CE:49:PHE:HE2	1.72	0.55
11:DA:654:U:H1'	11:DA:656:G:N2	2.17	0.55
11:BA:1551:U:H2'	11:BA:1552:U:C6	2.42	0.55
11:DA:771:A:P	33:DW:110:ARG:HH22	2.29	0.55
11:AA:1556:G:O2'	11:AA:1557:U:OP1	2.25	0.55
11:DA:1123:G:H3'	11:DA:1721:G:H21	1.72	0.55
15:DE:228:PRO:HA	15:DE:231:TRP:NE1	2.21	0.55
36:AZ:41:SER:OG	36:AZ:42:ASN:N	2.39	0.55
23:BM:87:ASN:OD1	23:BM:99:GLN:NE2	2.39	0.55
33:AW:212:VAL:HB	33:AW:220:PHE:HB2	1.88	0.55
11:CA:61:A:H5''	11:CA:62:G:OP2	2.07	0.55
11:AA:1489:U:H5'	11:AA:1490:C:H5	1.72	0.55
21:BK:82:VAL:HG11	21:BK:122:SER:HB3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A4:95:ASP:O	5:A4:98:ASN:ND2	2.39	0.55
35:CY:58:LYS:HG2	35:CY:105:ASP:O	2.07	0.55
6:B5:75:TYR:HB3	6:B5:80:ALA:HB2	1.89	0.55
25:BO:95:LYS:HB2	25:BO:153:GLN:NE2	2.22	0.55
11:CA:882:G:H2'	11:CA:883:A:O4'	2.07	0.55
11:CA:1564:A:H2'	11:CA:1565:A:C8	2.42	0.55
11:DA:76:A:H4'	11:DA:77:G:OP2	2.06	0.55
10:C9:80:TYR:HE2	10:C9:83:LYS:NZ	2.05	0.55
12:BB:123:PRO:HD3	12:BB:143:LEU:O	2.07	0.55
11:DA:1206:A:OP2	11:DA:1217:G:O2'	2.25	0.55
11:AA:658:C:H2'	11:AA:659:G:H8	1.71	0.55
10:A9:103:LEU:HD12	31:AU:57:LYS:HB3	1.88	0.55
11:AA:268:G:H2'	11:AA:269:G:O4'	2.06	0.55
28:BR:51:VAL:HB	28:BR:72:LEU:HB2	1.89	0.55
33:AW:108:LYS:HD2	33:AW:110:ARG:HH21	1.71	0.55
11:BA:1556:G:O2'	11:BA:1557:U:OP1	2.24	0.55
11:BA:765:A:N3	26:BP:19:ARG:HD3	2.22	0.55
11:DA:1190:G:C4	11:DA:1415:A:C6	2.95	0.55
8:C7:13:TYR:HD1	8:C7:76:LEU:HD22	1.72	0.55
13:DC:146:LYS:HB2	13:DC:151:LYS:HZ2	1.72	0.55
18:AH:68:ARG:NH2	36:AZ:8:GLN:HG3	2.22	0.55
33:CW:129:THR:HB	33:CW:142:VAL:HG12	1.89	0.55
35:DY:64:LYS:NZ	35:DY:82:SER:H	2.04	0.55
11:CA:1172:G:H4'	11:CA:1173:G:C5'	2.37	0.55
11:BA:1342:U:H4'	11:BA:1343:G:OP2	2.07	0.55
5:D4:238:TYR:O	5:D4:240:HIS:N	2.39	0.55
21:DK:82:VAL:HG11	21:DK:122:SER:HB3	1.88	0.55
8:A7:61:TRP:CE2	24:AN:22:VAL:HG22	2.42	0.55
11:CA:29:G:H2'	11:CA:30:C:C6	2.42	0.55
11:BA:1286:U:O2'	11:BA:1287:U:OP2	2.20	0.55
19:DI:33:VAL:HA	19:DI:69:ILE:O	2.05	0.55
14:DD:77:LEU:HD13	14:DD:91:ARG:O	2.07	0.55
23:BM:28:THR:HG23	23:BM:58:ALA:HA	1.89	0.55
12:BB:106:ASN:O	12:BB:109:THR:HG22	2.07	0.55
9:C8:99:ASN:HD22	17:CG:90:ASN:HD21	1.54	0.55
11:CA:1017:C:H4'	11:CA:1017:C:OP2	2.06	0.55
11:AA:1200:G:OP2	31:AU:101:SER:N	2.40	0.54
28:AR:47:ARG:C	28:AR:49:LYS:H	2.07	0.54
11:DA:1123:G:H3'	11:DA:1721:G:N2	2.22	0.54
3:C2:150:ARG:NH2	11:CA:181:G:OP1	2.35	0.54
17:AG:44:VAL:HG12	17:AG:46:HIS:H	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AC:34:ASP:HB3	13:AC:60:GLN:NE2	2.22	0.54
11:DA:70:U:OP1	35:DY:173:ARG:NH2	2.40	0.54
10:C9:88:HIS:NE2	11:CA:1220:C:OP2	2.39	0.54
3:A2:56:VAL:HG13	11:AA:324:A:H5'	1.89	0.54
15:AE:45:LEU:HG	15:AE:49:PHE:HE2	1.71	0.54
11:CA:984:C:H5''	11:CA:985:C:OP2	2.06	0.54
22:CL:31:LYS:O	22:CL:36:SER:HB2	2.07	0.54
11:CA:1370:U:OP2	11:CA:1370:U:H2'	2.07	0.54
28:CR:72:LEU:HB3	28:CR:103:TRP:CZ3	2.42	0.54
5:C4:37:PRO:HG3	5:C4:101:THR:O	2.07	0.54
11:BA:437:A:OP1	39:BA:6460:HOH:O	2.18	0.54
22:CL:73:VAL:HB	22:CL:82:ILE:HG22	1.87	0.54
4:A3:145:LEU:HA	18:AH:42:GLN:HE21	1.72	0.54
11:CA:76:A:H4'	11:CA:77:G:OP2	2.07	0.54
7:C6:33:VAL:HG21	7:C6:44:ILE:HD12	1.88	0.54
14:BD:159:ALA:O	14:BD:165:GLY:HA3	2.07	0.54
35:CY:198:LYS:HA	35:CY:201:ARG:HD2	1.88	0.54
19:DI:46:LEU:O	19:DI:49:LYS:HB2	2.06	0.54
11:AA:1358:A:H4'	11:AA:1359:C:O5'	2.06	0.54
36:DZ:32:CYS:HA	36:DZ:68:VAL:HG12	1.89	0.54
11:DA:1019:G:H2'	11:DA:1020:G:C8	2.42	0.54
21:DK:101:GLY:HA3	21:DK:134:PRO:HG2	1.89	0.54
35:BY:189:LEU:O	35:BY:193:VAL:HG23	2.07	0.54
11:BA:1551:U:H4'	19:BI:142:LYS:O	2.07	0.54
10:D9:143:ILE:HG12	10:D9:144:ASP:H	1.71	0.54
11:DA:1146:C:OP1	23:DM:136:GLN:HB2	2.07	0.54
25:DO:5:GLN:NE2	25:DO:123:ARG:HE	2.06	0.54
7:D6:34:LYS:HZ3	7:D6:78:LYS:HE3	1.69	0.54
3:D2:51:ILE:HD13	3:D2:65:ALA:HA	1.88	0.54
7:D6:66:GLY:O	11:DA:1026:C:H4'	2.07	0.54
33:BW:155:GLU:HG3	35:BY:219:TRP:CZ2	2.41	0.54
1:B0:61:CYS:HB3	1:B0:64:LEU:H	1.72	0.54
11:AA:1329:G:H21	30:AT:137:MET:HE1	1.72	0.54
5:B4:200:THR:HG23	5:B4:216:ILE:HB	1.88	0.54
18:BH:106:THR:HG21	18:BH:121:THR:HB	1.90	0.54
20:AJ:79:ARG:HG2	24:AN:55:ARG:HB3	1.88	0.54
11:CA:213:U:H4'	11:CA:214:U:H5'	1.90	0.54
10:A9:80:TYR:HE2	10:A9:83:LYS:NZ	2.05	0.54
11:DA:1564:A:H2'	11:DA:1565:A:C8	2.41	0.54
15:AE:141:ARG:HB2	15:AE:223:TYR:CD1	2.42	0.54
11:CA:90:U:O2'	33:CW:8:HIS:HD2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1452:G:H1'	30:BT:71:LYS:HE2	1.88	0.54
6:C5:87:ARG:NH1	11:CA:1126:C:P	2.80	0.54
35:CY:137:ARG:HG2	35:CY:181:ARG:HG3	1.89	0.54
25:CO:5:GLN:NE2	25:CO:123:ARG:HE	2.05	0.54
32:DV:46:LEU:HD22	32:DV:50:ILE:HD11	1.89	0.54
13:BC:34:ASP:HB3	13:BC:60:GLN:NE2	2.22	0.54
13:CC:146:LYS:HG2	13:CC:147:GLN:HB2	1.89	0.54
15:CE:185:PRO:HD3	15:CE:211:PHE:CE2	2.42	0.54
8:B7:13:TYR:HD1	8:B7:76:LEU:HD22	1.72	0.54
5:B4:140:VAL:HG12	5:B4:221:VAL:HG22	1.90	0.54
12:BB:46:ILE:HG13	32:BV:105:MET:HE1	1.89	0.54
15:CE:36:LEU:HD13	15:CE:248:LEU:HD21	1.89	0.54
21:AK:82:VAL:HG11	21:AK:122:SER:HB3	1.89	0.54
11:BA:1033:A:H4'	11:BA:1034:A:OP2	2.08	0.54
28:CR:74:GLY:HA3	28:CR:101:ARG:NH1	2.22	0.54
15:DE:158:LYS:HG2	15:DE:171:VAL:HG22	1.88	0.54
21:CK:82:VAL:HG11	21:CK:122:SER:HB3	1.89	0.54
28:DR:74:GLY:HA3	28:DR:101:ARG:NH1	2.22	0.54
33:CW:254:ARG:NH1	33:CW:260:TYR:CG	2.75	0.54
11:AA:1262:U:H2'	11:AA:1263:G:C8	2.42	0.54
11:CA:1551:U:H2'	11:CA:1552:U:C6	2.42	0.54
11:BA:378:A:OP2	11:BA:378:A:C8	2.53	0.54
11:DA:840:A:O2'	11:DA:841:A:O5'	2.26	0.54
11:BA:660:U:H2'	11:BA:661:G:O4'	2.07	0.54
11:AA:190:G:H2'	11:AA:191:A:C8	2.42	0.54
26:CP:13:ASN:HD22	26:CP:20:GLN:NE2	2.06	0.54
11:BA:1223:U:O2'	11:BA:1224:C:O5'	2.26	0.54
5:D4:148:LYS:HZ2	5:D4:158:SER:HB3	1.71	0.54
14:CD:120:ASN:H	14:CD:124:HIS:CD2	2.25	0.54
19:CI:46:LEU:O	19:CI:49:LYS:HB2	2.06	0.54
25:BO:148:ALA:HA	25:BO:151:LEU:HD12	1.90	0.54
26:CP:76:ASN:OD1	26:CP:77:GLN:N	2.40	0.54
26:DP:131:THR:HG23	26:DP:134:SER:H	1.71	0.54
11:AA:59:C:N4	11:AA:62:G:OP1	2.36	0.54
11:AA:61:A:H5''	11:AA:62:G:OP2	2.08	0.54
11:DA:234:G:H2'	11:DA:235:A:C8	2.42	0.54
10:A9:88:HIS:CD2	11:AA:1219:U:OP2	2.61	0.54
3:B2:25:ARG:O	3:B2:28:GLU:HG2	2.07	0.54
13:DC:146:LYS:HD2	13:DC:151:LYS:NZ	2.23	0.54
11:BA:1419:G:OP1	39:BA:6514:HOH:O	2.17	0.54
11:CA:1454:A:H4'	19:CI:73:GLY:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:1158:U:O4	11:DA:1172:G:N2	2.39	0.54
11:CA:1370:U:H4'	11:CA:1371:A:H5'	1.90	0.54
28:CR:51:VAL:HB	28:CR:72:LEU:HB2	1.90	0.54
11:CA:1538:U:H5'	23:CM:39:GLY:H	1.73	0.54
32:CV:24:LEU:HD13	32:CV:58:MET:HE1	1.90	0.54
35:BY:198:LYS:HA	35:BY:201:ARG:HD2	1.89	0.54
35:BY:58:LYS:HG2	35:BY:105:ASP:O	2.07	0.54
17:BG:117:ARG:O	17:BG:136:VAL:N	2.38	0.54
35:AY:98:ARG:HD2	35:AY:99:GLY:H	1.71	0.54
35:CY:7:TYR:HB2	35:CY:113:ILE:HB	1.89	0.54
10:A9:106:ASN:HB3	10:A9:108:LYS:HG3	1.90	0.54
9:C8:45:ILE:O	23:CM:4:VAL:HA	2.08	0.54
17:CG:83:LEU:O	17:CG:87:VAL:HG23	2.06	0.54
10:C9:106:ASN:HB3	10:C9:108:LYS:HG3	1.90	0.54
9:D8:40:ASN:HB2	23:DM:25:LYS:NZ	2.22	0.54
12:DB:134:SER:HB2	12:DB:152:TYR:CD2	2.42	0.54
11:AA:1200:G:OP1	31:AU:28:GLY:HA2	2.07	0.54
11:CA:1452:G:OP2	11:CA:1452:G:O4'	2.26	0.54
11:AA:1551:U:H4'	19:AI:142:LYS:O	2.07	0.54
11:AA:1450:G:P	30:AT:60:ARG:NH1	2.80	0.54
14:AD:71:PHE:CE1	33:AW:254:ARG:HD3	2.42	0.54
17:CG:45:PRO:HB2	17:CG:68:ILE:HD12	1.88	0.54
17:DG:68:ILE:HA	17:DG:71:LEU:HD12	1.90	0.54
1:C0:101:ASN:ND2	10:C9:77:LYS:NZ	2.55	0.54
13:AC:34:ASP:HB3	13:AC:60:GLN:HE22	1.72	0.54
12:BB:60:ILE:HG23	12:BB:69:VAL:HG21	1.89	0.54
11:CA:885:A:N3	11:CA:975:G:O2'	2.34	0.54
11:AA:866:U:O2	11:AA:966:A:O2'	2.26	0.54
4:C3:103:LYS:HA	4:C3:113:ARG:HH12	1.70	0.54
25:AO:101:ARG:NH1	25:AO:101:ARG:HG3	2.22	0.54
11:CA:332:A:H2'	11:CA:333:C:C6	2.43	0.54
14:DD:120:ASN:H	14:DD:124:HIS:HD2	1.55	0.54
6:A5:81:ILE:HD11	11:AA:1748:U:H5'	1.90	0.54
14:CD:159:ALA:O	14:CD:165:GLY:HA3	2.06	0.54
26:BP:76:ASN:OD1	26:BP:77:GLN:N	2.41	0.54
11:CA:45:A:N1	11:CA:424:A:O2'	2.36	0.54
7:D6:63:LYS:HD3	7:D6:72:GLN:NE2	2.23	0.54
8:A7:16:LEU:O	8:A7:20:GLY:N	2.39	0.54
11:BA:1228:A:H5''	11:BA:1228:A:C8	2.43	0.54
11:BA:231:U:H2'	11:BA:232:G:C4'	2.38	0.54
11:BA:726:U:H5''	11:BA:727:U:OP2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1428:C:HO2'	11:CA:1429:G:P	2.30	0.54
11:DA:1172:G:H4'	11:DA:1173:G:C5'	2.37	0.54
26:DP:13:ASN:HD22	26:DP:20:GLN:NE2	2.06	0.54
11:CA:1751:U:H4'	11:CA:1752:U:OP1	2.08	0.54
33:DW:52:LEU:HD21	33:DW:113:LEU:HD12	1.88	0.54
15:DE:158:LYS:HG3	18:DH:95:PRO:O	2.07	0.54
11:AA:318:U:O2'	27:AQ:6:GLN:HG2	2.07	0.54
39:AA:2353:HOH:O	26:AP:86:ASN:HB2	2.08	0.54
11:AA:1395:A:H5''	11:AA:1396:A:OP2	2.07	0.54
12:BB:25:LEU:HD22	12:BB:33:ILE:HD13	1.90	0.54
2:B1:24:ILE:HD11	17:BG:121:THR:HB	1.90	0.54
11:CA:1555:A:H5'	19:CI:137:ARG:HH12	1.72	0.54
27:BQ:88:ASP:HB3	27:BQ:154:PHE:CE2	2.43	0.54
11:BA:1019:G:H2'	11:BA:1020:G:C8	2.43	0.54
8:D7:3:HIS:CE1	11:DA:1229:U:C4	2.96	0.54
25:CO:148:ALA:HA	25:CO:151:LEU:HD12	1.89	0.54
11:AA:1526:G:H5'	11:AA:1527:A:OP2	2.08	0.54
31:BU:75:LYS:O	31:BU:78:SER:OG	2.25	0.54
14:BD:120:ASN:H	14:BD:124:HIS:CD2	2.25	0.54
11:AA:149:U:OP1	35:AY:107:ARG:HG2	2.07	0.54
11:CA:1212:U:H1'	11:CA:1216:A:H62	1.73	0.54
11:DA:1551:U:H2'	11:DA:1552:U:C6	2.43	0.54
11:BA:469:A:H2	11:BA:505:A:C2	2.25	0.54
11:CA:771:A:H4'	11:CA:772:A:OP2	2.08	0.54
14:CD:71:PHE:CE1	33:CW:254:ARG:HD3	2.42	0.54
11:CA:1556:G:O2'	11:CA:1557:U:OP1	2.25	0.54
11:CA:1531:G:C4	23:CM:134:ARG:HD2	2.43	0.54
13:AC:146:LYS:HG2	13:AC:147:GLN:HB2	1.89	0.54
20:CJ:41:ARG:HB3	20:CJ:101:ILE:HG23	1.90	0.54
11:AA:1555:A:H5'	19:AI:137:ARG:HH12	1.72	0.54
10:D9:80:TYR:HE2	10:D9:83:LYS:NZ	2.05	0.54
12:DB:60:ILE:HG23	12:DB:69:VAL:HG21	1.89	0.54
11:BA:1445:G:H2'	11:BA:1446:A:C8	2.42	0.54
11:BA:190:G:H2'	11:BA:191:A:C8	2.41	0.54
11:DA:754:A:O2'	14:DD:9:SER:OG	2.17	0.54
33:BW:129:THR:HB	33:BW:142:VAL:HG12	1.89	0.54
5:C4:148:LYS:HZ2	5:C4:158:SER:HB3	1.72	0.54
11:AA:1370:U:H4'	11:AA:1371:A:H5'	1.90	0.54
19:AI:33:VAL:HA	19:AI:69:ILE:O	2.08	0.54
11:DA:1517:A:OP1	23:DM:133:VAL:N	2.39	0.54
14:BD:49:LEU:O	14:BD:53:ARG:HG3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1302:G:N2	32:CV:8:THR:OG1	2.38	0.54
9:D8:43:VAL:CG2	23:DM:25:LYS:HB2	2.34	0.54
13:AC:201:LYS:HB2	13:AC:203:PHE:HD2	1.72	0.54
21:AK:43:HIS:CD2	21:AK:55:ARG:HG3	2.43	0.54
10:B9:94:LYS:HB2	11:BA:1201:G:OP1	2.08	0.54
15:DE:45:LEU:HG	15:DE:49:PHE:HE2	1.73	0.54
11:DA:229:A:HO2'	11:DA:230:A:P	2.22	0.54
11:BA:468:U:H5''	11:BA:469:A:O4'	2.07	0.54
5:D4:90:VAL:HG11	5:D4:226:ARG:HH12	1.71	0.54
11:CA:622:G:H5'	25:CO:122:SER:OG	2.08	0.54
11:BA:649:U:O4'	11:BA:661:G:N2	2.41	0.54
32:AV:24:LEU:HD13	32:AV:58:MET:HE1	1.90	0.54
11:DA:882:G:H2'	11:DA:883:A:O4'	2.08	0.54
28:AR:193:ASP:OD1	28:AR:193:ASP:N	2.37	0.54
30:BT:119:LYS:HD3	30:BT:128:PHE:HB3	1.90	0.54
11:BA:762:U:H5	26:BP:6:ARG:CZ	2.21	0.54
15:BE:180:VAL:O	15:BE:199:THR:HB	2.08	0.54
6:A5:75:TYR:HB3	6:A5:80:ALA:HB2	1.88	0.54
11:BA:479:G:H2'	11:BA:480:A:C8	2.43	0.54
11:DA:1083:G:O2'	11:DA:1705:A:H5''	2.08	0.54
35:DY:58:LYS:HG2	35:DY:105:ASP:O	2.08	0.54
11:BA:883:A:H5'	21:BK:66:ARG:HB3	1.89	0.54
11:AA:1347:U:O2'	11:AA:1348:U:OP2	2.23	0.54
21:BK:101:GLY:HA3	21:BK:134:PRO:HG2	1.90	0.54
15:AE:213:LYS:O	15:AE:217:TYR:HD1	1.91	0.54
17:BG:44:VAL:HG12	17:BG:46:HIS:H	1.73	0.54
13:DC:201:LYS:HB2	13:DC:203:PHE:HD2	1.73	0.54
5:B4:49:LEU:HD23	21:BK:51:GLU:HB3	1.89	0.54
11:DA:232:G:O2'	11:DA:233:U:H5'	2.07	0.54
11:AA:1551:U:H2'	11:AA:1552:U:C6	2.43	0.54
11:BA:470:G:H5'	34:BX:34:ARG:NH2	2.23	0.54
11:DA:1121:C:C4'	11:DA:1608:C:OP2	2.56	0.54
4:D3:101:GLU:HB2	4:D3:113:ARG:HG3	1.90	0.54
11:AA:1531:G:C4	23:AM:134:ARG:HD2	2.43	0.54
11:CA:332:A:H2'	11:CA:333:C:H6	1.73	0.54
12:CB:29:MET:CE	12:CB:144:CYS:HB3	2.38	0.54
11:BA:29:G:H2'	11:BA:30:C:C6	2.43	0.54
18:AH:80:ASP:HA	18:AH:123:GLY:O	2.08	0.54
12:AB:46:ILE:HG13	32:AV:105:MET:HE1	1.90	0.54
11:DA:318:U:O2'	27:DQ:6:GLN:HG2	2.08	0.54
26:CP:53:VAL:HG22	26:CP:73:VAL:HG22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AJ:78:ASP:OD1	24:AN:53:LYS:HD2	2.08	0.54
11:DA:29:G:H2'	11:DA:30:C:C6	2.43	0.54
26:DP:79:TYR:O	26:DP:83:TYR:HD1	1.91	0.54
3:A2:105:VAL:O	3:A2:108:SER:HB2	2.08	0.54
11:CA:1019:G:H2'	11:CA:1020:G:C8	2.43	0.54
11:DA:534:A:H3'	11:DA:534:A:N3	2.23	0.54
11:AA:1069:U:H4'	11:AA:1070:U:H5''	1.90	0.54
12:AB:29:MET:CE	12:AB:144:CYS:HB3	2.38	0.54
11:DA:364:G:OP1	27:DQ:95:LYS:HA	2.07	0.54
11:AA:1355:G:H21	28:AR:76:ASN:HD21	1.55	0.54
11:DA:1212:U:H1'	11:DA:1216:A:H62	1.73	0.53
15:DE:45:LEU:HG	15:DE:49:PHE:CE2	2.43	0.53
15:CE:180:VAL:O	15:CE:199:THR:HB	2.08	0.53
3:A2:146:HIS:CE1	11:AA:181:G:C8	2.96	0.53
11:AA:1647:U:H2'	11:AA:1648:C:H6	1.73	0.53
20:AJ:41:ARG:HB3	20:AJ:101:ILE:HG23	1.90	0.53
35:DY:137:ARG:HG2	35:DY:181:ARG:HG3	1.89	0.53
11:CA:986:G:OP1	39:CA:2185:HOH:O	2.18	0.53
11:BA:1715:A:H1'	11:BA:1736:C:H5'	1.90	0.53
15:BE:145:TRP:H	15:BE:153:HIS:CE1	2.25	0.53
8:D7:13:TYR:HD1	8:D7:76:LEU:HD22	1.72	0.53
25:DO:101:ARG:NH1	25:DO:101:ARG:HG3	2.23	0.53
2:B1:65:ARG:HH11	17:BG:125:THR:HG21	1.73	0.53
26:AP:55:VAL:HG13	26:AP:58:PHE:HE1	1.74	0.53
28:CR:233:LYS:NZ	32:CV:24:LEU:O	2.34	0.53
5:C4:140:VAL:HG12	5:C4:221:VAL:HG22	1.90	0.53
11:AA:29:G:H2'	11:AA:30:C:C6	2.42	0.53
8:B7:65:TYR:HB3	13:BC:75:PHE:CE1	2.43	0.53
3:C2:177:THR:HG21	11:CA:205:A:OP1	2.08	0.53
23:CM:28:THR:HG23	23:CM:58:ALA:HA	1.90	0.53
22:AL:73:VAL:HB	22:AL:82:ILE:HG22	1.89	0.53
31:CU:75:LYS:O	31:CU:78:SER:OG	2.26	0.53
11:BA:1186:G:H5'	11:BA:1216:A:C2	2.43	0.53
11:DA:75:C:H1'	35:DY:178:LYS:HG2	1.90	0.53
6:A5:45:VAL:HA	21:AK:113:GLN:HG3	1.89	0.53
11:BA:235:A:H4'	11:BA:236:U:OP2	2.07	0.53
20:DJ:41:ARG:HB3	20:DJ:101:ILE:HG23	1.91	0.53
23:CM:96:LYS:HB2	23:CM:98:TYR:CZ	2.43	0.53
11:DA:172:U:C4'	11:DA:173:A:OP2	2.57	0.53
13:CC:146:LYS:HD2	13:CC:151:LYS:NZ	2.22	0.53
4:A3:115:ARG:HG2	4:A3:121:TYR:CE2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1659:C:H5'	11:AA:1660:A:OP2	2.07	0.53
15:BE:158:LYS:HG3	18:BH:95:PRO:O	2.08	0.53
5:B4:50:VAL:HG21	5:B4:63:ILE:HG12	1.89	0.53
11:CA:840:A:O2'	11:CA:841:A:O5'	2.27	0.53
5:D4:170:ILE:HD13	5:D4:213:LEU:HD11	1.90	0.53
11:BA:1538:U:OP1	23:BM:42:PHE:HB2	2.08	0.53
11:AA:1147:U:O4	23:AM:140:THR:HG21	2.08	0.53
11:DA:1042:G:H5'	11:DA:1043:U:OP2	2.08	0.53
11:DA:1283:U:O3'	32:DV:2:GLY:HA2	2.07	0.53
30:DT:124:ALA:O	30:DT:127:LYS:HE2	2.07	0.53
11:AA:738:A:O2'	11:AA:739:A:OP1	2.25	0.53
11:CA:1526:G:H5'	11:CA:1527:A:OP2	2.08	0.53
11:BA:1204:U:H2'	11:BA:1205:G:O4'	2.08	0.53
11:DA:135:A:N6	35:DY:191:LYS:HB2	2.23	0.53
35:CY:98:ARG:HD2	35:CY:99:GLY:H	1.73	0.53
6:D5:17:HIS:HE1	11:DA:1742:G:OP1	1.91	0.53
27:AQ:37:ILE:HD11	27:AQ:59:PHE:CE1	2.42	0.53
5:C4:38:ILE:HB	5:C4:237:LEU:O	2.09	0.53
11:BA:1212:U:H1'	11:BA:1216:A:H62	1.73	0.53
8:D7:6:LYS:NZ	31:DU:20:ASN:ND2	2.55	0.53
36:DZ:41:SER:OG	36:DZ:42:ASN:N	2.39	0.53
11:AA:1212:U:H1'	11:AA:1216:A:H62	1.73	0.53
11:DA:234:G:HO2'	11:DA:235:A:C1'	2.20	0.53
28:BR:74:GLY:HA3	28:BR:101:ARG:NH1	2.23	0.53
35:BY:137:ARG:HG2	35:BY:181:ARG:HG3	1.90	0.53
11:BA:1247:A:H3'	11:BA:1248:U:H5''	1.89	0.53
11:BA:1262:U:H2'	11:BA:1263:G:C8	2.43	0.53
11:BA:1647:U:H2'	11:BA:1648:C:H6	1.73	0.53
1:B0:22:LYS:HG3	10:B9:74:LYS:CD	2.37	0.53
11:DA:839:U:H3'	11:DA:840:A:O4'	2.09	0.53
12:CB:60:ILE:HG23	12:CB:69:VAL:HG21	1.91	0.53
11:AA:463:A:HO2'	14:AD:9:SER:HG	1.56	0.53
11:DA:190:G:H2'	11:DA:191:A:C8	2.41	0.53
11:AA:934:U:OP1	11:AA:1044:C:O2'	2.23	0.53
11:DA:533:G:N2	39:DA:7636:HOH:O	2.41	0.53
25:CO:97:ALA:O	25:CO:101:ARG:HG2	2.08	0.53
25:DO:95:LYS:HB2	25:DO:153:GLN:HE21	1.73	0.53
10:B9:106:ASN:HB3	10:B9:108:LYS:HG3	1.90	0.53
11:AA:1372:A:OP2	32:AV:56:HIS:HE1	1.91	0.53
14:BD:120:ASN:H	14:BD:124:HIS:HD2	1.55	0.53
15:AE:144:TYR:CD2	15:AE:148:LYS:HB3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:40:A:H3'	11:CA:430:A:H62	1.73	0.53
11:CA:14:C:O5'	15:CE:165:SER:HB3	2.08	0.53
11:BA:738:A:O2'	11:BA:739:A:OP1	2.26	0.53
11:AA:1019:G:H2'	11:AA:1020:G:C8	2.43	0.53
14:AD:120:ASN:H	14:AD:124:HIS:CD2	2.26	0.53
11:BA:1122:G:H1'	11:BA:1718:A:C4	2.44	0.53
11:CA:1011:C:H4'	25:CO:7:LYS:HG2	1.91	0.53
11:CA:1228:A:H5''	11:CA:1228:A:C8	2.44	0.53
11:BA:61:A:H5''	11:BA:62:G:OP2	2.07	0.53
11:BA:220:A:H3'	11:BA:221:A:C8	2.36	0.53
11:BA:677:G:N2	11:BA:725:A:H1'	2.23	0.53
13:BC:226:GLU:HB2	28:BR:208:THR:H	1.73	0.53
11:CA:17:C:O2'	11:CA:1110:A:N1	2.37	0.53
34:DX:53:ASP:HB2	34:DX:56:LYS:HB2	1.91	0.53
35:CY:64:LYS:NZ	35:CY:82:SER:H	2.05	0.53
25:BO:101:ARG:HG3	25:BO:101:ARG:NH1	2.22	0.53
34:CX:53:ASP:HB2	34:CX:56:LYS:HB2	1.91	0.53
14:CD:120:ASN:H	14:CD:124:HIS:HD2	1.55	0.53
11:BA:1358:A:H4'	11:BA:1359:C:O5'	2.07	0.53
1:D0:58:GLY:HA2	1:D0:88:CYS:O	2.08	0.53
11:CA:1342:U:H4'	11:CA:1343:G:OP2	2.08	0.53
11:AA:1564:A:H2'	11:AA:1565:A:C8	2.43	0.53
2:C1:24:ILE:HD11	17:CG:121:THR:HB	1.89	0.53
2:D1:12:MET:SD	2:D1:30:VAL:HG23	2.49	0.53
13:DC:165:GLN:N	13:DC:166:PRO:HD2	2.24	0.53
6:D5:81:ILE:HD11	11:DA:1748:U:H5'	1.91	0.53
11:AA:466:A:H4'	14:AD:130:ARG:NH1	2.24	0.53
35:AY:7:TYR:HB2	35:AY:113:ILE:HB	1.90	0.53
15:DE:180:VAL:O	15:DE:199:THR:HB	2.09	0.53
5:A4:72:LEU:O	5:A4:79:SER:OG	2.26	0.53
11:CA:1206:A:OP2	11:CA:1217:G:O2'	2.26	0.53
11:CA:1007:U:O2'	11:CA:1009:U:C5	2.61	0.53
10:D9:103:LEU:HD22	10:D9:109:VAL:HA	1.90	0.53
11:AA:771:A:P	33:AW:110:ARG:HH22	2.31	0.53
28:CR:297:GLU:OE1	28:CR:297:GLU:N	2.38	0.53
11:BA:1443:A:H4'	11:BA:1444:U:H5'	1.89	0.53
11:AA:840:A:H8	25:AO:66:ARG:HH22	1.54	0.53
11:DA:478:G:C2'	11:DA:494:A:H61	2.21	0.53
10:B9:75:LYS:HZ1	11:BA:1418:C:P	2.32	0.53
25:DO:101:ARG:HG3	25:DO:101:ARG:HH11	1.73	0.53
33:CW:47:LEU:HD11	33:CW:113:LEU:HD11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1288:C:OP1	32:AV:7:LYS:N	2.40	0.53
9:D8:99:ASN:HD22	17:DG:90:ASN:HD21	1.55	0.53
25:AO:95:LYS:HB2	25:AO:153:GLN:NE2	2.23	0.53
5:C4:95:ASP:O	5:C4:98:ASN:ND2	2.40	0.53
21:AK:56:VAL:HG11	21:AK:77:ALA:HA	1.90	0.53
11:BA:493:U:H4'	11:BA:494:A:OP2	2.05	0.53
11:AA:534:A:N3	11:AA:534:A:H3'	2.23	0.53
30:BT:132:ILE:HD12	30:BT:137:MET:HB2	1.89	0.53
13:BC:201:LYS:HB2	13:BC:203:PHE:HD2	1.73	0.53
28:DR:72:LEU:HB3	28:DR:103:TRP:CZ3	2.44	0.53
11:CA:232:G:HO2'	11:CA:233:U:P	2.28	0.53
11:BA:1452:G:O4'	11:BA:1452:G:OP2	2.26	0.53
11:BA:229:A:H1'	11:BA:230:A:N7	2.22	0.53
11:BA:515:U:O2'	26:BP:58:PHE:O	2.25	0.53
19:DI:12:PHE:HD1	19:DI:12:PHE:H	1.56	0.53
11:BA:892:G:HO2'	11:BA:893:A:H8	1.53	0.53
13:CC:34:ASP:HB3	13:CC:60:GLN:HE22	1.71	0.53
13:BC:146:LYS:HD2	13:BC:151:LYS:NZ	2.24	0.53
11:CA:1276:G:H5'	11:CA:1294:A:OP2	2.09	0.53
11:DA:1370:U:H4'	11:DA:1371:A:H5'	1.90	0.53
11:DA:1514:G:H5'	30:DT:90:GLY:HA2	1.90	0.53
11:BA:1370:U:H4'	11:BA:1371:A:H5'	1.91	0.53
25:DO:97:ALA:O	25:DO:101:ARG:HG2	2.09	0.53
11:CA:1538:U:OP1	23:CM:42:PHE:HB2	2.08	0.53
7:B6:63:LYS:HD3	7:B6:72:GLN:NE2	2.24	0.53
11:BA:1471:C:P	30:BT:130:ARG:HH22	2.30	0.53
12:BB:165:GLU:HG3	12:BB:199:TYR:CE2	2.44	0.53
23:BM:40:ARG:NH2	30:BT:48:GLU:OE1	2.37	0.53
26:CP:79:TYR:O	26:CP:83:TYR:HD1	1.92	0.53
11:BA:1395:A:H5''	11:BA:1396:A:OP2	2.08	0.53
6:C5:81:ILE:HD11	11:CA:1748:U:H5'	1.90	0.53
11:CA:1358:A:H4'	11:CA:1359:C:O5'	2.07	0.53
3:C2:105:VAL:O	3:C2:108:SER:HB2	2.09	0.53
30:BT:18:PHE:HZ	30:BT:140:LEU:HD22	1.74	0.53
9:D8:43:VAL:HG21	23:DM:25:LYS:CB	2.36	0.53
15:BE:141:ARG:NH1	15:BE:230:PHE:CZ	2.76	0.53
15:AE:141:ARG:NH1	15:AE:230:PHE:CZ	2.76	0.53
11:DA:1252:C:H2'	11:DA:1253:G:H8	1.74	0.53
10:A9:101:TYR:CE1	31:AU:33:LEU:HD11	2.44	0.53
28:BR:72:LEU:HB3	28:BR:103:TRP:CZ3	2.44	0.53
11:BA:1246:C:OP2	11:BA:1399:G:OP2	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:25:ARG:O	3:A2:28:GLU:HG2	2.09	0.53
11:BA:1427:C:H2'	39:BA:6555:HOH:O	2.09	0.53
8:C7:35:THR:HB	8:C7:37:VAL:HG23	1.91	0.53
11:CA:190:G:H2'	11:CA:191:A:C8	2.40	0.53
11:AA:486:A:H5''	11:AA:487:C:OP1	2.09	0.53
11:CA:210:A:C8	11:CA:210:A:OP2	2.62	0.53
11:BA:912:A:O2'	11:BA:913:U:OP1	2.26	0.53
11:CA:1278:C:H4'	11:CA:1279:U:OP1	2.08	0.53
11:CA:573:A:O2'	11:CA:574:A:OP1	2.24	0.53
28:AR:190:VAL:HG13	28:AR:216:VAL:HB	1.91	0.53
20:AJ:67:LYS:HA	24:AN:43:ARG:NE	2.23	0.53
11:AA:1204:U:H2'	11:AA:1205:G:O4'	2.09	0.53
11:DA:1712:C:O2	11:DA:1733:G:N2	2.29	0.53
15:BE:31:THR:HB	15:BE:34:GLY:H	1.74	0.53
11:AA:1442:A:H62	11:AA:1510:U:H3	1.57	0.53
15:AE:141:ARG:HB3	15:AE:222:THR:HG22	1.90	0.53
13:CC:201:LYS:HB2	13:CC:203:PHE:HD2	1.73	0.53
11:AA:1452:G:H5''	11:AA:1452:G:H8	1.73	0.53
11:AA:954:G:N1	11:AA:1001:A:O2'	2.39	0.53
26:BP:55:VAL:HG13	26:BP:58:PHE:HE1	1.73	0.53
28:AR:255:GLY:H	28:AR:279:LYS:HZ1	1.56	0.53
33:AW:88:LEU:HG	33:AW:89:MET:HG2	1.91	0.53
5:B4:119:LYS:HG3	11:BA:909:C:H5'	1.89	0.53
26:CP:13:ASN:ND2	33:CW:54:TYR:O	2.41	0.53
11:BA:1158:U:O4	11:BA:1172:G:N2	2.37	0.53
28:BR:161:HIS:HB3	28:BR:197:LYS:HE2	1.91	0.53
4:C3:63:ILE:HD11	4:C3:94:PHE:CZ	2.44	0.53
15:CE:81:VAL:HG21	15:CE:126:ILE:HD13	1.91	0.53
5:C4:170:ILE:HD13	5:C4:213:LEU:HD11	1.90	0.53
11:AA:62:G:H4'	11:AA:164:U:C5	2.44	0.53
11:DA:1051:G:O6	39:DA:7667:HOH:O	2.16	0.53
27:AQ:126:GLN:HG2	27:AQ:127:CYS:H	1.74	0.53
11:AA:661:G:H3'	11:AA:662:U:C6	2.43	0.53
25:AO:148:ALA:HA	25:AO:151:LEU:HD12	1.90	0.53
11:AA:1301:A:P	13:AC:163:THR:HG21	2.48	0.53
7:C6:63:LYS:HD3	7:C6:72:GLN:NE2	2.24	0.53
11:CA:1383:G:O2'	11:CA:1384:U:OP1	2.24	0.53
11:AA:1042:G:H5'	11:AA:1043:U:OP2	2.09	0.53
12:AB:123:PRO:HD3	12:AB:143:LEU:O	2.08	0.53
30:AT:124:ALA:O	30:AT:127:LYS:HE2	2.09	0.53
28:CR:190:VAL:HG13	28:CR:216:VAL:HB	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1017:C:OP2	11:AA:1017:C:H4'	2.09	0.53
6:A5:40:THR:HB	6:A5:71:VAL:HB	1.90	0.53
3:D2:25:ARG:O	3:D2:28:GLU:HG2	2.08	0.53
19:AI:12:PHE:H	19:AI:12:PHE:HD1	1.55	0.53
11:DA:1647:U:H2'	11:DA:1648:C:H6	1.73	0.53
11:DA:1443:A:H4'	11:DA:1444:U:H5'	1.89	0.53
11:AA:1168:A:HO2'	11:AA:1169:C:P	2.30	0.53
11:BA:934:U:OP1	11:BA:1044:C:O2'	2.24	0.53
11:CA:1223:U:O2'	11:CA:1224:C:O5'	2.27	0.53
11:AA:515:U:O2'	26:AP:58:PHE:O	2.27	0.53
11:DA:1204:U:H2'	11:DA:1205:G:O4'	2.09	0.53
31:BU:61:ALA:O	31:BU:65:LYS:HB2	2.09	0.53
33:BW:206:SER:HB2	33:BW:207:PHE:CD2	2.44	0.53
32:DV:58:MET:O	32:DV:62:GLN:HG2	2.08	0.53
26:AP:53:VAL:HG22	26:AP:73:VAL:HG22	1.91	0.53
35:CY:189:LEU:O	35:CY:193:VAL:HG23	2.09	0.53
16:BF:51:TRP:HE3	16:BF:73:LEU:HD21	1.74	0.53
33:DW:254:ARG:NH1	33:DW:260:TYR:CG	2.76	0.53
6:D5:44:MET:HE2	21:DK:97:LEU:HD12	1.91	0.53
6:B5:81:ILE:HD11	11:BA:1748:U:H5'	1.90	0.53
11:AA:1049:C:O2'	11:AA:1050:C:H5'	2.09	0.53
13:CC:44:ARG:HG3	13:CC:49:THR:HG22	1.91	0.53
27:CQ:88:ASP:HB3	27:CQ:154:PHE:CE2	2.43	0.53
26:AP:51:ARG:NH1	26:AP:146:PHE:HE1	2.07	0.53
11:DA:1399:G:N2	20:DJ:72:GLU:HG2	2.23	0.53
11:DA:416:C:O2'	11:DA:417:A:P	2.66	0.53
28:CR:178:ASN:N	23:DM:110:ARG:HH12	2.07	0.53
35:DY:162:ARG:NH1	35:DY:176:CYS:SG	2.82	0.53
11:BA:1507:U:C6	17:BG:161:MET:HG2	2.43	0.53
11:AA:673:A:H2'	11:AA:675:A:N6	2.17	0.53
11:DA:770:G:H2'	11:DA:771:A:H8	1.67	0.53
11:AA:614:A:H2'	11:AA:615:A:C8	2.44	0.53
11:AA:1647:U:H2'	11:AA:1648:C:C6	2.44	0.53
10:C9:88:HIS:CD2	11:CA:1220:C:OP2	2.62	0.53
34:CX:34:ARG:HB3	34:CX:34:ARG:NH1	2.24	0.53
11:DA:680:U:HO2'	11:DA:681:G:P	2.32	0.53
11:DA:494:A:C2	34:DX:48:HIS:HB3	2.43	0.53
26:BP:13:ASN:HD22	26:BP:20:GLN:NE2	2.07	0.53
15:DE:145:TRP:H	15:DE:153:HIS:CE1	2.27	0.53
1:D0:61:CYS:HB3	1:D0:64:LEU:H	1.74	0.53
11:BA:1558:A:OP1	19:BI:137:ARG:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:13:TYR:HD1	8:A7:76:LEU:HD22	1.73	0.53
15:BE:185:PRO:HD3	15:BE:211:PHE:CE2	2.44	0.53
9:B8:47:LYS:CB	23:BM:6:GLU:HA	2.39	0.53
11:BA:882:G:H2'	11:BA:883:A:O4'	2.09	0.53
5:B4:110:ARG:HG3	21:BK:131:ASP:O	2.09	0.53
2:A1:54:VAL:HB	17:AG:28:CYS:HA	1.91	0.53
21:DK:139:SER:OG	21:DK:140:THR:O	2.20	0.53
13:AC:45:THR:HG22	13:AC:47:THR:H	1.74	0.53
31:AU:8:LEU:HD11	31:AU:123:ALA:HB2	1.91	0.53
15:AE:31:THR:HB	15:AE:34:GLY:H	1.73	0.53
20:BJ:67:LYS:HA	24:BN:43:ARG:NE	2.24	0.53
11:DA:1558:A:OP1	19:DI:137:ARG:HB2	2.09	0.53
14:AD:64:PRO:HA	14:AD:69:ARG:NH1	2.24	0.53
22:AL:127:LYS:HE2	22:AL:141:LYS:HE3	1.91	0.53
13:DC:45:THR:HG22	13:DC:47:THR:H	1.74	0.53
15:DE:174:PRO:O	15:DE:177:THR:OG1	2.23	0.53
11:CA:1042:G:H5'	11:CA:1043:U:OP2	2.09	0.53
11:AA:878:A:O2'	11:AA:894:U:H1'	2.09	0.52
35:BY:162:ARG:NH1	35:BY:176:CYS:SG	2.82	0.52
11:CA:227:G:OP2	11:CA:227:G:H4'	2.09	0.52
11:AA:771:A:H5''	11:AA:772:A:O5'	2.08	0.52
4:B3:101:GLU:HB2	4:B3:113:ARG:HG3	1.91	0.52
11:CA:1171:G:C5'	24:CN:39:ARG:HH12	2.22	0.52
1:B0:22:LYS:HE3	10:B9:74:LYS:HD3	1.91	0.52
11:AA:1270:U:O2'	15:AE:210:ASN:ND2	2.42	0.52
11:BA:622:G:H5'	25:BO:122:SER:OG	2.09	0.52
11:DA:573:A:C6	13:DC:147:GLN:OE1	2.62	0.52
7:C6:65:THR:HB	7:C6:68:LYS:HG3	1.91	0.52
33:DW:88:LEU:HG	33:DW:89:MET:HG2	1.90	0.52
7:C6:5:LEU:H	18:CH:24:GLN:HE22	1.56	0.52
11:AA:533:G:N2	39:AA:2091:HOH:O	2.41	0.52
11:DA:1278:C:H4'	11:DA:1279:U:OP1	2.09	0.52
15:CE:145:TRP:H	15:CE:153:HIS:CE1	2.27	0.52
5:D4:37:PRO:HG3	5:D4:101:THR:O	2.10	0.52
11:CA:1555:A:C5'	19:CI:137:ARG:HH12	2.22	0.52
3:C2:40:THR:HG21	3:C2:86:ILE:O	2.09	0.52
28:CR:33:GLN:HE21	28:CR:88:ASN:HD22	1.57	0.52
31:DU:75:LYS:O	31:DU:78:SER:OG	2.26	0.52
11:BA:1653:C:H5'	35:BY:65:GLN:NE2	2.24	0.52
7:A6:63:LYS:HD3	7:A6:72:GLN:NE2	2.24	0.52
22:DL:73:VAL:HB	22:DL:82:ILE:HG22	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B5:30:VAL:HG21	6:B5:76:CYS:HA	1.91	0.52
11:BA:45:A:N1	11:BA:424:A:O2'	2.36	0.52
17:DG:117:ARG:O	17:DG:136:VAL:N	2.38	0.52
11:CA:477:G:H2'	11:CA:478:G:O4'	2.08	0.52
27:DQ:88:ASP:HB3	27:DQ:154:PHE:CE2	2.43	0.52
11:CA:1204:U:H2'	11:CA:1205:G:O4'	2.09	0.52
15:BE:141:ARG:HB3	15:BE:222:THR:CG2	2.38	0.52
11:CA:1007:U:O2'	11:CA:1009:U:H5	1.92	0.52
11:CA:1452:G:H1'	30:CT:71:LYS:HE2	1.92	0.52
11:BA:163:A:H5'	11:BA:164:U:OP1	2.09	0.52
11:BA:1246:C:O2'	11:BA:1247:A:OP1	2.24	0.52
11:BA:234:G:O2'	11:BA:235:A:O4'	2.27	0.52
11:DA:1199:G:O6	11:DA:1228:A:H2'	2.10	0.52
3:D2:27:PHE:CE1	11:DA:292:G:H4'	2.45	0.52
1:C0:97:ASP:O	1:C0:101:ASN:ND2	2.42	0.52
17:BG:67:LEU:HD12	17:BG:150:ILE:HD11	1.91	0.52
11:BA:1469:U:C5'	30:BT:75:GLY:HA3	2.38	0.52
5:D4:50:VAL:HG21	5:D4:63:ILE:HG12	1.92	0.52
11:AA:839:U:O2'	18:AH:56:HIS:O	2.28	0.52
15:AE:145:TRP:H	15:AE:153:HIS:CE1	2.28	0.52
15:BE:81:VAL:HG21	15:BE:126:ILE:HD13	1.90	0.52
8:B7:35:THR:HB	8:B7:37:VAL:HG23	1.91	0.52
11:BA:1653:C:H4'	35:BY:65:GLN:OE1	2.09	0.52
18:AH:55:ASP:OD1	18:AH:59:LYS:HA	2.09	0.52
11:DA:1469:U:OP1	30:DT:78:THR:OG1	2.12	0.52
17:AG:117:ARG:O	17:AG:136:VAL:N	2.37	0.52
11:BA:1535:A:C2'	11:BA:1536:U:H5'	2.39	0.52
25:DO:148:ALA:HA	25:DO:151:LEU:HD12	1.90	0.52
11:AA:553:A:N6	13:AC:115:ASP:OD2	2.42	0.52
11:BA:958:G:H4'	11:BA:1729:A:H4'	1.91	0.52
11:BA:104:A:H2'	11:BA:105:G:C8	2.44	0.52
28:AR:77:HIS:H	28:AR:97:ASP:HB3	1.74	0.52
1:B0:97:ASP:O	1:B0:101:ASN:ND2	2.43	0.52
35:DY:98:ARG:HD2	35:DY:99:GLY:H	1.73	0.52
28:DR:190:VAL:HG13	28:DR:216:VAL:HB	1.91	0.52
12:BB:29:MET:CE	12:BB:144:CYS:HB3	2.39	0.52
15:DE:141:ARG:HB3	15:DE:222:THR:HG22	1.92	0.52
11:AA:1164:C:OP2	11:AA:1165:A:O2'	2.15	0.52
23:BM:27:ILE:HG22	23:BM:29:PRO:HD2	1.92	0.52
14:BD:62:LEU:HD11	14:BD:68:ARG:HH11	1.70	0.52
30:CT:135:GLU:CD	11:DA:891:G:H1	2.12	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AR:297:GLU:OE1	28:AR:297:GLU:N	2.38	0.52
20:BJ:41:ARG:HB3	20:BJ:101:ILE:HG23	1.90	0.52
13:AC:136:GLY:HA3	13:AC:159:TYR:O	2.10	0.52
1:B0:22:LYS:HZ3	10:B9:76:LYS:CA	2.23	0.52
28:AR:72:LEU:HB3	28:AR:103:TRP:CZ3	2.44	0.52
21:BK:43:HIS:CD2	21:BK:55:ARG:HG3	2.44	0.52
11:BA:2:A:HO2'	11:BA:3:C:P	2.32	0.52
3:B2:150:ARG:NH2	11:BA:181:G:OP1	2.33	0.52
11:BA:839:U:H3'	11:BA:840:A:O4'	2.10	0.52
15:DE:185:PRO:HD3	15:DE:211:PHE:CE2	2.44	0.52
26:AP:14:PRO:HG3	33:AW:97:THR:HG23	1.91	0.52
9:B8:99:ASN:HD22	17:BG:90:ASN:ND2	2.07	0.52
11:AA:1439:U:H4'	30:AT:91:ASN:HA	1.92	0.52
31:CU:8:LEU:HD11	31:CU:123:ALA:HB2	1.92	0.52
11:AA:1345:A:O2'	19:AI:3:GLN:OE1	2.27	0.52
11:BA:729:U:H1'	27:BQ:157:PHE:C	2.29	0.52
11:BA:628:G:H4'	18:BH:4:VAL:HG13	1.91	0.52
16:CF:51:TRP:HE3	16:CF:73:LEU:HD21	1.74	0.52
13:CC:165:GLN:N	13:CC:166:PRO:HD2	2.24	0.52
11:BA:484:U:H2'	11:BA:485:U:O3'	2.10	0.52
28:CR:77:HIS:H	28:CR:97:ASP:HB3	1.75	0.52
30:CT:124:ALA:O	30:CT:127:LYS:HE2	2.08	0.52
11:CA:89:A:C6	11:CA:389:G:C6	2.98	0.52
11:BA:1744:U:H6	11:BA:1744:U:H5''	1.74	0.52
11:BA:530:G:N7	14:BD:171:ARG:HD2	2.24	0.52
11:DA:1428:C:OP1	39:DA:8119:HOH:O	2.19	0.52
11:CA:1744:U:H6	11:CA:1744:U:H5''	1.74	0.52
11:CA:1262:U:H2'	11:CA:1263:G:C8	2.44	0.52
11:CA:75:C:H5'	35:CY:176:CYS:HB2	1.92	0.52
11:CA:878:A:OP1	21:CK:57:THR:HB	2.10	0.52
11:DA:1441:C:H4'	11:DA:1512:G:N2	2.25	0.52
4:A3:109:LYS:NZ	11:AA:725:A:O3'	2.42	0.52
11:BA:1514:G:H2'	11:BA:1540:G:N2	2.24	0.52
11:AA:1276:G:H5'	11:AA:1294:A:OP2	2.10	0.52
26:CP:55:VAL:HG13	26:CP:58:PHE:HE1	1.75	0.52
11:DA:738:A:H4'	11:DA:739:A:OP2	2.09	0.52
11:BA:332:A:H2'	11:BA:333:C:H6	1.75	0.52
21:BK:56:VAL:HG11	21:BK:77:ALA:HA	1.90	0.52
5:B4:72:LEU:O	5:B4:79:SER:OG	2.27	0.52
11:AA:1535:A:OP1	30:AT:87:LYS:NZ	2.41	0.52
19:BI:99:VAL:HG12	19:BI:100:ASP:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BP:79:TYR:O	26:BP:83:TYR:HD1	1.92	0.52
22:DL:127:LYS:HE2	22:DL:141:LYS:HE3	1.91	0.52
11:AA:1537:C:OP1	23:AM:41:ARG:NH1	2.42	0.52
20:BJ:55:ARG:HE	20:BJ:87:ARG:NH1	2.07	0.52
11:DA:886:U:H6	11:DA:886:U:H5''	1.75	0.52
25:CO:25:PRO:HG3	25:CO:63:PRO:HG3	1.92	0.52
15:DE:31:THR:HB	15:DE:34:GLY:H	1.73	0.52
5:B4:49:LEU:O	21:BK:51:GLU:HG3	2.09	0.52
11:AA:1228:A:C8	11:AA:1228:A:H5''	2.44	0.52
11:AA:64:U:H3'	35:AY:178:LYS:NZ	2.24	0.52
11:CA:222:U:C2	11:CA:814:A:N6	2.78	0.52
11:CA:1032:U:H3	11:CA:1035:A:N6	1.99	0.52
28:AR:74:GLY:HA3	28:AR:101:ARG:NH1	2.24	0.52
17:CG:68:ILE:HA	17:CG:71:LEU:HD12	1.91	0.52
11:CA:100:A:H4'	11:CA:101:A:O5'	2.10	0.52
8:C7:13:TYR:HE1	8:C7:49:LEU:HD21	1.74	0.52
13:BC:146:LYS:HG2	13:BC:147:GLN:HB2	1.91	0.52
11:DA:100:A:H4'	11:DA:101:A:O5'	2.10	0.52
11:BA:473:A:H2'	11:BA:474:G:C8	2.44	0.52
29:CS:38:LEU:HG	29:CS:42:PHE:HE2	1.74	0.52
28:AR:161:HIS:HB3	28:AR:197:LYS:HE2	1.91	0.52
25:CO:101:ARG:HH11	25:CO:101:ARG:HG3	1.74	0.52
26:DP:55:VAL:HG13	26:DP:58:PHE:HE1	1.75	0.52
35:BY:7:TYR:HB2	35:BY:113:ILE:HB	1.91	0.52
22:CL:127:LYS:HE2	22:CL:141:LYS:HE3	1.91	0.52
21:AK:142:ARG:HG3	21:AK:143:GLU:N	2.25	0.52
27:CQ:126:GLN:HG2	27:CQ:127:CYS:H	1.74	0.52
12:AB:35:HIS:NE2	32:AV:104:GLU:OE1	2.42	0.52
22:BL:127:LYS:HE2	22:BL:141:LYS:HE3	1.91	0.52
11:DA:762:U:H5	26:DP:6:ARG:CZ	2.23	0.52
10:B9:109:VAL:HG11	31:BU:62:LEU:HD21	1.91	0.52
2:C1:54:VAL:HB	17:CG:28:CYS:HA	1.92	0.52
10:D9:88:HIS:NE2	11:DA:1220:C:OP2	2.42	0.52
10:A9:94:LYS:HB2	11:AA:1201:G:P	2.49	0.52
11:DA:947:C:H5'	11:DA:1076:U:H1'	1.90	0.52
11:CA:1199:G:O6	11:CA:1228:A:H2'	2.09	0.52
15:DE:170:LEU:HD22	15:DE:197:ILE:HD13	1.91	0.52
11:AA:1452:G:O4'	11:AA:1452:G:OP2	2.28	0.52
11:DA:1201:G:C6	11:DA:1227:G:C6	2.98	0.52
3:A2:27:PHE:CE1	11:AA:292:G:H4'	2.44	0.52
11:DA:1647:U:H2'	11:DA:1648:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DM:96:LYS:HB2	23:DM:98:TYR:CZ	2.45	0.52
11:CA:1188:A:O2'	11:CA:1189:A:H3'	2.09	0.52
11:AA:634:C:H5'	11:AA:634:C:H6	1.74	0.52
5:B4:159:THR:HG23	5:B4:161:TYR:HD2	1.75	0.52
7:B6:68:LYS:HB3	11:BA:1027:U:OP1	2.09	0.52
5:D4:119:LYS:HG3	11:DA:909:C:H5'	1.91	0.52
11:AA:1514:G:C5'	30:AT:90:GLY:HA2	2.39	0.52
2:D1:21:ARG:NH2	17:DG:122:ARG:NH1	2.57	0.52
20:DJ:55:ARG:HE	20:DJ:87:ARG:NH1	2.07	0.52
32:BV:24:LEU:HD13	32:BV:58:MET:HE1	1.91	0.52
21:CK:139:SER:OG	21:CK:140:THR:O	2.19	0.52
11:AA:464:G:H5"	14:AD:11:THR:HG23	1.91	0.52
28:BR:190:VAL:HG13	28:BR:216:VAL:HB	1.91	0.52
13:BC:165:GLN:N	13:BC:166:PRO:HD2	2.25	0.52
11:BA:573:A:N6	13:BC:182:GLN:HG3	2.24	0.52
26:BP:51:ARG:NH1	26:BP:146:PHE:HE1	2.08	0.52
18:DH:55:ASP:OD1	18:DH:59:LYS:HA	2.09	0.52
13:BC:44:ARG:HG3	13:BC:49:THR:HG22	1.92	0.52
4:B3:24:VAL:O	4:B3:27:GLN:HG2	2.10	0.52
26:CP:51:ARG:NH1	26:CP:146:PHE:HE1	2.08	0.52
5:A4:140:VAL:HG12	5:A4:221:VAL:HG22	1.91	0.52
15:DE:141:ARG:HB2	15:DE:223:TYR:CD1	2.45	0.52
11:DA:878:A:O2'	11:DA:894:U:H1'	2.10	0.52
11:CA:679:U:H2'	11:CA:680:U:H6	1.74	0.52
11:BA:1721:G:H3'	11:BA:1721:G:C8	2.45	0.52
28:BR:92:ILE:HG21	28:BR:126:PHE:CE1	2.45	0.52
28:DR:92:ILE:HG21	28:DR:126:PHE:CE1	2.44	0.52
23:AM:96:LYS:HB2	23:AM:98:TYR:CZ	2.44	0.52
11:DA:242:U:C2	11:DA:244:A:OP2	2.63	0.52
11:DA:1372:A:OP1	32:DV:60:ARG:NH1	2.43	0.52
1:A0:43:ASN:O	1:A0:43:ASN:ND2	2.31	0.52
11:AA:839:U:H3'	11:AA:840:A:O4'	2.09	0.52
21:CK:91:ASN:OD1	21:CK:91:ASN:N	2.43	0.52
29:DS:38:LEU:HG	29:DS:42:PHE:HE2	1.75	0.52
29:AS:38:LEU:HG	29:AS:42:PHE:HE2	1.75	0.52
1:C0:19:ASN:HB2	10:C9:74:LYS:HZ1	1.75	0.52
11:BA:28:U:H2'	11:BA:29:G:C8	2.45	0.52
5:B4:75:LEU:O	5:B4:79:SER:HB2	2.10	0.52
11:AA:1535:A:C2'	11:AA:1536:U:H5'	2.40	0.52
36:BZ:32:CYS:HA	36:BZ:68:VAL:HG12	1.92	0.52
5:B4:170:ILE:HD13	5:B4:213:LEU:HD11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:DB:29:MET:CE	12:DB:144:CYS:HB3	2.38	0.52
11:CA:282:A:H2'	11:CA:283:A:H8	1.75	0.52
3:A2:40:THR:HG21	3:A2:86:ILE:O	2.10	0.52
11:BA:534:A:N3	11:BA:534:A:H3'	2.24	0.52
31:BU:8:LEU:HD11	31:BU:123:ALA:HB2	1.92	0.52
14:AD:77:LEU:HD13	14:AD:91:ARG:O	2.09	0.52
31:DU:8:LEU:HD11	31:DU:123:ALA:HB2	1.92	0.52
12:CB:134:SER:HB2	12:CB:152:TYR:CD2	2.44	0.52
36:BZ:41:SER:OG	36:BZ:42:ASN:N	2.41	0.52
11:CA:1507:U:C6	17:CG:161:MET:HG2	2.45	0.52
11:DA:1450:G:P	30:DT:60:ARG:NH1	2.83	0.52
14:BD:71:PHE:CE1	33:BW:254:ARG:HD3	2.44	0.52
22:DL:7:ARG:HH11	22:DL:7:ARG:CG	2.21	0.52
11:AA:1744:U:H6	11:AA:1744:U:H5''	1.75	0.52
11:DA:1480:U:O2'	11:DA:1481:A:H8	1.93	0.52
11:BA:1647:U:H2'	11:BA:1648:C:C6	2.45	0.52
11:DA:1535:A:C2'	11:DA:1536:U:H5'	2.40	0.52
13:DC:146:LYS:CB	13:DC:151:LYS:HZ2	2.23	0.52
11:DA:665:A:H2'	11:DA:666:A:C8	2.44	0.52
11:CA:661:G:H3'	11:CA:662:U:C6	2.45	0.52
4:C3:115:ARG:HG2	4:C3:121:TYR:CE2	2.44	0.52
33:DW:129:THR:HB	33:DW:142:VAL:HG12	1.91	0.52
13:DC:101:ALA:O	13:DC:105:VAL:HG23	2.10	0.52
11:DA:912:A:HO2'	11:DA:913:U:P	2.32	0.52
25:CO:101:ARG:HG3	25:CO:101:ARG:NH1	2.24	0.52
11:BA:332:A:H2'	11:BA:333:C:C6	2.45	0.52
11:CA:28:U:H2'	11:CA:29:G:C8	2.45	0.52
11:CA:1555:A:H5'	19:CI:137:ARG:NH1	2.24	0.52
32:CV:65:PRO:HA	32:CV:78:ARG:HH12	1.75	0.52
11:AA:40:A:H3'	11:AA:430:A:H62	1.74	0.52
10:D9:121:PRO:HB2	31:DU:38:ALA:HA	1.92	0.52
5:C4:109:THR:HG22	21:CK:130:GLU:HG3	1.92	0.52
18:BH:55:ASP:OD1	18:BH:59:LYS:HA	2.09	0.52
5:C4:67:VAL:HG21	11:CA:898:U:H4'	1.91	0.52
35:BY:76:LEU:HB2	35:BY:94:ARG:NH1	2.25	0.52
5:B4:95:ASP:O	5:B4:98:ASN:ND2	2.40	0.52
13:AC:44:ARG:HG3	13:AC:49:THR:HG22	1.92	0.52
30:BT:4:ASN:HB2	30:BT:152:ARG:NH1	2.25	0.52
11:CA:144:C:O4'	35:CY:132:LYS:NZ	2.42	0.52
14:AD:105:MET:HE2	14:AD:108:ARG:HD2	1.92	0.52
11:DA:464:G:H5''	14:DD:11:THR:HG23	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:DB:50:TRP:O	12:DB:54:LYS:HG3	2.10	0.52
36:AZ:32:CYS:HA	36:AZ:68:VAL:HG12	1.92	0.52
12:BB:134:SER:HB2	12:BB:152:TYR:CD2	2.45	0.52
3:A2:24:LYS:O	11:AA:391:A:H8	1.92	0.52
11:DA:1508:G:HO2'	11:DA:1509:U:P	2.28	0.52
11:BA:81:A:OP2	39:BA:6140:HOH:O	2.19	0.52
11:CA:1480:U:O2'	11:CA:1481:A:H8	1.93	0.52
17:CG:67:LEU:HD12	17:CG:150:ILE:HD11	1.92	0.52
11:BA:878:A:O2'	11:BA:894:U:H1'	2.10	0.52
23:BM:96:LYS:HB2	23:BM:98:TYR:CZ	2.45	0.52
11:AA:622:G:H5'	25:AO:122:SER:OG	2.10	0.52
10:C9:133:TYR:HA	10:C9:139:LEU:O	2.10	0.52
11:BA:1278:C:H4'	11:BA:1279:U:OP1	2.09	0.52
20:AJ:22:THR:HG22	20:AJ:88:ILE:HG12	1.92	0.52
4:A3:144:ARG:O	18:AH:42:GLN:NE2	2.43	0.52
5:A4:75:LEU:O	5:A4:79:SER:HB2	2.10	0.52
11:BA:477:G:H2'	11:BA:478:G:O4'	2.09	0.52
27:AQ:56:LYS:O	27:AQ:63:LEU:HD22	2.09	0.52
14:DD:71:PHE:CE1	33:DW:254:ARG:HD3	2.45	0.52
11:AA:282:A:H2'	11:AA:283:A:H8	1.75	0.52
19:AI:99:VAL:HG12	19:AI:100:ASP:H	1.73	0.52
11:AA:1746:G:H4'	11:AA:1747:A:OP2	2.10	0.52
1:B0:24:GLU:HA	10:B9:77:LYS:NZ	2.25	0.52
3:D2:40:THR:HG21	3:D2:86:ILE:O	2.10	0.52
11:BA:1475:G:H2'	11:BA:1476:A:C8	2.45	0.52
15:CE:144:TYR:CD2	15:CE:148:LYS:HB3	2.45	0.52
11:CA:1500:C:H5''	17:CG:86:LYS:HE3	1.91	0.52
11:DA:1118:U:O2'	15:DE:90:GLN:O	2.17	0.52
28:AR:155:SER:OG	28:AR:160:ASN:ND2	2.42	0.52
11:CA:104:A:H2'	11:CA:105:G:C8	2.44	0.52
25:AO:25:PRO:HG3	25:AO:63:PRO:HG3	1.91	0.52
1:C0:58:GLY:HA2	1:C0:88:CYS:O	2.09	0.52
12:AB:165:GLU:HG3	12:AB:199:TYR:CE2	2.45	0.52
34:BX:7:THR:HG22	34:BX:8:LEU:O	2.10	0.52
12:AB:134:SER:HB2	12:AB:152:TYR:CD2	2.45	0.52
36:BZ:46:SER:HA	36:BZ:74:ARG:HH22	1.74	0.52
31:AU:61:ALA:O	31:AU:65:LYS:HB2	2.09	0.52
11:DA:1427:C:H2'	39:DA:8116:HOH:O	2.09	0.52
11:DA:1452:G:H5''	11:DA:1452:G:H8	1.75	0.52
3:D2:25:ARG:NH2	11:DA:377:G:OP2	2.42	0.52
11:DA:1721:G:H3'	11:DA:1721:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:DB:56:ALA:O	12:DB:60:ILE:HG13	2.10	0.52
4:C3:101:GLU:HB2	4:C3:113:ARG:HG3	1.92	0.52
33:AW:129:THR:HB	33:AW:142:VAL:HG12	1.91	0.52
9:A8:99:ASN:HD22	17:AG:90:ASN:ND2	2.07	0.52
13:DC:136:GLY:HA3	13:DC:159:TYR:O	2.10	0.52
29:BS:38:LEU:HG	29:BS:42:PHE:HE2	1.75	0.52
11:AA:1223:U:O2'	11:AA:1224:C:O5'	2.27	0.52
11:BA:1372:A:OP1	32:BV:60:ARG:NH1	2.43	0.52
1:A0:61:CYS:HB3	1:A0:64:LEU:H	1.74	0.52
32:BV:58:MET:O	32:BV:62:GLN:HG2	2.09	0.52
15:AE:35:ARG:NH1	15:AE:248:LEU:O	2.41	0.52
12:DB:121:THR:O	12:DB:143:LEU:HB2	2.10	0.52
35:DY:71:GLY:H	35:DY:98:ARG:CZ	2.23	0.52
5:A4:106:LEU:HB2	5:A4:221:VAL:HB	1.92	0.52
11:BA:1526:G:H5'	11:BA:1527:A:OP2	2.09	0.52
33:BW:124:LYS:HB2	33:BW:166:LEU:HD11	1.92	0.52
30:DT:89:ARG:NH1	30:DT:92:LEU:HB3	2.24	0.52
33:DW:206:SER:HB2	33:DW:207:PHE:CD2	2.45	0.52
9:B8:51:GLU:HA	9:B8:54:ILE:HB	1.92	0.52
11:DA:537:A:OP2	11:DA:538:A:OP2	2.28	0.52
11:CA:1345:A:O2'	19:CI:3:GLN:OE1	2.27	0.52
35:BY:98:ARG:HD2	35:BY:99:GLY:H	1.73	0.52
18:CH:80:ASP:HA	18:CH:123:GLY:O	2.10	0.52
28:AR:334:ARG:HB3	28:AR:336:PHE:CE2	2.45	0.52
30:CT:4:ASN:HB2	30:CT:152:ARG:NH1	2.24	0.52
13:DC:44:ARG:HG3	13:DC:49:THR:HG22	1.92	0.52
31:CU:61:ALA:O	31:CU:65:LYS:HB2	2.09	0.52
34:BX:53:ASP:N	34:BX:53:ASP:OD1	2.38	0.52
11:CA:1311:C:H4'	11:CA:1312:U:OP2	2.10	0.51
11:DA:984:C:H5''	11:DA:985:C:OP2	2.09	0.51
11:BA:633:U:H6	11:BA:633:U:C5'	2.23	0.51
11:AA:1143:A:H2'	11:AA:1144:A:H8	1.75	0.51
31:DU:61:ALA:O	31:DU:65:LYS:HB2	2.09	0.51
11:CA:839:U:H3'	11:CA:840:A:O4'	2.09	0.51
29:DS:46:THR:HG23	29:DS:89:ILE:HD13	1.91	0.51
15:AE:185:PRO:HD3	15:AE:211:PHE:CE2	2.44	0.51
8:A7:35:THR:HB	8:A7:37:VAL:HG23	1.91	0.51
23:AM:119:ILE:HD11	29:AS:115:ASP:HB3	1.93	0.51
15:CE:158:LYS:HG3	18:CH:95:PRO:O	2.11	0.51
25:BO:95:LYS:HB2	25:BO:153:GLN:HE21	1.76	0.51
5:B4:106:LEU:HB2	5:B4:221:VAL:HB	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BO:25:PRO:HG3	25:BO:63:PRO:HG3	1.92	0.51
11:BA:1442:A:H62	11:BA:1510:U:H3	1.58	0.51
35:BY:32:MET:HE1	35:BY:63:MET:HB2	1.92	0.51
35:DY:189:LEU:O	35:DY:193:VAL:HG23	2.09	0.51
11:CA:958:G:H4'	11:CA:1729:A:H4'	1.92	0.51
23:DM:28:THR:HG23	23:DM:58:ALA:HA	1.91	0.51
35:DY:7:TYR:HB2	35:DY:113:ILE:HB	1.91	0.51
8:B7:75:TYR:CZ	8:B7:79:LYS:HE3	2.44	0.51
11:AA:1033:A:H4'	11:AA:1034:A:OP2	2.09	0.51
8:C7:65:TYR:HB3	13:CC:75:PHE:CE1	2.44	0.51
11:DA:641:G:N2	11:DA:668:U:O2	2.43	0.51
15:AE:180:VAL:O	15:AE:199:THR:HB	2.09	0.51
11:DA:1286:U:O2'	11:DA:1287:U:OP2	2.18	0.51
11:BA:1537:C:OP1	23:BM:41:ARG:NH1	2.42	0.51
15:DE:219:LEU:O	15:DE:222:THR:OG1	2.25	0.51
11:DA:1032:U:H3	11:DA:1035:A:N6	1.99	0.51
11:CA:1647:U:H2'	11:CA:1648:C:H6	1.74	0.51
11:BA:614:A:H2'	11:BA:615:A:C8	2.45	0.51
28:CR:92:ILE:HG21	28:CR:126:PHE:CE1	2.45	0.51
11:AA:1278:C:H4'	11:AA:1279:U:OP1	2.10	0.51
22:BL:7:ARG:CG	22:BL:7:ARG:HH11	2.20	0.51
17:AG:67:LEU:HD12	17:AG:150:ILE:HD11	1.91	0.51
11:CA:1663:A:H3'	11:CA:1664:A:C8	2.46	0.51
11:CA:976:A:N6	11:CA:982:U:OP2	2.44	0.51
11:AA:1454:A:H4'	19:AI:73:GLY:O	2.10	0.51
11:CA:840:A:H8	25:CO:66:ARG:HH22	1.57	0.51
29:DS:39:ALA:O	29:DS:47:ARG:HG2	2.10	0.51
11:BA:1293:A:H4'	11:BA:1294:A:O5'	2.11	0.51
11:AA:1500:C:H5''	17:AG:86:LYS:HE3	1.91	0.51
26:BP:77:GLN:HE22	26:BP:142:HIS:HE1	1.58	0.51
35:CY:71:GLY:H	35:CY:98:ARG:CZ	2.23	0.51
28:CR:190:VAL:HB	28:CR:219:LEU:HD13	1.93	0.51
30:CT:18:PHE:HZ	30:CT:140:LEU:HD22	1.74	0.51
26:AP:76:ASN:OD1	26:AP:77:GLN:N	2.43	0.51
12:BB:12:ARG:CZ	32:BV:93:ILE:HD11	2.40	0.51
7:C6:38:CYS:HB3	7:C6:57:CYS:HB3	1.92	0.51
11:DA:1442:A:H62	11:DA:1510:U:H3	1.57	0.51
36:AZ:73:VAL:HG13	36:AZ:78:GLU:HB2	1.92	0.51
11:CA:1442:A:H62	11:CA:1510:U:H3	1.56	0.51
11:CA:533:G:N2	39:CA:2088:HOH:O	2.42	0.51
11:AA:104:A:H2'	11:AA:105:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C4:128:VAL:HG22	5:C4:175:ASN:ND2	2.25	0.51
12:BB:64:GLN:NE2	15:BE:246:GLU:HG2	2.24	0.51
2:C1:12:MET:SD	2:C1:30:VAL:HG23	2.50	0.51
6:C5:30:VAL:HG21	6:C5:76:CYS:HA	1.92	0.51
11:AA:882:G:H2'	11:AA:883:A:O4'	2.10	0.51
13:AC:42:VAL:HG22	13:AC:51:ILE:HG12	1.92	0.51
16:DF:51:TRP:HE3	16:DF:73:LEU:HD21	1.74	0.51
11:DA:1569:A:C5	24:DN:13:TYR:HE2	2.29	0.51
11:DA:282:A:H2'	11:DA:283:A:H8	1.76	0.51
5:D4:95:ASP:O	5:D4:98:ASN:ND2	2.40	0.51
4:C3:50:ILE:O	4:C3:50:ILE:HG13	2.09	0.51
15:AE:184:ILE:HD12	15:AE:184:ILE:H	1.74	0.51
33:AW:51:ARG:HD3	33:AW:51:ARG:N	2.26	0.51
15:CE:31:THR:HB	15:CE:34:GLY:H	1.74	0.51
13:DC:42:VAL:HG22	13:DC:51:ILE:HG12	1.92	0.51
11:CA:318:U:H2'	11:CA:319:A:C8	2.45	0.51
10:A9:129:TYR:HB2	10:A9:152:LEU:HB2	1.90	0.51
11:AA:1399:G:N2	20:AJ:72:GLU:HG2	2.23	0.51
11:AA:3:C:N4	14:AD:16:ARG:HB2	2.24	0.51
11:DA:531:A:N3	39:DA:7637:HOH:O	2.35	0.51
11:DA:559:C:H5''	11:DA:571:G:H1'	1.93	0.51
19:CI:12:PHE:HD1	19:CI:12:PHE:H	1.57	0.51
11:CA:1647:U:H2'	11:CA:1648:C:C6	2.45	0.51
20:BJ:41:ARG:NH2	20:BJ:103:ASN:HB3	2.24	0.51
11:CA:69:A:H3'	35:CY:173:ARG:HH22	1.75	0.51
11:CA:614:A:H2'	11:CA:615:A:C8	2.46	0.51
23:AM:90:ASN:ND2	29:AS:14:ARG:HD2	2.26	0.51
11:AA:316:G:OP1	27:AQ:133:THR:OG1	2.28	0.51
11:BA:1168:A:HO2'	11:BA:1169:C:P	2.31	0.51
11:CA:1293:A:H4'	11:CA:1294:A:O5'	2.11	0.51
13:BC:136:GLY:HA3	13:BC:159:TYR:O	2.10	0.51
5:A4:50:VAL:HG21	5:A4:63:ILE:HG12	1.92	0.51
11:AA:1045:G:C2'	11:AA:1046:G:H5''	2.40	0.51
21:BK:91:ASN:OD1	21:BK:91:ASN:N	2.44	0.51
11:DA:61:A:H5''	11:DA:62:G:OP2	2.09	0.51
11:AA:1293:A:H4'	11:AA:1294:A:O5'	2.11	0.51
36:DZ:32:CYS:HB2	36:DZ:70:CYS:HB3	1.93	0.51
14:AD:120:ASN:H	14:AD:124:HIS:HD2	1.56	0.51
22:DL:51:LEU:O	22:DL:73:VAL:HA	2.10	0.51
32:CV:65:PRO:CA	32:CV:78:ARG:HH12	2.23	0.51
13:AC:165:GLN:N	13:AC:166:PRO:HD2	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:369:A:OP2	11:AA:370:U:OP2	2.29	0.51
11:AA:1377:A:OP2	17:AG:54:LYS:NZ	2.44	0.51
11:DA:148:C:H5'	35:DY:108:VAL:HG21	1.92	0.51
11:AA:928:C:O2'	25:AO:103:HIS:HD2	1.92	0.51
11:DA:1439:U:H4'	30:DT:91:ASN:HA	1.92	0.51
31:AU:75:LYS:O	31:AU:78:SER:OG	2.26	0.51
11:BA:576:U:H5'	11:BA:576:U:H6	1.75	0.51
36:DZ:73:VAL:HG13	36:DZ:78:GLU:HB2	1.93	0.51
11:CA:1474:G:OP2	11:CA:1474:G:H8	1.94	0.51
31:BU:86:PHE:HB2	31:BU:94:ILE:HG23	1.92	0.51
21:BK:142:ARG:HG3	21:BK:143:GLU:N	2.25	0.51
28:AR:33:GLN:HE21	28:AR:88:ASN:HD22	1.57	0.51
11:DA:1213:G:H1'	29:DS:84:HIS:ND1	2.25	0.51
15:DE:141:ARG:NH1	15:DE:230:PHE:CZ	2.79	0.51
11:AA:1007:U:O2'	11:AA:1009:U:H5	1.93	0.51
15:CE:170:LEU:HD22	15:CE:197:ILE:HD13	1.92	0.51
6:B5:82:HIS:ND1	11:BA:1719:A:N1	2.57	0.51
13:CC:136:GLY:HA3	13:CC:159:TYR:O	2.11	0.51
11:DA:1663:A:H3'	11:DA:1664:A:C8	2.45	0.51
8:C7:9:LYS:HG2	8:C7:13:TYR:HE2	1.76	0.51
11:AA:1469:U:H5'	11:AA:1470:C:OP2	2.11	0.51
28:DR:161:HIS:HB3	28:DR:197:LYS:HE2	1.93	0.51
23:AM:27:ILE:HG22	23:AM:29:PRO:HD2	1.92	0.51
4:D3:63:ILE:HD11	4:D3:94:PHE:CZ	2.44	0.51
8:A7:13:TYR:HE1	8:A7:49:LEU:HD21	1.75	0.51
11:CA:883:A:H5'	21:CK:66:ARG:HB3	1.91	0.51
6:D5:10:ARG:HH12	11:DA:1743:A:P	2.34	0.51
28:DR:155:SER:OG	28:DR:160:ASN:ND2	2.43	0.51
30:AT:4:ASN:HB2	30:AT:152:ARG:NH1	2.25	0.51
26:DP:51:ARG:NH1	26:DP:146:PHE:HE1	2.08	0.51
5:D4:75:LEU:O	5:D4:79:SER:HB2	2.11	0.51
14:BD:64:PRO:HA	14:BD:69:ARG:NH1	2.25	0.51
11:BA:425:A:H5''	11:BA:426:G:OP2	2.10	0.51
28:DR:33:GLN:HE21	28:DR:88:ASN:HD22	1.57	0.51
11:CA:1535:A:OP1	30:CT:87:LYS:NZ	2.41	0.51
36:AZ:46:SER:HA	36:AZ:74:ARG:HH22	1.75	0.51
11:CA:1246:C:OP2	11:CA:1399:G:OP2	2.28	0.51
4:C3:68:GLN:NE2	11:CA:835:U:OP2	2.44	0.51
15:DE:49:PHE:CD1	15:DE:139:PRO:HD3	2.46	0.51
11:CA:227:G:N2	11:CA:229:A:H8	2.09	0.51
11:BA:1164:C:OP2	11:BA:1165:A:O2'	2.17	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1166:A:P	20:BJ:73:GLY:HA3	2.50	0.51
11:DA:1171:G:H5''	24:DN:39:ARG:HH12	1.76	0.51
20:DJ:41:ARG:NH2	20:DJ:103:ASN:HB3	2.26	0.51
28:AR:92:ILE:HG21	28:AR:126:PHE:CE1	2.45	0.51
11:CA:1514:G:H2'	11:CA:1540:G:N2	2.25	0.51
4:A3:63:ILE:HD11	4:A3:94:PHE:CZ	2.45	0.51
27:BQ:70:ILE:HG23	27:BQ:87:ARG:HD2	1.93	0.51
11:AA:1319:U:OP2	20:AJ:20:ARG:NH2	2.33	0.51
12:AB:121:THR:O	12:AB:143:LEU:HB2	2.11	0.51
34:BX:53:ASP:HB2	34:BX:56:LYS:HB2	1.91	0.51
18:CH:41:MET:HB2	18:CH:47:ILE:HD13	1.93	0.51
4:A3:162:PHE:HD1	4:A3:163:LEU:HD23	1.75	0.51
5:A4:170:ILE:HD13	5:A4:213:LEU:HD11	1.91	0.51
12:BB:50:TRP:O	12:BB:54:LYS:HG3	2.10	0.51
26:DP:53:VAL:HG22	26:DP:73:VAL:HG22	1.93	0.51
27:DQ:126:GLN:HG2	27:DQ:127:CYS:H	1.75	0.51
11:AA:1246:C:O2'	11:AA:1247:A:OP1	2.27	0.51
11:AA:1252:C:H2'	11:AA:1253:G:H8	1.75	0.51
28:CR:178:ASN:HB2	23:DM:110:ARG:NH1	2.26	0.51
11:BA:1311:C:H4'	11:BA:1312:U:OP2	2.11	0.51
11:BA:230:A:N6	11:BA:231:U:C2	2.78	0.51
11:DA:1228:A:H5''	11:DA:1228:A:C8	2.45	0.51
3:B2:22:ARG:HB3	11:BA:376:A:H5''	1.92	0.51
11:AA:378:A:OP2	11:AA:378:A:C8	2.55	0.51
11:BA:633:U:C4'	11:BA:634:C:H5''	2.41	0.51
11:BA:512:C:H4'	11:BA:512:C:OP1	2.11	0.51
3:C2:56:VAL:HG13	11:CA:324:A:H5'	1.93	0.51
11:BA:100:A:H4'	11:BA:101:A:O5'	2.11	0.51
31:BU:116:GLU:O	31:BU:120:ILE:HG13	2.11	0.51
28:DR:77:HIS:H	28:DR:97:ASP:HB3	1.74	0.51
11:BA:840:A:HO2'	11:BA:841:A:P	2.32	0.51
11:AA:1514:G:H2'	11:AA:1540:G:N2	2.26	0.51
27:DQ:70:ILE:HG23	27:DQ:87:ARG:HD2	1.92	0.51
34:AX:53:ASP:HB2	34:AX:56:LYS:HB2	1.92	0.51
10:B9:157:LYS:NZ	22:CL:137:GLY:O	2.36	0.51
12:CB:165:GLU:HG3	12:CB:199:TYR:CE2	2.45	0.51
32:CV:89:SER:C	32:CV:91:ILE:H	2.13	0.51
1:D0:97:ASP:O	1:D0:101:ASN:ND2	2.43	0.51
11:BA:785:G:N3	18:BH:107:THR:HG21	2.26	0.51
11:DA:530:G:N7	14:DD:171:ARG:HD2	2.26	0.51
12:DB:161:ASN:O	12:DB:167:ILE:HD11	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:666:A:H5"	18:BH:43:LYS:NZ	2.25	0.51
1:B0:58:GLY:HA2	1:B0:88:CYS:O	2.10	0.51
11:CA:640:A:H2'	11:CA:641:G:C8	2.46	0.51
1:A0:58:GLY:HA2	1:A0:88:CYS:O	2.11	0.51
11:AA:1421:G:O2'	24:AN:6:TRP:HA	2.10	0.51
33:CW:51:ARG:N	33:CW:51:ARG:HD3	2.26	0.51
13:CC:85:ASP:OD1	13:CC:85:ASP:N	2.44	0.51
33:DW:51:ARG:N	33:DW:51:ARG:HD3	2.25	0.51
31:AU:86:PHE:HB2	31:AU:94:ILE:HG23	1.93	0.51
11:DA:213:U:H4'	11:DA:214:U:H5'	1.92	0.51
15:AE:141:ARG:HB3	15:AE:222:THR:CG2	2.41	0.51
11:AA:90:U:O2'	33:AW:8:HIS:HD2	1.93	0.51
11:DA:1311:C:H4'	11:DA:1312:U:OP2	2.10	0.51
11:BA:376:A:H2'	11:BA:377:G:C8	2.45	0.51
28:AR:114:PHE:CE2	28:AR:149:GLY:HA2	2.46	0.51
20:AJ:41:ARG:NH2	20:AJ:103:ASN:HB3	2.25	0.51
11:BA:878:A:OP1	21:BK:57:THR:HB	2.10	0.51
39:CA:2377:HOH:O	26:CP:90:ARG:NH2	2.42	0.51
11:AA:469:A:H2'	11:AA:470:G:C8	2.41	0.51
3:D2:10:LYS:CD	11:DA:329:A:H5"	2.39	0.51
11:CA:1469:U:H5'	11:CA:1470:C:OP2	2.11	0.51
11:AA:1176:A:N3	24:AN:9:HIS:NE2	2.47	0.51
11:DA:754:A:H4'	14:DD:9:SER:CB	2.40	0.51
11:CA:507:G:HO2'	11:CA:508:A:P	2.33	0.51
29:BS:39:ALA:O	29:BS:47:ARG:HG2	2.11	0.51
29:CS:39:ALA:O	29:CS:47:ARG:HG2	2.10	0.51
4:D3:115:ARG:HG2	4:D3:121:TYR:CE2	2.45	0.51
22:CL:9:ILE:HA	27:CQ:98:ARG:HB3	1.91	0.51
11:DA:332:A:H2'	11:DA:333:C:C6	2.46	0.51
11:CA:515:U:OP1	26:CP:35:LYS:HD2	2.11	0.51
14:BD:135:LYS:HG3	14:BD:159:ALA:HA	1.93	0.51
15:CE:35:ARG:NH1	15:CE:248:LEU:O	2.40	0.51
15:DE:55:ILE:HG23	15:DE:60:ILE:HD12	1.91	0.51
11:CA:886:U:H5"	11:CA:886:U:H6	1.76	0.51
11:CA:857:G:O2'	25:CO:107:ASN:HB3	2.09	0.51
6:D5:30:VAL:HG21	6:D5:76:CYS:HA	1.92	0.51
31:DU:86:PHE:HB2	31:DU:94:ILE:HG23	1.92	0.51
15:BE:144:TYR:CD2	15:BE:148:LYS:HB3	2.46	0.51
7:C6:53:ILE:HG23	7:C6:58:SER:HA	1.93	0.51
30:DT:4:ASN:HB2	30:DT:152:ARG:NH1	2.25	0.51
11:BA:1472:U:OP2	30:BT:105:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CI:99:VAL:HG12	19:CI:100:ASP:H	1.76	0.51
28:BR:33:GLN:HE21	28:BR:88:ASN:HD22	1.57	0.51
12:DB:32:TYR:OH	36:DZ:80:HIS:HD2	1.93	0.51
13:CC:45:THR:HG22	13:CC:47:THR:H	1.75	0.51
4:B3:50:ILE:O	4:B3:50:ILE:HG13	2.10	0.51
10:D9:128:HIS:HE1	11:DA:1223:U:H1'	1.75	0.51
11:DA:1213:G:C4	29:DS:84:HIS:CD2	2.99	0.51
7:D6:53:ILE:HG23	7:D6:58:SER:HA	1.93	0.51
11:BA:416:C:O2'	11:BA:417:A:P	2.68	0.51
28:DR:23:TRP:O	28:DR:46:SER:HB2	2.11	0.51
15:BE:52:SER:HB3	36:BZ:40:PHE:O	2.10	0.51
11:AA:1153:U:H1'	29:AS:131:THR:HG23	1.92	0.51
11:DA:1313:G:O2'	28:DR:74:GLY:O	2.22	0.51
11:BA:1252:C:H2'	11:BA:1253:G:H8	1.76	0.51
24:DN:39:ARG:HG3	24:DN:40:ARG:N	2.26	0.51
14:CD:49:LEU:O	14:CD:53:ARG:HG3	2.09	0.51
11:DA:376:A:H2'	11:DA:377:G:C8	2.46	0.51
11:BA:1171:G:C5'	24:BN:39:ARG:HH12	2.23	0.51
28:BR:114:PHE:CE2	28:BR:149:GLY:HA2	2.45	0.51
11:AA:1663:A:H3'	11:AA:1664:A:C8	2.46	0.51
11:DA:622:G:N1	11:DA:948:A:OP2	2.40	0.51
11:AA:622:G:N1	11:AA:948:A:OP2	2.42	0.51
11:CA:1504:U:C2'	11:CA:1505:C:H5'	2.40	0.51
31:DU:116:GLU:O	31:DU:120:ILE:HG13	2.11	0.51
11:DA:934:U:OP1	11:DA:1044:C:O2'	2.28	0.51
14:DD:49:LEU:O	14:DD:53:ARG:HG3	2.11	0.51
11:BA:318:U:H2'	11:BA:319:A:C8	2.45	0.51
11:CA:163:A:H5'	11:CA:164:U:OP1	2.11	0.51
5:D4:140:VAL:HG12	5:D4:221:VAL:HG22	1.93	0.51
8:D7:3:HIS:CD2	11:DA:1229:U:C2	2.99	0.51
11:AA:738:A:H4'	11:AA:739:A:OP2	2.11	0.51
11:BA:1359:C:O2'	32:BV:52:GLY:HA3	2.11	0.51
11:CA:149:U:OP1	35:CY:107:ARG:HG2	2.10	0.51
5:A4:132:THR:OG1	5:A4:136:TYR:HB2	2.11	0.51
11:DA:1326:C:H5'	11:DA:1327:U:OP2	2.11	0.51
8:D7:47:ARG:HD3	11:DA:1191:A:O2'	2.10	0.51
25:DO:25:PRO:HG3	25:DO:63:PRO:HG3	1.92	0.51
18:CH:55:ASP:OD1	18:CH:59:LYS:HA	2.11	0.51
11:AA:206:U:H5''	27:AQ:16:PHE:CG	2.46	0.51
35:CY:216:LEU:HB3	35:CY:220:LYS:HE3	1.92	0.51
5:D4:128:VAL:HG13	5:D4:175:ASN:OD1	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:886:U:H5''	11:BA:886:U:H6	1.76	0.51
28:CR:334:ARG:HB3	28:CR:336:PHE:CE2	2.46	0.51
11:CA:1217:G:O2'	11:CA:1218:C:OP2	2.19	0.51
36:CZ:47:VAL:HB	36:CZ:74:ARG:NH1	2.26	0.51
11:AA:1199:G:O6	11:AA:1228:A:H2'	2.10	0.51
11:AA:1166:A:P	20:AJ:73:GLY:HA3	2.50	0.51
11:CA:3:C:HO2'	11:CA:4:C:P	2.30	0.51
11:AA:1011:C:H4'	25:AO:7:LYS:HG2	1.92	0.51
11:DA:894:U:N3	21:DK:55:ARG:NH2	2.58	0.51
11:BA:1663:A:H3'	11:BA:1664:A:C8	2.46	0.51
11:AA:976:A:N6	11:AA:982:U:OP2	2.44	0.51
11:DA:1172:G:H4'	11:DA:1173:G:O5'	2.11	0.51
11:DA:1568:C:P	24:DN:18:LYS:NZ	2.84	0.51
29:CS:46:THR:HG23	29:CS:89:ILE:HD13	1.92	0.51
1:D0:60:ILE:HD11	1:D0:70:ILE:HD11	1.93	0.51
11:DA:1751:U:O2'	11:DA:1753:A:N6	2.44	0.51
11:DA:1469:U:C5'	30:DT:75:GLY:HA3	2.41	0.51
1:B0:97:ASP:HA	1:B0:100:ARG:HG2	1.93	0.51
7:A6:53:ILE:HG23	7:A6:58:SER:HA	1.93	0.51
11:AA:1383:G:O2'	11:AA:1384:U:OP1	2.24	0.51
26:BP:53:VAL:HG22	26:BP:73:VAL:HG22	1.92	0.51
11:BA:282:A:H2'	11:BA:283:A:H8	1.76	0.51
8:A7:75:TYR:CZ	8:A7:79:LYS:HE3	2.46	0.51
11:BA:1500:C:H5''	17:BG:86:LYS:HE3	1.92	0.51
35:BY:216:LEU:HB3	35:BY:220:LYS:HE3	1.92	0.51
4:D3:162:PHE:HD1	4:D3:163:LEU:HD23	1.76	0.51
19:DI:99:VAL:HG12	19:DI:100:ASP:H	1.75	0.51
3:D2:179:ARG:HG3	3:D2:179:ARG:NH1	2.26	0.51
11:BA:1474:G:H8	11:BA:1474:G:OP2	1.93	0.51
11:AA:886:U:H6	11:AA:886:U:H5''	1.75	0.51
35:AY:189:LEU:O	35:AY:193:VAL:HG23	2.11	0.51
20:CJ:32:GLU:OE2	20:CJ:55:ARG:NH2	2.44	0.51
11:CA:494:A:C2	34:CX:48:HIS:HB3	2.45	0.51
12:AB:161:ASN:O	12:AB:167:ILE:HD11	2.11	0.51
16:BF:58:ASN:HB3	16:BF:74:ASN:ND2	2.26	0.51
11:BA:371:U:H5	14:BD:4:THR:O	1.94	0.51
28:CR:155:SER:OG	28:CR:160:ASN:ND2	2.43	0.51
3:D2:24:LYS:NZ	11:DA:1683:A:OP1	2.44	0.51
19:BI:79:GLN:O	19:BI:83:ILE:HG13	2.11	0.51
28:BR:23:TRP:O	28:BR:46:SER:HB2	2.12	0.51
11:BA:947:C:H5'	11:BA:1076:U:H1'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1504:U:C2'	11:AA:1505:C:H5'	2.41	0.51
11:AA:1507:U:C5	17:AG:161:MET:HG2	2.46	0.51
10:A9:86:THR:O	11:AA:1219:U:H5'	2.11	0.51
11:DA:1262:U:H2'	11:DA:1263:G:C8	2.45	0.51
11:DA:560:C:OP2	22:DL:65:SER:HB3	2.10	0.51
28:DR:114:PHE:CE2	28:DR:149:GLY:HA2	2.47	0.51
29:AS:90:VAL:HB	29:AS:117:ILE:HA	1.93	0.51
7:A6:65:THR:HB	7:A6:68:LYS:HG3	1.91	0.51
11:DA:1045:G:C2'	11:DA:1046:G:H5''	2.40	0.51
28:CR:161:HIS:HB3	28:CR:197:LYS:HE2	1.92	0.51
8:D7:35:THR:HB	8:D7:37:VAL:HG23	1.92	0.51
11:AA:332:A:H2'	11:AA:333:C:C6	2.46	0.51
23:BM:119:ILE:HD11	29:BS:115:ASP:HB3	1.94	0.51
36:CZ:32:CYS:HB2	36:CZ:70:CYS:HB3	1.93	0.51
28:AR:190:VAL:HB	28:AR:219:LEU:HD13	1.93	0.51
11:BA:1347:U:O2'	11:BA:1348:U:OP2	2.21	0.51
10:A9:81:THR:HG21	11:AA:1184:G:OP1	2.11	0.51
2:A1:12:MET:SD	2:A1:30:VAL:HG23	2.51	0.51
8:D7:16:LEU:O	8:D7:20:GLY:N	2.37	0.51
17:BG:168:LEU:O	17:BG:172:ILE:HG13	2.10	0.51
17:BG:83:LEU:O	17:BG:87:VAL:HG23	2.11	0.51
29:DS:90:VAL:HB	29:DS:117:ILE:HA	1.93	0.51
27:BQ:56:LYS:O	27:BQ:63:LEU:HD22	2.10	0.51
25:AO:129:ARG:O	25:AO:133:LEU:HG	2.10	0.51
11:CA:1005:A:OP2	39:CA:2192:HOH:O	2.19	0.51
11:BA:498:C:H4'	11:BA:499:A:OP2	2.11	0.51
11:AA:371:U:H5	14:AD:4:THR:O	1.94	0.51
23:CM:40:ARG:NH2	30:CT:48:GLU:OE1	2.41	0.51
11:DA:658:C:H2'	11:DA:659:G:C8	2.46	0.51
4:C3:190:LYS:HD3	7:C6:10:TYR:HD1	1.76	0.51
15:CE:219:LEU:O	15:CE:222:THR:OG1	2.27	0.50
15:BE:141:ARG:HB2	15:BE:223:TYR:CD1	2.45	0.50
11:DA:233:U:H2'	11:DA:234:G:N9	2.26	0.50
11:CA:1452:G:H8	11:CA:1452:G:H5''	1.75	0.50
11:CA:1201:G:C6	11:CA:1227:G:C6	2.99	0.50
11:AA:947:C:H5'	11:AA:1076:U:H1'	1.93	0.50
11:BA:488:G:H2'	11:BA:489:U:H6	1.76	0.50
24:BN:39:ARG:HG3	24:BN:40:ARG:N	2.26	0.50
17:BG:68:ILE:HA	17:BG:71:LEU:HD12	1.92	0.50
13:BC:146:LYS:HB2	13:BC:151:LYS:HZ2	1.76	0.50
11:DA:1514:G:H2'	11:DA:1540:G:N2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CB:23:ILE:HA	12:CB:42:HIS:CD2	2.46	0.50
5:B4:37:PRO:HG3	5:B4:101:THR:O	2.11	0.50
28:DR:111:TYR:CD2	28:DR:112:LYS:HG2	2.46	0.50
11:DA:28:U:H2'	11:DA:29:G:C8	2.46	0.50
4:D3:190:LYS:HD3	7:D6:10:TYR:HD1	1.76	0.50
11:CA:1252:C:H2'	11:CA:1253:G:H8	1.76	0.50
12:AB:147:ASP:OD2	12:AB:162:ARG:NH2	2.44	0.50
4:A3:24:VAL:O	4:A3:27:GLN:HG2	2.10	0.50
36:BZ:73:VAL:HG13	36:BZ:78:GLU:HB2	1.93	0.50
12:AB:116:ARG:HD3	15:AE:242:GLU:OE2	2.10	0.50
11:DA:248:A:H2'	11:DA:249:A:O4'	2.11	0.50
30:BT:38:THR:O	30:BT:56:TRP:HH2	1.95	0.50
4:C3:162:PHE:HD1	4:C3:163:LEU:HD23	1.76	0.50
11:DA:371:U:H5	14:DD:4:THR:O	1.94	0.50
4:A3:190:LYS:HB3	7:A6:10:TYR:CE1	2.45	0.50
28:BR:334:ARG:HB3	28:BR:336:PHE:CE2	2.46	0.50
4:D3:24:VAL:O	4:D3:27:GLN:HG2	2.11	0.50
11:DA:491:U:H2'	11:DA:492:C:O4'	2.11	0.50
11:CA:1236:G:H4'	11:CA:1237:G:OP1	2.12	0.50
11:AA:1253:G:H1'	20:AJ:72:GLU:HG3	1.92	0.50
11:CA:2:A:HO2'	11:CA:3:C:P	2.32	0.50
11:DA:1263:G:N2	11:DA:1296:G:H1	2.05	0.50
11:CA:559:C:H5''	11:CA:571:G:H1'	1.93	0.50
11:AA:1555:A:H5'	19:AI:137:ARG:NH1	2.27	0.50
10:B9:102:LYS:HD3	10:B9:112:GLN:HB2	1.93	0.50
4:C3:145:LEU:HA	18:CH:42:GLN:NE2	2.25	0.50
1:C0:61:CYS:HB3	1:C0:64:LEU:H	1.75	0.50
23:AM:119:ILE:HG23	29:AS:124:PHE:CE2	2.47	0.50
11:DA:163:A:H5'	11:DA:164:U:OP1	2.11	0.50
13:AC:101:ALA:O	13:AC:105:VAL:HG23	2.11	0.50
8:B7:9:LYS:HG2	8:B7:13:TYR:HE2	1.77	0.50
13:BC:101:ALA:O	13:BC:105:VAL:HG23	2.11	0.50
26:DP:77:GLN:HE22	26:DP:142:HIS:HE1	1.59	0.50
11:BA:573:A:O2'	11:BA:574:A:OP1	2.23	0.50
11:CA:1535:A:C2'	11:CA:1536:U:H5'	2.40	0.50
28:AR:20:HIS:HE1	28:AR:50:THR:HG22	1.77	0.50
5:D4:45:PHE:HE2	5:D4:68:VAL:HG11	1.76	0.50
13:CC:42:VAL:HG22	13:CC:51:ILE:HG12	1.92	0.50
15:DE:184:ILE:H	15:DE:184:ILE:HD12	1.75	0.50
11:DA:776:A:H5''	11:DA:777:U:O5'	2.11	0.50
11:CA:1246:C:O2'	11:CA:1247:A:OP1	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1199:G:O6	11:BA:1228:A:H2'	2.10	0.50
8:A7:6:LYS:NZ	31:AU:27:LYS:NZ	2.49	0.50
11:DA:64:U:H3'	35:DY:178:LYS:NZ	2.25	0.50
11:CA:222:U:H3	11:CA:235:A:N6	2.05	0.50
11:CA:1607:A:H5''	11:CA:1608:C:OP1	2.11	0.50
11:DA:11:A:C2'	11:DA:12:U:H5'	2.41	0.50
11:AA:1480:U:O2'	11:AA:1481:A:H8	1.94	0.50
34:AX:34:ARG:HB3	34:AX:34:ARG:NH1	2.27	0.50
11:CA:1153:U:N3	11:CA:1157:U:H5	2.08	0.50
22:CL:77:LYS:HG3	22:CL:78:ASN:N	2.27	0.50
11:BA:1108:U:OP1	11:BA:1621:G:O2'	2.29	0.50
11:CA:1045:G:C2'	11:CA:1046:G:H5''	2.40	0.50
11:AA:100:A:H4'	11:AA:101:A:O5'	2.11	0.50
11:CA:1372:A:OP1	32:CV:60:ARG:NH1	2.44	0.50
8:D7:13:TYR:HE1	8:D7:49:LEU:HD21	1.75	0.50
11:DA:62:G:H4'	11:DA:164:U:C5	2.47	0.50
20:BJ:32:GLU:OE2	20:BJ:55:ARG:NH2	2.44	0.50
12:BB:12:ARG:NH2	32:BV:93:ILE:HD11	2.26	0.50
20:CJ:55:ARG:HE	20:CJ:87:ARG:NH1	2.07	0.50
12:DB:165:GLU:HG3	12:DB:199:TYR:CE2	2.46	0.50
12:AB:181:LEU:HA	36:AZ:58:GLY:O	2.12	0.50
4:C3:111:GLN:NE2	11:CA:800:A:O4'	2.44	0.50
12:CB:44:ILE:HG21	12:CB:158:PRO:HB2	1.93	0.50
30:DT:18:PHE:HZ	30:DT:140:LEU:HD22	1.76	0.50
11:BA:550:G:OP1	34:BX:59:SER:OG	2.11	0.50
15:AE:37:VAL:HG21	15:AE:60:ILE:HG23	1.94	0.50
22:CL:13:ARG:NH2	27:CQ:101:LYS:O	2.44	0.50
11:AA:776:A:H5''	11:AA:777:U:O5'	2.11	0.50
28:BR:77:HIS:H	28:BR:97:ASP:HB3	1.75	0.50
13:AC:137:CYS:SG	13:AC:138:GLU:N	2.84	0.50
20:BJ:78:ASP:OD1	24:BN:53:LYS:HD2	2.11	0.50
33:DW:124:LYS:HB2	33:DW:166:LEU:HD11	1.92	0.50
35:CY:76:LEU:HB2	35:CY:94:ARG:NH1	2.25	0.50
11:BA:1326:C:H5'	11:BA:1327:U:OP2	2.12	0.50
34:DX:34:ARG:NH1	34:DX:34:ARG:HB3	2.26	0.50
3:C2:179:ARG:HG3	3:C2:179:ARG:NH1	2.26	0.50
12:AB:44:ILE:HG21	12:AB:158:PRO:HB2	1.93	0.50
9:D8:60:VAL:HA	9:D8:72:LYS:HG3	1.93	0.50
12:BB:152:TYR:CZ	36:BZ:75:SER:HB2	2.46	0.50
11:DA:235:A:H4'	11:DA:236:U:OP2	2.11	0.50
11:CA:220:A:H3'	11:CA:221:A:C8	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:CX:7:THR:HG22	34:CX:8:LEU:O	2.12	0.50
11:AA:13:C:O2'	11:AA:1270:U:N3	2.32	0.50
10:B9:101:TYR:CE1	31:BU:33:LEU:HD11	2.46	0.50
11:CA:1143:A:H2'	11:CA:1144:A:H8	1.75	0.50
10:C9:88:HIS:CE1	11:CA:1220:C:OP2	2.64	0.50
5:A4:159:THR:HG23	5:A4:161:TYR:HD2	1.73	0.50
11:BA:1045:G:C2'	11:BA:1046:G:H5''	2.41	0.50
8:D7:11:ARG:HE	8:D7:35:THR:HG22	1.76	0.50
11:CA:1751:U:O2'	11:CA:1753:A:N6	2.44	0.50
20:BJ:22:THR:HG22	20:BJ:88:ILE:HG12	1.92	0.50
11:AA:1538:U:H5'	23:AM:39:GLY:H	1.77	0.50
12:CB:29:MET:HE3	12:CB:144:CYS:HB3	1.93	0.50
11:AA:28:U:H2'	11:AA:29:G:C8	2.46	0.50
11:CA:1501:C:OP2	17:CG:86:LYS:NZ	2.45	0.50
16:BF:58:ASN:HB3	16:BF:74:ASN:HD21	1.77	0.50
28:DR:334:ARG:HB3	28:DR:336:PHE:CE2	2.46	0.50
26:BP:52:ASN:HA	26:BP:80:LEU:HD23	1.94	0.50
33:AW:124:LYS:HB2	33:AW:166:LEU:HD11	1.93	0.50
14:BD:105:MET:HE2	14:BD:108:ARG:HD2	1.92	0.50
17:BG:21:GLU:OE1	17:BG:102:ASN:ND2	2.45	0.50
11:CA:490:U:H2'	11:CA:491:U:C6	2.47	0.50
15:DE:144:TYR:CD2	15:DE:148:LYS:HB3	2.46	0.50
8:D7:75:TYR:CZ	8:D7:79:LYS:HE3	2.45	0.50
5:D4:123:LEU:HD11	5:D4:143:LEU:HD11	1.94	0.50
11:DA:1474:G:H8	11:DA:1474:G:OP2	1.95	0.50
30:DT:38:THR:O	30:DT:56:TRP:HH2	1.93	0.50
11:CA:93:C:O2	11:CA:417:A:O2'	2.26	0.50
11:BA:1504:U:C2'	11:BA:1505:C:H5'	2.41	0.50
11:BA:1505:C:H5''	23:BM:27:ILE:HD12	1.93	0.50
11:BA:227:G:H21	11:BA:229:A:H8	1.58	0.50
21:DK:43:HIS:CD2	21:DK:55:ARG:HG3	2.46	0.50
3:B2:25:ARG:NH2	11:BA:377:G:OP2	2.44	0.50
24:AN:39:ARG:HG3	24:AN:40:ARG:N	2.26	0.50
23:CM:90:ASN:HD21	29:CS:14:ARG:HD2	1.76	0.50
11:BA:1663:A:H5'	11:BA:1664:A:OP2	2.12	0.50
11:BA:622:G:N1	11:BA:948:A:OP2	2.42	0.50
11:CA:1505:C:H5''	23:CM:27:ILE:HD12	1.94	0.50
7:B6:65:THR:HB	7:B6:68:LYS:HG3	1.93	0.50
33:BW:11:ARG:HH12	33:BW:20:LEU:HB3	1.76	0.50
29:AS:42:PHE:CD1	29:AS:46:THR:HG21	2.46	0.50
11:BA:879:G:C6	11:BA:880:G:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:9:LYS:HG2	8:A7:13:TYR:HE2	1.76	0.50
14:DD:135:LYS:HG3	14:DD:159:ALA:HA	1.93	0.50
11:CA:214:U:C6	11:CA:214:U:OP2	2.64	0.50
5:B4:140:VAL:HG21	5:B4:178:ILE:HG21	1.94	0.50
26:CP:77:GLN:HE22	26:CP:142:HIS:HE1	1.59	0.50
4:A3:190:LYS:HD3	7:A6:10:TYR:HD1	1.75	0.50
11:AA:1281:G:H5'	11:AA:1282:U:OP2	2.12	0.50
11:DA:973:A:H2'	11:DA:974:C:O4'	2.12	0.50
12:AB:186:SER:HB3	12:AB:189:GLU:HB3	1.93	0.50
35:AY:216:LEU:HB3	35:AY:220:LYS:HE3	1.92	0.50
18:DH:41:MET:HB2	18:DH:47:ILE:HD13	1.93	0.50
11:CA:738:A:O2'	11:CA:739:A:OP1	2.28	0.50
28:CR:20:HIS:HE1	28:CR:50:THR:HG22	1.77	0.50
5:D4:31:TRP:CZ2	21:DK:17:GLY:HA2	2.46	0.50
5:C4:232:THR:HG22	5:C4:236:GLU:OE2	2.11	0.50
5:D4:132:THR:OG1	5:D4:136:TYR:HB2	2.11	0.50
31:AU:108:TYR:HB3	31:AU:112:ILE:HD12	1.93	0.50
11:AA:1722:U:H5'	21:AK:151:LEU:HD12	1.92	0.50
14:CD:105:MET:HE2	14:CD:108:ARG:HD2	1.93	0.50
35:AY:2:LYS:HB3	35:AY:108:VAL:HG22	1.94	0.50
11:BA:1083:G:O2'	11:BA:1705:A:H5''	2.11	0.50
10:B9:87:LYS:NZ	11:BA:1187:C:P	2.77	0.50
15:DE:141:ARG:HB3	15:DE:222:THR:CG2	2.42	0.50
11:CA:1212:U:H2'	11:CA:1214:A:OP2	2.11	0.50
19:AI:74:SER:OG	19:AI:75:GLY:N	2.44	0.50
11:AA:1311:C:H4'	11:AA:1312:U:OP2	2.10	0.50
10:A9:88:HIS:CD2	11:AA:1220:C:OP2	2.64	0.50
11:DA:976:A:N6	11:DA:982:U:OP2	2.45	0.50
14:CD:37:LYS:HG3	14:CD:38:ASN:HB3	1.94	0.50
11:BA:1463:U:O2'	11:BA:1464:U:O5'	2.22	0.50
11:DA:840:A:H8	25:DO:66:ARG:HH22	1.58	0.50
11:CA:328:G:H5''	11:CA:329:A:N7	2.27	0.50
11:DA:1665:U:H2'	11:DA:1666:G:O4'	2.11	0.50
13:AC:98:GLY:HA3	13:AC:132:ASP:OD2	2.12	0.50
10:D9:104:GLU:OE2	10:D9:106:ASN:HB3	2.12	0.50
5:C4:50:VAL:HG21	5:C4:63:ILE:HG12	1.94	0.50
22:AL:17:ARG:NH1	22:AL:20:LYS:HE2	2.27	0.50
13:DC:136:GLY:HA2	13:DC:158:GLY:HA3	1.94	0.50
1:C0:43:ASN:HA	11:CA:1708:A:O2'	2.12	0.50
29:AS:39:ALA:O	29:AS:47:ARG:HG2	2.11	0.50
29:BS:42:PHE:CD1	29:BS:46:THR:HG21	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BS:46:THR:O	29:BS:50:VAL:HG23	2.11	0.50
11:CA:1752:U:HO2'	11:CA:1753:A:P	2.34	0.50
27:AQ:70:ILE:HG23	27:AQ:87:ARG:HD2	1.93	0.50
13:CC:101:ALA:O	13:CC:105:VAL:HG23	2.12	0.50
11:DA:332:A:H2'	11:DA:333:C:H6	1.77	0.50
11:DA:14:C:O5'	15:DE:165:SER:HB3	2.10	0.50
15:DE:37:VAL:HG21	15:DE:60:ILE:HG23	1.93	0.50
15:CE:37:VAL:HG21	15:CE:60:ILE:HG23	1.92	0.50
12:BB:161:ASN:O	12:BB:167:ILE:HD11	2.11	0.50
16:CF:58:ASN:HB3	16:CF:74:ASN:ND2	2.26	0.50
17:AG:83:LEU:O	17:AG:87:VAL:HG23	2.11	0.50
26:AP:79:TYR:O	26:AP:83:TYR:HD1	1.94	0.50
11:DA:1330:U:O3'	30:DT:138:THR:HG23	2.12	0.50
2:B1:12:MET:SD	2:B1:30:VAL:HG23	2.52	0.50
35:CY:2:LYS:HB3	35:CY:108:VAL:HG22	1.94	0.50
28:BR:111:TYR:CD2	28:BR:112:LYS:HG2	2.47	0.50
11:BA:1384:U:H2'	11:BA:1387:A:OP1	2.12	0.50
12:CB:177:GLU:O	12:CB:181:LEU:HG	2.12	0.50
35:DY:76:LEU:HB2	35:DY:94:ARG:NH1	2.25	0.50
26:DP:52:ASN:HA	26:DP:80:LEU:HD23	1.94	0.50
4:C3:24:VAL:O	4:C3:27:GLN:HG2	2.11	0.50
15:CE:184:ILE:H	15:CE:184:ILE:HD12	1.77	0.50
9:D8:78:SER:OG	23:DM:57:ARG:NH2	2.44	0.50
11:DA:1504:U:C2'	11:DA:1505:C:H5'	2.41	0.50
11:AA:1253:G:O3'	20:AJ:74:SER:HB2	2.12	0.50
10:A9:88:HIS:NE2	11:AA:1220:C:OP2	2.45	0.50
11:CA:1450:G:P	30:CT:60:ARG:NH1	2.84	0.50
28:CR:114:PHE:CE2	28:CR:149:GLY:HA2	2.46	0.50
14:DD:80:MET:HB3	14:DD:86:LEU:HB2	1.94	0.50
1:C0:97:ASP:HA	1:C0:100:ARG:HG2	1.94	0.50
11:AA:1665:U:H2'	11:AA:1666:G:O4'	2.11	0.50
11:DA:1663:A:H5'	11:DA:1664:A:OP2	2.12	0.50
11:AA:1360:U:H5''	32:AV:3:ARG:NH1	2.25	0.50
11:BA:10:G:OP1	11:BA:1605:A:H2'	2.12	0.50
11:BA:1360:U:H5''	32:BV:3:ARG:NH1	2.26	0.50
6:B5:87:ARG:NH1	11:BA:1126:C:OP1	2.44	0.50
11:AA:754:A:O2'	14:AD:9:SER:OG	2.16	0.50
11:AA:1621:G:P	22:AL:72:ARG:HH21	2.35	0.50
11:DA:1173:G:OP2	39:DA:8021:HOH:O	2.19	0.50
13:BC:136:GLY:HA2	13:BC:158:GLY:HA3	1.93	0.50
29:AS:46:THR:HG23	29:AS:89:ILE:HD13	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BS:46:THR:HG23	29:BS:89:ILE:HD13	1.93	0.50
25:BO:129:ARG:O	25:BO:133:LEU:HG	2.12	0.50
26:BP:13:ASN:ND2	33:BW:54:TYR:O	2.43	0.50
27:CQ:70:ILE:HG23	27:CQ:87:ARG:HD2	1.93	0.50
11:DA:1469:U:H5'	30:DT:75:GLY:HA3	1.93	0.50
12:BB:44:ILE:HG21	12:BB:158:PRO:HB2	1.93	0.50
11:CA:246:U:OP2	27:CQ:33:TYR:OH	2.29	0.50
26:AP:52:ASN:HA	26:AP:80:LEU:HD23	1.94	0.50
11:BA:464:G:H5''	14:BD:11:THR:HG23	1.94	0.50
5:C4:75:LEU:O	5:C4:79:SER:HB2	2.11	0.50
11:AA:576:U:H5'	11:AA:576:U:H6	1.76	0.50
12:DB:44:ILE:HG21	12:DB:158:PRO:HB2	1.92	0.50
30:CT:38:THR:O	30:CT:56:TRP:HH2	1.95	0.50
13:BC:45:THR:HG22	13:BC:47:THR:H	1.76	0.50
11:AA:1550:U:H4'	19:AI:145:ARG:NH2	2.27	0.50
17:AG:21:GLU:OE1	17:AG:102:ASN:ND2	2.44	0.50
11:AA:1236:G:H4'	11:AA:1237:G:OP1	2.12	0.50
4:D3:50:ILE:HG13	4:D3:50:ILE:O	2.11	0.50
11:AA:446:U:O4'	33:AW:66:ASN:ND2	2.41	0.50
10:C9:81:THR:HG21	11:CA:1184:G:OP1	2.12	0.50
12:DB:114:GLU:OE1	15:DE:32:LYS:HG3	2.12	0.50
36:DZ:46:SER:HA	36:DZ:74:ARG:HH22	1.77	0.50
11:AA:3:C:HO2'	11:AA:4:C:P	2.30	0.50
6:D5:97:ARG:C	6:D5:99:PRO:HD3	2.32	0.50
6:C5:45:VAL:HG12	6:C5:50:LYS:HG3	1.94	0.50
11:DA:413:C:C4	35:DY:87:ARG:HD3	2.47	0.50
11:DA:1721:G:H4'	11:DA:1722:U:O5'	2.12	0.50
21:CK:43:HIS:CD2	21:CK:55:ARG:HG3	2.47	0.50
11:DA:765:A:N3	26:DP:19:ARG:HD3	2.27	0.50
11:CA:1661:G:H2'	11:CA:1661:G:N3	2.27	0.50
33:CW:11:ARG:HH12	33:CW:20:LEU:HB3	1.75	0.50
11:AA:879:G:C6	11:AA:880:G:C6	3.00	0.50
15:DE:150:ALA:H	15:DE:175:ARG:HH22	1.60	0.50
28:CR:161:HIS:CD2	28:CR:161:HIS:H	2.30	0.50
28:AR:161:HIS:H	28:AR:161:HIS:CD2	2.30	0.50
15:AE:81:VAL:HG21	15:AE:126:ILE:HD13	1.94	0.50
25:AO:97:ALA:O	25:AO:101:ARG:HG2	2.11	0.50
15:DE:35:ARG:NH1	15:DE:248:LEU:O	2.41	0.50
23:AM:36:ARG:HH22	23:AM:152:ARG:HD3	1.77	0.50
5:C4:128:VAL:HG13	5:C4:175:ASN:OD1	2.11	0.50
1:D0:97:ASP:HA	1:D0:100:ARG:HG2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CJ:79:ARG:HG2	24:CN:55:ARG:HB3	1.94	0.50
7:B6:53:ILE:HG23	7:B6:58:SER:HA	1.93	0.50
31:CU:86:PHE:HB2	31:CU:94:ILE:HG23	1.94	0.50
35:AY:76:LEU:HB2	35:AY:94:ARG:NH1	2.26	0.50
11:CA:369:A:OP2	11:CA:370:U:OP2	2.29	0.50
11:CA:1286:U:O2'	11:CA:1287:U:OP2	2.22	0.50
20:AJ:55:ARG:HE	20:AJ:87:ARG:NH1	2.08	0.50
17:DG:83:LEU:O	17:DG:87:VAL:HG23	2.11	0.50
3:A2:179:ARG:HG3	3:A2:179:ARG:NH1	2.27	0.50
3:B2:179:ARG:HG3	3:B2:179:ARG:NH1	2.26	0.50
28:BR:155:SER:OG	28:BR:160:ASN:ND2	2.45	0.50
7:A6:38:CYS:HB3	7:A6:57:CYS:HB3	1.94	0.50
21:DK:142:ARG:HG3	21:DK:143:GLU:N	2.27	0.50
11:AA:519:A:OP1	26:AP:91:LYS:NZ	2.24	0.50
11:AA:894:U:C4	21:AK:55:ARG:NH2	2.80	0.50
31:AU:55:TYR:CG	31:AU:56:VAL:N	2.80	0.50
6:B5:45:VAL:HG12	6:B5:50:LYS:HG3	1.94	0.50
11:DA:468:U:H5''	11:DA:469:A:O4'	2.11	0.50
11:DA:531:A:H5''	11:DA:536:C:H41	1.77	0.50
11:BA:1399:G:N2	20:BJ:72:GLU:HG2	2.25	0.50
11:CA:653:U:H3	11:CA:656:G:N2	2.10	0.50
11:BA:1426:G:OP1	29:BS:127:THR:HG21	2.12	0.50
11:CA:376:A:H2'	11:CA:377:G:C8	2.47	0.50
15:CE:150:ALA:H	15:CE:175:ARG:HH22	1.60	0.50
3:B2:27:PHE:CE1	11:BA:292:G:H4'	2.46	0.50
11:BA:894:U:C4	21:BK:55:ARG:NH2	2.80	0.50
14:CD:80:MET:HB3	14:CD:86:LEU:HB2	1.93	0.50
11:BA:1665:U:H2'	11:BA:1666:G:O4'	2.11	0.50
2:D1:24:ILE:HD13	17:DG:134:VAL:HG21	1.94	0.50
11:CA:1665:U:H2'	11:CA:1666:G:O4'	2.11	0.50
11:DA:1147:U:OP2	23:DM:137:HIS:NE2	2.44	0.50
31:CU:116:GLU:O	31:CU:120:ILE:HG13	2.12	0.50
11:DA:1715:A:H1'	11:DA:1736:C:H5'	1.94	0.50
11:BA:887:U:C6	11:BA:887:U:H5''	2.47	0.50
11:BA:1355:G:H21	28:BR:76:ASN:ND2	2.10	0.50
28:DR:161:HIS:H	28:DR:161:HIS:CD2	2.30	0.50
15:DE:145:TRP:O	18:DH:98:GLN:NE2	2.44	0.50
11:BA:1555:A:H5'	19:BI:137:ARG:NH1	2.25	0.50
12:AB:50:TRP:O	12:AB:54:LYS:HG3	2.11	0.50
8:B7:13:TYR:HE1	8:B7:49:LEU:HD21	1.75	0.50
5:B4:100:LYS:HD3	5:B4:238:TYR:CE2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:244:A:H8	11:BA:244:A:O5'	1.95	0.50
10:B9:80:TYR:HE2	10:B9:83:LYS:HZ3	1.60	0.50
11:DA:318:U:H2'	11:DA:319:A:C8	2.46	0.50
36:AZ:32:CYS:HB2	36:AZ:70:CYS:HB3	1.94	0.50
35:BY:71:GLY:H	35:BY:98:ARG:CZ	2.24	0.50
27:BQ:126:GLN:HG2	27:BQ:127:CYS:H	1.76	0.50
18:BH:41:MET:HB2	18:BH:47:ILE:HD13	1.94	0.50
28:CR:184:ALA:HB3	28:CR:206:ARG:NH1	2.26	0.50
12:BB:186:SER:HB3	12:BB:189:GLU:HB3	1.92	0.50
11:DA:928:C:O2'	25:DO:103:HIS:HD2	1.94	0.50
11:BA:1000:U:H4'	11:BA:1097:A:N6	2.27	0.50
1:A0:97:ASP:O	1:A0:101:ASN:ND2	2.45	0.50
26:CP:52:ASN:HA	26:CP:80:LEU:HD23	1.94	0.50
15:BE:55:ILE:HG23	15:BE:60:ILE:HD12	1.93	0.50
13:AC:85:ASP:OD1	13:AC:85:ASP:N	2.43	0.50
11:BA:973:A:H2'	11:BA:974:C:O4'	2.12	0.50
11:AA:656:G:H2'	11:AA:657:U:C6	2.47	0.49
28:AR:23:TRP:O	28:AR:46:SER:HB2	2.12	0.49
11:CA:2:A:C2	11:CA:361:A:H1'	2.46	0.49
11:CA:1117:U:O2'	11:CA:1273:U:H4'	2.12	0.49
11:CA:1263:G:N2	11:CA:1296:G:H1	2.06	0.49
11:CA:1507:U:C5	17:CG:161:MET:HG2	2.46	0.49
11:AA:376:A:H2'	11:AA:377:G:C8	2.48	0.49
11:BA:1480:U:O2'	11:BA:1481:A:H8	1.93	0.49
2:B1:58:MET:HB2	2:B1:59:GLU:OE2	2.12	0.49
22:AL:77:LYS:HG3	22:AL:78:ASN:N	2.27	0.49
29:DS:42:PHE:CD1	29:DS:46:THR:HG21	2.47	0.49
11:BA:15:U:H2'	11:BA:16:G:O4'	2.12	0.49
23:DM:27:ILE:HG22	23:DM:29:PRO:HD2	1.94	0.49
8:D7:67:TYR:HB3	13:DC:75:PHE:CZ	2.47	0.49
28:AR:111:TYR:CD2	28:AR:112:LYS:HG2	2.47	0.49
35:AY:71:GLY:H	35:AY:98:ARG:CZ	2.24	0.49
30:AT:46:ALA:HB1	30:AT:87:LYS:HB3	1.94	0.49
8:A7:51:ASP:OD2	11:AA:1191:A:N3	2.45	0.49
20:AJ:32:GLU:OE2	20:AJ:55:ARG:NH2	2.44	0.49
11:BA:1260:G:N3	11:BA:1393:A:C2	2.80	0.49
18:DH:10:CYS:HA	18:DH:27:LEU:HD11	1.94	0.49
22:BL:68:ARG:HG3	22:BL:116:ILE:HG12	1.93	0.49
11:BA:1236:G:H4'	11:BA:1237:G:OP1	2.10	0.49
31:CU:108:TYR:HB3	31:CU:112:ILE:HD12	1.95	0.49
12:DB:64:GLN:HE22	15:DE:246:GLU:HG2	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:D9:133:TYR:HA	10:D9:139:LEU:O	2.12	0.49
11:DA:1185:C:O2'	11:DA:1216:A:C2	2.64	0.49
11:DA:1253:G:H1'	20:DJ:72:GLU:HG3	1.94	0.49
11:CA:416:C:O2'	11:CA:417:A:P	2.69	0.49
11:BA:1011:C:H4'	25:BO:7:LYS:HG2	1.94	0.49
11:AA:1008:A:H4'	11:AA:1009:U:OP1	2.12	0.49
15:BE:170:LEU:HD22	15:BE:197:ILE:HD13	1.94	0.49
11:CA:75:C:H1'	35:CY:178:LYS:HG2	1.94	0.49
11:AA:771:A:H4'	11:AA:772:A:OP2	2.12	0.49
11:BA:229:A:C4	11:BA:230:A:C6	3.00	0.49
20:CJ:41:ARG:NH2	20:CJ:103:ASN:HB3	2.26	0.49
11:CA:1171:G:C5'	24:CN:39:ARG:NH1	2.75	0.49
13:AC:136:GLY:HA2	13:AC:158:GLY:HA3	1.94	0.49
13:CC:136:GLY:HA2	13:CC:158:GLY:HA3	1.94	0.49
11:DA:1319:U:O2	11:DA:1488:A:H2'	2.12	0.49
11:BA:1661:G:N3	11:BA:1661:G:H2'	2.27	0.49
11:DA:1661:G:N3	11:DA:1661:G:H2'	2.27	0.49
11:CA:754:A:H4'	14:CD:9:SER:CB	2.42	0.49
26:CP:18:ARG:HH21	26:CP:20:GLN:NE2	2.11	0.49
12:BB:23:ILE:HA	12:BB:42:HIS:CD2	2.47	0.49
8:B7:11:ARG:HE	8:B7:35:THR:HG22	1.76	0.49
11:DA:331:U:H2'	11:DA:332:A:H8	1.76	0.49
23:CM:119:ILE:HD11	29:CS:115:ASP:HB3	1.93	0.49
11:CA:318:U:O2'	27:CQ:6:GLN:HG2	2.12	0.49
16:AF:58:ASN:HB3	16:AF:74:ASN:ND2	2.27	0.49
11:CA:561:A:OP1	34:CX:9:ALA:HA	2.13	0.49
30:AT:38:THR:O	30:AT:56:TRP:HH2	1.94	0.49
11:AA:1568:C:OP2	24:AN:18:LYS:NZ	2.45	0.49
11:DA:104:A:H2'	11:DA:105:G:C8	2.46	0.49
32:AV:25:THR:HG22	32:AV:27:ASP:H	1.77	0.49
17:DG:21:GLU:OE1	17:DG:102:ASN:ND2	2.45	0.49
7:D6:38:CYS:HB3	7:D6:57:CYS:HB3	1.93	0.49
25:DO:129:ARG:O	25:DO:133:LEU:HG	2.11	0.49
3:B2:40:THR:HG21	3:B2:86:ILE:O	2.11	0.49
5:D4:232:THR:HG22	5:D4:236:GLU:OE2	2.12	0.49
15:AE:58:PRO:HG3	15:AE:131:THR:HG23	1.93	0.49
25:AO:102:LYS:O	25:AO:105:GLU:HG2	2.12	0.49
15:CE:141:ARG:HB3	15:CE:222:THR:HG22	1.94	0.49
11:AA:416:C:O2'	11:AA:417:A:P	2.69	0.49
11:CA:947:C:H5'	11:CA:1076:U:H1'	1.93	0.49
11:AA:1201:G:C6	11:AA:1227:G:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B5:97:ARG:C	6:B5:99:PRO:HD3	2.33	0.49
34:BX:34:ARG:HB3	34:BX:34:ARG:NH1	2.27	0.49
11:DA:673:A:H2'	11:DA:675:A:N6	2.27	0.49
31:DU:35:THR:HG22	31:DU:41:ALA:HB2	1.94	0.49
13:AC:146:LYS:HD2	13:AC:151:LYS:NZ	2.23	0.49
11:AA:1555:A:C5'	19:AI:137:ARG:HH12	2.25	0.49
14:DD:37:LYS:HG3	14:DD:38:ASN:HB3	1.94	0.49
25:BO:4:MET:SD	25:BO:126:ARG:NH1	2.86	0.49
3:C2:56:VAL:HG22	11:CA:324:A:P	2.52	0.49
11:CA:1663:A:H5'	11:CA:1664:A:OP2	2.12	0.49
26:DP:18:ARG:HH21	26:DP:20:GLN:NE2	2.11	0.49
25:DO:101:ARG:HH12	25:DO:145:ALA:HA	1.77	0.49
11:CA:331:U:H2'	11:CA:332:A:H8	1.76	0.49
12:CB:121:THR:O	12:CB:143:LEU:HB2	2.11	0.49
22:BL:51:LEU:O	22:BL:73:VAL:HA	2.13	0.49
28:DR:141:GLU:HA	28:DR:160:ASN:HD21	1.78	0.49
28:CR:141:GLU:HA	28:CR:160:ASN:HD21	1.77	0.49
5:C4:45:PHE:HE2	5:C4:68:VAL:HG11	1.77	0.49
11:CA:421:G:H2'	11:CA:422:G:H5''	1.94	0.49
12:DB:147:ASP:OD2	12:DB:162:ARG:NH2	2.45	0.49
5:B4:132:THR:OG1	5:B4:136:TYR:HB2	2.12	0.49
11:CA:726:U:H5''	11:CA:727:U:OP2	2.12	0.49
35:AY:142:LYS:HE3	35:AY:156:ILE:HD11	1.95	0.49
2:D1:11:ILE:HG12	2:D1:27:VAL:HG11	1.94	0.49
32:BV:25:THR:HG22	32:BV:27:ASP:H	1.78	0.49
2:D1:9:ALA:HB1	2:D1:29:VAL:HG11	1.95	0.49
11:DA:295:U:OP1	27:DQ:135:ARG:HD3	2.13	0.49
12:BB:145:ASP:O	12:BB:148:SER:OG	2.27	0.49
31:AU:55:TYR:CE2	31:AU:56:VAL:HG23	2.48	0.49
11:BA:1201:G:C6	11:BA:1227:G:C6	3.00	0.49
10:A9:133:TYR:HA	10:A9:139:LEU:O	2.13	0.49
11:AA:1212:U:H2'	11:AA:1214:A:OP2	2.12	0.49
11:BA:75:C:H1'	35:BY:178:LYS:HG2	1.95	0.49
11:CA:219:C:H3'	11:CA:220:A:H5''	1.94	0.49
11:CA:1494:U:HO2'	11:CA:1495:U:P	2.29	0.49
11:CA:377:G:H2'	11:CA:378:A:C8	2.47	0.49
1:D0:22:LYS:CG	10:D9:74:LYS:HZ1	2.24	0.49
11:AA:1158:U:O4	11:AA:1172:G:N2	2.40	0.49
31:AU:116:GLU:O	31:AU:120:ILE:HG13	2.11	0.49
11:CA:316:G:OP1	27:CQ:133:THR:OG1	2.29	0.49
11:DA:1281:G:H5'	11:DA:1282:U:OP2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1751:U:O2'	11:BA:1753:A:N6	2.45	0.49
8:A7:11:ARG:HE	8:A7:35:THR:HG22	1.77	0.49
11:DA:59:C:H5'	11:DA:447:C:N4	2.28	0.49
11:CA:1329:G:H21	30:CT:137:MET:HE1	1.77	0.49
14:AD:135:LYS:HG3	14:AD:159:ALA:HA	1.95	0.49
23:BM:36:ARG:HH22	23:BM:152:ARG:HD3	1.77	0.49
10:C9:80:TYR:HE2	10:C9:83:LYS:HZ3	1.58	0.49
28:AR:330:ASP:OD2	28:AR:334:ARG:NH2	2.46	0.49
35:DY:2:LYS:HB3	35:DY:108:VAL:HG22	1.95	0.49
14:CD:64:PRO:HA	14:CD:69:ARG:NH1	2.27	0.49
21:CK:142:ARG:HG3	21:CK:143:GLU:N	2.28	0.49
4:C3:116:SER:HB2	4:C3:117:ARG:HD3	1.95	0.49
19:AI:8:LEU:HD11	19:AI:23:SER:HB3	1.94	0.49
19:CI:8:LEU:HD11	19:CI:23:SER:HB3	1.95	0.49
17:CG:21:GLU:OE1	17:CG:102:ASN:ND2	2.45	0.49
5:C4:132:THR:OG1	5:C4:136:TYR:HB2	2.13	0.49
12:DB:186:SER:HB3	12:DB:189:GLU:HB3	1.93	0.49
4:A3:50:ILE:HG13	4:A3:50:ILE:O	2.11	0.49
34:AX:7:THR:HG22	34:AX:8:LEU:O	2.13	0.49
31:CU:83:LEU:HD11	31:CU:103:LEU:HD21	1.94	0.49
10:B9:133:TYR:HA	10:B9:139:LEU:O	2.12	0.49
11:DA:420:A:N3	11:DA:432:U:O2'	2.37	0.49
11:BA:1507:U:C5	17:BG:161:MET:HG2	2.48	0.49
11:BA:559:C:H5''	11:BA:571:G:H1'	1.93	0.49
11:BA:229:A:HO2'	11:BA:230:A:P	2.30	0.49
11:DA:954:G:N1	11:DA:1001:A:O2'	2.43	0.49
14:AD:37:LYS:HG3	14:AD:38:ASN:HB3	1.94	0.49
39:DA:7476:HOH:O	26:DP:90:ARG:NH2	2.38	0.49
11:AA:1462:U:OP2	11:AA:1464:U:H5	1.96	0.49
8:C7:11:ARG:HE	8:C7:35:THR:HG22	1.76	0.49
23:CM:27:ILE:HG22	23:CM:29:PRO:HD2	1.93	0.49
13:AC:226:GLU:HB2	28:AR:208:THR:H	1.77	0.49
11:DA:884:A:OP2	21:DK:66:ARG:N	2.46	0.49
11:DA:887:U:C6	11:DA:887:U:H5''	2.47	0.49
11:AA:210:A:OP2	11:AA:210:A:C8	2.65	0.49
8:D7:9:LYS:HG2	8:D7:13:TYR:HE2	1.77	0.49
18:DH:111:LEU:HB3	18:DH:115:GLU:HB2	1.94	0.49
15:DE:81:VAL:HG21	15:DE:126:ILE:HD13	1.95	0.49
5:B4:128:VAL:HG13	5:B4:175:ASN:OD1	2.12	0.49
12:BB:54:LYS:HB2	36:BZ:95:ILE:HD13	1.95	0.49
32:CV:89:SER:HB3	32:CV:91:ILE:H	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BR:141:GLU:HA	28:BR:160:ASN:HD21	1.77	0.49
1:A0:97:ASP:HA	1:A0:100:ARG:HG2	1.94	0.49
11:DA:206:U:H5''	27:DQ:16:PHE:CG	2.47	0.49
29:AS:101:VAL:HB	29:AS:125:ALA:HB2	1.94	0.49
16:DF:58:ASN:HB3	16:DF:74:ASN:ND2	2.28	0.49
11:AA:573:A:O2'	11:AA:574:A:OP1	2.23	0.49
11:CA:628:G:H4'	18:CH:4:VAL:HG13	1.93	0.49
30:AT:18:PHE:HZ	30:AT:140:LEU:HD22	1.76	0.49
3:A2:195:GLU:HG2	27:AQ:9:TYR:CD2	2.47	0.49
4:D3:62:LEU:HD11	4:D3:95:THR:OG1	2.12	0.49
29:BS:90:VAL:HB	29:BS:117:ILE:HA	1.94	0.49
35:BY:151:ASP:OD2	35:BY:155:LEU:HD12	2.12	0.49
18:AH:10:CYS:HA	18:AH:27:LEU:HD11	1.94	0.49
11:DA:557:U:H4'	34:DX:17:GLN:OE1	2.12	0.49
21:BK:139:SER:OG	21:BK:140:THR:O	2.20	0.49
10:B9:128:HIS:ND1	11:BA:1222:U:O2'	2.32	0.49
11:DA:873:G:O2'	21:DK:51:GLU:HA	2.12	0.49
31:AU:35:THR:HG22	31:AU:41:ALA:HB2	1.94	0.49
31:BU:35:THR:HG22	31:BU:41:ALA:HB2	1.95	0.49
31:DU:20:ASN:HD21	31:DU:27:LYS:HZ3	1.59	0.49
6:A5:97:ARG:C	6:A5:99:PRO:HD3	2.32	0.49
11:BA:1007:U:O2'	11:BA:1009:U:C5	2.64	0.49
6:A5:45:VAL:HG12	6:A5:50:LYS:HG3	1.95	0.49
11:AA:181:G:H5'	11:AA:181:G:H8	1.76	0.49
11:DA:292:G:H2'	11:DA:293:U:O4'	2.12	0.49
11:BA:1171:G:H5''	24:BN:39:ARG:HH12	1.75	0.49
11:BA:516:G:OP2	26:BP:35:LYS:HE2	2.13	0.49
11:DA:238:G:O2'	11:DA:239:A:P	2.70	0.49
11:AA:1360:U:HO2'	11:AA:1361:A:P	2.31	0.49
11:DA:316:G:OP1	27:DQ:133:THR:OG1	2.30	0.49
11:CA:238:G:H1'	11:CA:239:A:OP2	2.13	0.49
11:AA:840:A:O2'	11:AA:841:A:O5'	2.27	0.49
23:DM:36:ARG:HH22	23:DM:152:ARG:HD3	1.77	0.49
11:AA:1289:C:O2'	11:AA:1371:A:H1'	2.12	0.49
9:C8:99:ASN:HD22	17:CG:90:ASN:ND2	2.11	0.49
11:AA:163:A:H5'	11:AA:164:U:OP1	2.12	0.49
12:BB:64:GLN:HE22	15:BE:246:GLU:HG2	1.77	0.49
11:DA:1569:A:C8	24:DN:13:TYR:HD2	2.31	0.49
27:DQ:56:LYS:O	27:DQ:63:LEU:HD22	2.12	0.49
5:A4:123:LEU:HD11	5:A4:143:LEU:HD11	1.95	0.49
1:B0:33:GLU:HG2	1:B0:52:ASP:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B1:9:ALA:HB1	2:B1:29:VAL:HG11	1.94	0.49
19:DI:8:LEU:HD11	19:DI:23:SER:HB3	1.94	0.49
4:B3:162:PHE:HD1	4:B3:163:LEU:HD23	1.76	0.49
33:AW:31:PRO:HG2	33:AW:38:LEU:HG	1.94	0.49
33:BW:51:ARG:N	33:BW:51:ARG:HD3	2.26	0.49
16:BF:66:GLU:HG3	16:BF:66:GLU:O	2.12	0.49
11:BA:1049:C:O2'	11:BA:1050:C:H5'	2.12	0.49
5:B4:45:PHE:HE2	5:B4:68:VAL:HG11	1.77	0.49
36:CZ:46:SER:HA	36:CZ:74:ARG:HH22	1.77	0.49
11:AA:559:C:H5''	11:AA:571:G:H1'	1.93	0.49
11:AA:377:G:H2'	11:AA:378:A:C8	2.47	0.49
10:B9:102:LYS:NZ	10:B9:112:GLN:HB3	2.28	0.49
22:DL:77:LYS:HG3	22:DL:78:ASN:N	2.27	0.49
2:C1:58:MET:HB2	2:C1:59:GLU:OE2	2.12	0.49
15:AE:49:PHE:CD1	15:AE:139:PRO:HD3	2.48	0.49
12:BB:187:LYS:HD3	36:BZ:57:ASN:HA	1.95	0.49
11:AA:879:G:H22	21:AK:68:GLU:CD	2.15	0.49
11:CA:270:U:H5'	11:CA:271:U:C6	2.48	0.49
26:AP:13:ASN:ND2	33:AW:54:TYR:O	2.41	0.49
11:AA:299:C:OP2	27:AQ:102:ARG:NH1	2.37	0.49
11:DA:15:U:H2'	11:DA:16:G:O4'	2.11	0.49
29:DS:46:THR:O	29:DS:50:VAL:HG23	2.12	0.49
23:CM:36:ARG:HH22	23:CM:152:ARG:HD3	1.77	0.49
11:DA:1406:G:O2'	11:DA:1407:A:OP2	2.30	0.49
35:CY:70:ARG:HB2	35:CY:101:ILE:HB	1.95	0.49
11:DA:1527:A:H5''	11:DA:1528:A:OP2	2.13	0.49
25:AO:95:LYS:HB2	25:AO:153:GLN:HE21	1.77	0.49
11:DA:1469:U:H5'	11:DA:1470:C:OP2	2.13	0.49
28:DR:330:ASP:OD2	28:DR:334:ARG:NH2	2.46	0.49
5:A4:69:GLU:OE1	5:A4:88:LYS:HG2	2.12	0.49
11:DA:421:G:H2'	11:DA:422:G:H5''	1.95	0.49
9:A8:60:VAL:HA	9:A8:72:LYS:HG3	1.95	0.49
2:B1:11:ILE:HG12	2:B1:27:VAL:HG11	1.94	0.49
21:CK:39:ASP:OD1	21:CK:40:THR:N	2.40	0.49
5:C4:123:LEU:HD11	5:C4:143:LEU:HD11	1.94	0.49
35:DY:216:LEU:HB3	35:DY:220:LYS:HE3	1.94	0.49
29:BS:101:VAL:HB	29:BS:125:ALA:HB2	1.95	0.49
33:AW:206:SER:HB2	33:AW:207:PHE:CD2	2.48	0.49
11:BA:1421:G:O2'	24:BN:6:TRP:HA	2.13	0.49
36:DZ:47:VAL:HB	36:DZ:74:ARG:NH1	2.27	0.49
28:CR:23:TRP:O	28:CR:46:SER:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:235:A:OP1	11:DA:236:U:H5	1.96	0.49
6:C5:97:ARG:C	6:C5:99:PRO:HD3	2.32	0.49
11:DA:656:G:H2'	11:DA:657:U:C6	2.48	0.49
11:DA:1262:U:OP1	15:DE:96:ARG:NH1	2.45	0.49
31:DU:55:TYR:CG	31:DU:56:VAL:N	2.80	0.49
11:DA:377:G:H2'	11:DA:378:A:C8	2.47	0.49
11:BA:1171:G:C5'	24:BN:39:ARG:NH1	2.76	0.49
11:BA:1153:U:N3	11:BA:1157:U:H5	2.07	0.49
11:AA:69:A:H3'	35:AY:173:ARG:HH22	1.78	0.49
11:DA:1531:G:C4	23:DM:134:ARG:HD2	2.47	0.49
11:CA:1462:U:OP2	11:CA:1464:U:H5	1.95	0.49
2:D1:58:MET:HB2	2:D1:59:GLU:OE2	2.13	0.49
11:AA:214:U:O2'	11:AA:215:A:O5'	2.28	0.49
10:C9:102:LYS:HZ2	10:C9:112:GLN:HB3	1.76	0.49
4:B3:63:ILE:HD11	4:B3:94:PHE:CZ	2.47	0.49
14:CD:135:LYS:HG3	14:CD:159:ALA:HA	1.94	0.49
11:AA:1527:A:H5''	11:AA:1528:A:OP2	2.13	0.49
28:DR:190:VAL:HB	28:DR:219:LEU:HD13	1.93	0.49
36:BZ:32:CYS:HB2	36:BZ:70:CYS:HB3	1.94	0.49
11:BA:1500:C:P	17:BG:86:LYS:HZ2	2.35	0.49
7:B6:38:CYS:HB3	7:B6:57:CYS:HB3	1.94	0.49
15:BE:65:TYR:CD2	15:BE:77:LEU:HB2	2.48	0.49
14:BD:90:GLU:HB3	14:BD:95:TYR:CD2	2.48	0.49
14:DD:64:PRO:HA	14:DD:69:ARG:NH1	2.27	0.49
33:CW:206:SER:HB2	33:CW:207:PHE:CD2	2.47	0.49
5:B4:127:ARG:CZ	11:BA:862:A:H1'	2.41	0.49
31:DU:83:LEU:HD11	31:DU:103:LEU:HD21	1.94	0.49
33:CW:124:LYS:HB2	33:CW:166:LEU:HD11	1.93	0.49
5:B4:232:THR:HG22	5:B4:236:GLU:OE2	2.12	0.49
29:AS:74:ALA:HB3	29:AS:76:GLU:OE2	2.13	0.49
4:B3:15:ILE:O	4:B3:19:VAL:HG23	2.13	0.49
8:C7:75:TYR:CZ	8:C7:79:LYS:HE3	2.47	0.49
5:B4:111:ASP:OD1	5:B4:111:ASP:N	2.46	0.49
11:BA:421:G:H2'	11:BA:422:G:H5''	1.95	0.49
11:BA:338:G:OP1	27:BQ:84:ILE:HD11	2.12	0.49
20:CJ:67:LYS:HA	24:CN:43:ARG:NE	2.28	0.49
11:DA:1153:U:N3	11:DA:1157:U:H5	2.07	0.49
15:CE:46:ASP:HA	15:CE:49:PHE:HD2	1.77	0.49
11:AA:772:A:O2'	33:AW:108:LYS:NZ	2.43	0.49
15:AE:170:LEU:HD22	15:AE:197:ILE:HD13	1.94	0.49
11:CA:292:G:H2'	11:CA:293:U:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DO:4:MET:SD	25:DO:126:ARG:NH1	2.85	0.49
11:CA:1480:U:HO2'	11:CA:1481:A:P	2.36	0.49
28:AR:114:PHE:CD2	28:AR:149:GLY:HA2	2.48	0.49
24:CN:39:ARG:HG3	24:CN:40:ARG:N	2.27	0.49
11:CA:1426:G:OP1	29:CS:127:THR:HG21	2.13	0.49
31:BU:55:TYR:CE2	31:BU:56:VAL:HG23	2.48	0.49
20:DJ:22:THR:HG22	20:DJ:88:ILE:HG12	1.93	0.49
11:AA:1661:G:N3	11:AA:1661:G:H2'	2.27	0.49
11:AA:1174:A:OP1	11:AA:1175:A:OP2	2.31	0.49
11:BA:1357:G:OP1	32:BV:32:LYS:NZ	2.45	0.49
11:AA:479:G:OP2	11:AA:479:G:C8	2.64	0.49
13:DC:24:LEU:HD22	13:DC:28:PHE:HE1	1.77	0.49
21:CK:147:ARG:NH1	21:CK:150:ARG:NH2	2.60	0.49
11:DA:1293:A:H4'	11:DA:1294:A:O5'	2.13	0.49
28:CR:111:TYR:CD2	28:CR:112:LYS:HG2	2.47	0.49
22:CL:51:LEU:O	22:CL:73:VAL:HA	2.13	0.49
22:AL:51:LEU:O	22:AL:73:VAL:HA	2.12	0.49
11:BA:493:U:C4'	11:BA:494:A:OP2	2.61	0.49
11:AA:660:U:H2'	11:AA:661:G:O4'	2.12	0.49
12:BB:12:ARG:NE	32:BV:93:ILE:HD11	2.28	0.49
12:CB:196:ASP:OD2	32:CV:89:SER:HA	2.12	0.49
11:BA:1250:G:H2'	11:BA:1251:C:O4'	2.13	0.49
11:DA:1161:A:H5'	11:DA:1401:U:OP1	2.13	0.49
23:DM:15:HIS:NE2	23:DM:66:CYS:SG	2.86	0.49
11:BA:636:G:H2'	11:BA:637:U:C6	2.47	0.49
11:AA:1475:G:H2'	11:AA:1476:A:C8	2.48	0.49
12:BB:177:GLU:O	12:BB:181:LEU:HG	2.13	0.49
12:AB:12:ARG:HD3	12:AB:172:TRP:HZ3	1.78	0.49
27:CQ:65:ILE:CD1	27:CQ:139:LEU:HD21	2.43	0.49
31:AU:83:LEU:HD11	31:AU:103:LEU:HD21	1.94	0.49
19:DI:57:LEU:HD23	19:DI:110:GLN:HG2	1.95	0.49
21:DK:39:ASP:OD1	21:DK:40:THR:N	2.43	0.49
11:AA:1474:G:H8	11:AA:1474:G:OP2	1.96	0.49
3:A2:196:LEU:HD23	3:A2:196:LEU:HA	1.63	0.49
15:CE:174:PRO:O	15:CE:177:THR:OG1	2.22	0.49
11:BA:1509:U:OP2	11:BA:1509:U:C4'	2.61	0.49
6:D5:45:VAL:HG12	6:D5:50:LYS:HG3	1.94	0.49
11:DA:1506:G:HO2'	11:DA:1507:U:P	2.26	0.49
11:BA:1313:G:H22	11:BA:1354:A:H2	1.61	0.49
11:BA:1430:C:OP2	23:BM:126:ARG:NH2	2.40	0.49
11:DA:1123:G:H2'	11:DA:1721:G:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:69:A:H2'	11:BA:70:U:H5''	1.95	0.49
1:B0:22:LYS:HG3	10:B9:74:LYS:NZ	2.28	0.49
17:DG:67:LEU:HD12	17:DG:150:ILE:HD11	1.95	0.49
10:B9:102:LYS:HZ2	10:B9:112:GLN:HB3	1.78	0.49
3:B2:10:LYS:CD	11:BA:329:A:H5''	2.42	0.49
10:C9:72:LYS:HD3	11:CA:1160:G:H5'	1.94	0.49
3:C2:21:HIS:HE1	11:CA:101:A:O2'	1.96	0.49
11:AA:765:A:C5	26:AP:19:ARG:NH1	2.81	0.49
13:AC:24:LEU:HD22	13:AC:28:PHE:HE1	1.77	0.49
11:BA:160:C:O2'	35:BY:132:LYS:O	2.31	0.49
11:AA:931:A:P	25:AO:96:LYS:NZ	2.86	0.49
12:DB:23:ILE:HA	12:DB:42:HIS:CD2	2.47	0.49
27:AQ:70:ILE:HD13	27:AQ:106:ILE:HD13	1.95	0.49
13:BC:24:LEU:HD22	13:BC:28:PHE:HE1	1.78	0.49
11:AA:1752:U:HO2'	11:AA:1753:A:P	2.36	0.49
11:AA:331:U:H2'	11:AA:332:A:H8	1.76	0.49
25:BO:101:ARG:HH12	25:BO:145:ALA:HA	1.78	0.49
27:DQ:70:ILE:HD13	27:DQ:106:ILE:HD13	1.95	0.49
35:BY:70:ARG:HB2	35:BY:101:ILE:HB	1.95	0.49
10:B9:106:ASN:HD22	10:B9:108:LYS:HE2	1.78	0.49
5:A4:140:VAL:HG21	5:A4:178:ILE:HG21	1.94	0.49
12:BB:12:ARG:HD3	12:BB:172:TRP:HZ3	1.77	0.49
17:DG:157:ALA:HB2	17:DG:167:THR:OG1	2.13	0.49
29:CS:90:VAL:HB	29:CS:117:ILE:HA	1.94	0.49
11:CA:1573:G:OP2	30:CT:93:ARG:HD2	2.12	0.49
35:BY:2:LYS:HB3	35:BY:108:VAL:HG22	1.95	0.49
29:CS:74:ALA:HB3	29:CS:76:GLU:OE2	2.13	0.49
28:BR:20:HIS:HE1	28:BR:50:THR:HG22	1.77	0.49
2:C1:9:ALA:HB1	2:C1:29:VAL:HG11	1.95	0.49
11:CA:550:G:O5'	34:CX:61:ASN:HB3	2.13	0.49
35:AY:151:ASP:OD2	35:AY:155:LEU:HD12	2.13	0.49
19:CI:57:LEU:HD23	19:CI:110:GLN:HG2	1.95	0.49
11:DA:1475:G:H2'	11:DA:1476:A:C8	2.48	0.49
6:A5:30:VAL:HG21	6:A5:76:CYS:HA	1.95	0.49
11:CA:427:A:H5''	22:CL:49:LYS:HG3	1.95	0.49
5:C4:111:ASP:OD1	5:C4:111:ASP:N	2.46	0.49
11:BA:136:U:P	35:BY:139:ASN:HD21	2.36	0.49
35:DY:151:ASP:OD2	35:DY:155:LEU:HD12	2.12	0.49
11:CA:1326:C:H5'	11:CA:1327:U:OP2	2.12	0.49
10:D9:137:CYS:SG	10:D9:139:LEU:HB2	2.53	0.48
36:AZ:47:VAL:HB	36:AZ:74:ARG:NH1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1212:U:H2'	11:BA:1214:A:OP2	2.13	0.48
19:DI:74:SER:OG	19:DI:75:GLY:N	2.45	0.48
11:CA:645:C:H2'	11:CA:646:A:C8	2.47	0.48
11:AA:75:C:H1'	35:AY:178:LYS:HG2	1.95	0.48
11:CA:227:G:N2	11:CA:229:A:O2'	2.45	0.48
11:BA:1010:A:H2'	11:BA:1011:C:C6	2.48	0.48
11:AA:605:U:OP2	22:AL:5:LYS:NZ	2.37	0.48
9:D8:66:VAL:HG11	11:DA:1506:G:C6	2.48	0.48
28:DR:297:GLU:N	28:DR:297:GLU:OE1	2.38	0.48
11:DA:614:A:H2'	11:DA:615:A:C8	2.47	0.48
14:BD:80:MET:HB3	14:BD:86:LEU:HB2	1.95	0.48
11:BA:1464:U:OP2	11:BA:1465:C:H5	1.96	0.48
11:DA:69:A:H2'	11:DA:70:U:H5''	1.95	0.48
11:DA:840:A:H62	25:DO:72:LYS:HZ1	1.60	0.48
11:CA:1176:A:H5'	11:CA:1176:A:C8	2.48	0.48
32:BV:35:LEU:HD13	32:BV:47:ARG:HG3	1.94	0.48
3:C2:36:THR:HB	3:C2:65:ALA:O	2.13	0.48
11:AA:1027:U:H2'	11:AA:1028:G:C8	2.48	0.48
11:BA:976:A:N6	11:BA:982:U:OP2	2.45	0.48
11:AA:15:U:H2'	11:AA:16:G:O4'	2.13	0.48
11:BA:1513:G:H2'	11:BA:1514:G:H1'	1.94	0.48
28:CR:193:ASP:N	28:CR:193:ASP:OD1	2.37	0.48
7:B6:5:LEU:H	18:BH:24:GLN:HE22	1.61	0.48
11:DA:270:U:H5'	11:DA:271:U:C6	2.48	0.48
29:CS:46:THR:O	29:CS:50:VAL:HG23	2.13	0.48
25:CO:101:ARG:HH12	25:CO:145:ALA:HA	1.77	0.48
11:CA:1550:U:H4'	19:CI:145:ARG:HH21	1.76	0.48
11:CA:750:U:H3'	11:CA:752:C:OP2	2.13	0.48
25:CO:95:LYS:HB2	25:CO:153:GLN:HE21	1.74	0.48
6:C5:75:TYR:CB	6:C5:80:ALA:HB2	2.43	0.48
11:DA:283:A:H2'	11:DA:284:U:H6	1.78	0.48
11:BA:666:A:H2'	11:BA:667:C:O4'	2.13	0.48
28:BR:330:ASP:OD2	28:BR:334:ARG:NH2	2.46	0.48
3:C2:179:ARG:HG3	3:C2:179:ARG:HH11	1.78	0.48
15:CE:55:ILE:HG23	15:CE:60:ILE:HD12	1.93	0.48
19:DI:9:VAL:HG23	19:DI:98:TYR:HE2	1.78	0.48
15:CE:57:GLU:HG3	15:CE:59:GLU:HG2	1.95	0.48
16:AF:17:THR:O	16:AF:95:ASN:HB3	2.13	0.48
6:A5:17:HIS:HE1	11:AA:1742:G:OP1	1.95	0.48
11:BA:40:A:H3'	11:BA:430:A:H62	1.78	0.48
11:DA:1250:G:H2'	11:DA:1251:C:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:33:GLU:HG2	1:A0:52:ASP:HB2	1.95	0.48
25:CO:129:ARG:O	25:CO:133:LEU:HG	2.12	0.48
33:AW:160:ASP:CG	33:AW:176:HIS:HB3	2.32	0.48
11:CA:928:C:O2'	25:CO:103:HIS:HD2	1.95	0.48
12:DB:25:LEU:HD22	12:DB:33:ILE:HD13	1.94	0.48
36:CZ:73:VAL:HG13	36:CZ:78:GLU:HB2	1.95	0.48
29:BS:74:ALA:HB3	29:BS:76:GLU:OE2	2.13	0.48
12:DB:177:GLU:O	12:DB:181:LEU:HG	2.13	0.48
11:CA:295:U:OP1	27:CQ:135:ARG:HD3	2.13	0.48
29:CS:101:VAL:HB	29:CS:125:ALA:HB2	1.95	0.48
13:BC:85:ASP:N	13:BC:85:ASP:OD1	2.45	0.48
33:AW:202:LYS:HG2	33:AW:208:ASP:OD2	2.13	0.48
8:C7:61:TRP:CE2	24:CN:22:VAL:HG22	2.48	0.48
11:CA:973:A:H2'	11:CA:974:C:O4'	2.13	0.48
10:B9:131:ARG:NH2	11:BA:1208:A:N3	2.62	0.48
3:C2:24:LYS:O	11:CA:391:A:H8	1.96	0.48
31:CU:35:THR:HG22	31:CU:41:ALA:HB2	1.95	0.48
11:CA:1509:U:C4'	11:CA:1509:U:OP2	2.61	0.48
11:DA:771:A:H5''	11:DA:772:A:O5'	2.11	0.48
11:BA:377:G:H2'	11:BA:378:A:C8	2.48	0.48
11:AA:1171:G:C5'	24:AN:39:ARG:HH12	2.25	0.48
11:DA:237:U:H1'	11:DA:238:G:OP2	2.13	0.48
11:DA:1462:U:OP2	11:DA:1464:U:H5	1.96	0.48
31:BU:55:TYR:CG	31:BU:56:VAL:N	2.81	0.48
28:DR:240:TRP:HB3	28:DR:245:LEU:HD21	1.95	0.48
11:AA:1663:A:H5'	11:AA:1664:A:OP2	2.12	0.48
4:C3:192:PHE:HE2	7:C6:25:ALA:HB3	1.76	0.48
11:BA:750:U:H3'	11:BA:752:C:OP2	2.13	0.48
18:BH:68:ARG:NH2	36:BZ:8:GLN:HG3	2.27	0.48
12:AB:23:ILE:HA	12:AB:42:HIS:CD2	2.47	0.48
21:AK:147:ARG:NH1	21:AK:150:ARG:NH2	2.60	0.48
11:AA:1751:U:O2'	11:AA:1753:A:N6	2.46	0.48
20:DJ:32:GLU:OE1	20:DJ:55:ARG:NH2	2.45	0.48
11:BA:738:A:H4'	11:BA:739:A:OP2	2.12	0.48
28:AR:141:GLU:HA	28:AR:160:ASN:HD21	1.78	0.48
11:DA:1569:A:C8	24:DN:13:TYR:CD2	3.00	0.48
28:CR:184:ALA:HB2	23:DM:16:ARG:CD	2.43	0.48
9:C8:60:VAL:HA	9:C8:72:LYS:HG3	1.95	0.48
15:CE:65:TYR:CD2	15:CE:77:LEU:HB2	2.48	0.48
11:BA:681:G:H1	11:BA:720:U:H3	1.61	0.48
25:CO:102:LYS:O	25:CO:105:GLU:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BP:107:GLU:O	26:BP:110:ARG:HB2	2.13	0.48
11:DA:40:A:H3'	11:DA:430:A:H62	1.78	0.48
15:DE:65:TYR:CD2	15:DE:77:LEU:HB2	2.48	0.48
3:B2:177:THR:HG21	11:BA:205:A:OP1	2.13	0.48
15:BE:150:ALA:H	15:BE:175:ARG:HH22	1.61	0.48
16:DF:17:THR:O	16:DF:95:ASN:HB3	2.14	0.48
27:DQ:65:ILE:CD1	27:DQ:139:LEU:HD21	2.42	0.48
11:DA:1008:A:H4'	11:DA:1009:U:OP1	2.13	0.48
15:BE:46:ASP:HA	15:BE:49:PHE:HD2	1.77	0.48
10:A9:73:LYS:NZ	11:AA:1157:U:OP1	2.46	0.48
11:AA:603:U:H4'	11:AA:604:G:O5'	2.12	0.48
31:DU:55:TYR:CE2	31:DU:56:VAL:HG23	2.48	0.48
11:CA:1166:A:P	20:CJ:73:GLY:HA3	2.52	0.48
11:AA:413:C:C4	35:AY:87:ARG:HD3	2.48	0.48
1:D0:22:LYS:HD2	10:D9:74:LYS:NZ	2.28	0.48
11:AA:512:C:H4'	11:AA:512:C:OP1	2.11	0.48
11:BA:1462:U:OP2	11:BA:1464:U:H5	1.96	0.48
11:CA:1469:U:H5'	30:CT:75:GLY:HA3	1.95	0.48
13:CC:98:GLY:HA3	13:CC:132:ASP:OD2	2.13	0.48
11:BA:1137:A:OP1	17:BG:147:TYR:OH	2.23	0.48
31:CU:55:TYR:CG	31:CU:56:VAL:N	2.80	0.48
33:AW:11:ARG:HH12	33:AW:20:LEU:HB3	1.77	0.48
11:AA:270:U:H5'	11:AA:271:U:C6	2.48	0.48
13:CC:24:LEU:HD22	13:CC:28:PHE:HE1	1.78	0.48
11:BA:1568:C:P	24:BN:18:LYS:HZ1	2.36	0.48
2:C1:21:ARG:NH1	11:CA:1591:C:O2	2.45	0.48
6:D5:75:TYR:CB	6:D5:80:ALA:HB2	2.44	0.48
10:C9:106:ASN:HD22	10:C9:108:LYS:HE2	1.78	0.48
12:DB:145:ASP:O	12:DB:148:SER:OG	2.28	0.48
5:A4:128:VAL:HG22	5:A4:175:ASN:ND2	2.28	0.48
23:DM:82:PRO:HD3	30:DT:40:TRP:CE2	2.48	0.48
3:D2:105:VAL:O	3:D2:108:SER:HB2	2.12	0.48
12:AB:25:LEU:HD22	12:AB:33:ILE:HD13	1.94	0.48
11:AA:1740:C:H2'	11:AA:1741:A:C8	2.48	0.48
35:CY:151:ASP:OD2	35:CY:155:LEU:HD12	2.12	0.48
34:DX:7:THR:HG22	34:DX:8:LEU:O	2.13	0.48
11:CA:557:U:H4'	34:CX:17:GLN:OE1	2.14	0.48
22:BL:35:GLY:HA2	22:BL:38:TRP:HD1	1.78	0.48
30:AT:68:VAL:HG11	30:AT:117:ILE:HG21	1.96	0.48
11:DA:576:U:H5'	11:DA:576:U:H6	1.77	0.48
16:CF:17:THR:O	16:CF:95:ASN:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C0:33:GLU:HG2	1:C0:52:ASP:HB2	1.95	0.48
11:CA:776:A:H5''	11:CA:777:U:O5'	2.14	0.48
13:AC:217:PRO:HA	13:AC:218:PRO:HD3	1.67	0.48
9:D8:51:GLU:HA	9:D8:54:ILE:HB	1.95	0.48
11:AA:875:C:H6	11:AA:875:C:OP2	1.96	0.48
11:DA:1213:G:H1'	29:DS:84:HIS:CB	2.43	0.48
15:CE:141:ARG:HB3	15:CE:222:THR:CG2	2.43	0.48
36:BZ:47:VAL:HB	36:BZ:74:ARG:NH1	2.28	0.48
11:BA:62:G:H4'	11:BA:164:U:C5	2.47	0.48
11:BA:772:A:O2'	33:BW:108:LYS:NZ	2.44	0.48
3:C2:22:ARG:HB3	11:CA:376:A:H5''	1.96	0.48
11:CA:680:U:H2'	11:CA:681:G:H8	1.79	0.48
28:DR:255:GLY:H	28:DR:279:LYS:HZ1	1.59	0.48
11:AA:1171:G:C5'	24:AN:39:ARG:NH1	2.76	0.48
20:AJ:69:PRO:O	24:AN:40:ARG:NH1	2.47	0.48
32:DV:18:GLU:HA	32:DV:71:LEU:HD23	1.94	0.48
11:AA:11:A:C2'	11:AA:12:U:H5'	2.42	0.48
11:BA:11:A:C2'	11:BA:12:U:H5'	2.44	0.48
4:C3:194:THR:HB	11:CA:1027:U:O3'	2.13	0.48
11:DA:487:C:H3'	11:DA:488:G:N7	2.28	0.48
5:C4:159:THR:HG23	5:C4:161:TYR:HD2	1.75	0.48
12:CB:187:LYS:HD3	36:CZ:57:ASN:HA	1.94	0.48
11:DA:726:U:H5''	11:DA:727:U:OP2	2.13	0.48
11:DA:1440:A:H4'	11:DA:1513:G:H4'	1.94	0.48
21:DK:91:ASN:N	21:DK:91:ASN:OD1	2.47	0.48
4:D3:45:VAL:HG13	4:D3:63:ILE:HG22	1.95	0.48
11:AA:332:A:H2'	11:AA:333:C:H6	1.77	0.48
2:A1:65:ARG:HH11	17:AG:125:THR:HG21	1.78	0.48
18:DH:52:VAL:HG22	18:DH:61:VAL:HG22	1.96	0.48
5:D4:140:VAL:HG21	5:D4:178:ILE:HG21	1.95	0.48
11:BA:1535:A:OP1	30:BT:87:LYS:NZ	2.46	0.48
26:AP:77:GLN:HE22	26:AP:142:HIS:HE1	1.60	0.48
13:DC:82:TYR:CD2	13:DC:87:ILE:HD11	2.48	0.48
20:AJ:63:ILE:HG22	20:AJ:65:VAL:HG23	1.94	0.48
12:AB:114:GLU:OE1	15:AE:32:LYS:HG3	2.12	0.48
1:A0:60:ILE:HD11	1:A0:70:ILE:HD11	1.95	0.48
13:BC:42:VAL:HG22	13:BC:51:ILE:HG12	1.94	0.48
11:AA:235:A:O2'	11:AA:814:A:H5'	2.13	0.48
11:CA:1399:G:N2	20:CJ:72:GLU:HG2	2.26	0.48
11:AA:2:A:HO2'	11:AA:3:C:P	2.35	0.48
11:AA:1153:U:N3	11:AA:1157:U:H5	2.07	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1008:A:H4'	11:BA:1009:U:OP1	2.13	0.48
6:A5:46:ASP:H	21:AK:113:GLN:CD	2.16	0.48
11:DA:531:A:H1'	39:DA:7637:HOH:O	2.11	0.48
10:D9:109:VAL:HG21	31:DU:62:LEU:HD23	1.96	0.48
11:BA:603:U:H4'	11:BA:604:G:O5'	2.14	0.48
19:CI:12:PHE:HE2	19:CI:14:ARG:HH12	1.62	0.48
14:AD:62:LEU:HD11	14:AD:68:ARG:HH11	1.72	0.48
28:CR:114:PHE:CD2	28:CR:149:GLY:HA2	2.48	0.48
14:BD:86:LEU:HD12	14:BD:86:LEU:HA	1.65	0.48
11:CA:512:C:OP1	11:CA:512:C:H4'	2.12	0.48
11:DA:1464:U:OP2	11:DA:1465:C:H5	1.97	0.48
11:CA:537:A:O2'	34:CX:32:LYS:HE3	2.12	0.48
11:CA:444:A:H5'	11:CA:445:U:C5	2.48	0.48
11:AA:488:G:OP2	11:AA:488:G:C8	2.67	0.48
11:DA:1514:G:H5'	30:DT:90:GLY:CA	2.44	0.48
27:DQ:12:GLN:NE2	27:DQ:60:THR:HG23	2.27	0.48
26:AP:18:ARG:HH21	26:AP:20:GLN:NE2	2.12	0.48
11:CA:887:U:C6	11:CA:887:U:H5''	2.48	0.48
11:DA:1384:U:H2'	11:DA:1387:A:OP1	2.13	0.48
12:BB:121:THR:O	12:BB:143:LEU:HB2	2.14	0.48
28:BR:190:VAL:HB	28:BR:219:LEU:HD13	1.94	0.48
16:CF:58:ASN:HB3	16:CF:74:ASN:HD21	1.77	0.48
5:C4:72:LEU:O	5:C4:79:SER:OG	2.28	0.48
33:BW:202:LYS:HG2	33:BW:208:ASP:OD2	2.13	0.48
35:AY:32:MET:HE1	35:AY:63:MET:HB2	1.94	0.48
26:DP:15:LEU:HD21	33:DW:94:ILE:CG2	2.44	0.48
11:CA:338:G:OP1	27:CQ:84:ILE:HD11	2.12	0.48
11:BA:57:U:O2'	11:BA:443:A:N3	2.42	0.48
14:CD:110:GLN:OE1	14:CD:126:ARG:HD2	2.14	0.48
8:A7:65:TYR:HB3	13:AC:75:PHE:CE1	2.49	0.48
9:B8:63:VAL:HG22	17:BG:97:LEU:HB3	1.96	0.48
25:DO:43:ALA:HB1	25:DO:82:CYS:SG	2.54	0.48
17:AG:168:LEU:O	17:AG:172:ILE:HG13	2.13	0.48
1:B0:60:ILE:HA	1:B0:90:ILE:HB	1.96	0.48
31:BU:108:TYR:HB3	31:BU:112:ILE:HD12	1.94	0.48
13:AC:121:ALA:O	13:AC:125:ILE:HD12	2.13	0.48
3:C2:185:ARG:NH2	11:CA:202:U:O2	2.46	0.48
11:CA:875:C:H6	11:CA:875:C:OP2	1.96	0.48
11:CA:1049:C:O2'	11:CA:1050:C:H5'	2.13	0.48
29:DS:74:ALA:HB3	29:DS:76:GLU:OE2	2.14	0.48
14:AD:90:GLU:HB3	14:AD:95:TYR:CD2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1008:A:H4'	11:CA:1009:U:OP1	2.14	0.48
11:AA:1199:G:OP2	31:AU:98:LYS:HD2	2.12	0.48
11:AA:1508:G:HO2'	11:AA:1509:U:P	2.33	0.48
11:CA:770:G:H2'	11:CA:771:A:H8	1.69	0.48
11:BA:1585:U:OP1	17:BG:143:ASN:ND2	2.47	0.48
11:CA:1319:U:O2	11:CA:1488:A:H2'	2.14	0.48
11:CA:878:A:O2'	11:CA:894:U:H1'	2.13	0.48
11:CA:313:G:O4'	11:CA:314:A:H8	1.97	0.48
22:BL:77:LYS:HG3	22:BL:78:ASN:N	2.29	0.48
16:DF:78:ARG:NH1	16:DF:100:GLY:CA	2.76	0.48
11:AA:912:A:HO2'	11:AA:913:U:P	2.37	0.48
11:CA:1721:G:H3'	11:CA:1721:G:C8	2.48	0.48
4:D3:109:LYS:CE	4:D3:109:LYS:H	2.27	0.48
11:AA:887:U:H5"	11:AA:887:U:C6	2.48	0.48
20:CJ:22:THR:HG22	20:CJ:88:ILE:HG12	1.94	0.48
5:D4:46:GLY:HA3	21:DK:47:LEU:CD1	2.44	0.48
29:CS:42:PHE:CD1	29:CS:46:THR:HG21	2.48	0.48
25:BO:97:ALA:O	25:BO:101:ARG:HG2	2.13	0.48
27:CQ:37:ILE:HD11	27:CQ:59:PHE:HE1	1.79	0.48
35:DY:70:ARG:HB2	35:DY:101:ILE:HB	1.95	0.48
15:BE:35:ARG:NH1	15:BE:248:LEU:O	2.42	0.48
11:BA:1538:U:H5'	23:BM:39:GLY:H	1.78	0.48
27:CQ:56:LYS:O	27:CQ:63:LEU:HD22	2.13	0.48
11:DA:1236:G:H4'	11:DA:1237:G:OP1	2.12	0.48
27:BQ:68:LYS:HB2	27:BQ:126:GLN:OE1	2.13	0.48
16:AF:58:ASN:HB3	16:AF:74:ASN:HD21	1.78	0.48
16:DF:58:ASN:HB3	16:DF:74:ASN:HD21	1.78	0.48
31:DU:108:TYR:HB3	31:DU:112:ILE:HD12	1.94	0.48
11:BA:721:A:H5"	11:BA:722:A:OP2	2.13	0.48
35:AY:129:LEU:HG	35:AY:130:PRO:HD2	1.96	0.48
18:BH:18:GLU:OE2	18:BH:67:GLY:HA2	2.12	0.48
33:DW:202:LYS:HG2	33:DW:208:ASP:OD2	2.13	0.48
26:CP:107:GLU:O	26:CP:110:ARG:HB2	2.14	0.48
5:B4:149:THR:O	5:B4:151:ALA:N	2.46	0.48
11:DA:1183:A:H1'	29:DS:105:LYS:HA	1.96	0.48
11:DA:451:G:OP1	26:DP:102:ARG:NH2	2.47	0.48
11:AA:1051:G:O6	39:AA:2198:HOH:O	2.17	0.48
4:A3:143:ALA:O	18:AH:49:GLU:HG3	2.14	0.48
11:AA:75:C:H5'	35:AY:176:CYS:HB2	1.95	0.48
11:BA:1007:U:O2'	11:BA:1009:U:H5	1.96	0.48
11:BA:560:C:OP2	22:BL:65:SER:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BB:201:LYS:HD2	32:BV:84:TYR:HE2	1.78	0.48
11:CA:69:A:H2'	11:CA:70:U:H5''	1.95	0.48
23:AM:89:ILE:HA	23:AM:89:ILE:HD13	1.79	0.48
23:AM:92:PHE:O	29:AS:14:ARG:N	2.35	0.48
11:DA:1464:U:OP2	11:DA:1465:C:C5	2.67	0.48
11:CA:485:U:H2'	11:CA:486:A:H5'	1.95	0.48
11:CA:1621:G:OP1	22:CL:72:ARG:NH2	2.37	0.48
11:CA:986:G:H5''	39:CA:2160:HOH:O	2.14	0.48
9:A8:43:VAL:HG21	23:AM:25:LYS:HB2	1.94	0.48
3:B2:50:ARG:NH1	11:BA:1649:U:OP2	2.39	0.48
11:AA:1469:U:H5'	30:AT:75:GLY:HA3	1.95	0.48
11:AA:482:A:C5'	26:BP:37:LYS:NZ	2.76	0.48
11:AA:482:A:H5'	26:BP:37:LYS:NZ	2.29	0.48
28:DR:186:TYR:HB2	28:DR:198:VAL:HG13	1.96	0.48
11:DA:1329:G:H21	30:DT:137:MET:HE1	1.78	0.48
11:AA:662:U:H2'	11:AA:663:G:O4'	2.14	0.48
11:DA:1287:U:OP1	11:DA:1300:G:N2	2.47	0.48
12:BB:169:MET:HG3	12:BB:195:VAL:HG11	1.95	0.48
3:A2:179:ARG:HH11	3:A2:179:ARG:HG3	1.78	0.48
17:BG:49:GLY:HA3	17:BG:51:TYR:CE2	2.49	0.48
25:AO:43:ALA:HB1	25:AO:82:CYS:SG	2.54	0.48
17:DG:168:LEU:O	17:DG:172:ILE:HG13	2.14	0.48
15:AE:234:PRO:HB3	36:AZ:13:MET:HE2	1.96	0.48
15:CE:107:ASP:OD1	15:CE:111:HIS:HB2	2.14	0.48
11:CA:1250:G:H2'	11:CA:1251:C:O4'	2.13	0.48
5:B4:69:GLU:OE1	5:B4:88:LYS:HG2	2.14	0.48
11:BA:1740:C:H2'	11:BA:1741:A:C8	2.48	0.48
2:A1:9:ALA:HB1	2:A1:29:VAL:HG11	1.94	0.48
30:CT:68:VAL:HG11	30:CT:117:ILE:HG21	1.96	0.48
11:CA:1475:G:H2'	11:CA:1476:A:C8	2.48	0.48
11:AA:1692:C:N4	39:AA:2228:HOH:O	2.46	0.48
9:B8:60:VAL:HA	9:B8:72:LYS:HG3	1.95	0.48
33:CW:162:LEU:HD13	33:CW:171:ILE:HG21	1.94	0.48
11:DA:1246:C:OP2	11:DA:1399:G:OP2	2.31	0.48
10:A9:72:LYS:HD3	11:AA:1160:G:H5'	1.96	0.48
11:BA:1337:C:O2'	30:BT:11:LYS:HG3	2.14	0.48
11:DA:1404:G:C8	24:DN:40:ARG:HD2	2.49	0.48
11:AA:69:A:H2'	11:AA:70:U:H5''	1.94	0.48
30:DT:46:ALA:HB1	30:DT:87:LYS:HB3	1.96	0.48
4:A3:115:ARG:NH1	11:AA:632:U:N3	2.61	0.48
11:BA:1469:U:H5'	11:BA:1470:C:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BC:146:LYS:CB	13:BC:151:LYS:HZ2	2.27	0.48
33:CW:107:THR:HG21	33:CW:247:ARG:HA	1.95	0.48
9:B8:43:VAL:HG21	23:BM:25:LYS:HB2	1.95	0.48
11:DA:1538:U:H5'	23:DM:39:GLY:H	1.78	0.48
4:A3:45:VAL:HG13	4:A3:63:ILE:HG22	1.95	0.48
28:AR:186:TYR:HB2	28:AR:198:VAL:HG13	1.96	0.48
11:BA:762:U:H5	26:BP:6:ARG:NH1	2.12	0.48
27:CQ:63:LEU:HD21	27:CQ:127:CYS:SG	2.54	0.48
4:C3:190:LYS:HB3	7:C6:10:TYR:CE1	2.48	0.48
29:BS:119:LYS:HG2	29:BS:119:LYS:H	1.39	0.48
14:AD:90:GLU:HB3	14:AD:95:TYR:CG	2.49	0.48
11:DA:1695:U:H2'	11:DA:1696:U:O4'	2.14	0.48
27:BQ:65:ILE:CD1	27:BQ:139:LEU:HD21	2.43	0.48
19:BI:8:LEU:HD11	19:BI:23:SER:HB3	1.94	0.48
21:BK:39:ASP:OD1	21:BK:40:THR:N	2.41	0.48
28:DR:24:VAL:O	28:DR:313:THR:HB	2.14	0.48
11:AA:498:C:H4'	11:AA:499:A:OP2	2.14	0.48
4:D3:197:LYS:N	11:DA:1029:G:OP1	2.46	0.48
18:AH:41:MET:HB2	18:AH:47:ILE:HD13	1.96	0.48
11:CA:1245:G:HO2'	11:CA:1246:C:P	2.36	0.48
11:CA:1313:G:H22	11:CA:1354:A:H2	1.61	0.48
11:BA:210:A:OP2	11:BA:210:A:H8	1.94	0.48
11:BA:771:A:H4'	11:BA:772:A:OP2	2.13	0.48
11:CA:137:G:H2'	11:CA:138:G:C8	2.49	0.48
11:AA:1171:G:H5''	24:AN:39:ARG:HH12	1.78	0.48
28:BR:114:PHE:CD2	28:BR:149:GLY:HA2	2.48	0.48
28:DR:92:ILE:HD11	28:DR:124:VAL:HB	1.95	0.48
11:BA:2:A:C2	11:BA:361:A:H1'	2.49	0.48
11:AA:1721:G:C8	11:AA:1721:G:H3'	2.49	0.48
11:BA:1464:U:OP2	11:BA:1465:C:C5	2.67	0.48
12:CB:56:ALA:O	12:CB:60:ILE:HG13	2.14	0.48
13:BC:98:GLY:HA3	13:BC:132:ASP:OD2	2.14	0.48
11:DA:1454:A:H4'	19:DI:73:GLY:O	2.13	0.48
5:B4:148:LYS:HZ2	5:B4:158:SER:HB3	1.79	0.48
11:AA:214:U:H5'	11:AA:214:U:H6	1.79	0.48
28:BR:163:ASP:HB3	28:BR:164:TRP:H	1.60	0.48
18:BH:112:THR:HB	18:BH:115:GLU:HG3	1.95	0.48
11:CA:283:A:H2'	11:CA:284:U:H6	1.78	0.48
8:D7:47:ARG:HG3	8:D7:47:ARG:HH11	1.78	0.48
5:D4:128:VAL:HG22	5:D4:175:ASN:ND2	2.29	0.48
3:B2:179:ARG:HG3	3:B2:179:ARG:HH11	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:DC:15:VAL:HG11	24:DN:35:MET:HB3	1.95	0.48
