



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:05 PM GMT

PDB ID : 4V9L  
Title : 70S Ribosome translocation intermediate FA-3.6A containing elongation factor EFG/FUSIDIC ACID/GDP, mRNA, and tRNA bound in the pe<sup>\*</sup>/E state.  
Authors : Zhou, J.; Lancaster, L.; Donohue, J.P.; Noller, H.F.  
Deposited on : 2013-04-24  
Resolution : 3.50 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](mailto: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.

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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 : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

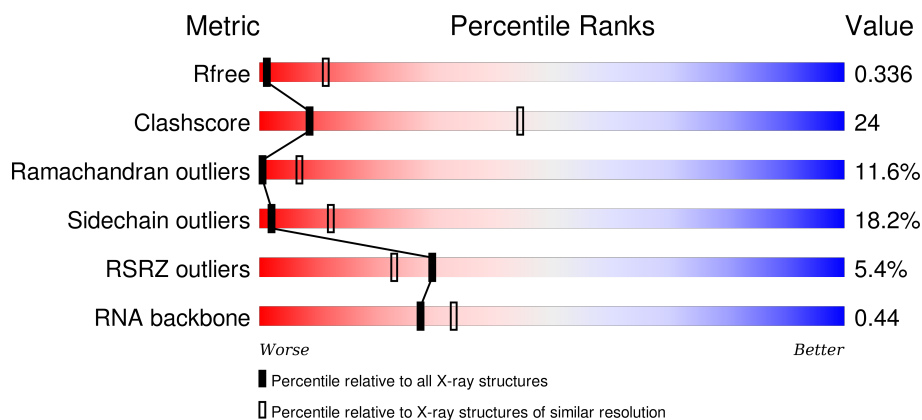
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	91344	1051 (3.60-3.40)
Clashscore	102246	1157 (3.60-3.40)
Ramachandran outliers	100387	1120 (3.60-3.40)
Sidechain outliers	100360	1121 (3.60-3.40)
RSRZ outliers	91569	1058 (3.60-3.40)
RNA backbone	2183	1050 (4.20-2.80)

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  $\geq 3$ , 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.

Mol	Chain	Length	Quality of chain
1	AB	235	<div> <div>3%</div> <div>34%</div> <div>45%</div> <div>18%</div> <div>•</div> </div>
1	CB	235	<div> <div>9%</div> <div>40%</div> <div>45%</div> <div>15%</div> </div>
2	AC	207	<div> <div>5%</div> <div>42%</div> <div>46%</div> <div>12%</div> </div>
2	CC	207	<div> <div>5%</div> <div>49%</div> <div>43%</div> <div>8%</div> </div>

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Mol	Chain	Length	Quality of chain
3	AD	208	
3	CD	208	
4	AE	151	
4	CE	151	
5	AF	101	
5	CF	101	
6	AG	155	
6	CG	155	
7	AH	138	
7	CH	138	
8	AI	127	
8	CI	127	
9	AJ	99	
9	CJ	99	
10	AK	119	
10	CK	119	
11	AL	125	
11	CL	125	
12	AM	125	
12	CM	125	
13	AN	60	
13	CN	60	
14	AO	88	
14	CO	88	
15	AP	84	

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Mol	Chain	Length	Quality of chain
15	CP	84	
16	AQ	100	
16	CQ	100	
17	AR	70	
17	CR	70	
18	AS	79	
18	CS	79	
19	AT	99	
19	CT	99	
20	AA	1511	
20	CA	1511	
21	AW	77	
21	CW	77	
22	AV	23	
22	CV	23	
23	AY	687	
23	CY	687	
24	AU	6	
24	CU	6	
25	BC	228	
25	DC	228	
26	BD	275	
26	DD	275	
27	BE	205	
27	DE	205	

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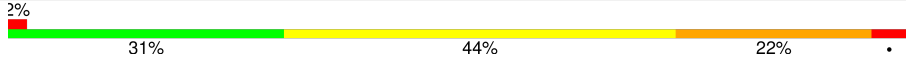
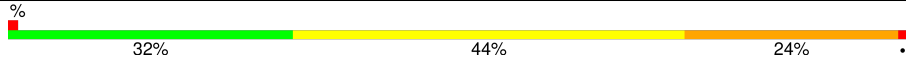
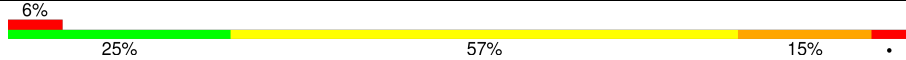
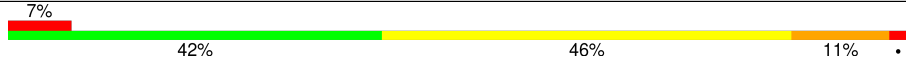
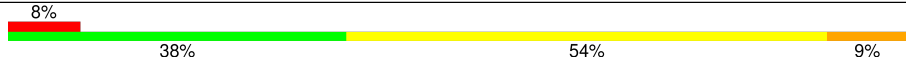
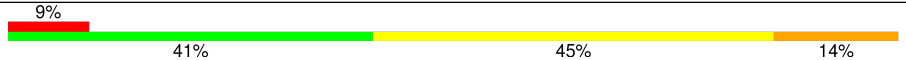
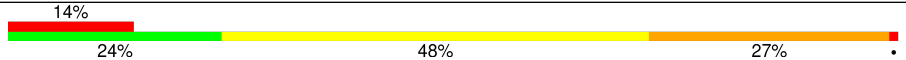
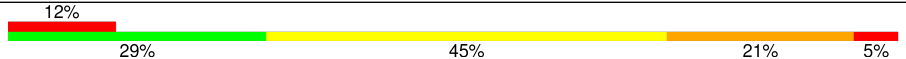
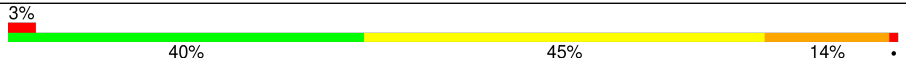
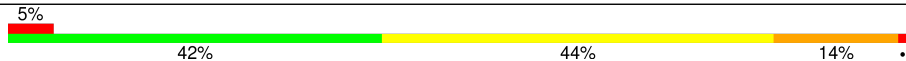
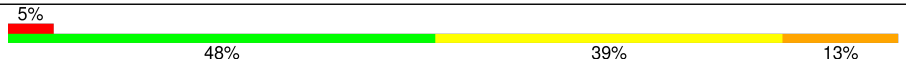
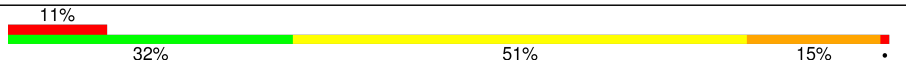
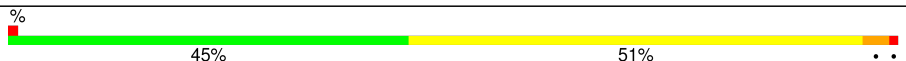
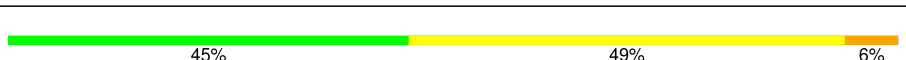
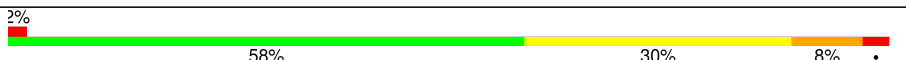

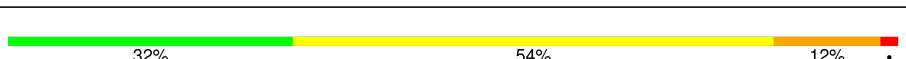
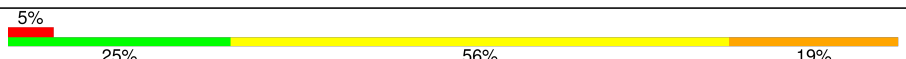
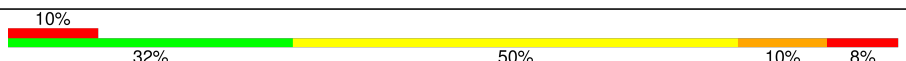
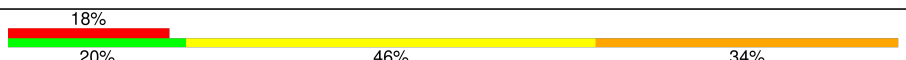
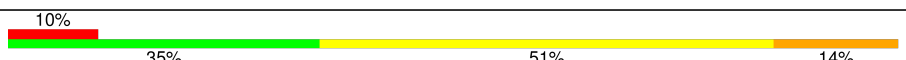
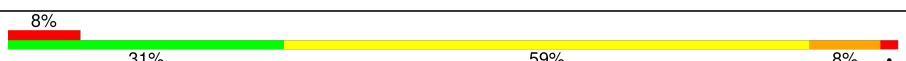
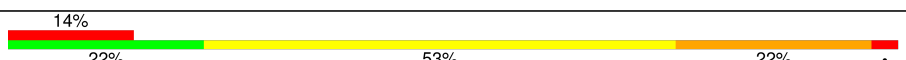
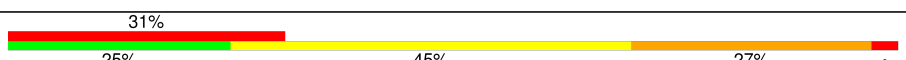


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Mol	Chain	Length	Quality of chain
28	BF	208	
28	DF	208	
29	BG	181	
29	DG	181	
30	BH	167	
30	DH	167	
31	BJ	170	
31	DJ	170	
32	BK	140	
32	DK	140	
33	BN	138	
33	DN	138	
34	BO	122	
34	DO	122	
35	BP	146	
35	DP	146	
36	BQ	141	
36	DQ	141	
37	BR	117	
37	DR	117	
38	BS	99	
38	DS	99	
39	BT	138	
39	DT	138	
40	BU	117	




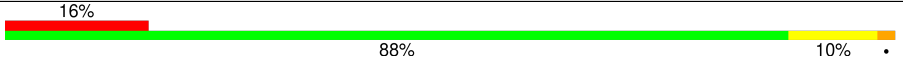
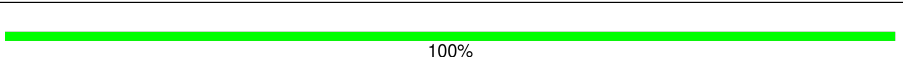
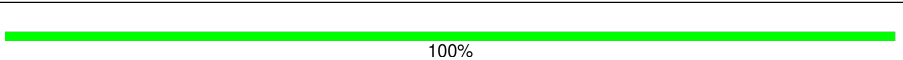
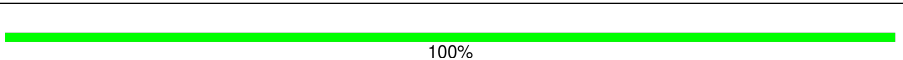
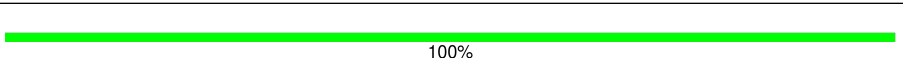
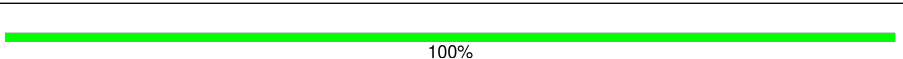
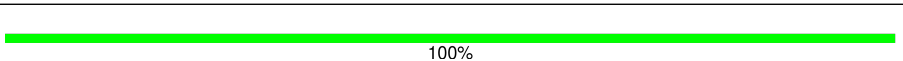
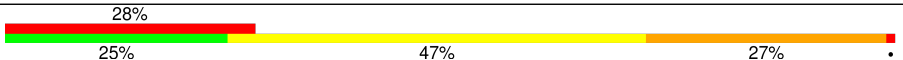
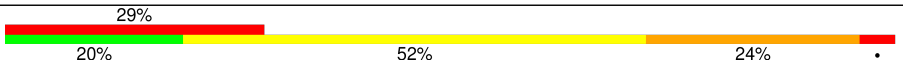
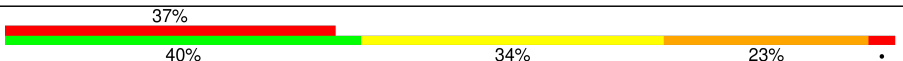
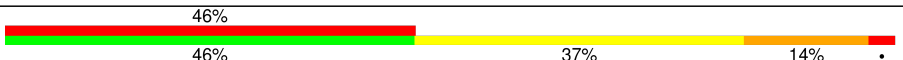
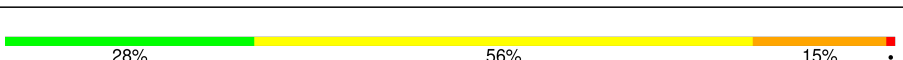
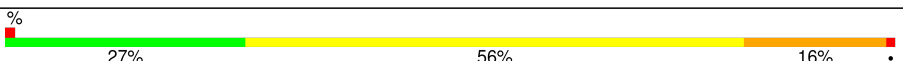
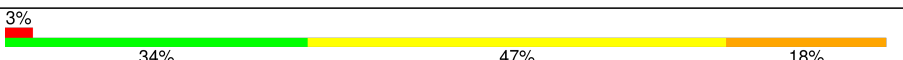
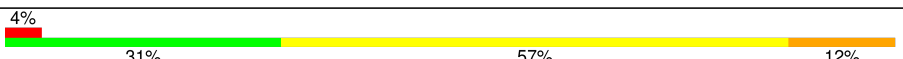
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Mol	Chain	Length	Quality of chain
40	DU	117	
41	BV	101	
41	DV	101	
42	BW	113	
42	DW	113	
43	BX	93	
43	DX	93	
44	BY	107	
44	DY	107	
45	BZ	185	
45	DZ	185	
46	B0	84	
46	D0	84	
47	B2	71	
47	D2	71	
48	B3	60	
48	D3	60	
49	B5	59	
49	D5	59	
50	B6	50	
50	D6	50	
51	B7	49	
51	D7	49	
52	B8	64	
52	D8	64	

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Mol	Chain	Length	Quality of chain
53	B9	37	
53	D9	37	
54	Be	102	
54	De	102	
55	Bf	31	
55	Bg	31	
55	Df	31	
55	Dg	31	
56	Bh	30	
56	Dh	30	
57	B1	93	
57	D1	93	
58	B4	35	
58	D4	35	
59	BA	2879	
59	DA	2879	
60	BB	119	
60	DB	119	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
61	FUA	AY	701	-	-	-	X
61	FUA	CY	701	-	-	-	X
62	GDP	AY	702	-	-	X	X
62	GDP	CY	702	-	-	X	X

## 2 Entry composition

There are 63 unique types of molecules in this entry. The entry contains 308166 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 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AB	235	Total	C	N	O	S	0	0	0
			1910	1218	342	345	5			
1	CB	235	Total	C	N	O	S	0	0	0
			1910	1218	342	345	5			

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AC	207	Total	C	N	O	S	0	0	0
			1621	1022	315	283	1			
2	CC	207	Total	C	N	O	S	0	0	0
			1621	1022	315	283	1			

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
3	CD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AE	151	Total	C	N	O	S	0	0	0
			1156	729	218	205	4			
4	CE	151	Total	C	N	O	S	0	0	0
			1156	729	218	205	4			

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
5	CF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
6	CG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
7	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
8	AI	127	Total	C	N	O	0	0	0
			1010	639	197	174			
8	CI	127	Total	C	N	O	0	0	0
			1010	639	197	174			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AI	58	HIS	ARG	CONFLICT	UNP P62669
CI	58	HIS	ARG	CONFLICT	UNP P62669

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AJ	99	Total	C	N	O	S	0	0	0
			802	504	157	140	1			
9	CJ	99	Total	C	N	O	S	0	0	0
			802	504	157	140	1			

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
10	CK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AL	125	Total	C	N	O	S	0	0	0
			976	614	196	165	1			
11	CL	125	Total	C	N	O	S	0	0	0
			976	614	196	165	1			

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AM	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			
12	CM	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			

- Molecule 13 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
13	CN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
14	CO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AP	84	Total	C	N	O	S	0	0	0
			706	446	140	119	1			
15	CP	84	Total	C	N	O	S	0	0	0
			706	446	140	119	1			

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AQ	100	Total	C	N	O	S	0	0	0
			835	534	155	144	2			
16	CQ	100	Total	C	N	O	S	0	0	0
			835	534	155	144	2			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AQ	96	GLU	GLN	CONFLICT	UNP P62658
CQ	96	GLU	GLN	CONFLICT	UNP P62658

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
17	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AS	79	Total	C	N	O	S	0	0	0
			634	405	115	112	2			
18	CS	79	Total	C	N	O	S	0	0	0
			634	405	115	112	2			

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
19	CT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AT	41	ILE	VAL	CONFLICT	UNP P62661
CT	41	ILE	VAL	CONFLICT	UNP P62661

- Molecule 20 is a RNA chain called ribosomal RNA 16S.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AA	1511	Total	C	N	O	P	0	0	0
			32474	14455	6015	10494	1510			
20	CA	1511	Total	C	N	O	P	0	0	0
			32474	14455	6015	10494	1510			

- Molecule 21 is a RNA chain called transfer RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AW	77	Total	C	N	O	P	0	0	0
			1635	732	291	536	76			
21	CW	77	Total	C	N	O	P	0	0	0
			1635	732	291	536	76			

- Molecule 22 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	23	Total	C	N	O	P	0	0	0
			503	227	106	148	22			
22	CV	23	Total	C	N	O	P	0	0	0
			503	227	106	148	22			

- Molecule 23 is a protein called Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AY	667	Total	C	N	O	S	0	0	0
			5219	3318	893	990	18			
23	CY	667	Total	C	N	O	S	0	0	0
			5219	3318	893	990	18			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	129	LYS	HIS	CONFLICT	UNP Q72I01
AY	226	ASN	HIS	CONFLICT	UNP Q72I01
CY	129	LYS	HIS	CONFLICT	UNP Q72I01

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Chain	Residue	Modelled	Actual	Comment	Reference
CY	226	ASN	HIS	CONFLICT	UNP Q72I01

- Molecule 24 is a protein called VIOMYCIN.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
24	AU	6	Total	C	N	O	0	0	0
			48	25	13	10			
24	CU	6	Total	C	N	O	0	0	0
			48	25	13	10			

- Molecule 25 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			
25	DC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BC	20	VAL	ILE	CONFLICT	UNP Q72GV9
BC	28	ARG	HIS	CONFLICT	UNP Q72GV9
DC	20	VAL	ILE	CONFLICT	UNP Q72GV9
DC	28	ARG	HIS	CONFLICT	UNP Q72GV9

- Molecule 26 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			
26	DD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 27 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BE	205	Total	C	N	O	S	0	0	0
			1569	991	300	272	6			
27	DE	205	Total	C	N	O	S	0	0	0
			1569	991	300	272	6			

- Molecule 28 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BF	208	Total	C	N	O	S	0	0	0
			1628	1037	304	284	3			
28	DF	208	Total	C	N	O	S	0	0	0
			1628	1037	304	284	3			

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BF	2	LYS	-	INSERTION	UNP Q72I05
BF	3	GLU	-	INSERTION	UNP Q72I05
BF	4	VAL	-	INSERTION	UNP Q72I05
BF	5	ALA	-	INSERTION	UNP Q72I05
BF	6	VAL	-	INSERTION	UNP Q72I05
DF	2	LYS	-	INSERTION	UNP Q72I05
DF	3	GLU	-	INSERTION	UNP Q72I05
DF	4	VAL	-	INSERTION	UNP Q72I05
DF	5	ALA	-	INSERTION	UNP Q72I05
DF	6	VAL	-	INSERTION	UNP Q72I05

- Molecule 29 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
29	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BG	5	VAL	LEU	CONFLICT	UNP Q72I16
DG	5	VAL	LEU	CONFLICT	UNP Q72I16

- Molecule 30 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BH	167	Total	C	N	O	S	0	0	0
			1274	806	238	229	1			
30	DH	167	Total	C	N	O	S	0	0	0
			1274	806	238	229	1			

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
31	BJ	170	Total	C	N	O	0	0	0
			851	510	170	171			
31	DJ	170	Total	C	N	O	0	0	0
			851	510	170	171			

- Molecule 32 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	140	Total	C	N	O	S	0	0	0
			1035	659	183	188	5			
32	DK	140	Total	C	N	O	S	0	0	0
			1035	659	183	188	5			

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
33	DN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 34 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
34	DO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BO	69	ILE	VAL	CONFLICT	UNP Q72I14
DO	69	ILE	VAL	CONFLICT	UNP Q72I14

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	DP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 36 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
36	DQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BQ	32	TYR	PHE	CONFLICT	UNP Q72I11
DQ	32	TYR	PHE	CONFLICT	UNP Q72I11

- Molecule 37 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
37	BR	117	Total	C	N	O	0	0	0
			960	599	202	159			
37	DR	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	BS	99	Total	C	N	O	0	0	0
			775	488	155	132			
38	DS	99	Total	C	N	O	0	0	0
			775	488	155	132			

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BT	138	Total	C	N	O	S	0	0	0
			1147	713	235	198	1			
39	DT	138	Total	C	N	O	S	0	0	0
			1147	713	235	198	1			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BT	123	GLN	LYS	CONFLICT	UNP Q72JU9
BT	135	ALA	VAL	CONFLICT	UNP Q72JU9
DT	123	GLN	LYS	CONFLICT	UNP Q72JU9
DT	135	ALA	VAL	CONFLICT	UNP Q72JU9

- Molecule 40 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
40	DU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 41 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
41	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 42 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			
42	DW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

- Molecule 43 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BX	93	Total	C	N	O	0	0	0
			734	477	132	125			
43	DX	93	Total	C	N	O	0	0	0
			734	477	132	125			

- Molecule 44 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BY	107	Total	C	N	O	S	0	0	0
			818	524	155	134	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	DY	107	Total	C	N	O	S	0	0	0
			818	524	155	134	5			

- Molecule 45 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BZ	185	Total	C	N	O	S	0	0	0
			1473	939	262	270	2			
45	DZ	185	Total	C	N	O	S	0	0	0
			1473	939	262	270	2			

- Molecule 46 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	B0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			
46	D0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B0	11	ARG	LYS	CONFLICT	UNP Q72HR3
D0	11	ARG	LYS	CONFLICT	UNP Q72HR3

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	B2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			
47	D2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 48 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B3	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			
48	D3	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			

- Molecule 49 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
49	D5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B5	29	THR	ILE	CONFLICT	UNP P62652
D5	29	THR	ILE	CONFLICT	UNP P62652

- Molecule 50 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			
50	D6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 51 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
51	D7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 52 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
52	D8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 53 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
53	D9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 54 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	Be	102	Total	C	N	O	0	0	0
			686	430	119	137			
54	De	102	Total	C	N	O	0	0	0
			686	430	119	137			

- Molecule 55 is a protein called 50S RIBOSOMAL PROTEIN L7/L12.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
55	Bf	31	Total	C	N	O	0	0	0
			156	93	31	32			
55	Bg	31	Total	C	N	O	0	0	0
			156	93	31	32			
55	Df	31	Total	C	N	O	0	0	0
			156	93	31	32			
55	Dg	31	Total	C	N	O	0	0	0
			156	93	31	32			

- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L7/L12.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
56	Bh	30	Total	C	N	O	0	0	0
			151	90	30	31			
56	Dh	30	Total	C	N	O	0	0	0
			151	90	30	31			

- Molecule 57 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	B1	93	Total	C	N	O	S	0	0	0
			732	460	145	126	1			
57	D1	93	Total	C	N	O	S	0	0	0
			732	460	145	126	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B1	81	LYS	ARG	CONFLICT	UNP Q72G84
D1	81	LYS	ARG	CONFLICT	UNP Q72G84

- Molecule 58 is a protein called 50S ribosomal protein L31.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	B4	35	Total	C	N	O	S	0	0	0
			271	174	44	50	3			
58	D4	35	Total	C	N	O	S	0	0	0
			271	174	44	50	3			

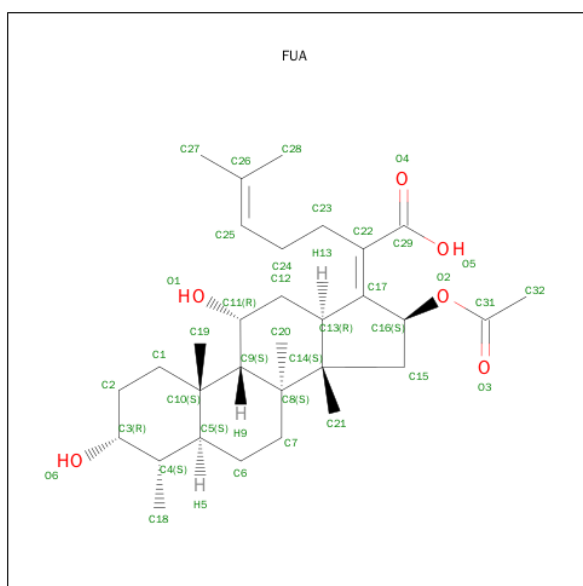
- Molecule 59 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	BA	2879	Total	C	N	O	P	0	0	0
			61997	27594	11582	19943	2878			
59	DA	2879	Total	C	N	O	P	0	0	0
			61997	27594	11582	19943	2878			

- Molecule 60 is a RNA chain called 5S ribosomal RNA.

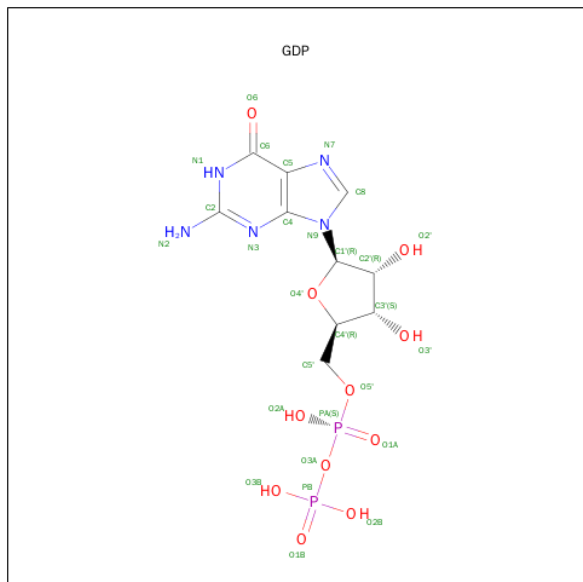
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
60	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
60	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 61 is FUSIDIC ACID (three-letter code: FUA) (formula:  $C_{31}H_{48}O_6$ ).



Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	AY	1	Total	C O	0	0
			37 31 6			
61	CY	1	Total	C O	0	0
			37 31 6			

- Molecule 62 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula:  $C_{10}H_{15}N_5O_{11}P_2$ ).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
62	AY	1	Total	C	N	O	P	0	0
			28	10	5	11	2		
62	CY	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

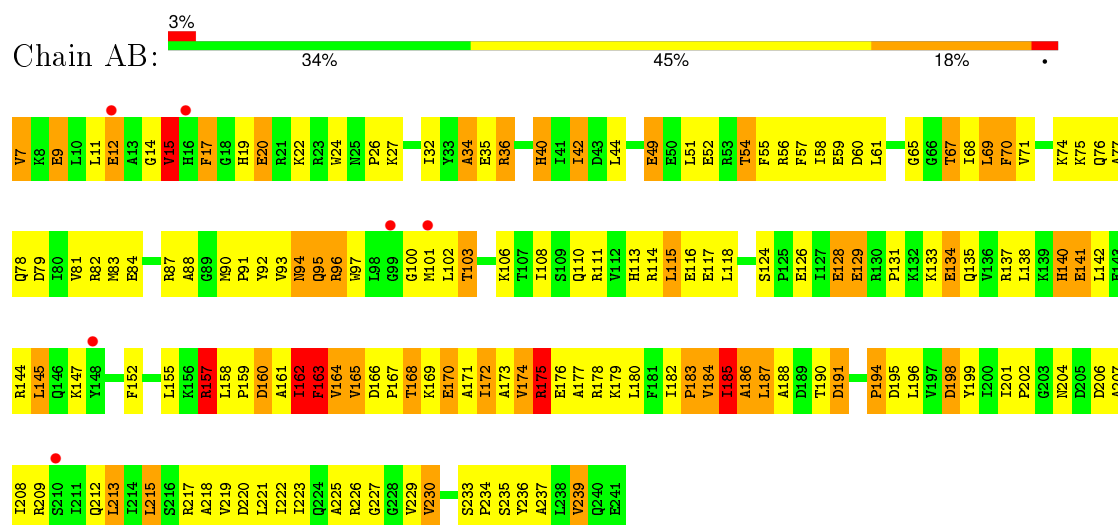
- Molecule 63 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	BA	1	Total	Mg	0	0
			1	1		
63	CY	1	Total	Mg	0	0
			1	1		

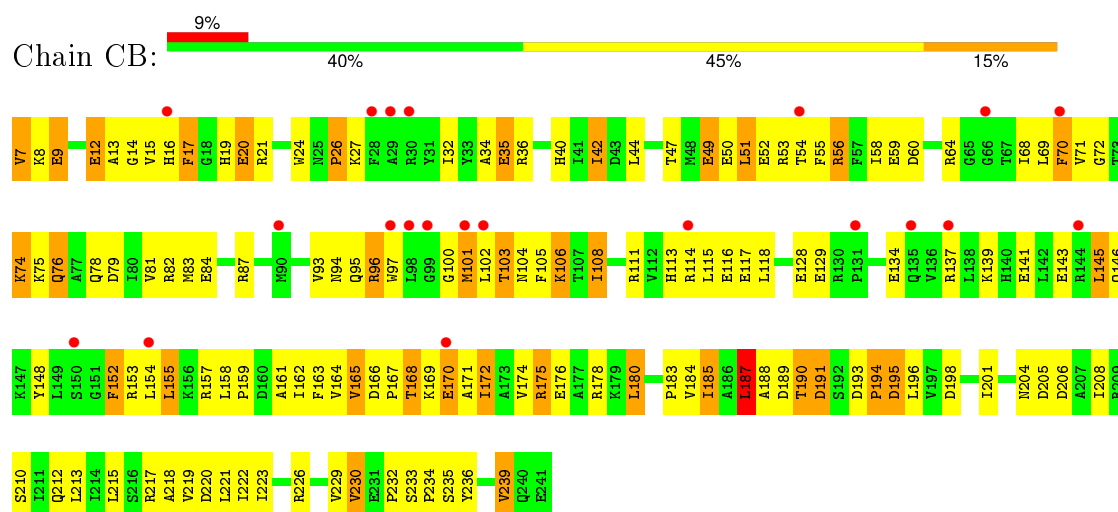
### 3 Residue-property plots

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.

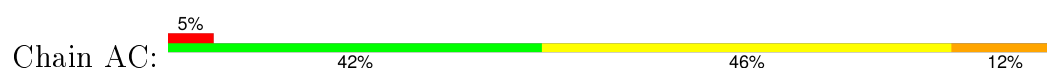
#### • Molecule 1: 30S ribosomal protein S2

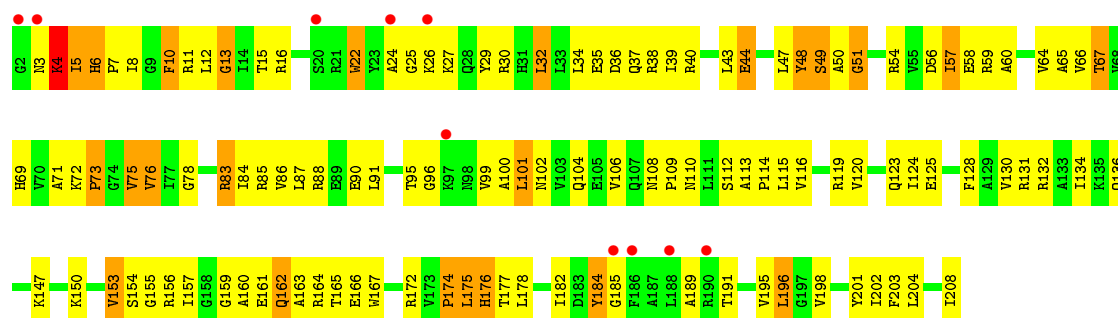


#### • Molecule 1: 30S ribosomal protein S2

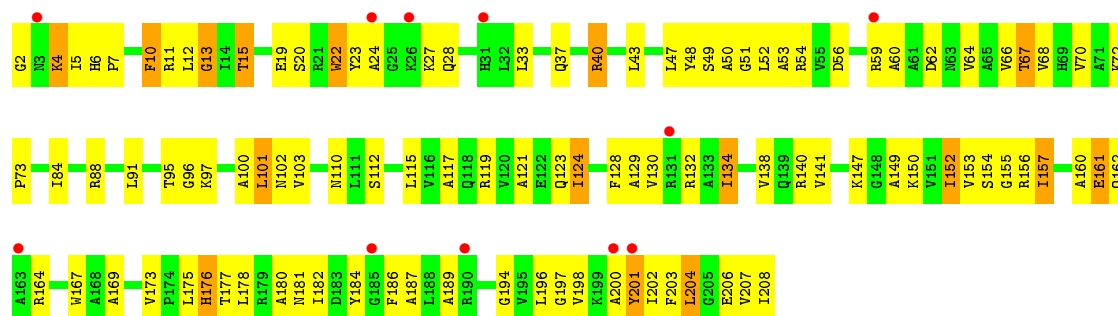


#### • Molecule 2: 30S ribosomal protein S3

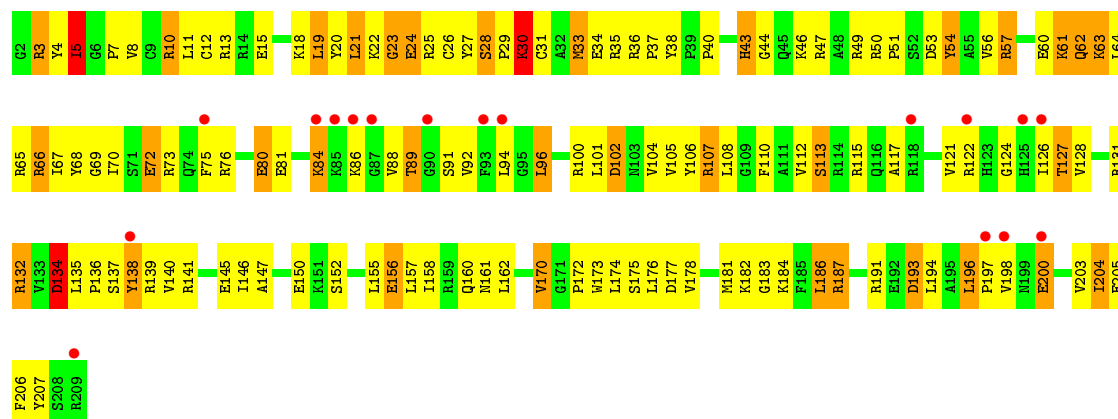




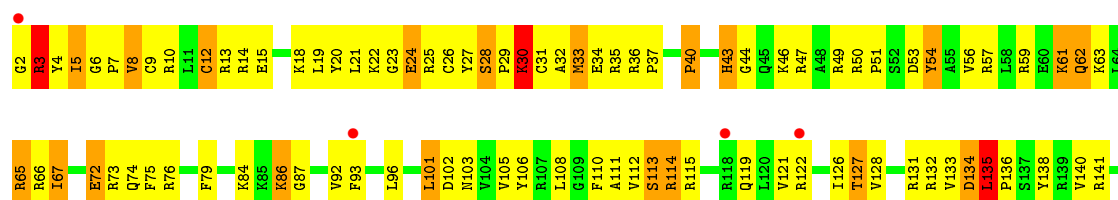
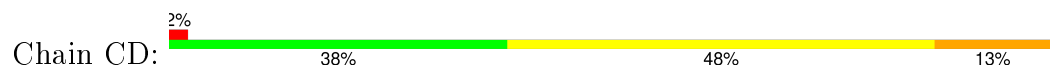
• Molecule 2: 30S ribosomal protein S3



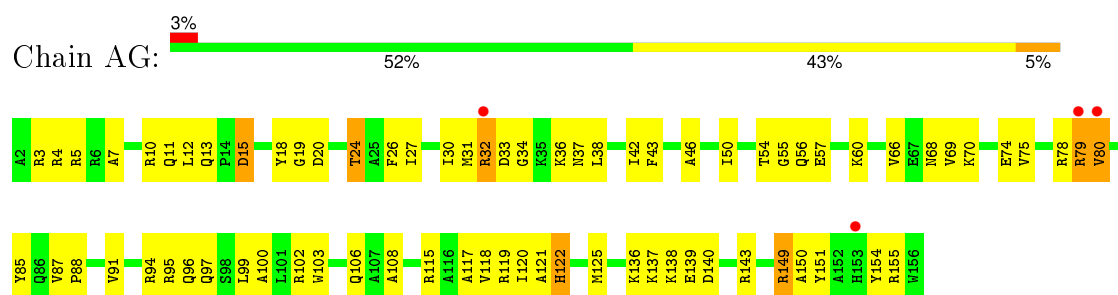
• Molecule 3: 30S ribosomal protein S4



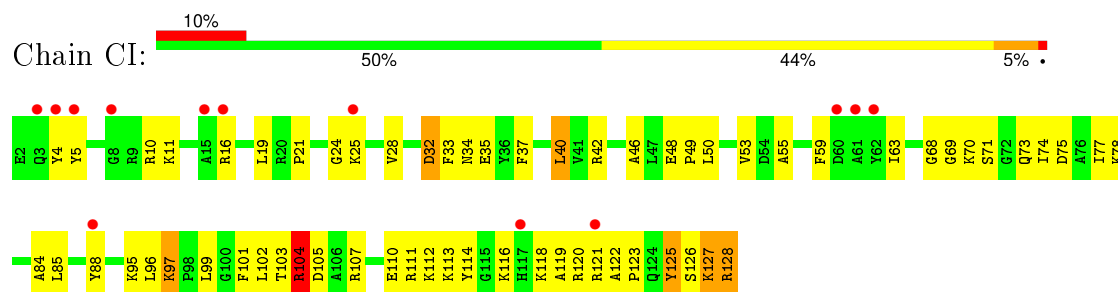
• Molecule 3: 30S ribosomal protein S4



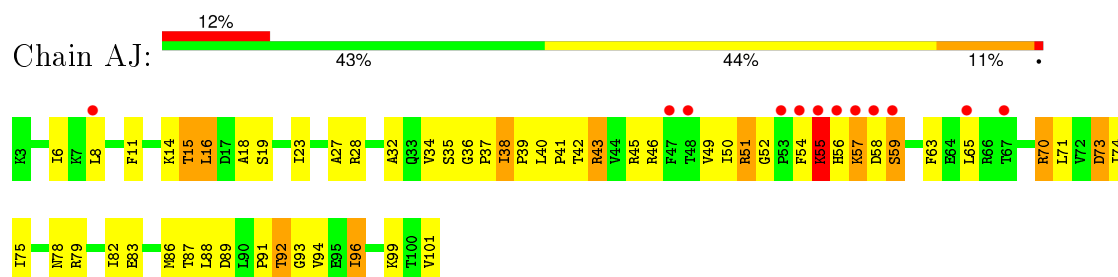




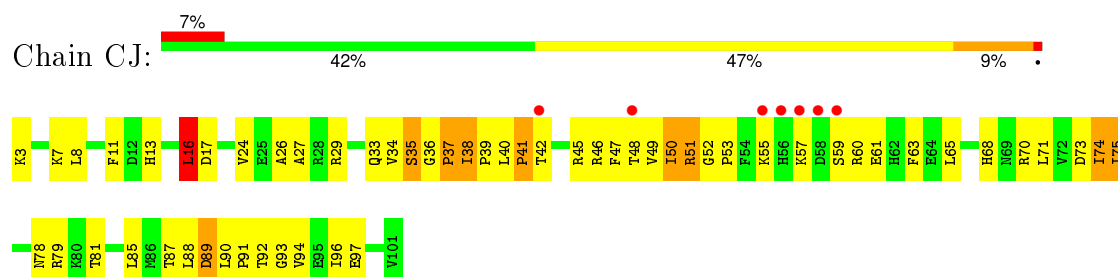
- Molecule 8: 30S ribosomal protein S9



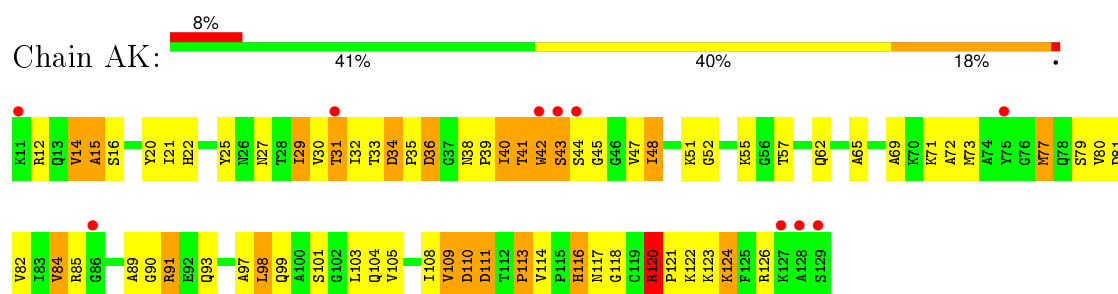
- Molecule 9: 30S ribosomal protein S10



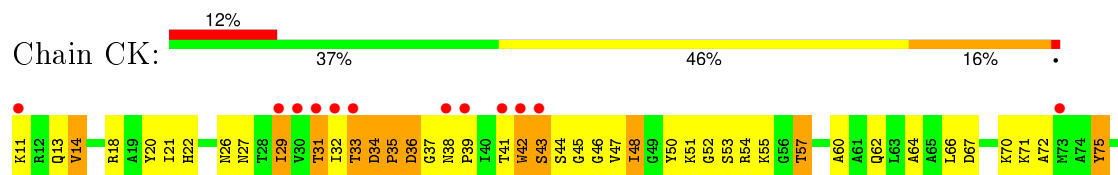
- Molecule 9: 30S ribosomal protein S10



- Molecule 10: 30S ribosomal protein S11

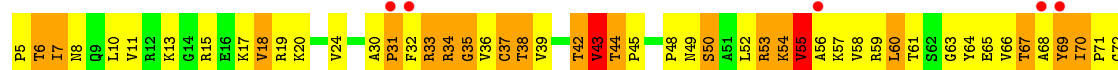


- Molecule 10: 30S ribosomal protein S11

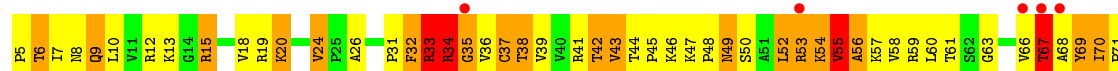
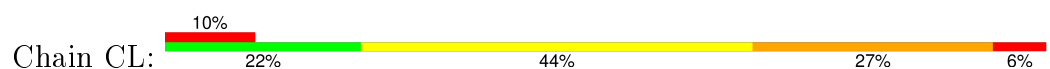




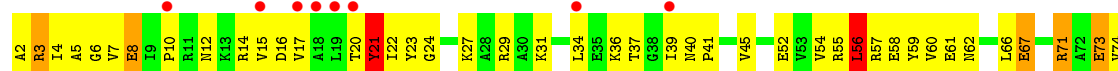
- Molecule 11: 30S ribosomal protein S12



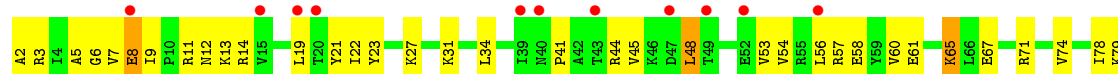
- Molecule 11: 30S ribosomal protein S12



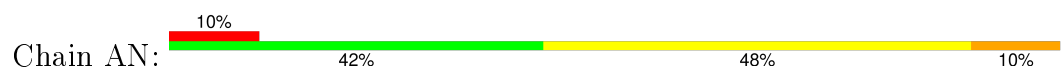
- Molecule 12: 30S ribosomal protein S13



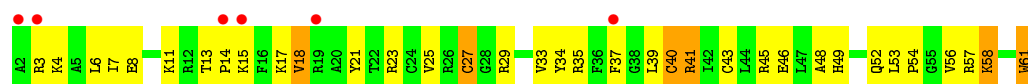
- Molecule 12: 30S ribosomal protein S13



- Molecule 13: 30S ribosomal protein S14 type Z



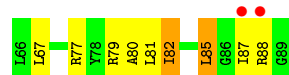
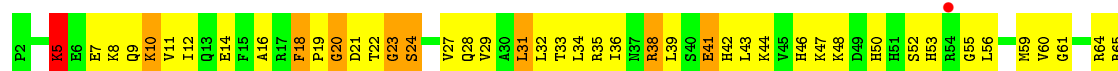




- Molecule 13: 30S ribosomal protein S14 type Z



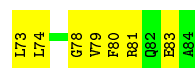
- Molecule 14: 30S ribosomal protein S15



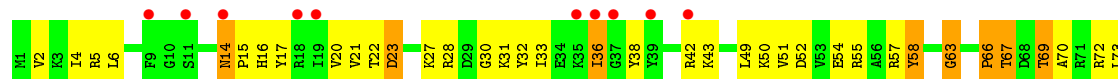
- Molecule 14: 30S ribosomal protein S15



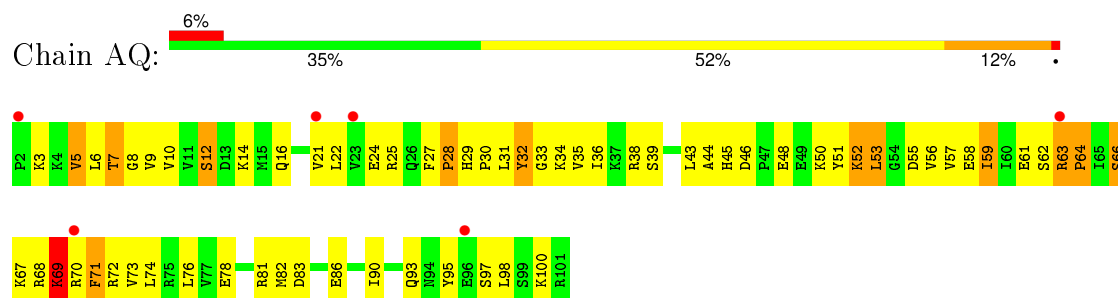
- Molecule 15: 30S ribosomal protein S16



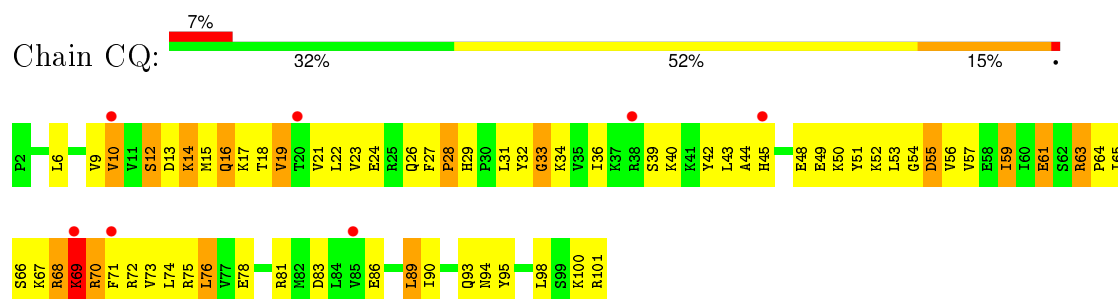
- Molecule 15: 30S ribosomal protein S16



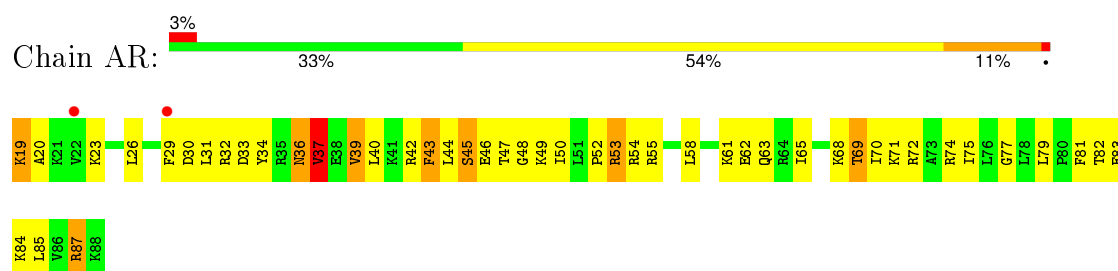
- Molecule 16: 30S ribosomal protein S17



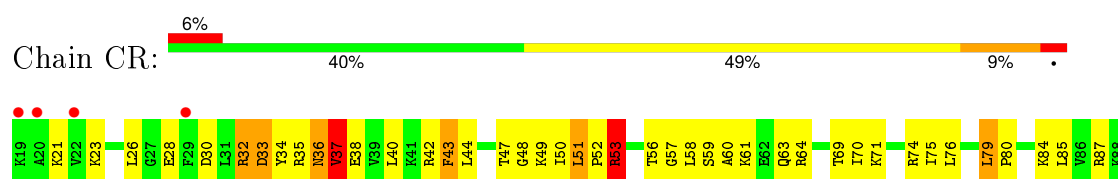
- Molecule 16: 30S ribosomal protein S17



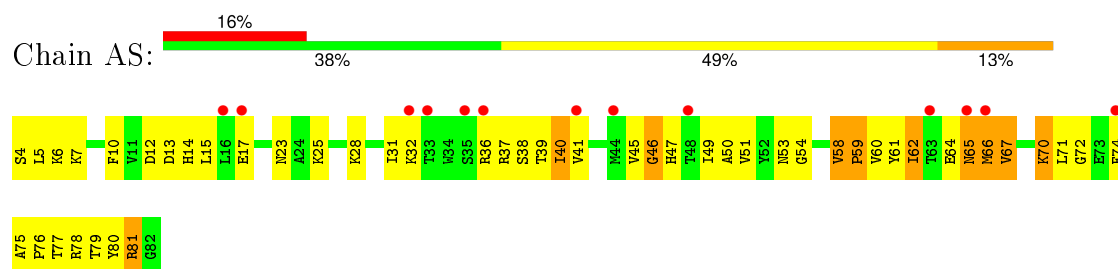
- Molecule 17: 30S ribosomal protein S18



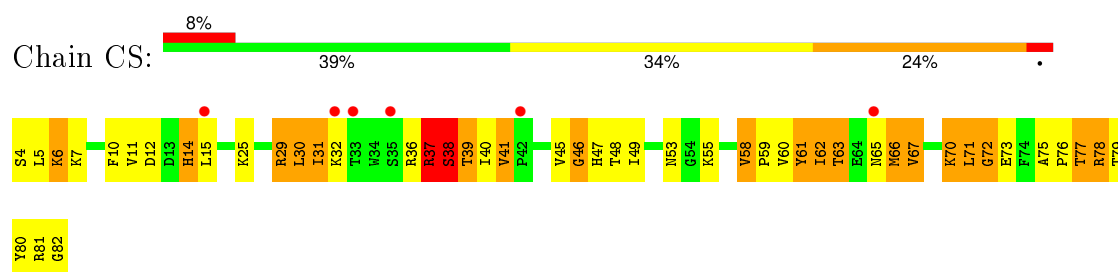
- Molecule 17: 30S ribosomal protein S18



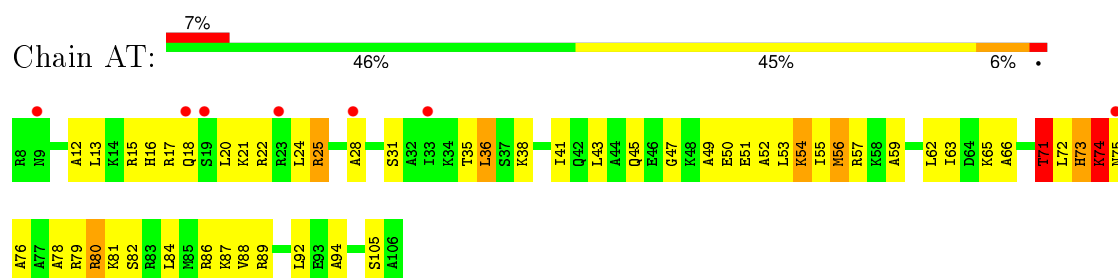
- Molecule 18: 30S ribosomal protein S19



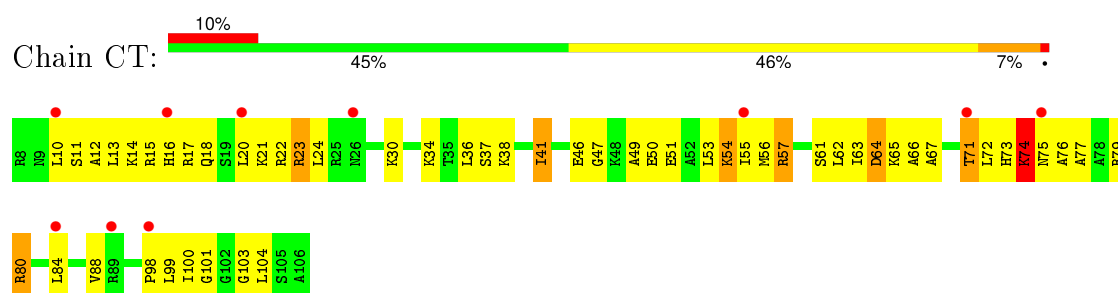
- Molecule 18: 30S ribosomal protein S19



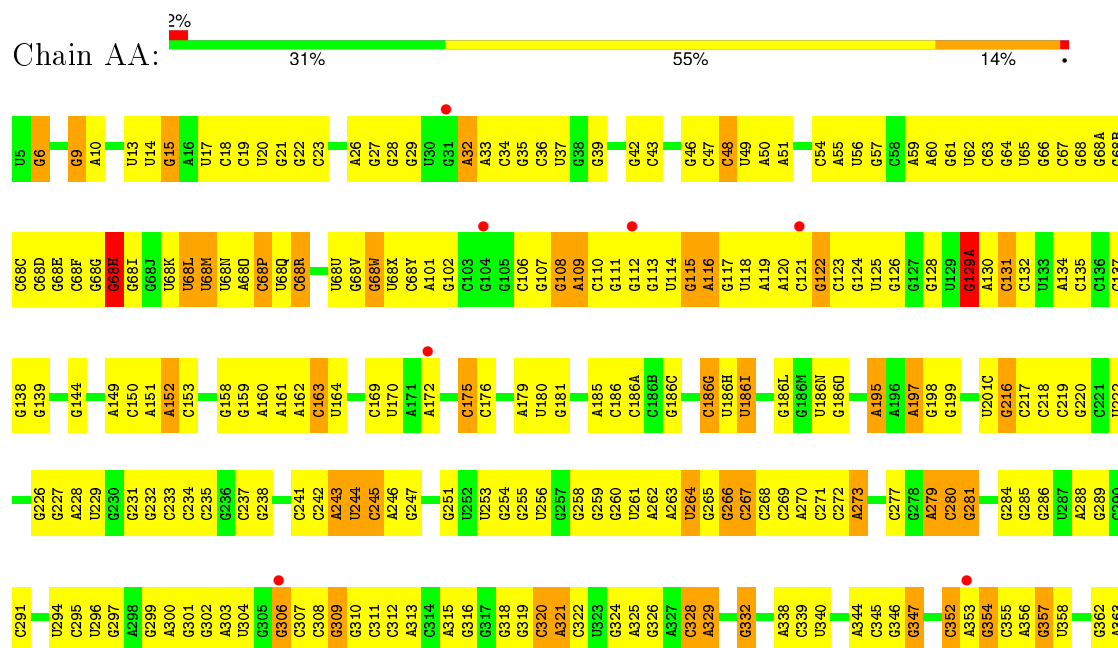
- Molecule 19: 30S ribosomal protein S20



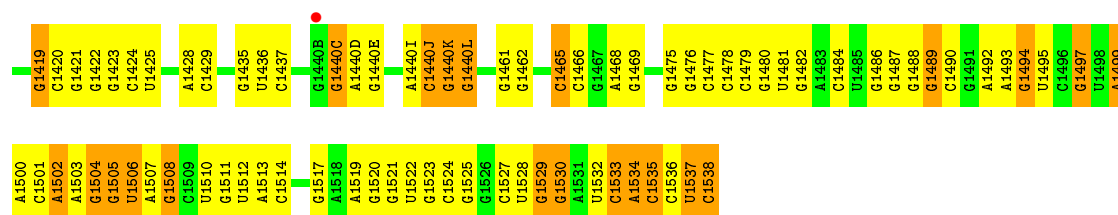
- Molecule 19: 30S ribosomal protein S20



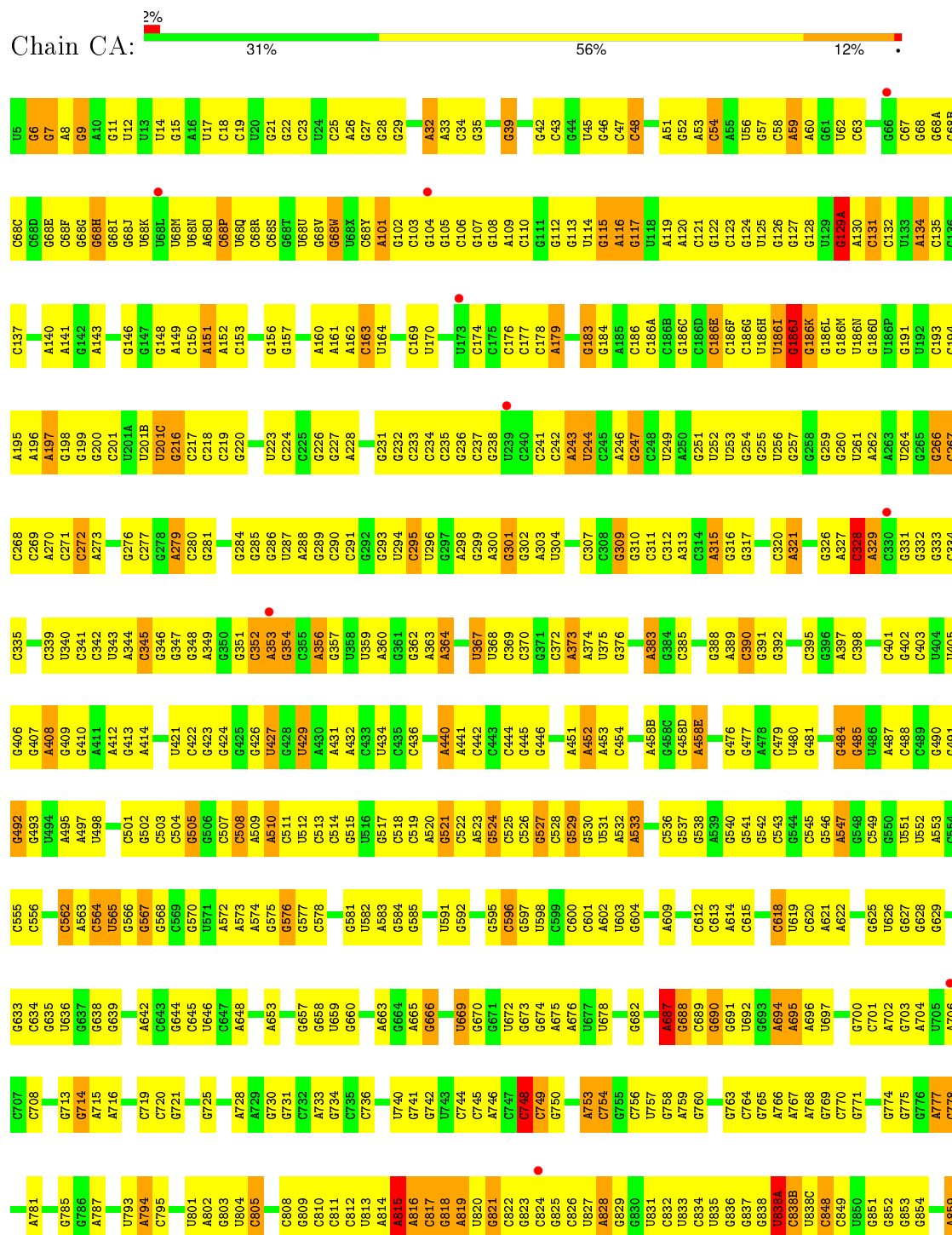
- Molecule 20: ribosomal RNA 16S

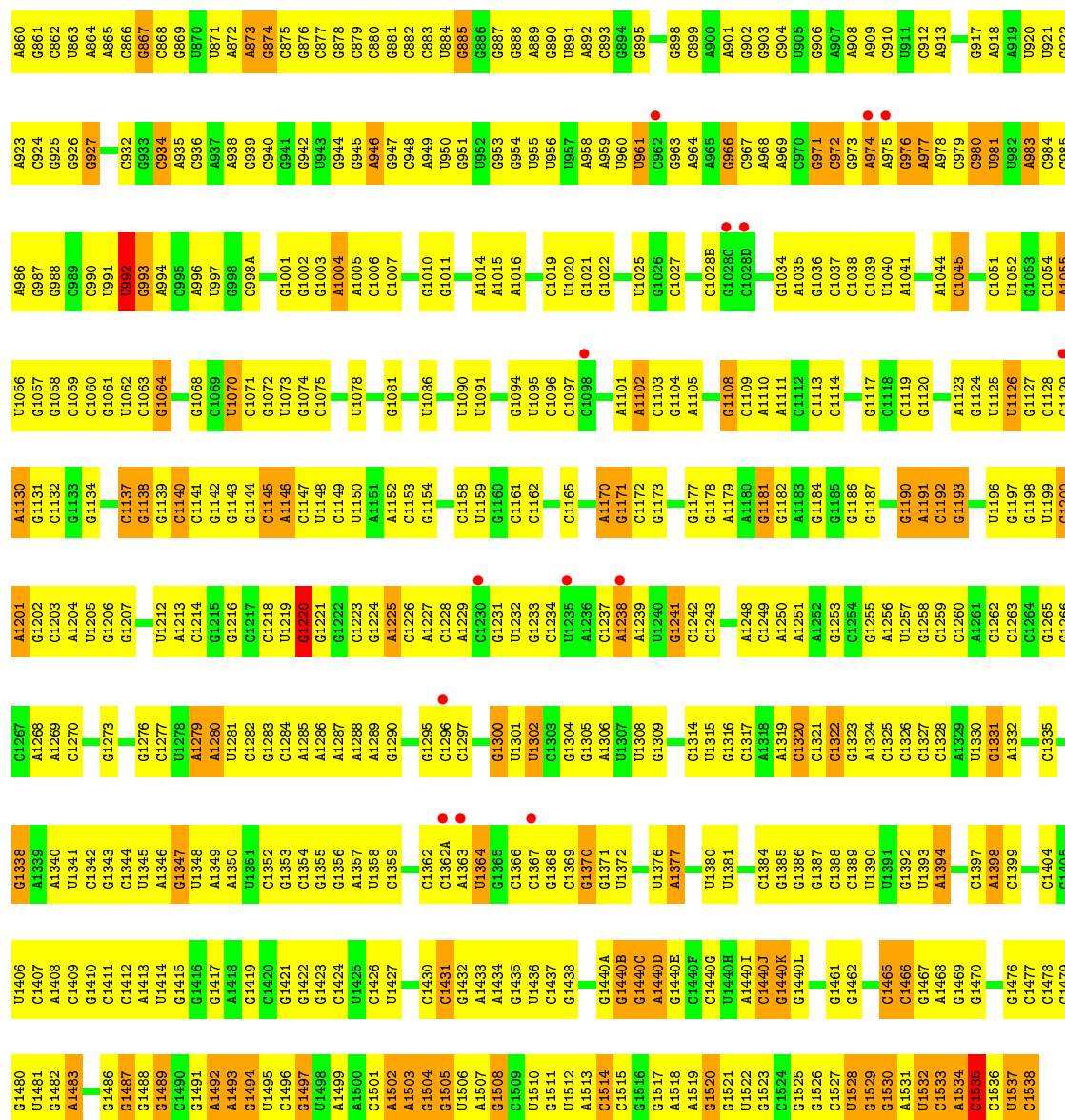


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G1354	A1287	C1214	C1141	U1073	G998A	A937	C862	G776	G703	C569	C508	A431	U366
G1355	A1288	G1142	G1143	U1074	U999	A938			A704	G570	A509	A432	C367
G1289	A1289	G1143	C1075	G1076	G1001	C940	A865	A777	U705	U571	A510	U434	U368
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G1410	U1345	U1205	G1135	U991	C1066	C1066	C930	C848	G760	A695	C561	G423	G424
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C1412	G1347	U1280	U1137	U993	A1068	A1068	C932	G851	G765	U626	A563	G502	G426
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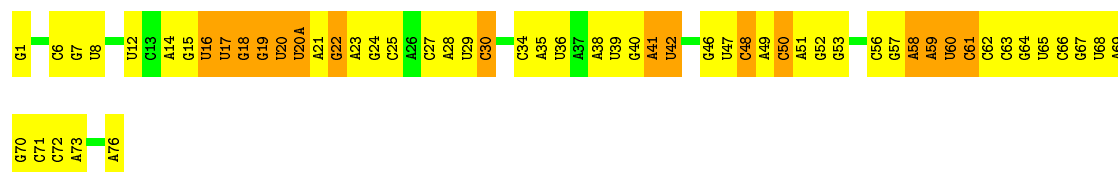
• Molecule 20: ribosomal RNA 16S





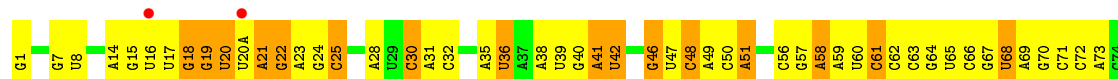
### • Molecule 21: transfer RNA

Chain AW: 26% 53% 21%



### • Molecule 21: transfer RNA

Chain CW: 3% 31% 48% 21%

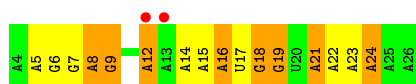


C75  
A76

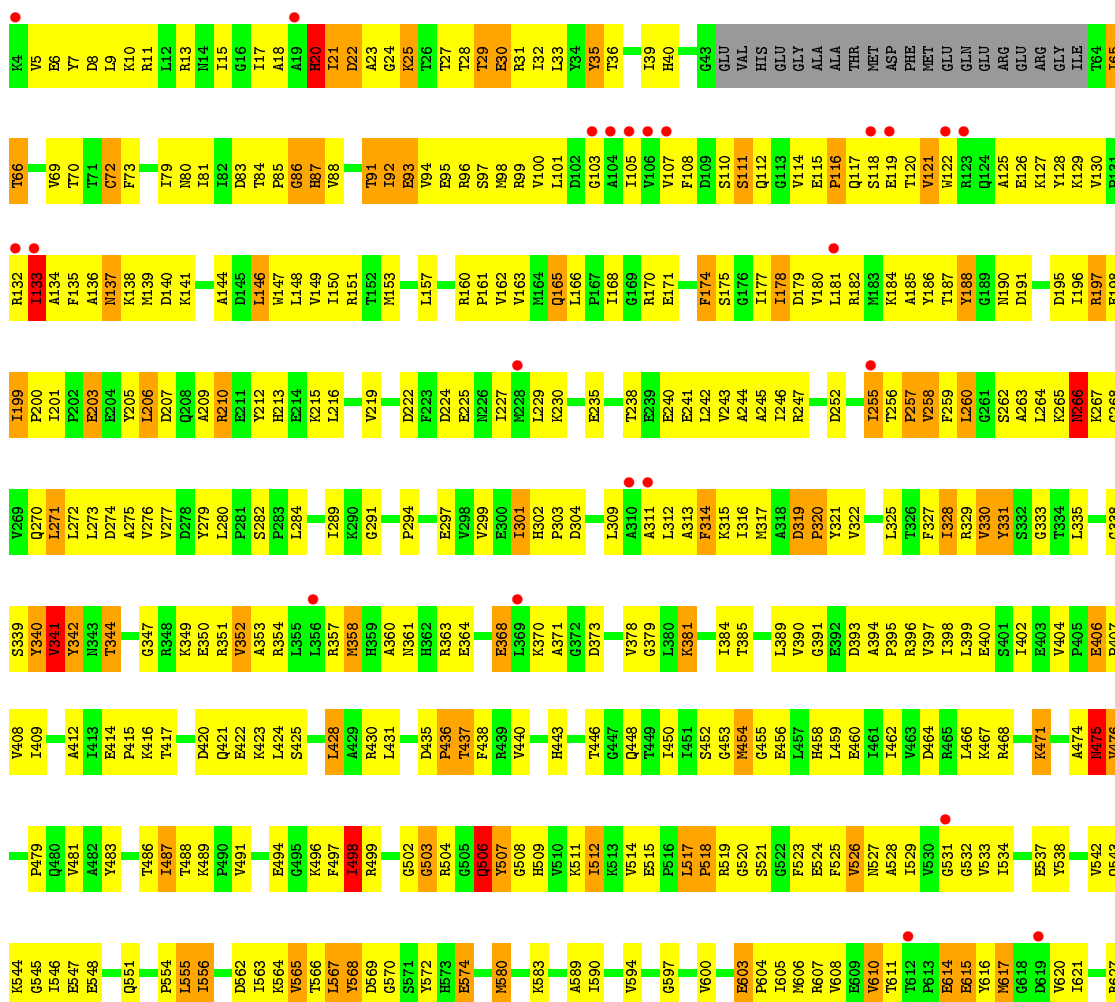
- Molecule 22: messenger RNA



- Molecule 22: messenger RNA

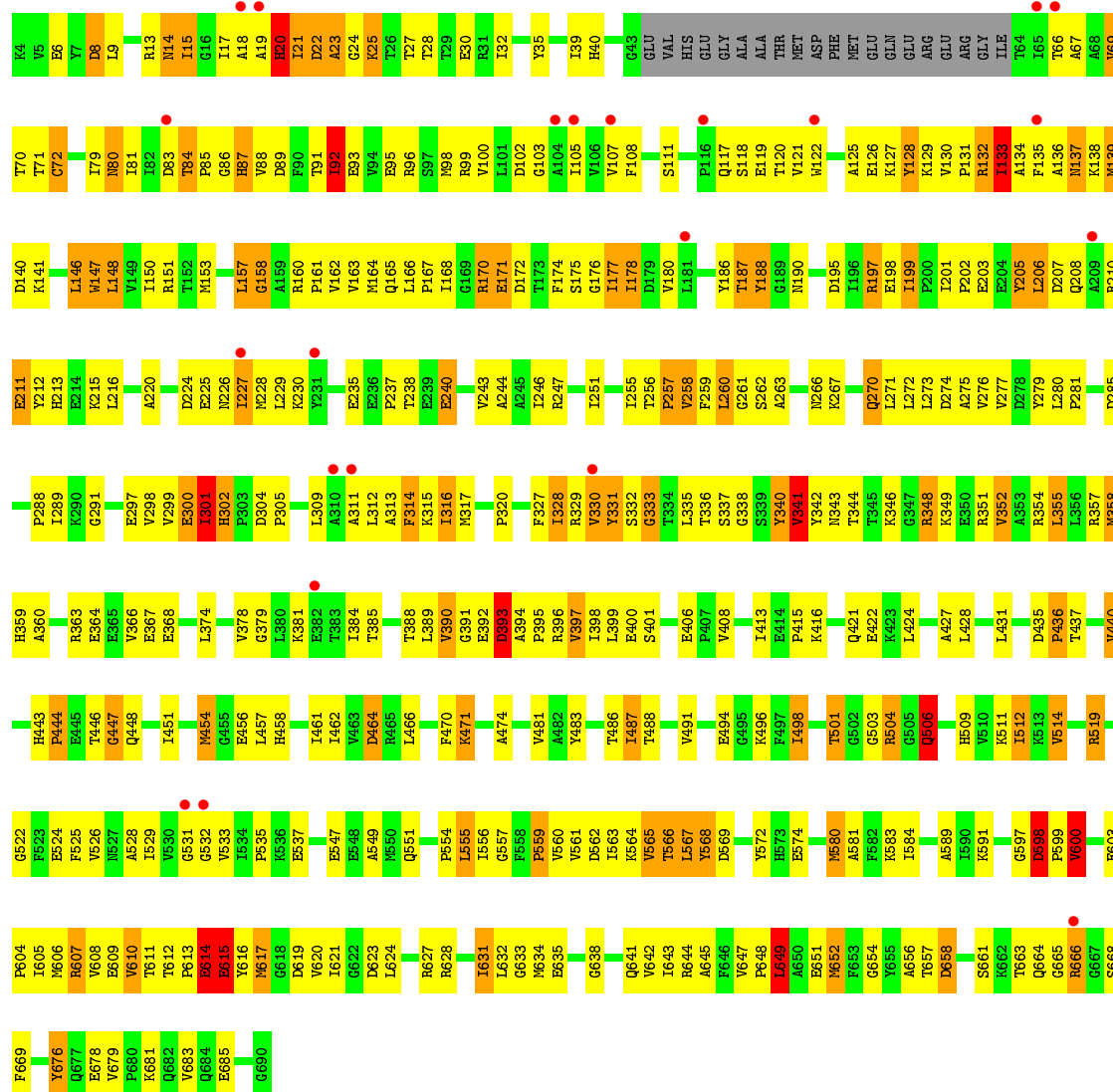
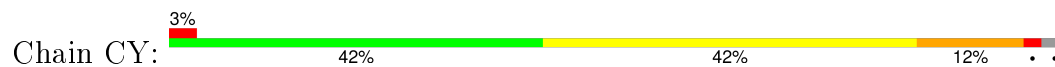


- Molecule 23: Elongation factor G

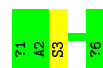
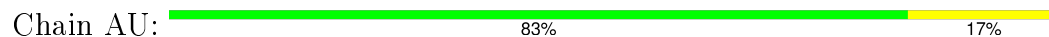




• Molecule 23: Elongation factor G



• Molecule 24: VIOMYCIN



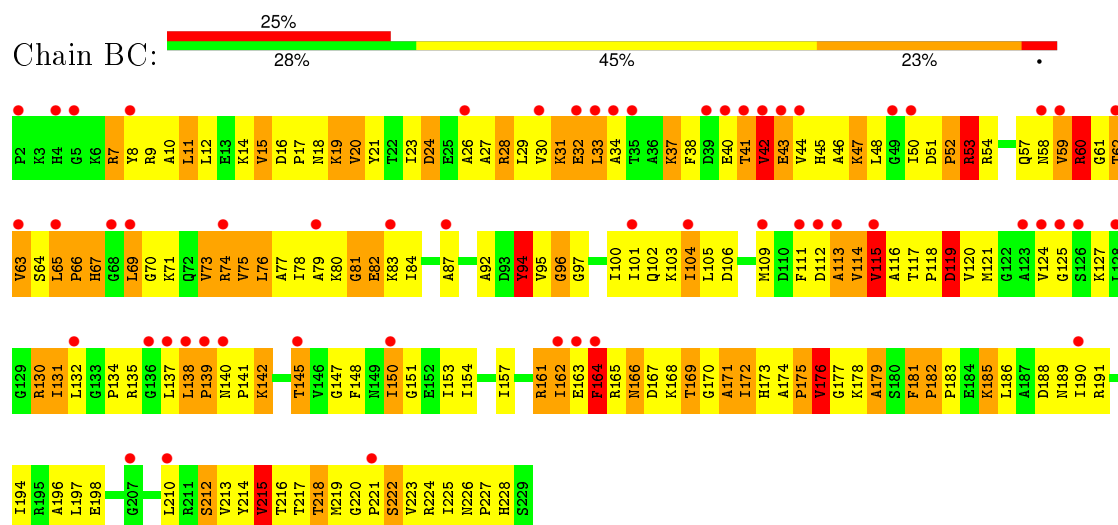
• Molecule 24: VIOMYCIN



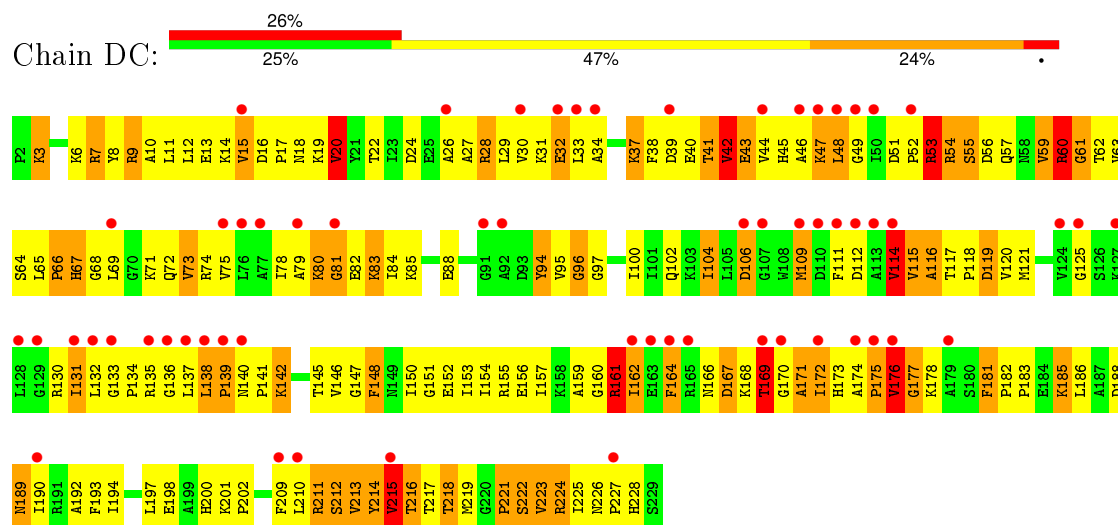




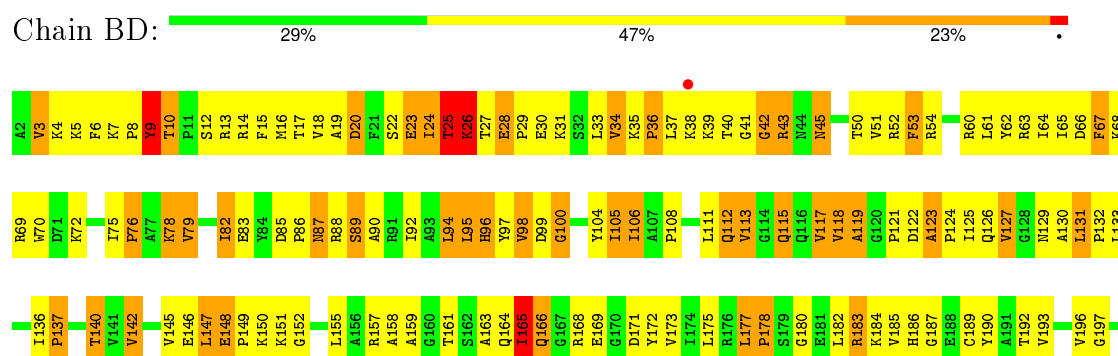
- Molecule 25: 50S ribosomal protein L1

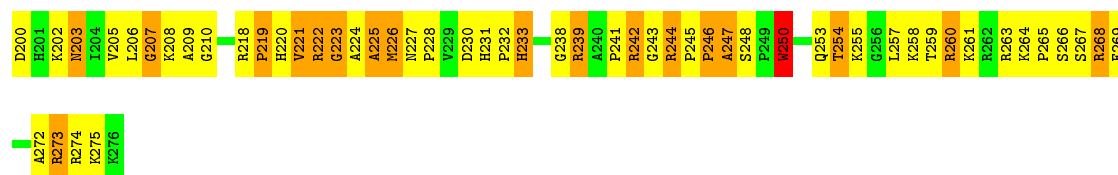


- Molecule 25: 50S ribosomal protein L1

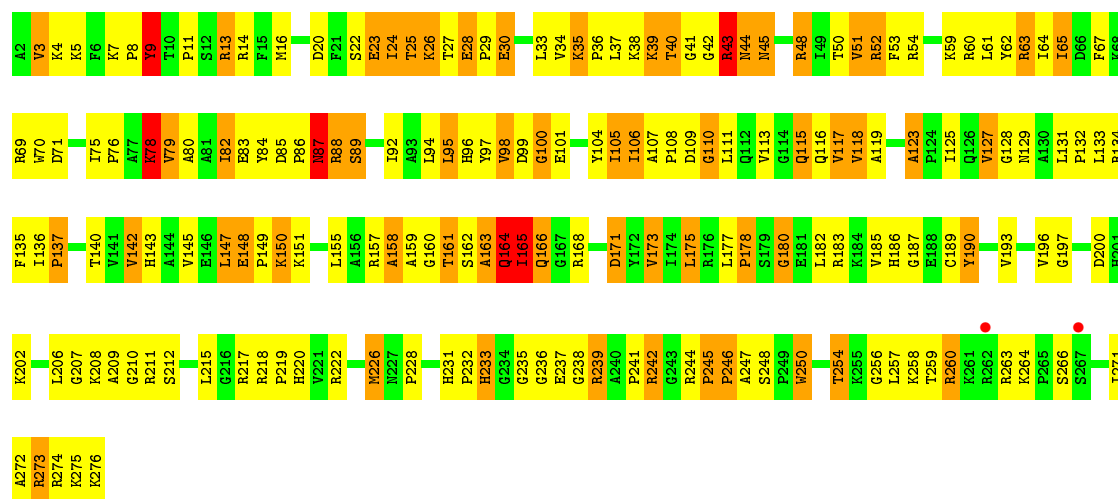


- Molecule 26: 50S ribosomal protein L2

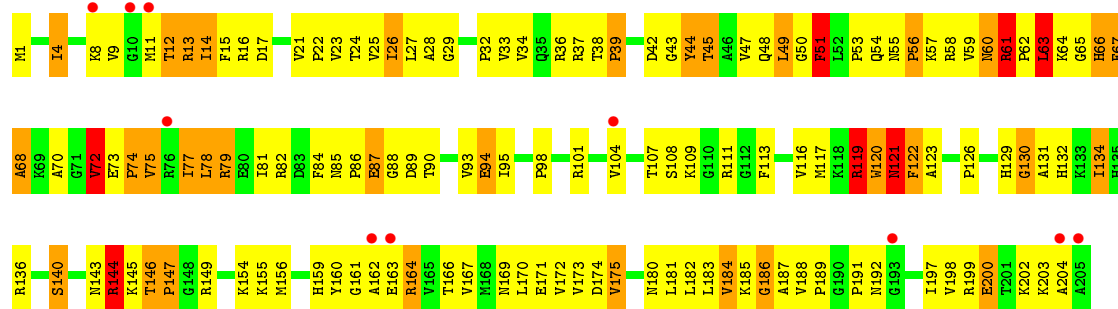




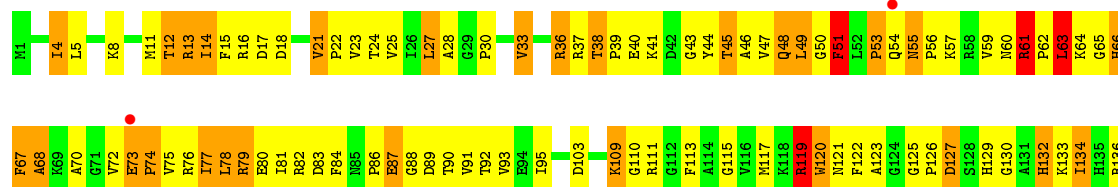
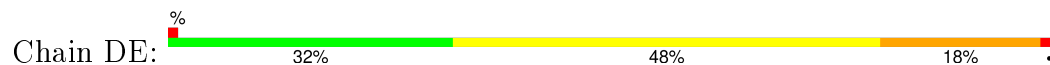
• Molecule 26: 50S ribosomal protein L2

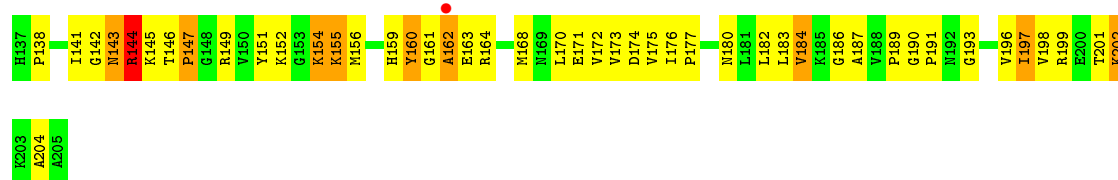


• Molecule 27: 50S ribosomal protein L3

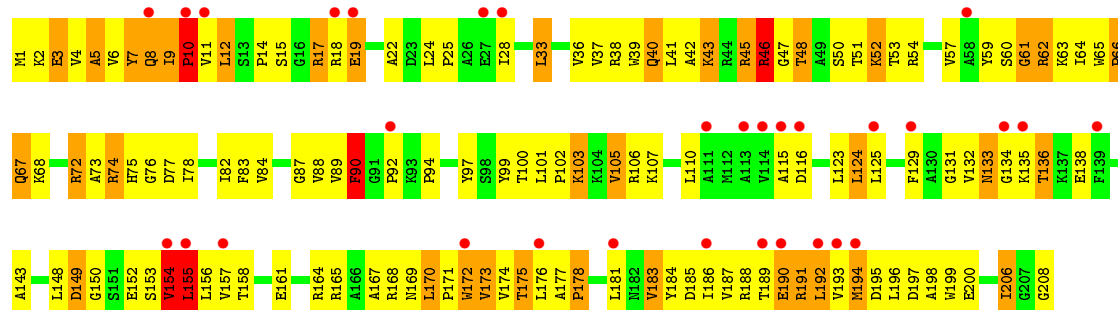


• Molecule 27: 50S ribosomal protein L3

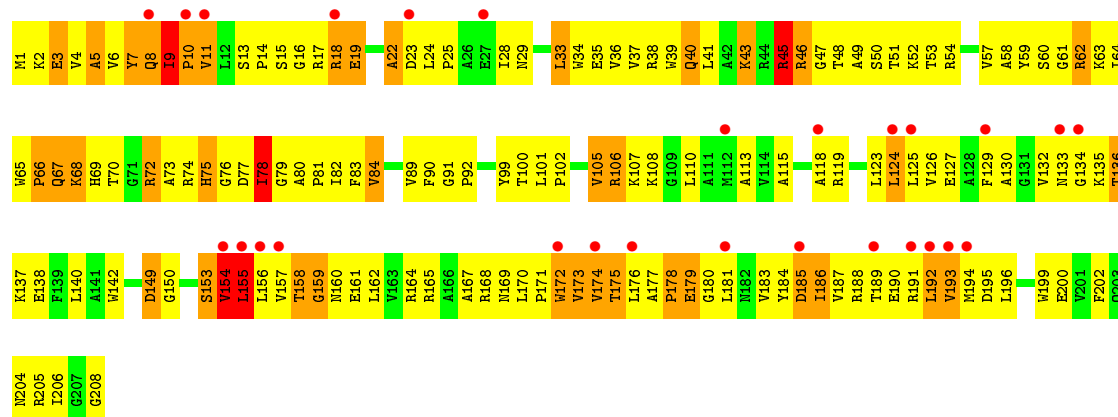




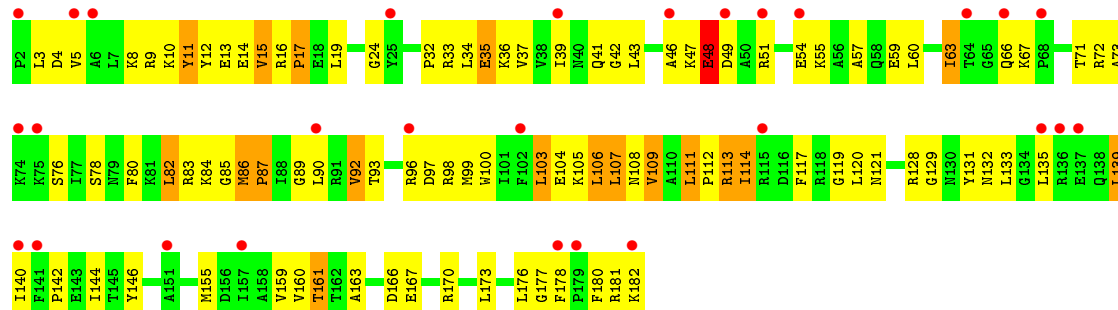
• Molecule 28: 50S ribosomal protein L4



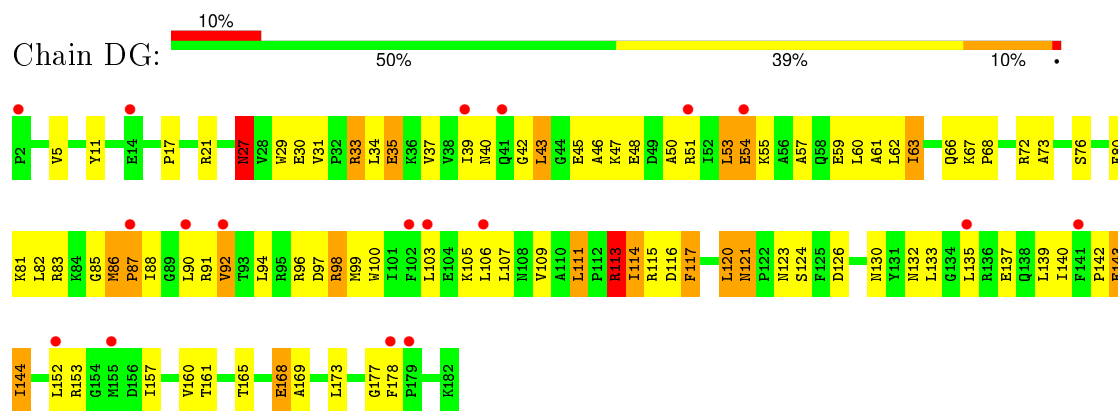
• Molecule 28: 50S ribosomal protein L4



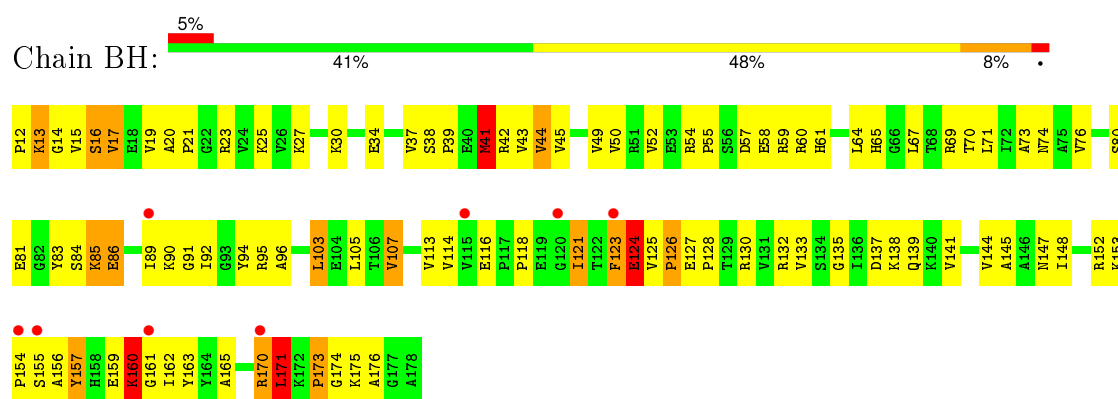
• Molecule 29: 50S ribosomal protein L5



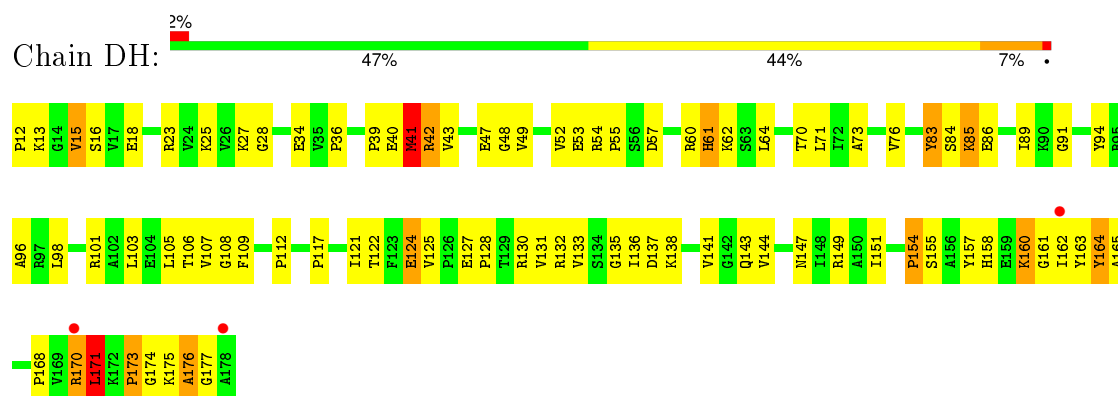
- Molecule 29: 50S ribosomal protein L5



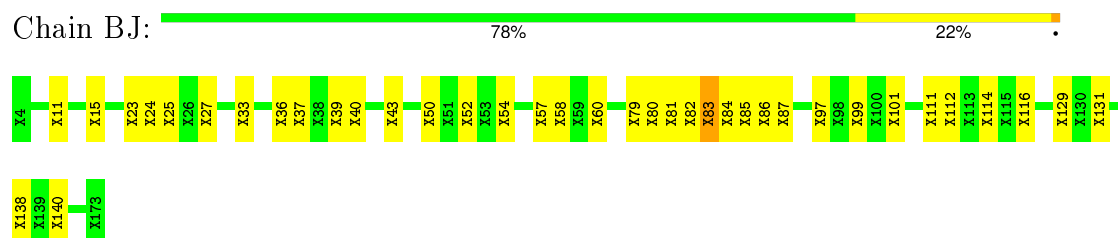
- Molecule 30: 50S ribosomal protein L6



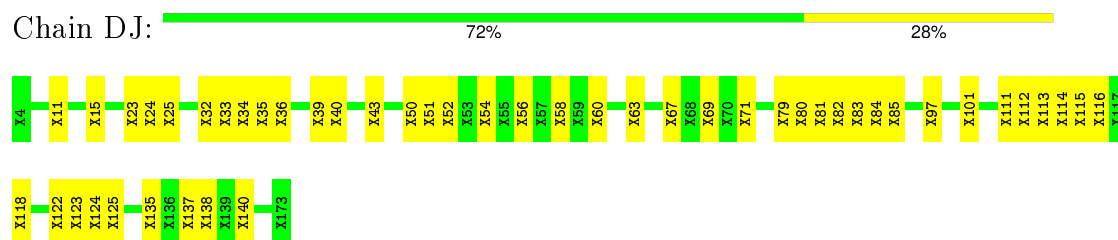
- Molecule 30: 50S ribosomal protein L6



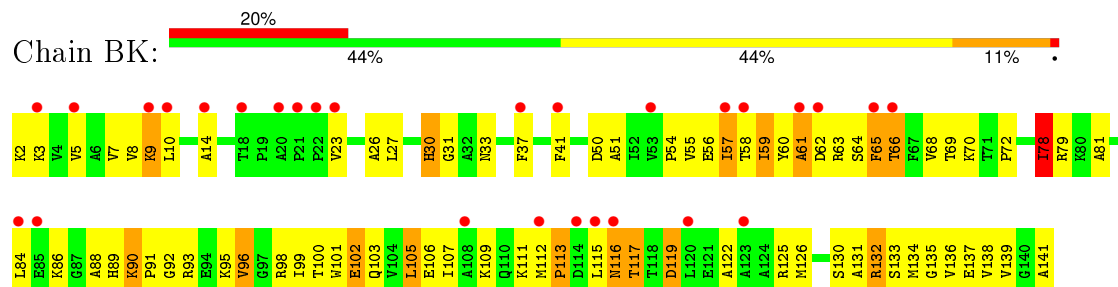
- Molecule 31: 50S RIBOSOMAL PROTEIN L10



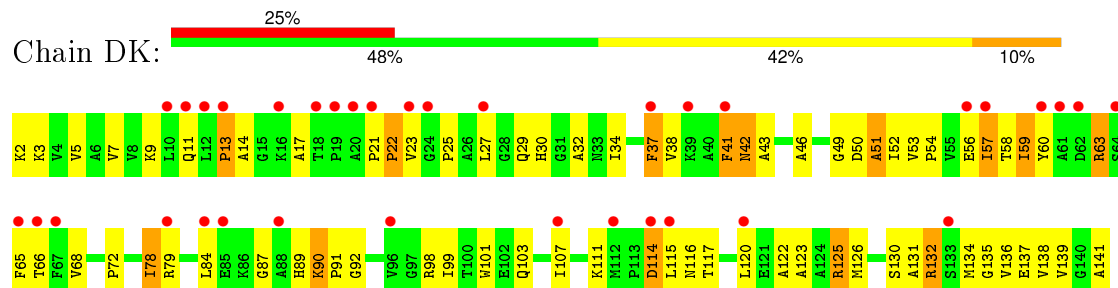
- Molecule 31: 50S RIBOSOMAL PROTEIN L10



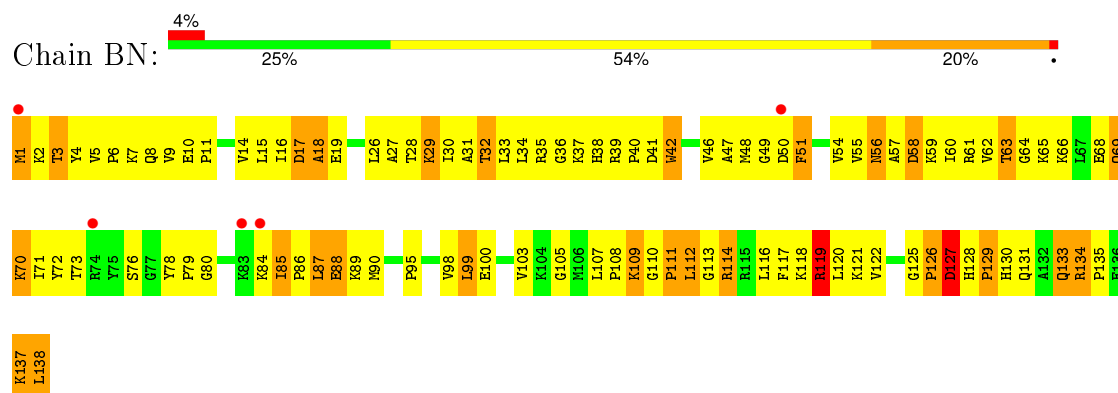
- Molecule 32: 50S ribosomal protein L11



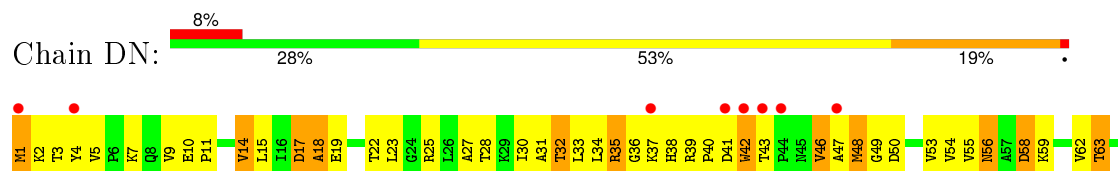
- Molecule 32: 50S ribosomal protein L11

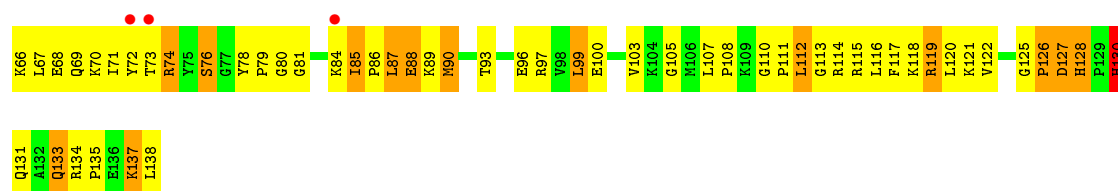


- Molecule 33: 50S ribosomal protein L13

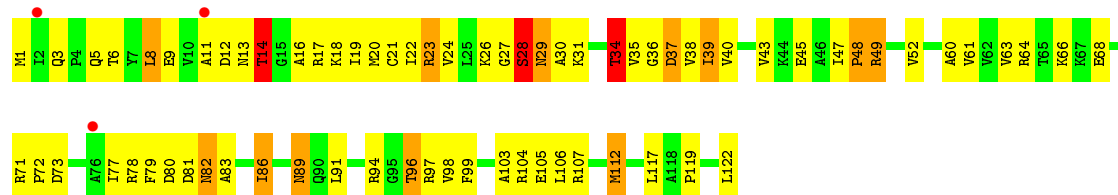
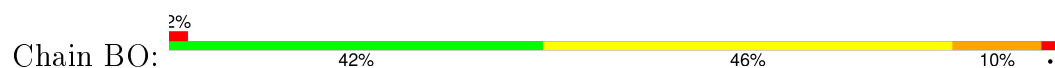


- Molecule 33: 50S ribosomal protein L13

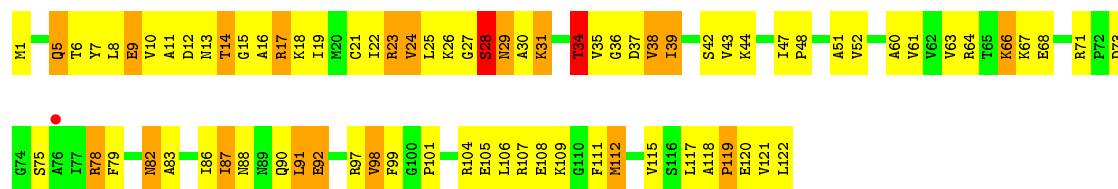




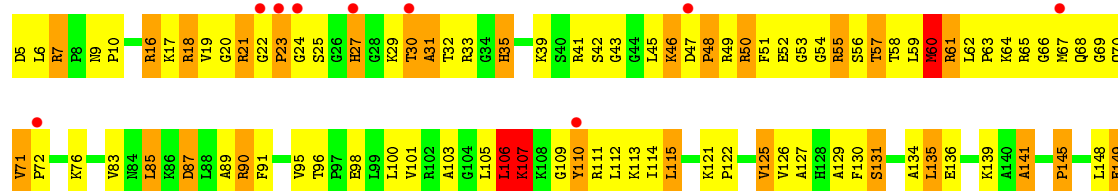
- Molecule 34: 50S ribosomal protein L14



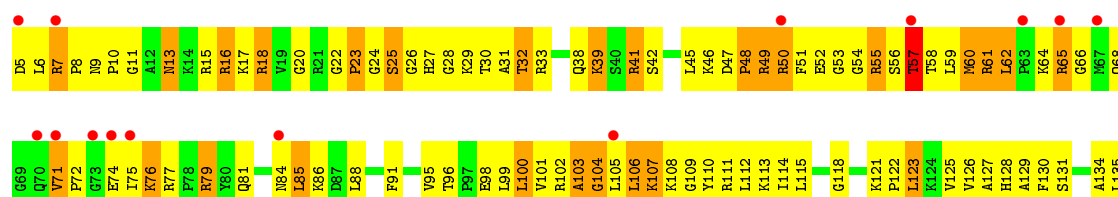
- Molecule 34: 50S ribosomal protein L14



- Molecule 35: 50S ribosomal protein L15

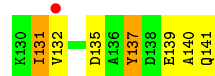
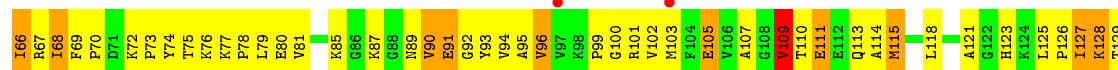


- Molecule 35: 50S ribosomal protein L15

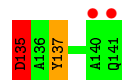
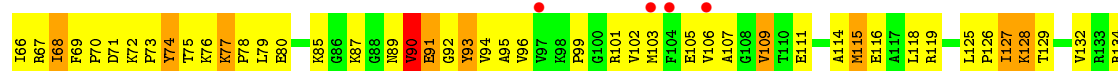




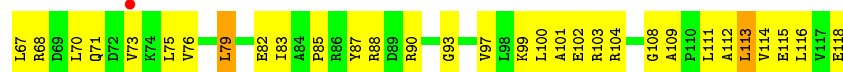
- Molecule 36: 50S ribosomal protein L16



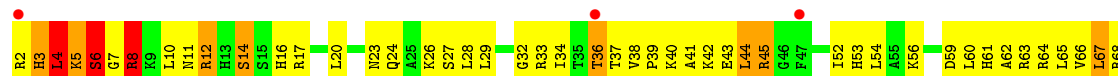
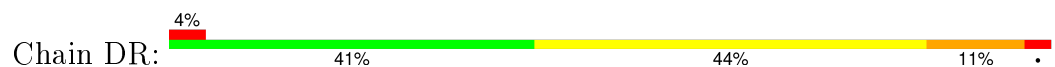
- Molecule 36: 50S ribosomal protein L16

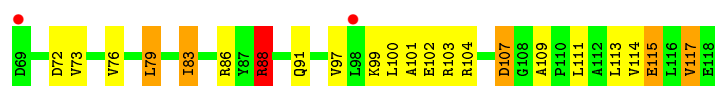


- Molecule 37: 50S ribosomal protein L17

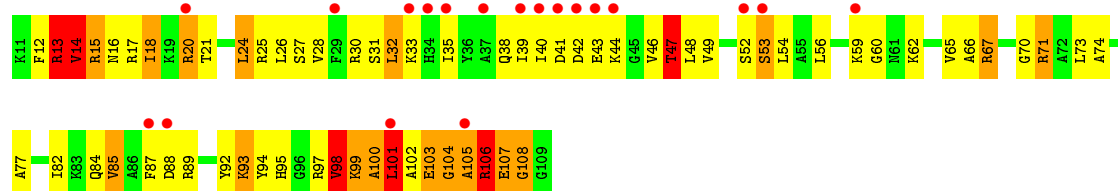


- Molecule 37: 50S ribosomal protein L17

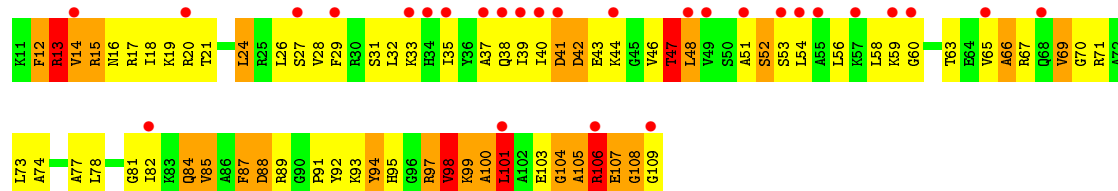




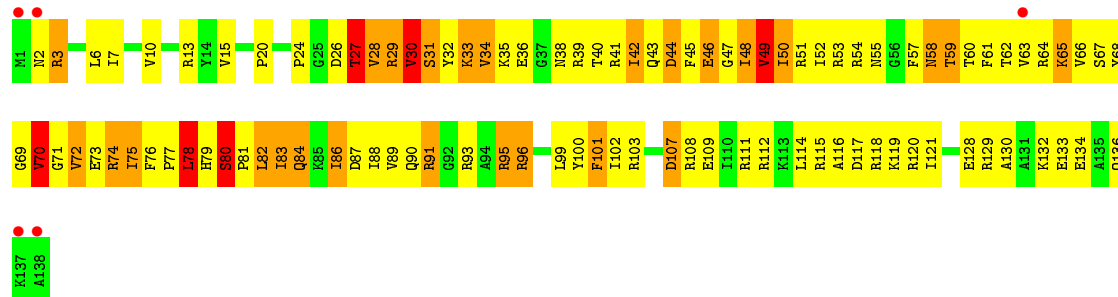
• Molecule 38: 50S ribosomal protein L18



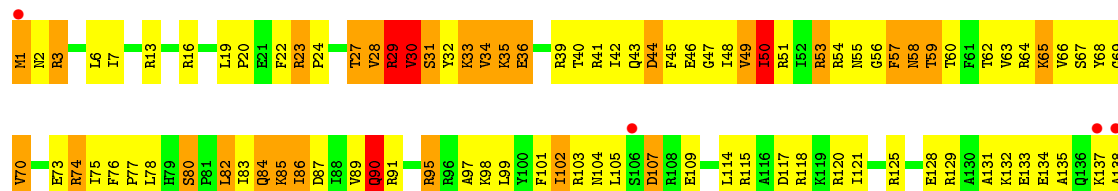
• Molecule 38: 50S ribosomal protein L18



• Molecule 39: 50S ribosomal protein L19

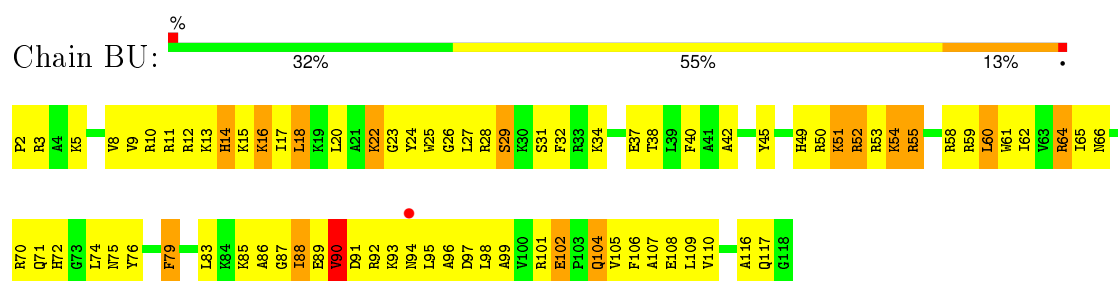


• Molecule 39: 50S ribosomal protein L19

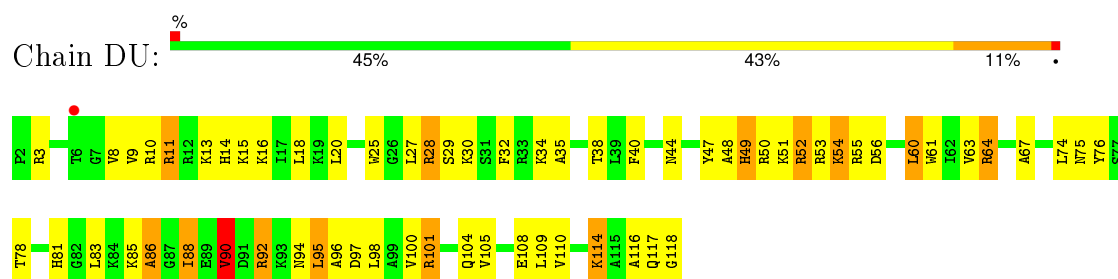


• Molecule 40: 50S ribosomal protein L20

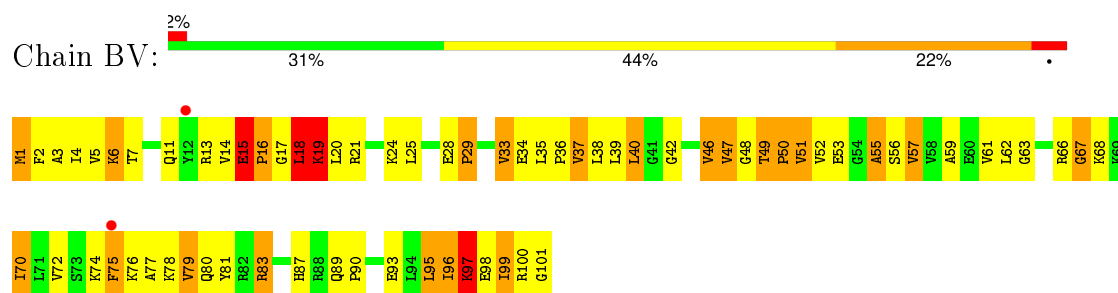




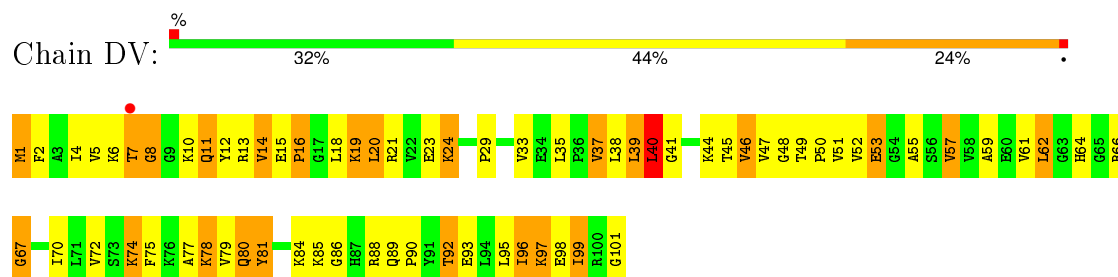
- Molecule 40: 50S ribosomal protein L20



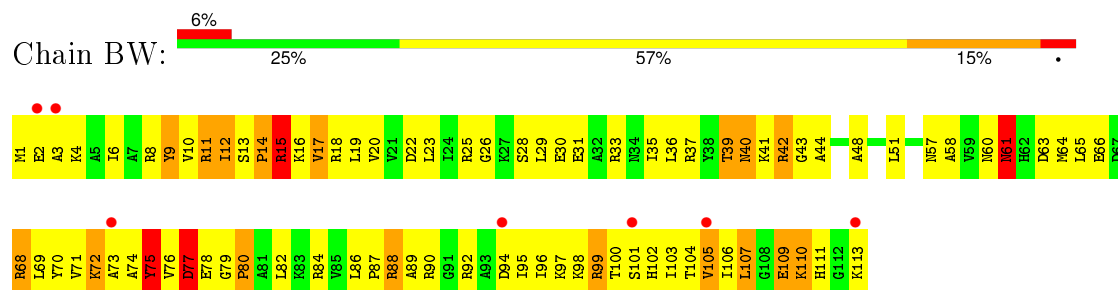
- Molecule 41: 50S ribosomal protein L21



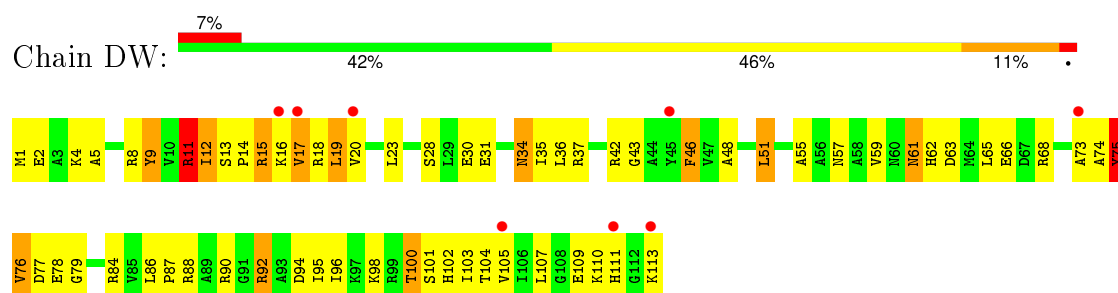
- Molecule 41: 50S ribosomal protein L21



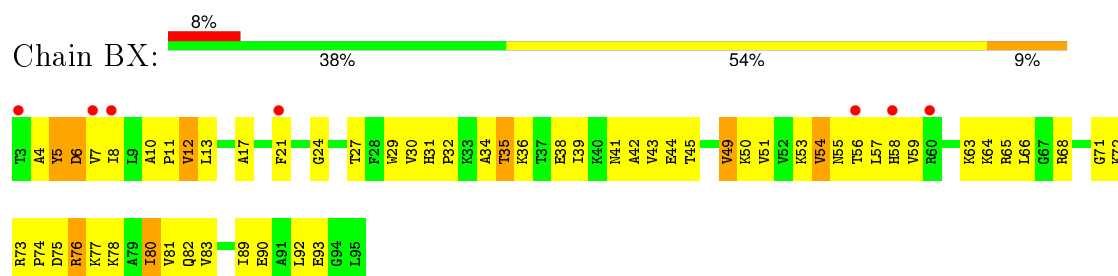
- Molecule 42: 50S ribosomal protein L22



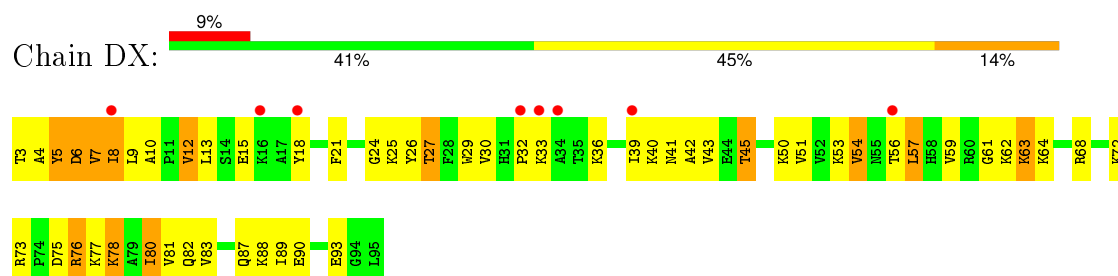
- Molecule 42: 50S ribosomal protein L22



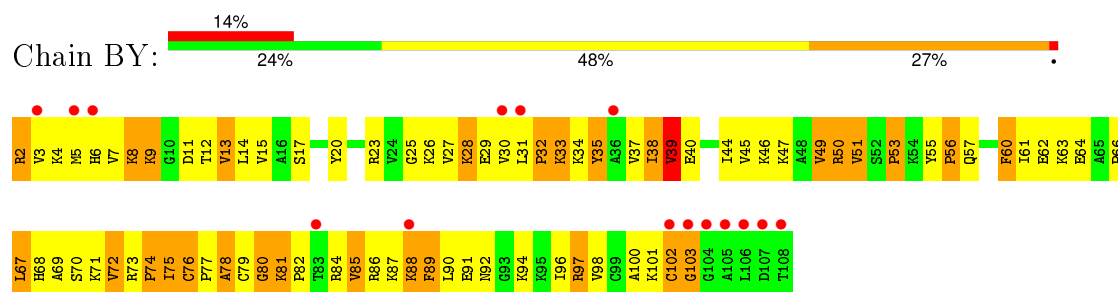
- Molecule 43: 50S ribosomal protein L23



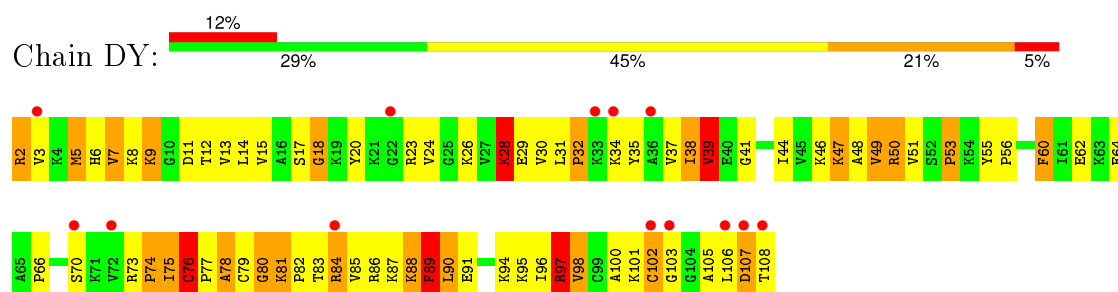
- Molecule 43: 50S ribosomal protein L23



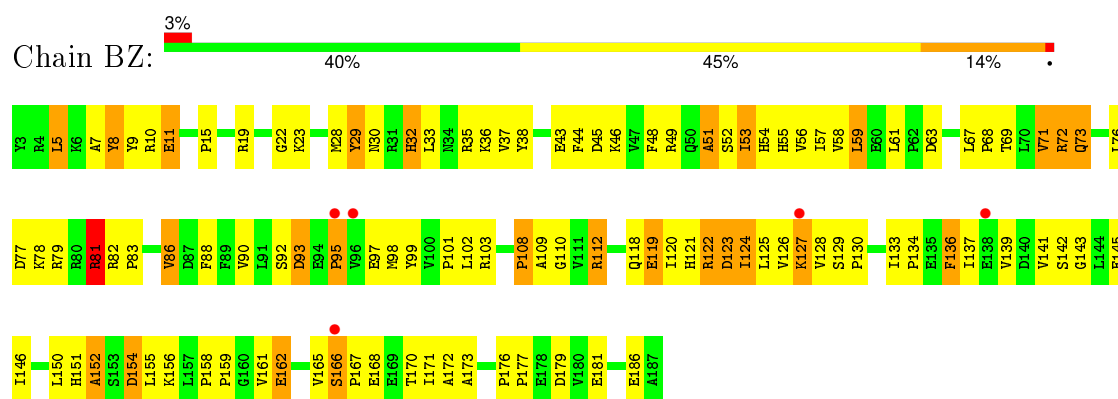
- Molecule 44: 50S ribosomal protein L24



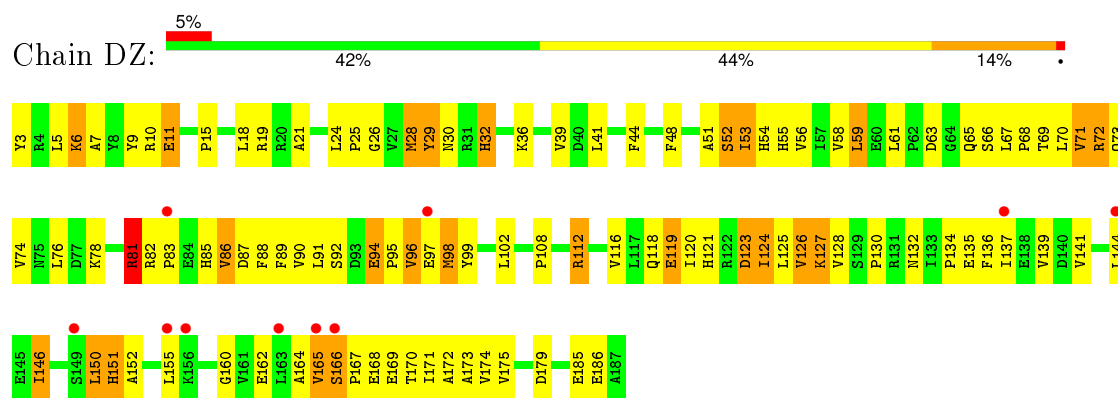
- Molecule 44: 50S ribosomal protein L24



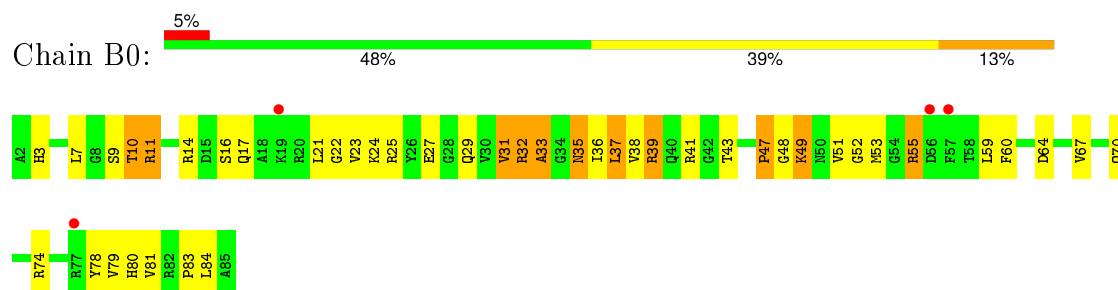
- Molecule 45: 50S ribosomal protein L25



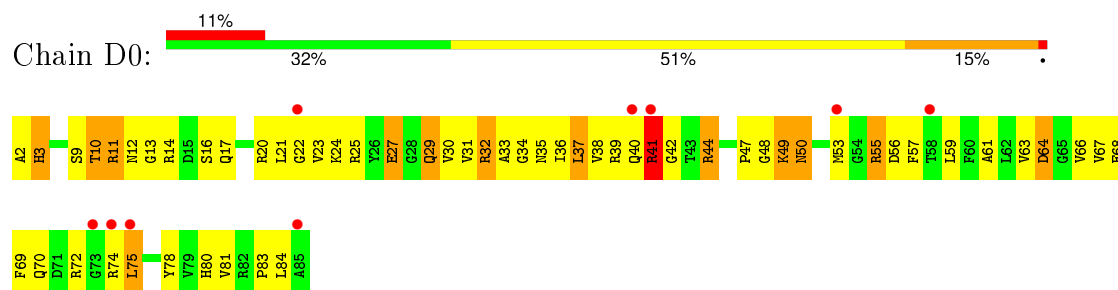
• Molecule 45: 50S ribosomal protein L25



• Molecule 46: 50S ribosomal protein L27

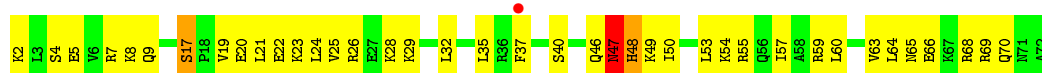


• Molecule 46: 50S ribosomal protein L27

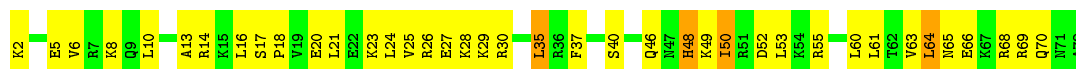


• Molecule 47: 50S ribosomal protein L29

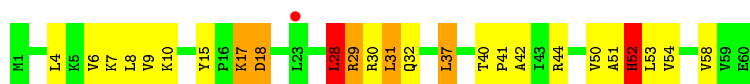




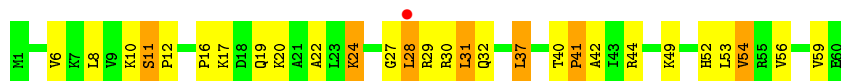
- Molecule 47: 50S ribosomal protein L29



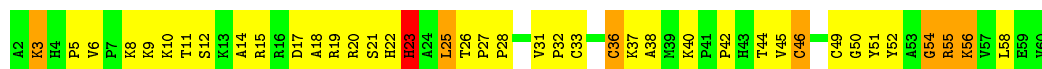
- Molecule 48: 50S ribosomal protein L30



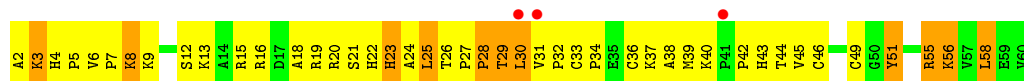
- Molecule 48: 50S ribosomal protein L30



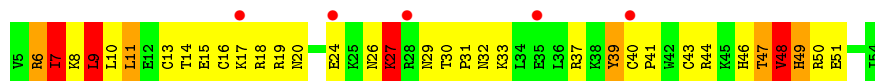
- Molecule 49: 50S ribosomal protein L32



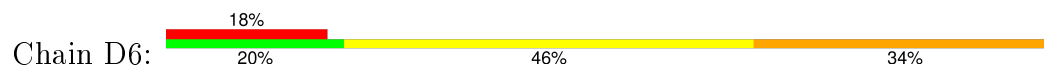
- Molecule 49: 50S ribosomal protein L32

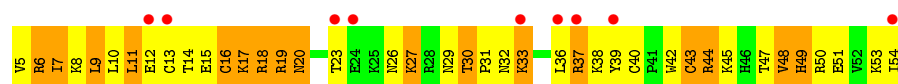


- Molecule 50: 50S ribosomal protein L33

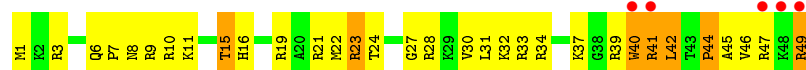


- Molecule 50: 50S ribosomal protein L33





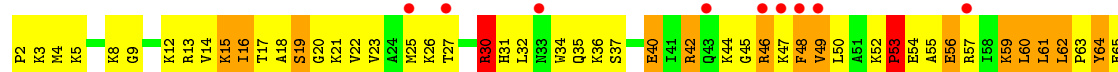
- Molecule 51: 50S ribosomal protein L34



- Molecule 51: 50S ribosomal protein L34



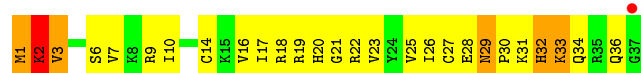
- Molecule 52: 50S ribosomal protein L35



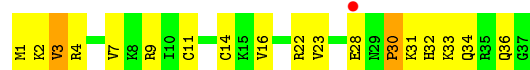
- Molecule 52: 50S ribosomal protein L35



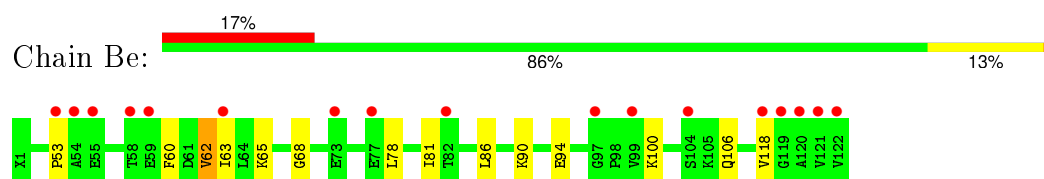
- Molecule 53: 50S ribosomal protein L36



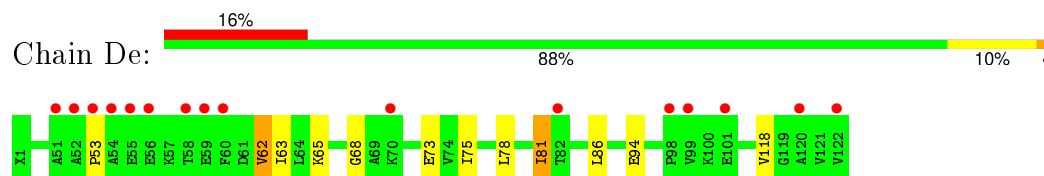
- Molecule 53: 50S ribosomal protein L36



- Molecule 54: 50S ribosomal protein L7/L12



- Molecule 54: 50S ribosomal protein L7/L12



- Molecule 55: 50S RIBOSOMAL PROTEIN L7/L12



There are no outlier residues recorded for this chain.

- Molecule 55: 50S RIBOSOMAL PROTEIN L7/L12



There are no outlier residues recorded for this chain.

- Molecule 55: 50S RIBOSOMAL PROTEIN L7/L12



There are no outlier residues recorded for this chain.

- Molecule 55: 50S RIBOSOMAL PROTEIN L7/L12



There are no outlier residues recorded for this chain.

- Molecule 56: 50S RIBOSOMAL PROTEIN L7/L12



There are no outlier residues recorded for this chain.

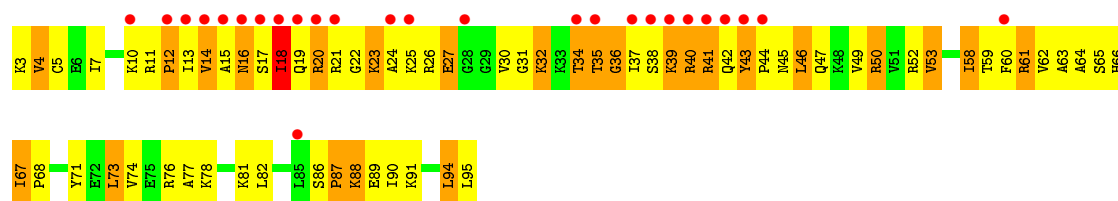
- Molecule 56: 50S RIBOSOMAL PROTEIN L7/L12



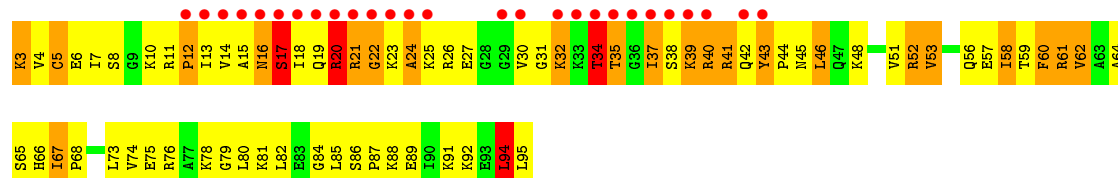
There are no outlier residues recorded for this chain.

- Molecule 57: 50S ribosomal protein L28

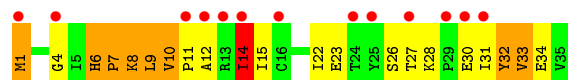
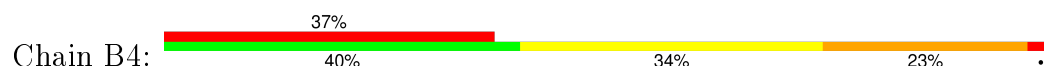




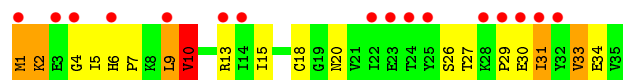
• Molecule 57: 50S ribosomal protein L28



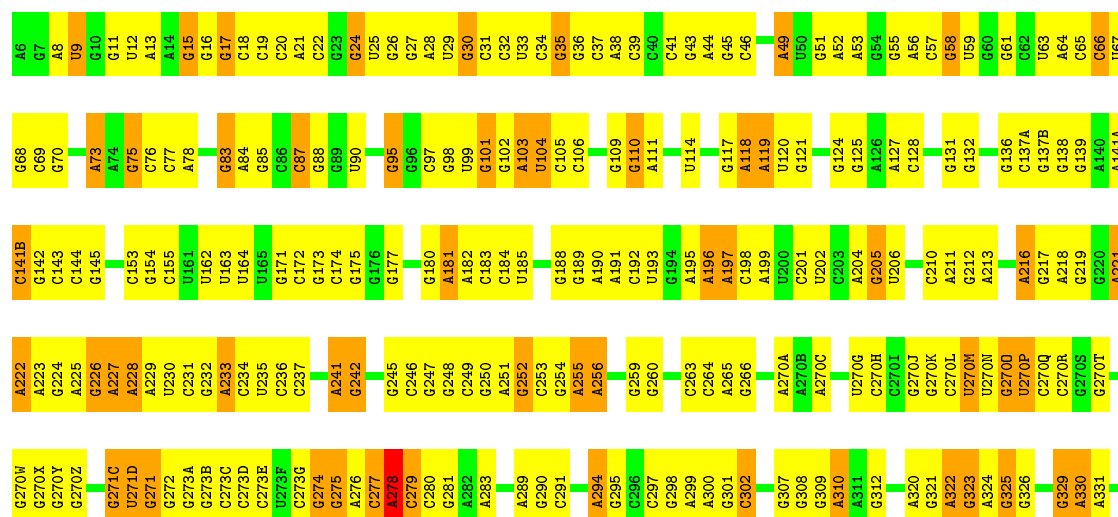
• Molecule 58: 50S ribosomal protein L31



• Molecule 58: 50S ribosomal protein L31



• Molecule 59: 23S ribosomal RNA



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G1368	C1290	G1148	A1077	C1007	G946	A872	U810	G748	G680	U614	C544	G473	U405	C335
A1359	C1291	G1149	U1078	C1008	G947		U811	G749	G681	U615		G474	G406	C336
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C1295	C1295	C1152	U1082	U1012	G950	U877	C814	A752	G684	G618			C410	A340
C1296	C1296	C1153	U1083	U1013	C951	A878	C815	C753	A885	G618A			C411	C341
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		A1155	A1085	C1015	G955	G883	G818		G687				C413	A346
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		G1171	C1100	U1026	G966	A900	U829	G768		C634			A429	
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		A1174	C1102	U1028	G968	C902	G831	G770	A705	G636			C433	G359
		U1175	A1103	A1029	U969			G771	A706	A637			U434	
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		A1177	U1105		C971	U907	A835	U773	C708	U639			A501	A363G
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		G1215	G1138	G1063	G997		G864	G801	A603				C466	G397
		G1216	A1214	C1064	C998	G938	C865	A802	G533				G467	G398
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			U1142	G1071	A1001	A941	C867	G805	G607				A401	A401
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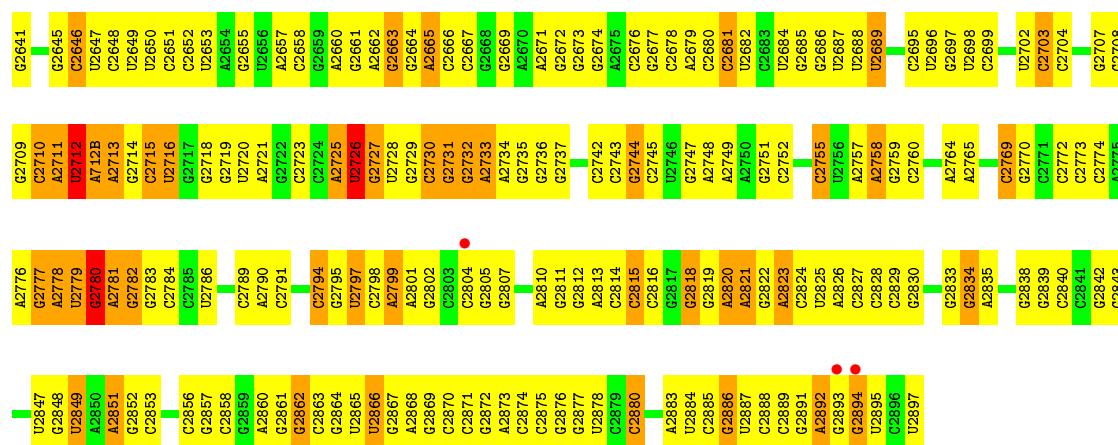


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G2499	A2433	G2367	G2078	A2015	A1953	G1869	A1803	G1725	G1646	C1577	A1509	G1435
U2500	A2434	G2371	G2080	U2016	G1954	C1870	C1804	G1726	G1647	U1578	A1510	G1436
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U2519	A2453	G2255	U2102	G2038	G1973	U1899	G1824	G1756	A1668	C1599	C1532	
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G2521	A2522	U2257	C2106	C2040	G1975	A1900	A1826	G1758	C1670	G1601	G1534	G1459
G2522	G2456	C2258	C2107	U2041	U1976	A1901	G1826	A1759	C1671	U1602	U1535	A1460
G2523	U2457	G2259	G2108	A2042	A1977	C1902	C1827		C1672	A1603	A1536	G1461
G2524	G2458	C2260	C2109	G2043	G1978	G1903	G1828	A1762	C1673	C1604	C1537	C1462
G2525	A2459	C2261	U2109	C2044	C1979	G1904	A1829	G1763	G1674	G1605	G1538	C1463
G2526	U2460	U2262	G2110	G2045	G1980	G1906	C1830	G1764	C1675	G1606	G1539	G1464
C2527	C2461	C2263	C2111	G2046	A1981	A1912	G1831	C1765	A1676	C1607	G1540	G1465
U2528	U2462	G2264	G2112	U2047	U1982	C1913	U1833	C1771	A1677	A1608	G1541	G1466
G2529	C2463	G2265	U2113	G2048	G1985	C1914	U1834	G1772	G1681	A1609	G1542	C1467
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A2531	C2465	A2268	G2115	C2050	G1987	A1916	C1838	C1774	G1682	C1612	C1544	
G2532	C2466	A2269	G2116	A2051	C1988	U1917	G1839		G1683	G1613	A1545	G1474
	C2467	G2270	A2117	G2052		C1920	U1840	U1778	A1690	A1614	C1546	G1475
	C2468		U2118	G2053	G1989	C1920	G1840	U1779	C1691	C1615	C1547	G1478
	A2469	A2273	A2119	A2054	C1990	G1923	C1842	A1780	G1692	A1616	G1548	G1479
	C2470	G2274	G2120	C2055	G1991	U1923	G1843	C1781	U1693	C1617	G1551	U1481
	C2471	C2275	G2121	G2056	G1992	C1924	C1844	C1782	G1694	G1623	G1552	G1483
	C2472	G2276	U2122	A2057	U1993		G1845	C1783	C1695	G1626	A1554	A1486
	G2475	G2277	G2125	A2058	C1996	A1927	G1850	A1787	G1696	C163B	G1557	G1487
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	C2477	G2279	G2127	A2060	G1998	A1929	C1852	A1789	G1700	A1632	G1559	G1491
	A2478	G2280	G2128	A2061	G1999	G1930	A1853	C1790	A1701	G1633	G1492	G1493
	G2479	C2282	C2129	A2062	C1999	U1931	A1854	A1791	G1702	A1634	C1493	A1494
	C2480	C2283	G2130	C2063	G2000		G1855	G1792	G1695	C1635	C1564	A1495
	G2481	C2284	U2130	C2064	A2001	G1935	U1851	C1793	G1705	C1636	A1565	A1496
	G2482	A2287	G2131	C2065	G2002	G1936	C1852	U1794	G1706	A1637	A1566	A1497
	C2483	A2288	U2132	C2066	G2003	A1937	A1854	C1795	G1707	C1638	G1568	U1497
	G2484	G2289	G2133	G2067	G2004	A1938	G1855	U1796	C1708	A1639	A1569	C1498
	G2485	U2291	A2134	U2068	G2005	U1939	G1857	C1797	U1709	C1640	C1499	
	A2486	U2292	G2135	G2069	C2006	U1940	G1858	C1798	G1710	A1641	G1500	
	A2487	C2293	A2136	G2070	C2007		A1859	C1799				
	A2488	C2294	C2137	A2071	C2008	C1947	G1860	C1797				
	G2489	G2295	G2138	G2072	G2009	G1948	G1861	U1798				
	U2491		C2139	C2073	G2010	G1949						
			U2144	U2074	U2011							

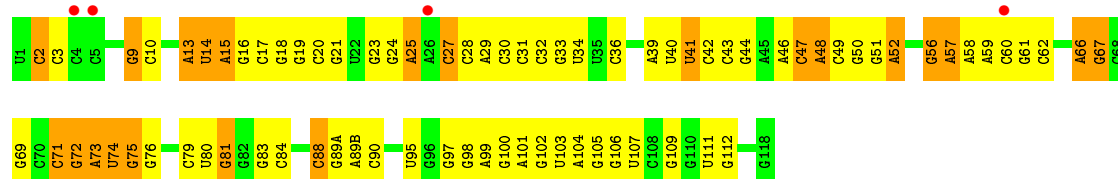


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A1483	A1483	G1385	A1321	A1253	C1180	U1113	A1046	A980	A917	C850	C786	U724	C858	G599	G630
U1454	C1387	C1386	A1322	A1254	C1181	U1114	G1047	A983	A918	U851	U787	G725	C859	G600	C531
G1455	G1388	U1323	U1324	U1255	G1182	G1115	C1049	A984	G919	G852	A788	G726	G660	G601	A532
G1459	G1389	G1324	G1325	G1257	G1184	G1116	C1050	C985	G921	G854	A789	A727	G661	G602	G533
A1460	U1390	G1326	C1185	C1257	C1185	G1117	G1051	C986	G922	G855	G790	G728	G662	A603	U534
G1461	U1326	U1327	G1186	C1258	G1187	G1120	C1052	G987	G923	C856	G792	G730	G663	G604	G535
C1462	C1327	G1259	G1187	C1259	G1187	G1120	C1053	A988	C924	C857	C731	G732	C864	C605	A536
C1463	U1328	G1260	U1188	C1260	U1188	C1121	A1054	G989	C925	U858	G794	G732	U667	U607	G537
C1464	U1329	C1261	U1189	C1261	U1189	G1122	G1055	A990	A926	G859	G733	G732	G668	A608	G539
U1535	C1397	U1263	G1190	U1263	G1190	C1123	G1056	C991	G928	C862	C796	A734	G669	A609A	C541
A1536	U1398	U1263	G1193	U1263	G1193	G1124	A1057	C992	G929	G863	C797	A735	A670	G609B	C542
C1537	C1399	G1264	G1193	G1264	G1193	G1125	G1058	G993	U930	A863	G798	C736	C671	G610	G543
C1468	C1400	A1265	A1194	A1265	A1194	A1126	G1059	G994	G931	G864	G799	C737	C672	G611	G544
A1469	G1334	C1266	G1195	C1266	G1195	A1127	U1060	C995	G932	C865	A800	G738	C673	G612	G545
U1540	C1402	U1335	C1196	U1335	C1196	A1128	U1061	A996	G933	A866	G739	G739	G674	U613	C546
U1541	G1470	A1336	G1197	A1268	G1197	A1129	G1062	G997	G934	C967	U740	G742	A675	U614	A547
G1542	C1404	U1337	U1198	A1269	U1198	U1130	G1063	C998	G935	U868	A804	G741	C678	G615	A548
A1543	U1405	G1338	U1199	C1270	U1199	G1131	C1064	U999	C935	G869	G805	G742	C679	A616	G549
C1474	U1406	G1339	C1200	C1271	C1200	C1135	U1065	A1000	G938	A870	C806	G743	C679	G617	G556
A1545	C1407	U1340	C1201	A1272	C1201	G1136	U1066	A1001	G939	U871	U807	G744	G680	G618A	U557
U1546	C1408	U1341	C1202	U1273	C1202	G1137	A1070	G1002	G940	A872	G808	G745	G681	G618B	G558
G1548	C1409	A1342	G1203	A1274	G1203	G1137	A1069	G1003	G941	G873	G809	A746	G682	G619	G559
C1547	G1410	G1343	U1204	A1275	U1204	G1138	G1071	C1005	G942	G874	C812	U747	C684	G620	C560
C1479	C1411	G1347	U1285	A1278	U1285	G1139	G1072	C1006	U943	G875	U813	G748	A885	A621	G560
U1549	G1416	G1347	G1206	A1279	G1206	C1140	C1072	C1007	G944	A878	C814	C749	A886	G622	G561
C1550	U1481	A1348	C1207	G1279	C1207	U1141	A1073	C1008	A945	U879	U821	A750	C687	G623	U562
C1551	G1483	A1349	C1208	G1283	C1208	U1142	G1075	C1009	G946	G880	C817	A751	C687	G624	G563
G1552	C1417	U1352	G1209	U1284	G1209	U1143	C1076	A1010	G947	G881	G818	G753	U888	G625	C564
A1486	U1419	U1352	A1210	G1285	A1210	G1144	C1077	G1011	G948	G882	A819	C754	C689	U626	C565
G1487	U1420	A1353	U1211	G1285	U1211	C1145	A1077	G1012	G949	G883	A820	G754	C690	A627	G570
U1555	U1421	A1354	C1212	A1286	C1212	C1146	U1078	U1012	G950	G884	C822	U757	C691	G628	A571
C1556	G1422	G1355	A1213	U1287	A1213	G1149	C1080	C1013	G952	C951	U822	C758	C692	A631	A572
C1557	G1423	G1356	C1214	A1288	C1214	U1150	U1081	G1016	C955	A887	G823	C759	U694	A632	G573
G1492	G1424	U1357	G1215	C1289	G1215	G1151	U1082	G1017	G956	C988	A824	G760	G695	A633	C574
G1559	G1425	G1358	G1216	C1290	G1216	C1152	U1083	C988	G957	C989	U826	A761	C696	G634	A575
A1494	G1426	A1359	C1217	C1291	C1217	G1153	A1084	C989	U958	A890	U827	U762	C697	G635	U576
A1495	A1427	A1360	C1218	U1292	C1218	C1154	U1085	A1021	A959	C993	U828	A764	C698	G636	G577
C1496	C1428	G1361	C1221	C1293	C1221	G1154	A1086	U1020	A960	C894	A829	A765	A699	A637	A578
U1497	C1429	A1365	C1222	U1294	C1222	G1157	G1087	U1023	U905	C895	C832	C766	C700	U639	C580
A1567	C1430	A1366	G1224	G1299	G1224	C1158	A1088	U1024	C961	U895	G832	C767	A705	C640	C581
G1568	U1431	A1367	G1225	U1300	G1225	U1159	G1089	G1024	G962	A896	U833	U767	A706	C641	G582
A1569	C1501	G1368	A1226	A1301	A1226	G1162	U1090	G1025	U963	C897	U834	G768	A707	C642	G583
C1502	G1436	G1369	G1227	A1302	G1227	G1163	G1091	U1026	C964	A900	G835	G769	C708	A643	C584
U1570	C1437	C1370	C1230	C1305	C1230	G1164	C1092	A1027	C965	A901	G836	G770	U709	A644	G585
A1572	U1438	G1371	G1231	C1306	G1231	U1165	U1094	A1028	C966	C902	C837	C772	G710	C645	A586
A1508	U1438	U1372	G1232	A1307	G1232	C1166	U1095	A1029	C967	C903	C838	U773	G711	A646	C587
A1509	C1373	A1373	G1233	A1308	G1233	U1167	A1096	G1030	U969	C904	U839	A774	G712	G647	U588
U1576	G1374	G1374	G1239	A1309	G1239	G1168	U1097	U1033	C970	U905	C840	G775	G712	G647	U588
C1577	C1375	C1375	G1240	G1309	G1240	G1169	U1101	C971	C971	A841	G842	G776	G715	G648	C589
U1578	G1376	G1376	A1241	G1310	A1241	G1173	U1102	G1036	G972	A841	G842	G776	A716	G649	A590
A1579	C1377	A1241	A1242	G1311	A1241	G1174	C1102	G1037	A973	G974	G843	U779	A717	C650	C591
A1580	A1378	A1378	A1242	U1312	A1242	A1174	C1103	C1038	A909	G974	C844	G780	A718	G651	G592
G1581	G1379	G1379	G1243	U1313	G1243	A1174	C1104	C1039	A910	G974	C844	G780	A718	G651	G593
U1515	U1313	U1313	G1244	C1314	G1244	U1175	C1104	G1039	C974B	A911	G845	A781	C719	G652	G594
U1516	G1380	G1380	G1244	C1315	G1244	U1176	C1105	G1039	C975	C912	C846	A782	C720	U654	G595
A1583	G1381	G1381	A1247	C1316	A1247	U1177	U1106	G1042	C975	C912	U847	A783	C721	A655	G596
C1585	U1449	G1382	A1247	C1316	A1247	U1177	U1106	G1042	C975	C912	U847	A783	C721	A655	G596
A1586	C1450	C1383	G1248	A1317	G1248	C1178	G1107	G1042	C975	C912	U847	A783	C721	A655	G596

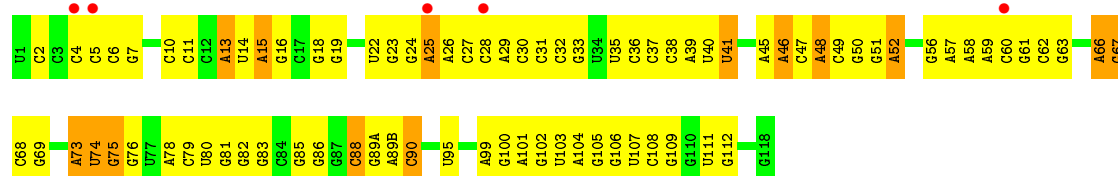




### ● Molecule 60: 5S ribosomal RNA



### ● Molecule 60: 5S ribosomal RNA



## 4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	308.96Å 670.66Å 347.77Å 90.00° 92.52° 90.00°	Depositor
Resolution (Å)	40.00 – 3.50 140.20 – 3.57	Depositor EDS
% Data completeness (in resolution range)	(Not available) (40.00-3.50) 80.3 (140.20-3.57)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.19 (at 3.58Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, $R_{free}$	0.284 , 0.328 0.298 , 0.336	Depositor DCC
$R_{free}$ test set	33469 reflections (5.25%)	DCC
Wilson B-factor (Å <sup>2</sup> )	57.8	Xtriage
Anisotropy	0.660	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.14 , 34.2	EDS
Estimated twinning fraction	0.258 for h,-k,-l	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.25$ , $\langle L^2 \rangle = 0.10$	Xtriage
Outliers	0 of 670940 reflections	Xtriage
$F_o, F_c$ correlation	0.78	EDS
Total number of atoms	308166	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.92% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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: GDP, MG, DPP, KBE, UAL, FUA, 5OH

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	AB	0.38	0/1945	0.72	1/2621 (0.0%)
1	CB	0.37	0/1945	0.67	1/2621 (0.0%)
2	AC	0.28	0/1645	0.53	0/2216
2	CC	0.28	0/1645	0.52	0/2216
3	AD	0.30	0/1733	0.58	0/2318
3	CD	0.30	0/1733	0.58	1/2318 (0.0%)
4	AE	0.32	0/1172	0.58	1/1576 (0.1%)
4	CE	0.31	0/1172	0.58	1/1576 (0.1%)
5	AF	0.31	0/856	0.59	0/1154
5	CF	0.31	0/856	0.56	1/1154 (0.1%)
6	AG	0.29	0/1276	0.51	0/1709
6	CG	0.28	0/1276	0.52	0/1709
7	AH	0.30	0/1136	0.57	0/1527
7	CH	0.28	0/1136	0.55	0/1527
8	AI	0.29	0/1029	0.53	0/1379
8	CI	0.27	0/1029	0.49	0/1379
9	AJ	0.27	0/815	0.54	0/1095
9	CJ	0.28	0/815	0.57	1/1095 (0.1%)
10	AK	0.33	0/900	0.61	0/1213
10	CK	0.36	0/900	0.65	0/1213
11	AL	0.40	0/992	0.83	2/1327 (0.2%)
11	CL	0.40	0/992	0.82	1/1327 (0.1%)
12	AM	0.29	0/1008	0.59	1/1347 (0.1%)
12	CM	0.28	0/1008	0.54	0/1347
13	AN	0.30	0/501	0.52	0/664
13	CN	0.26	0/501	0.46	0/664
14	AO	0.31	0/745	0.52	0/992
14	CO	0.31	0/745	0.53	0/992
15	AP	0.28	0/722	0.50	0/970
15	CP	0.27	0/722	0.52	0/970
16	AQ	0.36	0/848	0.65	0/1131
16	CQ	0.37	0/848	0.71	0/1131

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AR	0.31	0/579	0.59	0/768
17	CR	0.30	0/579	0.55	0/768
18	AS	0.31	0/647	0.60	0/870
18	CS	0.31	0/647	0.61	0/870
19	AT	0.33	0/765	0.56	0/1007
19	CT	0.32	0/765	0.55	0/1007
20	AA	0.37	0/36351	1.02	61/56736 (0.1%)
20	CA	0.36	0/36351	0.99	53/56736 (0.1%)
21	AW	0.33	0/1827	1.03	0/2845
21	CW	0.33	0/1827	1.01	5/2845 (0.2%)
22	AV	0.27	0/568	0.81	0/886
22	CV	0.29	0/568	0.92	0/886
23	AY	0.34	1/5317 (0.0%)	0.66	7/7198 (0.1%)
23	CY	0.37	2/5317 (0.0%)	0.61	1/7198 (0.0%)
24	AU	0.95	0/11	1.28	0/13
24	CU	0.92	0/11	1.04	0/13
25	BC	0.41	0/1774	0.74	1/2391 (0.0%)
25	DC	0.43	0/1774	0.72	1/2391 (0.0%)
26	BD	0.33	0/2195	0.65	1/2955 (0.0%)
26	DD	0.35	0/2195	0.65	0/2955
27	BE	0.32	0/1602	0.66	0/2160
27	DE	0.31	0/1602	0.66	0/2160
28	BF	0.35	0/1663	0.73	2/2249 (0.1%)
28	DF	0.37	0/1663	0.76	3/2249 (0.1%)
29	BG	0.40	1/1499 (0.1%)	0.59	0/2016
29	DG	0.38	1/1499 (0.1%)	0.61	0/2016
30	BH	0.30	0/1298	0.60	0/1751
30	DH	0.29	0/1298	0.57	0/1751
32	BK	0.27	0/1054	0.51	0/1427
32	DK	0.27	0/1054	0.50	0/1427
33	BN	0.45	0/1131	0.77	0/1525
33	DN	0.48	0/1131	0.74	0/1525
34	BO	0.30	0/943	0.57	0/1269
34	DO	0.29	0/943	0.55	0/1269
35	BP	0.30	0/1131	0.62	0/1504
35	DP	0.29	0/1131	0.62	0/1504
36	BQ	0.35	0/1143	0.63	0/1527
36	DQ	0.34	0/1143	0.60	0/1527
37	BR	0.30	0/974	0.60	0/1302
37	DR	0.31	0/974	0.61	0/1302
38	BS	0.34	0/783	0.69	0/1041
38	DS	0.33	0/783	0.70	0/1041
39	BT	0.34	0/1161	0.67	0/1549



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
39	DT	0.36	0/1161	0.66	0/1549
40	BU	0.36	0/982	0.57	0/1306
40	DU	0.40	0/982	0.60	0/1306
41	BV	0.38	0/790	0.70	1/1057 (0.1%)
41	DV	0.38	0/790	0.67	0/1057
42	BW	0.31	0/911	0.59	0/1220
42	DW	0.31	0/911	0.61	1/1220 (0.1%)
43	BX	0.30	0/748	0.55	0/1004
43	DX	0.29	0/748	0.54	1/1004 (0.1%)
44	BY	0.32	0/831	0.62	0/1108
44	DY	0.33	0/831	0.66	0/1108
45	BZ	0.29	0/1505	0.58	0/2042
45	DZ	0.28	0/1505	0.58	0/2042
46	B0	0.28	0/671	0.49	0/892
46	D0	0.28	0/671	0.54	0/892
47	B2	0.31	0/600	0.55	0/793
47	D2	0.32	0/600	0.55	0/793
48	B3	0.27	0/482	0.53	0/646
48	D3	0.27	0/482	0.55	0/646
49	B5	0.33	0/473	0.59	0/639
49	D5	0.31	0/473	0.57	0/639
50	B6	0.29	0/440	0.70	1/586 (0.2%)
50	D6	0.30	0/440	0.66	0/586
51	B7	0.33	0/438	0.64	0/575
51	D7	0.31	0/438	0.59	0/575
52	B8	0.34	0/525	0.68	0/691
52	D8	0.30	0/525	0.64	0/691
53	B9	0.30	0/310	0.55	0/407
53	D9	0.32	0/310	0.52	0/407
54	Be	0.28	0/538	0.50	0/715
54	De	0.26	0/538	0.49	0/715
57	B1	0.46	0/739	0.82	0/981
57	D1	0.47	0/739	0.84	1/981 (0.1%)
58	B4	0.32	0/276	0.58	0/372
58	D4	0.35	0/276	0.62	0/372
59	BA	0.40	0/69437	1.04	158/108401 (0.1%)
59	DA	0.40	3/69437 (0.0%)	1.03	149/108401 (0.1%)
60	BB	0.37	0/2853	1.08	11/4451 (0.2%)
60	DB	0.35	0/2853	1.03	5/4451 (0.1%)
All	All	0.37	8/330576 (0.0%)	0.92	474/492228 (0.1%)

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
1	AB	0	3
1	CB	0	1
11	CL	0	2
23	AY	0	3
23	CY	0	2
25	BC	0	1
25	DC	0	3
26	BD	0	1
26	DD	0	2
28	BF	0	2
28	DF	0	2
29	BG	0	2
29	DG	0	2
31	BJ	0	1
31	DJ	0	1
35	DP	0	1
38	BS	0	3
38	DS	0	3
42	BW	0	1
42	DW	0	1
57	B1	0	2
57	D1	0	2
All	All	0	41

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	CY	506	GLN	C-N	8.35	1.53	1.34
29	BG	114	ILE	N-CA	-7.50	1.31	1.46
29	DG	114	ILE	N-CA	-7.47	1.31	1.46
23	CY	25	LYS	C-N	6.18	1.48	1.34
23	AY	506	GLN	C-N	-5.48	1.21	1.34
59	DA	459	U	C2-O2	-5.47	1.17	1.22
59	DA	459	U	N1-C2	-5.46	1.33	1.38
59	DA	459	U	N3-C4	-5.16	1.33	1.38

All (474) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	1006	C	C6-N1-C2	-13.61	114.86	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	459	U	N1-C2-N3	12.63	122.48	114.90
59	BA	1006	C	C6-N1-C2	-12.54	115.28	120.30
23	AY	506	GLN	O-C-N	-12.49	102.72	122.70
20	AA	815	A	C5-C6-N6	11.75	133.10	123.70
20	CA	815	A	C5-C6-N6	11.67	133.04	123.70
59	DA	459	U	C6-N1-C2	-11.47	114.12	121.00
59	BA	1139	G	O5'-P-OP1	-11.12	95.69	105.70
20	AA	815	A	N1-C6-N6	-11.03	111.98	118.60
20	CA	815	A	N1-C6-N6	-10.84	112.10	118.60
59	BA	1007	C	C6-N1-C1'	-9.64	109.23	120.80
59	DA	2040	C	C5-C6-N1	9.42	125.71	121.00
59	DA	459	U	N1-C2-O2	-9.28	116.30	122.80
59	DA	1006	C	N3-C2-O2	-9.28	115.41	121.90
59	BA	2040	C	C5-C6-N1	9.26	125.63	121.00
59	DA	459	U	N3-C4-C5	-9.23	109.06	114.60
28	DF	193	VAL	N-CA-C	-9.19	86.18	111.00
59	BA	1249	U	C2-N1-C1'	8.87	128.35	117.70
59	BA	2023	G	N1-C6-O6	8.87	125.22	119.90
59	BA	1007	C	C6-N1-C2	8.75	123.80	120.30
59	BA	1132	A	N1-C2-N3	8.71	133.66	129.30
20	AA	1508	G	N1-C2-N3	8.68	129.11	123.90
60	BB	101	A	C6-N1-C2	-8.49	113.51	118.60
59	DA	459	U	C5-C4-O4	8.44	130.96	125.90
59	BA	1008	C	C6-N1-C2	-8.20	117.02	120.30
20	AA	1158	C	C2-N1-C1'	8.16	127.78	118.80
20	CA	838(C)	U	C2-N1-C1'	8.15	127.48	117.70
59	BA	1048	A	N1-C6-N6	8.11	123.47	118.60
59	DA	1006	C	O4'-C1'-N1	8.11	114.69	108.20
20	AA	838(C)	U	C2-N1-C1'	8.04	127.35	117.70
59	DA	1287	A	N1-C2-N3	8.01	133.31	129.30
23	AY	502	GLY	CA-C-N	-7.95	100.30	116.20
23	AY	503	GLY	O-C-N	-7.83	110.17	122.70
59	DA	2041	U	C5-C6-N1	7.83	126.62	122.70
23	AY	506	GLN	CA-C-N	7.81	134.39	117.20
59	BA	2023	G	C4-C5-N7	7.80	113.92	110.80
59	DA	459	U	C6-N1-C1'	7.75	132.04	121.20
59	BA	621	A	N1-C6-N6	-7.72	113.97	118.60
20	AA	815	A	N3-C4-N9	-7.71	121.23	127.40
59	DA	1493	C	N1-C2-O2	7.70	123.52	118.90
20	AA	1508	G	C2-N3-C4	-7.64	108.08	111.90
60	DB	101	A	C6-N1-C2	-7.59	114.04	118.60
59	BA	673	C	C2-N3-C4	-7.58	116.11	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	BA	1136	G	C5-C6-O6	-7.57	124.06	128.60
59	DA	1138	G	N3-C4-N9	-7.55	121.47	126.00
20	AA	815	A	C6-N1-C2	7.53	123.12	118.60
20	CA	129(A)	G	N3-C2-N2	7.52	125.16	119.90
59	DA	470	A	N1-C6-N6	7.51	123.11	118.60
59	DA	2041	U	O5'-P-OP2	-7.51	98.94	105.70
59	DA	459	U	C4-C5-C6	7.47	124.18	119.70
20	AA	1158	C	N1-C2-O2	7.46	123.38	118.90
59	DA	1153	C	C2-N1-C1'	7.45	127.00	118.80
60	BB	75	G	C6-N1-C2	-7.41	120.65	125.10
59	DA	1249	U	C2-N1-C1'	7.41	126.59	117.70
59	BA	1313	U	C2-N1-C1'	7.38	126.56	117.70
20	CA	815	A	N9-C4-C5	7.38	108.75	105.80
20	CA	1158	C	C2-N1-C1'	7.35	126.88	118.80
59	DA	1493	C	C2-N1-C1'	7.33	126.86	118.80
59	BA	1007	C	N1-C2-N3	-7.31	114.08	119.20
59	DA	1022	G	P-O3'-C3'	7.30	128.46	119.70
20	AA	815	A	N9-C4-C5	7.30	108.72	105.80
59	BA	2585	U	C2-N1-C1'	7.29	126.45	117.70
23	AY	506	GLN	C-N-CA	7.28	139.91	121.70
59	BA	1963	U	C2-N1-C1'	7.24	126.38	117.70
59	BA	2023	G	N9-C4-C5	-7.22	102.51	105.40
59	BA	1136	G	N1-C6-O6	7.21	124.22	119.90
1	AB	163	PHE	N-CA-C	-7.20	91.55	111.00
59	DA	1078	U	C2-N1-C1'	7.20	126.34	117.70
23	AY	502	GLY	O-C-N	7.18	135.41	123.20
59	DA	103	A	N1-C6-N6	7.18	122.91	118.60
59	BA	2712	U	N1-C2-O2	7.18	127.83	122.80
59	DA	2585	U	C2-N1-C1'	7.13	126.25	117.70
20	CA	1170	A	N1-C6-N6	7.08	122.85	118.60
20	AA	1170	A	N1-C6-N6	7.07	122.84	118.60
59	BA	2712	U	C2-N1-C1'	7.07	126.18	117.70
20	AA	838(C)	U	N1-C2-O2	7.07	127.75	122.80
59	BA	2023	G	C5-C6-O6	-7.07	124.36	128.60
59	DA	1006	C	C2-N1-C1'	7.06	126.57	118.80
59	BA	1774	C	C2-N1-C1'	7.04	126.55	118.80
59	DA	673	C	C2-N3-C4	-7.04	116.38	119.90
59	BA	2040	C	P-O3'-C3'	7.02	128.13	119.70
59	DA	470	A	N7-C8-N9	7.00	117.30	113.80
20	CA	1535	C	C2-N1-C1'	6.96	126.45	118.80
20	AA	421	U	C2-N1-C1'	6.95	126.03	117.70
20	AA	815	A	C6-C5-N7	6.89	137.12	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	BA	2344	U	N1-C2-O2	-6.87	117.99	122.80
59	DA	1048	A	N1-C6-N6	6.87	122.72	118.60
59	DA	2585	U	N1-C2-O2	6.87	127.61	122.80
59	BA	2710	C	C6-N1-C2	-6.87	117.55	120.30
20	AA	754	C	C2-N1-C1'	6.85	126.33	118.80
59	BA	95	G	N3-C4-N9	-6.79	121.92	126.00
59	BA	963	U	N3-C2-O2	-6.77	117.46	122.20
59	BA	1914	C	C2-N1-C1'	6.76	126.24	118.80
59	BA	103	A	N1-C6-N6	6.75	122.65	118.60
20	CA	1508	G	N1-C2-N3	6.75	127.95	123.90
60	BB	101	A	C5-C6-N1	6.73	121.06	117.70
59	DA	1963	U	N1-C2-O2	6.70	127.49	122.80
20	CA	815	A	N3-C4-N9	-6.69	122.05	127.40
59	BA	1774	C	N1-C2-O2	6.68	122.91	118.90
59	DA	1139	G	N7-C8-N9	6.66	116.43	113.10
20	CA	838(C)	U	N1-C2-O2	6.66	127.46	122.80
60	DB	75	G	C6-N1-C2	-6.64	121.11	125.10
59	DA	1138	G	N3-C4-C5	6.64	131.92	128.60
20	AA	838(C)	U	N3-C2-O2	-6.63	117.56	122.20
59	BA	673	C	C5-C4-N4	-6.63	115.56	120.20
59	DA	1314	C	C2-N1-C1'	6.63	126.09	118.80
20	AA	618	C	C6-N1-C1'	6.62	128.75	120.80
60	BB	101	A	C5-C6-N6	-6.61	118.41	123.70
59	DA	1963	U	C2-N1-C1'	6.60	125.62	117.70
20	CA	815	A	C6-C5-N7	6.59	136.91	132.30
59	DA	83	G	C2-N3-C4	-6.58	108.61	111.90
60	DB	88	C	C2-N1-C1'	6.57	126.02	118.80
59	BA	1007	C	C2-N1-C1'	6.55	126.00	118.80
20	CA	1508	G	N3-C2-N2	-6.54	115.32	119.90
59	BA	1137	G	N3-C4-C5	-6.54	125.33	128.60
59	DA	1007	C	N1-C1'-C2'	6.51	122.47	114.00
60	BB	9	G	C5-C6-O6	6.51	132.51	128.60
59	DA	470	A	C6-C5-N7	-6.51	127.75	132.30
59	DA	2681	C	C2-N1-C1'	6.50	125.95	118.80
20	CA	618	C	N3-C4-C5	-6.48	119.31	121.90
21	CW	61	C	C2-N1-C1'	6.46	125.91	118.80
20	CA	1158	C	N1-C2-O2	6.46	122.77	118.90
60	BB	75	G	C5-C6-O6	-6.45	124.73	128.60
25	BC	138	LEU	CA-CB-CG	6.45	130.13	115.30
59	BA	1137	G	N3-C4-N9	6.43	129.86	126.00
59	BA	963	U	N1-C2-O2	6.42	127.30	122.80
59	BA	1136	G	C4-C5-N7	6.41	113.36	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	CD	28	SER	C-N-CD	6.41	141.86	128.40
20	CA	618	C	C5-C4-N4	6.41	124.69	120.20
20	AA	618	C	C5-C4-N4	6.40	124.68	120.20
59	DA	2585	U	N3-C2-O2	-6.40	117.72	122.20
59	BA	1132	A	C2-N3-C4	-6.38	107.41	110.60
20	CA	129(A)	G	N3-C4-N9	6.38	129.83	126.00
59	BA	2040	C	C6-N1-C2	-6.36	117.75	120.30
4	CE	12	LEU	CA-CB-CG	6.35	129.91	115.30
20	CA	815	A	C6-N1-C2	6.35	122.41	118.60
59	DA	1313	U	C2-N1-C1'	6.33	125.30	117.70
59	DA	2794	C	C2-N1-C1'	6.33	125.77	118.80
59	BA	1494	A	C2-N3-C4	6.31	113.76	110.60
20	AA	717	C	C2-N1-C1'	6.30	125.74	118.80
59	BA	459	U	C5-C6-N1	6.30	125.85	122.70
60	BB	75	G	C5-C6-N1	6.29	114.65	111.50
59	DA	673	C	C5-C4-N4	-6.29	115.79	120.20
59	DA	2344	U	N1-C2-O2	-6.29	118.40	122.80
59	BA	1136	G	N9-C4-C5	-6.27	102.89	105.40
59	BA	2802	G	N3-C4-N9	6.26	129.76	126.00
59	DA	576	U	C5-C4-O4	-6.26	122.14	125.90
28	BF	155	LEU	N-CA-C	-6.24	94.16	111.00
59	BA	1007	C	N1-C1'-C2'	6.23	122.09	114.00
59	BA	1420	U	C2-N1-C1'	6.22	125.17	117.70
20	AA	1158	C	C6-N1-C1'	-6.22	113.33	120.80
59	BA	226	G	C2-N3-C4	6.21	115.01	111.90
59	BA	463	G	C2-N3-C4	-6.21	108.79	111.90
59	BA	1313	U	N1-C2-O2	6.21	127.15	122.80
20	CA	1514	C	C5-C6-N1	6.21	124.10	121.00
59	DA	621	A	N1-C6-N6	-6.18	114.89	118.60
4	AE	12	LEU	CA-CB-CG	6.18	129.51	115.30
59	DA	1937	A	P-O3'-C3'	6.17	127.10	119.70
41	BV	49	THR	C-N-CD	6.17	141.35	128.40
59	DA	294	A	N1-C6-N6	6.17	122.30	118.60
59	BA	1542	G	P-O3'-C3'	6.17	127.10	119.70
59	DA	1139	G	C6-C5-N7	-6.16	126.71	130.40
20	AA	421	U	N1-C2-O2	6.15	127.11	122.80
59	BA	527	C	C6-N1-C2	-6.14	117.84	120.30
59	DA	985	C	C2-N1-C1'	6.14	125.55	118.80
59	DA	121	G	N3-C4-N9	6.13	129.68	126.00
59	BA	2688	U	N3-C2-O2	-6.12	117.91	122.20
20	AA	68(R)	C	N1-C2-O2	-6.12	115.23	118.90
59	BA	2585	U	N1-C2-O2	6.11	127.08	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	CA	754	C	C2-N1-C1'	6.10	125.51	118.80
59	BA	1494	A	N1-C6-N6	-6.09	114.94	118.60
20	CA	1508	G	C2-N3-C4	-6.08	108.86	111.90
59	DA	114	U	C2-N1-C1'	6.06	124.97	117.70
59	BA	95	G	C4-N9-C1'	-6.06	118.62	126.50
59	BA	2712	U	N3-C2-O2	-6.06	117.96	122.20
20	CA	421	U	N1-C2-O2	6.06	127.04	122.80
59	BA	2598	A	N1-C6-N6	6.06	122.23	118.60
59	BA	1048	A	C6-C5-N7	-6.05	128.06	132.30
59	DA	671	C	C2-N1-C1'	6.05	125.45	118.80
59	BA	1314	C	N1-C2-O2	6.04	122.53	118.90
59	BA	1920	C	C6-N1-C2	-6.04	117.89	120.30
20	AA	618	C	O4'-C1'-N1	6.03	113.02	108.20
20	AA	383	A	N1-C6-N6	6.02	122.21	118.60
59	BA	1006	C	N3-C2-O2	-6.02	117.69	121.90
59	BA	1673	U	O4'-C1'-N1	6.01	113.01	108.20
59	BA	30	G	N3-C4-N9	6.01	129.61	126.00
59	DA	30	G	N3-C4-N9	6.00	129.60	126.00
20	AA	1066	C	C2-N1-C1'	6.00	125.40	118.80
59	BA	278	A	P-O3'-C3'	6.00	126.89	119.70
20	AA	1158	C	N3-C2-O2	-5.99	117.71	121.90
59	BA	1963	U	N1-C2-O2	5.99	126.99	122.80
59	BA	2407	G	C4-N9-C1'	5.99	134.29	126.50
20	CA	421	U	C2-N1-C1'	5.99	124.89	117.70
59	BA	1249	U	C6-N1-C1'	-5.99	112.82	121.20
12	AM	56	LEU	CA-CB-CG	5.99	129.06	115.30
28	DF	155	LEU	N-CA-C	-5.98	94.86	111.00
59	BA	1249	U	N1-C2-O2	5.96	126.97	122.80
59	BA	1048	A	C4-C5-C6	5.95	119.98	117.00
59	DA	1448	G	N9-C4-C5	5.94	107.78	105.40
9	CJ	16	LEU	CA-CB-CG	5.93	128.95	115.30
20	CA	1535	C	C5-C6-N1	5.93	123.97	121.00
20	CA	838(A)	U	C2-N1-C1'	5.92	124.81	117.70
59	DA	737	C	C2-N1-C1'	5.92	125.31	118.80
59	DA	30	G	N3-C4-C5	-5.92	125.64	128.60
59	BA	2119	A	C5-C6-N6	5.92	128.43	123.70
59	BA	1006	C	C5-C6-N1	5.90	123.95	121.00
20	CA	992	U	P-O3'-C3'	5.88	126.76	119.70
20	AA	1332	A	N1-C6-N6	5.87	122.12	118.60
59	BA	329	G	N3-C4-N9	5.87	129.52	126.00
20	AA	618	C	N3-C4-C5	-5.87	119.55	121.90
59	DA	2041	U	O4'-C1'-N1	5.87	112.89	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	AA	618	C	C2-N1-C1'	-5.86	112.35	118.80
59	DA	1006	C	C5-C6-N1	5.86	123.93	121.00
59	BA	1287	A	N1-C2-N3	5.85	132.23	129.30
60	BB	81	G	C5-C6-O6	-5.85	125.09	128.60
21	CW	25	C	C2-N1-C1'	5.85	125.23	118.80
50	B6	9	LEU	CA-CB-CG	5.84	128.73	115.30
59	BA	1107	G	N3-C4-N9	-5.84	122.50	126.00
20	AA	129(A)	G	N3-C2-N2	5.84	123.99	119.90
59	DA	1570	A	N1-C6-N6	5.83	122.10	118.60
20	AA	1043	C	O4'-C1'-N1	5.81	112.85	108.20
59	DA	2710	C	C6-N1-C2	-5.81	117.98	120.30
20	AA	1214	C	C2-N1-C1'	5.80	125.18	118.80
59	BA	103	A	C4-C5-C6	5.79	119.89	117.00
59	BA	95	G	C8-N9-C1'	5.76	134.49	127.00
21	CW	61	C	N1-C2-O2	5.76	122.35	118.90
59	DA	1327	C	C6-N1-C2	-5.76	118.00	120.30
60	BB	101	A	N3-C4-N9	5.75	132.00	127.40
60	DB	88	C	N1-C2-O2	5.74	122.35	118.90
59	BA	1774	C	N3-C2-O2	-5.74	117.88	121.90
59	DA	103	A	C4-C5-C6	5.74	119.87	117.00
59	BA	1872	A	N1-C6-N6	5.72	122.03	118.60
59	DA	807	U	C2-N3-C4	-5.72	123.57	127.00
59	DA	2681	C	C6-N1-C1'	-5.72	113.94	120.80
20	CA	1483	A	N9-C4-C5	-5.72	103.51	105.80
59	BA	2040	C	O4'-C1'-N1	-5.71	103.63	108.20
20	AA	1214	C	N1-C2-O2	5.71	122.32	118.90
59	BA	1022	G	P-O3'-C3'	5.70	126.53	119.70
59	DA	510	C	N1-C2-O2	5.70	122.32	118.90
59	DA	1107	G	N9-C4-C5	5.69	107.68	105.40
59	BA	527	C	C2-N1-C1'	5.68	125.05	118.80
59	DA	1153	C	C6-N1-C1'	-5.68	113.98	120.80
28	DF	174	VAL	N-CA-C	-5.67	95.69	111.00
59	BA	1493	C	N1-C2-O2	5.67	122.30	118.90
20	CA	815	A	C5-C6-N1	-5.67	114.87	117.70
59	DA	1774	C	C6-N1-C2	-5.67	118.03	120.30
59	BA	1007	C	C4-C5-C6	-5.66	114.57	117.40
59	BA	45	G	N3-C4-N9	-5.66	122.60	126.00
20	CA	838(C)	U	N3-C2-O2	-5.66	118.24	122.20
59	DA	270(L)	C	C6-N1-C2	-5.64	118.04	120.30
20	AA	960	U	N1-C2-O2	5.63	126.74	122.80
20	AA	1170	A	C4-C5-C6	5.62	119.81	117.00
59	BA	1497	U	C2-N1-C1'	5.62	124.44	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	1493	C	N3-C2-O2	-5.62	117.97	121.90
59	DA	1955	U	C2-N1-C1'	5.62	124.44	117.70
59	DA	1913	A	P-O3'-C3'	5.62	126.44	119.70
20	AA	186(G)	C	C6-N1-C2	-5.61	118.06	120.30
59	DA	645	C	C2-N1-C1'	5.61	124.97	118.80
20	AA	717	C	C6-N1-C1'	-5.60	114.08	120.80
59	BA	1327	C	C6-N1-C2	-5.60	118.06	120.30
59	BA	1332	G	C4-N9-C1'	5.59	133.77	126.50
59	DA	1658	C	C2-N1-C1'	5.59	124.95	118.80
20	AA	68(H)	G	C8-N9-C4	-5.59	104.17	106.40
59	BA	1143	A	C2-N3-C4	-5.58	107.81	110.60
59	DA	401	A	N1-C2-N3	5.58	132.09	129.30
20	AA	815	A	C5-C6-N1	-5.58	114.91	117.70
20	CA	1465	C	C2-N3-C4	-5.57	117.11	119.90
20	AA	68(R)	C	C2-N1-C1'	-5.57	112.67	118.80
59	DA	2023	G	N1-C2-N2	5.57	121.21	116.20
59	DA	1976	U	O4'-C1'-N1	5.57	112.65	108.20
59	BA	24	G	N3-C4-N9	-5.56	122.66	126.00
20	AA	1465	C	C2-N3-C4	-5.55	117.12	119.90
59	DA	1107	G	N3-C4-N9	-5.55	122.67	126.00
59	BA	114	U	C2-N1-C1'	5.55	124.36	117.70
59	DA	1779	U	C2-N1-C1'	5.55	124.36	117.70
59	DA	1673	U	O4'-C1'-N1	5.54	112.64	108.20
59	BA	1558	A	P-O3'-C3'	5.54	126.35	119.70
59	DA	1937	A	OP1-P-O3'	5.54	117.39	105.20
60	DB	75	G	N3-C4-C5	-5.54	125.83	128.60
20	CA	129(A)	G	N9-C4-C5	-5.53	103.19	105.40
59	DA	2518	A	P-O3'-C3'	5.53	126.34	119.70
20	AA	68(H)	G	N9-C4-C5	5.53	107.61	105.40
20	CA	821	G	N9-C4-C5	-5.53	103.19	105.40
59	BA	2447	G	P-O3'-C3'	5.53	126.33	119.70
59	BA	1007	C	C5'-C4'-C3'	5.52	124.83	116.00
59	BA	2119	A	N1-C6-N6	-5.52	115.29	118.60
20	AA	748	C	P-O3'-C3'	5.51	126.31	119.70
20	AA	68(R)	C	C6-N1-C1'	5.51	127.41	120.80
59	BA	2407	G	C8-N9-C1'	-5.51	119.84	127.00
59	DA	1052	C	C2-N1-C1'	-5.50	112.75	118.80
59	BA	1153	C	C2-N1-C1'	5.50	124.85	118.80
20	CA	838(C)	U	C6-N1-C1'	-5.50	113.50	121.20
20	AA	1508	G	C6-C5-N7	-5.49	127.10	130.40
59	DA	1052	C	C6-N1-C1'	5.49	127.39	120.80
20	CA	748	C	P-O3'-C3'	5.49	126.28	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	1963	U	N3-C2-O2	-5.49	118.36	122.20
59	DA	1774	C	C2-N1-C1'	5.48	124.83	118.80
42	DW	51	LEU	CA-CB-CG	5.48	127.90	115.30
59	BA	329	G	C8-N9-C1'	-5.48	119.88	127.00
59	BA	1313	U	C6-N1-C1'	-5.47	113.54	121.20
20	CA	821	G	N3-C4-N9	5.47	129.28	126.00
59	BA	1136	G	C6-C5-N7	-5.47	127.12	130.40
59	DA	470	A	C5-N7-C8	-5.46	101.17	103.90
59	BA	2794	C	N1-C2-O2	5.45	122.17	118.90
59	BA	1090	U	O4'-C1'-N1	5.45	112.56	108.20
20	CA	815	A	C4-C5-N7	-5.45	107.98	110.70
20	CA	1170	A	C4-C5-C6	5.45	119.72	117.00
59	DA	2040	C	O5'-P-OP1	5.44	117.23	110.70
59	BA	1249	U	C5-C6-N1	5.44	125.42	122.70
59	BA	1985	G	N3-C4-N9	-5.43	122.74	126.00
11	AL	55	VAL	CB-CA-C	-5.43	101.08	111.40
21	CW	30	C	C2-N1-C1'	5.43	124.77	118.80
59	BA	1774	C	C6-N1-C2	-5.42	118.13	120.30
20	AA	943	U	C5-C4-O4	5.42	129.15	125.90
60	BB	101	A	N3-C4-C5	-5.42	123.01	126.80
59	DA	1048	A	C4-C5-C6	5.42	119.71	117.00
59	DA	1558	A	P-O3'-C3'	5.41	126.20	119.70
20	AA	1196	U	C2-N1-C1'	5.41	124.19	117.70
59	BA	1019	U	N3-C2-O2	-5.41	118.41	122.20
59	BA	576	U	C5-C4-O4	-5.41	122.66	125.90
20	CA	1158	C	N3-C2-O2	-5.40	118.12	121.90
59	BA	737	C	C2-N1-C1'	5.40	124.74	118.80
59	DA	422	A	C8-N9-C4	-5.38	103.65	105.80
59	DA	2473	U	C2-N1-C1'	5.37	124.15	117.70
59	BA	2780	G	C4-C5-N7	-5.37	108.65	110.80
59	DA	1137	G	N3-C4-C5	-5.37	125.91	128.60
59	DA	544	C	C6-N1-C1'	-5.37	114.36	120.80
59	BA	2119	A	N9-C4-C5	5.36	107.94	105.80
59	BA	294	A	N1-C6-N6	5.36	121.82	118.60
20	AA	383	A	C4-C5-C6	5.36	119.68	117.00
59	DA	2726	U	C2-N1-C1'	5.36	124.13	117.70
20	CA	186(J)	G	OP2-P-O3'	5.35	116.97	105.20
59	DA	1249	U	C6-N1-C1'	-5.34	113.72	121.20
20	AA	1071	C	C5-C6-N1	5.34	123.67	121.00
59	DA	130	C	N1-C2-O2	5.34	122.10	118.90
59	DA	541	C	O4'-C1'-N1	5.34	112.47	108.20
59	BA	2429	G	O4'-C1'-N9	5.33	112.47	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	AA	186(G)	C	N3-C2-O2	-5.33	118.17	121.90
59	DA	2598	A	N1-C6-N6	5.33	121.80	118.60
59	DA	985	C	C6-N1-C1'	-5.32	114.41	120.80
59	DA	1213	A	N1-C6-N6	5.32	121.79	118.60
59	BA	2681	C	C2-N1-C1'	5.32	124.65	118.80
59	BA	2801	A	N1-C6-N6	5.32	121.79	118.60
59	DA	2023	G	N3-C4-C5	5.32	131.26	128.60
59	BA	2578	G	C8-N9-C1'	5.31	133.91	127.00
59	DA	1256	G	N3-C4-N9	5.31	129.19	126.00
20	CA	687	A	P-O3'-C3'	5.31	126.07	119.70
59	BA	2802	G	N9-C4-C5	-5.29	103.28	105.40
59	BA	1963	U	N3-C2-O2	-5.29	118.50	122.20
59	DA	2344	U	C2-N3-C4	-5.28	123.83	127.00
23	CY	567	LEU	CA-CB-CG	5.28	127.44	115.30
59	BA	673	C	N3-C4-C5	5.27	124.01	121.90
59	DA	544	C	C2-N1-C1'	5.27	124.60	118.80
59	DA	1157	G	C8-N9-C1'	-5.27	120.15	127.00
59	BA	2041	U	C5-C4-O4	-5.27	122.74	125.90
20	CA	1158	C	C6-N1-C1'	-5.27	114.48	120.80
59	DA	757	U	N1-C2-O2	5.27	126.49	122.80
59	DA	270(L)	C	C2-N1-C1'	5.26	124.59	118.80
59	DA	1493	C	C6-N1-C2	-5.26	118.19	120.30
59	DA	270(L)	C	N1-C2-O2	5.26	122.06	118.90
59	BA	1007	C	C5-C4-N4	-5.26	116.52	120.20
20	CA	383	A	N1-C6-N6	5.26	121.76	118.60
20	CA	618	C	C6-N1-C1'	5.26	127.11	120.80
59	BA	2041	U	N3-C2-O2	5.26	125.88	122.20
59	BA	2598	A	C4-C5-C6	5.25	119.63	117.00
59	BA	2786	U	C2-N1-C1'	5.25	124.01	117.70
59	BA	1048	A	C4-N9-C1'	5.25	135.76	126.30
59	DA	2040	C	OP1-P-O3'	5.25	116.75	105.20
20	CA	129(A)	G	C8-N9-C1'	-5.25	120.18	127.00
59	DA	2802	G	N3-C4-N9	5.24	129.14	126.00
59	DA	671	C	C6-N1-C1'	-5.23	114.52	120.80
59	BA	95	G	C6-C5-N7	5.23	133.54	130.40
59	BA	121	G	N3-C4-N9	5.23	129.14	126.00
20	CA	838(A)	U	N1-C2-O2	5.23	126.46	122.80
59	DA	2712	U	N1-C2-O2	5.22	126.46	122.80
20	CA	183	G	N3-C4-N9	5.22	129.13	126.00
20	AA	421	U	N3-C2-O2	-5.22	118.55	122.20
59	BA	2710	C	N3-C2-O2	-5.22	118.25	121.90
59	DA	1022	G	C8-N9-C4	-5.22	104.31	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	1498	C	N3-C2-O2	-5.22	118.25	121.90
20	AA	320	C	O4'-C1'-N1	5.22	112.37	108.20
59	BA	1287	A	C2-N3-C4	-5.22	107.99	110.60
59	BA	1048	A	N3-C4-N9	5.21	131.57	127.40
59	DA	130	C	C2-N1-C1'	5.21	124.53	118.80
59	DA	2053	G	N3-C4-N9	5.21	129.13	126.00
20	AA	838(C)	U	C6-N1-C1'	-5.21	113.90	121.20
59	BA	1914	C	N1-C2-O2	5.21	122.03	118.90
59	DA	1448	G	N3-C4-N9	-5.21	122.88	126.00
59	BA	510	C	N1-C2-O2	5.20	122.02	118.90
59	BA	226	G	N9-C4-C5	5.19	107.48	105.40
59	DA	1249	U	C5-C6-N1	5.19	125.30	122.70
59	BA	83	G	C2-N3-C4	-5.19	109.31	111.90
20	CA	129(A)	G	C4-N9-C1'	5.18	133.24	126.50
59	DA	565	C	C5-C4-N4	-5.18	116.58	120.20
59	DA	1287	A	C2-N3-C4	-5.18	108.01	110.60
59	DA	1078	U	N3-C2-O2	-5.17	118.58	122.20
59	DA	1138	G	N3-C2-N2	-5.17	116.28	119.90
20	AA	1465	C	C5-C4-N4	-5.17	116.58	120.20
59	BA	1138	G	N3-C4-N9	-5.17	122.90	126.00
59	DA	1006	C	N1-C2-O2	5.17	122.00	118.90
20	AA	717	C	N1-C2-O2	5.16	121.99	118.90
59	BA	1048	A	N9-C4-C5	-5.16	103.74	105.80
59	DA	130	C	C6-N1-C1'	-5.16	114.61	120.80
59	BA	2532	G	C2-N3-C4	5.15	114.48	111.90
59	DA	1985	G	N3-C2-N2	-5.15	116.30	119.90
59	BA	2595	G	C2-N3-C4	-5.15	109.33	111.90
59	BA	2769	C	C6-N1-C1'	5.15	126.98	120.80
20	CA	129(A)	G	C6-C5-N7	-5.15	127.31	130.40
59	BA	1314	C	N3-C2-O2	-5.13	118.31	121.90
59	DA	329	G	C4-N9-C1'	5.13	133.17	126.50
59	DA	1139	G	C4-C5-N7	5.13	112.85	110.80
20	AA	1066	C	C6-N1-C1'	-5.13	114.65	120.80
59	DA	1007	C	C5-C6-N1	5.13	123.56	121.00
20	AA	1101	A	P-O3'-C3'	5.12	125.85	119.70
20	AA	1170	A	C6-C5-N7	-5.12	128.71	132.30
59	DA	1149	G	N3-C4-N9	5.12	129.07	126.00
59	DA	2598	A	C4-C5-C6	5.12	119.56	117.00
26	BD	177	LEU	CA-CB-CG	5.12	127.08	115.30
59	DA	671	C	N1-C2-O2	5.12	121.97	118.90
59	DA	1493	C	C5-C6-N1	5.11	123.56	121.00
59	DA	344	G	C2-N3-C4	-5.11	109.34	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DC	215	VAL	CB-CA-C	-5.11	101.70	111.40
59	BA	1931	U	N3-C2-O2	-5.11	118.63	122.20
59	DA	2041	U	C6-N1-C2	-5.10	117.94	121.00
20	CA	1290	G	C5-C6-O6	-5.09	125.55	128.60
20	AA	754	C	C6-N1-C2	-5.09	118.27	120.30
59	DA	1157	G	N3-C4-N9	5.09	129.05	126.00
11	AL	60	LEU	CA-CB-CG	5.08	126.99	115.30
59	BA	1048	A	C8-N9-C1'	-5.08	118.55	127.70
20	AA	129(A)	G	N9-C4-C5	-5.08	103.37	105.40
59	BA	95	G	C4-C5-N7	-5.08	108.77	110.80
57	D1	17	SER	N-CA-C	-5.08	97.30	111.00
59	DA	1872	A	N1-C6-N6	5.08	121.65	118.60
59	DA	470	A	C4-C5-C6	5.07	119.53	117.00
59	BA	1009	A	C5-N7-C8	5.07	106.43	103.90
59	BA	1851	U	C5-C6-N1	5.07	125.23	122.70
60	BB	88	C	C2-N1-C1'	5.07	124.37	118.80
59	DA	1139	G	C5-N7-C8	-5.06	101.77	104.30
59	BA	1420	U	C5-C6-N1	5.06	125.23	122.70
59	DA	2092	U	P-O3'-C3'	5.06	125.78	119.70
59	DA	2780	G	P-O3'-C3'	5.06	125.78	119.70
1	CB	187	LEU	CA-CB-CG	5.06	126.93	115.30
59	DA	1007	C	C2-N1-C1'	5.06	124.36	118.80
59	BA	9	U	N1-C2-O2	5.05	126.34	122.80
59	BA	474	G	P-O3'-C3'	5.05	125.77	119.70
23	AY	502	GLY	C-N-CA	-5.05	111.69	122.30
59	BA	2578	G	N3-C4-N9	-5.05	122.97	126.00
21	CW	25	C	N1-C2-O2	5.05	121.93	118.90
28	BF	191	ARG	N-CA-C	5.05	124.62	111.00
5	CF	19	LEU	CA-CB-CG	5.05	126.91	115.30
59	BA	1802	A	N1-C6-N6	5.04	121.63	118.60
59	DA	737	C	N1-C2-O2	5.04	121.93	118.90
20	CA	328	C	P-O3'-C3'	5.04	125.75	119.70
59	BA	1743	G	O4'-C1'-N9	5.03	112.23	108.20
20	CA	1483	A	C8-N9-C4	5.03	107.81	105.80
59	DA	673	C	N3-C4-C5	5.03	123.91	121.90
59	DA	1396	U	C2-N1-C1'	5.03	123.73	117.70
59	DA	2013	A	N1-C6-N6	-5.03	115.58	118.60
59	BA	671	C	C2-N1-C1'	5.03	124.33	118.80
20	CA	838(C)	U	C5-C6-N1	5.03	125.21	122.70
59	BA	2576	G	C4-N9-C1'	5.02	133.03	126.50
59	BA	1090	U	C2-N1-C1'	-5.02	111.68	117.70
11	CL	33	ARG	N-CA-C	5.02	124.55	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	CA	1220	G	N3-C4-N9	5.02	129.01	126.00
59	DA	2040	C	C4-C5-C6	-5.02	114.89	117.40
59	BA	329	G	C4-N9-C1'	5.01	133.01	126.50
59	BA	1090	U	C6-N1-C1'	5.01	128.21	121.20
59	BA	2712	U	C6-N1-C1'	-5.01	114.19	121.20
43	DX	57	LEU	CA-CB-CG	5.01	126.82	115.30
59	BA	2407	G	N3-C4-N9	5.01	129.00	126.00
59	BA	1090	U	C5-C4-O4	5.00	128.90	125.90
59	BA	2040	C	C4-C5-C6	-5.00	114.90	117.40
20	AA	1248	A	N1-C6-N6	-5.00	115.60	118.60
59	DA	130	C	C5-C4-N4	-5.00	116.70	120.20

There are no chirality outliers.