25:BO:102:LYS:O	25:BO:105:GLU:HG2	2.14	0.48
4:A3:108:HIS:CE1	11:AA:801:C:H5'	2.49	0.48
11:AA:645:C:H2'	11:AA:646:A:C8	2.48	0.48
3:B2:105:VAL:O	3:B2:108:SER:HB2	2.13	0.48
5:C4:69:GLU:OE1	5:C4:88:LYS:HG2	2.14	0.48
28:CR:186:TYR:HB2	28:CR:198:VAL:HG13	1.96	0.48
28:DR:176:SER:HB2	28:DR:179:LYS:HG2	1.96	0.48
24:AN:34:GLU:O	24:AN:34:GLU:HG3	2.14	0.48
19:AI:9:VAL:HG23	19:AI:98:TYR:HE2	1.79	0.48
11:DA:1740:C:H2'	11:DA:1741:A:C8	2.49	0.48
13:DC:215:ILE:HG13	32:DV:15:SER:HB3	1.95	0.48
10:C9:130:ASP:N	10:C9:130:ASP:OD1	2.46	0.48
29:CS:36:ASP:OD1	29:CS:36:ASP:N	2.47	0.48
24:CN:34:GLU:HG3	24:CN:34:GLU:O	2.13	0.48
15:DE:46:ASP:HA	15:DE:49:PHE:HD2	1.79	0.48
32:DV:25:THR:HG22	32:DV:27:ASP:H	1.79	0.48
11:BA:531:A:H5''	11:BA:536:C:H41	1.79	0.48
11:BA:1506:G:O2'	11:BA:1507:U:P	2.71	0.48
11:CA:603:U:H4'	11:CA:604:G:O5'	2.13	0.48
11:BA:1246:C:O2'	11:BA:1247:A:P	2.72	0.48
11:BA:238:G:O2'	11:BA:239:A:P	2.72	0.48
11:DA:1451:C:H4'	11:DA:1452:G:OP1	2.14	0.48
10:D9:92:HIS:NE2	11:DA:1201:G:C5	2.82	0.48
11:DA:211:U:H3	11:DA:238:G:H22	1.61	0.48
11:DA:650:C:H2'	11:DA:651:G:O4'	2.13	0.48
11:DA:679:U:H4'	11:DA:680:U:OP2	2.14	0.48
33:AW:36:HIS:CD2	33:AW:87:GLY:HA3	2.48	0.48
26:CP:18:ARG:NE	26:CP:20:GLN:HE21	2.12	0.48
29:AS:46:THR:O	29:AS:50:VAL:HG23	2.13	0.48
28:BR:161:HIS:CD2	28:BR:161:HIS:H	2.31	0.48
5:A4:37:PRO:HG3	5:A4:101:THR:O	2.13	0.48
10:A9:106:ASN:HD22	10:A9:108:LYS:HE2	1.78	0.48
3:D2:179:ARG:HG3	3:D2:179:ARG:HH11	1.79	0.48
15:AE:55:ILE:HG23	15:AE:60:ILE:HD12	1.94	0.48
11:AA:726:U:H5''	11:AA:727:U:OP2	2.14	0.48
36:BZ:30:ARG:O	36:BZ:39:ILE:HG12	2.14	0.48
25:CO:43:ALA:HB1	25:CO:82:CYS:SG	2.54	0.48
12:CB:201:LYS:NZ	32:CV:82:LEU:HD22	2.29	0.48
11:DA:137:G:H2'	11:DA:138:G:C8	2.49	0.48
11:CA:1098:A:H5''	11:CA:1099:G:OP2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:629:A:OP1	39:DA:7830:HOH:O	2.18	0.48
19:BI:57:LEU:HD23	19:BI:110:GLN:HG2	1.96	0.48
28:AR:86:GLN:HB3	28:AR:130:ASN:HD21	1.79	0.48
20:CJ:42:ALA:HB1	20:CJ:48:VAL:HG11	1.96	0.48
11:CA:1740:C:H2'	11:CA:1741:A:C8	2.49	0.48
28:BR:86:GLN:HB3	28:BR:130:ASN:HD21	1.79	0.48
11:AA:973:A:H2'	11:AA:974:C:O4'	2.12	0.48
11:AA:655:C:OP2	11:AA:655:C:O4'	2.31	0.48
17:CG:157:ALA:HB2	17:CG:167:THR:OG1	2.14	0.48
15:AE:65:TYR:CD2	15:AE:77:LEU:HB2	2.49	0.48
11:DA:1246:C:O2'	11:DA:1247:A:P	2.72	0.47
11:CA:2:A:H1'	11:CA:3:C:OP1	2.14	0.47
11:CA:221:A:C6	11:CA:222:U:H1'	2.49	0.47
11:CA:231:U:H5''	11:CA:232:G:OP2	2.14	0.47
11:DA:894:U:C4	21:DK:55:ARG:NH2	2.82	0.47
23:CM:122:HIS:HE1	29:CS:128:TYR:OH	1.97	0.47
11:DA:512:C:H4'	11:DA:512:C:OP1	2.13	0.47
28:AR:240:TRP:HB3	28:AR:245:LEU:HD21	1.96	0.47
32:DV:35:LEU:HD13	32:DV:47:ARG:HG3	1.96	0.47
11:BA:1256:C:H4'	11:BA:1257:U:OP1	2.13	0.47
11:DA:1122:G:H1'	11:DA:1718:A:N3	2.28	0.47
35:AY:70:ARG:HB2	35:AY:101:ILE:HB	1.96	0.47
4:B3:174:TYR:CE2	4:B3:180:ARG:HB2	2.49	0.47
11:BA:1406:G:O2'	11:BA:1407:A:OP2	2.31	0.47
18:BH:111:LEU:HB3	18:BH:115:GLU:HB2	1.96	0.47
5:B4:38:ILE:HA	5:B4:240:HIS:NE2	2.29	0.47
5:C4:140:VAL:HG21	5:C4:178:ILE:HG21	1.95	0.47
11:BA:331:U:H2'	11:BA:332:A:H8	1.78	0.47
35:AY:98:ARG:HD2	35:AY:99:GLY:N	2.29	0.47
6:A5:75:TYR:CB	6:A5:80:ALA:HB2	2.44	0.47
4:D3:190:LYS:HB3	7:D6:10:TYR:CE1	2.48	0.47
11:CA:738:A:H4'	11:CA:739:A:OP2	2.14	0.47
13:CC:121:ALA:O	13:CC:125:ILE:HD12	2.14	0.47
1:C0:60:ILE:HA	1:C0:90:ILE:HB	1.96	0.47
11:AA:896:U:H2'	11:AA:897:A:H8	1.79	0.47
23:AM:66:CYS:HA	23:AM:69:ILE:HD12	1.96	0.47
6:C5:82:HIS:ND1	11:CA:1719:A:N1	2.61	0.47
12:CB:12:ARG:HD3	12:CB:172:TRP:HZ3	1.78	0.47
14:DD:81:PHE:CE1	14:DD:88:GLU:HA	2.49	0.47
5:D4:86:LYS:HB2	5:D4:107:ASP:HB3	1.95	0.47
9:C8:41:HIS:HB3	9:C8:76:ASN:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AI:129:LYS:HE3	19:AI:133:GLY:O	2.14	0.47
12:CB:186:SER:HB3	12:CB:189:GLU:HB3	1.95	0.47
19:CI:26:PRO:HA	19:CI:65:LEU:HD23	1.96	0.47
11:DA:466:A:H4'	14:DD:130:ARG:NH1	2.28	0.47
19:BI:9:VAL:HG23	19:BI:98:TYR:HE2	1.79	0.47
10:C9:101:TYR:OH	31:CU:37:GLU:HG3	2.13	0.47
23:CM:45:ILE:O	23:CM:49:VAL:HG23	2.14	0.47
12:DB:169:MET:HG3	12:DB:195:VAL:HG11	1.94	0.47
11:AA:1200:G:C8	31:AU:76:ARG:NH1	2.82	0.47
11:CA:4:C:OP2	15:CE:201:SER:OG	2.30	0.47
13:AC:146:LYS:CD	13:AC:151:LYS:HZ2	2.22	0.47
11:BA:1124:A:H4'	11:BA:1719:A:C5	2.49	0.47
11:DA:1480:U:HO2'	11:DA:1481:A:P	2.37	0.47
11:BA:1176:A:H5'	11:BA:1176:A:C8	2.49	0.47
17:BG:66:ARG:NH2	17:BG:143:ASN:HD21	2.12	0.47
21:AK:91:ASN:N	21:AK:91:ASN:OD1	2.46	0.47
11:DA:1513:G:H2'	11:DA:1514:G:H1'	1.96	0.47
11:BA:840:A:O2'	11:BA:841:A:O5'	2.27	0.47
32:CV:35:LEU:HD13	32:CV:47:ARG:HG3	1.97	0.47
5:B4:148:LYS:HE2	5:B4:152:GLY:H	1.79	0.47
14:BD:149:ARG:CG	14:BD:152:SER:HB2	2.43	0.47
20:CJ:22:THR:OG1	20:CJ:113:GLU:HB2	2.14	0.47
28:BR:140:ARG:HH11	28:BR:162:SER:HA	1.79	0.47
11:DA:879:G:H22	21:DK:68:GLU:CD	2.17	0.47
4:B3:65:VAL:HG13	4:B3:69:SER:HB2	1.96	0.47
13:BC:105:VAL:HG21	13:BC:174:ALA:HB3	1.97	0.47
8:B7:52:ARG:HB2	8:B7:54:PHE:CE2	2.49	0.47
18:AH:111:LEU:HB3	18:AH:115:GLU:HB2	1.95	0.47
11:CA:879:G:C6	11:CA:880:G:C6	3.02	0.47
11:BA:1447:C:H5''	30:BT:48:GLU:OE2	2.14	0.47
1:C0:60:ILE:HD11	1:C0:70:ILE:HD11	1.96	0.47
13:DC:193:LEU:HB3	13:DC:204:GLY:HA2	1.96	0.47
13:DC:178:VAL:HG23	13:DC:185:MET:HB3	1.96	0.47
5:B4:31:TRP:CZ2	21:BK:17:GLY:HA2	2.49	0.47
12:CB:147:ASP:OD2	12:CB:162:ARG:NH2	2.45	0.47
29:DS:101:VAL:HB	29:DS:125:ALA:HB2	1.95	0.47
36:DZ:9:ARG:HH22	36:DZ:33:ASP:HA	1.80	0.47
11:CA:576:U:H5'	11:CA:576:U:H6	1.78	0.47
11:AA:1326:C:H5'	11:AA:1327:U:OP2	2.12	0.47
35:CY:142:LYS:HE3	35:CY:156:ILE:HD11	1.96	0.47
11:BA:407:A:H5'	11:BA:408:C:H5	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BH:12:LYS:HE3	18:BH:12:LYS:HB2	1.47	0.47
29:DS:119:LYS:H	29:DS:119:LYS:HG2	1.39	0.47
16:AF:66:GLU:HG3	16:AF:66:GLU:O	2.13	0.47
13:DC:85:ASP:OD1	13:DC:85:ASP:N	2.45	0.47
11:BA:467:A:H5'	11:BA:467:A:H8	1.78	0.47
15:BE:184:ILE:H	15:BE:184:ILE:HD12	1.78	0.47
11:BA:135:A:N6	35:BY:191:LYS:HB2	2.29	0.47
11:BA:1473:G:P	30:BT:102:LYS:NZ	2.86	0.47
14:CD:37:LYS:HG3	14:CD:38:ASN:CB	2.45	0.47
11:AA:1357:G:OP1	32:AV:32:LYS:NZ	2.44	0.47
14:AD:149:ARG:CG	14:AD:152:SER:HB2	2.43	0.47
3:D2:67:ARG:O	3:D2:68:LEU:HD23	2.14	0.47
11:CA:1513:G:H2'	11:CA:1514:G:H1'	1.96	0.47
11:DA:494:A:H4'	11:DA:494:A:OP1	2.11	0.47
20:CJ:54:VAL:HB	20:CJ:88:ILE:HB	1.96	0.47
26:BP:18:ARG:HH21	26:BP:20:GLN:NE2	2.12	0.47
11:CA:15:U:H2'	11:CA:16:G:O4'	2.13	0.47
5:D4:100:LYS:HD3	5:D4:238:TYR:CE2	2.48	0.47
28:CR:330:ASP:OD2	28:CR:334:ARG:NH2	2.46	0.47
15:BE:37:VAL:HG21	15:BE:60:ILE:HG23	1.95	0.47
12:BB:147:ASP:OD2	12:BB:162:ARG:NH2	2.47	0.47
11:BA:137:G:H2'	11:BA:138:G:C8	2.49	0.47
17:AG:107:PHE:HD1	17:AG:172:ILE:HD13	1.78	0.47
17:DG:106:VAL:HG12	17:DG:172:ILE:HG22	1.96	0.47
5:B4:86:LYS:HB2	5:B4:107:ASP:HB3	1.96	0.47
5:C4:86:LYS:HB2	5:C4:107:ASP:HB3	1.96	0.47
11:CA:575:U:H5''	11:CA:576:U:OP2	2.13	0.47
11:CA:466:A:H4'	14:CD:130:ARG:NH1	2.28	0.47
28:DR:98:LYS:HG2	28:DR:119:SER:O	2.14	0.47
9:B8:46:GLU:CG	23:BM:8:GLU:HB2	2.44	0.47
16:BF:17:THR:O	16:BF:95:ASN:HB3	2.14	0.47
8:A7:17:LEU:HD12	8:A7:89:PRO:HG3	1.94	0.47
4:A3:36:SER:O	4:A3:40:ILE:HG13	2.14	0.47
10:B9:104:GLU:HG2	10:B9:105:ASN:H	1.80	0.47
33:BW:160:ASP:CG	33:BW:176:HIS:HB3	2.34	0.47
11:BA:977:U:H2'	11:BA:978:C:O4'	2.13	0.47
20:DJ:63:ILE:HG22	20:DJ:65:VAL:HG23	1.96	0.47
25:BO:43:ALA:HB1	25:BO:82:CYS:SG	2.54	0.47
19:CI:74:SER:OG	19:CI:75:GLY:N	2.46	0.47
11:BA:89:A:C6	11:BA:389:G:C6	3.02	0.47
11:DA:1007:U:O2'	11:DA:1009:U:H5	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:DE:45:LEU:HD12	15:DE:48:ILE:HD12	1.96	0.47
15:BE:45:LEU:HD12	15:BE:48:ILE:HD12	1.96	0.47
11:CA:235:A:HO2'	11:CA:814:A:H5'	1.79	0.47
10:D9:143:ILE:HG23	10:D9:144:ASP:N	2.29	0.47
3:A2:22:ARG:HB3	11:AA:376:A:H5''	1.97	0.47
11:CA:1171:G:H5''	24:CN:39:ARG:HH12	1.78	0.47
11:CA:1664:A:C5	11:CA:1665:U:H1'	2.49	0.47
2:A1:58:MET:HB2	2:A1:59:GLU:OE2	2.15	0.47
3:C2:21:HIS:CE1	11:CA:101:A:O2'	2.68	0.47
11:BA:444:A:H5'	11:BA:445:U:C5	2.49	0.47
11:CA:238:G:O2'	11:CA:239:A:P	2.71	0.47
10:C9:128:HIS:HB2	10:C9:131:ARG:HG3	1.97	0.47
11:AA:1513:G:H2'	11:AA:1514:G:H1'	1.95	0.47
26:BP:15:LEU:HD12	33:BW:54:TYR:HB3	1.97	0.47
15:AE:227:THR:HB	15:AE:228:PRO:HD2	1.96	0.47
11:AA:931:A:P	25:AO:96:LYS:HZ2	2.36	0.47
11:DA:90:U:O2'	33:DW:8:HIS:HD2	1.97	0.47
11:AA:1287:U:OP1	11:AA:1300:G:N2	2.47	0.47
25:AO:101:ARG:HH12	25:AO:145:ALA:HA	1.78	0.47
21:BK:147:ARG:NH1	21:BK:150:ARG:NH2	2.61	0.47
11:AA:1359:C:O2'	32:AV:52:GLY:HA3	2.15	0.47
27:CQ:68:LYS:HB2	27:CQ:126:GLN:OE1	2.15	0.47
11:BA:283:A:H2'	11:BA:284:U:H6	1.79	0.47
11:BA:1383:G:O2'	11:BA:1384:U:OP1	2.25	0.47
1:A0:60:ILE:HA	1:A0:90:ILE:HB	1.96	0.47
23:AM:15:HIS:NE2	23:AM:66:CYS:SG	2.87	0.47
12:CB:54:LYS:HB2	36:CZ:95:ILE:HD13	1.95	0.47
18:AH:18:GLU:OE2	18:AH:67:GLY:HA2	2.14	0.47
5:A4:149:THR:O	5:A4:151:ALA:N	2.47	0.47
11:AA:136:U:P	35:AY:139:ASN:HD21	2.36	0.47
12:CB:161:ASN:O	12:CB:167:ILE:HD11	2.13	0.47
11:AA:338:G:OP1	27:AQ:84:ILE:HD11	2.15	0.47
25:DO:102:LYS:O	25:DO:105:GLU:HG2	2.15	0.47
17:CG:117:ARG:O	17:CG:136:VAL:N	2.38	0.47
5:D4:149:THR:O	5:D4:151:ALA:N	2.47	0.47
14:AD:32:GLY:HA3	34:AX:41:TYR:CD1	2.48	0.47
19:BI:26:PRO:HA	19:BI:65:LEU:HD23	1.96	0.47
14:DD:90:GLU:HB3	14:DD:95:TYR:CD2	2.49	0.47
12:DB:12:ARG:HD3	12:DB:172:TRP:HZ3	1.78	0.47
12:DB:53:ILE:HG23	12:DB:174:ILE:HG13	1.96	0.47
22:CL:35:GLY:HA2	22:CL:38:TRP:HD1	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BW:31:PRO:HG2	33:BW:38:LEU:HG	1.97	0.47
19:CI:9:VAL:HG23	19:CI:98:TYR:HE2	1.79	0.47
17:CG:168:LEU:O	17:CG:172:ILE:HG13	2.14	0.47
13:BC:121:ALA:O	13:BC:125:ILE:HD12	2.15	0.47
21:CK:76:GLN:O	21:CK:79:ILE:HG13	2.14	0.47
11:BA:896:U:H2'	11:BA:897:A:H8	1.80	0.47
33:CW:160:ASP:CG	33:CW:176:HIS:HB3	2.35	0.47
11:DA:1212:U:H2'	11:DA:1214:A:OP2	2.12	0.47
12:AB:152:TYR:CZ	36:AZ:75:SER:HB2	2.49	0.47
11:AA:1246:C:OP2	11:AA:1399:G:OP2	2.31	0.47
6:B5:99:PRO:CD	6:B5:100:PRO:HD3	2.44	0.47
11:CA:227:G:H21	11:CA:229:A:H8	1.61	0.47
11:DA:1176:A:H5'	11:DA:1176:A:C8	2.50	0.47
9:A8:41:HIS:HB3	9:A8:76:ASN:N	2.29	0.47
11:BA:229:A:C5	11:BA:230:A:N6	2.83	0.47
11:CA:679:U:H3	11:CA:722:A:N6	2.04	0.47
11:AA:292:G:H2'	11:AA:293:U:O4'	2.15	0.47
14:CD:38:ASN:ND2	14:CD:40:ARG:NH1	2.57	0.47
20:AJ:37:GLU:O	20:AJ:41:ARG:HB2	2.15	0.47
11:AA:507:G:HO2'	11:AA:508:A:P	2.36	0.47
25:CO:4:MET:SD	25:CO:126:ARG:NH1	2.87	0.47
19:CI:62:PHE:CE2	19:CI:91:ILE:HD11	2.50	0.47
11:CA:531:A:H5''	11:CA:536:C:H41	1.79	0.47
11:DA:181:G:H8	11:DA:181:G:H5'	1.79	0.47
12:BB:56:ALA:O	12:BB:60:ILE:HG13	2.14	0.47
11:AA:1176:A:C8	11:AA:1176:A:H5'	2.50	0.47
11:CA:1168:A:HO2'	11:CA:1169:C:P	2.36	0.47
3:C2:67:ARG:O	3:C2:68:LEU:HD23	2.14	0.47
31:CU:55:TYR:CE2	31:CU:56:VAL:HG23	2.48	0.47
33:DW:107:THR:HG21	33:DW:247:ARG:HA	1.96	0.47
3:B2:36:THR:HB	3:B2:65:ALA:O	2.14	0.47
4:A3:65:VAL:HG13	4:A3:69:SER:HB2	1.97	0.47
11:AA:282:A:H2'	11:AA:283:A:C8	2.49	0.47
11:AA:283:A:H2'	11:AA:284:U:H6	1.78	0.47
17:AG:106:VAL:HG12	17:AG:172:ILE:HG22	1.97	0.47
1:B0:60:ILE:HD11	1:B0:70:ILE:HD11	1.97	0.47
11:BA:1281:G:H5'	11:BA:1282:U:OP2	2.14	0.47
22:DL:35:GLY:HA2	22:DL:38:TRP:HD1	1.79	0.47
23:AM:45:ILE:O	23:AM:49:VAL:HG23	2.14	0.47
13:CC:178:VAL:HG23	13:CC:185:MET:HB3	1.96	0.47
35:DY:32:MET:HE1	35:DY:63:MET:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C5:17:HIS:HE1	11:CA:1742:G:OP1	1.96	0.47
18:BH:10:CYS:HA	18:BH:27:LEU:HD11	1.95	0.47
30:BT:99:CYS:SG	30:BT:100:HIS:N	2.88	0.47
28:DR:20:HIS:HE1	28:DR:50:THR:HG22	1.78	0.47
11:CA:1575:U:H2'	11:CA:1576:U:C6	2.50	0.47
32:CV:25:THR:HG22	32:CV:27:ASP:H	1.79	0.47
31:BU:83:LEU:HD11	31:BU:103:LEU:HD21	1.96	0.47
27:BQ:39:LEU:HA	27:BQ:39:LEU:HD23	1.66	0.47
16:CF:66:GLU:HG3	16:CF:66:GLU:O	2.14	0.47
25:BO:18:LEU:HD23	25:BO:18:LEU:HA	1.66	0.47
1:D0:33:GLU:HG2	1:D0:52:ASP:HB2	1.95	0.47
11:AA:1250:G:H2'	11:AA:1251:C:O4'	2.14	0.47
15:BE:107:ASP:OD1	15:BE:111:HIS:HB2	2.14	0.47
11:DA:1007:U:O2'	11:DA:1009:U:C5	2.67	0.47
6:C5:99:PRO:CD	6:C5:100:PRO:HD3	2.44	0.47
6:A5:99:PRO:CD	6:A5:100:PRO:HD3	2.44	0.47
11:DA:1509:U:C4'	11:DA:1509:U:OP2	2.62	0.47
11:AA:1494:U:O2'	11:AA:1495:U:P	2.72	0.47
11:BA:606:U:OP2	22:BL:5:LYS:NZ	2.47	0.47
11:DA:892:G:O2'	11:DA:893:A:C8	2.66	0.47
28:BR:297:GLU:OE1	28:BR:297:GLU:N	2.38	0.47
14:DD:37:LYS:HG3	14:DD:38:ASN:CB	2.45	0.47
7:B6:34:LYS:HZ1	7:B6:78:LYS:HE3	1.78	0.47
16:BF:78:ARG:NH1	16:BF:100:GLY:CA	2.77	0.47
11:BA:181:G:H5'	11:BA:181:G:H8	1.80	0.47
11:DA:444:A:H5'	11:DA:445:U:C5	2.50	0.47
11:CA:1027:U:H2'	11:CA:1028:G:C8	2.49	0.47
33:AW:194:VAL:HG21	33:AW:240:LEU:HD13	1.97	0.47
7:D6:34:LYS:HZ1	7:D6:78:LYS:HE3	1.80	0.47
7:B6:65:THR:HG23	11:BA:850:G:O2'	2.14	0.47
11:BA:270:U:H5'	11:BA:271:U:C6	2.49	0.47
15:AE:150:ALA:H	15:AE:175:ARG:HH22	1.60	0.47
21:DK:147:ARG:NH1	21:DK:150:ARG:NH2	2.61	0.47
11:CA:1173:G:O5'	39:CA:2223:HOH:O	2.21	0.47
11:AA:1358:A:HO2'	11:AA:1382:A:H2	1.62	0.47
32:DV:24:LEU:HD13	32:DV:58:MET:HE1	1.96	0.47
11:BA:729:U:H1'	27:BQ:157:PHE:O	2.15	0.47
28:DR:299:ILE:HD12	28:DR:330:ASP:HB2	1.96	0.47
28:BR:102:LEU:O	28:BR:111:TYR:N	2.32	0.47
11:CA:1287:U:OP1	11:CA:1300:G:N2	2.47	0.47
23:DM:66:CYS:HA	23:DM:69:ILE:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DM:69:ILE:O	23:DM:73:ILE:HG12	2.15	0.47
24:DN:34:GLU:HG3	24:DN:34:GLU:O	2.14	0.47
28:BR:186:TYR:HB2	28:BR:198:VAL:HG13	1.96	0.47
27:AQ:65:ILE:CD1	27:AQ:139:LEU:HD21	2.44	0.47
19:AI:57:LEU:HD23	19:AI:110:GLN:HG2	1.97	0.47
4:B3:62:LEU:HD11	4:B3:95:THR:OG1	2.14	0.47
8:D7:17:LEU:HD12	8:D7:89:PRO:HG3	1.96	0.47
11:DA:338:G:OP1	27:DQ:84:ILE:HD11	2.14	0.47
39:CA:2376:HOH:O	26:CP:86:ASN:HB2	2.14	0.47
3:C2:111:GLU:OE2	3:C2:171:ARG:NH2	2.47	0.47
11:CA:530:G:N7	14:CD:171:ARG:HD2	2.29	0.47
30:AT:108:LEU:HB3	30:AT:130:ARG:HD2	1.96	0.47
29:AS:36:ASP:N	29:AS:36:ASP:OD1	2.47	0.47
28:CR:235:LYS:HE2	28:CR:256:SER:H	1.80	0.47
30:DT:68:VAL:HG11	30:DT:117:ILE:HG21	1.96	0.47
11:DA:1423:U:O2'	29:DS:84:HIS:HD2	1.98	0.47
11:DA:1246:C:O2'	11:DA:1247:A:OP1	2.26	0.47
10:B9:128:HIS:HB2	10:B9:131:ARG:HG3	1.96	0.47
11:AA:416:C:HO2'	11:AA:417:A:P	2.38	0.47
11:DA:416:C:HO2'	11:DA:417:A:P	2.37	0.47
11:DA:1166:A:OP2	20:DJ:73:GLY:CA	2.52	0.47
10:B9:94:LYS:HA	11:BA:1201:G:OP2	2.14	0.47
11:CA:1272:A:H5''	11:CA:1273:U:OP2	2.15	0.47
3:A2:146:HIS:HE1	11:AA:181:G:C4	2.33	0.47
11:DA:677:G:N2	11:DA:725:A:H1'	2.29	0.47
11:BA:292:G:H2'	11:BA:293:U:O4'	2.14	0.47
11:BA:1721:G:H4'	11:BA:1722:U:H5''	1.97	0.47
28:DR:114:PHE:CD2	28:DR:149:GLY:HA2	2.49	0.47
23:AM:89:ILE:HG22	23:AM:90:ASN:N	2.30	0.47
13:CC:146:LYS:HB2	13:CC:151:LYS:HZ1	1.80	0.47
13:DC:228:ARG:H	13:DC:228:ARG:HG2	1.47	0.47
4:A3:101:GLU:HB2	4:A3:113:ARG:HG3	1.95	0.47
11:DA:1190:G:C5	11:DA:1415:A:C2	3.02	0.47
11:DA:1664:A:C5	11:DA:1665:U:H1'	2.50	0.47
14:AD:80:MET:HB3	14:AD:86:LEU:HB2	1.95	0.47
13:DC:98:GLY:HA3	13:DC:132:ASP:OD2	2.14	0.47
23:AM:122:HIS:HE1	29:AS:128:TYR:OH	1.98	0.47
15:DE:231:TRP:HB3	18:DH:68:ARG:NH2	2.30	0.47
11:BA:1531:G:C8	23:BM:134:ARG:HB3	2.49	0.47
11:DA:1605:A:H4'	11:DA:1606:C:O5'	2.15	0.47
28:BR:15:GLY:CA	28:BR:65:PHE:HB2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:CQ:12:GLN:NE2	27:CQ:60:THR:HG23	2.28	0.47
8:A7:48:SER:HB2	11:AA:1192:C:OP1	2.14	0.47
11:BA:1292:U:O2	11:BA:1294:A:H5'	2.15	0.47
20:AJ:54:VAL:HB	20:AJ:88:ILE:HB	1.97	0.47
11:BA:1568:C:P	24:BN:18:LYS:NZ	2.88	0.47
11:AA:1501:C:P	17:AG:86:LYS:HE2	2.55	0.47
18:CH:52:VAL:HG22	18:CH:61:VAL:HG22	1.97	0.47
6:B5:75:TYR:CB	6:B5:80:ALA:HB2	2.45	0.47
11:CA:1527:A:H5''	11:CA:1528:A:OP2	2.14	0.47
27:CQ:58:PRO:HA	27:CQ:63:LEU:HB3	1.96	0.47
11:DA:282:A:H2'	11:DA:283:A:C8	2.49	0.47
27:DQ:63:LEU:HD21	27:DQ:127:CYS:SG	2.55	0.47
35:CY:213:GLU:O	35:CY:216:LEU:HB2	2.14	0.47
11:BA:282:A:H2'	11:BA:283:A:C8	2.50	0.47
35:DY:213:GLU:O	35:DY:216:LEU:HB2	2.14	0.47
29:CS:119:LYS:HG2	29:CS:119:LYS:H	1.40	0.47
17:DG:107:PHE:HD1	17:DG:172:ILE:HD13	1.80	0.47
14:DD:90:GLU:HB3	14:DD:95:TYR:CG	2.50	0.47
35:BY:116:LYS:NZ	35:BY:125:THR:OG1	2.47	0.47
14:BD:81:PHE:CE1	14:BD:88:GLU:HA	2.48	0.47
28:AR:235:LYS:HE2	28:AR:256:SER:H	1.79	0.47
11:BA:1098:A:H5''	11:BA:1099:G:OP2	2.14	0.47
11:AA:295:U:OP1	27:AQ:135:ARG:HD3	2.15	0.47
9:A8:51:GLU:HA	9:A8:54:ILE:HB	1.96	0.47
21:BK:21:VAL:HG12	21:BK:22:GLY:H	1.79	0.47
7:D6:45:PHE:CG	25:DO:57:ARG:HD3	2.50	0.47
15:CE:234:PRO:HB3	36:CZ:13:MET:HE2	1.97	0.47
13:BC:193:LEU:HB3	13:BC:204:GLY:HA2	1.97	0.47
33:DW:162:LEU:HD13	33:DW:171:ILE:HG21	1.97	0.47
12:CB:169:MET:HG3	12:CB:195:VAL:HG11	1.96	0.47
11:DA:398:A:O2'	11:DA:1642:A:N3	2.39	0.47
14:AD:81:PHE:CE1	14:AD:88:GLU:HA	2.49	0.47
6:A5:82:HIS:ND1	11:AA:1719:A:N1	2.57	0.47
4:B3:36:SER:O	4:B3:40:ILE:HG13	2.14	0.47
23:CM:66:CYS:HA	23:CM:69:ILE:HD12	1.97	0.47
28:BR:176:SER:HB2	28:BR:179:LYS:HG2	1.96	0.47
11:AA:1431:A:H8	11:AA:1431:A:H3'	1.80	0.47
7:C6:29:TYR:H	7:C6:46:SER:HB3	1.80	0.47
8:C7:17:LEU:HD12	8:C7:89:PRO:HG3	1.96	0.47
3:A2:78:GLU:OE2	27:AQ:20:LYS:HE2	2.14	0.47
14:CD:81:PHE:CE1	14:CD:88:GLU:HA	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:896:U:H2'	11:DA:897:A:H8	1.79	0.47
13:DC:118:VAL:HG21	13:DC:145:LEU:HD21	1.97	0.47
11:BA:1575:U:H2'	11:BA:1576:U:C6	2.50	0.47
11:BA:1488:A:O2'	11:BA:1489:U:O5'	2.32	0.47
15:DE:58:PRO:HG3	15:DE:131:THR:HG23	1.97	0.47
20:BJ:63:ILE:HG22	20:BJ:65:VAL:HG23	1.97	0.47
21:DK:21:VAL:HG12	21:DK:22:GLY:H	1.80	0.47
11:AA:137:G:H2'	11:AA:138:G:C8	2.50	0.47
32:AV:106:LEU:O	32:AV:110:GLY:N	2.48	0.47
11:CA:676:C:O2'	11:CA:677:G:P	2.73	0.47
28:CR:178:ASN:ND2	23:DM:110:ARG:NH1	2.58	0.47
11:BA:413:C:C4	35:BY:87:ARG:HD3	2.49	0.47
10:D9:92:HIS:CE1	11:DA:1201:G:N7	2.83	0.47
3:A2:25:ARG:NH2	11:AA:377:G:OP2	2.48	0.47
14:BD:37:LYS:HG3	14:BD:38:ASN:HB3	1.97	0.47
28:CR:92:ILE:HD11	28:CR:124:VAL:HB	1.96	0.47
19:DI:12:PHE:HE2	19:DI:14:ARG:HH12	1.61	0.47
14:AD:37:LYS:HG3	14:AD:38:ASN:CB	2.45	0.47
11:BA:892:G:O2'	11:BA:893:A:C8	2.68	0.47
11:CA:892:G:O2'	11:CA:893:A:C8	2.68	0.47
28:CR:240:TRP:HB3	28:CR:245:LEU:HD21	1.96	0.47
13:AC:35:ALA:HB1	13:AC:57:LYS:HB2	1.96	0.47
11:AA:327:G:C4	11:AA:329:A:C8	3.03	0.47
21:AK:128:ARG:HG3	21:AK:128:ARG:HH11	1.79	0.47
8:C7:52:ARG:HB2	8:C7:54:PHE:CE2	2.50	0.47
33:DW:194:VAL:HG21	33:DW:240:LEU:HD13	1.97	0.47
19:AI:111:LEU:HD22	19:AI:118:LEU:HD12	1.96	0.47
7:C6:5:LEU:HD12	18:CH:24:GLN:HG3	1.97	0.47
3:A2:36:THR:HB	3:A2:65:ALA:O	2.15	0.47
3:B2:67:ARG:O	3:B2:68:LEU:HD23	2.15	0.47
4:C3:45:VAL:HG13	4:C3:63:ILE:HG22	1.97	0.47
11:BA:1568:C:O2'	11:BA:1570:U:H5	1.98	0.47
27:BQ:70:ILE:HD13	27:BQ:106:ILE:HD13	1.95	0.47
11:AA:1351:U:H1'	11:AA:1488:A:N6	2.29	0.47
23:BM:24:GLY:HA2	23:BM:58:ALA:HB3	1.97	0.47
11:AA:59:C:H5'	11:AA:447:C:N4	2.30	0.47
11:DA:762:U:H5	26:DP:6:ARG:NH1	2.12	0.47
11:CA:1353:G:OP1	20:CJ:87:ARG:NH2	2.47	0.47
11:CA:480:A:H2'	11:CA:481:A:O4'	2.15	0.47
28:AR:235:LYS:HG3	28:AR:256:SER:O	2.15	0.47
32:CV:106:LEU:O	32:CV:110:GLY:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AK:21:VAL:HG12	21:AK:22:GLY:H	1.79	0.47
4:C3:62:LEU:HD11	4:C3:95:THR:OG1	2.15	0.47
14:CD:90:GLU:HB3	14:CD:95:TYR:CD2	2.49	0.47
6:B5:4:LYS:NZ	11:BA:1747:A:OP1	2.41	0.47
21:CK:21:VAL:HG12	21:CK:22:GLY:H	1.80	0.47
7:D6:29:TYR:H	7:D6:46:SER:HB3	1.79	0.47
12:BB:47:GLU:HB2	32:BV:109:LEU:HD13	1.97	0.47
2:C1:11:ILE:HG12	2:C1:27:VAL:HG11	1.97	0.47
9:C8:51:GLU:HA	9:C8:54:ILE:HB	1.96	0.47
5:D4:122:THR:N	5:D4:146:THR:OG1	2.39	0.47
23:AM:88:ARG:HA	23:AM:88:ARG:HD2	1.57	0.47
22:CL:106:LEU:HD23	22:CL:122:LYS:HE2	1.97	0.47
28:AR:176:SER:HB2	28:AR:179:LYS:HG2	1.96	0.47
22:BL:106:LEU:HD23	22:BL:122:LYS:HE2	1.97	0.47
11:CA:1401:U:H4'	20:CJ:70:CYS:SG	2.55	0.47
7:B6:29:TYR:H	7:B6:46:SER:HB3	1.79	0.47
11:AA:1083:G:O2'	11:AA:1705:A:H5''	2.14	0.47
28:DR:86:GLN:HB3	28:DR:130:ASN:HD21	1.79	0.47
36:AZ:74:ARG:HA	36:AZ:79:ALA:HB2	1.97	0.47
11:DA:1313:G:H22	11:DA:1354:A:H2	1.61	0.47
11:CA:11:A:C2'	11:CA:12:U:H5'	2.43	0.47
11:DA:470:G:N2	11:DA:503:A:N1	2.55	0.47
9:D8:41:HIS:HB3	9:D8:76:ASN:N	2.30	0.47
19:AI:62:PHE:CE2	19:AI:91:ILE:HD11	2.50	0.47
11:BA:327:G:C4	11:BA:329:A:C8	3.03	0.47
11:CA:1621:G:P	22:CL:72:ARG:HH21	2.37	0.47
11:AA:665:A:H4'	11:AA:666:A:OP1	2.15	0.47
14:DD:149:ARG:CG	14:DD:152:SER:HB2	2.44	0.47
11:CA:237:U:OP2	11:CA:237:U:C6	2.67	0.47
11:CA:5:U:P	15:CE:205:THR:HG22	2.54	0.47
8:A7:52:ARG:HB2	8:A7:54:PHE:CE2	2.50	0.47
11:CA:1371:A:H2'	11:CA:1372:A:C8	2.50	0.47
11:DA:550:G:O5'	34:DX:61:ASN:HB3	2.14	0.47
11:AA:626:U:OP1	27:AQ:101:LYS:HE3	2.15	0.47
11:AA:1538:U:OP1	23:AM:42:PHE:HB2	2.14	0.47
27:AQ:68:LYS:O	27:AQ:126:GLN:N	2.47	0.47
12:DB:29:MET:HE3	12:DB:144:CYS:HB3	1.97	0.47
11:CA:282:A:H2'	11:CA:283:A:C8	2.49	0.47
35:BY:98:ARG:HD2	35:BY:99:GLY:N	2.30	0.47
35:DY:7:TYR:HA	35:DY:8:PRO:HD3	1.60	0.47
8:D7:47:ARG:HH11	8:D7:47:ARG:CG	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CB:50:TRP:O	12:CB:54:LYS:HG3	2.13	0.47
23:CM:111:GLU:O	23:CM:115:ARG:HG2	2.15	0.47
22:DL:68:ARG:HG3	22:DL:116:ILE:HG12	1.97	0.47
13:CC:137:CYS:SG	13:CC:138:GLU:N	2.88	0.47
11:DA:1049:C:O2'	11:DA:1050:C:H5'	2.14	0.47
21:AK:39:ASP:OD1	21:AK:40:THR:N	2.40	0.47
28:CR:176:SER:HB2	28:CR:179:LYS:HG2	1.96	0.47
11:AA:1472:U:OP2	30:AT:105:ARG:NH2	2.48	0.47
3:D2:78:GLU:OE2	27:DQ:20:LYS:HE2	2.15	0.47
11:BA:854:G:H1'	11:BA:922:A:O4'	2.15	0.47
11:DA:620:U:HO2'	25:DO:115:TYR:HH	1.62	0.47
26:DP:107:GLU:O	26:DP:110:ARG:HB2	2.15	0.47
24:DN:16:ASP:CG	24:DN:26:ARG:NH1	2.68	0.47
11:CA:854:G:H1'	11:CA:922:A:O4'	2.15	0.47
11:CA:1695:U:H2'	11:CA:1696:U:O4'	2.15	0.47
11:AA:762:U:H5	26:AP:6:ARG:CZ	2.27	0.47
26:AP:107:GLU:O	26:AP:110:ARG:HB2	2.15	0.47
10:B9:88:HIS:CD2	11:BA:1220:C:OP2	2.68	0.47
10:D9:88:HIS:CE1	11:DA:1217:G:N2	2.83	0.47
19:DI:79:GLN:O	19:DI:83:ILE:HG13	2.15	0.47
11:DA:603:U:H4'	11:DA:604:G:O5'	2.15	0.47
11:CA:1518:G:H2'	11:CA:1519:U:H5''	1.97	0.47
11:BA:1153:U:H1'	29:BS:131:THR:HG23	1.97	0.47
31:BU:50:CYS:HB3	31:BU:55:TYR:CZ	2.50	0.47
11:BA:328:G:H5''	11:BA:329:A:N7	2.30	0.47
11:AA:1621:G:OP1	22:AL:72:ARG:NH2	2.45	0.47
33:BW:107:THR:HG21	33:BW:247:ARG:HA	1.96	0.47
11:BA:1371:A:H2'	11:BA:1372:A:C8	2.50	0.47
22:DL:17:ARG:NH1	22:DL:20:LYS:HE2	2.30	0.47
11:BA:1555:A:C5'	19:BI:137:ARG:HH12	2.28	0.47
27:AQ:73:LEU:O	27:AQ:85:ILE:HA	2.15	0.47
6:D5:11:SER:HB2	11:DA:912:A:H5'	1.97	0.47
13:CC:105:VAL:HG21	13:CC:174:ALA:HB3	1.97	0.47
35:CY:7:TYR:HA	35:CY:8:PRO:HD3	1.59	0.47
12:CB:29:MET:HE1	12:CB:150:LEU:HD21	1.97	0.47
11:CA:476:U:H2'	11:CA:477:G:H8	1.80	0.47
11:BA:1472:U:H5	30:BT:105:ARG:NH2	2.13	0.47
8:D7:47:ARG:NH1	8:D7:47:ARG:HG3	2.29	0.47
24:DN:16:ASP:CG	24:DN:26:ARG:HH12	2.19	0.47
23:BM:84:TRP:CZ3	23:BM:85:LEU:HG	2.50	0.47
11:BA:1174:A:OP1	11:BA:1175:A:OP2	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:DC:121:ALA:O	13:DC:125:ILE:HD12	2.14	0.47
4:A3:171:THR:O	4:A3:175:LYS:HB2	2.15	0.47
25:BO:121:GLU:OE2	25:BO:143:TYR:HE2	1.98	0.47
11:AA:1695:U:H2'	11:AA:1696:U:O4'	2.15	0.47
20:BJ:79:ARG:HG2	24:BN:55:ARG:HB3	1.97	0.47
3:B2:195:GLU:HG2	27:BQ:9:TYR:CD2	2.50	0.47
11:CA:482:A:H5'	11:CA:483:C:OP2	2.14	0.47
20:DJ:42:ALA:HB1	20:DJ:48:VAL:HG11	1.97	0.47
20:CJ:63:ILE:HG22	20:CJ:65:VAL:HG23	1.96	0.47
11:AA:907:A:C8	21:AK:137:THR:O	2.68	0.47
22:AL:106:LEU:HD23	22:AL:122:LYS:HE2	1.96	0.47
33:CW:31:PRO:HG2	33:CW:38:LEU:HG	1.97	0.47
13:AC:118:VAL:HG21	13:AC:145:LEU:HD21	1.97	0.47
15:CE:52:SER:HB3	36:CZ:40:PHE:O	2.15	0.46
21:AK:105:THR:HG22	21:AK:107:GLN:H	1.80	0.46
11:AA:606:U:OP2	22:AL:5:LYS:NZ	2.48	0.46
11:CA:653:U:N3	11:CA:656:G:N2	2.63	0.46
19:CI:54:ILE:HA	19:CI:62:PHE:CE1	2.50	0.46
11:BA:1664:A:C5	11:BA:1665:U:H1'	2.50	0.46
11:CA:328:G:H5'	11:CA:330:C:H41	1.79	0.46
22:DL:78:ASN:ND2	22:DL:80:LYS:HE2	2.31	0.46
11:BA:1518:G:H2'	11:BA:1519:U:H5''	1.97	0.46
11:CA:486:A:H5''	11:CA:487:C:OP1	2.15	0.46
11:BA:1027:U:H2'	11:BA:1028:G:C8	2.50	0.46
19:BI:111:LEU:HD22	19:BI:118:LEU:HD12	1.97	0.46
11:AA:840:A:HO2'	11:AA:841:A:P	2.38	0.46
11:CA:840:A:H62	25:CO:72:LYS:HZ1	1.63	0.46
15:BE:227:THR:HB	15:BE:228:PRO:HD2	1.97	0.46
11:AA:479:G:H2'	11:AA:480:A:O4'	2.14	0.46
21:BK:54:VAL:HG11	21:BK:81:VAL:HA	1.98	0.46
11:DA:750:U:H3'	11:DA:752:C:OP2	2.15	0.46
13:AC:105:VAL:HG21	13:AC:174:ALA:HB3	1.96	0.46
27:CQ:70:ILE:HD13	27:CQ:106:ILE:HD13	1.97	0.46
23:BM:119:ILE:HG23	29:BS:124:PHE:CE2	2.49	0.46
11:AA:1371:A:H2'	11:AA:1372:A:C8	2.50	0.46
32:CV:65:PRO:N	32:CV:78:ARG:HH12	2.13	0.46
28:CR:184:ALA:H	28:CR:206:ARG:HH22	1.63	0.46
11:CA:1439:U:H4'	30:CT:91:ASN:HA	1.96	0.46
13:DC:77:GLN:HG3	13:DC:87:ILE:HD12	1.97	0.46
30:DT:108:LEU:HB3	30:DT:130:ARG:HD2	1.98	0.46
17:DG:49:GLY:HA3	17:DG:51:TYR:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CB:25:LEU:HD22	12:CB:33:ILE:HD13	1.96	0.46
19:CI:129:LYS:HE3	19:CI:133:GLY:O	2.15	0.46
35:BY:129:LEU:HG	35:BY:130:PRO:HD2	1.96	0.46
8:B7:77:LYS:HA	8:B7:84:ALA:HB3	1.97	0.46
13:AC:193:LEU:HB3	13:AC:204:GLY:HA2	1.97	0.46
4:C3:15:ILE:O	4:C3:19:VAL:HG23	2.15	0.46
35:DY:129:LEU:HG	35:DY:130:PRO:HD2	1.96	0.46
24:BN:34:GLU:O	24:BN:34:GLU:HG3	2.14	0.46
16:DF:66:GLU:HG3	16:DF:66:GLU:O	2.14	0.46
22:AL:129:ILE:HG13	22:AL:129:ILE:H	1.57	0.46
17:AG:51:TYR:CG	17:AG:61:CYS:HB2	2.50	0.46
5:D4:49:LEU:O	21:DK:51:GLU:HG3	2.15	0.46
11:AA:4:C:OP2	15:AE:201:SER:OG	2.33	0.46
32:DV:27:ASP:HB3	32:DV:30:PHE:HD2	1.80	0.46
9:B8:41:HIS:HB3	9:B8:76:ASN:N	2.30	0.46
11:BA:1263:G:N2	11:BA:1296:G:H1	2.05	0.46
14:DD:110:GLN:OE1	14:DD:126:ARG:HD2	2.16	0.46
11:BA:1494:U:O2'	11:BA:1495:U:P	2.72	0.46
11:DA:1171:G:C5'	24:DN:39:ARG:HH12	2.27	0.46
24:BN:40:ARG:HG2	24:BN:40:ARG:H	1.36	0.46
11:BA:1145:C:C2'	11:BA:1146:C:H5'	2.45	0.46
23:BM:89:ILE:HG22	23:BM:90:ASN:N	2.30	0.46
11:DA:1535:A:H4'	30:DT:45:VAL:HG11	1.95	0.46
11:DA:327:G:C4	11:DA:329:A:C8	3.03	0.46
11:DA:328:G:H5''	11:DA:329:A:N7	2.30	0.46
28:CR:15:GLY:CA	28:CR:65:PHE:HB2	2.44	0.46
15:AE:45:LEU:HD12	15:AE:48:ILE:HD12	1.96	0.46
15:AE:46:ASP:HA	15:AE:49:PHE:HD2	1.80	0.46
11:DA:573:A:N1	13:DC:147:GLN:CD	2.68	0.46
33:AW:36:HIS:CE1	33:AW:87:GLY:HA3	2.50	0.46
33:AW:107:THR:HG21	33:AW:247:ARG:HA	1.96	0.46
27:CQ:104:ARG:NH1	27:CQ:104:ARG:HG2	2.30	0.46
11:BA:15:U:O5'	11:BA:15:U:H6	1.99	0.46
11:DA:270:U:H5'	11:DA:271:U:H6	1.80	0.46
8:D7:52:ARG:HB2	8:D7:54:PHE:CE2	2.50	0.46
2:C1:21:ARG:HG3	11:CA:1134:C:H4'	1.96	0.46
4:C3:65:VAL:HG13	4:C3:69:SER:HB2	1.96	0.46
11:CA:213:U:H4'	11:CA:214:U:C5'	2.46	0.46
11:AA:447:C:H5'	11:AA:448:A:N7	2.31	0.46
11:BA:477:G:H4'	34:BX:73:ALA:O	2.14	0.46
12:AB:177:GLU:O	12:AB:181:LEU:HG	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AV:27:ASP:HB3	32:AV:30:PHE:HD2	1.80	0.46
13:DC:215:ILE:HG13	32:DV:15:SER:CB	2.46	0.46
9:C8:51:GLU:H	9:C8:51:GLU:HG3	1.61	0.46
11:AA:1472:U:H5	30:AT:105:ARG:NH2	2.13	0.46
13:BC:118:VAL:HG21	13:BC:145:LEU:HD21	1.97	0.46
12:DB:35:HIS:NE2	32:DV:104:GLU:OE1	2.48	0.46
32:DV:106:LEU:O	32:DV:110:GLY:N	2.47	0.46
11:DA:977:U:H2'	11:DA:978:C:O4'	2.14	0.46
33:CW:202:LYS:HG2	33:CW:208:ASP:OD2	2.14	0.46
17:BG:35:CYS:HB3	17:BG:63:ILE:HD11	1.97	0.46
35:CY:32:MET:HE1	35:CY:63:MET:HB2	1.97	0.46
11:BA:557:U:H4'	34:BX:17:GLN:OE1	2.16	0.46
25:DO:65:VAL:HG21	25:DO:73:ILE:HD11	1.97	0.46
3:D2:195:GLU:HG2	27:DQ:9:TYR:CD2	2.50	0.46
5:C4:149:THR:O	5:C4:151:ALA:N	2.48	0.46
13:CC:193:LEU:HB3	13:CC:204:GLY:HA2	1.96	0.46
8:C7:47:ARG:HG3	8:C7:47:ARG:HH11	1.81	0.46
1:C0:25:LEU:HG	1:C0:25:LEU:H	1.53	0.46
33:DW:160:ASP:CG	33:DW:176:HIS:HB3	2.35	0.46
11:CA:371:U:H5	14:CD:4:THR:O	1.98	0.46
8:B7:17:LEU:HD12	8:B7:89:PRO:HG3	1.96	0.46
11:DA:955:A:H2'	11:DA:956:A:O4'	2.15	0.46
14:BD:110:GLN:OE1	14:BD:126:ARG:HD2	2.15	0.46
11:AA:893:A:C5	11:AA:894:U:C4	3.03	0.46
19:AI:79:GLN:O	19:AI:83:ILE:HG13	2.15	0.46
15:CE:49:PHE:CD1	15:CE:139:PRO:HD3	2.51	0.46
15:CE:45:LEU:HD12	15:CE:48:ILE:HD12	1.96	0.46
15:BE:49:PHE:CD1	15:BE:139:PRO:HD3	2.50	0.46
4:B3:116:SER:HB2	4:B3:117:ARG:HD3	1.96	0.46
11:AA:1010:A:H2'	11:AA:1011:C:C6	2.50	0.46
9:A8:81:ARG:NH1	11:AA:1506:G:N7	2.62	0.46
11:CA:1494:U:O2'	11:CA:1495:U:P	2.73	0.46
20:CJ:37:GLU:O	20:CJ:41:ARG:HB2	2.15	0.46
14:BD:38:ASN:ND2	14:BD:40:ARG:NH1	2.58	0.46
28:AR:92:ILE:HD11	28:AR:124:VAL:HB	1.96	0.46
11:BA:70:U:OP1	35:BY:173:ARG:NH2	2.48	0.46
19:DI:62:PHE:CE2	19:DI:91:ILE:HD11	2.50	0.46
13:AC:35:ALA:HA	13:AC:57:LYS:HD2	1.98	0.46
23:BM:90:ASN:OD1	29:BS:14:ARG:NH1	2.48	0.46
4:C3:192:PHE:CE2	7:C6:25:ALA:HB3	2.50	0.46
3:C2:10:LYS:CD	11:CA:329:A:H5''	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:18:LYS:NZ	11:AA:936:U:H5'	2.31	0.46
11:BA:313:G:O4'	11:BA:314:A:H8	1.99	0.46
11:DA:1027:U:H2'	11:DA:1028:G:C8	2.50	0.46
11:AA:1025:G:H5''	11:AA:1025:G:H8	1.80	0.46
11:AA:215:A:OP2	11:AA:812:U:H1'	2.15	0.46
18:AH:52:VAL:HG22	18:AH:61:VAL:HG22	1.97	0.46
35:CY:98:ARG:HD2	35:CY:99:GLY:N	2.29	0.46
5:B4:127:ARG:NH2	11:BA:862:A:H1'	2.30	0.46
5:A4:128:VAL:HG13	5:A4:175:ASN:OD1	2.15	0.46
11:BA:524:C:P	39:BA:6159:HOH:O	2.73	0.46
11:BA:1695:U:H2'	11:BA:1696:U:O4'	2.15	0.46
11:AA:1272:A:H5''	11:AA:1273:U:OP2	2.15	0.46
18:CH:10:CYS:HA	18:CH:27:LEU:HD11	1.96	0.46
11:CA:407:A:H5'	11:CA:408:C:H5	1.79	0.46
11:CA:1064:A:O2'	11:CA:1065:A:H3'	2.15	0.46
20:BJ:80:PHE:CD2	24:BN:42:PHE:HE2	2.33	0.46
11:BA:937:U:H5'	25:BO:17:ALA:O	2.16	0.46
28:AR:313:THR:N	28:AR:327:GLY:O	2.49	0.46
11:BA:955:A:H2'	11:BA:956:A:O4'	2.15	0.46
13:BC:178:VAL:HG23	13:BC:185:MET:HB3	1.97	0.46
8:A7:47:ARG:HH11	8:A7:47:ARG:CG	2.29	0.46
23:CM:88:ARG:HD2	23:CM:88:ARG:HA	1.56	0.46
11:DA:854:G:H1'	11:DA:922:A:O4'	2.16	0.46
15:AE:78:MET:O	15:AE:105:VAL:HA	2.15	0.46
28:BR:235:LYS:HE2	28:BR:256:SER:H	1.80	0.46
11:AA:530:G:N7	14:AD:171:ARG:HD2	2.30	0.46
13:BC:82:TYR:CD2	13:BC:87:ILE:HD11	2.50	0.46
11:DA:1306:U:H2'	11:DA:1307:U:C6	2.51	0.46
11:CA:99:A:H2'	39:CA:2033:HOH:O	2.15	0.46
36:BZ:74:ARG:HA	36:BZ:79:ALA:HB2	1.97	0.46
10:A9:133:TYR:CE1	11:AA:1207:C:H1'	2.50	0.46
11:BA:63:U:H3'	11:BA:64:U:H5''	1.97	0.46
4:A3:116:SER:HB2	4:A3:117:ARG:HD3	1.97	0.46
6:A5:42:ARG:NH1	6:A5:71:VAL:HG21	2.29	0.46
11:AA:1509:U:OP2	11:AA:1509:U:C4'	2.62	0.46
20:DJ:37:GLU:O	20:DJ:41:ARG:HB2	2.15	0.46
1:B0:22:LYS:HG3	10:B9:74:LYS:HZ3	1.80	0.46
11:DA:1463:U:H1'	11:DA:1464:U:OP1	2.16	0.46
11:AA:1464:U:OP2	11:AA:1465:C:H5	1.99	0.46
4:B3:115:ARG:HG2	4:B3:121:TYR:CE2	2.50	0.46
11:AA:238:G:O2'	11:AA:239:A:P	2.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AV:35:LEU:HD13	32:AV:47:ARG:HG3	1.97	0.46
14:CD:149:ARG:CG	14:CD:152:SER:HB2	2.45	0.46
27:BQ:12:GLN:NE2	27:BQ:60:THR:HG23	2.29	0.46
4:D3:145:LEU:HA	18:DH:42:GLN:NE2	2.28	0.46
4:B3:45:VAL:HG13	4:B3:63:ILE:HG22	1.97	0.46
14:AD:49:LEU:O	14:AD:53:ARG:HG3	2.14	0.46
15:AE:158:LYS:HG3	18:AH:95:PRO:O	2.15	0.46
11:AA:1288:C:OP2	32:AV:7:LYS:HE3	2.16	0.46
11:BA:728:U:H5'	11:BA:729:U:OP2	2.16	0.46
35:BY:32:MET:HE2	35:BY:54:GLY:HA2	1.97	0.46
11:BA:135:A:H2'	35:BY:183:ILE:HD11	1.96	0.46
2:D1:65:ARG:NH1	17:DG:125:THR:HG21	2.30	0.46
15:CE:78:MET:O	15:CE:105:VAL:HA	2.16	0.46
4:D3:36:SER:O	4:D3:40:ILE:HG13	2.14	0.46
14:DD:6:ILE:HD13	33:DW:23:LEU:HD11	1.97	0.46
11:CA:1431:A:H3'	11:CA:1431:A:H8	1.81	0.46
32:CV:61:ILE:HD13	32:CV:71:LEU:HD11	1.97	0.46
17:AG:119:ASP:OD1	17:AG:120:SER:N	2.49	0.46
11:AA:1064:A:O2'	11:AA:1065:A:H3'	2.15	0.46
17:DG:24:ILE:HG13	17:DG:30:GLN:HA	1.97	0.46
12:BB:53:ILE:HG23	12:BB:174:ILE:HG13	1.97	0.46
25:BO:88:GLU:HG3	25:BO:89:ASP:H	1.81	0.46
11:DA:621:C:H4'	25:DO:119:LEU:HD22	1.96	0.46
28:CR:86:GLN:HB3	28:CR:130:ASN:HD21	1.80	0.46
17:AG:157:ALA:HB2	17:AG:167:THR:OG1	2.15	0.46
21:AK:76:GLN:O	21:AK:79:ILE:HG13	2.16	0.46
11:AA:407:A:H5'	11:AA:408:C:H5	1.80	0.46
11:AA:1241:U:H4'	11:AA:1242:G:O5'	2.15	0.46
30:BT:68:VAL:HG11	30:BT:117:ILE:HG21	1.96	0.46
13:BC:68:LYS:HE3	13:BC:68:LYS:HB2	1.64	0.46
36:AZ:9:ARG:HH22	36:AZ:33:ASP:HA	1.81	0.46
3:B2:111:GLU:OE2	3:B2:171:ARG:NH2	2.48	0.46
29:DS:113:LYS:O	29:DS:116:MET:HG2	2.15	0.46
28:BR:24:VAL:O	28:BR:313:THR:HB	2.15	0.46
24:CN:16:ASP:CG	24:CN:26:ARG:NH1	2.69	0.46
10:D9:128:HIS:HB2	10:D9:131:ARG:HG3	1.96	0.46
10:D9:128:HIS:NE2	10:D9:133:TYR:HB3	2.30	0.46
11:BA:1186:G:H5'	11:BA:1216:A:N3	2.31	0.46
11:DA:1010:A:H2'	11:DA:1011:C:C6	2.50	0.46
15:AE:52:SER:HB3	36:AZ:40:PHE:O	2.16	0.46
10:A9:128:HIS:NE2	10:A9:133:TYR:HB3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1010:A:H2'	11:BA:1011:C:H6	1.80	0.46
11:CA:12:U:O2'	11:CA:1271:G:O2'	2.20	0.46
11:AA:1496:A:N1	11:AA:1579:G:N2	2.62	0.46
11:BA:1253:G:O3'	20:BJ:74:SER:HB2	2.15	0.46
11:AA:1263:G:N2	11:AA:1296:G:H1	2.09	0.46
11:BA:1272:A:H5''	11:BA:1273:U:OP2	2.14	0.46
11:BA:1605:A:H4'	11:BA:1606:C:O5'	2.15	0.46
11:AA:531:A:H5''	11:AA:536:C:H41	1.79	0.46
16:CF:78:ARG:NH1	16:CF:100:GLY:CA	2.78	0.46
3:D2:36:THR:HB	3:D2:65:ALA:O	2.16	0.46
11:BA:879:G:H22	21:BK:68:GLU:CD	2.17	0.46
14:CD:129:ILE:O	14:CD:142:ASN:HA	2.15	0.46
5:A4:148:LYS:HE2	5:A4:152:GLY:H	1.80	0.46
5:C4:49:LEU:O	21:CK:51:GLU:HG3	2.15	0.46
12:CB:64:GLN:OE1	15:CE:245:SER:HB3	2.16	0.46
11:DA:1555:A:H5'	19:DI:137:ARG:HH12	1.80	0.46
23:BM:92:PHE:CE1	29:BS:13:PHE:HD1	2.34	0.46
5:D4:69:GLU:OE1	5:D4:88:LYS:HG2	2.16	0.46
17:CG:106:VAL:HG12	17:CG:172:ILE:HG22	1.98	0.46
8:A7:47:ARG:HH11	8:A7:47:ARG:HG3	1.80	0.46
13:CC:82:TYR:CD2	13:CC:87:ILE:HD11	2.49	0.46
36:CZ:30:ARG:O	36:CZ:39:ILE:HG12	2.16	0.46
23:DM:111:GLU:O	23:DM:115:ARG:HG2	2.16	0.46
11:DA:1064:A:O2'	11:DA:1065:A:H3'	2.15	0.46
11:CA:57:U:O2'	11:CA:443:A:N3	2.42	0.46
22:AL:35:GLY:HA2	22:AL:38:TRP:HD1	1.79	0.46
17:DG:37:THR:O	17:DG:41:GLN:HG2	2.16	0.46
11:AA:491:U:H5''	11:AA:492:C:OP2	2.15	0.46
14:BD:20:GLU:HG3	14:BD:23:ARG:HB3	1.98	0.46
35:DY:48:TYR:OH	35:DY:116:LYS:HE3	2.15	0.46
11:DA:369:A:OP2	11:DA:370:U:OP2	2.33	0.46
5:A4:45:PHE:HE2	5:A4:68:VAL:HG11	1.79	0.46
11:BA:143:C:OP1	26:BP:118:LYS:HB2	2.15	0.46
28:BR:135:SER:HG	28:BR:145:TRP:HE1	1.61	0.46
2:D1:54:VAL:HB	17:DG:28:CYS:HA	1.97	0.46
10:B9:88:HIS:HD2	11:BA:1219:U:H5''	1.79	0.46
36:CZ:74:ARG:HA	36:CZ:79:ALA:HB2	1.97	0.46
13:CC:196:GLU:HA	13:CC:197:PRO:HD3	1.65	0.46
11:CA:1010:A:H2'	11:CA:1011:C:C6	2.51	0.46
28:AR:22:ASP:HB3	28:AR:47:ARG:HB2	1.98	0.46
10:A9:128:HIS:HB2	10:A9:131:ARG:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1451:C:H4'	11:CA:1452:G:OP1	2.15	0.46
11:DA:1494:U:O2'	11:DA:1495:U:P	2.73	0.46
6:D5:99:PRO:CD	6:D5:100:PRO:HD3	2.45	0.46
31:DU:50:CYS:HB3	31:DU:55:TYR:CZ	2.51	0.46
11:DA:875:C:OP2	11:DA:875:C:H6	1.98	0.46
11:CA:378:A:OP2	11:CA:378:A:C8	2.54	0.46
32:DV:70:SER:O	32:DV:71:LEU:C	2.53	0.46
6:C5:42:ARG:NH1	6:C5:71:VAL:HG21	2.31	0.46
11:CA:893:A:C5	11:CA:894:U:C4	3.04	0.46
31:BU:29:LEU:O	31:BU:33:LEU:HB2	2.15	0.46
11:AA:313:G:O4'	11:AA:314:A:H8	1.99	0.46
28:BR:240:TRP:HB3	28:BR:245:LEU:HD21	1.96	0.46
11:CA:622:G:N1	11:CA:948:A:OP2	2.45	0.46
15:AE:49:PHE:CD1	36:AZ:41:SER:HB2	2.45	0.46
22:CL:17:ARG:NH1	22:CL:20:LYS:HE2	2.30	0.46
11:DA:1371:A:H2'	11:DA:1372:A:C8	2.50	0.46
9:B8:99:ASN:O	9:B8:102:GLN:N	2.28	0.46
4:A3:179:THR:HG21	11:AA:636:G:H1'	1.96	0.46
14:DD:71:PHE:HE1	33:DW:254:ARG:HD3	1.80	0.46
27:BQ:58:PRO:HA	27:BQ:63:LEU:HB3	1.97	0.46
12:AB:145:ASP:HB3	12:AB:147:ASP:OD1	2.16	0.46
29:CS:13:PHE:CD2	29:CS:117:ILE:HD11	2.51	0.46
11:DA:1183:A:H1'	29:DS:104:GLY:O	2.15	0.46
20:CJ:48:VAL:HG22	20:CJ:93:CYS:SG	2.55	0.46
13:BC:77:GLN:HG3	13:BC:87:ILE:HD12	1.97	0.46
11:DA:407:A:H5'	11:DA:408:C:H5	1.80	0.46
11:AA:557:U:H4'	34:AX:17:GLN:OE1	2.15	0.46
3:D2:177:THR:HG21	11:DA:205:A:OP1	2.15	0.46
11:AA:1387:A:H2'	11:AA:1388:A:C8	2.50	0.46
10:D9:99:ALA:O	10:D9:113:GLN:NE2	2.48	0.46
14:AD:20:GLU:HG3	14:AD:23:ARG:HB3	1.97	0.46
20:BJ:42:ALA:HB1	20:BJ:48:VAL:HG11	1.97	0.46
8:A7:77:LYS:HA	8:A7:84:ALA:HB3	1.97	0.46
11:BA:363:G:H5''	18:BH:88:LYS:HE2	1.98	0.46
10:A9:123:ILE:HD13	10:A9:136:LYS:HD2	1.98	0.46
28:BR:98:LYS:HG2	28:BR:119:SER:O	2.16	0.46
4:C3:36:SER:O	4:C3:40:ILE:HG13	2.14	0.46
8:B7:47:ARG:CG	8:B7:47:ARG:HH11	2.29	0.46
29:DS:36:ASP:OD1	29:DS:36:ASP:N	2.47	0.46
23:BM:66:CYS:HA	23:BM:69:ILE:HD12	1.96	0.46
19:AI:26:PRO:HA	19:AI:65:LEU:HD23	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D7:77:LYS:HA	8:D7:84:ALA:HB3	1.97	0.46
11:AA:391:A:C4'	11:AA:392:A:H5''	2.45	0.46
11:DA:33:G:C5	11:DA:467:A:N6	2.83	0.46
6:D5:42:ARG:NH1	6:D5:71:VAL:HG21	2.31	0.46
11:BA:1428:C:HO2'	11:BA:1429:G:P	2.37	0.46
23:CM:89:ILE:HG22	23:CM:90:ASN:N	2.31	0.46
11:CA:1489:U:H5'	11:CA:1490:C:H5	1.80	0.46
29:AS:13:PHE:CD2	29:AS:117:ILE:HD11	2.50	0.46
11:DA:1488:A:H5''	20:DJ:59:LYS:NZ	2.31	0.46
11:CA:468:U:H3'	11:CA:469:A:H5'	1.97	0.46
11:CA:1464:U:OP2	11:CA:1465:C:C5	2.69	0.46
12:DB:69:VAL:O	12:DB:91:CYS:HB2	2.16	0.46
11:DA:911:A:N6	39:DA:7031:HOH:O	2.35	0.46
11:CA:444:A:HO2'	11:CA:445:U:P	2.36	0.46
19:DI:111:LEU:HD22	19:DI:118:LEU:HD12	1.97	0.46
33:CW:194:VAL:HG21	33:CW:240:LEU:HD13	1.98	0.46
11:DA:313:G:O4'	11:DA:314:A:H8	1.98	0.46
14:DD:129:ILE:O	14:DD:142:ASN:HA	2.15	0.46
11:BA:1513:G:H1'	11:BA:1542:A:H61	1.81	0.46
11:BA:213:U:H4'	11:BA:214:U:C5'	2.45	0.46
18:CH:111:LEU:HB3	18:CH:115:GLU:HB2	1.98	0.46
5:D4:148:LYS:HE2	5:D4:152:GLY:H	1.80	0.46
3:B2:94:THR:HG23	11:BA:319:A:C2	2.51	0.46
8:D7:12:ILE:HD12	8:D7:45:LEU:HD12	1.98	0.46
27:DQ:37:ILE:HD11	27:DQ:59:PHE:HE1	1.80	0.46
5:A4:85:ARG:HH12	5:A4:108:ILE:HD11	1.80	0.46
2:C1:54:VAL:HB	17:CG:28:CYS:CA	2.46	0.46
4:A3:133:PRO:HG3	4:A3:162:PHE:CE1	2.51	0.46
11:CA:641:G:N2	11:CA:668:U:O2	2.48	0.46
35:BY:213:GLU:O	35:BY:216:LEU:HB2	2.16	0.46
29:DS:13:PHE:CD2	29:DS:117:ILE:HD11	2.51	0.46
11:DA:249:A:H4'	33:DW:134:GLY:O	2.16	0.46
1:B0:70:ILE:HG13	11:BA:1709:A:N1	2.31	0.46
17:BG:51:TYR:CG	17:BG:61:CYS:HB2	2.50	0.46
32:CV:27:ASP:HB3	32:CV:30:PHE:HD2	1.81	0.46
22:DL:68:ARG:NH2	22:DL:115:ASP:OD2	2.38	0.46
8:C7:47:ARG:HG3	8:C7:47:ARG:NH1	2.31	0.46
11:BA:250:A:H4'	33:BW:137:GLN:HE21	1.80	0.46
31:CU:87:THR:HB	31:CU:96:LYS:HB2	1.98	0.46
28:DR:235:LYS:HE2	28:DR:256:SER:H	1.81	0.46
11:DA:151:A:H5'	11:DA:152:U:P	2.55	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:DE:78:MET:O	15:DE:105:VAL:HA	2.16	0.46
29:AS:113:LYS:O	29:AS:116:MET:HG2	2.16	0.46
19:BI:129:LYS:HE3	19:BI:133:GLY:O	2.15	0.46
25:DO:83:ALA:HA	25:DO:84:PRO:HD2	1.78	0.46
8:B7:90:LYS:O	13:BC:70:LYS:HD3	2.15	0.46
11:AA:1053:A:C4	11:AA:1063:A:N6	2.83	0.46
26:AP:81:LEU:HD12	26:AP:81:LEU:HA	1.83	0.46
11:BA:1017:C:OP2	11:BA:1017:C:H4'	2.16	0.46
19:DI:129:LYS:HE3	19:DI:133:GLY:O	2.16	0.46
18:BH:28:ARG:HB2	18:BH:60:LYS:HG2	1.98	0.46
11:BA:151:A:H5'	11:BA:152:U:P	2.56	0.46
11:AA:451:G:OP1	26:AP:102:ARG:NH2	2.48	0.46
11:DA:1214:A:H4'	29:DS:85:TYR:OH	2.16	0.46
36:DZ:74:ARG:HA	36:DZ:79:ALA:HB2	1.97	0.46
11:AA:892:G:O2'	11:AA:893:A:C8	2.68	0.46
19:CI:79:GLN:O	19:CI:83:ILE:HG13	2.15	0.46
11:AA:598:A:N3	14:AD:16:ARG:NH1	2.64	0.46
28:AR:47:ARG:HA	28:AR:78:PHE:HB3	1.98	0.46
28:CR:178:ASN:CA	23:DM:110:ARG:HH12	2.29	0.46
11:CA:227:G:HO2'	11:CA:229:A:H62	1.58	0.46
11:BA:232:G:HO2'	11:BA:233:U:P	2.36	0.46
17:CG:66:ARG:NH2	17:CG:143:ASN:HD21	2.14	0.46
29:CS:127:THR:HG22	29:CS:128:TYR:CD2	2.50	0.46
11:BA:893:A:C5	11:BA:894:U:C4	3.04	0.46
11:BA:2:A:H1'	11:BA:3:C:OP1	2.16	0.46
11:AA:1664:A:C5	11:AA:1665:U:H1'	2.50	0.46
33:CW:212:VAL:O	33:CW:219:ALA:HA	2.16	0.46
12:AB:128:GLN:NE2	12:AB:132:GLU:HG3	2.31	0.46
10:B9:75:LYS:HD3	11:BA:1418:C:H6	1.80	0.46
11:CA:1281:G:H5'	11:CA:1282:U:OP2	2.15	0.46
5:C4:148:LYS:HE2	5:C4:152:GLY:H	1.81	0.46
1:D0:60:ILE:HA	1:D0:90:ILE:HB	1.97	0.46
4:D3:65:VAL:HG13	4:D3:69:SER:HB2	1.96	0.46
13:DC:105:VAL:HG21	13:DC:174:ALA:HB3	1.97	0.46
18:AH:112:THR:HB	18:AH:115:GLU:HG3	1.98	0.46
9:D8:99:ASN:O	9:D8:102:GLN:N	2.27	0.46
11:BA:478:G:C2'	11:BA:494:A:H61	2.29	0.46
30:BT:46:ALA:HB1	30:BT:87:LYS:HB3	1.97	0.46
28:BR:299:ILE:HD12	28:BR:330:ASP:HB2	1.96	0.46
14:BD:90:GLU:HB3	14:BD:95:TYR:CG	2.49	0.46
1:B0:70:ILE:HG13	11:BA:1709:A:C2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CD:90:GLU:HB3	14:CD:95:TYR:CG	2.50	0.46
13:CC:77:GLN:HG3	13:CC:87:ILE:HD12	1.98	0.46
30:CT:108:LEU:HB3	30:CT:130:ARG:HD2	1.97	0.46
2:A1:11:ILE:HG12	2:A1:27:VAL:HG11	1.98	0.46
31:DU:29:LEU:O	31:DU:33:LEU:HB2	2.16	0.46
15:DE:107:ASP:OD1	15:DE:111:HIS:HB2	2.15	0.46
24:AN:16:ASP:CG	24:AN:26:ARG:HH12	2.20	0.46
33:CW:155:GLU:HG3	35:CY:219:TRP:HZ2	1.81	0.46
20:AJ:42:ALA:HB1	20:AJ:48:VAL:HG11	1.97	0.46
11:DA:1000:U:H4'	11:DA:1097:A:N6	2.30	0.46
10:B9:130:ASP:OD1	10:B9:130:ASP:N	2.47	0.46
17:DG:188:LYS:HD3	17:DG:188:LYS:HA	1.66	0.46
4:D3:171:THR:O	4:D3:175:LYS:HB2	2.15	0.46
11:BA:1241:U:H4'	11:BA:1242:G:O5'	2.16	0.46
11:AA:421:G:H2'	11:AA:422:G:H5''	1.97	0.46
11:AA:624:A:H5'	27:AQ:152:LYS:HE2	1.97	0.46
11:BA:1053:A:C4	11:BA:1063:A:N6	2.83	0.46
5:D4:127:ARG:CZ	11:DA:862:A:H1'	2.46	0.46
10:D9:128:HIS:CE1	11:DA:1223:U:H1'	2.51	0.46
11:CA:416:C:HO2'	11:CA:417:A:P	2.36	0.46
11:AA:878:A:OP1	21:AK:57:THR:HB	2.15	0.46
11:BA:507:G:O2'	11:BA:508:A:OP2	2.31	0.46
11:AA:1506:G:O2'	11:AA:1507:U:P	2.73	0.46
11:DA:675:A:H4'	11:DA:676:C:OP2	2.14	0.46
11:CA:1506:G:O2'	11:CA:1507:U:P	2.73	0.46
29:BS:127:THR:HG22	29:BS:128:TYR:CD2	2.51	0.46
28:BR:92:ILE:HD11	28:BR:124:VAL:HB	1.97	0.46
19:DI:14:ARG:HD3	19:DI:125:ARG:HH22	1.81	0.46
28:CR:245:LEU:HA	28:CR:245:LEU:HD23	1.56	0.46
20:DJ:22:THR:OG1	20:DJ:113:GLU:HB2	2.15	0.46
28:BR:245:LEU:HD23	28:BR:245:LEU:HA	1.57	0.46
23:BM:90:ASN:HD21	29:BS:14:ARG:HD2	1.80	0.46
11:CA:1464:U:OP2	11:CA:1465:C:H5	1.99	0.46
3:B2:10:LYS:HE2	11:BA:314:A:OP2	2.16	0.46
11:BA:661:G:H3'	11:BA:662:U:C6	2.49	0.46
11:AA:933:A:H2'	11:AA:934:U:O4'	2.16	0.46
22:AL:17:ARG:CZ	22:AL:20:LYS:HE2	2.45	0.46
11:CA:507:G:O2'	11:CA:508:A:OP2	2.30	0.46
11:DA:16:G:H1'	11:DA:1111:A:H61	1.81	0.46
11:AA:1469:U:C5'	30:AT:75:GLY:HA3	2.46	0.46
5:A4:46:GLY:HA3	21:AK:47:LEU:CD1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BH:52:VAL:HG22	18:BH:61:VAL:HG22	1.97	0.46
18:DH:112:THR:HB	18:DH:115:GLU:HG3	1.98	0.46
11:AA:750:U:H3'	11:AA:752:C:OP2	2.15	0.46
11:CA:879:G:H5''	11:CA:880:G:OP2	2.16	0.46
2:C1:65:ARG:HH11	17:CG:125:THR:HG21	1.80	0.46
11:AA:318:U:H2'	11:AA:319:A:C8	2.51	0.46
11:CA:160:C:O2'	35:CY:132:LYS:O	2.34	0.46
27:DQ:68:LYS:HB2	27:DQ:126:GLN:OE1	2.16	0.46
12:AB:145:ASP:O	12:AB:148:SER:OG	2.27	0.46
12:AB:148:SER:HA	12:AB:149:PRO:HD3	1.75	0.46
23:AM:69:ILE:O	23:AM:73:ILE:HG12	2.16	0.46
20:AJ:48:VAL:HG22	20:AJ:93:CYS:SG	2.55	0.46
15:CE:58:PRO:HG3	15:CE:131:THR:HG23	1.98	0.46
11:AA:1456:A:H2'	11:AA:1457:A:O4'	2.16	0.46
11:AA:958:G:H4'	11:AA:1729:A:H4'	1.97	0.46
4:D3:15:ILE:O	4:D3:19:VAL:HG23	2.16	0.46
36:CZ:9:ARG:HH22	36:CZ:33:ASP:HA	1.81	0.46
35:BY:142:LYS:HE3	35:BY:156:ILE:HD11	1.98	0.46
11:CA:955:A:H2'	11:CA:956:A:O4'	2.16	0.46
29:BS:113:LYS:O	29:BS:116:MET:HG2	2.15	0.46
35:CY:129:LEU:HG	35:CY:130:PRO:HD2	1.96	0.46
8:C7:77:LYS:HA	8:C7:84:ALA:HB3	1.98	0.46
17:BG:157:ALA:HB2	17:BG:167:THR:OG1	2.16	0.46
28:AR:105:LEU:HD23	28:AR:105:LEU:HA	1.76	0.46
4:A3:165:GLU:CD	4:A3:165:GLU:H	2.19	0.46
23:DM:88:ARG:HD2	23:DM:88:ARG:HA	1.54	0.46
3:B2:194:LYS:HD3	3:B2:194:LYS:HA	1.76	0.46
35:AY:49:VAL:HB	35:AY:115:LYS:H	1.81	0.46
23:AM:84:TRP:CZ3	23:AM:85:LEU:HG	2.51	0.46
10:B9:116:CYS:O	10:B9:120:GLY:N	2.49	0.46
11:DA:1472:U:OP2	30:DT:105:ARG:NH2	2.49	0.46
14:CD:56:ALA:O	14:CD:60:LEU:HG	2.15	0.46
4:D3:117:ARG:HD2	11:DA:834:A:C6	2.51	0.46
1:B0:22:LYS:N	10:B9:74:LYS:NZ	2.58	0.46
11:CA:1430:C:OP2	23:CM:126:ARG:NH2	2.46	0.46
23:CM:90:ASN:OD1	29:CS:14:ARG:NH1	2.49	0.46
10:B9:101:TYR:CE1	31:BU:33:LEU:HD21	2.50	0.46
20:DJ:54:VAL:HB	20:DJ:88:ILE:HB	1.97	0.46
11:CA:172:U:C4'	11:CA:173:A:OP2	2.62	0.46
11:CA:1463:U:H1'	11:CA:1464:U:OP1	2.16	0.46
11:CA:1662:C:C6	11:CA:1662:C:H5'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:1147:U:O4	23:DM:140:THR:HG21	2.16	0.46
11:CA:934:U:OP1	11:CA:1044:C:O2'	2.29	0.46
11:CA:270:U:H5'	11:CA:271:U:H6	1.81	0.46
11:AA:1513:G:H1'	11:AA:1542:A:H61	1.81	0.46
11:CA:840:A:HO2'	11:CA:841:A:P	2.39	0.46
11:AA:482:A:O5'	26:BP:37:LYS:NZ	2.49	0.46
22:AL:75:LEU:HD11	22:AL:82:ILE:HD12	1.97	0.46
12:BB:165:GLU:HG3	12:BB:199:TYR:HE2	1.80	0.46
27:AQ:63:LEU:HD21	27:AQ:127:CYS:SG	2.56	0.46
35:DY:98:ARG:HD2	35:DY:99:GLY:N	2.30	0.46
3:A2:195:GLU:HG2	27:AQ:9:TYR:CE2	2.51	0.46
23:CM:15:HIS:NE2	23:CM:66:CYS:SG	2.89	0.46
24:AN:16:ASP:CG	24:AN:26:ARG:NH1	2.69	0.46
21:DK:75:MET:HG2	21:DK:118:ALA:HB2	1.98	0.46
11:AA:854:G:H1'	11:AA:922:A:O4'	2.15	0.46
11:BA:1456:A:H2'	11:BA:1457:A:O4'	2.16	0.46
4:A3:62:LEU:HD11	4:A3:95:THR:OG1	2.16	0.46
11:DA:1431:A:H3'	11:DA:1431:A:H8	1.81	0.46
12:AB:53:ILE:HG23	12:AB:174:ILE:HG13	1.96	0.46
18:BH:81:VAL:HG21	18:BH:125:ILE:HB	1.98	0.46
32:BV:106:LEU:O	32:BV:110:GLY:N	2.48	0.46
10:C9:104:GLU:HG2	10:C9:105:ASN:H	1.80	0.46
5:A4:111:ASP:OD1	5:A4:111:ASP:N	2.49	0.46
14:BD:56:ALA:O	14:BD:60:LEU:HG	2.16	0.46
11:AA:250:A:H4'	33:AW:137:GLN:HE21	1.81	0.46
13:BC:216:HIS:HA	13:BC:217:PRO:HD2	1.81	0.46
11:AA:1517:A:OP1	23:AM:133:VAL:N	2.45	0.46
22:CL:68:ARG:NH2	22:CL:115:ASP:OD2	2.37	0.46
12:CB:35:HIS:NE2	32:CV:104:GLU:OE1	2.48	0.46
10:D9:126:ALA:HB2	11:DA:1224:C:O4'	2.15	0.45
11:DA:63:U:H3'	11:DA:64:U:H5''	1.98	0.45
12:DB:76:ILE:HD12	12:DB:200:HIS:CD2	2.51	0.45
12:CB:76:ILE:HD12	12:CB:200:HIS:CD2	2.51	0.45
11:AA:1428:C:HO2'	11:AA:1429:G:P	2.38	0.45
11:AA:1145:C:C2'	11:AA:1146:C:H5'	2.47	0.45
12:AB:69:VAL:O	12:AB:91:CYS:HB2	2.16	0.45
11:DA:1168:A:HO2'	11:DA:1169:C:P	2.36	0.45
15:AE:102:PHE:CD1	15:AE:116:TRP:HB3	2.51	0.45
6:B5:87:ARG:HH11	11:BA:1126:C:C5'	2.25	0.45
11:DA:1736:C:O2'	11:DA:1737:C:H5'	2.16	0.45
19:CI:111:LEU:HD22	19:CI:118:LEU:HD12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D4:159:THR:HG23	5:D4:161:TYR:HD2	1.77	0.45
11:DA:1025:G:H8	11:DA:1025:G:H5''	1.81	0.45
33:DW:11:ARG:HH12	33:DW:20:LEU:HB3	1.77	0.45
11:DA:493:U:C4'	11:DA:494:A:OP2	2.63	0.45
11:AA:214:U:OP2	11:AA:214:U:C6	2.69	0.45
11:CA:631:C:OP1	18:CH:32:LYS:N	2.49	0.45
12:DB:128:GLN:NE2	12:DB:132:GLU:HG3	2.31	0.45
11:DA:561:A:OP2	22:DL:66:ALA:HB1	2.15	0.45
6:D5:28:ARG:HG3	21:DK:147:ARG:HA	1.98	0.45
11:DA:122:A:C8	35:DY:201:ARG:HD3	2.52	0.45
11:AA:1489:U:H5'	11:AA:1490:C:C5	2.50	0.45
19:BI:95:HIS:HA	19:BI:99:VAL:HG23	1.97	0.45
19:AI:100:ASP:OD2	19:AI:102:ASN:HB3	2.16	0.45
19:AI:95:HIS:HA	19:AI:99:VAL:HG23	1.98	0.45
5:D4:72:LEU:O	5:D4:79:SER:OG	2.30	0.45
19:CI:100:ASP:OD2	19:CI:102:ASN:HB3	2.16	0.45
27:BQ:63:LEU:HD21	27:BQ:127:CYS:SG	2.56	0.45
12:AB:169:MET:HG3	12:AB:195:VAL:HG11	1.97	0.45
35:BY:49:VAL:HB	35:BY:115:LYS:H	1.81	0.45
26:AP:27:HIS:HE1	26:AP:67:SER:OG	1.99	0.45
11:CA:343:C:O2'	11:CA:344:A:OP2	2.25	0.45
5:A4:139:ARG:CZ	11:AA:862:A:H5'	2.46	0.45
17:CG:51:TYR:CG	17:CG:61:CYS:HB2	2.51	0.45
31:AU:87:THR:HB	31:AU:96:LYS:HB2	1.98	0.45
13:AC:178:VAL:HG23	13:AC:185:MET:HB3	1.98	0.45
26:DP:27:HIS:HE1	26:DP:67:SER:OG	1.99	0.45
11:CA:1387:A:H2'	11:CA:1388:A:C8	2.52	0.45
30:CT:155:LYS:HG2	30:CT:155:LYS:H	1.49	0.45
25:CO:127:LEU:HD22	25:CO:127:LEU:HA	1.84	0.45
21:CK:75:MET:HG2	21:CK:118:ALA:HB2	1.97	0.45
11:DA:1301:A:OP2	13:DC:163:THR:HG21	2.15	0.45
17:CG:24:ILE:HG13	17:CG:30:GLN:HA	1.97	0.45
13:BC:137:CYS:SG	13:BC:138:GLU:N	2.89	0.45
10:A9:137:CYS:SG	10:A9:139:LEU:HB2	2.56	0.45
11:BA:1486:U:O2'	11:BA:1487:A:P	2.74	0.45
11:BA:470:G:N2	11:BA:503:A:N1	2.48	0.45
12:CB:164:THR:CG2	12:CB:200:HIS:HB3	2.46	0.45
11:BA:1163:U:H2'	11:BA:1164:C:C6	2.51	0.45
12:AB:76:ILE:HD12	12:AB:200:HIS:CD2	2.51	0.45
17:AG:66:ARG:NH2	17:AG:143:ASN:HD21	2.13	0.45
19:BI:62:PHE:CE2	19:BI:91:ILE:HD11	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AO:4:MET:SD	25:AO:126:ARG:NH1	2.90	0.45
19:AI:54:ILE:HA	19:AI:62:PHE:CE1	2.51	0.45
13:BC:35:ALA:HA	13:BC:57:LYS:HD2	1.98	0.45
11:BA:1463:U:H1'	11:BA:1464:U:OP1	2.17	0.45
11:DA:110:A:C6	11:DA:245:A:C5	3.04	0.45
11:AA:1172:G:N2	39:AA:2376:HOH:O	2.43	0.45
6:B5:87:ARG:NH1	11:BA:1126:C:C5'	2.80	0.45
3:D2:56:VAL:HG13	11:DA:324:A:H5'	1.98	0.45
11:CA:1736:C:O2'	11:CA:1737:C:H5'	2.15	0.45
27:DQ:104:ARG:HG2	27:DQ:104:ARG:NH1	2.30	0.45
10:C9:137:CYS:SG	10:C9:139:LEU:HB2	2.57	0.45
11:BA:533:G:N2	39:BA:6087:HOH:O	2.48	0.45
5:A4:67:VAL:CG2	11:AA:898:U:H4'	2.45	0.45
11:BA:809:A:O2'	27:BQ:49:GLU:OE2	2.31	0.45
1:C0:19:ASN:HB2	10:C9:74:LYS:NZ	2.31	0.45
25:BO:101:ARG:HH12	25:BO:145:ALA:CA	2.29	0.45
12:CB:121:THR:HG23	12:CB:143:LEU:HD12	1.98	0.45
15:BE:181:ALA:HA	15:BE:199:THR:HG21	1.98	0.45
12:BB:29:MET:CE	12:BB:150:LEU:HD21	2.47	0.45
30:CT:46:ALA:HB1	30:CT:87:LYS:HB3	1.97	0.45
27:DQ:58:PRO:HA	27:DQ:63:LEU:HB3	1.97	0.45
11:BA:1501:C:P	17:BG:86:LYS:HE2	2.56	0.45
11:CA:491:U:H2'	11:CA:492:C:O4'	2.15	0.45
21:CK:103:VAL:HG11	21:CK:142:ARG:HA	1.97	0.45
12:DB:71:VAL:HG11	12:DB:82:ALA:HB1	1.98	0.45
11:CA:151:A:H5'	11:CA:152:U:P	2.56	0.45
11:CA:1083:G:O2'	11:CA:1705:A:H5''	2.16	0.45
19:DI:26:PRO:HA	19:DI:65:LEU:HD23	1.98	0.45
36:BZ:9:ARG:HH22	36:BZ:33:ASP:HA	1.80	0.45
11:DA:1053:A:C4	11:DA:1063:A:N6	2.85	0.45
3:A2:111:GLU:OE2	3:A2:171:ARG:NH2	2.48	0.45
5:B4:123:LEU:HD11	5:B4:143:LEU:HD11	1.97	0.45
17:BG:24:ILE:HG13	17:BG:30:GLN:HA	1.99	0.45
12:DB:26:ASN:ND2	12:DB:149:PRO:HA	2.31	0.45
10:A9:116:CYS:O	10:A9:120:GLY:N	2.49	0.45
14:AD:56:ALA:O	14:AD:60:LEU:HG	2.16	0.45
18:CH:81:VAL:HG21	18:CH:125:ILE:HB	1.97	0.45
6:B5:10:ARG:HH12	11:BA:1743:A:P	2.39	0.45
5:A4:110:ARG:HG3	21:AK:131:ASP:O	2.15	0.45
36:AZ:30:ARG:O	36:AZ:39:ILE:HG12	2.17	0.45
2:C1:62:ARG:NH1	6:C5:48:SER:HB3	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BM:111:GLU:O	23:BM:115:ARG:HG2	2.17	0.45
30:BT:8:PHE:HB2	30:BT:145:THR:HA	1.98	0.45
11:DA:1420:U:OP2	39:DA:8036:HOH:O	2.21	0.45
10:A9:156:LYS:HD3	7:D6:60:ILE:HG13	1.97	0.45
11:AA:227:G:H2'	11:AA:229:A:N7	2.31	0.45
11:CA:1246:C:O2'	11:CA:1247:A:P	2.74	0.45
28:DR:22:ASP:HB3	28:DR:47:ARG:HB2	1.98	0.45
11:AA:1508:G:N3	11:AA:1508:G:H2'	2.31	0.45
11:DA:2:A:H1'	11:DA:3:C:OP1	2.17	0.45
11:BA:226:A:H3'	11:BA:227:G:C4'	2.46	0.45
19:DI:54:ILE:HA	19:DI:62:PHE:CE1	2.51	0.45
11:CA:1469:U:C5'	30:CT:75:GLY:HA3	2.46	0.45
7:B6:18:LYS:HZ2	11:BA:936:U:C5'	2.30	0.45
31:CU:50:CYS:HB3	31:CU:55:TYR:CZ	2.51	0.45
11:BA:866:U:O2	11:BA:966:A:O2'	2.35	0.45
33:CW:126:LEU:HB3	33:CW:143:THR:CG2	2.44	0.45
29:CS:34:ILE:HD13	29:CS:50:VAL:HG21	1.98	0.45
11:CA:1372:A:OP2	32:CV:56:HIS:HE1	2.00	0.45
8:A7:9:LYS:HA	8:A7:45:LEU:HD11	1.99	0.45
20:AJ:22:THR:OG1	20:AJ:113:GLU:HB2	2.16	0.45
22:AL:9:ILE:HA	27:AQ:98:ARG:HB3	1.96	0.45
30:BT:108:LEU:HB3	30:BT:130:ARG:HD2	1.99	0.45
12:DB:28:GLN:HB3	12:DB:150:LEU:HD12	1.99	0.45
19:CI:95:HIS:HA	19:CI:99:VAL:HG23	1.98	0.45
17:BG:106:VAL:HG12	17:BG:172:ILE:HG22	1.97	0.45
11:DA:249:A:H4'	33:DW:133:ILE:HG22	1.98	0.45
29:BS:13:PHE:CD2	29:BS:117:ILE:HD11	2.52	0.45
5:A4:86:LYS:HB2	5:A4:107:ASP:HB3	1.98	0.45
19:DI:57:LEU:CD2	19:DI:110:GLN:HG2	2.47	0.45
10:D9:111:LEU:CD1	10:D9:124:PHE:HE2	2.30	0.45
11:AA:151:A:H5'	11:AA:152:U:P	2.56	0.45
13:AC:82:TYR:CD2	13:AC:87:ILE:HD11	2.50	0.45
5:D4:110:ARG:HG3	21:DK:131:ASP:O	2.16	0.45
11:CA:243:G:C4'	33:CW:204:GLN:HE21	2.30	0.45
23:AM:111:GLU:O	23:AM:115:ARG:HG2	2.15	0.45
5:D4:181:GLU:HG2	5:D4:199:TYR:CE1	2.51	0.45
14:DD:20:GLU:HG3	14:DD:23:ARG:HB3	1.97	0.45
18:AH:81:VAL:HG21	18:AH:125:ILE:HB	1.99	0.45
12:BB:194:MET:CE	32:BV:89:SER:HB2	2.47	0.45
11:AA:1306:U:H2'	11:AA:1307:U:C6	2.51	0.45
28:AR:135:SER:HG	28:AR:145:TRP:HE1	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:638:U:H2'	11:DA:639:C:C6	2.52	0.45
11:DA:1455:A:H4'	19:DI:17:ASN:ND2	2.32	0.45
11:DA:143:C:OP1	26:DP:118:LYS:HB2	2.17	0.45
25:CO:121:GLU:OE2	25:CO:143:TYR:HE2	2.00	0.45
24:BN:16:ASP:CG	24:BN:26:ARG:NH1	2.69	0.45
11:BA:1306:U:H2'	11:BA:1307:U:C6	2.51	0.45
11:BA:776:A:H5''	11:BA:777:U:O5'	2.16	0.45
20:CJ:23:LEU:HD22	20:CJ:112:ILE:HG12	1.98	0.45
1:D0:25:LEU:HG	1:D0:25:LEU:H	1.51	0.45
11:CA:762:U:O2	11:CA:762:U:H2'	2.16	0.45
11:BA:1155:A:C4	29:BS:105:LYS:HB2	2.52	0.45
11:CA:89:A:H1'	33:CW:3:ARG:O	2.16	0.45
28:CR:22:ASP:HB3	28:CR:47:ARG:HB2	1.98	0.45
11:AA:605:U:OP1	22:AL:19:ARG:NH2	2.49	0.45
6:B5:42:ARG:NH1	6:B5:71:VAL:HG21	2.31	0.45
2:A1:17:LYS:HE2	11:AA:1588:G:O2'	2.17	0.45
11:BA:1721:G:H4'	11:BA:1722:U:O5'	2.17	0.45
20:BJ:37:GLU:O	20:BJ:41:ARG:HB2	2.17	0.45
22:AL:7:ARG:HH11	22:AL:7:ARG:CG	2.20	0.45
3:A2:89:VAL:CG2	3:A2:102:LYS:HA	2.45	0.45
11:AA:328:G:H5''	11:AA:329:A:N7	2.31	0.45
11:BA:1662:C:C6	11:BA:1662:C:H5'	2.52	0.45
11:CA:1059:A:N3	11:CA:1115:A:O2'	2.44	0.45
11:AA:1463:U:H1'	11:AA:1464:U:OP1	2.15	0.45
11:AA:535:A:OP2	11:AA:535:A:H8	2.00	0.45
11:AA:641:G:H2'	11:AA:642:G:O4'	2.17	0.45
11:DA:1513:G:H1'	11:DA:1542:A:H61	1.81	0.45
26:AP:18:ARG:NE	26:AP:20:GLN:HE21	2.14	0.45
14:BD:129:ILE:O	14:BD:142:ASN:HA	2.15	0.45
34:DX:59:SER:HA	34:DX:60:PRO:HD3	1.78	0.45
28:CR:140:ARG:HH11	28:CR:162:SER:HA	1.81	0.45
11:CA:931:A:P	25:CO:96:LYS:NZ	2.89	0.45
11:BA:912:A:HO2'	11:BA:913:U:P	2.38	0.45
25:AO:101:ARG:HH12	25:AO:145:ALA:HB1	1.81	0.45
11:DA:1292:U:O2	11:DA:1294:A:H5'	2.17	0.45
32:AV:53:PHE:CE2	32:AV:57:LEU:HD11	2.51	0.45
27:AQ:68:LYS:HB2	27:AQ:126:GLN:OE1	2.17	0.45
27:BQ:68:LYS:O	27:BQ:126:GLN:N	2.48	0.45
11:DA:575:U:H5''	11:DA:576:U:OP2	2.15	0.45
12:BB:45:ASN:OD1	32:BV:109:LEU:HD11	2.16	0.45
23:BM:69:ILE:O	23:BM:73:ILE:HG12	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1605:A:H4'	11:CA:1606:C:O5'	2.16	0.45
35:AY:116:LYS:NZ	35:AY:125:THR:OG1	2.48	0.45
12:CB:26:ASN:ND2	12:CB:149:PRO:HA	2.31	0.45
8:A7:70:LYS:HG2	8:A7:92:PHE:HE2	1.81	0.45
12:CB:58:ARG:CZ	36:CZ:54:VAL:HG21	2.46	0.45
12:AB:45:ASN:OD1	32:AV:109:LEU:HD11	2.16	0.45
21:DK:119:LEU:HA	21:DK:119:LEU:HD12	1.86	0.45
13:AC:68:LYS:HE3	13:AC:68:LYS:HB2	1.64	0.45
11:BA:1054:U:H4'	11:BA:1055:G:O5'	2.15	0.45
29:CS:113:LYS:O	29:CS:116:MET:HG2	2.15	0.45
9:D8:70:VAL:HG11	17:DG:161:MET:SD	2.56	0.45
10:B9:137:CYS:SG	10:B9:139:LEU:HB2	2.57	0.45
11:BA:872:A:H3'	11:BA:873:G:H5''	1.98	0.45
8:B7:6:LYS:HZ1	31:BU:27:LYS:NZ	2.14	0.45
11:AA:267:A:H2'	11:AA:268:G:C8	2.51	0.45
10:A9:128:HIS:ND1	11:AA:1222:U:O2'	2.31	0.45
11:CA:3:C:O2'	15:CE:182:ALA:N	2.49	0.45
11:DA:535:A:H8	11:DA:535:A:OP2	1.98	0.45
12:BB:76:ILE:HD12	12:BB:200:HIS:CD2	2.51	0.45
11:BA:447:C:H5'	11:BA:448:A:N7	2.32	0.45
11:BA:1451:C:H4'	11:BA:1452:G:OP1	2.17	0.45
11:BA:234:G:O2'	11:BA:235:A:P	2.74	0.45
11:DA:893:A:C5	11:DA:894:U:C4	3.04	0.45
3:A2:10:LYS:CD	11:AA:329:A:H5''	2.43	0.45
11:DA:1662:C:H5'	11:DA:1662:C:C6	2.52	0.45
11:DA:328:G:H5'	11:DA:330:C:H41	1.81	0.45
11:CA:1715:A:H1'	11:CA:1736:C:H5'	1.98	0.45
11:BA:1736:C:O2'	11:BA:1737:C:H5'	2.17	0.45
22:CL:17:ARG:CZ	22:CL:20:LYS:HE2	2.46	0.45
11:BA:933:A:H2'	11:BA:934:U:O4'	2.15	0.45
12:BB:128:GLN:NE2	12:BB:132:GLU:HG3	2.30	0.45
11:BA:1514:G:O2'	11:BA:1515:A:C8	2.68	0.45
28:BR:140:ARG:HG2	28:BR:163:ASP:O	2.17	0.45
11:CA:673:A:H2'	11:CA:675:A:N6	2.28	0.45
22:BL:17:ARG:NH1	22:BL:20:LYS:HE2	2.31	0.45
18:CH:112:THR:HB	18:CH:115:GLU:HG3	1.99	0.45
27:BQ:73:LEU:O	27:BQ:85:ILE:HA	2.17	0.45
11:AA:1406:G:O2'	11:AA:1407:A:OP2	2.32	0.45
21:AK:54:VAL:HG11	21:AK:81:VAL:HA	1.99	0.45
11:CA:1406:G:O2'	11:CA:1407:A:OP2	2.33	0.45
23:AM:24:GLY:HA2	23:AM:58:ALA:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:1387:A:H2'	11:DA:1388:A:C8	2.51	0.45
28:AR:299:ILE:HD12	28:AR:330:ASP:HB2	1.98	0.45
4:C3:133:PRO:HG3	4:C3:162:PHE:CE1	2.52	0.45
24:AN:33:TYR:O	24:AN:34:GLU:HB3	2.16	0.45
12:CB:12:ARG:HD3	12:CB:172:TRP:CZ3	2.52	0.45
28:CR:235:LYS:HG3	28:CR:256:SER:O	2.16	0.45
24:CN:16:ASP:CG	24:CN:26:ARG:HH12	2.19	0.45
21:DK:76:GLN:O	21:DK:79:ILE:HG13	2.16	0.45
11:BA:802:U:H2'	11:BA:803:A:C8	2.52	0.45
18:CH:28:ARG:HB2	18:CH:60:LYS:HG2	1.98	0.45
10:D9:123:ILE:HD13	10:D9:136:LYS:HD2	1.98	0.45
11:DA:1240:G:N7	39:DA:8007:HOH:O	2.36	0.45
21:AK:139:SER:OG	21:AK:140:THR:O	2.23	0.45
13:AC:221:ILE:HG22	13:AC:222:THR:H	1.82	0.45
3:A2:185:ARG:NH2	11:AA:202:U:O2	2.50	0.45
8:D7:70:LYS:HG2	8:D7:92:PHE:HE2	1.81	0.45
11:AA:1691:C:N4	39:AA:2230:HOH:O	2.30	0.45
18:DH:8:ALA:HA	18:DH:74:VAL:HG21	1.97	0.45
13:AC:228:ARG:H	13:AC:228:ARG:HG2	1.48	0.45
17:BG:178:ASN:HA	17:BG:186:ILE:HD12	1.99	0.45
2:A1:61:GLU:O	6:A5:51:ARG:CZ	2.65	0.45
11:AA:516:G:OP2	26:AP:35:LYS:HE2	2.14	0.45
11:BA:90:U:OP1	33:BW:3:ARG:HB2	2.17	0.45
11:BA:1226:U:C2'	11:BA:1227:G:H5'	2.47	0.45
11:CA:234:G:O2'	11:CA:235:A:O4'	2.34	0.45
11:DA:676:C:HO2'	11:DA:677:G:P	2.36	0.45
11:DA:3:C:N4	14:DD:16:ARG:HB2	2.32	0.45
11:DA:982:U:C4'	11:DA:983:A:OP2	2.63	0.45
11:DA:1145:C:OP1	23:DM:132:LYS:NZ	2.28	0.45
11:DA:382:A:H4'	11:DA:1684:A:H5'	1.99	0.45
11:AA:1480:U:HO2'	11:AA:1481:A:P	2.39	0.45
21:CK:105:THR:HG22	21:CK:107:GLN:H	1.82	0.45
19:BI:54:ILE:HA	19:BI:62:PHE:CE1	2.51	0.45
1:C0:101:ASN:HD21	10:C9:77:LYS:HZ1	1.60	0.45
13:CC:146:LYS:CB	13:CC:151:LYS:HZ1	2.30	0.45
11:DA:1518:G:H2'	11:DA:1519:U:H5''	1.97	0.45
12:AB:56:ALA:O	12:AB:60:ILE:HG13	2.16	0.45
33:BW:194:VAL:HG21	33:BW:240:LEU:HD13	1.97	0.45
3:C2:50:ARG:HB3	3:C2:67:ARG:HG3	1.97	0.45
11:DA:1575:U:H2'	11:DA:1576:U:C6	2.50	0.45
33:BW:193:ARG:NH1	33:BW:220:PHE:HE1	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CW:185:ILE:HD12	33:CW:193:ARG:HB2	1.99	0.45
33:DW:143:THR:OG1	33:DW:147:ARG:HB2	2.17	0.45
28:BR:193:ASP:OD1	28:BR:193:ASP:N	2.40	0.45
11:DA:553:A:H2	13:DC:181:LYS:NZ	2.10	0.45
11:DA:447:C:H5'	11:DA:448:A:N7	2.31	0.45
4:C3:174:TYR:CE2	4:C3:180:ARG:HB2	2.51	0.45
11:DA:879:G:C6	11:DA:880:G:C6	3.04	0.45
4:D3:174:TYR:CE2	4:D3:180:ARG:HB2	2.51	0.45
8:B7:12:ILE:HD12	8:B7:45:LEU:HD12	1.99	0.45
11:BA:762:U:H2'	11:BA:762:U:O2	2.17	0.45
12:AB:196:ASP:HA	12:AB:199:TYR:CD1	2.52	0.45
23:DM:24:GLY:HA2	23:DM:58:ALA:HB3	1.97	0.45
11:BA:575:U:H5''	11:BA:576:U:OP2	2.16	0.45
21:DK:103:VAL:HG11	21:DK:142:ARG:HA	1.98	0.45
32:BV:27:ASP:HB3	32:BV:30:PHE:HD2	1.80	0.45
12:BB:145:ASP:HB3	12:BB:147:ASP:OD1	2.17	0.45
12:BB:26:ASN:ND2	12:BB:149:PRO:HA	2.31	0.45
11:CA:1573:G:H22	30:CT:91:ASN:ND2	2.14	0.45
12:CB:145:ASP:HB3	12:CB:147:ASP:OD1	2.17	0.45
8:C7:47:ARG:CG	8:C7:47:ARG:HH11	2.29	0.45
28:AR:24:VAL:O	28:AR:313:THR:HB	2.17	0.45
8:A7:47:ARG:HG3	8:A7:47:ARG:NH1	2.30	0.45
21:AK:135:ILE:HD13	21:AK:135:ILE:HA	1.86	0.45
11:CA:977:U:H2'	11:CA:978:C:O4'	2.16	0.45
33:DW:31:PRO:HG2	33:DW:38:LEU:HG	1.98	0.45
25:AO:121:GLU:OE2	25:AO:143:TYR:HE2	1.99	0.45
10:D9:116:CYS:O	10:D9:120:GLY:N	2.49	0.45
11:DA:1241:U:H4'	11:DA:1242:G:O5'	2.17	0.45
18:DH:28:ARG:HB2	18:DH:60:LYS:HG2	1.99	0.45
30:DT:145:THR:HG22	30:DT:149:ILE:HD11	1.98	0.45
11:CA:451:G:OP1	26:CP:102:ARG:NH2	2.50	0.45
11:AA:668:U:H2'	11:AA:669:G:O4'	2.16	0.45
11:CA:1306:U:H2'	11:CA:1307:U:C6	2.51	0.45
30:AT:145:THR:HG22	30:AT:149:ILE:HD11	1.98	0.45
11:AA:1461:A:H4'	13:AC:6:ARG:HE	1.81	0.45
33:BW:162:LEU:HD13	33:BW:171:ILE:HG21	1.97	0.45
11:CA:55:U:H4'	11:CA:56:G:O5'	2.17	0.45
11:AA:977:U:H2'	11:AA:978:C:O4'	2.15	0.45
12:BB:71:VAL:HG11	12:BB:82:ALA:HB1	1.99	0.45
11:BA:719:G:OP2	11:BA:719:G:C8	2.70	0.45
33:DW:114:LYS:HD2	33:DW:114:LYS:HA	1.73	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:802:U:H2'	11:AA:803:A:C8	2.52	0.45
17:CG:178:ASN:HA	17:CG:186:ILE:HD12	1.99	0.45
15:CE:141:ARG:HB2	15:CE:223:TYR:CE1	2.52	0.45
36:AZ:47:VAL:N	36:AZ:74:ARG:HH22	2.15	0.45
36:AZ:71:GLY:O	36:AZ:75:SER:HB3	2.16	0.45
4:C3:109:LYS:CE	4:C3:109:LYS:H	2.29	0.45
11:DA:872:A:H3'	11:DA:873:G:H5''	1.98	0.45
11:DA:1163:U:H2'	11:DA:1164:C:C6	2.52	0.45
11:BA:875:C:H6	11:BA:875:C:OP2	1.99	0.45
23:BM:89:ILE:HA	23:BM:89:ILE:HD13	1.80	0.45
11:DA:840:A:HO2'	11:DA:841:A:P	2.40	0.45
11:BA:1154:U:H5''	29:BS:129:LYS:HD3	1.99	0.45
23:AM:87:ASN:HB2	23:AM:100:MET:HG3	1.98	0.45
11:DA:486:A:H5''	11:DA:487:C:OP1	2.16	0.45
33:CW:143:THR:OG1	33:CW:147:ARG:HB2	2.17	0.45
27:AQ:12:GLN:NE2	27:AQ:60:THR:HG23	2.28	0.45
11:DA:1288:C:P	32:DV:7:LYS:HE3	2.57	0.45
15:DE:205:THR:HG23	15:DE:211:PHE:CE2	2.52	0.45
11:CA:1513:G:H1'	11:CA:1542:A:H61	1.81	0.45
33:AW:126:LEU:HB3	33:AW:143:THR:CG2	2.47	0.45
33:DW:36:HIS:CD2	33:DW:87:GLY:HA3	2.51	0.45
11:DA:17:C:H2'	11:DA:18:C:C6	2.51	0.45
11:CA:665:A:O3'	11:CA:666:A:H8	1.98	0.45
28:DR:161:HIS:H	28:DR:161:HIS:HD2	1.65	0.45
4:D3:63:ILE:HG12	4:D3:93:PHE:O	2.17	0.45
6:A5:28:ARG:HG3	21:AK:147:ARG:HA	1.97	0.45
20:BJ:22:THR:OG1	20:BJ:113:GLU:HB2	2.16	0.45
11:CA:447:C:H5'	11:CA:448:A:N7	2.31	0.45
11:CA:1568:C:O2'	11:CA:1570:U:H5	2.00	0.45
25:CO:101:ARG:HH12	25:CO:145:ALA:CA	2.29	0.45
4:A3:174:TYR:CE2	4:A3:180:ARG:HB2	2.51	0.45
3:A2:94:THR:HG23	11:AA:319:A:C2	2.52	0.45
11:AA:1527:A:OP2	29:AS:52:ARG:NH1	2.50	0.45
11:AA:1355:G:H21	28:AR:76:ASN:ND2	2.14	0.45
27:AQ:58:PRO:HA	27:AQ:63:LEU:HB3	1.99	0.45
5:B4:72:LEU:HD12	5:B4:85:ARG:HB3	1.99	0.45
21:BK:103:VAL:HG11	21:BK:142:ARG:HA	1.98	0.45
11:AA:558:G:N1	11:AA:574:A:OP2	2.46	0.45
12:AB:12:ARG:HD3	12:AB:172:TRP:CZ3	2.52	0.45
35:BY:48:TYR:OH	35:BY:116:LYS:HE3	2.17	0.45
28:DR:235:LYS:HG3	28:DR:256:SER:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:DI:143:ALA:HA	19:DI:145:ARG:NH1	2.32	0.45
36:CZ:17:ILE:HG22	36:CZ:21:LYS:HA	1.99	0.45
18:DH:18:GLU:OE2	18:DH:67:GLY:HA2	2.16	0.45
9:A8:63:VAL:HG22	17:AG:97:LEU:HB3	1.99	0.45
11:CA:728:U:H5'	11:CA:729:U:OP2	2.17	0.45
11:BA:500:U:H2'	11:BA:501:U:H6	1.81	0.45
12:AB:71:VAL:HG11	12:AB:82:ALA:HB1	1.97	0.45
25:DO:88:GLU:HG3	25:DO:89:ASP:H	1.82	0.45
22:AL:68:ARG:HG3	22:AL:116:ILE:HG12	1.99	0.45
35:CY:84:PHE:CZ	35:CY:91:PHE:HD1	2.35	0.45
11:CA:363:G:H5''	18:CH:88:LYS:HE2	1.99	0.45
14:AD:118:LEU:HA	14:AD:118:LEU:HD12	1.82	0.45
5:A4:74:ASP:N	5:A4:74:ASP:OD1	2.50	0.45
11:CA:593:A:H2'	11:CA:594:U:C6	2.52	0.45
4:B3:161:ASP:OD1	4:B3:161:ASP:N	2.42	0.45
19:DI:15:LYS:HG3	19:DI:78:SER:HB3	1.99	0.45
10:B9:123:ILE:HD13	10:B9:136:LYS:HD2	1.98	0.45
35:CY:14:LYS:HD2	35:CY:123:GLY:HA3	1.99	0.45
7:A6:29:TYR:H	7:A6:46:SER:HB3	1.81	0.45
26:BP:16:LEU:HD21	33:BW:64:ILE:HG12	1.98	0.45
11:CA:1241:U:H4'	11:CA:1242:G:O5'	2.16	0.45
11:BA:1431:A:H8	11:BA:1431:A:H3'	1.81	0.45
9:D8:40:ASN:HB2	23:DM:25:LYS:HZ3	1.81	0.45
11:CA:1076:U:H5''	22:CL:14:LYS:HE2	1.98	0.45
11:CA:1199:G:N2	31:CU:27:LYS:HG3	2.32	0.45
11:AA:63:U:H3'	11:AA:64:U:H5''	1.98	0.45
11:DA:1508:G:N3	11:DA:1508:G:H2'	2.32	0.45
11:AA:672:C:H2'	11:AA:673:A:O4'	2.17	0.45
11:BA:226:A:H3'	11:BA:227:G:O4'	2.16	0.45
11:AA:1518:G:H2'	11:AA:1519:U:H5''	1.98	0.45
11:BA:1123:G:C6	11:BA:1721:G:C6	3.05	0.45
11:DA:1721:G:H4'	11:DA:1722:U:C5'	2.47	0.45
11:DA:1444:U:O2'	17:DG:77:ASN:OD1	2.35	0.45
11:BA:1463:U:HO2'	11:BA:1464:U:P	2.40	0.45
11:AA:1662:C:H5'	11:AA:1662:C:C6	2.52	0.45
11:CA:535:A:OP2	11:CA:535:A:H8	1.99	0.45
11:AA:1464:U:OP2	11:AA:1465:C:C5	2.69	0.45
3:A2:56:VAL:HG22	11:AA:324:A:P	2.57	0.45
15:BE:102:PHE:CD1	15:BE:116:TRP:HB3	2.51	0.45
15:CE:102:PHE:CD1	15:CE:116:TRP:HB3	2.51	0.45
28:DR:184:ALA:H	28:DR:206:ARG:HH22	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A5:15:ARG:NH2	11:AA:913:U:C5	2.85	0.45
16:AF:78:ARG:NH1	16:AF:100:GLY:CA	2.78	0.45
11:DA:1025:G:H2'	11:DA:1026:C:O4'	2.17	0.45
33:AW:193:ARG:NH1	33:AW:220:PHE:HE1	2.15	0.45
33:DW:36:HIS:CE1	33:DW:87:GLY:HA3	2.51	0.45
3:B2:94:THR:HG23	11:BA:319:A:H2	1.82	0.45
35:DY:64:LYS:HZ1	35:DY:82:SER:H	1.63	0.45
11:AA:1031:A:H2	11:AA:1037:G:H22	1.63	0.45
35:AY:64:LYS:HZ1	35:AY:82:SER:H	1.63	0.45
14:AD:129:ILE:O	14:AD:142:ASN:HA	2.16	0.45
11:DA:515:U:OP1	26:DP:35:LYS:HD2	2.15	0.45
11:DA:516:G:OP2	26:DP:35:LYS:HE2	2.16	0.45
12:AB:28:GLN:HB3	12:AB:150:LEU:HD12	1.98	0.45
8:B7:3:HIS:CE1	11:BA:1204:U:O4'	2.70	0.45
12:BB:196:ASP:HA	12:BB:199:TYR:CD1	2.52	0.45
12:AB:165:GLU:HG3	12:AB:199:TYR:HE2	1.82	0.45
3:C2:94:THR:HG23	11:CA:319:A:C2	2.52	0.45
11:DA:937:U:O2	25:DO:63:PRO:HB2	2.17	0.45
5:C4:85:ARG:HH12	5:C4:108:ILE:HD11	1.80	0.45
28:DR:313:THR:N	28:DR:327:GLY:O	2.50	0.45
14:AD:32:GLY:HA3	34:AX:41:TYR:CE1	2.52	0.45
24:DN:33:TYR:O	24:DN:34:GLU:HB3	2.17	0.45
28:BR:235:LYS:HG3	28:BR:256:SER:O	2.16	0.45
30:DT:105:ARG:H	30:DT:105:ARG:HG2	1.59	0.45
10:D9:100:PHE:HB3	10:D9:124:PHE:CZ	2.51	0.45
31:BU:87:THR:HB	31:BU:96:LYS:HB2	1.98	0.45
18:AH:8:ALA:HA	18:AH:74:VAL:HG21	1.97	0.45
11:CA:250:A:H4'	33:CW:137:GLN:HE21	1.81	0.45
15:DE:57:GLU:HG3	15:DE:59:GLU:HG2	1.99	0.45
11:BA:289:U:H2'	11:BA:290:A:O4'	2.17	0.45
31:DU:87:THR:HB	31:DU:96:LYS:HB2	1.97	0.45
18:CH:8:ALA:HA	18:CH:74:VAL:HG21	1.99	0.45
18:CH:18:GLU:OE2	18:CH:67:GLY:HA2	2.15	0.45
8:B7:70:LYS:HG2	8:B7:92:PHE:HE2	1.82	0.45
11:AA:593:A:H2'	11:AA:594:U:C6	2.52	0.45
11:AA:83:C:H5'	11:AA:84:U:OP2	2.16	0.45
2:B1:54:VAL:HB	17:BG:28:CYS:HA	1.98	0.45
30:AT:155:LYS:HG2	30:AT:155:LYS:H	1.48	0.45
8:C7:70:LYS:HG2	8:C7:92:PHE:HE2	1.82	0.45
11:BA:514:G:H4'	26:BP:34:SER:HB3	1.99	0.45
13:CC:118:VAL:HG21	13:CC:145:LEU:HD21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:593:A:H2'	11:DA:594:U:C6	2.52	0.45
11:AA:1246:C:O2'	11:AA:1247:A:P	2.75	0.45
31:AU:29:LEU:O	31:AU:33:LEU:HB2	2.16	0.45
28:BR:47:ARG:HA	28:BR:78:PHE:HB3	1.98	0.45
28:BR:22:ASP:HB3	28:BR:47:ARG:HB2	1.98	0.45
28:CR:178:ASN:CB	23:DM:110:ARG:NH1	2.80	0.45
6:B5:45:VAL:HA	21:BK:113:GLN:HG3	1.99	0.45
10:D9:102:LYS:HG2	10:D9:103:LEU:N	2.31	0.45
11:BA:229:A:C5	11:BA:230:A:C6	3.05	0.45
11:AA:409:G:O2'	11:AA:410:G:O4'	2.35	0.45
11:DA:378:A:OP2	11:DA:378:A:C8	2.55	0.45
21:DK:105:THR:HG22	21:DK:107:GLN:H	1.82	0.45
11:CA:1480:U:O2'	11:CA:1481:A:C8	2.70	0.45
11:BA:1429:G:H5''	23:BM:138:THR:OG1	2.17	0.45
1:B0:22:LYS:CA	10:B9:74:LYS:HZ3	2.30	0.45
11:CA:112:U:O2'	11:CA:324:A:N3	2.39	0.45
4:B3:109:LYS:NZ	11:BA:725:A:O3'	2.50	0.45
11:AA:531:A:H1'	39:AA:2093:HOH:O	2.16	0.45
11:CA:1025:G:H8	11:CA:1025:G:H5''	1.82	0.45
11:CA:982:U:C4'	11:CA:983:A:OP2	2.64	0.45
11:BA:1025:G:H2'	11:BA:1026:C:O4'	2.16	0.45
33:AW:36:HIS:ND1	33:AW:87:GLY:HA3	2.32	0.45
28:AR:184:ALA:H	28:AR:206:ARG:HH22	1.65	0.45
8:D7:67:TYR:HB3	13:DC:75:PHE:HZ	1.81	0.45
11:BA:809:A:O2'	27:BQ:45:LYS:NZ	2.23	0.45
4:A3:5:LYS:HA	4:A3:5:LYS:HD3	1.70	0.45
4:D3:127:LEU:HB2	4:D3:174:TYR:CE1	2.51	0.45
22:BL:82:ILE:HD11	22:BL:121:PHE:CE1	2.52	0.45
35:AY:198:LYS:O	35:AY:201:ARG:HB2	2.17	0.45
27:BQ:37:ILE:HD11	27:BQ:59:PHE:HE1	1.80	0.45
11:DA:372:C:O2'	11:DA:739:A:N1	2.46	0.45
5:B4:216:ILE:H	5:B4:216:ILE:HG13	1.57	0.45
35:AY:7:TYR:HA	35:AY:8:PRO:HD3	1.59	0.45
13:CC:226:GLU:HB2	28:CR:208:THR:H	1.81	0.45
17:CG:107:PHE:HD1	17:CG:172:ILE:HD13	1.82	0.45
19:DI:29:GLY:HA2	19:DI:65:LEU:O	2.17	0.45
13:AC:77:GLN:HG3	13:AC:87:ILE:HD12	1.98	0.45
36:AZ:17:ILE:HG22	36:AZ:21:LYS:HA	1.99	0.45
11:AA:1098:A:H5''	11:AA:1099:G:OP2	2.17	0.45
11:BA:1084:A:O2'	11:BA:1704:C:O2'	2.26	0.45
25:BO:65:VAL:HG21	25:BO:73:ILE:HD11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:20:G:H5''	11:AA:565:G:C4	2.52	0.45
11:AA:1575:U:H2'	11:AA:1576:U:C6	2.52	0.45
11:AA:955:A:H2'	11:AA:956:A:O4'	2.17	0.45
11:DA:630:A:OP2	39:DA:7827:HOH:O	2.20	0.45
19:BI:122:ASP:HA	19:BI:123:PRO:HD3	1.75	0.45
11:CA:289:U:H2'	11:CA:290:A:O4'	2.17	0.45
36:CZ:71:GLY:O	36:CZ:75:SER:HB3	2.17	0.45
28:BR:127:SER:OG	28:BR:132:GLN:HB2	2.17	0.45
11:CA:1390:G:H2'	11:CA:1391:C:O4'	2.16	0.45
14:BD:12:TYR:HA	14:BD:47:MET:HG3	1.98	0.45
21:BK:75:MET:HG2	21:BK:118:ALA:HB2	1.98	0.45
14:AD:110:GLN:OE1	14:AD:126:ARG:HD2	2.16	0.45
3:D2:194:LYS:HA	3:D2:194:LYS:HD3	1.75	0.45
17:CG:188:LYS:HA	17:CG:188:LYS:HD3	1.67	0.45
13:CC:15:VAL:HG11	24:CN:35:MET:HB3	1.99	0.45
11:DA:297:U:O4	39:DA:7336:HOH:O	2.21	0.45
15:BE:57:GLU:HG3	15:BE:59:GLU:HG2	1.99	0.45
35:BY:182:LEU:O	35:BY:187:ARG:HD2	2.17	0.45
36:BZ:17:ILE:HG22	36:BZ:21:LYS:HA	1.99	0.45
11:DA:1486:U:O2'	11:DA:1487:A:P	2.74	0.45
11:CA:1486:U:HO2'	11:CA:1487:A:P	2.36	0.45
4:B3:117:ARG:HD2	11:BA:834:A:C6	2.51	0.45
11:AA:1313:G:H22	11:AA:1354:A:H2	1.64	0.45
11:DA:1145:C:OP2	23:DM:141:SER:HB2	2.16	0.45
11:AA:1586:A:C5'	11:AA:1587:U:OP2	2.65	0.45
11:DA:238:G:N3	11:DA:238:G:O2'	2.46	0.45
11:DA:162:A:OP1	35:DY:137:ARG:HB2	2.16	0.45
11:AA:1463:U:HO2'	11:AA:1464:U:P	2.39	0.45
11:CA:1025:G:H2'	11:CA:1026:C:O4'	2.17	0.45
4:A3:109:LYS:H	4:A3:109:LYS:CE	2.29	0.45
11:CA:1440:A:H4'	11:CA:1513:G:H4'	1.98	0.45
11:DA:1568:C:P	24:DN:18:LYS:HZ1	2.40	0.45
11:AA:1440:A:H4'	11:AA:1513:G:H4'	1.99	0.45
29:AS:34:ILE:HD13	29:AS:50:VAL:HG21	1.99	0.45
11:BA:17:C:H2'	11:BA:18:C:C6	2.52	0.45
25:DO:101:ARG:HH12	25:DO:145:ALA:HB1	1.80	0.45
19:CI:143:ALA:HA	19:CI:145:ARG:NH1	2.32	0.45
11:CA:1586:A:H3'	11:CA:1587:U:H6	1.82	0.45
33:DW:249:THR:HB	33:DW:252:GLU:HG3	1.98	0.45
25:CO:147:THR:O	25:CO:151:LEU:HG	2.17	0.45
12:AB:29:MET:HE3	12:AB:144:CYS:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C7:67:TYR:HB3	13:CC:75:PHE:HZ	1.82	0.45
11:AA:517:U:O2'	11:AA:519:A:N7	2.40	0.45
12:BB:148:SER:HA	12:BB:149:PRO:HD3	1.75	0.45
12:DB:12:ARG:HD3	12:DB:172:TRP:CZ3	2.52	0.45
11:AA:1431:A:H3'	11:AA:1431:A:C8	2.52	0.45
17:BG:24:ILE:HD13	17:BG:24:ILE:H	1.82	0.45
17:CG:35:CYS:HB3	17:CG:63:ILE:HD11	1.98	0.45
26:AP:127:LYS:HG2	26:AP:129:GLY:H	1.82	0.45
35:CY:49:VAL:HB	35:CY:115:LYS:H	1.81	0.45
13:DC:221:ILE:HG22	13:DC:222:THR:H	1.82	0.45
11:DA:1437:G:P	19:DI:141:GLN:HG2	2.57	0.45
8:D7:22:PHE:HE1	8:D7:24:LEU:HG	1.82	0.45
4:D3:70:TYR:OH	4:D3:129:ASP:OD1	2.32	0.45
12:CB:53:ILE:HG23	12:CB:174:ILE:HG13	1.98	0.45
10:A9:104:GLU:HG2	10:A9:105:ASN:H	1.80	0.45
35:AY:152:ASP:HA	35:AY:153:PRO:HD2	1.84	0.45
4:B3:171:THR:O	4:B3:175:LYS:HB2	2.16	0.45
20:BJ:23:LEU:HD22	20:BJ:112:ILE:HG12	1.99	0.45
9:A8:47:LYS:HB2	23:AM:6:GLU:HA	1.99	0.45
28:BR:238:LEU:HD12	28:BR:238:LEU:HA	1.89	0.45
4:D3:165:GLU:H	4:D3:165:GLU:CD	2.17	0.45
28:CR:147:ILE:HG12	28:CR:147:ILE:H	1.58	0.45
29:BS:36:ASP:N	29:BS:36:ASP:OD1	2.47	0.45
27:DQ:39:LEU:HA	27:DQ:39:LEU:HD23	1.66	0.45
20:DJ:16:LYS:HA	20:DJ:16:LYS:HD3	1.83	0.45
3:D2:38:LEU:HD21	3:D2:104:LEU:HD21	1.99	0.45
11:AA:57:U:O2'	11:AA:443:A:N3	2.47	0.45
8:C7:95:SER:OG	13:CC:70:LYS:HE3	2.16	0.45
11:DA:391:A:C4'	11:DA:392:A:H5''	2.45	0.44
10:A9:101:TYR:HE1	31:AU:33:LEU:HD21	1.82	0.44
11:DA:1010:A:H2'	11:DA:1011:C:H6	1.83	0.44
11:AA:597:U:H2'	11:AA:598:A:C8	2.53	0.44
11:DA:3:C:HO2'	11:DA:4:C:P	2.36	0.44
11:BA:233:U:H2'	11:BA:234:G:C8	2.52	0.44
19:CI:14:ARG:HD3	19:CI:125:ARG:HH22	1.81	0.44
3:D2:22:ARG:HB3	11:DA:376:A:H5''	1.98	0.44
11:DA:211:U:H1'	11:DA:212:A:O5'	2.16	0.44
14:BD:37:LYS:HG3	14:BD:38:ASN:CB	2.47	0.44
11:DA:209:G:C5'	11:DA:210:A:H5'	2.47	0.44
11:DA:1520:U:H1'	23:DM:89:ILE:HG13	1.99	0.44
23:DM:89:ILE:HG22	23:DM:90:ASN:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:3:C:O2'	15:BE:182:ALA:N	2.50	0.44
17:DG:66:ARG:NH2	17:DG:143:ASN:HD21	2.15	0.44
11:BA:246:U:OP2	27:BQ:33:TYR:OH	2.35	0.44
11:DA:1319:U:C4	20:DJ:88:ILE:HD11	2.52	0.44
3:A2:10:LYS:HE2	11:AA:314:A:OP2	2.17	0.44
10:C9:72:LYS:HB3	11:CA:1160:G:OP1	2.16	0.44
21:DK:128:ARG:NH1	21:DK:128:ARG:CG	2.70	0.44
23:CM:87:ASN:HB2	23:CM:100:MET:HG3	1.98	0.44
11:CA:985:C:H2'	11:CA:986:G:H8	1.82	0.44
33:DW:126:LEU:HB3	33:DW:143:THR:CG2	2.45	0.44
11:DA:1568:C:O2'	11:DA:1570:U:H5	2.00	0.44
7:A6:5:LEU:H	18:AH:24:GLN:HE22	1.61	0.44
11:BA:1031:A:H2	11:BA:1037:G:H22	1.65	0.44
33:BW:129:THR:HB	33:BW:142:VAL:CG1	2.47	0.44
22:BL:17:ARG:CZ	22:BL:20:LYS:HE2	2.47	0.44
28:AR:161:HIS:H	28:AR:161:HIS:HD2	1.65	0.44
28:DR:140:ARG:HH11	28:DR:162:SER:HA	1.81	0.44
4:B3:174:TYR:CZ	4:B3:178:THR:HG21	2.52	0.44
4:D3:123:TYR:O	4:D3:126:LEU:HB3	2.17	0.44
8:B7:9:LYS:HA	8:B7:45:LEU:HD11	1.98	0.44
11:AA:122:A:C8	35:AY:201:ARG:HD3	2.52	0.44
33:CW:249:THR:HB	33:CW:252:GLU:HG3	1.97	0.44
9:C8:99:ASN:O	9:C8:102:GLN:N	2.27	0.44
12:AB:29:MET:CE	12:AB:150:LEU:HD21	2.47	0.44
11:BA:1471:C:P	30:BT:130:ARG:NH2	2.90	0.44
12:DB:196:ASP:HA	12:DB:199:TYR:CD1	2.52	0.44
20:DJ:48:VAL:HG22	20:DJ:93:CYS:SG	2.57	0.44
11:DA:1471:C:P	30:DT:130:ARG:HH22	2.40	0.44
35:DY:38:GLY:N	35:DY:48:TYR:O	2.47	0.44
11:AA:1729:A:H2'	11:AA:1730:G:C8	2.52	0.44
17:CG:49:GLY:HA3	17:CG:51:TYR:CE2	2.52	0.44
22:DL:106:LEU:HD23	22:DL:122:LYS:HE2	1.98	0.44
19:AI:15:LYS:HG3	19:AI:78:SER:HB3	2.00	0.44
15:BE:234:PRO:HB3	36:BZ:13:MET:HE2	1.99	0.44
29:AS:65:VAL:HG12	29:AS:69:LYS:HD2	1.99	0.44
35:AY:14:LYS:HD2	35:AY:123:GLY:HA3	1.99	0.44
21:AK:75:MET:HG2	21:AK:118:ALA:HB2	1.98	0.44
23:BM:45:ILE:O	23:BM:49:VAL:HG23	2.16	0.44
17:AG:188:LYS:HD3	17:AG:188:LYS:HA	1.67	0.44
18:DH:57:ARG:HG2	18:DH:57:ARG:H	1.54	0.44
28:CR:24:VAL:O	28:CR:313:THR:HB	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:BI:15:LYS:HG3	19:BI:78:SER:HB3	1.99	0.44
23:DM:45:ILE:O	23:DM:49:VAL:HG23	2.17	0.44
10:B9:88:HIS:NE2	11:BA:1220:C:OP2	2.50	0.44
15:BE:219:LEU:O	15:BE:222:THR:OG1	2.27	0.44
11:BA:420:A:N3	11:BA:432:U:O2'	2.41	0.44
19:BI:74:SER:OG	19:BI:75:GLY:N	2.49	0.44
11:BA:507:G:HO2'	11:BA:508:A:P	2.39	0.44
11:DA:1226:U:C2'	11:DA:1227:G:H5'	2.47	0.44
11:CA:181:G:H5'	11:CA:181:G:H8	1.80	0.44
11:CA:1520:U:H1'	23:CM:89:ILE:HG13	1.99	0.44
23:CM:89:ILE:HD13	23:CM:89:ILE:HA	1.79	0.44
11:CA:1488:A:O2'	11:CA:1489:U:O5'	2.34	0.44
11:DA:1488:A:O2'	11:DA:1489:U:O5'	2.31	0.44
13:CC:146:LYS:CD	13:CC:151:LYS:HZ1	2.27	0.44
4:B3:109:LYS:NZ	11:BA:726:U:P	2.90	0.44
7:C6:18:LYS:NZ	11:CA:936:U:H5'	2.32	0.44
11:DA:507:G:HO2'	11:DA:508:A:P	2.40	0.44
11:AA:722:A:H5''	11:AA:723:A:OP2	2.18	0.44
15:DE:102:PHE:CD1	15:DE:116:TRP:HB3	2.52	0.44
11:AA:1025:G:H2'	11:AA:1026:C:O4'	2.17	0.44
11:CA:1321:G:O2'	11:CA:1349:C:N3	2.45	0.44
11:AA:270:U:H5'	11:AA:271:U:H6	1.81	0.44
28:BR:161:HIS:HB3	28:BR:197:LYS:CE	2.47	0.44
21:CK:54:VAL:HG11	21:CK:81:VAL:HA	1.99	0.44
11:CA:17:C:H2'	11:CA:18:C:C6	2.52	0.44
21:DK:54:VAL:HG11	21:DK:81:VAL:HA	1.98	0.44
11:AA:561:A:OP1	34:AX:9:ALA:HA	2.17	0.44
21:BK:82:VAL:HG13	21:BK:124:MET:HE2	1.99	0.44
27:AQ:37:ILE:HD11	27:AQ:59:PHE:HE1	1.82	0.44
28:CR:194:GLY:HA2	28:CR:216:VAL:HG23	1.99	0.44
12:BB:12:ARG:HD3	12:BB:172:TRP:CZ3	2.52	0.44
17:BG:107:PHE:HD1	17:BG:172:ILE:HD13	1.81	0.44
11:CA:1253:G:O3'	20:CJ:74:SER:HB2	2.17	0.44
12:AB:26:ASN:ND2	12:AB:149:PRO:HA	2.32	0.44
35:AY:213:GLU:O	35:AY:216:LEU:HB2	2.17	0.44
29:DS:77:LYS:HA	29:DS:77:LYS:HD3	1.82	0.44
23:CM:15:HIS:HB3	23:CM:22:ILE:HB	2.00	0.44
11:CA:243:G:O2'	27:CQ:38:GLY:HA3	2.18	0.44
30:DT:8:PHE:HB2	30:DT:145:THR:HA	1.99	0.44
17:AG:35:CYS:HB3	17:AG:63:ILE:HD11	1.98	0.44
35:DY:14:LYS:HD2	35:DY:123:GLY:HA3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CD:75:ALA:O	14:CD:79:ARG:HB2	2.17	0.44
11:AA:7:G:H4'	11:AA:567:C:H4'	2.00	0.44
28:AR:17:LEU:HB2	28:AR:333:ILE:HB	1.99	0.44
28:DR:17:LEU:HB2	28:DR:333:ILE:HB	1.99	0.44
4:C3:143:ALA:O	18:CH:49:GLU:HG3	2.17	0.44
17:BG:119:ASP:OD1	17:BG:120:SER:N	2.49	0.44
35:CY:48:TYR:OH	35:CY:116:LYS:HE3	2.18	0.44
11:DA:1578:C:OP2	19:DI:128:PRO:HA	2.17	0.44
11:DA:1456:A:H2'	11:DA:1457:A:O4'	2.17	0.44
14:CD:20:GLU:HG3	14:CD:23:ARG:HB3	1.98	0.44
18:DH:113:HIS:O	18:DH:116:CYS:HB2	2.17	0.44
10:C9:116:CYS:O	10:C9:120:GLY:N	2.49	0.44
29:CS:65:VAL:HG12	29:CS:69:LYS:HD2	2.00	0.44
14:AD:54:LYS:HD3	14:AD:54:LYS:HA	1.87	0.44
15:AE:107:ASP:OD1	15:AE:111:HIS:HB2	2.18	0.44
17:BG:37:THR:O	17:BG:41:GLN:HG2	2.17	0.44
18:DH:81:VAL:HG21	18:DH:125:ILE:HB	1.98	0.44
24:DN:30:ILE:HB	24:DN:37:THR:O	2.17	0.44
11:DA:1186:G:OP1	11:DA:1218:C:O2'	2.21	0.44
15:AE:141:ARG:HB2	15:AE:223:TYR:CE1	2.52	0.44
31:AU:34:ARG:HG2	31:AU:35:THR:N	2.32	0.44
15:DE:49:PHE:CE1	15:DE:139:PRO:HD3	2.52	0.44
11:AA:1163:U:H2'	11:AA:1164:C:C6	2.53	0.44
11:BA:535:A:OP2	11:BA:535:A:H8	2.00	0.44
11:CA:1531:G:C8	23:CM:134:ARG:HB3	2.52	0.44
11:DA:209:G:H8	11:DA:209:G:H5''	1.82	0.44
13:BC:35:ALA:HB1	13:BC:57:LYS:HB2	1.98	0.44
13:DC:10:LYS:HA	13:DC:10:LYS:HD3	1.74	0.44
13:CC:35:ALA:HA	13:CC:57:LYS:HD2	1.99	0.44
11:CA:1292:U:O2	11:CA:1294:A:H5'	2.16	0.44
3:A2:67:ARG:O	3:A2:68:LEU:HD23	2.18	0.44
13:CC:10:LYS:HD3	13:CC:10:LYS:HA	1.75	0.44
28:AR:161:HIS:HB3	28:AR:197:LYS:CE	2.47	0.44
11:CA:15:U:H6	11:CA:15:U:O5'	2.01	0.44
11:CA:1031:A:H2	11:CA:1037:G:H22	1.64	0.44
8:A7:12:ILE:HD12	8:A7:45:LEU:HD12	1.98	0.44
20:BJ:54:VAL:HB	20:BJ:88:ILE:HB	1.98	0.44
27:CQ:73:LEU:O	27:CQ:85:ILE:HA	2.16	0.44
22:DL:9:ILE:HA	27:DQ:98:ARG:HB3	1.99	0.44
11:AA:1527:A:P	29:AS:52:ARG:HH11	2.40	0.44
12:CB:28:GLN:HB3	12:CB:150:LEU:HD12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:CT:124:ALA:C	30:CT:127:LYS:HE2	2.37	0.44
19:AI:143:ALA:HA	19:AI:145:ARG:NH1	2.32	0.44
11:CA:561:A:H1'	34:CX:14:VAL:HB	1.99	0.44
30:CT:64:LEU:O	30:CT:68:VAL:HG23	2.18	0.44
30:AT:101:GLY:O	30:AT:105:ARG:HG2	2.18	0.44
24:BN:33:TYR:O	24:BN:34:GLU:HB3	2.18	0.44
8:B7:47:ARG:NH1	8:B7:47:ARG:HG3	2.31	0.44
18:AH:28:ARG:HB2	18:AH:60:LYS:HG2	1.98	0.44
12:CB:3:THR:OG1	36:CZ:97:GLU:HG3	2.17	0.44
13:DC:209:ILE:HG22	13:DC:211:ASP:H	1.83	0.44
11:DA:99:A:H2'	39:DA:7320:HOH:O	2.18	0.44
11:DA:1054:U:H4'	11:DA:1055:G:O5'	2.15	0.44
8:C7:22:PHE:HE1	8:C7:24:LEU:HG	1.82	0.44
4:A3:13:THR:O	4:A3:17:GLU:HG3	2.17	0.44
11:DA:1324:U:OP1	19:DI:25:ARG:NH1	2.50	0.44
33:AW:162:LEU:HD13	33:AW:171:ILE:HG21	1.98	0.44
28:BR:308:LYS:O	28:BR:309:ASN:HB2	2.18	0.44
14:BD:32:GLY:HA3	34:BX:41:TYR:CD1	2.52	0.44
11:AA:1322:U:H2'	11:AA:1323:C:O4'	2.17	0.44
13:DC:68:LYS:HE3	13:DC:68:LYS:HB2	1.64	0.44
11:AA:135:A:N6	35:AY:191:LYS:HB2	2.31	0.44
4:C3:165:GLU:CD	4:C3:165:GLU:H	2.19	0.44
11:CA:1322:U:H2'	11:CA:1323:C:O4'	2.18	0.44
13:CC:227:ILE:HG21	28:CR:246:THR:HA	2.00	0.44
11:CA:416:C:N3	11:CA:420:A:N6	2.65	0.44
11:AA:872:A:H3'	11:AA:873:G:H5''	1.98	0.44
31:AU:34:ARG:NH2	31:AU:106:ARG:HH22	2.16	0.44
11:DA:267:A:H2'	11:DA:268:G:C8	2.53	0.44
11:AA:2:A:H1'	11:AA:3:C:OP1	2.17	0.44
11:DA:234:G:O2'	11:DA:235:A:P	2.76	0.44
31:CU:34:ARG:HG2	31:CU:35:THR:N	2.32	0.44
11:CA:1496:A:N1	11:CA:1579:G:N2	2.64	0.44
11:DA:381:G:O2'	11:DA:1684:A:H5''	2.17	0.44
11:CA:615:A:H1'	11:CA:1079:G:O4'	2.18	0.44
32:AV:78:ARG:O	32:AV:82:LEU:HG	2.18	0.44
11:CA:534:A:C5	11:CA:534:A:OP1	2.71	0.44
28:AR:245:LEU:HA	28:AR:245:LEU:HD23	1.56	0.44
4:B3:109:LYS:CE	4:B3:109:LYS:H	2.29	0.44
11:CA:327:G:C4	11:CA:329:A:C8	3.05	0.44
11:DA:92:G:H5'	11:DA:452:A:O2'	2.17	0.44
4:B3:192:PHE:CG	7:B6:21:ARG:NH1	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:665:A:O3'	11:AA:666:A:C8	2.69	0.44
11:BA:316:G:OP1	27:BQ:133:THR:OG1	2.33	0.44
3:B2:50:ARG:HB3	3:B2:67:ARG:HG3	1.99	0.44
28:BR:206:ARG:HG2	28:BR:207:TYR:CD1	2.52	0.44
29:BS:34:ILE:HD13	29:BS:50:VAL:HG21	1.99	0.44
12:CB:128:GLN:NE2	12:CB:132:GLU:HG3	2.31	0.44
15:AE:205:THR:HG23	15:AE:211:PHE:CE2	2.53	0.44
21:DK:30:VAL:HG23	21:DK:47:LEU:HD23	2.00	0.44
11:BA:931:A:P	25:BO:96:LYS:NZ	2.91	0.44
5:C4:46:GLY:HA3	21:CK:47:LEU:CD1	2.46	0.44
11:BA:1752:U:O2'	11:BA:1753:A:P	2.75	0.44
25:AO:101:ARG:HH12	25:AO:145:ALA:CA	2.30	0.44
5:D4:36:ALA:O	5:D4:240:HIS:HE1	2.00	0.44
11:BA:1329:G:H21	30:BT:137:MET:HE1	1.82	0.44
21:AK:103:VAL:HG11	21:AK:142:ARG:HA	1.97	0.44
11:AA:928:C:O2'	25:AO:103:HIS:CD2	2.70	0.44
28:CR:299:ILE:HD12	28:CR:330:ASP:HB2	1.97	0.44
4:D3:133:PRO:HG3	4:D3:162:PHE:CE1	2.53	0.44
19:CI:57:LEU:CD2	19:CI:110:GLN:HG2	2.47	0.44
11:CA:1431:A:C8	11:CA:1431:A:H3'	2.53	0.44
11:AA:648:U:O2'	14:BD:89:GLN:HG3	2.18	0.44
30:CT:145:THR:HG22	30:CT:149:ILE:HD11	1.98	0.44
35:DY:20:ASP:HB3	35:DY:23:LYS:H	1.83	0.44
12:AB:32:TYR:OH	36:AZ:80:HIS:HD2	2.00	0.44
19:BI:143:ALA:HA	19:BI:145:ARG:NH1	2.33	0.44
25:CO:65:VAL:HG21	25:CO:73:ILE:HD11	1.98	0.44
26:CP:27:HIS:HE1	26:CP:67:SER:OG	2.01	0.44
17:AG:178:ASN:HA	17:AG:186:ILE:HD12	2.00	0.44
25:CO:83:ALA:HA	25:CO:84:PRO:HD2	1.79	0.44
35:CY:78:SER:OG	35:CY:79:GLU:N	2.50	0.44
20:DJ:27:ASN:OD1	20:DJ:28:LEU:N	2.50	0.44
4:B3:13:THR:O	4:B3:17:GLU:HG3	2.17	0.44
28:CR:127:SER:OG	28:CR:132:GLN:HB2	2.18	0.44
1:A0:83:PHE:HD2	1:A0:84:GLN:HG3	1.83	0.44
11:CA:1113:G:C2'	11:CA:1114:G:H5'	2.47	0.44
4:C3:171:THR:O	4:C3:175:LYS:HB2	2.16	0.44
33:AW:114:LYS:HA	33:AW:114:LYS:HD2	1.74	0.44
35:CY:20:ASP:HB3	35:CY:23:LYS:H	1.83	0.44
10:D9:88:HIS:CE1	11:DA:1217:G:H21	2.35	0.44
11:CA:1508:G:N3	11:CA:1508:G:H2'	2.33	0.44
14:AD:71:PHE:HE1	33:AW:254:ARG:HD3	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:230:A:N7	11:BA:231:U:C6	2.85	0.44
11:DA:1721:G:H3'	11:DA:1721:G:H8	1.82	0.44
11:AA:13:C:H4'	11:AA:1270:U:O2	2.18	0.44
11:DA:1272:A:H5''	11:DA:1273:U:OP2	2.16	0.44
11:DA:507:G:O2'	11:DA:508:A:OP2	2.33	0.44
11:CA:911:A:N6	39:CA:2166:HOH:O	2.40	0.44
29:BS:72:CYS:SG	29:BS:78:PRO:HA	2.58	0.44
11:CA:426:G:OP1	22:CL:77:LYS:HA	2.18	0.44
8:C7:13:TYR:CE1	8:C7:49:LEU:HD21	2.52	0.44
11:CA:1108:U:OP1	11:CA:1621:G:O2'	2.34	0.44
28:AR:15:GLY:CA	28:AR:65:PHE:HB2	2.44	0.44
10:A9:75:LYS:HD3	11:AA:1418:C:H6	1.81	0.44
3:D2:50:ARG:HB3	3:D2:67:ARG:HG3	1.99	0.44
11:BA:1025:G:H8	11:BA:1025:G:H5''	1.81	0.44
33:BW:212:VAL:O	33:BW:219:ALA:HA	2.17	0.44
3:A2:50:ARG:HB3	3:A2:67:ARG:HG3	1.99	0.44
29:DS:127:THR:HG22	29:DS:128:TYR:CD2	2.51	0.44
25:DO:101:ARG:HH12	25:DO:145:ALA:CA	2.29	0.44
4:B3:123:TYR:O	4:B3:126:LEU:HB3	2.17	0.44
4:A3:123:TYR:O	4:A3:126:LEU:HB3	2.18	0.44
12:CB:64:GLN:HE22	15:CE:246:GLU:CG	2.31	0.44
11:CA:1359:C:O2'	32:CV:52:GLY:HA3	2.17	0.44
12:BB:28:GLN:HB3	12:BB:150:LEU:HD12	1.99	0.44
11:DA:762:U:O2	11:DA:762:U:H2'	2.17	0.44
5:D4:85:ARG:HH12	5:D4:108:ILE:HD11	1.82	0.44
11:DA:214:U:C6	11:DA:214:U:OP2	2.70	0.44
23:AM:15:HIS:HB3	23:AM:22:ILE:HB	2.00	0.44
17:AG:49:GLY:HA3	17:AG:51:TYR:CE2	2.52	0.44
35:AY:48:TYR:OH	35:AY:116:LYS:HE3	2.17	0.44
21:BK:76:GLN:O	21:BK:79:ILE:HG13	2.17	0.44
17:DG:26:ASP:HA	17:DG:27:PRO:HD2	1.87	0.44
3:A2:38:LEU:HD21	3:A2:104:LEU:HD21	2.00	0.44
25:CO:88:GLU:HG3	25:CO:89:ASP:H	1.82	0.44
12:AB:197:LEU:HD23	12:AB:197:LEU:HA	1.83	0.44
1:A0:74:ASP:N	1:A0:74:ASP:OD1	2.51	0.44
18:AH:12:LYS:HB2	18:AH:12:LYS:HE3	1.49	0.44
13:DC:14:PHE:CE1	20:DJ:111:GLU:HG3	2.53	0.44
11:DA:857:G:O2'	25:DO:107:ASN:HB3	2.17	0.44
11:AA:391:A:HO2'	11:AA:392:A:P	2.37	0.44
5:B4:57:ARG:NH1	11:BA:873:G:OP1	2.51	0.44
10:A9:95:LEU:HD11	31:AU:29:LEU:CD1	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1199:G:H21	31:CU:27:LYS:HG3	1.81	0.44
11:DA:1506:G:O2'	11:DA:1507:U:P	2.73	0.44
9:D8:41:HIS:HD2	11:DA:1507:U:OP1	2.01	0.44
11:BA:210:A:O2'	11:BA:239:A:H2	2.00	0.44
35:AY:137:ARG:CG	35:AY:181:ARG:HG3	2.47	0.44
11:DA:411:U:OP1	35:DY:96:SER:OG	2.18	0.44
25:AO:4:MET:O	25:AO:5:GLN:HG2	2.18	0.44
11:CA:469:A:C2'	11:CA:470:G:H8	2.25	0.44
11:AA:679:U:H2'	11:AA:680:U:O4'	2.17	0.44
12:BB:69:VAL:O	12:BB:91:CYS:HB2	2.17	0.44
12:CB:69:VAL:O	12:CB:91:CYS:HB2	2.17	0.44
23:BM:87:ASN:HB2	23:BM:100:MET:HG3	2.00	0.44
4:C3:102:SER:HA	11:CA:633:U:C4	2.53	0.44
28:CR:161:HIS:HB3	28:CR:197:LYS:CE	2.48	0.44
5:B4:46:GLY:HA3	21:BK:47:LEU:CD1	2.46	0.44
22:DL:17:ARG:CZ	22:DL:20:LYS:HE2	2.48	0.44
13:BC:10:LYS:HD3	13:BC:10:LYS:HA	1.75	0.44
33:BW:249:THR:HB	33:BW:252:GLU:HG3	1.98	0.44
11:AA:1488:A:O2'	11:AA:1489:U:O5'	2.32	0.44
3:D2:94:THR:HG23	11:DA:319:A:C2	2.52	0.44
14:AD:64:PRO:HA	14:AD:69:ARG:HH11	1.81	0.44
11:BA:1527:A:H5''	11:BA:1528:A:OP2	2.17	0.44
22:BL:68:ARG:NH2	22:BL:115:ASP:OD2	2.38	0.44
8:A7:67:TYR:HB3	13:AC:75:PHE:HZ	1.82	0.44
11:BA:1489:U:H5'	11:BA:1490:C:H5	1.83	0.44
8:B7:47:ARG:HG3	8:B7:47:ARG:HH11	1.81	0.44
11:CA:243:G:O2'	27:CQ:38:GLY:O	2.29	0.44
30:DT:76:ILE:O	30:DT:80:LYS:HG3	2.18	0.44
11:AA:45:A:N1	11:AA:424:A:O2'	2.34	0.44
11:CA:802:U:H2'	11:CA:803:A:C8	2.52	0.44
14:AD:75:ALA:O	14:AD:79:ARG:HB2	2.18	0.44
11:AA:1390:G:H2'	11:AA:1391:C:O4'	2.17	0.44
26:BP:105:PHE:CZ	26:BP:127:LYS:HE2	2.52	0.44
11:CA:907:A:C8	21:CK:137:THR:O	2.70	0.44
36:DZ:30:ARG:O	36:DZ:39:ILE:HG12	2.18	0.44
28:CR:98:LYS:HG2	28:CR:119:SER:O	2.17	0.44
17:AG:193:GLU:O	17:AG:197:LYS:HG3	2.17	0.44
8:D7:61:TRP:CE2	24:DN:22:VAL:HG22	2.53	0.44
11:CA:1674:A:H4'	35:CY:81:HIS:CE1	2.52	0.44
17:AG:24:ILE:HG13	17:AG:30:GLN:HA	1.97	0.44
11:AA:1612:C:H6	11:AA:1612:C:O5'	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1724:U:H6	11:AA:1724:U:H5''	1.82	0.44
30:BT:155:LYS:H	30:BT:155:LYS:HG2	1.48	0.44
11:BA:374:G:H8	11:BA:374:G:H5''	1.83	0.44
30:DT:34:ILE:HD11	30:DT:58:TYR:OH	2.18	0.44
11:DA:597:U:H2'	11:DA:598:A:C8	2.52	0.44
36:CZ:47:VAL:N	36:CZ:74:ARG:HH22	2.15	0.44
11:DA:416:C:N3	11:DA:420:A:N6	2.66	0.44
11:DA:93:C:O2	11:DA:417:A:O2'	2.35	0.44
11:CA:872:A:H3'	11:CA:873:G:H5''	1.99	0.44
11:BA:416:C:N3	11:BA:420:A:N6	2.66	0.44
11:CA:267:A:H2'	11:CA:268:G:C8	2.53	0.44
11:AA:654:U:O4	14:BD:115:LYS:NZ	2.45	0.44
11:AA:1226:U:C2'	11:AA:1227:G:H5'	2.47	0.44
31:AU:50:CYS:HB3	31:AU:55:TYR:CZ	2.52	0.44
11:CA:63:U:H3'	11:CA:64:U:H5''	1.98	0.44
4:D3:120:THR:OG1	11:DA:633:U:OP2	2.25	0.44
11:DA:772:A:O2'	33:DW:108:LYS:NZ	2.45	0.44
31:CU:29:LEU:O	31:CU:33:LEU:HB2	2.17	0.44
11:DA:1145:C:C2'	11:DA:1146:C:H5'	2.48	0.44
21:BK:105:THR:HG22	21:BK:107:GLN:H	1.82	0.44
35:CY:180:GLN:O	35:CY:181:ARG:HB2	2.18	0.44
19:AI:14:ARG:HD3	19:AI:125:ARG:HH22	1.83	0.44
11:DA:1269:G:N2	11:DA:1272:A:OP2	2.51	0.44
25:BO:4:MET:O	25:BO:5:GLN:HG2	2.18	0.44
11:BA:863:G:H2'	11:BA:864:U:C6	2.53	0.44
8:C7:9:LYS:HA	8:C7:45:LEU:HD11	2.00	0.44
11:BA:1360:U:OP2	32:BV:49:LYS:HE2	2.18	0.44
6:A5:15:ARG:HD3	11:AA:914:G:O6	2.17	0.44
33:DW:212:VAL:O	33:DW:219:ALA:HA	2.18	0.44
33:DW:193:ARG:NH1	33:DW:220:PHE:HE1	2.16	0.44
11:DA:15:U:H6	11:DA:15:U:O5'	2.00	0.44
11:AA:478:G:C2'	11:AA:494:A:H61	2.29	0.44
21:BK:44:VAL:HG22	21:BK:54:VAL:HB	1.99	0.44
35:BY:64:LYS:HZ1	35:BY:82:SER:H	1.66	0.44
15:BE:205:THR:HG23	15:BE:211:PHE:CE2	2.53	0.44
11:AA:1292:U:C6	12:AB:98:ARG:NH1	2.86	0.44
11:AA:482:A:H5'	26:BP:37:LYS:HZ1	1.82	0.44
6:D5:5:ARG:NH2	11:DA:1748:U:OP2	2.38	0.44
28:AR:194:GLY:HA2	28:AR:216:VAL:HG23	2.00	0.44
3:C2:73:PHE:CZ	3:C2:112:ILE:HD11	2.52	0.44
14:BD:64:PRO:HA	14:BD:69:ARG:HH11	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CB:196:ASP:HA	12:CB:199:TYR:CD1	2.52	0.44
11:BA:550:G:O5'	34:BX:61:ASN:HB3	2.17	0.44
9:B8:63:VAL:HG13	17:BG:97:LEU:HD12	1.98	0.44
19:BI:57:LEU:CD2	19:BI:110:GLN:HG2	2.48	0.44
35:DY:116:LYS:NZ	35:DY:125:THR:OG1	2.48	0.44
11:DA:1437:G:H2'	11:DA:1438:U:C6	2.53	0.44
5:B4:181:GLU:HG2	5:B4:199:TYR:CE1	2.52	0.44
13:CC:216:HIS:O	32:CV:20:TYR:OH	2.30	0.44
3:D2:111:GLU:OE2	3:D2:171:ARG:NH2	2.51	0.44
11:CA:896:U:H2'	11:CA:897:A:H8	1.83	0.44
25:AO:88:GLU:HG3	25:AO:89:ASP:H	1.82	0.44
3:D2:185:ARG:NH2	11:DA:202:U:O2	2.50	0.44
26:DP:105:PHE:CZ	26:DP:127:LYS:HE2	2.53	0.44
11:AA:1596:C:H2'	11:AA:1597:G:O4'	2.18	0.44
11:DA:728:U:H5'	11:DA:729:U:OP2	2.18	0.44
35:AY:20:ASP:HB3	35:AY:23:LYS:H	1.83	0.44
11:BA:593:A:H2'	11:BA:594:U:C6	2.52	0.44
11:DA:289:U:H2'	11:DA:290:A:O4'	2.18	0.44
1:D0:74:ASP:OD1	1:D0:74:ASP:N	2.51	0.44
11:CA:1135:A:O5'	11:CA:1135:A:H8	2.00	0.44
11:BA:90:U:O2'	33:BW:8:HIS:HD2	2.00	0.44
11:AA:894:U:N3	21:AK:55:ARG:NH2	2.63	0.44
11:AA:63:U:C3'	11:AA:64:U:H5''	2.48	0.44
11:BA:1508:G:N3	11:BA:1508:G:H2'	2.33	0.44
11:CA:229:A:HO2'	11:CA:230:A:P	2.29	0.44
11:DA:1509:U:H4'	11:DA:1509:U:OP2	2.18	0.44
11:CA:1163:U:H2'	11:CA:1164:C:C6	2.52	0.44
11:BA:409:G:O2'	11:BA:410:G:O4'	2.34	0.44
27:BQ:66:ARG:H	27:BQ:66:ARG:HG2	1.61	0.44
11:BA:1721:G:H4'	11:BA:1722:U:C5'	2.47	0.44
11:CA:1404:G:C8	24:CN:40:ARG:HD2	2.53	0.44
13:DC:35:ALA:HA	13:DC:57:LYS:HD2	1.99	0.44
13:CC:228:ARG:CG	28:CR:245:LEU:H	2.27	0.44
11:CA:1154:U:H5''	29:CS:129:LYS:HD3	2.00	0.44
11:DA:1156:A:H2	11:DA:1425:G:N3	2.16	0.44
11:CA:1427:C:H2'	39:CA:2225:HOH:O	2.17	0.44
11:CA:1462:U:C4'	11:CA:1463:U:OP2	2.64	0.44
21:AK:128:ARG:NH1	21:AK:128:ARG:CG	2.70	0.44
5:D4:73:ALA:HB2	21:DK:128:ARG:HH12	1.82	0.44
11:AA:1426:G:OP1	29:AS:127:THR:HG21	2.18	0.44
29:AS:127:THR:HG22	29:AS:128:TYR:CD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DS:72:CYS:SG	29:DS:78:PRO:HA	2.57	0.44
33:CW:88:LEU:HD11	33:CW:104:LEU:HD23	1.99	0.44
11:AA:909:C:H5''	11:AA:910:U:H2'	2.00	0.44
11:CA:315:U:O3'	27:CQ:133:THR:OG1	2.35	0.44
9:B8:73:LEU:HB2	9:B8:75:VAL:CG2	2.48	0.44
33:AW:143:THR:OG1	33:AW:147:ARG:HB2	2.18	0.44
33:DW:36:HIS:ND1	33:DW:87:GLY:HA3	2.33	0.44
4:B3:174:TYR:CD2	4:B3:180:ARG:HB2	2.53	0.44
11:BA:1387:A:H2'	11:BA:1388:A:C8	2.53	0.44
35:DY:75:LEU:O	35:DY:94:ARG:HA	2.18	0.44
12:DB:145:ASP:HB3	12:DB:147:ASP:OD1	2.18	0.44
11:DA:1431:A:C8	11:DA:1431:A:H3'	2.53	0.44
11:CA:342:U:H4'	11:CA:343:C:OP2	2.18	0.44
12:AB:47:GLU:HB2	32:AV:109:LEU:HD13	1.99	0.44
11:CA:1242:G:N2	11:CA:1412:C:H1'	2.33	0.44
14:AD:110:GLN:NE2	14:AD:126:ARG:HB2	2.33	0.44
10:C9:123:ILE:HD13	10:C9:136:LYS:HD2	1.99	0.44
15:BE:78:MET:O	15:BE:105:VAL:HA	2.18	0.44
14:DD:56:ALA:O	14:DD:60:LEU:HG	2.18	0.44
11:DA:1322:U:H2'	11:DA:1323:C:O4'	2.17	0.44
17:CG:193:GLU:O	17:CG:197:LYS:HG3	2.17	0.44
11:BA:451:G:OP1	26:BP:102:ARG:NH2	2.51	0.44
4:A3:15:ILE:O	4:A3:19:VAL:HG23	2.16	0.44
35:AY:84:PHE:CZ	35:AY:91:PHE:HD1	2.36	0.44
18:AH:85:ASP:O	18:AH:88:LYS:HB2	2.18	0.44
35:BY:14:LYS:HD2	35:BY:123:GLY:HA3	2.00	0.44
28:AR:308:LYS:O	28:AR:309:ASN:HB2	2.18	0.44
33:BW:114:LYS:HD2	33:BW:114:LYS:HA	1.74	0.44
30:BT:76:ILE:HA	30:BT:79:LEU:HD12	2.00	0.44
35:BY:84:PHE:CZ	35:BY:91:PHE:HD1	2.36	0.44
13:AC:209:ILE:HG22	13:AC:211:ASP:H	1.83	0.44
12:AB:192:GLU:CD	12:AB:192:GLU:H	2.20	0.44
33:AW:12:ILE:HG12	33:AW:12:ILE:H	1.63	0.44
11:DA:1596:C:H2'	11:DA:1597:G:O4'	2.18	0.44
31:BU:34:ARG:NH2	31:BU:106:ARG:HH22	2.15	0.44
15:CE:181:ALA:HA	15:CE:199:THR:HG21	2.00	0.44
6:D5:99:PRO:HG2	11:DA:1750:A:C8	2.53	0.44
11:DA:985:C:H2'	11:DA:986:G:H8	1.83	0.44
35:CY:137:ARG:CG	35:CY:181:ARG:HG3	2.48	0.44
23:AM:92:PHE:CE1	29:AS:13:PHE:HD1	2.36	0.44
11:DA:1463:U:HO2'	11:DA:1464:U:P	2.39	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CK:34:MET:HB3	21:CK:41:PHE:HB2	2.00	0.44
11:AA:1361:A:H2'	11:AA:1362:U:C6	2.53	0.44
28:DR:15:GLY:CA	28:DR:65:PHE:HB2	2.43	0.44
13:DC:226:GLU:HB2	28:DR:208:THR:H	1.82	0.44
14:DD:109:LEU:HD23	14:DD:129:ILE:HD12	1.99	0.44
33:BW:143:THR:OG1	33:BW:147:ARG:HB2	2.17	0.44
11:CA:661:G:H3'	11:CA:662:U:H6	1.83	0.44
14:AD:154:LYS:NZ	11:BA:474:G:P	2.91	0.44
28:BR:184:ALA:H	28:BR:206:ARG:HH22	1.65	0.44
27:AQ:104:ARG:NH1	27:AQ:104:ARG:HG2	2.32	0.44
28:BR:161:HIS:HD2	28:BR:161:HIS:H	1.66	0.44
11:CA:665:A:O3'	11:CA:666:A:C8	2.71	0.44
25:BO:101:ARG:HH12	25:BO:145:ALA:HB1	1.81	0.44
8:D7:3:HIS:CE1	11:DA:1229:U:N3	2.86	0.44
25:DO:147:THR:O	25:DO:151:LEU:HG	2.17	0.44
19:BI:100:ASP:OD2	19:BI:102:ASN:HB3	2.18	0.44
27:CQ:68:LYS:O	27:CQ:126:GLN:N	2.47	0.44
5:B4:170:ILE:HG13	5:B4:210:ILE:HG21	1.99	0.44
11:BA:665:A:O3'	11:BA:666:A:H8	2.00	0.44
11:BA:1501:C:OP2	17:BG:86:LYS:NZ	2.41	0.44
11:DA:479:G:H2'	11:DA:480:A:O4'	2.18	0.44
12:DB:165:GLU:HG3	12:DB:199:TYR:HE2	1.82	0.44
11:AA:1353:G:OP1	20:AJ:87:ARG:NH2	2.50	0.44
11:AA:1151:G:H21	11:AA:1431:A:H62	1.66	0.44
17:DG:51:TYR:CG	17:DG:61:CYS:HB2	2.52	0.44
3:D2:195:GLU:HG2	27:DQ:9:TYR:CE2	2.53	0.44
11:DA:1472:U:H5	30:DT:105:ARG:NH2	2.16	0.44
11:BA:1431:A:C8	11:BA:1431:A:H3'	2.53	0.44
5:C4:181:GLU:HG2	5:C4:199:TYR:CE1	2.53	0.44
11:BA:1530:U:H4'	23:BM:135:GLY:HA3	2.00	0.44
13:BC:209:ILE:HG22	13:BC:211:ASP:H	1.83	0.44
4:C3:70:TYR:OH	4:C3:129:ASP:OD1	2.33	0.44
11:DA:514:G:H4'	26:DP:34:SER:HB3	2.00	0.44
11:CA:1712:C:O2	11:CA:1733:G:N2	2.37	0.44
36:DZ:17:ILE:HG22	36:DZ:21:LYS:HA	1.99	0.44
32:CV:98:ILE:HD11	32:CV:117:LEU:HD22	2.00	0.44
11:AA:1113:G:C2'	11:AA:1114:G:H5'	2.48	0.44
11:AA:585:A:OP2	34:AX:44:ARG:NH2	2.38	0.44
11:CA:303:A:C2	11:CA:305:C:C2	3.06	0.44
11:BA:55:U:H4'	11:BA:56:G:O5'	2.18	0.44
1:B0:83:PHE:HD2	1:B0:84:GLN:HG3	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:BK:45:THR:HG22	21:BK:52:THR:HA	2.00	0.44
17:CG:119:ASP:OD1	17:CG:120:SER:N	2.51	0.44
12:BB:48:GLU:O	12:BB:52:LYS:HG2	2.18	0.44
11:BA:1135:A:C6	11:BA:1136:G:C5	3.06	0.44
11:AA:1054:U:H4'	11:AA:1055:G:O5'	2.16	0.44
11:BA:83:C:H5'	11:BA:84:U:OP2	2.18	0.44
14:CD:12:TYR:HA	14:CD:47:MET:HG3	2.00	0.44
21:CK:135:ILE:HA	21:CK:135:ILE:HD13	1.89	0.44
8:A7:22:PHE:HE1	8:A7:24:LEU:HG	1.82	0.44
29:DS:65:VAL:HG12	29:DS:69:LYS:HD2	2.00	0.44
30:CT:76:ILE:O	30:CT:80:LYS:HG3	2.18	0.44
12:DB:3:THR:OG1	36:DZ:97:GLU:HG3	2.18	0.44
1:C0:84:GLN:NE2	22:CL:57:GLY:H	2.15	0.44
20:CJ:97:ASP:N	20:CJ:97:ASP:OD1	2.51	0.44
12:CB:71:VAL:HG11	12:CB:82:ALA:HB1	1.99	0.44
10:D9:128:HIS:HD1	11:DA:1222:U:HO2'	1.62	0.43
11:DA:392:A:O2'	11:DA:393:C:H4'	2.18	0.43
11:CA:391:A:C4'	11:CA:392:A:H5''	2.47	0.43
4:D3:116:SER:HB2	4:D3:117:ARG:HD3	2.00	0.43
6:C5:99:PRO:HG2	11:CA:1750:A:C8	2.52	0.43
11:DA:672:C:H2'	11:DA:673:A:O4'	2.18	0.43
11:CA:1509:U:H4'	11:CA:1509:U:OP2	2.17	0.43
12:DB:164:THR:CG2	12:DB:200:HIS:HB3	2.47	0.43
11:BA:237:U:C1'	11:BA:238:G:OP2	2.63	0.43
11:CA:136:U:O4	35:CY:181:ARG:NH2	2.51	0.43
11:BA:1720:G:H5''	11:BA:1720:G:H8	1.83	0.43
11:AA:507:G:O2'	11:AA:508:A:OP2	2.32	0.43
23:DM:87:ASN:HB2	23:DM:100:MET:HG3	2.00	0.43
8:C7:12:ILE:HD12	8:C7:45:LEU:HD12	1.99	0.43
33:BW:88:LEU:HD11	33:BW:104:LEU:HD23	2.00	0.43
11:AA:986:G:H5''	39:AA:2155:HOH:O	2.18	0.43
11:BA:646:A:H2'	11:BA:647:U:O4'	2.17	0.43
11:AA:1158:U:OP1	11:AA:1427:C:O2'	2.25	0.43
11:DA:486:A:H2'	11:DA:487:C:C4	2.53	0.43
11:AA:58:G:C2	11:AA:444:A:C4	3.05	0.43
8:D7:9:LYS:HA	8:D7:45:LEU:HD11	1.99	0.43
3:A2:64:ARG:HD3	3:A2:64:ARG:HA	1.83	0.43
18:DH:106:THR:CG2	18:DH:121:THR:HB	2.48	0.43
5:D4:106:LEU:HA	5:D4:106:LEU:HD23	1.87	0.43
11:AA:1289:C:H2'	11:AA:1290:G:O4'	2.18	0.43
11:DA:1569:A:C5	24:DN:13:TYR:CE2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BY:216:LEU:O	35:BY:220:LYS:HG3	2.18	0.43
28:CR:141:GLU:HA	28:CR:160:ASN:ND2	2.33	0.43
26:BP:74:TYR:HB2	26:BP:80:LEU:HB2	1.99	0.43
1:B0:65:LYS:HA	11:BA:1709:A:H62	1.82	0.43
11:BA:1576:U:OP1	19:BI:132:GLY:N	2.47	0.43
11:CA:150:A:H1'	11:CA:407:A:N7	2.33	0.43
35:CY:116:LYS:NZ	35:CY:125:THR:OG1	2.47	0.43
11:BA:1550:U:H4'	19:BI:145:ARG:NH2	2.32	0.43
30:DT:76:ILE:HA	30:DT:79:LEU:HD12	2.00	0.43
11:CA:1054:U:H4'	11:CA:1055:G:O5'	2.16	0.43
32:DV:53:PHE:CE2	32:DV:57:LEU:HD11	2.53	0.43
13:CC:221:ILE:HG22	13:CC:222:THR:H	1.83	0.43
11:DA:1501:C:OP2	17:DG:86:LYS:NZ	2.45	0.43
35:BY:121:ILE:HD12	35:BY:124:LEU:HD11	2.00	0.43
18:CH:62:VAL:HG12	36:CZ:1:MET:HE1	2.00	0.43
11:BA:658:C:H2'	11:BA:659:G:H8	1.83	0.43
35:DY:84:PHE:CZ	35:DY:91:PHE:HD1	2.36	0.43
18:CH:113:HIS:O	18:CH:116:CYS:HB2	2.18	0.43
11:DA:1275:U:O4	39:DA:7939:HOH:O	2.21	0.43
13:BC:14:PHE:HE1	20:BJ:111:GLU:HG3	1.83	0.43
17:DG:119:ASP:OD1	17:DG:120:SER:N	2.50	0.43
4:B3:80:LEU:HA	4:B3:80:LEU:HD12	1.85	0.43
11:BA:1724:U:H6	11:BA:1724:U:H5''	1.83	0.43
2:C1:35:LYS:HD3	2:C1:35:LYS:HA	1.79	0.43
3:B2:196:LEU:HD23	3:B2:196:LEU:HA	1.65	0.43
28:BR:17:LEU:HB2	28:BR:333:ILE:HB	2.00	0.43
10:B9:87:LYS:HD3	11:BA:1219:U:OP1	2.17	0.43
10:D9:131:ARG:HE	11:DA:1207:C:H42	1.64	0.43
28:DR:117:HIS:HD2	28:DR:139:GLU:CD	2.22	0.43
31:BU:34:ARG:HH21	31:BU:106:ARG:HH22	1.66	0.43
31:BU:34:ARG:HG2	31:BU:35:THR:N	2.33	0.43
31:CU:34:ARG:NH2	31:CU:106:ARG:HH22	2.15	0.43
11:AA:1010:A:H2'	11:AA:1011:C:H6	1.83	0.43
11:AA:1509:U:OP2	11:AA:1509:U:H4'	2.19	0.43
4:B3:113:ARG:HA	4:B3:114:PRO:HD3	1.81	0.43
19:AI:12:PHE:HE2	19:AI:14:ARG:HH12	1.65	0.43
11:DA:1480:U:O2'	11:DA:1481:A:C8	2.70	0.43
11:AA:1480:U:O2'	11:AA:1481:A:C8	2.71	0.43
17:CG:44:VAL:HA	17:CG:45:PRO:HD2	1.78	0.43
11:CA:894:U:N3	21:CK:55:ARG:NH2	2.63	0.43
13:CC:157:GLN:NE2	13:CC:158:GLY:H	2.14	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:662:U:H2'	11:DA:663:G:O4'	2.17	0.43
5:D4:119:LYS:HE2	11:DA:910:U:H5''	2.00	0.43
11:AA:933:A:H4'	11:AA:1045:G:O2'	2.18	0.43
11:CA:909:C:H5''	11:CA:910:U:H2'	2.00	0.43
11:BA:840:A:H8	25:BO:66:ARG:HH22	1.64	0.43
11:AA:764:U:H4'	11:AA:765:A:OP1	2.17	0.43
14:BD:149:ARG:HB2	14:BD:152:SER:H	1.83	0.43
28:CR:163:ASP:HB3	28:CR:164:TRP:H	1.61	0.43
8:A7:13:TYR:CE1	8:A7:49:LEU:HD21	2.53	0.43
11:DA:1591:C:H2'	11:DA:1592:C:C6	2.51	0.43
4:D3:174:TYR:CZ	4:D3:178:THR:HG21	2.53	0.43
18:BH:35:LEU:HD21	18:BH:61:VAL:HG21	2.00	0.43
4:A3:174:TYR:CZ	4:A3:178:THR:HG21	2.52	0.43
11:AA:1372:A:OP1	32:AV:60:ARG:NH1	2.50	0.43
35:BY:198:LYS:O	35:BY:201:ARG:HB2	2.18	0.43
8:D7:4:VAL:N	11:DA:1229:U:H1'	2.33	0.43
11:AA:534:A:OP1	11:AA:534:A:C5	2.71	0.43
11:DA:762:U:C5	26:DP:6:ARG:NH1	2.86	0.43
30:DT:64:LEU:O	30:DT:68:VAL:HG23	2.18	0.43
11:AA:762:U:O2	11:AA:762:U:H2'	2.17	0.43
11:AA:762:U:H5	26:AP:6:ARG:NH1	2.16	0.43
30:DT:101:GLY:O	30:DT:105:ARG:HG2	2.19	0.43
30:BT:145:THR:HG22	30:BT:149:ILE:HD11	2.00	0.43
24:BN:16:ASP:CG	24:BN:26:ARG:HH12	2.20	0.43
11:CA:593:A:H2'	11:CA:594:U:H6	1.83	0.43
35:CY:38:GLY:N	35:CY:48:TYR:O	2.47	0.43
13:DC:14:PHE:HE1	20:DJ:111:GLU:HG3	1.83	0.43
11:AA:1118:U:O2'	15:AE:90:GLN:O	2.32	0.43
11:AA:289:U:H2'	11:AA:290:A:O4'	2.18	0.43
20:CJ:78:ASP:OD1	24:CN:53:LYS:HD2	2.18	0.43
17:DG:193:GLU:O	17:DG:197:LYS:HG3	2.18	0.43
32:AV:19:HIS:HB2	32:AV:20:TYR:CD1	2.53	0.43
11:CA:1456:A:H2'	11:CA:1457:A:O4'	2.17	0.43
11:DA:1180:A:OP2	39:DA:8039:HOH:O	2.21	0.43
35:BY:20:ASP:HB3	35:BY:23:LYS:H	1.82	0.43
11:AA:1310:C:H1'	11:AA:1381:A:C4	2.53	0.43
4:C3:13:THR:O	4:C3:17:GLU:HG3	2.17	0.43
4:C3:30:HIS:HA	4:C3:31:PRO:HD2	1.89	0.43
25:DO:121:GLU:OE2	25:DO:143:TYR:HE2	2.01	0.43
11:AA:611:U:H2'	11:AA:612:U:C6	2.53	0.43
11:CA:1677:A:H8	11:CA:1677:A:OP2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:117:U:H1'	33:CW:33:GLN:HB2	1.99	0.43
4:A3:70:TYR:O	4:A3:74:LEU:HG	2.18	0.43
25:AO:65:VAL:HG21	25:AO:73:ILE:HD11	1.99	0.43
11:CA:504:A:H5'	14:CD:173:LYS:HB2	2.00	0.43
11:DA:1207:C:H5'	11:DA:1208:A:OP2	2.18	0.43
36:DZ:47:VAL:N	36:DZ:74:ARG:HH22	2.16	0.43
10:B9:128:HIS:CD2	10:B9:131:ARG:HG3	2.54	0.43
11:AA:1459:G:H2'	11:AA:1487:A:H61	1.83	0.43
28:DR:47:ARG:HA	28:DR:78:PHE:HB3	2.00	0.43
11:AA:1207:C:H5'	11:AA:1208:A:OP2	2.18	0.43
11:DA:227:G:N2	11:DA:229:A:H8	2.16	0.43
11:CA:1226:U:C2'	11:CA:1227:G:H5'	2.48	0.43
11:AA:1006:C:H4'	11:AA:1007:U:H5'	2.00	0.43
11:AA:772:A:C2	14:AD:71:PHE:HE2	2.36	0.43
11:DA:2:A:HO2'	11:DA:3:C:P	2.39	0.43
35:BY:180:GLN:O	35:BY:181:ARG:HB2	2.18	0.43
11:BA:1253:G:H1'	20:BJ:72:GLU:HG3	2.01	0.43
11:BA:489:U:H2'	11:BA:490:U:C6	2.53	0.43
24:BN:39:ARG:HH11	24:BN:39:ARG:CG	2.22	0.43
6:D5:71:VAL:HG11	6:D5:73:LEU:HD13	2.00	0.43
11:DA:1721:G:H4'	11:DA:1722:U:H5''	2.00	0.43
11:CA:894:U:C4	21:CK:55:ARG:NH2	2.85	0.43
11:DA:1488:A:OP1	20:DJ:86:LYS:NZ	2.36	0.43
11:CA:1362:U:H2'	11:CA:1363:U:C6	2.54	0.43
11:CA:313:G:H2'	11:CA:313:G:OP2	2.18	0.43
11:AA:1360:U:OP2	32:AV:49:LYS:HE2	2.18	0.43
11:AA:470:G:H1	11:AA:503:A:H61	1.66	0.43
16:DF:78:ARG:HH12	16:DF:100:GLY:CA	2.31	0.43
11:DA:1708:A:H5'	22:DL:62:GLN:HG3	2.00	0.43
4:B3:115:ARG:NH1	11:BA:631:C:N3	2.67	0.43
11:AA:1736:C:O2'	11:AA:1737:C:H5'	2.17	0.43
10:B9:111:LEU:HD22	10:B9:124:PHE:CE2	2.54	0.43
11:AA:1605:A:H4'	11:AA:1606:C:O5'	2.17	0.43
11:BA:1514:G:C5'	30:BT:90:GLY:HA2	2.48	0.43
11:AA:478:G:H2'	11:AA:479:G:C8	2.53	0.43
33:CW:129:THR:HB	33:CW:142:VAL:CG1	2.47	0.43
21:DK:150:ARG:CG	21:DK:150:ARG:HH11	2.32	0.43
4:D3:5:LYS:HD3	4:D3:5:LYS:HA	1.70	0.43
21:AK:82:VAL:HG13	21:AK:124:MET:HE2	1.99	0.43
35:BY:75:LEU:O	35:BY:94:ARG:HA	2.19	0.43
5:A4:170:ILE:HG13	5:A4:210:ILE:HG21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:668:U:H2'	11:CA:669:G:O4'	2.18	0.43
11:CA:245:A:H4'	11:CA:246:U:OP2	2.18	0.43
11:BA:1235:G:C2	11:BA:1236:G:H1'	2.54	0.43
4:B3:133:PRO:HG3	4:B3:162:PHE:CE1	2.54	0.43
11:BA:148:C:H5'	35:BY:108:VAL:HG21	2.00	0.43
30:AT:8:PHE:HB2	30:AT:145:THR:HA	1.99	0.43
18:CH:85:ASP:O	18:CH:88:LYS:HB2	2.18	0.43
28:CR:313:THR:N	28:CR:327:GLY:O	2.51	0.43
8:B7:22:PHE:HE1	8:B7:24:LEU:HG	1.83	0.43
11:DA:802:U:H2'	11:DA:803:A:C8	2.52	0.43
11:CA:1119:G:C6	11:CA:1120:A:C6	3.06	0.43
30:AT:76:ILE:O	30:AT:80:LYS:HG3	2.17	0.43