All (41) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AB	162	ILE	Peptide
1	AB	170	GLU	Peptide
1	AB	185	ILE	Peptide
23	AY	133	ILE	Peptide
23	AY	503	GLY	Mainchain
23	AY	506	GLN	Mainchain
57	B1	16	ASN	Peptide
57	B1	18	ILE	Peptide
25	BC	171	ALA	Peptide
26	BD	164	GLN	Peptide
28	BF	154	VAL	Peptide
28	BF	173	VAL	Peptide
29	BG	111	LEU	Mainchain
29	BG	113	ARG	Peptide
31	BJ	83	UNK	Peptide
38	BS	14	VAL	Peptide
38	BS	46	VAL	Peptide
38	BS	98	VAL	Peptide
42	BW	75	TYR	Peptide
1	CB	170	GLU	Peptide
11	CL	32	PHE	Peptide
11	CL	57	LYS	Peptide
23	CY	133	ILE	Peptide
23	CY	503	GLY	Mainchain
57	D1	16	ASN	Peptide
57	D1	17	SER	Peptide

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Mol	Chain	Res	Type	Group
25	DC	161	ARG	Peptide
25	DC	171	ALA	Peptide
25	DC	211	ARG	Peptide
26	DD	164	GLN	Peptide
26	DD	78	LYS	Peptide
28	DF	154	VAL	Peptide
28	DF	173	VAL	Peptide
29	DG	111	LEU	Mainchain
29	DG	113	ARG	Peptide
31	DJ	83	UNK	Peptide
35	DP	57	THR	Peptide
38	DS	14	VAL	Peptide
38	DS	46	VAL	Peptide
38	DS	98	VAL	Peptide
42	DW	75	TYR	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	AB	1910	0	1957	135	0
1	CB	1910	0	1957	107	0
2	AC	1621	0	1688	87	0
2	CC	1621	0	1688	64	0
3	AD	1703	0	1763	104	0
3	CD	1703	0	1763	104	0
4	AE	1156	0	1213	70	0
4	CE	1156	0	1213	57	0
5	AF	843	0	857	42	0
5	CF	843	0	857	32	0
6	AG	1257	0	1296	54	0
6	CG	1257	0	1296	53	0
7	AH	1116	0	1177	67	0
7	CH	1116	0	1177	73	0
8	AI	1010	0	1037	78	0
8	CI	1010	0	1037	57	0
9	AJ	802	0	849	44	0
9	CJ	802	0	849	48	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	AK	885	0	904	54	0
10	CK	885	0	904	60	0
11	AL	976	0	1062	113	0
11	CL	976	0	1062	103	0
12	AM	997	0	1072	67	0
12	CM	997	0	1072	49	0
13	AN	492	0	529	37	0
13	CN	492	0	529	26	0
14	AO	734	0	771	47	0
14	CO	734	0	771	43	0
15	AP	706	0	725	45	0
15	CP	706	0	725	28	0
16	AQ	835	0	904	64	0
16	CQ	835	0	904	57	0
17	AR	574	0	644	36	0
17	CR	574	0	644	37	0
18	AS	634	0	655	34	0
18	CS	634	0	655	45	0
19	AT	763	0	861	38	0
19	CT	763	0	861	37	0
20	AA	32474	0	16393	1002	0
20	CA	32474	0	16393	1036	0
21	AW	1635	0	831	63	0
21	CW	1635	0	831	53	0
22	AV	503	0	252	12	0
22	CV	503	0	252	15	0
23	AY	5219	0	5290	315	0
23	CY	5219	0	5291	323	0
24	AU	48	0	39	1	0
24	CU	48	0	39	3	0
25	BC	1742	0	1798	168	0
25	DC	1742	0	1798	180	0
26	BD	2145	0	2234	202	0
26	DD	2145	0	2234	199	0
27	BE	1569	0	1634	124	0
27	DE	1569	0	1634	121	0
28	BF	1628	0	1680	132	0
28	DF	1628	0	1680	153	0
29	BG	1474	0	1535	72	0
29	DG	1474	0	1535	71	0
30	BH	1274	0	1342	57	0
30	DH	1274	0	1342	49	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	BJ	851	0	197	31	0
31	DJ	851	0	193	39	0
32	BK	1035	0	1082	58	0
32	DK	1035	0	1082	53	0
33	BN	1104	0	1180	84	0
33	DN	1104	0	1180	97	0
34	BO	933	0	996	64	0
34	DO	933	0	996	77	0
35	BP	1114	0	1187	87	0
35	DP	1114	0	1187	87	0
36	BQ	1122	0	1179	74	0
36	DQ	1122	0	1179	71	0
37	BR	960	0	1021	70	0
37	DR	960	0	1021	61	0
38	BS	775	0	835	68	0
38	DS	775	0	835	62	0
39	BT	1147	0	1207	101	0
39	DT	1147	0	1207	100	0
40	BU	964	0	1022	84	0
40	DU	964	0	1022	60	1
41	BV	779	0	852	66	0
41	DV	779	0	852	69	0
42	BW	900	0	964	69	0
42	DW	900	0	964	49	0
43	BX	734	0	789	44	0
43	DX	734	0	789	42	0
44	BY	818	0	908	58	0
44	DY	818	0	908	59	0
45	BZ	1473	0	1497	80	0
45	DZ	1473	0	1497	69	0
46	B0	662	0	688	33	0
46	D0	662	0	688	46	0
47	B2	598	0	653	28	0
47	D2	598	0	653	31	0
48	B3	477	0	529	23	0
48	D3	477	0	529	19	0
49	B5	459	0	477	46	0
49	D5	459	0	477	47	0
50	B6	433	0	461	26	0
50	D6	433	0	461	38	0
51	B7	430	0	480	38	0
51	D7	430	0	480	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	B8	517	0	582	52	0
52	D8	517	0	582	47	0
53	B9	307	0	338	22	0
53	D9	307	0	335	17	0
54	Be	686	0	615	0	0
54	De	686	0	616	0	0
55	Bf	156	0	40	0	0
55	Bg	156	0	41	0	0
55	Df	156	0	40	0	0
55	Dg	156	0	37	0	0
56	Bh	151	0	39	0	0
56	Dh	151	0	40	0	0
57	B1	732	0	808	72	0
57	D1	732	0	808	81	0
58	B4	271	0	284	19	0
58	D4	271	0	284	18	0
59	BA	61997	0	31250	2039	1
59	DA	61997	0	31250	2203	0
60	BB	2551	0	1295	85	0
60	DB	2551	0	1295	85	0
61	AY	37	0	47	6	0
61	CY	37	0	47	7	0
62	AY	28	0	12	12	0
62	CY	28	0	12	13	0
63	BA	1	0	0	0	0
63	CY	1	0	0	0	0
All	All	308166	0	213086	12302	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 24.

All (12302) 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)
23:CY:19:ALA:H	23:CY:25:LYS:CE	1.38	1.34
59:DA:2405:G:H21	59:DA:2412:A:N6	1.28	1.26
23:CY:19:ALA:N	23:CY:25:LYS:HE3	1.49	1.26
59:DA:2405:G:N2	59:DA:2412:A:H62	1.29	1.25
21:AW:15:G:N2	21:AW:48:C:H42	1.36	1.24
21:AW:15:G:H22	21:AW:48:C:N4	1.38	1.21
59:DA:2681:C:N4	59:DA:2725:A:H62	1.35	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:137:ASN:HD22	23:CY:138:LYS:N	1.35	1.21
59:DA:2681:C:C5	59:DA:2725:A:N6	2.09	1.21
59:BA:2681:C:C5	59:BA:2725:A:N6	2.09	1.20
23:CY:23:ALA:CB	23:CY:24:GLY:HA2	1.66	1.20
59:BA:2681:C:N4	59:BA:2725:A:H62	1.41	1.19
23:CY:23:ALA:HB3	23:CY:24:GLY:CA	1.73	1.18
23:CY:18:ALA:CA	23:CY:25:LYS:HE3	1.71	1.18
23:CY:17:ILE:CG2	23:CY:25:LYS:HB3	1.76	1.15
20:AA:815:A:N1	20:AA:1508:G:N2	1.93	1.15
20:AA:815:A:H2	20:AA:1527:C:O2	1.29	1.15
23:CY:18:ALA:HA	23:CY:25:LYS:HE3	1.19	1.14
23:CY:18:ALA:HA	23:CY:25:LYS:CE	1.76	1.14
23:CY:137:ASN:ND2	23:CY:138:LYS:H	1.46	1.12
20:CA:815:A:N1	20:CA:1508:G:N2	2.00	1.10
21:AW:50:C:N4	21:AW:64:G:H1	1.50	1.08
59:DA:1354:A:N6	59:DA:1377:G:H21	1.50	1.08
59:BA:1311:G:N2	59:BA:1603:A:H62	1.50	1.08
20:CA:815:A:H2	20:CA:1527:C:O2	1.33	1.07
59:DA:137(B):G:H1	59:DA:141(B):C:N4	1.53	1.07
59:BA:2023:G:N1	59:BA:2040:C:O2	1.85	1.07
59:DA:1354:A:H62	59:DA:1377:G:N2	1.53	1.06
23:CY:18:ALA:C	23:CY:25:LYS:HE3	1.75	1.06
59:BA:1802:A:C8	59:BA:1815:A:N6	2.23	1.05
59:BA:2472:G:N2	59:BA:2478:A:H62	1.53	1.05
29:BG:107:LEU:HA	29:BG:111:LEU:HD12	1.30	1.05
59:BA:2472:G:H21	59:BA:2478:A:N6	1.51	1.05
59:DA:1005:C:N4	59:DA:1138:G:H1	1.54	1.05
20:AA:1413:A:N6	20:AA:1487:G:H1	1.53	1.05
59:BA:1354:A:H62	59:BA:1377:G:N2	1.54	1.05
59:BA:1311:G:H21	59:BA:1603:A:N6	1.55	1.04
23:CY:17:ILE:HG22	23:CY:25:LYS:CB	1.88	1.02
23:CY:19:ALA:N	23:CY:25:LYS:CE	2.11	1.02
59:DA:1492:G:H1	59:DA:1498:C:H42	1.04	1.02
59:DA:2699:C:H42	59:DA:2708:G:H1	1.06	1.02
59:BA:2749:A:H62	59:BA:2753:A:N6	1.58	1.02
59:DA:1718:G:H1	59:DA:1741:C:H42	1.08	1.01
59:DA:1005:C:N3	59:DA:1138:G:N2	2.07	1.01
59:DA:1478:G:H1	59:DA:1515:C:N4	1.59	1.01
23:CY:19:ALA:H	23:CY:25:LYS:NZ	1.59	1.01
20:CA:505:G:H1	20:CA:526:C:N4	1.58	1.01
59:DA:2681:C:H5	59:DA:2725:A:H61	1.08	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2747:G:N2	59:DA:2757:A:H62	1.60	1.00
20:CA:408:A:H2	20:CA:434:U:H3	1.03	1.00
59:DA:874:G:H1	59:DA:903:C:H42	1.01	1.00
59:DA:850:C:H42	59:DA:928:G:H1	1.06	1.00
59:DA:2103:C:H42	59:DA:2186:G:H1	1.06	1.00
59:BA:1802:A:H8	59:BA:1815:A:N6	1.56	0.99
59:BA:2023:G:O6	59:BA:2040:C:N3	1.92	0.99
20:CA:815:A:H61	20:CA:1508:G:H21	1.02	0.99
59:BA:1007:C:N3	59:BA:1136:G:O6	1.94	0.99
20:AA:815:A:C2	20:AA:1527:C:O2	2.13	0.99
59:DA:2293:C:N4	59:DA:2339:G:H1	1.60	0.99
59:DA:2023:G:N1	59:DA:2040:C:O2	1.95	0.99
59:BA:1418:G:N2	59:BA:1580:A:H62	1.58	0.99
59:BA:1354:A:N6	59:BA:1377:G:H21	1.59	0.99
59:BA:1019:U:O2	59:BA:1020:A:N7	1.95	0.99
59:DA:415:A:H61	59:DA:2408:U:H3	1.06	0.99
59:DA:2681:C:H41	59:DA:2725:A:N6	1.61	0.99
59:DA:2819:G:H1	59:DA:2827:C:H42	1.11	0.99
59:DA:998:C:H42	59:DA:1157:G:H1	1.11	0.99
59:DA:273(G):C:H42	59:DA:363(A):G:H1	1.07	0.98
20:CA:591:U:H3	20:CA:648:A:H61	1.00	0.98
23:CY:17:ILE:HG22	23:CY:25:LYS:HB3	0.98	0.98
59:DA:1305:C:H42	59:DA:1623:G:H1	1.00	0.98
20:AA:1422:G:H5"	34:BO:48:PRO:HB3	1.40	0.98
20:CA:146:G:H1	20:CA:176:C:N4	1.62	0.98
59:DA:2515:C:H42	59:DA:2569:G:H1	1.05	0.98
59:DA:1169:G:H1	59:DA:1180:C:H42	1.07	0.98
59:DA:1039:G:H1	59:DA:1116:C:H42	1.07	0.97
59:BA:529:A:H62	59:BA:2041:U:H3	1.08	0.97
29:DG:113:ARG:CG	58:D4:34:GLU:OE2	2.12	0.97
59:DA:2125:G:N2	59:DA:2173:A:H62	1.61	0.97
60:DB:31:C:H42	60:DB:51:G:H1	1.04	0.97
59:BA:8:A:N1	59:BA:2895:U:O4	1.97	0.97
20:CA:68(C):C:H42	20:CA:68(W):G:H1	1.01	0.97
20:CA:947:G:H1	20:CA:1234:C:H42	1.07	0.97
59:BA:2681:C:C4	59:BA:2725:A:N6	2.32	0.97
59:BA:2749:A:N6	59:BA:2753:A:H61	1.63	0.97
59:BA:2287:A:H62	59:BA:2344:U:H3	1.11	0.97
59:DA:2109:U:H3	59:DA:2180:U:H3	0.98	0.97
59:BA:2587:A:H62	59:BA:2608:G:H21	1.00	0.97
20:CA:987:G:H1	20:CA:1218:C:H42	1.10	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:257:G:H1	20:CA:269:C:H42	1.13	0.97
20:CA:815:A:C2	20:CA:1527:C:O2	2.17	0.96
59:DA:1467:C:H42	59:DA:1525:G:H1	1.00	0.96
59:DA:2681:C:N4	59:DA:2725:A:N6	2.12	0.96
59:BA:1664:A:H61	59:BA:1996:C:H42	1.08	0.96
59:DA:1311:G:N2	59:DA:1603:A:H62	1.64	0.96
59:BA:2133:G:N2	59:BA:2158:A:H62	1.63	0.96
29:DG:113:ARG:HG3	58:D4:34:GLU:OE2	1.63	0.96
27:BE:63:LEU:HB2	27:BE:65:GLY:H	1.29	0.96
20:CA:1412:C:N4	20:CA:1488:G:H1	1.62	0.96
1:CB:69:LEU:HB3	1:CB:162:ILE:HG13	1.46	0.96
59:DA:1906:G:H1	59:DA:1924:C:H42	1.01	0.96
31:BJ:25:UNK:HA	31:BJ:80:UNK:HA	1.47	0.95
59:DA:873:G:H1	59:DA:904:C:H42	1.14	0.95
59:DA:672:C:H42	59:DA:808:G:H1	1.14	0.95
59:DA:2520:C:H42	59:DA:2545:G:H1	1.09	0.95
59:DA:273(A):G:H1	59:DA:364:C:H42	1.07	0.95
59:DA:459:U:C4	59:DA:470:A:N7	2.34	0.95
59:DA:1417:C:N4	59:DA:1581:G:H1	1.64	0.95
33:BN:5:VAL:O	33:BN:7:LYS:NZ	2.00	0.95
59:DA:2747:G:H21	59:DA:2757:A:N6	1.63	0.94
20:CA:1413:A:H61	20:CA:1487:G:H1	1.11	0.94
59:BA:2681:C:N4	59:BA:2725:A:N6	2.15	0.94
20:CA:923:A:H61	20:CA:1393:U:H3	1.13	0.94
59:DA:1348:G:H1	59:DA:1598:C:H42	1.13	0.94
59:DA:736:C:H42	59:DA:760:G:H1	0.95	0.94
59:DA:137(A):C:H42	59:DA:142:G:H1	1.14	0.94
59:DA:2093:G:H1	59:DA:2196:C:H42	1.03	0.94
20:CA:1422:G:H1	20:CA:1478:C:H42	1.13	0.94
59:DA:1387:C:H42	59:DA:1400:G:H1	1.12	0.94
23:AY:137:ASN:HD22	23:AY:138:LYS:H	1.11	0.94
59:BA:1541:U:H3'	59:BA:1542:G:H3'	1.49	0.94
59:DA:76:C:N4	59:DA:110:G:H1	1.65	0.94
59:DA:2125:G:H21	59:DA:2173:A:N6	1.65	0.94
20:CA:444:C:H42	20:CA:490:G:H1	0.98	0.94
20:CA:1255:G:H1	20:CA:1282:C:N4	1.64	0.94
59:DA:690:G:H1	59:DA:772:C:H42	0.96	0.94
20:CA:1063:C:H42	20:CA:1193:G:H1	1.09	0.93
59:DA:1309:G:H1	59:DA:1605:C:N4	1.66	0.93
59:DA:2065:C:H42	59:DA:2445:G:H1	1.17	0.93
59:DA:122:G:H1	59:DA:129:C:H42	1.14	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1025:G:H1	59:BA:1139:G:H1	1.15	0.93
59:DA:8:A:N1	59:DA:2895:U:O4	2.01	0.93
59:DA:736:C:N4	59:DA:760:G:H1	1.65	0.93
59:BA:682:G:H1	59:BA:795:C:H42	1.09	0.93
59:DA:1288:U:H3	59:DA:1326:U:H3	1.09	0.93
20:CA:1409:C:N4	20:CA:1491:G:H1	1.66	0.93
59:DA:1411:C:H42	59:DA:1591:G:H1	1.15	0.93
59:DA:1770:G:H1	59:DA:1982:C:H42	0.97	0.93
59:DA:2681:C:C4	59:DA:2725:A:N6	2.33	0.93
20:CA:1165:C:H42	20:CA:1171:G:H1	0.92	0.92
20:AA:112:G:H1	20:AA:315:A:H61	1.07	0.92
8:CI:4:TYR:HB2	8:CI:19:LEU:HB2	1.51	0.92
59:DA:2080:G:H1	59:DA:2240:C:H42	0.94	0.92
59:DA:737:C:H42	59:DA:759:G:H1	1.04	0.92
33:DN:5:VAL:O	33:DN:7:LYS:NZ	2.02	0.92
59:BA:24:G:N1	59:BA:516:C:O2	2.02	0.92
59:DA:272:G:H1	59:DA:365(A):C:H42	0.93	0.92
59:BA:2505:G:H22	59:BA:2610:C:H42	1.12	0.92
59:BA:1019:U:H3	59:BA:1020:A:N6	1.66	0.92
59:DA:2464:C:N4	59:DA:2486:G:H1	1.67	0.92
25:BC:169:THR:HG23	25:BC:171:ALA:HB2	1.51	0.92
59:BA:585:G:H21	59:BA:1254:A:H62	0.99	0.92
20:CA:687:A:H62	20:CA:703:G:H21	1.09	0.92
59:DA:671:C:H42	59:DA:809:G:H1	1.17	0.92
20:CA:296:U:H3	20:CA:301:G:H1	1.10	0.92
59:BA:858:U:H3	59:BA:919:G:H1	1.14	0.92
23:CY:23:ALA:HB3	23:CY:24:GLY:HA2	0.93	0.92
59:DA:2395:C:H42	59:DA:2421:G:H1	1.16	0.92
20:CA:1165:C:N4	20:CA:1171:G:H1	1.67	0.92
20:CA:862:C:N4	20:CA:867:G:H1	1.66	0.92
23:CY:163:VAL:HG13	23:CY:258:VAL:HB	1.51	0.92
59:DA:1030:G:H1	59:DA:1124:C:H42	1.15	0.92
23:CY:22:ASP:O	23:CY:24:GLY:HA2	1.68	0.91
59:BA:2587:A:H62	59:BA:2608:G:N2	1.67	0.91
20:CA:895:G:H1	20:CA:904:C:H42	1.13	0.91
59:BA:226:G:N3	59:BA:228:A:N6	2.16	0.91
59:DA:1311:G:H21	59:DA:1603:A:H62	0.92	0.91
20:CA:505:G:H1	20:CA:526:C:H42	0.92	0.91
59:BA:2133:G:H21	59:BA:2158:A:H62	0.93	0.91
59:DA:57:C:H42	59:DA:70:G:H1	0.93	0.91
59:BA:2681:C:H41	59:BA:2725:A:N6	1.68	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:633:GLY:HA3	23:CY:644:ARG:HB2	1.52	0.91
59:BA:1417:C:H42	59:BA:1581:G:H1	1.06	0.91
59:BA:1844:C:H42	59:BA:1896:G:H1	1.17	0.91
11:AL:56:ALA:HB3	11:AL:68:ALA:HB3	1.52	0.91
20:CA:1255:G:H1	20:CA:1282:C:H42	0.91	0.91
59:DA:57:C:N4	59:DA:70:G:H1	1.68	0.91
59:DA:814:C:H42	59:DA:1193:G:H1	1.18	0.91
23:AY:137:ASN:HD21	23:AY:263:ALA:H	1.06	0.90
59:DA:381:G:H1	59:DA:393:C:H42	1.07	0.90
20:CA:1123:A:H2	20:CA:1150:U:H3	1.17	0.90
59:DA:19:C:H42	59:DA:521:G:H1	1.14	0.90
59:BA:1782:C:H42	59:BA:2586:C:H42	1.12	0.90
59:BA:2459:A:H61	59:BA:2493:U:H3	1.16	0.90
20:CA:1059:C:N4	20:CA:1198:G:H1	1.68	0.90
59:BA:57:C:H42	59:BA:70:G:H1	1.19	0.90
59:BA:2747:G:N2	59:BA:2757:A:H62	1.69	0.90
59:DA:585:G:H21	59:DA:1254:A:H62	1.13	0.90
20:CA:1114:C:H42	20:CA:1186:G:H1	0.95	0.90
33:BN:9:VAL:HG11	33:BN:39:ARG:HH22	1.34	0.90
59:BA:1418:G:H21	59:BA:1580:A:N6	1.68	0.90
20:CA:862:C:H42	20:CA:867:G:H1	0.93	0.90
59:DA:1423:G:H1	59:DA:1575:C:H42	1.15	0.90
11:CL:56:ALA:HB3	11:CL:68:ALA:HB3	1.52	0.90
59:BA:585:G:H21	59:BA:1254:A:N6	1.69	0.90
20:CA:1059:C:H42	20:CA:1198:G:H1	0.91	0.90
23:AY:137:ASN:ND2	23:AY:138:LYS:H	1.70	0.90
39:DT:49:VAL:HA	39:DT:63:VAL:HA	1.53	0.90
59:BA:2681:C:H5	59:BA:2725:A:H61	1.08	0.89
33:BN:3:THR:HG1	40:BU:61:TRP:HE1	1.13	0.89
59:DA:2023:G:O6	59:DA:2040:C:N3	2.05	0.89
59:DA:2464:C:H42	59:DA:2486:G:H1	0.91	0.89
59:DA:1309:G:H1	59:DA:1605:C:H42	0.90	0.89
59:DA:272:G:H1	59:DA:365(A):C:N4	1.69	0.89
6:AG:79:ARG:HB3	20:AA:1381:U:H1'	1.54	0.89
33:DN:49:GLY:O	33:DN:119:ARG:NH1	2.04	0.89
33:DN:74:ARG:HG3	33:DN:74:ARG:HH11	1.36	0.89
46:D0:38:VAL:HB	46:D0:59:LEU:HB2	1.55	0.89
59:DA:392:C:H5''	59:DA:409:C:H5''	1.53	0.89
59:BA:1438:U:O2	59:BA:1553:A:N7	2.05	0.89
59:DA:2634:G:H1	59:DA:2784:C:H42	1.19	0.89
23:CY:27:THR:HG21	62:CY:702:GDP:H2'	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1166:C:H42	59:DA:1183:G:H1	1.16	0.89
59:BA:141(A):A:H8	59:BA:1595:G:H21	1.15	0.89
20:AA:68(E):G:O6	20:AA:68(U):U:O2	1.90	0.88
59:BA:2109:U:H3	59:BA:2180:U:H3	1.18	0.88
59:DA:1311:G:H21	59:DA:1603:A:N6	1.69	0.88
11:CL:58:VAL:HG12	11:CL:60:LEU:H	1.38	0.88
57:B1:19:GLN:HB3	57:B1:40:ARG:HD3	1.56	0.88
59:BA:1324:G:H1	59:BA:1330:C:H42	1.16	0.88
59:DA:2681:C:H41	59:DA:2725:A:H62	1.06	0.88
20:CA:1114:C:N4	20:CA:1186:G:H1	1.70	0.88
59:BA:36:G:H1	59:BA:444:C:H42	1.21	0.88
16:CQ:43:LEU:HB3	16:CQ:69:LYS:HE2	1.55	0.88
11:AL:58:VAL:HG12	11:AL:60:LEU:H	1.36	0.88
59:BA:326:G:H1	59:BA:336:C:H42	1.19	0.88
59:DA:1856:G:H1	59:DA:1886:C:H42	1.22	0.88
20:CA:1408:A:H61	24:CU:1:KBE:HA	1.39	0.88
29:DG:42:GLY:O	59:DA:2306:C:N4	2.06	0.88
59:BA:1019:U:H3	59:BA:1020:A:H62	0.89	0.88
20:CA:444:C:N4	20:CA:490:G:H1	1.72	0.88
11:AL:35:GLY:HA2	11:AL:58:VAL:HG13	1.56	0.88
3:AD:23:GLY:HA3	3:AD:112:VAL:HG22	1.53	0.88
59:DA:2681:C:H5	59:DA:2725:A:N6	1.58	0.88
59:DA:1417:C:H42	59:DA:1581:G:H1	0.89	0.87
59:BA:2747:G:H21	59:BA:2757:A:H62	0.88	0.87
49:B5:36:CYS:SG	49:B5:37:LYS:N	2.47	0.87
59:DA:1105:U:H2'	59:DA:1106:G:H8	1.40	0.87
3:CD:102:ASP:HA	3:CD:121:VAL:HG21	1.54	0.87
33:DN:25:ARG:HH22	59:DA:114(B):A:H4'	1.40	0.87
59:DA:2080:G:H1	59:DA:2240:C:N4	1.70	0.87
20:CA:833:U:H3	20:CA:853:G:H1	0.94	0.87
3:AD:102:ASP:HA	3:AD:121:VAL:HG21	1.53	0.87
59:BA:226:G:N2	59:BA:228:A:H62	1.71	0.87
20:CA:259:G:H1	20:CA:267:C:H42	1.13	0.87
59:DA:1487:G:H1	59:DA:1502:C:H42	1.17	0.87
59:DA:1305:C:N4	59:DA:1623:G:H1	1.72	0.86
59:DA:1906:G:H1	59:DA:1924:C:N4	1.74	0.86
20:CA:1409:C:H42	20:CA:1491:G:H1	0.91	0.86
20:CA:1409:C:N3	20:CA:1491:G:N2	2.22	0.86
20:CA:815:A:N6	20:CA:1508:G:H21	1.72	0.86
20:CA:1165:C:N3	20:CA:1171:G:N2	2.22	0.86
59:DA:712:G:H1	59:DA:719:C:H42	1.19	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1478:G:H1	59:DA:1515:C:H42	0.89	0.86
59:BA:1418:G:H21	59:BA:1580:A:H62	0.90	0.86
11:CL:89:ARG:HA	11:CL:96:VAL:HB	1.58	0.86
59:DA:690:G:H1	59:DA:772:C:N4	1.72	0.86
59:DA:1614:A:OP1	59:DA:1617:C:N4	2.07	0.86
32:DK:27:LEU:HD21	32:DK:57:ILE:HD13	1.57	0.86
59:DA:1770:G:H1	59:DA:1982:C:N4	1.73	0.86
21:CW:15:G:H22	21:CW:48:C:H42	1.24	0.86
59:BA:1462:C:H4'	59:BA:2703:C:H5'	1.57	0.86
59:BA:2125:G:H21	59:BA:2173:A:H62	1.23	0.86
59:BA:2133:G:H21	59:BA:2158:A:N6	1.72	0.85
25:BC:115:VAL:HA	25:BC:145:THR:HA	1.57	0.85
59:DA:2400:G:H1	59:DA:2416:C:H42	1.23	0.85
27:DE:111:ARG:H	27:DE:161:GLY:HA3	1.41	0.85
59:BA:2514:U:H3	59:BA:2570:G:H1	1.23	0.85
59:DA:76:C:H42	59:DA:110:G:H1	0.90	0.85
21:AW:53:G:H1	21:AW:61:C:H42	1.18	0.85
27:BE:13:ARG:HA	27:BE:21:VAL:O	1.75	0.85
20:CA:68(C):C:N4	20:CA:68(W):G:H1	1.73	0.85
2:CC:19:GLU:O	2:CC:40:ARG:NH2	2.08	0.85
59:DA:1467:C:N4	59:DA:1525:G:H1	1.74	0.85
20:AA:687:A:H62	20:AA:703:G:H21	1.24	0.85
59:BA:2681:C:H5	59:BA:2725:A:N6	1.61	0.85
59:BA:2587:A:N6	59:BA:2608:G:H21	1.75	0.85
59:DA:401:A:H61	59:DA:422:A:H61	1.24	0.85
39:DT:53:ARG:NH2	39:DT:60:THR:OG1	2.09	0.85
23:CY:276:VAL:HA	23:CY:280:LEU:HD23	1.56	0.85
26:DD:3:VAL:H	26:DD:20:ASP:HB2	1.40	0.85
44:BY:37:VAL:HG13	44:BY:69:ALA:HA	1.58	0.85
27:DE:63:LEU:HB2	27:DE:65:GLY:H	1.41	0.84
8:AI:2:GLU:N	8:AI:88:TYR:HH	1.74	0.84
21:AW:18:G:N2	21:AW:58:A:OP1	2.10	0.84
31:BJ:54:UNK:HA	31:BJ:79:UNK:HA	1.58	0.84
45:BZ:151:HIS:HB3	45:BZ:170:THR:HA	1.58	0.84
20:AA:406:G:H1	20:AA:436:C:H42	1.23	0.84
25:DC:169:THR:HG23	25:DC:171:ALA:HB2	1.57	0.84
23:CY:23:ALA:CB	23:CY:24:GLY:CA	2.36	0.84
23:AY:85:PRO:HB3	23:AY:94:VAL:HA	1.59	0.84
26:BD:136:ILE:O	26:BD:168:ARG:NH2	2.11	0.84
26:DD:263:ARG:NH1	59:DA:2227:A:OP1	2.10	0.84
59:BA:307:G:N2	59:BA:310:A:OP2	2.10	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:157:ILE:HG12	25:BC:161:ARG:HG2	1.58	0.84
21:AW:50:C:H42	21:AW:64:G:H1	0.89	0.84
59:DA:137(B):G:H1	59:DA:141(B):C:H42	0.85	0.84
59:DA:1462:C:H4'	59:DA:2703:C:H5'	1.59	0.84
33:DN:74:ARG:NH1	33:DN:85:ILE:HD11	1.92	0.84
20:AA:977:A:HO2'	20:AA:981:U:H3	1.22	0.84
59:DA:273(A):G:H1	59:DA:364:C:N4	1.75	0.84
59:DA:2093:G:H1	59:DA:2196:C:N4	1.76	0.84
59:BA:392:C:H5''	59:BA:409:C:H5''	1.59	0.84
23:CY:25:LYS:N	62:CY:702:GDP:O2B	2.11	0.83
8:AI:4:TYR:HB2	8:AI:19:LEU:HB2	1.58	0.83
59:DA:291:C:H42	59:DA:349:G:H1	1.25	0.83
59:BA:585:G:N2	59:BA:1254:A:H62	1.74	0.83
26:BD:3:VAL:H	26:BD:20:ASP:HB2	1.43	0.83
44:BY:79:CYS:SG	44:BY:80:GLY:N	2.50	0.83
3:CD:3:ARG:HH22	3:CD:5:ILE:HD12	1.44	0.83
59:BA:1018:C:H42	59:BA:1144:G:H1	1.27	0.83
20:AA:1510:U:H3	20:AA:1525:G:H1	1.25	0.83
59:DA:1416:G:H1	59:DA:1582:C:H42	1.23	0.83
59:DA:2024:G:C2	59:DA:2040:C:H1'	2.13	0.83
20:CA:666:G:OP2	20:CA:725:G:N2	2.10	0.83
1:CB:171:ALA:HA	1:CB:174:VAL:HB	1.58	0.83
29:DG:73:ALA:H	29:DG:87:PRO:HD2	1.42	0.83
59:DA:2838:G:H1	59:DA:2880:C:H42	1.23	0.83
20:AA:1077:G:N2	20:AA:1080:A:OP2	2.11	0.83
59:DA:874:G:H1	59:DA:903:C:N4	1.75	0.83
60:DB:86:G:H1	60:DB:90:C:H42	1.24	0.83
23:CY:18:ALA:HA	23:CY:25:LYS:CD	2.08	0.83
11:CL:58:VAL:HG11	11:CL:85:ILE:HG12	1.61	0.83
26:DD:24:ILE:HG13	26:DD:82:ILE:HB	1.60	0.83
23:CY:161:PRO:HA	23:CY:256:THR:HB	1.60	0.83
28:BF:4:VAL:H	28:BF:24:LEU:HG	1.44	0.83
39:DT:20:PRO:HG2	39:DT:86:ILE:HA	1.61	0.82
59:BA:278:A:O2'	59:BA:279:C:O5'	1.96	0.82
28:DF:64:ILE:H	28:DF:76:GLY:HA2	1.44	0.82
8:CI:10:ARG:HD3	8:CI:75:ASP:HB3	1.59	0.82
20:CA:1412:C:H42	20:CA:1488:G:H1	0.84	0.82
25:DC:43:GLU:OE1	59:DA:2123:G:N2	2.11	0.82
59:DA:1287:A:H2	59:DA:1649:G:H4'	1.43	0.82
35:DP:23:PRO:HD2	35:DP:33:ARG:HE	1.42	0.82
20:CA:591:U:H3	20:CA:648:A:N6	1.77	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:115:VAL:HA	25:DC:145:THR:HA	1.61	0.82
33:DN:133:GLN:HG2	33:DN:135:PRO:HD3	1.60	0.82
20:AA:681:C:H42	20:AA:709:G:H1	1.26	0.82
25:DC:44:VAL:HB	25:DC:174:ALA:HB3	1.61	0.82
59:BA:273(G):C:H42	59:BA:363(A):G:H1	1.27	0.82
59:BA:2747:G:H21	59:BA:2757:A:N6	1.73	0.82
3:AD:3:ARG:HH22	3:AD:5:ILE:HD12	1.45	0.82
59:BA:273(A):G:H1	59:BA:364:C:H42	1.28	0.82
1:CB:161:ALA:HB1	1:CB:185:ILE:HD11	1.58	0.82
20:AA:1065:U:O2	20:AA:1067:A:N6	2.12	0.82
2:AC:54:ARG:HB2	2:AC:69:HIS:HB2	1.60	0.82
20:CA:125:U:O2	20:CA:236:G:O6	1.98	0.82
2:AC:88:ARG:HH21	2:AC:100:ALA:HA	1.44	0.82
14:AO:39:LEU:HD12	14:AO:56:LEU:HB2	1.62	0.82
1:CB:174:VAL:HG22	1:CB:184:VAL:HG11	1.61	0.82
40:BU:50:ARG:HH22	41:BV:72:VAL:HG12	1.43	0.82
39:BT:47:GLY:HA2	39:BT:65:LYS:HB2	1.62	0.82
23:CY:22:ASP:O	23:CY:24:GLY:CA	2.28	0.82
20:AA:961:U:O2	20:AA:1201:A:N1	2.13	0.82
49:B5:3:LYS:HG2	49:B5:5:PRO:HD2	1.62	0.81
28:DF:105:VAL:HG22	59:DA:600:G:H1'	1.61	0.81
33:DN:56:ASN:H	33:DN:126:PRO:HA	1.45	0.81
44:DY:86:ARG:HG2	44:DY:88:LYS:H	1.45	0.81
59:DA:1980:G:O2'	59:DA:1982:C:OP2	1.98	0.81
59:BA:1270:C:H5''	59:BA:1271:G:H5''	1.60	0.81
59:BA:1490:A:O3'	59:BA:1494:A:N6	2.13	0.81
43:BX:53:LYS:HB3	43:BX:82:GLN:HB3	1.60	0.81
35:BP:66:GLY:HA2	59:BA:2415:G:H4'	1.62	0.81
59:DA:1019:U:O2	59:DA:1020:A:N7	2.14	0.81
59:BA:1443:G:H1	59:BA:1548:C:H42	1.27	0.81
23:AY:633:GLY:HA3	23:AY:644:ARG:HB2	1.63	0.81
20:CA:947:G:H1	20:CA:1234:C:N4	1.78	0.81
2:AC:50:ALA:HB1	2:AC:72:LYS:HB3	1.62	0.81
59:DA:2472:G:H21	59:DA:2478:A:H62	1.29	0.81
60:DB:22:U:H3	60:DB:61:G:H1	1.25	0.81
59:BA:85:G:N1	59:BA:97:C:O2	2.12	0.81
28:DF:171:PRO:HB3	59:DA:323:G:C8	2.16	0.81
59:BA:1136:G:HO2'	59:BA:2038:G:HO2'	1.29	0.81
59:DA:2699:C:N4	59:DA:2708:G:H1	1.77	0.81
59:DA:850:C:N4	59:DA:928:G:H1	1.79	0.81
59:BA:307:G:H21	59:BA:330:A:H62	1.29	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:701:FUA:H5	61:CY:701:FUA:H202	1.63	0.81
59:DA:2502:G:H5'	59:DA:2503:A:H5''	1.63	0.81
20:AA:1528:U:H4'	20:AA:1529:G:H21	1.43	0.81
59:DA:307:G:N2	59:DA:310:A:OP2	2.10	0.81
59:BA:2048:G:H1	59:BA:2620:C:H42	1.28	0.81
59:DA:415:A:N6	59:DA:2408:U:H3	1.78	0.81
59:BA:1417:C:N4	59:BA:1581:G:H1	1.78	0.81
60:DB:31:C:N4	60:DB:51:G:H1	1.78	0.81
1:AB:69:LEU:HB3	1:AB:162:ILE:HG22	1.62	0.81
57:D1:19:GLN:NE2	59:DA:2233:U:OP2	2.13	0.81
20:CA:1003:G:N1	20:CA:1037:C:O2	2.14	0.81
59:DA:2040:C:H5''	59:DA:2040:C:C6	2.16	0.80
27:BE:147:PRO:HB2	27:BE:149:ARG:H	1.45	0.80
23:CY:566:THR:HG22	23:CY:567:LEU:H	1.45	0.80
59:DA:2103:C:N4	59:DA:2186:G:H1	1.78	0.80
59:DA:736:C:N3	59:DA:760:G:N2	2.29	0.80
23:AY:137:ASN:HD22	23:AY:138:LYS:N	1.78	0.80
1:CB:84:GLU:HB3	1:CB:219:VAL:HG21	1.62	0.80
20:CA:815:A:H61	20:CA:1508:G:N2	1.78	0.80
59:BA:1008:C:H1'	59:BA:1009:A:N7	1.97	0.80
59:BA:1135:C:H42	59:BA:1138:G:H8	1.28	0.80
59:BA:1019:U:C2	59:BA:1020:A:N7	2.48	0.80
59:BA:863:A:H2'	59:BA:864:G:C8	2.16	0.80
21:CW:30:C:H42	21:CW:40:G:H1	1.29	0.80
3:CD:57:ARG:HG2	3:CD:206:PHE:HB2	1.63	0.80
45:BZ:7:ALA:HB2	45:BZ:59:LEU:HB2	1.61	0.80
28:DF:63:LYS:NZ	28:DF:66:PRO:O	2.15	0.80
20:AA:296:U:H3	20:AA:301:G:H1	1.28	0.80
43:BX:54:VAL:HG13	43:BX:81:VAL:HG12	1.64	0.80
38:DS:40:ILE:HA	38:DS:47:THR:HA	1.64	0.80
40:DU:92:ARG:HD2	41:DV:11:GLN:HB2	1.64	0.80
20:CA:146:G:H1	20:CA:176:C:H42	0.86	0.80
23:AY:137:ASN:HD21	23:AY:263:ALA:N	1.79	0.80
3:CD:134:ASP:OD2	3:CD:134:ASP:N	2.14	0.80
20:AA:908:A:H2'	20:AA:909:A:C8	2.17	0.80
59:DA:1849:G:H1	59:DA:1893:C:H42	1.29	0.80
57:D1:81:LYS:HG2	59:DA:270(J):G:H4'	1.62	0.80
3:AD:57:ARG:HH21	4:AE:107:ARG:HH21	1.28	0.80
23:CY:18:ALA:HB2	23:CY:85:PRO:HD2	1.63	0.80
59:DA:2515:C:N4	59:DA:2569:G:H1	1.79	0.80
20:AA:112:G:H1	20:AA:315:A:N6	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2107:C:H42	59:DA:2182:G:H1	1.30	0.80
26:DD:157:ARG:HH22	59:DA:1817:G:H3'	1.45	0.80
25:DC:46:ALA:HA	25:DC:212:SER:O	1.80	0.80
29:BG:73:ALA:H	29:BG:87:PRO:HD2	1.45	0.80
40:DU:3:ARG:HB2	59:DA:445:C:H5''	1.61	0.80
29:DG:113:ARG:HG2	58:D4:34:GLU:OE2	1.82	0.80
59:DA:2520:C:N4	59:DA:2545:G:H1	1.78	0.80
33:DN:118:LYS:O	33:DN:121:LYS:NZ	2.15	0.80
23:AY:201:ILE:HG12	23:AY:206:LEU:H	1.46	0.80
59:BA:2047:U:O2'	59:BA:2823:A:N1	2.14	0.80
32:BK:79:ARG:HG3	32:BK:84:LEU:HB2	1.62	0.80
20:CA:1063:C:N4	20:CA:1193:G:H1	1.80	0.79
28:BF:157:VAL:HG12	28:BF:192:LEU:HA	1.64	0.79
20:CA:628:G:H2'	20:CA:629:G:H8	1.46	0.79
59:DA:750:A:OP1	59:DA:1615:C:N4	2.15	0.79
39:BT:33:LYS:HB2	39:BT:43:GLN:H	1.47	0.79
26:BD:209:ALA:HB2	59:BA:1790:C:H4'	1.63	0.79
26:BD:149:PRO:HG2	59:BA:2218:G:H4'	1.61	0.79
42:BW:41:LYS:O	42:BW:44:ALA:N	2.15	0.79
30:BH:85:LYS:HE3	30:BH:145:ALA:HB2	1.65	0.79
59:BA:964:C:O2'	59:BA:2273:A:N3	2.14	0.79
59:DA:2587:A:H62	59:DA:2608:G:H21	1.28	0.79
20:AA:1003:G:N1	20:AA:1037:C:O2	2.15	0.79
20:CA:1363:A:H4'	20:CA:1364:U:H5''	1.62	0.79
59:BA:2681:C:H41	59:BA:2725:A:H62	1.18	0.79
59:DA:812:C:H42	59:DA:1195:G:H1	1.28	0.79
59:BA:867:C:N3	59:BA:912:C:O2'	2.15	0.79
59:BA:1387:C:H42	59:BA:1400:G:H1	1.26	0.79
11:AL:71:PRO:O	11:AL:102:ARG:NH1	2.16	0.79
59:BA:1664:A:H61	59:BA:1996:C:N4	1.81	0.79
46:B0:74:ARG:HH22	60:BB:13:A:H8	1.30	0.79
38:BS:106:ARG:HE	38:BS:108:GLY:HA2	1.47	0.79
11:AL:71:PRO:HB2	11:AL:102:ARG:HH11	1.48	0.79
36:BQ:12:GLN:HA	59:BA:910:A:H62	1.48	0.79
37:BR:41:ALA:HB1	37:BR:97:VAL:HG11	1.65	0.79
25:DC:213:VAL:HG11	25:DC:225:ILE:HG12	1.64	0.79
39:BT:88:ILE:HG22	39:BT:89:VAL:HG23	1.64	0.79
60:DB:24:G:C6	60:DB:56:G:N3	2.51	0.79
11:AL:89:ARG:HA	11:AL:96:VAL:HB	1.65	0.79
4:CE:92:LYS:HG2	4:CE:119:LEU:HD12	1.63	0.79
57:B1:12:PRO:HA	57:B1:44:PRO:HD2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2876:G:H2'	59:BA:2877:G:H8	1.47	0.79
25:DC:30:VAL:HA	25:DC:33:LEU:HG	1.65	0.79
14:AO:39:LEU:HD23	20:AA:740:U:H4'	1.63	0.78
61:CY:701:FUA:H201	61:CY:701:FUA:O1	1.82	0.78
59:DA:881:G:H1	59:DA:895:U:H3	1.28	0.78
3:AD:175:SER:HB3	3:AD:184:LYS:HB2	1.65	0.78
59:DA:2293:C:H42	59:DA:2339:G:H1	0.83	0.78
59:DA:951:C:H42	59:DA:966:G:H1	1.28	0.78
59:BA:371:A:H61	59:BA:401:A:H3'	1.48	0.78
59:DA:1478:G:H2'	59:DA:1479:G:H8	1.48	0.78
59:DA:381:G:H1	59:DA:393:C:N4	1.79	0.78
50:D6:40:CYS:SG	59:DA:2370:G:N2	2.56	0.78
27:DE:109:LYS:NZ	59:DA:2681:C:OP2	2.17	0.78
20:CA:1412:C:N3	20:CA:1488:G:N2	2.28	0.78
30:BH:41:MET:SD	30:BH:42:ARG:N	2.56	0.78
23:AY:497:PHE:HB3	23:AY:508:GLY:H	1.49	0.78
25:DC:33:LEU:HD13	25:DC:221:PRO:HB2	1.65	0.78
41:DV:24:LYS:HB3	59:DA:1162:G:H4'	1.65	0.78
59:DA:680:G:H1	59:DA:797:C:H42	1.31	0.78
59:DA:119:A:H4'	59:DA:120:U:H5'	1.63	0.78
59:BA:1006:C:H42	59:BA:1137:G:H1	1.31	0.78
59:DA:2293:C:N3	59:DA:2339:G:N2	2.26	0.78
59:BA:226:G:H21	59:BA:228:A:H62	1.31	0.78
11:CL:34:ARG:HG3	11:CL:82:VAL:HG13	1.65	0.78
27:DE:13:ARG:HA	27:DE:21:VAL:O	1.82	0.78
23:CY:105:ILE:HD13	23:CY:133:ILE:HD11	1.66	0.78
25:DC:51:ASP:O	25:DC:53:ARG:N	2.17	0.78
59:DA:1039:G:H1	59:DA:1116:C:N4	1.80	0.78
23:AY:137:ASN:ND2	62:AY:702:GDP:O6	2.17	0.78
57:D1:18:ILE:HG21	59:DA:380:U:H4'	1.64	0.78
39:BT:34:VAL:HG13	39:BT:39:ARG:HG2	1.64	0.78
59:DA:1248:G:H3'	59:DA:1249:U:H5''	1.65	0.78
23:CY:506:GLN:HG3	23:CY:581:ALA:HB2	1.65	0.78
1:AB:204:ASN:OD1	1:AB:207:ALA:N	2.15	0.78
59:DA:1007:C:N3	59:DA:1136:G:O6	2.17	0.78
51:D7:40:TRP:HE1	59:DA:458:G:HO2'	1.30	0.78
40:BU:52:ARG:NH1	59:BA:559:G:O2'	2.17	0.78
45:BZ:119:GLU:HB2	45:BZ:122:ARG:HH12	1.48	0.78
26:DD:222:ARG:N	59:DA:1789:A:OP1	2.16	0.78
59:BA:1478:G:H1	59:BA:1515:C:H42	1.31	0.78
59:DA:737:C:N4	59:DA:759:G:H1	1.80	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:557:U:H2'	59:BA:558:G:C8	2.19	0.78
33:DN:73:THR:HG22	33:DN:84:LYS:HB3	1.65	0.78
41:DV:96:ILE:HG22	41:DV:97:LYS:H	1.48	0.78
23:AY:133:ILE:HD12	23:AY:280:LEU:HD21	1.65	0.78
30:BH:144:VAL:HA	30:BH:147:ASN:HB2	1.66	0.78
59:DA:2212:A:H1'	59:DA:2215:G:C5	2.19	0.78
59:DA:558:G:H2'	59:DA:559:G:H8	1.49	0.77
59:DA:964:C:O2'	59:DA:2273:A:N3	2.15	0.77
59:DA:484:C:H42	59:DA:496:G:H1	1.32	0.77
59:BA:2284:C:H42	59:BA:2384:G:H1	1.29	0.77
59:DA:1169:G:H1	59:DA:1180:C:N4	1.81	0.77
20:CA:68(C):C:N3	20:CA:68(W):G:N2	2.30	0.77
59:DA:2041:U:H2'	59:DA:2042:A:C8	2.19	0.77
59:BA:1791:A:N6	59:BA:1828:G:O2'	2.16	0.77
59:DA:2208:U:H3	59:DA:2216:G:H1	1.32	0.77
49:B5:12:SER:HB2	59:BA:2020:A:H5'	1.67	0.77
39:DT:3:ARG:HG3	59:DA:2876:G:H4'	1.64	0.77
20:CA:1414:U:H2'	20:CA:1415:G:H8	1.48	0.77
40:BU:92:ARG:HD2	41:BV:11:GLN:HB2	1.65	0.77
20:CA:356:A:N3	20:CA:368:U:O2'	2.18	0.77
23:AY:607:ARG:HG3	23:AY:674:ASP:HB2	1.67	0.77
20:AA:107:G:OP1	20:AA:325:A:N6	2.17	0.77
25:BC:164:PHE:HA	25:BC:172:ILE:HG13	1.65	0.77
59:DA:585:G:H21	59:DA:1254:A:N6	1.82	0.77
11:CL:85:ILE:HG23	11:CL:98:TYR:HB3	1.66	0.77
41:BV:96:ILE:HG22	41:BV:97:LYS:H	1.49	0.77
23:AY:608:VAL:HG21	23:AY:652:MET:HE2	1.67	0.77
20:CA:923:A:N6	20:CA:1393:U:H3	1.81	0.77
17:CR:52:PRO:HB3	20:CA:720:C:H5''	1.65	0.77
23:CY:137:ASN:ND2	62:CY:702:GDP:O6	2.18	0.77
33:BN:114:ARG:HH22	59:BA:528:A:H5''	1.50	0.77
20:CA:1413:A:N6	20:CA:1487:G:H1	1.82	0.77
20:CA:895:G:H1	20:CA:904:C:N4	1.82	0.77
14:AO:39:LEU:HD21	14:AO:52:SER:HB3	1.66	0.77
32:BK:90:LYS:HG3	59:BA:1063:G:H21	1.47	0.77
59:DA:1105:U:H2'	59:DA:1106:G:C8	2.19	0.77
25:DC:157:ILE:HG12	25:DC:161:ARG:HG2	1.66	0.77
33:BN:14:VAL:HG12	33:BN:15:LEU:H	1.50	0.77
59:DA:579:G:H5''	59:DA:2018:G:H5''	1.67	0.77
3:CD:175:SER:HB3	3:CD:184:LYS:HB2	1.64	0.77
32:BK:27:LEU:HD21	32:BK:57:ILE:HD13	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DS:70:GLY:HA3	38:DS:99:LYS:HG3	1.66	0.77
19:CT:66:ALA:HB1	19:CT:72:LEU:HB2	1.67	0.77
42:DW:12:ILE:HD11	42:DW:42:ARG:HH22	1.50	0.77
20:AA:285:G:H2'	20:AA:286:G:H8	1.50	0.77
59:DA:2330:G:H1	59:DA:2385:C:H42	1.31	0.77
39:BT:51:ARG:HB3	39:BT:62:THR:HG22	1.67	0.77
18:CS:29:ARG:HH11	18:CS:48:THR:HG21	1.50	0.77
37:BR:5:LYS:HG3	59:BA:2820:A:H4'	1.64	0.77
59:BA:682:G:H1	59:BA:795:C:N4	1.81	0.77
25:DC:83:LYS:HG3	25:DC:117:THR:HG21	1.66	0.77
43:DX:62:LYS:NZ	59:DA:1338:G:N7	2.33	0.77
23:AY:230:LYS:HG3	23:AY:235:GLU:HB3	1.65	0.77
38:BS:92:TYR:OH	59:BA:2293:C:OP1	2.03	0.77
60:BB:81:G:O6	60:BB:95:U:O2	2.03	0.77
59:DA:859:G:N2	59:DA:917:A:OP2	2.12	0.77
21:CW:18:G:N2	21:CW:58:A:OP1	2.17	0.77
19:CT:75:ASN:HB2	20:CA:262:A:H4'	1.64	0.77
13:CN:41:ARG:HH22	20:CA:973:G:H4'	1.50	0.77
59:BA:2469:A:H2	59:BA:2481:G:H21	1.32	0.77
59:DA:1718:G:H1	59:DA:1741:C:N4	1.81	0.76
38:BS:24:LEU:HB3	38:BS:85:VAL:HG12	1.65	0.76
51:B7:40:TRP:CZ3	59:BA:459:U:H6	2.03	0.76
59:DA:1819:A:H4'	59:DA:1820:U:H5'	1.67	0.76
20:CA:12:U:H3	20:CA:22:G:H1	1.33	0.76
23:AY:517:LEU:HG	23:AY:518:PRO:HD2	1.65	0.76
59:BA:1430:C:H42	59:BA:1563:G:H1	1.31	0.76
1:AB:84:GLU:HB3	1:AB:219:VAL:HG21	1.67	0.76
11:CL:70:ILE:HA	11:CL:100:ILE:HB	1.67	0.76
27:DE:189:PRO:HA	59:DA:2680:C:H5'	1.67	0.76
59:BA:1007:C:H5''	59:BA:1008:C:H2'	1.65	0.76
59:DA:1022:G:H22	59:DA:114(B):A:H2	1.33	0.76
20:CA:987:G:H1	20:CA:1218:C:N4	1.84	0.76
37:BR:12:ARG:NH2	59:BA:1276:A:O2'	2.18	0.76
40:BU:3:ARG:HB2	59:BA:445:C:H5''	1.66	0.76
20:AA:1505:G:H5''	20:AA:1506:U:H5''	1.66	0.76
11:CL:13:LYS:NZ	20:CA:882:C:OP2	2.18	0.76
25:DC:216:THR:HB	25:DC:222:SER:HB3	1.67	0.76
4:AE:125:SER:OG	20:AA:19:C:OP1	2.04	0.76
26:DD:147:LEU:HD12	26:DD:155:LEU:HD21	1.67	0.76
14:AO:23:GLY:O	20:AA:750:G:N2	2.18	0.76
59:DA:700:G:H1	59:DA:732:C:H42	1.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:67:THR:HA	2:CC:102:ASN:HB3	1.67	0.76
41:DV:40:LEU:HD12	41:DV:46:VAL:HA	1.66	0.76
59:DA:784:A:N6	59:DA:2072:G:O2'	2.18	0.76
33:BN:54:VAL:HB	33:BN:122:VAL:HG13	1.66	0.76
58:B4:15:ILE:H	58:B4:32:TYR:HB3	1.49	0.76
59:BA:1324:G:H1	59:BA:1330:C:N4	1.81	0.76
28:BF:4:VAL:HG13	28:BF:7:TYR:HA	1.66	0.76
29:DG:105:LYS:HE2	58:D4:26:SER:HB2	1.65	0.76
28:BF:153:SER:HA	28:BF:172:TRP:O	1.86	0.76
9:CJ:40:LEU:HD22	9:CJ:41:PRO:HD2	1.68	0.76
59:DA:1008:C:H1'	59:DA:1009:A:N7	1.99	0.76
59:DA:998:C:N4	59:DA:1157:G:H1	1.81	0.76
20:AA:1060:C:H2'	20:AA:1061:G:H8	1.50	0.76
59:BA:270(A):A:OP2	59:BA:270(Z):G:N1	2.16	0.76
59:BA:1139:G:H2'	59:BA:1140:C:C6	2.20	0.76
59:BA:2024:G:C2	59:BA:2040:C:H1'	2.21	0.76
25:BC:46:ALA:HA	25:BC:212:SER:O	1.85	0.76
1:AB:167:PRO:O	1:AB:171:ALA:HB2	1.84	0.76
25:BC:138:LEU:HD22	25:BC:139:PRO:HD2	1.68	0.76
23:CY:133:ILE:HD12	23:CY:280:LEU:HD21	1.68	0.76
3:CD:103:ASN:HA	3:CD:106:TYR:HB3	1.67	0.76
23:AY:566:THR:HG22	23:AY:567:LEU:H	1.50	0.76
3:AD:122:ARG:HE	20:AA:403:C:H4'	1.50	0.76
32:BK:115:LEU:O	59:BA:1058:G:O2'	2.02	0.76
59:BA:1005:C:H42	59:BA:1138:G:H1	1.29	0.76
33:DN:86:PRO:HG2	33:DN:89:LYS:H	1.50	0.76
59:BA:270(C):A:O2'	59:BA:364:C:O2	2.04	0.76
59:DA:2041:U:OP2	59:DA:2041:U:H6	1.67	0.76
41:BV:83:ARG:NH1	59:BA:815:C:OP2	2.19	0.76
20:AA:973:G:H3'	20:AA:974:A:H5''	1.67	0.76
27:BE:1:MET:HA	27:BE:200:GLU:HG2	1.67	0.76
59:DA:1492:G:H1	59:DA:1498:C:N4	1.81	0.75
11:CL:35:GLY:HA2	11:CL:58:VAL:HG13	1.67	0.75
59:DA:2469:A:H2	59:DA:2481:G:H21	1.34	0.75
20:AA:441:A:H62	20:AA:493:G:H21	1.33	0.75
43:DX:53:LYS:HB3	43:DX:82:GLN:HB3	1.68	0.75
10:CK:27:ASN:ND2	10:CK:55:LYS:O	2.18	0.75
31:DJ:52:UNK:HA	31:DJ:81:UNK:HA	1.68	0.75
59:DA:273(G):C:N4	59:DA:363(A):G:H1	1.81	0.75
20:CA:257:G:H1	20:CA:269:C:N4	1.85	0.75
26:DD:79:VAL:HA	26:DD:95:LEU:HA	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1819:A:H4'	59:BA:1820:U:H5'	1.67	0.75
20:AA:559:A:H4'	20:AA:560:U:H5''	1.68	0.75
59:DA:277:C:H3'	59:DA:278:A:H8	1.51	0.75
59:DA:1913:A:O2'	59:DA:1914:C:OP2	2.05	0.75
14:CO:23:GLY:O	20:CA:750:G:N2	2.15	0.75
59:BA:1935:G:H3'	59:BA:1962:C:H42	1.51	0.75
25:BC:164:PHE:HB3	25:BC:172:ILE:HG21	1.68	0.75
16:AQ:28:PRO:HA	16:AQ:35:VAL:HA	1.66	0.75
34:DO:121:VAL:O	39:DT:43:GLN:NE2	2.18	0.75
57:D1:12:PRO:HA	57:D1:44:PRO:HD2	1.68	0.75
59:DA:2819:G:H1	59:DA:2827:C:N4	1.83	0.75
36:BQ:89:ASN:O	36:BQ:91:GLU:N	2.18	0.75
19:CT:74:LYS:HG2	19:CT:75:ASN:H	1.52	0.75
28:DF:40:GLN:HA	28:DF:43:LYS:HG2	1.69	0.75
33:DN:110:GLY:O	33:DN:113:GLY:N	2.16	0.75
59:BA:11:G:N1	59:BA:2628:C:OP1	2.16	0.75
2:AC:67:THR:HA	2:AC:102:ASN:HB3	1.66	0.75
3:AD:68:TYR:O	3:AD:70:ILE:N	2.18	0.75
33:BN:69:GLN:HE22	59:BA:1022:G:H8	1.34	0.75
1:CB:71:VAL:HB	1:CB:164:VAL:HG22	1.68	0.75
1:AB:19:HIS:HB2	1:AB:204:ASN:HD22	1.52	0.75
28:BF:206:ILE:HG22	28:BF:208:GLY:H	1.52	0.75
27:BE:134:ILE:HD12	59:BA:2579:C:H4'	1.68	0.75
30:DH:16:SER:HB3	30:DH:27:LYS:HB3	1.69	0.75
26:BD:98:VAL:O	59:BA:1501:C:O2'	2.03	0.75
59:DA:1530:G:O6	59:DA:1541:U:O2	2.05	0.75
20:AA:713:G:H2'	20:AA:714:G:C8	2.21	0.75
20:CA:862:C:N3	20:CA:867:G:N2	2.33	0.75
11:CL:87:GLY:HA2	11:CL:98:TYR:H	1.51	0.75
57:D1:3:LYS:HG3	57:D1:4:VAL:HG12	1.69	0.75
37:BR:10:LEU:HB3	37:BR:17:ARG:HH21	1.51	0.75
59:BA:698:C:OP1	59:BA:1634:A:N6	2.18	0.75
44:BY:38:ILE:HD11	44:BY:64:GLU:HB3	1.68	0.75
36:BQ:70:PRO:HA	36:BQ:95:ALA:HB2	1.69	0.75
20:CA:666:G:H1	20:CA:740:U:H3	1.34	0.75
20:CA:612:C:H42	20:CA:628:G:H1	1.32	0.75
50:D6:8:LYS:HD2	50:D6:27:LYS:HG2	1.68	0.75
53:B9:27:CYS:SG	53:B9:28:GLU:N	2.58	0.75
12:CM:91:ARG:NH1	12:CM:97:PRO:O	2.19	0.75
46:D0:24:LYS:NZ	59:DA:2355:C:O2'	2.19	0.75
10:AK:32:ILE:HD13	10:AK:72:ALA:HB2	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:529:A:N6	59:BA:2041:U:H3	1.82	0.75
59:BA:1782:C:N4	59:BA:2586:C:H42	1.84	0.75
59:DA:577:G:O2'	59:DA:1254:A:OP1	2.05	0.75
33:DN:70:LYS:HB3	33:DN:87:LEU:HB2	1.69	0.75
26:DD:157:ARG:HH21	59:DA:1818:U:H6	1.34	0.75
17:CR:44:LEU:HG	17:CR:50:ILE:HA	1.69	0.75
59:DA:1083:U:O2'	59:DA:1085:A:N7	2.18	0.75
38:DS:42:ASP:OD1	38:DS:42:ASP:N	2.20	0.75
23:AY:314:PHE:HZ	23:AY:329:ARG:HB3	1.51	0.75
35:BP:49:ARG:HD2	52:B8:59:LYS:HE2	1.68	0.75
53:B9:31:LYS:NZ	59:BA:2478:A:OP1	2.20	0.75
59:DA:223:A:O2'	59:DA:420:C:O2	2.05	0.75
40:DU:98:LEU:HD22	40:DU:101:ARG:HH22	1.51	0.75
21:CW:41:A:H2'	21:CW:42:U:C6	2.21	0.75
59:BA:1664:A:N6	59:BA:1996:C:H42	1.85	0.74
59:DA:1019:U:C2	59:DA:1020:A:N7	2.54	0.74
57:D1:43:TYR:HE2	59:DA:2230:G:H5''	1.51	0.74
59:DA:2178:C:H2'	59:DA:2179:C:C6	2.22	0.74
20:AA:585:G:H1	20:AA:756:C:H42	1.33	0.74
20:CA:672:U:H3	20:CA:734:G:H1	1.32	0.74
13:CN:48:ALA:HA	13:CN:53:LEU:HB2	1.66	0.74
53:B9:23:VAL:HB	53:B9:36:GLN:HG3	1.68	0.74
44:DY:97:ARG:NH2	59:DA:300:A:OP1	2.14	0.74
57:B1:74:VAL:HG12	57:B1:78:LYS:HE3	1.69	0.74
20:CA:501:C:H1'	20:CA:549:C:H1'	1.69	0.74
35:DP:56:SER:O	35:DP:58:THR:N	2.20	0.74
20:AA:1065:U:H4'	20:AA:1066:C:H5''	1.69	0.74
2:AC:5:ILE:HG21	20:AA:1189:C:H5''	1.67	0.74
26:DD:62:TYR:HE2	26:DD:88:ARG:HH22	1.35	0.74
10:AK:22:HIS:HB3	10:AK:29:ILE:HG22	1.70	0.74
59:DA:154:G:H1	59:DA:172:C:H42	1.33	0.74
31:DJ:23:UNK:O	31:DJ:85:UNK:N	2.20	0.74
57:D1:22:GLY:HA2	57:D1:37:ILE:HA	1.69	0.74
59:BA:1083:U:O2'	59:BA:1085:A:N7	2.20	0.74
35:BP:56:SER:O	35:BP:58:THR:N	2.20	0.74
20:AA:1281:U:H5'	20:AA:1282:C:H5	1.52	0.74
59:BA:676:A:H8	59:BA:2069:G:H21	1.33	0.74
30:DH:107:VAL:O	30:DH:109:PHE:N	2.20	0.74
57:B1:86:SER:HB2	57:B1:89:GLU:HB2	1.69	0.74
59:DA:1417:C:N3	59:DA:1581:G:N2	2.32	0.74
59:DA:2396:G:H2'	59:DA:2397:G:H8	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:52:LEU:H	11:AL:53:ARG:HD2	1.52	0.74
44:DY:97:ARG:HA	44:DY:97:ARG:HH11	1.53	0.74
33:BN:56:ASN:HA	33:BN:125:GLY:H	1.53	0.74
25:DC:69:LEU:HD22	25:DC:71:LYS:HB2	1.69	0.74
59:BA:1459:G:H2'	59:BA:1461:G:H5'	1.66	0.74
20:AA:673:G:H2'	20:AA:674:G:C8	2.23	0.74
38:BS:53:SER:HA	38:BS:65:VAL:HG11	1.69	0.74
35:DP:13:ASN:ND2	59:DA:598:G:O2'	2.18	0.74
21:AW:15:G:N1	21:AW:48:C:N3	2.30	0.74
59:DA:1139:G:OP2	59:DA:1139:G:C8	2.41	0.74
1:AB:171:ALA:HA	1:AB:174:VAL:HB	1.67	0.74
53:B9:25:VAL:HB	53:B9:34:GLN:HB2	1.69	0.74
17:AR:52:PRO:HB3	20:AA:720:C:H5''	1.70	0.74
20:AA:33:A:H2	20:AA:551:U:H3	1.35	0.74
29:DG:40:ASN:ND2	29:DG:90:LEU:O	2.21	0.74
30:DH:143:GLN:OE1	59:DA:2744:G:N2	2.18	0.74
59:DA:575:A:OP2	59:DA:2499:C:O2'	2.05	0.74
6:AG:87:VAL:HG22	6:AG:151:TYR:HB3	1.68	0.74
2:AC:48:TYR:O	2:AC:50:ALA:N	2.21	0.74
26:DD:209:ALA:HB2	59:DA:1790:C:H4'	1.69	0.74
45:BZ:76:LEU:HD22	45:BZ:83:PRO:HA	1.68	0.74
10:AK:29:ILE:HD11	10:AK:42:TRP:HB2	1.70	0.74
45:BZ:51:ALA:HA	45:BZ:55:HIS:HB2	1.69	0.74
59:BA:1492:G:H1	59:BA:1498:C:H42	1.36	0.74
12:AM:120:LYS:HG2	20:AA:955:U:H5'	1.69	0.74
60:BB:60:C:H2'	60:BB:61:G:H8	1.52	0.74
20:CA:778:G:H1	20:CA:804:U:H3	1.36	0.74
59:DA:1486:A:H2	59:DA:1503:U:H3	1.35	0.74
11:CL:90:VAL:HG22	11:CL:96:VAL:HG11	1.68	0.74
42:DW:20:VAL:HG21	42:DW:43:GLY:HA3	1.70	0.74
23:AY:428:LEU:HA	23:AY:431:LEU:HB2	1.70	0.74
37:BR:67:LEU:HD13	37:BR:70:LEU:HB2	1.68	0.74
59:BA:1354:A:H62	59:BA:1377:G:H21	0.77	0.74
27:DE:119:ARG:NH1	27:DE:156:MET:O	2.19	0.74
59:BA:2459:A:N6	59:BA:2493:U:H3	1.85	0.74
6:AG:78:ARG:HB3	6:AG:85:TYR:HB2	1.69	0.74
25:DC:79:ALA:HB1	25:DC:83:LYS:HB2	1.69	0.74
34:DO:66:LYS:HG3	59:DA:1665:A:H5''	1.70	0.74
59:BA:1047:G:H1'	59:BA:1110:G:H22	1.52	0.74
43:BX:6:ASP:OD1	47:B2:29:LYS:NZ	2.21	0.74
57:B1:88:LYS:HA	57:B1:91:LYS:HB3	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BO:71:ARG:NH2	34:BO:122:LEU:O	2.21	0.74
31:BJ:23:UNK:O	31:BJ:85:UNK:N	2.21	0.74
59:BA:1782:C:H42	59:BA:2586:C:N4	1.85	0.74
33:DN:72:TYR:N	33:DN:85:ILE:O	2.19	0.74
59:BA:278:A:HO2'	59:BA:279:C:P	2.10	0.74
25:DC:14:LYS:HD3	25:DC:33:LEU:HD22	1.69	0.74
25:DC:37:LYS:HE3	59:DA:2127:G:H4'	1.68	0.74
23:AY:72:CYS:HB3	23:AY:79:ILE:HB	1.70	0.74
44:DY:28:LYS:HA	44:DY:39:VAL:HA	1.69	0.74
59:DA:1511:A:H2'	59:DA:1512:G:C8	2.22	0.74
44:DY:51:VAL:HG12	44:DY:53:PRO:HD2	1.67	0.74
3:CD:191:ARG:HH12	3:CD:195:ALA:HA	1.53	0.74
59:BA:2287:A:N6	59:BA:2344:U:H3	1.85	0.73
20:CA:687:A:H62	20:CA:703:G:N2	1.84	0.73
39:DT:64:ARG:HG2	39:DT:102:ILE:HD11	1.70	0.73
43:BX:82:GLN:NE2	43:BX:83:VAL:O	2.20	0.73
2:AC:102:ASN:HD21	2:AC:104:GLN:HG2	1.53	0.73
28:DF:110:LEU:HD23	28:DF:183:VAL:HG13	1.70	0.73
42:DW:5:ALA:HB2	42:DW:57:ASN:HD21	1.53	0.73
3:AD:187:ARG:NH2	3:AD:193:ASP:OD2	2.21	0.73
26:BD:14:ARG:HE	26:BD:15:PHE:HE2	1.35	0.73
59:BA:1980:G:O2'	59:BA:1982:C:OP2	2.05	0.73
23:CY:138:LYS:HE2	62:CY:702:GDP:C5	2.23	0.73
59:BA:1007:C:O2	59:BA:1136:G:N1	2.18	0.73
59:BA:2024:G:N2	59:BA:2040:C:H1'	2.03	0.73
59:DA:1024:G:H3'	59:DA:1025:G:H5''	1.70	0.73
35:DP:7:ARG:HG2	59:DA:1203:G:H4'	1.69	0.73
1:AB:162:ILE:HB	1:AB:164:VAL:HG23	1.70	0.73
39:BT:33:LYS:HD3	39:BT:34:VAL:H	1.52	0.73
60:BB:81:G:H1	60:BB:95:U:H3	1.36	0.73
20:CA:186(E):C:H42	20:CA:186(L):G:H1	1.34	0.73
59:DA:137(A):C:N4	59:DA:142:G:H1	1.86	0.73
59:DA:371:A:H61	59:DA:401:A:H3'	1.53	0.73
29:BG:73:ALA:HA	59:BA:2312:U:H5''	1.70	0.73
51:B7:40:TRP:HZ3	59:BA:459:U:H6	1.35	0.73
59:DA:1324:G:H1	59:DA:1330:C:H42	1.36	0.73
59:DA:805:G:N2	59:DA:829:A:OP1	2.22	0.73
59:DA:599:G:H1	59:DA:658:C:H42	1.36	0.73
19:AT:86:ARG:NH2	20:AA:258:G:OP1	2.20	0.73
59:BA:2634:G:H1	59:BA:2784:C:H42	1.34	0.73
59:DA:1348:G:H1	59:DA:1598:C:N4	1.86	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:2:LYS:HB2	28:BF:24:LEU:HD12	1.69	0.73
59:BA:223:A:O2'	59:BA:420:C:O2	2.06	0.73
10:AK:99:GLN:HG2	10:AK:105:VAL:HG21	1.69	0.73
4:CE:115:VAL:HG11	4:CE:118:ILE:HB	1.68	0.73
49:D5:36:CYS:SG	49:D5:37:LYS:N	2.61	0.73
23:AY:141:LYS:HE2	59:BA:2656:U:H4'	1.70	0.73
14:AO:38:ARG:HH11	14:AO:38:ARG:HA	1.52	0.73
59:DA:2699:C:N3	59:DA:2708:G:N2	2.35	0.73
40:BU:45:TYR:O	40:BU:49:HIS:ND1	2.21	0.73
3:CD:8:VAL:HG11	3:CD:115:ARG:HD3	1.71	0.73
8:CI:113:LYS:H	8:CI:119:ALA:HA	1.52	0.73
44:BY:73:ARG:HD2	59:BA:335:C:H4'	1.69	0.73
34:DO:68:GLU:HB3	34:DO:78:ARG:HB2	1.69	0.73
32:BK:56:GLU:HB3	32:BK:68:VAL:HB	1.70	0.73
59:DA:671:C:N4	59:DA:809:G:H1	1.86	0.73
59:DA:2520:C:N3	59:DA:2545:G:N2	2.32	0.73
1:AB:204:ASN:HD21	1:AB:206:ASP:HB2	1.53	0.73
59:BA:1345:C:H42	59:BA:1601:G:H1	1.33	0.73
12:AM:115:LYS:NZ	20:AA:1228:C:OP1	2.22	0.73
16:AQ:10:VAL:HA	16:AQ:21:VAL:HG22	1.70	0.73
31:DJ:54:UNK:HA	31:DJ:79:UNK:HA	1.71	0.73
26:DD:35:LYS:O	26:DD:37:LEU:N	2.21	0.73
10:CK:111:ASP:HA	17:CR:84:LYS:HG3	1.69	0.73
6:CG:113:GLU:HB2	6:CG:119:ARG:HG2	1.68	0.73
20:AA:1135:U:O2	20:AA:1138:G:N2	2.20	0.73
28:DF:101:LEU:HD12	28:DF:102:PRO:HD2	1.71	0.73
31:DJ:25:UNK:HA	31:DJ:80:UNK:HA	1.70	0.73
20:CA:992:U:O2'	20:CA:993:G:OP2	2.04	0.73
59:BA:2505:G:N2	59:BA:2610:C:H42	1.87	0.73
1:AB:174:VAL:HG22	1:AB:184:VAL:HG11	1.70	0.73
59:BA:1287:A:H2	59:BA:1649:G:HO2'	1.36	0.73
9:CJ:34:VAL:HG13	9:CJ:74:ILE:HG22	1.71	0.73
21:AW:15:G:H22	21:AW:48:C:H42	0.75	0.73
27:BE:111:ARG:NH2	59:BA:2680:C:OP2	2.22	0.73
11:CL:80:HIS:O	11:CL:82:VAL:N	2.20	0.73
28:BF:9:ILE:HG22	28:BF:125:LEU:H	1.54	0.73
18:CS:48:THR:HG22	18:CS:61:TYR:HE2	1.53	0.73
8:AI:120:ARG:HD2	20:AA:1348:U:H4'	1.68	0.73
53:B9:19:ARG:O	53:B9:21:GLY:N	2.22	0.73
18:CS:39:THR:HA	18:CS:70:LYS:HA	1.71	0.73
25:BC:65:LEU:O	25:BC:67:HIS:N	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:529:A:N7	59:BA:2041:U:O4	2.22	0.72
11:AL:85:ILE:HG23	11:AL:98:TYR:HB3	1.70	0.72
45:BZ:121:HIS:HB3	45:BZ:124:ILE:HG22	1.70	0.72
25:BC:181:PHE:HB3	25:BC:185:LYS:HB3	1.69	0.72
23:AY:408:VAL:HG22	23:AY:454:MET:HA	1.69	0.72
33:BN:34:LEU:HD21	33:BN:120:LEU:HD12	1.71	0.72
20:CA:375:U:H3	20:CA:389:A:H61	1.37	0.72
25:DC:47:LYS:HG3	25:DC:47:LYS:O	1.89	0.72
20:CA:973:G:H3'	20:CA:974:A:H5''	1.70	0.72
13:AN:41:ARG:HH22	20:AA:973:G:H4'	1.53	0.72
59:DA:1664:A:H3'	59:DA:1665:A:H8	1.54	0.72
39:DT:117:ASP:HB3	39:DT:120:ARG:HG2	1.70	0.72
20:CA:1515:C:H42	20:CA:1520:G:H1	1.35	0.72
1:AB:35:GLU:HA	1:AB:40:HIS:HA	1.71	0.72
49:D5:13:LYS:HB3	49:D5:16:ARG:HH21	1.54	0.72
29:BG:35:GLU:HB2	29:BG:161:THR:HA	1.70	0.72
3:CD:15:GLU:HA	3:CD:59:ARG:HH22	1.54	0.72
59:DA:873:G:H1	59:DA:904:C:N4	1.87	0.72
59:DA:1387:C:N4	59:DA:1400:G:H1	1.85	0.72
20:CA:259:G:H1	20:CA:267:C:N4	1.87	0.72
59:DA:1540:G:C2	59:DA:1541:U:H1'	2.24	0.72
52:B8:42:ARG:NH1	59:BA:2351:G:N7	2.35	0.72
52:B8:61:LEU:HD23	52:B8:62:LEU:HG	1.70	0.72
32:BK:60:TYR:HB2	32:BK:64:SER:HB3	1.70	0.72
36:DQ:70:PRO:HA	36:DQ:95:ALA:HB2	1.72	0.72
59:DA:690:G:N2	59:DA:772:C:N3	2.35	0.72
59:DA:390:A:H4'	59:DA:391:G:H5'	1.69	0.72
59:DA:1166:C:N4	59:DA:1183:G:H1	1.88	0.72
1:AB:170:GLU:O	1:AB:174:VAL:HG23	1.89	0.72
48:D3:11:SER:OG	59:DA:989:G:OP2	2.07	0.72
59:BA:2070:G:H1	59:BA:2441:C:H42	1.36	0.72
59:DA:2290:G:H1	59:DA:2342:C:H42	1.38	0.72
59:BA:2030:A:H4'	59:BA:2031:A:C8	2.24	0.72
33:DN:137:LYS:HZ3	33:DN:138:LEU:H	1.34	0.72
37:DR:76:VAL:HA	37:DR:79:LEU:HB2	1.70	0.72
39:BT:49:VAL:HA	39:BT:63:VAL:HA	1.72	0.72
20:AA:1060:C:H2'	20:AA:1061:G:C8	2.25	0.72
46:D0:24:LYS:HB2	46:D0:37:LEU:HA	1.69	0.72
33:DN:137:LYS:NZ	33:DN:138:LEU:H	1.86	0.72
10:CK:62:GLN:HG3	10:CK:97:ALA:HB2	1.70	0.72
25:BC:44:VAL:HG22	25:BC:215:VAL:HG12	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:16:LEU:HD11	9:AJ:70:ARG:HD3	1.71	0.72
59:DA:1792:G:H1	59:DA:1827:C:H42	1.37	0.72
11:CL:37:CYS:SG	11:CL:38:THR:N	2.63	0.72
20:AA:505:G:H1	20:AA:526:C:H42	1.36	0.72
27:BE:65:GLY:HA2	27:BE:70:ALA:HA	1.70	0.72
28:DF:154:VAL:HG23	28:DF:173:VAL:HG22	1.72	0.72
41:DV:7:THR:OG1	41:DV:8:GLY:N	2.19	0.72
10:AK:33:THR:HA	10:AK:39:PRO:HA	1.72	0.72
59:BA:848:G:H2'	59:BA:849:A:C8	2.25	0.72
34:BO:8:LEU:HD21	34:BO:21:CYS:HB2	1.72	0.72
59:DA:1022:G:O2'	59:DA:1023:U:OP2	2.04	0.72
59:DA:585:G:N2	59:DA:1254:A:H62	1.86	0.72
27:DE:61:ARG:HB2	27:DE:62:PRO:HD3	1.72	0.72
23:AY:603:GLU:OE2	23:AY:628:ARG:NH2	2.22	0.72
16:AQ:43:LEU:HD12	16:AQ:69:LYS:HA	1.71	0.72
20:AA:975:A:H4'	20:AA:976:G:H5''	1.69	0.72
20:CA:68(A):G:H1	20:CA:68(Y):C:H42	1.37	0.72
26:DD:242:ARG:NH1	59:DA:1902:C:OP1	2.23	0.72
27:DE:28:ALA:HB3	27:DE:93:VAL:HG22	1.71	0.72
23:CY:19:ALA:N	23:CY:25:LYS:NZ	2.29	0.72
59:DA:19:C:N4	59:DA:521:G:H1	1.86	0.72
23:AY:276:VAL:HA	23:AY:280:LEU:HD23	1.71	0.72
32:BK:116:ASN:HD22	59:BA:1058:G:H1'	1.55	0.72
20:CA:406:G:H1	20:CA:436:C:H42	1.35	0.72
40:DU:85:LYS:HD2	40:DU:117:GLN:HG2	1.71	0.72
59:BA:476:G:N1	59:BA:479:A:OP2	2.21	0.72
23:CY:314:PHE:N	23:CY:327:PHE:O	2.20	0.72
11:CL:8:ASN:ND2	20:CA:880:C:OP1	2.22	0.72
23:CY:25:LYS:HE2	23:CY:86:GLY:CA	2.20	0.72
59:DA:137(B):G:N2	59:DA:141(B):C:N3	2.33	0.72
59:BA:579:G:H5''	59:BA:2018:G:H5''	1.72	0.72
59:BA:2178:C:H2'	59:BA:2179:C:H6	1.55	0.72
57:B1:13:ILE:HG13	57:B1:17:SER:HB3	1.70	0.72
1:CB:167:PRO:O	1:CB:171:ALA:HB2	1.89	0.72
1:CB:184:VAL:H	1:CB:198:ASP:HB2	1.55	0.72
26:DD:149:PRO:O	26:DD:151:LYS:NZ	2.22	0.72
20:CA:1124:G:H1	20:CA:1149:C:H42	1.37	0.72
10:CK:62:GLN:NE2	10:CK:93:GLN:OE1	2.22	0.72
46:B0:14:ARG:NH2	59:BA:2279:G:N7	2.38	0.72
59:DA:2818:G:H1	59:DA:2828:C:H42	1.34	0.72
23:CY:27:THR:HG23	62:CY:702:GDP:PA	2.29	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1309:G:N2	59:DA:1605:C:N3	2.35	0.71
59:DA:612:G:N2	59:DA:616:A:O2'	2.23	0.71
12:AM:114:ARG:HB3	20:AA:1228:C:H5''	1.72	0.71
12:CM:14:ARG:NH1	20:CA:1302:U:O4	2.23	0.71
35:BP:21:ARG:NH2	59:BA:1192:G:OP2	2.23	0.71
59:BA:1511:A:H2'	59:BA:1512:G:C8	2.25	0.71
1:CB:194:PRO:O	1:CB:196:LEU:N	2.23	0.71
59:DA:1423:G:H1	59:DA:1575:C:N4	1.87	0.71
11:AL:53:ARG:HG2	11:AL:93:LEU:HD22	1.72	0.71
52:B8:19:SER:OG	59:BA:651:G:OP1	2.07	0.71
46:B0:32:ARG:HA	46:B0:64:ASP:HA	1.72	0.71
17:CR:53:ARG:NH2	20:CA:834:C:OP1	2.22	0.71
20:CA:68(E):G:O6	20:CA:68(U):U:O2	2.08	0.71
59:DA:1279:G:H1	59:DA:1291:C:H42	1.36	0.71
23:CY:138:LYS:HG2	62:CY:702:GDP:C6	2.26	0.71
29:BG:66:GLN:HG2	58:B4:1:MET:HG2	1.71	0.71
20:CA:146:G:N2	20:CA:176:C:N3	2.32	0.71
20:CA:1113:C:H42	20:CA:1187:G:H1	1.37	0.71
59:DA:2632:A:N1	59:DA:2786:U:O4	2.23	0.71
58:B4:12:ALA:HB1	58:B4:31:ILE:HB	1.71	0.71
59:DA:327:G:H1	59:DA:335:C:H42	1.39	0.71
20:CA:522:C:H42	20:CA:527:G:H1	1.34	0.71
59:DA:1063:G:H1	59:DA:1075:C:H42	1.38	0.71
35:DP:45:LEU:HG	35:DP:46:LYS:HD2	1.72	0.71
59:BA:2246:G:H2'	59:BA:2247:A:C8	2.26	0.71
30:BH:20:ALA:HB3	30:BH:23:ARG:HG3	1.72	0.71
25:BC:79:ALA:HB1	25:BC:83:LYS:HB2	1.72	0.71
38:BS:71:ARG:HE	38:BS:103:GLU:HB3	1.56	0.71
28:BF:60:SER:HB3	28:BF:62:ARG:HG3	1.72	0.71
20:AA:1502:A:H8	20:AA:1505:G:H22	1.38	0.71
60:BB:60:C:H2'	60:BB:61:G:C8	2.25	0.71
25:BC:44:VAL:HB	25:BC:174:ALA:HB3	1.73	0.71
1:CB:95:GLN:OE1	1:CB:96:ARG:NH1	2.23	0.71
35:BP:96:THR:HA	35:BP:126:VAL:HB	1.73	0.71
59:BA:1659:U:H3	59:BA:2001:A:H61	1.37	0.71
10:AK:21:ILE:HB	10:AK:84:VAL:HA	1.71	0.71
59:DA:122:G:H1	59:DA:129:C:N4	1.88	0.71
27:DE:92:THR:H	27:DE:95:ILE:HD11	1.53	0.71
41:DV:4:ILE:HD13	41:DV:40:LEU:HD23	1.71	0.71
59:DA:2071:A:H2'	59:DA:2072:G:H8	1.53	0.71
57:B1:58:ILE:HG13	57:B1:91:LYS:HB2	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:231:HIS:O	26:DD:233:HIS:N	2.20	0.71
25:DC:164:PHE:HB3	25:DC:172:ILE:HG21	1.72	0.71
47:D2:20:GLU:HA	47:D2:23:LYS:HD2	1.72	0.71
59:DA:150:C:H42	59:DA:176:G:H1	1.36	0.71
59:BA:570:G:H5'	59:BA:972:G:H4'	1.72	0.71
15:AP:30:GLY:HA2	20:AA:309:G:H5''	1.72	0.71
20:CA:1321:C:H3'	20:CA:1322:C:H5''	1.73	0.71
20:CA:816:A:H5'	20:CA:817:C:H2'	1.73	0.71
59:DA:1030:G:H1	59:DA:1124:C:N4	1.87	0.71
4:AE:148:VAL:HG13	4:AE:152:ARG:HD2	1.73	0.71
49:D5:46:CYS:HB3	49:D5:49:CYS:HB2	1.73	0.71
12:AM:99:ARG:NH2	20:AA:1308:U:OP2	2.24	0.71
36:DQ:58:PHE:HZ	36:DQ:64:ILE:HD11	1.55	0.71
36:DQ:43:THR:HA	36:DQ:94:VAL:HG12	1.72	0.71
59:DA:1411:C:N4	59:DA:1591:G:H1	1.87	0.71
1:CB:162:ILE:HG23	1:CB:184:VAL:HG13	1.70	0.71
28:DF:154:VAL:O	28:DF:175:THR:HA	1.90	0.71
20:AA:427:U:H4'	20:AA:541:G:H5''	1.71	0.71
50:B6:15:GLU:HA	50:B6:49:HIS:HA	1.73	0.71
16:CQ:56:VAL:HG23	16:CQ:81:ARG:HG3	1.72	0.71
23:CY:627:ARG:NH2	23:CY:658:ASP:OD1	2.24	0.71
59:BA:1135:C:N4	59:BA:1138:G:OP2	2.17	0.71
34:BO:66:LYS:HG3	59:BA:1665:A:H5''	1.73	0.71
59:BA:226:G:C2	59:BA:228:A:N6	2.59	0.71
49:D5:9:LYS:HZ1	59:DA:2018:G:H3'	1.55	0.71
27:BE:49:LEU:HD21	27:BE:81:ILE:HG12	1.72	0.71
20:CA:984:C:H42	20:CA:1221:G:H1	1.36	0.71
2:AC:157:ILE:HD13	2:AC:164:ARG:HE	1.56	0.71
51:B7:34:ARG:HD3	51:B7:39:ARG:HD2	1.71	0.71
44:BY:102:CYS:SG	44:BY:103:GLY:N	2.63	0.71
20:AA:1414:U:H2'	20:AA:1415:G:H8	1.56	0.71
20:CA:285:G:H2'	20:CA:286:G:H8	1.55	0.71
6:AG:57:GLU:HB2	6:AG:60:LYS:HB2	1.71	0.71
59:DA:273(G):C:H3'	59:DA:274:G:H5''	1.73	0.71
20:CA:1060:C:H2'	20:CA:1061:G:C8	2.26	0.71
59:BA:697:C:H42	59:BA:765:G:H1	1.36	0.71
59:DA:2447:G:N2	59:DA:2450:A:OP2	2.23	0.71
59:DA:270(T):G:H2'	59:DA:270(U):G:H8	1.54	0.71
11:AL:124:LYS:NZ	20:AA:501:C:OP2	2.20	0.71
33:DN:48:MET:N	33:DN:48:MET:SD	2.63	0.71
59:BA:2505:G:H22	59:BA:2610:C:N4	1.87	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:814:C:N4	59:DA:1193:G:H1	1.89	0.71
36:BQ:1:MET:O	36:BQ:2:LEU:HB2	1.91	0.71
44:BY:86:ARG:HG2	44:BY:88:LYS:H	1.56	0.71
4:AE:18:ARG:NH2	20:AA:1070:U:OP1	2.24	0.71
59:BA:1438:U:H3	59:BA:1553:A:H8	1.37	0.70
59:BA:326:G:H1	59:BA:336:C:N4	1.89	0.70
21:CW:15:G:N2	21:CW:48:C:H42	1.88	0.70
28:BF:154:VAL:HG12	28:BF:156:LEU:HA	1.72	0.70
59:BA:1022:G:H22	59:BA:114(B):A:H2	1.37	0.70
35:BP:58:THR:O	35:BP:61:ARG:NE	2.24	0.70
27:DE:168:MET:HB2	59:DA:2731:G:H5'	1.72	0.70
38:DS:53:SER:HA	38:DS:65:VAL:HG11	1.71	0.70
26:DD:45:ASN:HB3	59:DA:1813:G:H1'	1.71	0.70
40:DU:53:ARG:NH2	59:DA:994:C:OP1	2.24	0.70
18:AS:39:THR:HA	18:AS:70:LYS:HA	1.71	0.70
20:CA:1537:U:H3	22:CV:8:A:H2	1.38	0.70
59:DA:846:C:H4'	59:DA:847:U:H5'	1.72	0.70
59:DA:1671:U:N3	59:DA:1674:G:OP2	2.24	0.70
44:DY:2:ARG:HH11	44:DY:3:VAL:H	1.39	0.70
59:BA:1231:G:H2'	59:BA:1232:G:H8	1.55	0.70
59:BA:2078:C:H42	59:BA:2242:G:H1	1.37	0.70
52:D8:61:LEU:HD23	52:D8:62:LEU:HG	1.73	0.70
59:DA:1718:G:N2	59:DA:1741:C:N3	2.36	0.70
20:CA:1422:G:H1	20:CA:1478:C:N4	1.88	0.70
59:DA:2395:C:N4	59:DA:2421:G:H1	1.89	0.70
59:BA:1844:C:N4	59:BA:1896:G:H1	1.89	0.70
30:BH:74:ASN:ND2	59:BA:2747:G:OP1	2.25	0.70
59:DA:1019:U:H3	59:DA:1020:A:H62	1.36	0.70
11:AL:92:ASP:OD1	11:AL:92:ASP:N	2.24	0.70
48:D3:8:LEU:HB2	48:D3:28:LEU:HD12	1.73	0.70
61:AY:701:FUA:H5	61:AY:701:FUA:H202	1.73	0.70
8:AI:21:PRO:HA	8:AI:59:PHE:HA	1.73	0.70
46:D0:27:GLU:HB3	46:D0:68:GLU:HA	1.72	0.70
23:CY:23:ALA:O	23:CY:138:LYS:HE3	1.91	0.70
59:DA:2125:G:H21	59:DA:2173:A:H62	0.80	0.70
25:BC:121:MET:O	25:BC:125:GLY:N	2.24	0.70
26:BD:3:VAL:HG22	26:BD:19:ALA:HA	1.72	0.70
20:CA:628:G:H2'	20:CA:629:G:C8	2.26	0.70
20:AA:373:A:N3	20:AA:481:G:N2	2.35	0.70
59:DA:1536:A:OP2	59:DA:1537:C:N4	2.23	0.70
23:AY:341:VAL:HG12	23:AY:391:GLY:HA2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:35:GLU:HA	1:CB:40:HIS:HA	1.72	0.70
20:CA:977:A:HO2'	20:CA:981:U:H3	1.36	0.70
29:BG:103:LEU:HD12	29:BG:107:LEU:HD21	1.73	0.70
20:CA:408:A:H2	20:CA:434:U:N3	1.83	0.70
57:D1:20:ARG:HH11	57:D1:22:GLY:HA3	1.57	0.70
20:CA:1060:C:H2'	20:CA:1061:G:H8	1.56	0.70
25:DC:138:LEU:HD22	25:DC:139:PRO:HD2	1.73	0.70
20:AA:28:G:O2'	20:AA:296:U:OP1	2.09	0.70
32:BK:92:GLY:O	45:BZ:112:ARG:NH2	2.25	0.70
10:AK:40:ILE:HD13	20:AA:685:G:H5'	1.73	0.70
20:AA:367:U:H4'	23:AY:351:ARG:HE	1.55	0.70
59:BA:2454:G:H1	59:BA:2498:C:H42	1.40	0.70
23:CY:20:HIS:CG	23:CY:21:ILE:H	2.10	0.70
34:DO:73:ASP:OD1	39:DT:32:TYR:OH	2.05	0.70
57:B1:45:ASN:HB3	57:B1:64:ALA:HB2	1.74	0.70
23:CY:313:ALA:HA	23:CY:328:ILE:HA	1.71	0.70
57:B1:3:LYS:HG3	57:B1:4:VAL:H	1.55	0.70
25:BC:51:ASP:O	25:BC:53:ARG:N	2.21	0.70
7:CH:94:TYR:OH	20:CA:597:G:N2	2.24	0.70
59:BA:1516:U:H2'	59:BA:1517:G:H8	1.54	0.70
20:AA:801:U:H2'	20:AA:802:A:H8	1.56	0.70
25:BC:213:VAL:HG11	25:BC:225:ILE:HG12	1.74	0.70
59:DA:1347:G:H1	59:DA:1599:C:H42	1.39	0.70
20:AA:112:G:N2	20:AA:315:A:N1	2.35	0.70
28:BF:176:LEU:HD21	28:BF:181:LEU:HA	1.74	0.70
52:B8:53:PRO:HA	52:B8:56:GLU:HB2	1.73	0.70
38:DS:35:ILE:HG22	38:DS:53:SER:HB2	1.72	0.70
45:DZ:151:HIS:HB3	45:DZ:170:THR:HA	1.73	0.70
20:CA:1512:U:H2'	20:CA:1513:A:C8	2.26	0.70
38:BS:28:VAL:HG12	38:BS:38:GLN:H	1.57	0.70
59:DA:1361:G:O6	59:DA:1370:C:N3	2.24	0.70
59:DA:290:G:O6	59:DA:350:U:O2	2.09	0.70
59:DA:137(A):C:N3	59:DA:142:G:N2	2.34	0.70
59:BA:1008:C:O2	59:BA:1009:A:N6	2.21	0.70
59:DA:270(C):A:O2'	59:DA:364:C:O2	2.10	0.70
59:BA:1538:G:H2'	59:BA:1539:G:H8	1.57	0.70
59:BA:57:C:N4	59:BA:70:G:H1	1.89	0.70
25:BC:216:THR:HB	25:BC:222:SER:HB3	1.73	0.70
59:BA:1494:A:N3	59:BA:1494:A:H2'	2.07	0.70
23:CY:511:LYS:HB2	23:CY:569:ASP:HB3	1.74	0.70
26:DD:202:LYS:HB3	59:DA:1820:U:H1'	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2876:G:H2'	59:BA:2877:G:C8	2.27	0.70
57:D1:86:SER:HB2	57:D1:89:GLU:HB2	1.73	0.70
26:BD:264:LYS:HD3	26:BD:266:SER:H	1.56	0.70
33:BN:29:LYS:O	33:BN:32:THR:OG1	2.08	0.70
20:CA:537:G:H2'	20:CA:538:G:C8	2.26	0.70
23:CY:177:ILE:HG13	23:CY:271:LEU:HD11	1.74	0.70
59:DA:2634:G:H1	59:DA:2784:C:N4	1.90	0.70
46:B0:24:LYS:HB2	46:B0:37:LEU:HA	1.74	0.70
15:CP:72:ARG:NH1	20:CA:452:A:N3	2.40	0.70
36:BQ:43:THR:HA	36:BQ:94:VAL:HG12	1.72	0.70
29:BG:107:LEU:HA	29:BG:111:LEU:CD1	2.16	0.70
59:DA:1287:A:C2	59:DA:1649:G:H4'	2.27	0.70
57:D1:18:ILE:HG12	57:D1:20:ARG:H	1.55	0.70
21:AW:53:G:H1	21:AW:61:C:N4	1.89	0.70
40:BU:49:HIS:HD2	59:BA:559:G:H22	1.39	0.70
28:BF:154:VAL:HG23	28:BF:173:VAL:HG22	1.73	0.70
43:DX:82:GLN:HE21	43:DX:83:VAL:H	1.39	0.70
59:DA:2712:U:OP1	59:DA:2714:G:O2'	2.07	0.70
17:AR:34:TYR:HB3	17:AR:69:THR:HG22	1.73	0.70
23:AY:315:LYS:HB3	23:AY:327:PHE:HD2	1.56	0.70
26:DD:254:THR:HG21	59:DA:1824:G:H1'	1.72	0.70
46:D0:32:ARG:HA	46:D0:64:ASP:HA	1.73	0.70
59:BA:1007:C:H5''	59:BA:1008:C:C2'	2.21	0.70
34:DO:1:MET:N	59:DA:1665:A:O2'	2.20	0.70
42:DW:18:ARG:NH2	59:DA:517:C:O2'	2.25	0.70
59:BA:2848:G:O2'	59:BA:2867:G:N2	2.24	0.70
10:CK:81:ASP:HA	10:CK:106:LYS:O	1.92	0.70
59:BA:2593:U:H3	59:BA:2600:A:H61	1.38	0.70
18:CS:36:ARG:HB2	18:CS:72:GLY:HA3	1.74	0.70
29:BG:39:ILE:HG12	29:BG:92:VAL:HG12	1.72	0.70
12:AM:105:THR:OG1	12:AM:106:ASN:N	2.22	0.70
60:BB:51:G:H21	60:BB:52:A:H62	1.38	0.70
34:BO:1:MET:N	59:BA:1665:A:O2'	2.21	0.69
59:BA:2502:G:H5'	59:BA:2503:A:H5''	1.72	0.69
11:AL:93:LEU:O	11:AL:95:GLY:N	2.25	0.69
25:BC:16:ASP:O	25:BC:18:ASN:N	2.24	0.69
59:DA:273(G):C:N3	59:DA:363(A):G:N2	2.36	0.69
27:DE:48:GLN:HE22	27:DE:64:LYS:HE3	1.55	0.69
40:DU:92:ARG:O	40:DU:96:ALA:N	2.25	0.69
38:BS:89:ARG:HB3	38:BS:92:TYR:HB3	1.74	0.69
16:CQ:9:VAL:HA	16:CQ:56:VAL:HG22	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:67:ALA:HB2	23:CY:363:ARG:HH21	1.56	0.69
20:CA:1376:U:H2'	20:CA:1377:A:H8	1.57	0.69
49:B5:15:ARG:NH1	59:BA:2046:G:OP1	2.15	0.69
28:DF:157:VAL:HG12	28:DF:192:LEU:HA	1.74	0.69
43:BX:36:LYS:HD3	43:BX:54:VAL:HB	1.74	0.69
59:BA:83:G:H21	59:BA:103:A:H62	1.37	0.69
3:AD:19:LEU:HB3	3:AD:67:ILE:HD13	1.73	0.69
7:CH:21:LYS:N	7:CH:65:TYR:OH	2.23	0.69
59:DA:453:C:H4'	59:DA:472:A:H61	1.56	0.69
59:DA:2133:G:H2'	59:DA:2157:G:H22	1.57	0.69
59:BA:1024:G:H3'	59:BA:1025:G:H5''	1.74	0.69
20:CA:1276:G:N2	20:CA:1282:C:O2	2.22	0.69
11:CL:93:LEU:O	11:CL:95:GLY:N	2.25	0.69
1:AB:101:MET:HB2	1:AB:102:LEU:HD12	1.73	0.69
59:BA:2304:G:H1	59:BA:2312:U:H3	1.38	0.69
11:AL:42:THR:HA	11:AL:52:LEU:HA	1.74	0.69
18:CS:29:ARG:HD2	18:CS:48:THR:HG21	1.74	0.69
20:CA:21:G:H2'	20:CA:22:G:C8	2.27	0.69
28:BF:101:LEU:HD12	28:BF:102:PRO:HD2	1.75	0.69
20:AA:940:C:H2'	20:AA:941:G:C8	2.27	0.69
59:BA:499:U:O2	59:BA:503:A:N7	2.26	0.69
20:AA:946:A:H2'	20:AA:947:G:C8	2.26	0.69
59:DA:1003:G:H1	59:DA:1152:C:H42	1.39	0.69
59:DA:2065:C:N4	59:DA:2445:G:H1	1.88	0.69
26:DD:3:VAL:HG21	26:DD:200:ASP:HB3	1.74	0.69
20:CA:1124:G:O2'	20:CA:1145:C:N4	2.25	0.69
2:AC:66:VAL:HB	2:AC:101:LEU:HA	1.73	0.69
10:AK:84:VAL:HG21	10:AK:91:ARG:HD3	1.73	0.69
32:DK:132:ARG:HH22	32:DK:138:VAL:HG23	1.58	0.69
44:BY:46:LYS:HB2	44:BY:62:GLU:HB2	1.75	0.69
20:CA:715:A:H2'	20:CA:716:A:C8	2.25	0.69
59:BA:2698:U:H2'	59:BA:2699:C:C6	2.27	0.69
8:CI:46:ALA:HB2	8:CI:74:ILE:HG23	1.74	0.69
11:CL:107:ALA:O	11:CL:109:GLY:N	2.25	0.69
42:BW:4:LYS:O	42:BW:57:ASN:ND2	2.25	0.69
52:D8:4:MET:SD	59:DA:592:G:N2	2.64	0.69
39:DT:28:VAL:HA	39:DT:47:GLY:H	1.56	0.69
23:CY:547:GLU:O	23:CY:551:GLN:NE2	2.24	0.69
3:CD:122:ARG:HD3	3:CD:136:PRO:HD3	1.74	0.69
23:CY:330:VAL:HG13	23:CY:331:TYR:H	1.57	0.69
32:BK:72:PRO:O	32:BK:111:LYS:NZ	2.20	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:16:SER:HB3	30:BH:27:LYS:HB3	1.73	0.69
3:CD:25:ARG:HG3	3:CD:30:LYS:HE3	1.75	0.69
28:BF:48:THR:HB	59:BA:442:G:H21	1.56	0.69
59:BA:1771:C:H42	59:BA:1980:G:H1	1.39	0.69
52:B8:2:PRO:HA	59:BA:591:C:H1'	1.74	0.69
34:BO:8:LEU:HD12	34:BO:82:ASN:HB2	1.75	0.69
52:B8:23:VAL:HG13	52:B8:48:PHE:HA	1.73	0.69
23:CY:610:VAL:HG22	23:CY:643:ILE:HB	1.75	0.69
1:CB:108:ILE:HA	1:CB:111:ARG:HG3	1.74	0.69
4:CE:143:ARG:NH1	7:CH:77:GLU:OE2	2.26	0.69
2:AC:4:LYS:HE3	20:AA:1191:A:H5'	1.74	0.69
6:CG:15:ASP:HB3	6:CG:19:GLY:H	1.57	0.69
17:AR:26:LEU:HD11	17:AR:42:ARG:HD2	1.75	0.69
23:CY:486:THR:H	23:CY:600:VAL:HG12	1.57	0.69
59:DA:672:C:N4	59:DA:808:G:H1	1.88	0.69
59:DA:76:C:N3	59:DA:110:G:N2	2.35	0.69
11:CL:101:VAL:HB	11:CL:104:VAL:HG22	1.74	0.69
11:AL:37:CYS:SG	11:AL:38:THR:N	2.65	0.69
59:DA:465:G:HO2'	59:DA:683:C:HO2'	1.30	0.69
59:DA:557:U:H2'	59:DA:558:G:C8	2.27	0.69
20:AA:1356:G:H2'	20:AA:1357:A:C8	2.28	0.69
36:DQ:54:MET:HG2	36:DQ:58:PHE:HE2	1.58	0.69
59:DA:2001:A:H2'	59:DA:2002:G:C8	2.28	0.69
3:CD:74:GLN:NE2	20:CA:403:C:OP2	2.26	0.69
59:DA:234:C:H42	59:DA:430:G:H22	1.41	0.69
42:BW:92:ARG:NH2	59:BA:2015:A:OP1	2.25	0.69
14:CO:38:ARG:HH11	14:CO:38:ARG:HA	1.58	0.69
59:DA:947:G:H2'	59:DA:948:G:H8	1.58	0.69
34:DO:8:LEU:HD21	34:DO:21:CYS:HB2	1.74	0.69
41:BV:56:SER:H	41:BV:100:ARG:HG3	1.58	0.69
8:CI:120:ARG:HD2	20:CA:1348:U:H4'	1.75	0.69
59:BA:1570:A:H2'	59:BA:1571:A:C8	2.28	0.69
57:D1:79:GLY:HA3	59:DA:270(S):G:H1'	1.74	0.69
18:CS:78:ARG:O	18:CS:81:ARG:NH1	2.26	0.69
59:BA:1417:C:N3	59:BA:1581:G:N2	2.35	0.69
59:BA:442:G:H4'	59:BA:615:G:H22	1.57	0.69
38:DS:28:VAL:HG12	38:DS:38:GLN:H	1.58	0.69
3:CD:122:ARG:HE	20:CA:403:C:H4'	1.58	0.69
27:BE:166:THR:HG21	27:BE:199:ARG:HH21	1.56	0.69
59:BA:850:C:H42	59:BA:928:G:H1	1.38	0.69
12:CM:98:VAL:O	12:CM:99:ARG:NE	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:36:ARG:NH2	18:AS:72:GLY:O	2.26	0.69
6:CG:114:ARG:HH12	20:CA:1297:C:H1'	1.57	0.69
27:BE:28:ALA:HB3	27:BE:93:VAL:HG22	1.75	0.69
27:BE:143:ASN:O	59:BA:2052:G:O2'	2.09	0.69
59:BA:390:A:H4'	59:BA:391:G:H5'	1.73	0.69
26:BD:245:PRO:O	26:BD:247:ALA:N	2.26	0.69
12:AM:122:LYS:HB3	20:AA:953:G:O2'	1.91	0.69
36:DQ:89:ASN:O	36:DQ:91:GLU:N	2.25	0.69
45:BZ:73:GLN:NE2	60:BB:102:G:N3	2.39	0.69
23:CY:535:PRO:HB2	23:CY:537:GLU:HG2	1.75	0.69
59:DA:1010:A:N3	59:DA:1153:C:H1'	2.08	0.68
20:CA:867:G:O2'	20:CA:873:A:N1	2.27	0.68
21:CW:15:G:H22	21:CW:48:C:N4	1.92	0.68
45:BZ:30:ASN:HB2	45:BZ:90:VAL:HB	1.76	0.68
37:BR:68:ARG:HH21	59:BA:2707:G:H5''	1.58	0.68
5:CF:82:ARG:NH2	5:CF:84:ASN:OD1	2.26	0.68
10:AK:114:VAL:HG11	17:AR:82:THR:HG21	1.74	0.68
25:DC:16:ASP:O	25:DC:18:ASN:N	2.26	0.68
20:AA:1321:C:H3'	20:AA:1322:C:H5''	1.75	0.68
59:DA:560:C:H2'	59:DA:561:G:H8	1.57	0.68
59:DA:2747:G:H21	59:DA:2757:A:H62	0.80	0.68
20:CA:1059:C:N3	20:CA:1198:G:N2	2.34	0.68
41:BV:40:LEU:HD12	41:BV:46:VAL:HA	1.76	0.68
59:BA:909:A:H2'	59:BA:912:C:C5	2.28	0.68
57:D1:13:ILE:HG12	57:D1:17:SER:HB3	1.75	0.68
59:BA:1264:G:H3'	59:BA:1265:A:H2'	1.74	0.68
21:AW:66:C:H2'	21:AW:67:G:H8	1.56	0.68
20:AA:697:U:O2	20:AA:785:G:N2	2.26	0.68
20:AA:1503:A:H61	22:AV:14:A:H3'	1.57	0.68
45:BZ:19:ARG:NH2	60:BB:76:G:O3'	2.26	0.68
20:AA:628:G:H2'	20:AA:629:G:C8	2.28	0.68
23:CY:137:ASN:ND2	23:CY:138:LYS:N	2.20	0.68
20:AA:114:U:O4	20:AA:313:A:N1	2.26	0.68
11:CL:93:LEU:HG	11:CL:96:VAL:HG22	1.75	0.68
1:AB:88:ALA:HB1	1:AB:222:ILE:HD11	1.75	0.68
23:AY:514:VAL:HA	23:AY:565:VAL:O	1.92	0.68
29:DG:35:GLU:HB2	29:DG:161:THR:HA	1.75	0.68
3:CD:72:GLU:OE2	3:CD:207:TYR:OH	2.11	0.68
59:BA:1295:C:H42	59:BA:1645:G:H1	1.41	0.68
29:DG:98:ARG:HH11	29:DG:98:ARG:HG2	1.57	0.68
20:CA:1119:C:N3	20:CA:1154:G:O6	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1440(J):C:O2'	20:AA:1440(K):G:N3	2.27	0.68
27:DE:147:PRO:HB2	27:DE:149:ARG:H	1.58	0.68
59:BA:36:G:H1	59:BA:444:C:N4	1.91	0.68
59:BA:2293:C:H42	59:BA:2339:G:H1	1.41	0.68
20:AA:612:C:H2'	20:AA:613:C:C6	2.29	0.68
45:DZ:19:ARG:NH2	60:DB:76:G:O3'	2.24	0.68
1:AB:34:ALA:HB1	1:AB:36:ARG:HD2	1.75	0.68
44:BY:84:ARG:HD2	44:BY:98:VAL:H	1.57	0.68
20:AA:537:G:H2'	20:AA:538:G:H8	1.59	0.68
59:BA:2505:G:N1	59:BA:2610:C:N3	2.39	0.68
3:AD:20:TYR:O	3:AD:22:LYS:N	2.27	0.68
59:DA:1487:G:H1	59:DA:1502:C:N4	1.87	0.68
37:BR:4:LEU:HB2	59:BA:1653:G:H3'	1.76	0.68
59:BA:558:G:H2'	59:BA:559:G:C8	2.29	0.68
59:DA:2071:A:H2'	59:DA:2072:G:C8	2.27	0.68
20:AA:537:G:H2'	20:AA:538:G:C8	2.28	0.68
23:CY:176:GLY:HA3	23:CY:187:THR:HA	1.75	0.68
5:AF:4:TYR:OH	20:AA:738:C:OP1	2.11	0.68
41:BV:55:ALA:HB1	41:BV:101:GLY:HA2	1.74	0.68
12:AM:8:GLU:HG2	12:AM:22:ILE:HG12	1.75	0.68
59:DA:479:A:H1'	59:DA:481:G:H5''	1.76	0.68
44:BY:76:CYS:HB3	44:BY:96:ILE:HG13	1.74	0.68
59:DA:1028:A:H2'	59:DA:1029:A:C8	2.28	0.68
35:BP:50:ARG:HB2	35:BP:57:THR:HB	1.76	0.68
59:BA:575:A:OP2	59:BA:2499:C:O2'	2.12	0.68
23:CY:631:ILE:HA	23:CY:645:ALA:HA	1.75	0.68
23:CY:309:LEU:HA	23:CY:333:GLY:HA3	1.74	0.68
11:CL:5:PRO:HG2	11:CL:15:ARG:HH21	1.57	0.68
53:D9:23:VAL:HB	53:D9:36:GLN:HG3	1.74	0.68
59:DA:2038:G:C2'	59:DA:2039:C:H5'	2.24	0.68
59:DA:712:G:H1	59:DA:719:C:N4	1.91	0.68
59:DA:2400:G:H1	59:DA:2416:C:N4	1.91	0.68
23:AY:133:ILE:HG13	23:AY:272:LEU:HD11	1.75	0.68
20:CA:576:G:N7	20:CA:881:G:H1'	2.08	0.68