20:AJ:97:ASP:N	20:AJ:97:ASP:OD1	2.52	0.43
11:CA:1596:C:H2'	11:CA:1597:G:O4'	2.18	0.43
5:B4:74:ASP:N	5:B4:74:ASP:OD1	2.51	0.43
18:AH:83:LEU:HD23	18:AH:83:LEU:HA	1.79	0.43
1:B0:111:ASN:OD1	1:B0:111:ASN:N	2.46	0.43
11:DA:653:U:H6	11:DA:653:U:OP1	2.01	0.43
10:D9:128:HIS:CD2	10:D9:131:ARG:HG3	2.54	0.43
11:AA:416:C:N3	11:AA:420:A:N6	2.67	0.43
31:CU:34:ARG:HH21	31:CU:106:ARG:HH22	1.67	0.43
11:DA:605:U:OP1	22:DL:19:ARG:NH2	2.51	0.43
11:BA:1508:G:HO2'	11:BA:1509:U:P	2.38	0.43
11:DA:470:G:H1	11:DA:503:A:N6	2.09	0.43
10:D9:109:VAL:HG11	31:DU:62:LEU:HD21	2.00	0.43
11:CA:1165:A:P	19:CI:142:LYS:NZ	2.91	0.43
19:BI:12:PHE:HE2	19:BI:14:ARG:HH12	1.65	0.43
11:DA:1171:G:C5'	24:DN:39:ARG:NH1	2.81	0.43
11:AA:1558:A:OP1	19:AI:137:ARG:HB2	2.19	0.43
28:DR:100:LEU:HB3	28:DR:114:PHE:HD1	1.83	0.43
3:C2:124:HIS:HE1	3:C2:153:ARG:CZ	2.30	0.43
11:AA:1443:A:H4'	11:AA:1444:U:C5'	2.49	0.43
3:C2:56:VAL:HG13	3:C2:57:ARG:N	2.34	0.43
13:CC:35:ALA:HB1	13:CC:57:LYS:HB2	2.01	0.43
3:D2:56:VAL:HG13	3:D2:57:ARG:N	2.34	0.43
22:AL:53:THR:N	22:AL:72:ARG:O	2.51	0.43
11:DA:933:A:H2'	11:DA:934:U:O4'	2.18	0.43
11:BA:885:A:N3	11:BA:975:G:O2'	2.35	0.43
11:AA:763:U:OP2	11:AA:763:U:C5	2.72	0.43
28:AR:206:ARG:HG2	28:AR:207:TYR:CD1	2.53	0.43
15:BE:162:LYS:CB	15:BE:167:ARG:HH11	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AR:140:ARG:HG2	28:AR:163:ASP:O	2.17	0.43
4:A3:63:ILE:HG12	4:A3:93:PHE:O	2.18	0.43
4:C3:127:LEU:HB2	4:C3:174:TYR:CE1	2.52	0.43
11:AA:482:A:C5'	26:BP:37:LYS:HZ1	2.30	0.43
11:BA:1301:A:OP2	13:BC:163:THR:HG21	2.18	0.43
27:DQ:73:LEU:O	27:DQ:85:ILE:HA	2.18	0.43
11:CA:879:G:H22	21:CK:68:GLU:CD	2.22	0.43
27:AQ:63:LEU:HD12	27:AQ:63:LEU:HA	1.87	0.43
5:B4:110:ARG:NH2	21:BK:135:ILE:HB	2.34	0.43
28:AR:77:HIS:HB3	28:AR:96:TRP:HB2	2.01	0.43
6:A5:4:LYS:NZ	11:AA:1747:A:OP1	2.47	0.43
11:AA:575:U:H5''	11:AA:576:U:OP2	2.18	0.43
28:CR:184:ALA:HB3	28:CR:206:ARG:CZ	2.48	0.43
28:CR:206:ARG:HG2	28:CR:207:TYR:CD2	2.54	0.43
26:CP:74:TYR:CE1	26:CP:84:GLU:OE2	2.72	0.43
39:CA:2449:HOH:O	30:CT:93:ARG:NH1	2.28	0.43
11:BA:1488:A:H5''	20:BJ:59:LYS:NZ	2.33	0.43
28:CR:17:LEU:HB2	28:CR:333:ILE:HB	2.00	0.43
33:BW:128:VAL:HB	33:BW:159:GLY:H	1.83	0.43
17:DG:178:ASN:HA	17:DG:186:ILE:HD12	2.00	0.43
11:DA:517:U:O2'	11:DA:519:A:N7	2.38	0.43
14:DD:75:ALA:O	14:DD:79:ARG:HB2	2.19	0.43
13:DC:137:CYS:SG	13:DC:138:GLU:N	2.91	0.43
28:AR:98:LYS:HG2	28:AR:119:SER:O	2.18	0.43
35:DY:49:VAL:HB	35:DY:115:LYS:H	1.82	0.43
30:BT:34:ILE:HD11	30:BT:58:TYR:OH	2.18	0.43
5:B4:122:THR:N	5:B4:146:THR:OG1	2.41	0.43
11:CA:1461:A:H4'	13:CC:6:ARG:HE	1.82	0.43
13:BC:108:MET:HE1	13:BC:139:ILE:HG21	2.00	0.43
17:AG:37:THR:O	17:AG:41:GLN:HG2	2.19	0.43
4:B3:132:LEU:HD23	4:B3:132:LEU:HA	1.83	0.43
11:BA:1455:A:H4'	19:BI:17:ASN:ND2	2.33	0.43
13:BC:221:ILE:HG22	13:BC:222:THR:H	1.82	0.43
11:AA:55:U:H4'	11:AA:56:G:O5'	2.18	0.43
11:BA:392:A:O2'	11:BA:393:C:H4'	2.17	0.43
13:DC:196:GLU:HA	13:DC:197:PRO:HD3	1.66	0.43
11:CA:1006:C:H4'	11:CA:1007:U:H5'	2.00	0.43
31:AU:34:ARG:HH21	31:AU:106:ARG:HH22	1.66	0.43
28:BR:117:HIS:HD2	28:BR:139:GLU:CD	2.22	0.43
11:CA:63:U:C3'	11:CA:64:U:H5''	2.48	0.43
10:D9:127:LYS:HE2	10:D9:132:HIS:HE1	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:771:A:H4'	11:DA:772:A:OP2	2.19	0.43
11:DA:68:U:OP1	35:DY:167:THR:HG23	2.19	0.43
11:CA:138:G:N2	11:CA:166:C:O2	2.52	0.43
11:AA:1144:A:H2'	11:AA:1145:C:O4'	2.18	0.43
11:BA:1269:G:H8	11:BA:1269:G:H5''	1.84	0.43
11:AA:1445:G:H2'	11:AA:1446:A:H8	1.82	0.43
11:BA:763:U:C5	11:BA:763:U:OP2	2.71	0.43
11:DA:558:G:N1	11:DA:574:A:OP2	2.47	0.43
3:B2:124:HIS:HE1	3:B2:153:ARG:CZ	2.32	0.43
29:CS:72:CYS:SG	29:CS:78:PRO:HA	2.58	0.43
33:AW:193:ARG:NH1	33:AW:220:PHE:CE1	2.86	0.43
15:CE:205:THR:HG23	15:CE:211:PHE:CE2	2.54	0.43
11:DA:1540:G:H5'	23:DM:153:LYS:HB2	2.01	0.43
11:DA:493:U:O2	11:DA:493:U:O2'	2.25	0.43
33:DW:126:LEU:HD13	33:DW:143:THR:HG21	2.00	0.43
26:AP:15:LEU:HD12	33:AW:54:TYR:HB3	2.00	0.43
7:A6:9:ILE:HG13	7:A6:9:ILE:H	1.51	0.43
11:CA:1288:C:OP2	32:CV:7:LYS:HE3	2.18	0.43
11:BA:1752:U:HO2'	11:BA:1753:A:P	2.40	0.43
28:DR:163:ASP:HB3	28:DR:164:TRP:H	1.61	0.43
4:C3:63:ILE:HG12	4:C3:93:PHE:O	2.19	0.43
21:DK:44:VAL:HG22	21:DK:54:VAL:HB	2.00	0.43
11:AA:1292:U:O2	11:AA:1294:A:H5'	2.18	0.43
11:AA:787:A:N3	18:AH:105:THR:HB	2.34	0.43
33:AW:47:LEU:HD21	33:AW:92:VAL:HG11	2.01	0.43
30:BT:124:ALA:C	30:BT:127:LYS:HE2	2.38	0.43
3:A2:94:THR:HG23	11:AA:319:A:H2	1.84	0.43
28:AR:141:GLU:HA	28:AR:160:ASN:ND2	2.34	0.43
35:CY:216:LEU:O	35:CY:220:LYS:HG3	2.18	0.43
19:DI:95:HIS:HA	19:DI:99:VAL:HG23	2.00	0.43
8:D7:16:LEU:HD23	8:D7:16:LEU:HA	1.86	0.43
26:AP:74:TYR:CE1	26:AP:84:GLU:OE2	2.72	0.43
28:BR:141:GLU:HA	28:BR:160:ASN:ND2	2.33	0.43
12:DB:64:GLN:NE2	15:DE:246:GLU:HG2	2.32	0.43
35:DY:216:LEU:O	35:DY:220:LYS:HG3	2.19	0.43
24:CN:33:TYR:O	24:CN:34:GLU:HB3	2.18	0.43
11:AA:1471:C:P	30:AT:130:ARG:HH22	2.41	0.43
23:CM:69:ILE:O	23:CM:73:ILE:HG12	2.18	0.43
24:DN:16:ASP:OD1	24:DN:26:ARG:NH1	2.52	0.43
14:BD:110:GLN:NE2	14:BD:126:ARG:HB2	2.33	0.43
11:AA:611:U:H2'	11:AA:612:U:H6	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B2:84:THR:OG1	3:B2:85:LYS:N	2.51	0.43
30:AT:34:ILE:HD11	30:AT:58:TYR:OH	2.18	0.43
11:CA:621:C:H4'	25:CO:119:LEU:HD22	1.99	0.43
35:BY:78:SER:OG	35:BY:79:GLU:N	2.52	0.43
11:AA:1295:C:H5'	12:AB:100:THR:HG23	2.00	0.43
11:BA:1113:G:C2'	11:BA:1114:G:H5'	2.49	0.43
11:AA:1142:G:H21	11:AA:1543:C:H4'	1.83	0.43
11:BA:597:U:H2'	11:BA:598:A:C8	2.53	0.43
3:D2:196:LEU:HA	3:D2:196:LEU:HD23	1.64	0.43
18:CH:12:LYS:HE3	18:CH:12:LYS:HB2	1.51	0.43
25:BO:11:LYS:H	25:BO:11:LYS:HG3	1.63	0.43
28:DR:105:LEU:HA	28:DR:105:LEU:HD23	1.76	0.43
11:DA:763:U:OP2	11:DA:763:U:C5	2.72	0.43
11:DA:763:U:H4'	11:DA:764:U:OP2	2.19	0.43
11:CA:1010:A:H2'	11:CA:1011:C:H6	1.83	0.43
10:A9:109:VAL:HB	31:AU:65:LYS:HG2	2.00	0.43
28:CR:117:HIS:HD2	28:CR:139:GLU:CD	2.22	0.43
15:DE:224:ARG:HD2	36:DZ:40:PHE:HZ	1.83	0.43
11:BA:267:A:H2'	11:BA:268:G:C8	2.53	0.43
11:BA:506:U:H5'	14:BD:133:HIS:NE2	2.33	0.43
11:BA:34:U:O2'	11:BA:508:A:H5'	2.18	0.43
11:AA:794:A:H1'	11:AA:797:A:H2	1.83	0.43
11:BA:1509:U:OP2	11:BA:1509:U:H4'	2.18	0.43
11:BA:209:G:H5''	11:BA:209:G:C8	2.53	0.43
11:DA:885:A:N3	11:DA:975:G:O2'	2.41	0.43
11:AA:1269:G:H5''	11:AA:1269:G:H8	1.83	0.43
28:CR:297:GLU:HA	28:CR:298:PRO:HD2	1.89	0.43
14:AD:38:ASN:ND2	14:AD:40:ARG:NH1	2.59	0.43
11:CA:1360:U:OP2	32:CV:49:LYS:HE2	2.19	0.43
29:AS:72:CYS:SG	29:AS:78:PRO:HA	2.58	0.43
11:AA:949:A:H8	11:AA:949:A:C5'	2.32	0.43
5:B4:73:ALA:HB2	21:BK:128:ARG:HH12	1.83	0.43
2:C1:59:GLU:OE2	17:CG:200:ARG:NH2	2.52	0.43
2:B1:59:GLU:OE2	17:BG:200:ARG:NH2	2.51	0.43
21:CK:128:ARG:CG	21:CK:128:ARG:NH1	2.70	0.43
11:BA:661:G:H3'	11:BA:662:U:H6	1.84	0.43
28:DR:206:ARG:HG2	28:DR:207:TYR:CD1	2.54	0.43
22:AL:54:GLU:OE1	22:AL:72:ARG:NH1	2.52	0.43
22:AL:78:ASN:ND2	22:AL:80:LYS:HE2	2.34	0.43
11:BA:985:C:H2'	11:BA:986:G:H8	1.83	0.43
33:CW:36:HIS:CD2	33:CW:87:GLY:HA3	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1289:C:H2'	11:CA:1290:G:O4'	2.19	0.43
21:CK:44:VAL:HG22	21:CK:54:VAL:HB	2.00	0.43
3:A2:148:GLN:NE2	11:AA:187:U:O4	2.51	0.43
11:DA:1752:U:HO2'	11:DA:1753:A:P	2.40	0.43
12:BB:103:THR:HA	12:BB:109:THR:HG21	2.01	0.43
35:CY:198:LYS:O	35:CY:201:ARG:HB2	2.19	0.43
25:BO:147:THR:O	25:BO:151:LEU:HG	2.19	0.43
11:DA:534:A:C5	11:DA:534:A:OP1	2.72	0.43
11:CA:39:A:H61	11:CA:459:G:H1'	1.84	0.43
11:BA:1394:U:H2'	11:BA:1395:A:O4'	2.19	0.43
11:BA:1729:A:H2'	11:BA:1730:G:C8	2.53	0.43
3:D2:73:PHE:CZ	3:D2:112:ILE:HD11	2.53	0.43
28:DR:141:GLU:HA	28:DR:160:ASN:ND2	2.34	0.43
19:DI:100:ASP:OD2	19:DI:102:ASN:HB3	2.17	0.43
29:AS:77:LYS:HD3	29:AS:77:LYS:HA	1.81	0.43
30:AT:64:LEU:O	30:AT:68:VAL:HG23	2.19	0.43
5:B4:69:GLU:OE2	5:B4:86:LYS:HE2	2.19	0.43
8:C7:88:ILE:HA	8:C7:89:PRO:HD3	1.90	0.43
20:BJ:48:VAL:HG22	20:BJ:93:CYS:SG	2.58	0.43
26:BP:127:LYS:HG2	26:BP:129:GLY:H	1.84	0.43
30:CT:76:ILE:HA	30:CT:79:LEU:HD12	1.99	0.43
4:B3:70:TYR:O	4:B3:74:LEU:HG	2.18	0.43
11:CA:1053:A:C4	11:CA:1063:A:N6	2.87	0.43
11:AA:474:G:H2'	11:AA:475:C:H6	1.84	0.43
11:AA:52:G:H2'	11:AA:53:C:O4'	2.18	0.43
27:BQ:111:SER:HA	27:BQ:112:PRO:HD3	1.90	0.43
8:D7:99:PHE:O	13:DC:90:TRP:HE3	2.02	0.43
23:DM:84:TRP:CZ3	23:DM:85:LEU:HG	2.54	0.43
11:BA:1390:G:H2'	11:BA:1391:C:O4'	2.18	0.43
14:AD:12:TYR:HA	14:AD:47:MET:HG3	2.01	0.43
35:BY:141:ILE:O	35:BY:145:PHE:HB2	2.19	0.43
3:C2:203:LEU:HA	3:C2:203:LEU:HD12	1.85	0.43
8:C7:55:LEU:HA	8:C7:55:LEU:HD23	1.85	0.43
18:CH:126:LEU:HD23	18:CH:126:LEU:HA	1.86	0.43
1:B0:74:ASP:N	1:B0:74:ASP:OD1	2.52	0.43
35:DY:142:LYS:HE3	35:DY:156:ILE:HD11	2.00	0.43
11:BA:907:A:C8	21:BK:137:THR:O	2.71	0.43
1:B0:95:LEU:O	1:B0:99:VAL:HG23	2.18	0.43
28:DR:127:SER:OG	28:DR:132:GLN:HB2	2.18	0.43
11:CA:1207:C:H5'	11:CA:1208:A:OP2	2.19	0.43
10:A9:98:LEU:HD21	31:AU:29:LEU:CD1	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A9:101:TYR:HB2	31:AU:58:LEU:HD22	2.00	0.43
11:CA:1486:U:O2'	11:CA:1487:A:P	2.76	0.43
35:AY:176:CYS:HA	35:AY:177:PRO:HD3	1.88	0.43
11:DA:3:C:O2'	15:DE:182:ALA:N	2.51	0.43
11:DA:4:C:OP2	15:DE:201:SER:OG	2.35	0.43
11:BA:1494:U:O2'	11:BA:1495:U:H5'	2.19	0.43
28:AR:100:LEU:HB3	28:AR:114:PHE:HD1	1.84	0.43
27:BQ:32:ARG:HH12	27:BQ:51:THR:C	2.22	0.43
13:CC:228:ARG:NH1	28:CR:242:ILE:O	2.52	0.43
11:CA:1145:C:C2'	11:CA:1146:C:H5'	2.48	0.43
10:C9:88:HIS:CD2	11:CA:1219:U:OP2	2.72	0.43
11:AA:1661:G:C2'	11:AA:1662:C:OP2	2.66	0.43
11:CA:1174:A:OP1	11:CA:1175:A:OP2	2.36	0.43
22:BL:78:ASN:ND2	22:BL:80:LYS:HE2	2.34	0.43
11:CA:949:A:H8	11:CA:949:A:C5'	2.31	0.43
33:DW:116:LEU:HB3	33:DW:120:GLU:HB2	2.01	0.43
7:B6:18:LYS:NZ	11:BA:936:U:OP2	2.52	0.43
11:AA:1514:G:H5'	30:AT:90:GLY:CA	2.49	0.43
5:B4:67:VAL:CG2	11:BA:898:U:H4'	2.49	0.43
28:AR:140:ARG:HH11	28:AR:162:SER:HA	1.82	0.43
11:DA:931:A:P	25:DO:96:LYS:NZ	2.92	0.43
33:AW:249:THR:HB	33:AW:252:GLU:HG3	1.99	0.43
25:CO:101:ARG:HH12	25:CO:145:ALA:HB1	1.81	0.43
35:DY:198:LYS:O	35:DY:201:ARG:HB2	2.19	0.43
8:A7:16:LEU:HD23	8:A7:16:LEU:HA	1.86	0.43
6:B5:5:ARG:NH2	11:BA:1748:U:OP2	2.39	0.43
22:DL:75:LEU:HD11	22:DL:82:ILE:HD12	1.99	0.43
28:DR:194:GLY:HA2	28:DR:216:VAL:HG23	2.00	0.43
11:DA:1300:G:O4'	11:DA:1393:A:H1'	2.19	0.43
30:CT:18:PHE:CZ	30:CT:140:LEU:HD22	2.54	0.43
12:CB:165:GLU:HG3	12:CB:199:TYR:HE2	1.82	0.43
26:AP:74:TYR:HB2	26:AP:80:LEU:HB2	2.00	0.43
11:DA:39:A:H61	11:DA:459:G:H1'	1.84	0.43
5:D4:69:GLU:OE2	5:D4:86:LYS:HE2	2.19	0.43
35:DY:32:MET:HB2	35:DY:32:MET:HE2	1.80	0.43
19:AI:57:LEU:CD2	19:AI:110:GLN:HG2	2.49	0.43
30:AT:99:CYS:SG	30:AT:100:HIS:N	2.92	0.43
1:D0:83:PHE:HD2	1:D0:84:GLN:HG3	1.83	0.43
11:DA:65:C:H5'	35:DY:177:PRO:HA	2.01	0.43
26:BP:27:HIS:HE1	26:BP:67:SER:OG	2.01	0.43
34:CX:59:SER:HA	34:CX:60:PRO:HD3	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BH:113:HIS:O	18:BH:116:CYS:HB2	2.19	0.43
22:AL:10:ARG:HH21	27:AQ:90:LEU:HD11	1.83	0.43
5:C4:139:ARG:CZ	11:CA:862:A:H5'	2.49	0.43
5:A4:181:GLU:HG2	5:A4:199:TYR:CE1	2.54	0.43
28:CR:308:LYS:O	28:CR:309:ASN:HB2	2.19	0.43
11:DA:1379:G:H2'	11:DA:1380:G:O4'	2.19	0.43
3:C2:98:LEU:HA	3:C2:98:LEU:HD23	1.85	0.43
29:BS:121:LEU:HA	29:BS:121:LEU:HD23	1.89	0.43
35:DY:141:ILE:O	35:DY:145:PHE:HB2	2.17	0.43
23:BM:62:THR:HB	23:BM:65:GLN:HG3	2.01	0.43
11:AA:1266:G:C2	11:AA:1267:G:C8	3.07	0.43
11:DA:1423:U:OP1	24:DN:9:HIS:ND1	2.51	0.43
11:AA:392:A:O2'	11:AA:393:C:H4'	2.19	0.43
11:BA:1200:G:C6	31:CU:91:LYS:NZ	2.73	0.43
11:CA:392:A:O2'	11:CA:393:C:H4'	2.18	0.43
11:DA:794:A:H1'	11:DA:797:A:H2	1.83	0.43
28:BR:93:SER:OG	28:BR:101:ARG:HB2	2.19	0.43
11:DA:606:U:OP2	22:DL:5:LYS:NZ	2.52	0.43
11:BA:63:U:C3'	11:BA:64:U:H5''	2.47	0.43
6:A5:71:VAL:HG11	6:A5:73:LEU:HD13	2.00	0.43
11:DA:1174:A:OP1	11:DA:1175:A:OP2	2.36	0.43
11:AA:947:C:H4'	11:AA:1076:U:O2'	2.18	0.43
11:BA:1494:U:HO2'	11:BA:1495:U:P	2.33	0.43
19:BI:14:ARG:HD3	19:BI:125:ARG:HH22	1.84	0.43
11:AA:863:G:H2'	11:AA:864:U:C6	2.53	0.43
11:AA:1404:G:C8	24:AN:40:ARG:HD2	2.54	0.43
11:DA:1721:G:C8	11:DA:1721:G:C3'	3.02	0.43
11:AA:313:G:OP2	11:AA:313:G:H2'	2.18	0.43
3:C2:21:HIS:CD2	11:CA:98:U:H1'	2.54	0.43
11:BA:1362:U:H2'	11:BA:1363:U:C6	2.54	0.43
11:CA:933:A:H2'	11:CA:934:U:O4'	2.18	0.43
11:DA:909:C:H5''	11:DA:910:U:H2'	2.00	0.43
33:CW:193:ARG:NH1	33:CW:220:PHE:HE1	2.16	0.43
33:CW:36:HIS:CE1	33:CW:87:GLY:HA3	2.54	0.43
21:CK:30:VAL:HG23	21:CK:47:LEU:HD23	2.01	0.43
32:CV:53:PHE:O	32:CV:56:HIS:HB3	2.18	0.43
5:D4:170:ILE:HG13	5:D4:210:ILE:HG21	2.01	0.43
3:B2:148:GLN:NE2	11:BA:187:U:O4	2.46	0.43
11:DA:250:A:H4'	33:DW:137:GLN:NE2	2.32	0.43
11:AA:1752:U:O2'	11:AA:1753:A:P	2.77	0.43
15:CE:227:THR:HB	15:CE:228:PRO:HD2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CL:8:GLY:H	27:CQ:98:ARG:NH1	2.17	0.43
30:AT:93:ARG:H	30:AT:93:ARG:HG3	1.46	0.43
11:AA:160:C:O2'	35:AY:132:LYS:O	2.36	0.43
11:BA:242:U:C2	11:BA:244:A:OP2	2.71	0.43
4:A3:145:LEU:HA	18:AH:42:GLN:NE2	2.34	0.43
12:CB:29:MET:CE	12:CB:150:LEU:HD21	2.49	0.43
30:BT:130:ARG:H	30:BT:130:ARG:HG2	1.65	0.43
4:B3:24:VAL:HA	4:B3:27:GLN:NE2	2.33	0.43
11:AA:39:A:H61	11:AA:459:G:H1'	1.84	0.43
35:BY:32:MET:CE	35:BY:54:GLY:HA2	2.48	0.43
11:DA:1191:A:C6	11:DA:1237:G:H1'	2.54	0.43
4:A3:24:VAL:HA	4:A3:27:GLN:NE2	2.34	0.43
27:CQ:15:VAL:HG21	27:CQ:33:TYR:HB2	2.01	0.43
23:DM:15:HIS:HB3	23:DM:22:ILE:HB	2.01	0.43
29:CS:76:GLU:O	29:CS:77:LYS:HB2	2.19	0.43
35:AY:32:MET:HE2	35:AY:54:GLY:HA2	2.01	0.43
9:B8:46:GLU:HG3	23:BM:8:GLU:HB2	2.01	0.43
11:BA:978:C:O2'	11:BA:980:G:N7	2.47	0.43
22:BL:106:LEU:HD13	22:BL:113:VAL:HG22	2.01	0.43
28:BR:313:THR:N	28:BR:327:GLY:O	2.51	0.43
19:AI:29:GLY:HA2	19:AI:65:LEU:O	2.17	0.43
20:AJ:94:ASN:ND2	20:AJ:97:ASP:OD2	2.52	0.43
11:BA:243:G:O2'	27:BQ:38:GLY:O	2.34	0.43
35:CY:182:LEU:O	35:CY:187:ARG:HD2	2.18	0.43
9:D8:98:LYS:HG3	11:DA:1502:A:OP1	2.18	0.43
20:DJ:97:ASP:N	20:DJ:97:ASP:OD1	2.51	0.43
35:AY:78:SER:OG	35:AY:79:GLU:N	2.51	0.43
11:DA:1232:U:H2'	11:DA:1233:U:O4'	2.19	0.43
23:DM:63:GLU:O	23:DM:67:ASN:ND2	2.52	0.43
1:D0:95:LEU:O	1:D0:99:VAL:HG23	2.18	0.43
11:AA:1379:G:H2'	11:AA:1380:G:O4'	2.19	0.43
11:CA:637:U:H2'	11:CA:638:U:C6	2.53	0.43
28:DR:43:ILE:HG22	28:DR:82:LEU:HD13	2.01	0.43
5:C4:122:THR:N	5:C4:146:THR:OG1	2.40	0.43
26:AP:16:LEU:HD21	33:AW:64:ILE:HG12	2.00	0.43
18:DH:85:ASP:O	18:DH:88:LYS:HB2	2.18	0.43
6:D5:15:ARG:HD3	11:DA:914:G:O6	2.19	0.43
36:BZ:93:TYR:CG	36:BZ:94:PRO:HA	2.54	0.43
11:CA:1183:A:H1'	29:CS:104:GLY:O	2.19	0.43
11:BA:1316:A:H2'	11:BA:1317:A:C8	2.54	0.43
28:AR:147:ILE:H	28:AR:147:ILE:HG12	1.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BM:63:GLU:O	23:BM:67:ASN:ND2	2.52	0.43
22:DL:6:PRO:HG3	22:DL:14:LYS:HE3	2.01	0.43
28:CR:47:ARG:HA	28:CR:78:PHE:HB3	1.99	0.43
4:B3:68:GLN:NE2	11:BA:835:U:OP2	2.49	0.43
3:A2:146:HIS:HA	3:A2:149:LYS:HG2	2.01	0.43
11:AA:606:U:H4'	11:AA:1072:G:O6	2.18	0.43
6:C5:47:PRO:O	6:C5:50:LYS:HB2	2.19	0.43
11:BA:223:C:N4	11:BA:234:G:H1	2.17	0.43
11:BA:772:A:C2	14:BD:71:PHE:HE2	2.37	0.43
11:AA:413:C:H4'	11:AA:414:G:OP1	2.19	0.43
11:DA:863:G:H2'	11:DA:864:U:C6	2.54	0.43
11:CA:1269:G:H5''	11:CA:1269:G:H8	1.84	0.43
11:CA:1361:A:H2'	11:CA:1362:U:C6	2.54	0.43
3:D2:89:VAL:CG2	3:D2:102:LYS:HA	2.45	0.43
10:C9:86:THR:O	11:CA:1219:U:H5'	2.19	0.43
11:CA:1660:A:H61	11:CA:1665:U:H3	1.67	0.43
11:CA:299:C:OP2	27:CQ:102:ARG:NH1	2.37	0.43
22:CL:78:ASN:ND2	22:CL:80:LYS:HE2	2.34	0.43
31:CU:121:GLU:HA	31:CU:124:LEU:HG	2.01	0.43
33:BW:185:ILE:HD12	33:BW:193:ARG:HB2	2.01	0.43
33:BW:193:ARG:NH1	33:BW:220:PHE:CE1	2.86	0.43
14:CD:149:ARG:HB2	14:CD:152:SER:H	1.83	0.43
33:DW:185:ILE:HD12	33:DW:193:ARG:HB2	2.01	0.43
26:BP:18:ARG:NE	26:BP:20:GLN:HE21	2.14	0.43
11:CA:1746:G:H4'	11:CA:1747:A:OP2	2.19	0.43
11:DA:1031:A:H2	11:DA:1037:G:H22	1.64	0.43
11:DA:1538:U:OP1	23:DM:42:PHE:HB2	2.18	0.43
33:CW:47:LEU:HD21	33:CW:92:VAL:HG11	2.01	0.43
11:AA:1500:C:P	17:AG:86:LYS:HZ2	2.41	0.43
11:CA:763:U:H4'	11:CA:764:U:OP2	2.18	0.43
21:DK:82:VAL:HG13	21:DK:124:MET:HE2	2.01	0.43
35:BY:193:VAL:O	35:BY:196:ALA:HB3	2.19	0.43
21:CK:82:VAL:HG13	21:CK:124:MET:HE2	1.99	0.43
11:BA:884:A:OP2	21:BK:66:ARG:N	2.52	0.43
30:DT:124:ALA:C	30:DT:127:LYS:HE2	2.39	0.43
1:B0:24:GLU:HA	10:B9:77:LYS:HZ3	1.84	0.43
35:CY:75:LEU:O	35:CY:94:ARG:HA	2.19	0.43
26:DP:74:TYR:HB2	26:DP:80:LEU:HB2	2.01	0.43
11:AA:1568:C:O2'	11:AA:1570:U:H5	2.00	0.43
12:BB:181:LEU:HA	36:BZ:58:GLY:O	2.19	0.43
17:AG:24:ILE:H	17:AG:24:ILE:HD13	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CV:19:HIS:HB2	32:CV:20:TYR:CD1	2.54	0.43
11:CA:135:A:H2'	35:CY:183:ILE:HD11	2.01	0.43
35:AY:121:ILE:HD12	35:AY:124:LEU:HD11	2.01	0.43
9:A8:46:GLU:O	9:A8:50:VAL:HG23	2.19	0.43
20:AJ:23:LEU:HD22	20:AJ:112:ILE:HG12	2.00	0.43
17:DG:35:CYS:HB3	17:DG:63:ILE:HD11	1.99	0.43
15:CE:142:LYS:HD2	15:CE:152:ALA:O	2.18	0.43
11:CA:52:G:H2'	11:CA:53:C:O4'	2.18	0.43
1:A0:95:LEU:O	1:A0:99:VAL:HG23	2.18	0.43
11:CA:1544:G:N3	11:CA:1544:G:H2'	2.34	0.43
5:D4:111:ASP:OD1	5:D4:111:ASP:N	2.48	0.43
11:CA:374:G:H8	11:CA:374:G:H5''	1.84	0.43
5:A4:40:PHE:N	5:A4:40:PHE:CD1	2.87	0.43
15:BE:58:PRO:HG3	15:BE:131:THR:HG23	2.00	0.43
26:CP:15:LEU:HD23	33:CW:96:LYS:HG3	2.00	0.43
12:DB:65:HIS:HA	12:DB:66:PRO:HD3	1.79	0.43
14:CD:71:PHE:CE2	33:CW:250:ILE:HG21	2.54	0.43
1:D0:63:ARG:NH1	11:DA:559:C:OP2	2.52	0.43
31:DU:34:ARG:HG2	31:DU:35:THR:N	2.32	0.43
6:B5:71:VAL:HG11	6:B5:73:LEU:HD13	1.99	0.43
12:AB:164:THR:CG2	12:AB:200:HIS:HB3	2.49	0.43
28:BR:100:LEU:HB3	28:BR:114:PHE:HD1	1.83	0.43
11:BA:616:A:H4'	11:BA:617:A:O5'	2.19	0.43
35:DY:137:ARG:CG	35:DY:181:ARG:HG3	2.49	0.43
13:DC:35:ALA:HB1	13:DC:57:LYS:HB2	2.00	0.43
11:BA:763:U:H4'	11:BA:764:U:OP2	2.18	0.43
4:A3:192:PHE:CB	7:A6:21:ARG:HH12	2.32	0.43
33:BW:116:LEU:HB3	33:BW:120:GLU:HB2	2.01	0.43
33:AW:88:LEU:HD11	33:AW:104:LEU:HD23	2.00	0.43
11:DA:1256:C:H4'	11:DA:1257:U:OP1	2.17	0.43
11:AA:1514:G:H5'	30:AT:90:GLY:HA2	2.01	0.43
11:AA:493:U:H1'	11:AA:494:A:OP2	2.19	0.43
6:B5:28:ARG:HG3	21:BK:147:ARG:HA	2.01	0.43
18:DH:35:LEU:HD21	18:DH:61:VAL:HG21	2.01	0.43
12:DB:103:THR:HA	12:DB:109:THR:HG21	2.01	0.43
8:C7:16:LEU:HD23	8:C7:16:LEU:HA	1.86	0.43
30:BT:18:PHE:CZ	30:BT:140:LEU:HD22	2.53	0.43
28:BR:194:GLY:HA2	28:BR:216:VAL:HG23	2.00	0.43
12:DB:29:MET:CE	12:DB:150:LEU:HD21	2.49	0.43
11:CA:1729:A:H2'	11:CA:1730:G:C8	2.54	0.43
13:CC:45:THR:HB	13:CC:48:LYS:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1346:C:HO2'	11:BA:1347:U:P	2.41	0.43
4:D3:24:VAL:HA	4:D3:27:GLN:NE2	2.34	0.43
35:AY:216:LEU:O	35:AY:220:LYS:HG3	2.19	0.43
20:AJ:87:ARG:HA	20:AJ:87:ARG:HD3	1.82	0.43
11:BA:138:G:N2	11:BA:166:C:O2	2.52	0.43
35:AY:32:MET:CE	35:AY:54:GLY:HA2	2.49	0.43
14:CD:110:GLN:NE2	14:CD:126:ARG:HB2	2.33	0.43
22:CL:106:LEU:HD13	22:CL:113:VAL:HG22	2.00	0.43
28:BR:309:ASN:HD22	28:BR:309:ASN:HA	1.71	0.43
1:C0:83:PHE:HD2	1:C0:84:GLN:HG3	1.83	0.43
32:DV:53:PHE:O	32:DV:57:LEU:HG	2.19	0.43
33:BW:23:LEU:HA	33:BW:23:LEU:HD12	1.86	0.43
11:BA:1437:G:H2'	11:BA:1438:U:C6	2.54	0.43
11:AA:728:U:H5'	11:AA:729:U:OP2	2.19	0.43
11:DA:1385:U:H5"	32:DV:3:ARG:NE	2.33	0.43
4:A3:146:ASP:OD1	4:A3:148:THR:OG1	2.37	0.43
39:DA:8103:HOH:O	30:DT:93:ARG:NH1	2.46	0.43
26:CP:105:PHE:CZ	26:CP:127:LYS:HE2	2.54	0.43
3:A2:178:SER:O	3:A2:180:PRO:HD3	2.18	0.43
11:BA:1379:G:H2'	11:BA:1380:G:O4'	2.19	0.43
11:DA:1537:C:OP1	23:DM:41:ARG:NH1	2.48	0.43
10:B9:103:LEU:HG	31:BU:58:LEU:HD23	2.00	0.43
11:CA:585:A:OP2	34:CX:44:ARG:NH2	2.45	0.43
11:BA:303:A:C2	11:BA:305:C:C2	3.06	0.43
15:AE:57:GLU:HG3	15:AE:59:GLU:HG2	2.00	0.43
11:DA:52:G:H2'	11:DA:53:C:O4'	2.19	0.43
23:BM:88:ARG:HD2	23:BM:88:ARG:HA	1.57	0.43
28:BR:105:LEU:HD23	28:BR:105:LEU:HA	1.77	0.43
11:DA:1724:U:H6	11:DA:1724:U:H5"	1.84	0.43
27:DQ:110:ILE:HD13	27:DQ:138:ALA:CB	2.49	0.43
29:CS:79:VAL:HA	29:CS:80:PRO:HD3	1.88	0.43
36:BZ:28:LEU:HA	36:BZ:29:PRO:HD2	1.85	0.43
11:DA:303:A:C2	11:DA:305:C:C2	3.06	0.43
11:BA:1199:G:H21	31:BU:27:LYS:HG3	1.83	0.42
4:D3:106:LYS:HE2	11:DA:793:G:H22	1.84	0.42
15:DE:52:SER:HB3	36:DZ:40:PHE:O	2.19	0.42
11:BA:1006:C:H4'	11:BA:1007:U:H5'	2.01	0.42
11:BA:219:C:O2	11:BA:817:G:N1	2.45	0.42
11:BA:380:G:H2'	11:BA:381:G:O4'	2.19	0.42
11:BA:1124:A:H4'	11:BA:1719:A:N7	2.34	0.42
14:BD:40:ARG:HA	14:BD:43:TRP:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B0:43:ASN:HA	11:BA:1708:A:H1'	2.01	0.42
13:AC:157:GLN:NE2	13:AC:158:GLY:H	2.15	0.42
1:B0:22:LYS:HZ3	10:B9:76:LYS:HA	1.84	0.42
11:DA:70:U:H5'	35:DY:173:ARG:HH12	1.84	0.42
11:AA:1362:U:H2'	11:AA:1363:U:C6	2.54	0.42
11:BA:1443:A:H4'	11:BA:1444:U:C5'	2.49	0.42
33:CW:116:LEU:HB3	33:CW:120:GLU:HB2	2.01	0.42
11:BA:125:U:H5''	11:BA:125:U:H6	1.84	0.42
11:CA:125:U:H5''	11:CA:125:U:H6	1.84	0.42
16:AF:78:ARG:HH12	16:AF:100:GLY:CA	2.32	0.42
11:CA:932:G:H2'	11:CA:933:A:C8	2.54	0.42
15:AE:243:THR:HB	15:AE:244:PHE:HD1	1.84	0.42
11:DA:1357:G:O2'	11:DA:1381:A:N6	2.52	0.42
11:BA:933:A:H4'	11:BA:1045:G:O2'	2.18	0.42
3:B2:64:ARG:NH2	11:BA:323:U:OP1	2.43	0.42
11:BA:270:U:H4'	11:BA:270:U:OP2	2.19	0.42
33:BW:126:LEU:HB3	33:BW:143:THR:CG2	2.46	0.42
21:AK:30:VAL:HG23	21:AK:47:LEU:HD23	2.00	0.42
28:CR:140:ARG:HG2	28:CR:163:ASP:O	2.19	0.42
2:A1:21:ARG:NH1	11:AA:1591:C:O2	2.52	0.42
11:CA:516:G:OP2	26:CP:35:LYS:CE	2.67	0.42
18:CH:106:THR:CG2	18:CH:121:THR:HB	2.49	0.42
25:AO:147:THR:O	25:AO:151:LEU:HG	2.18	0.42
5:B4:85:ARG:HH12	5:B4:108:ILE:HD11	1.84	0.42
31:BU:62:LEU:HD23	31:BU:62:LEU:HA	1.92	0.42
12:DB:29:MET:HE1	12:DB:150:LEU:HD21	2.01	0.42
11:BA:534:A:C5	11:BA:534:A:OP1	2.72	0.42
27:DQ:63:LEU:HD12	27:DQ:63:LEU:HA	1.88	0.42
20:CJ:87:ARG:HA	20:CJ:87:ARG:HD3	1.82	0.42
5:D4:45:PHE:CE2	5:D4:68:VAL:HG11	2.54	0.42
26:CP:74:TYR:HB2	26:CP:80:LEU:HB2	2.01	0.42
11:CA:466:A:H5'	14:CD:144:PRO:HD2	2.00	0.42
33:CW:176:HIS:CD2	33:CW:178:GLU:OE2	2.71	0.42
11:AA:593:A:H2'	11:AA:594:U:H6	1.84	0.42
14:BD:32:GLY:HA3	34:BX:41:TYR:CE1	2.53	0.42
11:DA:146:A:H1'	35:DY:13:GLN:OE1	2.19	0.42
1:C0:95:LEU:O	1:C0:99:VAL:HG23	2.19	0.42
13:AC:164:GLY:O	13:AC:167:LYS:HB3	2.19	0.42
34:DX:35:SER:O	34:DX:38:ARG:HB3	2.19	0.42
25:BO:71:GLN:NE2	25:BO:79:LYS:NZ	2.67	0.42
23:DM:62:THR:HB	23:DM:65:GLN:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BH:8:ALA:HA	18:BH:74:VAL:HG21	2.00	0.42
23:CM:84:TRP:CZ3	23:CM:85:LEU:HG	2.54	0.42
35:CY:152:ASP:HA	35:CY:153:PRO:HD2	1.85	0.42
17:CG:110:ALA:HB1	17:CG:175:ALA:HB3	2.01	0.42
4:A3:30:HIS:HA	4:A3:31:PRO:HD2	1.89	0.42
11:AA:117:U:H1'	33:AW:33:GLN:HB2	2.01	0.42
11:CA:1379:G:H2'	11:CA:1380:G:O4'	2.18	0.42
35:DY:121:ILE:HD12	35:DY:124:LEU:HD11	2.00	0.42
11:BA:1596:C:H2'	11:BA:1597:G:O4'	2.19	0.42
12:BB:114:GLU:OE1	15:BE:32:LYS:HG3	2.19	0.42
14:CD:32:GLY:HA3	34:CX:41:TYR:CD1	2.54	0.42
36:DZ:71:GLY:O	36:DZ:75:SER:HB3	2.17	0.42
25:CO:11:LYS:H	25:CO:11:LYS:HG3	1.65	0.42
17:BG:188:LYS:HA	17:BG:188:LYS:HD3	1.67	0.42
27:CQ:39:LEU:HD23	27:CQ:39:LEU:HA	1.66	0.42
21:DK:135:ILE:HD13	21:DK:135:ILE:HA	1.90	0.42
11:DA:1544:G:H2'	11:DA:1544:G:N3	2.34	0.42
11:DA:655:C:O4'	11:DA:655:C:OP2	2.37	0.42
28:DR:308:LYS:O	28:DR:309:ASN:HB2	2.19	0.42
10:B9:128:HIS:NE2	10:B9:133:TYR:HB3	2.31	0.42
6:D5:45:VAL:HA	21:DK:113:GLN:HG3	2.01	0.42
11:AA:1076:U:H5''	22:AL:14:LYS:HE2	2.01	0.42
11:CA:1012:C:O2'	18:CH:2:VAL:N	2.46	0.42
11:BA:209:G:H4'	11:BA:210:A:O4'	2.19	0.42
31:DU:34:ARG:NH2	31:DU:106:ARG:HH22	2.16	0.42
11:CA:680:U:H2'	11:CA:681:G:C8	2.54	0.42
11:AA:615:A:H1'	11:AA:1079:G:O4'	2.19	0.42
11:DA:1443:A:H5'	11:DA:1445:G:O4'	2.19	0.42
11:BA:1462:U:C4'	11:BA:1463:U:OP2	2.62	0.42
27:CQ:32:ARG:HH12	27:CQ:51:THR:C	2.22	0.42
11:CA:1144:A:H2'	11:CA:1145:C:O4'	2.19	0.42
11:BA:1660:A:H61	11:BA:1665:U:H3	1.67	0.42
11:BA:949:A:C5'	11:BA:949:A:H8	2.33	0.42
11:AA:982:U:C4'	11:AA:983:A:OP2	2.64	0.42
3:C2:64:ARG:HH22	11:CA:323:U:P	2.42	0.42
11:BA:909:C:H5''	11:BA:910:U:H2'	2.01	0.42
15:BE:145:TRP:O	18:BH:98:GLN:NE2	2.48	0.42
10:C9:128:HIS:NE2	10:C9:133:TYR:HB3	2.31	0.42
11:BA:1513:G:H2'	11:BA:1514:G:C1'	2.48	0.42
11:AA:477:G:C2	11:AA:478:G:H1'	2.54	0.42
11:CA:1752:U:O2'	11:CA:1753:A:P	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C3:174:TYR:CZ	4:C3:178:THR:HG21	2.54	0.42
14:AD:109:LEU:HD23	14:AD:129:ILE:HD12	2.01	0.42
35:BY:185:PRO:HG2	35:BY:186:GLU:HG2	2.02	0.42
11:AA:550:G:O5'	34:AX:61:ASN:HB3	2.18	0.42
22:CL:75:LEU:HD11	22:CL:82:ILE:HD12	2.00	0.42
11:AA:39:A:H2'	11:AA:40:A:O4'	2.19	0.42
28:BR:77:HIS:HB3	28:BR:96:TRP:HB2	2.01	0.42
29:BS:76:GLU:O	29:BS:77:LYS:HB2	2.19	0.42
11:AA:422:G:H5''	11:AA:422:G:H8	1.85	0.42
11:CA:585:A:H2'	11:CA:586:A:C8	2.54	0.42
11:DA:117:U:H1'	33:DW:33:GLN:HB2	2.00	0.42
11:DA:83:C:H5'	11:DA:84:U:OP2	2.18	0.42
12:BB:159:CYS:HB3	12:BB:170:ILE:CD1	2.49	0.42
33:BW:42:LEU:O	33:BW:86:THR:OG1	2.33	0.42
11:CA:1356:G:H5'	11:CA:1357:G:OP2	2.20	0.42
20:CJ:27:ASN:OD1	20:CJ:28:LEU:N	2.51	0.42
19:CI:42:ASN:HB3	19:CI:43:PRO:HD3	2.00	0.42
12:AB:65:HIS:CD2	12:AB:67:GLU:HB2	2.55	0.42
11:BA:295:U:OP1	27:BQ:135:ARG:HD3	2.18	0.42
13:DC:164:GLY:O	13:DC:167:LYS:HB3	2.19	0.42
3:A2:73:PHE:CZ	3:A2:112:ILE:HD11	2.54	0.42
2:D1:35:LYS:HD3	2:D1:35:LYS:HA	1.80	0.42
11:AA:1544:G:N3	11:AA:1544:G:H2'	2.34	0.42
25:CO:59:GLN:HG2	25:CO:59:GLN:H	1.58	0.42
6:C5:69:LEU:HA	6:C5:69:LEU:HD12	1.84	0.42
11:CA:83:C:H5'	11:CA:84:U:OP2	2.17	0.42
28:CR:133:ILE:HB	28:CR:145:TRP:HB2	2.01	0.42
11:AA:234:G:HO2'	11:AA:235:A:C1'	2.31	0.42
11:DA:232:G:HO2'	11:DA:233:U:P	2.35	0.42
11:DA:63:U:C3'	11:DA:64:U:H5''	2.48	0.42
3:A2:22:ARG:NH2	11:AA:293:U:OP1	2.45	0.42
28:AR:297:GLU:HG3	28:AR:310:PRO:CD	2.44	0.42
11:AA:1479:G:H5'	11:AA:1480:U:OP2	2.19	0.42
28:DR:100:LEU:HB3	28:DR:114:PHE:CD1	2.54	0.42
28:BR:297:GLU:OE2	28:BR:307:GLY:HA3	2.19	0.42
21:DK:34:MET:HB3	21:DK:41:PHE:HB2	2.00	0.42
13:CC:228:ARG:HG2	28:CR:245:LEU:HB2	2.01	0.42
11:BA:1143:A:H2'	11:BA:1144:A:H8	1.76	0.42
11:DA:949:A:H8	11:DA:949:A:C5'	2.32	0.42
11:DA:1661:G:C2'	11:DA:1662:C:OP2	2.67	0.42
11:CA:1661:G:C2'	11:CA:1662:C:OP2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:1443:A:H5'	11:BA:1445:G:O4'	2.19	0.42
11:CA:1650:G:C6	11:CA:1651:G:N1	2.87	0.42
11:BA:1621:G:P	22:BL:72:ARG:HH21	2.42	0.42
11:CA:983:A:H2'	11:CA:984:C:C6	2.55	0.42
11:AA:764:U:C5	11:AA:766:G:C2	3.07	0.42
11:AA:1513:G:H2'	11:AA:1514:G:C1'	2.49	0.42
4:C3:115:ARG:NH1	11:CA:631:C:N3	2.67	0.42
11:AA:270:U:OP2	11:AA:270:U:H4'	2.19	0.42
11:DA:1434:C:C2'	11:DA:1435:G:H5''	2.48	0.42
33:BW:36:HIS:CD2	33:BW:87:GLY:HA3	2.54	0.42
13:AC:10:LYS:HD3	13:AC:10:LYS:HA	1.75	0.42
11:DA:221:A:N6	11:DA:815:U:H3	2.17	0.42
11:CA:1591:C:H2'	11:CA:1592:C:C6	2.52	0.42
4:B3:5:LYS:HD3	4:B3:5:LYS:HA	1.70	0.42
18:AH:106:THR:CG2	18:AH:121:THR:HB	2.47	0.42
12:BB:121:THR:HG23	12:BB:143:LEU:HD12	2.01	0.42
23:CM:24:GLY:HA2	23:CM:58:ALA:HB3	2.01	0.42
11:BA:493:U:H4'	11:BA:494:A:O5'	2.15	0.42
27:DQ:68:LYS:O	27:DQ:126:GLN:N	2.49	0.42
11:DA:479:G:N1	11:DA:492:C:O2	2.51	0.42
4:C3:24:VAL:HA	4:C3:27:GLN:NE2	2.35	0.42
13:BC:45:THR:HB	13:BC:48:LYS:H	1.84	0.42
4:B3:15:ILE:HA	4:B3:15:ILE:HD12	1.90	0.42
11:BA:137:G:OP2	35:BY:139:ASN:ND2	2.53	0.42
17:DG:39:LYS:HG2	19:DI:113:GLN:O	2.19	0.42
27:AQ:110:ILE:HD13	27:AQ:138:ALA:CB	2.49	0.42
11:CA:606:U:H4'	11:CA:1072:G:O6	2.19	0.42
19:BI:42:ASN:HB3	19:BI:43:PRO:HD3	2.02	0.42
11:BA:1466:C:H5'	11:BA:1467:U:OP2	2.20	0.42
4:B3:7:HIS:HE1	11:BA:833:A:OP1	2.03	0.42
11:DA:446:U:O4'	33:DW:66:ASN:ND2	2.49	0.42
28:AR:127:SER:OG	28:AR:132:GLN:HB2	2.18	0.42
11:DA:1390:G:H2'	11:DA:1391:C:O4'	2.18	0.42
29:BS:65:VAL:HG12	29:BS:69:LYS:HD2	2.00	0.42
12:BB:58:ARG:CZ	36:BZ:54:VAL:HG21	2.50	0.42
11:BA:669:G:C6	11:BA:670:G:N7	2.87	0.42
12:BB:65:HIS:HA	12:BB:66:PRO:HD3	1.79	0.42
28:BR:226:LYS:O	28:BR:242:ILE:HG13	2.19	0.42
4:B3:30:HIS:HA	4:B3:31:PRO:HD2	1.90	0.42
11:BA:1232:U:H2'	11:BA:1233:U:O4'	2.19	0.42
8:A7:55:LEU:HD23	8:A7:55:LEU:HA	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:55:U:H4'	11:DA:56:G:O5'	2.19	0.42
35:AY:182:LEU:O	35:AY:187:ARG:HD2	2.18	0.42
14:BD:75:ALA:O	14:BD:79:ARG:HB2	2.18	0.42
10:A9:109:VAL:HG11	31:AU:62:LEU:HD21	2.02	0.42
28:AR:117:HIS:HD2	28:AR:139:GLU:CD	2.23	0.42
11:BA:947:C:H4'	11:BA:1076:U:O2'	2.19	0.42
11:BA:794:A:H1'	11:BA:797:A:H2	1.84	0.42
11:DA:1121:C:H5'	11:DA:1608:C:OP2	2.20	0.42
11:AA:1451:C:H4'	11:AA:1452:G:OP1	2.19	0.42
11:AA:1494:U:O2'	11:AA:1495:U:H5'	2.20	0.42
35:BY:137:ARG:CG	35:BY:181:ARG:HG3	2.49	0.42
11:BA:209:G:C4'	11:BA:210:A:H5'	2.49	0.42
11:BA:236:U:O2'	11:BA:237:U:OP1	2.32	0.42
11:CA:560:C:H4'	34:CX:8:LEU:HG	2.02	0.42
9:D8:46:GLU:O	9:D8:50:VAL:HG23	2.19	0.42
11:DA:1144:A:H2'	11:DA:1145:C:O4'	2.19	0.42
3:C2:146:HIS:HA	3:C2:149:LYS:HE2	2.02	0.42
11:DA:1269:G:H8	11:DA:1269:G:H5''	1.85	0.42
14:DD:86:LEU:HA	14:DD:86:LEU:HD12	1.65	0.42
13:CC:228:ARG:H	13:CC:228:ARG:HG2	1.44	0.42
17:AG:71:LEU:HG	17:AG:150:ILE:CD1	2.49	0.42
3:B2:89:VAL:CG2	3:B2:102:LYS:HA	2.44	0.42
11:DA:1445:G:H2'	11:DA:1446:A:H8	1.83	0.42
27:DQ:32:ARG:HH12	27:DQ:51:THR:C	2.22	0.42
21:BK:34:MET:HB3	21:BK:41:PHE:HB2	2.01	0.42
4:C3:192:PHE:CD1	7:C6:21:ARG:NH1	2.86	0.42
11:CA:1060:A:C5	11:CA:1061:U:H1'	2.54	0.42
14:DD:149:ARG:HB2	14:DD:152:SER:H	1.84	0.42
11:BA:982:U:C4'	11:BA:983:A:OP2	2.65	0.42
11:AA:763:U:H4'	11:AA:764:U:OP2	2.18	0.42
11:CA:1514:G:C5'	30:CT:90:GLY:HA2	2.49	0.42
13:DC:157:GLN:NE2	13:DC:158:GLY:H	2.16	0.42
11:BA:1434:C:C2'	11:BA:1435:G:H5''	2.47	0.42
11:BA:879:G:H5''	11:BA:880:G:OP2	2.19	0.42
14:CD:142:ASN:ND2	26:CP:62:TYR:OH	2.52	0.42
28:DR:140:ARG:HG2	28:DR:163:ASP:O	2.18	0.42
3:A2:64:ARG:HH22	11:AA:323:U:P	2.41	0.42
21:DK:150:ARG:HG2	21:DK:150:ARG:NH1	2.34	0.42
18:BH:106:THR:CG2	18:BH:121:THR:HB	2.49	0.42
3:C2:94:THR:HG23	11:CA:319:A:H2	1.84	0.42
5:A4:88:LYS:O	5:A4:89:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:896:U:H2'	11:AA:897:A:C8	2.55	0.42
13:CC:109:ASN:ND2	13:CC:178:VAL:HG12	2.34	0.42
11:BA:1574:C:H2'	11:BA:1575:U:C6	2.55	0.42
11:AA:138:G:N2	11:AA:166:C:O2	2.52	0.42
20:BJ:61:LEU:HD13	24:BN:33:TYR:CE1	2.55	0.42
11:DA:1307:U:H5'	20:DJ:83:ARG:HH22	1.84	0.42
5:A4:127:ARG:NH2	11:AA:923:U:O2	2.52	0.42
12:CB:148:SER:HA	12:CB:149:PRO:HD3	1.76	0.42
4:B3:70:TYR:OH	4:B3:129:ASP:OD1	2.35	0.42
11:AA:474:G:H2'	11:AA:475:C:C6	2.55	0.42
28:AR:43:ILE:HG22	28:AR:82:LEU:HD13	2.02	0.42
26:CP:16:LEU:HD21	33:CW:64:ILE:HG12	2.01	0.42
32:BV:53:PHE:CE2	32:BV:57:LEU:HD11	2.54	0.42
18:AH:113:HIS:O	18:AH:116:CYS:HB2	2.20	0.42
2:B1:17:LYS:HE2	11:BA:1588:G:O2'	2.19	0.42
11:CA:177:U:H2'	11:CA:178:U:C6	2.54	0.42
27:BQ:110:ILE:HD13	27:BQ:138:ALA:CB	2.49	0.42
32:BV:19:HIS:HB2	32:BV:20:TYR:CD1	2.55	0.42
20:BJ:97:ASP:OD1	20:BJ:97:ASP:N	2.52	0.42
11:BA:112:U:H2'	11:BA:113:U:C6	2.55	0.42
11:CA:473:A:C6	11:CA:474:G:C6	3.07	0.42
11:BA:427:A:H5''	22:BL:49:LYS:HG3	2.02	0.42
30:CT:99:CYS:SG	30:CT:100:HIS:N	2.92	0.42
23:AM:63:GLU:O	23:AM:67:ASN:ND2	2.53	0.42
27:CQ:110:ILE:HD13	27:CQ:138:ALA:CB	2.49	0.42
16:AF:42:PHE:HE2	16:AF:90:ILE:HG23	1.84	0.42
24:CN:30:ILE:HB	24:CN:37:THR:O	2.19	0.42
21:AK:18:PRO:HA	21:AK:19:PRO:HD3	1.85	0.42
11:BA:873:G:O2'	21:BK:51:GLU:HA	2.20	0.42
10:A9:128:HIS:CD2	10:A9:131:ARG:HG3	2.54	0.42
11:CA:228:C:O2'	11:CA:229:A:H5''	2.18	0.42
1:B0:43:ASN:HA	11:BA:1708:A:O2'	2.18	0.42
11:AA:328:G:H5'	11:AA:330:C:H41	1.84	0.42
11:AA:1660:A:H61	11:AA:1665:U:H3	1.67	0.42
3:C2:10:LYS:HE2	11:CA:314:A:OP2	2.19	0.42
11:CA:1174:A:C2'	11:CA:1175:A:H5'	2.49	0.42
11:AA:1362:U:P	32:AV:59:LYS:HZ1	2.38	0.42
11:CA:1443:A:H5'	11:CA:1445:G:O4'	2.19	0.42
3:D2:146:HIS:HA	3:D2:149:LYS:HE2	2.02	0.42
11:AA:680:U:H3	11:AA:721:A:H61	1.66	0.42
15:DE:227:THR:HB	15:DE:228:PRO:HD2	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DR:184:ALA:HB3	28:DR:206:ARG:NH1	2.35	0.42
11:DA:125:U:H6	11:DA:125:U:H5''	1.85	0.42
32:BV:32:LYS:HB2	32:BV:47:ARG:HE	1.84	0.42
11:CA:933:A:H4'	11:CA:1045:G:O2'	2.19	0.42
14:AD:149:ARG:HB2	14:AD:152:SER:H	1.82	0.42
11:BA:903:G:N3	11:BA:966:A:H1'	2.35	0.42
3:D2:64:ARG:HD3	3:D2:64:ARG:HA	1.79	0.42
11:DA:313:G:OP2	11:DA:313:G:H2'	2.20	0.42
11:BA:270:U:H5'	11:BA:271:U:H6	1.83	0.42
33:AW:129:THR:HB	33:AW:142:VAL:CG1	2.49	0.42
11:CA:1434:C:C2'	11:CA:1435:G:H5''	2.47	0.42
13:BC:228:ARG:HG2	13:BC:228:ARG:H	1.47	0.42
28:BR:184:ALA:HB3	28:BR:206:ARG:NH1	2.35	0.42
32:CV:53:PHE:CE2	32:CV:57:LEU:HD11	2.54	0.42
8:A7:72:GLY:O	8:A7:76:LEU:HG	2.19	0.42
11:BA:1292:U:H3'	12:BB:98:ARG:HH12	1.83	0.42
11:AA:1752:U:H4'	11:AA:1753:A:N7	2.35	0.42
11:CA:764:U:C5	11:CA:766:G:C2	3.08	0.42
11:AA:27:A:H2'	11:AA:28:U:O4'	2.19	0.42
12:AB:121:THR:HG23	12:AB:143:LEU:HD12	2.01	0.42
13:AC:45:THR:HB	13:AC:48:LYS:H	1.84	0.42
11:CA:731:C:H4'	18:CH:80:ASP:OD2	2.19	0.42
35:DY:193:VAL:O	35:DY:196:ALA:HB3	2.20	0.42
11:CA:533:G:N2	39:CA:2090:HOH:O	2.49	0.42
11:DA:283:A:H2'	11:DA:284:U:C6	2.54	0.42
35:AY:193:VAL:O	35:AY:196:ALA:HB3	2.20	0.42
28:AR:20:HIS:CE1	28:AR:50:THR:HG22	2.54	0.42
17:BG:18:ASN:HB3	17:BG:21:GLU:CD	2.40	0.42
11:CA:1151:G:H21	11:CA:1431:A:H62	1.66	0.42
28:BR:133:ILE:HB	28:BR:145:TRP:HB2	2.01	0.42
2:D1:54:VAL:HB	17:DG:28:CYS:HB3	2.02	0.42
2:A1:61:GLU:O	6:A5:51:ARG:NH1	2.53	0.42
11:BA:1151:G:H21	11:BA:1431:A:H62	1.65	0.42
30:CT:8:PHE:HB2	30:CT:145:THR:HA	2.00	0.42
30:AT:76:ILE:HA	30:AT:79:LEU:HD12	2.01	0.42
11:CA:135:A:N1	35:CY:187:ARG:HB3	2.35	0.42
20:DJ:94:ASN:ND2	20:DJ:97:ASP:OD2	2.53	0.42
11:CA:517:U:O2'	11:CA:519:A:N7	2.39	0.42
11:BA:369:A:OP2	11:BA:370:U:OP2	2.38	0.42
28:BR:62:ASN:HB3	28:BR:63:GLY:H	1.62	0.42
33:DW:222:THR:CG2	33:DW:226:ASN:HB2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:1098:A:H5''	11:DA:1099:G:OP2	2.20	0.42
11:BA:585:A:OP2	34:BX:44:ARG:NH2	2.39	0.42
8:D7:81:GLY:HA3	31:DU:17:LYS:HE2	2.01	0.42
11:BA:679:U:H4'	11:BA:680:U:OP2	2.19	0.42
11:AA:1232:U:H2'	11:AA:1233:U:O4'	2.20	0.42
30:CT:34:ILE:HD11	30:CT:58:TYR:OH	2.19	0.42
14:BD:54:LYS:HA	14:BD:54:LYS:HD3	1.86	0.42
11:CA:158:G:N3	35:CY:13:GLN:NE2	2.67	0.42
11:AA:177:U:H2'	11:AA:178:U:C6	2.53	0.42
15:DE:141:ARG:HB2	15:DE:223:TYR:CE1	2.55	0.42
11:BA:1207:C:H5'	11:BA:1208:A:OP2	2.18	0.42
11:CA:384:C:H41	11:CA:391:A:H1'	1.84	0.42
10:A9:103:LEU:HG	31:AU:58:LEU:HD23	2.01	0.42
6:B5:99:PRO:HG2	11:BA:1750:A:C8	2.54	0.42
11:CA:223:C:H42	11:CA:235:A:H2	1.66	0.42
11:DA:1143:A:H2'	11:DA:1144:A:H8	1.77	0.42
11:BA:221:A:N3	11:BA:221:A:H2'	2.34	0.42
28:DR:297:GLU:HA	28:DR:298:PRO:HD2	1.89	0.42
24:AN:39:ARG:CG	24:AN:39:ARG:HH11	2.21	0.42
11:BA:1721:G:H3'	11:BA:1721:G:H8	1.83	0.42
11:AA:12:U:H2'	11:AA:13:C:C6	2.54	0.42
28:BR:297:GLU:HA	28:BR:298:PRO:HD2	1.89	0.42
28:CR:240:TRP:CE3	28:CR:245:LEU:HD22	2.42	0.42
11:AA:1443:A:H5'	11:AA:1445:G:O4'	2.20	0.42
11:BA:1661:G:C2'	11:BA:1662:C:OP2	2.67	0.42
11:CA:535:A:HO2'	11:CA:536:C:P	2.42	0.42
22:DL:78:ASN:HD21	22:DL:80:LYS:HE2	1.84	0.42
11:BA:328:G:H5'	11:BA:330:C:H41	1.84	0.42
11:CA:1153:U:H1'	29:CS:131:THR:HG23	2.01	0.42
11:AA:1651:G:C5	11:AA:1673:A:N6	2.88	0.42
3:B2:146:HIS:HA	3:B2:149:LYS:HE2	2.01	0.42
31:AU:121:GLU:HA	31:AU:124:LEU:HG	2.01	0.42
31:BU:121:GLU:HA	31:BU:124:LEU:HG	2.01	0.42
11:DA:970:A:O2'	11:DA:1738:U:O2	2.38	0.42
11:DA:933:A:H4'	11:DA:1045:G:O2'	2.19	0.42
11:CA:238:G:HO2'	11:CA:239:A:P	2.38	0.42
11:CA:662:U:H2'	11:CA:663:G:O4'	2.19	0.42
33:CW:36:HIS:ND1	33:CW:87:GLY:HA3	2.34	0.42
28:DR:161:HIS:HB3	28:DR:197:LYS:CE	2.48	0.42
25:AO:96:LYS:HB2	25:AO:96:LYS:HE3	1.81	0.42
8:D7:13:TYR:CE1	8:D7:49:LEU:HD21	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CB:79:GLN:NE2	12:CB:95:SER:O	2.52	0.42
2:A1:21:ARG:HG3	11:AA:1134:C:H4'	2.00	0.42
22:CL:8:GLY:O	27:CQ:98:ARG:HD3	2.19	0.42
12:BB:79:GLN:NE2	12:BB:95:SER:O	2.52	0.42
33:DW:47:LEU:HD21	33:DW:92:VAL:HG11	2.02	0.42
18:DH:108:TYR:CE2	18:DH:121:THR:HG21	2.55	0.42
5:D4:216:ILE:HG13	5:D4:216:ILE:H	1.58	0.42
11:DA:1394:U:H2'	11:DA:1395:A:O4'	2.19	0.42
11:BA:762:U:C5	26:BP:6:ARG:NH1	2.87	0.42
11:CA:1358:A:C5	11:CA:1382:A:C6	3.07	0.42
35:BY:7:TYR:HA	35:BY:8:PRO:HD3	1.59	0.42
18:CH:80:ASP:OD1	18:CH:124:LYS:HE3	2.20	0.42
31:AU:49:ASP:OD1	31:AU:75:LYS:HA	2.20	0.42
11:CA:479:G:H2'	11:CA:480:A:O4'	2.19	0.42
5:C4:72:LEU:HD12	5:C4:85:ARG:HB3	2.00	0.42
5:A4:69:GLU:OE2	5:A4:86:LYS:HE2	2.20	0.42
11:BA:39:A:H61	11:BA:459:G:H1'	1.84	0.42
33:AW:160:ASP:OD1	33:AW:176:HIS:HB3	2.19	0.42
11:BA:896:U:H2'	11:BA:897:A:C8	2.55	0.42
5:D4:127:ARG:NH2	11:DA:862:A:H1'	2.33	0.42
24:BN:16:ASP:OD1	24:BN:26:ARG:NH1	2.52	0.42
4:C3:70:TYR:O	4:C3:74:LEU:HG	2.19	0.42
11:DA:1060:A:C5	11:DA:1061:U:H1'	2.55	0.42
12:AB:48:GLU:O	12:AB:52:LYS:HG2	2.19	0.42
11:AA:1119:G:C6	11:AA:1120:A:C6	3.07	0.42
13:CC:164:GLY:O	13:CC:167:LYS:HB3	2.20	0.42
14:DD:163:PRO:O	14:DD:164:LEU:HB2	2.20	0.42
29:BS:79:VAL:HA	29:BS:80:PRO:HD3	1.87	0.42
3:C2:196:LEU:HD23	3:C2:196:LEU:HA	1.65	0.42
13:CC:68:LYS:HB2	13:CC:68:LYS:HE3	1.66	0.42
2:B1:35:LYS:HA	2:B1:35:LYS:HD3	1.79	0.42
3:B2:73:PHE:CZ	3:B2:112:ILE:HD11	2.55	0.42
11:AA:514:G:H4'	26:AP:34:SER:HB3	2.01	0.42
11:AA:384:C:H41	11:AA:391:A:H1'	1.84	0.42
10:B9:133:TYR:CE1	11:BA:1207:C:H1'	2.55	0.42
8:D7:6:LYS:HZ3	31:DU:20:ASN:ND2	2.16	0.42
11:BA:1508:G:O2'	11:BA:1509:U:P	2.78	0.42
11:CA:12:U:H2'	11:CA:13:C:C6	2.54	0.42
14:CD:71:PHE:CD1	33:CW:254:ARG:HD3	2.55	0.42
11:AA:1296:G:H2'	11:AA:1296:G:N3	2.35	0.42
11:DA:33:G:C4	11:DA:467:A:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:DD:110:GLN:NE2	14:DD:126:ARG:HB2	2.35	0.42
23:BM:122:HIS:HE1	29:BS:128:TYR:OH	2.02	0.42
11:DA:983:A:H2'	11:DA:984:C:C6	2.55	0.42
11:DA:615:A:H1'	11:DA:1079:G:O4'	2.19	0.42
28:BR:100:LEU:HB3	28:BR:114:PHE:CD1	2.54	0.42
17:AG:150:ILE:O	17:AG:153:CYS:HB2	2.18	0.42
11:DA:1462:U:C4'	11:DA:1463:U:OP2	2.63	0.42
11:DA:69:A:H3'	35:DY:173:ARG:NH2	2.28	0.42
11:BA:1520:U:H1'	23:BM:89:ILE:HG13	2.02	0.42
11:DA:1362:U:H2'	11:DA:1363:U:C6	2.55	0.42
15:AE:49:PHE:CE1	15:AE:139:PRO:HD3	2.55	0.42
33:DW:88:LEU:HD11	33:DW:104:LEU:HD23	2.00	0.42
11:AA:238:G:H1'	11:AA:239:A:OP2	2.20	0.42
11:AA:879:G:H5''	11:AA:880:G:OP2	2.20	0.42
11:CA:812:U:H3'	11:CA:813:U:H5''	2.01	0.42
5:B4:155:SER:H	5:B4:158:SER:HB2	1.84	0.42
10:C9:128:HIS:CD2	10:C9:131:ARG:HG3	2.54	0.42
11:CA:631:C:OP1	18:CH:32:LYS:HG3	2.20	0.42
11:AA:1223:U:H4'	11:AA:1224:C:OP1	2.20	0.42
8:D7:13:TYR:CD1	8:D7:76:LEU:HD22	2.54	0.42
4:C3:123:TYR:O	4:C3:126:LEU:HB3	2.19	0.42
21:AK:44:VAL:HG22	21:AK:54:VAL:HB	2.02	0.42
11:BA:27:A:H2'	11:BA:28:U:O4'	2.20	0.42
11:DA:135:A:H61	35:DY:191:LYS:HB2	1.84	0.42
11:DA:1113:G:C2'	11:DA:1114:G:H5'	2.49	0.42
17:DG:18:ASN:HB3	17:DG:21:GLU:CD	2.40	0.42
11:CA:1573:G:N2	30:CT:91:ASN:HB2	2.35	0.42
15:CE:57:GLU:HG3	15:CE:59:GLU:CG	2.50	0.42
30:BT:64:LEU:O	30:BT:68:VAL:HG23	2.20	0.42
23:BM:15:HIS:HB3	23:BM:22:ILE:HB	2.01	0.42
23:BM:15:HIS:NE2	23:BM:66:CYS:SG	2.92	0.42
11:BA:1004:A:N3	11:BA:1743:A:H1'	2.34	0.42
4:D3:70:TYR:O	4:D3:74:LEU:HG	2.19	0.42
28:BR:276:GLN:O	28:BR:294:ILE:HG23	2.20	0.42
11:BA:621:C:H4'	25:BO:119:LEU:HD22	2.02	0.42
11:AA:112:U:H2'	11:AA:113:U:C6	2.54	0.42
32:DV:98:ILE:HD11	32:DV:117:LEU:HD22	2.02	0.42
33:DW:141:ILE:HG22	33:DW:149:ILE:HB	2.02	0.42
22:BL:131:LEU:HD23	22:BL:131:LEU:HA	1.76	0.42
6:A5:69:LEU:HD12	6:A5:69:LEU:HA	1.83	0.42
13:DC:112:LEU:HD23	13:DC:112:LEU:HA	1.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:DH:12:LYS:HE3	18:DH:12:LYS:HB2	1.47	0.42
18:CH:57:ARG:H	18:CH:57:ARG:HG2	1.52	0.42
1:C0:41:LEU:HA	1:C0:41:LEU:HD23	1.79	0.42
5:C4:24:ASP:HA	5:C4:25:PRO:HD2	1.74	0.42
20:DJ:23:LEU:HD22	20:DJ:112:ILE:HG12	2.00	0.42
11:CA:1246:C:HO2'	11:CA:1247:A:P	2.42	0.42
6:B5:47:PRO:O	6:B5:50:LYS:HB2	2.20	0.42
11:DA:633:U:H3	11:DA:675:A:C4'	2.32	0.42
11:BA:413:C:H5'	35:BY:87:ARG:HH12	1.84	0.42
11:DA:1479:G:H5'	11:DA:1480:U:OP2	2.20	0.42
17:DG:71:LEU:HG	17:DG:150:ILE:CD1	2.49	0.42
11:AA:1520:U:O2'	23:AM:89:ILE:HG21	2.20	0.42
11:DA:1488:A:H1'	11:DA:1489:U:OP1	2.20	0.42
11:CA:1360:U:HO2'	11:CA:1361:A:P	2.38	0.42
11:CA:1362:U:P	32:CV:59:LYS:NZ	2.89	0.42
11:DA:1535:A:O3'	30:DT:45:VAL:HG12	2.19	0.42
11:DA:1660:A:H61	11:DA:1665:U:H3	1.67	0.42
11:CA:1446:A:O2'	11:CA:1512:G:OP1	2.37	0.42
7:C6:34:LYS:HZ1	7:C6:78:LYS:HE3	1.82	0.42
14:AD:131:GLN:O	14:AD:132:ARG:HB2	2.19	0.42
15:CE:101:GLY:O	15:CE:116:TRP:HA	2.20	0.42
4:B3:115:ARG:NH1	11:BA:632:U:N3	2.68	0.42
15:DE:101:GLY:O	15:DE:116:TRP:HA	2.20	0.42
32:DV:32:LYS:HB2	32:DV:47:ARG:HE	1.85	0.42
11:BA:812:U:H3'	11:BA:813:U:H5''	2.02	0.42
30:CT:101:GLY:O	30:CT:105:ARG:HG2	2.20	0.42
11:CA:506:U:H5'	14:CD:133:HIS:NE2	2.35	0.42
29:DS:34:ILE:HD13	29:DS:50:VAL:HG21	2.01	0.42
33:DW:129:THR:HB	33:DW:142:VAL:CG1	2.49	0.42
28:CR:161:HIS:HD2	28:CR:161:HIS:H	1.65	0.42
22:AL:34:LEU:H	22:AL:34:LEU:HG	1.61	0.42
11:BA:538:A:H2'	34:BX:32:LYS:HD2	2.01	0.42
1:B0:92:LEU:HG	1:B0:93:LYS:N	2.35	0.42
4:D3:174:TYR:CD2	4:D3:180:ARG:HB2	2.55	0.42
11:BA:206:U:H5''	27:BQ:16:PHE:CD2	2.54	0.42
4:A3:127:LEU:HB2	4:A3:174:TYR:CE1	2.55	0.42
11:BA:517:U:O2'	11:BA:519:A:N7	2.39	0.42
15:BE:36:LEU:HA	15:BE:36:LEU:HD12	1.92	0.42
13:DC:45:THR:HB	13:DC:48:LYS:H	1.84	0.42
12:BB:12:ARG:HB3	12:BB:169:MET:SD	2.59	0.42
5:D4:72:LEU:HD12	5:D4:85:ARG:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:886:U:O2	11:CA:987:U:H1'	2.20	0.42
11:BA:1472:U:H5	30:BT:105:ARG:CZ	2.33	0.42
25:AO:133:LEU:HA	27:AQ:147:ILE:HG21	2.01	0.42
26:BP:74:TYR:CE1	26:BP:84:GLU:OE2	2.72	0.42
35:AY:75:LEU:O	35:AY:94:ARG:HA	2.20	0.42
26:CP:110:ARG:O	26:CP:114:ARG:HD2	2.19	0.42
19:CI:29:GLY:HA2	19:CI:65:LEU:O	2.18	0.42
19:BI:29:GLY:HA2	19:BI:65:LEU:O	2.20	0.42
35:DY:32:MET:CE	35:DY:54:GLY:HA2	2.49	0.42
11:CA:1742:G:N7	21:CK:146:ARG:NH2	2.67	0.42
7:D6:45:PHE:CD2	25:DO:57:ARG:HD3	2.55	0.42
11:DA:896:U:H2'	11:DA:897:A:C8	2.55	0.42
35:CY:32:MET:CE	35:CY:54:GLY:HA2	2.49	0.42
25:BO:88:GLU:HG3	25:BO:89:ASP:N	2.35	0.42
11:BA:593:A:H2'	11:BA:594:U:H6	1.84	0.42
11:BA:1466:C:C2	11:BA:1485:G:N2	2.88	0.42
11:CA:1517:A:OP1	23:CM:133:VAL:N	2.48	0.42
15:AE:85:THR:O	15:AE:99:PHE:HA	2.20	0.42
11:CA:611:U:H2'	11:CA:612:U:H6	1.85	0.42
13:DC:217:PRO:HA	13:DC:218:PRO:HD3	1.66	0.42
11:BA:364:G:OP1	27:BQ:95:LYS:HA	2.20	0.42
11:DA:374:G:H8	11:DA:374:G:H5''	1.85	0.42
25:BO:83:ALA:HA	25:BO:84:PRO:HD2	1.77	0.42
4:D3:13:THR:O	4:D3:17:GLU:HG3	2.20	0.42
11:BA:1561:U:H2'	11:BA:1562:G:C8	2.54	0.42
11:AA:200:U:H2'	11:AA:201:A:O4'	2.20	0.42
11:BA:52:G:H2'	11:BA:53:C:O4'	2.19	0.42
11:CA:1466:C:H5'	11:CA:1467:U:OP2	2.20	0.42
14:CD:163:PRO:O	14:CD:164:LEU:HB2	2.20	0.42
11:BA:1119:G:C6	11:BA:1120:A:C6	3.07	0.42
17:AG:26:ASP:HA	17:AG:27:PRO:HD2	1.88	0.42
28:BR:122:TYR:HE2	28:BR:138:ALA:HB2	1.85	0.42
23:AM:62:THR:HB	23:AM:65:GLN:HG3	2.01	0.42
28:BR:148:LEU:HD23	28:BR:148:LEU:HA	1.87	0.42
29:CS:121:LEU:HA	29:CS:121:LEU:HD23	1.87	0.42
11:CA:1724:U:H5''	11:CA:1724:U:H6	1.84	0.42
11:CA:597:U:H2'	11:CA:598:A:C8	2.54	0.42
11:BA:1064:A:O2'	11:BA:1065:A:H3'	2.19	0.42
28:DR:133:ILE:HB	28:DR:145:TRP:HB2	2.00	0.42
36:BZ:47:VAL:N	36:BZ:74:ARG:HH22	2.18	0.42
15:AE:219:LEU:HD12	15:AE:219:LEU:HA	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CL:6:PRO:HG3	22:CL:14:LYS:HE3	2.01	0.42
11:DA:947:C:H4'	11:DA:1076:U:O2'	2.19	0.42
11:BA:1199:G:N2	31:BU:27:LYS:HG3	2.34	0.42
6:A5:47:PRO:O	6:A5:50:LYS:HB2	2.20	0.42
6:D5:47:PRO:O	6:D5:50:LYS:HB2	2.19	0.42
11:CA:1508:G:O2'	11:CA:1509:U:P	2.78	0.42
11:BA:413:C:H4'	11:BA:414:G:OP1	2.20	0.42
11:CA:772:A:C2	14:CD:71:PHE:HE2	2.38	0.42
10:D9:95:LEU:HD13	31:DU:52:GLN:HB2	2.02	0.42
11:AA:1585:U:H2'	11:AA:1586:A:H8	1.84	0.42
11:AA:1558:A:H3'	11:AA:1559:A:H8	1.84	0.42
28:DR:100:LEU:HB2	28:DR:114:PHE:HB2	2.01	0.42
28:CR:100:LEU:HB2	28:CR:114:PHE:HB2	2.02	0.42
17:AG:44:VAL:HA	17:AG:45:PRO:HD2	1.77	0.42
27:DQ:15:VAL:HG21	27:DQ:33:TYR:HB2	2.02	0.42
10:B9:95:LEU:HA	10:B9:95:LEU:HD12	1.73	0.42
11:BA:1144:A:H2'	11:BA:1145:C:O4'	2.20	0.42
11:BA:764:U:C5	11:BA:766:G:C2	3.07	0.42
11:BA:92:G:H5'	11:BA:452:A:O2'	2.20	0.42
11:BA:1361:A:H2'	11:BA:1362:U:C6	2.54	0.42
11:DA:1447:C:H5''	30:DT:48:GLU:OE2	2.20	0.42
33:AW:116:LEU:HB3	33:AW:120:GLU:HB2	2.01	0.42
32:BV:28:PHE:CE2	32:BV:32:LYS:HD3	2.55	0.42
11:BA:936:U:C5	25:BO:15:GLY:O	2.72	0.42
15:CE:243:THR:HB	15:CE:244:PHE:HD1	1.85	0.42
32:DV:28:PHE:CE2	32:DV:32:LYS:HD3	2.54	0.42
9:A8:43:VAL:HG12	23:AM:57:ARG:HG3	2.02	0.42
32:CV:28:PHE:CE2	32:CV:32:LYS:HD3	2.55	0.42
11:DA:1752:U:O2'	11:DA:1753:A:P	2.77	0.42
2:D1:20:SER:O	11:DA:1591:C:C6	2.72	0.42
21:BK:150:ARG:CG	21:BK:150:ARG:HH11	2.33	0.42
5:C4:170:ILE:HG13	5:C4:210:ILE:HG21	2.02	0.42
22:BL:9:ILE:HA	27:BQ:98:ARG:HB3	2.01	0.42
11:AA:1488:A:H5''	20:AJ:59:LYS:NZ	2.34	0.42
30:AT:89:ARG:HH11	30:AT:92:LEU:HB3	1.84	0.42
32:AV:53:PHE:O	32:AV:57:LEU:HG	2.20	0.42
28:CR:77:HIS:HB3	28:CR:96:TRP:HB2	2.01	0.42
11:AA:283:A:H2'	11:AA:284:U:C6	2.54	0.42
11:CA:639:C:H2'	11:CA:640:A:O4'	2.20	0.42
11:CA:1191:A:C6	11:CA:1237:G:H1'	2.55	0.42
11:DA:138:G:N2	11:DA:166:C:O2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BY:38:GLY:N	35:BY:48:TYR:O	2.46	0.42
11:AA:1242:G:N2	11:AA:1412:C:H1'	2.35	0.42
24:AN:16:ASP:OD1	24:AN:26:ARG:NH1	2.52	0.42
11:AA:1466:C:H5'	11:AA:1467:U:OP2	2.20	0.42
32:BV:98:ILE:HG22	32:BV:99:ASP:O	2.20	0.42
14:AD:163:PRO:O	14:AD:164:LEU:HB2	2.20	0.42
29:AS:33:LEU:HD11	29:AS:59:ALA:HA	2.02	0.42
3:D2:84:THR:OG1	3:D2:85:LYS:N	2.52	0.42
13:AC:225:LYS:HE2	28:AR:210:LYS:HB3	2.02	0.42
12:DB:159:CYS:HB3	12:DB:170:ILE:CD1	2.50	0.42
28:AR:226:LYS:O	28:AR:242:ILE:HG13	2.20	0.42
35:CY:121:ILE:HD12	35:CY:124:LEU:HD11	2.01	0.42
12:CB:48:GLU:O	12:CB:52:LYS:HG2	2.18	0.42
35:BY:152:ASP:HA	35:BY:153:PRO:HD2	1.84	0.42
12:DB:192:GLU:H	12:DB:192:GLU:CD	2.21	0.42
14:BD:116:LEU:HD23	14:BD:116:LEU:HA	1.89	0.42
20:CJ:16:LYS:HA	20:CJ:16:LYS:HD3	1.84	0.42
7:D6:22:LEU:HA	7:D6:22:LEU:HD23	1.84	0.42
3:A2:84:THR:OG1	3:A2:85:LYS:N	2.53	0.42
19:DI:122:ASP:HA	19:DI:123:PRO:HD3	1.76	0.42
30:CT:125:THR:HB	30:CT:126:LYS:H	1.64	0.42
33:CW:42:LEU:O	33:CW:86:THR:OG1	2.31	0.42
32:AV:98:ILE:HD11	32:AV:117:LEU:HD22	2.02	0.42
11:BA:611:U:H2'	11:BA:612:U:H6	1.85	0.42
11:DA:1223:U:H4'	11:DA:1224:C:OP1	2.20	0.42
10:A9:129:TYR:CB	10:A9:152:LEU:HB2	2.49	0.42
11:CA:794:A:H1'	11:CA:797:A:H2	1.85	0.42
11:AA:657:U:H2'	11:AA:658:C:C6	2.55	0.42
20:BJ:90:ASP:O	20:BJ:91:LEU:HD23	2.19	0.42
12:BB:164:THR:CG2	12:BB:200:HIS:HB3	2.49	0.42
10:D9:95:LEU:HG	11:DA:1200:G:C1'	2.49	0.42
11:BA:488:G:OP2	11:BA:488:G:C8	2.73	0.42
11:BA:246:U:H5	27:BQ:33:TYR:CZ	2.38	0.42
3:A2:56:VAL:HG13	3:A2:57:ARG:N	2.34	0.42
3:D2:10:LYS:HZ2	11:DA:328:G:HO2'	1.57	0.42
11:DA:1651:G:C5	11:DA:1673:A:N6	2.88	0.42
11:AA:985:C:H2'	11:AA:986:G:H8	1.83	0.42
11:AA:1423:U:OP1	24:AN:9:HIS:ND1	2.53	0.42
11:AA:315:U:O3'	27:AQ:133:THR:OG1	2.37	0.42
11:BA:191:A:H2'	11:BA:192:C:C6	2.55	0.42
11:DA:665:A:H4'	11:DA:666:A:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AW:126:LEU:HD13	33:AW:143:THR:HG21	2.02	0.42
7:B6:42:GLN:HE22	7:B6:55:GLU:H	1.68	0.42
11:AA:477:G:H2'	11:AA:478:G:O4'	2.20	0.42
33:BW:36:HIS:ND1	33:BW:87:GLY:HA3	2.35	0.42
11:DA:1358:A:C5	11:DA:1382:A:C6	3.07	0.42
11:BA:537:A:O2'	34:BX:32:LYS:HE3	2.20	0.42
8:B7:13:TYR:CE1	8:B7:49:LEU:HD21	2.54	0.42
11:BA:1287:U:OP1	11:BA:1300:G:N2	2.53	0.42
5:A4:72:LEU:HD12	5:A4:85:ARG:HB3	2.00	0.42
30:AT:124:ALA:C	30:AT:127:LYS:HE2	2.40	0.42
12:BB:29:MET:HE3	12:BB:144:CYS:HB3	2.01	0.42
19:AI:102:ASN:HB2	28:AR:67:ILE:HG23	2.01	0.42
15:AE:181:ALA:HA	15:AE:199:THR:HG21	2.02	0.42
11:AA:1191:A:C6	11:AA:1237:G:H1'	2.54	0.42
29:CS:90:VAL:HG23	29:CS:119:LYS:O	2.20	0.42
9:B8:46:GLU:O	9:B8:50:VAL:HG23	2.20	0.42
33:BW:176:HIS:CD2	33:BW:178:GLU:OE2	2.73	0.42
28:AR:133:ILE:HB	28:AR:145:TRP:HB2	2.01	0.42
11:DA:593:A:H2'	11:DA:594:U:H6	1.84	0.42
3:D2:185:ARG:NH2	11:DA:256:U:H1'	2.34	0.42
11:BA:1529:U:C2'	11:BA:1530:U:OP2	2.68	0.42
1:B0:84:GLN:NE2	22:BL:57:GLY:H	2.17	0.42
11:BA:1113:G:H2'	11:BA:1113:G:N3	2.35	0.42
26:CP:127:LYS:HG2	26:CP:129:GLY:H	1.83	0.42
11:DA:1060:A:H4'	11:DA:1116:A:H5'	2.02	0.42
28:AR:283:LEU:HB2	28:AR:284:MET:HE2	2.02	0.42
11:AA:1060:A:C5	11:AA:1061:U:H1'	2.55	0.42
17:DG:110:ALA:HB1	17:DG:175:ALA:HB3	2.01	0.42
3:D2:5:ARG:NH2	11:DA:323:U:O2'	2.53	0.42
11:CA:1437:G:H2'	11:CA:1438:U:C6	2.55	0.42
3:C2:84:THR:OG1	3:C2:85:LYS:N	2.53	0.42
12:CB:65:HIS:HA	12:CB:66:PRO:HD3	1.79	0.42
23:DM:119:ILE:HG22	23:DM:121:SER:N	2.35	0.42
11:BA:1345:A:O2'	19:BI:3:GLN:OE1	2.35	0.42
30:CT:10:VAL:HB	30:CT:69:TYR:CE2	2.55	0.42
11:CA:1727:G:H2'	11:CA:1728:U:O4'	2.20	0.42
33:CW:222:THR:CG2	33:CW:226:ASN:HB2	2.50	0.42
26:CP:119:ALA:O	26:CP:123:LEU:HG	2.19	0.42
11:AA:453:G:H4'	33:AW:26:ILE:HG13	2.01	0.42
24:AN:30:ILE:HB	24:AN:37:THR:O	2.20	0.42
11:BA:587:U:O4	34:BX:37:LYS:HE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1408:U:O2'	13:CC:184:ILE:HG12	2.19	0.42
19:CI:15:LYS:HG3	19:CI:78:SER:HB3	2.02	0.42
1:C0:74:ASP:N	1:C0:74:ASP:OD1	2.52	0.42
14:AD:99:LEU:HA	14:AD:99:LEU:HD23	1.85	0.42
26:CP:124:LEU:HD23	26:CP:124:LEU:HA	1.86	0.42
25:DO:127:LEU:HD22	25:DO:127:LEU:HA	1.84	0.42
11:AA:440:C:H2'	11:AA:441:C:C6	2.55	0.42
19:DI:131:CYS:SG	20:DJ:77:TRP:HD1	2.42	0.42
11:CA:1232:U:H2'	11:CA:1233:U:O4'	2.20	0.42
11:AA:89:A:H1'	33:AW:3:ARG:O	2.20	0.41
11:DA:1494:U:HO2'	11:DA:1495:U:P	2.36	0.41
6:A5:99:PRO:HG2	11:AA:1750:A:C8	2.55	0.41
11:BA:239:A:H3'	11:BA:239:A:P	2.60	0.41
10:D9:94:LYS:HG2	10:D9:95:LEU:HB2	2.02	0.41
11:BA:1497:A:O3'	30:BT:86:ASN:ND2	2.53	0.41
3:B2:22:ARG:NH2	11:BA:293:U:OP1	2.45	0.41
35:AY:180:GLN:O	35:AY:181:ARG:HB2	2.19	0.41
11:BA:1708:A:N6	39:BA:6367:HOH:O	2.53	0.41
25:CO:4:MET:O	25:CO:5:GLN:HG2	2.20	0.41
11:AA:70:U:OP1	35:AY:173:ARG:NH2	2.53	0.41
7:D6:5:LEU:HG	18:DH:24:GLN:HE21	1.85	0.41
11:CA:1176:A:H5'	11:CA:1176:A:H8	1.85	0.41
7:A6:34:LYS:HZ3	7:A6:78:LYS:HE3	1.79	0.41
11:AA:1361:A:H2'	11:AA:1362:U:H6	1.85	0.41
11:AA:125:U:H5''	11:AA:125:U:H6	1.85	0.41
11:BA:1060:A:C5	11:BA:1061:U:H1'	2.55	0.41
11:DA:191:A:H2'	11:DA:192:C:C6	2.55	0.41
11:DA:1513:G:H2'	11:DA:1514:G:C1'	2.50	0.41
11:DA:753:C:H2'	11:DA:754:A:H8	1.85	0.41
3:A2:21:HIS:HE1	11:AA:101:A:O2'	2.03	0.41
15:DE:162:LYS:CB	15:DE:167:ARG:HH11	2.31	0.41
15:AE:143:GLY:N	15:AE:156:PRO:HD3	2.35	0.41
4:C3:174:TYR:CD2	4:C3:180:ARG:HB2	2.55	0.41
4:B3:127:LEU:HB2	4:B3:174:TYR:CE1	2.55	0.41
18:AH:35:LEU:HD21	18:AH:61:VAL:HG21	2.01	0.41
11:DA:1746:G:H4'	11:DA:1747:A:OP2	2.20	0.41
12:AB:79:GLN:NE2	12:AB:95:SER:O	2.51	0.41
11:DA:1729:A:H2'	11:DA:1730:G:C8	2.55	0.41
4:A3:174:TYR:CD2	4:A3:180:ARG:HB2	2.54	0.41
12:CB:103:THR:HA	12:CB:109:THR:HG21	2.02	0.41
17:DG:44:VAL:CG2	19:DI:48:ALA:HB3	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DQ:93:VAL:HG23	27:DQ:98:ARG:O	2.20	0.41
11:CA:884:A:OP2	21:CK:66:ARG:N	2.52	0.41
11:AA:1394:U:H2'	11:AA:1395:A:O4'	2.19	0.41
2:C1:18:THR:O	2:C1:24:ILE:HB	2.20	0.41
15:DE:181:ALA:HA	15:DE:199:THR:HG21	2.02	0.41
11:CA:477:G:C2	11:CA:478:G:H1'	2.55	0.41
11:BA:665:A:O3'	11:BA:666:A:C8	2.73	0.41
11:CA:494:A:H2'	11:CA:495:C:O4'	2.19	0.41
27:BQ:57:CYS:HA	27:BQ:58:PRO:HD3	1.84	0.41
33:BW:51:ARG:HA	33:BW:51:ARG:HD2	1.93	0.41
28:BR:20:HIS:CE1	28:BR:50:THR:HG22	2.54	0.41
5:C4:69:GLU:OE2	5:C4:86:LYS:HE2	2.19	0.41
11:AA:153:U:OP2	26:AP:114:ARG:HG2	2.20	0.41
13:AC:118:VAL:HG21	13:AC:145:LEU:HD11	2.01	0.41
11:BA:719:G:O5'	11:BA:719:G:H8	2.03	0.41
11:AA:82:A:H2'	11:AA:83:C:C6	2.55	0.41
14:BD:6:ILE:HD13	33:BW:23:LEU:HD11	2.01	0.41
13:AC:162:CYS:O	13:AC:167:LYS:HB2	2.19	0.41
11:BA:585:A:H2'	11:BA:586:A:C8	2.55	0.41
11:BA:1727:G:H2'	11:BA:1728:U:O4'	2.20	0.41
1:D0:79:GLY:HA3	1:D0:91:LEU:HD13	2.02	0.41
20:AJ:30:SER:HB3	20:AJ:107:ASP:HB2	2.01	0.41
29:BS:33:LEU:HD11	29:BS:59:ALA:HA	2.02	0.41
11:AA:1132:A:H2'	11:AA:1133:C:C6	2.55	0.41
11:DA:1466:C:H5'	11:DA:1467:U:OP2	2.20	0.41
28:DR:243:LEU:HA	28:DR:243:LEU:HD23	1.81	0.41
3:D2:203:LEU:HD12	3:D2:203:LEU:HA	1.86	0.41
22:DL:129:ILE:HG13	22:DL:129:ILE:H	1.57	0.41
11:AA:1615:U:O2	16:AF:56:SER:HB3	2.20	0.41
4:D3:132:LEU:HA	4:D3:132:LEU:HD23	1.83	0.41
14:AD:116:LEU:HD23	14:AD:116:LEU:HA	1.91	0.41
11:AA:342:U:H4'	11:AA:343:C:OP2	2.20	0.41
28:DR:122:TYR:HE2	28:DR:138:ALA:HB2	1.85	0.41
11:AA:894:U:H5''	11:AA:895:U:OP2	2.20	0.41
10:A9:101:TYR:CE2	31:AU:62:LEU:HD21	2.54	0.41
11:BA:164:U:H6	11:BA:264:U:HO2'	1.65	0.41
11:BA:238:G:H1'	11:BA:239:A:OP2	2.20	0.41
11:CA:679:U:H2'	11:CA:680:U:C6	2.53	0.41
11:AA:380:G:H2'	11:AA:381:G:O4'	2.20	0.41
28:CR:100:LEU:HB3	28:CR:114:PHE:HD1	1.84	0.41
28:CR:297:GLU:OE2	28:CR:307:GLY:HA3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CD:86:LEU:HA	14:CD:86:LEU:HD12	1.63	0.41
11:CA:112:U:H2'	11:CA:113:U:C6	2.55	0.41
11:DA:1443:A:H4'	11:DA:1444:U:C5'	2.50	0.41
11:BA:1142:G:C2	11:BA:1143:A:C8	3.07	0.41
11:DA:1147:U:O4'	11:DA:1168:A:N6	2.52	0.41
22:CL:54:GLU:OE1	22:CL:72:ARG:NH1	2.52	0.41
31:DU:121:GLU:HA	31:DU:124:LEU:HG	2.01	0.41
11:CA:1721:G:H3'	11:CA:1721:G:H8	1.85	0.41
28:DR:77:HIS:HB3	28:DR:96:TRP:HB2	2.01	0.41
11:AA:191:A:H2'	11:AA:192:C:C6	2.55	0.41
33:DW:193:ARG:NH1	33:DW:220:PHE:CE1	2.88	0.41
11:BA:841:A:O2'	11:BA:843:A:OP1	2.36	0.41
11:AA:17:C:H2'	11:AA:18:C:C6	2.54	0.41
21:BK:30:VAL:HG23	21:BK:47:LEU:HD23	2.01	0.41
14:CD:142:ASN:HB3	26:CP:62:TYR:HE2	1.84	0.41
6:D5:34:LYS:NZ	11:DA:1746:G:N7	2.43	0.41
11:AA:749:G:O5'	11:AA:749:G:H8	2.03	0.41
15:CE:143:GLY:N	15:CE:156:PRO:HD3	2.35	0.41
35:CY:193:VAL:O	35:CY:196:ALA:HB3	2.20	0.41
11:CA:283:A:H2'	11:CA:284:U:C6	2.55	0.41
34:BX:53:ASP:HA	34:BX:54:PRO:HD2	1.93	0.41
30:BT:101:GLY:O	30:BT:105:ARG:HG2	2.20	0.41
30:BT:105:ARG:HG2	30:BT:105:ARG:H	1.57	0.41
11:CA:1235:G:C2	11:CA:1236:G:H1'	2.55	0.41
17:AG:83:LEU:HA	17:AG:83:LEU:HD12	1.91	0.41
11:DA:206:U:H5''	27:DQ:16:PHE:CD2	2.55	0.41
33:AW:31:PRO:HD2	33:AW:38:LEU:HD11	2.02	0.41
29:AS:76:GLU:O	29:AS:77:LYS:HB2	2.19	0.41
11:BA:636:G:H2'	11:BA:637:U:H6	1.85	0.41
12:AB:12:ARG:HB3	12:AB:169:MET:SD	2.60	0.41
11:DA:39:A:H2'	11:DA:40:A:O4'	2.20	0.41
29:DS:76:GLU:O	29:DS:77:LYS:HB2	2.19	0.41
13:BC:109:ASN:ND2	13:BC:178:VAL:HG12	2.35	0.41
11:AA:150:A:H1'	11:AA:407:A:N7	2.35	0.41
20:CJ:94:ASN:ND2	20:CJ:97:ASP:OD2	2.53	0.41
16:AF:42:PHE:CE2	16:AF:90:ILE:HD12	2.54	0.41
32:BV:98:ILE:HD11	32:BV:117:LEU:HD22	2.03	0.41
11:AA:1636:C:H2'	11:AA:1637:U:C6	2.54	0.41
5:C4:34:PHE:CZ	5:C4:48:THR:HB	2.55	0.41
36:DZ:28:LEU:HA	36:DZ:29:PRO:HD2	1.88	0.41
14:BD:163:PRO:O	14:BD:164:LEU:HB2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BD:14:THR:HA	14:BD:15:PRO:HD2	1.67	0.41
5:D4:84:TRP:HB2	5:D4:112:ARG:CG	2.50	0.41
11:CA:1561:U:H2'	11:CA:1562:G:C8	2.55	0.41
19:DI:42:ASN:HB3	19:DI:43:PRO:HD3	2.02	0.41
11:AA:1316:A:H2'	11:AA:1317:A:C8	2.55	0.41
11:AA:225:C:H2'	11:AA:226:A:C8	2.55	0.41
21:CK:45:THR:HG22	21:CK:52:THR:HA	2.02	0.41
33:CW:23:LEU:HD12	33:CW:23:LEU:HA	1.85	0.41
11:AA:374:G:H5''	11:AA:374:G:H8	1.85	0.41
18:BH:57:ARG:HG2	18:BH:57:ARG:H	1.56	0.41
25:BO:127:LEU:HA	25:BO:127:LEU:HD22	1.86	0.41
1:B0:25:LEU:H	1:B0:25:LEU:HG	1.52	0.41
14:DD:12:TYR:HA	14:DD:47:MET:HG3	2.01	0.41
21:DK:74:ALA:HB1	21:DK:115:ALA:HB2	2.02	0.41
11:DA:1208:A:N6	11:DA:1217:G:O6	2.52	0.41
10:A9:156:LYS:HD3	7:D6:60:ILE:CG1	2.50	0.41
11:AA:93:C:O2	11:AA:417:A:O2'	2.35	0.41
11:AA:654:U:O2	11:AA:656:G:N2	2.52	0.41
11:DA:230:A:H3'	11:DA:231:U:H5''	2.01	0.41
33:AW:254:ARG:NH1	33:AW:260:TYR:CD2	2.88	0.41
11:CA:1317:A:OP1	20:CJ:51:LYS:HG3	2.20	0.41
11:AA:1554:U:N3	11:AA:1586:A:C4	2.88	0.41
11:BA:1721:G:C3'	11:BA:1721:G:C8	3.03	0.41
11:DA:845:G:OP1	25:DO:3:ARG:HD2	2.20	0.41
6:C5:71:VAL:HG11	6:C5:73:LEU:HD13	2.01	0.41
11:BA:894:U:N3	21:BK:55:ARG:NH2	2.60	0.41
11:CA:1520:U:O2'	23:CM:89:ILE:HG21	2.20	0.41
27:AQ:66:ARG:HG2	27:AQ:66:ARG:H	1.64	0.41
10:B9:112:GLN:C	11:CA:534:A:N6	2.73	0.41
28:CR:226:LYS:O	28:CR:242:ILE:HG13	2.20	0.41
28:DR:226:LYS:O	28:DR:242:ILE:HG13	2.20	0.41
21:BK:128:ARG:HG3	21:BK:128:ARG:HH11	1.82	0.41
11:DA:1651:G:C2'	11:DA:1652:A:OP2	2.68	0.41
14:CD:131:GLN:O	14:CD:132:ARG:HB2	2.20	0.41
11:AA:1650:G:C6	11:AA:1651:G:N1	2.89	0.41
16:BF:78:ARG:HH12	16:BF:100:GLY:CA	2.31	0.41
33:DW:88:LEU:HD22	33:DW:186:GLN:HB3	2.02	0.41
11:DA:812:U:H3'	11:DA:813:U:H5''	2.02	0.41
10:C9:102:LYS:HD3	10:C9:112:GLN:HB2	2.02	0.41
32:DV:19:HIS:HB2	32:DV:20:TYR:CD1	2.54	0.41
11:BA:1223:U:H4'	11:BA:1224:C:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:537:A:O2'	34:AX:32:LYS:HE3	2.21	0.41
4:B3:63:ILE:HG12	4:B3:93:PHE:O	2.20	0.41
1:A0:92:LEU:HG	1:A0:93:LYS:N	2.35	0.41
27:CQ:93:VAL:HG23	27:CQ:98:ARG:O	2.21	0.41
21:BK:150:ARG:NH1	21:BK:150:ARG:HG2	2.35	0.41
11:CA:764:U:H4'	11:CA:765:A:OP1	2.19	0.41
11:BA:1342:U:H2'	11:BA:1343:G:C8	2.56	0.41
22:CL:82:ILE:HD11	22:CL:121:PHE:CE1	2.55	0.41
11:CA:1558:A:H3'	11:CA:1559:A:H8	1.85	0.41
22:AL:82:ILE:HD11	22:AL:121:PHE:CE1	2.55	0.41
31:CU:49:ASP:OD1	31:CU:75:LYS:HA	2.21	0.41
11:DA:1742:G:N7	21:DK:146:ARG:NH2	2.68	0.41
11:CA:39:A:H2'	11:CA:40:A:O4'	2.20	0.41
11:AA:103:C:H2'	11:AA:104:A:C8	2.55	0.41
11:DA:1235:G:C2	11:DA:1236:G:H1'	2.55	0.41
11:CA:1644:C:P	35:CY:94:ARG:HH22	2.44	0.41
5:C4:45:PHE:CE2	5:C4:68:VAL:HG11	2.54	0.41
2:C1:29:VAL:O	2:C1:40:GLN:HA	2.21	0.41
11:AA:1742:G:N7	21:AK:146:ARG:NH2	2.68	0.41
9:D8:51:GLU:HG3	9:D8:51:GLU:H	1.61	0.41
11:CA:1431:A:H2'	11:CA:1432:C:O4'	2.20	0.41
17:DG:24:ILE:H	17:DG:24:ILE:HD13	1.85	0.41
11:BA:1242:G:N2	11:BA:1412:C:H1'	2.35	0.41
8:C7:74:GLU:OE1	8:C7:77:LYS:NZ	2.29	0.41
11:BA:1431:A:H2'	11:BA:1432:C:O4'	2.20	0.41
22:DL:106:LEU:HA	22:DL:106:LEU:HD23	1.86	0.41
11:BA:82:A:H2'	11:BA:83:C:C6	2.54	0.41
11:DA:764:U:C5	11:DA:766:G:C2	3.08	0.41
30:CT:27:LYS:HG2	30:CT:58:TYR:CE2	2.55	0.41
11:DA:1316:A:H2'	11:DA:1317:A:C8	2.55	0.41
12:DB:48:GLU:O	12:DB:52:LYS:HG2	2.20	0.41
35:DY:182:LEU:O	35:DY:187:ARG:HD2	2.19	0.41
5:C4:80:ASN:HB3	6:C5:61:ASN:CB	2.50	0.41
11:CA:179:C:H2'	11:CA:180:C:H6	1.85	0.41
8:B7:61:TRP:CE2	24:BN:22:VAL:HG22	2.55	0.41
11:BA:1408:U:O2'	13:BC:184:ILE:HG12	2.20	0.41
4:B3:166:LYS:O	4:B3:170:ILE:HG13	2.20	0.41
11:DA:179:C:H2'	11:DA:180:C:H6	1.85	0.41
5:A4:31:TRP:HE1	21:AK:17:GLY:C	2.23	0.41
11:AA:1713:G:OP2	16:AF:30:LYS:HD2	2.21	0.41
20:CJ:30:SER:HB3	20:CJ:107:ASP:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:56:ARG:NH1	1:A0:85:ASP:OD2	2.53	0.41
13:CC:213:VAL:HG13	32:CV:41:VAL:HG22	2.03	0.41
3:B2:98:LEU:HA	3:B2:98:LEU:HD23	1.86	0.41
33:CW:114:LYS:HD2	33:CW:114:LYS:HA	1.75	0.41
25:AO:18:LEU:HD23	25:AO:18:LEU:HA	1.69	0.41
3:A2:194:LYS:HA	3:A2:194:LYS:HD3	1.76	0.41
13:BC:6:ARG:HD3	13:BC:6:ARG:HA	1.87	0.41
13:CC:108:MET:HE1	13:CC:139:ILE:HG21	2.01	0.41
11:DA:112:U:H2'	11:DA:113:U:C6	2.55	0.41
18:AH:36:LYS:O	18:AH:40:ILE:HG13	2.20	0.41
3:C2:38:LEU:HD21	3:C2:104:LEU:HD21	2.02	0.41
11:BA:1496:A:O3'	30:BT:96:HIS:ND1	2.53	0.41
11:DA:875:C:N4	11:DA:892:G:C4	2.88	0.41
23:AM:134:ARG:HB2	23:AM:136:GLN:HE22	1.85	0.41
28:DR:297:GLU:OE2	28:DR:307:GLY:HA3	2.20	0.41
28:AR:94:SER:HB3	28:AR:124:VAL:CG2	2.44	0.41
11:DA:34:U:O2'	11:DA:508:A:H5'	2.20	0.41
11:AA:1167:C:H5''	11:AA:1169:C:C6	2.56	0.41
23:DM:100:MET:HE1	23:DM:108:LYS:HG3	2.02	0.41
11:CA:1059:A:C6	11:CA:1060:A:C6	3.09	0.41
15:AE:162:LYS:CB	15:AE:167:ARG:HH11	2.29	0.41
28:AR:184:ALA:HB3	28:AR:206:ARG:NH1	2.36	0.41
10:B9:84:LYS:NZ	11:BA:1416:G:OP2	2.53	0.41
6:C5:28:ARG:HG3	21:CK:147:ARG:HA	2.03	0.41
28:AR:163:ASP:HB3	28:AR:164:TRP:H	1.61	0.41
11:CA:931:A:P	25:CO:96:LYS:HZ2	2.44	0.41
11:CA:1752:U:H4'	11:CA:1753:A:N7	2.35	0.41
35:DY:185:PRO:HG2	35:DY:186:GLU:HG2	2.01	0.41
4:A3:178:THR:O	4:A3:179:THR:OG1	2.36	0.41
3:C2:86:ILE:HG22	3:C2:112:ILE:CD1	2.50	0.41
11:BA:103:C:H2'	11:BA:104:A:C8	2.54	0.41
33:AW:51:ARG:HA	33:AW:51:ARG:HD2	1.92	0.41
4:A3:95:THR:HG22	4:A3:96:ALA:H	1.85	0.41
15:BE:57:GLU:HG3	15:BE:59:GLU:CG	2.50	0.41
35:BY:20:ASP:HB2	35:BY:23:LYS:HB2	2.02	0.41
11:BA:611:U:H2'	11:BA:612:U:C6	2.56	0.41
11:AA:143:C:OP1	26:AP:118:LYS:HB2	2.21	0.41
11:BA:177:U:H2'	11:BA:178:U:C6	2.54	0.41
11:CA:937:U:H5'	25:CO:17:ALA:O	2.20	0.41
27:AQ:118:GLU:HG2	27:AQ:150:VAL:HG21	2.03	0.41
11:CA:1529:U:C2'	11:CA:1530:U:OP2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DT:99:CYS:SG	30:DT:100:HIS:N	2.92	0.41
11:DA:343:C:O2'	11:DA:344:A:OP2	2.30	0.41
3:C2:195:GLU:HG2	27:CQ:9:TYR:CD2	2.55	0.41
2:C1:17:LYS:HE2	11:CA:1588:G:O2'	2.19	0.41
6:D5:82:HIS:HA	11:DA:1719:A:N6	2.36	0.41
11:BA:8:U:O2	11:BA:1111:A:H3'	2.20	0.41
11:DA:177:U:H2'	11:DA:178:U:C6	2.55	0.41
11:AA:1135:A:C6	11:AA:1136:G:C5	3.08	0.41
1:A0:79:GLY:HA3	1:A0:91:LEU:HD13	2.02	0.41
3:A2:98:LEU:HD23	3:A2:98:LEU:HA	1.87	0.41
11:BA:1544:G:N3	11:BA:1544:G:H2'	2.35	0.41
3:B2:21:HIS:N	3:B2:21:HIS:ND1	2.68	0.41
5:D4:74:ASP:OD1	5:D4:74:ASP:N	2.54	0.41
12:CB:192:GLU:CD	12:CB:192:GLU:H	2.21	0.41
11:DA:1295:C:H5'	12:DB:100:THR:HG23	2.03	0.41
1:B0:79:GLY:HA3	1:B0:91:LEU:HD13	2.02	0.41
36:AZ:45:SER:O	36:AZ:74:ARG:CZ	2.62	0.41
11:BA:384:C:H41	11:BA:391:A:H1'	1.85	0.41
11:BA:391:A:C4'	11:BA:392:A:H5''	2.47	0.41
11:DA:1551:U:H4'	19:DI:142:LYS:O	2.20	0.41
11:BA:1450:G:P	30:BT:60:ARG:HH12	2.42	0.41
11:CA:2:A:OP2	15:CE:180:VAL:HG11	2.20	0.41
11:BA:162:A:OP1	35:BY:137:ARG:HB2	2.20	0.41
11:BA:606:U:H4'	11:BA:1072:G:O6	2.20	0.41
12:BB:201:LYS:HD2	32:BV:84:TYR:CE2	2.55	0.41
11:CA:1316:A:H2'	11:CA:1317:A:C8	2.55	0.41
24:AN:40:ARG:H	24:AN:40:ARG:HG2	1.36	0.41
1:B0:22:LYS:HZ1	10:B9:76:LYS:HG2	1.82	0.41
23:DM:89:ILE:HA	23:DM:89:ILE:HD13	1.79	0.41
11:AA:911:A:N6	39:AA:2161:HOH:O	2.37	0.41
3:A2:5:ARG:NH1	11:AA:327:G:O6	2.52	0.41
28:BR:240:TRP:CE3	28:BR:245:LEU:HD22	2.43	0.41
17:BG:150:ILE:HA	17:BG:153:CYS:SG	2.61	0.41
11:CA:1443:A:H4'	11:CA:1444:U:C5'	2.50	0.41
11:AA:243:G:C6	11:AA:244:A:C6	3.08	0.41
3:C2:64:ARG:NH2	11:CA:323:U:OP1	2.39	0.41
32:AV:28:PHE:CE2	32:AV:32:LYS:HD3	2.56	0.41
14:AD:149:ARG:H	14:AD:149:ARG:HG2	1.44	0.41
11:CA:237:U:C4'	11:CA:238:G:OP2	2.69	0.41
3:B2:51:ILE:HA	3:B2:64:ARG:O	2.21	0.41
11:CA:270:U:OP2	11:CA:270:U:H4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:812:U:H3'	11:AA:813:U:H5''	2.03	0.41
12:AB:127:PHE:CG	12:AB:128:GLN:N	2.89	0.41
11:BA:1373:G:H5'	32:BV:4:VAL:HA	2.01	0.41
11:BA:318:U:C1'	27:BQ:6:GLN:HE21	2.33	0.41
21:AK:150:ARG:HH11	21:AK:150:ARG:CG	2.34	0.41
3:A2:204:GLN:O	3:A2:208:LYS:N	2.53	0.41
11:DA:89:A:C6	11:DA:389:G:C6	3.09	0.41
4:C3:5:LYS:HD3	4:C3:5:LYS:HA	1.69	0.41
11:DA:1289:C:H2'	11:DA:1290:G:O4'	2.21	0.41
11:CA:763:U:C5	11:CA:763:U:OP2	2.73	0.41
18:CH:35:LEU:HD21	18:CH:61:VAL:HG21	2.01	0.41
11:CA:214:U:O2'	11:CA:215:A:H5'	2.19	0.41
11:BA:471:C:H4'	14:BD:120:ASN:HD22	1.85	0.41
28:AR:77:HIS:CD2	28:AR:96:TRP:HB2	2.55	0.41
19:BI:102:ASN:HB2	28:BR:67:ILE:HG23	2.03	0.41
20:BJ:64:THR:HA	20:BJ:78:ASP:O	2.20	0.41
26:DP:74:TYR:CE1	26:DP:84:GLU:OE2	2.73	0.41
17:CG:18:ASN:HB3	17:CG:21:GLU:CD	2.41	0.41
27:BQ:139:LEU:HA	27:BQ:139:LEU:HD23	1.74	0.41
10:C9:101:TYR:CE2	31:CU:62:LEU:HD21	2.56	0.41
13:BC:118:VAL:HG21	13:BC:145:LEU:HD11	2.03	0.41
33:DW:176:HIS:CD2	33:DW:178:GLU:OE2	2.73	0.41
2:D1:54:VAL:HB	17:DG:28:CYS:CA	2.50	0.41
11:DA:1151:G:H21	11:DA:1431:A:H62	1.68	0.41
32:BV:53:PHE:O	32:BV:57:LEU:HG	2.20	0.41
1:C0:79:GLY:HA3	1:C0:91:LEU:HD13	2.03	0.41
16:DF:42:PHE:HE2	16:DF:90:ILE:HG23	1.86	0.41
11:BA:179:C:H2'	11:BA:180:C:H6	1.85	0.41
11:AA:564:A:HO2'	11:AA:566:C:H5	1.67	0.41
15:BE:85:THR:O	15:BE:99:PHE:HA	2.20	0.41
18:DH:36:LYS:O	18:DH:40:ILE:HG13	2.21	0.41
11:CA:1301:A:P	13:CC:163:THR:HG21	2.61	0.41
11:AA:303:A:C2	11:AA:305:C:C2	3.08	0.41
1:B0:56:ARG:NH1	1:B0:85:ASP:OD2	2.54	0.41
11:BA:857:G:O2'	25:BO:107:ASN:HB3	2.19	0.41
11:BA:1322:U:H2'	11:BA:1323:C:O4'	2.20	0.41
18:AH:11:LEU:O	18:AH:15:VAL:HG23	2.20	0.41
28:CR:122:TYR:HE2	28:CR:138:ALA:HB2	1.85	0.41
33:DW:12:ILE:H	33:DW:12:ILE:HG12	1.70	0.41
11:BA:1149:C:H5''	11:BA:1149:C:H6	1.84	0.41
14:BD:118:LEU:HA	14:BD:118:LEU:HD12	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:C8:91:LYS:HG2	9:C8:91:LYS:O	2.21	0.41
11:BA:1612:C:O5'	11:BA:1612:C:H6	2.03	0.41
14:CD:118:LEU:HD12	14:CD:118:LEU:HA	1.84	0.41
3:B2:56:VAL:HG13	3:B2:57:ARG:N	2.35	0.41
18:BH:83:LEU:HD23	18:BH:83:LEU:HA	1.79	0.41
11:BA:968:C:H5''	39:BA:6347:HOH:O	2.19	0.41
13:CC:209:ILE:HG22	13:CC:211:ASP:H	1.85	0.41
18:CH:11:LEU:O	18:CH:15:VAL:HG23	2.20	0.41
11:CA:1208:A:N6	11:CA:1217:G:O6	2.54	0.41
32:DV:30:PHE:O	32:DV:34:ILE:HG13	2.20	0.41
11:BA:65:C:C5	35:BY:177:PRO:HB3	2.56	0.41
9:B8:76:ASN:OD1	11:BA:1506:G:H3'	2.20	0.41
11:DA:1174:A:C2'	11:DA:1175:A:H5'	2.50	0.41
11:AA:616:A:H4'	11:AA:617:A:O5'	2.20	0.41
11:AA:1586:A:H5'	11:AA:1587:U:OP2	2.20	0.41
11:BA:615:A:H1'	11:BA:1079:G:O4'	2.19	0.41
35:DY:180:GLN:O	35:DY:181:ARG:HB2	2.20	0.41
8:C7:40:LEU:HD21	11:CA:1189:A:N3	2.36	0.41
11:CA:1361:A:H2'	11:CA:1362:U:H6	1.85	0.41
13:DC:228:ARG:HG3	28:DR:245:LEU:N	2.34	0.41
11:BA:1661:G:C4'	11:BA:1662:C:H5''	2.46	0.41
11:DA:1650:G:C6	11:DA:1651:G:N1	2.88	0.41
11:DA:1361:A:H2'	11:DA:1362:U:C6	2.55	0.41
33:AW:117:SER:HB3	33:AW:120:GLU:OE2	2.20	0.41
22:BL:54:GLU:OE1	22:BL:72:ARG:NH1	2.52	0.41
11:AA:912:A:O2'	11:AA:913:U:P	2.79	0.41
11:DA:1108:U:OP1	11:DA:1621:G:O2'	2.30	0.41
11:CA:1721:G:H4'	11:CA:1722:U:H5''	2.03	0.41
11:DA:1357:G:OP1	28:DR:77:HIS:HE1	2.04	0.41
11:BA:322:G:H2'	11:BA:323:U:C6	2.55	0.41
14:BD:109:LEU:HD23	14:BD:129:ILE:HD12	2.03	0.41
14:BD:109:LEU:HB2	14:BD:146:PHE:HB3	2.02	0.41
11:DA:1752:U:H4'	11:DA:1753:A:N7	2.35	0.41
11:BA:1558:A:H3'	11:BA:1559:A:H8	1.85	0.41
30:BT:25:HIS:CE1	30:BT:142:ARG:HH22	2.39	0.41
11:CA:1394:U:H2'	11:CA:1395:A:O4'	2.19	0.41
25:BO:151:LEU:O	25:BO:152:VAL:HB	2.21	0.41
28:CR:95:SER:HB3	28:CR:97:ASP:OD1	2.20	0.41
11:BA:1353:G:OP1	20:BJ:87:ARG:NH2	2.54	0.41
8:C7:67:TYR:HB3	13:CC:75:PHE:CZ	2.56	0.41
11:AA:883:A:H5'	21:AK:66:ARG:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DT:18:PHE:CZ	30:DT:140:LEU:HD22	2.54	0.41
26:AP:74:TYR:CD1	26:AP:80:LEU:HD13	2.55	0.41
28:CR:200:ASN:OD1	28:CR:206:ARG:HD2	2.21	0.41
11:AA:1568:C:P	24:AN:18:LYS:NZ	2.94	0.41
11:BA:422:G:H8	11:BA:422:G:H5''	1.85	0.41
11:DA:136:U:P	35:DY:139:ASN:HD21	2.44	0.41
33:CW:160:ASP:OD1	33:CW:176:HIS:HB3	2.21	0.41
9:A8:63:VAL:HG13	17:AG:97:LEU:HD12	2.03	0.41
26:DP:127:LYS:HG2	26:DP:129:GLY:H	1.84	0.41
5:D4:34:PHE:CZ	5:D4:48:THR:HB	2.56	0.41
33:BW:222:THR:HG21	33:BW:226:ASN:HB2	2.02	0.41
28:BR:39:SER:HA	28:BR:40:PRO:HD3	1.78	0.41
5:A4:146:THR:HG21	5:A4:160:CYS:O	2.21	0.41
4:D3:166:LYS:O	4:D3:170:ILE:HG13	2.20	0.41
11:DA:611:U:H2'	11:DA:612:U:H6	1.85	0.41
16:BF:42:PHE:HE2	16:BF:90:ILE:HG23	1.86	0.41
11:AA:1335:A:N3	30:AT:5:GLN:NE2	2.69	0.41
11:BA:200:U:H2'	11:BA:201:A:O4'	2.20	0.41
29:CS:54:ILE:HG12	29:CS:55:SER:H	1.86	0.41
28:DR:276:GLN:O	28:DR:294:ILE:HG23	2.20	0.41
5:A4:34:PHE:CZ	5:A4:48:THR:HB	2.56	0.41
18:DH:126:LEU:HD23	18:DH:126:LEU:HA	1.85	0.41
21:CK:119:LEU:HA	21:CK:119:LEU:HD12	1.86	0.41
11:BA:416:C:H4'	11:BA:418:G:OP1	2.21	0.41
11:DA:1006:C:H4'	11:DA:1007:U:H5'	2.02	0.41
15:CE:224:ARG:HD2	36:CZ:40:PHE:HZ	1.86	0.41
6:C5:99:PRO:HG2	11:CA:1750:A:H8	1.85	0.41
11:AA:64:U:O2'	11:AA:65:C:O5'	2.34	0.41
6:D5:49:SER:OG	21:DK:117:ARG:HB2	2.21	0.41
15:BE:155:ILE:HG21	15:BE:155:ILE:HD13	1.85	0.41
11:CA:1263:G:P	11:CA:1263:G:H8	2.43	0.41
11:AA:1508:G:O2'	11:AA:1509:U:P	2.79	0.41
11:DA:380:G:H2'	11:DA:381:G:O4'	2.21	0.41
11:BA:1269:G:N2	11:BA:1272:A:OP2	2.52	0.41
14:CD:85:LEU:HD23	14:CD:85:LEU:HA	1.86	0.41
11:DA:1488:A:HO2'	11:DA:1489:U:P	2.43	0.41
3:D2:124:HIS:HE1	3:D2:153:ARG:CZ	2.33	0.41
33:BW:88:LEU:HD22	33:BW:186:GLN:HB3	2.02	0.41
5:A4:119:LYS:HG3	11:AA:909:C:H5'	2.01	0.41
33:CW:126:LEU:HD13	33:CW:143:THR:HG21	2.02	0.41
9:B8:69:VAL:HG13	9:B8:73:LEU:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CW:193:ARG:NH1	33:CW:220:PHE:CE1	2.88	0.41
11:AA:494:A:H3'	11:AA:495:C:C6	2.55	0.41
33:BW:36:HIS:CE1	33:BW:87:GLY:HA3	2.55	0.41
22:AL:8:GLY:O	27:AQ:98:ARG:HD3	2.21	0.41
11:DA:879:G:H5''	11:DA:880:G:OP2	2.21	0.41
11:CA:1568:C:P	24:CN:18:LYS:NZ	2.93	0.41
11:CA:763:U:C6	11:CA:763:U:OP2	2.74	0.41
26:DP:81:LEU:HA	26:DP:81:LEU:HD12	1.82	0.41
11:AA:550:G:H21	34:AX:64:ALA:CB	2.34	0.41
5:D4:38:ILE:HA	5:D4:240:HIS:NE2	2.36	0.41
11:AA:1301:A:OP2	13:AC:163:THR:HG21	2.20	0.41
25:CO:62:ILE:HA	25:CO:63:PRO:HD2	1.94	0.41
11:AA:575:U:O2	11:AA:575:U:H3'	2.20	0.41
14:DD:64:PRO:HA	14:DD:69:ARG:HH11	1.84	0.41
11:DA:1476:A:C2	11:DA:1522:U:O4'	2.74	0.41
8:A7:67:TYR:HB3	13:AC:75:PHE:CZ	2.56	0.41
13:DC:109:ASN:ND2	13:DC:178:VAL:HG12	2.35	0.41
22:CL:106:LEU:HD21	22:CL:122:LYS:HB3	2.03	0.41
4:D3:19:VAL:O	4:D3:23:LEU:HG	2.21	0.41
11:DA:1301:A:P	13:DC:163:THR:HG21	2.61	0.41
26:AP:105:PHE:CZ	26:AP:127:LYS:HE2	2.55	0.41
22:DL:106:LEU:HD13	22:DL:113:VAL:HG22	2.01	0.41
22:DL:106:LEU:HD21	22:DL:122:LYS:HB3	2.03	0.41
11:CA:1113:G:N3	11:CA:1113:G:H2'	2.36	0.41
11:CA:611:U:H2'	11:CA:612:U:C6	2.56	0.41
11:DA:103:C:H5''	11:DA:374:G:H2'	2.01	0.41
33:CW:222:THR:HG21	33:CW:226:ASN:HB2	2.02	0.41
11:AA:364:G:OP1	27:AQ:95:LYS:HA	2.20	0.41
17:AG:110:ALA:HB1	17:AG:175:ALA:HB3	2.02	0.41
29:DS:33:LEU:HD11	29:DS:59:ALA:HA	2.03	0.41
26:AP:119:ALA:O	26:AP:123:LEU:HG	2.20	0.41
11:CA:440:C:H2'	11:CA:441:C:C6	2.56	0.41
39:DA:7876:HOH:O	21:DK:149:ARG:HD2	2.20	0.41
11:DA:46:A:H4'	11:DA:47:C:C5'	2.51	0.41
3:C2:194:LYS:HA	3:C2:194:LYS:HD3	1.75	0.41
22:CL:129:ILE:HG13	22:CL:129:ILE:H	1.57	0.41
14:AD:155:SER:O	14:AD:155:SER:OG	2.37	0.41
35:DY:41:LEU:HA	35:DY:41:LEU:HD23	1.88	0.41
11:AA:1437:G:H2'	11:AA:1438:U:C6	2.55	0.41
21:DK:45:THR:HG22	21:DK:52:THR:HA	2.03	0.41
11:CA:225:C:H2'	11:CA:226:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DZ:93:TYR:CG	36:DZ:94:PRO:HA	2.56	0.41
30:AT:10:VAL:HB	30:AT:69:TYR:CE2	2.56	0.41
36:BZ:71:GLY:O	36:BZ:75:SER:HB3	2.21	0.41
11:AA:55:U:H5''	11:AA:394:G:H22	1.85	0.41
5:A4:57:ARG:NH1	11:AA:873:G:OP1	2.53	0.41
11:CA:654:U:O2'	11:CA:656:G:H1'	2.21	0.41
11:DA:413:C:H4'	11:DA:414:G:OP1	2.19	0.41
11:BA:1496:A:H2'	11:BA:1497:A:C8	2.56	0.41
11:CA:380:G:H2'	11:CA:381:G:O4'	2.21	0.41
11:AA:413:C:N4	35:AY:87:ARG:HD3	2.36	0.41
11:BA:1479:G:H5'	11:BA:1480:U:OP2	2.21	0.41
11:CA:1479:G:H5'	11:CA:1480:U:OP2	2.21	0.41
28:AR:297:GLU:OE2	28:AR:307:GLY:HA3	2.20	0.41
11:DA:239:A:P	11:DA:239:A:H3'	2.60	0.41
14:DD:40:ARG:HA	14:DD:43:TRP:HB2	2.02	0.41
11:BA:1188:A:H8	11:BA:1188:A:O5'	2.03	0.41
11:CA:890:U:H5''	11:CA:892:G:C1'	2.51	0.41
11:AA:535:A:O2'	11:AA:536:C:H3'	2.21	0.41
33:CW:88:LEU:HD22	33:CW:186:GLN:HB3	2.03	0.41
8:C7:54:PHE:HB3	8:C7:72:GLY:HA2	2.02	0.41
11:BA:1059:A:C6	11:BA:1060:A:C6	3.09	0.41
16:CF:78:ARG:HH12	16:CF:100:GLY:CA	2.32	0.41
11:DA:1138:A:H2'	11:DA:1139:G:O4'	2.21	0.41
11:AA:866:U:O2'	11:AA:967:U:H4'	2.20	0.41
10:A9:75:LYS:NZ	11:AA:1418:C:OP2	2.47	0.41
14:DD:109:LEU:HB2	14:DD:146:PHE:HB3	2.02	0.41
33:AW:212:VAL:O	33:AW:219:ALA:HA	2.20	0.41
11:AA:763:U:OP2	11:AA:763:U:C6	2.74	0.41
11:AA:15:U:O5'	11:AA:15:U:H6	2.03	0.41
11:BA:1373:G:OP1	32:BV:5:ARG:N	2.46	0.41
23:AM:119:ILE:HG22	23:AM:121:SER:N	2.36	0.41
11:CA:995:U:H2'	11:CA:996:U:C6	2.56	0.41
5:D4:103:PHE:HZ	5:D4:106:LEU:HG	1.86	0.41
11:AA:1488:A:H1'	11:AA:1489:U:OP1	2.21	0.41
32:AV:53:PHE:O	32:AV:56:HIS:HB3	2.21	0.41
18:BH:108:TYR:CE2	18:BH:121:THR:HG21	2.56	0.41
27:CQ:68:LYS:HB2	27:CQ:126:GLN:HB2	2.03	0.41
12:BB:64:GLN:HE22	15:BE:246:GLU:CG	2.33	0.41
5:B4:88:LYS:O	5:B4:89:LEU:HD23	2.21	0.41
24:CN:16:ASP:OD1	24:CN:26:ARG:NH1	2.53	0.41
14:AD:22:GLU:HG3	14:AD:23:ARG:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BH:85:ASP:O	18:BH:88:LYS:HB2	2.21	0.41
11:AA:84:U:O4	39:AA:2027:HOH:O	2.21	0.41
2:B1:54:VAL:HB	17:BG:28:CYS:CA	2.50	0.41
26:AP:101:THR:HG23	26:AP:105:PHE:CE1	2.56	0.41
32:CV:98:ILE:HG22	32:CV:99:ASP:O	2.20	0.41
20:BJ:94:ASN:ND2	20:BJ:97:ASP:OD2	2.53	0.41
11:AA:1231:C:H2'	11:AA:1232:U:C6	2.56	0.41
3:B2:56:VAL:HG21	3:B2:62:LYS:HD3	2.02	0.41
33:BW:222:THR:CG2	33:BW:226:ASN:HB2	2.50	0.41
11:BA:342:U:H4'	11:BA:343:C:OP2	2.20	0.41
11:BA:928:C:O2'	25:BO:103:HIS:HD2	2.03	0.41
25:AO:83:ALA:HA	25:AO:84:PRO:HD2	1.79	0.41
35:AY:61:PHE:CD2	35:AY:72:ARG:HD3	2.55	0.41
18:DH:11:LEU:O	18:DH:15:VAL:HG23	2.21	0.41
17:CG:37:THR:O	17:CG:41:GLN:HG2	2.21	0.41
11:AA:46:A:H4'	11:AA:47:C:C5'	2.51	0.41
26:BP:32:THR:OG1	26:BP:60:THR:OG1	2.20	0.41
33:BW:132:ALA:HB3	33:BW:140:TYR:CE1	2.56	0.41
16:CF:61:ILE:HD13	16:CF:71:ILE:HG12	2.03	0.41
15:DE:85:THR:O	15:DE:99:PHE:HA	2.21	0.41
31:BU:25:ILE:HG12	31:BU:26:SER:H	1.86	0.41
36:CZ:51:ILE:HD13	36:CZ:87:LEU:HD11	2.03	0.41
8:A7:95:SER:O	13:AC:65:GLU:OE2	2.39	0.41
13:AC:15:VAL:HG11	24:AN:35:MET:HB3	2.02	0.41
1:C0:56:ARG:HD3	1:C0:85:ASP:O	2.21	0.41
15:DE:142:LYS:HD2	15:DE:152:ALA:O	2.21	0.41
32:AV:113:ASN:HD22	32:AV:113:ASN:HA	1.69	0.41
11:AA:179:C:H2'	11:AA:180:C:H6	1.86	0.41
10:B9:87:LYS:HZ3	11:BA:1187:C:P	2.27	0.41
11:CA:676:C:H5'	39:CA:2145:HOH:O	2.21	0.41
11:AA:890:U:H5''	11:AA:892:G:C1'	2.51	0.41
11:BA:1591:C:H2'	11:BA:1592:C:C6	2.51	0.41
6:A5:99:PRO:HG2	11:AA:1750:A:H8	1.86	0.41
11:DA:1176:A:H8	11:DA:1176:A:H5'	1.86	0.41
11:CA:1494:U:O2'	11:CA:1495:U:H5'	2.20	0.41
11:BA:230:A:C8	11:BA:230:A:H3'	2.56	0.41
11:BA:1296:G:H2'	11:BA:1296:G:N3	2.36	0.41
11:BA:1295:C:H2'	11:BA:1296:G:O4'	2.20	0.41
11:AA:954:G:C6	11:AA:1001:A:C4	3.09	0.41
31:DU:34:ARG:HH21	31:DU:106:ARG:HH22	1.67	0.41
11:CA:381:G:O2'	11:CA:1684:A:H5''	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BA:482:A:H2	11:BA:489:U:O2	2.04	0.41
11:AA:1585:U:OP1	17:AG:143:ASN:ND2	2.54	0.41
11:BA:515:U:OP1	26:BP:35:LYS:HD2	2.21	0.41
25:DO:4:MET:O	25:DO:5:GLN:HG2	2.20	0.41
11:DA:410:G:OP1	35:DY:72:ARG:NH1	2.53	0.41
28:BR:100:LEU:HB2	28:BR:114:PHE:HB2	2.02	0.41
21:AK:34:MET:HB3	21:AK:41:PHE:HB2	2.02	0.41
28:AR:93:SER:OG	28:AR:101:ARG:HB2	2.21	0.41
11:BA:890:U:H5''	11:BA:892:G:O4'	2.21	0.41
11:BA:894:U:O4	21:BK:55:ARG:NH2	2.54	0.41
33:BW:125:LEU:HD23	33:BW:125:LEU:HA	1.85	0.41
11:BA:763:U:C6	11:BA:763:U:OP2	2.73	0.41
11:DA:840:A:H5'	25:DO:18:LEU:HD12	2.02	0.41
4:A3:113:ARG:HA	4:A3:114:PRO:HD3	1.81	0.41
11:CA:1175:A:C3'	11:CA:1176:A:H5''	2.51	0.41
2:D1:18:THR:O	2:D1:24:ILE:HB	2.21	0.41
11:BA:1266:G:C2	11:BA:1267:G:C8	3.09	0.41
11:AA:535:A:HO2'	11:AA:536:C:P	2.42	0.41
3:C2:21:HIS:ND1	3:C2:21:HIS:N	2.69	0.41
23:BM:87:ASN:N	23:BM:87:ASN:OD1	2.54	0.41
11:DA:444:A:HO2'	11:DA:445:U:P	2.41	0.41
11:AA:1175:A:C3'	11:AA:1176:A:H5''	2.51	0.41
11:BA:1650:G:C6	11:BA:1651:G:N1	2.88	0.41
11:AA:185:C:H5''	11:AA:186:C:OP2	2.20	0.41
10:D9:104:GLU:CD	10:D9:108:LYS:HB2	2.41	0.41
11:CA:191:A:H2'	11:CA:192:C:C6	2.56	0.41
10:B9:113:GLN:HB2	10:B9:124:PHE:HD2	1.86	0.41
11:AA:1138:A:H2'	11:AA:1139:G:O4'	2.20	0.41
15:AE:162:LYS:HB3	15:AE:167:ARG:NH1	2.32	0.41
11:BA:983:A:H2'	11:BA:984:C:C6	2.56	0.41
15:BE:243:THR:HB	15:BE:244:PHE:HD1	1.86	0.41
15:DE:243:THR:HB	15:DE:244:PHE:HD1	1.85	0.41
9:D8:69:VAL:HG13	9:D8:73:LEU:HD12	2.03	0.41
11:DA:477:G:C2	11:DA:478:G:H1'	2.56	0.41
11:BA:18:C:H5'	11:BA:1110:A:N6	2.36	0.41
1:C0:92:LEU:HG	1:C0:93:LYS:N	2.35	0.41
11:CA:658:C:O2'	11:CA:659:G:H5'	2.21	0.41
12:AB:104:LEU:HB2	12:AB:132:GLU:HB3	2.03	0.41
1:D0:92:LEU:HG	1:D0:93:LYS:N	2.35	0.41
16:CF:55:LEU:HB3	16:CF:77:HIS:CE1	2.56	0.41
11:BA:1288:C:P	32:BV:7:LYS:HE3	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D7:54:PHE:HB3	8:D7:72:GLY:HA2	2.03	0.41
3:D2:204:GLN:O	3:D2:208:LYS:N	2.54	0.41
13:CC:32:LEU:HD23	13:CC:32:LEU:HA	1.79	0.41
4:D3:178:THR:O	4:D3:179:THR:OG1	2.37	0.41
8:B7:54:PHE:HB3	8:B7:72:GLY:HA2	2.03	0.41
12:DB:121:THR:HG23	12:DB:143:LEU:HD12	2.02	0.41
18:CH:108:TYR:CE2	18:CH:121:THR:HG21	2.56	0.41
11:CA:27:A:H2'	11:CA:28:U:O4'	2.21	0.41
10:A9:80:TYR:HE2	10:A9:83:LYS:HZ3	1.67	0.41
11:BA:122:A:C8	35:BY:201:ARG:HD3	2.56	0.41
11:BA:1358:A:C5	11:BA:1382:A:C6	3.09	0.41
13:DC:47:THR:HB	13:DC:48:LYS:HG3	2.03	0.41
28:AR:95:SER:HB3	28:AR:97:ASP:OD1	2.21	0.41
20:BJ:87:ARG:HA	20:BJ:87:ARG:HD3	1.84	0.41
5:A4:103:PHE:HZ	5:A4:106:LEU:HG	1.86	0.41
11:CA:103:C:H2'	11:CA:104:A:C8	2.56	0.41
11:DA:538:A:H2'	34:DX:32:LYS:HD2	2.02	0.41
25:BO:62:ILE:HA	25:BO:63:PRO:HD2	1.94	0.41
5:D4:123:LEU:HD13	5:D4:145:PHE:CZ	2.56	0.41
17:AG:18:ASN:HB3	17:AG:21:GLU:CD	2.40	0.41
11:CA:422:G:H8	11:CA:422:G:H5''	1.85	0.41
2:B1:9:ALA:HB1	2:B1:29:VAL:CG1	2.51	0.41
11:BA:39:A:H2'	11:BA:40:A:O4'	2.20	0.41
35:AY:32:MET:HB2	35:AY:32:MET:HE2	1.85	0.41
11:DA:137:G:OP2	35:DY:139:ASN:ND2	2.54	0.41
11:CA:575:U:H3'	11:CA:575:U:O2	2.20	0.41
27:AQ:139:LEU:HA	27:AQ:139:LEU:HD23	1.76	0.41
13:BC:178:VAL:HG21	13:BC:185:MET:HE2	2.03	0.41
13:AC:178:VAL:HG21	13:AC:185:MET:HE2	2.03	0.41
12:BB:71:VAL:HG21	12:BB:85:PHE:CD1	2.56	0.41
25:DO:88:GLU:HG3	25:DO:89:ASP:N	2.36	0.41
1:A0:84:GLN:NE2	22:AL:57:GLY:H	2.19	0.41
11:CA:1135:A:C6	11:CA:1136:G:C5	3.09	0.41
30:BT:76:ILE:O	30:BT:80:LYS:HG3	2.21	0.41
11:AA:1113:G:H2'	11:AA:1114:G:H5'	2.02	0.41
11:DA:1500:C:H5''	17:DG:86:LYS:HE3	2.01	0.41
11:DA:763:U:OP2	11:DA:763:U:C6	2.74	0.41
11:CA:82:A:H2'	11:CA:83:C:C6	2.55	0.41
11:BA:1231:C:H2'	11:BA:1232:U:C6	2.56	0.41
11:CA:1231:C:H2'	11:CA:1232:U:C6	2.56	0.41
11:AA:1712:C:H2'	11:AA:1713:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CF:42:PHE:HE2	16:CF:90:ILE:HG23	1.86	0.41
19:AI:42:ASN:HB3	19:AI:43:PRO:HD3	2.03	0.41
36:CZ:28:LEU:HA	36:CZ:29:PRO:HD2	1.86	0.41
12:DB:46:ILE:HG13	32:DV:105:MET:HE2	2.03	0.41
11:AA:1561:U:H2'	11:AA:1562:G:C8	2.56	0.41
32:CV:84:TYR:O	32:CV:86:PRO:HD3	2.20	0.41
28:BR:43:ILE:HG22	28:BR:82:LEU:HD13	2.03	0.41
4:C3:108:HIS:CE1	11:CA:801:C:H5'	2.56	0.41
33:DW:105:TYR:CD1	33:DW:191:ILE:HD11	2.56	0.41
13:BC:164:GLY:O	13:BC:167:LYS:HB3	2.21	0.41
29:AS:54:ILE:HG12	29:AS:55:SER:H	1.86	0.41
28:CR:276:GLN:O	28:CR:294:ILE:HG23	2.20	0.41
15:BE:142:LYS:HD2	15:BE:152:ALA:O	2.21	0.41
11:BA:46:A:H4'	11:BA:47:C:C5'	2.51	0.41
29:CS:33:LEU:HD11	29:CS:59:ALA:HA	2.02	0.41
11:DA:440:C:H2'	11:DA:441:C:C6	2.56	0.41
12:DB:11:LYS:HD2	32:DV:93:ILE:HG23	2.02	0.41
3:B2:185:ARG:NH2	11:BA:256:U:H1'	2.36	0.41
3:B2:38:LEU:HD21	3:B2:104:LEU:HD21	2.03	0.41
11:BA:595:A:H2'	11:BA:596:U:O4'	2.21	0.41
27:DQ:118:GLU:HG2	27:DQ:150:VAL:HG21	2.03	0.41
34:BX:26:LYS:HA	34:BX:27:PRO:HD2	1.91	0.41
25:CO:18:LEU:HD23	25:CO:18:LEU:HA	1.69	0.41
11:CA:1149:C:H5''	11:CA:1149:C:H6	1.85	0.41
26:BP:124:LEU:HA	26:BP:124:LEU:HD23	1.86	0.41
15:CE:239:LEU:HG	15:CE:239:LEU:H	1.71	0.41
1:A0:111:ASN:OD1	1:A0:111:ASN:N	2.47	0.41
11:AA:1149:C:H6	11:AA:1149:C:H5''	1.85	0.41
21:CK:74:ALA:HB1	21:CK:115:ALA:HB2	2.02	0.41
11:CA:1132:A:H2'	11:CA:1133:C:C6	2.56	0.41
36:CZ:93:TYR:CG	36:CZ:94:PRO:HA	2.56	0.41
23:CM:62:THR:HB	23:CM:65:GLN:HG3	2.01	0.41
11:DA:1132:A:H2'	11:DA:1133:C:C6	2.56	0.41
15:AE:142:LYS:HD2	15:AE:152:ALA:O	2.20	0.41
11:DA:500:U:OP1	34:DX:28:ARG:NH2	2.49	0.41
22:DL:54:GLU:OE1	22:DL:72:ARG:NH1	2.53	0.41
11:CA:999:C:N4	39:CA:2174:HOH:O	2.52	0.41
31:AU:25:ILE:HG12	31:AU:26:SER:H	1.86	0.41
28:AR:62:ASN:HB3	28:AR:63:GLY:H	1.63	0.41
11:DA:1159:U:H2'	11:DA:1160:G:H8	1.85	0.41
18:BH:14:LEU:HD23	18:BH:72:CYS:SG	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AE:28:GLN:HA	15:AE:29:PRO:HD3	1.86	0.41
25:DO:71:GLN:NE2	25:DO:79:LYS:NZ	2.69	0.41
5:D4:80:ASN:HB3	6:D5:61:ASN:CB	2.51	0.41
18:BH:11:LEU:HA	18:BH:11:LEU:HD22	1.94	0.41
14:DD:112:ARG:HD3	14:DD:112:ARG:HA	1.35	0.41
5:C4:74:ASP:N	5:C4:74:ASP:OD1	2.54	0.41
4:C3:132:LEU:HD23	4:C3:132:LEU:HA	1.84	0.41
29:AS:119:LYS:HG2	29:AS:119:LYS:H	1.38	0.41
11:AA:351:A:H2'	11:AA:352:C:H4'	2.03	0.41
12:DB:116:ARG:HD3	15:DE:242:GLU:OE2	2.21	0.41
15:AE:219:LEU:O	15:AE:222:THR:OG1	2.28	0.41
11:BA:1486:U:HO2'	11:BA:1487:A:P	2.41	0.41
36:BZ:40:PHE:HB3	36:BZ:42:ASN:N	2.35	0.41
3:A2:146:HIS:HE1	11:AA:181:G:C8	2.37	0.41
6:B5:46:ASP:H	21:BK:113:GLN:CD	2.24	0.41
6:C5:49:SER:OG	21:CK:117:ARG:HB2	2.20	0.41
11:DA:1404:G:H1'	24:DN:40:ARG:HG3	2.03	0.41
11:AA:80:A:H5'	39:AA:2023:HOH:O	2.21	0.41
28:CR:100:LEU:HB3	28:CR:114:PHE:CD1	2.56	0.41
28:AR:240:TRP:CE3	28:AR:245:LEU:HD22	2.43	0.41
11:BA:1463:U:OP2	11:BA:1463:U:H3'	2.21	0.41
31:BU:29:LEU:HD11	31:BU:55:TYR:HB2	2.03	0.41
11:BA:764:U:H4'	11:BA:765:A:OP1	2.20	0.41
11:BA:677:G:C6	11:BA:725:A:C2	3.09	0.41
11:AA:92:G:H5'	11:AA:452:A:O2'	2.21	0.41
17:CG:164:ILE:HG13	17:CG:164:ILE:H	1.63	0.41
11:CA:1159:U:H2'	11:CA:1160:G:H8	1.85	0.41
15:BE:101:GLY:O	15:BE:116:TRP:HA	2.20	0.41
4:C3:194:THR:HG21	11:CA:1027:U:H4'	2.03	0.41
11:CA:1138:A:H2'	11:CA:1139:G:O4'	2.20	0.41
11:DA:1158:U:O2'	11:DA:1181:C:H5'	2.20	0.41
15:CE:162:LYS:CB	15:CE:167:ARG:HH11	2.33	0.41
21:CK:150:ARG:HH11	21:CK:150:ARG:CG	2.34	0.41
8:D7:72:GLY:O	8:D7:76:LEU:HG	2.21	0.41
22:AL:8:GLY:H	27:AQ:98:ARG:HH11	1.68	0.41
11:DA:912:A:H2'	11:DA:912:A:H8	1.70	0.41
22:CL:8:GLY:H	27:CQ:98:ARG:HH11	1.68	0.41
11:DA:1561:U:H2'	11:DA:1562:G:C8	2.56	0.41
23:DM:127:HIS:NE2	23:DM:133:VAL:HG21	2.36	0.41
22:DL:82:ILE:HD11	22:DL:121:PHE:CE1	2.56	0.41
2:C1:54:VAL:O	17:CG:138:PRO:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DA:537:A:O2'	34:DX:32:LYS:HE3	2.21	0.41
12:CB:196:ASP:OD1	32:CV:89:SER:O	2.39	0.41
11:AA:1568:C:P	24:AN:18:LYS:HZ1	2.44	0.41
2:D1:29:VAL:O	2:D1:40:GLN:HA	2.21	0.41
11:DA:1476:A:N1	11:DA:1521:C:O2'	2.48	0.41
11:DA:575:U:O2	11:DA:575:U:H3'	2.21	0.41
26:AP:110:ARG:O	26:AP:114:ARG:HD2	2.21	0.41
11:DA:1431:A:H2'	11:DA:1432:C:O4'	2.21	0.41
12:DB:71:VAL:HG21	12:DB:85:PHE:CD1	2.57	0.41
11:DA:598:A:H3'	11:DA:599:A:H5''	2.03	0.41
35:AY:20:ASP:HB2	35:AY:23:LYS:HB2	2.03	0.41
4:A3:70:TYR:OH	4:A3:129:ASP:OD1	2.35	0.41
11:DA:1231:C:H2'	11:DA:1232:U:C6	2.56	0.41
33:DW:222:THR:HG21	33:DW:226:ASN:HB2	2.02	0.41
25:AO:71:GLN:NE2	25:AO:79:LYS:NZ	2.68	0.41
11:AA:1727:G:H2'	11:AA:1728:U:O4'	2.20	0.41
11:DA:1692:C:N4	39:DA:7960:HOH:O	2.54	0.41
11:DA:155:U:OP2	35:DY:83:CYS:O	2.38	0.41
21:AK:45:THR:HG22	21:AK:52:THR:HA	2.03	0.41
33:DW:132:ALA:HB3	33:DW:140:TYR:CE1	2.56	0.41
11:CA:200:U:H2'	11:CA:201:A:O4'	2.20	0.41
12:CB:104:LEU:HD23	12:CB:104:LEU:HA	1.89	0.41
33:AW:95:GLU:HA	33:AW:95:GLU:OE1	2.20	0.41
4:C3:84:LEU:HA	4:C3:84:LEU:HD23	1.97	0.41
12:AB:159:CYS:HB3	12:AB:170:ILE:CD1	2.51	0.41
20:AJ:27:ASN:OD1	20:AJ:28:LEU:N	2.54	0.41
18:CH:14:LEU:HD23	18:CH:72:CYS:SG	2.61	0.41
3:A2:145:ARG:NH1	11:AA:183:G:C6	2.80	0.40
11:CA:947:C:H4'	11:CA:1076:U:O2'	2.20	0.40
11:AA:1208:A:N6	11:AA:1217:G:O6	2.53	0.40
36:CZ:40:PHE:HB3	36:CZ:42:ASN:N	2.35	0.40
28:DR:93:SER:OG	28:DR:101:ARG:HB2	2.22	0.40
3:A2:124:HIS:HE1	3:A2:153:ARG:CZ	2.33	0.40
11:BA:163:A:OP1	35:BY:137:ARG:HG3	2.20	0.40
11:CA:954:G:N1	11:CA:1001:A:O2'	2.46	0.40
23:CM:134:ARG:HB2	23:CM:136:GLN:HE22	1.86	0.40
3:D2:22:ARG:NH2	11:DA:293:U:OP1	2.47	0.40
28:AR:100:LEU:HB3	28:AR:114:PHE:CD1	2.55	0.40
11:CA:1079:G:HO2'	11:CA:1080:G:P	2.45	0.40
11:BA:4:C:OP2	15:BE:201:SER:OG	2.39	0.40
27:AQ:32:ARG:HH12	27:AQ:51:THR:C	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:1188:A:O5'	11:CA:1188:A:H8	2.03	0.40
11:CA:535:A:H62	34:CX:29:LYS:HD3	1.86	0.40
11:DA:1416:G:O2'	11:DA:1417:A:OP1	2.33	0.40
11:DA:1661:G:C4'	11:DA:1662:C:H5''	2.46	0.40
11:BA:313:G:H2'	11:BA:313:G:OP2	2.21	0.40
11:AA:678:U:C2'	11:AA:679:U:H5'	2.51	0.40
11:AA:983:A:H2'	11:AA:984:C:C6	2.56	0.40
11:BA:1651:G:C2'	11:BA:1652:A:OP2	2.69	0.40
3:C2:51:ILE:HA	3:C2:64:ARG:O	2.21	0.40
4:D3:109:LYS:HZ3	11:DA:726:U:P	2.44	0.40
26:DP:18:ARG:NE	26:DP:20:GLN:HE21	2.13	0.40
11:AA:841:A:O2'	11:AA:843:A:OP1	2.38	0.40
9:A8:73:LEU:HB2	9:A8:75:VAL:CG2	2.50	0.40
13:DC:32:LEU:HD23	13:DC:32:LEU:HA	1.77	0.40
11:DA:912:A:O2'	11:DA:913:U:P	2.79	0.40
33:BW:47:LEU:HD21	33:BW:92:VAL:HG11	2.02	0.40
18:AH:108:TYR:CE2	18:AH:121:THR:HG21	2.56	0.40
5:C4:103:PHE:HZ	5:C4:106:LEU:HG	1.87	0.40
30:BT:89:ARG:HB2	30:BT:92:LEU:HB2	2.04	0.40
19:AI:33:VAL:HG22	19:AI:69:ILE:HB	2.03	0.40
11:AA:731:C:H4'	18:AH:80:ASP:OD2	2.21	0.40
11:DA:1712:C:H2'	11:DA:1713:G:O4'	2.21	0.40
6:A5:34:LYS:NZ	11:AA:1746:G:N7	2.44	0.40
11:DA:1058:A:C2	11:DA:1114:G:N3	2.89	0.40
11:AA:1383:G:O2'	11:AA:1384:U:P	2.79	0.40
27:BQ:63:LEU:HD12	27:BQ:63:LEU:HA	1.88	0.40
11:BA:550:G:C5'	34:BX:61:ASN:HB3	2.51	0.40
9:D8:60:VAL:O	9:D8:72:LYS:HE3	2.20	0.40
11:CA:738:A:HO2'	11:CA:739:A:P	2.43	0.40
11:AA:148:C:H5'	35:AY:108:VAL:HG21	2.03	0.40
11:AA:1235:G:C2	11:AA:1236:G:H1'	2.56	0.40
11:AA:1570:U:H2'	11:AA:1571:C:H5'	2.02	0.40
11:BA:1488:A:H1'	11:BA:1489:U:OP1	2.21	0.40
11:AA:861:U:H3	11:AA:923:U:H3	1.70	0.40
26:BP:101:THR:HG23	26:BP:105:PHE:CE1	2.57	0.40
11:CA:1712:C:H2'	11:CA:1713:G:O4'	2.21	0.40
11:AA:1113:G:C2	11:AA:1114:G:C8	3.09	0.40
13:CC:162:CYS:O	13:CC:167:LYS:HB2	2.22	0.40
6:D5:82:HIS:ND1	11:DA:1719:A:N1	2.68	0.40
11:CA:249:A:H4'	33:CW:134:GLY:O	2.21	0.40
33:AW:141:ILE:HG22	33:AW:149:ILE:HB	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:CQ:111:SER:HA	27:CQ:112:PRO:HD3	1.89	0.40
11:AA:158:G:N3	35:AY:13:GLN:NE2	2.70	0.40
6:A5:66:ILE:HG12	21:AK:129:ILE:HD12	2.03	0.40
28:CR:192:TRP:HA	28:CR:215:ASN:HB2	2.03	0.40
27:BQ:118:GLU:HG2	27:BQ:150:VAL:HG21	2.03	0.40
11:BA:793:G:OP2	11:BA:793:G:H8	2.04	0.40
22:BL:129:ILE:HG13	22:BL:129:ILE:H	1.58	0.40
7:B6:22:LEU:HA	7:B6:22:LEU:HD23	1.86	0.40
36:BZ:22:GLU:H	36:BZ:22:GLU:HG2	1.69	0.40
4:A3:80:LEU:HD12	4:A3:80:LEU:HA	1.86	0.40
14:DD:101:ILE:H	14:DD:101:ILE:HG13	1.77	0.40
14:DD:118:LEU:HD12	14:DD:118:LEU:HA	1.86	0.40
14:AD:112:ARG:HA	14:AD:112:ARG:HD3	1.33	0.40
33:BW:105:TYR:CD1	33:BW:191:ILE:HD11	2.56	0.40
20:DJ:64:THR:HA	20:DJ:78:ASP:O	2.21	0.40
11:DA:1213:G:H4'	29:DS:82:LYS:O	2.21	0.40
10:A9:152:LEU:HD21	7:D6:58:SER:HB3	2.03	0.40
11:BA:1208:A:N6	11:BA:1217:G:O6	2.54	0.40
11:AA:416:C:H4'	11:AA:418:G:OP1	2.21	0.40
36:DZ:40:PHE:HB3	36:DZ:42:ASN:N	2.36	0.40
11:DA:1495:U:C4'	11:DA:1496:A:OP2	2.65	0.40
3:A2:146:HIS:HE1	11:AA:181:G:N9	2.19	0.40
11:AA:1473:G:P	30:AT:102:LYS:NZ	2.94	0.40
11:BA:875:C:N4	11:BA:892:G:C4	2.90	0.40
14:DD:38:ASN:ND2	14:DD:40:ARG:NH1	2.60	0.40
11:DA:508:A:H5'	39:DA:7814:HOH:O	2.21	0.40
4:A3:192:PHE:CD1	7:A6:21:ARG:NH1	2.90	0.40
8:C7:72:GLY:O	8:C7:76:LEU:HG	2.20	0.40
11:CA:125:U:C4'	11:CA:125:U:OP2	2.67	0.40
32:AV:32:LYS:HB2	32:AV:47:ARG:HE	1.86	0.40
10:A9:75:LYS:HD3	11:AA:1418:C:C5	2.55	0.40
11:AA:10:G:OP1	11:AA:1605:A:H2'	2.20	0.40
3:D2:51:ILE:HA	3:D2:64:ARG:O	2.22	0.40
15:CE:211:PHE:HD1	15:CE:211:PHE:HA	1.78	0.40
13:BC:228:ARG:HD3	28:BR:207:TYR:CZ	2.56	0.40
11:BA:749:G:H2'	14:BD:149:ARG:HH12	1.87	0.40
11:AA:476:U:H2'	11:AA:477:G:H8	1.85	0.40
11:BA:213:U:C4'	11:BA:214:U:OP2	2.70	0.40
11:AA:5:U:P	15:AE:205:THR:HG22	2.62	0.40
4:D3:73:LEU:HD21	4:D3:94:PHE:HB3	2.02	0.40
8:D7:9:LYS:HG3	8:D7:45:LEU:CD2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1287:U:O2	32:AV:4:VAL:HG11	2.21	0.40
11:DA:1601:G:H5"	11:DA:1747:A:OP1	2.20	0.40
35:AY:185:PRO:HG2	35:AY:186:GLU:HG2	2.03	0.40
18:BH:80:ASP:OD1	18:BH:124:LYS:HE3	2.22	0.40
26:DP:77:GLN:O	26:DP:81:LEU:HB2	2.21	0.40
11:AA:1370:U:H4'	11:AA:1371:A:C5'	2.52	0.40
2:A1:54:VAL:HB	17:AG:28:CYS:CA	2.51	0.40
31:DU:49:ASP:OD1	31:DU:75:LYS:HA	2.21	0.40
11:BA:573:A:C6	13:BC:182:GLN:HG3	2.57	0.40
11:DA:1569:A:C4	24:DN:13:TYR:CE2	3.09	0.40
11:CA:1447:C:H5"	30:CT:48:GLU:OE2	2.21	0.40
32:BV:30:PHE:O	32:BV:34:ILE:HG13	2.21	0.40
4:B3:19:VAL:O	4:B3:23:LEU:HG	2.21	0.40
27:DQ:65:ILE:HD12	27:DQ:139:LEU:HD21	2.03	0.40
13:DC:118:VAL:HG21	13:DC:145:LEU:HD11	2.02	0.40
22:AL:106:LEU:HD21	22:AL:122:LYS:HB3	2.03	0.40
11:DA:638:U:H2'	11:DA:639:C:H6	1.86	0.40
11:AA:919:A:O2'	11:AA:955:A:H5'	2.21	0.40
16:AF:42:PHE:CE2	16:AF:90:ILE:HG23	2.56	0.40
11:DA:611:U:H2'	11:DA:612:U:C6	2.55	0.40
3:B2:185:ARG:NH2	11:BA:202:U:O2	2.54	0.40
23:CM:63:GLU:O	23:CM:67:ASN:ND2	2.54	0.40
11:BA:351:A:H2'	11:BA:352:C:H4'	2.03	0.40
20:BJ:27:ASN:OD1	20:BJ:28:LEU:N	2.54	0.40
35:CY:61:PHE:CD2	35:CY:72:ARG:HD3	2.56	0.40
28:AR:122:TYR:HE2	28:AR:138:ALA:HB2	1.86	0.40
3:A2:177:THR:HG21	11:AA:205:A:OP1	2.21	0.40
28:CR:43:ILE:HG22	28:CR:82:LEU:HD13	2.02	0.40
33:CW:141:ILE:HG22	33:CW:149:ILE:HB	2.02	0.40
11:DA:360:U:H5"	11:DA:361:A:OP2	2.20	0.40
12:CB:20:GLN:NE2	12:CB:41:ILE:HD13	2.37	0.40
33:AW:105:TYR:CD1	33:AW:191:ILE:HD11	2.56	0.40
35:CY:141:ILE:O	35:CY:145:PHE:HB2	2.20	0.40
22:AL:134:LEU:HD23	22:AL:134:LEU:HA	1.90	0.40
33:DW:95:GLU:HA	33:DW:95:GLU:OE1	2.22	0.40
26:DP:124:LEU:HD23	26:DP:124:LEU:HA	1.87	0.40
11:CA:94:U:H2'	11:CA:95:C:C6	2.56	0.40
17:BG:193:GLU:O	17:BG:197:LYS:HG3	2.21	0.40
35:BY:176:CYS:HA	35:BY:177:PRO:HD3	1.87	0.40
11:BA:535:A:P	11:BA:535:A:H2'	2.61	0.40
11:DA:1175:A:C3'	11:DA:1176:A:H5"	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DU:62:LEU:HA	31:DU:62:LEU:HD23	1.95	0.40
11:DA:1296:G:N3	11:DA:1296:G:H2'	2.36	0.40
11:DA:413:C:H5'	35:DY:87:ARG:HH12	1.85	0.40
11:CA:137:G:OP2	35:CY:139:ASN:ND2	2.55	0.40
11:DA:506:U:H5'	14:DD:133:HIS:NE2	2.35	0.40
11:AA:1463:U:H3'	11:AA:1463:U:OP2	2.22	0.40
14:AD:86:LEU:HD12	14:AD:86:LEU:HA	1.62	0.40
11:DA:847:A:H5'	25:DO:92:PHE:CG	2.56	0.40
21:CK:128:ARG:HG3	21:CK:128:ARG:HH11	1.80	0.40
33:CW:117:SER:HB3	33:CW:120:GLU:OE2	2.20	0.40
8:C7:9:LYS:HG3	8:C7:45:LEU:CD2	2.51	0.40
23:DM:30:ILE:HG22	23:DM:40:ARG:HG2	2.04	0.40
22:BL:53:THR:N	22:BL:72:ARG:O	2.51	0.40
11:AA:912:A:H2'	11:AA:912:A:H8	1.72	0.40
33:BW:239:GLU:CD	33:BW:239:GLU:N	2.71	0.40
11:DA:932:G:H2'	11:DA:933:A:C8	2.55	0.40
11:CA:5:U:O2'	11:CA:546:G:O3'	2.39	0.40
11:CA:866:U:O2	11:CA:966:A:O2'	2.35	0.40
26:BP:15:LEU:HD21	33:BW:94:ILE:CG2	2.51	0.40
11:AA:995:U:H2'	11:AA:996:U:C6	2.56	0.40
11:DA:550:G:C5'	34:DX:61:ASN:HB3	2.52	0.40
25:AO:101:ARG:NH1	25:AO:145:ALA:CB	2.85	0.40
15:DE:143:GLY:N	15:DE:156:PRO:HD3	2.35	0.40
12:AB:103:THR:HA	12:AB:109:THR:HG21	2.03	0.40
27:DQ:70:ILE:HD11	27:DQ:136:PHE:CZ	2.56	0.40
22:BL:75:LEU:HD11	22:BL:82:ILE:HD12	2.04	0.40
5:C4:42:SER:HB2	5:C4:240:HIS:ND1	2.36	0.40
23:CM:119:ILE:HG22	23:CM:121:SER:N	2.37	0.40
5:B4:106:LEU:HA	5:B4:106:LEU:HD23	1.84	0.40
5:B4:103:PHE:HZ	5:B4:106:LEU:HG	1.86	0.40
11:DA:27:A:H2'	11:DA:28:U:O4'	2.21	0.40
25:AO:151:LEU:O	25:AO:152:VAL:HB	2.20	0.40
2:A1:54:VAL:O	17:AG:138:PRO:HG3	2.20	0.40
28:CR:77:HIS:CD2	28:CR:96:TRP:HB2	2.55	0.40
11:BA:1442:A:O2'	17:BG:76:ARG:NH1	2.54	0.40
28:CR:20:HIS:CE1	28:CR:50:THR:HG22	2.55	0.40
30:AT:18:PHE:CZ	30:AT:140:LEU:HD22	2.55	0.40
2:A1:9:ALA:HB1	2:A1:29:VAL:CG1	2.51	0.40
33:BW:160:ASP:OD1	33:BW:176:HIS:HB3	2.21	0.40
11:AA:151:A:H5'	11:AA:152:U:OP2	2.21	0.40
13:CC:118:VAL:HG21	13:CC:145:LEU:HD11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CO:88:GLU:HG3	25:CO:89:ASP:N	2.37	0.40
12:CB:71:VAL:HG21	12:CB:85:PHE:CD1	2.57	0.40
11:DA:65:C:N3	35:DY:133:LEU:HA	2.36	0.40
11:DA:1059:A:C6	11:DA:1060:A:C6	3.09	0.40
16:BF:42:PHE:CE2	16:BF:90:ILE:HD12	2.57	0.40
13:BC:162:CYS:O	13:BC:167:LYS:HB2	2.20	0.40
11:CA:453:G:H4'	33:CW:26:ILE:HG13	2.04	0.40
22:BL:71:VAL:HG11	22:BL:95:LEU:HD13	2.03	0.40
11:DA:225:C:H2'	11:DA:226:A:C8	2.56	0.40
11:AA:198:C:H4'	11:AA:199:G:OP1	2.21	0.40
23:DM:116:LEU:HB3	23:DM:124:GLY:HA3	2.03	0.40
9:D8:91:LYS:O	9:D8:108:ILE:HG13	2.21	0.40
3:D2:72:ASN:ND2	11:DA:255:C:O4'	2.54	0.40
11:CA:351:A:H2'	11:CA:352:C:H4'	2.04	0.40
11:CA:446:U:O4'	33:CW:66:ASN:ND2	2.48	0.40
28:CR:32:SER:OG	28:CR:37:GLU:O	2.39	0.40
5:C4:31:TRP:CZ2	21:CK:17:GLY:HA2	2.56	0.40
35:AY:141:ILE:O	35:AY:145:PHE:HB2	2.21	0.40
17:DG:123:ILE:HD12	17:DG:132:GLN:HG2	2.03	0.40
11:BA:1132:A:H2'	11:BA:1133:C:C6	2.57	0.40
11:DA:1529:U:C2'	11:DA:1530:U:OP2	2.69	0.40
15:CE:99:PHE:O	15:CE:118:VAL:HA	2.22	0.40
9:C8:46:GLU:O	9:C8:50:VAL:HG23	2.20	0.40
11:DA:1727:G:H2'	11:DA:1728:U:O4'	2.21	0.40
28:BR:192:TRP:HA	28:BR:215:ASN:HB2	2.03	0.40
21:BK:74:ALA:HB1	21:BK:115:ALA:HB2	2.02	0.40
18:DH:83:LEU:HD23	18:DH:83:LEU:HA	1.81	0.40
20:BJ:16:LYS:HA	20:BJ:16:LYS:HD3	1.84	0.40
22:DL:98:ASN:HD22	22:DL:98:ASN:HA	1.71	0.40
8:C7:5:LEU:H	8:C7:5:LEU:HG	1.76	0.40
28:DR:42:LEU:HA	28:DR:42:LEU:HD23	1.89	0.40
12:BB:104:LEU:HD23	12:BB:104:LEU:HA	1.89	0.40
26:CP:143:LEU:HD12	26:CP:143:LEU:HA	1.83	0.40
3:A2:203:LEU:HD12	3:A2:203:LEU:HA	1.86	0.40
28:DR:212:HIS:CE1	28:DR:230:THR:HG22	2.57	0.40
4:D3:151:TYR:HB2	4:D3:181:GLU:O	2.21	0.40
9:D8:78:SER:HA	9:D8:81:ARG:CZ	2.51	0.40
11:AA:873:G:O2'	21:AK:51:GLU:HA	2.22	0.40
11:AA:894:U:O4	21:AK:55:ARG:NH2	2.54	0.40
31:AU:29:LEU:HD11	31:AU:55:TYR:HB2	2.04	0.40
11:AA:1159:U:H2'	11:AA:1160:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:229:A:H1'	11:CA:230:A:N9	2.35	0.40
3:A2:146:HIS:HB2	11:AA:182:U:O2'	2.21	0.40
11:DA:633:U:H3	11:DA:675:A:H4'	1.85	0.40
3:C2:23:LYS:HG3	11:CA:377:G:OP1	2.20	0.40
11:BA:491:U:H2'	11:BA:492:C:O4'	2.21	0.40
20:CJ:90:ASP:O	20:CJ:91:LEU:HD23	2.21	0.40
11:BA:81:A:O3'	26:BP:117:GLY:HA2	2.21	0.40
35:DY:61:PHE:CD2	35:DY:72:ARG:HD3	2.56	0.40
35:DY:61:PHE:CE1	35:DY:96:SER:HB2	2.57	0.40
11:AA:1479:G:H8	11:AA:1479:G:H5''	1.86	0.40
14:AD:40:ARG:HA	14:AD:43:TRP:HB2	2.02	0.40
14:BD:85:LEU:HD21	14:BD:104:LEU:HD13	2.04	0.40
14:BD:85:LEU:HD23	14:BD:85:LEU:HA	1.86	0.40
11:CA:890:U:H5''	11:CA:892:G:O4'	2.22	0.40
11:AA:1520:U:H1'	23:AM:89:ILE:HG13	2.03	0.40
11:DA:1351:U:H1'	11:DA:1488:A:N6	2.36	0.40
11:BA:726:U:H6	11:BA:726:U:O5'	2.04	0.40
5:A4:73:ALA:HB2	21:AK:128:ARG:HH12	1.86	0.40
11:DA:1167:C:H5''	11:DA:1169:C:C6	2.56	0.40
11:AA:1154:U:H5''	29:AS:129:LYS:HD3	2.04	0.40
10:B9:113:GLN:HB2	10:B9:124:PHE:CD2	2.57	0.40
11:BA:995:U:H2'	11:BA:996:U:C6	2.56	0.40
3:B2:64:ARG:HA	3:B2:64:ARG:HD3	1.81	0.40
11:CA:1513:G:H2'	11:CA:1514:G:C1'	2.51	0.40
4:C3:115:ARG:NH1	11:CA:632:U:N3	2.69	0.40
15:BE:228:PRO:HA	15:BE:231:TRP:CD1	2.57	0.40
11:DA:270:U:H4'	11:DA:270:U:OP2	2.20	0.40
11:BA:1752:U:H4'	11:BA:1753:A:N7	2.35	0.40
4:A3:142:ARG:NH1	4:A3:152:ARG:NH1	2.70	0.40
23:BM:119:ILE:HG22	23:BM:121:SER:N	2.35	0.40
5:C4:36:ALA:HA	5:C4:37:PRO:HD3	1.87	0.40
11:DA:1342:U:H2'	11:DA:1343:G:C8	2.56	0.40
11:CA:1355:G:H21	28:CR:76:ASN:ND2	2.17	0.40
15:CE:36:LEU:HD12	15:CE:36:LEU:HA	1.89	0.40
11:CA:1558:A:OP1	19:CI:137:ARG:HB2	2.21	0.40
27:AQ:68:LYS:HB2	27:AQ:126:GLN:HB2	2.02	0.40
3:D2:86:ILE:HG22	3:D2:112:ILE:CD1	2.52	0.40
25:AO:62:ILE:HA	25:AO:63:PRO:HD2	1.93	0.40
11:DA:1113:G:C2	11:DA:1114:G:C8	3.09	0.40
5:A4:210:ILE:O	11:AA:1036:U:O2'	2.26	0.40
11:BA:283:A:H2'	11:BA:284:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:479:G:N1	11:CA:492:C:O2	2.54	0.40
13:BC:47:THR:HB	13:BC:48:LYS:HG3	2.04	0.40
29:BS:90:VAL:HG23	29:BS:119:LYS:O	2.20	0.40
35:BY:48:TYR:HE1	35:BY:119:ALA:HB3	1.87	0.40
9:A8:51:GLU:H	9:A8:51:GLU:HG3	1.59	0.40
22:CL:68:ARG:HG3	22:CL:116:ILE:HG12	2.04	0.40
5:A4:127:ARG:CZ	11:AA:862:A:H1'	2.52	0.40
5:A4:110:ARG:NH2	21:AK:135:ILE:HB	2.37	0.40
13:CC:15:VAL:O	13:CC:19:VAL:HG23	2.22	0.40
11:DA:1437:G:OP2	19:DI:141:GLN:HG3	2.21	0.40
11:DA:1054:U:H6	11:DA:1054:U:H2'	1.64	0.40
33:BW:114:LYS:HD3	33:BW:241:PRO:HA	2.03	0.40
11:AA:1295:C:H5'	12:AB:100:THR:CG2	2.51	0.40
11:BA:598:A:H3'	11:BA:599:A:H5''	2.03	0.40
12:BB:65:HIS:CD2	12:BB:67:GLU:HB2	2.56	0.40
11:BA:1119:G:N3	11:BA:1607:A:H2	2.19	0.40
15:DE:99:PHE:O	15:DE:118:VAL:HA	2.21	0.40
33:BW:78:VAL:O	33:BW:79:ARG:HD3	2.22	0.40
5:B4:34:PHE:CZ	5:B4:48:THR:HB	2.56	0.40
11:CA:808:C:H2'	11:CA:809:A:O4'	2.22	0.40
5:C4:110:ARG:HG3	21:CK:131:ASP:O	2.20	0.40
4:B3:146:ASP:OD1	4:B3:148:THR:OG1	2.39	0.40
12:CB:159:CYS:HB3	12:CB:170:ILE:CD1	2.52	0.40
4:C3:146:ASP:OD1	4:C3:148:THR:OG1	2.39	0.40
12:BB:32:TYR:OH	36:BZ:80:HIS:HD2	2.03	0.40
11:BA:117:U:H1'	33:BW:33:GLN:HB2	2.04	0.40
33:BW:21:ASN:OD1	33:BW:24:GLY:HA3	2.21	0.40
8:D7:58:ILE:HD13	13:DC:31:SER:HB2	2.02	0.40
3:D2:17:ARG:NH2	11:DA:1635:U:H4'	2.36	0.40
6:B5:15:ARG:HD3	11:BA:914:G:O6	2.22	0.40
19:CI:122:ASP:HA	19:CI:123:PRO:HD3	1.75	0.40
3:D2:21:HIS:N	3:D2:21:HIS:ND1	2.69	0.40
13:CC:112:LEU:HD23	13:CC:112:LEU:HA	1.88	0.40
13:DC:113:LEU:HD23	13:DC:113:LEU:HA	1.88	0.40
22:CL:131:LEU:HA	22:CL:131:LEU:HD23	1.78	0.40
22:CL:134:LEU:HA	22:CL:134:LEU:HD23	1.90	0.40
36:AZ:69:LEU:HD23	36:AZ:69:LEU:HA	1.91	0.40
22:DL:134:LEU:HA	22:DL:134:LEU:HD23	1.89	0.40
33:AW:23:LEU:HD12	33:AW:23:LEU:HA	1.84	0.40
29:DS:49:ARG:O	29:DS:49:ARG:HG3	2.22	0.40
11:CA:787:A:H2'	11:CA:788:U:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:131:LYS:O	12:AB:134:SER:HB3	2.22	0.40
11:DA:384:C:H41	11:DA:391:A:H1'	1.86	0.40
31:AU:52:GLN:O	31:AU:55:TYR:CD1	2.66	0.40
15:BE:49:PHE:CE1	15:BE:139:PRO:HD3	2.57	0.40
4:A3:117:ARG:N	4:A3:117:ARG:HD3	2.37	0.40
11:BA:530:G:H5''	11:BA:531:A:OP1	2.22	0.40
9:A8:41:HIS:HD2	11:AA:1507:U:OP1	2.05	0.40
11:DA:676:C:O2'	11:DA:677:G:P	2.79	0.40
11:DA:1509:U:H6	11:DA:1509:U:H2'	1.57	0.40
11:BA:210:A:O2'	11:BA:239:A:C2	2.75	0.40
11:BA:758:A:C6	11:BA:770:G:C4	3.10	0.40
11:BA:376:A:H2'	11:BA:377:G:H8	1.86	0.40
11:AA:1587:U:H5''	11:AA:1588:G:O5'	2.21	0.40
11:AA:1558:A:H1'	11:AA:1583:A:N6	2.36	0.40
11:DA:1720:G:HO2'	11:DA:1721:G:P	2.36	0.40
35:DY:59:ASP:HB2	35:DY:61:PHE:CD2	2.57	0.40
11:BA:1176:A:H5'	11:BA:1176:A:H8	1.86	0.40
11:BA:890:U:H5''	11:BA:892:G:C1'	2.51	0.40
27:BQ:15:VAL:HG21	27:BQ:33:TYR:HB2	2.04	0.40
23:CM:96:LYS:HD2	23:CM:98:TYR:OH	2.22	0.40
3:C2:56:VAL:HG21	3:C2:62:LYS:HD3	2.04	0.40
25:DO:18:LEU:HD23	25:DO:18:LEU:HA	1.72	0.40
5:D4:90:VAL:HG11	5:D4:226:ARG:NH1	2.37	0.40
3:D2:56:VAL:HG22	11:DA:324:A:P	2.62	0.40
11:CA:1147:U:O4'	11:CA:1168:A:N6	2.55	0.40
33:AW:239:GLU:N	33:AW:239:GLU:CD	2.71	0.40
31:DU:43:PHE:CE1	31:DU:124:LEU:HD22	2.57	0.40
3:D2:51:ILE:HB	11:DA:258:A:N6	2.37	0.40
28:DR:77:HIS:CD2	28:DR:96:TRP:HB2	2.57	0.40
11:DA:493:U:H4'	11:DA:494:A:OP2	2.19	0.40
11:DA:753:C:H2'	11:DA:754:A:C8	2.57	0.40
9:A8:69:VAL:HG13	9:A8:73:LEU:HD12	2.03	0.40
1:D0:64:LEU:HD12	1:D0:90:ILE:HG22	2.04	0.40
12:DB:79:GLN:NE2	12:DB:95:SER:O	2.52	0.40
11:CA:1554:U:N3	11:CA:1586:A:C4	2.90	0.40
31:BU:49:ASP:OD1	31:BU:75:LYS:HA	2.21	0.40
11:AA:662:U:OP2	11:AA:662:U:H6	2.05	0.40
25:DO:151:LEU:O	25:DO:152:VAL:HB	2.22	0.40
11:AA:1573:G:H22	30:AT:91:ASN:ND2	2.19	0.40
11:BA:575:U:O2	11:BA:575:U:H3'	2.20	0.40
11:AA:777:U:O2	11:AA:777:U:H2'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BP:74:TYR:CD1	26:BP:80:LEU:HD13	2.57	0.40
13:CC:226:GLU:HB2	28:CR:207:TYR:HA	2.03	0.40
32:AV:30:PHE:O	32:AV:34:ILE:HG13	2.21	0.40
1:C0:60:ILE:HG22	1:C0:65:LYS:HG3	2.03	0.40
11:AA:1431:A:H2'	11:AA:1432:C:O4'	2.21	0.40
20:DJ:47:GLN:HG2	20:DJ:48:VAL:HG23	2.04	0.40
22:AL:106:LEU:HD13	22:AL:113:VAL:HG22	2.04	0.40
11:AA:585:A:H2'	11:AA:586:A:C8	2.56	0.40
11:BA:1113:G:H2'	11:BA:1114:G:H5'	2.02	0.40
26:CP:101:THR:HG23	26:CP:105:PHE:CE1	2.57	0.40
32:DV:98:ILE:HG22	32:DV:99:ASP:O	2.20	0.40
15:CE:85:THR:O	15:CE:99:PHE:HA	2.22	0.40
10:B9:72:LYS:HD3	11:BA:1160:G:H5'	2.02	0.40
11:AA:360:U:H5''	11:AA:361:A:OP2	2.22	0.40
13:DC:25:HIS:CD2	24:DN:48:HIS:CE1	3.10	0.40
28:AR:276:GLN:O	28:AR:294:ILE:HG23	2.22	0.40
11:CA:634:C:H2'	11:CA:635:U:H5'	2.04	0.40
17:BG:123:ILE:HD12	17:BG:132:GLN:HG2	2.04	0.40
11:DA:808:C:H2'	11:DA:809:A:O4'	2.21	0.40
13:CC:14:PHE:HE1	20:CJ:111:GLU:HG3	1.85	0.40
36:AZ:93:TYR:CG	36:AZ:94:PRO:HA	2.55	0.40
39:AA:2326:HOH:O	21:AK:149:ARG:HD2	2.21	0.40
27:CQ:118:GLU:HG2	27:CQ:150:VAL:HG21	2.04	0.40
11:BA:861:U:H3	11:BA:923:U:H3	1.70	0.40
26:DP:119:ALA:O	26:DP:123:LEU:HG	2.21	0.40
28:CR:212:HIS:CE1	28:CR:230:THR:HG22	2.56	0.40
30:BT:135:GLU:HG2	30:BT:135:GLU:H	1.40	0.40
12:DB:104:LEU:HA	12:DB:104:LEU:HD23	1.88	0.40
18:CH:13:ASP:N	18:CH:13:ASP:OD1	2.55	0.40
8:A7:40:LEU:HD23	8:A7:40:LEU:HA	1.89	0.40
11:BA:1677:A:H8	11:BA:1677:A:OP2	2.04	0.40
18:AH:31:SER:OG	18:AH:33:VAL:N	2.54	0.40
11:BA:1249:G:H5'	13:BC:142:SER:HB2	2.03	0.40

All (6) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B8:47:LYS:NZ	11:BA:270:U:O2[2_556]	1.96	0.24
7:B6:32:ASP:OD2	2:C1:35:LYS:NZ[1_556]	1.99	0.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CA:891:G:OP1	30:DT:122:ASN:ND2[1_455]	2.07	0.13
3:A2:133:LYS:NZ	11:BA:1730:G:OP1[1_655]	2.10	0.10
11:CA:1679:A:OP2	11:DA:1638:G:O2'[2_555]	2.19	0.01
11:BA:229:A:OP1	26:CP:146:PHE:N[2_546]	2.19	0.01

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	
1	A0	97/211 (46%)	92 (95%)	5 (5%)	0	100	100
1	B0	97/211 (46%)	92 (95%)	5 (5%)	0	100	100
1	C0	97/211 (46%)	92 (95%)	5 (5%)	0	100	100
1	D0	97/211 (46%)	91 (94%)	6 (6%)	0	100	100
2	A1	64/68 (94%)	62 (97%)	2 (3%)	0	100	100
2	B1	64/68 (94%)	62 (97%)	2 (3%)	0	100	100
2	C1	64/68 (94%)	62 (97%)	2 (3%)	0	100	100
2	D1	64/68 (94%)	62 (97%)	2 (3%)	0	100	100
3	A2	205/208 (99%)	197 (96%)	8 (4%)	0	100	100
3	B2	205/208 (99%)	195 (95%)	10 (5%)	0	100	100
3	C2	205/208 (99%)	195 (95%)	10 (5%)	0	100	100
3	D2	205/208 (99%)	195 (95%)	10 (5%)	0	100	100
4	A3	194/197 (98%)	187 (96%)	7 (4%)	0	100	100
4	B3	194/197 (98%)	187 (96%)	7 (4%)	0	100	100
4	C3	194/197 (98%)	188 (97%)	6 (3%)	0	100	100
4	D3	194/197 (98%)	187 (96%)	7 (4%)	0	100	100
5	A4	207/265 (78%)	191 (92%)	14 (7%)	2 (1%)	19	66
5	B4	219/265 (83%)	202 (92%)	14 (6%)	3 (1%)	14	60