20:CA:1513:A:H2'	20:CA:1514:C:C6	2.28	0.68
28:BF:63:LYS:HG3	28:BF:76:GLY:HA2	1.74	0.68
46:B0:39:ARG:NH2	59:BA:2363:C:O2'	2.27	0.68
23:AY:91:THR:O	23:AY:93:GLU:N	2.27	0.68
20:CA:908:A:H2'	20:CA:909:A:C8	2.28	0.68
40:BU:28:ARG:NH1	40:BU:38:THR:OG1	2.26	0.68
45:BZ:128:VAL:HB	45:BZ:161:VAL:HG13	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:78:ARG:O	18:AS:81:ARG:NH1	2.27	0.68
28:DF:50:SER:HA	28:DF:92:PRO:HB2	1.74	0.68
29:BG:11:TYR:HB2	29:BG:176:LEU:HD21	1.75	0.68
20:CA:137:C:H42	20:CA:226:G:H1	1.40	0.68
2:CC:72:LYS:HD2	2:CC:73:PRO:HD2	1.75	0.68
20:CA:127:G:H1	20:CA:234:C:H42	1.41	0.68
28:DF:158:THR:OG1	28:DF:159:GLY:N	2.25	0.68
59:DA:24:G:N1	59:DA:516:C:O2	2.19	0.68
57:B1:45:ASN:HD22	59:BA:2230:G:H1'	1.59	0.68
2:CC:66:VAL:HG21	2:CC:91:LEU:HD13	1.75	0.68
20:CA:1266:G:N2	20:CA:1269:A:OP2	2.25	0.68
32:DK:115:LEU:O	59:DA:1058:G:O2'	2.12	0.68
59:BA:2243:U:H2'	59:BA:2244:U:H6	1.59	0.68
59:DA:558:G:H2'	59:DA:559:G:C8	2.28	0.68
11:CL:54:LYS:HD2	11:CL:70:ILE:HG12	1.75	0.68
59:DA:2751:G:N2	59:DA:2751:G:OP1	2.18	0.68
1:AB:27:LYS:HB2	1:AB:194:PRO:HG3	1.76	0.68
27:DE:199:ARG:HH22	27:DE:202:LYS:HZ1	1.42	0.68
20:CA:186(N):U:H2'	20:CA:186(O):G:H8	1.58	0.68
20:CA:370:C:H42	20:CA:391:G:H1	1.39	0.68
33:BN:42:TRP:N	40:BU:64:ARG:HD2	2.08	0.68
12:AM:58:GLU:O	12:AM:62:ASN:ND2	2.26	0.68
4:AE:126:ARG:HE	20:AA:9:G:H5''	1.59	0.68
27:DE:37:ARG:NH1	27:DE:44:TYR:OH	2.27	0.68
57:B1:14:VAL:HG13	57:B1:41:ARG:HD2	1.75	0.68
59:DA:2503:A:O2'	59:DA:2505:G:OP2	2.05	0.68
41:DV:47:VAL:HG12	41:DV:52:VAL:HB	1.76	0.68
13:CN:9:LYS:NZ	20:CA:980:C:O3'	2.27	0.68
41:DV:84:LYS:NZ	59:DA:1226:A:OP1	2.21	0.68
25:DC:27:ALA:HB3	25:DC:28:ARG:HE	1.59	0.68
23:AY:162:VAL:HB	23:AY:255:ILE:HG13	1.76	0.68
23:CY:131:PRO:HG2	23:CY:281:PRO:HG3	1.75	0.68
37:DR:2:ARG:HB2	59:DA:2723:C:H5''	1.76	0.67
39:DT:49:VAL:HG22	39:DT:50:ILE:H	1.57	0.67
26:BD:24:ILE:HG13	26:BD:82:ILE:HB	1.76	0.67
59:DA:875:G:H1	59:DA:902:C:H42	1.40	0.67
30:DH:41:MET:SD	30:DH:42:ARG:N	2.64	0.67
51:B7:3:ARG:HG3	59:BA:1613:G:H1'	1.76	0.67
20:CA:1510:U:H3	20:CA:1525:G:H1	1.41	0.67
25:BC:132:LEU:O	25:BC:137:LEU:N	2.27	0.67
59:DA:1541:U:H3'	59:DA:1542:G:O3'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AW:12:U:H3	21:AW:23:A:H61	1.42	0.67
20:AA:68(B):G:O6	20:AA:68(X):U:O2	2.12	0.67
10:AK:111:ASP:HA	17:AR:84:LYS:HG3	1.75	0.67
50:D6:6:ARG:HD2	50:D6:6:ARG:H	1.59	0.67
45:DZ:72:ARG:NH1	60:DB:103:U:O3'	2.27	0.67
51:B7:11:LYS:O	51:B7:15:THR:OG1	2.07	0.67
59:DA:1999:C:O2	59:DA:2687:U:O2'	2.11	0.67
23:CY:491:VAL:H	23:CY:514:VAL:HG22	1.58	0.67
17:CR:40:LEU:HA	17:CR:43:PHE:HB2	1.76	0.67
16:AQ:68:ARG:O	16:AQ:70:ARG:N	2.26	0.67
23:AY:341:VAL:HG22	23:AY:352:VAL:HG12	1.74	0.67
18:AS:36:ARG:HB2	18:AS:72:GLY:HA3	1.77	0.67
59:BA:1690:A:H62	59:BA:1697:G:H21	1.41	0.67
23:CY:605:ILE:HG13	23:CY:648:PRO:HA	1.76	0.67
59:BA:1434:A:H2'	59:BA:1435:G:C8	2.28	0.67
26:DD:110:GLY:HA3	26:DD:127:VAL:HG11	1.75	0.67
59:BA:1014:U:H3	59:BA:1148:A:H61	1.39	0.67
2:CC:48:TYR:O	2:CC:50:ALA:N	2.28	0.67
5:CF:87:ARG:NH2	20:CA:673:G:O3'	2.27	0.67
34:BO:112:MET:SD	34:BO:112:MET:N	2.67	0.67
26:DD:164:GLN:O	26:DD:164:GLN:NE2	2.27	0.67
59:DA:380:U:H3	59:DA:394:A:H61	1.41	0.67
26:DD:260:ARG:NH2	26:DD:266:SER:OG	2.28	0.67
20:AA:520:A:H62	20:AA:529:G:H21	1.42	0.67
9:AJ:51:ARG:HB3	20:AA:1060:C:H4'	1.75	0.67
57:D1:12:PRO:HA	57:D1:43:TYR:HB2	1.76	0.67
59:DA:2127:G:O6	59:DA:2161:C:N3	2.27	0.67
59:DA:476:G:N1	59:DA:479:A:OP2	2.25	0.67
49:D5:18:ALA:HA	49:D5:21:SER:HB3	1.75	0.67
11:AL:6:THR:O	11:AL:8:ASN:N	2.28	0.67
60:DB:40:U:H3'	60:DB:41:U:H5''	1.76	0.67
20:AA:68(E):G:C6	20:AA:68(U):U:O2	2.47	0.67
14:AO:77:ARG:HA	14:AO:80:ALA:HB3	1.76	0.67
59:DA:2049:G:H1	59:DA:2619:C:H42	1.42	0.67
42:BW:76:VAL:HG23	42:BW:103:ILE:HG13	1.77	0.67
8:AI:113:LYS:H	8:AI:119:ALA:HA	1.60	0.67
20:AA:68(F):C:H2'	20:AA:68(G):G:C8	2.30	0.67
14:AO:16:ALA:HB1	14:AO:21:ASP:HB3	1.76	0.67
59:DA:1090:U:H2'	59:DA:1091:G:C8	2.29	0.67
28:BF:188:ARG:HB3	35:BP:7:ARG:HH22	1.60	0.67
59:DA:1474:C:H42	59:DA:1519:G:H1	1.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:10:MET:N	4:CE:10:MET:SD	2.68	0.67
59:BA:2185:C:H2'	59:BA:2186:G:H8	1.58	0.67
35:DP:56:SER:HB2	35:DP:59:LEU:HB3	1.76	0.67
28:DF:191:ARG:O	28:DF:193:VAL:N	2.27	0.67
11:AL:71:PRO:HG2	11:AL:102:ARG:HG2	1.77	0.67
45:BZ:99:TYR:HB3	45:BZ:123:ASP:HB2	1.75	0.67
50:D6:30:THR:O	50:D6:32:ASN:N	2.28	0.67
23:AY:679:VAL:HB	23:AY:683:VAL:HB	1.76	0.67
44:DY:2:ARG:HD3	44:DY:3:VAL:HG23	1.75	0.67
20:CA:186(F):C:H42	20:CA:186(K):G:H1	1.41	0.67
45:DZ:58:VAL:HG22	45:DZ:68:PRO:HB3	1.76	0.67
7:CH:15:ASN:ND2	20:CA:826:C:O2	2.28	0.67
20:CA:815:A:N6	20:CA:1508:G:N2	2.41	0.67
59:BA:1018:C:H2'	59:BA:1019:U:H6	1.60	0.67
11:AL:34:ARG:HG3	11:AL:82:VAL:HG13	1.77	0.67
51:B7:30:VAL:O	51:B7:34:ARG:HG2	1.95	0.67
20:AA:68(K):U:N3	20:AA:68(N):U:OP2	2.26	0.67
44:DY:102:CYS:SG	44:DY:103:GLY:N	2.65	0.67
59:BA:2037:G:H2'	59:BA:2038:G:H8	1.59	0.67
59:DA:1478:G:H2'	59:DA:1479:G:C8	2.30	0.67
59:DA:1467:C:N3	59:DA:1525:G:N2	2.37	0.67
59:DA:1856:G:H1	59:DA:1886:C:N4	1.92	0.67
20:CA:663:A:H61	20:CA:742:G:H1	1.43	0.67
20:CA:299:G:N2	20:CA:566:G:O6	2.25	0.67
10:CK:120:ARG:H	10:CK:121:PRO:HD3	1.60	0.67
59:DA:1689:A:H62	59:DA:1698:A:H2	1.40	0.67
16:CQ:63:ARG:HH21	20:CA:130:A:H5'	1.60	0.67
50:B6:30:THR:O	50:B6:32:ASN:N	2.28	0.67
21:AW:50:C:N3	21:AW:64:G:N2	2.38	0.67
3:CD:26:CYS:HA	3:CD:31:CYS:HA	1.75	0.67
33:BN:111:PRO:HA	33:BN:114:ARG:HE	1.60	0.67
20:CA:1218:C:H2'	20:CA:1219:U:C6	2.29	0.67
42:BW:78:GLU:O	59:BA:24:G:O2'	2.13	0.67
60:DB:86:G:H1	60:DB:90:C:N4	1.93	0.67
33:BN:110:GLY:O	33:BN:112:LEU:N	2.28	0.67
26:BD:88:ARG:NH2	59:BA:1817:G:OP1	2.25	0.67
11:CL:124:LYS:NZ	20:CA:501:C:OP2	2.20	0.67
59:DA:436:C:H2'	59:DA:438:G:C8	2.30	0.67
11:CL:118:SER:HB3	20:CA:35:G:H21	1.60	0.67
59:BA:1064:C:N4	59:BA:1070:A:OP1	2.28	0.67
59:BA:2109:U:O4	59:BA:2180:U:O4	2.12	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1408:A:N6	24:CU:1:KBE:HA	2.09	0.67
59:DA:1613:G:H3'	59:DA:1614:A:H5'	1.77	0.67
51:B7:40:TRP:CH2	59:BA:458:G:H1'	2.30	0.67
59:DA:453:C:O2	59:DA:457:A:O2'	2.13	0.67
37:BR:64:ARG:O	37:BR:68:ARG:N	2.28	0.67
44:DY:76:CYS:O	44:DY:78:ALA:N	2.28	0.67
59:BA:1838:C:H4'	59:BA:1839:G:H5'	1.77	0.67
59:BA:19:C:H2'	59:BA:20:C:C6	2.30	0.67
15:CP:67:THR:H	15:CP:70:ALA:HB3	1.60	0.67
59:BA:1778:U:H3	59:BA:1785:A:H62	1.41	0.67
59:BA:404:C:H4'	59:BA:405:U:H5''	1.76	0.67
20:CA:1040:U:H2'	20:CA:1041:A:C8	2.30	0.67
11:AL:70:ILE:HA	11:AL:100:ILE:HB	1.76	0.66
20:CA:346:G:H4'	39:DT:41:ARG:HH22	1.58	0.66
16:AQ:66:SER:OG	16:AQ:67:LYS:N	2.27	0.66
59:DA:2711:A:H5''	59:DA:2712:U:H5'	1.77	0.66
59:DA:1335:U:H2'	59:DA:1336:A:C8	2.29	0.66
33:DN:80:GLY:N	59:DA:1131:G:OP1	2.27	0.66
59:DA:1791:A:N6	59:DA:1828:G:O2'	2.27	0.66
20:AA:458(A):G:H21	20:AA:458(E):A:H62	1.43	0.66
20:CA:253:U:O4	20:CA:273:A:N1	2.29	0.66
35:DP:96:THR:HA	35:DP:126:VAL:HB	1.77	0.66
2:AC:8:ILE:HD11	2:AC:184:TYR:HB3	1.77	0.66
12:AM:37:THR:HG22	12:AM:59:TYR:HB3	1.77	0.66
34:BO:64:ARG:HB2	34:BO:83:ALA:HB3	1.76	0.66
20:CA:1488:G:H2'	20:CA:1489:G:C8	2.30	0.66
52:D8:31:HIS:NE2	59:DA:2392:A:OP2	2.28	0.66
25:BC:62:THR:OG1	25:BC:62:THR:O	2.04	0.66
39:DT:53:ARG:HH12	39:DT:60:THR:H	1.44	0.66
52:D8:62:LEU:HD13	59:DA:242:G:H5''	1.77	0.66
59:DA:1057:A:N6	59:DA:1087:G:OP1	2.23	0.66
59:BA:2243:U:H2'	59:BA:2244:U:C6	2.31	0.66
1:AB:175:ARG:NH2	20:AA:1075:C:O3'	2.27	0.66
4:CE:35:GLY:HA3	4:CE:112:LEU:HB3	1.77	0.66
59:DA:2812:G:H2'	59:DA:2813:A:C8	2.29	0.66
5:CF:67:MET:HE1	5:CF:72:VAL:HB	1.77	0.66
20:CA:454:C:N4	20:CA:479:C:N3	2.43	0.66
42:BW:68:ARG:HB3	42:BW:110:LYS:H	1.61	0.66
59:DA:1135:C:H42	59:DA:1138:G:H8	1.42	0.66
3:CD:20:TYR:O	3:CD:22:LYS:N	2.28	0.66
37:BR:64:ARG:NH2	59:BA:2706:G:O2'	2.20	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2711:A:H3'	59:BA:2712:U:H5'	1.76	0.66
43:DX:8:ILE:HA	43:DX:30:VAL:HG12	1.76	0.66
59:DA:1957:C:H2'	59:DA:1958:C:C6	2.31	0.66
59:DA:582:G:H2'	59:DA:583:G:C8	2.30	0.66
20:CA:408:A:C2	20:CA:434:U:N3	2.50	0.66
3:CD:132:ARG:NH2	20:CA:490:G:OP2	2.28	0.66
26:BD:131:LEU:HD13	26:BD:136:ILE:HD11	1.78	0.66
20:CA:186(J):G:H4'	20:CA:186(K):G:OP2	1.93	0.66
16:AQ:100:LYS:HB2	20:AA:246:A:H3'	1.78	0.66
1:CB:115:LEU:HD13	1:CB:145:LEU:HB3	1.77	0.66
23:CY:606:MET:HG3	23:CY:649:LEU:HD21	1.75	0.66
59:DA:1230:C:H2'	59:DA:1231:G:C8	2.30	0.66
59:DA:678:C:H42	59:DA:799:G:H1	1.42	0.66
25:DC:140:ASN:O	25:DC:142:LYS:N	2.29	0.66
42:DW:13:SER:OG	59:DA:1266:G:O6	2.12	0.66
20:CA:769:G:H1	20:CA:810:C:H42	1.44	0.66
33:BN:100:GLU:HB3	33:BN:117:PHE:HZ	1.60	0.66
1:AB:95:GLN:OE1	1:AB:96:ARG:NH1	2.29	0.66
36:DQ:87:LYS:HB2	59:DA:2277:G:OP1	1.95	0.66
59:BA:1007:C:H5''	59:BA:1008:C:H3'	1.78	0.66
23:AY:22:ASP:O	62:AY:702:GDP:O3A	2.13	0.66
59:BA:32:C:N4	59:BA:447:A:OP2	2.29	0.66
25:DC:115:VAL:H	25:DC:145:THR:HG22	1.60	0.66
11:AL:92:ASP:HB2	11:AL:93:LEU:HD23	1.78	0.66
33:DN:137:LYS:HB3	33:DN:137:LYS:NZ	2.10	0.66
33:BN:118:LYS:O	33:BN:121:LYS:NZ	2.17	0.66
59:DA:144:C:H2'	59:DA:145:G:H8	1.59	0.66
29:DG:66:GLN:HG2	58:D4:1:MET:HG2	1.78	0.66
32:DK:14:ALA:HB3	32:DK:50:ASP:HA	1.76	0.66
38:DS:74:ALA:HB2	38:DS:104:GLY:HA2	1.76	0.66
59:DA:1039:G:N2	59:DA:1116:C:N3	2.36	0.66
59:DA:1604:C:H2'	59:DA:1605:C:C6	2.31	0.66
59:DA:808:G:H2'	59:DA:809:G:C8	2.31	0.66
28:DF:59:TYR:OH	59:DA:470:A:OP1	2.08	0.66
23:CY:272:LEU:HA	23:CY:275:ALA:HB3	1.78	0.66
59:DA:307:G:H21	59:DA:330:A:H62	1.44	0.66
20:CA:186(N):U:H2'	20:CA:186(O):G:C8	2.31	0.66
20:AA:67:C:H2'	20:AA:68:G:C8	2.30	0.66
44:DY:74:PRO:HB2	44:DY:96:ILE:HD11	1.76	0.66
41:BV:35:LEU:HD23	41:BV:57:VAL:HG22	1.77	0.66
25:BC:33:LEU:HD13	25:BC:221:PRO:HG2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AU:3:SER:HB2	59:BA:1913:A:H2'	1.77	0.66
20:CA:476:G:H2'	20:CA:477:G:C8	2.29	0.66
59:DA:868:U:H3	59:DA:909:A:H61	1.42	0.66
8:CI:114:TYR:HB2	20:CA:1367:C:H5''	1.78	0.66
57:B1:50:ARG:HA	57:B1:59:THR:HA	1.77	0.66
7:CH:10:LEU:HD22	7:CH:83:ILE:HD11	1.78	0.66
20:CA:114:U:H2'	20:CA:115:G:C8	2.30	0.66
12:CM:3:ARG:HE	12:CM:7:VAL:HG13	1.60	0.66
36:BQ:27:VAL:HG12	36:BQ:29:PHE:H	1.61	0.66
20:AA:1512:U:H2'	20:AA:1513:A:C8	2.29	0.66
32:BK:90:LYS:NZ	59:BA:1076:C:O2'	2.29	0.66
59:DA:278:A:O2'	59:DA:279:C:O5'	2.12	0.66
35:BP:47:ASP:OD1	35:BP:50:ARG:NH2	2.29	0.66
60:BB:24:G:C6	60:BB:56:G:N3	2.64	0.66
8:AI:96:LEU:HG	8:AI:101:PHE:HB2	1.78	0.66
59:BA:871:U:H2'	59:BA:872:A:C8	2.30	0.66
37:BR:104:ARG:HB3	37:BR:109:ALA:HB3	1.77	0.66
34:DO:64:ARG:HB2	34:DO:83:ALA:HB3	1.77	0.66
59:BA:839:U:H2'	59:BA:840:C:C6	2.31	0.66
28:DF:89:VAL:HG21	59:DA:586:A:H5'	1.76	0.66
20:AA:237:C:H2'	20:AA:238:G:C8	2.30	0.66
48:B3:6:VAL:HG22	48:B3:37:LEU:HD11	1.77	0.66
59:BA:1335:U:H2'	59:BA:1336:A:C8	2.30	0.66
59:DA:926:A:H2'	59:DA:928:G:C8	2.31	0.66
59:BA:528:A:N1	59:BA:2042:A:H2'	2.10	0.66
11:AL:58:VAL:HG11	11:AL:85:ILE:HG12	1.76	0.66
28:DF:176:LEU:HD21	28:DF:181:LEU:HA	1.77	0.66
26:BD:219:PRO:HG3	59:BA:764:A:H2	1.59	0.66
59:BA:1326:U:O2'	59:BA:2010:G:O2'	2.13	0.66
59:BA:2020:A:N1	59:BA:2034:U:O4	2.29	0.66
30:BH:121:ILE:HG22	30:BH:135:GLY:HA2	1.78	0.66
20:AA:867:G:O2'	20:AA:873:A:N1	2.28	0.66
2:CC:11:ARG:O	2:CC:13:GLY:N	2.28	0.66
20:AA:791:G:N2	20:AA:1497:G:O3'	2.29	0.66
59:BA:2049:G:H1	59:BA:2619:C:H42	1.42	0.66
59:BA:24:G:O6	59:BA:516:C:N3	2.29	0.66
59:BA:573:G:N1	59:BA:2031:A:OP2	2.22	0.66
40:BU:64:ARG:HB2	40:BU:64:ARG:HH21	1.60	0.66
59:BA:1801:G:N2	59:BA:2207:C:O2'	2.25	0.66
26:DD:180:GLY:HA3	26:DD:275:LYS:HB3	1.78	0.66
8:CI:127:LYS:O	20:CA:966:G:O2'	2.13	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:45:VAL:HG23	12:CM:48:LEU:HD12	1.78	0.66
20:CA:505:G:N2	20:CA:526:C:N3	2.40	0.66
59:BA:227:A:H61	59:BA:410:G:H21	1.42	0.66
57:B1:13:ILE:HG13	57:B1:17:SER:CB	2.26	0.66
3:AD:101:LEU:HD11	3:AD:126:ILE:HG21	1.78	0.66
28:BF:3:GLU:HA	28:BF:24:LEU:H	1.60	0.66
20:AA:681:C:N4	20:AA:709:G:H1	1.94	0.66
35:DP:41:ARG:NH1	59:DA:832:G:OP1	2.29	0.66
2:CC:88:ARG:HA	2:CC:91:LEU:HD12	1.78	0.66
21:AW:39:U:H2'	21:AW:40:G:H8	1.60	0.66
27:BE:22:PRO:O	27:BE:186:GLY:N	2.29	0.65
59:DA:2707:G:H2'	59:DA:2708:G:H8	1.61	0.65
16:CQ:68:ARG:O	16:CQ:70:ARG:N	2.26	0.65
53:B9:14:CYS:SG	53:B9:27:CYS:HB2	2.36	0.65
60:BB:104:A:H2'	60:BB:105:G:O4'	1.95	0.65
37:BR:104:ARG:HB2	37:BR:111:LEU:HD21	1.77	0.65
49:B5:20:ARG:HA	49:B5:23:HIS:HB2	1.78	0.65
1:CB:19:HIS:HB2	1:CB:204:ASN:HD22	1.62	0.65
52:D8:53:PRO:HA	52:D8:56:GLU:HB2	1.78	0.65
28:BF:54:ARG:NH2	28:BF:77:ASP:OD2	2.29	0.65
27:BE:109:LYS:NZ	59:BA:2681:C:OP2	2.25	0.65
25:BC:115:VAL:H	25:BC:145:THR:HG22	1.61	0.65
59:BA:558:G:H2'	59:BA:559:G:H8	1.59	0.65
23:AY:631:ILE:HA	23:AY:645:ALA:HA	1.78	0.65
59:DA:661:C:H2'	59:DA:662:G:C8	2.32	0.65
23:CY:408:VAL:HG22	23:CY:454:MET:HA	1.78	0.65
59:DA:131:G:H1	59:DA:148:C:H42	1.41	0.65
14:CO:69:TYR:OH	20:CA:753:A:OP1	2.14	0.65
52:B8:26:LYS:HG2	52:B8:47:LYS:HG3	1.76	0.65
51:B7:21:ARG:NH2	59:BA:684:G:OP1	2.30	0.65
7:CH:86:ILE:HG21	7:CH:133:LEU:HD23	1.78	0.65
29:BG:41:GLN:HB2	29:BG:90:LEU:HD23	1.79	0.65
59:BA:2134:A:H2	59:BA:2159:G:HO2'	1.44	0.65
59:DA:459:U:C5	59:DA:470:A:N7	2.64	0.65
59:DA:1288:U:C4	59:DA:1327:C:H1'	2.31	0.65
25:BC:132:LEU:HD22	25:BC:137:LEU:HD12	1.78	0.65
29:BG:72:ARG:HB3	29:BG:87:PRO:HD2	1.76	0.65
37:BR:4:LEU:O	37:BR:6:SER:N	2.29	0.65
3:AD:108:LEU:HD21	3:AD:183:GLY:HA3	1.78	0.65
28:BF:106:ARG:NH1	59:BA:618(A):G:OP1	2.29	0.65
46:B0:21:LEU:HD23	46:B0:39:ARG:HB3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D1:7:ILE:HD11	57:D1:62:VAL:HA	1.78	0.65
59:BA:1631:A:C5	59:BA:1683:C:H5'	2.31	0.65
20:CA:1070:U:H3	20:CA:1105:A:H61	1.44	0.65
26:BD:244:ARG:NH1	59:BA:1841:U:O2'	2.27	0.65
59:DA:2649:U:H2'	59:DA:2650:U:H6	1.61	0.65
59:DA:2372:G:H2'	59:DA:2373:G:C8	2.31	0.65
29:BG:173:LEU:HB3	29:BG:178:PHE:HB2	1.77	0.65
39:DT:24:PRO:HB3	39:DT:97:ALA:HA	1.76	0.65
49:B5:40:LYS:HE2	49:B5:46:CYS:HB2	1.77	0.65
27:BE:119:ARG:NH1	27:BE:156:MET:O	2.30	0.65
59:BA:2514:U:H2'	59:BA:2515:C:C6	2.32	0.65
23:AY:24:GLY:C	62:AY:702:GDP:O2A	2.34	0.65
59:BA:1540:G:C2	59:BA:1541:U:H1'	2.32	0.65
26:BD:125:ILE:HG21	26:BD:137:PRO:HG2	1.78	0.65
38:BS:74:ALA:HA	38:BS:105:ALA:HB2	1.77	0.65
59:BA:1478:G:H2'	59:BA:1479:G:H8	1.59	0.65
40:DU:54:LYS:HE2	59:DA:995:C:H5''	1.79	0.65
23:CY:338:GLY:O	23:CY:351:ARG:NH2	2.29	0.65
26:BD:60:ARG:NE	59:BA:1567:A:OP1	2.25	0.65
20:CA:68(E):G:C6	20:CA:68(U):U:O2	2.49	0.65
20:AA:1308:U:H2'	20:AA:1309:G:C8	2.31	0.65
52:D8:61:LEU:HG	59:DA:593:G:H4'	1.78	0.65
20:CA:271:C:H2'	20:CA:272:C:O4'	1.97	0.65
36:DQ:87:LYS:NZ	59:DA:955:C:OP1	2.18	0.65
59:BA:1454:U:O2'	59:BA:1455:G:N7	2.29	0.65
23:AY:610:VAL:HG22	23:AY:643:ILE:HB	1.78	0.65
23:CY:139:MET:H	23:CY:262:SER:HB2	1.60	0.65
20:CA:927:G:O6	20:CA:1390:U:O2	2.14	0.65
59:BA:1957:C:H2'	59:BA:1958:C:C6	2.31	0.65
8:CI:32:ASP:OD2	8:CI:32:ASP:N	2.30	0.65
45:BZ:137:ILE:HG23	45:BZ:156:LYS:HB3	1.79	0.65
23:CY:86:GLY:O	23:CY:88:VAL:N	2.29	0.65
59:BA:682:G:N2	59:BA:795:C:N3	2.35	0.65
57:D1:18:ILE:HG12	57:D1:20:ARG:N	2.11	0.65
59:DA:465:G:H2'	59:DA:466:A:C5	2.31	0.65
59:DA:2355:C:H42	59:DA:2362:G:H1	1.45	0.65
59:DA:24:G:O6	59:DA:516:C:N3	2.29	0.65
59:DA:2671:A:H2'	59:DA:2672:G:C8	2.31	0.65
5:CF:47:ARG:HA	5:CF:57:GLN:HA	1.77	0.65
23:AY:15:ILE:HD11	23:AY:81:ILE:HG13	1.77	0.65
59:DA:648:G:H2'	59:DA:649:G:H8	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:256:THR:O	23:AY:258:VAL:N	2.29	0.65
18:CS:31:ILE:HG12	18:CS:49:ILE:HA	1.78	0.65
59:BA:1862:G:H1	59:BA:1880:C:H42	1.42	0.65
34:BO:18:LYS:HB2	34:BO:45:GLU:HB3	1.77	0.65
11:CL:95:GLY:O	11:CL:97:ARG:N	2.25	0.65
8:CI:104:ARG:HH21	8:CI:105:ASP:HB3	1.61	0.65
20:AA:34:C:H2'	20:AA:35:G:C8	2.31	0.65
20:CA:993:G:O6	20:CA:1045:C:N3	2.30	0.65
8:AI:57:GLY:O	8:AI:59:PHE:N	2.25	0.65
39:DT:32:TYR:HB3	39:DT:82:LEU:HA	1.78	0.65
20:CA:1172:C:H2'	20:CA:1173:G:C8	2.31	0.65
33:DN:76:SER:HB3	59:DA:2641:G:H4'	1.78	0.65
30:BH:86:GLU:HB2	30:BH:132:ARG:HA	1.76	0.65
3:AD:43:HIS:HA	3:AD:46:LYS:HD3	1.78	0.65
26:BD:180:GLY:HA3	26:BD:275:LYS:HB3	1.77	0.65
20:CA:1495:U:OP2	23:CY:504:ARG:NH1	2.30	0.65
10:CK:11:LYS:N	10:CK:75:TYR:HH	1.94	0.65
48:D3:40:THR:O	48:D3:42:ALA:N	2.30	0.65
31:BJ:50:UNK:O	31:BJ:52:UNK:N	2.30	0.65
19:CT:80:ARG:NH2	20:CA:260:G:OP1	2.30	0.65
19:CT:79:ARG:NH2	20:CA:261:U:OP2	2.30	0.65
26:DD:13:ARG:NH1	59:DA:729:G:OP2	2.29	0.65
59:DA:659:C:H2'	59:DA:660:G:C8	2.32	0.65
59:DA:479:A:H4'	59:DA:480:A:H5'	1.79	0.65
20:CA:34:C:H2'	20:CA:35:G:C8	2.32	0.65
3:AD:152:SER:HA	3:AD:155:LEU:HG	1.78	0.65
20:CA:1430:C:H42	20:CA:1470:G:H1	1.45	0.65
36:DQ:27:VAL:HG12	36:DQ:29:PHE:H	1.61	0.65
33:DN:58:ASP:OD1	33:DN:58:ASP:N	2.30	0.65
20:CA:408:A:N1	20:CA:434:U:O4	2.30	0.65
35:DP:39:LYS:NZ	59:DA:808:G:O6	2.22	0.65
12:CM:114:ARG:NE	20:CA:1229:A:OP2	2.30	0.65
20:AA:285:G:H2'	20:AA:286:G:C8	2.32	0.65
21:CW:28:A:N1	21:CW:42:U:O4	2.30	0.65
23:CY:317:MET:HB3	23:CY:327:PHE:CE2	2.32	0.65
8:CI:120:ARG:HH12	20:CA:1346:A:H5'	1.62	0.65
21:AW:66:C:H2'	21:AW:67:G:C8	2.31	0.65
41:BV:35:LEU:HB2	41:BV:57:VAL:HG13	1.78	0.65
1:CB:204:ASN:HD21	1:CB:206:ASP:HB2	1.62	0.65
20:CA:898:G:N2	20:CA:901:A:OP2	2.30	0.65
59:DA:2474:C:OP2	59:DA:2475:C:N4	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:182:A:H2'	59:DA:183:C:H6	1.62	0.65
59:BA:969:U:H2'	59:BA:970:C:C6	2.32	0.65
35:BP:23:PRO:HD2	35:BP:33:ARG:HE	1.60	0.65
59:DA:2466:C:H42	59:DA:2484:G:H1	1.45	0.65
14:CO:49:ASP:OD2	14:CO:52:SER:OG	2.09	0.65
60:DB:59:A:H2'	60:DB:60:C:O4'	1.97	0.65
59:BA:659:C:H2'	59:BA:660:G:H8	1.61	0.65
20:CA:908:A:H2'	20:CA:909:A:H8	1.61	0.65
21:CW:64:G:C6	21:CW:65:U:C4	2.85	0.65
59:DA:651:G:H2'	59:DA:652:U:H5''	1.78	0.65
53:B9:3:VAL:HG11	59:BA:2539:C:H5'	1.77	0.65
59:DA:2080:G:H2'	59:DA:2081:C:C6	2.32	0.65
11:CL:86:ARG:HE	11:CL:99:HIS:HB2	1.61	0.65
20:CA:127:G:H2'	20:CA:128:G:H8	1.62	0.65
25:BC:114:VAL:O	25:BC:116:ALA:N	2.30	0.65
30:BH:85:LYS:HD2	30:BH:141:VAL:HG13	1.78	0.65
27:BE:77:ILE:HG22	27:BE:78:LEU:HG	1.79	0.65
28:BF:129:PHE:HE1	28:BF:193:VAL:HG12	1.62	0.65
2:CC:22:TRP:HA	9:CJ:93:GLY:HA2	1.78	0.65
59:BA:1047:G:O3'	59:BA:1048:A:H8	1.80	0.65
20:CA:1537:U:O4	22:CV:8:A:N1	2.30	0.65
23:CY:614:GLU:HA	23:CY:617:MET:HB3	1.79	0.65
27:BE:202:LYS:NZ	59:BA:2771:C:OP1	2.27	0.65
28:DF:3:GLU:HB2	28:DF:23:ASP:HA	1.79	0.65
59:BA:2092:U:OP1	59:BA:2199:A:O2'	2.15	0.65
2:CC:167:TRP:HZ2	20:CA:1192:C:H5''	1.62	0.65
43:BX:8:ILE:HA	43:BX:30:VAL:HG12	1.78	0.65
59:DA:2040:C:H6	59:DA:2040:C:H5''	1.62	0.64
26:DD:51:VAL:HG13	26:DD:52:ARG:H	1.62	0.64
40:BU:92:ARG:HG2	40:BU:95:LEU:H	1.62	0.64
59:DA:2810:A:H62	59:DA:2891:G:H21	1.44	0.64
26:BD:137:PRO:O	26:BD:140:THR:OG1	2.14	0.64
45:BZ:102:LEU:HD13	45:BZ:139:VAL:HG11	1.79	0.64
20:CA:367:U:OP1	23:CY:340:TYR:OH	2.15	0.64
20:AA:1391:U:H2'	20:AA:1392:G:C8	2.32	0.64
25:BC:67:HIS:NE2	25:BC:188:ASP:HB2	2.12	0.64
17:AR:40:LEU:HA	17:AR:43:PHE:HB2	1.77	0.64
6:CG:57:GLU:HB2	6:CG:60:LYS:HB2	1.79	0.64
3:CD:152:SER:HA	3:CD:155:LEU:HG	1.79	0.64
20:CA:1251:A:N3	20:CA:1369:C:O2'	2.26	0.64
59:DA:1270:C:H5''	59:DA:1271:G:H5'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1275:A:OP2	59:DA:1646:C:N4	2.30	0.64
20:AA:418:C:H42	20:AA:425:G:H1	1.45	0.64
37:DR:39:PRO:HG2	59:DA:1651:G:H5'	1.79	0.64
27:BE:189:PRO:HA	59:BA:2680:C:H5'	1.79	0.64
59:BA:8:A:N1	59:BA:2895:U:C4	2.64	0.64
51:D7:40:TRP:HZ3	59:DA:459:U:C6	2.16	0.64
59:DA:381:G:N2	59:DA:393:C:N3	2.42	0.64
39:DT:30:VAL:HG22	39:DT:31:SER:H	1.62	0.64
23:CY:526:VAL:HG23	23:CY:528:ALA:HB2	1.80	0.64
10:CK:85:ARG:HA	10:CK:110:ASP:O	1.97	0.64
25:BC:83:LYS:HG3	25:BC:117:THR:HG21	1.77	0.64
26:BD:142:VAL:HG23	26:BD:193:VAL:HA	1.79	0.64
59:BA:2393:A:H62	59:BA:2422:A:H61	1.45	0.64
35:BP:115:LEU:HA	35:BP:134:ALA:HB2	1.78	0.64
2:AC:153:VAL:HG23	2:AC:166:GLU:HB3	1.77	0.64
19:CT:18:GLN:NE2	20:CA:104:G:OP2	2.31	0.64
19:AT:80:ARG:NH2	20:AA:261:U:OP2	2.30	0.64
23:CY:18:ALA:CA	23:CY:25:LYS:CE	2.52	0.64
59:DA:2023:G:H8	59:DA:2023:G:P	2.19	0.64
59:BA:2505:G:O6	59:BA:2610:C:O2	2.16	0.64
41:BV:4:ILE:HG13	41:BV:13:ARG:HG3	1.79	0.64
51:D7:21:ARG:HH12	59:DA:683:C:H5''	1.61	0.64
27:BE:47:VAL:HG21	27:BE:86:PRO:HD3	1.79	0.64
59:BA:1043:C:O2'	59:BA:1048:A:O2'	2.13	0.64
59:DA:662:G:H2'	59:DA:663:G:H8	1.63	0.64
25:BC:213:VAL:HG21	25:BC:225:ILE:HG12	1.79	0.64
39:BT:93:ARG:O	39:BT:95:ARG:NH1	2.31	0.64
12:AM:103:THR:HB	20:AA:1226:C:H2'	1.80	0.64
48:D3:6:VAL:HG12	48:D3:56:VAL:HA	1.79	0.64
59:BA:2834:G:H1'	59:BA:2883:A:N6	2.12	0.64
20:CA:106:C:H2'	20:CA:107:G:H8	1.63	0.64
59:DA:2626:C:H2'	59:DA:2627:G:O4'	1.97	0.64
59:BA:1972:A:H2'	59:BA:1973:G:H8	1.61	0.64
59:BA:1394:U:H4'	59:BA:1603:A:H4'	1.79	0.64
16:CQ:68:ARG:HH22	20:CA:277:C:H5''	1.62	0.64
59:DA:2838:G:H1	59:DA:2880:C:N4	1.94	0.64
36:DQ:1:MET:SD	36:DQ:2:LEU:N	2.70	0.64
39:DT:129:ARG:HD3	39:DT:132:LYS:HB2	1.79	0.64
16:AQ:62:SER:HB3	20:AA:186(I):U:H3	1.61	0.64
26:BD:13:ARG:NH1	59:BA:729:G:OP2	2.29	0.64
20:AA:663:A:H61	20:AA:742:G:H1	1.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:48:PRO:O	35:DP:50:ARG:N	2.30	0.64
8:AI:127:LYS:HA	20:AA:967:C:H5'	1.78	0.64
45:DZ:28:MET:HB3	45:DZ:88:PHE:HB2	1.79	0.64
59:DA:1137:G:C2'	59:DA:1138:G:H5'	2.28	0.64
20:AA:1413:A:N1	20:AA:1487:G:N2	2.32	0.64
26:DD:100:GLY:HA3	59:DA:1500:G:H21	1.62	0.64
59:BA:1538:G:H2'	59:BA:1539:G:C8	2.33	0.64
59:DA:2080:G:N2	59:DA:2240:C:N3	2.34	0.64
59:DA:687:C:H42	59:DA:787:U:H4'	1.62	0.64
20:CA:713:G:H2'	20:CA:714:G:C8	2.32	0.64
23:AY:335:LEU:HD11	23:AY:352:VAL:HG11	1.79	0.64
59:BA:1613:G:H3'	59:BA:1614:A:H5'	1.78	0.64
28:DF:2:LYS:O	28:DF:4:VAL:N	2.29	0.64
25:BC:28:ARG:HG3	25:BC:183:PRO:HG3	1.79	0.64
59:DA:2111:C:O2	59:DA:2118:U:O2'	2.12	0.64
32:DK:56:GLU:HB3	32:DK:68:VAL:HB	1.80	0.64
25:DC:6:LYS:O	25:DC:9:ARG:HG3	1.98	0.64
59:DA:1139:G:O2'	59:DA:1143:A:N1	2.25	0.64
1:CB:71:VAL:HA	1:CB:93:VAL:HB	1.80	0.64
59:BA:224:G:OP2	59:BA:408:G:N2	2.30	0.64
59:DA:1316:U:H2'	59:DA:1317:A:C8	2.33	0.64
16:AQ:45:HIS:HB3	16:AQ:72:ARG:HA	1.78	0.64
9:AJ:40:LEU:HD22	9:AJ:41:PRO:HD2	1.79	0.64
29:BG:71:THR:OG1	29:BG:89:GLY:O	2.14	0.64
20:CA:865:A:H5'	20:CA:1078:U:H5	1.63	0.64
15:CP:51:VAL:HG11	15:CP:77:ALA:HB1	1.79	0.64
15:AP:57:ARG:NH2	15:AP:78:GLY:O	2.31	0.64
39:BT:53:ARG:NH1	39:BT:60:THR:OG1	2.27	0.64
59:BA:2037:G:H2'	59:BA:2038:G:C8	2.32	0.64
59:DA:2707:G:H2'	59:DA:2708:G:C8	2.33	0.64
39:DT:27:THR:O	39:DT:87:ASP:HB2	1.97	0.64
20:CA:1414:U:H2'	20:CA:1415:G:C8	2.31	0.64
14:AO:23:GLY:H	14:AO:27:VAL:HG21	1.63	0.64
34:DO:28:SER:HG	59:DA:2563:U:HO2'	1.44	0.64
59:DA:1935:G:H3'	59:DA:1962:C:H42	1.63	0.64
52:D8:18:ALA:HB3	59:DA:628:G:H5''	1.79	0.64
20:CA:46:G:H1	20:CA:395:C:H42	1.43	0.64
9:CJ:47:PHE:N	9:CJ:63:PHE:O	2.20	0.64
9:AJ:65:LEU:HA	13:AN:56:VAL:HA	1.79	0.64
59:DA:1872:A:H8	59:DA:1872:A:O5'	1.79	0.64
5:AF:98:LEU:HB3	17:AR:30:ASP:HA	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:137:ASN:ND2	23:AY:262:SER:HA	2.13	0.64
57:B1:18:ILE:HG21	59:BA:380:U:H4'	1.79	0.64
1:AB:58:ILE:HD11	1:AB:185:ILE:HG21	1.79	0.64
17:CR:48:GLY:O	17:CR:74:ARG:NH2	2.31	0.64
59:BA:222:A:N6	59:BA:232:G:H1'	2.13	0.64
23:AY:315:LYS:HB3	23:AY:327:PHE:CD2	2.32	0.64
59:DA:2857:G:N2	59:DA:2860:A:OP2	2.29	0.64
1:AB:175:ARG:HH22	20:AA:1076:C:H5'	1.62	0.64
59:DA:2287:A:H62	59:DA:2344:U:H3	1.42	0.64
47:D2:61:LEU:O	47:D2:65:ASN:N	2.26	0.64
10:AK:34:ASP:O	10:AK:36:ASP:N	2.30	0.64
6:AG:95:ARG:HH22	20:AA:938:A:H4'	1.63	0.64
57:B1:26:ARG:HB3	57:B1:32:LYS:HB2	1.80	0.64
52:D8:14:VAL:HG23	52:D8:24:ALA:HB2	1.79	0.64
20:AA:1015:A:H2'	20:AA:1016:A:C8	2.33	0.64
20:AA:599:C:H42	20:AA:639:G:H1	1.46	0.64
40:DU:29:SER:OG	40:DU:30:LYS:NZ	2.29	0.64
59:BA:1223:G:N2	59:BA:1226:A:OP2	2.30	0.64
59:DA:1400:G:H2'	59:DA:1401:G:H8	1.62	0.64
6:AG:75:VAL:HA	6:AG:88:PRO:HA	1.78	0.64
25:DC:115:VAL:HB	25:DC:150:ILE:HG23	1.80	0.64
12:CM:91:ARG:HA	12:CM:94:ARG:HG2	1.79	0.64
52:B8:50:LEU:HA	52:B8:53:PRO:HG2	1.79	0.64
20:CA:715:A:H2'	20:CA:716:A:H8	1.62	0.64
20:AA:1376:U:H2'	20:AA:1377:A:C8	2.33	0.64
57:D1:75:GLU:HA	57:D1:78:LYS:HE2	1.78	0.64
27:BE:130:GLY:HA2	59:BA:2580:U:H4'	1.78	0.64
59:BA:991:C:H5'	59:BA:1185:C:H2'	1.79	0.64
3:AD:107:ARG:HB3	3:AD:174:LEU:HD11	1.80	0.64
20:CA:184:G:H1	20:CA:193:C:H42	1.46	0.64
4:CE:80:ILE:HG12	4:CE:91:LEU:HB2	1.78	0.64
47:B2:32:LEU:HD11	47:B2:54:LYS:HG2	1.80	0.64
44:BY:20:TYR:HB3	44:BY:23:ARG:HG3	1.80	0.64
59:BA:2426:A:H3'	59:BA:2427:C:H5''	1.80	0.64
59:BA:2520:C:H41	59:BA:2542:A:H62	1.44	0.64
59:DA:67:U:H2'	59:DA:68:G:H8	1.62	0.64
38:DS:51:ALA:HB1	38:DS:69:VAL:HG22	1.80	0.64
59:BA:1025:G:O6	59:BA:1139:G:N2	2.25	0.64
59:BA:1531:C:H42	59:BA:1540:G:H1	1.45	0.64
39:DT:50:ILE:HG12	39:DT:99:LEU:HB2	1.80	0.64
26:BD:202:LYS:HB3	59:BA:1820:U:H1'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:35:LYS:HD3	26:BD:61:LEU:HD11	1.80	0.64
11:CL:6:THR:O	11:CL:8:ASN:N	2.30	0.64
20:AA:892:A:HO2'	20:AA:1415:G:HO2'	1.37	0.64
59:BA:1230:C:H2'	59:BA:1231:G:C8	2.32	0.64
23:CY:71:THR:OG1	23:CY:359:HIS:ND1	2.30	0.64
52:D8:2:PRO:HA	59:DA:591:C:H1'	1.79	0.64
35:BP:62:LEU:HD21	52:B8:25:MET:HB3	1.79	0.64
36:DQ:36:ALA:HA	36:DQ:129:THR:HG22	1.79	0.64
10:CK:26:ASN:ND2	20:CA:691:G:OP2	2.31	0.64
23:AY:313:ALA:HA	23:AY:328:ILE:HA	1.80	0.64
26:DD:165:ILE:O	26:DD:166:GLN:HB2	1.98	0.64
59:DA:2241:A:H2'	59:DA:2242:G:C8	2.33	0.64
59:DA:2819:G:N2	59:DA:2827:C:N3	2.39	0.63
59:BA:1139:G:O2'	59:BA:1140:C:O4'	2.15	0.63
25:BC:104:ILE:HG23	25:BC:111:PHE:CZ	2.33	0.63
25:DC:115:VAL:HG11	25:DC:154:ILE:HG12	1.79	0.63
23:CY:20:HIS:HB2	23:CY:117:GLN:HB3	1.80	0.63
41:BV:37:VAL:HA	41:BV:51:VAL:HG11	1.80	0.63
2:CC:66:VAL:HB	2:CC:101:LEU:HA	1.80	0.63
32:DK:116:ASN:HD22	59:DA:1058:G:H1'	1.62	0.63
49:B5:46:CYS:HB3	49:B5:49:CYS:H	1.62	0.63
50:D6:13:CYS:SG	50:D6:14:THR:N	2.70	0.63
59:DA:2454:G:H1	59:DA:2498:C:H42	1.46	0.63
59:BA:911:A:O2'	59:BA:2263:C:O2'	2.14	0.63
9:AJ:56:HIS:O	9:AJ:58:ASP:N	2.30	0.63
36:BQ:110:THR:HB	36:BQ:113:GLN:HB2	1.80	0.63
1:AB:52:GLU:OE1	1:AB:56:ARG:NH2	2.31	0.63
59:DA:821:A:H3'	59:DA:946:G:H8	1.63	0.63
28:BF:175:THR:OG1	28:BF:175:THR:O	2.09	0.63
20:CA:1306:A:N6	20:CA:1331:G:O2'	2.31	0.63
59:BA:2366:A:H2'	59:BA:2367:G:O4'	1.98	0.63
40:DU:15:LYS:NZ	59:DA:1217:C:OP2	2.29	0.63
60:DB:31:C:N3	60:DB:51:G:N2	2.41	0.63
25:BC:41:THR:O	25:BC:43:GLU:N	2.29	0.63
28:DF:154:VAL:HG12	28:DF:156:LEU:HA	1.80	0.63
36:DQ:2:LEU:HG	36:DQ:69:PHE:HE1	1.63	0.63
59:DA:2829:C:H2'	59:DA:2830:G:H8	1.63	0.63
7:CH:14:ARG:HH12	20:CA:876:G:H4'	1.63	0.63
20:AA:1271:G:H5'	20:AA:1314:C:H5''	1.79	0.63
44:DY:38:ILE:HD11	44:DY:64:GLU:HB3	1.81	0.63
35:DP:112:LEU:HD22	35:DP:113:LYS:H	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:353:ALA:HB3	23:AY:378:VAL:HB	1.79	0.63
32:DK:17:ALA:HA	32:DK:38:VAL:HG21	1.79	0.63
59:BA:966:G:H2'	59:BA:967:C:C6	2.33	0.63
59:DA:1525:G:H2'	59:DA:1526:G:C8	2.33	0.63
57:D1:21:ARG:HG3	59:DA:2080:G:H5''	1.80	0.63
59:BA:37:C:H2'	59:BA:38:A:C8	2.33	0.63
25:BC:43:GLU:HB2	25:BC:216:THR:O	1.98	0.63
59:BA:1443:G:H1	59:BA:1548:C:N4	1.96	0.63
26:DD:160:GLY:HA3	59:DA:1820:U:C4	2.33	0.63
59:DA:1196:C:HO2'	59:DA:1227:G:HO2'	1.33	0.63
39:DT:3:ARG:HB3	39:DT:6:LEU:HB2	1.80	0.63
57:D1:76:ARG:HH22	57:D1:95:LEU:HD13	1.63	0.63
37:DR:14:SER:OG	59:DA:2713:A:OP1	2.15	0.63
23:AY:163:VAL:HG22	23:AY:258:VAL:HB	1.81	0.63
59:BA:291:C:H42	59:BA:349:G:H1	1.45	0.63
26:DD:8:PRO:HG3	59:DA:1694:C:H5'	1.80	0.63
23:AY:96:ARG:HA	23:AY:99:ARG:HB2	1.80	0.63
39:BT:24:PRO:HG3	39:BT:52:ILE:HG12	1.80	0.63
20:CA:140:A:H2'	20:CA:141:A:C8	2.33	0.63
20:AA:1481:U:H2'	20:AA:1482:G:C8	2.33	0.63
11:AL:87:GLY:HA2	11:AL:98:TYR:H	1.62	0.63
10:CK:27:ASN:HD21	10:CK:45:GLY:HA3	1.64	0.63
10:AK:84:VAL:HG22	10:AK:110:ASP:HA	1.79	0.63
59:DA:2372:G:H1	59:DA:2381:C:H42	1.46	0.63
44:DY:14:LEU:HA	44:DY:24:VAL:HA	1.80	0.63
23:AY:496:LYS:HA	23:AY:509:HIS:HA	1.80	0.63
18:AS:49:ILE:HD13	18:AS:71:LEU:HD22	1.80	0.63
59:BA:1199:U:H2'	59:BA:1200:C:C6	2.33	0.63
59:DA:2557:G:H2'	59:DA:2558:C:C6	2.33	0.63
59:BA:834:C:H2'	59:BA:835:A:C8	2.34	0.63
47:B2:20:GLU:HA	47:B2:23:LYS:HD2	1.81	0.63
29:DG:126:ASP:HB2	29:DG:130:ASN:HD22	1.64	0.63
59:DA:2303:G:H1	59:DA:2313:C:H42	1.47	0.63
59:BA:2525:G:H2'	59:BA:2526:G:H8	1.64	0.63
59:BA:1149:G:H2'	59:BA:1150:C:C6	2.33	0.63
8:AI:93:ARG:HH21	20:AA:1178:G:H5''	1.64	0.63
59:DA:1771:C:H2'	59:DA:1772:G:C8	2.33	0.63
59:DA:56:A:H2'	59:DA:57:C:C6	2.33	0.63
6:AG:78:ARG:HD2	6:AG:79:ARG:HD3	1.80	0.63
26:BD:165:ILE:HA	26:BD:175:LEU:HA	1.80	0.63
14:CO:39:LEU:HB3	14:CO:56:LEU:HD13	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:78:ILE:HD11	25:DC:104:ILE:HD11	1.81	0.63
26:DD:145:VAL:HG12	26:DD:147:LEU:H	1.62	0.63
26:BD:86:PRO:O	26:BD:88:ARG:N	2.32	0.63
59:DA:1538:G:H2'	59:DA:1539:G:H8	1.63	0.63
35:DP:16:ARG:O	59:DA:661:C:O2'	2.13	0.63
10:AK:113:PRO:HB3	20:AA:676:A:H5''	1.80	0.63
8:AI:113:LYS:HE2	20:AA:1187:G:H5'	1.79	0.63
20:CA:865:A:H5'	20:CA:1078:U:C5	2.33	0.63
18:AS:40:ILE:HG12	18:AS:71:LEU:HD23	1.78	0.63
59:BA:535:C:H2'	59:BA:536:A:C8	2.33	0.63
20:CA:123:C:OP1	20:CA:311:C:O2'	2.17	0.63
23:CY:212:TYR:HA	23:CY:215:LYS:HB2	1.80	0.63
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HG2	1.80	0.63
20:CA:1479:C:H2'	20:CA:1480:G:H8	1.63	0.63
26:BD:118:VAL:N	26:BD:129:ASN:OD1	2.24	0.63
33:DN:42:TRP:N	40:DU:64:ARG:HD2	2.13	0.63
29:DG:113:ARG:HB2	58:D4:34:GLU:OE1	1.99	0.63
20:CA:1422:G:H5''	34:DO:48:PRO:HB3	1.81	0.63
57:D1:37:ILE:HG12	59:DA:200:U:H4'	1.81	0.63
10:CK:47:VAL:HG13	20:CA:687:A:H4'	1.81	0.63
41:DV:35:LEU:HB2	41:DV:57:VAL:HG13	1.79	0.63
38:DS:26:LEU:HD22	38:DS:87:PHE:HA	1.80	0.63
20:CA:1127:G:N2	20:CA:1147:C:H41	1.97	0.63
20:CA:944:G:N1	20:CA:1338:G:OP2	2.26	0.63
20:AA:1324:A:H4'	20:AA:1362:C:H4'	1.80	0.63
59:BA:1435:G:H1	59:BA:1557:C:H42	1.45	0.63
16:AQ:61:GLU:HA	16:AQ:71:PHE:HA	1.81	0.63
42:BW:86:LEU:HD12	42:BW:87:PRO:HD2	1.79	0.63
20:AA:925:G:O2'	20:AA:927:G:OP1	2.13	0.63
59:DA:839:U:H2'	59:DA:840:C:C6	2.34	0.63
25:BC:11:LEU:HA	25:BC:14:LYS:HG2	1.80	0.63
26:DD:239:ARG:HB2	59:DA:2590:A:H5''	1.81	0.63
35:DP:115:LEU:HD13	59:DA:627:A:H62	1.64	0.63
2:AC:58:GLU:H	2:AC:65:ALA:HB3	1.62	0.63
59:BA:589:C:H2'	59:BA:590:A:C8	2.33	0.63
20:CA:692:U:O2'	20:CA:694:A:N7	2.27	0.63
59:DA:1120:G:H2'	59:DA:1121:C:C6	2.33	0.63
59:DA:2678:C:H2'	59:DA:2679:A:C8	2.34	0.63
59:DA:980:A:H2	59:DA:2038:G:H1'	1.63	0.63
25:BC:139:PRO:HA	25:BC:145:THR:HB	1.79	0.63
25:DC:177:GLY:HA2	25:DC:186:LEU:HD21	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:132:LEU:HD22	25:DC:137:LEU:HD12	1.80	0.63
25:DC:96:GLY:HA3	25:DC:100:ILE:HG12	1.79	0.63
38:BS:17:ARG:HA	38:BS:20:ARG:HB3	1.79	0.63
23:AY:259:PHE:HB2	23:AY:272:LEU:HD13	1.81	0.63
14:CO:21:ASP:OD2	20:CA:750:G:O2'	2.16	0.63
20:AA:33:A:N1	20:AA:551:U:O4	2.32	0.63
47:D2:25:VAL:HG22	47:D2:60:LEU:HB3	1.80	0.63
27:BE:199:ARG:NH2	59:BA:2772:C:OP1	2.27	0.63
59:BA:2853:C:H2'	59:BA:2854:G:C8	2.33	0.63
59:BA:2185:C:H2'	59:BA:2186:G:C8	2.33	0.63
20:AA:722:A:H4'	20:AA:723:U:H5	1.62	0.63
28:BF:110:LEU:HD23	28:BF:183:VAL:HG13	1.80	0.63
59:DA:1173:G:H21	59:DA:1177:A:H62	1.46	0.63
23:CY:98:MET:SD	23:CY:130:VAL:HG11	2.38	0.63
10:CK:34:ASP:O	10:CK:36:ASP:N	2.32	0.63
23:AY:31:ARG:NH2	23:AY:266:ASN:OD1	2.31	0.63
41:BV:77:ALA:O	41:BV:79:VAL:N	2.28	0.63
40:DU:47:TYR:HA	40:DU:50:ARG:HD2	1.81	0.63
20:CA:1056:U:H3	20:CA:1204:A:H61	1.45	0.63
20:CA:815:A:C6	20:CA:1508:G:N2	2.64	0.63
3:CD:36:ARG:NH2	20:CA:429:U:OP2	2.28	0.63
59:BA:67:U:H2'	59:BA:68:G:H8	1.64	0.63
1:CB:58:ILE:HD11	1:CB:185:ILE:HG21	1.80	0.63
10:AK:116:HIS:CD2	20:AA:674:G:H21	2.17	0.63
11:AL:80:HIS:CE1	23:AY:425:SER:HB3	2.33	0.63
23:CY:617:MET:HA	23:CY:620:VAL:HG22	1.80	0.63
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CE1	2.34	0.63
59:BA:947:G:H1	59:BA:970:C:H42	1.45	0.63
39:DT:128:GLU:HG2	39:DT:129:ARG:HG2	1.81	0.63
34:DO:28:SER:OG	59:DA:2563:U:O2'	2.15	0.63
59:BA:1638:C:H4'	59:BA:2710:C:O2	1.98	0.63
39:DT:133:GLU:O	39:DT:137:LYS:N	2.32	0.63
59:DA:2646:C:OP2	59:DA:2732:G:O2'	2.16	0.63
36:BQ:34:LEU:HD13	36:BQ:118:LEU:HB3	1.80	0.63
59:BA:745:G:O6	59:BA:746:A:N6	2.32	0.63
33:BN:27:ALA:HA	33:BN:30:ILE:HB	1.80	0.63
20:AA:1522:U:H2'	20:AA:1523:G:C8	2.34	0.63
27:BE:8:LYS:HG3	27:BE:188:VAL:HG21	1.80	0.63
59:BA:1144:G:H2'	59:BA:1145:C:H6	1.63	0.63
60:DB:51:G:H21	60:DB:52:A:H62	1.45	0.63
26:DD:250:TRP:CE2	59:DA:1805:U:H5''	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1771:C:H42	59:DA:1980:G:H1	1.46	0.63
59:BA:2233:U:H2'	59:BA:2234:G:C8	2.33	0.63
59:BA:273(G):C:N4	59:BA:363(A):G:H1	1.97	0.63
59:BA:2415:G:H2'	59:BA:2416:C:H6	1.63	0.63
1:AB:174:VAL:O	1:AB:177:ALA:N	2.32	0.63
59:BA:863:A:H2'	59:BA:864:G:H8	1.63	0.63
20:CA:1229:A:O2'	21:CW:30:C:OP1	2.16	0.63
41:DV:39:LEU:HD12	41:DV:47:VAL:HG21	1.81	0.63
59:DA:848:G:H2'	59:DA:849:A:C8	2.33	0.63
46:D0:49:LYS:HB2	46:D0:80:HIS:HB3	1.79	0.63
20:CA:673:G:H2'	20:CA:674:G:C8	2.33	0.63
20:CA:1172:C:H2'	20:CA:1173:G:H8	1.62	0.63
8:AI:93:ARG:NH2	20:AA:1179:A:OP2	2.31	0.63
3:AD:62:GLN:O	3:AD:65:ARG:N	2.31	0.63
28:DF:34:TRP:HB2	35:DP:10:PRO:HB2	1.80	0.63
3:CD:164:ALA:O	3:CD:168:ARG:NH1	2.32	0.63
59:DA:734:A:H2'	59:DA:735:A:H8	1.64	0.63
21:AW:69:A:H2'	21:AW:70:G:H8	1.63	0.63
23:CY:91:THR:O	23:CY:93:GLU:N	2.32	0.63
59:BA:769:G:H2'	59:BA:770:G:C8	2.34	0.63
1:AB:92:TYR:HE1	1:AB:94:ASN:HB2	1.63	0.63
23:CY:138:LYS:HE2	62:CY:702:GDP:C4	2.34	0.62
20:AA:312:C:H2'	20:AA:313:A:C8	2.34	0.62
20:CA:687:A:N6	20:CA:703:G:H21	1.90	0.62
33:BN:15:LEU:HB2	33:BN:134:ARG:HG2	1.79	0.62
5:CF:84:ASN:HA	5:CF:86:ARG:HH21	1.64	0.62
59:DA:1271:G:O3'	59:DA:1272:A:H4'	1.98	0.62
38:DS:77:ALA:HA	38:DS:82:ILE:HD12	1.81	0.62
59:DA:880:G:H1	59:DA:897:C:H42	1.47	0.62
43:BX:29:TRP:HZ3	43:BX:76:ARG:HH21	1.47	0.62
10:AK:52:GLY:H	10:AK:55:LYS:HE2	1.63	0.62
59:DA:39:C:H2'	59:DA:40:C:C6	2.34	0.62
37:DR:4:LEU:O	37:DR:6:SER:N	2.26	0.62
47:B2:4:SER:HA	47:B2:7:ARG:HD2	1.80	0.62
20:CA:1522:U:H2'	20:CA:1523:G:C8	2.34	0.62
20:AA:1083:U:H5''	20:AA:1084:G:OP2	1.99	0.62
26:DD:67:PHE:HZ	26:DD:157:ARG:HH11	1.47	0.62
14:AO:8:LYS:HE3	14:AO:31:LEU:HD21	1.81	0.62
26:BD:14:ARG:NH1	59:BA:1693:U:O2'	2.31	0.62
59:DA:1669:A:H61	59:DA:1993:U:H3	1.46	0.62
59:BA:1516:U:H2'	59:BA:1517:G:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:343:ASN:HD22	23:CY:389:LEU:HD11	1.63	0.62
23:CY:616:TYR:HA	23:CY:619:ASP:HB2	1.81	0.62
44:DY:47:LYS:NZ	59:DA:480:A:O2'	2.32	0.62
4:AE:93:PRO:HG3	7:AH:105:ARG:HG2	1.80	0.62
8:AI:20:ARG:O	8:AI:60:ASP:N	2.22	0.62
45:DZ:10:ARG:HB3	45:DZ:36:LYS:HB2	1.81	0.62
59:DA:259:G:H2'	59:DA:260:G:C8	2.34	0.62
20:AA:782:A:H62	20:AA:800:G:H21	1.48	0.62
9:CJ:7:LYS:NZ	20:CA:1279:A:OP2	2.32	0.62
59:DA:834:C:H2'	59:DA:835:A:C8	2.34	0.62
20:AA:1435:G:H2'	20:AA:1436:U:C6	2.34	0.62
59:BA:2038:G:C2'	59:BA:2039:C:H5'	2.30	0.62
20:CA:426:G:H2'	20:CA:427:U:O4'	2.00	0.62
59:DA:1387:C:H2'	59:DA:1388:G:C8	2.35	0.62
59:DA:2392:A:H2'	59:DA:2393:A:O4'	1.98	0.62
25:BC:63:VAL:N	25:BC:161:ARG:O	2.32	0.62
35:DP:66:GLY:HA2	59:DA:2415:G:H4'	1.80	0.62
20:AA:406:G:H1	20:AA:436:C:N4	1.93	0.62
60:DB:60:C:H2'	60:DB:61:G:C8	2.35	0.62
59:DA:812:C:N4	59:DA:1195:G:H1	1.97	0.62
59:DA:951:C:N4	59:DA:966:G:H1	1.96	0.62
38:DS:97:ARG:O	38:DS:99:LYS:N	2.32	0.62
60:BB:47:C:H2'	60:BB:48:A:O4'	1.99	0.62
18:CS:71:LEU:O	18:CS:73:GLU:N	2.26	0.62
20:CA:1538:C:N3	22:CV:7:G:O6	2.32	0.62
45:BZ:72:ARG:NH1	60:BB:103:U:O3'	2.32	0.62
59:BA:1645:G:H5''	59:BA:1646:C:H5'	1.81	0.62
59:DA:2812:G:H2'	59:DA:2813:A:H8	1.63	0.62
59:BA:1948:G:H2'	59:BA:1949:G:C8	2.34	0.62
16:CQ:21:VAL:HG12	16:CQ:23:VAL:HG22	1.81	0.62
20:AA:890:G:H22	20:AA:906:G:H2'	1.64	0.62
59:BA:374:A:H62	59:BA:400:G:H21	1.45	0.62
20:CA:45:U:H5''	20:CA:307:C:H1'	1.81	0.62
59:DA:1830:C:H42	59:DA:1975:G:H1	1.45	0.62
8:CI:97:LYS:NZ	20:CA:1178:G:O6	2.29	0.62
59:DA:1858:G:H1'	59:DA:1884:A:N6	2.14	0.62
59:DA:2020:A:N1	59:DA:2034:U:O4	2.32	0.62
20:AA:1420:C:H42	20:AA:1480:G:H1	1.48	0.62
41:BV:89:GLN:OE1	59:BA:1162:G:N2	2.32	0.62
2:AC:12:LEU:HD12	13:AN:58:LYS:HB2	1.81	0.62
38:BS:97:ARG:O	38:BS:99:LYS:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:15:VAL:HG13	25:DC:221:PRO:HB3	1.81	0.62
20:CA:767:A:H2'	20:CA:768:A:O4'	2.00	0.62
23:AY:134:ALA:HB3	23:AY:258:VAL:HA	1.82	0.62
4:AE:151:LEU:HB3	7:AH:79:VAL:HG22	1.80	0.62
15:CP:5:ARG:HB2	20:CA:376:G:H5''	1.81	0.62
4:AE:32:VAL:HG13	4:AE:62:ALA:HB2	1.79	0.62
59:BA:2886:G:H2'	59:BA:2887:U:C6	2.34	0.62
59:BA:2269:A:H2'	59:BA:2270:G:O4'	1.99	0.62
20:AA:1412:C:H2'	20:AA:1413:A:C8	2.35	0.62
59:BA:2287:A:N6	59:BA:2344:U:N3	2.45	0.62
59:BA:2406:U:H4'	59:BA:2407:G:O5'	1.99	0.62
11:CL:58:VAL:HG12	11:CL:60:LEU:N	2.13	0.62
59:BA:35:G:H2'	59:BA:36:G:O4'	1.98	0.62
25:DC:43:GLU:OE2	25:DC:218:THR:HA	1.98	0.62
14:AO:46:HIS:HB3	20:AA:668:G:H1'	1.80	0.62
11:AL:70:ILE:HG23	11:AL:100:ILE:HD12	1.81	0.62
59:BA:371:A:N6	59:BA:401:A:H3'	2.13	0.62
50:B6:19:ARG:NH2	59:BA:2399:G:O2'	2.32	0.62
45:DZ:72:ARG:HH12	60:DB:104:A:P	2.23	0.62
20:CA:479:C:H2'	20:CA:480:U:C6	2.34	0.62
59:BA:1317:A:H61	59:BA:1335:U:H3	1.47	0.62
59:BA:1336:A:H2'	59:BA:1337:G:H8	1.63	0.62
35:DP:50:ARG:HB2	35:DP:57:THR:HB	1.79	0.62
20:AA:49:U:O4	20:AA:362:G:N2	2.32	0.62
40:DU:83:LEU:HA	40:DU:88:ILE:HD12	1.82	0.62
19:CT:20:LEU:HD22	19:CT:23:ARG:HH11	1.64	0.62
45:DZ:99:TYR:HB3	45:DZ:123:ASP:HB2	1.80	0.62
20:AA:137:C:H42	20:AA:226:G:H1	1.45	0.62
1:CB:162:ILE:HG12	1:CB:164:VAL:HG23	1.82	0.62
23:AY:83:ASP:C	23:AY:85:PRO:HD3	2.19	0.62
25:BC:45:HIS:CE1	59:BA:2177:C:H1'	2.35	0.62
59:DA:584:C:H42	59:DA:1256:G:H1	1.45	0.62
33:BN:9:VAL:HG11	33:BN:39:ARG:NH2	2.12	0.62
3:AD:18:LYS:HB3	3:AD:33:MET:HG3	1.81	0.62
1:AB:69:LEU:H	1:AB:163:PHE:H	1.47	0.62
38:BS:85:VAL:HG23	38:BS:106:ARG:HH11	1.63	0.62
59:DA:1802:A:C8	59:DA:1815:A:N6	2.67	0.62
59:BA:1077:A:H3'	59:BA:1078:U:O4'	2.00	0.62
59:BA:1142:U:H5''	59:BA:114(B):A:C8	2.33	0.62
12:CM:91:ARG:NH2	20:CA:1226:C:OP2	2.32	0.62
21:CW:63:C:H2'	21:CW:64:G:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:294:U:H2'	20:AA:295:C:C6	2.34	0.62
20:AA:666:G:OP2	20:AA:725:G:N2	2.28	0.62
23:CY:72:CYS:HB3	23:CY:79:ILE:HB	1.81	0.62
33:DN:10:GLU:OE2	33:DN:11:PRO:HD2	1.99	0.62
3:AD:81:GLU:HA	3:AD:84:LYS:HE2	1.80	0.62
59:BA:2023:G:O2'	59:BA:2618:G:H5''	2.00	0.62
36:DQ:46:GLN:HG2	36:DQ:126:PRO:HD3	1.82	0.62
25:BC:58:ASN:ND2	25:BC:166:ASN:OD1	2.30	0.62
41:DV:86:GLY:N	59:DA:1224:C:O2'	2.29	0.62
16:CQ:18:THR:HG23	16:CQ:69:LYS:HE3	1.82	0.62
14:CO:39:LEU:HD12	14:CO:56:LEU:HD22	1.82	0.62
59:BA:85:G:O6	59:BA:97:C:N3	2.33	0.62
59:BA:460:A:H62	59:BA:469:G:H21	1.45	0.62
33:BN:125:GLY:HA3	33:BN:126:PRO:O	2.00	0.62
11:AL:84:LEU:HD22	11:AL:104:VAL:HG13	1.82	0.62
25:BC:30:VAL:HA	25:BC:33:LEU:HG	1.82	0.62
20:AA:1270:C:H2'	20:AA:1271:G:C8	2.35	0.62
59:DA:1777:U:O4	59:DA:1787:A:N1	2.33	0.62
9:CJ:7:LYS:HE2	9:CJ:97:GLU:HG3	1.82	0.62
45:DZ:102:LEU:HD13	45:DZ:139:VAL:HG11	1.81	0.62
60:DB:39:A:H2	60:DB:46:A:H61	1.48	0.62
20:AA:1494:G:N2	59:BA:1912:A:N3	2.47	0.62
59:DA:2570:G:H2'	59:DA:2571:C:C6	2.34	0.62
59:BA:193:U:H3	59:BA:202:U:H3	1.48	0.62
59:BA:52:A:OP2	59:BA:117:G:N1	2.27	0.62
1:CB:74:LYS:NZ	1:CB:205:ASP:OD2	2.33	0.62
21:AW:6:C:H2'	21:AW:7:G:C8	2.34	0.62
43:DX:10:ALA:HB3	43:DX:29:TRP:HB2	1.81	0.62
39:BT:77:PRO:O	39:BT:79:HIS:N	2.32	0.62
27:DE:87:GLU:OE2	27:DE:89:ASP:N	2.32	0.62
20:CA:1002:G:H2'	20:CA:1003:G:C8	2.35	0.62
33:BN:63:THR:OG1	59:BA:1141:U:OP2	2.13	0.62
59:DA:531:C:H3'	59:DA:561:G:H21	1.64	0.62
43:BX:10:ALA:HB3	43:BX:29:TRP:HB2	1.80	0.62
16:AQ:57:VAL:HG12	16:AQ:76:LEU:HA	1.81	0.62
59:DA:2696:U:H2'	59:DA:2697:G:C8	2.34	0.62
35:BP:89:ALA:HA	35:BP:121:LYS:HD2	1.81	0.62
57:D1:15:ALA:H	57:D1:41:ARG:HG2	1.63	0.62
59:BA:797:C:H2'	59:BA:798:G:H8	1.64	0.62
4:CE:24:ARG:NH2	20:CA:15:G:O2'	2.33	0.62
11:CL:55:VAL:HG12	11:CL:67:THR:HG22	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DU:75:ASN:HB2	59:DA:1011:G:OP1	1.99	0.62
59:DA:19:C:H2'	59:DA:20:C:C6	2.35	0.62
26:DD:157:ARG:NH2	59:DA:1818:U:H6	1.98	0.62
11:AL:93:LEU:HG	11:AL:96:VAL:HG22	1.82	0.62
38:BS:102:ALA:HA	38:BS:108:GLY:HA3	1.81	0.62
26:DD:149:PRO:HG2	59:DA:2218:G:H4'	1.81	0.62
25:DC:63:VAL:N	25:DC:161:ARG:O	2.33	0.62
20:CA:67:C:H2'	20:CA:68:G:C8	2.35	0.62
59:DA:234:C:H42	59:DA:430:G:N2	1.96	0.62
59:DA:531:C:P	59:DA:561:G:H22	2.23	0.62
59:DA:481:G:H1'	59:DA:506:G:N2	2.14	0.62
44:BY:76:CYS:O	44:BY:78:ALA:N	2.31	0.62
23:AY:330:VAL:HG13	23:AY:331:TYR:H	1.64	0.62
59:BA:1197:G:H2'	59:BA:1198:U:H6	1.64	0.62
26:BD:231:HIS:O	26:BD:233:HIS:N	2.33	0.62
59:DA:722:A:H2'	59:DA:723:G:C8	2.34	0.62
29:DG:121:ASN:HD22	29:DG:123:ASN:H	1.47	0.62
5:AF:100:ASN:HA	17:AR:23:LYS:HE3	1.82	0.62
32:DK:30:HIS:CD2	32:DK:59:ILE:HB	2.34	0.62
30:DH:91:GLY:HA2	30:DH:160:LYS:HG3	1.82	0.62
29:BG:37:VAL:HG22	29:BG:159:VAL:HG23	1.81	0.62
44:BY:32:PRO:HD2	44:BY:34:LYS:H	1.64	0.62
33:DN:25:ARG:HA	59:DA:1012:U:O4	1.99	0.62
59:DA:2023:G:C6	59:DA:2040:C:N3	2.68	0.62
59:DA:272:G:N2	59:DA:365(A):C:N3	2.40	0.62
36:BQ:74:TYR:HB3	36:BQ:91:GLU:O	2.00	0.62
33:DN:89:LYS:O	33:DN:93:THR:OG1	2.18	0.62
28:BF:1:MET:HB3	28:BF:3:GLU:HG2	1.82	0.62
1:AB:152:PHE:HE2	1:AB:155:LEU:HD12	1.65	0.62
59:BA:1057:A:N6	59:BA:1087:G:OP1	2.33	0.62
59:DA:2143:C:N3	59:DA:2148:G:O6	2.33	0.62
23:AY:486:THR:OG1	23:AY:487:ILE:N	2.28	0.62
59:BA:1090:U:H2'	59:BA:1091:G:C8	2.35	0.62
12:CM:81:LEU:HB3	12:CM:89:GLY:HA3	1.80	0.62
20:CA:808:C:H2'	20:CA:809:G:C8	2.34	0.62
59:BA:1468:C:H2'	59:BA:1469:A:C8	2.35	0.62
29:BG:128:ARG:HH12	59:BA:2315:G:H21	1.48	0.62
20:CA:68(F):C:H2'	20:CA:68(G):G:C8	2.35	0.62
59:BA:1858:G:H1'	59:BA:1884:A:N6	2.15	0.62
1:CB:220:ASP:HA	1:CB:223:ILE:HD12	1.81	0.62
59:DA:1005:C:H42	59:DA:1138:G:H1	0.77	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DS:89:ARG:HB3	38:DS:92:TYR:HB3	1.81	0.61
59:DA:272:G:H2'	59:DA:273(A):G:C8	2.34	0.61
57:B1:42:GLN:OE1	59:BA:379:G:N2	2.26	0.61
2:CC:37:GLN:HA	2:CC:40:ARG:HG3	1.81	0.61
26:BD:165:ILE:O	26:BD:166:GLN:HB2	2.00	0.61
25:DC:121:MET:O	25:DC:125:GLY:N	2.27	0.61
25:DC:65:LEU:O	25:DC:67:HIS:N	2.33	0.61
28:DF:154:VAL:HB	28:DF:173:VAL:HG13	1.81	0.61
41:DV:40:LEU:HD13	41:DV:47:VAL:HG22	1.82	0.61
11:CL:124:LYS:O	11:CL:126:LYS:N	2.33	0.61
11:AL:113:ARG:HH21	11:AL:115:LYS:HB3	1.65	0.61
59:BA:2091:U:H3	59:BA:2228:G:H1	1.48	0.61
59:BA:1199:U:H2'	59:BA:1200:C:H6	1.65	0.61
8:AI:97:LYS:HD2	8:AI:102:LEU:HD12	1.82	0.61
21:AW:70:G:H2'	21:AW:71:C:C6	2.35	0.61
27:BE:87:GLU:OE2	27:BE:89:ASP:N	2.32	0.61
5:AF:82:ARG:NH2	5:AF:84:ASN:OD1	2.33	0.61
20:AA:1461:G:H2'	20:AA:1462:G:H8	1.65	0.61
59:DA:1054:A:H2'	59:DA:1055:G:C8	2.35	0.61
20:CA:1356:G:H2'	20:CA:1357:A:C8	2.34	0.61
59:DA:2030:A:H4'	59:DA:2031:A:C8	2.35	0.61
20:CA:595:G:H1'	20:CA:596:C:H5	1.64	0.61
59:BA:2086:U:H2'	59:BA:2087:G:C8	2.35	0.61
23:CY:25:LYS:O	23:CY:28:THR:HB	2.00	0.61
59:DA:415:A:N1	59:DA:2408:U:O2	2.32	0.61
59:DA:2081:C:H2'	59:DA:2082:A:H8	1.65	0.61
59:BA:956:G:H1'	59:BA:960:A:N6	2.14	0.61
59:BA:56:A:H2'	59:BA:57:C:C6	2.35	0.61
28:BF:9:ILE:HG21	28:BF:124:LEU:HB2	1.80	0.61
59:DA:1203:G:H2'	59:DA:1204:A:C2	2.35	0.61
28:DF:158:THR:HA	28:DF:195:ASP:H	1.65	0.61
39:BT:30:VAL:HA	39:BT:45:PHE:H	1.63	0.61
59:BA:192:C:O2'	59:BA:802:A:N3	2.33	0.61
42:DW:4:LYS:O	42:DW:57:ASN:ND2	2.33	0.61
59:BA:2001:A:H4'	59:BA:2689:U:C2	2.34	0.61
37:BR:64:ARG:NH1	59:BA:2851:A:O2'	2.34	0.61
4:AE:143:ARG:NH1	7:AH:77:GLU:OE1	2.33	0.61
59:DA:2089:U:H2'	59:DA:2090:G:C8	2.35	0.61
28:BF:88:VAL:HG22	28:BF:89:VAL:H	1.65	0.61
7:AH:127:LEU:HB3	7:AH:129:VAL:HG22	1.81	0.61
34:DO:7:TYR:O	34:DO:82:ASN:ND2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2105:C:H2'	59:DA:2106:G:C8	2.35	0.61
59:DA:273(C):C:H2'	59:DA:273(D):C:C6	2.35	0.61
20:CA:584:G:H2'	20:CA:585:G:C8	2.35	0.61
4:AE:33:VAL:HG12	4:AE:112:LEU:HD12	1.82	0.61
20:AA:21:G:H2'	20:AA:22:G:C8	2.34	0.61
59:DA:1999:C:H4'	59:DA:2723:C:H1'	1.82	0.61
59:BA:2023:G:C6	59:BA:2040:C:N3	2.69	0.61
59:DA:1400:G:H2'	59:DA:1401:G:C8	2.35	0.61
25:DC:151:GLY:HA2	25:DC:154:ILE:HG13	1.81	0.61
1:AB:166:ASP:HA	1:AB:188:ALA:HB2	1.82	0.61
23:CY:566:THR:CG2	23:CY:567:LEU:H	2.14	0.61
59:BA:557:U:H2'	59:BA:558:G:H8	1.63	0.61
20:CA:1221:G:OP1	20:CA:1320:C:N4	2.29	0.61
20:CA:1376:U:H2'	20:CA:1377:A:C8	2.35	0.61
60:BB:71:C:H42	60:BB:105:G:H1	1.49	0.61
59:DA:2115:G:H1	59:DA:2118:U:P	2.23	0.61
20:AA:56:U:H2'	20:AA:57:G:H8	1.65	0.61
19:AT:43:LEU:HB2	19:AT:52:ALA:HB2	1.81	0.61
36:BQ:85:LYS:HE2	46:B0:7:LEU:HD12	1.80	0.61
59:BA:2336:A:H3'	59:BA:2337:G:H8	1.64	0.61
1:AB:79:ASP:O	1:AB:82:ARG:HG2	2.00	0.61
60:DB:32:C:H2'	60:DB:33:G:C8	2.35	0.61
36:DQ:34:LEU:HD13	36:DQ:118:LEU:HB3	1.82	0.61
13:AN:48:ALA:HA	13:AN:53:LEU:HB2	1.81	0.61
59:BA:177:G:OP2	59:BA:177:G:N2	2.30	0.61
36:DQ:135:ASP:H	36:DQ:137:TYR:HD1	1.46	0.61
1:CB:187:LEU:HD23	1:CB:201:ILE:HG22	1.83	0.61
59:DA:1770:G:H2'	59:DA:1771:C:C6	2.35	0.61
13:CN:45:ARG:NH2	20:CA:1059:C:O3'	2.33	0.61
11:AL:58:VAL:HG21	11:AL:85:ILE:HD11	1.80	0.61
3:CD:101:LEU:HD12	3:CD:121:VAL:HG13	1.83	0.61
26:DD:85:ASP:OD1	26:DD:88:ARG:NH1	2.33	0.61
59:BA:1387:C:N4	59:BA:1400:G:H1	1.96	0.61
60:BB:66:A:H61	60:BB:107:U:H2'	1.65	0.61
59:DA:848:G:N3	59:DA:933:A:O2'	2.25	0.61
59:DA:1670:C:H2'	59:DA:1671:U:O4'	1.99	0.61
46:D0:72:ARG:HH22	60:DB:10:C:H5''	1.65	0.61
2:CC:182:ILE:HG12	2:CC:203:PHE:HA	1.82	0.61
9:AJ:8:LEU:HA	9:AJ:96:ILE:HG22	1.80	0.61
17:AR:48:GLY:O	17:AR:74:ARG:NH2	2.32	0.61
26:DD:89:SER:HB2	26:DD:159:ALA:HB2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:55:ASN:ND2	59:BA:2683:C:OP1	2.33	0.61
12:AM:78:ILE:HA	12:AM:81:LEU:HB2	1.81	0.61
59:DA:470:A:H8	59:DA:470:A:H5'	1.63	0.61
25:BC:61:GLY:HA3	25:BC:164:PHE:CD1	2.36	0.61
20:AA:687:A:H62	20:AA:703:G:N2	1.97	0.61
20:AA:1201:A:H4'	20:AA:1202:G:H5''	1.82	0.61
13:CN:41:ARG:NH1	20:CA:973:G:O3'	2.33	0.61
59:DA:1538:G:H2'	59:DA:1539:G:C8	2.34	0.61
1:CB:189:ASP:HB3	1:CB:204:ASN:HA	1.83	0.61
21:CW:63:C:H2'	21:CW:64:G:C8	2.35	0.61
23:AY:680:PRO:O	23:AY:682:GLN:N	2.34	0.61
59:BA:918:A:N3	60:BB:80:U:O2'	2.32	0.61
59:BA:2210:G:N2	59:BA:2212:A:OP1	2.29	0.61
26:DD:123:ALA:HB3	26:DD:131:LEU:HG	1.81	0.61
20:AA:346:G:O2'	39:BT:41:ARG:NH2	2.33	0.61
29:DG:43:LEU:HD13	59:DA:2305:A:H61	1.65	0.61
39:BT:64:ARG:HD3	39:BT:73:GLU:HG3	1.82	0.61
36:BQ:17:LEU:HD11	59:BA:958:U:H3	1.65	0.61
59:DA:855:G:H1	59:DA:922:U:H3	1.46	0.61
49:B5:44:THR:HG22	49:B5:45:VAL:H	1.64	0.61
27:DE:38:THR:HG22	27:DE:41:LYS:HG2	1.83	0.61
59:DA:2515:C:H2'	59:DA:2516:G:H8	1.65	0.61
20:CA:987:G:N2	20:CA:1218:C:N3	2.43	0.61
31:BJ:25:UNK:CA	31:BJ:80:UNK:HA	2.27	0.61
27:BE:15:PHE:HD1	39:BT:80:SER:HB2	1.65	0.61
25:DC:104:ILE:HG21	25:DC:132:LEU:HD11	1.82	0.61
20:AA:740:U:O2'	20:AA:741:G:O4'	2.17	0.61
59:BA:2622:C:O2'	59:BA:2824:C:N4	2.34	0.61
11:CL:49:ASN:ND2	20:CA:521:G:O6	2.31	0.61
20:CA:1513:A:H2'	20:CA:1514:C:H6	1.65	0.61
2:AC:3:ASN:O	2:AC:4:LYS:HB2	1.99	0.61
59:BA:2707:G:H2'	59:BA:2708:G:C8	2.34	0.61
26:BD:246:PRO:HD3	59:BA:1902:C:H5'	1.82	0.61
26:DD:206:LEU:HB2	59:DA:1791:A:H4'	1.81	0.61
23:AY:161:PRO:HA	23:AY:256:THR:HB	1.81	0.61
27:DE:4:ILE:HD13	27:DE:5:LEU:H	1.66	0.61
23:AY:605:ILE:HG13	23:AY:648:PRO:HA	1.83	0.61
20:AA:1338:G:H21	21:AW:41:A:H1'	1.65	0.61
3:CD:170:VAL:HG11	3:CD:176:LEU:HB2	1.83	0.61
3:AD:64:LEU:HD13	3:AD:198:VAL:HG11	1.83	0.61
20:AA:707:C:H2'	20:AA:708:C:H6	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1024:G:OP2	59:BA:1025:G:H3'	2.00	0.61
57:D1:21:ARG:HB3	57:D1:38:SER:HB2	1.83	0.61
26:BD:258:LYS:NZ	59:BA:1844:C:O3'	2.33	0.61
59:DA:1819:A:C4'	59:DA:1820:U:H5'	2.31	0.61
30:BH:123:PHE:O	30:BH:124:GLU:HB3	2.00	0.61
30:BH:152:ARG:HB3	30:BH:162:ILE:HG13	1.82	0.61
59:DA:659:C:H2'	59:DA:660:G:H8	1.63	0.61
2:CC:150:LYS:HE3	2:CC:201:TYR:HD1	1.65	0.61
20:CA:585:G:H1	20:CA:756:C:H42	1.48	0.61
26:BD:133:LEU:N	26:BD:187:GLY:O	2.33	0.61
59:DA:1197:G:H2'	59:DA:1198:U:H6	1.65	0.61
59:DA:2154:G:H2'	59:DA:2155:G:H8	1.66	0.61
59:BA:1007:C:H5''	59:BA:1008:C:C3'	2.31	0.61
23:AY:137:ASN:ND2	23:AY:263:ALA:H	1.89	0.61
59:BA:137(B):G:H1	59:BA:141(B):C:H42	1.48	0.61
51:D7:8:ASN:HB3	51:D7:11:LYS:HB3	1.83	0.61
44:BY:79:CYS:HG	44:BY:80:GLY:H	1.48	0.61
60:DB:57:A:H2'	60:DB:58:A:C8	2.35	0.61
20:AA:520:A:H62	20:AA:529:G:N2	1.98	0.61
26:BD:106:ILE:HG23	26:BD:108:PRO:HD3	1.81	0.61
11:CL:12:ARG:NH2	20:CA:881:G:OP2	2.34	0.61
59:DA:1796:U:H3	59:DA:1823:G:H1	1.49	0.61
30:DH:39:PRO:O	30:DH:41:MET:N	2.29	0.61
45:DZ:74:VAL:HG22	45:DZ:86:VAL:HA	1.82	0.61
59:BA:1090:U:H2'	59:BA:1091:G:H8	1.66	0.61
20:CA:1120:G:H1	20:CA:1153:C:H42	1.46	0.61
12:CM:79:LYS:HA	12:CM:82:MET:HG2	1.82	0.61
13:AN:61:TRP:HZ2	20:AA:1368:G:H4'	1.64	0.61
20:AA:1484:C:HO2'	59:BA:1960:A:HO2'	1.45	0.61
23:CY:613:PRO:HD2	23:CY:666:ARG:HB3	1.82	0.61
23:CY:496:LYS:HA	23:CY:509:HIS:HA	1.82	0.61
28:DF:54:ARG:NH1	59:DA:673:C:OP1	2.33	0.61
40:DU:28:ARG:NH1	40:DU:38:THR:OG1	2.34	0.61
20:AA:339:C:H2'	20:AA:340:U:C6	2.36	0.61
59:BA:689:A:H2'	59:BA:690:G:C8	2.36	0.61
1:AB:169:LYS:O	1:AB:172:ILE:N	2.32	0.61
27:BE:109:LYS:HG2	27:BE:191:PRO:HD3	1.83	0.61
20:CA:816:A:OP2	20:CA:1526:G:O2'	2.18	0.61
39:DT:60:THR:HG22	39:DT:78:LEU:H	1.66	0.61
25:DC:138:LEU:HD13	25:DC:139:PRO:HG2	1.81	0.61
59:DA:992:C:H42	59:DA:1162:G:H1	1.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:148:GLU:HB3	26:DD:151:LYS:HG3	1.83	0.61
41:BV:62:LEU:HD12	41:BV:95:LEU:HB2	1.83	0.61
38:DS:24:LEU:HB3	38:DS:85:VAL:HG12	1.83	0.61
46:D0:22:GLY:H	46:D0:39:ARG:HB2	1.66	0.61
26:DD:244:ARG:HG2	26:DD:245:PRO:HA	1.81	0.61
3:AD:19:LEU:HD23	3:AD:67:ILE:HB	1.82	0.61
11:CL:15:ARG:NH1	20:CA:563:A:N3	2.49	0.61
20:AA:1225:A:H2'	20:AA:1226:C:C5	2.36	0.61
21:AW:23:A:H2'	21:AW:24:G:C8	2.36	0.61
21:CW:64:G:C6	21:CW:65:U:O4	2.53	0.61
26:DD:163:ALA:HB1	26:DD:175:LEU:HD21	1.83	0.61
59:DA:836:G:H1	59:DA:943:U:H3	1.46	0.61
26:BD:111:LEU:HG	26:BD:127:VAL:HG12	1.83	0.61
49:D5:15:ARG:NH1	59:DA:2046:G:OP1	2.19	0.61
60:BB:9:G:H2'	60:BB:10:C:C6	2.36	0.61
59:BA:273(D):C:H2'	59:BA:273(E):C:H6	1.66	0.61
59:BA:2111:C:O2	59:BA:2118:U:O2'	2.19	0.61
59:BA:2531:A:HO2'	59:BA:2658:C:HO2'	1.48	0.61
59:DA:2291:U:OP1	59:DA:2380:C:O2'	2.18	0.61
45:DZ:5:LEU:HD11	45:DZ:44:PHE:HD1	1.66	0.61
37:DR:53:HIS:CG	59:DA:2840:C:H5''	2.36	0.61
6:CG:102:ARG:HD2	6:CG:106:GLN:HE22	1.65	0.61
5:AF:46:ARG:HH22	17:AR:37:VAL:HG21	1.66	0.61
31:DJ:122:UNK:O	31:DJ:124:UNK:N	2.34	0.61
59:BA:2287:A:N6	59:BA:2344:U:C2	2.69	0.61
59:BA:36:G:N2	59:BA:444:C:N3	2.41	0.61
59:BA:273(A):G:H1	59:BA:364:C:N4	1.96	0.61
26:DD:157:ARG:NH1	59:DA:1818:U:OP2	2.34	0.61
23:CY:580:MET:HA	23:CY:583:LYS:HB3	1.82	0.61
59:DA:1291:C:H4'	59:DA:1535:U:O2'	2.01	0.61
59:BA:52:A:H2'	59:BA:53:A:C8	2.35	0.61
53:D9:2:LYS:HD2	59:DA:2526:G:O2'	2.01	0.61
42:DW:75:TYR:O	42:DW:104:THR:N	2.34	0.61
23:CY:208:GLN:O	23:CY:211:GLU:HG2	2.01	0.61
59:BA:2870:C:H2'	59:BA:2871:C:O4'	2.01	0.61
14:AO:67:LEU:HD13	14:AO:87:ILE:HD12	1.83	0.61
57:D1:25:LYS:HG2	57:D1:34:THR:HA	1.81	0.60
27:BE:12:THR:O	27:BE:22:PRO:HA	2.01	0.60
33:DN:25:ARG:NH2	59:DA:114(B):A:H4'	2.15	0.60
59:BA:1144:G:H2'	59:BA:1145:C:C6	2.36	0.60
27:BE:63:LEU:HB2	27:BE:65:GLY:N	2.10	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1416:G:H1	59:DA:1582:C:N4	1.95	0.60
59:DA:2080:G:H2'	59:DA:2081:C:H6	1.65	0.60
25:BC:47:LYS:HB2	25:BC:169:THR:O	2.01	0.60
3:AD:25:ARG:NH2	20:AA:411:A:OP2	2.33	0.60
59:DA:1486:A:N1	59:DA:1503:U:O4	2.34	0.60
1:AB:223:ILE:O	1:AB:227:GLY:N	2.34	0.60
20:AA:1504:G:H4'	20:AA:1505:G:H5'	1.83	0.60
23:CY:66:THR:O	23:CY:363:ARG:NH2	2.34	0.60
44:BY:97:ARG:NH2	59:BA:300:A:OP1	2.31	0.60
59:BA:970:C:O2	59:BA:984:A:O2'	2.13	0.60
14:CO:68:ARG:HH22	20:CA:582:U:H5''	1.66	0.60
49:D5:20:ARG:HA	49:D5:23:HIS:HB2	1.82	0.60
59:BA:1268:A:H2'	59:BA:1269:A:O4'	2.01	0.60
48:D3:30:ARG:NH2	59:DA:1159:U:OP1	2.34	0.60
59:BA:2606:C:H2'	59:BA:2607:G:C8	2.36	0.60
15:AP:29:ASP:OD2	15:AP:29:ASP:N	2.34	0.60
26:DD:168:ARG:HA	26:DD:173:VAL:HA	1.83	0.60
20:AA:810:C:H2'	20:AA:811:C:C6	2.36	0.60
28:DF:188:ARG:HB3	35:DP:7:ARG:HH21	1.64	0.60
30:BH:85:LYS:HD3	30:BH:133:VAL:HB	1.83	0.60
25:DC:61:GLY:HA3	25:DC:164:PHE:CE1	2.36	0.60
32:DK:78:ILE:HD11	32:DK:99:ILE:HD11	1.83	0.60
20:CA:1102:A:H2'	20:CA:1103:C:C6	2.35	0.60
52:D8:19:SER:OG	59:DA:651:G:OP1	2.14	0.60
48:D3:6:VAL:HG22	48:D3:37:LEU:HD11	1.83	0.60
36:BQ:109:VAL:HG21	36:BQ:114:ALA:HB2	1.81	0.60
41:BV:79:VAL:HG21	59:BA:973:A:H5'	1.83	0.60
20:AA:885:G:H1	20:AA:912:C:H42	1.49	0.60
23:CY:457:LEU:HD23	23:CY:458:HIS:H	1.66	0.60
60:BB:39:A:H2	60:BB:46:A:H61	1.49	0.60
26:BD:254:THR:HG21	59:BA:1824:G:H1'	1.83	0.60
36:BQ:132:VAL:HB	36:BQ:137:TYR:OH	2.01	0.60
59:DA:184:C:H2'	59:DA:185:U:C6	2.36	0.60
20:CA:237:C:H2'	20:CA:238:G:C8	2.36	0.60
59:DA:1142:U:H5''	59:DA:114(B):A:C8	2.36	0.60
59:BA:1530:G:O6	59:BA:1541:U:O2	2.19	0.60
25:DC:62:THR:OG1	25:DC:62:THR:O	2.14	0.60
28:DF:156:LEU:O	28:DF:158:THR:HG22	2.01	0.60
40:DU:98:LEU:HD13	40:DU:101:ARG:HH12	1.66	0.60
25:DC:51:ASP:HB2	25:DC:54:ARG:HB2	1.82	0.60
59:BA:1558:A:O2'	59:BA:1559:G:OP2	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:165:ILE:HA	26:DD:175:LEU:HA	1.83	0.60
10:CK:53:SER:HB2	20:CA:694:A:H5''	1.83	0.60
59:DA:871:U:O2	59:DA:906:G:O6	2.19	0.60
4:CE:102:ALA:HB3	4:CE:107:ARG:HB2	1.83	0.60
46:D0:35:ASN:ND2	59:DA:2353:G:O2'	2.35	0.60
20:AA:1198:G:H2'	20:AA:1199:U:C6	2.36	0.60
35:BP:106:LEU:HD21	35:BP:112:LEU:HD23	1.83	0.60
1:CB:60:ASP:HB3	1:CB:64:ARG:HH22	1.65	0.60
59:BA:1463:C:H2'	59:BA:1464:C:C6	2.36	0.60
59:DA:2378:A:O5'	59:DA:2378:A:H8	1.84	0.60
37:BR:49:ASP:HB3	59:BA:2839:G:H4'	1.84	0.60
59:BA:2119:A:C2	59:BA:2170:A:H2'	2.36	0.60
11:AL:88:GLY:O	11:AL:99:HIS:NE2	2.34	0.60
10:CK:32:ILE:HD13	10:CK:72:ALA:HB2	1.82	0.60
59:DA:1495:A:H2	59:DA:1578:U:H1'	1.66	0.60
59:DA:2246:G:H2'	59:DA:2247:A:C8	2.36	0.60
59:DA:2789:C:H1'	59:DA:2892:A:H2	1.66	0.60
21:AW:19:G:N2	21:AW:56:C:N3	2.49	0.60
59:DA:2038:G:H2'	59:DA:2039:C:H5'	1.84	0.60
33:BN:40:PRO:HG3	40:BU:71:GLN:HE22	1.67	0.60
37:BR:40:LYS:O	37:BR:44:LEU:HB2	2.01	0.60
4:CE:76:ILE:HG12	4:CE:78:HIS:H	1.67	0.60
59:BA:1101:U:H2'	59:BA:1102:C:C6	2.36	0.60
59:BA:2469:A:H61	59:BA:2481:G:H1'	1.67	0.60
11:CL:49:ASN:N	11:CL:49:ASN:OD1	2.33	0.60
23:AY:512:ILE:HA	23:AY:567:LEU:HA	1.82	0.60
59:DA:1913:A:HO2'	59:DA:1914:C:P	2.23	0.60
44:BY:74:PRO:HG3	44:BY:82:PRO:HA	1.81	0.60
44:DY:76:CYS:HB3	44:DY:96:ILE:HG13	1.83	0.60
20:CA:62:U:H3	20:CA:105:G:H1	1.49	0.60
2:AC:163:ALA:HB3	20:AA:1056:U:H4'	1.83	0.60
4:AE:77:PRO:HD2	4:AE:142:LEU:HD21	1.83	0.60
42:DW:68:ARG:HB3	42:DW:110:LYS:HB2	1.81	0.60
12:AM:24:GLY:O	12:AM:29:ARG:NH1	2.34	0.60
38:BS:27:SER:H	38:BS:40:ILE:HG22	1.66	0.60
20:AA:865:A:H2'	20:AA:866:C:C6	2.36	0.60
29:DG:62:LEU:HD12	58:D4:7:PRO:HG3	1.83	0.60
12:CM:11:ARG:O	12:CM:13:LYS:N	2.34	0.60
32:BK:100:THR:HG22	32:BK:139:VAL:HB	1.83	0.60
59:DA:643:A:H2'	59:DA:644:A:C8	2.35	0.60
60:DB:14:U:H2'	60:DB:15:A:H2	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1081:G:H2'	20:AA:1082:G:H8	1.66	0.60
39:BT:59:THR:HG23	39:BT:78:LEU:HD22	1.81	0.60
59:BA:1007:C:N3	59:BA:1136:G:C6	2.69	0.60
26:DD:43:ARG:O	26:DD:51:VAL:HG11	2.01	0.60
20:AA:585:G:H1	20:AA:756:C:N4	2.00	0.60
38:BS:35:ILE:HG22	38:BS:53:SER:HB2	1.83	0.60
42:DW:76:VAL:HA	42:DW:102:HIS:O	2.01	0.60
20:AA:265:G:H2'	20:AA:266:G:H5''	1.84	0.60
29:BG:11:TYR:O	29:BG:15:VAL:HB	2.01	0.60
5:CF:70:ASP:OD2	5:CF:71:ARG:N	2.34	0.60
8:CI:127:LYS:HA	20:CA:967:C:H5'	1.84	0.60
37:DR:3:HIS:O	37:DR:4:LEU:HB2	2.01	0.60
37:DR:53:HIS:CD2	59:DA:2840:C:H5''	2.36	0.60
20:AA:185:A:H2'	20:AA:186:C:C6	2.36	0.60
16:CQ:27:PHE:HB2	16:CQ:28:PRO:HD2	1.82	0.60
48:B3:30:ARG:NH1	48:B3:32:GLN:O	2.33	0.60
23:AY:135:PHE:HA	23:AY:260:LEU:HA	1.84	0.60
2:CC:154:SER:O	2:CC:197:GLY:N	2.25	0.60
31:DJ:39:UNK:O	31:DJ:43:UNK:N	2.34	0.60
29:BG:109:VAL:O	29:BG:112:PRO:HD2	2.01	0.60
34:BO:66:LYS:HD3	34:BO:78:ARG:HD2	1.82	0.60
1:CB:168:THR:C	1:CB:171:ALA:H	2.05	0.60
1:CB:166:ASP:HA	1:CB:188:ALA:HB2	1.82	0.60
41:BV:39:LEU:HD12	41:BV:47:VAL:HG21	1.83	0.60
43:DX:25:LYS:HG2	43:DX:82:GLN:HB2	1.83	0.60
59:BA:1638:C:H2'	59:BA:1639:U:O4'	2.02	0.60
27:BE:8:LYS:HE3	27:BE:188:VAL:HG11	1.84	0.60
59:DA:212:G:H2'	59:DA:213:A:C8	2.36	0.60
34:DO:34:THR:OG1	34:DO:35:VAL:N	2.33	0.60
31:BJ:33:UNK:O	31:BJ:37:UNK:N	2.35	0.60
6:CG:69:VAL:HA	6:CG:138:LYS:HD2	1.84	0.60
37:DR:7:GLY:O	37:DR:8:ARG:HB2	2.00	0.60
36:DQ:116:GLU:HA	36:DQ:119:ARG:HE	1.65	0.60
23:AY:268:GLY:HA2	23:AY:271:LEU:HD21	1.83	0.60
26:BD:68:LYS:O	26:BD:70:TRP:N	2.30	0.60
57:B1:76:ARG:NH2	57:B1:94:LEU:O	2.35	0.60
23:CY:135:PHE:HA	23:CY:260:LEU:HA	1.84	0.60
39:BT:60:THR:HG22	39:BT:77:PRO:HA	1.84	0.60
59:DA:1557:C:H2'	59:DA:1558:A:H2	1.67	0.60
59:DA:2515:C:N3	59:DA:2569:G:N2	2.37	0.60
59:BA:2131:G:H5'	59:BA:2133:G:C1'	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1812:A:H2'	59:DA:1813:G:C8	2.36	0.60
3:CD:106:TYR:HA	3:CD:111:ALA:HB3	1.83	0.60
43:DX:51:VAL:HA	43:DX:83:VAL:HG22	1.84	0.60
59:DA:1542:G:H4'	59:DA:1543:A:O5'	2.01	0.60
59:BA:2001:A:H2'	59:BA:2002:G:C8	2.37	0.60
45:DZ:3:TYR:N	45:DZ:56:VAL:O	2.35	0.60
59:DA:2105:C:H2'	59:DA:2106:G:H8	1.65	0.60
26:BD:130:ALA:HA	26:BD:192:THR:HA	1.82	0.60
12:CM:122:LYS:HA	20:CA:954:G:H5'	1.82	0.60
8:AI:10:ARG:HD3	8:AI:75:ASP:HB3	1.83	0.60
23:AY:606:MET:HG3	23:AY:649:LEU:HD21	1.84	0.60
59:BA:1139:G:OP2	59:BA:1139:G:H8	1.84	0.60
40:DU:64:ARG:HB2	40:DU:64:ARG:HH21	1.67	0.60
27:BE:143:ASN:ND2	27:BE:146:THR:O	2.34	0.60
31:BJ:25:UNK:O	31:BJ:111:UNK:HA	2.02	0.60
2:CC:2:GLY:N	20:CA:1062:U:O4	2.35	0.60
39:DT:30:VAL:HA	39:DT:45:PHE:H	1.66	0.60
44:BY:37:VAL:N	44:BY:67:LEU:O	2.32	0.60
25:DC:214:TYR:HB3	25:DC:222:SER:HB2	1.81	0.60
28:BF:157:VAL:HG13	28:BF:194:MET:HG2	1.83	0.60
25:DC:185:LYS:O	25:DC:189:ASN:HB2	2.02	0.60
1:AB:71:VAL:HB	1:AB:164:VAL:HG22	1.84	0.60
11:AL:54:LYS:HD2	11:AL:70:ILE:HG12	1.83	0.60
32:BK:7:VAL:HB	32:BK:58:THR:HG23	1.82	0.60
57:D1:13:ILE:HG23	57:D1:17:SER:HB2	1.84	0.60
36:BQ:92:GLY:O	36:BQ:94:VAL:HG13	2.01	0.60
8:CI:125:TYR:HE2	20:CA:967:C:H4'	1.66	0.60
52:D8:17:THR:O	52:D8:19:SER:N	2.35	0.60
21:AW:41:A:H2'	21:AW:42:U:C6	2.37	0.60
18:CS:12:ASP:H	18:CS:38:SER:HB3	1.66	0.60
59:BA:2066:C:H42	59:BA:2444:G:H1	1.49	0.60
20:AA:1238:A:H2	20:AA:1241:G:N3	1.99	0.60