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	C4	219/265 (83%)	203 (93%)	13 (6%)	3 (1%)	14	60
5	D4	219/265 (83%)	203 (93%)	13 (6%)	3 (1%)	14	60
6	A5	98/119 (82%)	98 (100%)	0	0	100	100
6	B5	98/119 (82%)	98 (100%)	0	0	100	100
6	C5	98/119 (82%)	97 (99%)	1 (1%)	0	100	100
6	D5	98/119 (82%)	98 (100%)	0	0	100	100
7	A6	78/81 (96%)	71 (91%)	6 (8%)	1 (1%)	15	62
7	B6	78/81 (96%)	70 (90%)	7 (9%)	1 (1%)	15	62
7	C6	78/81 (96%)	71 (91%)	6 (8%)	1 (1%)	15	62
7	D6	78/81 (96%)	71 (91%)	6 (8%)	1 (1%)	15	62
8	A7	99/162 (61%)	94 (95%)	5 (5%)	0	100	100
8	B7	99/162 (61%)	96 (97%)	3 (3%)	0	100	100
8	C7	99/162 (61%)	95 (96%)	4 (4%)	0	100	100
8	D7	99/162 (61%)	95 (96%)	4 (4%)	0	100	100
9	A8	77/143 (54%)	74 (96%)	3 (4%)	0	100	100
9	B8	77/143 (54%)	73 (95%)	4 (5%)	0	100	100
9	C8	77/143 (54%)	73 (95%)	4 (5%)	0	100	100
9	D8	77/143 (54%)	73 (95%)	4 (5%)	0	100	100
10	A9	91/189 (48%)	90 (99%)	1 (1%)	0	100	100
10	B9	91/189 (48%)	89 (98%)	2 (2%)	0	100	100
10	C9	91/189 (48%)	89 (98%)	2 (2%)	0	100	100
10	D9	91/189 (48%)	89 (98%)	1 (1%)	1 (1%)	17	65
12	AB	199/241 (83%)	197 (99%)	2 (1%)	0	100	100
12	BB	199/241 (83%)	197 (99%)	2 (1%)	0	100	100
12	CB	199/241 (83%)	197 (99%)	2 (1%)	0	100	100
12	DB	199/241 (83%)	197 (99%)	2 (1%)	0	100	100
13	AC	226/243 (93%)	213 (94%)	13 (6%)	0	100	100
13	BC	226/243 (93%)	214 (95%)	12 (5%)	0	100	100
13	CC	226/243 (93%)	214 (95%)	12 (5%)	0	100	100
13	DC	226/243 (93%)	214 (95%)	12 (5%)	0	100	100
14	AD	178/181 (98%)	174 (98%)	4 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	BD	178/181 (98%)	174 (98%)	4 (2%)	0	100	100
14	CD	178/181 (98%)	175 (98%)	3 (2%)	0	100	100
14	DD	178/181 (98%)	174 (98%)	4 (2%)	0	100	100
15	AE	227/296 (77%)	211 (93%)	15 (7%)	1 (0%)	39	80
15	BE	227/296 (77%)	212 (93%)	14 (6%)	1 (0%)	39	80
15	CE	227/296 (77%)	211 (93%)	15 (7%)	1 (0%)	39	80
15	DE	227/296 (77%)	212 (93%)	14 (6%)	1 (0%)	39	80
16	AF	87/101 (86%)	82 (94%)	5 (6%)	0	100	100
16	BF	87/101 (86%)	82 (94%)	5 (6%)	0	100	100
16	CF	87/101 (86%)	82 (94%)	5 (6%)	0	100	100
16	DF	87/101 (86%)	82 (94%)	5 (6%)	0	100	100
17	AG	190/200 (95%)	178 (94%)	11 (6%)	1 (0%)	34	77
17	BG	190/200 (95%)	178 (94%)	12 (6%)	0	100	100
17	CG	190/200 (95%)	179 (94%)	9 (5%)	2 (1%)	17	65
17	DG	190/200 (95%)	178 (94%)	10 (5%)	2 (1%)	17	65
18	AH	127/130 (98%)	112 (88%)	14 (11%)	1 (1%)	24	70
18	BH	127/130 (98%)	111 (87%)	15 (12%)	1 (1%)	24	70
18	CH	127/130 (98%)	112 (88%)	14 (11%)	1 (1%)	24	70
18	DH	127/130 (98%)	112 (88%)	14 (11%)	1 (1%)	24	70
19	AI	141/145 (97%)	132 (94%)	9 (6%)	0	100	100
19	BI	141/145 (97%)	131 (93%)	10 (7%)	0	100	100
19	CI	141/145 (97%)	132 (94%)	9 (6%)	0	100	100
19	DI	141/145 (97%)	132 (94%)	9 (6%)	0	100	100
20	AJ	106/120 (88%)	104 (98%)	2 (2%)	0	100	100
20	BJ	106/120 (88%)	105 (99%)	1 (1%)	0	100	100
20	CJ	106/120 (88%)	104 (98%)	2 (2%)	0	100	100
20	DJ	106/120 (88%)	104 (98%)	2 (2%)	0	100	100
21	AK	138/151 (91%)	133 (96%)	5 (4%)	0	100	100
21	BK	138/151 (91%)	134 (97%)	4 (3%)	0	100	100
21	CK	138/151 (91%)	133 (96%)	5 (4%)	0	100	100
21	DK	138/151 (91%)	133 (96%)	5 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	AL	138/142 (97%)	126 (91%)	10 (7%)	2 (1%)	14	60
22	BL	138/142 (97%)	126 (91%)	10 (7%)	2 (1%)	14	60
22	CL	138/142 (97%)	127 (92%)	9 (6%)	2 (1%)	14	60
22	DL	138/142 (97%)	125 (91%)	11 (8%)	2 (1%)	14	60
23	AM	151/155 (97%)	138 (91%)	11 (7%)	2 (1%)	15	62
23	BM	151/155 (97%)	139 (92%)	10 (7%)	2 (1%)	15	62
23	CM	151/155 (97%)	138 (91%)	11 (7%)	2 (1%)	15	62
23	DM	151/155 (97%)	138 (91%)	11 (7%)	2 (1%)	15	62
24	AN	52/55 (94%)	49 (94%)	3 (6%)	0	100	100
24	BN	52/55 (94%)	50 (96%)	2 (4%)	0	100	100
24	CN	52/55 (94%)	49 (94%)	3 (6%)	0	100	100
24	DN	52/55 (94%)	49 (94%)	3 (6%)	0	100	100
25	AO	150/153 (98%)	140 (93%)	9 (6%)	1 (1%)	26	72
25	BO	150/153 (98%)	140 (93%)	9 (6%)	1 (1%)	26	72
25	CO	150/153 (98%)	140 (93%)	9 (6%)	1 (1%)	26	72
25	DO	150/153 (98%)	140 (93%)	9 (6%)	1 (1%)	26	72
26	AP	146/149 (98%)	135 (92%)	11 (8%)	0	100	100
26	BP	146/149 (98%)	136 (93%)	10 (7%)	0	100	100
26	CP	146/149 (98%)	135 (92%)	11 (8%)	0	100	100
26	DP	146/149 (98%)	135 (92%)	11 (8%)	0	100	100
27	AQ	154/157 (98%)	148 (96%)	6 (4%)	0	100	100
27	BQ	154/157 (98%)	149 (97%)	5 (3%)	0	100	100
27	CQ	154/157 (98%)	150 (97%)	4 (3%)	0	100	100
27	DQ	154/157 (98%)	149 (97%)	5 (3%)	0	100	100
28	AR	336/343 (98%)	309 (92%)	25 (7%)	2 (1%)	30	75
28	BR	336/343 (98%)	308 (92%)	26 (8%)	2 (1%)	30	75
28	CR	336/343 (98%)	308 (92%)	26 (8%)	2 (1%)	30	75
28	DR	336/343 (98%)	307 (91%)	27 (8%)	2 (1%)	30	75
29	AS	126/144 (88%)	122 (97%)	3 (2%)	1 (1%)	24	70
29	BS	126/144 (88%)	122 (97%)	3 (2%)	1 (1%)	24	70
29	CS	126/144 (88%)	122 (97%)	3 (2%)	1 (1%)	24	70

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	DS	126/144 (88%)	122 (97%)	3 (2%)	1 (1%)	24	70
30	AT	152/155 (98%)	145 (95%)	7 (5%)	0	100	100
30	BT	152/155 (98%)	144 (95%)	8 (5%)	0	100	100
30	CT	152/155 (98%)	145 (95%)	7 (5%)	0	100	100
30	DT	152/155 (98%)	144 (95%)	8 (5%)	0	100	100
31	AU	122/126 (97%)	112 (92%)	10 (8%)	0	100	100
31	BU	122/126 (97%)	113 (93%)	9 (7%)	0	100	100
31	CU	122/126 (97%)	112 (92%)	10 (8%)	0	100	100
31	DU	122/126 (97%)	112 (92%)	10 (8%)	0	100	100
32	AV	117/130 (90%)	115 (98%)	2 (2%)	0	100	100
32	BV	117/130 (90%)	116 (99%)	1 (1%)	0	100	100
32	CV	117/130 (90%)	114 (97%)	2 (2%)	1 (1%)	21	68
32	DV	117/130 (90%)	115 (98%)	1 (1%)	1 (1%)	21	68
33	AW	257/259 (99%)	246 (96%)	11 (4%)	0	100	100
33	BW	257/259 (99%)	248 (96%)	9 (4%)	0	100	100
33	CW	257/259 (99%)	247 (96%)	10 (4%)	0	100	100
33	DW	257/259 (99%)	247 (96%)	10 (4%)	0	100	100
34	AX	72/80 (90%)	68 (94%)	4 (6%)	0	100	100
34	BX	72/80 (90%)	68 (94%)	4 (6%)	0	100	100
34	CX	72/80 (90%)	68 (94%)	4 (6%)	0	100	100
34	DX	72/80 (90%)	68 (94%)	4 (6%)	0	100	100
35	AY	226/293 (77%)	214 (95%)	11 (5%)	1 (0%)	39	80
35	BY	226/293 (77%)	214 (95%)	10 (4%)	2 (1%)	21	68
35	CY	226/293 (77%)	214 (95%)	11 (5%)	1 (0%)	39	80
35	DY	226/293 (77%)	215 (95%)	10 (4%)	1 (0%)	39	80
36	AZ	95/97 (98%)	93 (98%)	2 (2%)	0	100	100
36	BZ	95/97 (98%)	93 (98%)	2 (2%)	0	100	100
36	CZ	95/97 (98%)	93 (98%)	2 (2%)	0	100	100
36	DZ	95/97 (98%)	93 (98%)	2 (2%)	0	100	100
All	All	20528/23556 (87%)	19447 (95%)	1013 (5%)	68 (0%)	46	83