20:AA:576:G:N7	20:AA:881:G:H1'	2.16	0.60
43:BX:27:THR:HG22	43:BX:80:ILE:HB	1.82	0.60
59:BA:2095:C:H2'	59:BA:2096:U:C6	2.36	0.60
59:BA:413:C:H2'	59:BA:414:C:C6	2.37	0.60
20:CA:1123:A:N1	20:CA:1150:U:O4	2.33	0.60
59:DA:2176:A:H2'	59:DA:2177:C:C6	2.36	0.60
59:DA:291:C:N4	59:DA:349:G:H1	1.95	0.60
34:DO:107:ARG:HH22	39:DT:36:GLU:HG3	1.67	0.60
45:BZ:82:ARG:HG2	45:BZ:83:PRO:HD2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:96:ARG:NE	59:BA:2717:G:O2'	2.35	0.60
59:BA:659:C:H2'	59:BA:660:G:C8	2.37	0.60
34:DO:19:ILE:HG22	34:DO:43:VAL:HA	1.82	0.60
60:BB:71:C:H2'	60:BB:72:G:H5'	1.84	0.60
20:CA:253:U:H3	20:CA:273:A:H2	1.49	0.60
20:AA:1270:C:H2'	20:AA:1271:G:H8	1.66	0.60
20:AA:1288:A:H2'	20:AA:1289:A:O4'	2.02	0.60
1:CB:139:LYS:O	1:CB:143:GLU:HG2	2.02	0.60
59:DA:2736:G:H2'	59:DA:2737:G:H8	1.66	0.60
20:CA:848:C:H2'	20:CA:849:C:H6	1.67	0.60
28:DF:11:VAL:HG13	28:DF:127:GLU:HB2	1.84	0.60
2:AC:22:TRP:HB3	2:AC:59:ARG:H	1.67	0.60
34:BO:28:SER:HB3	59:BA:2566:A:H61	1.66	0.60
59:BA:1604:C:H2'	59:BA:1605:C:C6	2.35	0.60
59:DA:1137:G:H2'	59:DA:1138:G:H5'	1.83	0.60
3:AD:31:CYS:HB3	3:AD:33:MET:HG2	1.83	0.60
59:DA:1849:G:H1	59:DA:1893:C:N4	1.99	0.60
17:CR:44:LEU:HD22	17:CR:79:LEU:HD21	1.84	0.60
17:CR:74:ARG:HG3	17:CR:79:LEU:HB3	1.84	0.60
29:DG:57:ALA:HB1	29:DG:90:LEU:HD22	1.84	0.60
35:DP:53:GLY:O	35:DP:55:ARG:N	2.34	0.60
35:BP:51:PHE:CD1	35:BP:52:GLU:HB2	2.37	0.60
59:DA:38:A:H2'	59:DA:39:C:C6	2.37	0.60
45:DZ:10:ARG:HD2	45:DZ:36:LYS:HB2	1.84	0.60
41:DV:66:ARG:HG2	41:DV:88:ARG:HB3	1.83	0.60
20:AA:588:G:H1	20:AA:651:C:H42	1.50	0.60
32:DK:21:PRO:HA	32:DK:23:VAL:H	1.67	0.60
59:DA:740:U:H2'	59:DA:741:G:C8	2.37	0.60
59:BA:1305:C:H42	59:BA:1623:G:H1	1.47	0.60
47:B2:48:HIS:CD2	47:B2:49:LYS:H	2.19	0.60
36:DQ:14:ARG:NH1	59:DA:956:G:N7	2.40	0.60
20:CA:231:G:H2'	20:CA:232:G:H8	1.67	0.60
59:DA:2037:G:H2'	59:DA:2038:G:C8	2.37	0.59
3:CD:10:ARG:HA	3:CD:13:ARG:HD2	1.83	0.59
39:DT:47:GLY:HA3	39:DT:65:LYS:HB2	1.84	0.59
59:DA:686:G:N2	59:DA:788:A:H61	2.00	0.59
39:DT:59:THR:OG1	39:DT:59:THR:O	2.12	0.59
28:BF:5:ALA:HB1	28:BF:123:LEU:HD21	1.84	0.59
25:DC:104:ILE:HG23	25:DC:111:PHE:CZ	2.36	0.59
23:CY:567:LEU:HG	23:CY:568:TYR:H	1.66	0.59
20:AA:33:A:H4'	20:AA:364:A:H1'	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:241:PRO:HA	59:BA:1971:A:H1'	1.84	0.59
20:CA:1040:U:H2'	20:CA:1041:A:H8	1.67	0.59
25:BC:30:VAL:HG13	25:BC:33:LEU:HD12	1.82	0.59
34:DO:23:ARG:HG3	34:DO:24:VAL:H	1.66	0.59
42:BW:26:GLY:HA2	42:BW:71:VAL:O	2.02	0.59
47:D2:2:LYS:HD2	47:D2:5:GLU:HB2	1.84	0.59
9:AJ:42:THR:H	20:AA:1151:A:H5''	1.66	0.59
59:DA:1891:G:H2'	59:DA:1892:C:C6	2.37	0.59
7:AH:103:VAL:HG12	7:AH:138:TRP:HD1	1.67	0.59
59:DA:565:C:H4'	59:DA:1253:A:C6	2.36	0.59
20:AA:1206:G:H2'	20:AA:1207:G:O4'	2.02	0.59
25:BC:23:ILE:HG21	25:BC:191:ARG:HG3	1.84	0.59
10:AK:41:THR:HG21	10:AK:71:LYS:HD3	1.83	0.59
59:BA:1128:A:O4'	59:BA:2516:G:O2'	2.20	0.59
59:BA:322:A:O4'	59:BA:340:A:H1'	2.00	0.59
59:BA:772:C:H2'	59:BA:773:U:C6	2.36	0.59
20:AA:1290:G:H3'	20:AA:1291:G:H8	1.66	0.59
59:DA:2686:G:H2'	59:DA:2687:U:O4'	2.02	0.59
59:DA:1025:G:H8	59:DA:1025:G:OP1	1.85	0.59
59:BA:2345:G:H5''	59:BA:2347:C:O4'	2.02	0.59
59:BA:2178:C:H2'	59:BA:2179:C:C6	2.35	0.59
59:BA:38:A:H2'	59:BA:39:C:C6	2.37	0.59
11:AL:58:VAL:HG12	11:AL:60:LEU:N	2.10	0.59
25:BC:104:ILE:HG21	25:BC:132:LEU:HD11	1.82	0.59
25:BC:81:GLY:O	25:BC:84:ILE:HB	2.02	0.59
20:CA:22:G:H4'	20:CA:885:G:C8	2.37	0.59
20:CA:885:G:H1	20:CA:912:C:H42	1.51	0.59
36:BQ:1:MET:N	36:BQ:48:GLU:OE1	2.35	0.59
20:CA:563:A:H5''	20:CA:564:C:H5	1.66	0.59
20:CA:390:C:H2'	20:CA:391:G:C8	2.35	0.59
21:CW:51:A:H61	21:CW:63:C:H42	1.48	0.59
5:AF:82:ARG:HB2	5:AF:85:VAL:HG23	1.83	0.59
7:AH:111:ILE:HD11	7:AH:137:VAL:HG23	1.83	0.59
59:BA:2829:C:H2'	59:BA:2830:G:H8	1.67	0.59
20:CA:990:C:H2'	20:CA:991:U:O4'	2.03	0.59
59:DA:1318:C:N3	59:DA:1334:G:O6	2.35	0.59
20:CA:1262:C:H2'	20:CA:1263:C:C6	2.37	0.59
41:DV:1:MET:SD	41:DV:99:ILE:HG13	2.42	0.59
20:AA:217:C:H2'	20:AA:218:C:H6	1.67	0.59
50:B6:6:ARG:HD2	50:B6:6:ARG:H	1.67	0.59
59:BA:978:G:O2'	59:BA:1002:G:O2'	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2698:U:H2'	59:DA:2699:C:C6	2.37	0.59
23:CY:134:ALA:HB3	23:CY:258:VAL:HA	1.83	0.59
11:CL:34:ARG:HB2	20:CA:363:A:OP1	2.01	0.59
25:DC:41:THR:HB	25:DC:175:PRO:HA	1.83	0.59
28:DF:102:PRO:HB3	59:DA:606:U:H5''	1.85	0.59
59:BA:2284:C:N4	59:BA:2384:G:H1	1.99	0.59
59:BA:847:U:HO2'	59:BA:848:G:H8	1.48	0.59
16:AQ:66:SER:OG	20:AA:254:G:OP1	2.20	0.59
11:CL:12:ARG:HH22	20:CA:881:G:P	2.25	0.59
27:DE:204:ALA:HA	59:DA:2734:A:H1'	1.83	0.59
45:DZ:3:TYR:O	45:DZ:58:VAL:N	2.35	0.59
32:DK:42:ASN:ND2	32:DK:49:GLY:O	2.34	0.59
26:BD:27:THR:HG23	26:BD:83:GLU:HB3	1.84	0.59
25:BC:140:ASN:O	25:BC:142:LYS:N	2.34	0.59
29:BG:119:GLY:HA3	29:BG:181:ARG:HA	1.84	0.59
49:D5:31:VAL:HG23	49:D5:40:LYS:HG3	1.84	0.59
52:B8:36:LYS:HD2	52:B8:40:GLU:HG3	1.84	0.59
59:DA:1000:A:H2'	59:DA:1001:A:C8	2.38	0.59
1:CB:53:ARG:O	1:CB:56:ARG:HB2	2.02	0.59
59:DA:1113:U:H2'	59:DA:1114:G:C8	2.38	0.59
10:CK:21:ILE:HD12	10:CK:84:VAL:HG12	1.85	0.59
39:BT:74:ARG:HD2	39:BT:76:PHE:CZ	2.37	0.59
3:CD:13:ARG:HG3	3:CD:40:PRO:HD3	1.83	0.59
38:DS:92:TYR:OH	59:DA:2293:C:OP1	2.20	0.59
59:BA:1438:U:C2	59:BA:1553:A:N7	2.70	0.59
59:DA:1886:C:O2'	59:DA:2101:G:O2'	2.21	0.59
28:DF:8:GLN:HB2	28:DF:22:ALA:HB2	1.84	0.59
59:BA:1287:A:H2'	59:BA:1288:U:H5'	1.84	0.59
59:BA:1288:U:C4	59:BA:1327:C:H1'	2.37	0.59
39:BT:27:THR:HG22	39:BT:49:VAL:HB	1.84	0.59
59:BA:1430:C:N4	59:BA:1563:G:H1	2.00	0.59
44:BY:73:ARG:HH21	44:BY:82:PRO:HD3	1.67	0.59
25:BC:15:VAL:HG22	25:BC:221:PRO:HB3	1.84	0.59
34:DO:31:LYS:NZ	59:DA:2547:U:O2'	2.34	0.59
59:BA:1346:G:H1	59:BA:1600:C:H42	1.49	0.59
21:CW:23:A:H2'	21:CW:24:G:C8	2.37	0.59
59:DA:969:U:H2'	59:DA:970:C:C6	2.37	0.59
17:AR:75:ILE:HD11	20:AA:735:C:H1'	1.84	0.59
27:DE:49:LEU:HD11	27:DE:81:ILE:HG12	1.84	0.59
59:DA:49:A:H5''	59:DA:51:G:O4'	2.01	0.59
29:DG:103:LEU:HA	29:DG:106:LEU:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:36:C:O2	60:BB:49:C:O2'	2.20	0.59
6:CG:89:MET:HA	6:CG:155:ARG:HD2	1.83	0.59
59:BA:852:G:H2'	59:BA:853:G:C8	2.37	0.59
20:AA:1230:C:H2'	20:AA:1231:G:H8	1.68	0.59
30:DH:127:GLU:OE2	30:DH:130:ARG:NH2	2.35	0.59
20:AA:1266:G:N2	20:AA:1269:A:OP2	2.34	0.59
41:DV:4:ILE:HG13	41:DV:13:ARG:HG3	1.83	0.59
59:DA:2011:U:H2'	59:DA:2012:G:O4'	2.02	0.59
20:AA:505:G:H1	20:AA:526:C:N4	2.00	0.59
4:AE:17:ALA:HA	4:AE:26:PHE:HA	1.83	0.59
20:AA:801:U:H2'	20:AA:802:A:C8	2.37	0.59
59:BA:2091:U:OP2	59:BA:2092:U:O2'	2.18	0.59
59:BA:2886:G:H2'	59:BA:2887:U:H6	1.68	0.59
2:AC:25:GLY:O	2:AC:27:LYS:N	2.35	0.59
20:CA:59:A:H1'	20:CA:354:G:N2	2.17	0.59
19:CT:53:LEU:HA	19:CT:56:MET:HB2	1.84	0.59
20:AA:898:G:N2	20:AA:901:A:OP2	2.36	0.59
23:CY:25:LYS:HE2	23:CY:86:GLY:HA2	1.84	0.59
20:CA:815:A:C2	20:CA:1527:C:H1'	2.37	0.59
59:DA:1144:G:H2'	59:DA:1145:C:C6	2.37	0.59
59:BA:1018:C:N4	59:BA:1144:G:H1	1.97	0.59
59:BA:2570:G:H2'	59:BA:2571:C:C6	2.38	0.59
20:AA:919:A:O2'	20:AA:1080:A:N1	2.31	0.59
44:DY:86:ARG:HD2	44:DY:88:LYS:HD2	1.84	0.59
40:DU:3:ARG:NH1	59:DA:446:G:H5'	2.17	0.59
59:BA:1286:A:O2'	59:BA:1288:U:OP2	2.20	0.59
11:AL:93:LEU:HD21	11:AL:96:VAL:HG13	1.84	0.59
26:BD:157:ARG:HH21	59:BA:1818:U:H6	1.48	0.59
17:CR:79:LEU:HD23	17:CR:80:PRO:HD2	1.85	0.59
9:CJ:92:THR:OG1	9:CJ:93:GLY:N	2.34	0.59
20:AA:129(A):G:H4'	20:AA:130:A:H5''	1.84	0.59
20:AA:308:C:H2'	20:AA:309:G:H8	1.67	0.59
20:CA:115:G:H1'	20:CA:116:A:N7	2.18	0.59
59:DA:1975:G:O2'	59:DA:1976:U:O5'	2.21	0.59
14:AO:82:ILE:HG12	14:AO:87:ILE:H	1.67	0.59
44:BY:51:VAL:HB	44:BY:55:TYR:HB2	1.84	0.59
27:DE:55:ASN:HB2	27:DE:74:PRO:O	2.03	0.59
20:CA:216:G:H2'	20:CA:217:C:C6	2.38	0.59
1:AB:61:LEU:O	1:AB:65:GLY:N	2.32	0.59
46:D0:47:PRO:HG3	46:D0:53:MET:HB2	1.85	0.59
59:DA:2243:U:H2'	59:DA:2244:U:H6	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1354:A:H62	59:DA:1377:G:H21	0.73	0.59
33:DN:22:THR:HB	33:DN:25:ARG:HB2	1.84	0.59
59:BA:1664:A:H3'	59:BA:1665:A:H8	1.67	0.59
27:BE:143:ASN:HB3	27:BE:147:PRO:HD2	1.82	0.59
59:BA:1541:U:H3'	59:BA:1542:G:C3'	2.27	0.59
59:DA:575:A:H2'	59:DA:576:U:H6	1.67	0.59
25:BC:115:VAL:HB	25:BC:150:ILE:HG23	1.84	0.59
27:DE:12:THR:HG21	39:DT:57:PHE:HD1	1.67	0.59
59:DA:319:C:H42	59:DA:323:G:H1	1.50	0.59
11:AL:49:ASN:HD21	20:AA:528:C:N4	2.01	0.59
59:DA:796:C:H2'	59:DA:797:C:C6	2.37	0.59
26:BD:95:LEU:HD11	26:BD:105:ILE:HG22	1.84	0.59
44:DY:84:ARG:HH21	44:DY:97:ARG:HH12	1.49	0.59
3:AD:172:PRO:HB2	3:AD:187:ARG:HH22	1.68	0.59
59:BA:2656:U:O4	59:BA:2665:A:N7	2.36	0.59
36:DQ:69:PHE:CE2	36:DQ:71:ASP:HB3	2.37	0.59
48:D3:11:SER:HB2	59:DA:988:A:P	2.43	0.59
26:DD:244:ARG:NH1	59:DA:1841:U:O2'	2.21	0.59
46:D0:35:ASN:H	46:D0:61:ALA:HB3	1.68	0.59
27:DE:49:LEU:HD11	27:DE:81:ILE:H	1.68	0.59
16:AQ:3:LYS:NZ	20:AA:128:G:O2'	2.35	0.59
28:DF:113:ALA:HB1	28:DF:186:ILE:HG21	1.84	0.59
45:DZ:166:SER:H	45:DZ:167:PRO:HA	1.66	0.59
9:CJ:16:LEU:HD11	9:CJ:70:ARG:HD3	1.83	0.59
35:BP:110:TYR:HD2	35:BP:111:ARG:HG3	1.67	0.59
20:AA:1103:C:H2'	20:AA:1104:G:O4'	2.03	0.59
20:CA:1492:A:H2'	20:CA:1493:A:C8	2.37	0.59
34:BO:34:THR:OG1	34:BO:35:VAL:N	2.35	0.59
42:DW:92:ARG:NH2	59:DA:2015:A:OP1	2.36	0.59
11:CL:74:GLY:O	11:CL:102:ARG:NH2	2.35	0.59
29:BG:3:LEU:HB2	29:BG:97:ASP:HB3	1.84	0.59
59:DA:1638:C:H4'	59:DA:2710:C:O2	2.03	0.59
26:DD:51:VAL:HG21	26:DD:54:ARG:HB2	1.83	0.59
59:BA:680:G:H2'	59:BA:681:G:C8	2.38	0.59
59:BA:579:G:O2'	59:BA:2019:A:OP1	2.18	0.59
20:CA:950:U:H2'	20:CA:951:G:H8	1.68	0.59
38:BS:26:LEU:HD22	38:BS:87:PHE:HA	1.85	0.59
11:CL:52:LEU:HD12	11:CL:54:LYS:HZ3	1.67	0.59
8:AI:16:ARG:NH1	20:AA:1147:C:O2	2.35	0.59
11:AL:34:ARG:HB2	20:AA:363:A:OP1	2.03	0.59
20:AA:241:C:H2'	20:AA:242:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1260:G:H2'	59:BA:1261:C:C6	2.38	0.59
59:DA:1149:G:H2'	59:DA:1150:C:C6	2.36	0.59
23:CY:201:ILE:HD13	23:CY:206:LEU:HD12	1.83	0.59
14:AO:7:GLU:O	14:AO:10:LYS:HG3	2.03	0.59
59:BA:1410:G:H2'	59:BA:1411:C:C6	2.37	0.59
45:DZ:7:ALA:HB2	45:DZ:59:LEU:HB2	1.83	0.59
34:BO:19:ILE:HG22	34:BO:43:VAL:HA	1.85	0.59
57:B1:35:THR:HG21	59:BA:2432:A:C8	2.37	0.59
35:DP:85:LEU:HG	35:DP:118:GLY:HA3	1.84	0.59
15:AP:20:VAL:HG23	15:AP:35:LYS:HA	1.85	0.59
8:CI:126:SER:OG	20:CA:1231:G:O3'	2.21	0.59
23:CY:136:ALA:HB3	23:CY:260:LEU:HB2	1.84	0.59
40:BU:95:LEU:HD11	41:BV:13:ARG:HD3	1.83	0.59
27:BE:14:ILE:HG13	27:BE:23:VAL:HG21	1.85	0.59
25:DC:47:LYS:HB3	25:DC:212:SER:HB2	1.83	0.59
28:BF:9:ILE:HG23	28:BF:12:LEU:HD23	1.83	0.59
39:DT:41:ARG:HG2	39:DT:43:GLN:H	1.68	0.59
52:B8:57:ARG:HA	52:B8:60:LEU:HD12	1.85	0.59
23:AY:309:LEU:HA	23:AY:333:GLY:HA3	1.83	0.59
60:DB:104:A:H2'	60:DB:105:G:O4'	2.03	0.59
38:DS:74:ALA:HA	38:DS:105:ALA:HB2	1.85	0.59
12:CM:48:LEU:HD13	12:CM:53:VAL:HG22	1.85	0.59
20:AA:576:G:OP2	20:AA:577:G:H5''	2.03	0.59
59:DA:2718:G:O2'	59:DA:2847:U:OP1	2.19	0.59
27:BE:132:HIS:HB3	59:BA:1658:C:OP1	2.03	0.59
1:AB:42:ILE:HD11	1:AB:202:PRO:HB2	1.84	0.59
37:BR:48:VAL:O	37:BR:52:ILE:HG12	2.03	0.59
59:DA:1448:G:HO2'	59:DA:1529:A:H61	1.51	0.59
52:D8:26:LYS:HG2	52:D8:47:LYS:HG3	1.84	0.59
19:AT:66:ALA:HB1	19:AT:72:LEU:HB2	1.84	0.59
20:AA:131:C:H2'	20:AA:132:C:C6	2.38	0.59
59:DA:1359:A:OP2	59:DA:1371:G:N2	2.34	0.59
40:BU:105:VAL:O	40:BU:109:LEU:HG	2.02	0.59
10:CK:108:ILE:HB	17:CR:87:ARG:HA	1.85	0.59
18:AS:12:ASP:OD1	18:AS:14:HIS:NE2	2.35	0.59
35:BP:69:GLY:HA2	59:BA:245:G:H5'	1.85	0.59
23:CY:83:ASP:C	23:CY:85:PRO:HD3	2.24	0.59
11:CL:60:LEU:HD23	11:CL:63:GLY:O	2.03	0.59
25:BC:41:THR:C	25:BC:43:GLU:H	2.06	0.59
41:DV:24:LYS:NZ	59:DA:1162:G:O2'	2.36	0.59
26:BD:79:VAL:C	26:BD:96:HIS:H	2.06	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1674:G:H1'	59:DA:1676:A:H62	1.68	0.59
59:DA:781:A:O2'	59:DA:1788:C:O2	2.17	0.59
59:DA:40:C:H2'	59:DA:41:C:H6	1.68	0.59
33:DN:39:ARG:HG2	33:DN:40:PRO:HD2	1.83	0.59
37:DR:33:ARG:HA	37:DR:114:VAL:O	2.03	0.59
30:BH:103:LEU:HD13	30:BH:125:VAL:HG21	1.84	0.59
23:AY:216:LEU:HD11	23:AY:246:ILE:HD11	1.83	0.59
8:CI:116:LYS:HA	8:CI:123:PRO:HD3	1.85	0.59
59:BA:1930:G:HO2'	59:BA:1968:G:H1	1.50	0.59
14:CO:25:THR:OG1	14:CO:26:GLU:OE2	2.19	0.59
25:BC:165:ARG:H	25:BC:172:ILE:HG13	1.68	0.58
25:DC:40:GLU:HG3	25:DC:218:THR:HB	1.84	0.58
59:DA:2500:U:O2'	59:DA:2504:U:OP1	2.15	0.58
49:D5:9:LYS:NZ	59:DA:2018:G:H3'	2.17	0.58
59:DA:2330:G:H1	59:DA:2385:C:N4	2.01	0.58
59:BA:1819:A:C4'	59:BA:1820:U:H5'	2.33	0.58
20:CA:520:A:H62	20:CA:529:G:H21	1.49	0.58
11:CL:70:ILE:HG23	11:CL:100:ILE:HD12	1.85	0.58
33:BN:26:LEU:HD23	33:BN:99:LEU:HD21	1.84	0.58
10:AK:85:ARG:HA	10:AK:110:ASP:O	2.03	0.58
36:BQ:54:MET:SD	36:BQ:64:ILE:HG21	2.43	0.58
61:AY:701:FUA:H201	61:AY:701:FUA:O1	2.03	0.58
15:AP:80:PHE:HB3	20:AA:458(E):A:H5''	1.85	0.58
59:BA:1631:A:N6	59:BA:1682:G:O3'	2.36	0.58
52:D8:26:LYS:HD2	52:D8:44:LYS:HD2	1.85	0.58
26:BD:45:ASN:HB3	59:BA:1813:G:H1'	1.84	0.58
45:BZ:58:VAL:HG22	45:BZ:68:PRO:HB3	1.85	0.58
20:CA:126:G:OP1	20:CA:633:G:N2	2.36	0.58
5:AF:11:ASN:HB3	5:AF:14:LEU:HG	1.84	0.58
59:BA:987:G:O2'	59:BA:1000:A:N3	2.34	0.58
8:CI:16:ARG:HH12	20:CA:1128:C:H5''	1.66	0.58
7:AH:14:ARG:HD3	7:AH:82:HIS:HE1	1.68	0.58
20:AA:950:U:H2'	20:AA:951:G:C8	2.38	0.58
47:B2:63:VAL:O	47:B2:66:GLU:HG2	2.03	0.58
30:DH:121:ILE:HG22	30:DH:136:ILE:H	1.68	0.58
59:BA:263:C:O2'	59:BA:429:A:N3	2.31	0.58
1:CB:59:GLU:HG3	1:CB:221:LEU:HD11	1.84	0.58
59:DA:692:C:H42	59:DA:770:G:H1	1.49	0.58
59:BA:1005:C:N4	59:BA:1138:G:H1	2.00	0.58
59:BA:1019:U:H2'	59:BA:1020:A:C8	2.38	0.58
59:DA:274:G:H2'	59:DA:275:G:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1412:C:H2'	20:CA:1413:A:H8	1.68	0.58
37:BR:20:LEU:HD11	59:BA:1277:G:H5'	1.85	0.58
59:DA:2370:G:H2'	59:DA:2371:G:O4'	2.03	0.58
40:BU:49:HIS:CD2	59:BA:559:G:H22	2.21	0.58
44:BY:84:ARG:HE	44:BY:97:ARG:HD2	1.67	0.58
20:CA:1392:G:O2'	20:CA:1502:A:OP1	2.20	0.58
9:CJ:60:ARG:NH2	20:CA:1366:C:O3'	2.35	0.58
50:D6:15:GLU:HB3	50:D6:20:ASN:HB2	1.85	0.58
25:BC:7:ARG:NH1	59:BA:2128:C:OP1	2.35	0.58
53:D9:30:PRO:HB2	59:DA:2527:C:H5''	1.85	0.58
27:DE:15:PHE:HD1	39:DT:80:SER:HB2	1.66	0.58
32:DK:89:HIS:HA	59:DA:1064:C:H4'	1.84	0.58
34:BO:14:THR:HB	34:BO:16:ALA:H	1.68	0.58
35:DP:88:LEU:HD11	35:DP:123:LEU:HD11	1.84	0.58
59:BA:1416:G:H2'	59:BA:1417:C:C6	2.37	0.58
25:BC:40:GLU:HG2	25:BC:219:MET:HG2	1.84	0.58
59:BA:307:G:N2	59:BA:309:G:H3'	2.18	0.58
10:AK:123:LYS:HA	10:AK:126:ARG:HB3	1.85	0.58
59:DA:680:G:H1	59:DA:797:C:N4	1.99	0.58
57:D1:11:ARG:NH2	59:DA:1365:A:O2'	2.36	0.58
26:BD:79:VAL:HA	26:BD:95:LEU:HA	1.85	0.58
20:AA:946:A:H2'	20:AA:947:G:H8	1.67	0.58
60:BB:74:U:H2'	60:BB:75:G:H8	1.68	0.58
28:BF:188:ARG:HB3	35:BP:7:ARG:NH2	2.18	0.58
42:BW:68:ARG:HH22	42:BW:111:HIS:HB2	1.68	0.58
33:BN:100:GLU:HB3	33:BN:117:PHE:CZ	2.37	0.58
26:DD:142:VAL:HG12	26:DD:163:ALA:O	2.04	0.58
35:BP:46:LYS:HG2	35:BP:51:PHE:CD1	2.38	0.58
20:AA:216:G:H2'	20:AA:217:C:C6	2.38	0.58
20:AA:272:C:H2'	20:AA:273:A:C8	2.38	0.58
20:CA:335:C:O2'	20:CA:1433:A:N3	2.28	0.58
26:DD:80:ALA:N	26:DD:94:LEU:O	2.33	0.58
60:BB:32:C:H2'	60:BB:33:G:C8	2.38	0.58
20:AA:1114:C:H2'	20:AA:1115:C:H6	1.69	0.58
50:D6:43:CYS:HB2	50:D6:44:ARG:HE	1.68	0.58
41:DV:41:GLY:H	41:DV:45:THR:HB	1.68	0.58
59:DA:459:U:H6	59:DA:460:A:C8	2.21	0.58
26:BD:165:ILE:HG22	26:BD:166:GLN:H	1.68	0.58
25:DC:125:GLY:HA2	25:DC:138:LEU:HD11	1.85	0.58
59:BA:273(G):C:N3	59:BA:363(A):G:N2	2.49	0.58
59:DA:1019:U:H3	59:DA:1020:A:N6	2.00	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:105:ALA:O	38:BS:107:GLU:N	2.37	0.58
46:D0:39:ARG:HH21	59:DA:2355:C:H1'	1.68	0.58
59:BA:1830:C:H2'	59:BA:1831:G:H8	1.68	0.58
59:DA:599:G:H1	59:DA:658:C:N4	2.00	0.58
59:BA:821:A:H3'	59:BA:946:G:C8	2.38	0.58
20:CA:1538:C:O2	22:CV:7:G:N1	2.28	0.58
34:DO:73:ASP:OD1	34:DO:75:SER:OG	2.21	0.58
20:CA:513:C:H42	20:CA:538:G:H1	1.51	0.58
45:DZ:58:VAL:HA	45:DZ:68:PRO:HA	1.83	0.58
59:DA:640:C:H42	59:DA:648:G:H1	1.50	0.58
28:DF:3:GLU:HA	28:DF:24:LEU:H	1.68	0.58
23:AY:368:GLU:O	23:AY:370:LYS:NZ	2.33	0.58
44:BY:4:LYS:HD2	44:BY:33:LYS:HB3	1.85	0.58
3:AD:157:LEU:O	3:AD:161:ASN:ND2	2.34	0.58
29:BG:47:LYS:HA	29:BG:82:LEU:HG	1.83	0.58
49:D5:3:LYS:HG2	49:D5:5:PRO:HD2	1.85	0.58
20:AA:1306:A:N6	20:AA:1331:G:O2'	2.35	0.58
12:CM:44:ARG:NH1	20:CA:1296:C:OP1	2.36	0.58
59:BA:2679:A:H61	59:BA:2728:U:H3	1.50	0.58
27:BE:111:ARG:H	27:BE:161:GLY:HA3	1.67	0.58
29:BG:107:LEU:HD13	29:BG:177:GLY:HA3	1.85	0.58
33:DN:74:ARG:HH12	33:DN:85:ILE:HD11	1.68	0.58
25:DC:34:ALA:HB2	25:DC:217:THR:HG21	1.85	0.58
28:DF:156:LEU:HD12	28:DF:193:VAL:HG21	1.84	0.58
26:BD:35:LYS:N	26:BD:36:PRO:HD2	2.19	0.58
38:BS:33:LYS:HD2	60:BB:27:C:H5''	1.84	0.58
13:CN:61:TRP:HZ2	20:CA:1368:G:H4'	1.69	0.58
59:DA:516:C:H2'	59:DA:517:C:C6	2.39	0.58
34:BO:22:ILE:HD12	59:BA:1952:A:C2	2.38	0.58
59:DA:182:A:H2'	59:DA:183:C:C6	2.38	0.58
59:DA:2116:G:N7	59:DA:2166:G:N2	2.52	0.58
23:CY:355:LEU:HB2	23:CY:366:VAL:HG22	1.84	0.58
20:CA:1242:C:H2'	20:CA:1243:C:C6	2.38	0.58
59:DA:2839:G:H1	59:DA:2878:U:H3	1.50	0.58
59:BA:484:C:H2'	59:BA:485:C:C6	2.38	0.58
2:CC:95:THR:O	2:CC:97:LYS:N	2.36	0.58
52:D8:16:ILE:HG21	52:D8:60:LEU:HD11	1.85	0.58
34:BO:30:ALA:HB2	59:BA:2674:G:H4'	1.85	0.58
46:D0:50:ASN:HD22	46:D0:63:VAL:HG11	1.66	0.58
48:B3:4:LEU:HD23	48:B3:58:VAL:HG13	1.84	0.58
60:DB:66:A:H61	60:DB:107:U:H2'	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:161:GLY:O	27:DE:163:GLU:N	2.36	0.58
26:DD:79:VAL:C	26:DD:96:HIS:H	2.06	0.58
27:BE:13:ARG:HG3	27:BE:15:PHE:HE2	1.68	0.58
23:CY:103:GLY:HA3	23:CY:280:LEU:HD12	1.86	0.58
28:DF:185:ASP:HA	28:DF:188:ARG:HG2	1.85	0.58
28:BF:154:VAL:HB	28:BF:173:VAL:HG13	1.85	0.58
23:AY:524:GLU:HB2	23:AY:564:LYS:HA	1.86	0.58
59:DA:1792:G:N2	59:DA:1827:C:N3	2.51	0.58
59:BA:608:A:H2'	59:BA:609(A):A:C8	2.38	0.58
49:D5:18:ALA:C	49:D5:21:SER:H	2.07	0.58
20:CA:584:G:H1	20:CA:757:U:H3	1.51	0.58
60:DB:66:A:N6	60:DB:107:U:H2'	2.19	0.58
33:BN:76:SER:HB3	59:BA:2641:G:H4'	1.84	0.58
10:AK:20:TYR:HB2	10:AK:31:THR:HG23	1.86	0.58
26:BD:89:SER:HB2	26:BD:159:ALA:HB2	1.86	0.58
49:D5:45:VAL:HG13	49:D5:51:TYR:H	1.69	0.58
20:CA:551:U:H2'	20:CA:552:U:C6	2.38	0.58
12:AM:34:LEU:HD13	12:AM:41:PRO:HG3	1.86	0.58
20:CA:1015:A:H2'	20:CA:1016:A:C8	2.37	0.58
25:DC:7:ARG:HH22	59:DA:2128:C:H5''	1.67	0.58
60:DB:81:G:H1	60:DB:95:U:H3	1.50	0.58
37:DR:104:ARG:HB3	37:DR:109:ALA:HB3	1.85	0.58
59:BA:1054:A:H2'	59:BA:1055:G:C8	2.39	0.58
59:DA:2601:C:H2'	59:DA:2603:G:C8	2.38	0.58
28:DF:10:PRO:HG3	28:DF:19:GLU:HA	1.86	0.58
27:BE:109:LYS:HB2	37:BR:2:ARG:NE	2.19	0.58
59:DA:1558:A:O2'	59:DA:1559:G:OP2	2.21	0.58
20:AA:1513:A:H2'	20:AA:1514:C:C6	2.39	0.58
1:AB:75:LYS:O	1:AB:78:GLN:HB3	2.04	0.58
41:DV:4:ILE:HG22	41:DV:39:LEU:HD23	1.85	0.58
37:BR:39:PRO:HG2	59:BA:1651:G:H5'	1.84	0.58
35:BP:27:HIS:HB3	59:BA:814:C:H5	1.67	0.58
57:D1:44:PRO:HD3	59:DA:396:G:H4'	1.86	0.58
2:CC:22:TRP:CZ2	13:CN:54:PRO:HG2	2.38	0.58
59:BA:2229:C:H2'	59:BA:2230:G:H8	1.69	0.58
12:AM:86:CYS:O	12:AM:90:LEU:N	2.34	0.58
33:BN:35:ARG:HB3	33:BN:42:TRP:HZ3	1.69	0.58
40:BU:64:ARG:NH2	40:BU:64:ARG:HB2	2.18	0.58
23:AY:69:VAL:HA	23:AY:81:ILE:O	2.03	0.58
59:DA:884:C:H42	59:DA:892:G:H1	1.52	0.58
59:DA:2834:G:H1'	59:DA:2883:A:N6	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:90:LYS:NZ	59:DA:1076:C:O2'	2.37	0.58
10:CK:22:HIS:HB3	10:CK:29:ILE:HG22	1.83	0.58
36:DQ:68:ILE:HG23	36:DQ:103:MET:HA	1.83	0.58
6:CG:78:ARG:HG2	6:CG:85:TYR:HD1	1.68	0.58
59:BA:2080:G:H2'	59:BA:2081:C:C6	2.38	0.58
29:BG:109:VAL:HG11	58:B4:14:ILE:HG12	1.86	0.58
59:DA:1638:C:H2'	59:DA:1639:U:O4'	2.03	0.58
59:DA:2023:G:N1	59:DA:2040:C:C2	2.60	0.58
59:BA:24:G:H2'	59:BA:25:U:C6	2.38	0.58
20:CA:127:G:H2'	20:CA:128:G:C8	2.39	0.58
8:CI:42:ARG:NH1	8:CI:75:ASP:OD2	2.36	0.58
25:DC:79:ALA:O	25:DC:84:ILE:HG13	2.04	0.58
11:AL:45:PRO:HG3	11:AL:92:ASP:HB3	1.86	0.58
51:B7:40:TRP:CZ3	59:BA:459:U:C6	2.89	0.58
59:DA:1324:G:H1	59:DA:1330:C:N4	2.02	0.58
34:DO:68:GLU:N	34:DO:68:GLU:OE2	2.35	0.58
20:CA:565:U:OP2	20:CA:566:G:O2'	2.22	0.58
20:AA:356:A:N3	20:AA:368:U:O2'	2.29	0.58
20:CA:801:U:H2'	20:CA:802:A:C8	2.39	0.58
26:DD:134:ARG:HA	26:DD:168:ARG:HE	1.67	0.58
8:AI:11:LYS:HG3	8:AI:108:VAL:HA	1.86	0.58
20:CA:217:C:H2'	20:CA:218:C:H6	1.68	0.58
10:CK:108:ILE:HD13	17:CR:87:ARG:HG2	1.85	0.58
47:B2:21:LEU:HD13	47:B2:63:VAL:HG12	1.86	0.58
53:B9:22:ARG:NH1	59:BA:2741:A:OP1	2.35	0.58
46:D0:16:SER:HB2	59:DA:2261:C:H3'	1.84	0.58
42:BW:13:SER:HA	42:BW:99:ARG:HB2	1.85	0.58
7:AH:119:LEU:HB2	7:AH:124:ALA:HB2	1.85	0.58
3:AD:10:ARG:NH2	20:AA:543:C:OP2	2.28	0.58
12:CM:84:ILE:HD11	18:CS:63:THR:HG23	1.85	0.58
59:BA:1291:C:H4'	59:BA:1535:U:O2'	2.03	0.58
6:AG:54:THR:OG1	6:AG:55:GLY:N	2.36	0.58
12:AM:97:PRO:HA	12:AM:110:ARG:HG3	1.86	0.58
59:BA:704:G:HO2'	59:BA:705:A:P	2.27	0.58
20:CA:591:U:H2'	20:CA:592:G:C8	2.39	0.58
59:DA:459:U:O4	59:DA:470:A:N7	2.36	0.58
59:BA:448:U:O4	59:BA:582:G:N2	2.37	0.58
20:AA:410:G:N1	20:AA:431:A:OP2	2.31	0.58
59:DA:787:U:H5''	59:DA:788:A:H5'	1.85	0.58
28:DF:62:ARG:HH21	28:DF:64:ILE:HA	1.69	0.58
25:DC:67:HIS:NE2	25:DC:188:ASP:HB2	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:862:G:H2'	59:BA:863:A:O4'	2.04	0.58
59:BA:1478:G:H1	59:BA:1515:C:N4	2.01	0.58
23:AY:565:VAL:HG12	23:AY:566:THR:O	2.03	0.58
31:DJ:25:UNK:C	31:DJ:111:UNK:HA	2.34	0.58
60:BB:29:A:H2'	60:BB:30:C:C6	2.39	0.58
59:BA:2241:A:H2'	59:BA:2242:G:C8	2.39	0.58
59:DA:2130:U:O2'	59:DA:2158:A:N1	2.34	0.58
59:BA:1435:G:H1	59:BA:1557:C:N4	2.01	0.58
59:DA:1474:C:H2'	59:DA:1475:G:H8	1.69	0.58
59:DA:2834:G:H1'	59:DA:2883:A:H61	1.68	0.58
59:BA:358:U:H2'	59:BA:359:A:C8	2.39	0.58
59:BA:174:C:H2'	59:BA:175:G:O4'	2.03	0.58
23:CY:148:LEU:HA	23:CY:151:ARG:HH21	1.68	0.58
59:BA:915:C:H2'	59:BA:916:G:O4'	2.04	0.58
8:CI:37:PHE:HE1	8:CI:77:ILE:HD12	1.68	0.58
30:BH:90:LYS:HB2	30:BH:163:TYR:CE1	2.39	0.58
20:AA:689:C:H2'	20:AA:690:G:O4'	2.04	0.58
57:B1:46:LEU:HD23	57:B1:61:ARG:HH12	1.67	0.58
59:DA:2593:U:H3	59:DA:2600:A:H61	1.51	0.58
15:CP:21:VAL:HB	15:CP:36:ILE:HD11	1.85	0.58
20:AA:815:A:N6	20:AA:1508:G:H21	2.01	0.58
59:DA:2849:U:H1'	59:DA:2866:U:H6	1.69	0.58
20:CA:269:C:H2'	20:CA:270:A:C8	2.38	0.58
59:DA:226:G:H1'	59:DA:228:A:N6	2.19	0.58
59:BA:227:A:N6	59:BA:410:G:H21	2.02	0.58
59:DA:685:A:H5''	59:DA:774:A:H61	1.68	0.58
20:AA:1510:U:H2'	20:AA:1511:G:C8	2.39	0.58
1:AB:162:ILE:HD11	1:AB:184:VAL:HG13	1.85	0.58
20:AA:1002:G:H2'	20:AA:1003:G:C8	2.38	0.58
59:BA:868:U:H2'	59:BA:869:G:C8	2.39	0.58
59:BA:1498:C:H2'	59:BA:1499:C:C6	2.38	0.58
20:CA:186(E):C:N4	20:CA:186(L):G:H1	2.02	0.58
32:BK:60:TYR:O	32:BK:62:ASP:N	2.34	0.58
2:CC:11:ARG:HB3	2:CC:15:THR:HB	1.86	0.58
59:BA:1639:U:H2'	59:BA:1640:C:H5''	1.86	0.58
59:DA:2090:G:H1	59:DA:2229:C:H42	1.51	0.58
59:DA:1403:C:H5''	59:DA:1471:A:H1'	1.86	0.58
23:AY:114:VAL:HB	23:AY:116:PRO:HD3	1.86	0.58
36:BQ:68:ILE:HG23	36:BQ:103:MET:HA	1.86	0.58
8:CI:11:LYS:NZ	20:CA:1372:U:OP2	2.25	0.58
1:AB:15:VAL:HB	1:AB:209:ARG:HE	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:32:LEU:O	38:BS:62:LYS:NZ	2.36	0.58
35:DP:111:ARG:HB3	35:DP:128:HIS:HB2	1.84	0.58
59:DA:1864:U:OP1	59:DA:2410:G:O2'	2.22	0.58
28:BF:41:LEU:HB3	59:BA:443:A:H61	1.68	0.58
20:AA:1488:G:H2'	20:AA:1489:G:H8	1.69	0.57
20:AA:1422:G:H2'	20:AA:1423:G:H8	1.69	0.57
26:DD:43:ARG:HG2	59:DA:691:C:O2'	2.04	0.57
26:DD:43:ARG:HD3	26:DD:44:ASN:HB3	1.85	0.57
39:DT:49:VAL:HG23	39:DT:63:VAL:HG22	1.86	0.57
3:AD:101:LEU:HD22	3:AD:138:TYR:HD2	1.69	0.57
25:BC:157:ILE:HG23	25:BC:161:ARG:HB2	1.86	0.57
60:DB:24:G:C6	60:DB:56:G:C2	2.92	0.57
40:DU:95:LEU:HD22	40:DU:101:ARG:NH2	2.19	0.57
38:DS:26:LEU:O	38:DS:88:ASP:HB3	2.04	0.57
26:BD:105:ILE:HG23	26:BD:106:ILE:O	2.04	0.57
59:DA:2829:C:H2'	59:DA:2830:G:C8	2.38	0.57
59:BA:570:G:OP1	59:BA:972:G:O2'	2.20	0.57
12:CM:3:ARG:HH21	12:CM:7:VAL:HG22	1.69	0.57
16:AQ:59:ILE:HG12	16:AQ:73:VAL:HG22	1.86	0.57
59:DA:1054:A:H2'	59:DA:1055:G:H8	1.67	0.57
59:DA:184:C:H2'	59:DA:185:U:H6	1.68	0.57
38:BS:25:ARG:HB3	38:BS:40:ILE:HG23	1.85	0.57
42:BW:84:ARG:NH2	59:BA:1322:A:O2'	2.36	0.57
20:AA:1062:U:H2'	20:AA:1063:C:C6	2.39	0.57
59:DA:1930:G:H22	59:DA:1968:G:H2'	1.69	0.57
36:DQ:67:ARG:O	36:DQ:101:ARG:NH2	2.36	0.57
46:B0:49:LYS:HB2	46:B0:80:HIS:ND1	2.19	0.57
59:BA:105:C:H2'	59:BA:106:C:C6	2.39	0.57
59:BA:2715:C:H2'	59:BA:2716:U:C6	2.39	0.57
59:DA:2576:G:O2'	59:DA:2579:C:OP2	2.18	0.57
2:CC:153:VAL:HG12	2:CC:198:VAL:HA	1.86	0.57
26:BD:43:ARG:O	26:BD:51:VAL:HG11	2.04	0.57
44:BY:7:VAL:HG22	44:BY:8:LYS:HZ2	1.67	0.57
20:AA:406:G:H2'	20:AA:407:G:H8	1.69	0.57
59:DA:1162:G:H2'	59:DA:1163:G:C8	2.39	0.57
38:DS:99:LYS:HG2	38:DS:101:LEU:H	1.68	0.57
23:AY:512:ILE:HG22	23:AY:567:LEU:HD13	1.86	0.57
59:BA:1045:A:N3	59:BA:1047:G:N2	2.53	0.57
20:AA:234:C:H2'	20:AA:235:C:C6	2.40	0.57
46:B0:11:ARG:NH2	59:BA:2278:A:H3'	2.20	0.57
26:BD:268:ARG:NH1	59:BA:2224:G:OP1	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:126:ASP:OD1	59:DA:2302:G:N2	2.38	0.57
59:DA:2154:G:H2'	59:DA:2155:G:C8	2.39	0.57
59:DA:1930:G:N2	59:DA:1968:G:H2'	2.20	0.57
30:BH:17:VAL:HG11	30:BH:50:VAL:HG21	1.85	0.57
20:AA:280:C:H3'	20:AA:281:G:H5'	1.85	0.57
31:BJ:39:UNK:O	31:BJ:43:UNK:N	2.37	0.57
6:AG:15:ASP:HB3	6:AG:19:GLY:H	1.69	0.57
4:AE:50:GLU:HG2	4:AE:52:PRO:HD2	1.85	0.57
35:DP:136:GLU:HA	35:DP:139:LYS:HG2	1.85	0.57
3:CD:33:MET:O	3:CD:35:ARG:N	2.37	0.57
20:AA:1480:G:C2	20:AA:1481:U:H1'	2.39	0.57
20:CA:1412:C:H2'	20:CA:1413:A:C8	2.39	0.57
59:BA:1854:A:H62	59:BA:1888:G:H8	1.50	0.57
59:DA:291:C:N3	59:DA:349:G:N2	2.43	0.57
59:DA:2233:U:H2'	59:DA:2234:G:C8	2.39	0.57
59:DA:2587:A:H62	59:DA:2608:G:N2	2.00	0.57
40:BU:40:PHE:HB3	41:BV:75:PHE:CE1	2.39	0.57
16:AQ:70:ARG:HG2	20:AA:235:C:H5'	1.86	0.57
20:CA:522:C:N4	20:CA:527:G:H1	2.01	0.57
20:CA:285:G:H2'	20:CA:286:G:C8	2.38	0.57
4:AE:19:MET:SD	20:AA:15:G:H1'	2.43	0.57
4:AE:20:GLN:H	4:AE:24:ARG:HA	1.68	0.57
8:CI:120:ARG:NH2	20:CA:1346:A:OP1	2.36	0.57
20:AA:1218:C:H2'	20:AA:1219:U:C6	2.40	0.57
59:BA:769:G:H4'	59:BA:1379:A:N6	2.20	0.57
20:AA:890:G:N2	20:AA:906:G:H2'	2.19	0.57
59:BA:690:G:O2'	59:BA:780:G:OP1	2.21	0.57
21:CW:23:A:H2'	21:CW:24:G:H8	1.69	0.57
37:BR:36:THR:OG1	37:BR:37:THR:N	2.36	0.57
29:DG:120:LEU:HD21	29:DG:133:LEU:HD22	1.85	0.57
44:DY:32:PRO:HD2	44:DY:34:LYS:H	1.69	0.57
20:AA:935:A:H2'	20:AA:936:C:H6	1.68	0.57
59:DA:2715:C:H2'	59:DA:2716:U:C6	2.39	0.57
4:AE:27:ARG:HE	4:AE:49:PRO:HD3	1.69	0.57
59:BA:2257:U:H2'	59:BA:2258:C:C6	2.39	0.57
59:DA:733:G:OP2	59:DA:761:A:N6	2.31	0.57
27:BE:203:LYS:HA	59:BA:2733:A:N1	2.19	0.57
23:CY:19:ALA:HB3	23:CY:25:LYS:HZ2	1.70	0.57
23:CY:23:ALA:HB3	23:CY:24:GLY:C	2.25	0.57
59:DA:2708:G:H2'	59:DA:2709:G:C8	2.39	0.57
59:BA:391:G:O2'	59:BA:410:G:OP1	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:58:UNK:HA	59:DA:1107:G:P	2.44	0.57
1:AB:71:VAL:HA	1:AB:93:VAL:HB	1.86	0.57
59:DA:2876:G:H2'	59:DA:2877:G:H8	1.68	0.57
26:BD:67:PHE:HZ	26:BD:157:ARG:HD2	1.69	0.57
28:BF:155:LEU:HB2	28:BF:189:THR:OG1	2.04	0.57
18:CS:40:ILE:HG12	18:CS:71:LEU:HD23	1.86	0.57
59:BA:648:G:H2'	59:BA:649:G:H8	1.68	0.57
59:BA:2030:A:H4'	59:BA:2031:A:H8	1.69	0.57
44:DY:96:ILE:O	44:DY:98:VAL:N	2.38	0.57
28:BF:54:ARG:HA	28:BF:87:GLY:HA3	1.86	0.57
4:CE:57:LYS:HZ1	4:CE:61:TYR:HD2	1.50	0.57
20:CA:603:U:H2'	20:CA:604:G:C8	2.39	0.57
25:DC:73:VAL:HG23	25:DC:112:ASP:HB2	1.87	0.57
19:AT:51:GLU:HA	19:AT:54:LYS:HD2	1.85	0.57
20:AA:757:U:H2'	20:AA:758:G:O4'	2.05	0.57
59:DA:2284:C:H42	59:DA:2384:G:H1	1.50	0.57
59:BA:2700:C:H2'	59:BA:2701:C:C6	2.39	0.57
10:CK:99:GLN:HG2	10:CK:105:VAL:HG21	1.85	0.57
26:DD:274:ARG:NH2	59:DA:1798:U:OP2	2.37	0.57
42:BW:1:MET:N	42:BW:109:GLU:OE2	2.33	0.57
28:BF:105:VAL:HG22	59:BA:600:G:H1'	1.86	0.57
1:CB:83:MET:CB	1:CB:234:PRO:HG3	2.34	0.57
3:CD:22:LYS:NZ	20:CA:410:G:O6	2.35	0.57
39:DT:49:VAL:H	39:DT:63:VAL:HG13	1.70	0.57
25:DC:139:PRO:HA	25:DC:145:THR:HB	1.87	0.57
25:DC:62:THR:HA	25:DC:162:ILE:O	2.04	0.57
21:CW:39:U:H2'	21:CW:40:G:H8	1.69	0.57
20:AA:302:G:N3	20:AA:556:C:H4'	2.20	0.57
59:DA:2107:C:N4	59:DA:2182:G:H1	2.01	0.57
23:AY:259:PHE:CE1	23:AY:275:ALA:HB1	2.40	0.57
32:BK:30:HIS:CD2	32:BK:59:ILE:HB	2.39	0.57
59:DA:2386:C:H2'	59:DA:2387:U:C6	2.38	0.57
59:DA:173:G:H2'	59:DA:174:C:C6	2.40	0.57
59:BA:1047:G:O2'	59:BA:1109:C:N4	2.36	0.57
36:BQ:52:VAL:HG11	59:BA:2482:G:H22	1.70	0.57
21:CW:64:G:N1	21:CW:65:U:C4	2.72	0.57
7:CH:108:GLY:HA2	7:CH:138:TRP:HB3	1.86	0.57
20:AA:1287:A:H2'	20:AA:1288:A:C8	2.40	0.57
59:DA:565:C:H4'	59:DA:1253:A:N6	2.18	0.57
14:CO:7:GLU:O	14:CO:10:LYS:HG3	2.04	0.57
7:AH:100:ILE:HG22	7:AH:125:ARG:HH21	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:25:SER:OG	35:DP:27:HIS:O	2.23	0.57
59:BA:2769:C:H2'	59:BA:2770:G:C8	2.39	0.57
49:D5:55:ARG:O	49:D5:56:LYS:HB2	2.04	0.57
59:BA:1404:C:H2'	59:BA:1405:U:H6	1.69	0.57
60:DB:6:C:H2'	60:DB:7:G:H8	1.70	0.57
26:DD:40:THR:O	26:DD:42:GLY:N	2.36	0.57
59:DA:1166:C:N3	59:DA:1183:G:N2	2.45	0.57
59:BA:1287:A:H2	59:BA:1649:G:O2'	1.87	0.57
51:D7:33:ARG:NH1	59:DA:466:A:O3'	2.37	0.57
27:DE:110:GLY:HA2	27:DE:162:ALA:N	2.19	0.57
59:DA:1028:A:H2'	59:DA:1029:A:H8	1.68	0.57
20:AA:68(G):G:C4	20:AA:68(H):G:H1'	2.40	0.57
59:BA:769:G:H2'	59:BA:770:G:H8	1.68	0.57
59:DA:724:U:H2'	59:DA:725:G:O4'	2.05	0.57
59:BA:2066:C:H2'	59:BA:2067:G:C8	2.39	0.57
42:BW:99:ARG:NH1	59:BA:1262:A:OP1	2.37	0.57
30:DH:175:LYS:O	30:DH:177:GLY:N	2.37	0.57
20:AA:68(P):C:H2'	20:AA:68(Q):U:O4'	2.05	0.57
20:AA:1118:C:H2'	20:AA:1119:C:H6	1.69	0.57
20:AA:1401:G:H2'	20:AA:1402:C:O4'	2.04	0.57
20:AA:992:U:H3	20:AA:1044:A:H62	1.50	0.57
59:DA:822:U:H5	59:DA:944:G:H1'	1.69	0.57
23:CY:415:PRO:HA	23:CY:474:ALA:HA	1.85	0.57
49:D5:8:LYS:NZ	59:DA:2055:C:OP1	2.32	0.57
59:BA:2545:G:H2'	59:BA:2546:U:O4'	2.03	0.57
7:CH:97:VAL:HG13	7:CH:98:LYS:H	1.69	0.57
59:BA:1802:A:H2'	59:BA:1803:A:C8	2.39	0.57
20:CA:410:G:H21	20:CA:432:A:H62	1.50	0.57
59:DA:459:U:C6	59:DA:470:A:N6	2.73	0.57
59:DA:460:A:H2'	59:DA:461:C:O4'	2.04	0.57
59:DA:1583:A:H4'	59:DA:1586:A:C4	2.40	0.57
59:DA:772:C:H2'	59:DA:773:U:C6	2.40	0.57
59:DA:391:G:H2'	59:DA:392:C:C6	2.40	0.57
59:BA:2054:A:H62	59:BA:2577:A:H61	1.53	0.57
59:BA:959:A:N3	59:BA:2457:U:O2'	2.36	0.57
59:BA:326:G:N2	59:BA:336:C:N3	2.47	0.57
3:AD:23:GLY:O	3:AD:25:ARG:N	2.36	0.57
59:DA:422:A:H2'	59:DA:423:A:C8	2.39	0.57
21:AW:17:U:H5'	21:AW:18:G:C4'	2.34	0.57
20:AA:813:U:H2'	20:AA:814:A:C8	2.39	0.57
25:DC:176:VAL:O	25:DC:178:LYS:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:71:ARG:NH1	34:DO:104:ARG:HE	2.03	0.57
26:BD:100:GLY:HA3	59:BA:1500:G:H21	1.69	0.57
59:DA:1510:A:H2'	59:DA:1511:A:O4'	2.04	0.57
20:AA:891:U:H2'	20:AA:892:A:C8	2.40	0.57
59:DA:2712:U:O2'	59:DA:2713:A:H5'	2.04	0.57
59:BA:1273:U:H5'	59:BA:1646:C:H42	1.68	0.57
29:BG:15:VAL:HG13	29:BG:19:LEU:HD12	1.86	0.57
15:AP:81:ARG:HG2	15:AP:83:GLU:H	1.69	0.57
20:CA:123:C:O2'	20:CA:290:C:O2	2.23	0.57
59:DA:856:C:H2'	59:DA:857:C:C6	2.39	0.57
20:AA:707:C:H2'	20:AA:708:C:C6	2.39	0.57
26:BD:89:SER:OG	26:BD:90:ALA:N	2.38	0.57
21:CW:66:C:H2'	21:CW:67:G:H8	1.68	0.57
59:BA:453:C:O2	59:BA:457:A:O2'	2.23	0.57
36:BQ:46:GLN:HG2	36:BQ:126:PRO:HD3	1.86	0.57
50:D6:26:ASN:ND2	50:D6:51:GLU:OE1	2.38	0.57
48:B3:50:VAL:O	48:B3:52:HIS:N	2.35	0.57
29:DG:114:ILE:HG22	29:DG:116:ASP:H	1.70	0.57
27:BE:175:VAL:HB	27:BE:182:LEU:HD12	1.87	0.57
59:BA:2152:G:H2'	59:BA:2153:G:C8	2.40	0.57
1:AB:157:ARG:HB3	1:AB:157:ARG:HH11	1.69	0.57
40:DU:108:GLU:HG3	41:DV:44:LYS:HG2	1.85	0.57
21:AW:63:C:H2'	21:AW:64:G:H8	1.70	0.57
9:CJ:51:ARG:HG3	9:CJ:59:SER:HB3	1.86	0.57
59:BA:141(A):A:H5'	59:BA:141(B):C:OP2	2.05	0.57
28:BF:46:ARG:HG2	28:BF:48:THR:HG23	1.87	0.57
31:DJ:58:UNK:N	59:DA:1106:G:H5''	2.19	0.57
27:DE:65:GLY:HA2	27:DE:70:ALA:HA	1.86	0.57
27:DE:13:ARG:HA	27:DE:21:VAL:C	2.24	0.57
59:DA:33:U:O4	59:DA:446:G:O2'	2.21	0.57
20:CA:997:U:H3	20:CA:1044:A:H2	1.52	0.57
10:CK:117:ASN:O	20:CA:716:A:O2'	2.23	0.57
29:DG:98:ARG:NH1	29:DG:98:ARG:HG2	2.20	0.57
10:AK:111:ASP:O	10:AK:113:PRO:HD3	2.05	0.57
2:AC:7:PRO:HG2	2:AC:201:TYR:CE2	2.39	0.57
59:DA:821:A:H3'	59:DA:946:G:C8	2.40	0.57
20:AA:1286:A:N6	20:AA:1355:G:OP1	2.37	0.57
23:AY:107:VAL:HG22	23:AY:135:PHE:HB3	1.87	0.57
23:AY:136:ALA:HB3	23:AY:260:LEU:HB2	1.86	0.57
34:DO:34:THR:H	34:DO:37:ASP:CG	2.06	0.57
59:BA:2649:U:H2'	59:BA:2650:U:H6	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:39:ILE:HG13	29:DG:92:VAL:HG13	1.87	0.57
21:CW:70:G:H2'	21:CW:71:C:C6	2.40	0.57
17:AR:58:LEU:H	17:AR:58:LEU:HD22	1.69	0.57
59:BA:388:G:H5'	59:BA:389:G:OP2	2.04	0.57
23:CY:210:ARG:O	23:CY:213:HIS:HB3	2.05	0.57
59:DA:13:A:H61	59:DA:525:U:H3'	1.70	0.57
14:CO:72:ARG:NH2	20:CA:754:C:OP1	2.37	0.57
7:CH:44:PHE:CD2	7:CH:80:ILE:HG13	2.39	0.57
20:CA:745:C:H1'	20:CA:836:G:O2'	2.04	0.57
33:DN:42:TRP:CD1	40:DU:63:VAL:HG11	2.39	0.57
59:DA:1434:A:H2'	59:DA:1435:G:C8	2.40	0.57
59:DA:2102:U:H2'	59:DA:2103:C:C6	2.39	0.57
59:DA:1387:C:N3	59:DA:1400:G:N2	2.44	0.57
25:BC:170:GLY:O	25:BC:172:ILE:N	2.37	0.57
20:AA:813:U:H2'	20:AA:814:A:H8	1.69	0.57
11:AL:17:LYS:NZ	20:AA:302:G:O3'	2.33	0.57
23:AY:272:LEU:HA	23:AY:275:ALA:HB3	1.87	0.57
59:DA:2212:A:H1'	59:DA:2215:G:C6	2.40	0.57
1:AB:87:ARG:HG2	1:AB:223:ILE:HD11	1.86	0.57
43:DX:82:GLN:HE21	43:DX:83:VAL:N	2.03	0.57
35:BP:47:ASP:OD2	35:BP:49:ARG:NE	2.38	0.57
20:AA:552:U:H2'	20:AA:553:A:H8	1.68	0.57
48:D3:8:LEU:HD22	48:D3:31:LEU:HA	1.87	0.57
11:CL:115:LYS:O	11:CL:117:ARG:N	2.33	0.57
59:DA:591:C:H2'	59:DA:592:G:C8	2.39	0.57
34:DO:39:ILE:HG23	34:DO:60:ALA:HB3	1.86	0.57
18:CS:49:ILE:HD11	18:CS:62:ILE:HB	1.87	0.57
59:DA:2525:G:H2'	59:DA:2526:G:H8	1.70	0.57
20:CA:848:C:H2'	20:CA:849:C:C6	2.40	0.57
27:DE:77:ILE:HG22	27:DE:78:LEU:HG	1.86	0.57
30:BH:45:VAL:HG22	30:BH:50:VAL:HG22	1.86	0.57
20:AA:745:C:H2'	20:AA:746:A:H8	1.69	0.57
39:DT:95:ARG:HE	59:DA:1753:G:H5''	1.70	0.57
48:D3:10:LYS:HB3	48:D3:53:LEU:HD23	1.86	0.57
59:DA:439:G:H2'	59:DA:440:G:C8	2.40	0.57
2:AC:106:VAL:HG12	2:AC:108:ASN:H	1.68	0.57
59:BA:2328:A:H2'	59:BA:2329:G:C8	2.40	0.57
59:DA:2773:C:H2'	59:DA:2774:C:H6	1.70	0.57
59:DA:2870:C:H2'	59:DA:2871:C:O4'	2.05	0.57
59:DA:1564:C:H2'	59:DA:1565:C:C6	2.39	0.57
59:BA:883:G:H2'	59:BA:884:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:75:TYR:O	42:BW:104:THR:N	2.37	0.57
27:DE:25:VAL:HG22	27:DE:183:LEU:HG	1.86	0.57
59:BA:1418:G:OP1	59:BA:1588:C:O2'	2.23	0.57
59:DA:1811:G:H2'	59:DA:1812:A:C8	2.40	0.57
59:DA:1614:A:H5''	59:DA:1617:C:H41	1.69	0.57
28:DF:63:LYS:HG2	28:DF:65:TRP:O	2.05	0.57
28:DF:102:PRO:HA	59:DA:607:U:P	2.45	0.57
59:DA:305:U:H2'	59:DA:306:U:C6	2.40	0.57
20:CA:1003:G:O6	20:CA:1037:C:N3	2.37	0.57
45:BZ:118:GLN:N	45:BZ:173:ALA:O	2.38	0.57
59:BA:989:G:O2'	59:BA:990:A:OP2	2.22	0.57
9:AJ:49:VAL:HG23	13:AN:41:ARG:HB2	1.87	0.57
29:BG:32:PRO:HB2	29:BG:163:ALA:HA	1.85	0.57
9:AJ:39:PRO:HA	9:AJ:70:ARG:HG3	1.87	0.57
36:DQ:51:ARG:HA	36:DQ:54:MET:HE2	1.86	0.57
42:BW:3:ALA:HB3	42:BW:107:LEU:HD13	1.87	0.57
12:AM:122:LYS:HA	20:AA:954:G:H5'	1.86	0.57
59:DA:2893:G:H5''	59:DA:2894:G:O4'	2.04	0.57
59:DA:1957:C:H2'	59:DA:1958:C:H6	1.68	0.57
20:AA:1522:U:H2'	20:AA:1523:G:H8	1.69	0.57
36:DQ:34:LEU:HB2	36:DQ:118:LEU:HD22	1.86	0.57
59:BA:1446:C:H2'	59:BA:1447:G:C8	2.40	0.57
43:DX:32:PRO:HA	43:DX:77:LYS:HB2	1.85	0.57
59:DA:2096:U:H2'	59:DA:2097:C:C6	2.40	0.57
59:DA:441:U:H2'	59:DA:442:G:C8	2.40	0.57
20:CA:1468:A:H2'	20:CA:1469:G:O4'	2.05	0.57
59:BA:922:U:H2'	59:BA:923:C:C6	2.39	0.57
59:BA:1028:A:H2'	59:BA:1029:A:C8	2.40	0.57
8:AI:107:ARG:HE	20:AA:1347:G:H5''	1.70	0.57
33:BN:108:PRO:HA	33:BN:109:LYS:HD2	1.87	0.57
59:BA:153:C:H2'	59:BA:154:G:H8	1.69	0.57
59:DA:2036:C:H2'	59:DA:2037:G:H8	1.69	0.56
25:BC:115:VAL:N	25:BC:145:THR:HG22	2.20	0.56
25:BC:162:ILE:HD13	25:BC:175:PRO:HD2	1.87	0.56
25:BC:73:VAL:HG22	25:BC:75:VAL:H	1.70	0.56
20:AA:1510:U:H2'	20:AA:1511:G:H8	1.70	0.56
59:BA:2006:C:O2'	59:BA:2823:A:N3	2.37	0.56
41:DV:62:LEU:HD12	41:DV:95:LEU:HB2	1.87	0.56
26:BD:67:PHE:CZ	26:BD:157:ARG:HD2	2.40	0.56
59:BA:1203:G:H2'	59:BA:1204:A:C2	2.40	0.56
48:B3:6:VAL:HB	48:B3:54:VAL:HG13	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2392:A:H2'	59:BA:2393:A:O4'	2.05	0.56
59:BA:2082:A:H62	59:BA:2237:G:H21	1.52	0.56
21:CW:66:C:H2'	21:CW:67:G:C8	2.40	0.56
59:BA:13:A:O2'	59:BA:15:G:N7	2.35	0.56
59:BA:270(O):G:O2'	59:BA:270(P):U:H5''	2.04	0.56
26:DD:115:GLN:HE22	26:DD:117:VAL:HG22	1.70	0.56
20:CA:186:C:H2'	20:CA:186(A):C:C6	2.40	0.56
29:DG:135:LEU:HD22	29:DG:140:ILE:HD11	1.87	0.56
32:BK:88:ALA:HB2	32:BK:96:VAL:HG23	1.85	0.56
23:AY:8:ASP:O	23:AY:9:LEU:HB2	2.04	0.56
57:D1:25:LYS:HB3	59:DA:388:G:OP2	2.05	0.56
40:BU:51:LYS:O	40:BU:54:LYS:HB2	2.05	0.56
25:DC:47:LYS:HB2	25:DC:169:THR:OG1	2.05	0.56
28:DF:8:GLN:O	28:DF:9:ILE:HB	2.03	0.56
59:DA:270(K):G:H1	59:DA:270(Q):C:H42	1.53	0.56
32:BK:134:MET:HG2	59:BA:1063:G:H5'	1.86	0.56
59:BA:33:U:O4	59:BA:446:G:O2'	2.18	0.56
28:BF:191:ARG:HB3	28:BF:193:VAL:HG23	1.86	0.56
20:CA:1126:U:H2'	20:CA:1127:G:O4'	2.05	0.56
9:AJ:51:ARG:HG2	9:AJ:59:SER:O	2.05	0.56
23:AY:564:LYS:HG2	23:AY:565:VAL:H	1.69	0.56
59:DA:234:C:N4	59:DA:430:G:H22	2.02	0.56
26:DD:177:LEU:HD23	26:DD:178:PRO:HD2	1.87	0.56
2:AC:7:PRO:O	2:AC:11:ARG:HG2	2.04	0.56
59:DA:2649:U:H2'	59:DA:2650:U:C6	2.39	0.56
59:DA:648:G:H2'	59:DA:649:G:C8	2.40	0.56
52:D8:17:THR:OG1	52:D8:19:SER:OG	2.22	0.56
50:D6:37:ARG:HH21	59:DA:2287:A:H61	1.53	0.56
35:BP:52:GLU:HG3	35:BP:53:GLY:H	1.70	0.56
20:CA:695:A:H2'	20:CA:696:A:C8	2.40	0.56
59:BA:2315:G:H2'	59:BA:2316:C:C6	2.40	0.56
21:AW:41:A:O2'	21:AW:42:U:OP1	2.21	0.56
60:DB:81:G:O6	60:DB:95:U:O2	2.23	0.56
43:BX:64:LYS:HE2	43:BX:66:LEU:HD11	1.86	0.56
20:CA:892:A:H2'	20:CA:893:C:H6	1.70	0.56
20:CA:1073:U:H2'	20:CA:1074:G:C8	2.40	0.56
28:BF:36:VAL:O	28:BF:39:TRP:HB3	2.05	0.56
16:AQ:95:TYR:OH	20:AA:279:A:OP2	2.15	0.56
35:DP:81:GLN:HG2	35:DP:106:LEU:HA	1.87	0.56
37:BR:90:ARG:HH21	37:BR:118:GLU:HG3	1.69	0.56
59:DA:2391:G:O2'	59:DA:2424:C:N4	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1312:U:O2	59:BA:1339:G:N1	2.33	0.56
59:DA:1494:A:H2'	59:DA:1494:A:N3	2.19	0.56
59:BA:242:G:N2	59:BA:255:A:OP2	2.38	0.56
20:AA:1262:C:H2'	20:AA:1263:C:C6	2.39	0.56
20:AA:321:A:H61	20:AA:332:G:H1	1.53	0.56
27:BE:119:ARG:HG2	27:BE:160:TYR:HB2	1.87	0.56
37:BR:2:ARG:NH1	59:BA:2723:C:OP1	2.38	0.56
20:AA:1507:A:H2'	20:AA:1508:G:C8	2.40	0.56
41:BV:4:ILE:HB	41:BV:39:LEU:O	2.05	0.56
11:AL:36:VAL:N	11:AL:58:VAL:HA	2.19	0.56
29:DG:86:MET:SD	29:DG:86:MET:N	2.79	0.56
31:BJ:58:UNK:HA	59:BA:1107:G:P	2.44	0.56
60:DB:23:G:H2'	60:DB:24:G:C8	2.39	0.56
11:AL:52:LEU:HG	11:AL:53:ARG:H	1.70	0.56
38:BS:95:HIS:CE1	60:BB:48:A:H4'	2.40	0.56
27:BE:72:VAL:HG12	27:BE:73:GLU:H	1.70	0.56
59:BA:1429:G:H2'	59:BA:1430:C:C6	2.40	0.56
59:DA:700:G:H1	59:DA:732:C:N4	2.02	0.56
31:DJ:25:UNK:CA	31:DJ:80:UNK:HA	2.35	0.56
35:BP:61:ARG:HA	52:B8:27:THR:HG21	1.87	0.56
60:BB:59:A:H2'	60:BB:60:C:O4'	2.06	0.56
59:BA:1345:C:N4	59:BA:1601:G:H1	2.02	0.56
33:DN:137:LYS:HZ2	33:DN:137:LYS:HB3	1.70	0.56
35:DP:55:ARG:NH1	59:DA:2358:G:H1	2.04	0.56
22:CV:8:A:H2'	22:CV:9:G:C8	2.40	0.56
39:DT:16:ARG:NH2	39:DT:82:LEU:O	2.36	0.56
23:CY:634:MET:SD	23:CY:634:MET:N	2.78	0.56
59:BA:926:A:H2'	59:BA:928:G:C8	2.40	0.56
12:AM:87:TYR:HE1	18:AS:76:PRO:HA	1.70	0.56
52:D8:50:LEU:HA	52:D8:53:PRO:HG2	1.87	0.56
23:AY:610:VAL:O	23:AY:642:VAL:HA	2.05	0.56
59:DA:2590:A:H2'	59:DA:2591:C:H6	1.71	0.56
23:CY:92:ILE:HG21	23:CY:437:THR:HG22	1.86	0.56
45:DZ:10:ARG:NH2	45:DZ:26:GLY:O	2.39	0.56
59:DA:2696:U:H2'	59:DA:2697:G:H8	1.70	0.56
20:CA:68(H):G:H2'	20:CA:68(I):G:C8	2.40	0.56
17:AR:70:ILE:O	17:AR:74:ARG:HG3	2.04	0.56
26:BD:133:LEU:HB2	26:BD:187:GLY:HA2	1.88	0.56
26:DD:186:HIS:HB3	26:DD:189:CYS:SG	2.44	0.56
28:BF:45:ARG:NH2	59:BA:443:A:O5'	2.37	0.56
27:DE:14:ILE:HG13	27:DE:23:VAL:HG21	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:892:A:H2'	20:CA:893:C:C6	2.40	0.56
20:CA:1530:G:H2'	20:CA:1531:A:H8	1.69	0.56
23:AY:149:VAL:O	23:AY:153:MET:HG3	2.05	0.56
20:AA:318:G:H2'	20:AA:319:G:H8	1.69	0.56
20:AA:1040:U:H2'	20:AA:1041:A:H8	1.69	0.56
39:BT:109:GLU:HA	39:BT:112:ARG:HB3	1.87	0.56
59:DA:2489:G:N2	59:DA:2491:U:O4	2.38	0.56
34:BO:89:ASN:N	34:BO:89:ASN:OD1	2.38	0.56
23:CY:166:LEU:HB2	23:CY:178:ILE:HG22	1.87	0.56
25:DC:3:LYS:NZ	59:DA:2151:G:OP1	2.28	0.56
59:BA:41:C:H2'	59:BA:43:G:C8	2.40	0.56
59:DA:155:C:H42	59:DA:171:G:H1	1.52	0.56
37:DR:40:LYS:O	37:DR:44:LEU:HB2	2.04	0.56
46:B0:38:VAL:HB	46:B0:59:LEU:HB2	1.87	0.56
12:AM:2:ALA:O	12:AM:4:ILE:N	2.37	0.56
31:DJ:36:UNK:O	31:DJ:40:UNK:N	2.38	0.56
32:BK:130:SER:OG	59:BA:1059:G:N2	2.27	0.56
11:CL:77:LEU:O	11:CL:79:GLU:N	2.38	0.56
59:DA:530:G:N2	59:DA:2021:C:O2	2.39	0.56
27:BE:62:PRO:O	27:BE:64:LYS:N	2.32	0.56
23:AY:25:LYS:HE3	62:AY:702:GDP:O2B	2.05	0.56
21:CW:76:A:H1'	59:DA:2395:C:C2	2.40	0.56
57:B1:19:GLN:O	57:B1:21:ARG:N	2.34	0.56
25:BC:115:VAL:HG11	25:BC:154:ILE:HG12	1.86	0.56
14:AO:42:HIS:NE2	20:AA:739:C:O2	2.38	0.56
3:CD:54:TYR:O	3:CD:57:ARG:HB3	2.06	0.56
40:DU:92:ARG:HG2	40:DU:95:LEU:H	1.70	0.56
26:DD:35:LYS:HD3	26:DD:61:LEU:HG	1.88	0.56
57:D1:43:TYR:HB2	57:D1:44:PRO:HD2	1.86	0.56
20:CA:1044:A:H2'	20:CA:1045:C:H4'	1.87	0.56
47:D2:16:LEU:HD12	47:D2:24:LEU:HD11	1.87	0.56
20:AA:309:G:H2'	20:AA:310:G:H8	1.70	0.56
42:BW:18:ARG:HA	42:BW:76:VAL:HG11	1.87	0.56
59:DA:1231:G:H2'	59:DA:1232:G:H8	1.70	0.56
25:DC:60:ARG:HG2	25:DC:142:LYS:HD3	1.88	0.56
59:BA:2092:U:O2'	59:BA:2093:G:OP2	2.23	0.56
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HA	1.86	0.56
20:AA:1363:A:H4'	20:AA:1364:U:H5''	1.86	0.56
59:BA:2564:A:C8	59:BA:2648:C:H5'	2.41	0.56
26:BD:9:TYR:HD1	26:BD:10:THR:H	1.52	0.56
23:AY:544:LYS:O	23:AY:548:GLU:N	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DX:3:THR:N	43:DX:6:ASP:OD1	2.38	0.56
26:DD:125:ILE:HG21	26:DD:137:PRO:HG2	1.86	0.56
57:B1:23:LYS:HB3	57:B1:36:GLY:HA3	1.88	0.56
6:CG:121:ALA:O	6:CG:125:MET:HG2	2.06	0.56
7:CH:110:ALA:HB3	7:CH:121:ASP:HB3	1.86	0.56
59:DA:2250:G:O2'	59:DA:2496:C:OP1	2.21	0.56
5:AF:33:TYR:HA	5:AF:71:ARG:HH21	1.69	0.56
39:BT:32:TYR:HB3	39:BT:82:LEU:HA	1.87	0.56
27:DE:159:HIS:HB2	59:DA:2621:A:O2'	2.06	0.56
3:CD:108:LEU:HD21	3:CD:183:GLY:HA3	1.87	0.56
23:AY:534:ILE:HG23	23:AY:538:TYR:HD2	1.70	0.56
27:BE:120:TRP:O	27:BE:121:ASN:HB2	2.06	0.56
59:DA:401:A:H2'	59:DA:402:A:C8	2.40	0.56
43:BX:36:LYS:HB2	59:BA:1599:C:OP1	2.06	0.56
37:BR:12:ARG:HG2	37:BR:16:HIS:CG	2.41	0.56
20:AA:520:A:N6	20:AA:529:G:H21	2.04	0.56
20:CA:54:C:H42	20:CA:357:G:H1	1.52	0.56
59:DA:579:G:H2'	59:DA:580:C:C6	2.41	0.56
33:BN:99:LEU:HD12	33:BN:122:VAL:HG21	1.87	0.56
33:DN:137:LYS:HZ3	33:DN:138:LEU:N	2.02	0.56
52:D8:42:ARG:HG3	59:DA:2350:C:H5''	1.87	0.56
20:AA:924:C:H2'	20:AA:925:G:C8	2.40	0.56
59:BA:2147:G:H2'	59:BA:2148:G:O4'	2.06	0.56
19:AT:89:ARG:NH1	19:AT:105:SER:O	2.38	0.56
49:D5:3:LYS:HG3	59:DA:2613:U:OP2	2.05	0.56
28:BF:41:LEU:O	59:BA:443:A:N6	2.38	0.56
44:DY:17:SER:OG	44:DY:18:GLY:N	2.37	0.56
59:DA:698:C:OP1	59:DA:1634:A:N6	2.36	0.56
20:AA:828:A:H2'	20:AA:829:G:O4'	2.05	0.56
7:AH:97:VAL:HG13	7:AH:98:LYS:H	1.71	0.56
59:BA:1495:A:H2	59:BA:1578:U:H1'	1.71	0.56
53:B9:6:SER:HB3	59:BA:2466:C:H5''	1.88	0.56
59:DA:2245:U:OP1	59:DA:2430:A:N6	2.38	0.56
20:AA:1124:G:O2'	20:AA:1145:C:N4	2.39	0.56
20:AA:1144:G:N2	20:AA:1146:A:H62	2.03	0.56
59:DA:1199:U:H2'	59:DA:1200:C:C6	2.40	0.56
20:CA:151:A:H62	20:CA:170:U:H3	1.53	0.56
59:BA:2618:G:H2'	59:BA:2619:C:H6	1.71	0.56
3:CD:25:ARG:HB2	20:CA:410:G:OP2	2.06	0.56
59:DA:1165:U:H2'	59:DA:1166:C:H6	1.70	0.56
59:BA:137(B):G:H2'	59:BA:139:G:N7	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:12:THR:O	27:DE:22:PRO:HA	2.05	0.56
28:BF:125:LEU:HD21	28:BF:199:TRP:CD1	2.39	0.56
39:BT:48:ILE:O	39:BT:49:VAL:HG12	2.05	0.56
18:CS:82:GLY:HA3	20:CA:1226:C:H4'	1.86	0.56
26:DD:244:ARG:HH22	59:DA:1841:U:H1'	1.71	0.56
36:BQ:1:MET:H1	36:BQ:48:GLU:HB2	1.71	0.56
23:CY:311:ALA:HA	23:CY:330:VAL:HA	1.88	0.56
25:DC:27:ALA:O	25:DC:31:LYS:HB2	2.05	0.56
23:CY:14:ASN:HB3	23:CY:102:ASP:H	1.71	0.56
2:CC:7:PRO:HG2	2:CC:184:TYR:CG	2.41	0.56
18:CS:49:ILE:HB	18:CS:60:VAL:HG13	1.88	0.56
59:DA:2147:G:H2'	59:DA:2148:G:O4'	2.05	0.56
20:CA:200:G:H1	20:CA:217:C:H42	1.53	0.56
59:DA:1448:G:O2'	59:DA:1529:A:N6	2.36	0.56
20:AA:318:G:H2'	20:AA:319:G:C8	2.41	0.56
59:BA:1165:U:H2'	59:BA:1166:C:C6	2.40	0.56
49:B5:55:ARG:HD3	49:B5:56:LYS:H	1.71	0.56
36:DQ:30:GLY:HA3	36:DQ:105:GLU:HB2	1.86	0.56
59:BA:595:C:H2'	59:BA:596:G:O4'	2.05	0.56
45:BZ:152:ALA:HA	45:BZ:167:PRO:HB2	1.87	0.56
59:DA:2795:G:H3'	59:DA:2797:U:H5''	1.88	0.56
18:AS:13:ASP:O	18:AS:17:GLU:HG2	2.04	0.56
36:DQ:21:THR:OG1	36:DQ:99:PRO:O	2.24	0.56
59:DA:1301:A:H1'	59:DA:1302:A:H2'	1.88	0.56
21:AW:64:G:C6	21:AW:65:U:O4	2.59	0.56
59:BA:2048:G:H1	59:BA:2620:C:N4	2.00	0.56
37:DR:63:ARG:NH2	59:DA:1454:U:OP1	2.38	0.56
27:DE:151:TYR:HB2	27:DE:154:LYS:HB2	1.87	0.56
59:BA:1542:G:H4'	59:BA:1543:A:O5'	2.05	0.56
51:D7:6:GLN:O	59:DA:686:G:H8	1.89	0.56
20:CA:741:G:H2'	20:CA:742:G:H8	1.71	0.56
26:DD:24:ILE:HG12	26:DD:25:THR:H	1.69	0.56
61:CY:701:FUA:C20	61:CY:701:FUA:O1	2.51	0.56
37:BR:33:ARG:HA	37:BR:114:VAL:O	2.06	0.56
39:BT:27:THR:O	39:BT:87:ASP:HB2	2.06	0.56
59:DA:1664:A:H3'	59:DA:1665:A:C8	2.38	0.56
3:CD:191:ARG:NH1	3:CD:194:LEU:O	2.39	0.56
25:DC:61:GLY:HA2	25:DC:200:HIS:CE1	2.40	0.56
36:DQ:132:VAL:HB	36:DQ:137:TYR:OH	2.06	0.56
10:CK:21:ILE:HB	10:CK:84:VAL:HA	1.88	0.56
37:DR:42:LYS:O	37:DR:45:ARG:HG3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:87:VAL:HG22	6:CG:151:TYR:HB3	1.87	0.56
9:CJ:35:SER:N	9:CJ:73:ASP:O	2.36	0.56
59:DA:602:G:N2	59:DA:655:A:N7	2.53	0.56
11:AL:5:PRO:HG2	11:AL:15:ARG:HH21	1.69	0.56
29:DG:37:VAL:HB	29:DG:94:LEU:HB2	1.86	0.56
23:CY:344:THR:OG1	23:CY:388:THR:O	2.21	0.56
43:BX:41:ASN:O	43:BX:45:THR:OG1	2.16	0.56
59:DA:2676:C:H2'	59:DA:2677:G:H8	1.71	0.56
52:D8:23:VAL:HG12	52:D8:46:ARG:HH11	1.71	0.56
59:DA:1748:G:H2'	59:DA:1749:A:C8	2.40	0.56
30:BH:173:PRO:O	30:BH:175:LYS:N	2.38	0.56
42:BW:74:ALA:HA	42:BW:105:VAL:HA	1.87	0.56
23:CY:28:THR:O	23:CY:32:ILE:HG12	2.05	0.56
20:CA:730:G:C5	20:CA:731:G:H1'	2.40	0.56
59:DA:1144:G:H2'	59:DA:1145:C:H6	1.71	0.56
59:DA:1771:C:H2'	59:DA:1772:G:H8	1.68	0.56
59:BA:392:C:H2'	59:BA:393:C:H6	1.71	0.56
1:CB:161:ALA:HA	1:CB:183:PRO:HB2	1.88	0.56
59:DA:2472:G:N2	59:DA:2478:A:H62	2.01	0.56
28:DF:5:ALA:HB2	28:DF:118:ALA:HB1	1.88	0.56
37:BR:11:ASN:HB2	59:BA:1653:G:O6	2.04	0.56
41:DV:96:ILE:HG22	41:DV:97:LYS:N	2.18	0.56
38:DS:67:ARG:HA	38:DS:99:LYS:HB2	1.87	0.56
59:BA:2781:A:H8	59:BA:2781:A:H5''	1.71	0.56
52:B8:18:ALA:HB3	59:BA:651:G:H4'	1.88	0.56
34:DO:75:SER:HG	39:DT:32:TYR:HH	1.52	0.56
23:CY:358:MET:HA	23:CY:363:ARG:HG2	1.87	0.56
52:B8:23:VAL:HA	52:B8:48:PHE:O	2.06	0.56
11:AL:114:LYS:HB2	20:AA:538:G:H5''	1.86	0.56
20:CA:300:A:O5'	20:CA:300:A:H8	1.89	0.56
59:DA:2590:A:H2'	59:DA:2591:C:C6	2.41	0.56
59:BA:2118:U:H3	59:BA:2148:G:H4'	1.70	0.56
34:DO:87:ILE:HD13	34:DO:91:LEU:HD23	1.88	0.56
59:BA:2650:U:H2'	59:BA:2651:C:C6	2.41	0.56
59:BA:1446:C:H2'	59:BA:1447:G:H8	1.71	0.56
20:CA:294:U:H2'	20:CA:295:C:C6	2.40	0.56
35:DP:98:GLU:O	35:DP:102:ARG:NH2	2.39	0.56
42:BW:20:VAL:HG21	42:BW:43:GLY:HA3	1.86	0.56
20:AA:591:U:H2'	20:AA:592:G:C8	2.41	0.56
20:CA:1386:G:H2'	20:CA:1387:G:H8	1.71	0.56
47:B2:2:LYS:HD2	47:B2:5:GLU:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:5:TYR:HA	43:BX:7:VAL:HG23	1.87	0.56
59:BA:1120:G:H2'	59:BA:1121:C:C6	2.41	0.56
1:CB:162:ILE:O	1:CB:164:VAL:HG23	2.06	0.56
1:CB:27:LYS:HB2	1:CB:194:PRO:HG3	1.88	0.56
31:BJ:112:UNK:O	31:BJ:114:UNK:N	2.39	0.56
39:DT:47:GLY:HA2	39:DT:65:LYS:HD2	1.87	0.56
25:BC:84:ILE:HG23	25:BC:95:VAL:HB	1.87	0.56
25:DC:139:PRO:O	25:DC:145:THR:OG1	2.18	0.56
59:BA:2634:G:H1	59:BA:2784:C:N4	2.03	0.56
20:CA:1515:C:N4	20:CA:1520:G:H1	2.03	0.56
36:DQ:52:VAL:O	36:DQ:54:MET:N	2.39	0.56
2:AC:153:VAL:HG12	2:AC:198:VAL:HG22	1.88	0.56
59:BA:1281:G:H2'	59:BA:1282:U:C6	2.41	0.56
35:BP:25:SER:HB2	59:BA:812:C:H3'	1.87	0.56
7:CH:41:ARG:NH2	7:CH:123:GLU:OE1	2.39	0.56
59:BA:2893:G:H5''	59:BA:2894:G:O4'	2.05	0.56
20:AA:408:A:H2	20:AA:434:U:H3	1.53	0.56
59:DA:1207:C:H42	59:DA:1239:G:H1	1.54	0.56
14:AO:65:ARG:NH2	20:AA:581:G:OP1	2.38	0.56
21:AW:63:C:H2'	21:AW:64:G:C8	2.41	0.56
59:BA:1311:G:H21	59:BA:1603:A:H62	0.72	0.56
59:DA:2396:G:H2'	59:DA:2397:G:C8	2.37	0.56
2:CC:56:ASP:O	2:CC:67:THR:OG1	2.16	0.56
59:DA:319:C:H2'	59:DA:320:A:O4'	2.05	0.56
23:AY:207:ASP:HA	23:AY:210:ARG:HB2	1.87	0.56
57:B1:44:PRO:HD3	59:BA:396:G:H4'	1.86	0.56
20:AA:584:G:H2'	20:AA:585:G:C8	2.41	0.56
4:AE:24:ARG:HD2	22:AV:26:A:H2	1.70	0.56
59:DA:1677:A:H2'	59:DA:1678:G:C8	2.40	0.56
59:BA:2697:G:H2'	59:BA:2698:U:O4'	2.06	0.56
35:BP:23:PRO:HD2	35:BP:33:ARG:NE	2.21	0.56
37:DR:10:LEU:HB2	59:DA:1653:G:C6	2.40	0.56
48:B3:29:ARG:HH21	59:BA:1183:G:H4'	1.70	0.56
7:AH:120:THR:HG23	7:AH:123:GLU:HG3	1.86	0.56
20:AA:217:C:H2'	20:AA:218:C:C6	2.41	0.56
46:B0:23:VAL:HG12	46:B0:38:VAL:HG22	1.86	0.56
20:AA:565:U:OP2	20:AA:566:G:O2'	2.24	0.56
19:AT:21:LYS:O	19:AT:24:LEU:HB3	2.06	0.56
59:BA:355:G:H2'	59:BA:356:G:H8	1.71	0.56
46:D0:11:ARG:HH22	59:DA:2278:A:H3'	1.71	0.56
20:CA:1461:G:H2'	20:CA:1462:G:H8	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1026:G:O6	20:AA:1035:A:N1	2.39	0.56
34:DO:88:ASN:ND2	34:DO:92:GLU:O	2.38	0.56
27:DE:27:LEU:HD13	39:DT:1:MET:HB3	1.87	0.56
29:BG:66:GLN:NE2	58:B4:1:MET:SD	2.78	0.55
59:DA:2023:G:O2'	59:DA:2618:G:H5''	2.06	0.55
59:DA:1880:C:H2'	59:DA:1881:C:H6	1.71	0.55
59:DA:1585:C:H3'	59:DA:1586:A:H8	1.70	0.55
59:BA:795:C:H2'	59:BA:796:C:O4'	2.06	0.55
49:B5:10:LYS:N	59:BA:2017:U:O2'	2.39	0.55
11:AL:37:CYS:HA	11:AL:57:LYS:H	1.71	0.55
59:DA:2632:A:H2'	59:DA:2633:G:C8	2.42	0.55
44:BY:28:LYS:HE3	44:BY:30:VAL:HG23	1.88	0.55
25:DC:169:THR:O	25:DC:169:THR:OG1	2.22	0.55
60:DB:22:U:O2	60:DB:61:G:N2	2.30	0.55
38:BS:84:GLN:HA	38:BS:106:ARG:HG2	1.87	0.55
4:CE:101:ILE:HD11	4:CE:119:LEU:HD22	1.89	0.55
59:DA:1801:G:O2'	59:DA:1802:A:H5'	2.06	0.55
38:DS:26:LEU:HD11	38:DS:101:LEU:HD13	1.89	0.55
23:AY:512:ILE:HD12	23:AY:589:ALA:HB1	1.87	0.55
57:D1:45:ASN:OD1	57:D1:46:LEU:N	2.40	0.55
59:BA:639:U:H2'	59:BA:640:C:C6	2.41	0.55
6:CG:150:ALA:HB1	10:CK:93:GLN:HE22	1.71	0.55
59:DA:1899:G:H21	59:DA:1902:C:H41	1.54	0.55
59:DA:1231:G:H2'	59:DA:1232:G:C8	2.41	0.55
29:BG:105:LYS:HD2	58:B4:26:SER:HB3	1.88	0.55
26:BD:111:LEU:HD11	26:BD:117:VAL:HG11	1.88	0.55
21:AW:68:U:H2'	21:AW:69:A:C8	2.41	0.55
20:CA:1522:U:H2'	20:CA:1523:G:H8	1.70	0.55
32:BK:101:TRP:HZ2	32:BK:141:ALA:H	1.54	0.55
37:DR:97:VAL:HA	37:DR:113:LEU:O	2.06	0.55
20:AA:950:U:H2'	20:AA:951:G:H8	1.71	0.55
34:BO:96:THR:HG23	34:BO:97:ARG:HG2	1.88	0.55
23:AY:466:LEU:O	23:AY:471:LYS:N	2.40	0.55
23:AY:20:HIS:HB3	23:AY:118:SER:N	2.21	0.55
23:AY:178:ILE:HA	23:AY:185:ALA:HA	1.88	0.55
59:BA:1978:A:H2'	59:BA:1979:C:C6	2.42	0.55
20:CA:961:U:OP2	20:CA:1223:C:O2'	2.17	0.55
59:BA:1215:G:O6	59:BA:1234:U:O2	2.23	0.55
59:DA:864:G:H2'	59:DA:865:C:C6	2.40	0.55
23:CY:138:LYS:HE2	62:CY:702:GDP:C8	2.41	0.55
59:DA:1999:C:H5'	59:DA:2723:C:O2'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2023:G:H8	59:BA:2023:G:P	2.28	0.55
38:DS:92:TYR:C	38:DS:94:TYR:H	2.09	0.55
25:DC:54:ARG:O	25:DC:56:ASP:N	2.39	0.55
3:AD:136:PRO:HD2	20:AA:403:C:H5''	1.88	0.55
11:CL:114:LYS:HB2	20:CA:538:G:H5''	1.87	0.55
36:BQ:72:LYS:N	36:BQ:94:VAL:O	2.37	0.55
50:D6:6:ARG:O	50:D6:7:ILE:HB	2.05	0.55
25:BC:28:ARG:O	25:BC:31:LYS:HB3	2.05	0.55
57:B1:26:ARG:NH1	57:B1:27:GLU:OE1	2.39	0.55
6:CG:87:VAL:HG12	6:CG:88:PRO:O	2.06	0.55
2:AC:78:GLY:HA3	2:AC:83:ARG:H	1.71	0.55
33:BN:72:TYR:N	33:BN:85:ILE:O	2.28	0.55
23:AY:146:LEU:O	23:AY:150:ILE:HG12	2.06	0.55
12:CM:80:ARG:NH1	18:CS:65:ASN:O	2.39	0.55
19:CT:54:LYS:HA	19:CT:57:ARG:HE	1.71	0.55
59:BA:661:C:H2'	59:BA:662:G:C8	2.41	0.55
59:BA:1025:G:C4	59:BA:1135:C:H1'	2.41	0.55
59:BA:1814:G:H3'	59:BA:1815:A:H2'	1.88	0.55
8:CI:4:TYR:HE1	8:CI:21:PRO:HD3	1.70	0.55
20:AA:980:C:H5'	20:AA:981:U:C5	2.41	0.55
44:BY:14:LEU:HD21	44:BY:79:CYS:HB2	1.88	0.55
1:AB:71:VAL:H	1:AB:164:VAL:HA	1.72	0.55
23:AY:526:VAL:O	23:AY:528:ALA:N	2.40	0.55
25:DC:168:LYS:O	59:DA:2178:C:O2'	2.23	0.55
59:BA:1510:A:H2'	59:BA:1511:A:O4'	2.05	0.55
59:DA:150:C:N4	59:DA:176:G:H1	2.03	0.55
20:CA:113:G:H2'	20:CA:114:U:C6	2.42	0.55
29:BG:63:ILE:HA	58:B4:27:THR:HG21	1.88	0.55
48:D3:6:VAL:HB	48:D3:54:VAL:HG13	1.88	0.55
59:DA:40:C:H2'	59:DA:41:C:C6	2.41	0.55
26:BD:42:GLY:H	59:BA:692:C:H4'	1.71	0.55
43:DX:12:VAL:HG11	43:DX:21:PHE:CZ	2.42	0.55
59:BA:621:A:C2	59:BA:622:G:H1'	2.42	0.55
9:CJ:26:ALA:HA	9:CJ:29:ARG:HB2	1.88	0.55
37:BR:73:VAL:O	37:BR:76:VAL:HG12	2.07	0.55
25:BC:194:ILE:HA	25:BC:197:LEU:HD12	1.87	0.55
36:DQ:109:VAL:HG21	36:DQ:114:ALA:HB2	1.89	0.55
23:CY:316:ILE:HD11	23:CY:385:THR:HB	1.89	0.55
37:BR:29:LEU:HD12	37:BR:83:ILE:HD13	1.88	0.55
59:BA:687:C:H2'	59:BA:688:U:O4'	2.05	0.55
53:D9:32:HIS:O	53:D9:34:GLN:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D7:18:PHE:HE2	59:DA:117:G:H5'	1.72	0.55
25:DC:57:GLN:HG2	25:DC:202:PRO:HB3	1.88	0.55
47:D2:48:HIS:CD2	47:D2:49:LYS:HG2	2.41	0.55
20:CA:1440(C):G:N7	39:DT:118:ARG:NH1	2.54	0.55
25:DC:102:GLN:HG3	25:DC:106:ASP:HB2	1.88	0.55
20:AA:1488:G:H2'	20:AA:1489:G:C8	2.41	0.55
59:BA:2125:G:N2	59:BA:2173:A:H62	1.99	0.55
25:BC:84:ILE:HD11	25:BC:97:GLY:N	2.22	0.55
1:CB:58:ILE:HG22	1:CB:222:ILE:HG22	1.88	0.55
20:CA:612:C:N4	20:CA:628:G:H1	2.03	0.55
57:B1:12:PRO:HA	57:B1:43:TYR:HB2	1.88	0.55
59:DA:1162:G:H2'	59:DA:1163:G:H8	1.72	0.55
9:CJ:55:LYS:HD2	9:CJ:55:LYS:H	1.71	0.55
20:CA:517:G:H5'	20:CA:519:C:C2	2.42	0.55
11:CL:52:LEU:HD21	20:CA:521:G:OP2	2.07	0.55
59:DA:276:A:H2'	59:DA:277:C:C6	2.41	0.55
59:DA:1536:A:H5''	59:DA:1537:C:OP2	2.05	0.55
10:CK:18:ARG:HB2	10:CK:33:THR:OG1	2.06	0.55
23:CY:663:THR:O	23:CY:665:GLY:N	2.39	0.55
18:AS:36:ARG:HH22	18:AS:75:ALA:HB3	1.71	0.55
37:BR:68:ARG:HG3	59:BA:2708:G:H5'	1.89	0.55
28:BF:75:HIS:NE2	59:BA:1256:G:O2'	2.39	0.55
59:BA:824:A:H1'	59:BA:2358:G:N7	2.21	0.55
59:BA:2095:C:H2'	59:BA:2096:U:H6	1.72	0.55
37:DR:41:ALA:HB1	37:DR:97:VAL:HG11	1.87	0.55
29:DG:31:VAL:O	29:DG:33:ARG:HD3	2.07	0.55
2:AC:191:THR:HG23	2:AC:196:LEU:HD21	1.88	0.55
46:B0:67:VAL:HG13	46:B0:81:VAL:HG22	1.88	0.55
59:BA:1586:A:H3'	59:BA:1587:A:H8	1.71	0.55
34:DO:98:VAL:HG13	34:DO:117:LEU:HD22	1.86	0.55
1:CB:113:HIS:O	1:CB:117:GLU:HG2	2.06	0.55
59:DA:817:C:H42	59:DA:1190:G:H1	1.54	0.55
57:D1:18:ILE:CG2	59:DA:380:U:H4'	2.34	0.55
59:BA:513:A:H2	59:BA:582:G:H4'	1.72	0.55
11:CL:32:PHE:O	11:CL:84:LEU:HG	2.07	0.55
25:BC:176:VAL:HG21	25:BC:189:ASN:HB3	1.89	0.55
57:D1:45:ASN:HD22	59:DA:2230:G:H1'	1.71	0.55
59:DA:2804:C:H2'	59:DA:2805:G:C8	2.42	0.55
59:DA:2648:C:H42	59:DA:2672:G:H1	1.54	0.55
40:DU:86:ALA:HB3	40:DU:88:ILE:HG13	1.87	0.55
3:AD:196:LEU:O	3:AD:198:VAL:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:86:ARG:HE	11:AL:99:HIS:HB2	1.72	0.55
59:DA:2246:G:H2'	59:DA:2247:A:H8	1.72	0.55
8:AI:11:LYS:HA	8:AI:108:VAL:HG12	1.87	0.55
7:AH:9:MET:HG3	7:AH:26:VAL:HG11	1.88	0.55
59:BA:2648:C:H2'	59:BA:2649:U:C6	2.42	0.55
20:AA:1145:C:O2'	20:AA:1146:A:O5'	2.24	0.55
49:B5:55:ARG:HD3	49:B5:56:LYS:N	2.21	0.55
36:BQ:25:ASP:OD1	36:BQ:25:ASP:N	2.40	0.55
20:CA:1237:C:O2'	20:CA:1300:G:N2	2.39	0.55
20:CA:861:G:HO2'	20:CA:874:G:HO2'	1.54	0.55
2:CC:175:LEU:HD23	2:CC:175:LEU:H	1.71	0.55
20:CA:383:A:H8	20:CA:383:A:O5'	1.89	0.55
4:AE:110:LEU:O	4:AE:115:VAL:HG23	2.06	0.55
39:DT:51:ARG:NH2	59:DA:2719:G:OP1	2.39	0.55
20:CA:401:C:H2'	20:CA:402:G:C8	2.41	0.55
59:DA:2333:A:H1'	59:DA:2335:A:C6	2.41	0.55
59:DA:142:G:H2'	59:DA:143:C:C6	2.42	0.55
27:DE:156:MET:HE1	59:DA:2050:C:H1'	1.88	0.55
59:DA:407:G:H1	59:DA:420:C:H42	1.54	0.55
23:CY:162:VAL:HB	23:CY:255:ILE:HG13	1.89	0.55
26:BD:22:SER:C	26:BD:24:ILE:H	2.08	0.55
26:BD:25:THR:O	26:BD:26:LYS:HB2	2.06	0.55
11:AL:71:PRO:HD2	11:AL:102:ARG:HD3	1.89	0.55
59:DA:950:G:H2'	59:DA:951:C:C6	2.40	0.55
59:BA:1478:G:H2'	59:BA:1479:G:C8	2.41	0.55
7:AH:89:PRO:HG2	20:AA:878:G:H5'	1.87	0.55
20:AA:802:A:H2'	20:AA:803:G:O4'	2.07	0.55
20:AA:1304:G:N1	20:AA:1332:A:OP2	2.40	0.55
18:AS:76:PRO:O	18:AS:78:ARG:N	2.37	0.55
59:BA:1778:U:O4	59:BA:1785:A:N7	2.40	0.55
26:DD:215:LEU:HB2	26:DD:217:ARG:HG3	1.87	0.55
23:AY:70:THR:HB	23:AY:81:ILE:HD13	1.88	0.55
16:AQ:45:HIS:CB	16:AQ:72:ARG:HA	2.36	0.55
25:BC:27:ALA:HB3	25:BC:28:ARG:HE	1.72	0.55
18:AS:54:GLY:HA3	20:AA:1220:G:H21	1.72	0.55
59:DA:273(C):C:H2'	59:DA:273(D):C:H6	1.70	0.55
2:CC:147:LYS:HB2	2:CC:203:PHE:CD2	2.42	0.55
59:DA:1064:C:H42	59:DA:1074:G:H1	1.54	0.55
20:CA:1242:C:H2'	20:CA:1243:C:H6	1.72	0.55
37:DR:104:ARG:HB2	37:DR:111:LEU:HD21	1.88	0.55
26:BD:41:GLY:O	26:BD:43:ARG:N	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:91:LEU:HD22	4:AE:120:THR:HB	1.89	0.55
20:AA:454:C:N4	20:AA:479:C:N3	2.55	0.55
23:CY:297:GLU:HG3	23:CY:298:VAL:H	1.70	0.55
26:BD:151:LYS:HD2	59:BA:2208:U:H4'	1.87	0.55
23:CY:341:VAL:HG12	23:CY:391:GLY:HA2	1.88	0.55
43:BX:32:PRO:HA	43:BX:77:LYS:HB3	1.88	0.55
53:D9:11:CYS:SG	53:D9:14:CYS:N	2.80	0.55
12:AM:14:ARG:NH1	20:AA:1295:G:O2'	2.39	0.55
6:CG:108:ALA:HB2	6:CG:123:GLU:HG2	1.88	0.55
46:B0:9:SER:OG	46:B0:10:THR:N	2.39	0.55
26:BD:274:ARG:NH2	59:BA:1798:U:OP2	2.40	0.55
8:CI:69:GLY:HA3	20:CA:1371:G:H4'	1.88	0.55
5:AF:47:ARG:HA	5:AF:57:GLN:HA	1.87	0.55
20:AA:503:C:H2'	20:AA:504:C:C6	2.42	0.55
29:BG:86:MET:SD	29:BG:86:MET:N	2.80	0.55
39:BT:130:ALA:O	39:BT:134:GLU:N	2.39	0.55
20:AA:1172:C:H2'	20:AA:1173:G:C8	2.41	0.55
23:CY:25:LYS:HE2	23:CY:86:GLY:HA3	1.87	0.55
59:DA:2819:G:H2'	59:DA:2821:A:N7	2.22	0.55
59:BA:2729:G:H2'	59:BA:2730:C:O4'	2.07	0.55
59:BA:1663:C:HO2'	59:BA:1664:A:H8	1.53	0.55
59:DA:1308:A:H2'	59:DA:1309:G:O4'	2.06	0.55
59:DA:470:A:H2'	59:DA:471:A:O4'	2.07	0.55
25:BC:169:THR:O	25:BC:169:THR:OG1	2.22	0.55
11:CL:88:GLY:O	11:CL:99:HIS:NE2	2.39	0.55
59:BA:380:U:H2'	59:BA:381:G:C8	2.42	0.55
26:DD:86:PRO:HG3	59:DA:1567:A:H2'	1.88	0.55
37:BR:12:ARG:HG2	37:BR:16:HIS:ND1	2.21	0.55
40:DU:52:ARG:NH1	59:DA:559:G:O2'	2.40	0.55
59:BA:1501:C:H2'	59:BA:1502:C:C6	2.42	0.55
59:BA:191:A:H2'	59:BA:192:C:H6	1.70	0.55
59:DA:1279:G:H1	59:DA:1291:C:N4	2.02	0.55
59:DA:476:G:H1'	59:DA:480:A:N6	2.21	0.55
49:D5:18:ALA:O	49:D5:21:SER:N	2.29	0.55
44:BY:15:VAL:HB	44:BY:23:ARG:H	1.71	0.55
59:BA:373:U:H2'	59:BA:374:A:C8	2.42	0.55
59:BA:2152:G:H2'	59:BA:2153:G:H8	1.72	0.55
16:AQ:29:HIS:CG	16:AQ:32:TYR:HB2	2.42	0.55
59:DA:199:A:N6	59:DA:2433:A:H2'	2.21	0.55
59:DA:2168:G:N2	59:DA:2170:A:H3'	2.20	0.55
47:D2:64:LEU:O	47:D2:68:ARG:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DY:7:VAL:HG21	59:DA:336:C:H5''	1.88	0.55
16:CQ:51:TYR:HE1	16:CQ:76:LEU:HB2	1.72	0.55
1:CB:20:GLU:HG3	1:CB:191:ASP:HB2	1.89	0.55
59:DA:2660:A:H2'	59:DA:2661:G:O4'	2.07	0.55
59:BA:2437:U:H2'	59:BA:2438:U:C6	2.42	0.55
57:B1:65:SER:O	57:B1:66:HIS:ND1	2.40	0.55
59:BA:236:C:H2'	59:BA:237:C:H6	1.72	0.55
20:AA:160:A:H61	20:AA:347:G:H1'	1.72	0.55
2:CC:68:VAL:HG12	2:CC:70:VAL:HG22	1.89	0.55
59:BA:2620:C:O2'	59:BA:2621:A:H8	1.89	0.55
1:CB:71:VAL:HG22	1:CB:93:VAL:HG21	1.88	0.55
59:BA:514:A:N3	59:BA:581:C:O2'	2.38	0.55
59:BA:2176:A:H2'	59:BA:2177:C:C6	2.42	0.55
9:CJ:51:ARG:NH1	9:CJ:61:GLU:OE2	2.40	0.55
3:AD:33:MET:O	3:AD:35:ARG:N	2.40	0.55
25:BC:176:VAL:O	25:BC:178:LYS:N	2.40	0.55
2:CC:56:ASP:N	2:CC:56:ASP:OD1	2.38	0.55
26:BD:147:LEU:HA	26:BD:185:VAL:HG13	1.89	0.55
1:AB:91:PRO:HG2	1:AB:155:LEU:HD23	1.89	0.55
27:BE:79:ARG:HG3	32:BK:63:ARG:HB2	101.51	0.55
59:DA:1530:G:C6	59:DA:1541:U:O2	2.59	0.55
13:CN:48:ALA:HB2	13:CN:53:LEU:HD12	1.88	0.55
42:DW:9:TYR:H	42:DW:102:HIS:CE1	2.24	0.55
42:DW:9:TYR:H	42:DW:102:HIS:HE1	1.53	0.55
20:AA:891:U:H2'	20:AA:892:A:H8	1.71	0.55
59:BA:2078:C:H2'	59:BA:2079:U:C6	2.41	0.55
48:D3:8:LEU:HD12	48:D3:28:LEU:HB3	1.87	0.55
59:DA:1316:U:H3	59:DA:1336:A:H61	1.54	0.55
35:BP:41:ARG:HE	35:BP:45:LEU:HD22	1.72	0.55
1:CB:87:ARG:HH22	1:CB:233:SER:H	1.53	0.55
39:BT:58:ASN:HD22	39:BT:58:ASN:H	1.53	0.55
23:CY:496:LYS:HG2	23:CY:498:ILE:HG23	1.89	0.55
20:AA:185:A:H2'	20:AA:186:C:H6	1.72	0.55
59:BA:1010:A:N3	59:BA:1153:C:H1'	2.22	0.55
16:AQ:56:VAL:HB	16:AQ:78:GLU:HG2	1.88	0.55
20:CA:152:A:N6	20:CA:169:C:O2	2.39	0.55
20:AA:109:A:H62	20:AA:324:G:H21	1.55	0.55
29:DG:173:LEU:HB3	29:DG:178:PHE:HB2	1.87	0.55
59:BA:576:U:H2'	59:BA:577:G:C8	2.42	0.55
20:AA:715:A:H2'	20:AA:716:A:C8	2.41	0.55
20:CA:1010:G:H2'	20:CA:1011:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1375:C:H2'	59:BA:1376:C:C6	2.42	0.55
23:AY:25:LYS:HE3	62:AY:702:GDP:PB	2.47	0.55
40:DU:10:ARG:NH2	59:DA:584:C:OP2	2.40	0.55
41:BV:47:VAL:HB	41:BV:50:PRO:O	2.06	0.55
28:BF:157:VAL:O	28:BF:194:MET:HA	2.07	0.55
39:BT:33:LYS:HD3	39:BT:34:VAL:N	2.21	0.55
26:DD:220:HIS:N	59:DA:1790:C:OP1	2.40	0.55
26:DD:244:ARG:HG3	59:DA:1902:C:O4'	2.07	0.55
59:DA:2805:G:H2'	59:DA:2807:G:C8	2.42	0.55
26:DD:239:ARG:NH2	59:DA:1788:C:OP1	2.39	0.55
59:BA:797:C:H2'	59:BA:798:G:C8	2.42	0.55
59:BA:1182:A:H2'	59:BA:1183:G:C8	2.42	0.55
4:CE:151:LEU:HB3	7:CH:79:VAL:HG22	1.89	0.55
59:DA:404:C:H4'	59:DA:405:U:H5'	1.88	0.55
23:AY:110:SER:HB3	23:AY:144:ALA:HA	1.89	0.55
1:AB:24:TRP:CZ3	1:AB:26:PRO:HA	2.41	0.55
33:DN:19:GLU:HB3	33:DN:59:LYS:HE3	1.88	0.55
43:DX:41:ASN:O	43:DX:45:THR:OG1	2.23	0.55
20:AA:578:C:H2'	20:AA:579:G:C8	2.42	0.55
28:BF:161:GLU:O	28:BF:165:ARG:HG2	2.07	0.55
12:AM:3:ARG:HH21	12:AM:7:VAL:HG22	1.71	0.55
7:CH:85:ARG:NH1	7:CH:87:SER:O	2.40	0.55
2:CC:43:LEU:O	2:CC:47:LEU:HB3	2.06	0.55
23:CY:604:PRO:HA	23:CY:676:TYR:HB3	1.89	0.55
59:BA:2036:C:H2'	59:BA:2037:G:H8	1.72	0.55
3:CD:14:ARG:HG3	3:CD:66:ARG:HH22	1.72	0.55
31:BJ:25:UNK:C	31:BJ:111:UNK:HA	2.37	0.55
20:CA:1422:G:H2'	20:CA:1423:G:H8	1.72	0.55
59:DA:1501:C:H2'	59:DA:1502:C:C6	2.42	0.55
51:D7:3:ARG:HG3	59:DA:1613:G:H1'	1.89	0.55
25:BC:34:ALA:HB2	25:BC:217:THR:HG21	1.88	0.55
25:DC:42:VAL:HB	25:DC:177:GLY:HA3	1.88	0.55
26:BD:25:THR:HG22	26:BD:26:LYS:H	1.71	0.55
38:BS:71:ARG:O	38:BS:74:ALA:HB3	2.07	0.55
39:BT:49:VAL:O	39:BT:50:ILE:HG13	2.06	0.55
41:BV:33:VAL:HG13	41:BV:59:ALA:HB3	1.88	0.55
9:CJ:40:LEU:HD21	20:CA:1280:A:H5'	1.87	0.55
59:BA:334:C:OP1	59:BA:335:C:N4	2.31	0.55
59:BA:646:A:H2'	59:BA:647:G:O4'	2.07	0.55
59:DA:1796:U:H2'	59:DA:1797:C:C6	2.42	0.55
20:CA:33:A:H2'	20:CA:34:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1948:G:H1	59:DA:1958:C:H42	1.55	0.55
7:CH:7:ALA:O	7:CH:11:THR:HG23	2.07	0.55
20:CA:1481:U:H2'	20:CA:1482:G:C8	2.42	0.55
20:CA:757:U:H2'	20:CA:758:G:O4'	2.04	0.55
42:DW:68:ARG:HH12	42:DW:111:HIS:HB2	1.72	0.55
59:BA:2829:C:H2'	59:BA:2830:G:C8	2.42	0.55
19:CT:53:LEU:HD12	19:CT:100:ILE:HG23	1.89	0.55
20:AA:242:C:H2'	20:AA:245:C:H5	1.72	0.55
60:BB:32:C:H2'	60:BB:33:G:H8	1.70	0.55
59:BA:2011:U:H2'	59:BA:2012:G:O4'	2.07	0.55
29:DG:114:ILE:HB	29:DG:117:PHE:HB2	1.88	0.55
2:AC:155:GLY:HA3	2:AC:196:LEU:HA	1.89	0.55
23:CY:188:TYR:HB2	23:CY:267:LYS:HG2	1.88	0.55
26:BD:250:TRP:CE2	59:BA:1805:U:H5''	2.42	0.55
59:DA:2533:A:OP1	59:DA:2665:A:O2'	2.18	0.55
7:AH:110:ALA:HB3	7:AH:121:ASP:HB3	1.89	0.55
23:CY:146:LEU:O	23:CY:150:ILE:HG12	2.07	0.55
59:DA:2138:C:H2'	59:DA:2139:C:C6	2.42	0.55
28:DF:196:LEU:O	28:DF:200:GLU:HG2	2.07	0.55
59:DA:322:A:O4'	59:DA:340:A:H1'	2.07	0.55
59:BA:1833:U:H2'	59:BA:1834:U:C6	2.42	0.55
59:BA:740:U:H2'	59:BA:741:G:C8	2.42	0.55
8:AI:124:GLN:HB3	20:AA:1232:U:H5''	1.88	0.55
6:CG:73:MET:HG2	6:CG:90:GLU:HA	1.89	0.55
16:CQ:86:GLU:O	16:CQ:90:ILE:HG13	2.07	0.55
25:BC:120:VAL:O	25:BC:124:VAL:N	2.23	0.55
59:DA:1221:C:H2'	59:DA:122(A):C:H6	1.71	0.55
23:CY:18:ALA:HA	23:CY:25:LYS:HD3	1.89	0.54
59:DA:1025:G:C4	59:DA:1135:C:H1'	2.43	0.54
59:DA:1305:C:N3	59:DA:1623:G:N2	2.45	0.54
59:BA:226:G:N2	59:BA:228:A:N6	2.47	0.54
59:BA:1854:A:H1'	59:BA:2233:U:H4'	1.89	0.54
16:CQ:43:LEU:HB2	16:CQ:70:ARG:O	2.08	0.54
25:BC:153:ILE:O	25:BC:157:ILE:HG13	2.08	0.54
10:AK:72:ALA:HB1	10:AK:77:MET:HG2	1.90	0.54
20:AA:1324:A:H2'	20:AA:1325:C:C6	2.41	0.54
52:D8:61:LEU:O	52:D8:64:TYR:N	2.39	0.54
40:BU:60:LEU:HD13	40:BU:64:ARG:HH22	1.71	0.54
59:DA:1473:G:H2'	59:DA:1474:C:C6	2.42	0.54
26:BD:228:PRO:HB3	59:BA:2598:A:H4'	1.90	0.54
29:BG:60:LEU:HD12	29:BG:90:LEU:HD21	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1436:U:H2'	20:AA:1437:C:O4'	2.07	0.54
59:DA:722:A:H2'	59:DA:723:G:H8	1.72	0.54
14:AO:11:VAL:HG21	14:AO:34:LEU:HD22	1.88	0.54
20:CA:1016:A:H8	20:CA:1016:A:O5'	1.90	0.54
59:DA:878:A:H2'	59:DA:879:G:O4'	2.07	0.54
23:CY:524:GLU:HB2	23:CY:564:LYS:HA	1.88	0.54
23:AY:291:GLY:HA2	23:AY:400:GLU:N	2.22	0.54
59:DA:1897:G:H2'	59:DA:1898:U:O4'	2.07	0.54
18:AS:64:GLU:O	18:AS:67:VAL:HG23	2.06	0.54
28:DF:202:PHE:HA	28:DF:205:ARG:HB2	1.88	0.54
59:DA:2389:G:H5''	59:DA:2390:U:O4'	2.07	0.54
33:DN:68:GLU:HA	33:DN:88:GLU:OE1	2.07	0.54
53:B9:2:LYS:HG2	53:B9:33:LYS:HB3	1.89	0.54
32:BK:106:GLU:HA	32:BK:109:LYS:HB2	1.89	0.54
20:CA:56:U:H2'	20:CA:57:G:H8	1.71	0.54
59:DA:1821:A:H2'	59:DA:1822:G:C8	2.42	0.54
29:BG:135:LEU:HD22	29:BG:140:ILE:HD11	1.89	0.54
59:DA:2606:C:H2'	59:DA:2607:G:C8	2.42	0.54
7:AH:37:ARG:O	7:AH:41:ARG:HB2	2.07	0.54
7:AH:46:LYS:HB3	7:AH:62:TYR:HB2	1.89	0.54
9:CJ:57:LYS:HB2	20:CA:972:C:H4'	1.89	0.54
27:BE:119:ARG:HD2	27:BE:120:TRP:CD1	2.43	0.54
59:DA:1479:G:H2'	59:DA:1480:G:C8	2.42	0.54
59:DA:997:G:H2'	59:DA:998:C:C6	2.42	0.54
34:BO:68:GLU:HB3	34:BO:78:ARG:HB2	1.89	0.54
39:DT:27:THR:HG22	39:DT:49:VAL:HB	1.88	0.54
59:DA:1019:U:H2'	59:DA:1020:A:C8	2.41	0.54
41:BV:15:GLU:HB2	41:BV:18:LEU:HD21	1.88	0.54
9:CJ:55:LYS:HG2	20:CA:963:G:N2	2.23	0.54
34:DO:71:ARG:NH2	34:DO:122:LEU:O	2.40	0.54
37:BR:17:ARG:O	37:BR:21:TYR:HD2	1.90	0.54
38:DS:42:ASP:O	38:DS:44:LYS:N	2.39	0.54
10:AK:82:VAL:HG21	10:AK:105:VAL:HG12	1.88	0.54
53:B9:19:ARG:HH11	53:B9:26:ILE:HD11	1.71	0.54
28:BF:103:LYS:HG3	28:BF:107:LYS:HE2	1.89	0.54
60:DB:102:G:H2'	60:DB:103:U:H6	1.72	0.54
59:BA:1957:C:H2'	59:BA:1958:C:H6	1.71	0.54
59:DA:181:A:H2'	59:DA:182:A:H8	1.72	0.54
35:DP:50:ARG:HH21	52:D8:59:LYS:HD2	1.73	0.54
15:AP:53:VAL:HG12	15:AP:79:VAL:HG22	1.88	0.54
59:BA:2064:C:H2'	59:BA:2065:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1231:G:H2'	20:CA:1232:U:O4'	2.06	0.54
23:CY:147:TRP:HA	23:CY:150:ILE:HB	1.88	0.54
20:AA:476:G:H2'	20:AA:477:G:C8	2.43	0.54
30:BH:94:TYR:HB3	30:BH:107:VAL:HG12	1.90	0.54
2:CC:124:ILE:HD11	2:CC:196:LEU:HG	1.89	0.54
26:BD:205:VAL:HG12	26:BD:207:GLY:H	1.72	0.54
45:DZ:52:SER:OG	45:DZ:53:ILE:N	2.40	0.54
33:BN:65:LYS:NZ	59:BA:1021:A:OP2	2.32	0.54
59:BA:1151:G:H2'	59:BA:1152:C:C6	2.42	0.54
59:BA:1603:A:H5'	59:BA:1604:C:OP2	2.07	0.54
59:BA:2749:A:H62	59:BA:2753:A:H61	0.78	0.54
59:BA:30:G:H2'	59:BA:31:C:H6	1.71	0.54
33:DN:34:LEU:O	33:DN:49:GLY:HA3	2.07	0.54
59:DA:2502:G:H5'	59:DA:2503:A:C5'	2.34	0.54
1:AB:162:ILE:HG12	1:AB:184:VAL:HA	1.88	0.54
20:AA:299:G:C6	20:AA:300:A:C6	2.95	0.54
39:BT:30:VAL:HG22	39:BT:31:SER:H	1.72	0.54
20:CA:1145:C:O2'	20:CA:1146:A:O5'	2.26	0.54
39:DT:33:LYS:HD3	39:DT:34:VAL:H	1.73	0.54
59:DA:1531:C:H2'	59:DA:1532:C:C6	2.42	0.54
42:DW:78:GLU:O	59:DA:24:G:O2'	2.23	0.54
59:DA:1709:U:H1'	59:DA:2860:A:N3	2.23	0.54
26:BD:13:ARG:HG3	26:BD:16:MET:SD	2.47	0.54
57:D1:39:LYS:NZ	57:D1:40:ARG:O	2.41	0.54
23:AY:487:ILE:HB	23:AY:597:GLY:O	2.08	0.54
26:BD:51:VAL:HG21	26:BD:54:ARG:HB2	1.89	0.54
59:DA:2773:C:H2'	59:DA:2774:C:C6	2.42	0.54
16:CQ:57:VAL:HG12	16:CQ:76:LEU:HA	1.88	0.54
26:DD:14:ARG:NH1	59:DA:1693:U:O2'	2.30	0.54
20:AA:115:G:O2'	20:AA:116:A:OP2	2.25	0.54
18:CS:30:LEU:HD22	18:CS:32:LYS:HG3	1.87	0.54
3:CD:161:ASN:O	3:CD:165:MET:HB2	2.08	0.54
10:AK:79:SER:HA	10:AK:104:GLN:HB3	1.89	0.54
59:BA:605:C:H1'	59:BA:657:U:O2'	2.06	0.54
33:DN:27:ALA:O	33:DN:30:ILE:N	2.40	0.54
23:AY:294:PRO:HD3	23:AY:397:VAL:HG12	1.90	0.54
57:D1:48:LYS:NZ	57:D1:59:THR:OG1	2.26	0.54
51:D7:10:ARG:NH2	59:DA:771:G:OP1	2.40	0.54
59:BA:580:C:H2'	59:BA:581:C:C6	2.43	0.54
59:BA:227:A:H61	59:BA:410:G:N2	2.06	0.54
9:CJ:36:GLY:HA3	20:CA:1123:A:H4'	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:575:A:H2'	59:DA:576:U:C6	2.42	0.54
41:BV:6:LYS:HA	41:BV:11:GLN:HA	1.89	0.54
21:CW:62:C:H4'	25:DC:53:ARG:HH21	1.71	0.54
11:AL:76:ASN:O	11:AL:78:GLN:N	2.31	0.54
36:BQ:1:MET:N	36:BQ:48:GLU:HB2	2.22	0.54
59:BA:2078:C:N4	59:BA:2242:G:H1	2.04	0.54
59:DA:589:C:H2'	59:DA:590:A:C8	2.42	0.54
59:DA:531:C:H3'	59:DA:561:G:N2	2.21	0.54
59:BA:1336:A:H2'	59:BA:1337:G:C8	2.42	0.54
59:DA:181:A:H2'	59:DA:182:A:C8	2.42	0.54
20:CA:140:A:H2	20:CA:223:U:H3	1.50	0.54
59:BA:834:C:H1'	59:BA:2358:G:N3	2.22	0.54
20:AA:22:G:H2'	20:AA:23:C:C6	2.43	0.54
49:D5:12:SER:HB3	49:D5:15:ARG:HG2	1.89	0.54
49:D5:2:ALA:N	59:DA:2015:A:N3	2.56	0.54
23:CY:201:ILE:C	23:CY:203:GLU:H	2.11	0.54
20:AA:1040:U:H2'	20:AA:1041:A:C8	2.42	0.54
16:AQ:56:VAL:HG23	16:AQ:81:ARG:HG3	1.88	0.54
59:DA:1050:A:H2'	59:DA:1051:G:C8	2.42	0.54
17:CR:35:ARG:O	17:CR:37:VAL:N	2.41	0.54
52:B8:9:GLY:O	52:B8:13:ARG:HG2	2.08	0.54
59:DA:2299:G:H2'	59:DA:2300:G:H8	1.72	0.54
43:DX:64:LYS:HD2	43:DX:73:ARG:HH21	1.72	0.54
49:D5:4:HIS:HB3	59:DA:2577:A:H1'	1.89	0.54
59:DA:819:A:OP2	59:DA:1187:G:N2	2.40	0.54
17:CR:32:ARG:HA	17:CR:69:THR:HG21	1.89	0.54
28:DF:126:VAL:HG21	28:DF:142:TRP:HZ2	1.73	0.54
1:CB:154:LEU:HD23	1:CB:154:LEU:H	1.73	0.54
7:AH:31:PHE:HE1	20:AA:642:A:HO2'	1.55	0.54
10:CK:43:SER:HB2	10:CK:71:LYS:HZ1	1.71	0.54
20:CA:1501:C:OP1	20:CA:1508:G:H4'	2.07	0.54
59:BA:1136:G:H2'	59:BA:1137:G:O4'	2.07	0.54
59:BA:1139:G:H1'	59:BA:1143:A:C2	2.43	0.54
59:BA:2470:G:H2'	59:BA:2471:C:H6	1.73	0.54
25:BC:61:GLY:HA3	25:BC:164:PHE:CE1	2.42	0.54
20:CA:296:U:O2'	20:CA:556:C:O2	2.20	0.54
9:CJ:51:ARG:HB3	20:CA:1060:C:H4'	1.88	0.54
3:AD:25:ARG:HB2	20:AA:410:G:OP2	2.07	0.54
59:DA:2889:C:H2'	59:DA:2891:G:O4'	2.08	0.54
25:BC:132:LEU:HB3	25:BC:137:LEU:HB2	1.88	0.54
1:AB:184:VAL:N	1:AB:198:ASP:HB2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BZ:118:GLN:HB3	45:BZ:173:ALA:H	1.71	0.54
26:BD:208:LYS:HG3	26:BD:210:GLY:H	1.72	0.54
34:DO:104:ARG:O	34:DO:107:ARG:HB3	2.06	0.54
34:DO:71:ARG:HD2	39:DT:74:ARG:HH21	1.70	0.54
17:AR:49:LYS:HB3	20:AA:719:C:O2'	2.08	0.54
59:DA:657:U:H2'	59:DA:658:C:C6	2.42	0.54
59:BA:848:G:H2'	59:BA:849:A:H8	1.72	0.54
26:DD:245:PRO:O	26:DD:247:ALA:N	2.40	0.54
20:CA:129(A):G:H4'	20:CA:130:A:H5''	1.88	0.54
42:BW:15:ARG:HD2	49:B5:20:ARG:HD3	1.90	0.54
35:BP:60:MET:HB3	59:BA:2392:A:H8	1.73	0.54
28:BF:167:ALA:HB1	28:BF:175:THR:HB	1.88	0.54
59:DA:2089:U:H2'	59:DA:2090:G:H8	1.72	0.54
12:AM:74:VAL:O	12:AM:78:ILE:HG12	2.07	0.54
20:CA:216:G:H2'	20:CA:217:C:H6	1.73	0.54
59:DA:2014:A:H2'	59:DA:2015:A:C8	2.43	0.54
30:BH:175:LYS:HG2	30:BH:176:ALA:H	1.71	0.54
59:BA:354:G:H2'	59:BA:355:G:H8	1.71	0.54
19:AT:22:ARG:NE	20:AA:324:G:OP1	2.38	0.54
10:AK:118:GLY:HA2	20:AA:716:A:H1'	1.88	0.54
45:DZ:127:LYS:HG2	45:DZ:164:ALA:HB2	1.89	0.54
50:B6:11:LEU:HD12	50:B6:26:ASN:HB2	1.88	0.54
10:CK:20:TYR:HB2	10:CK:31:THR:HG23	1.90	0.54
20:CA:1288:A:H2'	20:CA:1289:A:O4'	2.07	0.54
45:BZ:103:ARG:HD3	45:BZ:136:PHE:HB2	1.90	0.54
20:AA:1048:G:H2'	20:AA:1050:G:H8	1.71	0.54
59:BA:210:C:H2'	59:BA:211:A:C8	2.41	0.54
32:BK:95:LYS:HG2	32:BK:137:GLU:HB3	1.89	0.54
25:DC:8:TYR:O	25:DC:12:LEU:HB2	2.07	0.54
40:BU:59:ARG:HG3	59:BA:1009:A:H5''	1.88	0.54
36:BQ:76:LYS:N	36:BQ:89:ASN:H	2.06	0.54
40:BU:55:ARG:HA	40:BU:58:ARG:HD2	1.88	0.54
27:DE:62:PRO:O	27:DE:64:LYS:N	2.37	0.54
40:DU:49:HIS:HA	40:DU:52:ARG:HB3	1.90	0.54
59:DA:484:C:N4	59:DA:496:G:H1	2.01	0.54
33:BN:15:LEU:HD21	33:BN:55:VAL:HG13	1.90	0.54
33:BN:14:VAL:HG21	33:BN:33:LEU:HD21	1.90	0.54
23:AY:13:ARG:O	23:AY:80:ASN:N	2.31	0.54
44:DY:51:VAL:HB	44:DY:55:TYR:HB2	1.89	0.54
59:BA:83:G:H21	59:BA:103:A:N6	2.04	0.54
59:BA:463:G:H2'	59:BA:464:U:H5''	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:270(T):G:H2'	59:DA:270(U):G:C8	2.41	0.54
59:BA:2593:U:H2'	59:BA:2594:C:C6	2.43	0.54
20:AA:1440(J):C:H1'	20:AA:1440(K):G:N2	2.22	0.54
20:CA:370:C:N4	20:CA:391:G:H1	2.05	0.54
59:DA:1687:G:N1	59:DA:1700:A:OP1	2.36	0.54
59:BA:1826:G:O2'	59:BA:1971:A:OP2	2.26	0.54
60:DB:36:C:N4	60:DB:49:C:O2	2.26	0.54
20:CA:757:U:O2'	20:CA:879:C:O2	2.26	0.54
59:DA:2526:G:H1	59:DA:2537:U:H3	1.54	0.54
26:DD:136:ILE:O	26:DD:168:ARG:NH2	2.38	0.54
36:BQ:135:ASP:H	36:BQ:137:TYR:HD1	1.55	0.54
8:CI:70:LYS:NZ	20:CA:1248:A:O2'	2.34	0.54
20:CA:600:C:H2'	20:CA:601:C:C6	2.42	0.54
23:CY:190:ASN:HD21	23:CY:195:ASP:H	1.54	0.54
36:BQ:7:MET:SD	36:BQ:8:LYS:N	2.80	0.54
16:CQ:40:LYS:NZ	16:CQ:42:TYR:OH	2.41	0.54
59:BA:2626:C:H2'	59:BA:2627:G:O4'	2.07	0.54
38:DS:17:ARG:O	38:DS:21:THR:N	2.40	0.54
27:BE:101:ARG:HE	27:BE:171:GLU:HB2	1.72	0.54
26:DD:70:TRP:HE1	26:DD:150:LYS:HZ1	1.55	0.54
59:BA:976:C:H2'	59:BA:977:G:H8	1.73	0.54
36:DQ:134:ARG:HH12	45:DZ:119:GLU:HG3	1.72	0.54
28:DF:162:LEU:HD12	28:DF:162:LEU:H	1.71	0.54
59:BA:1667:G:O2'	59:BA:1991:U:O4	2.25	0.54
59:DA:2050:C:H2'	59:DA:2051:A:C8	2.43	0.54
23:AY:18:ALA:HB2	23:AY:85:PRO:HD2	1.89	0.54
59:DA:56:A:H2'	59:DA:57:C:H6	1.71	0.54
21:AW:17:U:H5'	21:AW:18:G:O4'	2.07	0.54
28:BF:2:LYS:O	28:BF:4:VAL:N	2.40	0.54
11:AL:69:TYR:CD1	11:AL:70:ILE:HG13	2.43	0.54
59:DA:2212:A:H4'	59:DA:2213:U:C5	2.43	0.54
9:CJ:53:PRO:O	13:CN:41:ARG:NH2	2.41	0.54
17:CR:44:LEU:HD11	17:CR:70:ILE:HD13	1.88	0.54
53:B9:32:HIS:O	53:B9:34:GLN:N	2.41	0.54
44:DY:28:LYS:HB2	44:DY:39:VAL:HG13	1.90	0.54
37:DR:67:LEU:HD21	37:DR:76:VAL:HG11	1.90	0.54
26:DD:244:ARG:HG2	26:DD:245:PRO:CA	2.37	0.54
23:CY:187:THR:HG21	23:CY:199:ILE:HD13	1.88	0.54
7:CH:9:MET:O	7:CH:13:ILE:HG12	2.07	0.54
23:AY:289:ILE:HB	23:AY:301:ILE:HB	1.90	0.54
60:DB:11:C:H42	60:DB:109:G:H1	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2065:C:H2'	59:BA:2066:C:H6	1.72	0.54
20:AA:216:G:H2'	20:AA:217:C:H6	1.73	0.54
59:BA:2630:G:H2'	59:BA:2631:G:C8	2.43	0.54
30:DH:176:ALA:HB1	59:DA:2529:G:H5''	1.90	0.54
43:BX:35:THR:HG21	59:BA:143:C:H5'	1.87	0.54
29:BG:42:GLY:O	59:BA:2306:C:N4	2.41	0.54
59:BA:2728:U:H2'	59:BA:2729:G:C8	2.43	0.54
37:DR:64:ARG:NE	59:DA:1454:U:O2	2.41	0.54
59:DA:2851:A:H2'	59:DA:2852:G:O4'	2.08	0.54
59:DA:2109:U:O4	59:DA:2180:U:O4	2.25	0.54
59:DA:1525:G:H2'	59:DA:1526:G:H8	1.71	0.54
31:BJ:25:UNK:N	31:BJ:112:UNK:N	2.56	0.54
59:DA:1165:U:H2'	59:DA:1166:C:C6	2.43	0.54
39:DT:55:ASN:H	39:DT:59:THR:HB	1.72	0.54
20:AA:1511:G:H2'	20:AA:1512:U:O4'	2.08	0.54
59:BA:2415:G:H2'	59:BA:2416:C:C6	2.41	0.54
1:AB:70:PHE:CD2	1:AB:81:VAL:HB	2.43	0.54
21:CW:30:C:N4	21:CW:40:G:H1	2.00	0.54
30:BH:83:TYR:O	30:BH:85:LYS:N	2.41	0.54
11:AL:52:LEU:HG	11:AL:54:LYS:HZ1	1.72	0.54
38:DS:26:LEU:HD13	38:DS:106:ARG:HH12	1.71	0.54
51:B7:37:LYS:NZ	59:BA:468:G:OP2	2.40	0.54
26:BD:157:ARG:NH2	59:BA:1817:G:H3'	2.23	0.54
28:BF:176:LEU:HG	28:BF:177:ALA:N	2.23	0.54
12:CM:91:ARG:HH21	20:CA:1226:C:P	2.31	0.54
59:DA:153:C:H2'	59:DA:154:G:C8	2.43	0.54
59:DA:24:G:H2'	59:DA:25:U:C6	2.43	0.54
29:BG:129:GLY:O	29:BG:161:THR:N	2.38	0.54
59:DA:1841:U:H2'	59:DA:1842:G:H8	1.73	0.54
3:AD:15:GLU:HG3	3:AD:66:ARG:HH22	1.72	0.54
52:B8:63:PRO:O	52:B8:65:GLU:N	2.41	0.54
12:CM:98:VAL:N	20:CA:1308:U:OP1	2.28	0.54
23:CY:309:LEU:O	23:CY:390:VAL:HB	2.08	0.54
11:CL:15:ARG:NH2	20:CA:567:G:O6	2.41	0.54
34:BO:64:ARG:HH22	39:BT:69:GLY:HA3	1.73	0.54
59:DA:799:G:H3'	59:DA:800:A:H5''	1.89	0.54
5:AF:95:GLU:O	5:AF:97:PHE:N	2.41	0.54
20:CA:948:C:H5'	20:CA:1306:A:H4'	1.90	0.54
59:BA:852:G:H2'	59:BA:853:G:H8	1.72	0.54
59:BA:2327:A:H2'	59:BA:2328:A:C8	2.43	0.54
59:DA:197:A:O4'	59:DA:2068:U:N3	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:11:UNK:O	31:BJ:15:UNK:N	2.40	0.54
59:DA:325:G:H1	59:DA:337:C:H42	1.56	0.54
60:BB:20:C:H2'	60:BB:21:G:C8	2.43	0.54
59:BA:842:G:H2'	59:BA:843:G:H8	1.71	0.54
23:CY:216:LEU:HD11	23:CY:246:ILE:HD11	1.89	0.54
59:DA:641:C:H2'	59:DA:642:G:O4'	2.07	0.54
20:CA:1314:C:H2'	20:CA:1315:U:C6	2.43	0.54
27:BE:108:SER:OG	27:BE:161:GLY:O	2.25	0.54
20:CA:68(B):G:H2'	20:CA:68(C):C:C6	2.43	0.54
59:DA:2464:C:H2'	59:DA:2465:C:O4'	2.08	0.54
36:BQ:74:TYR:OH	59:BA:957:A:H4'	2.07	0.54
59:BA:1854:A:N6	59:BA:1888:G:H8	2.06	0.54
59:BA:307:G:H21	59:BA:330:A:N6	2.00	0.54
25:DC:84:ILE:HG23	25:DC:95:VAL:HB	1.90	0.54
59:DA:307:G:H21	59:DA:330:A:N6	2.06	0.54
1:AB:69:LEU:CB	1:AB:162:ILE:HG22	2.35	0.54
51:B7:41:ARG:HB3	59:BA:463:G:O6	2.08	0.54
3:AD:11:LEU:HD13	3:AD:66:ARG:HD2	1.90	0.54
59:BA:618(A):G:H2'	59:BA:618(B):C:C6	2.43	0.54
23:CY:631:ILE:HG22	23:CY:632:LEU:N	2.22	0.54
41:BV:52:VAL:HG13	41:BV:55:ALA:HB3	1.89	0.54
59:DA:506:G:H4'	59:DA:509:C:O2	2.08	0.54
59:DA:144:C:H2'	59:DA:145:G:C8	2.42	0.54
59:DA:1120:G:H2'	59:DA:1121:C:H6	1.73	0.54
20:AA:1084:G:H3'	20:AA:1085:U:H2'	1.90	0.54
11:CL:41:ARG:HH12	11:CL:55:VAL:HG11	1.73	0.54
20:AA:1484:C:O2'	59:BA:1960:A:O2'	2.16	0.54
59:DA:669:G:H8	59:DA:801:G:HO2'	1.55	0.54
7:AH:14:ARG:HE	7:AH:83:ILE:HG23	1.73	0.54
20:CA:334:C:O2	20:CA:1434:A:O2'	2.25	0.54
52:D8:57:ARG:HG3	52:D8:60:LEU:HD12	1.88	0.54
59:BA:43:G:H2'	59:BA:44:A:O4'	2.07	0.54
59:BA:1166:C:H2'	59:BA:1167:U:C6	2.43	0.54
59:DA:862:G:H2'	59:DA:863:A:O4'	2.07	0.54
20:AA:678:U:H1'	20:AA:777:A:O3'	2.08	0.54
29:BG:43:LEU:HD13	59:BA:2305:A:H61	1.72	0.54
34:DO:25:LEU:HD23	34:DO:38:VAL:HG21	1.90	0.54
59:DA:86:C:H4'	59:DA:104:U:H1'	1.90	0.54
20:AA:1097:C:H2'	20:AA:1098:C:C6	2.43	0.54
45:DZ:118:GLN:O	45:DZ:172:ALA:HA	2.07	0.54
59:BA:686:G:N2	59:BA:788:A:H61	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:78:ALA:HA	19:AT:81:LYS:HD3	1.88	0.54
35:DP:65:ARG:HA	59:DA:631:A:H4'	1.89	0.54
59:DA:1459:G:H2'	59:DA:1461:G:H5'	1.90	0.54
59:BA:597:U:H2'	59:BA:598:G:C8	2.43	0.54
59:DA:383:U:H2'	59:DA:385:C:H5	1.73	0.54
20:AA:352:C:O2	20:AA:355:C:N4	2.41	0.54
33:BN:37:LYS:NZ	59:BA:1007:C:OP2	2.41	0.54
59:DA:2037:G:H2'	59:DA:2038:G:H8	1.72	0.54
59:BA:1376:C:H2'	59:BA:1377:G:O4'	2.08	0.54
40:BU:51:LYS:HA	40:BU:54:LYS:HD2	1.90	0.54
20:AA:687:A:N6	20:AA:703:G:H21	2.01	0.54
60:DB:62:C:H2'	60:DB:63:G:H8	1.73	0.54
28:DF:157:VAL:O	28:DF:193:VAL:O	2.26	0.54
41:DV:10:LYS:NZ	41:DV:23:GLU:OE1	2.40	0.54
11:CL:52:LEU:HD12	11:CL:54:LYS:NZ	2.23	0.54
20:CA:733:A:O2'	20:CA:734:G:OP2	2.22	0.54
20:CA:375:U:H3	20:CA:389:A:N6	2.04	0.54
37:DR:79:LEU:HA	37:DR:83:ILE:HD12	1.89	0.54
12:CM:14:ARG:NH1	20:CA:1295:G:O2'	2.41	0.54
39:BT:95:ARG:H	39:BT:95:ARG:HD2	1.73	0.54
59:BA:608:A:H2'	59:BA:609(A):A:H8	1.71	0.54
28:BF:102:PRO:HB3	59:BA:606:U:H5''	1.89	0.54
10:CK:118:GLY:HA2	20:CA:716:A:H1'	1.88	0.54
23:CY:634:MET:O	23:CY:641:GLN:NE2	2.40	0.54
8:AI:99:LEU:HD12	8:AI:101:PHE:HE1	1.74	0.54
4:AE:32:VAL:HG11	4:AE:58:ALA:C	2.28	0.54
20:CA:757:U:OP1	20:CA:822:C:O2'	2.26	0.54
27:DE:51:PHE:HB3	27:DE:76:ARG:HB2	1.90	0.54
59:DA:1149:G:H2'	59:DA:1150:C:H6	1.73	0.54
59:DA:1076:C:H2'	59:DA:1077:A:H4'	1.89	0.54
20:CA:1073:U:H2'	20:CA:1074:G:H8	1.73	0.54
23:AY:467:LYS:HA	23:AY:471:LYS:HA	1.88	0.54
20:AA:160:A:N6	20:AA:347:G:H1'	2.23	0.54
59:BA:210:C:H2'	59:BA:211:A:H8	1.73	0.54
59:DA:2131:G:H5''	59:DA:2132:U:O5'	2.08	0.54
23:CY:466:LEU:HA	23:CY:470:PHE:HD2	1.72	0.54
59:BA:2487:G:H2'	59:BA:2488:A:C8	2.43	0.54
4:AE:146:ALA:O	4:AE:150:ARG:HG2	2.08	0.54
59:BA:184:C:H2'	59:BA:185:U:C6	2.42	0.54
8:AI:112:LYS:NZ	8:AI:116:LYS:O	2.32	0.54
26:BD:263:ARG:NH1	59:BA:2227:A:OP1	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:91:ARG:O	7:AH:93:VAL:N	2.40	0.54
59:BA:212:G:H2'	59:BA:213:A:H8	1.72	0.54
26:DD:256:GLY:O	59:DA:1843:C:O2'	2.17	0.54
59:DA:1389:G:H2'	59:DA:1390:U:O4'	2.08	0.54
59:BA:2460:U:H2'	59:BA:2461:C:H6	1.73	0.54
59:DA:1017:G:O6	59:DA:1145:C:N3	2.40	0.53
59:BA:29:U:H2'	59:BA:30:G:C8	2.43	0.53
40:BU:90:VAL:C	40:BU:92:ARG:H	2.11	0.53
29:DG:47:LYS:HD3	29:DG:81:LYS:HD2	1.89	0.53
39:DT:53:ARG:O	39:DT:53:ARG:NH1	2.41	0.53
1:AB:167:PRO:HD2	1:AB:188:ALA:CB	2.38	0.53
37:BR:13:HIS:ND1	59:BA:712(B):A:H4'	2.23	0.53
39:BT:91:ARG:HG2	39:BT:116:ALA:HB2	1.89	0.53
41:BV:75:PHE:HB2	41:BV:81:TYR:O	2.08	0.53
20:CA:984:C:N4	20:CA:1221:G:H1	2.04	0.53
51:B7:30:VAL:O	51:B7:34:ARG:NH1	2.41	0.53
20:AA:1440(J):C:O2'	20:AA:1440(K):G:H5''	2.09	0.53
28:BF:63:LYS:HA	28:BF:76:GLY:HA2	1.90	0.53
20:CA:675:A:H2'	20:CA:676:A:C8	2.43	0.53
26:DD:211:ARG:NH1	59:DA:1566:A:OP1	2.41	0.53
59:BA:948:G:H1	59:BA:969:U:H3	1.55	0.53
7:AH:94:TYR:OH	20:AA:597:G:N2	2.34	0.53
59:BA:273(D):C:H2'	59:BA:273(E):C:C6	2.43	0.53
7:CH:64:LYS:HG2	7:CH:79:VAL:HG21	1.89	0.53
59:BA:153:C:H2'	59:BA:154:G:C8	2.43	0.53
59:BA:497:A:H3'	59:BA:498:G:H8	1.73	0.53
17:AR:45:SER:OG	17:AR:46:GLU:N	2.42	0.53
20:AA:572:A:HO2'	20:AA:916:G:HO2'	1.52	0.53
59:BA:271:G:H2'	59:BA:272:G:C8	2.44	0.53
32:DK:92:GLY:O	45:DZ:112:ARG:NH2	2.31	0.53
20:AA:68(Y):C:H2'	20:AA:101:A:C8	2.43	0.53
20:AA:119:A:H4'	20:AA:120:A:C8	2.42	0.53
59:BA:298:G:N1	59:BA:339:U:OP2	2.36	0.53
30:BH:92:ILE:HG12	30:BH:160:LYS:HE2	1.90	0.53
6:CG:65:ALA:HA	6:CG:128:ALA:HA	1.89	0.53
20:CA:1051:C:H2'	20:CA:1052:U:C6	2.42	0.53
59:DA:389:G:H1'	59:DA:2412:A:N3	2.23	0.53
27:BE:161:GLY:O	27:BE:163:GLU:N	2.41	0.53
39:BT:53:ARG:HH22	39:BT:60:THR:HG23	1.73	0.53
59:DA:1604:C:H2'	59:DA:1605:C:H6	1.73	0.53
23:AY:262:SER:N	23:AY:267:LYS:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1114:C:N3	20:CA:1186:G:N2	2.43	0.53
57:B1:20:ARG:HH22	57:B1:24:ALA:HB2	1.73	0.53
25:DC:40:GLU:HG2	25:DC:219:MET:HG2	1.90	0.53
25:DC:150:ILE:HD12	25:DC:153:ILE:HD12	1.90	0.53
35:BP:64:LYS:HE3	59:BA:2416:C:H5''	1.89	0.53
11:AL:53:ARG:HG3	11:AL:69:TYR:CE1	2.43	0.53
39:BT:27:THR:HG23	39:BT:28:VAL:H	1.73	0.53
20:AA:974:A:H8	20:AA:974:A:OP1	1.91	0.53
35:DP:55:ARG:HH12	59:DA:2358:G:H1	1.56	0.53
59:BA:1014:U:H3	59:BA:1148:A:N6	2.06	0.53
49:B5:33:CYS:SG	49:B5:38:ALA:N	2.81	0.53
50:D6:47:THR:OG1	50:D6:48:VAL:N	2.41	0.53
26:DD:142:VAL:HG23	26:DD:193:VAL:HA	1.89	0.53
20:CA:68(I):G:H1	20:CA:68(Q):U:H3	1.54	0.53
9:CJ:13:HIS:HA	9:CJ:16:LEU:HB3	1.89	0.53
9:CJ:16:LEU:HD13	9:CJ:17:ASP:N	2.23	0.53
1:CB:113:HIS:O	1:CB:116:GLU:HG2	2.08	0.53
59:DA:2655:G:O2'	59:DA:2664:G:O6	2.26	0.53
20:AA:115:G:H1'	20:AA:116:A:N7	2.22	0.53
20:AA:1097:C:H2'	20:AA:1098:C:H6	1.71	0.53
23:CY:274:ASP:HA	23:CY:277:VAL:HG12	1.90	0.53
59:BA:533:G:H2'	59:BA:534:U:C6	2.43	0.53
20:AA:730:G:H5'	20:AA:816:A:O2'	2.08	0.53
26:DD:28:GLU:O	26:DD:30:GLU:N	2.42	0.53
27:BE:172:VAL:HA	27:BE:184:VAL:HA	1.88	0.53
3:AD:51:PRO:HB2	3:AD:56:VAL:HG13	1.90	0.53
12:CM:34:LEU:HD13	12:CM:41:PRO:HA	1.89	0.53
29:BG:9:ARG:HH21	29:BG:12:TYR:HD1	1.56	0.53
2:AC:86:VAL:O	2:AC:90:GLU:HG3	2.08	0.53
20:CA:131:C:H2'	20:CA:132:C:H6	1.73	0.53
20:CA:1137:C:H4'	20:CA:1138:G:C2	2.43	0.53
20:AA:1176:A:H2'	20:AA:1177:G:C8	2.44	0.53
59:BA:2557:G:H2'	59:BA:2558:C:C6	2.44	0.53
59:BA:1120:G:H2'	59:BA:1121:C:H6	1.73	0.53
33:BN:114:ARG:HH22	59:BA:528:A:C5'	2.20	0.53
28:DF:57:VAL:C	28:DF:59:TYR:H	2.11	0.53
59:DA:226:G:HO2'	59:DA:227:A:H8	1.56	0.53
59:BA:38:A:H2'	59:BA:39:C:H6	1.73	0.53
25:BC:139:PRO:O	25:BC:145:THR:OG1	2.26	0.53
59:DA:2876:G:H2'	59:DA:2877:G:C8	2.43	0.53
9:CJ:55:LYS:HG2	20:CA:963:G:H21	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:14:VAL:HG11	20:AA:1148:U:H4'	1.89	0.53
20:AA:552:U:H2'	20:AA:553:A:C8	2.44	0.53
60:BB:23:G:H2'	60:BB:24:G:C8	2.43	0.53
11:AL:82:VAL:HB	11:AL:105:TYR:HB2	1.89	0.53
49:D5:13:LYS:HB3	49:D5:16:ARG:NH2	2.23	0.53
59:BA:571:A:H61	59:BA:2500:U:P	2.32	0.53
59:DA:1063:G:H1	59:DA:1075:C:N4	2.05	0.53
20:AA:243:A:H4'	20:AA:244:U:O5'	2.07	0.53
12:AM:87:TYR:CE1	18:AS:76:PRO:HA	2.44	0.53
2:CC:88:ARG:HH21	2:CC:100:ALA:HA	1.73	0.53
7:AH:94:TYR:CG	20:AA:598:U:H4'	2.42	0.53
59:DA:2524:G:H2'	59:DA:2525:G:C8	2.43	0.53
25:BC:24:ASP:OD1	25:BC:191:ARG:NH2	2.39	0.53
26:BD:66:ASP:N	26:BD:104:TYR:O	2.37	0.53
59:BA:1657:C:H2'	59:BA:1658:C:C6	2.44	0.53
59:BA:1153:C:H2'	59:BA:1154:G:O4'	2.08	0.53
59:DA:199:A:O2'	59:DA:2433:A:N6	2.42	0.53
20:AA:777:A:H2'	20:AA:778:G:H8	1.72	0.53
59:DA:1050:A:O2'	59:DA:2752:C:O2	2.26	0.53
59:BA:212:G:H2'	59:BA:213:A:C8	2.43	0.53
59:DA:1710:C:H2'	59:DA:1711:C:C6	2.42	0.53
40:DU:25:TRP:N	59:DA:533:G:OP1	2.39	0.53
59:DA:2673:G:H2'	59:DA:2674:G:C8	2.43	0.53
20:AA:415:A:H2'	20:AA:416:G:H8	1.72	0.53
59:DA:1783:A:H8	59:DA:1783:A:OP2	1.92	0.53
23:CY:205:TYR:O	23:CY:207:ASP:N	2.42	0.53
59:BA:2182:G:H2'	59:BA:2183:C:C6	2.43	0.53
59:BA:2678:C:H2'	59:BA:2679:A:C8	2.44	0.53
59:DA:141(A):A:H5'	59:DA:141(B):C:OP2	2.07	0.53
59:BA:1655:A:C2	59:BA:2049:G:H5''	2.44	0.53
33:BN:80:GLY:N	59:BA:1131:G:OP1	2.41	0.53
27:DE:37:ARG:HB2	27:DE:46:ALA:HB3	1.90	0.53
57:B1:19:GLN:H	57:B1:40:ARG:HB3	1.74	0.53
59:DA:270(K):G:H2'	59:DA:270(L):C:O4'	2.09	0.53
23:AY:201:ILE:HD13	23:AY:206:LEU:HD12	1.91	0.53
20:AA:1003:G:O6	20:AA:1037:C:N3	2.41	0.53
50:D6:27:LYS:HD2	50:D6:30:THR:H	1.74	0.53
44:DY:81:LYS:HB3	44:DY:97:ARG:HB2	1.89	0.53
59:BA:629:G:N3	59:BA:639:U:O2'	2.41	0.53
30:BH:20:ALA:HB1	30:BH:21:PRO:HD2	1.88	0.53
51:B7:42:LEU:O	51:B7:44:PRO:HD3	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:70:THR:HB	23:CY:81:ILE:HB	1.90	0.53
29:BG:105:LYS:HE3	29:BG:142:PRO:HG2	1.91	0.53
28:BF:41:LEU:HB3	59:BA:443:A:N6	2.24	0.53
20:CA:1530:G:H2'	20:CA:1531:A:C8	2.44	0.53
11:AL:15:ARG:HB3	20:AA:562:C:H1'	1.90	0.53
20:CA:1064:G:O2'	20:CA:1190:G:N2	2.42	0.53
34:DO:11:ALA:HB1	34:DO:99:PHE:HB2	1.91	0.53
26:DD:28:GLU:H	26:DD:29:PRO:HD2	1.74	0.53
59:DA:2259:G:H2'	59:DA:2260:C:H6	1.73	0.53
32:DK:123:ALA:O	32:DK:126:MET:HB3	2.09	0.53
42:DW:84:ARG:NH2	59:DA:1322:A:O2'	2.41	0.53
60:BB:15:A:H1'	60:BB:109:G:C6	2.43	0.53
59:DA:236:C:H2'	59:DA:237:C:H6	1.73	0.53
20:AA:748:C:O2'	20:AA:749:C:OP2	2.18	0.53
59:BA:2868:A:H2'	59:BA:2869:G:C8	2.43	0.53
12:AM:80:ARG:HA	12:AM:83:ASP:HB3	1.90	0.53
12:AM:80:ARG:HB3	18:AS:65:ASN:HB3	1.90	0.53
59:DA:1260:G:H2'	59:DA:1261:C:C6	2.43	0.53
45:DZ:24:LEU:HB2	45:DZ:41:LEU:HD23	1.90	0.53
23:AY:247:ARG:HB2	23:AY:279:TYR:HD1	1.73	0.53
1:AB:131:PRO:HB2	1:AB:134:GLU:HB2	1.91	0.53
53:B9:29:ASN:N	53:B9:29:ASN:OD1	2.40	0.53
59:BA:422:A:H2'	59:BA:423:A:C8	2.44	0.53
15:AP:21:VAL:HG11	15:AP:59:TRP:NE1	2.24	0.53
20:AA:108:G:OP1	20:AA:326:G:N2	2.40	0.53
59:DA:1524:G:H2'	59:DA:1525:G:O4'	2.09	0.53
33:DN:63:THR:OG1	59:DA:1141:U:OP2	2.18	0.53
41:DV:52:VAL:HG13	41:DV:55:ALA:HB3	1.91	0.53
26:DD:145:VAL:HB	26:DD:155:LEU:HB2	1.89	0.53
28:DF:37:VAL:O	28:DF:40:GLN:NE2	2.40	0.53
3:AD:193:ASP:N	3:AD:193:ASP:OD1	2.40	0.53
40:DU:27:LEU:HD21	49:D5:13:LYS:HD3	1.90	0.53
59:BA:2070:G:H1	59:BA:2441:C:N4	2.05	0.53
59:BA:1509:A:H4'	59:BA:1510:A:C8	2.44	0.53
42:BW:3:ALA:HB2	42:BW:58:ALA:HB2	1.91	0.53
20:AA:68(H):G:H1	20:AA:68(R):C:H42	1.56	0.53
59:DA:2671:A:H2'	59:DA:2672:G:H8	1.71	0.53
59:BA:2212:A:H1'	59:BA:2215:G:C5	2.44	0.53
57:B1:25:LYS:HG2	57:B1:34:THR:HA	1.89	0.53
20:AA:328:C:H4'	20:AA:329:A:H5'	1.89	0.53
12:AM:14:ARG:NH1	20:AA:1302:U:O4	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:B1:63:ALA:HB3	57:B1:66:HIS:HB2	1.91	0.53
30:BH:91:GLY:HA2	30:BH:160:LYS:HG3	1.91	0.53
49:D5:22:HIS:NE2	59:DA:2045:C:O2	2.42	0.53
44:DY:15:VAL:N	44:DY:23:ARG:O	2.28	0.53
20:AA:830:G:H2'	20:AA:831:U:O4'	2.08	0.53
30:BH:58:GLU:HB2	30:BH:61:HIS:HB2	1.90	0.53
23:AY:443:HIS:HB2	23:AY:450:ILE:HD11	1.91	0.53
20:AA:149:A:H2'	20:AA:150:C:C6	2.44	0.53
4:CE:147:ASP:N	4:CE:147:ASP:OD1	2.41	0.53
59:DA:75:G:H22	59:DA:111:A:H2	1.57	0.53
59:BA:2591:C:N4	59:BA:2592:G:O6	2.42	0.53
59:DA:2515:C:H2'	59:DA:2516:G:C8	2.43	0.53
20:CA:269:C:H2'	20:CA:270:A:H8	1.74	0.53
23:AY:22:ASP:O	62:AY:702:GDP:PB	2.67	0.53
59:BA:1162:G:H2'	59:BA:1163:G:C8	2.44	0.53
33:DN:74:ARG:CZ	33:DN:85:ILE:HD11	2.39	0.53
57:B1:16:ASN:HB3	59:BA:381:G:H4'	1.90	0.53
51:D7:7:PRO:HA	59:DA:686:G:C8	2.44	0.53
4:AE:131:ILE:O	4:AE:135:THR:OG1	2.21	0.53
53:D9:31:LYS:HD3	59:DA:2528:U:H5'	1.90	0.53
60:DB:62:C:H2'	60:DB:63:G:C8	2.43	0.53
3:AD:72:GLU:OE2	3:AD:207:TYR:OH	2.25	0.53
59:BA:2009:G:H2'	59:BA:2010:G:H8	1.73	0.53
45:BZ:99:TYR:HA	45:BZ:124:ILE:O	2.09	0.53
41:DV:5:VAL:HG13	41:DV:7:THR:HG22	1.90	0.53
59:BA:1827:C:H2'	59:BA:1828:G:O4'	2.09	0.53
59:DA:154:G:H1	59:DA:172:C:N4	2.03	0.53
20:AA:46:G:O2'	20:AA:365:U:O2'	2.14	0.53
60:BB:24:G:C2	60:BB:56:G:C2	2.96	0.53
6:CG:10:ARG:HH22	20:CA:1346:A:N6	2.06	0.53
60:DB:102:G:H2'	60:DB:103:U:C6	2.44	0.53
19:CT:15:ARG:NH2	20:CA:107:G:N7	2.57	0.53
9:CJ:63:PHE:HZ	13:CN:49:HIS:HE2	1.54	0.53
20:AA:777:A:H2'	20:AA:778:G:C8	2.44	0.53
7:AH:52:ASP:OD2	7:AH:56:LYS:N	2.42	0.53
20:CA:514:C:H2'	20:CA:515:G:C8	2.44	0.53
59:BA:270(J):G:H2'	59:BA:270(K):G:O4'	2.09	0.53
23:AY:274:ASP:HA	23:AY:277:VAL:HG12	1.91	0.53
59:BA:1732:A:H2'	59:BA:1733:G:O4'	2.09	0.53
20:AA:1018:C:H2'	20:AA:1019:C:C6	2.44	0.53
44:DY:46:LYS:HB2	44:DY:62:GLU:HG3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1035:U:H2'	59:BA:1036:G:C8	2.43	0.53
59:DA:477:A:H2'	59:DA:478:A:C8	2.43	0.53
5:CF:21:LEU:O	5:CF:25:ILE:HG12	2.09	0.53
59:DA:2066:C:H2'	59:DA:2067:G:C8	2.44	0.53
20:CA:1505:G:H1'	22:CV:15:A:C8	2.43	0.53
59:BA:30:G:H2'	59:BA:31:C:C6	2.44	0.53
40:BU:34:LYS:HZ3	59:BA:2018:G:H21	1.55	0.53
25:BC:45:HIS:ND1	25:BC:171:ALA:O	2.41	0.53
59:DA:19:C:H2'	59:DA:20:C:H6	1.73	0.53
57:B1:15:ALA:HA	57:B1:40:ARG:O	2.09	0.53
57:B1:20:ARG:HG3	57:B1:22:GLY:N	2.24	0.53
25:DC:40:GLU:HB3	25:DC:217:THR:C	2.29	0.53
26:DD:22:SER:C	26:DD:24:ILE:H	2.12	0.53
25:DC:65:LEU:CD1	25:DC:162:ILE:HD11	2.39	0.53
28:DF:171:PRO:HG2	28:DF:172:TRP:HD1	1.73	0.53
1:AB:167:PRO:HD2	1:AB:188:ALA:HB3	1.91	0.53
1:AB:176:GLU:O	1:AB:180:LEU:HD12	2.08	0.53
23:CY:528:ALA:HB3	23:CY:567:LEU:HB3	1.89	0.53
37:BR:24:GLN:HG3	37:BR:44:LEU:HD21	1.91	0.53
39:BT:49:VAL:HG23	39:BT:63:VAL:HG22	1.89	0.53
59:DA:2207:C:H42	59:DA:2217:G:H1	1.56	0.53
59:BA:1076:C:H2'	59:BA:1077:A:H4'	1.90	0.53
20:CA:759:A:H4'	20:CA:881:G:H5'	1.91	0.53
59:DA:2626:C:H42	59:DA:2777:G:H1	1.55	0.53
29:DG:130:ASN:HB3	29:DG:160:VAL:HG22	1.90	0.53
43:BX:74:PRO:O	43:BX:76:ARG:NH1	2.39	0.53
59:DA:259:G:H2'	59:DA:260:G:H8	1.71	0.53
59:DA:2570:G:H2'	59:DA:2571:C:H6	1.73	0.53
17:AR:74:ARG:HG2	17:AR:79:LEU:HB3	1.91	0.53
59:BA:2171:A:O2'	59:BA:2172:U:O4'	2.26	0.53
9:AJ:91:PRO:O	9:AJ:93:GLY:N	2.42	0.53
59:DA:2593:U:H2'	59:DA:2594:C:C6	2.44	0.53
7:AH:128:GLY:O	20:AA:600:C:H4'	2.09	0.53
20:CA:1064:G:H22	20:CA:1190:G:H2'	1.74	0.53
59:DA:2119:A:C2	59:DA:2170:A:H2'	2.44	0.53
20:AA:1020:U:H2'	20:AA:1021:G:H8	1.73	0.53
40:DU:105:VAL:O	40:DU:109:LEU:HG	2.08	0.53
26:BD:6:PHE:HE1	26:BD:18:VAL:HB	1.74	0.53
20:AA:1095:U:H2'	20:AA:1096:C:C6	2.43	0.53
8:AI:71:SER:HB3	20:AA:1372:U:H5''	1.91	0.53
28:DF:72:ARG:NH2	59:DA:1258:C:OP2	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:115:LEU:HB2	1:AB:145:LEU:HG	1.90	0.53
32:BK:54:PRO:HB2	32:BK:70:LYS:HD3	1.90	0.53
49:B5:18:ALA:HA	49:B5:21:SER:HB3	1.91	0.53
2:AC:13:GLY:HA2	13:AN:57:ARG:HH21	1.74	0.53
23:AY:661:SER:OG	59:BA:2660:A:N6	2.42	0.53
59:DA:2678:C:H2'	59:DA:2679:A:H8	1.74	0.53
33:DN:43:THR:HB	33:DN:46:VAL:HG11	1.91	0.53
59:DA:1128:A:C5	59:DA:2518:A:N6	2.77	0.53
51:D7:40:TRP:N	51:D7:40:TRP:CD1	2.76	0.53
23:AY:25:LYS:N	62:AY:702:GDP:O2B	2.41	0.53
59:DA:391:G:O2'	59:DA:410:G:OP1	2.27	0.53
59:DA:584:C:H2'	59:DA:585:G:O4'	2.09	0.53
41:BV:40:LEU:HD13	41:BV:47:VAL:HG22	1.89	0.53
59:DA:1166:C:H2'	59:DA:1167:U:C6	2.44	0.53
1:AB:168:THR:C	1:AB:171:ALA:H	2.12	0.53
11:AL:92:ASP:OD2	20:AA:523:A:N6	2.30	0.53
36:BQ:13:GLN:HG3	59:BA:910:A:C6	2.44	0.53
25:DC:26:ALA:HA	25:DC:30:VAL:HG23	1.90	0.53
20:CA:519:C:H2'	20:CA:520:A:O4'	2.09	0.53
59:DA:2469:A:H3'	59:DA:2470:G:C8	2.44	0.53
59:DA:2476:A:H8	59:DA:2481:G:H22	1.55	0.53
10:AK:40:ILE:HA	20:AA:685:G:H4'	1.91	0.53
20:CA:880:C:H2'	20:CA:881:G:C8	2.44	0.53
59:BA:1659:U:H3	59:BA:2001:A:N6	2.04	0.53
4:AE:19:MET:SD	4:AE:24:ARG:HB3	2.48	0.53
49:B5:15:ARG:HA	49:B5:15:ARG:HH11	1.74	0.53
20:AA:1332:A:H2'	20:AA:1333:A:O4'	2.08	0.53
42:BW:69:LEU:HB3	42:BW:107:LEU:HD23	1.91	0.53
23:AY:93:GLU:O	23:AY:97:SER:OG	2.27	0.53
59:DA:2118:U:O2	59:DA:2148:G:O2'	2.19	0.53
59:DA:922:U:H2'	59:DA:923:C:C6	2.43	0.53
46:D0:34:GLY:N	46:D0:61:ALA:O	2.39	0.53
20:CA:1466:C:H2'	20:CA:1467:G:O4'	2.09	0.53
59:BA:173:G:H2'	59:BA:174:C:C6	2.44	0.53
15:AP:43:LYS:NZ	20:AA:452:A:OP1	2.42	0.53
38:BS:14:VAL:HG13	59:BA:2335:A:OP2	2.09	0.53
42:DW:35:ILE:HG23	49:D5:28:PRO:HG3	1.91	0.53
41:BV:67:GLY:H	41:BV:90:PRO:HA	1.74	0.53
16:CQ:59:ILE:HG12	16:CQ:73:VAL:HG22	1.90	0.53
43:BX:90:GLU:HA	43:BX:93:GLU:HB2	1.90	0.53
59:DA:454:A:H3'	59:DA:455:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:401:C:H2'	20:AA:402:G:C8	2.44	0.53
46:B0:70:GLN:HB3	46:B0:78:TYR:HB2	1.91	0.53
59:DA:1476:C:H2'	59:DA:1477:A:C8	2.44	0.53
59:DA:1493:C:O2	59:DA:1493:C:H2'	2.06	0.53
59:BA:2083:G:H2'	59:BA:2084:C:C6	2.44	0.53
4:AE:10:MET:N	4:AE:10:MET:SD	2.77	0.53
22:CV:16:A:H2'	22:CV:17:U:C6	2.44	0.53
3:CD:2:GLY:N	20:CA:547:A:OP2	2.42	0.53
5:AF:2:ARG:NH1	5:AF:69:GLU:OE1	2.41	0.53
59:DA:1479:G:H2'	59:DA:1480:G:H8	1.72	0.53
3:CD:33:MET:O	3:CD:36:ARG:N	2.38	0.53
59:DA:1128:A:O4'	59:DA:2516:G:O2'	2.27	0.53
46:D0:23:VAL:HA	46:D0:38:VAL:HA	1.91	0.53
59:DA:991:C:H5'	59:DA:1185:C:H2'	1.91	0.53
3:AD:25:ARG:N	20:AA:409:G:OP1	2.40	0.53
26:DD:78:LYS:HA	26:DD:116:GLN:HA	1.90	0.53
25:BC:32:GLU:O	25:BC:34:ALA:N	2.38	0.53
20:AA:1064:G:N2	20:AA:1190:G:O2'	2.41	0.53
28:DF:169:ASN:ND2	59:DA:320:A:O2'	2.42	0.53
23:CY:514:VAL:HA	23:CY:565:VAL:O	2.09	0.53
26:BD:221:VAL:O	26:BD:223:GLY:N	2.41	0.53
38:BS:39:ILE:HD13	38:BS:73:LEU:HD11	1.91	0.53
11:CL:53:ARG:HA	11:CL:69:TYR:CE1	2.44	0.53
44:DY:49:VAL:O	44:DY:51:VAL:N	2.38	0.53
20:AA:264:U:H2'	20:AA:265:G:O4'	2.09	0.53
16:AQ:67:LYS:O	16:AQ:68:ARG:HB3	2.09	0.53
59:DA:327:G:H1	59:DA:335:C:N4	2.05	0.53
59:BA:2688:U:HO2'	59:BA:2689:U:P	2.31	0.53
59:DA:947:G:H2'	59:DA:948:G:C8	2.41	0.53
3:CD:72:GLU:HA	3:CD:75:PHE:HB3	1.90	0.53
45:BZ:134:PRO:HB3	45:BZ:161:VAL:HG21	1.90	0.53
34:DO:64:ARG:HH22	39:DT:69:GLY:HA3	1.73	0.53
59:BA:1468:C:H2'	59:BA:1469:A:H8	1.72	0.53
5:AF:46:ARG:HB3	5:AF:60:PHE:HE1	1.73	0.53
38:BS:40:ILE:HA	38:BS:47:THR:HA	1.89	0.53
26:DD:94:LEU:HG	26:DD:104:TYR:CE2	2.43	0.53
10:CK:29:ILE:HD11	10:CK:42:TRP:HB2	1.90	0.53
20:AA:1118:C:H2'	20:AA:1119:C:C6	2.44	0.53
23:AY:20:HIS:HB2	23:AY:117:GLN:HB3	1.91	0.53
47:D2:46:GLN:HB3	47:D2:48:HIS:CE1	2.43	0.53
20:AA:1404:C:H1'	20:AA:1499:A:C2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:63:LYS:HE3	43:BX:72:LYS:HE3	1.90	0.53
59:BA:2291:U:H3	59:BA:2341:G:H1	1.57	0.53
59:DA:473:G:H5''	59:DA:508:G:N2	2.24	0.53
2:AC:39:ILE:O	2:AC:43:LEU:HG	2.08	0.53
46:B0:41:ARG:NH2	59:BA:2386:C:O2'	2.42	0.53
27:BE:174:ASP:HB3	27:BE:183:LEU:HD13	1.91	0.53
36:DQ:32:TYR:HB2	36:DQ:106:VAL:HG22	1.91	0.53
3:CD:43:HIS:HA	3:CD:46:LYS:HD3	1.91	0.53
20:CA:1027:C:N3	20:CA:1034:G:O6	2.42	0.53
11:CL:113:ARG:HH21	11:CL:116:SER:H	1.56	0.53
20:AA:151:A:N7	20:AA:170:U:O4	2.42	0.53
59:BA:1007:C:H2'	59:BA:1008:C:C5	2.44	0.53
59:BA:2040:C:H5''	59:BA:2040:C:C6	2.44	0.53
59:DA:979:G:H3'	59:DA:980:A:C5'	2.39	0.53
27:DE:45:THR:HB	27:DE:83:ASP:HA	1.91	0.53
59:DA:459:U:C6	59:DA:460:A:C8	2.97	0.53
59:DA:2393:A:H62	59:DA:2422:A:H61	1.56	0.53
37:BR:97:VAL:HA	37:BR:113:LEU:O	2.09	0.53
59:DA:1312:U:O2	59:DA:1339:G:N1	2.22	0.53
59:DA:1540:G:H3'	59:DA:1541:U:C6	2.44	0.53
59:DA:1540:G:H3'	59:DA:1541:U:H6	1.74	0.53
59:DA:83:G:N2	59:DA:103:A:OP2	2.37	0.53
10:CK:85:ARG:HG2	10:CK:111:ASP:HB3	1.90	0.53
23:CY:100:VAL:HG11	23:CY:314:PHE:CE2	2.44	0.53
20:AA:1070:U:H2'	20:AA:1071:C:C6	2.44	0.53
23:CY:641:GLN:OE1	23:CY:642:VAL:N	2.42	0.53
25:DC:28:ARG:CZ	25:DC:183:PRO:HB3	2.39	0.53
20:AA:937:A:H2	20:AA:1377:A:HO2'	1.57	0.53
35:BP:53:GLY:O	35:BP:55:ARG:N	2.38	0.53
23:AY:266:ASN:N	23:AY:266:ASN:OD1	2.39	0.53
48:B3:8:LEU:HD22	48:B3:31:LEU:HA	1.91	0.53
59:DA:1448:G:HO2'	59:DA:1529:A:N6	2.07	0.53
42:BW:11:ARG:NH2	42:BW:99:ARG:O	2.42	0.53
28:DF:45:ARG:NH2	59:DA:443:A:H3'	2.23	0.53
59:DA:454:A:H3'	59:DA:455:C:H6	1.74	0.53
41:BV:70:ILE:HG12	41:BV:87:HIS:HB3	1.90	0.53
33:DN:47:ALA:HB2	33:DN:112:LEU:HD12	1.91	0.53
59:BA:1356:G:H2'	59:BA:1357:U:C6	2.44	0.53
23:AY:180:VAL:HG12	23:AY:209:ALA:HB1	1.91	0.53
3:CD:133:VAL:HG11	3:CD:138:TYR:CD2	2.43	0.53
2:CC:157:ILE:HD11	2:CC:164:ARG:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:421:GLN:O	23:AY:424:LEU:HG	2.09	0.53
40:BU:70:ARG:NH2	59:BA:1011:G:OP2	2.42	0.53
59:DA:1441:G:H1	59:DA:1550:C:H42	1.57	0.53
20:AA:1340:A:C2	20:AA:1341:U:C2	2.97	0.53
20:AA:1533:C:H5	22:AV:12:A:H61	1.55	0.53
20:CA:68(V):G:C2	20:CA:68(W):G:H1'	2.44	0.52
57:B1:21:ARG:NH2	57:B1:38:SER:OG	2.38	0.52
25:DC:133:GLY:N	25:DC:138:LEU:HB2	2.24	0.52
59:BA:1087:G:O2'	59:BA:1088:A:H4'	2.09	0.52
38:DS:37:ALA:HB1	38:DS:101:LEU:HD21	1.90	0.52
38:BS:92:TYR:C	38:BS:94:TYR:H	2.12	0.52
35:BP:27:HIS:HB3	59:BA:814:C:C5	2.43	0.52
59:BA:571:A:O2'	59:BA:572:A:OP2	2.25	0.52
10:AK:84:VAL:N	10:AK:109:VAL:O	2.42	0.52
20:CA:1224:G:O2'	20:CA:1322:C:OP2	2.20	0.52
51:B7:39:ARG:HD3	51:B7:42:LEU:HB3	1.89	0.52
1:CB:32:ILE:HD12	1:CB:40:HIS:HB3	1.90	0.52
23:AY:317:MET:HB2	23:AY:327:PHE:CE2	2.44	0.52
42:BW:9:TYR:H	42:BW:102:HIS:CE1	2.27	0.52
20:CA:272:C:H2'	20:CA:273:A:C8	2.44	0.52
59:DA:800:A:OP1	59:DA:800:A:H8	1.92	0.52
1:AB:96:ARG:HG2	20:AA:1099:G:OP1	2.09	0.52
20:CA:112:G:H1	20:CA:315:A:H61	1.57	0.52
11:CL:71:PRO:O	11:CL:102:ARG:NH1	2.42	0.52
20:AA:1063:C:H42	20:AA:1193:G:H1	1.57	0.52
6:AG:24:THR:HA	6:AG:27:ILE:HB	1.90	0.52
20:AA:983:A:H2	20:AA:984:C:C5	2.25	0.52
39:BT:20:PRO:HG2	39:BT:86:ILE:HA	1.90	0.52
59:BA:736:C:N3	59:BA:760:G:O6	2.43	0.52
34:DO:36:GLY:HA2	34:DO:106:LEU:HG	1.90	0.52
59:BA:221:A:C4	59:BA:233:A:H1'	2.43	0.52
9:AJ:82:ILE:O	9:AJ:86:MET:HB2	2.09	0.52
19:AT:79:ARG:O	19:AT:82:SER:OG	2.25	0.52
59:DA:1292:U:H2'	59:DA:1293:C:C6	2.44	0.52
8:AI:121:ARG:NH1	20:AA:1343:G:O2'	2.43	0.52
1:CB:75:LYS:O	1:CB:78:GLN:HB3	2.08	0.52
42:DW:28:SER:N	42:DW:31:GLU:OE1	2.40	0.52
39:BT:54:ARG:HA	39:BT:59:THR:HB	1.90	0.52
59:DA:873:G:H2'	59:DA:874:G:C8	2.44	0.52
27:DE:147:PRO:HG3	27:DE:151:TYR:CE1	2.43	0.52
20:CA:490:G:H2'	20:CA:491:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D1:20:ARG:NH1	57:D1:22:GLY:HA3	2.24	0.52
59:BA:69:C:H2'	59:BA:70:G:C8	2.44	0.52
30:BH:67:LEU:HD12	59:BA:2747:G:O2'	2.09	0.52
11:AL:60:LEU:HD23	11:AL:63:GLY:O	2.09	0.52
25:DC:121:MET:HG3	25:DC:146:VAL:HG22	1.90	0.52
20:AA:908:A:H2'	20:AA:909:A:H8	1.73	0.52
38:BS:26:LEU:O	38:BS:88:ASP:HB3	2.10	0.52
26:BD:260:ARG:NH1	59:BA:1799:G:OP1	2.36	0.52
59:BA:192:C:O2	59:BA:802:A:O2'	2.26	0.52
20:AA:673:G:H2'	20:AA:674:G:H8	1.73	0.52
20:AA:32:A:H2'	20:AA:33:A:C8	2.44	0.52
59:DA:2745:C:H41	59:DA:2755:C:H4'	1.74	0.52
59:BA:1492:G:H1	59:BA:1498:C:N4	2.04	0.52
20:AA:1137:C:H4'	20:AA:1138:G:C2	2.44	0.52
16:CQ:78:GLU:HG3	16:CQ:81:ARG:HD3	1.90	0.52
7:CH:94:TYR:CD2	20:CA:598:U:H4'	2.43	0.52
57:D1:62:VAL:HG21	57:D1:67:ILE:HG23	1.90	0.52
44:BY:15:VAL:HG12	44:BY:17:SER:H	1.74	0.52
59:BA:172:C:H2'	59:BA:173:G:O4'	2.09	0.52
37:DR:36:THR:OG1	37:DR:37:THR:N	2.41	0.52
59:BA:1234:U:H2'	59:BA:1235:G:O4'	2.10	0.52
59:BA:2291:U:H2'	59:BA:2292:C:C6	2.44	0.52
60:DB:78:A:H2'	60:DB:79:C:O4'	2.09	0.52
2:AC:160:ALA:O	2:AC:162:GLN:N	2.42	0.52
15:AP:70:ALA:O	15:AP:74:LEU:HG	2.09	0.52
23:CY:186:TYR:HA	23:CY:198:GLU:HB3	1.91	0.52
20:CA:1342:C:H2'	20:CA:1343:G:H8	1.72	0.52
20:CA:1343:G:N2	20:CA:1349:A:O2'	2.43	0.52
7:CH:31:PHE:O	7:CH:35:ILE:HG12	2.09	0.52
59:BA:907:U:H2'	59:BA:908:C:C6	2.44	0.52
26:BD:146:GLU:OE1	26:BD:150:LYS:N	2.41	0.52
6:AG:3:ARG:NH1	20:AA:1380:U:O2'	2.42	0.52
59:BA:49:A:H5''	59:BA:51:G:O4'	2.09	0.52
30:DH:54:ARG:NH1	30:DH:57:ASP:OD1	2.42	0.52
14:CO:22:THR:HB	20:CA:658:G:H4'	1.92	0.52
20:CA:1476:G:H2'	20:CA:1477:C:C6	2.44	0.52
14:AO:5:LYS:O	14:AO:9:GLN:HG2	2.09	0.52
2:AC:37:GLN:O	2:AC:37:GLN:NE2	2.42	0.52
20:CA:947:G:N2	20:CA:1234:C:N3	2.44	0.52
20:CA:987:G:H2'	20:CA:988:G:H8	1.73	0.52
59:DA:401:A:H2'	59:DA:402:A:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:71:VAL:O	1:AB:165:VAL:HG23	2.09	0.52
38:BS:26:LEU:HD13	38:BS:106:ARG:HH12	1.73	0.52
4:CE:92:LYS:HB3	4:CE:119:LEU:HB2	1.90	0.52
40:DU:49:HIS:CD2	59:DA:559:G:H22	2.27	0.52
27:BE:51:PHE:H	27:BE:74:PRO:HG3	1.75	0.52
26:BD:35:LYS:O	26:BD:37:LEU:N	2.43	0.52
20:CA:529:G:H1'	20:CA:533:A:C2	2.44	0.52
9:AJ:55:LYS:HG3	20:AA:973:G:O4'	2.09	0.52
34:DO:104:ARG:HD3	39:DT:35:LYS:HB2	1.92	0.52
57:D1:42:GLN:HG2	57:D1:43:TYR:N	2.24	0.52
59:DA:597:U:H2'	59:DA:598:G:H8	1.74	0.52
23:AY:13:ARG:HB2	23:AY:79:ILE:HG12	1.91	0.52
23:AY:309:LEU:HD21	23:AY:335:LEU:HD13	1.89	0.52
59:BA:850:C:N4	59:BA:928:G:H1	2.07	0.52
45:DZ:99:TYR:HA	45:DZ:124:ILE:O	2.09	0.52
27:DE:50:GLY:HA2	27:DE:77:ILE:O	2.08	0.52
20:CA:197:A:N3	20:CA:198:G:H1'	2.24	0.52
9:CJ:39:PRO:HA	9:CJ:70:ARG:HG3	1.90	0.52
34:BO:26:LYS:HB3	34:BO:30:ALA:HB3	1.91	0.52
3:AD:10:ARG:HA	3:AD:13:ARG:HD2	1.91	0.52
59:BA:2715:C:H2'	59:BA:2716:U:H6	1.72	0.52
59:DA:2868:A:H2'	59:DA:2869:G:C8	2.44	0.52
6:AG:27:ILE:HG21	6:AG:36:LYS:HZ3	1.74	0.52
51:B7:22:MET:O	51:B7:28:ARG:NH1	2.35	0.52
59:BA:1717:G:H2'	59:BA:1718:G:C8	2.45	0.52
59:BA:21:A:H2'	59:BA:22:C:C6	2.44	0.52
59:DA:1972:A:H2'	59:DA:1973:G:H8	1.74	0.52
20:CA:1435:G:H2'	20:CA:1436:U:C6	2.44	0.52
59:DA:2728:U:H2'	59:DA:2729:G:C8	2.45	0.52
32:DK:101:TRP:HE1	32:DK:141:ALA:H	1.58	0.52
48:D3:12:PRO:HB2	48:D3:20:LYS:HE2	1.91	0.52
27:DE:16:ARG:CZ	27:DE:173:VAL:HG11	2.39	0.52
12:AM:52:GLU:HA	12:AM:55:ARG:HE	1.73	0.52
30:BH:154:PRO:HA	30:BH:161:GLY:HA3	1.92	0.52
1:AB:106:LYS:H	1:AB:106:LYS:HD2	1.75	0.52
2:AC:56:ASP:N	2:AC:56:ASP:OD1	2.42	0.52
15:AP:6:LEU:HB3	15:AP:17:TYR:HD2	1.75	0.52
20:AA:815:A:H61	20:AA:1508:G:H21	1.57	0.52
37:BR:3:HIS:ND1	59:BA:1654:A:OP1	2.43	0.52
59:DA:1139:G:H2'	59:DA:1140:C:C6	2.44	0.52
59:BA:529:A:N6	59:BA:2041:U:C2	2.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1218:C:H2'	20:CA:1219:U:H6	1.73	0.52
25:BC:172:ILE:HD13	25:BC:173:HIS:H	1.73	0.52
59:BA:226:G:H21	59:BA:228:A:N6	2.02	0.52
3:AD:126:ILE:HG23	3:AD:146:ILE:HG23	1.92	0.52
39:DT:53:ARG:HH22	39:DT:60:THR:HG1	1.51	0.52
28:DF:191:ARG:O	28:DF:193:VAL:HG23	2.09	0.52
40:BU:49:HIS:HA	40:BU:52:ARG:HG2	1.90	0.52
26:BD:260:ARG:HH12	59:BA:1799:G:H3'	1.74	0.52
20:CA:501:C:H2'	20:CA:502:G:H8	1.74	0.52
20:AA:1127:G:H1'	20:AA:1148:U:C4	2.44	0.52
20:AA:1137:C:H5'	20:AA:1138:G:C6	2.44	0.52
25:DC:61:GLY:HA3	25:DC:164:PHE:CZ	2.44	0.52
59:BA:503:A:H4'	59:BA:504:U:H5''	1.92	0.52
59:BA:1273:U:H5'	59:BA:1646:C:N4	2.24	0.52
10:CK:114:VAL:O	20:CA:675:A:O2'	2.24	0.52
20:AA:827:U:O2'	20:AA:859:A:N1	2.36	0.52
34:BO:28:SER:CB	59:BA:2566:A:H61	2.22	0.52
42:BW:98:LYS:HA	59:BA:2012:G:OP1	2.09	0.52
21:CW:68:U:H2'	21:CW:69:A:C8	2.45	0.52
7:CH:129:VAL:HA	20:CA:600:C:H5'	1.90	0.52
3:AD:145:GLU:OE1	3:AD:182:LYS:HB3	2.09	0.52
20:CA:241:C:H2'	20:CA:242:C:C6	2.45	0.52
12:CM:67:GLU:HB2	12:CM:71:ARG:HH21	1.73	0.52
28:DF:107:LYS:NZ	59:DA:618(A):G:H5''	2.25	0.52
59:DA:1990:C:H2'	59:DA:1991:U:C6	2.44	0.52
8:AI:6:GLY:HA3	8:AI:80:GLY:O	2.10	0.52
59:DA:1636:C:H2'	59:DA:1637:A:H8	1.75	0.52
59:BA:189:G:H2'	59:BA:205:G:H22	1.74	0.52
23:CY:220:ALA:HB3	23:CY:227:ILE:HG21	1.91	0.52
20:CA:670:G:H1	20:CA:736:C:H42	1.58	0.52
6:CG:11:GLN:HE22	6:CG:14:PRO:HD3	1.74	0.52
15:CP:6:LEU:HB3	15:CP:17:TYR:HD2	1.75	0.52
4:AE:83:GLU:HG3	4:AE:87:SER:O	2.09	0.52
59:DA:1499:C:H2'	59:DA:1500:G:H8	1.73	0.52
11:CL:95:GLY:C	11:CL:97:ARG:H	2.09	0.52
27:BE:13:ARG:N	27:BE:23:VAL:HG22	2.24	0.52
25:DC:79:ALA:HA	25:DC:117:THR:HG23	1.90	0.52
60:DB:28:C:H2'	60:DB:29:A:C8	2.44	0.52
3:AD:61:LYS:HG2	3:AD:75:PHE:HE2	1.73	0.52
33:BN:112:LEU:HD22	59:BA:558:G:H5'	1.90	0.52
20:CA:520:A:H62	20:CA:529:G:N2	2.06	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1149:C:O2'	20:CA:1280:A:N1	2.42	0.52
59:DA:2469:A:H3'	59:DA:2470:G:H8	1.74	0.52
59:BA:224:G:P	59:BA:408:G:H21	2.32	0.52
59:BA:2688:U:O2'	59:BA:2689:U:OP2	2.26	0.52
37:DR:17:ARG:NH2	59:DA:2002:G:OP1	2.35	0.52
11:CL:15:ARG:HB3	20:CA:562:C:H1'	1.91	0.52
16:AQ:45:HIS:H	16:AQ:72:ARG:HA	1.75	0.52
20:AA:924:C:H2'	20:AA:925:G:H8	1.75	0.52
32:DK:7:VAL:HB	32:DK:58:THR:HG23	1.90	0.52
20:CA:953:G:H2'	20:CA:954:G:O4'	2.09	0.52
59:DA:2595:G:N2	59:DA:2598:A:OP2	2.39	0.52
36:BQ:25:ASP:HA	36:BQ:102:VAL:HG23	1.91	0.52
7:AH:31:PHE:HZ	7:AH:113:SER:HB2	1.74	0.52
59:BA:271(D):U:H3'	59:BA:271:G:H5'	1.91	0.52
59:DA:236:C:H2'	59:DA:237:C:C6	2.43	0.52
59:DA:1969:A:O2'	59:DA:1972:A:N3	2.34	0.52
59:DA:14:A:N3	59:DA:2625:G:H1'	2.24	0.52
23:AY:98:MET:HG3	23:AY:101:LEU:HD12	1.90	0.52
20:CA:249:U:O2	20:CA:252:U:O2'	2.27	0.52
15:CP:4:ILE:HB	15:CP:66:PRO:HA	1.91	0.52
46:D0:12:ASN:O	46:D0:14:ARG:N	2.36	0.52
52:B8:30:ARG:HD2	59:BA:2420:C:H41	1.74	0.52
22:CV:18:G:H5'	22:CV:19:G:OP1	2.10	0.52
23:CY:230:LYS:HD3	23:CY:237:PRO:HA	1.91	0.52
59:BA:1783:A:H8	59:BA:1783:A:OP2	1.92	0.52
23:AY:175:SER:O	23:AY:187:THR:OG1	2.25	0.52
23:AY:481:VAL:HB	23:AY:483:TYR:CZ	2.44	0.52
20:CA:408:A:H2'	20:CA:409:G:H8	1.73	0.52
59:DA:459:U:O4	59:DA:470:A:C8	2.63	0.52
59:BA:1530:G:C6	59:BA:1541:U:O2	2.63	0.52
36:BQ:76:LYS:NZ	36:BQ:77:LYS:O	2.31	0.52
59:BA:454:A:H3'	59:BA:455:C:C6	2.44	0.52
20:AA:767:A:O2'	20:AA:1524:C:O2	2.21	0.52
14:AO:39:LEU:HD22	14:AO:42:HIS:HB3	1.90	0.52
59:DA:270(K):G:H2'	59:DA:270(L):C:H6	1.75	0.52
59:BA:2825:U:H2'	59:BA:2826:A:O4'	2.09	0.52
51:D7:30:VAL:O	51:D7:34:ARG:HG2	2.10	0.52
20:AA:559:A:H4'	20:AA:560:U:H3'	1.91	0.52
59:BA:591:C:H2'	59:BA:592:G:H8	1.75	0.52
59:BA:571:A:H1'	59:BA:573:G:C8	2.45	0.52
20:CA:406:G:H1	20:CA:436:C:N4	2.05	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:821:A:H3'	59:BA:946:G:H8	1.74	0.52
5:CF:69:GLU:O	5:CF:71:ARG:N	2.42	0.52
25:BC:31:LYS:HG3	25:BC:182:PRO:HA	1.91	0.52
23:AY:311:ALA:HA	23:AY:330:VAL:HA	1.91	0.52
33:DN:10:GLU:CD	33:DN:11:PRO:HD2	2.30	0.52
20:CA:954:G:H2'	20:CA:955:U:O4'	2.10	0.52
6:CG:88:PRO:HB3	6:CG:145:ALA:HA	1.90	0.52
59:BA:622:G:H2'	59:BA:623:G:C8	2.44	0.52
23:AY:243:VAL:HA	23:AY:279:TYR:HE1	1.73	0.52
59:BA:1356:G:H2'	59:BA:1357:U:H6	1.74	0.52
59:BA:711:G:H2'	59:BA:712:G:C8	2.45	0.52
26:DD:111:LEU:HD11	26:DD:128:GLY:HA3	1.92	0.52
20:AA:20:U:O2'	20:AA:573:A:N6	2.42	0.52
27:DE:132:HIS:HB3	59:DA:1658:C:OP1	2.10	0.52
3:CD:128:VAL:HG22	3:CD:146:ILE:HA	1.90	0.52
59:DA:1904:G:O2'	59:DA:1927:A:N6	2.36	0.52
23:AY:66:THR:O	23:AY:363:ARG:NH2	2.42	0.52
20:AA:1507:A:H2'	20:AA:1508:G:H8	1.75	0.52
59:DA:1007:C:H3'	59:DA:1008:C:H2'	1.92	0.52
59:DA:693:C:H42	59:DA:769:G:H1	1.58	0.52
25:BC:173:HIS:CE1	59:BA:2176:A:C2	2.98	0.52
59:BA:390:A:H4'	59:BA:391:G:C5'	2.40	0.52
40:BU:92:ARG:O	40:BU:95:LEU:N	2.42	0.52
31:DJ:58:UNK:C	31:DJ:60:UNK:N	2.72	0.52
25:DC:83:LYS:HD2	25:DC:148:PHE:CD1	2.44	0.52
1:CB:54:THR:O	1:CB:58:ILE:HG12	2.09	0.52
11:AL:83:VAL:HB	11:AL:100:ILE:HG23	1.92	0.52
51:D7:26:GLY:HA2	59:DA:682:G:H5''	1.91	0.52
23:AY:607:ARG:HG2	23:AY:646:PHE:HE1	1.74	0.52
49:D5:9:LYS:HZ2	59:DA:2019:A:H8	1.53	0.52
42:DW:42:ARG:NH1	59:DA:2011:U:OP1	2.43	0.52
27:BE:58:ARG:HH12	27:BE:75:VAL:HG23	1.74	0.52
23:AY:100:VAL:HG21	23:AY:314:PHE:CZ	2.44	0.52
59:BA:1496:A:H2'	59:BA:1498:C:H5	1.74	0.52
42:DW:5:ALA:HB2	42:DW:57:ASN:ND2	2.22	0.52
20:AA:1349:A:H2'	20:AA:1350:A:O4'	2.09	0.52
59:DA:1792:G:H1	59:DA:1827:C:N4	2.04	0.52
57:D1:58:ILE:HG13	57:D1:91:LYS:HB2	1.92	0.52
59:DA:270(H):C:H42	59:DA:270(T):G:H1	1.56	0.52
30:DH:41:MET:HB2	30:DH:53:GLU:O	2.10	0.52
50:B6:8:LYS:HD2	50:B6:27:LYS:HG2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:611:THR:HA	23:AY:642:VAL:HG22	1.90	0.52
59:DA:820:A:N3	59:DA:943:U:H4'	2.24	0.52
59:BA:1638:C:H5''	59:BA:2710:C:O2'	2.09	0.52
59:DA:2030:A:H4'	59:DA:2031:A:H8	1.74	0.52
37:BR:53:HIS:CD2	59:BA:2840:C:H5''	2.44	0.52
48:B3:29:ARG:HG2	59:BA:1184:G:OP1	2.10	0.52
52:D8:20:GLY:O	52:D8:57:ARG:NH2	2.43	0.52
17:AR:58:LEU:HB3	17:AR:62:GLU:HB3	1.92	0.52
6:AG:31:MET:HG3	6:AG:36:LYS:HA	1.91	0.52
20:CA:151:A:N7	20:CA:170:U:O4	2.42	0.52
59:BA:271:G:H2'	59:BA:272:G:H8	1.73	0.52
44:DY:20:TYR:HB3	44:DY:23:ARG:HG3	1.91	0.52
11:CL:113:ARG:HE	11:CL:116:SER:N	2.08	0.52
34:DO:27:GLY:O	34:DO:29:ASN:N	2.34	0.52
17:AR:44:LEU:HG	17:AR:50:ILE:HA	1.92	0.52
5:CF:62:TRP:CH2	5:CF:64:GLN:HB2	2.45	0.52
20:CA:317:G:OP1	20:CA:353:A:N6	2.42	0.52
59:DA:449:A:H2'	59:DA:450:G:O4'	2.10	0.52
37:DR:100:LEU:HD22	37:DR:101:ALA:H	1.74	0.52
3:AD:76:ARG:O	3:AD:80:GLU:HG2	2.10	0.52
16:CQ:95:TYR:HE1	20:CA:279:A:H2'	1.75	0.52
20:CA:976:G:OP2	20:CA:1358:U:O2'	2.20	0.52
25:BC:54:ARG:HB3	25:BC:57:GLN:HB2	1.91	0.52
20:AA:1413:A:H61	20:AA:1487:G:H1	0.72	0.52
59:DA:2849:U:H1'	59:DA:2866:U:C6	2.45	0.52
59:DA:1394:U:H4'	59:DA:1603:A:H4'	1.90	0.52
42:BW:78:GLU:HG2	42:BW:79:GLY:O	2.10	0.52
59:DA:2811:G:H1	59:DA:2889:C:H42	1.57	0.52
23:CY:259:PHE:CE1	23:CY:275:ALA:HB1	2.45	0.52
20:CA:1038:C:H2'	20:CA:1039:C:C6	2.45	0.52
4:CE:92:LYS:HG3	4:CE:93:PRO:HD2	1.92	0.52
30:BH:41:MET:SD	30:BH:52:VAL:HG13	2.50	0.52
28:BF:153:SER:N	28:BF:190:GLU:OE2	2.39	0.52
59:BA:697:C:N4	59:BA:765:G:H1	2.06	0.52
20:AA:1360:A:H2'	20:AA:1361:G:O4'	2.08	0.52
59:BA:479:A:H1'	59:BA:481:G:H5''	1.91	0.52
20:AA:308:C:H2'	20:AA:309:G:C8	2.45	0.52
59:DA:2712:U:H1'	59:DA:712(B):A:C8	2.44	0.52
23:CY:617:MET:O	23:CY:621:ILE:HG13	2.08	0.52
20:CA:563:A:O2'	20:CA:566:G:O2'	2.27	0.52
29:DG:61:ALA:HB1	29:DG:66:GLN:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D6:38:LYS:HD3	59:DA:2344:U:OP1	2.10	0.52
20:AA:1016:A:O5'	20:AA:1016:A:H8	1.93	0.52
59:BA:2567:G:H2'	59:BA:2568:C:C6	2.45	0.52
59:DA:707:G:H1	59:DA:724:U:H3	1.58	0.52
59:BA:2674:G:H2'	59:BA:2675:A:C8	2.45	0.52
20:CA:961:U:O2	20:CA:1201:A:N1	2.42	0.52
20:AA:116:A:H2'	20:AA:117:G:O4'	2.09	0.52
59:BA:136:G:H1	59:BA:143:C:H42	1.56	0.52
59:BA:1444:G:HO2'	59:BA:144(B):A:H8	1.56	0.52
5:CF:100:ASN:HB2	17:CR:28:GLU:HA	1.92	0.52
6:AG:74:GLU:HG2	6:AG:91:VAL:HG22	1.92	0.52
35:BP:135:LEU:O	35:BP:139:LYS:HG2	2.09	0.52
59:BA:87:C:H5''	59:BA:88:G:H5'	1.92	0.52
21:AW:72:C:H2'	21:AW:73:A:O4'	2.10	0.52
8:CI:96:LEU:HG	8:CI:101:PHE:HB2	1.90	0.52
59:DA:1209:G:H21	59:DA:1210:A:H62	1.57	0.52
38:DS:52:SER:HB2	38:DS:56:LEU:H	1.74	0.52
27:BE:109:LYS:HD2	37:BR:2:ARG:CZ	2.38	0.52
40:BU:11:ARG:HG2	40:BU:15:LYS:HE3	1.91	0.52
46:D0:23:VAL:HG12	46:D0:38:VAL:HG22	1.92	0.52
33:DN:125:GLY:HA3	33:DN:126:PRO:O	2.10	0.52
33:DN:14:VAL:HG12	33:DN:15:LEU:H	1.75	0.52
1:AB:54:THR:O	1:AB:58:ILE:HG12	2.10	0.52
26:DD:157:ARG:HE	59:DA:1818:U:H2'	1.75	0.52
59:BA:401:A:H2'	59:BA:402:A:C8	2.45	0.52
41:BV:76:LYS:NZ	59:BA:974(A):G:O5'	2.42	0.52
20:AA:1281:U:H5'	20:AA:1282:C:C5	2.38	0.52
59:DA:2828:C:H2'	59:DA:2829:C:H6	1.73	0.52
1:CB:32:ILE:HD13	1:CB:42:ILE:HA	1.91	0.52
59:DA:588:U:H2'	59:DA:589:C:O4'	2.09	0.52
23:CY:343:ASN:N	23:CY:348:ARG:O	2.32	0.52
20:AA:68(F):C:H2'	20:AA:68(G):G:H8	1.74	0.52
57:D1:67:ILE:N	57:D1:68:PRO:HD2	2.25	0.52
37:DR:11:ASN:HB2	59:DA:1653:G:O6	2.09	0.52
2:AC:131:ARG:NH2	2:AC:166:GLU:OE2	2.41	0.52
59:BA:1972:A:H2'	59:BA:1973:G:C8	2.43	0.52
23:CY:122:TRP:CH2	23:CY:132:ARG:HG2	2.45	0.52
4:AE:35:GLY:HA3	4:AE:112:LEU:HD22	1.92	0.52
59:BA:2647:U:O2	59:BA:2673:G:O6	2.27	0.52
49:D5:45:VAL:HG22	49:D5:51:TYR:HB2	1.92	0.52
28:DF:45:ARG:CZ	59:DA:443:A:H3'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:85:ILE:HG22	33:BN:86:PRO:HD2	1.92	0.52
59:BA:1151:G:H2'	59:BA:1152:C:H6	1.75	0.52
20:AA:1343:G:H2'	20:AA:1344:C:C6	2.44	0.52
32:DK:101:TRP:HE1	32:DK:141:ALA:N	2.08	0.52
59:BA:2419:U:H2'	59:BA:2420:C:C6	2.45	0.52
6:AG:69:VAL:HA	6:AG:138:LYS:HD2	1.90	0.52
59:DA:2628:C:H1'	59:DA:2781:A:H2'	1.91	0.52
43:DX:36:LYS:HD3	43:DX:54:VAL:HB	1.92	0.52
60:DB:82:G:H2'	60:DB:83:G:C8	2.44	0.52
14:CO:50:HIS:ND1	20:CA:765:G:OP1	2.41	0.52
20:CA:1258:G:H2'	20:CA:1259:C:C6	2.44	0.52
59:BA:1848:A:H2'	59:BA:1849:G:O4'	2.09	0.52
14:AO:18:PHE:O	14:AO:20:GLY:N	2.43	0.52
20:CA:935:A:H2'	20:CA:936:C:C6	2.44	0.52
27:BE:181:LEU:HD21	39:BT:7:ILE:HD12	1.92	0.52
59:BA:586:A:H5''	59:BA:587:C:OP2	2.09	0.52
41:DV:15:GLU:HB3	41:DV:16:PRO:HD2	1.92	0.52
25:BC:163:GLU:O	25:BC:163:GLU:HG3	2.09	0.52
45:DZ:82:ARG:HG2	45:DZ:83:PRO:HD2	1.91	0.52
37:DR:62:ALA:O	37:DR:66:VAL:HG23	2.10	0.52
59:DA:2057:A:H2'	59:DA:2058:A:C8	2.45	0.52
4:AE:75:THR:HB	4:AE:117:ASP:O	2.08	0.52
7:AH:21:LYS:O	7:AH:23:SER:N	2.43	0.52
39:BT:53:ARG:NH1	39:BT:53:ARG:HB3	2.25	0.52
59:DA:1375:C:H2'	59:DA:1376:C:C6	2.44	0.52
20:AA:1487:G:H2'	20:AA:1488:G:H8	1.75	0.52
59:DA:850:C:N3	59:DA:928:G:N2	2.48	0.52
59:DA:1179:C:H2'	59:DA:1180:C:H6	1.75	0.52
27:BE:143:ASN:HD21	59:BA:2572:A:P	2.33	0.52
25:DC:75:VAL:HG21	25:DC:154:ILE:HG12	1.92	0.52
41:DV:55:ALA:HB1	41:DV:101:GLY:HA2	1.91	0.52
11:AL:102:ARG:HB3	11:AL:109:GLY:H	1.75	0.52
39:BT:51:ARG:NH2	39:BT:100:TYR:OH	2.33	0.52
59:BA:2293:C:N4	59:BA:2339:G:H1	2.08	0.52
9:AJ:49:VAL:HG22	9:AJ:50:ILE:H	1.75	0.52
43:DX:40:LYS:HG2	43:DX:51:VAL:HB	1.92	0.52
39:DT:35:LYS:O	39:DT:36:GLU:HB2	2.09	0.52
17:CR:74:ARG:NE	17:CR:80:PRO:O	2.26	0.52
6:AG:34:GLY:HA3	20:AA:1350:A:C2	2.45	0.52
25:BC:67:HIS:CE1	25:BC:185:LYS:HE2	2.45	0.52
20:AA:1324:A:H2'	20:AA:1325:C:H6	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:537:G:H2'	20:CA:538:G:H8	1.75	0.52
17:AR:65:ILE:O	17:AR:69:THR:OG1	2.27	0.52
59:BA:618(B):C:H2'	59:BA:619:G:O4'	2.10	0.52
8:CI:110:GLU:HB2	20:CA:1348:U:OP1	2.09	0.52
60:BB:73:A:H3'	60:BB:74:U:C6	2.45	0.52
45:BZ:29:TYR:HE1	60:BB:73:A:H61	1.58	0.52
20:AA:1440(K):G:H2'	20:AA:1440(L):G:O4'	2.09	0.52
20:CA:825:G:H1	20:CA:875:C:H42	1.58	0.52
39:DT:23:ARG:HG3	39:DT:24:PRO:HD2	1.91	0.52
23:AY:256:THR:O	23:AY:258:VAL:HG23	2.10	0.52
59:BA:1880:C:H2'	59:BA:1881:C:C6	2.45	0.52
59:DA:67:U:H2'	59:DA:68:G:C8	2.44	0.52
23:AY:496:LYS:HG2	23:AY:498:ILE:HG23	1.92	0.52
59:DA:852:G:H2'	59:DA:853:G:C8	2.45	0.52
59:BA:2066:C:H2'	59:BA:2067:G:H8	1.74	0.52
2:CC:155:GLY:HA3	2:CC:196:LEU:HA	1.92	0.52
19:AT:59:ALA:O	19:AT:63:ILE:HG13	2.09	0.52
43:DX:36:LYS:HA	43:DX:39:ILE:HD12	1.92	0.52
43:BX:71:GLY:HA3	59:BA:64:A:H4'	1.92	0.52
20:AA:488:C:H2'	20:AA:489:C:C6	2.45	0.52
59:DA:1357:U:H2'	59:DA:1358:G:O4'	2.10	0.52
33:BN:16:ILE:HG22	33:BN:17:ASP:H	1.75	0.52
59:BA:2794:C:H2'	59:BA:2795:G:H5'	1.91	0.52
14:AO:50:HIS:ND1	20:AA:764:C:H5"	2.25	0.52
45:DZ:69:THR:HA	45:DZ:91:LEU:HG	1.92	0.52
23:AY:546:ILE:HA	23:AY:590:ILE:HG13	1.91	0.52
45:DZ:30:ASN:HA	45:DZ:89:PHE:HE2	1.75	0.52
45:BZ:154:ASP:N	45:BZ:154:ASP:OD2	2.42	0.52
9:CJ:27:ALA:HA	9:CJ:85:LEU:HD11	1.92	0.52
23:AY:616:TYR:CG	23:AY:663:THR:HA	2.45	0.52
57:D1:34:THR:HG23	57:D1:35:THR:HG23	1.92	0.51
59:DA:1011:G:O2'	59:DA:1013:C:H5"	2.10	0.51
27:DE:149:ARG:NH1	59:DA:2024:G:O3'	2.43	0.51
27:BE:143:ASN:OD1	59:BA:2571:C:H2'	2.09	0.51
59:BA:1448:G:H2'	59:BA:149(B):A:C8	2.46	0.51
49:B5:8:LYS:O	49:B5:9:LYS:HB2	2.10	0.51
57:B1:15:ALA:H	57:B1:41:ARG:HG2	1.74	0.51
3:AD:115:ARG:HB3	20:AA:407:G:H5"	1.90	0.51
25:DC:42:VAL:HB	25:DC:177:GLY:CA	2.40	0.51
59:DA:2086:U:H2'	59:DA:2087:G:C8	2.44	0.51
9:CJ:55:LYS:HG3	20:CA:973:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:278:A:H2'	59:DA:279:C:C6	2.45	0.51
53:B9:7:VAL:HG21	53:B9:36:GLN:HG2	1.92	0.51
20:CA:68:G:H2'	20:CA:68(A):G:O4'	2.10	0.51
20:CA:834:C:H2'	20:CA:835:U:H6	1.75	0.51
57:D1:73:LEU:HD21	57:D1:94:LEU:HD23	1.92	0.51
20:CA:977:A:O2'	20:CA:981:U:N3	2.31	0.51
60:BB:74:U:H2'	60:BB:75:G:C8	2.45	0.51
42:BW:103:ILE:H	42:BW:103:ILE:HD12	1.75	0.51
42:BW:76:VAL:HA	42:BW:102:HIS:O	2.10	0.51
28:DF:1:MET:HB3	28:DF:3:GLU:HG2	1.90	0.51
25:BC:182:PRO:HB3	25:BC:183:PRO:HD2	1.91	0.51
20:AA:1178:G:N1	20:AA:1181:G:OP2	2.42	0.51
23:CY:92:ILE:HG23	23:CY:93:GLU:H	1.75	0.51
59:DA:2291:U:H2'	59:DA:2292:C:C6	2.44	0.51
59:DA:1495:A:C2	59:DA:1578:U:H1'	2.45	0.51
59:DA:2736:G:H2'	59:DA:2737:G:C8	2.44	0.51
20:AA:935:A:H2'	20:AA:936:C:C6	2.45	0.51
46:B0:52:GLY:O	46:B0:59:LEU:HA	2.10	0.51
59:DA:72:U:O4	59:DA:111:A:O2'	2.22	0.51
59:BA:189:G:H2'	59:BA:205:G:N2	2.24	0.51
59:BA:2794:C:N3	59:BA:2802:G:O6	2.43	0.51
21:CW:19:G:H4'	21:CW:20:U:H2'	1.92	0.51
32:DK:79:ARG:HA	32:DK:84:LEU:HB2	1.92	0.51
20:CA:682:G:H1	20:CA:708:C:H42	1.58	0.51
59:DA:1516:U:H2'	59:DA:1517:G:H8	1.75	0.51
20:CA:614:A:H2'	20:CA:615:C:C6	2.46	0.51
43:DX:5:TYR:HA	43:DX:7:VAL:HG23	1.92	0.51
40:BU:18:LEU:HD11	40:BU:22:LYS:HE2	1.92	0.51
59:BA:1412:A:H2'	59:BA:1413:G:C8	2.44	0.51
59:DA:2573:C:OP1	59:DA:2574:G:H5''	2.09	0.51
2:AC:175:LEU:HD23	2:AC:175:LEU:H	1.74	0.51
16:AQ:83:ASP:N	16:AQ:83:ASP:OD1	2.42	0.51
1:CB:114:ARG:O	1:CB:118:LEU:HG	2.10	0.51
59:BA:1240:U:HO2'	59:BA:1241:A:P	2.34	0.51
59:DA:1775:U:OP1	59:DA:1979:C:O2'	2.23	0.51
59:BA:2553:G:N3	59:BA:2583:G:H1'	2.26	0.51
59:DA:997:G:H2'	59:DA:998:C:H6	1.74	0.51
29:DG:113:ARG:HG3	58:D4:34:GLU:CD	2.27	0.51
59:DA:1416:G:N2	59:DA:1582:C:N3	2.49	0.51