All (68) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
22	AL	3	VAL
25	AO	152	VAL
28	AR	48	ASP
22	BL	3	VAL
25	BO	152	VAL
28	BR	48	ASP
22	CL	3	VAL
25	CO	152	VAL
28	CR	48	ASP
32	CV	90	ILE
22	DL	3	VAL
25	DO	152	VAL
28	DR	48	ASP
7	A6	66	GLY
22	AL	35	GLY
5	B4	239	SER
7	B6	66	GLY
22	BL	35	GLY
5	C4	239	SER
7	C6	66	GLY
22	CL	35	GLY
5	D4	239	SER
7	D6	66	GLY
22	DL	35	GLY
32	DV	71	LEU
5	A4	150	SER
18	AH	59	LYS
5	B4	150	SER
18	BH	59	LYS
35	BY	89	SER
5	C4	150	SER
18	CH	59	LYS
35	CY	89	SER
5	D4	150	SER
18	DH	59	LYS
29	AS	54	ILE
35	AY	89	SER
29	BS	54	ILE
29	CS	54	ILE
29	DS	54	ILE
35	DY	89	SER
17	CG	51	TYR
17	DG	51	TYR

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Mol	Chain	Res	Type
17	DG	158	PHE
17	AG	158	PHE
17	CG	158	PHE
5	A4	23	ILE
15	AE	57	GLU
28	AR	180	VAL
5	B4	23	ILE
15	BE	57	GLU
28	BR	180	VAL
5	C4	23	ILE
15	CE	57	GLU
28	CR	180	VAL
5	D4	23	ILE
28	DR	180	VAL
15	DE	57	GLU
23	AM	81	ILE
23	AM	150	VAL
23	BM	81	ILE
23	BM	150	VAL
35	BY	69	VAL
23	CM	81	ILE
23	CM	150	VAL
10	D9	143	ILE
23	DM	81	ILE
23	DM	150	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
1	A0	90/192 (47%)	82 (91%)	8 (9%)	12	51
1	B0	90/192 (47%)	82 (91%)	8 (9%)	12	51
1	C0	90/192 (47%)	82 (91%)	8 (9%)	12	51
1	D0	90/192 (47%)	83 (92%)	7 (8%)	16	56
2	A1	55/57 (96%)	46 (84%)	9 (16%)	3	20

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	B1	55/57 (96%)	45 (82%)	10 (18%)	2	15
2	C1	55/57 (96%)	45 (82%)	10 (18%)	2	15
2	D1	55/57 (96%)	44 (80%)	11 (20%)	1	11
3	A2	184/185 (100%)	157 (85%)	27 (15%)	4	27
3	B2	184/185 (100%)	157 (85%)	27 (15%)	4	27
3	C2	184/185 (100%)	157 (85%)	27 (15%)	4	27
3	D2	184/185 (100%)	158 (86%)	26 (14%)	4	29
4	A3	182/183 (100%)	153 (84%)	29 (16%)	3	22
4	B3	182/183 (100%)	154 (85%)	28 (15%)	3	24
4	C3	182/183 (100%)	154 (85%)	28 (15%)	3	24
4	D3	182/183 (100%)	153 (84%)	29 (16%)	3	22
5	A4	187/225 (83%)	157 (84%)	30 (16%)	3	22
5	B4	197/225 (88%)	167 (85%)	30 (15%)	3	25
5	C4	197/225 (88%)	166 (84%)	31 (16%)	3	24
5	D4	197/225 (88%)	167 (85%)	30 (15%)	3	25
6	A5	90/107 (84%)	76 (84%)	14 (16%)	3	24
6	B5	90/107 (84%)	76 (84%)	14 (16%)	3	24
6	C5	90/107 (84%)	76 (84%)	14 (16%)	3	24
6	D5	90/107 (84%)	76 (84%)	14 (16%)	3	24
7	A6	71/72 (99%)	60 (84%)	11 (16%)	3	24
7	B6	71/72 (99%)	60 (84%)	11 (16%)	3	24
7	C6	71/72 (99%)	60 (84%)	11 (16%)	3	24
7	D6	71/72 (99%)	60 (84%)	11 (16%)	3	24
8	A7	91/136 (67%)	83 (91%)	8 (9%)	12	51
8	B7	91/136 (67%)	83 (91%)	8 (9%)	12	51
8	C7	91/136 (67%)	83 (91%)	8 (9%)	12	51
8	D7	91/136 (67%)	83 (91%)	8 (9%)	12	51
9	A8	70/109 (64%)	59 (84%)	11 (16%)	3	24
9	B8	70/109 (64%)	59 (84%)	11 (16%)	3	24
9	C8	70/109 (64%)	59 (84%)	11 (16%)	3	24
9	D8	70/109 (64%)	59 (84%)	11 (16%)	3	24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	A9	81/156 (52%)	75 (93%)	6 (7%)	17	58
10	B9	81/156 (52%)	76 (94%)	5 (6%)	23	65
10	C9	81/156 (52%)	75 (93%)	6 (7%)	17	58
10	D9	81/156 (52%)	72 (89%)	9 (11%)	8	39
12	AB	180/211 (85%)	164 (91%)	16 (9%)	12	51
12	BB	180/211 (85%)	164 (91%)	16 (9%)	12	51
12	CB	180/211 (85%)	164 (91%)	16 (9%)	12	51
12	DB	180/211 (85%)	164 (91%)	16 (9%)	12	51
13	AC	196/210 (93%)	178 (91%)	18 (9%)	11	49
13	BC	196/210 (93%)	179 (91%)	17 (9%)	13	51
13	CC	196/210 (93%)	179 (91%)	17 (9%)	13	51
13	DC	196/210 (93%)	178 (91%)	18 (9%)	11	49
14	AD	161/162 (99%)	129 (80%)	32 (20%)	1	11
14	BD	161/162 (99%)	128 (80%)	33 (20%)	1	11
14	CD	161/162 (99%)	129 (80%)	32 (20%)	1	11
14	DD	161/162 (99%)	128 (80%)	33 (20%)	1	11
15	AE	193/250 (77%)	169 (88%)	24 (12%)	6	34
15	BE	193/250 (77%)	169 (88%)	24 (12%)	6	34
15	CE	193/250 (77%)	169 (88%)	24 (12%)	6	34
15	DE	193/250 (77%)	168 (87%)	25 (13%)	5	32
16	AF	80/92 (87%)	76 (95%)	4 (5%)	30	71
16	BF	80/92 (87%)	76 (95%)	4 (5%)	30	71
16	CF	80/92 (87%)	76 (95%)	4 (5%)	30	71
16	DF	80/92 (87%)	76 (95%)	4 (5%)	30	71
17	AG	163/169 (96%)	145 (89%)	18 (11%)	8	40
17	BG	163/169 (96%)	145 (89%)	18 (11%)	8	40
17	CG	163/169 (96%)	144 (88%)	19 (12%)	7	36
17	DG	163/169 (96%)	145 (89%)	18 (11%)	8	40
18	AH	116/117 (99%)	97 (84%)	19 (16%)	3	20
18	BH	116/117 (99%)	97 (84%)	19 (16%)	3	20
18	CH	116/117 (99%)	97 (84%)	19 (16%)	3	20

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	DH	116/117 (99%)	97 (84%)	19 (16%)	3	20
19	AI	120/122 (98%)	105 (88%)	15 (12%)	6	33
19	BI	120/122 (98%)	105 (88%)	15 (12%)	6	33
19	CI	120/122 (98%)	105 (88%)	15 (12%)	6	33
19	DI	120/122 (98%)	105 (88%)	15 (12%)	6	33
20	AJ	101/111 (91%)	91 (90%)	10 (10%)	10	45
20	BJ	101/111 (91%)	91 (90%)	10 (10%)	10	45
20	CJ	101/111 (91%)	91 (90%)	10 (10%)	10	45
20	DJ	101/111 (91%)	91 (90%)	10 (10%)	10	45
21	AK	112/121 (93%)	97 (87%)	15 (13%)	5	31
21	BK	112/121 (93%)	98 (88%)	14 (12%)	6	33
21	CK	112/121 (93%)	98 (88%)	14 (12%)	6	33
21	DK	112/121 (93%)	97 (87%)	15 (13%)	5	31
22	AL	112/114 (98%)	96 (86%)	16 (14%)	4	28
22	BL	112/114 (98%)	96 (86%)	16 (14%)	4	28
22	CL	112/114 (98%)	96 (86%)	16 (14%)	4	28
22	DL	112/114 (98%)	96 (86%)	16 (14%)	4	28
23	AM	133/135 (98%)	120 (90%)	13 (10%)	10	45
23	BM	133/135 (98%)	120 (90%)	13 (10%)	10	45
23	CM	133/135 (98%)	120 (90%)	13 (10%)	10	45
23	DM	133/135 (98%)	120 (90%)	13 (10%)	10	45
24	AN	48/49 (98%)	42 (88%)	6 (12%)	6	33
24	BN	48/49 (98%)	42 (88%)	6 (12%)	6	33
24	CN	48/49 (98%)	42 (88%)	6 (12%)	6	33
24	DN	48/49 (98%)	41 (85%)	7 (15%)	4	27
25	AO	135/136 (99%)	118 (87%)	17 (13%)	5	32
25	BO	135/136 (99%)	118 (87%)	17 (13%)	5	32
25	CO	135/136 (99%)	118 (87%)	17 (13%)	5	32
25	DO	135/136 (99%)	118 (87%)	17 (13%)	5	32
26	AP	133/134 (99%)	117 (88%)	16 (12%)	6	35
26	BP	133/134 (99%)	116 (87%)	17 (13%)	5	32

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	CP	133/134 (99%)	116 (87%)	17 (13%)	5	32
26	DP	133/134 (99%)	117 (88%)	16 (12%)	6	35
27	AQ	140/141 (99%)	122 (87%)	18 (13%)	5	32
27	BQ	140/141 (99%)	122 (87%)	18 (13%)	5	32
27	CQ	140/141 (99%)	122 (87%)	18 (13%)	5	32
27	DQ	140/141 (99%)	122 (87%)	18 (13%)	5	32
28	AR	291/295 (99%)	264 (91%)	27 (9%)	11	49
28	BR	291/295 (99%)	265 (91%)	26 (9%)	12	51
28	CR	291/295 (99%)	264 (91%)	27 (9%)	11	49
28	DR	291/295 (99%)	264 (91%)	27 (9%)	11	49
29	AS	108/117 (92%)	97 (90%)	11 (10%)	9	43
29	BS	108/117 (92%)	97 (90%)	11 (10%)	9	43
29	CS	108/117 (92%)	97 (90%)	11 (10%)	9	43
29	DS	108/117 (92%)	97 (90%)	11 (10%)	9	43
30	AT	133/134 (99%)	119 (90%)	14 (10%)	8	42
30	BT	133/134 (99%)	119 (90%)	14 (10%)	8	42
30	CT	133/134 (99%)	120 (90%)	13 (10%)	10	45
30	DT	133/134 (99%)	120 (90%)	13 (10%)	10	45
31	AU	103/104 (99%)	93 (90%)	10 (10%)	10	46
31	BU	103/104 (99%)	93 (90%)	10 (10%)	10	46
31	CU	103/104 (99%)	93 (90%)	10 (10%)	10	46
31	DU	103/104 (99%)	93 (90%)	10 (10%)	10	46
32	AV	107/115 (93%)	97 (91%)	10 (9%)	11	49
32	BV	107/115 (93%)	97 (91%)	10 (9%)	11	49
32	CV	107/115 (93%)	98 (92%)	9 (8%)	14	53
32	DV	107/115 (93%)	98 (92%)	9 (8%)	14	53
33	AW	226/226 (100%)	194 (86%)	32 (14%)	4	29
33	BW	226/226 (100%)	194 (86%)	32 (14%)	4	29
33	CW	226/226 (100%)	194 (86%)	32 (14%)	4	29
33	DW	226/226 (100%)	194 (86%)	32 (14%)	4	29
34	AX	61/67 (91%)	54 (88%)	7 (12%)	7	37

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	BX	61/67 (91%)	54 (88%)	7 (12%)	7	37
34	CX	61/67 (91%)	55 (90%)	6 (10%)	10	45
34	DX	61/67 (91%)	54 (88%)	7 (12%)	7	37
35	AY	197/244 (81%)	177 (90%)	20 (10%)	9	43
35	BY	197/244 (81%)	178 (90%)	19 (10%)	10	46
35	CY	197/244 (81%)	177 (90%)	20 (10%)	9	43
35	DY	197/244 (81%)	177 (90%)	20 (10%)	9	43
36	AZ	82/82 (100%)	74 (90%)	8 (10%)	10	45
36	BZ	82/82 (100%)	73 (89%)	9 (11%)	8	40
36	CZ	82/82 (100%)	75 (92%)	7 (8%)	13	53
36	DZ	82/82 (100%)	74 (90%)	8 (10%)	10	45
All	All	18158/20320 (89%)	15963 (88%)	2195 (12%)	6	34

All (2195) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A0	25	LEU
1	A0	43	ASN
1	A0	46	LEU
1	A0	61	CYS
1	A0	76	VAL
1	A0	83	PHE
1	A0	91	LEU
1	A0	97	ASP
2	A1	6	THR
2	A1	10	ARG
2	A1	18	THR
2	A1	27	VAL
2	A1	32	ILE
2	A1	36	GLU
2	A1	41	LEU
2	A1	45	VAL
2	A1	49	CYS
3	A2	18	MET
3	A2	21	HIS
3	A2	34	SER
3	A2	36	THR
3	A2	49	ARG

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Mol	Chain	Res	Type
3	A2	56	VAL
3	A2	64	ARG
3	A2	67	ARG
3	A2	74	SER
3	A2	84	THR
3	A2	86	ILE
3	A2	89	VAL
3	A2	101	THR
3	A2	103	THR
3	A2	108	SER
3	A2	136	THR
3	A2	137	VAL
3	A2	140	ASN
3	A2	144	SER
3	A2	167	PHE
3	A2	173	LEU
3	A2	175	CYS
3	A2	176	ILE
3	A2	177	THR
3	A2	179	ARG
3	A2	183	SER
3	A2	203	LEU
4	A3	3	LEU
4	A3	7	HIS
4	A3	9	LYS
4	A3	13	THR
4	A3	39	SER
4	A3	41	ILE
4	A3	52	LYS
4	A3	54	ASN
4	A3	63	ILE
4	A3	88	LEU
4	A3	92	VAL
4	A3	101	GLU
4	A3	102	SER
4	A3	109	LYS
4	A3	113	ARG
4	A3	115	ARG
4	A3	116	SER
4	A3	117	ARG
4	A3	132	LEU
4	A3	139	LYS

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Mol	Chain	Res	Type
4	A3	142	ARG
4	A3	148	THR
4	A3	152	ARG
4	A3	153	ILE
4	A3	161	ASP
4	A3	175	LYS
4	A3	178	THR
4	A3	179	THR
4	A3	196	LYS
5	A4	28	ARG
5	A4	44	SER
5	A4	48	THR
5	A4	50	VAL
5	A4	53	SER
5	A4	63	ILE
5	A4	70	SER
5	A4	71	THR
5	A4	74	ASP
5	A4	80	ASN
5	A4	84	TRP
5	A4	91	ILE
5	A4	92	ASP
5	A4	98	ASN
5	A4	109	THR
5	A4	110	ARG
5	A4	111	ASP
5	A4	115	SER
5	A4	120	TRP
5	A4	127	ARG
5	A4	130	CYS
5	A4	132	THR
5	A4	146	THR
5	A4	155	SER
5	A4	157	THR
5	A4	159	THR
5	A4	207	THR
5	A4	217	THR
5	A4	218	ILE
5	A4	228	LYS
6	A5	10	ARG
6	A5	18	THR
6	A5	21	VAL

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Mol	Chain	Res	Type
6	A5	23	CYS
6	A5	30	VAL
6	A5	33	ASP
6	A5	37	LYS
6	A5	44	MET
6	A5	49	SER
6	A5	69	LEU
6	A5	89	ARG
6	A5	90	CYS
6	A5	92	GLU
6	A5	95	ARG
7	A6	9	ILE
7	A6	23	ILE
7	A6	31	MET
7	A6	43	MET
7	A6	47	ASN
7	A6	54	CYS
7	A6	58	SER
7	A6	62	CYS
7	A6	63	LYS
7	A6	77	PHE
7	A6	79	ILE
8	A7	9	LYS
8	A7	16	LEU
8	A7	24	LEU
8	A7	35	THR
8	A7	40	LEU
8	A7	47	ARG
8	A7	50	LYS
8	A7	64	THR
9	A8	37	ASP
9	A8	39	VAL
9	A8	51	GLU
9	A8	67	SER
9	A8	68	THR
9	A8	75	VAL
9	A8	76	ASN
9	A8	78	SER
9	A8	84	MET
9	A8	94	GLU
9	A8	115	LYS
10	A9	74	LYS

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Mol	Chain	Res	Type
10	A9	79	SER
10	A9	86	THR
10	A9	93	THR
10	A9	143	ILE
10	A9	144	ASP
12	AB	16	SER
12	AB	17	ASN
12	AB	23	ILE
12	AB	38	VAL
12	AB	54	LYS
12	AB	55	LEU
12	AB	63	VAL
12	AB	89	THR
12	AB	105	THR
12	AB	110	LEU
12	AB	134	SER
12	AB	136	VAL
12	AB	159	CYS
12	AB	164	THR
12	AB	169	MET
12	AB	194	MET
13	AC	8	ILE
13	AC	12	LYS
13	AC	29	SER
13	AC	47	THR
13	AC	64	VAL
13	AC	79	ARG
13	AC	85	ASP
13	AC	105	VAL
13	AC	109	ASN
13	AC	137	CYS
13	AC	142	SER
13	AC	147	GLN
13	AC	162	CYS
13	AC	163	THR
13	AC	171	ILE
13	AC	201	LYS
13	AC	203	PHE
13	AC	221	ILE
14	AD	3	LYS
14	AD	6	ILE
14	AD	8	THR

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Mol	Chain	Res	Type
14	AD	9	SER
14	AD	16	ARG
14	AD	28	MET
14	AD	44	ARG
14	AD	47	MET
14	AD	57	ARG
14	AD	63	ASP
14	AD	68	ARG
14	AD	69	ARG
14	AD	79	ARG
14	AD	80	MET
14	AD	86	LEU
14	AD	99	LEU
14	AD	100	THR
14	AD	104	LEU
14	AD	105	MET
14	AD	107	ARG
14	AD	108	ARG
14	AD	112	ARG
14	AD	121	SER
14	AD	127	VAL
14	AD	129	ILE
14	AD	142	ASN
14	AD	147	MET
14	AD	149	ARG
14	AD	150	THR
14	AD	160	SER
14	AD	164	LEU
14	AD	171	ARG
15	AE	36	LEU
15	AE	43	SER
15	AE	44	SER
15	AE	46	ASP
15	AE	52	SER
15	AE	57	GLU
15	AE	83	GLN
15	AE	109	ASN
15	AE	157	GLN
15	AE	159	ILE
15	AE	160	THR
15	AE	162	LYS
15	AE	165	SER

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Mol	Chain	Res	Type
15	AE	168	ILE
15	AE	175	ARG
15	AE	194	VAL
15	AE	197	ILE
15	AE	199	THR
15	AE	205	THR
15	AE	208	ARG
15	AE	211	PHE
15	AE	219	LEU
15	AE	222	THR
15	AE	235	GLU
16	AF	49	LYS
16	AF	60	THR
16	AF	65	ASP
16	AF	66	GLU
17	AG	24	ILE
17	AG	28	CYS
17	AG	42	VAL
17	AG	53	VAL
17	AG	63	ILE
17	AG	66	ARG
17	AG	89	LYS
17	AG	99	THR
17	AG	101	ARG
17	AG	104	LEU
17	AG	120	SER
17	AG	121	THR
17	AG	135	ASP
17	AG	139	MET
17	AG	156	SER
17	AG	160	SER
17	AG	162	ARG
17	AG	164	ILE
18	AH	3	LYS
18	AH	11	LEU
18	AH	12	LYS
18	AH	27	LEU
18	AH	28	ARG
18	AH	30	VAL
18	AH	31	SER
18	AH	44	ASN
18	AH	47	ILE

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Mol	Chain	Res	Type
18	AH	57	ARG
18	AH	65	LEU
18	AH	66	ILE
18	AH	70	ASN
18	AH	97	ARG
18	AH	101	ASN
18	AH	103	VAL
18	AH	106	THR
18	AH	107	THR
18	AH	121	THR
19	AI	7	GLN
19	AI	12	PHE
19	AI	15	LYS
19	AI	23	SER
19	AI	30	LEU
19	AI	33	VAL
19	AI	36	SER
19	AI	46	LEU
19	AI	66	ASP
19	AI	72	ARG
19	AI	78	SER
19	AI	87	LEU
19	AI	89	LYS
19	AI	126	MET
19	AI	142	LYS
20	AJ	24	THR
20	AJ	31	VAL
20	AJ	45	THR
20	AJ	51	LYS
20	AJ	68	SER
20	AJ	74	SER
20	AJ	76	THR
20	AJ	94	ASN
20	AJ	97	ASP
20	AJ	115	THR
21	AK	14	ILE
21	AK	21	VAL
21	AK	40	THR
21	AK	55	ARG
21	AK	57	THR
21	AK	62	VAL
21	AK	75	MET

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Mol	Chain	Res	Type
21	AK	91	ASN
21	AK	97	LEU
21	AK	107	GLN
21	AK	122	SER
21	AK	128	ARG
21	AK	138	ASP
21	AK	139	SER
21	AK	150	ARG
22	AL	3	VAL
22	AL	7	ARG
22	AL	9	ILE
22	AL	10	ARG
22	AL	19	ARG
22	AL	34	LEU
22	AL	36	SER
22	AL	40	ASN
22	AL	52	VAL
22	AL	53	THR
22	AL	76	ARG
22	AL	80	LYS
22	AL	101	VAL
22	AL	109	GLN
22	AL	129	ILE
22	AL	130	SER
23	AM	15	HIS
23	AM	28	THR
23	AM	72	LEU
23	AM	87	ASN
23	AM	88	ARG
23	AM	94	ASP
23	AM	98	TYR
23	AM	99	GLN
23	AM	100	MET
23	AM	115	ARG
23	AM	123	ARG
23	AM	136	GLN
23	AM	138	THR
24	AN	3	ASN
24	AN	32	LYS
24	AN	39	ARG
24	AN	40	ARG
24	AN	43	ARG

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Mol	Chain	Res	Type
24	AN	49	ILE
25	AO	3	ARG
25	AO	7	LYS
25	AO	9	LYS
25	AO	11	LYS
25	AO	13	ILE
25	AO	14	SER
25	AO	26	LYS
25	AO	34	THR
25	AO	48	THR
25	AO	59	GLN
25	AO	66	ARG
25	AO	93	LEU
25	AO	104	LEU
25	AO	109	LYS
25	AO	118	ILE
25	AO	126	ARG
25	AO	127	LEU
26	AP	2	THR
26	AP	7	THR
26	AP	10	ILE
26	AP	21	LEU
26	AP	24	ASP
26	AP	51	ARG
26	AP	54	VAL
26	AP	77	GLN
26	AP	80	LEU
26	AP	88	ARG
26	AP	95	LEU
26	AP	102	ARG
26	AP	108	LEU
26	AP	110	ARG
26	AP	115	THR
26	AP	122	LYS
27	AQ	6	GLN
27	AQ	12	GLN
27	AQ	32	ARG
27	AQ	37	ILE
27	AQ	51	THR
27	AQ	61	SER
27	AQ	64	SER
27	AQ	77	THR

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Mol	Chain	Res	Type
27	AQ	84	ILE
27	AQ	87	ARG
27	AQ	93	VAL
27	AQ	98	ARG
27	AQ	103	HIS
27	AQ	115	SER
27	AQ	117	LYS
27	AQ	128	ARG
27	AQ	133	THR
27	AQ	135	ARG
28	AR	20	HIS
28	AR	32	SER
28	AR	42	LEU
28	AR	48	ASP
28	AR	50	THR
28	AR	67	ILE
28	AR	76	ASN
28	AR	80	SER
28	AR	88	ASN
28	AR	106	ARG
28	AR	107	THR
28	AR	113	ARG
28	AR	117	HIS
28	AR	124	VAL
28	AR	126	PHE
28	AR	147	ILE
28	AR	161	HIS
28	AR	178	ASN
28	AR	189	SER
28	AR	190	VAL
28	AR	208	THR
28	AR	219	LEU
28	AR	238	LEU
28	AR	246	THR
28	AR	264	ASN
28	AR	274	THR
28	AR	313	THR
29	AS	11	PHE
29	AS	12	THR
29	AS	28	SER
29	AS	36	ASP
29	AS	49	ARG

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Mol	Chain	Res	Type
29	AS	66	ARG
29	AS	83	THR
29	AS	84	HIS
29	AS	88	MET
29	AS	119	LYS
29	AS	127	THR
30	AT	9	THR
30	AT	45	VAL
30	AT	56	TRP
30	AT	60	ARG
30	AT	76	ILE
30	AT	77	SER
30	AT	89	ARG
30	AT	93	ARG
30	AT	105	ARG
30	AT	117	ILE
30	AT	130	ARG
30	AT	135	GLU
30	AT	143	ILE
30	AT	155	LYS
31	AU	3	ASP
31	AU	20	ASN
31	AU	29	LEU
31	AU	34	ARG
31	AU	50	CYS
31	AU	51	ASP
31	AU	56	VAL
31	AU	71	VAL
31	AU	78	SER
31	AU	100	CYS
32	AV	6	THR
32	AV	8	THR
32	AV	35	LEU
32	AV	37	GLU
32	AV	44	LYS
32	AV	46	LEU
32	AV	60	ARG
32	AV	83	ASP
32	AV	105	MET
32	AV	119	SER
33	AW	11	ARG
33	AW	19	MET

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Mol	Chain	Res	Type
33	AW	38	LEU
33	AW	41	SER
33	AW	42	LEU
33	AW	45	SER
33	AW	51	ARG
33	AW	82	LYS
33	AW	97	THR
33	AW	107	THR
33	AW	110	ARG
33	AW	115	SER
33	AW	122	LYS
33	AW	141	ILE
33	AW	142	VAL
33	AW	143	THR
33	AW	176	HIS
33	AW	183	CYS
33	AW	186	GLN
33	AW	189	ASN
33	AW	210	CYS
33	AW	214	ASP
33	AW	218	ASN
33	AW	229	VAL
33	AW	230	LEU
33	AW	232	GLN
33	AW	236	SER
33	AW	238	ILE
33	AW	242	SER
33	AW	247	ARG
33	AW	253	GLU
33	AW	256	ARG
34	AX	4	MET
34	AX	5	HIS
34	AX	8	LEU
34	AX	35	SER
34	AX	53	ASP
34	AX	59	SER
34	AX	62	TRP
35	AY	1	MET
35	AY	6	SER
35	AY	7	TYR
35	AY	10	THR
35	AY	16	ILE

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Mol	Chain	Res	Type
35	AY	32	MET
35	AY	43	ASP
35	AY	51	LYS
35	AY	78	SER
35	AY	97	VAL
35	AY	98	ARG
35	AY	106	MET
35	AY	118	VAL
35	AY	120	GLU
35	AY	137	ARG
35	AY	145	PHE
35	AY	155	LEU
35	AY	181	ARG
35	AY	186	GLU
35	AY	206	ASN
36	AZ	14	THR
36	AZ	17	ILE
36	AZ	22	GLU
36	AZ	25	ASP
36	AZ	31	LYS
36	AZ	47	VAL
36	AZ	61	THR
36	AZ	75	SER
1	B0	25	LEU
1	B0	43	ASN
1	B0	46	LEU
1	B0	61	CYS
1	B0	76	VAL
1	B0	83	PHE
1	B0	91	LEU
1	B0	97	ASP
2	B1	6	THR
2	B1	10	ARG
2	B1	18	THR
2	B1	27	VAL
2	B1	32	ILE
2	B1	36	GLU
2	B1	41	LEU
2	B1	45	VAL
2	B1	49	CYS
2	B1	55	LEU
3	B2	18	MET

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Mol	Chain	Res	Type
3	B2	21	HIS
3	B2	34	SER
3	B2	36	THR
3	B2	49	ARG
3	B2	56	VAL
3	B2	64	ARG
3	B2	67	ARG
3	B2	74	SER
3	B2	84	THR
3	B2	86	ILE
3	B2	89	VAL
3	B2	101	THR
3	B2	103	THR
3	B2	108	SER
3	B2	136	THR
3	B2	137	VAL
3	B2	140	ASN
3	B2	144	SER
3	B2	167	PHE
3	B2	173	LEU
3	B2	175	CYS
3	B2	176	ILE
3	B2	177	THR
3	B2	179	ARG
3	B2	183	SER
3	B2	203	LEU
4	B3	3	LEU
4	B3	7	HIS
4	B3	9	LYS
4	B3	13	THR
4	B3	39	SER
4	B3	41	ILE
4	B3	52	LYS
4	B3	54	ASN
4	B3	63	ILE
4	B3	88	LEU
4	B3	92	VAL
4	B3	101	GLU
4	B3	102	SER
4	B3	109	LYS
4	B3	113	ARG
4	B3	115	ARG

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Mol	Chain	Res	Type
4	B3	116	SER
4	B3	117	ARG
4	B3	132	LEU
4	B3	142	ARG
4	B3	148	THR
4	B3	152	ARG
4	B3	153	ILE
4	B3	161	ASP
4	B3	175	LYS
4	B3	178	THR
4	B3	179	THR
4	B3	196	LYS
5	B4	28	ARG
5	B4	44	SER
5	B4	48	THR
5	B4	50	VAL
5	B4	53	SER
5	B4	63	ILE
5	B4	70	SER
5	B4	71	THR
5	B4	74	ASP
5	B4	80	ASN
5	B4	84	TRP
5	B4	91	ILE
5	B4	92	ASP
5	B4	98	ASN
5	B4	109	THR
5	B4	110	ARG
5	B4	111	ASP
5	B4	115	SER
5	B4	120	TRP
5	B4	127	ARG
5	B4	130	CYS
5	B4	132	THR
5	B4	146	THR
5	B4	155	SER
5	B4	157	THR
5	B4	159	THR
5	B4	207	THR
5	B4	217	THR
5	B4	218	ILE
5	B4	230	ASP

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Mol	Chain	Res	Type
6	B5	10	ARG
6	B5	18	THR
6	B5	21	VAL
6	B5	23	CYS
6	B5	30	VAL
6	B5	33	ASP
6	B5	37	LYS
6	B5	44	MET
6	B5	49	SER
6	B5	69	LEU
6	B5	89	ARG
6	B5	90	CYS
6	B5	92	GLU
6	B5	95	ARG
7	B6	9	ILE
7	B6	23	ILE
7	B6	31	MET
7	B6	43	MET
7	B6	47	ASN
7	B6	54	CYS
7	B6	58	SER
7	B6	62	CYS
7	B6	63	LYS
7	B6	77	PHE
7	B6	79	ILE
8	B7	9	LYS
8	B7	16	LEU
8	B7	24	LEU
8	B7	35	THR
8	B7	40	LEU
8	B7	47	ARG
8	B7	50	LYS
8	B7	64	THR
9	B8	37	ASP
9	B8	39	VAL
9	B8	51	GLU
9	B8	67	SER
9	B8	68	THR
9	B8	75	VAL
9	B8	76	ASN
9	B8	78	SER
9	B8	84	MET

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Mol	Chain	Res	Type
9	B8	94	GLU
9	B8	115	LYS
10	B9	74	LYS
10	B9	79	SER
10	B9	86	THR
10	B9	93	THR
10	B9	144	ASP
12	BB	16	SER
12	BB	17	ASN
12	BB	23	ILE
12	BB	38	VAL
12	BB	54	LYS
12	BB	55	LEU
12	BB	63	VAL
12	BB	89	THR
12	BB	105	THR
12	BB	110	LEU
12	BB	134	SER
12	BB	136	VAL
12	BB	159	CYS
12	BB	164	THR
12	BB	169	MET
12	BB	194	MET
13	BC	8	ILE
13	BC	12	LYS
13	BC	29	SER
13	BC	47	THR
13	BC	64	VAL
13	BC	79	ARG
13	BC	85	ASP
13	BC	105	VAL
13	BC	109	ASN
13	BC	137	CYS
13	BC	147	GLN
13	BC	162	CYS
13	BC	163	THR
13	BC	171	ILE
13	BC	201	LYS
13	BC	203	PHE
13	BC	221	ILE
14	BD	3	LYS
14	BD	6	ILE

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Mol	Chain	Res	Type
14	BD	8	THR
14	BD	9	SER
14	BD	16	ARG
14	BD	28	MET
14	BD	44	ARG
14	BD	47	MET
14	BD	57	ARG
14	BD	63	ASP
14	BD	68	ARG
14	BD	69	ARG
14	BD	79	ARG
14	BD	80	MET
14	BD	86	LEU
14	BD	91	ARG
14	BD	99	LEU
14	BD	100	THR
14	BD	104	LEU
14	BD	105	MET
14	BD	107	ARG
14	BD	108	ARG
14	BD	112	ARG
14	BD	121	SER
14	BD	127	VAL
14	BD	129	ILE
14	BD	142	ASN
14	BD	147	MET
14	BD	149	ARG
14	BD	150	THR
14	BD	160	SER
14	BD	164	LEU
14	BD	171	ARG
15	BE	36	LEU
15	BE	43	SER
15	BE	44	SER
15	BE	52	SER
15	BE	56	LYS
15	BE	57	GLU
15	BE	83	GLN
15	BE	109	ASN
15	BE	157	GLN
15	BE	159	ILE
15	BE	160	THR

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Mol	Chain	Res	Type
15	BE	162	LYS
15	BE	165	SER
15	BE	168	ILE
15	BE	175	ARG
15	BE	194	VAL
15	BE	197	ILE
15	BE	199	THR
15	BE	205	THR
15	BE	208	ARG
15	BE	211	PHE
15	BE	219	LEU
15	BE	222	THR
15	BE	235	GLU
16	BF	49	LYS
16	BF	60	THR
16	BF	65	ASP
16	BF	66	GLU
17	BG	24	ILE
17	BG	28	CYS
17	BG	42	VAL
17	BG	53	VAL
17	BG	63	ILE
17	BG	66	ARG
17	BG	89	LYS
17	BG	99	THR
17	BG	101	ARG
17	BG	104	LEU
17	BG	120	SER
17	BG	121	THR
17	BG	135	ASP
17	BG	139	MET
17	BG	156	SER
17	BG	160	SER
17	BG	162	ARG
17	BG	164	ILE
18	BH	3	LYS
18	BH	11	LEU
18	BH	12	LYS
18	BH	27	LEU
18	BH	28	ARG
18	BH	30	VAL
18	BH	31	SER

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Mol	Chain	Res	Type
18	BH	44	ASN
18	BH	47	ILE
18	BH	57	ARG
18	BH	65	LEU
18	BH	66	ILE
18	BH	70	ASN
18	BH	97	ARG
18	BH	101	ASN
18	BH	103	VAL
18	BH	106	THR
18	BH	107	THR
18	BH	121	THR
19	BI	7	GLN
19	BI	12	PHE
19	BI	15	LYS
19	BI	23	SER
19	BI	30	LEU
19	BI	33	VAL
19	BI	36	SER
19	BI	46	LEU
19	BI	66	ASP
19	BI	72	ARG
19	BI	78	SER
19	BI	87	LEU
19	BI	89	LYS
19	BI	126	MET
19	BI	142	LYS
20	BJ	24	THR
20	BJ	31	VAL
20	BJ	45	THR
20	BJ	51	LYS
20	BJ	68	SER
20	BJ	74	SER
20	BJ	76	THR
20	BJ	94	ASN
20	BJ	97	ASP
20	BJ	115	THR
21	BK	14	ILE
21	BK	21	VAL
21	BK	40	THR
21	BK	55	ARG
21	BK	57	THR

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Mol	Chain	Res	Type
21	BK	75	MET
21	BK	91	ASN
21	BK	97	LEU
21	BK	107	GLN
21	BK	122	SER
21	BK	128	ARG
21	BK	138	ASP
21	BK	139	SER
21	BK	150	ARG
22	BL	3	VAL
22	BL	7	ARG
22	BL	9	ILE
22	BL	10	ARG
22	BL	19	ARG
22	BL	34	LEU
22	BL	36	SER
22	BL	40	ASN
22	BL	52	VAL
22	BL	53	THR
22	BL	76	ARG
22	BL	80	LYS
22	BL	101	VAL
22	BL	109	GLN
22	BL	129	ILE
22	BL	130	SER
23	BM	15	HIS
23	BM	28	THR
23	BM	72	LEU
23	BM	87	ASN
23	BM	88	ARG
23	BM	94	ASP
23	BM	98	TYR
23	BM	99	GLN
23	BM	100	MET
23	BM	115	ARG
23	BM	123	ARG
23	BM	136	GLN
23	BM	138	THR
24	BN	3	ASN
24	BN	32	LYS
24	BN	39	ARG
24	BN	40	ARG

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Mol	Chain	Res	Type
24	BN	43	ARG
24	BN	49	ILE
25	BO	3	ARG
25	BO	7	LYS
25	BO	9	LYS
25	BO	11	LYS
25	BO	13	ILE
25	BO	14	SER
25	BO	26	LYS
25	BO	34	THR
25	BO	48	THR
25	BO	59	GLN
25	BO	66	ARG
25	BO	93	LEU
25	BO	104	LEU
25	BO	109	LYS
25	BO	118	ILE
25	BO	126	ARG
25	BO	127	LEU
26	BP	2	THR
26	BP	7	THR
26	BP	10	ILE
26	BP	21	LEU
26	BP	24	ASP
26	BP	51	ARG
26	BP	54	VAL
26	BP	77	GLN
26	BP	80	LEU
26	BP	88	ARG
26	BP	95	LEU
26	BP	102	ARG
26	BP	108	LEU
26	BP	110	ARG
26	BP	115	THR
26	BP	122	LYS
26	BP	131	THR
27	BQ	6	GLN
27	BQ	12	GLN
27	BQ	32	ARG
27	BQ	37	ILE
27	BQ	51	THR
27	BQ	61	SER

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Mol	Chain	Res	Type
27	BQ	64	SER
27	BQ	77	THR
27	BQ	84	ILE
27	BQ	87	ARG
27	BQ	93	VAL
27	BQ	98	ARG
27	BQ	103	HIS
27	BQ	115	SER
27	BQ	117	LYS
27	BQ	128	ARG
27	BQ	133	THR
27	BQ	135	ARG
28	BR	20	HIS
28	BR	32	SER
28	BR	42	LEU
28	BR	48	ASP
28	BR	50	THR
28	BR	67	ILE
28	BR	76	ASN
28	BR	80	SER
28	BR	88	ASN
28	BR	106	ARG
28	BR	107	THR
28	BR	113	ARG
28	BR	117	HIS
28	BR	124	VAL
28	BR	126	PHE
28	BR	147	ILE
28	BR	161	HIS
28	BR	189	SER
28	BR	190	VAL
28	BR	208	THR
28	BR	219	LEU
28	BR	238	LEU
28	BR	246	THR
28	BR	264	ASN
28	BR	274	THR
28	BR	313	THR
29	BS	11	PHE
29	BS	12	THR
29	BS	28	SER
29	BS	36	ASP

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Mol	Chain	Res	Type
29	BS	49	ARG
29	BS	66	ARG
29	BS	83	THR
29	BS	84	HIS
29	BS	88	MET
29	BS	119	LYS
29	BS	127	THR
30	BT	9	THR
30	BT	45	VAL
30	BT	56	TRP
30	BT	60	ARG
30	BT	76	ILE
30	BT	77	SER
30	BT	89	ARG
30	BT	93	ARG
30	BT	105	ARG
30	BT	117	ILE
30	BT	130	ARG
30	BT	135	GLU
30	BT	143	ILE
30	BT	155	LYS
31	BU	3	ASP
31	BU	20	ASN
31	BU	29	LEU
31	BU	34	ARG
31	BU	50	CYS
31	BU	51	ASP
31	BU	56	VAL
31	BU	71	VAL
31	BU	78	SER
31	BU	100	CYS
32	BV	6	THR
32	BV	8	THR
32	BV	35	LEU
32	BV	37	GLU
32	BV	44	LYS
32	BV	46	LEU
32	BV	60	ARG
32	BV	85	VAL
32	BV	105	MET
32	BV	119	SER
33	BW	11	ARG

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Mol	Chain	Res	Type
33	BW	19	MET
33	BW	38	LEU
33	BW	41	SER
33	BW	42	LEU
33	BW	45	SER
33	BW	51	ARG
33	BW	82	LYS
33	BW	97	THR
33	BW	107	THR
33	BW	110	ARG
33	BW	115	SER
33	BW	122	LYS
33	BW	141	ILE
33	BW	142	VAL
33	BW	143	THR
33	BW	176	HIS
33	BW	183	CYS
33	BW	186	GLN
33	BW	189	ASN
33	BW	210	CYS
33	BW	214	ASP
33	BW	218	ASN
33	BW	229	VAL
33	BW	230	LEU
33	BW	232	GLN
33	BW	236	SER
33	BW	238	ILE
33	BW	242	SER
33	BW	247	ARG
33	BW	253	GLU
33	BW	256	ARG
34	BX	4	MET
34	BX	5	HIS
34	BX	8	LEU
34	BX	35	SER
34	BX	53	ASP
34	BX	59	SER
34	BX	62	TRP
35	BY	1	MET
35	BY	6	SER
35	BY	7	TYR
35	BY	10	THR

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Mol	Chain	Res	Type
35	BY	16	ILE
35	BY	32	MET
35	BY	43	ASP
35	BY	51	LYS
35	BY	78	SER
35	BY	97	VAL
35	BY	98	ARG
35	BY	106	MET
35	BY	118	VAL
35	BY	120	GLU
35	BY	137	ARG
35	BY	145	PHE
35	BY	155	LEU
35	BY	186	GLU
35	BY	206	ASN
36	BZ	14	THR
36	BZ	17	ILE
36	BZ	22	GLU
36	BZ	25	ASP
36	BZ	31	LYS
36	BZ	41	SER
36	BZ	47	VAL
36	BZ	61	THR
36	BZ	75	SER
1	C0	25	LEU
1	C0	43	ASN
1	C0	46	LEU
1	C0	61	CYS
1	C0	76	VAL
1	C0	83	PHE
1	C0	91	LEU
1	C0	97	ASP
2	C1	6	THR
2	C1	10	ARG
2	C1	18	THR
2	C1	27	VAL
2	C1	32	ILE
2	C1	36	GLU
2	C1	41	LEU
2	C1	45	VAL
2	C1	49	CYS
2	C1	58	MET

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Mol	Chain	Res	Type
3	C2	18	MET
3	C2	21	HIS
3	C2	34	SER
3	C2	36	THR
3	C2	49	ARG
3	C2	56	VAL
3	C2	64	ARG
3	C2	67	ARG
3	C2	74	SER
3	C2	84	THR
3	C2	86	ILE
3	C2	89	VAL
3	C2	101	THR
3	C2	103	THR
3	C2	108	SER
3	C2	136	THR
3	C2	137	VAL
3	C2	140	ASN
3	C2	144	SER
3	C2	167	PHE
3	C2	173	LEU
3	C2	175	CYS
3	C2	176	ILE
3	C2	177	THR
3	C2	179	ARG
3	C2	183	SER
3	C2	203	LEU
4	C3	3	LEU
4	C3	7	HIS
4	C3	9	LYS
4	C3	13	THR
4	C3	39	SER
4	C3	41	ILE
4	C3	52	LYS
4	C3	54	ASN
4	C3	63	ILE
4	C3	88	LEU
4	C3	92	VAL
4	C3	101	GLU
4	C3	102	SER
4	C3	109	LYS
4	C3	113	ARG

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Mol	Chain	Res	Type
4	C3	115	ARG
4	C3	116	SER
4	C3	117	ARG
4	C3	132	LEU
4	C3	142	ARG
4	C3	148	THR
4	C3	152	ARG
4	C3	153	ILE
4	C3	161	ASP
4	C3	175	LYS
4	C3	178	THR
4	C3	179	THR
4	C3	196	LYS
5	C4	28	ARG
5	C4	44	SER
5	C4	48	THR
5	C4	50	VAL
5	C4	53	SER
5	C4	63	ILE
5	C4	70	SER
5	C4	71	THR
5	C4	74	ASP
5	C4	80	ASN
5	C4	84	TRP
5	C4	91	ILE
5	C4	92	ASP
5	C4	98	ASN
5	C4	109	THR
5	C4	110	ARG
5	C4	111	ASP
5	C4	115	SER
5	C4	120	TRP
5	C4	127	ARG
5	C4	130	CYS
5	C4	131	LYS
5	C4	132	THR
5	C4	146	THR
5	C4	155	SER
5	C4	157	THR
5	C4	159	THR
5	C4	207	THR
5	C4	217	THR

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Mol	Chain	Res	Type
5	C4	218	ILE
5	C4	230	ASP
6	C5	10	ARG
6	C5	18	THR
6	C5	21	VAL
6	C5	23	CYS
6	C5	30	VAL
6	C5	33	ASP
6	C5	37	LYS
6	C5	44	MET
6	C5	49	SER
6	C5	69	LEU
6	C5	89	ARG
6	C5	90	CYS
6	C5	92	GLU
6	C5	95	ARG
7	C6	9	ILE
7	C6	23	ILE
7	C6	31	MET
7	C6	43	MET
7	C6	47	ASN
7	C6	54	CYS
7	C6	58	SER
7	C6	62	CYS
7	C6	63	LYS
7	C6	77	PHE
7	C6	79	ILE
8	C7	9	LYS
8	C7	16	LEU
8	C7	24	LEU
8	C7	35	THR
8	C7	40	LEU
8	C7	47	ARG
8	C7	50	LYS
8	C7	64	THR
9	C8	37	ASP
9	C8	39	VAL
9	C8	51	GLU
9	C8	67	SER
9	C8	68	THR
9	C8	75	VAL
9	C8	76	ASN

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Mol	Chain	Res	Type
9	C8	78	SER
9	C8	84	MET
9	C8	94	GLU
9	C8	115	LYS
10	C9	74	LYS
10	C9	79	SER
10	C9	86	THR
10	C9	93	THR
10	C9	142	LYS
10	C9	143	ILE
12	CB	16	SER
12	CB	17	ASN
12	CB	23	ILE
12	CB	38	VAL
12	CB	54	LYS
12	CB	55	LEU
12	CB	63	VAL
12	CB	89	THR
12	CB	105	THR
12	CB	110	LEU
12	CB	134	SER
12	CB	136	VAL
12	CB	159	CYS
12	CB	164	THR
12	CB	169	MET
12	CB	194	MET
13	CC	12	LYS
13	CC	29	SER
13	CC	47	THR
13	CC	64	VAL
13	CC	79	ARG
13	CC	85	ASP
13	CC	105	VAL
13	CC	109	ASN
13	CC	137	CYS
13	CC	142	SER
13	CC	147	GLN
13	CC	162	CYS
13	CC	163	THR
13	CC	171	ILE
13	CC	201	LYS
13	CC	203	PHE

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Mol	Chain	Res	Type
13	CC	221	ILE
14	CD	3	LYS
14	CD	6	ILE
14	CD	8	THR
14	CD	9	SER
14	CD	16	ARG
14	CD	28	MET
14	CD	44	ARG
14	CD	47	MET
14	CD	57	ARG
14	CD	63	ASP
14	CD	68	ARG
14	CD	69	ARG
14	CD	79	ARG
14	CD	80	MET
14	CD	86	LEU
14	CD	99	LEU
14	CD	100	THR
14	CD	104	LEU
14	CD	105	MET
14	CD	107	ARG
14	CD	108	ARG
14	CD	112	ARG
14	CD	121	SER
14	CD	127	VAL
14	CD	129	ILE
14	CD	142	ASN
14	CD	147	MET
14	CD	149	ARG
14	CD	150	THR
14	CD	160	SER
14	CD	164	LEU
14	CD	171	ARG
15	CE	36	LEU
15	CE	43	SER
15	CE	44	SER
15	CE	52	SER
15	CE	56	LYS
15	CE	57	GLU
15	CE	83	GLN
15	CE	109	ASN
15	CE	157	GLN

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Mol	Chain	Res	Type
15	CE	159	ILE
15	CE	160	THR
15	CE	162	LYS
15	CE	165	SER
15	CE	168	ILE
15	CE	175	ARG
15	CE	194	VAL
15	CE	197	ILE
15	CE	199	THR
15	CE	205	THR
15	CE	208	ARG
15	CE	211	PHE
15	CE	219	LEU
15	CE	222	THR
15	CE	235	GLU
16	CF	49	LYS
16	CF	60	THR
16	CF	65	ASP
16	CF	66	GLU
17	CG	24	ILE
17	CG	28	CYS
17	CG	42	VAL
17	CG	53	VAL
17	CG	63	ILE
17	CG	66	ARG
17	CG	89	LYS
17	CG	92	PHE
17	CG	99	THR
17	CG	101	ARG
17	CG	104	LEU
17	CG	120	SER
17	CG	121	THR
17	CG	135	ASP
17	CG	139	MET
17	CG	156	SER
17	CG	160	SER
17	CG	162	ARG
17	CG	164	ILE
18	CH	3	LYS
18	CH	11	LEU
18	CH	12	LYS
18	CH	27	LEU

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Mol	Chain	Res	Type
18	CH	28	ARG
18	CH	30	VAL
18	CH	31	SER
18	CH	44	ASN
18	CH	47	ILE
18	CH	57	ARG
18	CH	65	LEU
18	CH	66	ILE
18	CH	70	ASN
18	CH	97	ARG
18	CH	101	ASN
18	CH	103	VAL
18	CH	106	THR
18	CH	107	THR
18	CH	121	THR
19	CI	7	GLN
19	CI	12	PHE
19	CI	15	LYS
19	CI	23	SER
19	CI	30	LEU
19	CI	33	VAL
19	CI	36	SER
19	CI	46	LEU
19	CI	66	ASP
19	CI	72	ARG
19	CI	78	SER
19	CI	87	LEU
19	CI	89	LYS
19	CI	126	MET
19	CI	142	LYS
20	CJ	24	THR
20	CJ	31	VAL
20	CJ	45	THR
20	CJ	51	LYS
20	CJ	68	SER
20	CJ	74	SER
20	CJ	76	THR
20	CJ	94	ASN
20	CJ	97	ASP
20	CJ	115	THR
21	CK	14	ILE
21	CK	21	VAL

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Mol	Chain	Res	Type
21	CK	40	THR
21	CK	55	ARG
21	CK	57	THR
21	CK	75	MET
21	CK	91	ASN
21	CK	97	LEU
21	CK	107	GLN
21	CK	122	SER
21	CK	128	ARG
21	CK	138	ASP
21	CK	139	SER
21	CK	150	ARG
22	CL	3	VAL
22	CL	7	ARG
22	CL	9	ILE
22	CL	10	ARG
22	CL	19	ARG
22	CL	34	LEU
22	CL	36	SER
22	CL	40	ASN
22	CL	52	VAL
22	CL	53	THR
22	CL	76	ARG
22	CL	80	LYS
22	CL	101	VAL
22	CL	109	GLN
22	CL	129	ILE
22	CL	130	SER
23	CM	15	HIS
23	CM	28	THR
23	CM	72	LEU
23	CM	87	ASN
23	CM	88	ARG
23	CM	94	ASP
23	CM	98	TYR
23	CM	99	GLN
23	CM	100	MET
23	CM	115	ARG
23	CM	123	ARG
23	CM	136	GLN
23	CM	138	THR
24	CN	3	ASN

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Mol	Chain	Res	Type
24	CN	32	LYS
24	CN	39	ARG
24	CN	40	ARG
24	CN	43	ARG
24	CN	49	ILE
25	CO	3	ARG
25	CO	7	LYS
25	CO	9	LYS
25	CO	11	LYS
25	CO	13	ILE
25	CO	14	SER
25	CO	26	LYS
25	CO	34	THR
25	CO	48	THR
25	CO	59	GLN
25	CO	66	ARG
25	CO	93	LEU
25	CO	104	LEU
25	CO	109	LYS
25	CO	118	ILE
25	CO	126	ARG
25	CO	127	LEU
26	CP	2	THR
26	CP	7	THR
26	CP	10	ILE
26	CP	21	LEU
26	CP	24	ASP
26	CP	51	ARG
26	CP	54	VAL
26	CP	77	GLN
26	CP	80	LEU
26	CP	88	ARG
26	CP	95	LEU
26	CP	102	ARG
26	CP	108	LEU
26	CP	110	ARG
26	CP	115	THR
26	CP	122	LYS
26	CP	144	LYS
27	CQ	6	GLN
27	CQ	12	GLN
27	CQ	32	ARG

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Mol	Chain	Res	Type
27	CQ	37	ILE
27	CQ	51	THR
27	CQ	61	SER
27	CQ	64	SER
27	CQ	77	THR
27	CQ	84	ILE
27	CQ	87	ARG
27	CQ	93	VAL
27	CQ	98	ARG
27	CQ	103	HIS
27	CQ	115	SER
27	CQ	117	LYS
27	CQ	128	ARG
27	CQ	133	THR
27	CQ	135	ARG
28	CR	20	HIS
28	CR	32	SER
28	CR	42	LEU
28	CR	48	ASP
28	CR	50	THR
28	CR	67	ILE
28	CR	73	THR
28	CR	76	ASN
28	CR	80	SER
28	CR	88	ASN
28	CR	106	ARG
28	CR	107	THR
28	CR	113	ARG
28	CR	117	HIS
28	CR	124	VAL
28	CR	126	PHE
28	CR	147	ILE
28	CR	161	HIS
28	CR	189	SER
28	CR	190	VAL
28	CR	208	THR
28	CR	219	LEU
28	CR	238	LEU
28	CR	246	THR
28	CR	264	ASN
28	CR	274	THR
28	CR	313	THR

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Mol	Chain	Res	Type
29	CS	11	PHE
29	CS	12	THR
29	CS	28	SER
29	CS	36	ASP
29	CS	49	ARG
29	CS	66	ARG
29	CS	83	THR
29	CS	84	HIS
29	CS	88	MET
29	CS	119	LYS
29	CS	127	THR
30	CT	9	THR
30	CT	45	VAL
30	CT	56	TRP
30	CT	60	ARG
30	CT	76	ILE
30	CT	77	SER
30	CT	89	ARG
30	CT	93	ARG
30	CT	105	ARG
30	CT	117	ILE
30	CT	130	ARG
30	CT	135	GLU
30	CT	155	LYS
31	CU	3	ASP
31	CU	20	ASN
31	CU	29	LEU
31	CU	34	ARG
31	CU	50	CYS
31	CU	51	ASP
31	CU	56	VAL
31	CU	71	VAL
31	CU	78	SER
31	CU	100	CYS
32	CV	6	THR
32	CV	8	THR
32	CV	35	LEU
32	CV	37	GLU
32	CV	44	LYS
32	CV	46	LEU
32	CV	60	ARG
32	CV	105	MET

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Mol	Chain	Res	Type
32	CV	119	SER
33	CW	11	ARG
33	CW	19	MET
33	CW	38	LEU
33	CW	41	SER
33	CW	42	LEU
33	CW	45	SER
33	CW	51	ARG
33	CW	82	LYS
33	CW	97	THR
33	CW	107	THR
33	CW	110	ARG
33	CW	115	SER
33	CW	122	LYS
33	CW	141	ILE
33	CW	142	VAL
33	CW	143	THR
33	CW	176	HIS
33	CW	183	CYS
33	CW	186	GLN
33	CW	189	ASN
33	CW	210	CYS
33	CW	214	ASP
33	CW	218	ASN
33	CW	229	VAL
33	CW	230	LEU
33	CW	232	GLN
33	CW	236	SER
33	CW	238	ILE
33	CW	242	SER
33	CW	247	ARG
33	CW	253	GLU
33	CW	256	ARG
34	CX	4	MET
34	CX	5	HIS
34	CX	8	LEU
34	CX	53	ASP
34	CX	59	SER
34	CX	62	TRP
35	CY	1	MET
35	CY	6	SER
35	CY	7	TYR

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Mol	Chain	Res	Type
35	CY	10	THR
35	CY	16	ILE
35	CY	32	MET
35	CY	43	ASP
35	CY	51	LYS
35	CY	78	SER
35	CY	97	VAL
35	CY	98	ARG
35	CY	106	MET
35	CY	118	VAL
35	CY	120	GLU
35	CY	137	ARG
35	CY	145	PHE
35	CY	155	LEU
35	CY	181	ARG
35	CY	186	GLU
35	CY	206	ASN
36	CZ	14	THR
36	CZ	17	ILE
36	CZ	25	ASP
36	CZ	31	LYS
36	CZ	47	VAL
36	CZ	61	THR
36	CZ	75	SER
1	D0	25	LEU
1	D0	43	ASN
1	D0	46	LEU
1	D0	61	CYS
1	D0	76	VAL
1	D0	91	LEU
1	D0	97	ASP
2	D1	6	THR
2	D1	10	ARG
2	D1	18	THR
2	D1	27	VAL
2	D1	32	ILE
2	D1	36	GLU
2	D1	41	LEU
2	D1	45	VAL
2	D1	49	CYS
2	D1	55	LEU
2	D1	58	MET

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Mol	Chain	Res	Type
3	D2	18	MET
3	D2	21	HIS
3	D2	34	SER
3	D2	36	THR
3	D2	49	ARG
3	D2	56	VAL
3	D2	67	ARG
3	D2	74	SER
3	D2	84	THR
3	D2	86	ILE
3	D2	89	VAL
3	D2	101	THR
3	D2	103	THR
3	D2	108	SER
3	D2	136	THR
3	D2	137	VAL
3	D2	140	ASN
3	D2	144	SER
3	D2	167	PHE
3	D2	173	LEU
3	D2	175	CYS
3	D2	176	ILE
3	D2	177	THR
3	D2	179	ARG
3	D2	183	SER
3	D2	203	LEU
4	D3	3	LEU
4	D3	7	HIS
4	D3	9	LYS
4	D3	13	THR
4	D3	39	SER
4	D3	41	ILE
4	D3	52	LYS
4	D3	54	ASN
4	D3	63	ILE
4	D3	88	LEU
4	D3	92	VAL
4	D3	101	GLU
4	D3	102	SER
4	D3	109	LYS
4	D3	113	ARG
4	D3	115	ARG

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Mol	Chain	Res	Type
4	D3	116	SER
4	D3	117	ARG
4	D3	132	LEU
4	D3	139	LYS
4	D3	142	ARG
4	D3	148	THR
4	D3	152	ARG
4	D3	153	ILE
4	D3	161	ASP
4	D3	175	LYS
4	D3	178	THR
4	D3	179	THR
4	D3	196	LYS
5	D4	28	ARG
5	D4	44	SER
5	D4	48	THR
5	D4	50	VAL
5	D4	53	SER
5	D4	63	ILE
5	D4	70	SER
5	D4	71	THR
5	D4	74	ASP
5	D4	80	ASN
5	D4	84	TRP
5	D4	91	ILE
5	D4	92	ASP
5	D4	98	ASN
5	D4	109	THR
5	D4	110	ARG
5	D4	111	ASP
5	D4	115	SER
5	D4	120	TRP
5	D4	127	ARG
5	D4	130	CYS
5	D4	132	THR
5	D4	146	THR
5	D4	155	SER
5	D4	157	THR
5	D4	159	THR
5	D4	207	THR
5	D4	217	THR
5	D4	218	ILE

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Mol	Chain	Res	Type
5	D4	230	ASP
6	D5	10	ARG
6	D5	18	THR
6	D5	21	VAL
6	D5	23	CYS
6	D5	30	VAL
6	D5	33	ASP
6	D5	37	LYS
6	D5	44	MET
6	D5	49	SER
6	D5	69	LEU
6	D5	89	ARG
6	D5	90	CYS
6	D5	92	GLU
6	D5	95	ARG
7	D6	9	ILE
7	D6	23	ILE
7	D6	31	MET
7	D6	43	MET
7	D6	47	ASN
7	D6	54	CYS
7	D6	58	SER
7	D6	62	CYS
7	D6	63	LYS
7	D6	77	PHE
7	D6	79	ILE
8	D7	9	LYS
8	D7	16	LEU
8	D7	24	LEU
8	D7	35	THR
8	D7	40	LEU
8	D7	47	ARG
8	D7	50	LYS
8	D7	64	THR
9	D8	37	ASP
9	D8	39	VAL
9	D8	51	GLU
9	D8	67	SER
9	D8	68	THR
9	D8	75	VAL
9	D8	76	ASN
9	D8	78	SER

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Mol	Chain	Res	Type
9	D8	84	MET
9	D8	94	GLU
9	D8	115	LYS
10	D9	74	LYS
10	D9	79	SER
10	D9	86	THR
10	D9	93	THR
10	D9	95	LEU
10	D9	98	LEU
10	D9	103	LEU
10	D9	143	ILE
10	D9	144	ASP
12	DB	16	SER
12	DB	17	ASN
12	DB	23	ILE
12	DB	38	VAL
12	DB	54	LYS
12	DB	55	LEU
12	DB	63	VAL
12	DB	89	THR
12	DB	105	THR
12	DB	110	LEU
12	DB	134	SER
12	DB	136	VAL
12	DB	159	CYS
12	DB	164	THR
12	DB	169	MET
12	DB	194	MET
13	DC	8	ILE
13	DC	12	LYS
13	DC	29	SER
13	DC	47	THR
13	DC	64	VAL
13	DC	79	ARG
13	DC	85	ASP
13	DC	105	VAL
13	DC	109	ASN
13	DC	137	CYS
13	DC	142	SER
13	DC	147	GLN
13	DC	162	CYS
13	DC	163	THR

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Mol	Chain	Res	Type
13	DC	171	ILE
13	DC	201	LYS
13	DC	203	PHE
13	DC	221	ILE
14	DD	3	LYS
14	DD	6	ILE
14	DD	8	THR
14	DD	9	SER
14	DD	16	ARG
14	DD	28	MET
14	DD	44	ARG
14	DD	47	MET
14	DD	57	ARG
14	DD	63	ASP
14	DD	68	ARG
14	DD	69	ARG
14	DD	79	ARG
14	DD	80	MET
14	DD	86	LEU
14	DD	91	ARG
14	DD	99	LEU
14	DD	100	THR
14	DD	104	LEU
14	DD	105	MET
14	DD	107	ARG
14	DD	108	ARG
14	DD	112	ARG
14	DD	121	SER
14	DD	127	VAL
14	DD	129	ILE
14	DD	142	ASN
14	DD	147	MET
14	DD	149	ARG
14	DD	150	THR
14	DD	160	SER
14	DD	164	LEU
14	DD	171	ARG
15	DE	36	LEU
15	DE	43	SER
15	DE	44	SER
15	DE	46	ASP
15	DE	52	SER

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Mol	Chain	Res	Type
15	DE	56	LYS
15	DE	57	GLU
15	DE	83	GLN
15	DE	109	ASN
15	DE	157	GLN
15	DE	159	ILE
15	DE	160	THR
15	DE	162	LYS
15	DE	165	SER
15	DE	168	ILE
15	DE	175	ARG
15	DE	194	VAL
15	DE	197	ILE
15	DE	199	THR
15	DE	205	THR
15	DE	208	ARG
15	DE	211	PHE
15	DE	219	LEU
15	DE	222	THR
15	DE	235	GLU
16	DF	49	LYS
16	DF	60	THR
16	DF	65	ASP
16	DF	66	GLU
17	DG	24	ILE
17	DG	28	CYS
17	DG	42	VAL
17	DG	53	VAL
17	DG	63	ILE
17	DG	66	ARG
17	DG	89	LYS
17	DG	99	THR
17	DG	101	ARG
17	DG	104	LEU
17	DG	120	SER
17	DG	121	THR
17	DG	135	ASP
17	DG	139	MET
17	DG	156	SER
17	DG	160	SER
17	DG	162	ARG
17	DG	164	ILE

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Mol	Chain	Res	Type
18	DH	3	LYS
18	DH	11	LEU
18	DH	12	LYS
18	DH	27	LEU
18	DH	28	ARG
18	DH	30	VAL
18	DH	31	SER
18	DH	44	ASN
18	DH	47	ILE
18	DH	57	ARG
18	DH	65	LEU
18	DH	66	ILE
18	DH	70	ASN
18	DH	97	ARG
18	DH	101	ASN
18	DH	103	VAL
18	DH	106	THR
18	DH	107	THR
18	DH	121	THR
19	DI	7	GLN
19	DI	12	PHE
19	DI	15	LYS
19	DI	23	SER
19	DI	30	LEU
19	DI	33	VAL
19	DI	36	SER
19	DI	46	LEU
19	DI	66	ASP
19	DI	72	ARG
19	DI	78	SER
19	DI	87	LEU
19	DI	89	LYS
19	DI	126	MET
19	DI	142	LYS
20	DJ	24	THR
20	DJ	31	VAL
20	DJ	45	THR
20	DJ	51	LYS
20	DJ	68	SER
20	DJ	74	SER
20	DJ	76	THR
20	DJ	94	ASN

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Mol	Chain	Res	Type
20	DJ	97	ASP
20	DJ	115	THR
21	DK	14	ILE
21	DK	21	VAL
21	DK	40	THR
21	DK	55	ARG
21	DK	57	THR
21	DK	62	VAL
21	DK	75	MET
21	DK	91	ASN
21	DK	97	LEU
21	DK	107	GLN
21	DK	122	SER
21	DK	128	ARG
21	DK	138	ASP
21	DK	139	SER
21	DK	150	ARG
22	DL	3	VAL
22	DL	7	ARG
22	DL	9	ILE
22	DL	10	ARG
22	DL	19	ARG
22	DL	34	LEU
22	DL	36	SER
22	DL	40	ASN
22	DL	52	VAL
22	DL	53	THR
22	DL	76	ARG
22	DL	80	LYS
22	DL	101	VAL
22	DL	109	GLN
22	DL	129	ILE
22	DL	130	SER
23	DM	15	HIS
23	DM	28	THR
23	DM	72	LEU
23	DM	87	ASN
23	DM	88	ARG
23	DM	94	ASP
23	DM	98	TYR
23	DM	99	GLN
23	DM	100	MET

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Mol	Chain	Res	Type
23	DM	115	ARG
23	DM	123	ARG
23	DM	136	GLN
23	DM	138	THR
24	DN	2	PRO
24	DN	3	ASN
24	DN	32	LYS
24	DN	39	ARG
24	DN	40	ARG
24	DN	43	ARG
24	DN	49	ILE
25	DO	3	ARG
25	DO	7	LYS
25	DO	9	LYS
25	DO	11	LYS
25	DO	13	ILE
25	DO	14	SER
25	DO	26	LYS
25	DO	34	THR
25	DO	48	THR
25	DO	59	GLN
25	DO	66	ARG
25	DO	93	LEU
25	DO	104	LEU
25	DO	109	LYS
25	DO	118	ILE
25	DO	126	ARG
25	DO	127	LEU
26	DP	2	THR
26	DP	7	THR
26	DP	10	ILE
26	DP	21	LEU
26	DP	24	ASP
26	DP	51	ARG
26	DP	54	VAL
26	DP	77	GLN
26	DP	80	LEU
26	DP	88	ARG
26	DP	95	LEU
26	DP	102	ARG
26	DP	108	LEU
26	DP	110	ARG

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Mol	Chain	Res	Type
26	DP	115	THR
26	DP	122	LYS
27	DQ	6	GLN
27	DQ	12	GLN
27	DQ	32	ARG
27	DQ	37	ILE
27	DQ	51	THR
27	DQ	61	SER
27	DQ	64	SER
27	DQ	77	THR
27	DQ	84	ILE
27	DQ	87	ARG
27	DQ	93	VAL
27	DQ	98	ARG
27	DQ	103	HIS
27	DQ	115	SER
27	DQ	117	LYS
27	DQ	128	ARG
27	DQ	133	THR
27	DQ	135	ARG
28	DR	20	HIS
28	DR	32	SER
28	DR	42	LEU
28	DR	48	ASP
28	DR	50	THR
28	DR	67	ILE
28	DR	73	THR
28	DR	76	ASN
28	DR	80	SER
28	DR	88	ASN
28	DR	106	ARG
28	DR	107	THR
28	DR	113	ARG
28	DR	117	HIS
28	DR	124	VAL
28	DR	126	PHE
28	DR	147	ILE
28	DR	161	HIS
28	DR	189	SER
28	DR	190	VAL
28	DR	208	THR
28	DR	219	LEU

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Mol	Chain	Res	Type
28	DR	238	LEU
28	DR	246	THR
28	DR	264	ASN
28	DR	274	THR
28	DR	313	THR
29	DS	11	PHE
29	DS	12	THR
29	DS	28	SER
29	DS	36	ASP
29	DS	49	ARG
29	DS	66	ARG
29	DS	83	THR
29	DS	84	HIS
29	DS	88	MET
29	DS	119	LYS
29	DS	127	THR
30	DT	9	THR
30	DT	45	VAL
30	DT	56	TRP
30	DT	60	ARG
30	DT	76	ILE
30	DT	77	SER
30	DT	89	ARG
30	DT	93	ARG
30	DT	105	ARG
30	DT	117	ILE
30	DT	130	ARG
30	DT	135	GLU
30	DT	155	LYS
31	DU	3	ASP
31	DU	20	ASN
31	DU	29	LEU
31	DU	34	ARG
31	DU	50	CYS
31	DU	51	ASP
31	DU	56	VAL
31	DU	71	VAL
31	DU	78	SER
31	DU	100	CYS
32	DV	6	THR
32	DV	8	THR
32	DV	35	LEU

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Mol	Chain	Res	Type
32	DV	37	GLU
32	DV	44	LYS
32	DV	46	LEU
32	DV	60	ARG
32	DV	105	MET
32	DV	119	SER
33	DW	11	ARG
33	DW	19	MET
33	DW	38	LEU
33	DW	41	SER
33	DW	42	LEU
33	DW	45	SER
33	DW	51	ARG
33	DW	82	LYS
33	DW	97	THR
33	DW	107	THR
33	DW	110	ARG
33	DW	115	SER
33	DW	122	LYS
33	DW	141	ILE
33	DW	142	VAL
33	DW	143	THR
33	DW	176	HIS
33	DW	183	CYS
33	DW	186	GLN
33	DW	189	ASN
33	DW	210	CYS
33	DW	214	ASP
33	DW	218	ASN
33	DW	229	VAL
33	DW	230	LEU
33	DW	232	GLN
33	DW	236	SER
33	DW	238	ILE
33	DW	242	SER
33	DW	247	ARG
33	DW	253	GLU
33	DW	256	ARG
34	DX	4	MET
34	DX	5	HIS
34	DX	8	LEU
34	DX	35	SER

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Mol	Chain	Res	Type
34	DX	53	ASP
34	DX	59	SER
34	DX	62	TRP
35	DY	1	MET
35	DY	6	SER
35	DY	7	TYR
35	DY	10	THR
35	DY	16	ILE
35	DY	32	MET
35	DY	43	ASP
35	DY	51	LYS
35	DY	78	SER
35	DY	97	VAL
35	DY	98	ARG
35	DY	106	MET
35	DY	118	VAL
35	DY	120	GLU
35	DY	137	ARG
35	DY	145	PHE
35	DY	155	LEU
35	DY	181	ARG
35	DY	186	GLU
35	DY	206	ASN
36	DZ	14	THR
36	DZ	17	ILE
36	DZ	22	GLU
36	DZ	25	ASP
36	DZ	31	LYS
36	DZ	47	VAL
36	DZ	61	THR
36	DZ	75	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (397) such sidechains are listed below:

Mol	Chain	Res	Type
1	A0	84	GLN
1	A0	101	ASN
3	A2	21	HIS
3	A2	124	HIS
3	A2	140	ASN
3	A2	146	HIS
3	A2	157	GLN

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Mol	Chain	Res	Type
3	A2	182	GLN
3	A2	204	GLN
4	A3	7	HIS
4	A3	30	HIS
4	A3	108	HIS
5	A4	78	ASN
6	A5	17	HIS
7	A6	42	GLN
8	A7	32	HIS
9	A8	41	HIS
9	A8	99	ASN
10	A9	88	HIS
10	A9	106	ASN
10	A9	132	HIS
12	AB	20	GLN
12	AB	42	HIS
12	AB	128	GLN
12	AB	137	ASN
12	AB	200	HIS
13	AC	69	HIS
13	AC	74	GLN
13	AC	109	ASN
13	AC	157	GLN
13	AC	168	ASN
14	AD	38	ASN
14	AD	120	ASN
15	AE	75	HIS
15	AE	109	ASN
15	AE	132	HIS
15	AE	157	GLN
15	AE	210	ASN
15	AE	237	ASN
16	AF	74	ASN
16	AF	99	HIS
17	AG	90	ASN
17	AG	143	ASN
17	AG	174	ASN
17	AG	199	ASN
18	AH	24	GLN
19	AI	17	ASN
20	AJ	94	ASN
21	AK	43	HIS

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Mol	Chain	Res	Type
22	AL	47	HIS
22	AL	98	ASN
23	AM	21	ASN
23	AM	67	ASN
23	AM	122	HIS
23	AM	136	GLN
24	AN	48	HIS
25	AO	5	GLN
25	AO	71	GLN
25	AO	103	HIS
25	AO	134	ASN
25	AO	144	ASN
26	AP	20	GLN
26	AP	27	HIS
26	AP	77	GLN
27	AQ	6	GLN
27	AQ	103	HIS
28	AR	10	GLN
28	AR	33	GLN
28	AR	76	ASN
28	AR	77	HIS
28	AR	117	HIS
28	AR	130	ASN
28	AR	146	ASN
28	AR	160	ASN
28	AR	161	HIS
28	AR	212	HIS
28	AR	309	ASN
30	AT	3	ASN
31	AU	9	ASN
31	AU	20	ASN
31	AU	54	ASN
31	AU	85	HIS
32	AV	29	HIS
32	AV	48	ASN
32	AV	56	HIS
32	AV	113	ASN
33	AW	8	HIS
33	AW	36	HIS
33	AW	53	ASN
33	AW	176	HIS
33	AW	199	HIS

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Mol	Chain	Res	Type
34	AX	63	HIS
35	AY	112	GLN
35	AY	139	ASN
35	AY	206	ASN
36	AZ	8	GLN
36	AZ	57	ASN
36	AZ	80	HIS
1	B0	84	GLN
1	B0	101	ASN
3	B2	21	HIS
3	B2	124	HIS
3	B2	140	ASN
3	B2	146	HIS
3	B2	157	GLN
3	B2	182	GLN
3	B2	204	GLN
4	B3	7	HIS
4	B3	30	HIS
5	B4	78	ASN
6	B5	17	HIS
7	B6	42	GLN
8	B7	32	HIS
9	B8	41	HIS
9	B8	99	ASN
10	B9	92	HIS
10	B9	106	ASN
10	B9	132	HIS
12	BB	20	GLN
12	BB	42	HIS
12	BB	128	GLN
12	BB	137	ASN
12	BB	200	HIS
13	BC	69	HIS
13	BC	74	GLN
13	BC	109	ASN
13	BC	157	GLN
13	BC	168	ASN
13	BC	182	GLN
14	BD	38	ASN
14	BD	120	ASN
15	BE	75	HIS
15	BE	109	ASN

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Mol	Chain	Res	Type
15	BE	132	HIS
15	BE	202	GLN
15	BE	210	ASN
15	BE	237	ASN
16	BF	74	ASN
17	BG	90	ASN
17	BG	143	ASN
17	BG	174	ASN
17	BG	199	ASN
18	BH	24	GLN
19	BI	17	ASN
19	BI	79	GLN
19	BI	102	ASN
20	BJ	94	ASN
21	BK	43	HIS
22	BL	47	HIS
22	BL	78	ASN
22	BL	98	ASN
23	BM	67	ASN
23	BM	97	ASN
23	BM	122	HIS
23	BM	136	GLN
24	BN	48	HIS
25	BO	5	GLN
25	BO	71	GLN
25	BO	103	HIS
25	BO	134	ASN
25	BO	144	ASN
26	BP	20	GLN
26	BP	27	HIS
26	BP	77	GLN
27	BQ	6	GLN
27	BQ	103	HIS
28	BR	10	GLN
28	BR	33	GLN
28	BR	76	ASN
28	BR	77	HIS
28	BR	117	HIS
28	BR	130	ASN
28	BR	146	ASN
28	BR	160	ASN
28	BR	161	HIS

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Mol	Chain	Res	Type
28	BR	212	HIS
28	BR	309	ASN
29	BS	84	HIS
30	BT	3	ASN
30	BT	30	ASN
31	BU	9	ASN
31	BU	20	ASN
31	BU	54	ASN
31	BU	85	HIS
32	BV	48	ASN
32	BV	56	HIS
32	BV	113	ASN
33	BW	8	HIS
33	BW	36	HIS
33	BW	53	ASN
33	BW	176	HIS
33	BW	199	HIS
34	BX	48	HIS
34	BX	63	HIS
35	BY	112	GLN
35	BY	139	ASN
35	BY	206	ASN
36	BZ	8	GLN
36	BZ	57	ASN
36	BZ	80	HIS
1	C0	84	GLN
1	C0	101	ASN
3	C2	21	HIS
3	C2	124	HIS
3	C2	140	ASN
3	C2	157	GLN
3	C2	182	GLN
3	C2	204	GLN
4	C3	7	HIS
4	C3	30	HIS
4	C3	108	HIS
4	C3	111	GLN
5	C4	78	ASN
6	C5	17	HIS
7	C6	42	GLN
8	C7	32	HIS
9	C8	99	ASN

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Mol	Chain	Res	Type
10	C9	88	HIS
10	C9	106	ASN
10	C9	132	HIS
12	CB	20	GLN
12	CB	42	HIS
12	CB	128	GLN
12	CB	137	ASN
12	CB	200	HIS
13	CC	69	HIS
13	CC	109	ASN
13	CC	157	GLN
13	CC	168	ASN
14	CD	38	ASN
14	CD	142	ASN
15	CE	75	HIS
15	CE	109	ASN
15	CE	132	HIS
15	CE	202	GLN
15	CE	210	ASN
15	CE	237	ASN
16	CF	74	ASN
17	CG	90	ASN
17	CG	143	ASN
17	CG	174	ASN
17	CG	199	ASN
18	CH	24	GLN
18	CH	56	HIS
19	CI	79	GLN
19	CI	102	ASN
20	CJ	94	ASN
21	CK	43	HIS
22	CL	47	HIS
22	CL	98	ASN
23	CM	21	ASN
23	CM	67	ASN
23	CM	122	HIS
23	CM	136	GLN
24	CN	48	HIS
25	CO	5	GLN
25	CO	71	GLN
25	CO	103	HIS
25	CO	134	ASN

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Mol	Chain	Res	Type
25	CO	144	ASN
26	CP	20	GLN
26	CP	27	HIS
26	CP	77	GLN
27	CQ	6	GLN
27	CQ	103	HIS
28	CR	10	GLN
28	CR	33	GLN
28	CR	76	ASN
28	CR	77	HIS
28	CR	117	HIS
28	CR	130	ASN
28	CR	146	ASN
28	CR	160	ASN
28	CR	161	HIS
28	CR	178	ASN
28	CR	212	HIS
28	CR	309	ASN
29	CS	84	HIS
30	CT	3	ASN
30	CT	30	ASN
31	CU	9	ASN
31	CU	20	ASN
31	CU	54	ASN
31	CU	85	HIS
32	CV	29	HIS
32	CV	48	ASN
32	CV	56	HIS
32	CV	113	ASN
33	CW	8	HIS
33	CW	36	HIS
33	CW	53	ASN
33	CW	176	HIS
33	CW	199	HIS
33	CW	204	GLN
34	CX	63	HIS
35	CY	112	GLN
35	CY	139	ASN
35	CY	206	ASN
36	CZ	8	GLN
36	CZ	57	ASN
36	CZ	80	HIS

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Mol	Chain	Res	Type
1	D0	84	GLN
1	D0	101	ASN
3	D2	21	HIS
3	D2	124	HIS
3	D2	140	ASN
3	D2	146	HIS
3	D2	157	GLN
3	D2	182	GLN
3	D2	204	GLN
4	D3	7	HIS
4	D3	30	HIS
4	D3	108	HIS
5	D4	78	ASN
6	D5	17	HIS
7	D6	42	GLN
8	D7	32	HIS
9	D8	41	HIS
9	D8	99	ASN
10	D9	106	ASN
12	DB	20	GLN
12	DB	42	HIS
12	DB	128	GLN
12	DB	137	ASN
12	DB	200	HIS
13	DC	69	HIS
13	DC	74	GLN
13	DC	109	ASN
13	DC	157	GLN
13	DC	168	ASN
14	DD	38	ASN
15	DE	75	HIS
15	DE	109	ASN
15	DE	132	HIS
15	DE	202	GLN
15	DE	210	ASN
15	DE	237	ASN
16	DF	74	ASN
16	DF	99	HIS
17	DG	52	GLN
17	DG	143	ASN
17	DG	174	ASN
17	DG	199	ASN

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Mol	Chain	Res	Type
18	DH	24	GLN
19	DI	17	ASN
19	DI	79	GLN
20	DJ	94	ASN
21	DK	43	HIS
22	DL	47	HIS
22	DL	78	ASN
22	DL	98	ASN
23	DM	67	ASN
23	DM	122	HIS
23	DM	136	GLN
24	DN	48	HIS
25	DO	5	GLN
25	DO	71	GLN
25	DO	103	HIS
25	DO	134	ASN
25	DO	144	ASN
26	DP	20	GLN
26	DP	27	HIS
26	DP	77	GLN
27	DQ	6	GLN
27	DQ	103	HIS
28	DR	10	GLN
28	DR	33	GLN
28	DR	76	ASN
28	DR	77	HIS
28	DR	117	HIS
28	DR	130	ASN
28	DR	146	ASN
28	DR	160	ASN
28	DR	161	HIS
28	DR	212	HIS
28	DR	309	ASN
29	DS	84	HIS
30	DT	3	ASN
30	DT	30	ASN
31	DU	9	ASN
31	DU	20	ASN
31	DU	54	ASN
32	DV	48	ASN
32	DV	56	HIS
32	DV	113	ASN

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Mol	Chain	Res	Type
33	DW	8	HIS
33	DW	36	HIS
33	DW	53	ASN
33	DW	176	HIS
33	DW	199	HIS
34	DX	63	HIS
35	DY	112	GLN
35	DY	139	ASN
35	DY	206	ASN
36	DZ	8	GLN
36	DZ	57	ASN
36	DZ	80	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
11	AA	1716/1753 (97%)	647 (37%)	149 (8%)
11	BA	1716/1753 (97%)	652 (37%)	148 (8%)
11	CA	1716/1753 (97%)	649 (37%)	149 (8%)
11	DA	1716/1753 (97%)	647 (37%)	149 (8%)
All	All	6864/7012 (97%)	2595 (37%)	595 (8%)

All (2595) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
11	AA	2	A
11	AA	3	C
11	AA	4	C
11	AA	8	U
11	AA	11	A
11	AA	12	U
11	AA	13	C
11	AA	14	C
11	AA	17	C
11	AA	22	U
11	AA	26	U
11	AA	33	G
11	AA	37	U
11	AA	40	A
11	AA	41	U
11	AA	44	U

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Mol	Chain	Res	Type
11	AA	45	A
11	AA	46	A
11	AA	55	U
11	AA	58	G
11	AA	59	C
11	AA	60	C
11	AA	62	G
11	AA	64	U
11	AA	65	C
11	AA	66	A
11	AA	71	U
11	AA	72	G
11	AA	73	A
11	AA	74	A
11	AA	75	C
11	AA	76	A
11	AA	77	G
11	AA	80	A
11	AA	83	C
11	AA	85	G
11	AA	99	A
11	AA	100	A
11	AA	101	A
11	AA	106	U
11	AA	107	U
11	AA	110	A
11	AA	112	U
11	AA	122	A
11	AA	123	A
11	AA	124	U
11	AA	125	U
11	AA	126	A
11	AA	132	U
11	AA	134	C
11	AA	135	A
11	AA	147	G
11	AA	149	U
11	AA	152	U
11	AA	153	U
11	AA	155	U
11	AA	157	G
11	AA	160	C

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Mol	Chain	Res	Type
11	AA	161	U
11	AA	163	A
11	AA	164	U
11	AA	165	A
11	AA	168	U
11	AA	169	G
11	AA	171	U
11	AA	172	U
11	AA	173	A
11	AA	174	A
11	AA	181	G
11	AA	182	U
11	AA	185	C
11	AA	186	C
11	AA	188	G
11	AA	196	A
11	AA	199	G
11	AA	208	A
11	AA	209	G
11	AA	210	A
11	AA	211	U
11	AA	212	A
11	AA	213	U
11	AA	214	U
11	AA	215	A
11	AA	217	A
11	AA	218	C
11	AA	219	C
11	AA	220	A
11	AA	222	U
11	AA	223	C
11	AA	226	A
11	AA	227	G
11	AA	228	C
11	AA	229	A
11	AA	230	A
11	AA	231	U
11	AA	232	G
11	AA	233	U
11	AA	234	G
11	AA	235	A
11	AA	237	U

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Mol	Chain	Res	Type
11	AA	238	G
11	AA	239	A
11	AA	240	G
11	AA	242	U
11	AA	245	A
11	AA	246	U
11	AA	254	A
11	AA	258	A
11	AA	262	G
11	AA	264	U
11	AA	265	C
11	AA	266	G
11	AA	269	G
11	AA	270	U
11	AA	271	U
11	AA	272	U
11	AA	273	A
11	AA	274	C
11	AA	278	G
11	AA	303	A
11	AA	304	U
11	AA	305	C
11	AA	306	A
11	AA	307	G
11	AA	311	U
11	AA	312	C
11	AA	313	G
11	AA	314	A
11	AA	319	A
11	AA	320	G
11	AA	324	A
11	AA	329	A
11	AA	341	G
11	AA	342	U
11	AA	343	C
11	AA	344	A
11	AA	350	A
11	AA	351	A
11	AA	352	C
11	AA	354	G
11	AA	359	U
11	AA	360	U

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Mol	Chain	Res	Type
11	AA	364	G
11	AA	368	G
11	AA	369	A
11	AA	371	U
11	AA	374	G
11	AA	378	A
11	AA	379	A
11	AA	381	G
11	AA	388	A
11	AA	391	A
11	AA	392	A
11	AA	393	C
11	AA	394	G
11	AA	402	C
11	AA	405	C
11	AA	407	A
11	AA	409	G
11	AA	410	G
11	AA	413	C
11	AA	414	G
11	AA	415	G
11	AA	416	C
11	AA	417	A
11	AA	418	G
11	AA	422	G
11	AA	426	G
11	AA	428	A
11	AA	429	A
11	AA	431	U
11	AA	436	C
11	AA	437	A
11	AA	440	C
11	AA	444	A
11	AA	445	U
11	AA	447	C
11	AA	448	A
11	AA	452	A
11	AA	453	G
11	AA	460	A
11	AA	461	C
11	AA	466	A
11	AA	467	A

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Mol	Chain	Res	Type
11	AA	469	A
11	AA	479	G
11	AA	481	A
11	AA	482	A
11	AA	483	C
11	AA	485	U
11	AA	487	C
11	AA	488	G
11	AA	491	U
11	AA	492	C
11	AA	493	U
11	AA	494	A
11	AA	496	G
11	AA	499	A
11	AA	500	U
11	AA	503	A
11	AA	504	A
11	AA	508	A
11	AA	511	A
11	AA	512	C
11	AA	518	A
11	AA	527	A
11	AA	529	C
11	AA	530	G
11	AA	531	A
11	AA	532	G
11	AA	533	G
11	AA	534	A
11	AA	535	A
11	AA	536	C
11	AA	538	A
11	AA	540	U
11	AA	541	G
11	AA	542	G
11	AA	544	G
11	AA	548	A
11	AA	550	G
11	AA	551	U
11	AA	552	C
11	AA	553	A
11	AA	554	U
11	AA	559	C

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Mol	Chain	Res	Type
11	AA	560	C
11	AA	570	G
11	AA	571	G
11	AA	572	U
11	AA	573	A
11	AA	574	A
11	AA	575	U
11	AA	577	C
11	AA	578	C
11	AA	586	A
11	AA	588	A
11	AA	598	A
11	AA	599	A
11	AA	605	U
11	AA	608	C
11	AA	613	A
11	AA	614	A
11	AA	615	A
11	AA	616	A
11	AA	617	A
11	AA	618	G
11	AA	628	G
11	AA	629	A
11	AA	633	U
11	AA	634	C
11	AA	635	U
11	AA	642	G
11	AA	648	U
11	AA	650	C
11	AA	651	G
11	AA	653	U
11	AA	655	C
11	AA	656	G
11	AA	657	U
11	AA	659	G
11	AA	661	G
11	AA	662	U
11	AA	666	A
11	AA	667	C
11	AA	668	U
11	AA	670	G
11	AA	671	A

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Mol	Chain	Res	Type
11	AA	674	U
11	AA	676	C
11	AA	677	G
11	AA	678	U
11	AA	679	U
11	AA	680	U
11	AA	681	G
11	AA	682	C
11	AA	722	A
11	AA	724	C
11	AA	727	U
11	AA	728	U
11	AA	729	U
11	AA	739	A
11	AA	743	U
11	AA	749	G
11	AA	750	U
11	AA	751	U
11	AA	758	A
11	AA	759	G
11	AA	762	U
11	AA	764	U
11	AA	765	A
11	AA	766	G
11	AA	772	A
11	AA	777	U
11	AA	781	C
11	AA	785	G
11	AA	786	A
11	AA	792	G
11	AA	793	G
11	AA	794	A
11	AA	795	A
11	AA	797	A
11	AA	798	G
11	AA	799	G
11	AA	800	A
11	AA	805	G
11	AA	808	C
11	AA	811	U
11	AA	812	U
11	AA	813	U

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Mol	Chain	Res	Type
11	AA	814	A
11	AA	815	U
11	AA	817	G
11	AA	819	U
11	AA	820	U
11	AA	821	C
11	AA	822	U
11	AA	823	U
11	AA	825	G
11	AA	834	A
11	AA	835	U
11	AA	840	A
11	AA	841	A
11	AA	842	U
11	AA	843	A
11	AA	846	G
11	AA	849	A
11	AA	850	G
11	AA	859	A
11	AA	860	U
11	AA	861	U
11	AA	862	A
11	AA	864	U
11	AA	873	G
11	AA	875	C
11	AA	876	A
11	AA	877	G
11	AA	882	G
11	AA	883	A
11	AA	884	A
11	AA	886	U
11	AA	887	U
11	AA	888	C
11	AA	889	U
11	AA	890	U
11	AA	891	G
11	AA	892	G
11	AA	894	U
11	AA	895	U
11	AA	903	G
11	AA	906	U
11	AA	911	A

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Mol	Chain	Res	Type
11	AA	913	U
11	AA	920	G
11	AA	936	U
11	AA	937	U
11	AA	938	U
11	AA	941	A
11	AA	942	U
11	AA	944	A
11	AA	948	A
11	AA	949	A
11	AA	953	C
11	AA	962	G
11	AA	966	A
11	AA	968	C
11	AA	970	A
11	AA	971	A
11	AA	974	C
11	AA	975	G
11	AA	976	A
11	AA	981	A
11	AA	983	A
11	AA	996	U
11	AA	997	A
11	AA	998	A
11	AA	999	C
11	AA	1002	U
11	AA	1003	A
11	AA	1004	A
11	AA	1006	C
11	AA	1007	U
11	AA	1008	A
11	AA	1014	A
11	AA	1017	C
11	AA	1020	G
11	AA	1025	G
11	AA	1028	G
11	AA	1035	A
11	AA	1036	U
11	AA	1038	U
11	AA	1046	G
11	AA	1055	G
11	AA	1063	A

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Mol	Chain	Res	Type
11	AA	1064	A
11	AA	1069	U
11	AA	1072	G
11	AA	1076	U
11	AA	1080	G
11	AA	1081	G
11	AA	1083	G
11	AA	1092	U
11	AA	1093	A
11	AA	1099	G
11	AA	1111	A
11	AA	1114	G
11	AA	1122	G
11	AA	1123	G
11	AA	1124	A
11	AA	1128	G
11	AA	1131	C
11	AA	1132	A
11	AA	1136	G
11	AA	1137	A
11	AA	1139	G
11	AA	1140	U
11	AA	1142	G
11	AA	1146	C
11	AA	1147	U
11	AA	1149	C
11	AA	1155	A
11	AA	1157	U
11	AA	1162	C
11	AA	1165	A
11	AA	1166	A
11	AA	1168	A
11	AA	1169	C
11	AA	1171	G
11	AA	1172	G
11	AA	1173	G
11	AA	1174	A
11	AA	1175	A
11	AA	1176	A
11	AA	1181	C
11	AA	1189	A
11	AA	1198	A

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Mol	Chain	Res	Type
11	AA	1199	G
11	AA	1200	G
11	AA	1201	G
11	AA	1202	A
11	AA	1203	U
11	AA	1210	A
11	AA	1213	G
11	AA	1215	G
11	AA	1216	A
11	AA	1217	G
11	AA	1218	C
11	AA	1219	U
11	AA	1220	C
11	AA	1223	U
11	AA	1224	C
11	AA	1227	G
11	AA	1228	A
11	AA	1229	U
11	AA	1232	U
11	AA	1233	U
11	AA	1235	G
11	AA	1236	G
11	AA	1237	G
11	AA	1242	G
11	AA	1245	G
11	AA	1246	C
11	AA	1247	A
11	AA	1248	U
11	AA	1249	G
11	AA	1256	C
11	AA	1257	U
11	AA	1258	U
11	AA	1264	G
11	AA	1266	G
11	AA	1269	G
11	AA	1270	U
11	AA	1273	U
11	AA	1278	C
11	AA	1279	U
11	AA	1281	G
11	AA	1286	U
11	AA	1287	U

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Mol	Chain	Res	Type
11	AA	1288	C
11	AA	1290	G
11	AA	1293	A
11	AA	1296	G
11	AA	1297	A
11	AA	1311	C
11	AA	1316	A
11	AA	1318	C
11	AA	1319	U
11	AA	1320	A
11	AA	1321	G
11	AA	1327	U
11	AA	1331	A
11	AA	1333	A
11	AA	1334	U
11	AA	1339	G
11	AA	1343	G
11	AA	1344	U
11	AA	1345	A
11	AA	1347	U
11	AA	1348	U
11	AA	1349	C
11	AA	1351	U
11	AA	1358	A
11	AA	1359	C
11	AA	1360	U
11	AA	1365	U
11	AA	1366	G
11	AA	1368	A
11	AA	1369	A
11	AA	1370	U
11	AA	1371	A
11	AA	1372	A
11	AA	1373	G
11	AA	1381	A
11	AA	1383	G
11	AA	1384	U
11	AA	1385	U
11	AA	1386	U
11	AA	1395	A
11	AA	1396	A
11	AA	1397	C

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Mol	Chain	Res	Type
11	AA	1398	A
11	AA	1399	G
11	AA	1400	G
11	AA	1402	C
11	AA	1403	U
11	AA	1404	G
11	AA	1406	G
11	AA	1407	A
11	AA	1408	U
11	AA	1415	A
11	AA	1416	G
11	AA	1417	A
11	AA	1419	G
11	AA	1421	G
11	AA	1424	C
11	AA	1425	G
11	AA	1428	C
11	AA	1429	G
11	AA	1430	C
11	AA	1431	A
11	AA	1432	C
11	AA	1435	G
11	AA	1437	G
11	AA	1442	A
11	AA	1444	U
11	AA	1445	G
11	AA	1448	U
11	AA	1449	G
11	AA	1452	G
11	AA	1453	C
11	AA	1458	A
11	AA	1461	A
11	AA	1462	U
11	AA	1463	U
11	AA	1464	U
11	AA	1466	C
11	AA	1467	U
11	AA	1469	U
11	AA	1477	A
11	AA	1478	G
11	AA	1479	G
11	AA	1480	U

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Mol	Chain	Res	Type
11	AA	1481	A
11	AA	1487	A
11	AA	1488	A
11	AA	1489	U
11	AA	1492	U
11	AA	1493	A
11	AA	1494	U
11	AA	1495	U
11	AA	1496	A
11	AA	1498	U
11	AA	1505	C
11	AA	1506	G
11	AA	1507	U
11	AA	1508	G
11	AA	1509	U
11	AA	1510	U
11	AA	1511	A
11	AA	1512	G
11	AA	1514	G
11	AA	1519	U
11	AA	1526	G
11	AA	1528	A
11	AA	1529	U
11	AA	1530	U
11	AA	1531	G
11	AA	1532	U
11	AA	1533	G
11	AA	1536	U
11	AA	1538	U
11	AA	1539	U
11	AA	1540	G
11	AA	1545	A
11	AA	1547	G
11	AA	1549	A
11	AA	1556	G
11	AA	1557	U
11	AA	1558	A
11	AA	1562	G
11	AA	1572	A
11	AA	1573	G
11	AA	1579	G
11	AA	1583	A

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Mol	Chain	Res	Type
11	AA	1590	C
11	AA	1597	G
11	AA	1603	A
11	AA	1604	C
11	AA	1606	C
11	AA	1607	A
11	AA	1608	C
11	AA	1609	C
11	AA	1610	G
11	AA	1623	A
11	AA	1627	A
11	AA	1635	U
11	AA	1652	A
11	AA	1659	C
11	AA	1660	A
11	AA	1661	G
11	AA	1662	C
11	AA	1663	A
11	AA	1666	G
11	AA	1668	U
11	AA	1681	G
11	AA	1685	A
11	AA	1710	G
11	AA	1714	U
11	AA	1717	C
11	AA	1718	A
11	AA	1719	A
11	AA	1720	G
11	AA	1721	G
11	AA	1722	U
11	AA	1724	U
11	AA	1731	G
11	AA	1733	G
11	AA	1735	A
11	AA	1736	C
11	AA	1745	G
11	AA	1746	G
11	AA	1747	A
11	AA	1748	U
11	AA	1749	C
11	AA	1750	A
11	AA	1752	U

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Mol	Chain	Res	Type
11	AA	1753	A
11	BA	2	A
11	BA	3	C
11	BA	4	C
11	BA	8	U
11	BA	11	A
11	BA	12	U
11	BA	13	C
11	BA	14	C
11	BA	17	C
11	BA	22	U
11	BA	26	U
11	BA	33	G
11	BA	37	U
11	BA	40	A
11	BA	41	U
11	BA	44	U
11	BA	46	A
11	BA	55	U
11	BA	58	G
11	BA	59	C
11	BA	60	C
11	BA	62	G
11	BA	64	U
11	BA	65	C
11	BA	66	A
11	BA	71	U
11	BA	72	G
11	BA	73	A
11	BA	74	A
11	BA	75	C
11	BA	76	A
11	BA	77	G
11	BA	80	A
11	BA	83	C
11	BA	85	G
11	BA	99	A
11	BA	100	A
11	BA	101	A
11	BA	106	U
11	BA	107	U
11	BA	110	A

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Mol	Chain	Res	Type
11	BA	112	U
11	BA	122	A
11	BA	123	A
11	BA	124	U
11	BA	125	U
11	BA	126	A
11	BA	132	U
11	BA	134	C
11	BA	135	A
11	BA	147	G
11	BA	149	U
11	BA	152	U
11	BA	153	U
11	BA	155	U
11	BA	157	G
11	BA	160	C
11	BA	161	U
11	BA	163	A
11	BA	164	U
11	BA	165	A
11	BA	168	U
11	BA	169	G
11	BA	171	U
11	BA	172	U
11	BA	173	A
11	BA	174	A
11	BA	181	G
11	BA	182	U
11	BA	185	C
11	BA	186	C
11	BA	188	G
11	BA	196	A
11	BA	199	G
11	BA	208	A
11	BA	210	A
11	BA	211	U
11	BA	212	A
11	BA	213	U
11	BA	214	U
11	BA	215	A
11	BA	216	G
11	BA	217	A

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Mol	Chain	Res	Type
11	BA	218	C
11	BA	219	C
11	BA	220	A
11	BA	222	U
11	BA	223	C
11	BA	226	A
11	BA	227	G
11	BA	228	C
11	BA	229	A
11	BA	230	A
11	BA	231	U
11	BA	232	G
11	BA	233	U
11	BA	234	G
11	BA	235	A
11	BA	237	U
11	BA	238	G
11	BA	239	A
11	BA	240	G
11	BA	242	U
11	BA	243	G
11	BA	246	U
11	BA	247	C
11	BA	254	A
11	BA	258	A
11	BA	262	G
11	BA	264	U
11	BA	265	C
11	BA	266	G
11	BA	269	G
11	BA	270	U
11	BA	271	U
11	BA	272	U
11	BA	273	A
11	BA	274	C
11	BA	278	G
11	BA	303	A
11	BA	304	U
11	BA	305	C
11	BA	306	A
11	BA	307	G
11	BA	311	U

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Mol	Chain	Res	Type
11	BA	312	C
11	BA	313	G
11	BA	314	A
11	BA	319	A
11	BA	320	G
11	BA	324	A
11	BA	329	A
11	BA	341	G
11	BA	342	U
11	BA	343	C
11	BA	344	A
11	BA	350	A
11	BA	351	A
11	BA	352	C
11	BA	354	G
11	BA	359	U
11	BA	360	U
11	BA	364	G
11	BA	368	G
11	BA	369	A
11	BA	371	U
11	BA	374	G
11	BA	378	A
11	BA	379	A
11	BA	380	G
11	BA	381	G
11	BA	388	A
11	BA	391	A
11	BA	392	A
11	BA	393	C
11	BA	394	G
11	BA	402	C
11	BA	405	C
11	BA	407	A
11	BA	409	G
11	BA	410	G
11	BA	413	C
11	BA	414	G
11	BA	415	G
11	BA	416	C
11	BA	417	A
11	BA	418	G

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Mol	Chain	Res	Type
11	BA	422	G
11	BA	426	G
11	BA	428	A
11	BA	429	A
11	BA	431	U
11	BA	436	C
11	BA	437	A
11	BA	440	C
11	BA	444	A
11	BA	445	U
11	BA	447	C
11	BA	448	A
11	BA	452	A
11	BA	453	G
11	BA	460	A
11	BA	461	C
11	BA	466	A
11	BA	467	A
11	BA	468	U
11	BA	469	A
11	BA	471	C
11	BA	474	G
11	BA	478	G
11	BA	479	G
11	BA	481	A
11	BA	482	A
11	BA	483	C
11	BA	485	U
11	BA	487	C
11	BA	488	G
11	BA	490	U
11	BA	492	C
11	BA	493	U
11	BA	494	A
11	BA	496	G
11	BA	498	C
11	BA	499	A
11	BA	500	U
11	BA	503	A
11	BA	504	A
11	BA	508	A
11	BA	511	A

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Mol	Chain	Res	Type
11	BA	512	C
11	BA	518	A
11	BA	527	A
11	BA	529	C
11	BA	530	G
11	BA	531	A
11	BA	532	G
11	BA	533	G
11	BA	534	A
11	BA	535	A
11	BA	536	C
11	BA	538	A
11	BA	540	U
11	BA	541	G
11	BA	542	G
11	BA	544	G
11	BA	548	A
11	BA	550	G
11	BA	551	U
11	BA	552	C
11	BA	553	A
11	BA	554	U
11	BA	559	C
11	BA	560	C
11	BA	570	G
11	BA	571	G
11	BA	572	U
11	BA	573	A
11	BA	574	A
11	BA	575	U
11	BA	577	C
11	BA	578	C
11	BA	586	A
11	BA	588	A
11	BA	598	A
11	BA	599	A
11	BA	605	U
11	BA	608	C
11	BA	613	A
11	BA	614	A
11	BA	615	A
11	BA	616	A

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Mol	Chain	Res	Type
11	BA	617	A
11	BA	618	G
11	BA	628	G
11	BA	629	A
11	BA	633	U
11	BA	634	C
11	BA	635	U
11	BA	642	G
11	BA	646	A
11	BA	647	U
11	BA	648	U
11	BA	650	C
11	BA	651	G
11	BA	653	U
11	BA	655	C
11	BA	656	G
11	BA	657	U
11	BA	661	G
11	BA	662	U
11	BA	665	A
11	BA	666	A
11	BA	670	G
11	BA	673	A
11	BA	674	U
11	BA	676	C
11	BA	677	G
11	BA	680	U
11	BA	681	G
11	BA	682	C
11	BA	720	U
11	BA	721	A
11	BA	722	A
11	BA	727	U
11	BA	728	U
11	BA	729	U
11	BA	739	A
11	BA	743	U
11	BA	749	G
11	BA	750	U
11	BA	751	U
11	BA	758	A
11	BA	759	G

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Mol	Chain	Res	Type
11	BA	762	U
11	BA	764	U
11	BA	765	A
11	BA	766	G
11	BA	772	A
11	BA	777	U
11	BA	781	C
11	BA	785	G
11	BA	786	A
11	BA	792	G
11	BA	794	A
11	BA	795	A
11	BA	797	A
11	BA	798	G
11	BA	799	G
11	BA	800	A
11	BA	805	G
11	BA	808	C
11	BA	811	U
11	BA	812	U
11	BA	813	U
11	BA	814	A
11	BA	815	U
11	BA	817	G
11	BA	819	U
11	BA	820	U
11	BA	821	C
11	BA	822	U
11	BA	823	U
11	BA	825	G
11	BA	834	A
11	BA	835	U
11	BA	840	A
11	BA	841	A
11	BA	842	U
11	BA	843	A
11	BA	846	G
11	BA	849	A
11	BA	850	G
11	BA	859	A
11	BA	860	U
11	BA	862	A

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Mol	Chain	Res	Type
11	BA	864	U
11	BA	873	G
11	BA	875	C
11	BA	876	A
11	BA	877	G
11	BA	882	G
11	BA	883	A
11	BA	884	A
11	BA	886	U
11	BA	887	U
11	BA	888	C
11	BA	889	U
11	BA	890	U
11	BA	891	G
11	BA	892	G
11	BA	894	U
11	BA	895	U
11	BA	903	G
11	BA	906	U
11	BA	907	A
11	BA	911	A
11	BA	913	U
11	BA	920	G
11	BA	936	U
11	BA	937	U
11	BA	938	U
11	BA	941	A
11	BA	942	U
11	BA	944	A
11	BA	948	A
11	BA	949	A
11	BA	953	C
11	BA	962	G
11	BA	966	A
11	BA	968	C
11	BA	970	A
11	BA	971	A
11	BA	974	C
11	BA	975	G
11	BA	976	A
11	BA	981	A
11	BA	983	A

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Mol	Chain	Res	Type
11	BA	996	U
11	BA	997	A
11	BA	998	A
11	BA	999	C
11	BA	1002	U
11	BA	1003	A
11	BA	1004	A
11	BA	1006	C
11	BA	1007	U
11	BA	1008	A
11	BA	1014	A
11	BA	1017	C
11	BA	1020	G
11	BA	1025	G
11	BA	1028	G
11	BA	1035	A
11	BA	1036	U
11	BA	1038	U
11	BA	1046	G
11	BA	1055	G
11	BA	1063	A
11	BA	1064	A
11	BA	1069	U
11	BA	1072	G
11	BA	1076	U
11	BA	1080	G
11	BA	1081	G
11	BA	1083	G
11	BA	1092	U
11	BA	1093	A
11	BA	1099	G
11	BA	1111	A
11	BA	1114	G
11	BA	1122	G
11	BA	1123	G
11	BA	1124	A
11	BA	1131	C
11	BA	1136	G
11	BA	1137	A
11	BA	1139	G
11	BA	1140	U
11	BA	1142	G

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Mol	Chain	Res	Type
11	BA	1146	C
11	BA	1147	U
11	BA	1149	C
11	BA	1155	A
11	BA	1157	U
11	BA	1162	C
11	BA	1165	A
11	BA	1166	A
11	BA	1168	A
11	BA	1169	C
11	BA	1171	G
11	BA	1172	G
11	BA	1173	G
11	BA	1174	A
11	BA	1175	A
11	BA	1176	A
11	BA	1181	C
11	BA	1189	A
11	BA	1198	A
11	BA	1199	G
11	BA	1200	G
11	BA	1201	G
11	BA	1202	A
11	BA	1203	U
11	BA	1210	A
11	BA	1213	G
11	BA	1215	G
11	BA	1216	A
11	BA	1217	G
11	BA	1218	C
11	BA	1219	U
11	BA	1220	C
11	BA	1223	U
11	BA	1224	C
11	BA	1227	G
11	BA	1228	A
11	BA	1229	U
11	BA	1232	U
11	BA	1233	U
11	BA	1235	G
11	BA	1236	G
11	BA	1237	G

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Mol	Chain	Res	Type
11	BA	1242	G
11	BA	1245	G
11	BA	1246	C
11	BA	1247	A
11	BA	1248	U
11	BA	1249	G
11	BA	1256	C
11	BA	1257	U
11	BA	1258	U
11	BA	1264	G
11	BA	1266	G
11	BA	1269	G
11	BA	1270	U
11	BA	1273	U
11	BA	1278	C
11	BA	1279	U
11	BA	1281	G
11	BA	1286	U
11	BA	1287	U
11	BA	1288	C
11	BA	1290	G
11	BA	1293	A
11	BA	1296	G
11	BA	1297	A
11	BA	1311	C
11	BA	1316	A
11	BA	1317	A
11	BA	1318	C
11	BA	1319	U
11	BA	1320	A
11	BA	1321	G
11	BA	1327	U
11	BA	1331	A
11	BA	1333	A
11	BA	1334	U
11	BA	1339	G
11	BA	1343	G
11	BA	1344	U
11	BA	1345	A
11	BA	1347	U
11	BA	1348	U
11	BA	1349	C

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Mol	Chain	Res	Type
11	BA	1351	U
11	BA	1358	A
11	BA	1359	C
11	BA	1360	U
11	BA	1365	U
11	BA	1366	G
11	BA	1368	A
11	BA	1369	A
11	BA	1370	U
11	BA	1371	A
11	BA	1372	A
11	BA	1373	G
11	BA	1381	A
11	BA	1383	G
11	BA	1384	U
11	BA	1385	U
11	BA	1386	U
11	BA	1395	A
11	BA	1396	A
11	BA	1397	C
11	BA	1398	A
11	BA	1399	G
11	BA	1400	G
11	BA	1402	C
11	BA	1403	U
11	BA	1404	G
11	BA	1406	G
11	BA	1407	A
11	BA	1408	U
11	BA	1415	A
11	BA	1416	G
11	BA	1417	A
11	BA	1419	G
11	BA	1421	G
11	BA	1424	C
11	BA	1425	G
11	BA	1428	C
11	BA	1429	G
11	BA	1430	C
11	BA	1431	A
11	BA	1432	C
11	BA	1435	G

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Mol	Chain	Res	Type
11	BA	1437	G
11	BA	1442	A
11	BA	1444	U
11	BA	1445	G
11	BA	1448	U
11	BA	1449	G
11	BA	1452	G
11	BA	1453	C
11	BA	1458	A
11	BA	1459	G
11	BA	1461	A
11	BA	1462	U
11	BA	1463	U
11	BA	1464	U
11	BA	1466	C
11	BA	1467	U
11	BA	1469	U
11	BA	1477	A
11	BA	1478	G
11	BA	1479	G
11	BA	1480	U
11	BA	1481	A
11	BA	1487	A
11	BA	1488	A
11	BA	1489	U
11	BA	1492	U
11	BA	1493	A
11	BA	1494	U
11	BA	1495	U
11	BA	1496	A
11	BA	1498	U
11	BA	1505	C
11	BA	1506	G
11	BA	1507	U
11	BA	1508	G
11	BA	1509	U
11	BA	1510	U
11	BA	1511	A
11	BA	1512	G
11	BA	1514	G
11	BA	1519	U
11	BA	1526	G

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Mol	Chain	Res	Type
11	BA	1528	A
11	BA	1529	U
11	BA	1530	U
11	BA	1531	G
11	BA	1532	U
11	BA	1533	G
11	BA	1536	U
11	BA	1538	U
11	BA	1539	U
11	BA	1540	G
11	BA	1545	A
11	BA	1547	G
11	BA	1549	A
11	BA	1556	G
11	BA	1557	U
11	BA	1558	A
11	BA	1562	G
11	BA	1572	A
11	BA	1573	G
11	BA	1579	G
11	BA	1583	A
11	BA	1590	C
11	BA	1597	G
11	BA	1603	A
11	BA	1604	C
11	BA	1606	C
11	BA	1607	A
11	BA	1608	C
11	BA	1609	C
11	BA	1610	G
11	BA	1623	A
11	BA	1627	A
11	BA	1635	U
11	BA	1649	U
11	BA	1652	A
11	BA	1659	C
11	BA	1660	A
11	BA	1661	G
11	BA	1662	C
11	BA	1663	A
11	BA	1666	G
11	BA	1668	U

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Mol	Chain	Res	Type
11	BA	1681	G
11	BA	1685	A
11	BA	1710	G
11	BA	1714	U
11	BA	1717	C
11	BA	1718	A
11	BA	1719	A
11	BA	1720	G
11	BA	1721	G
11	BA	1722	U
11	BA	1724	U
11	BA	1731	G
11	BA	1733	G
11	BA	1735	A
11	BA	1736	C
11	BA	1737	C
11	BA	1745	G
11	BA	1746	G
11	BA	1747	A
11	BA	1749	C
11	BA	1750	A
11	BA	1752	U
11	BA	1753	A
11	CA	2	A
11	CA	3	C
11	CA	4	C
11	CA	8	U
11	CA	11	A
11	CA	12	U
11	CA	13	C
11	CA	14	C
11	CA	17	C
11	CA	22	U
11	CA	26	U
11	CA	33	G
11	CA	37	U
11	CA	40	A
11	CA	41	U
11	CA	44	U
11	CA	46	A
11	CA	55	U
11	CA	58	G

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Mol	Chain	Res	Type
11	CA	59	C
11	CA	60	C
11	CA	62	G
11	CA	64	U
11	CA	65	C
11	CA	66	A
11	CA	71	U
11	CA	72	G
11	CA	73	A
11	CA	74	A
11	CA	75	C
11	CA	76	A
11	CA	77	G
11	CA	80	A
11	CA	83	C
11	CA	85	G
11	CA	99	A
11	CA	100	A
11	CA	101	A
11	CA	106	U
11	CA	107	U
11	CA	110	A
11	CA	112	U
11	CA	122	A
11	CA	123	A
11	CA	124	U
11	CA	125	U
11	CA	126	A
11	CA	132	U
11	CA	134	C
11	CA	135	A
11	CA	147	G
11	CA	149	U
11	CA	152	U
11	CA	153	U
11	CA	155	U
11	CA	157	G
11	CA	160	C
11	CA	161	U
11	CA	163	A
11	CA	164	U
11	CA	165	A

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Mol	Chain	Res	Type
11	CA	168	U
11	CA	169	G
11	CA	171	U
11	CA	172	U
11	CA	173	A
11	CA	174	A
11	CA	181	G
11	CA	182	U
11	CA	185	C
11	CA	186	C
11	CA	188	G
11	CA	196	A
11	CA	199	G
11	CA	208	A
11	CA	210	A
11	CA	211	U
11	CA	212	A
11	CA	213	U
11	CA	214	U
11	CA	215	A
11	CA	216	G
11	CA	217	A
11	CA	218	C
11	CA	219	C
11	CA	220	A
11	CA	222	U
11	CA	223	C
11	CA	226	A
11	CA	227	G
11	CA	228	C
11	CA	229	A
11	CA	230	A
11	CA	232	G
11	CA	233	U
11	CA	234	G
11	CA	235	A
11	CA	237	U
11	CA	238	G
11	CA	239	A
11	CA	240	G
11	CA	244	A
11	CA	245	A

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Mol	Chain	Res	Type
11	CA	246	U
11	CA	247	C
11	CA	254	A
11	CA	258	A
11	CA	262	G
11	CA	264	U
11	CA	265	C
11	CA	266	G
11	CA	269	G
11	CA	270	U
11	CA	271	U
11	CA	272	U
11	CA	273	A
11	CA	274	C
11	CA	278	G
11	CA	303	A
11	CA	304	U
11	CA	305	C
11	CA	306	A
11	CA	307	G
11	CA	311	U
11	CA	312	C
11	CA	313	G
11	CA	314	A
11	CA	319	A
11	CA	320	G
11	CA	324	A
11	CA	328	G
11	CA	329	A
11	CA	341	G
11	CA	342	U
11	CA	343	C
11	CA	344	A
11	CA	350	A
11	CA	351	A
11	CA	352	C
11	CA	354	G
11	CA	359	U
11	CA	360	U
11	CA	364	G
11	CA	368	G
11	CA	369	A

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Mol	Chain	Res	Type
11	CA	371	U
11	CA	374	G
11	CA	378	A
11	CA	379	A
11	CA	381	G
11	CA	388	A
11	CA	391	A
11	CA	392	A
11	CA	393	C
11	CA	394	G
11	CA	402	C
11	CA	405	C
11	CA	407	A
11	CA	409	G
11	CA	410	G
11	CA	413	C
11	CA	414	G
11	CA	415	G
11	CA	416	C
11	CA	417	A
11	CA	418	G
11	CA	422	G
11	CA	426	G
11	CA	428	A
11	CA	429	A
11	CA	431	U
11	CA	436	C
11	CA	437	A
11	CA	440	C
11	CA	444	A
11	CA	445	U
11	CA	447	C
11	CA	448	A
11	CA	452	A
11	CA	453	G
11	CA	460	A
11	CA	461	C
11	CA	466	A
11	CA	467	A
11	CA	471	C
11	CA	473	A
11	CA	479	G

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Mol	Chain	Res	Type
11	CA	482	A
11	CA	483	C
11	CA	485	U
11	CA	487	C
11	CA	488	G
11	CA	492	C
11	CA	493	U
11	CA	494	A
11	CA	496	G
11	CA	499	A
11	CA	500	U
11	CA	503	A
11	CA	504	A
11	CA	508	A
11	CA	511	A
11	CA	512	C
11	CA	518	A
11	CA	527	A
11	CA	529	C
11	CA	530	G
11	CA	531	A
11	CA	532	G
11	CA	533	G
11	CA	534	A
11	CA	535	A
11	CA	536	C
11	CA	538	A
11	CA	540	U
11	CA	541	G
11	CA	542	G
11	CA	544	G
11	CA	548	A
11	CA	550	G
11	CA	551	U
11	CA	552	C
11	CA	553	A
11	CA	554	U
11	CA	559	C
11	CA	560	C
11	CA	570	G
11	CA	571	G
11	CA	572	U

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Mol	Chain	Res	Type
11	CA	573	A
11	CA	574	A
11	CA	575	U
11	CA	577	C
11	CA	578	C
11	CA	586	A
11	CA	588	A
11	CA	598	A
11	CA	599	A
11	CA	605	U
11	CA	608	C
11	CA	613	A
11	CA	614	A
11	CA	615	A
11	CA	616	A
11	CA	617	A
11	CA	618	G
11	CA	619	C
11	CA	628	G
11	CA	629	A
11	CA	633	U
11	CA	634	C
11	CA	635	U
11	CA	642	G
11	CA	645	C
11	CA	647	U
11	CA	648	U
11	CA	650	C
11	CA	651	G
11	CA	655	C
11	CA	656	G
11	CA	657	U
11	CA	659	G
11	CA	661	G
11	CA	662	U
11	CA	665	A
11	CA	666	A
11	CA	668	U
11	CA	670	G
11	CA	673	A
11	CA	674	U
11	CA	676	C

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Mol	Chain	Res	Type
11	CA	677	G
11	CA	678	U
11	CA	679	U
11	CA	680	U
11	CA	681	G
11	CA	682	C
11	CA	727	U
11	CA	728	U
11	CA	729	U
11	CA	739	A
11	CA	743	U
11	CA	749	G
11	CA	750	U
11	CA	751	U
11	CA	758	A
11	CA	759	G
11	CA	762	U
11	CA	764	U
11	CA	765	A
11	CA	766	G
11	CA	772	A
11	CA	777	U
11	CA	781	C
11	CA	785	G
11	CA	786	A
11	CA	792	G
11	CA	793	G
11	CA	794	A
11	CA	795	A
11	CA	797	A
11	CA	798	G
11	CA	799	G
11	CA	800	A
11	CA	805	G
11	CA	808	C
11	CA	811	U
11	CA	812	U
11	CA	813	U
11	CA	814	A
11	CA	815	U
11	CA	817	G
11	CA	819	U

Continued on next page...

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Mol	Chain	Res	Type
11	CA	820	U
11	CA	821	C
11	CA	822	U
11	CA	823	U
11	CA	825	G
11	CA	834	A
11	CA	835	U
11	CA	840	A
11	CA	841	A
11	CA	842	U
11	CA	843	A
11	CA	846	G
11	CA	849	A
11	CA	850	G
11	CA	859	A
11	CA	860	U
11	CA	862	A
11	CA	864	U
11	CA	873	G
11	CA	875	C
11	CA	876	A
11	CA	877	G
11	CA	882	G
11	CA	883	A
11	CA	884	A
11	CA	886	U
11	CA	887	U
11	CA	888	C
11	CA	889	U
11	CA	890	U
11	CA	891	G
11	CA	892	G
11	CA	894	U
11	CA	895	U
11	CA	903	G
11	CA	906	U
11	CA	911	A
11	CA	913	U
11	CA	920	G
11	CA	936	U
11	CA	937	U
11	CA	938	U

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Mol	Chain	Res	Type
11	CA	941	A
11	CA	942	U
11	CA	944	A
11	CA	948	A
11	CA	949	A
11	CA	953	C
11	CA	962	G
11	CA	966	A
11	CA	968	C
11	CA	970	A
11	CA	971	A
11	CA	974	C
11	CA	975	G
11	CA	976	A
11	CA	981	A
11	CA	983	A
11	CA	996	U
11	CA	997	A
11	CA	998	A
11	CA	999	C
11	CA	1002	U
11	CA	1003	A
11	CA	1004	A
11	CA	1006	C
11	CA	1007	U
11	CA	1008	A
11	CA	1014	A
11	CA	1017	C
11	CA	1020	G
11	CA	1025	G
11	CA	1028	G
11	CA	1035	A
11	CA	1036	U
11	CA	1038	U
11	CA	1046	G
11	CA	1055	G
11	CA	1063	A
11	CA	1064	A
11	CA	1069	U
11	CA	1072	G
11	CA	1076	U
11	CA	1080	G

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Mol	Chain	Res	Type
11	CA	1081	G
11	CA	1083	G
11	CA	1092	U
11	CA	1093	A
11	CA	1099	G
11	CA	1111	A
11	CA	1114	G
11	CA	1122	G
11	CA	1123	G
11	CA	1124	A
11	CA	1131	C
11	CA	1132	A
11	CA	1136	G
11	CA	1137	A
11	CA	1139	G
11	CA	1140	U
11	CA	1142	G
11	CA	1146	C
11	CA	1147	U
11	CA	1149	C
11	CA	1155	A
11	CA	1157	U
11	CA	1162	C
11	CA	1165	A
11	CA	1166	A
11	CA	1168	A
11	CA	1169	C
11	CA	1171	G
11	CA	1172	G
11	CA	1173	G
11	CA	1174	A
11	CA	1175	A
11	CA	1176	A
11	CA	1181	C
11	CA	1189	A
11	CA	1198	A
11	CA	1199	G
11	CA	1200	G
11	CA	1201	G
11	CA	1202	A
11	CA	1203	U
11	CA	1210	A

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Mol	Chain	Res	Type
11	CA	1213	G
11	CA	1215	G
11	CA	1216	A
11	CA	1217	G
11	CA	1218	C
11	CA	1219	U
11	CA	1220	C
11	CA	1223	U
11	CA	1224	C
11	CA	1227	G
11	CA	1228	A
11	CA	1229	U
11	CA	1232	U
11	CA	1233	U
11	CA	1235	G
11	CA	1236	G
11	CA	1237	G
11	CA	1242	G
11	CA	1245	G
11	CA	1246	C
11	CA	1247	A
11	CA	1248	U
11	CA	1249	G
11	CA	1256	C
11	CA	1257	U
11	CA	1258	U
11	CA	1264	G
11	CA	1266	G
11	CA	1269	G
11	CA	1270	U
11	CA	1273	U
11	CA	1278	C
11	CA	1279	U
11	CA	1281	G
11	CA	1286	U
11	CA	1287	U
11	CA	1288	C
11	CA	1290	G
11	CA	1293	A
11	CA	1296	G
11	CA	1297	A
11	CA	1304	C

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Mol	Chain	Res	Type
11	CA	1311	C
11	CA	1316	A
11	CA	1318	C
11	CA	1319	U
11	CA	1320	A
11	CA	1321	G
11	CA	1327	U
11	CA	1331	A
11	CA	1333	A
11	CA	1334	U
11	CA	1339	G
11	CA	1343	G
11	CA	1344	U
11	CA	1345	A
11	CA	1347	U
11	CA	1348	U
11	CA	1349	C
11	CA	1351	U
11	CA	1358	A
11	CA	1359	C
11	CA	1360	U
11	CA	1365	U
11	CA	1366	G
11	CA	1368	A
11	CA	1369	A
11	CA	1370	U
11	CA	1371	A
11	CA	1372	A
11	CA	1373	G
11	CA	1381	A
11	CA	1383	G
11	CA	1384	U
11	CA	1385	U
11	CA	1386	U
11	CA	1392	A
11	CA	1395	A
11	CA	1396	A
11	CA	1397	C
11	CA	1398	A
11	CA	1399	G
11	CA	1400	G
11	CA	1402	C

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Mol	Chain	Res	Type
11	CA	1403	U
11	CA	1404	G
11	CA	1406	G
11	CA	1407	A
11	CA	1408	U
11	CA	1415	A
11	CA	1416	G
11	CA	1417	A
11	CA	1419	G
11	CA	1421	G
11	CA	1424	C
11	CA	1425	G
11	CA	1428	C
11	CA	1429	G
11	CA	1430	C
11	CA	1431	A
11	CA	1432	C
11	CA	1435	G
11	CA	1437	G
11	CA	1442	A
11	CA	1444	U
11	CA	1445	G
11	CA	1448	U
11	CA	1449	G
11	CA	1452	G
11	CA	1453	C
11	CA	1458	A
11	CA	1461	A
11	CA	1462	U
11	CA	1463	U
11	CA	1464	U
11	CA	1466	C
11	CA	1467	U
11	CA	1469	U
11	CA	1477	A
11	CA	1478	G
11	CA	1479	G
11	CA	1480	U
11	CA	1481	A
11	CA	1487	A
11	CA	1488	A
11	CA	1489	U

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Mol	Chain	Res	Type
11	CA	1492	U
11	CA	1493	A
11	CA	1494	U
11	CA	1495	U
11	CA	1496	A
11	CA	1498	U
11	CA	1505	C
11	CA	1506	G
11	CA	1507	U
11	CA	1508	G
11	CA	1509	U
11	CA	1510	U
11	CA	1511	A
11	CA	1512	G
11	CA	1514	G
11	CA	1519	U
11	CA	1526	G
11	CA	1528	A
11	CA	1529	U
11	CA	1530	U
11	CA	1531	G
11	CA	1532	U
11	CA	1533	G
11	CA	1536	U
11	CA	1538	U
11	CA	1539	U
11	CA	1540	G
11	CA	1545	A
11	CA	1547	G
11	CA	1549	A
11	CA	1556	G
11	CA	1557	U
11	CA	1558	A
11	CA	1562	G
11	CA	1572	A
11	CA	1573	G
11	CA	1579	G
11	CA	1583	A
11	CA	1590	C
11	CA	1591	C
11	CA	1597	G
11	CA	1603	A

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Mol	Chain	Res	Type
11	CA	1604	C
11	CA	1606	C
11	CA	1607	A
11	CA	1608	C
11	CA	1609	C
11	CA	1610	G
11	CA	1623	A
11	CA	1627	A
11	CA	1635	U
11	CA	1649	U
11	CA	1652	A
11	CA	1659	C
11	CA	1660	A
11	CA	1661	G
11	CA	1662	C
11	CA	1663	A
11	CA	1666	G
11	CA	1668	U
11	CA	1681	G
11	CA	1685	A
11	CA	1710	G
11	CA	1714	U
11	CA	1717	C
11	CA	1718	A
11	CA	1719	A
11	CA	1720	G
11	CA	1721	G
11	CA	1722	U
11	CA	1724	U
11	CA	1731	G
11	CA	1733	G
11	CA	1735	A
11	CA	1736	C
11	CA	1737	C
11	CA	1745	G
11	CA	1746	G
11	CA	1747	A
11	CA	1748	U
11	CA	1749	C
11	CA	1750	A
11	CA	1752	U
11	CA	1753	A

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Mol	Chain	Res	Type
11	DA	2	A
11	DA	3	C
11	DA	4	C
11	DA	8	U
11	DA	11	A
11	DA	12	U
11	DA	13	C
11	DA	14	C
11	DA	17	C
11	DA	22	U
11	DA	26	U
11	DA	33	G
11	DA	37	U
11	DA	40	A
11	DA	41	U
11	DA	44	U
11	DA	45	A
11	DA	46	A
11	DA	55	U
11	DA	58	G
11	DA	59	C
11	DA	60	C
11	DA	62	G
11	DA	64	U
11	DA	65	C
11	DA	66	A
11	DA	71	U
11	DA	72	G
11	DA	73	A
11	DA	74	A
11	DA	75	C
11	DA	76	A
11	DA	77	G
11	DA	80	A
11	DA	83	C
11	DA	85	G
11	DA	99	A
11	DA	100	A
11	DA	101	A
11	DA	106	U
11	DA	107	U
11	DA	110	A

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Mol	Chain	Res	Type
11	DA	112	U
11	DA	122	A
11	DA	123	A
11	DA	124	U
11	DA	125	U
11	DA	126	A
11	DA	132	U
11	DA	134	C
11	DA	135	A
11	DA	147	G
11	DA	149	U
11	DA	152	U
11	DA	153	U
11	DA	155	U
11	DA	157	G
11	DA	160	C
11	DA	161	U
11	DA	163	A
11	DA	164	U
11	DA	165	A
11	DA	168	U
11	DA	169	G
11	DA	171	U
11	DA	172	U
11	DA	173	A
11	DA	174	A
11	DA	181	G
11	DA	182	U
11	DA	185	C
11	DA	186	C
11	DA	188	G
11	DA	196	A
11	DA	199	G
11	DA	208	A
11	DA	209	G
11	DA	210	A
11	DA	211	U
11	DA	212	A
11	DA	213	U
11	DA	214	U
11	DA	215	A
11	DA	216	G

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Mol	Chain	Res	Type
11	DA	217	A
11	DA	218	C
11	DA	219	C
11	DA	220	A
11	DA	222	U
11	DA	223	C
11	DA	226	A
11	DA	227	G
11	DA	229	A
11	DA	230	A
11	DA	231	U
11	DA	232	G
11	DA	233	U
11	DA	234	G
11	DA	235	A
11	DA	237	U
11	DA	238	G
11	DA	239	A
11	DA	240	G
11	DA	246	U
11	DA	247	C
11	DA	254	A
11	DA	258	A
11	DA	262	G
11	DA	264	U
11	DA	265	C
11	DA	266	G
11	DA	269	G
11	DA	270	U
11	DA	271	U
11	DA	272	U
11	DA	273	A
11	DA	274	C
11	DA	278	G
11	DA	303	A
11	DA	304	U
11	DA	305	C
11	DA	306	A
11	DA	307	G
11	DA	311	U
11	DA	312	C
11	DA	313	G

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Mol	Chain	Res	Type
11	DA	314	A
11	DA	319	A
11	DA	320	G
11	DA	324	A
11	DA	329	A
11	DA	341	G
11	DA	342	U
11	DA	343	C
11	DA	344	A
11	DA	350	A
11	DA	351	A
11	DA	352	C
11	DA	354	G
11	DA	359	U
11	DA	360	U
11	DA	364	G
11	DA	368	G
11	DA	369	A
11	DA	374	G
11	DA	378	A
11	DA	379	A
11	DA	381	G
11	DA	388	A
11	DA	391	A
11	DA	392	A
11	DA	393	C
11	DA	394	G
11	DA	402	C
11	DA	405	C
11	DA	407	A
11	DA	409	G
11	DA	410	G
11	DA	413	C
11	DA	414	G
11	DA	415	G
11	DA	416	C
11	DA	417	A
11	DA	418	G
11	DA	422	G
11	DA	426	G
11	DA	428	A
11	DA	429	A

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Mol	Chain	Res	Type
11	DA	431	U
11	DA	436	C
11	DA	437	A
11	DA	440	C
11	DA	444	A
11	DA	445	U
11	DA	447	C
11	DA	448	A
11	DA	452	A
11	DA	453	G
11	DA	460	A
11	DA	461	C
11	DA	466	A
11	DA	467	A
11	DA	469	A
11	DA	476	U
11	DA	479	G
11	DA	481	A
11	DA	482	A
11	DA	483	C
11	DA	485	U
11	DA	487	C
11	DA	488	G
11	DA	492	C
11	DA	493	U
11	DA	494	A
11	DA	496	G
11	DA	499	A
11	DA	500	U
11	DA	503	A
11	DA	504	A
11	DA	508	A
11	DA	511	A
11	DA	512	C
11	DA	518	A
11	DA	527	A
11	DA	529	C
11	DA	530	G
11	DA	531	A
11	DA	532	G
11	DA	533	G
11	DA	534	A

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Mol	Chain	Res	Type
11	DA	535	A
11	DA	536	C
11	DA	538	A
11	DA	540	U
11	DA	541	G
11	DA	542	G
11	DA	544	G
11	DA	548	A
11	DA	550	G
11	DA	551	U
11	DA	552	C
11	DA	553	A
11	DA	554	U
11	DA	559	C
11	DA	560	C
11	DA	570	G
11	DA	571	G
11	DA	572	U
11	DA	573	A
11	DA	574	A
11	DA	575	U
11	DA	577	C
11	DA	578	C
11	DA	586	A
11	DA	588	A
11	DA	598	A
11	DA	599	A
11	DA	605	U
11	DA	608	C
11	DA	613	A
11	DA	614	A
11	DA	615	A
11	DA	616	A
11	DA	617	A
11	DA	618	G
11	DA	619	C
11	DA	628	G
11	DA	629	A
11	DA	633	U
11	DA	634	C
11	DA	635	U
11	DA	642	G

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Mol	Chain	Res	Type
11	DA	648	U
11	DA	649	U
11	DA	650	C
11	DA	653	U
11	DA	655	C
11	DA	656	G
11	DA	657	U
11	DA	661	G
11	DA	662	U
11	DA	665	A
11	DA	666	A
11	DA	670	G
11	DA	673	A
11	DA	674	U
11	DA	676	C
11	DA	677	G
11	DA	678	U
11	DA	680	U
11	DA	681	G
11	DA	682	C
11	DA	721	A
11	DA	722	A
11	DA	727	U
11	DA	728	U
11	DA	729	U
11	DA	739	A
11	DA	743	U
11	DA	749	G
11	DA	750	U
11	DA	751	U
11	DA	758	A
11	DA	759	G
11	DA	762	U
11	DA	764	U
11	DA	765	A
11	DA	766	G
11	DA	772	A
11	DA	777	U
11	DA	781	C
11	DA	785	G
11	DA	786	A
11	DA	792	G

Continued on next page...

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Mol	Chain	Res	Type
11	DA	794	A
11	DA	795	A
11	DA	797	A
11	DA	798	G
11	DA	799	G
11	DA	800	A
11	DA	805	G
11	DA	808	C
11	DA	811	U
11	DA	812	U
11	DA	813	U
11	DA	814	A
11	DA	815	U
11	DA	817	G
11	DA	819	U
11	DA	820	U
11	DA	821	C
11	DA	822	U
11	DA	823	U
11	DA	825	G
11	DA	834	A
11	DA	835	U
11	DA	840	A
11	DA	841	A
11	DA	842	U
11	DA	843	A
11	DA	846	G
11	DA	849	A
11	DA	850	G
11	DA	859	A
11	DA	860	U
11	DA	861	U
11	DA	862	A
11	DA	864	U
11	DA	873	G
11	DA	875	C
11	DA	876	A
11	DA	877	G
11	DA	882	G
11	DA	883	A
11	DA	884	A
11	DA	886	U

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Mol	Chain	Res	Type
11	DA	887	U
11	DA	888	C
11	DA	889	U
11	DA	890	U
11	DA	891	G
11	DA	892	G
11	DA	894	U
11	DA	895	U
11	DA	903	G
11	DA	906	U
11	DA	907	A
11	DA	911	A
11	DA	913	U
11	DA	920	G
11	DA	936	U
11	DA	937	U
11	DA	938	U
11	DA	941	A
11	DA	942	U
11	DA	944	A
11	DA	948	A
11	DA	949	A
11	DA	953	C
11	DA	962	G
11	DA	966	A
11	DA	968	C
11	DA	970	A
11	DA	971	A
11	DA	974	C
11	DA	975	G
11	DA	976	A
11	DA	981	A
11	DA	983	A
11	DA	996	U
11	DA	997	A
11	DA	998	A
11	DA	999	C
11	DA	1002	U
11	DA	1003	A
11	DA	1004	A
11	DA	1006	C
11	DA	1007	U

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Mol	Chain	Res	Type
11	DA	1008	A
11	DA	1014	A
11	DA	1017	C
11	DA	1020	G
11	DA	1025	G
11	DA	1028	G
11	DA	1035	A
11	DA	1036	U
11	DA	1038	U
11	DA	1042	G
11	DA	1046	G
11	DA	1055	G
11	DA	1063	A
11	DA	1064	A
11	DA	1069	U
11	DA	1072	G
11	DA	1076	U
11	DA	1080	G
11	DA	1081	G
11	DA	1083	G
11	DA	1092	U
11	DA	1093	A
11	DA	1099	G
11	DA	1111	A
11	DA	1114	G
11	DA	1122	G
11	DA	1123	G
11	DA	1124	A
11	DA	1131	C
11	DA	1136	G
11	DA	1137	A
11	DA	1139	G
11	DA	1140	U
11	DA	1142	G
11	DA	1146	C
11	DA	1147	U
11	DA	1149	C
11	DA	1155	A
11	DA	1157	U
11	DA	1162	C
11	DA	1165	A
11	DA	1166	A

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Mol	Chain	Res	Type
11	DA	1168	A
11	DA	1169	C
11	DA	1171	G
11	DA	1172	G
11	DA	1173	G
11	DA	1174	A
11	DA	1175	A
11	DA	1176	A
11	DA	1181	C
11	DA	1189	A
11	DA	1198	A
11	DA	1199	G
11	DA	1200	G
11	DA	1201	G
11	DA	1202	A
11	DA	1203	U
11	DA	1205	G
11	DA	1210	A
11	DA	1213	G
11	DA	1215	G
11	DA	1216	A
11	DA	1217	G
11	DA	1218	C
11	DA	1219	U
11	DA	1220	C
11	DA	1223	U
11	DA	1224	C
11	DA	1227	G
11	DA	1228	A
11	DA	1229	U
11	DA	1232	U
11	DA	1233	U
11	DA	1235	G
11	DA	1236	G
11	DA	1237	G
11	DA	1242	G
11	DA	1245	G
11	DA	1246	C
11	DA	1247	A
11	DA	1248	U
11	DA	1249	G
11	DA	1256	C

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Mol	Chain	Res	Type
11	DA	1257	U
11	DA	1258	U
11	DA	1264	G
11	DA	1266	G
11	DA	1269	G
11	DA	1270	U
11	DA	1273	U
11	DA	1278	C
11	DA	1279	U
11	DA	1281	G
11	DA	1286	U
11	DA	1287	U
11	DA	1288	C
11	DA	1290	G
11	DA	1293	A
11	DA	1296	G
11	DA	1297	A
11	DA	1311	C
11	DA	1316	A
11	DA	1318	C
11	DA	1319	U
11	DA	1320	A
11	DA	1321	G
11	DA	1327	U
11	DA	1331	A
11	DA	1333	A
11	DA	1334	U
11	DA	1339	G
11	DA	1343	G
11	DA	1344	U
11	DA	1345	A
11	DA	1347	U
11	DA	1348	U
11	DA	1349	C
11	DA	1351	U
11	DA	1358	A
11	DA	1359	C
11	DA	1360	U
11	DA	1365	U
11	DA	1366	G
11	DA	1368	A
11	DA	1369	A

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Mol	Chain	Res	Type
11	DA	1370	U
11	DA	1371	A
11	DA	1372	A
11	DA	1373	G
11	DA	1381	A
11	DA	1383	G
11	DA	1384	U
11	DA	1385	U
11	DA	1386	U
11	DA	1395	A
11	DA	1396	A
11	DA	1397	C
11	DA	1398	A
11	DA	1399	G
11	DA	1400	G
11	DA	1402	C
11	DA	1403	U
11	DA	1404	G
11	DA	1406	G
11	DA	1407	A
11	DA	1408	U
11	DA	1415	A
11	DA	1416	G
11	DA	1417	A
11	DA	1419	G
11	DA	1421	G
11	DA	1424	C
11	DA	1425	G
11	DA	1428	C
11	DA	1429	G
11	DA	1430	C
11	DA	1431	A
11	DA	1432	C
11	DA	1435	G
11	DA	1437	G
11	DA	1442	A
11	DA	1444	U
11	DA	1445	G
11	DA	1448	U
11	DA	1449	G
11	DA	1452	G
11	DA	1453	C

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Mol	Chain	Res	Type
11	DA	1458	A
11	DA	1459	G
11	DA	1461	A
11	DA	1462	U
11	DA	1463	U
11	DA	1464	U
11	DA	1466	C
11	DA	1467	U
11	DA	1469	U
11	DA	1477	A
11	DA	1478	G
11	DA	1479	G
11	DA	1480	U
11	DA	1481	A
11	DA	1487	A
11	DA	1488	A
11	DA	1489	U
11	DA	1492	U
11	DA	1493	A
11	DA	1494	U
11	DA	1495	U
11	DA	1496	A
11	DA	1498	U
11	DA	1505	C
11	DA	1506	G
11	DA	1507	U
11	DA	1508	G
11	DA	1509	U
11	DA	1510	U
11	DA	1511	A
11	DA	1512	G
11	DA	1514	G
11	DA	1519	U
11	DA	1526	G
11	DA	1528	A
11	DA	1529	U
11	DA	1530	U
11	DA	1531	G
11	DA	1532	U
11	DA	1533	G
11	DA	1536	U
11	DA	1538	U

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Mol	Chain	Res	Type
11	DA	1539	U
11	DA	1540	G
11	DA	1545	A
11	DA	1546	G
11	DA	1547	G
11	DA	1549	A
11	DA	1556	G
11	DA	1557	U
11	DA	1558	A
11	DA	1562	G
11	DA	1572	A
11	DA	1573	G
11	DA	1579	G
11	DA	1583	A
11	DA	1587	U
11	DA	1590	C
11	DA	1597	G
11	DA	1603	A
11	DA	1604	C
11	DA	1606	C
11	DA	1607	A
11	DA	1609	C
11	DA	1610	G
11	DA	1623	A
11	DA	1627	A
11	DA	1635	U
11	DA	1649	U
11	DA	1652	A
11	DA	1659	C
11	DA	1660	A
11	DA	1661	G
11	DA	1662	C
11	DA	1663	A
11	DA	1666	G
11	DA	1668	U
11	DA	1681	G
11	DA	1685	A
11	DA	1710	G
11	DA	1714	U
11	DA	1717	C
11	DA	1718	A
11	DA	1719	A

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Mol	Chain	Res	Type
11	DA	1720	G
11	DA	1721	G
11	DA	1722	U
11	DA	1724	U
11	DA	1731	G
11	DA	1733	G
11	DA	1735	A
11	DA	1736	C
11	DA	1737	C
11	DA	1745	G
11	DA	1746	G
11	DA	1747	A
11	DA	1748	U
11	DA	1749	C
11	DA	1750	A
11	DA	1752	U
11	DA	1753	A

All (595) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
11	AA	1	A
11	AA	2	A
11	AA	3	C
11	AA	61	A
11	AA	64	U
11	AA	65	C
11	AA	71	U
11	AA	99	A
11	AA	100	A
11	AA	163	A
11	AA	168	U
11	AA	171	U
11	AA	172	U
11	AA	181	G
11	AA	198	C
11	AA	209	G
11	AA	210	A
11	AA	211	U
11	AA	213	U
11	AA	214	U
11	AA	229	A

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Mol	Chain	Res	Type
11	AA	232	G
11	AA	234	G
11	AA	237	U
11	AA	238	G
11	AA	239	A
11	AA	245	A
11	AA	257	G
11	AA	271	U
11	AA	272	U
11	AA	273	A
11	AA	312	C
11	AA	328	G
11	AA	341	G
11	AA	343	C
11	AA	378	A
11	AA	380	G
11	AA	391	A
11	AA	393	C
11	AA	409	G
11	AA	413	C
11	AA	414	G
11	AA	416	C
11	AA	427	A
11	AA	444	A
11	AA	451	G
11	AA	486	A
11	AA	493	U
11	AA	498	C
11	AA	499	A
11	AA	507	G
11	AA	534	A
11	AA	536	C
11	AA	543	A
11	AA	550	G
11	AA	572	U
11	AA	573	A
11	AA	604	G
11	AA	615	A
11	AA	632	U
11	AA	633	U
11	AA	665	A
11	AA	676	C

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Mol	Chain	Res	Type
11	AA	679	U
11	AA	680	U
11	AA	738	A
11	AA	763	U
11	AA	764	U
11	AA	771	A
11	AA	794	A
11	AA	798	G
11	AA	814	A
11	AA	833	A
11	AA	834	A
11	AA	840	A
11	AA	882	G
11	AA	890	U
11	AA	912	A
11	AA	941	A
11	AA	982	U
11	AA	1001	A
11	AA	1002	U
11	AA	1054	U
11	AA	1071	U
11	AA	1079	G
11	AA	1080	G
11	AA	1092	U
11	AA	1122	G
11	AA	1123	G
11	AA	1146	C
11	AA	1168	A
11	AA	1172	G
11	AA	1175	A
11	AA	1188	A
11	AA	1199	G
11	AA	1201	G
11	AA	1217	G
11	AA	1223	U
11	AA	1228	A
11	AA	1231	C
11	AA	1236	G
11	AA	1241	U
11	AA	1245	G
11	AA	1246	C
11	AA	1256	C

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Mol	Chain	Res	Type
11	AA	1257	U
11	AA	1277	U
11	AA	1278	C
11	AA	1286	U
11	AA	1318	C
11	AA	1342	U
11	AA	1346	C
11	AA	1347	U
11	AA	1365	U
11	AA	1371	A
11	AA	1383	G
11	AA	1397	C
11	AA	1402	C
11	AA	1403	U
11	AA	1406	G
11	AA	1428	C
11	AA	1429	G
11	AA	1431	A
11	AA	1443	A
11	AA	1444	U
11	AA	1451	C
11	AA	1452	G
11	AA	1462	U
11	AA	1463	U
11	AA	1480	U
11	AA	1486	U
11	AA	1488	A
11	AA	1494	U
11	AA	1495	U
11	AA	1506	G
11	AA	1509	U
11	AA	1529	U
11	AA	1556	G
11	AA	1557	U
11	AA	1572	A
11	AA	1605	A
11	AA	1651	G
11	AA	1661	G
11	AA	1662	C
11	AA	1720	G
11	AA	1721	G
11	AA	1744	U

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Mol	Chain	Res	Type
11	AA	1749	C
11	AA	1752	U
11	BA	1	A
11	BA	2	A
11	BA	3	C
11	BA	61	A
11	BA	64	U
11	BA	65	C
11	BA	71	U
11	BA	99	A
11	BA	100	A
11	BA	163	A
11	BA	168	U
11	BA	171	U
11	BA	172	U
11	BA	181	G
11	BA	198	C
11	BA	209	G
11	BA	210	A
11	BA	211	U
11	BA	213	U
11	BA	214	U
11	BA	229	A
11	BA	232	G
11	BA	234	G
11	BA	237	U
11	BA	238	G
11	BA	245	A
11	BA	257	G
11	BA	271	U
11	BA	272	U
11	BA	273	A
11	BA	312	C
11	BA	328	G
11	BA	341	G
11	BA	343	C
11	BA	378	A
11	BA	380	G
11	BA	391	A
11	BA	393	C
11	BA	409	G
11	BA	413	C

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Mol	Chain	Res	Type
11	BA	414	G
11	BA	416	C
11	BA	427	A
11	BA	444	A
11	BA	451	G
11	BA	486	A
11	BA	492	C
11	BA	493	U
11	BA	498	C
11	BA	499	A
11	BA	507	G
11	BA	534	A
11	BA	536	C
11	BA	543	A
11	BA	550	G
11	BA	572	U
11	BA	573	A
11	BA	604	G
11	BA	615	A
11	BA	632	U
11	BA	633	U
11	BA	665	A
11	BA	675	A
11	BA	676	C
11	BA	679	U
11	BA	680	U
11	BA	738	A
11	BA	763	U
11	BA	764	U
11	BA	771	A
11	BA	794	A
11	BA	798	G
11	BA	814	A
11	BA	833	A
11	BA	834	A
11	BA	840	A
11	BA	882	G
11	BA	890	U
11	BA	912	A
11	BA	941	A
11	BA	982	U
11	BA	1001	A

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Mol	Chain	Res	Type
11	BA	1002	U
11	BA	1054	U
11	BA	1079	G
11	BA	1080	G
11	BA	1092	U
11	BA	1122	G
11	BA	1123	G
11	BA	1146	C
11	BA	1168	A
11	BA	1172	G
11	BA	1175	A
11	BA	1188	A
11	BA	1199	G
11	BA	1201	G
11	BA	1217	G
11	BA	1223	U
11	BA	1228	A
11	BA	1231	C
11	BA	1236	G
11	BA	1241	U
11	BA	1245	G
11	BA	1246	C
11	BA	1256	C
11	BA	1257	U
11	BA	1277	U
11	BA	1278	C
11	BA	1286	U
11	BA	1318	C
11	BA	1342	U
11	BA	1346	C
11	BA	1347	U
11	BA	1365	U
11	BA	1371	A
11	BA	1383	G
11	BA	1397	C
11	BA	1402	C
11	BA	1403	U
11	BA	1406	G
11	BA	1428	C
11	BA	1429	G
11	BA	1431	A
11	BA	1443	A

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Mol	Chain	Res	Type
11	BA	1444	U
11	BA	1451	C
11	BA	1452	G
11	BA	1462	U
11	BA	1463	U
11	BA	1480	U
11	BA	1486	U
11	BA	1488	A
11	BA	1494	U
11	BA	1495	U
11	BA	1506	G
11	BA	1509	U
11	BA	1529	U
11	BA	1556	G
11	BA	1557	U
11	BA	1605	A
11	BA	1651	G
11	BA	1661	G
11	BA	1662	C
11	BA	1720	G
11	BA	1721	G
11	BA	1744	U
11	BA	1749	C
11	BA	1752	U
11	CA	1	A
11	CA	2	A
11	CA	3	C
11	CA	61	A
11	CA	64	U
11	CA	65	C
11	CA	71	U
11	CA	99	A
11	CA	100	A
11	CA	163	A
11	CA	168	U
11	CA	171	U
11	CA	172	U
11	CA	181	G
11	CA	198	C
11	CA	209	G
11	CA	210	A
11	CA	211	U

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Mol	Chain	Res	Type
11	CA	213	U
11	CA	214	U
11	CA	229	A
11	CA	232	G
11	CA	234	G
11	CA	237	U
11	CA	238	G
11	CA	239	A
11	CA	245	A
11	CA	257	G
11	CA	271	U
11	CA	272	U
11	CA	273	A
11	CA	312	C
11	CA	328	G
11	CA	341	G
11	CA	343	C
11	CA	378	A
11	CA	380	G
11	CA	391	A
11	CA	393	C
11	CA	409	G
11	CA	413	C
11	CA	414	G
11	CA	416	C
11	CA	427	A
11	CA	444	A
11	CA	451	G
11	CA	486	A
11	CA	492	C
11	CA	493	U
11	CA	498	C
11	CA	499	A
11	CA	507	G
11	CA	534	A
11	CA	536	C
11	CA	543	A
11	CA	550	G
11	CA	572	U
11	CA	573	A
11	CA	604	G
11	CA	615	A

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Mol	Chain	Res	Type
11	CA	632	U
11	CA	633	U
11	CA	665	A
11	CA	676	C
11	CA	679	U
11	CA	680	U
11	CA	738	A
11	CA	763	U
11	CA	764	U
11	CA	771	A
11	CA	794	A
11	CA	798	G
11	CA	814	A
11	CA	833	A
11	CA	834	A
11	CA	840	A
11	CA	882	G
11	CA	890	U
11	CA	912	A
11	CA	941	A
11	CA	982	U
11	CA	1001	A
11	CA	1002	U
11	CA	1054	U
11	CA	1071	U
11	CA	1079	G
11	CA	1080	G
11	CA	1092	U
11	CA	1122	G
11	CA	1123	G
11	CA	1146	C
11	CA	1168	A
11	CA	1172	G
11	CA	1175	A
11	CA	1188	A
11	CA	1199	G
11	CA	1201	G
11	CA	1217	G
11	CA	1223	U
11	CA	1228	A
11	CA	1231	C
11	CA	1236	G

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Mol	Chain	Res	Type
11	CA	1241	U
11	CA	1245	G
11	CA	1246	C
11	CA	1256	C
11	CA	1257	U
11	CA	1277	U
11	CA	1278	C
11	CA	1286	U
11	CA	1318	C
11	CA	1342	U
11	CA	1346	C
11	CA	1347	U
11	CA	1365	U
11	CA	1371	A
11	CA	1383	G
11	CA	1397	C
11	CA	1402	C
11	CA	1403	U
11	CA	1406	G
11	CA	1428	C
11	CA	1429	G
11	CA	1431	A
11	CA	1443	A
11	CA	1444	U
11	CA	1451	C
11	CA	1452	G
11	CA	1462	U
11	CA	1463	U
11	CA	1480	U
11	CA	1486	U
11	CA	1488	A
11	CA	1494	U
11	CA	1495	U
11	CA	1506	G
11	CA	1509	U
11	CA	1529	U
11	CA	1556	G
11	CA	1557	U
11	CA	1605	A
11	CA	1651	G
11	CA	1661	G
11	CA	1662	C

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Mol	Chain	Res	Type
11	CA	1720	G
11	CA	1721	G
11	CA	1744	U
11	CA	1749	C
11	CA	1752	U
11	DA	1	A
11	DA	2	A
11	DA	3	C
11	DA	61	A
11	DA	64	U
11	DA	65	C
11	DA	71	U
11	DA	99	A
11	DA	100	A
11	DA	163	A
11	DA	168	U
11	DA	171	U
11	DA	172	U
11	DA	181	G
11	DA	198	C
11	DA	209	G
11	DA	211	U
11	DA	213	U
11	DA	214	U
11	DA	229	A
11	DA	232	G
11	DA	234	G
11	DA	237	U
11	DA	238	G
11	DA	239	A
11	DA	245	A
11	DA	257	G
11	DA	271	U
11	DA	272	U
11	DA	273	A
11	DA	312	C
11	DA	328	G
11	DA	341	G
11	DA	343	C
11	DA	378	A
11	DA	380	G
11	DA	391	A

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Mol	Chain	Res	Type
11	DA	393	C
11	DA	409	G
11	DA	413	C
11	DA	414	G
11	DA	427	A
11	DA	444	A
11	DA	451	G
11	DA	486	A
11	DA	492	C
11	DA	493	U
11	DA	498	C
11	DA	499	A
11	DA	507	G
11	DA	534	A
11	DA	536	C
11	DA	543	A
11	DA	550	G
11	DA	572	U
11	DA	573	A
11	DA	604	G
11	DA	615	A
11	DA	632	U
11	DA	665	A
11	DA	675	A
11	DA	676	C
11	DA	679	U
11	DA	680	U
11	DA	738	A
11	DA	763	U
11	DA	764	U
11	DA	771	A
11	DA	794	A
11	DA	798	G
11	DA	814	A
11	DA	833	A
11	DA	834	A
11	DA	840	A
11	DA	882	G
11	DA	890	U
11	DA	912	A
11	DA	941	A
11	DA	982	U

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Mol	Chain	Res	Type
11	DA	1001	A
11	DA	1002	U
11	DA	1054	U
11	DA	1071	U
11	DA	1079	G
11	DA	1080	G
11	DA	1092	U
11	DA	1110	A
11	DA	1122	G
11	DA	1123	G
11	DA	1146	C
11	DA	1168	A
11	DA	1172	G
11	DA	1175	A
11	DA	1188	A
11	DA	1199	G
11	DA	1201	G
11	DA	1217	G
11	DA	1223	U
11	DA	1228	A
11	DA	1231	C
11	DA	1236	G
11	DA	1241	U
11	DA	1245	G
11	DA	1246	C
11	DA	1256	C
11	DA	1257	U
11	DA	1277	U
11	DA	1278	C
11	DA	1286	U
11	DA	1318	C
11	DA	1342	U
11	DA	1346	C
11	DA	1347	U
11	DA	1365	U
11	DA	1371	A
11	DA	1383	G
11	DA	1397	C
11	DA	1402	C
11	DA	1403	U
11	DA	1406	G
11	DA	1428	C

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Mol	Chain	Res	Type
11	DA	1429	G
11	DA	1431	A
11	DA	1443	A
11	DA	1444	U
11	DA	1451	C
11	DA	1452	G
11	DA	1462	U
11	DA	1463	U
11	DA	1480	U
11	DA	1486	U
11	DA	1488	A
11	DA	1494	U
11	DA	1495	U
11	DA	1506	G
11	DA	1509	U
11	DA	1529	U
11	DA	1556	G
11	DA	1557	U
11	DA	1586	A
11	DA	1605	A
11	DA	1651	G
11	DA	1661	G
11	DA	1662	C
11	DA	1720	G
11	DA	1721	G
11	DA	1744	U
11	DA	1749	C
11	DA	1752	U

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 332 ligands modelled in this entry, 332 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

EDS failed to run properly - this section will therefore be empty.

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

EDS failed to run properly - this section will therefore be empty.

6.3 Carbohydrates ⓘ

EDS failed to run properly - this section will therefore be empty.

6.4 Ligands ⓘ

EDS failed to run properly - this section will therefore be empty.

6.5 Other polymers ⓘ

EDS failed to run properly - this section will therefore be empty.