59:DA:8:A:N1	59:DA:2895:U:C4	2.78	0.51
59:BA:413:C:H2'	59:BA:414:C:H6	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:67:U:H2'	59:BA:68:G:C8	2.44	0.51
33:DN:34:LEU:HD11	33:DN:119:ARG:O	2.09	0.51
21:AW:57:G:N3	21:AW:57:G:H2'	2.26	0.51
12:CM:105:THR:HG22	20:CA:1229:A:N6	2.25	0.51
20:AA:296:U:H2'	20:AA:297:G:C8	2.45	0.51
37:BR:28:LEU:O	37:BR:31:HIS:N	2.43	0.51
32:BK:78:ILE:HD11	32:BK:99:ILE:HD11	1.92	0.51
20:CA:374:A:O2'	20:CA:451:A:OP2	2.26	0.51
60:BB:102:G:H2'	60:BB:103:U:C6	2.46	0.51
45:BZ:10:ARG:NH1	60:BB:75:G:O3'	2.42	0.51
59:BA:1264:G:O3'	59:BA:2615:U:H5'	2.11	0.51
26:DD:161:THR:OG1	26:DD:162:SER:N	2.43	0.51
16:CQ:63:ARG:NH2	20:CA:186(I):U:O2'	2.44	0.51
7:CH:14:ARG:HD3	7:CH:82:HIS:CE1	2.45	0.51
20:CA:113:G:H2'	20:CA:114:U:H6	1.75	0.51
58:D4:2:LYS:HG3	60:DB:39:A:H61	1.74	0.51
12:CM:89:GLY:O	12:CM:93:ARG:HG3	2.10	0.51
31:DJ:33:UNK:HA	59:DA:1055:G:H5''	1.91	0.51
34:BO:77:ILE:HD11	39:BT:72:VAL:HG22	1.92	0.51
23:AY:29:THR:HA	23:AY:32:ILE:HB	1.93	0.51
20:AA:1238:A:N3	20:AA:1238:A:H2'	2.26	0.51
59:BA:1411:C:H42	59:BA:1591:G:H1	1.57	0.51
59:DA:2066:C:H2'	59:DA:2067:G:H8	1.75	0.51
20:CA:1027:C:O2	20:CA:1034:G:N1	2.34	0.51
57:D1:27:GLU:HA	57:D1:31:GLY:HA2	1.92	0.51
4:AE:98:THR:OG1	20:AA:6:G:N2	2.28	0.51
30:DH:149:ARG:HH21	30:DH:163:TYR:HA	1.74	0.51
30:BH:139:GLN:OE1	59:BA:2759:G:N2	2.43	0.51
18:AS:46:GLY:HA2	18:AS:62:ILE:HG23	1.92	0.51
59:DA:2455:G:H2'	59:DA:2456:C:H6	1.75	0.51
15:CP:2:VAL:HA	15:CP:23:ASP:HA	1.92	0.51
59:BA:1195:G:H2'	59:BA:1196:C:H6	1.75	0.51
29:BG:76:SER:HA	29:BG:83:ARG:HA	1.91	0.51
4:CE:121:LYS:HG2	20:CA:7:G:H21	1.75	0.51
20:AA:232:G:H1'	20:AA:262:A:N1	2.25	0.51
25:DC:20:VAL:HG22	25:DC:226:ASN:H	1.74	0.51
34:DO:112:MET:SD	34:DO:112:MET:N	2.76	0.51
34:DO:14:THR:HB	34:DO:16:ALA:H	1.76	0.51
27:DE:172:VAL:HG21	27:DE:182:LEU:HG	1.92	0.51
23:CY:17:ILE:H	23:CY:83:ASP:HA	1.75	0.51
20:CA:815:A:N3	20:CA:1527:C:H1'	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2039:C:H2'	59:BA:2040:C:O4'	2.10	0.51
27:BE:66:HIS:O	27:BE:68:ALA:N	2.43	0.51
59:DA:1906:G:N2	59:DA:1924:C:N3	2.47	0.51
31:BJ:23:UNK:HA	31:BJ:111:UNK:O	2.09	0.51
59:DA:2634:G:N2	59:DA:2784:C:N3	2.43	0.51
59:BA:137(A):C:H2'	59:BA:137(B):G:C8	2.45	0.51
25:DC:132:LEU:HD12	25:DC:138:LEU:HD23	1.92	0.51
60:DB:24:G:N1	60:DB:56:G:N2	2.57	0.51
1:AB:184:VAL:HB	1:AB:198:ASP:H	1.75	0.51
59:BA:1400:G:H2'	59:BA:1401:G:H8	1.76	0.51
59:DA:580:C:H2'	59:DA:581:C:C6	2.45	0.51
20:CA:1124:G:H1	20:CA:1149:C:N4	2.06	0.51
31:DJ:24:UNK:HA	31:DJ:84:UNK:C	2.40	0.51
57:D1:60:PHE:HE2	57:D1:73:LEU:HD22	1.75	0.51
20:CA:766:A:H2'	20:CA:767:A:O4'	2.11	0.51
26:BD:246:PRO:HB2	26:BD:255:LYS:HE2	1.92	0.51
8:CI:125:TYR:CE2	20:CA:967:C:H4'	2.45	0.51
28:DF:25:PRO:HD3	28:DF:115:ALA:O	2.10	0.51
14:AO:79:ARG:HA	14:AO:82:ILE:HG22	1.91	0.51
59:BA:2838:G:H1	59:BA:2880:C:H42	1.57	0.51
34:BO:34:THR:H	34:BO:37:ASP:CG	2.13	0.51
59:BA:1410:G:H2'	59:BA:1411:C:H6	1.75	0.51
52:B8:8:LYS:HG3	59:BA:252:G:O6	2.10	0.51
7:AH:26:VAL:HG22	7:AH:32:LYS:NZ	2.25	0.51
18:CS:4:SER:O	20:CA:1314:C:N4	2.44	0.51
59:DA:1292:U:H2'	59:DA:1293:C:H6	1.75	0.51
1:CB:236:TYR:HA	1:CB:239:VAL:HB	1.93	0.51
41:BV:3:ALA:HB3	41:BV:14:VAL:HG23	1.91	0.51
23:CY:120:THR:OG1	23:CY:121:VAL:N	2.44	0.51
59:BA:2560:C:H2'	59:BA:2561:A:C8	2.45	0.51
8:CI:128:ARG:HD3	8:CI:128:ARG:H	1.75	0.51
59:BA:950:G:H2'	59:BA:951:C:C6	2.44	0.51
26:DD:79:VAL:O	26:DD:96:HIS:HB2	2.11	0.51
25:BC:115:VAL:HG21	25:BC:154:ILE:HD11	1.92	0.51
25:DC:42:VAL:O	25:DC:43:GLU:C	2.49	0.51
20:AA:1202:G:H2'	20:AA:1203:C:H5'	1.93	0.51
41:DV:38:LEU:O	41:DV:47:VAL:HG11	2.10	0.51
38:BS:67:ARG:HA	38:BS:99:LYS:HB2	1.92	0.51
20:CA:1148:U:H2'	20:CA:1149:C:O4'	2.11	0.51
23:AY:408:VAL:HG23	23:AY:409:ILE:HG12	1.93	0.51
59:DA:824:A:H1'	59:DA:2358:G:N7	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:612:C:H2'	20:AA:613:C:H6	1.75	0.51
20:CA:825:G:H2'	20:CA:826:C:C6	2.45	0.51
20:CA:116:A:H2'	20:CA:117:G:O4'	2.11	0.51
59:DA:648:G:H4'	59:DA:2351:G:H5''	1.92	0.51
28:BF:40:GLN:HE22	28:BF:184:TYR:HB2	1.75	0.51
7:AH:6:ILE:H	7:AH:6:ILE:HD12	1.74	0.51
52:D8:23:VAL:HG13	52:D8:48:PHE:HA	1.91	0.51
47:D2:48:HIS:CG	47:D2:49:LYS:H	2.28	0.51
59:BA:438:G:H2'	59:BA:439:G:H8	1.75	0.51
59:DA:2314:C:H2'	59:DA:2315:G:C8	2.45	0.51
48:D3:22:ALA:HB2	48:D3:49:LYS:HD3	1.93	0.51
59:BA:1175:U:H5	59:BA:1177:A:N1	2.07	0.51
20:AA:370:C:H42	20:AA:391:G:H1	1.57	0.51
20:CA:1340:A:C2	20:CA:1341:U:C2	2.98	0.51
10:CK:48:ILE:HD11	10:CK:64:ALA:HA	1.91	0.51
25:DC:118:PRO:HD3	25:DC:147:GLY:HA2	1.93	0.51
36:BQ:36:ALA:HA	36:BQ:129:THR:HG22	1.91	0.51
26:BD:161:THR:HB	26:BD:178:PRO:HG3	1.92	0.51
27:BE:36:ARG:HH21	27:BE:88:GLY:HA2	1.75	0.51
20:CA:1206:G:H2'	20:CA:1207:G:O4'	2.09	0.51
5:AF:61:LEU:HB2	5:AF:63:TYR:HE2	1.76	0.51
23:CY:137:ASN:HD22	23:CY:138:LYS:H	0.62	0.51
29:BG:103:LEU:HA	29:BG:106:LEU:HB3	1.91	0.51
20:AA:1478:C:H2'	20:AA:1479:C:C6	2.45	0.51
27:BE:144:ARG:O	59:BA:2052:G:O2'	2.29	0.51
59:BA:1853:A:H2'	59:BA:1854:A:C8	2.45	0.51
23:CY:512:ILE:HD12	23:CY:589:ALA:HB1	1.92	0.51
26:BD:53:PHE:O	26:BD:218:ARG:HG2	2.10	0.51
10:CK:51:LYS:HA	10:CK:55:LYS:HG3	1.91	0.51
4:CE:100:VAL:HG12	4:CE:115:VAL:HB	1.93	0.51
9:CJ:24:VAL:HA	9:CJ:34:VAL:HG11	1.93	0.51
15:CP:69:THR:HG21	20:CA:375:U:H5''	1.92	0.51
42:DW:18:ARG:HG2	42:DW:76:VAL:HG11	1.92	0.51
46:D0:68:GLU:HG3	46:D0:80:HIS:HB2	1.91	0.51
52:B8:16:ILE:HG21	52:B8:65:GLU:OXT	2.10	0.51
18:CS:77:THR:OG1	18:CS:78:ARG:N	2.44	0.51
29:DG:97:ASP:HA	29:DG:100:TRP:HD1	1.76	0.51
35:BP:6:LEU:HG	35:BP:7:ARG:H	1.75	0.51
12:AM:37:THR:HB	12:AM:56:LEU:HA	1.93	0.51
1:CB:87:ARG:HH12	1:CB:232:PRO:HA	1.74	0.51
26:DD:133:LEU:N	26:DD:187:GLY:O	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2649:U:H2'	59:BA:2650:U:C6	2.45	0.51
3:AD:13:ARG:HG3	3:AD:40:PRO:HD3	1.93	0.51
59:BA:1384:A:H1'	59:BA:1405:U:H1'	1.93	0.51
44:DY:46:LYS:H	44:DY:62:GLU:HB2	1.76	0.51
27:DE:8:LYS:NZ	27:DE:190:GLY:O	2.30	0.51
59:BA:717:G:H2'	59:BA:718:A:O4'	2.11	0.51
26:DD:108:PRO:HB3	26:DD:143:HIS:NE2	2.25	0.51
59:BA:1278:A:H2'	59:BA:1279:G:H8	1.75	0.51
59:BA:2676:C:H2'	59:BA:2677:G:C8	2.44	0.51
37:DR:23:ASN:ND2	59:DA:1294:U:H1'	2.26	0.51
59:DA:195:A:H5''	59:DA:196:A:OP2	2.11	0.51
1:AB:59:GLU:HG2	1:AB:225:ALA:HB2	1.92	0.51
1:CB:101:MET:HB2	1:CB:102:LEU:HD12	1.93	0.51
27:DE:36:ARG:NH2	27:DE:88:GLY:HA2	2.26	0.51
59:BA:1391:U:H3	59:BA:1394:U:H5	1.57	0.51
59:DA:1410:G:H2'	59:DA:1411:C:H6	1.75	0.51
59:BA:1007:C:H3'	59:BA:1008:C:H6	1.74	0.51
59:DA:1811:G:H2'	59:DA:1812:A:H8	1.73	0.51
11:CL:20:LYS:H	11:CL:20:LYS:HD3	1.76	0.51
20:CA:1113:C:N4	20:CA:1187:G:H1	2.06	0.51
59:BA:37:C:H4'	59:BA:451:C:OP1	2.10	0.51
3:AD:101:LEU:HD22	3:AD:138:TYR:CD2	2.45	0.51
35:DP:64:LYS:O	35:DP:66:GLY:N	2.43	0.51
10:AK:120:ARG:HH11	10:AK:126:ARG:HH12	1.59	0.51
1:AB:78:GLN:O	1:AB:81:VAL:HG22	2.11	0.51
41:DV:18:LEU:HA	41:DV:95:LEU:HD22	1.92	0.51
59:DA:485:C:H2'	59:DA:486:C:H6	1.76	0.51
26:DD:147:LEU:HD21	26:DD:183:ARG:HH12	1.76	0.51
51:B7:40:TRP:CZ2	59:BA:469:G:N1	2.79	0.51
23:AY:422:GLU:O	23:AY:425:SER:HB2	2.10	0.51
59:DA:1796:U:H2'	59:DA:1797:C:H6	1.73	0.51
23:CY:486:THR:OG1	23:CY:487:ILE:N	2.44	0.51
59:DA:222:A:N1	59:DA:233:A:H5'	2.26	0.51
59:DA:221:A:O2'	59:DA:222:A:O5'	2.26	0.51
2:AC:7:PRO:HG2	2:AC:201:TYR:HE2	1.76	0.51
36:DQ:75:THR:HG21	36:DQ:87:LYS:HZ2	1.74	0.51
59:BA:1682:G:P	59:BA:1699:G:H22	2.34	0.51
20:CA:865:A:H2'	20:CA:866:C:C6	2.45	0.51
59:DA:2557:G:H2'	59:DA:2558:C:H6	1.75	0.51
20:AA:1044:A:C5	20:AA:1045:C:H1'	2.45	0.51
23:AY:544:LYS:HB3	23:AY:583:LYS:HE3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:64:ARG:HH21	20:AA:581:G:H4'	1.74	0.51
46:B0:51:VAL:HG22	46:B0:81:VAL:HG23	1.91	0.51
20:AA:120:A:H2'	20:AA:122:G:C8	2.46	0.51
20:CA:669:U:H2'	20:CA:670:G:C8	2.46	0.51
35:BP:136:GLU:HA	35:BP:139:LYS:HG2	1.92	0.51
8:CI:128:ARG:HG3	21:CW:32:C:OP2	2.10	0.51
59:BA:1347:G:H2'	59:BA:1348:G:C8	2.46	0.51
20:CA:794:A:H2'	20:CA:795:C:H6	1.75	0.51
29:DG:27:ASN:HB3	29:DG:30:GLU:HB3	1.93	0.51
45:DZ:18:LEU:HD22	45:DZ:25:PRO:HB3	1.91	0.51
20:CA:442:C:H42	20:CA:492:G:H1	1.59	0.51
5:CF:8:ILE:HG23	5:CF:88:VAL:HG22	1.92	0.51
37:BR:100:LEU:HD22	37:BR:101:ALA:H	1.76	0.51
9:AJ:87:THR:O	9:AJ:89:ASP:N	2.44	0.51
59:BA:766:C:H2'	59:BA:767:U:C6	2.46	0.51
28:BF:10:PRO:HG3	28:BF:19:GLU:HA	1.92	0.51
39:BT:83:ILE:HD12	39:BT:84:GLN:HE22	1.75	0.51
59:BA:1213:A:N6	59:BA:1236:G:H1'	2.26	0.51
33:BN:58:ASP:N	33:BN:58:ASP:OD1	2.44	0.51
32:BK:91:PRO:HG3	59:BA:1062:G:H21	1.75	0.51
3:AD:91:SER:HA	3:AD:94:LEU:HD12	1.91	0.51
59:DA:1376:C:H2'	59:DA:1377:G:H8	1.76	0.51
59:BA:1394:U:H5''	59:BA:1604:C:P	2.51	0.51
59:DA:1326:U:H2'	59:DA:1327:C:O4'	2.10	0.51
49:B5:8:LYS:HZ2	59:BA:2056:G:H4'	1.75	0.51
41:BV:24:LYS:HB3	59:BA:1162:G:H4'	1.92	0.51
20:AA:767:A:H2'	20:AA:768:A:O4'	2.08	0.51
25:DC:115:VAL:N	25:DC:145:THR:HG22	2.25	0.51
49:B5:3:LYS:HE2	49:B5:3:LYS:H	1.76	0.51
59:BA:1288:U:C2	59:BA:1327:C:C2	2.99	0.51
39:BT:49:VAL:H	39:BT:63:VAL:HG13	1.76	0.51
27:BE:32:PRO:HD2	27:BE:50:GLY:C	2.31	0.51
28:BF:60:SER:N	59:BA:469:G:OP1	2.43	0.51
34:DO:71:ARG:HD2	39:DT:74:ARG:NH2	2.25	0.51
20:AA:584:G:H2'	20:AA:585:G:H8	1.74	0.51
46:D0:67:VAL:HG12	46:D0:68:GLU:H	1.75	0.51
59:BA:2707:G:H2'	59:BA:2708:G:H8	1.74	0.51
20:CA:137:C:N4	20:CA:226:G:H1	2.08	0.51
59:BA:2712:U:H2'	59:BA:2712:U:O2	2.10	0.51
23:AY:617:MET:HG2	23:AY:621:ILE:HD13	1.92	0.51
32:DK:30:HIS:HA	32:DK:59:ILE:HD12	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D5:15:ARG:HH11	49:D5:15:ARG:HA	1.75	0.51
26:DD:94:LEU:HG	26:DD:104:TYR:HE2	1.74	0.51
47:B2:5:GLU:O	47:B2:9:GLN:HG2	2.10	0.51
8:AI:124:GLN:NE2	20:AA:1232:U:OP1	2.42	0.51
32:BK:95:LYS:HG3	32:BK:135:GLY:O	2.11	0.51
19:AT:73:HIS:C	19:AT:74:LYS:HD3	2.31	0.51
34:DO:12:ASP:OD2	34:DO:12:ASP:N	2.42	0.51
6:AG:46:ALA:O	6:AG:50:ILE:HG13	2.11	0.51
59:DA:2152:G:H2'	59:DA:2153:G:C8	2.46	0.51
59:BA:2373:G:H2'	59:BA:2374:C:C6	2.46	0.51
59:DA:2023:G:C2	59:DA:2040:C:O2	2.61	0.51
59:DA:1287:A:H2	59:DA:1649:G:C4'	2.20	0.51
59:DA:2081:C:H2'	59:DA:2082:A:C8	2.46	0.51
26:DD:24:ILE:HA	26:DD:82:ILE:HD13	1.92	0.51
25:DC:81:GLY:O	25:DC:84:ILE:HB	2.10	0.51
25:DC:84:ILE:HD11	25:DC:97:GLY:N	2.26	0.51
1:AB:162:ILE:HG13	1:AB:185:ILE:O	2.11	0.51
3:AD:57:ARG:NH2	4:AE:107:ARG:HH21	2.02	0.51
40:DU:3:ARG:N	59:DA:445:C:OP1	2.26	0.51
11:AL:49:ASN:HD21	20:AA:528:C:H42	1.59	0.51
41:BV:17:GLY:HA2	41:BV:96:ILE:HB	1.93	0.51
28:BF:154:VAL:O	28:BF:156:LEU:N	2.44	0.51
28:DF:38:ARG:HA	28:DF:41:LEU:HB2	1.91	0.51
33:BN:69:GLN:HE21	59:BA:1022:G:H5''	1.75	0.51
33:BN:66:LYS:HE2	59:BA:1022:G:N7	2.25	0.51
59:BA:224:G:H2'	59:BA:225:A:O4'	2.11	0.51
59:BA:647:G:H2'	59:BA:648:G:O4'	2.11	0.51
23:CY:96:ARG:O	23:CY:100:VAL:HG12	2.10	0.51
59:DA:1062:G:H2'	59:DA:1063:G:C8	2.45	0.51
20:CA:1320:C:H2'	20:CA:1321:C:C6	2.46	0.51
3:AD:11:LEU:HB3	3:AD:66:ARG:NH1	2.26	0.51
21:AW:39:U:H2'	21:AW:40:G:C8	2.43	0.51
1:AB:49:GLU:O	1:AB:52:GLU:HB3	2.11	0.51
20:AA:368:U:C5	23:AY:354:ARG:HD3	2.46	0.51
20:AA:1157:A:H61	20:AA:1178:G:H1'	1.76	0.51
59:BA:2838:G:H2'	59:BA:2839:G:H8	1.75	0.51
6:AG:15:ASP:OD1	6:AG:18:TYR:HB2	2.11	0.51
48:B3:52:HIS:HD2	60:BB:83:G:H4'	1.76	0.51
59:DA:1490:A:O3'	59:DA:1494:A:N6	2.36	0.51
2:AC:156:ARG:N	2:AC:196:LEU:HD12	2.25	0.51
23:AY:197:ARG:HG3	23:AY:198:GLU:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CW:19:G:H1	21:CW:56:C:H42	1.59	0.51
20:CA:339:C:H2'	20:CA:340:U:C6	2.46	0.51
34:DO:13:ASN:HB3	34:DO:97:ARG:HG3	1.91	0.51
20:CA:1161:C:H2'	20:CA:1162:C:C6	2.46	0.51
4:CE:14:ARG:HD2	20:CA:17:U:H5''	1.93	0.51
59:BA:1914:C:H3'	59:BA:1915:U:H6	1.76	0.51
4:AE:40:ARG:HE	4:AE:66:MET:HE2	1.75	0.51
16:AQ:97:SER:O	16:AQ:97:SER:OG	2.26	0.51
30:DH:125:VAL:HG22	30:DH:131:VAL:HG22	1.91	0.51
59:BA:2736:G:H2'	59:BA:2737:G:H8	1.75	0.51
59:BA:2379:G:H2'	59:BA:2380:C:C6	2.45	0.51
23:CY:107:VAL:HG22	23:CY:135:PHE:HB3	1.93	0.51
59:DA:1007:C:H5''	59:DA:1008:C:H3'	1.93	0.51
59:DA:1024:G:OP2	59:DA:1025:G:H3'	2.11	0.51
33:BN:114:ARG:NH2	59:BA:528:A:H5''	2.21	0.51
59:BA:2347:C:H2'	59:BA:2348:U:C6	2.46	0.51
20:CA:490:G:H2'	20:CA:491:G:H8	1.75	0.51
59:BA:1845:G:H2'	59:BA:1846:G:H8	1.75	0.51
20:CA:1059:C:H2'	20:CA:1060:C:O4'	2.11	0.51
11:CL:31:PRO:HB3	20:CA:553:A:O4'	2.11	0.51
39:BT:46:GLU:HG3	39:BT:65:LYS:HD3	1.92	0.51
1:AB:97:TRP:HZ2	1:AB:176:GLU:HG3	1.75	0.51
11:AL:69:TYR:CG	11:AL:70:ILE:N	2.77	0.51
20:CA:22:G:H2'	20:CA:23:C:C6	2.46	0.51
13:AN:23:ARG:HA	13:AN:29:ARG:O	2.11	0.51
25:DC:71:LYS:HG3	25:DC:72:GLN:H	1.75	0.51
4:CE:118:ILE:HG13	4:CE:120:THR:HG22	1.93	0.51
20:CA:834:C:H42	20:CA:852:G:H1	1.59	0.51
59:BA:575:A:O2'	59:BA:2501:C:OP1	2.29	0.51
59:BA:2696:U:H2'	59:BA:2697:G:C8	2.46	0.51
59:BA:19:C:H2'	59:BA:20:C:H6	1.75	0.51
59:BA:1880:C:H2'	59:BA:1881:C:H6	1.75	0.51
39:BT:58:ASN:N	39:BT:58:ASN:HD22	2.08	0.51
43:BX:55:ASN:HB2	43:BX:80:ILE:HG23	1.92	0.51
59:DA:697:C:H2'	59:DA:698:C:C6	2.46	0.51
59:DA:2662:A:H2'	59:DA:2663:G:O4'	2.11	0.51
43:DX:36:LYS:HA	43:DX:39:ILE:HB	1.93	0.51
45:DZ:69:THR:HG22	45:DZ:90:VAL:HA	1.93	0.51
59:BA:767:U:H2'	59:BA:768:G:C8	2.46	0.51
5:AF:9:VAL:HB	5:AF:87:ARG:HB2	1.93	0.51
20:AA:383:A:H8	20:AA:383:A:O5'	1.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D8:8:LYS:HG3	59:DA:246:C:H42	1.75	0.51
59:DA:548:A:H2'	59:DA:549:G:O4'	2.11	0.51
14:AO:29:VAL:HG11	14:AO:81:LEU:HD21	1.92	0.51
59:BA:672:C:H42	59:BA:808:G:H1	1.57	0.51
47:B2:68:ARG:O	47:B2:70:GLN:NE2	2.44	0.51
59:DA:1765:C:H2'	59:DA:1766:U:C6	2.46	0.51
20:CA:328:C:H4'	20:CA:329:A:H5'	1.93	0.51
59:DA:2852:G:H2'	59:DA:2853:C:C6	2.46	0.51
59:DA:273(G):C:H3'	59:DA:274:G:C5'	2.40	0.51
27:BE:64:LYS:HZ3	27:BE:67:PHE:HB2	1.76	0.51
59:DA:273(A):G:N2	59:DA:364:C:N3	2.51	0.51
59:DA:380:U:H3	59:DA:394:A:N6	2.08	0.51
36:BQ:87:LYS:HB2	59:BA:2277:G:OP1	2.11	0.51
40:BU:92:ARG:O	40:BU:96:ALA:N	2.44	0.51
20:CA:266:G:O2'	20:CA:267:C:O5'	2.29	0.51
3:AD:35:ARG:HD3	20:AA:412:A:H2	1.76	0.51
3:CD:54:TYR:HD1	3:CD:209:ARG:HH22	1.57	0.51
59:BA:1651:G:H2'	59:BA:1652:A:O4'	2.11	0.51
39:BT:26:ASP:OD2	39:BT:27:THR:N	2.36	0.51
20:CA:974:A:H8	20:CA:974:A:OP1	1.94	0.51
59:BA:650:C:H2'	59:BA:651:G:O4'	2.11	0.51
59:DA:2290:G:H1	59:DA:2342:C:N4	2.06	0.51
36:DQ:90:VAL:HG12	36:DQ:93:TYR:HE1	1.76	0.51
59:DA:847:U:O2'	59:DA:848:G:H8	1.94	0.51
37:DR:14:SER:HA	37:DR:17:ARG:HD2	1.93	0.51
45:BZ:10:ARG:O	45:BZ:35:ARG:NH2	2.44	0.51
44:BY:97:ARG:HH21	59:BA:300:A:P	2.34	0.51
53:D9:9:ARG:NH2	59:DA:1033:U:OP1	2.30	0.51
26:DD:206:LEU:O	26:DD:211:ARG:HD3	2.11	0.51
59:DA:678:C:N4	59:DA:799:G:H1	2.09	0.51
23:AY:614:GLU:HA	23:AY:617:MET:HB3	1.93	0.51
26:DD:175:LEU:HD12	26:DD:185:VAL:HG21	1.92	0.51
23:CY:130:VAL:O	23:CY:132:ARG:HD3	2.11	0.51
59:BA:744:G:H2'	59:BA:745:G:O4'	2.11	0.51
20:CA:584:G:H2'	20:CA:585:G:H8	1.75	0.51
13:AN:48:ALA:HB2	13:AN:53:LEU:HD12	1.93	0.51
20:AA:1081:G:H2'	20:AA:1082:G:C8	2.46	0.51
8:AI:39:GLY:HA3	20:AA:1291:G:H4'	1.91	0.51
20:AA:271:C:H2'	20:AA:272:C:O4'	2.10	0.51
20:AA:280:C:H3'	20:AA:281:G:C5'	2.38	0.51
49:B5:55:ARG:O	49:B5:56:LYS:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:261:LYS:HG2	26:BD:263:ARG:H	1.76	0.51
59:BA:1036:G:H2'	59:BA:1037:G:C8	2.46	0.51
26:BD:6:PHE:CE1	26:BD:18:VAL:HB	2.46	0.51
59:DA:1836:C:H42	59:DA:1904:G:H1	1.59	0.51
21:AW:1:G:N2	21:AW:73:A:O2'	2.44	0.51
42:BW:90:ARG:HH11	59:BA:751:A:H4'	1.75	0.51
8:AI:50:LEU:HB3	8:AI:56:LEU:HA	1.93	0.51
59:BA:276:A:H2'	59:BA:277:C:C6	2.46	0.51
15:CP:30:GLY:HA2	20:CA:309:G:H5''	1.93	0.51
30:BH:96:ALA:HB3	30:BH:128:PRO:HA	1.92	0.51
30:BH:30:LYS:HD2	30:BH:81:GLU:HG2	1.91	0.51
19:CT:37:SER:O	19:CT:41:ILE:HG23	2.10	0.51
59:DA:1732:A:H2'	59:DA:1733:G:C8	2.46	0.51
23:CY:22:ASP:O	23:CY:24:GLY:HA3	2.09	0.50
23:CY:136:ALA:H	23:CY:260:LEU:HA	1.76	0.50
59:BA:2471:C:H2'	59:BA:2472:G:O4'	2.10	0.50
58:B4:15:ILE:H	58:B4:32:TYR:CB	2.23	0.50
59:BA:25:U:H3	59:BA:515:A:N6	2.09	0.50
23:CY:134:ALA:HB3	23:CY:258:VAL:HG13	1.93	0.50
59:BA:325:G:H2'	59:BA:326:G:C8	2.46	0.50
25:BC:218:THR:O	59:BA:2175:C:H1'	2.10	0.50
25:DC:150:ILE:HA	25:DC:153:ILE:HG13	1.93	0.50
25:DC:44:VAL:CB	25:DC:174:ALA:HB3	2.37	0.50
28:DF:102:PRO:HB2	28:DF:105:VAL:HG23	1.93	0.50
59:DA:270(J):G:H2'	59:DA:270(K):G:O4'	2.11	0.50
36:BQ:13:GLN:HB3	59:BA:954:G:H5''	1.92	0.50
39:BT:29:ARG:HG2	39:BT:30:VAL:HB	1.92	0.50
59:DA:1312:U:H5'	59:DA:1313:U:C6	2.46	0.50
35:BP:49:ARG:CZ	52:B8:59:LYS:HD2	2.41	0.50
52:B8:61:LEU:O	52:B8:64:TYR:N	2.43	0.50
59:BA:2002:G:H2'	59:BA:2003:G:C8	2.46	0.50
59:BA:2689:U:OP2	59:BA:2872:G:N2	2.44	0.50
59:BA:1295:C:N4	59:BA:1645:G:H1	2.08	0.50
59:DA:1273:U:H5'	59:DA:1646:C:N4	2.27	0.50
20:CA:1479:C:H2'	20:CA:1480:G:C8	2.44	0.50
28:BF:45:ARG:HA	28:BF:45:ARG:HE	1.75	0.50
59:DA:2795:G:H3'	59:DA:2797:U:C5'	2.41	0.50
59:BA:353:G:H2'	59:BA:354:G:C8	2.45	0.50
59:BA:533:G:H2'	59:BA:534:U:H6	1.75	0.50
59:BA:2126:A:N3	59:BA:2127:G:H1'	2.27	0.50
44:DY:85:VAL:HG13	44:DY:94:LYS:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D7:9:ARG:NH1	51:D7:46:VAL:O	2.44	0.50
16:CQ:12:SER:HB2	16:CQ:14:LYS:HG3	1.93	0.50
16:CQ:13:ASP:O	16:CQ:15:MET:N	2.44	0.50
37:DR:5:LYS:HE3	59:DA:2820:A:O3'	2.12	0.50
20:CA:431:A:H2'	20:CA:432:A:C8	2.46	0.50
20:AA:1479:C:H2'	20:AA:1480:G:H8	1.76	0.50
59:BA:2041:U:H6	59:BA:2041:U:O5'	1.94	0.50
59:BA:1540:G:N2	59:BA:1541:U:H1'	2.26	0.50
25:BC:42:VAL:HG11	25:BC:176:VAL:HG23	1.93	0.50
59:BA:270(C):A:H62	59:BA:270(Y):G:H21	1.59	0.50
33:DN:15:LEU:HD21	33:DN:55:VAL:HG13	1.94	0.50
59:BA:1088:A:N3	59:BA:1088:A:H2'	2.27	0.50
11:CL:45:PRO:HD2	11:CL:49:ASN:HB2	1.92	0.50
59:DA:2230:G:H2'	59:DA:2231:C:H6	1.77	0.50
52:B8:52:LYS:O	52:B8:55:ALA:N	2.44	0.50
47:D2:26:ARG:O	47:D2:29:LYS:HB2	2.11	0.50
4:CE:35:GLY:N	4:CE:112:LEU:HD13	2.27	0.50
4:CE:80:ILE:HG22	7:CH:104:ARG:HH21	1.77	0.50
20:CA:68(F):C:H2'	20:CA:68(G):G:H8	1.76	0.50
28:DF:54:ARG:HG2	59:DA:801:G:C5	2.47	0.50
23:AY:8:ASP:HB3	23:AY:11:ARG:HG2	1.93	0.50
7:CH:121:ASP:N	7:CH:121:ASP:OD1	2.43	0.50
23:AY:20:HIS:CG	23:AY:21:ILE:H	2.27	0.50
59:DA:2662:A:H8	59:DA:2662:A:O5'	1.93	0.50
45:DZ:97:GLU:HG2	45:DZ:127:LYS:HA	1.92	0.50
16:CQ:44:ALA:HB2	16:CQ:59:ILE:HD11	1.93	0.50
51:B7:28:ARG:O	51:B7:31:LEU:HB2	2.11	0.50
20:CA:764:C:H2'	20:CA:765:G:C8	2.47	0.50
32:DK:72:PRO:O	32:DK:111:LYS:NZ	2.30	0.50
7:CH:29:SER:OG	7:CH:32:LYS:HE2	2.11	0.50
20:AA:643:C:H2'	20:AA:644:G:H8	1.76	0.50
20:CA:1432:G:OP1	39:DT:107:ASP:HB2	2.11	0.50
13:AN:4:LYS:HG2	20:AA:994:A:C2	2.46	0.50
32:DK:125:ARG:HD2	32:DK:125:ARG:H	1.75	0.50
20:AA:255:G:H2'	20:AA:256:U:C6	2.46	0.50
20:AA:255:G:H2'	20:AA:256:U:H6	1.76	0.50
20:AA:1428:A:H2'	20:AA:1429:C:O4'	2.11	0.50
19:AT:17:ARG:HH12	20:AA:102:G:H5''	1.76	0.50
23:CY:28:THR:HG21	23:CY:107:VAL:HG21	1.92	0.50
27:BE:109:LYS:HE3	59:BA:2680:C:H5''	1.93	0.50
20:AA:1422:G:H2'	20:AA:1423:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:47:LYS:HB3	25:BC:212:SER:HB2	1.92	0.50
9:CJ:52:GLY:HA2	20:CA:1059:C:O2'	2.11	0.50
20:AA:1381:U:H5'	20:AA:1382:C:OP2	2.11	0.50
33:DN:53:VAL:HA	33:DN:121:LYS:O	2.10	0.50
59:BA:1553:A:H5'	59:BA:1554:A:OP2	2.11	0.50
20:AA:1077:G:N2	20:AA:1079:G:H3'	2.26	0.50
35:DP:24:GLY:HA3	35:DP:33:ARG:NH1	2.27	0.50
45:BZ:44:PHE:CZ	45:BZ:86:VAL:HG21	2.45	0.50
37:BR:24:GLN:O	37:BR:28:LEU:HB2	2.10	0.50
59:DA:597:U:H2'	59:DA:598:G:C8	2.46	0.50
26:DD:210:GLY:HA2	59:DA:764:A:H5'	1.93	0.50
60:BB:24:G:H5''	60:BB:25:A:OP1	2.11	0.50
20:CA:713:G:H21	20:CA:777:A:H1'	1.77	0.50
59:BA:2656:U:H3	59:BA:2665:A:H62	1.59	0.50
20:CA:1295:G:O2'	20:CA:1302:U:O4	2.25	0.50
35:DP:46:LYS:HG2	35:DP:51:PHE:CD1	2.46	0.50
25:BC:19:LYS:HE3	25:BC:20:VAL:H	1.77	0.50
60:BB:105:G:H2'	60:BB:106:G:H8	1.76	0.50
20:CA:562:C:H41	20:CA:884:U:H2'	1.76	0.50
20:CA:825:G:H2'	20:CA:826:C:H6	1.75	0.50
34:BO:64:ARG:HB3	34:BO:79:PHE:HB2	1.93	0.50
20:CA:105:G:H2'	20:CA:106:C:C6	2.46	0.50
18:AS:4:SER:O	20:AA:1314:C:N4	2.44	0.50
45:DZ:74:VAL:HG13	45:DZ:85:HIS:O	2.12	0.50
59:DA:1975:G:O2'	59:DA:1976:U:H6	1.95	0.50
4:AE:32:VAL:HG21	4:AE:59:GLY:HA2	1.93	0.50
59:BA:2324:C:O2'	59:BA:2337:G:H5'	2.11	0.50
2:CC:173:VAL:HG13	2:CC:182:ILE:HD13	1.93	0.50
20:AA:1284:C:OP2	20:AA:1285:A:O2'	2.23	0.50
28:DF:54:ARG:HD2	28:DF:81:PRO:HD3	1.92	0.50
59:DA:871:U:H2'	59:DA:872:A:C8	2.45	0.50
59:DA:2243:U:H2'	59:DA:2244:U:C6	2.45	0.50
59:BA:2673:G:H2'	59:BA:2674:G:H8	1.75	0.50
35:DP:79:ARG:NH2	35:DP:109:GLY:HA2	2.27	0.50
20:AA:581:G:N2	20:AA:760:G:N7	2.58	0.50
59:DA:743:G:H1	59:DA:754:C:H42	1.57	0.50
59:BA:2676:C:H2'	59:BA:2677:G:H8	1.76	0.50
27:BE:44:TYR:O	27:BE:45:THR:OG1	2.23	0.50
20:CA:341:C:H2'	20:CA:342:C:H6	1.77	0.50
59:BA:1466:G:H2'	59:BA:1547:C:H41	1.76	0.50
59:BA:822:U:H5	59:BA:944:G:HO2'	1.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:399:G:H2'	20:AA:400:C:C6	2.47	0.50
59:BA:1748:G:H2'	59:BA:1749:A:C8	2.47	0.50
59:DA:709:U:H2'	59:DA:710:G:C8	2.47	0.50
30:BH:126:PRO:HG2	30:BH:130:ARG:HH12	1.76	0.50
17:AR:81:PHE:HB3	20:AA:718:G:H1	1.77	0.50
59:BA:1669:A:O3'	59:BA:2549:G:H5'	2.10	0.50
35:DP:62:LEU:HD22	52:D8:27:THR:HG22	1.93	0.50
14:AO:22:THR:HB	20:AA:658:G:H4'	1.93	0.50
15:CP:80:PHE:HB3	20:CA:458(E):A:H5''	1.91	0.50
59:BA:1049:C:H1'	59:BA:1113:U:H4'	1.93	0.50
59:BA:488:G:H1'	59:BA:492:A:N6	2.26	0.50
31:DJ:63:UNK:O	31:DJ:67:UNK:N	2.45	0.50
59:DA:127:A:H5''	59:DA:128:C:C6	2.46	0.50
20:AA:1486:G:H2'	20:AA:1487:G:O4'	2.11	0.50
20:CA:408:A:H2'	20:CA:409:G:C8	2.45	0.50
1:CB:81:VAL:HG12	1:CB:215:LEU:HD11	1.91	0.50
20:AA:112:G:H2'	20:AA:113:G:H8	1.77	0.50
59:DA:2464:C:N3	59:DA:2486:G:N2	2.51	0.50
39:DT:49:VAL:HA	39:DT:63:VAL:CA	2.35	0.50
11:CL:85:ILE:HD12	11:CL:98:TYR:HB2	1.94	0.50
27:DE:66:HIS:NE2	59:DA:2786:U:OP1	2.41	0.50
25:BC:125:GLY:HA2	25:BC:138:LEU:HD21	1.92	0.50
21:AW:18:G:O2'	21:AW:57:G:N2	2.44	0.50
10:AK:120:ARG:H	10:AK:121:PRO:HD3	1.76	0.50
23:CY:512:ILE:HG22	23:CY:567:LEU:HD12	1.93	0.50
20:CA:612:C:H2'	20:CA:613:C:C6	2.47	0.50
59:BA:1071:G:H1'	59:BA:1089:G:C5	2.46	0.50
60:BB:81:G:O6	60:BB:95:U:C2	2.63	0.50
14:AO:8:LYS:HG3	14:AO:31:LEU:HD21	1.93	0.50
60:BB:57:A:H2'	60:BB:58:A:H8	1.76	0.50
20:AA:975:A:H2	20:AA:1357:A:HO2'	1.58	0.50
59:BA:2718:G:H2'	59:BA:2719:G:O4'	2.11	0.50
50:B6:47:THR:OG1	50:B6:48:VAL:N	2.45	0.50
20:CA:284:G:H2'	20:CA:285:G:C8	2.47	0.50
39:BT:95:ARG:NH2	59:BA:1753:G:OP1	2.45	0.50
59:DA:639:U:H2'	59:DA:640:C:C6	2.47	0.50
59:DA:1273:U:O2'	59:DA:1275:A:OP1	2.22	0.50
20:CA:689:C:H2'	20:CA:690:G:O4'	2.11	0.50
59:DA:1830:C:H2'	59:DA:1831:G:H8	1.76	0.50
43:DX:75:ASP:HA	43:DX:76:ARG:HH11	1.76	0.50
59:DA:855:G:H2'	59:DA:856:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:5:VAL:O	23:AY:7:TYR:N	2.45	0.50
28:DF:162:LEU:HA	28:DF:165:ARG:HG3	1.92	0.50
20:CA:1316:G:N1	20:CA:1319:A:OP2	2.43	0.50
59:DA:1356:G:H2'	59:DA:1357:U:H6	1.76	0.50
25:BC:37:LYS:HE3	59:BA:2127:G:H4'	1.94	0.50
45:DZ:132:ASN:ND2	45:DZ:160:GLY:O	2.44	0.50
59:DA:230:U:H2'	59:DA:231:C:C6	2.47	0.50
4:CE:71:LEU:HD22	4:CE:74:GLY:HA2	1.92	0.50
59:DA:27:G:H1'	59:DA:513:A:N6	2.26	0.50
7:AH:85:ARG:NH1	7:AH:134:ILE:O	2.44	0.50
59:DA:2742:C:H2'	59:DA:2743:C:C6	2.47	0.50
59:DA:2742:C:H2'	59:DA:2743:C:H6	1.76	0.50
2:AC:147:LYS:HB2	2:AC:203:PHE:CE2	2.46	0.50
20:AA:1051:C:H2'	20:AA:1052:U:C6	2.46	0.50
6:CG:12:LEU:HD13	6:CG:25:ALA:HB2	1.93	0.50
59:DA:1411:C:N3	59:DA:1591:G:N2	2.51	0.50
59:DA:1007:C:H5''	59:DA:1008:C:H2'	1.94	0.50
59:DA:1138:G:H2'	59:DA:1139:G:O4'	2.11	0.50
59:BA:1418:G:N2	59:BA:1580:A:N6	2.41	0.50
59:DA:2514:U:H2'	59:DA:2515:C:H6	1.77	0.50
11:CL:31:PRO:HG2	11:CL:32:PHE:CD2	2.47	0.50
28:DF:67:GLN:NE2	59:DA:674:G:O2'	2.45	0.50
59:BA:909:A:H2'	59:BA:912:C:H5	1.77	0.50
41:DV:95:LEU:O	41:DV:96:ILE:O	2.28	0.50
41:DV:37:VAL:HA	41:DV:51:VAL:HG11	1.92	0.50
59:BA:1102:C:C2	59:BA:1103:A:C8	3.00	0.50
59:DA:2328:A:H2'	59:DA:2329:G:C8	2.46	0.50
32:BK:31:GLY:HA3	32:BK:63:ARG:HE	1.76	0.50
20:CA:1127:G:H1'	20:CA:1148:U:C4	2.46	0.50
17:CR:43:PHE:HB3	17:CR:44:LEU:HD12	1.92	0.50
20:AA:33:A:H2'	20:AA:34:C:C6	2.47	0.50
60:BB:24:G:N1	60:BB:56:G:C2	2.80	0.50
9:CJ:24:VAL:HG21	9:CJ:37:PRO:HD3	1.93	0.50
51:B7:33:ARG:HB2	51:B7:34:ARG:HH12	1.77	0.50
10:CK:120:ARG:NH1	10:CK:126:ARG:HH12	2.08	0.50
59:BA:589:C:H2'	59:BA:590:A:H8	1.77	0.50
59:BA:52:A:H2'	59:BA:53:A:H8	1.75	0.50
39:BT:55:ASN:OD1	39:BT:58:ASN:ND2	2.45	0.50
59:DA:858:U:H3	59:DA:919:G:H1	1.59	0.50
20:AA:68(P):C:H2'	20:AA:68(Q):U:H6	1.77	0.50
20:AA:745:C:H5''	20:AA:851:G:H1'	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:107:ARG:NH2	20:AA:1346:A:N3	2.58	0.50
59:BA:2208:U:H2'	59:BA:2209:C:C6	2.47	0.50
59:BA:565:C:H4'	59:BA:1253:A:N6	2.26	0.50
7:AH:121:ASP:OD1	7:AH:121:ASP:N	2.39	0.50
15:AP:21:VAL:HG11	15:AP:59:TRP:CE2	2.46	0.50
51:D7:1:MET:N	59:DA:1619:G:O2'	2.45	0.50
59:DA:1731:G:HO2'	59:DA:1732:A:H8	1.54	0.50
6:AG:66:VAL:HG12	6:AG:70:LYS:HE2	1.94	0.50
59:BA:548:A:O5'	59:BA:548:A:H8	1.95	0.50
59:DA:1101:U:H2'	59:DA:1102:C:C6	2.46	0.50
28:DF:47:GLY:O	28:DF:49:ALA:N	2.45	0.50
20:CA:813:U:H2'	20:CA:814:A:C8	2.47	0.50
59:BA:1105:U:H2'	59:BA:1106:G:C8	2.46	0.50
2:CC:27:LYS:HG3	2:CC:28:GLN:H	1.75	0.50
23:AY:627:ARG:NH2	23:AY:658:ASP:OD1	2.44	0.50
3:AD:127:THR:HG23	3:AD:147:ALA:HB3	1.94	0.50
21:AW:16:U:H5'	21:AW:59:A:N1	2.27	0.50
59:DA:1579:A:H2'	59:DA:1580:A:O4'	2.12	0.50
27:DE:111:ARG:NH2	59:DA:2680:C:OP2	2.44	0.50
27:DE:109:LYS:HE3	59:DA:2680:C:H5''	1.92	0.50
59:BA:2684:U:H3	59:BA:2725:A:H2	1.59	0.50
59:DA:1310:G:H1	59:DA:1604:C:H42	1.58	0.50
25:BC:164:PHE:HZ	25:BC:196:ALA:HB1	1.77	0.50
20:CA:28:G:O2'	20:CA:296:U:OP1	2.28	0.50
20:CA:1057:G:H2'	20:CA:1058:G:O4'	2.10	0.50
29:DG:72:ARG:HB3	29:DG:86:MET:HA	1.94	0.50
59:DA:2415:G:H2'	59:DA:2416:C:C6	2.46	0.50
59:DA:371:A:N6	59:DA:401:A:H3'	2.24	0.50
20:AA:769:G:H4'	20:AA:1513:A:H4'	1.94	0.50
28:BF:5:ALA:HB3	28:BF:8:GLN:HA	1.93	0.50
41:DV:10:LYS:NZ	59:DA:994:C:H1'	2.26	0.50
41:BV:96:ILE:HG22	41:BV:97:LYS:N	2.25	0.50
26:BD:62:TYR:HE2	26:BD:88:ARG:HH22	1.59	0.50
11:CL:50:SER:OG	20:CA:519:C:OP2	2.20	0.50
16:AQ:68:ARG:HH12	20:AA:277:C:H5'	1.77	0.50
25:DC:170:GLY:O	25:DC:172:ILE:N	2.44	0.50
23:AY:394:ALA:O	23:AY:396:ARG:N	2.45	0.50
23:CY:616:TYR:CG	23:CY:663:THR:HA	2.47	0.50
59:BA:1428:C:C5	59:BA:1569:A:H5''	2.47	0.50
41:BV:51:VAL:HG23	41:BV:53:GLU:H	1.77	0.50
28:BF:75:HIS:HA	59:BA:674:G:H4'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1654:A:H2'	59:DA:1655:A:C8	2.46	0.50
59:DA:868:U:H3	59:DA:909:A:N6	2.08	0.50
59:DA:2474:C:H5'	59:DA:2475:C:OP2	2.12	0.50
59:BA:1198:U:H2'	59:BA:1199:U:C6	2.47	0.50
23:CY:457:LEU:O	23:CY:461:ILE:HG13	2.11	0.50
37:DR:97:VAL:HG22	37:DR:114:VAL:HA	1.93	0.50
59:DA:890:A:H2'	59:DA:892:G:O4'	2.12	0.50
39:BT:32:TYR:CE1	39:BT:81:PRO:HB2	2.47	0.50
59:BA:483:A:N7	59:BA:497:A:H2	2.09	0.50
20:CA:935:A:H2'	20:CA:936:C:H6	1.77	0.50
59:DA:2083:G:H2'	59:DA:2084:C:C6	2.46	0.50
20:CA:255:G:H2'	20:CA:256:U:C6	2.47	0.50
23:CY:394:ALA:O	23:CY:396:ARG:N	2.44	0.50
59:BA:2238:G:N3	59:BA:2238:G:H2'	2.26	0.50
60:DB:18:G:H2'	60:DB:19:G:H8	1.77	0.50
6:CG:79:ARG:HG3	20:CA:1381:U:H1'	1.94	0.50
42:BW:22:ASP:OD2	42:BW:25:ARG:NH1	2.44	0.50
25:DC:194:ILE:HA	25:DC:197:LEU:HD12	1.93	0.50
29:BG:120:LEU:HB3	29:BG:180:PHE:HA	1.93	0.50
30:BH:170:ARG:O	30:BH:171:LEU:HB2	2.12	0.50
59:BA:898:C:H2'	59:BA:899:A:C8	2.47	0.50
59:BA:878:A:H3'	59:BA:879:G:C8	2.47	0.50
20:CA:887:G:H1	20:CA:910:C:H42	1.59	0.50
23:CY:138:LYS:HE2	62:CY:702:GDP:N7	2.27	0.50
59:BA:2679:A:H2'	59:BA:2680:C:C6	2.47	0.50
27:BE:24:THR:HG22	27:BE:186:GLY:HA2	1.93	0.50
59:DA:1409:C:H2'	59:DA:1410:G:C8	2.46	0.50
59:DA:1153:C:H2'	59:DA:1154:G:O4'	2.10	0.50
59:DA:980:A:C2	59:DA:2038:G:H1'	2.44	0.50
59:BA:27:G:H2'	59:BA:28:A:C8	2.47	0.50
25:BC:169:THR:O	25:BC:171:ALA:N	2.45	0.50
59:BA:858:U:O2	59:BA:2268:A:H2'	2.12	0.50
16:CQ:67:LYS:HE2	20:CA:266:G:H2'	1.93	0.50
29:DG:72:ARG:HB3	29:DG:87:PRO:HD2	1.94	0.50
27:DE:63:LEU:HD12	27:DE:65:GLY:HA3	1.94	0.50
25:BC:114:VAL:HG21	25:BC:132:LEU:HD13	1.93	0.50
59:DA:374:A:H1'	59:DA:401:A:N6	2.27	0.50
26:BD:22:SER:O	26:BD:24:ILE:N	2.40	0.50
23:CY:512:ILE:HA	23:CY:567:LEU:HA	1.94	0.50
45:BZ:69:THR:HG22	45:BZ:90:VAL:HA	1.93	0.50
59:DA:1194:A:H2'	59:DA:1195:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DV:14:VAL:HG12	41:DV:96:ILE:HD13	1.93	0.50
20:AA:1391:U:H2'	20:AA:1392:G:H8	1.76	0.50
59:BA:2069:G:H1	59:BA:2442:C:H42	1.59	0.50
59:BA:223:A:H5'	59:BA:224:G:H5'	1.94	0.50
59:BA:571:A:N6	59:BA:2500:U:OP1	2.44	0.50
16:AQ:64:PRO:HB3	16:AQ:70:ARG:HH12	1.75	0.50
20:AA:540:G:H2'	20:AA:541:G:O4'	2.11	0.50
16:CQ:10:VAL:HG12	16:CQ:54:GLY:H	1.76	0.50
4:AE:17:ALA:O	20:AA:15:G:N2	2.32	0.50
59:BA:1219:G:H1	59:BA:1230:C:H42	1.59	0.50
23:AY:317:MET:HB3	23:AY:325:LEU:HB2	1.93	0.50
3:AD:15:GLU:OE1	3:AD:63:LYS:HA	2.12	0.50
12:AM:107:ALA:H	12:AM:108:ARG:HD2	1.77	0.50
18:AS:36:ARG:HH12	18:AS:75:ALA:HB3	1.77	0.50
20:AA:68(H):G:N2	20:AA:68(R):C:N3	2.57	0.50
29:BG:173:LEU:O	29:BG:178:PHE:N	2.44	0.50
21:CW:51:A:N6	21:CW:63:C:H42	2.09	0.50
16:AQ:44:ALA:HB2	16:AQ:59:ILE:HD11	1.94	0.50
32:DK:30:HIS:NE2	32:DK:58:THR:O	2.44	0.50
53:D9:2:LYS:HD3	59:DA:2526:G:N3	2.27	0.50
20:AA:570:G:O6	20:AA:865:A:N6	2.45	0.50
20:AA:1288:A:N1	20:AA:1371:G:H1'	2.26	0.50
59:BA:1290:C:H2'	59:BA:1291:C:C6	2.46	0.50
27:BE:204:ALA:HA	59:BA:2734:A:N3	2.26	0.50
29:DG:137:GLU:HB2	29:DG:140:ILE:HG23	1.94	0.50
52:D8:23:VAL:O	52:D8:46:ARG:NH1	2.43	0.50
4:AE:91:LEU:HD13	4:AE:118:ILE:HG12	1.92	0.50
28:DF:130:ALA:HB3	28:DF:142:TRP:HB2	1.94	0.50
59:BA:976:C:H2'	59:BA:977:G:C8	2.47	0.50
11:CL:113:ARG:NH2	11:CL:116:SER:OG	2.44	0.50
59:DA:2052:G:O6	59:DA:2617:C:N3	2.45	0.50
59:BA:438:G:H2'	59:BA:439:G:C8	2.47	0.50
19:AT:74:LYS:HG2	19:AT:75:ASN:H	1.76	0.50
42:BW:70:TYR:CZ	42:BW:72:LYS:HG2	2.47	0.50
17:CR:26:LEU:HD21	17:CR:42:ARG:HD2	1.93	0.50
59:BA:828:U:H2'	59:BA:829:A:N7	2.26	0.50
59:BA:828:U:H4'	59:BA:831:G:N1	2.27	0.50
20:AA:1012:U:H2'	20:AA:1013:G:C8	2.47	0.50
9:CJ:38:ILE:HG23	9:CJ:71:LEU:HB3	1.94	0.50
59:BA:65:C:H2'	59:BA:66:C:O4'	2.12	0.50
52:D8:30:ARG:H	52:D8:32:LEU:HD23	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:556:ILE:HD13	23:AY:556:ILE:H	1.77	0.50
59:BA:2359:C:H2'	59:BA:2360:A:O4'	2.12	0.50
59:BA:2342:C:H2'	59:BA:2343:C:O4'	2.12	0.50
44:DY:90:LEU:HD23	44:DY:90:LEU:H	1.77	0.50
59:DA:363(G):A:H8	59:DA:363(G):A:O5'	1.95	0.50
35:BP:30:THR:HG22	35:BP:31:ALA:H	1.76	0.50
27:BE:187:ALA:HB2	59:BA:2729:G:H1'	1.94	0.50
40:BU:8:VAL:HG12	59:BA:29:U:H4'	1.93	0.50
43:BX:75:ASP:N	59:BA:58:G:OP2	2.43	0.50
3:AD:25:ARG:HG3	3:AD:30:LYS:HE3	1.92	0.50
45:BZ:151:HIS:HA	45:BZ:171:ILE:HG23	1.92	0.50
20:AA:406:G:H2'	20:AA:407:G:C8	2.47	0.50
59:DA:1019:U:H2'	59:DA:1020:A:H8	1.76	0.50
28:DF:177:ALA:HB1	28:DF:178:PRO:HD2	1.94	0.50
26:BD:223:GLY:O	26:BD:225:ALA:N	2.45	0.50
39:BT:3:ARG:HG3	59:BA:2876:G:H4'	1.93	0.50
42:DW:12:ILE:HD12	42:DW:12:ILE:H	1.76	0.50
1:AB:88:ALA:HB2	1:AB:219:VAL:HG13	1.93	0.50
20:CA:345:C:H3'	39:DT:35:LYS:HZ1	1.77	0.50
59:DA:2231:C:H2'	59:DA:2232:U:O4'	2.12	0.50
59:DA:1511:A:H2'	59:DA:1512:G:H8	1.72	0.50
36:DQ:1:MET:N	36:DQ:48:GLU:HB2	2.26	0.50
36:DQ:58:PHE:CD1	36:DQ:61:GLY:HA3	2.47	0.50
36:DQ:73:PRO:HB3	36:DQ:90:VAL:HG12	1.92	0.50
18:AS:36:ARG:NH2	18:AS:75:ALA:O	2.45	0.50
28:BF:185:ASP:HA	28:BF:188:ARG:HG2	1.92	0.50
34:BO:79:PHE:O	34:BO:81:ASP:N	2.44	0.50
59:DA:1197:G:H2'	59:DA:1198:U:C6	2.46	0.50
28:BF:45:ARG:CZ	59:BA:443:A:H3'	2.41	0.50
28:DF:45:ARG:NH2	59:DA:444:C:OP1	2.43	0.50
59:DA:819:A:N7	59:DA:1188:U:O4	2.45	0.50
59:BA:2183:C:H2'	59:BA:2184:G:C8	2.47	0.50
23:AY:243:VAL:HA	23:AY:279:TYR:CE1	2.47	0.50
20:CA:1161:C:H2'	20:CA:1162:C:H6	1.77	0.50
13:AN:4:LYS:NZ	20:AA:1047:G:OP1	2.32	0.50
6:CG:26:PHE:O	6:CG:30:ILE:HG13	2.12	0.50
59:DA:2075:U:H2'	59:DA:2238:G:H22	1.77	0.50
34:BO:39:ILE:HG12	34:BO:40:VAL:O	2.11	0.50
20:AA:42:G:H2'	20:AA:43:C:C6	2.47	0.50
23:AY:554:PRO:HG3	23:AY:594:VAL:HG12	1.93	0.50
59:DA:105:C:H2'	59:DA:106:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1438:U:O2	59:DA:1553:A:N7	2.45	0.50
23:CY:398:ILE:HG22	23:CY:399:LEU:H	1.76	0.50
37:BR:62:ALA:O	37:BR:66:VAL:HG23	2.11	0.50
45:BZ:127:LYS:HD3	45:BZ:162:GLU:HB2	1.94	0.50
59:BA:753:C:H2'	59:BA:754:C:C6	2.47	0.50
42:DW:86:LEU:HB3	42:DW:94:ASP:HB2	1.93	0.50
59:DA:978:G:O2'	59:DA:1002:G:O2'	2.27	0.50
44:DY:79:CYS:SG	44:DY:80:GLY:N	2.85	0.50
47:B2:57:ILE:HA	47:B2:60:LEU:HD12	1.93	0.50
48:B3:18:ASP:N	48:B3:18:ASP:OD1	2.29	0.50
31:DJ:51:UNK:HA	31:DJ:56:UNK:CB	2.42	0.50
27:BE:109:LYS:HZ3	59:BA:2681:C:P	2.33	0.50
59:DA:1558:A:N7	59:DA:1560:G:H8	2.10	0.50
20:AA:1423:G:H5'	34:BO:49:ARG:NH2	2.25	0.50
59:DA:1287:A:H2'	59:DA:1288:U:H5'	1.94	0.50
59:BA:141(B):C:H2'	59:BA:142:G:O4'	2.12	0.50
59:BA:1595:G:H2'	59:BA:1596:A:C8	2.47	0.50
59:DA:1487:G:N2	59:DA:1502:C:N3	2.51	0.50
31:BJ:54:UNK:O	59:BA:1107:G:H5'	2.11	0.50
25:DC:46:ALA:CA	25:DC:212:SER:O	2.55	0.50
28:DF:170:LEU:HB2	28:DF:173:VAL:HB	1.93	0.50
26:DD:157:ARG:N	59:DA:1819:A:OP1	2.43	0.50
34:BO:104:ARG:CZ	39:BT:33:LYS:HD2	2.42	0.50
26:BD:172:TYR:HA	26:BD:186:HIS:HA	1.94	0.50
3:AD:175:SER:HB2	3:AD:186:LEU:HD11	1.94	0.50
59:DA:541:C:H2'	59:DA:542:C:C6	2.47	0.50
41:DV:6:LYS:HE2	41:DV:6:LYS:O	2.12	0.50
59:BA:468:G:H3'	59:BA:469:G:C8	2.47	0.50
53:B9:1:MET:HB3	53:B9:34:GLN:HG2	1.94	0.50
20:AA:1280:A:O2'	20:AA:1281:U:OP1	2.26	0.50
59:BA:2454:G:H1	59:BA:2498:C:N4	2.07	0.50
12:AM:105:THR:HG22	20:AA:1229:A:N6	2.26	0.50
23:CY:617:MET:HG3	23:CY:643:ILE:HD11	1.94	0.50
20:AA:612:C:H42	20:AA:628:G:H1	1.60	0.50
23:CY:390:VAL:HG11	23:CY:397:VAL:HG23	1.93	0.50
59:BA:1949:G:C6	59:BA:1950:G:C6	3.00	0.50
59:DA:2118:U:H3	59:DA:2148:G:H4'	1.77	0.50
59:BA:2064:C:H1'	59:BA:2450:A:C5	2.47	0.50
20:AA:901:A:H8	20:AA:901:A:O5'	1.95	0.50
33:BN:108:PRO:O	33:BN:113:GLY:HA3	2.12	0.50
20:CA:131:C:H2'	20:CA:132:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:112:LEU:HA	33:DN:115:ARG:HB2	1.94	0.50
20:CA:1342:C:H2'	20:CA:1343:G:C8	2.47	0.50
14:CO:50:HIS:ND1	20:CA:764:C:H5''	2.27	0.50
59:DA:2269:A:H2'	59:DA:2270:G:O4'	2.12	0.50
6:CG:54:THR:OG1	6:CG:55:GLY:N	2.41	0.50
10:AK:44:SER:H	10:AK:47:VAL:HG21	1.75	0.50
14:AO:24:SER:O	14:AO:28:GLN:NE2	2.45	0.50
59:BA:2057:A:H2'	59:BA:2058:A:H8	1.77	0.50
6:CG:139:GLU:O	6:CG:143:ARG:HG3	2.10	0.50
3:AD:134:ASP:N	3:AD:134:ASP:OD2	2.44	0.50
59:BA:613:U:H4'	59:BA:616:A:C6	2.47	0.50
59:BA:2024:G:C6	59:BA:2040:C:C2	3.00	0.49
59:DA:2293:C:H2'	59:DA:2294:C:O4'	2.12	0.49
29:DG:113:ARG:CG	58:D4:34:GLU:CD	2.80	0.49
18:CS:14:HIS:CE1	20:CA:1014:A:H4'	2.47	0.49
59:DA:814:C:O2'	59:DA:1224:C:N3	2.45	0.49
33:BN:39:ARG:HG2	33:BN:40:PRO:HD2	1.94	0.49
25:DC:153:ILE:HG23	25:DC:156:GLU:HB2	1.94	0.49
59:BA:1652:A:H3'	59:BA:1653:G:H8	1.75	0.49
59:BA:868:U:H3	59:BA:909:A:H61	1.60	0.49
23:AY:257:PRO:O	23:AY:259:PHE:N	2.40	0.49
23:AY:607:ARG:HA	23:AY:645:ALA:O	2.11	0.49
59:DA:1269:A:H61	59:DA:2011:U:H3	1.59	0.49
59:DA:2329:G:H2'	59:DA:2330:G:C8	2.46	0.49
31:DJ:25:UNK:N	31:DJ:112:UNK:N	2.60	0.49
59:DA:1664:A:H61	59:DA:1996:C:H42	1.60	0.49
20:AA:976:G:OP2	20:AA:1358:U:O2'	2.26	0.49
20:CA:834:C:H2'	20:CA:835:U:C6	2.46	0.49
59:DA:270(F):G:H2'	59:DA:270(G):U:C6	2.46	0.49
59:DA:242:G:H1'	59:DA:243:U:H5	1.76	0.49
59:DA:2133:G:H2'	59:DA:2157:G:N2	2.24	0.49
20:AA:859:A:H3'	20:AA:860:A:H8	1.77	0.49
35:DP:113:LYS:HA	35:DP:129:ALA:O	2.12	0.49
8:AI:97:LYS:HD3	20:AA:1178:G:N7	2.27	0.49
26:BD:115:GLN:HE22	26:BD:117:VAL:HG22	1.77	0.49
42:BW:88:ARG:HG3	59:BA:748:G:OP2	2.12	0.49
59:DA:1113:U:H2'	59:DA:1114:G:H8	1.76	0.49
20:AA:745:C:H2'	20:AA:746:A:C8	2.45	0.49
33:BN:107:LEU:HD13	33:BN:113:GLY:O	2.11	0.49
20:CA:1386:G:H2'	20:CA:1387:G:C8	2.47	0.49
59:DA:2114:A:C2	59:DA:2168:G:H1'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1019:C:H2'	20:AA:1020:U:O4'	2.12	0.49
44:DY:46:LYS:N	44:DY:62:GLU:HB2	2.27	0.49
59:DA:2781:A:H5'	59:DA:2782:G:C5'	2.42	0.49
59:BA:1710:C:H5'	59:BA:2859:G:H1'	1.93	0.49
5:AF:75:LEU:O	5:AF:79:LEU:HG	2.11	0.49
59:BA:564:C:O2'	59:BA:1252:G:O6	2.29	0.49
23:CY:243:VAL:HA	23:CY:279:TYR:HE1	1.77	0.49
26:DD:9:TYR:CD2	59:DA:705:A:H1'	2.47	0.49
25:BC:8:TYR:O	25:BC:12:LEU:HB2	2.12	0.49
59:DA:2004:G:H2'	59:DA:2005:A:O4'	2.12	0.49
48:B3:10:LYS:NZ	60:BB:84:C:OP1	2.41	0.49
47:B2:59:ARG:HG2	59:BA:77:C:H5'	1.92	0.49
20:CA:934:C:N3	20:CA:938:A:N1	2.60	0.49
4:CE:17:ALA:HA	4:CE:26:PHE:HA	1.94	0.49
16:AQ:12:SER:HB2	16:AQ:14:LYS:HD2	1.94	0.49
57:B1:67:ILE:N	57:B1:68:PRO:HD2	2.26	0.49
20:CA:312:C:H2'	20:CA:313:A:C8	2.47	0.49
59:DA:2687:U:H2'	59:DA:2688:U:O2	2.12	0.49
23:AY:265:LYS:O	23:AY:267:LYS:N	2.45	0.49
59:BA:24:G:C2	59:BA:516:C:O2	2.65	0.49
59:BA:857:C:N4	59:BA:858:U:O4	2.45	0.49
59:BA:957:A:C2	59:BA:2459:A:H5'	2.47	0.49
26:BD:219:PRO:HB2	59:BA:1789:A:O3'	2.12	0.49
59:DA:2842:G:H2'	59:DA:2843:G:H8	1.77	0.49
59:BA:1057:A:H62	59:BA:1087:G:P	2.34	0.49
11:CL:69:TYR:CG	11:CL:70:ILE:N	2.80	0.49
33:BN:66:LYS:O	33:BN:70:LYS:HB3	2.12	0.49
20:AA:671:G:H2'	20:AA:672:U:C6	2.47	0.49
59:DA:1509:A:H4'	59:DA:1510:A:C8	2.47	0.49
23:AY:111:SER:HB2	23:AY:141:LYS:HG2	1.94	0.49
59:BA:848:G:C2	59:BA:933:A:H1'	2.46	0.49
57:D1:88:LYS:HA	57:D1:91:LYS:HB3	1.94	0.49
23:AY:342:TYR:HB2	23:AY:349:LYS:HA	1.94	0.49
45:BZ:23:LYS:HD3	45:BZ:38:TYR:CD1	2.47	0.49
23:AY:219:VAL:HG11	23:AY:255:ILE:HD11	1.92	0.49
5:CF:9:VAL:HB	5:CF:87:ARG:HB2	1.94	0.49
20:AA:424:G:H2'	20:AA:425:G:H8	1.77	0.49
35:DP:48:PRO:C	35:DP:50:ARG:H	2.15	0.49
59:BA:1811:G:H2'	59:BA:1812:A:H8	1.75	0.49
23:AY:569:ASP:OD1	23:AY:570:GLY:N	2.37	0.49
59:DA:1199:U:H2'	59:DA:1200:C:H6	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DT:1:MET:HA	39:DT:7:ILE:HD11	1.93	0.49
20:CA:56:U:H2'	20:CA:57:G:C8	2.47	0.49
10:AK:16:SER:HA	10:AK:79:SER:O	2.12	0.49
59:BA:2660:A:H2'	59:BA:2661:G:O4'	2.12	0.49
59:DA:473:G:H5''	59:DA:508:G:H22	1.77	0.49
59:DA:1550:C:OP1	59:DA:1727:U:O2'	2.23	0.49
26:BD:145:VAL:HG12	26:BD:146:GLU:H	1.77	0.49
59:BA:547:A:H3'	59:BA:548:A:C8	2.47	0.49
59:BA:807:U:HO2'	59:BA:2060:A:H2	1.55	0.49
45:BZ:54:HIS:CE1	45:BZ:101:PRO:HB3	2.47	0.49
59:DA:1264:G:H3'	59:DA:1265:A:H2'	1.94	0.49
59:BA:1677:A:H2'	59:BA:1678:G:C8	2.47	0.49
7:CH:96:GLY:O	7:CH:100:ILE:HG13	2.12	0.49
47:B2:47:ASN:OD1	47:B2:47:ASN:N	2.40	0.49
60:DB:4:C:H2'	60:DB:5:C:C6	2.46	0.49
27:BE:56:PRO:HB2	27:BE:57:LYS:HD2	1.94	0.49
25:BC:105:LEU:HD22	25:BC:127:LYS:HB3	1.94	0.49
33:BN:57:ALA:O	33:BN:59:LYS:N	2.45	0.49
34:DO:9:GLU:HA	34:DO:18:LYS:HA	1.93	0.49
59:BA:1139:G:O2'	59:BA:1143:A:N1	2.30	0.49
59:BA:1130:U:N3	59:BA:2025:C:OP1	2.26	0.49
51:D7:40:TRP:CZ2	59:DA:458:G:H1'	2.47	0.49
20:CA:1421:G:H2'	20:CA:1422:G:O4'	2.13	0.49
59:BA:1581:G:H2'	59:BA:1582:C:C6	2.46	0.49
33:DN:85:ILE:HG21	33:DN:90:MET:HE2	1.93	0.49
59:BA:377:C:H2'	59:BA:378:C:C6	2.47	0.49
3:AD:33:MET:O	3:AD:36:ARG:N	2.46	0.49
27:DE:66:HIS:O	27:DE:68:ALA:N	2.44	0.49
25:DC:216:THR:HG21	59:DA:2176:A:O4'	2.12	0.49
20:AA:1065:U:OP2	20:AA:1190:G:N2	2.30	0.49
60:DB:29:A:H2'	60:DB:30:C:C6	2.46	0.49
28:DF:188:ARG:HG3	28:DF:189:THR:HG23	1.95	0.49
1:AB:102:LEU:O	1:AB:180:LEU:HD11	2.11	0.49
40:DU:92:ARG:CZ	40:DU:95:LEU:HG	2.42	0.49
26:DD:63:ARG:HB2	26:DD:85:ASP:OD2	2.12	0.49
11:AL:71:PRO:HD3	11:AL:100:ILE:HB	1.94	0.49
51:D7:27:GLY:O	51:D7:30:VAL:HB	2.12	0.49
20:AA:1127:G:N2	20:AA:1147:C:H41	2.09	0.49
28:DF:100:THR:O	59:DA:659:C:H4'	2.12	0.49
12:AM:116:THR:HA	20:AA:1228:C:H4'	1.93	0.49
18:CS:40:ILE:HG21	18:CS:66:MET:HG3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DY:2:ARG:HH11	44:DY:3:VAL:N	2.07	0.49
23:AY:316:ILE:HD11	23:AY:385:THR:HB	1.94	0.49
46:D0:32:ARG:CZ	46:D0:32:ARG:HB2	2.41	0.49
21:AW:29:U:H2'	21:AW:30:C:O4'	2.12	0.49
3:AD:15:GLU:OE1	3:AD:19:LEU:HD21	2.12	0.49
12:AM:20:THR:C	12:AM:22:ILE:H	2.15	0.49
20:CA:566:G:H4'	20:CA:567:G:H5'	1.94	0.49
18:AS:78:ARG:NH1	20:AA:1225:A:H5'	2.26	0.49
26:DD:161:THR:O	26:DD:196:VAL:HG22	2.12	0.49
2:AC:8:ILE:HD12	2:AC:16:ARG:HH12	1.76	0.49
9:CJ:50:ILE:HB	9:CJ:60:ARG:HG2	1.94	0.49
28:DF:24:LEU:HB3	28:DF:25:PRO:HD2	1.94	0.49
35:BP:60:MET:O	59:BA:2392:A:O2'	2.21	0.49
59:DA:526:A:O2'	59:DA:2043:C:O2	2.28	0.49
20:CA:46:G:H1	20:CA:395:C:N4	2.09	0.49
20:AA:927:G:O6	20:AA:1390:U:O2	2.30	0.49
29:BG:37:VAL:HG13	29:BG:159:VAL:HB	1.94	0.49
59:BA:1858:G:H1'	59:BA:1884:A:H61	1.77	0.49
36:DQ:137:TYR:HD1	36:DQ:137:TYR:H	1.56	0.49
57:B1:73:LEU:HD13	57:B1:94:LEU:HD23	1.94	0.49
20:AA:218:C:O2'	20:AA:458(C):G:N2	2.44	0.49
25:BC:60:ARG:NE	25:BC:142:LYS:HB3	2.27	0.49
39:DT:98:LYS:HG2	59:DA:2718:G:O3'	2.12	0.49
20:CA:1074:G:H2'	20:CA:1075:C:H6	1.78	0.49
59:BA:687:C:H42	59:BA:787:U:H4'	1.77	0.49
59:DA:1258:C:H2'	59:DA:1259:G:H8	1.77	0.49
27:DE:143:ASN:O	59:DA:2052:G:O2'	2.22	0.49
45:DZ:29:TYR:HE1	60:DB:73:A:H61	1.61	0.49
25:DC:114:VAL:O	25:DC:116:ALA:N	2.44	0.49
41:DV:67:GLY:HA3	41:DV:89:GLN:O	2.11	0.49
20:AA:999:U:O4	20:AA:1000:A:N6	2.45	0.49
20:CA:1324:A:H2'	20:CA:1325:C:C6	2.47	0.49
59:BA:1564:C:H2'	59:BA:1565:C:C6	2.47	0.49
14:CO:63:ARG:O	14:CO:67:LEU:HG	2.11	0.49
35:BP:90:ARG:HD2	35:BP:91:PHE:HB2	1.94	0.49
59:BA:2507:C:N4	59:BA:2508:G:O6	2.46	0.49
23:AY:127:LYS:HA	23:AY:127:LYS:HE2	1.95	0.49
59:DA:1497:U:H5'	59:DA:1498:C:C5	2.47	0.49
59:DA:459:U:H2'	59:DA:460:A:O4'	2.11	0.49
59:BA:513:A:H2'	59:BA:514:A:O4'	2.12	0.49
36:BQ:11:LYS:HD3	36:BQ:87:LYS:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:24:G:N3	60:DB:27:C:N4	2.53	0.49
26:DD:260:ARG:HH12	59:DA:1799:G:H5''	1.77	0.49
11:AL:53:ARG:HB3	11:AL:93:LEU:HD13	1.93	0.49
51:D7:34:ARG:HD2	51:D7:42:LEU:HD22	1.93	0.49
59:BA:1102:C:H2'	59:BA:1103:A:O4'	2.12	0.49
59:BA:814:C:H2'	59:BA:815:C:H6	1.78	0.49
42:DW:17:VAL:HB	42:DW:76:VAL:HG21	1.94	0.49
59:BA:573:G:O2'	59:BA:574:C:H3'	2.12	0.49
23:AY:338:GLY:O	23:AY:351:ARG:NH2	2.45	0.49
21:AW:12:U:H3	21:AW:23:A:N6	2.07	0.49
59:BA:2071:A:H2'	59:BA:2072:G:H8	1.76	0.49
26:BD:244:ARG:HH22	59:BA:1841:U:H1'	1.77	0.49
20:AA:545:C:O2'	20:AA:549:C:OP1	2.30	0.49
23:CY:494:GLU:HG2	23:CY:496:LYS:HB2	1.94	0.49
59:DA:197:A:H2	59:DA:2434:A:H62	1.60	0.49
59:DA:863:A:H2'	59:DA:864:G:C8	2.47	0.49
53:D9:7:VAL:HG11	53:D9:34:GLN:HB3	1.92	0.49
59:BA:2591:C:H2'	59:BA:2592:G:C8	2.48	0.49
3:CD:138:TYR:HB2	20:CA:620:C:H1'	1.94	0.49
13:CN:35:ARG:HG3	20:CA:1358:U:OP1	2.13	0.49
59:BA:719:C:H2'	59:BA:720:C:C6	2.47	0.49
4:CE:127:ASN:HD21	20:CA:18:C:P	2.35	0.49
44:DY:85:VAL:HA	44:DY:94:LYS:HA	1.94	0.49
59:BA:878:A:H3'	59:BA:879:G:H8	1.78	0.49
1:CB:134:GLU:OE2	1:CB:137:ARG:NH2	2.45	0.49
35:BP:65:ARG:HG2	52:B8:12:LYS:HA	1.94	0.49
42:DW:23:LEU:HD11	49:D5:27:PRO:HA	1.94	0.49
59:DA:503:A:H4'	59:DA:504:U:H5''	1.94	0.49
47:D2:66:GLU:O	47:D2:69:ARG:HG2	2.12	0.49
32:DK:130:SER:OG	59:DA:1059:G:N2	2.32	0.49
26:DD:92:ILE:HA	26:DD:107:ALA:H	1.76	0.49
4:CE:32:VAL:HG11	4:CE:59:GLY:HA2	1.94	0.49
59:DA:1009:A:H2'	59:DA:1010:A:C8	2.47	0.49
20:CA:525:C:H2'	20:CA:526:C:C6	2.48	0.49
59:BA:27:G:H1'	59:BA:513:A:N6	2.28	0.49
59:BA:451:C:N4	59:BA:454:A:OP2	2.29	0.49
20:AA:299:G:H2'	20:AA:300:A:C8	2.48	0.49
26:DD:147:LEU:HB2	26:DD:155:LEU:CD1	2.43	0.49
59:BA:2628:C:O2'	59:BA:2781:A:H2'	2.11	0.49
10:AK:29:ILE:HD12	20:AA:706:A:H1'	1.94	0.49
59:DA:2818:G:H1	59:DA:2828:C:N4	2.05	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:341:VAL:N	23:AY:350:GLU:O	2.34	0.49
59:BA:398:G:H2'	59:BA:399:G:C8	2.47	0.49
25:BC:213:VAL:HG11	25:BC:225:ILE:CG1	2.41	0.49
7:CH:15:ASN:O	7:CH:19:VAL:HG23	2.11	0.49
59:BA:2422:A:H4'	59:BA:2422:A:OP1	2.11	0.49
5:AF:98:LEU:HA	17:AR:31:LEU:H	1.77	0.49
7:CH:104:ARG:HB2	7:CH:138:TRP:HD1	1.78	0.49
23:AY:509:HIS:CE1	23:AY:511:LYS:HE3	2.47	0.49
35:BP:46:LYS:HG2	35:BP:51:PHE:CE1	2.47	0.49
59:BA:1591:G:H2'	59:BA:1592:C:C6	2.46	0.49
16:AQ:90:ILE:HG21	20:AA:583:A:H5'	1.94	0.49
50:D6:11:LEU:HD23	50:D6:51:GLU:HG3	1.94	0.49
46:D0:11:ARG:NH2	59:DA:2279:G:O5'	2.45	0.49
9:CJ:57:LYS:HG2	20:CA:972:C:OP2	2.12	0.49
59:DA:1710:C:H4'	59:DA:2858:C:N3	2.27	0.49
40:BU:75:ASN:HB2	59:BA:1011:G:OP1	2.12	0.49
14:AO:5:LYS:HD3	14:AO:5:LYS:H	1.78	0.49
59:BA:21:A:H2'	59:BA:22:C:H6	1.77	0.49
59:DA:1636:C:H2'	59:DA:1637:A:C8	2.47	0.49
27:DE:132:HIS:HB2	59:DA:744:G:OP1	2.12	0.49
59:BA:1105:U:H2'	59:BA:1106:G:H8	1.77	0.49
43:DX:80:ILE:HG21	59:DA:1341:U:O2	2.12	0.49
3:CD:119:GLN:HE22	20:CA:407:G:H1'	1.77	0.49
20:AA:823:G:H1	20:AA:877:C:H42	1.61	0.49
20:AA:152:A:H3'	20:AA:153:C:H6	1.77	0.49
20:AA:1468:A:H2'	20:AA:1469:G:O4'	2.13	0.49
59:BA:181:A:H2'	59:BA:182:A:C8	2.47	0.49
35:DP:74:GLU:HG2	59:DA:244:A:O3'	2.11	0.49
59:DA:1895:C:H2'	59:DA:1896:G:C8	2.47	0.49
46:B0:31:VAL:HG12	46:B0:35:ASN:HB2	1.95	0.49
59:BA:2121:G:H2'	59:BA:2122:U:C6	2.47	0.49
20:AA:64:G:H4'	20:AA:65:U:H3'	1.93	0.49
28:BF:143:ALA:HB1	28:BF:148:LEU:HB2	1.94	0.49
59:BA:2136:C:H2'	59:BA:2137:C:C6	2.48	0.49
35:DP:105:LEU:O	35:DP:107:LYS:N	2.44	0.49
4:CE:146:ALA:O	4:CE:150:ARG:HG2	2.12	0.49
59:BA:1670:C:O2	59:BA:1993:U:O2'	2.25	0.49
27:DE:130:GLY:HA2	59:DA:2580:U:H4'	1.94	0.49
10:AK:124:LYS:NZ	20:AA:692:U:OP1	2.28	0.49
26:DD:16:MET:HG3	26:DD:207:GLY:HA3	1.95	0.49
10:CK:57:THR:HG22	10:CK:60:ALA:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1019:C:H2'	20:CA:1020:U:O4'	2.12	0.49
46:D0:21:LEU:HD13	46:D0:41:ARG:HD3	1.93	0.49
2:CC:117:ALA:HB2	2:CC:200:ALA:HB2	1.94	0.49
20:CA:26:A:H4'	20:CA:508:C:H42	1.77	0.49
3:CD:29:PRO:O	3:CD:30:LYS:HB3	2.10	0.49
8:CI:4:TYR:CE1	8:CI:21:PRO:HD3	2.47	0.49
20:AA:428:G:H1'	20:AA:430:A:C8	2.48	0.49
44:BY:75:ILE:HA	44:BY:79:CYS:O	2.12	0.49
25:DC:148:PHE:C	25:DC:150:ILE:H	2.15	0.49
60:DB:24:G:N1	60:DB:56:G:C2	2.80	0.49
1:AB:170:GLU:HA	1:AB:173:ALA:HB3	1.95	0.49
59:BA:2824:C:H2'	59:BA:2825:U:O4'	2.12	0.49
59:DA:563:G:H2'	59:DA:564:C:C6	2.48	0.49
42:DW:8:ARG:HA	42:DW:102:HIS:ND1	2.28	0.49
59:BA:648:G:H4'	59:BA:2351:G:H5''	1.94	0.49
13:AN:17:LYS:HG2	20:AA:1317:C:OP1	2.13	0.49
57:B1:45:ASN:HB2	59:BA:2230:G:H1'	1.95	0.49
59:DA:590:A:H2'	59:DA:591:C:C6	2.48	0.49
49:B5:6:VAL:HG13	59:BA:2015:A:C2	2.47	0.49
59:DA:582:G:H2'	59:DA:583:G:H8	1.78	0.49
7:CH:104:ARG:HB2	7:CH:138:TRP:CD1	2.47	0.49
7:CH:104:ARG:HB3	7:CH:107:LEU:HG	1.94	0.49
20:AA:781:A:H1'	20:AA:1523:G:H1'	1.94	0.49
59:BA:193:U:H4'	59:BA:803:U:H4'	1.95	0.49
10:CK:84:VAL:HG22	10:CK:109:VAL:O	2.13	0.49
20:AA:949:A:H2'	20:AA:950:U:C6	2.47	0.49
42:BW:82:LEU:HB2	42:BW:98:LYS:HB2	1.94	0.49
57:B1:61:ARG:HB3	57:B1:61:ARG:HH11	1.77	0.49
59:DA:2461:C:H1'	59:DA:2492:U:N3	2.28	0.49
7:CH:120:THR:H	7:CH:123:GLU:HB2	1.77	0.49
59:BA:355:G:H2'	59:BA:356:G:C8	2.46	0.49
37:BR:63:ARG:HG3	37:BR:76:VAL:HG21	1.93	0.49
23:CY:174:PHE:O	23:CY:267:LYS:NZ	2.36	0.49
59:BA:2306:C:H5''	59:BA:2307:G:N7	2.26	0.49
60:BB:21:G:H1	60:BB:62:C:H42	1.60	0.49
16:CQ:17:LYS:HZ2	20:CA:255:G:HO2'	1.52	0.49
23:CY:337:SER:HB2	23:CY:367:GLU:O	2.12	0.49
59:BA:2845:G:H2'	59:BA:2846:G:C8	2.48	0.49
2:AC:172:ARG:NH2	20:AA:1107:C:OP1	2.41	0.49
59:BA:190:A:N7	59:BA:206:U:O4	2.45	0.49
19:CT:14:LYS:HA	19:CT:17:ARG:HE	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:73:ARG:NH1	59:BA:63:U:OP1	2.40	0.49
32:BK:103:GLN:O	32:BK:107:ILE:HG12	2.12	0.49
35:DP:114:ILE:HG12	35:DP:130:PHE:HD1	1.76	0.49
59:BA:2726:U:O2'	59:BA:2727:G:O5'	2.28	0.49
36:BQ:21:THR:OG1	36:BQ:99:PRO:O	2.30	0.49
45:DZ:96:VAL:HB	45:DZ:130:PRO:HG3	1.94	0.49
15:AP:5:ARG:HB2	20:AA:376:G:H5''	1.95	0.49
59:BA:2036:C:H2'	59:BA:2037:G:C8	2.48	0.49
27:DE:117:MET:O	27:DE:119:ARG:N	2.44	0.49
1:CB:72:GLY:H	1:CB:93:VAL:HB	1.78	0.49
31:BJ:58:UNK:C	31:BJ:60:UNK:N	2.76	0.49
49:B5:3:LYS:HE3	49:B5:5:PRO:HG2	1.94	0.49
23:CY:528:ALA:HB1	23:CY:568:TYR:HA	1.94	0.49
40:DU:3:ARG:HH11	59:DA:446:G:H5'	1.76	0.49
51:D7:30:VAL:HG22	51:D7:33:ARG:HH12	1.78	0.49
23:AY:133:ILE:HG22	23:AY:257:PRO:HB2	1.94	0.49
59:DA:1802:A:P	59:DA:1815:A:H61	2.35	0.49
32:BK:131:ALA:HB1	32:BK:136:VAL:HG13	1.95	0.49
20:CA:68(A):G:H1	20:CA:68(Y):C:N4	2.06	0.49
23:CY:20:HIS:HB3	23:CY:118:SER:N	2.28	0.49
23:CY:20:HIS:HB3	23:CY:118:SER:HB3	1.93	0.49
6:CG:13:GLN:O	6:CG:15:ASP:N	2.45	0.49
59:DA:222:A:N6	59:DA:232:G:H1'	2.27	0.49
59:BA:2013:A:H2'	59:BA:2014:A:C8	2.48	0.49
25:DC:28:ARG:HG3	25:DC:183:PRO:HG3	1.94	0.49
59:DA:1687:G:H2'	59:DA:1688:U:H6	1.78	0.49
20:CA:476:G:H2'	20:CA:477:G:H8	1.73	0.49
20:CA:1250:A:N3	20:CA:1370:G:O2'	2.44	0.49
42:BW:86:LEU:HB3	42:BW:94:ASP:HB2	1.93	0.49
7:AH:9:MET:O	7:AH:13:ILE:HG12	2.13	0.49
10:CK:29:ILE:HD12	20:CA:706:A:H1'	1.94	0.49
30:BH:19:VAL:HG21	30:BH:44:VAL:HA	1.94	0.49
59:DA:733:G:O6	59:DA:761:A:H2'	2.13	0.49
29:DG:111:LEU:HB3	29:DG:117:PHE:CE1	2.47	0.49
59:DA:2096:U:H2'	59:DA:2097:C:H6	1.76	0.49
6:AG:26:PHE:CE2	6:AG:30:ILE:HD11	2.47	0.49
59:BA:1165:U:H2'	59:BA:1166:C:H6	1.76	0.49
51:B7:7:PRO:HA	59:BA:686:G:C8	2.47	0.49
23:AY:659:LEU:O	23:AY:661:SER:N	2.45	0.49
20:CA:255:G:H2'	20:CA:256:U:H6	1.77	0.49
25:DC:68:GLY:HA2	25:DC:159:ALA:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:92:VAL:HG13	3:CD:96:LEU:HD22	1.95	0.49
6:CG:49:ILE:HA	6:CG:52:GLU:HB2	1.93	0.49
40:DU:40:PHE:HB3	41:DV:75:PHE:CE1	2.48	0.49
41:DV:77:ALA:O	41:DV:79:VAL:N	2.39	0.49
28:BF:132:VAL:O	28:BF:133:ASN:HB2	2.12	0.49
20:AA:68(V):G:C2	20:AA:68(W):G:H1'	2.47	0.49
9:AJ:34:VAL:HG22	9:AJ:74:ILE:HG22	1.95	0.49
1:AB:55:PHE:HE1	1:AB:218:ALA:HA	1.77	0.49
59:DA:1551:C:H2'	59:DA:1552:G:O4'	2.13	0.49
59:DA:1468:C:H2'	59:DA:1469:A:H8	1.77	0.49
59:BA:2662:A:O5'	59:BA:2662:A:H8	1.95	0.49
45:DZ:150:LEU:HD12	45:DZ:171:ILE:HD11	1.94	0.49
20:CA:1140:C:H2'	20:CA:1141:C:H6	1.77	0.49
59:BA:2620:C:HO2'	59:BA:2621:A:H8	1.61	0.49
59:BA:2472:G:H21	59:BA:2478:A:H62	0.73	0.49
59:DA:1639:U:O2'	59:DA:2699:C:H4'	2.13	0.49
59:BA:1018:C:N3	59:BA:1144:G:N2	2.56	0.49
50:B6:37:ARG:NE	59:BA:2344:U:O2'	2.46	0.49
1:CB:187:LEU:HD22	1:CB:188:ALA:N	2.28	0.49
49:B5:9:LYS:NZ	59:BA:2018:G:H3'	2.28	0.49
23:CY:256:THR:O	23:CY:258:VAL:N	2.46	0.49
3:AD:26:CYS:HA	3:AD:30:LYS:O	2.13	0.49
25:DC:46:ALA:HA	25:DC:212:SER:C	2.32	0.49
20:CA:740:U:O2'	20:CA:741:G:O4'	2.25	0.49
20:AA:17:U:H2'	20:AA:18:C:C6	2.47	0.49
28:DF:5:ALA:HB1	28:DF:123:LEU:HD21	1.95	0.49
26:DD:63:ARG:NH2	59:DA:1568:G:OP2	2.46	0.49
26:DD:88:ARG:NH2	59:DA:1817:G:OP1	2.46	0.49
20:AA:1399:C:C2	20:AA:1502:A:N6	2.81	0.49
59:BA:2014:A:H2'	59:BA:2015:A:C8	2.47	0.49
34:DO:21:CYS:HA	34:DO:39:ILE:HD11	1.95	0.49
59:BA:2852:G:H1	59:BA:2865:U:H3	1.60	0.49
59:DA:1696:G:H2'	59:DA:1697:G:O4'	2.13	0.49
59:DA:302:C:H42	59:DA:315:G:H1	1.60	0.49
44:DY:13:VAL:HG13	44:DY:73:ARG:O	2.13	0.49
49:B5:42:PRO:HB2	59:BA:2815:C:O2'	2.12	0.49
60:DB:47:C:H2'	60:DB:48:A:O4'	2.12	0.49
59:BA:2314:C:H2'	59:BA:2315:G:C8	2.47	0.49
12:AM:78:ILE:HD13	12:AM:81:LEU:HD22	1.95	0.49
21:AW:19:G:H1	21:AW:56:C:H42	1.59	0.49
26:BD:34:VAL:HB	26:BD:104:TYR:CE1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:59:ARG:HD3	2:CC:64:VAL:HG22	1.93	0.49
59:DA:1200:C:H2'	59:DA:1201:C:H6	1.78	0.49
47:D2:46:GLN:HB3	47:D2:48:HIS:HE1	1.78	0.49
59:BA:249:C:OP2	59:BA:2394:C:O2'	2.24	0.49
15:AP:8:ARG:HB2	15:AP:17:TYR:CE2	2.47	0.49
20:CA:794:A:H4'	20:CA:1521:G:O2'	2.12	0.49
59:BA:2736:G:H2'	59:BA:2737:G:C8	2.48	0.49
52:B8:12:LYS:HZ1	59:BA:246:C:H41	1.61	0.49
59:DA:2346:A:H5''	59:DA:2383:G:H1'	1.94	0.49
20:AA:1183:A:O2'	20:AA:1184:G:H5''	2.13	0.49
32:DK:43:ALA:HA	32:DK:46:ALA:HB2	1.94	0.49
59:DA:934:G:H2'	59:DA:935:C:H6	1.77	0.49
59:BA:2458:G:HO2'	59:BA:2490:G:H1	1.59	0.49
47:B2:28:LYS:HD2	47:B2:53:LEU:HD11	1.95	0.49
23:CY:157:LEU:HG	23:CY:158:GLY:H	1.78	0.49
6:CG:103:TRP:HH2	6:CG:141:VAL:HG21	1.77	0.49
59:BA:667:U:H2'	59:BA:668:G:O4'	2.13	0.49
40:BU:102:GLU:OE1	40:BU:104:GLN:NE2	2.46	0.49
20:AA:162:A:H3'	20:AA:163:C:O4'	2.12	0.49
33:DN:131:GLN:NE2	59:DA:7:G:O2'	2.46	0.49
42:BW:60:ASN:O	42:BW:61:ASN:ND2	2.43	0.49
5:AF:70:ASP:O	5:AF:73:ASN:ND2	2.45	0.49
59:DA:2686:G:H1	59:DA:2723:C:H42	1.61	0.49
59:BA:1394:U:H5''	59:BA:1604:C:OP1	2.13	0.49
59:DA:141(A):A:H8	59:DA:1595:G:H21	1.61	0.49
59:BA:1005:C:H2'	59:BA:1006:C:C6	2.47	0.49
20:AA:1487:G:H2'	20:AA:1488:G:C8	2.48	0.49
33:BN:111:PRO:HA	33:BN:114:ARG:NE	2.25	0.49
33:BN:51:PHE:HZ	59:BA:9:U:OP1	1.95	0.49
1:CB:178:ARG:HH12	7:CH:68:ARG:NH2	2.11	0.49
59:BA:2575:C:H2'	59:BA:2578:G:O6	2.13	0.49
25:DC:214:TYR:CB	25:DC:222:SER:HB2	2.43	0.49
26:DD:158:ALA:HB2	59:DA:1819:A:H5''	1.94	0.49
59:DA:950:G:O6	59:DA:967:C:N3	2.46	0.49
59:DA:535:C:H2'	59:DA:536:A:C8	2.48	0.49
23:AY:314:PHE:CZ	23:AY:329:ARG:HB3	2.39	0.49
59:BA:1980:G:H3'	59:BA:1981:A:H5''	1.94	0.49
8:CI:111:ARG:HH21	8:CI:113:LYS:HA	1.76	0.49
59:DA:1347:G:H1	59:DA:1599:C:N4	2.07	0.49
59:DA:1708:C:H2'	59:DA:1709:U:H6	1.78	0.49
59:BA:504:U:H4'	59:BA:505:A:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:76:PRO:HB2	18:CS:81:ARG:NH1	2.27	0.49
59:DA:1230:C:H2'	59:DA:1231:G:H8	1.76	0.49
59:DA:909:A:H2'	59:DA:912:C:C5	2.47	0.49
34:DO:64:ARG:HB3	34:DO:79:PHE:HB2	1.94	0.49
26:BD:115:GLN:HE22	26:BD:117:VAL:HG13	1.77	0.49
59:BA:2111:C:H1'	59:BA:2118:U:H4'	1.94	0.49
59:DA:956:G:H1'	59:DA:960:A:N6	2.27	0.49
20:AA:1115:C:H2'	20:AA:1116:C:H5'	1.95	0.49
34:BO:29:ASN:HB2	59:BA:2675:A:H4'	1.93	0.49
6:AG:15:ASP:HB2	6:AG:20:ASP:O	2.12	0.49
59:DA:1758:G:N7	59:DA:2695:C:H4'	2.28	0.49
20:AA:1039:C:H2'	20:AA:1040:U:C6	2.48	0.49
20:CA:294:U:O4	20:CA:303:A:N1	2.46	0.49
42:DW:84:ARG:HB2	42:DW:96:ILE:HG23	1.95	0.49
32:DK:84:LEU:HB3	32:DK:87:GLY:HA2	1.95	0.49
59:DA:1516:U:H2'	59:DA:1517:G:C8	2.48	0.49
59:BA:1710:C:H2'	59:BA:1711:C:C6	2.48	0.49
20:AA:163:C:H2'	20:AA:164:U:H6	1.78	0.49
45:BZ:48:PHE:CZ	45:BZ:52:SER:HA	2.48	0.49
34:BO:11:ALA:HB1	34:BO:99:PHE:HB2	1.95	0.49
20:AA:669:U:H2'	20:AA:670:G:C8	2.47	0.49
59:BA:109:G:H2'	59:BA:110:G:O4'	2.13	0.49
18:CS:55:LYS:HD2	20:CA:958:A:C4	2.48	0.49
59:BA:197:A:O4'	59:BA:2068:U:N3	2.46	0.49
29:BG:13:GLU:O	29:BG:17:PRO:HD2	2.12	0.49
45:BZ:11:GLU:H	45:BZ:11:GLU:CD	2.16	0.49
7:AH:34:GLU:O	7:AH:38:ILE:HG12	2.11	0.49
2:CC:53:ALA:HB2	2:CC:115:LEU:HD11	1.95	0.49
59:DA:1998:G:H2'	59:DA:1999:C:O4'	2.13	0.49
20:AA:817:C:O2'	20:AA:1527:C:O3'	2.31	0.49
59:BA:2038:G:H2'	59:BA:2039:C:O4'	2.13	0.49
59:DA:1136:G:H2'	59:DA:1137:G:O4'	2.12	0.49
59:DA:1139:G:H2'	59:DA:1140:C:H6	1.77	0.49
59:BA:584:C:H2'	59:BA:585:G:O4'	2.13	0.49
33:DN:31:ALA:O	33:DN:34:LEU:N	2.41	0.49
20:CA:127:G:H1	20:CA:234:C:N4	2.09	0.49
28:DF:175:THR:O	28:DF:175:THR:OG1	2.23	0.49
21:CW:39:U:H2'	21:CW:40:G:C8	2.48	0.49
43:BX:36:LYS:HE2	43:BX:56:THR:HG23	1.95	0.49
41:BV:18:LEU:H	41:BV:96:ILE:HD12	1.78	0.49
27:BE:49:LEU:HD21	27:BE:81:ILE:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:53:ARG:HD2	11:CL:53:ARG:N	2.27	0.49
59:BA:481:G:OP1	59:BA:481:G:H4'	2.13	0.49
59:DA:1823:G:H2'	59:DA:1824:G:H8	1.77	0.49
6:CG:114:ARG:NH1	20:CA:1297:C:O2	2.46	0.49
59:DA:481:G:H4'	59:DA:481:G:OP1	2.13	0.49
10:CK:119:CYS:HB3	10:CK:121:PRO:HD3	1.94	0.49
50:B6:8:LYS:HA	50:B6:27:LYS:HA	1.93	0.49
2:AC:8:ILE:HD12	2:AC:16:ARG:NH1	2.28	0.49
20:CA:925:G:O2'	20:CA:927:G:OP1	2.25	0.49
20:AA:966:G:H1'	21:AW:34:C:H4'	1.94	0.49
20:CA:802:A:H2'	20:CA:803:G:O4'	2.12	0.49
20:AA:1461:G:H2'	20:AA:1462:G:C8	2.47	0.49
59:BA:1870:C:H2'	59:BA:1871:A:O4'	2.13	0.49
26:DD:132:PRO:HA	26:DD:189:CYS:O	2.13	0.49
60:BB:49:C:H2'	60:BB:50:G:H8	1.77	0.49
35:DP:109:GLY:O	35:DP:111:ARG:N	2.46	0.49
29:DG:39:ILE:HG22	29:DG:157:ILE:HG23	1.93	0.49
35:DP:25:SER:H	35:DP:30:THR:HG22	1.77	0.49
35:DP:98:GLU:HA	35:DP:101:VAL:HG22	1.95	0.49
59:BA:354:G:H2'	59:BA:355:G:C8	2.46	0.49
59:DA:2333:A:H1'	59:DA:2335:A:C5	2.48	0.49
16:AQ:12:SER:HA	16:AQ:14:LYS:HZ2	1.78	0.49
39:BT:6:LEU:O	39:BT:10:VAL:HG23	2.13	0.49
59:BA:1726:G:H2'	59:BA:1727:U:C6	2.47	0.49
28:BF:135:LYS:HB3	28:BF:138:GLU:HG3	1.94	0.49
11:AL:43:VAL:HG12	11:AL:44:THR:H	1.77	0.49
27:DE:125:GLY:O	27:DE:127:ASP:N	2.46	0.49
59:DA:1081:U:H2'	59:DA:1082:U:C6	2.47	0.49
2:AC:6:HIS:ND1	13:AN:49:HIS:HB3	2.27	0.49
17:CR:47:THR:HG23	17:CR:49:LYS:H	1.78	0.49
47:D2:14:ARG:HG2	47:D2:63:VAL:HG13	1.95	0.49
20:CA:854:G:H3'	20:CA:871:U:O4	2.13	0.49
20:AA:1394:A:H8	20:AA:1501:C:HO2'	1.61	0.48
27:DE:152:LYS:HD3	59:DA:2620:C:P	2.53	0.48
59:DA:1603:A:H5'	59:DA:1604:C:OP2	2.12	0.48
1:CB:174:VAL:HG11	1:CB:196:LEU:HD13	1.95	0.48
59:DA:1286:A:O2'	59:DA:1288:U:OP2	2.20	0.48
59:DA:1980:G:H3'	59:DA:1981:A:H5''	1.95	0.48
25:BC:47:LYS:HB2	25:BC:169:THR:OG1	2.12	0.48
39:DT:27:THR:HG23	39:DT:28:VAL:H	1.78	0.48
59:BA:137(B):G:H5''	59:BA:138:G:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:118:PRO:HA	25:BC:121:MET:HB2	1.95	0.48
59:DA:2415:G:H2'	59:DA:2416:C:H6	1.78	0.48
59:DA:372:G:O2'	59:DA:400:G:O6	2.29	0.48
33:DN:55:VAL:HB	33:DN:126:PRO:HA	1.95	0.48
28:DF:180:GLY:HA3	59:DA:616:A:H1'	1.95	0.48
1:AB:77:ALA:O	1:AB:81:VAL:N	2.35	0.48
45:BZ:120:ILE:HG22	45:BZ:121:HIS:ND1	2.27	0.48
20:CA:357:G:OP1	20:CA:367:U:H5''	2.13	0.48
27:BE:55:ASN:HB2	27:BE:74:PRO:O	2.13	0.48
20:AA:441:A:H62	20:AA:493:G:N2	2.07	0.48
10:CK:52:GLY:H	10:CK:55:LYS:HE2	1.76	0.48
17:CR:44:LEU:HD21	17:CR:50:ILE:HG12	1.94	0.48
60:BB:24:G:N7	60:BB:56:G:O2'	2.46	0.48
52:B8:17:THR:OG1	52:B8:19:SER:OG	2.31	0.48
32:DK:91:PRO:HG3	59:DA:1062:G:H21	1.78	0.48
59:BA:2593:U:H3	59:BA:2600:A:N6	2.08	0.48
28:BF:106:ARG:HH12	28:BF:107:LYS:NZ	2.11	0.48
12:CM:99:ARG:HB3	12:CM:101:GLN:HG3	1.94	0.48
34:BO:64:ARG:HA	34:BO:79:PHE:CD1	2.47	0.48
8:AI:89:ASN:HB3	8:AI:92:TYR:CD1	2.48	0.48
59:BA:2215:G:H2'	59:BA:2216:G:H8	1.78	0.48
26:DD:132:PRO:HB2	26:DD:135:PHE:HD1	1.78	0.48
20:AA:569:C:H42	20:AA:881:G:H1	1.61	0.48
20:CA:198:G:H2'	20:CA:199:G:H8	1.77	0.48
25:DC:7:ARG:NH2	59:DA:2128:C:H5''	2.28	0.48
17:CR:37:VAL:HG23	17:CR:38:GLU:H	1.78	0.48
59:DA:2575:C:H2'	59:DA:2578:G:O6	2.13	0.48
20:AA:1048:G:H2'	20:AA:1050:G:C8	2.48	0.48
22:AV:12:A:H2'	22:AV:13:A:H5'	1.95	0.48
20:AA:488:C:H2'	20:AA:489:C:H6	1.78	0.48
59:BA:1670:C:H2'	59:BA:1671:U:O4'	2.12	0.48
44:BY:2:ARG:HD3	44:BY:3:VAL:H	1.78	0.48
33:BN:133:GLN:HG2	33:BN:135:PRO:HD3	1.95	0.48
35:BP:71:VAL:H	35:BP:72:PRO:HD3	1.78	0.48
59:DA:2554:U:H2'	59:DA:2555:U:C5	2.48	0.48
10:AK:108:ILE:HD13	17:AR:87:ARG:HA	1.95	0.48
59:BA:1486:A:H2'	59:BA:1487:G:H8	1.78	0.48
41:BV:28:GLU:HB3	41:BV:29:PRO:HD2	1.95	0.48
20:AA:683:G:H2'	20:AA:684:A:C8	2.48	0.48
50:D6:53:LYS:HG3	50:D6:54:ILE:H	1.78	0.48
46:D0:40:GLN:HB2	46:D0:44:ARG:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:94:ARG:HB2	6:CG:94:ARG:HH11	1.79	0.48
59:DA:2886:G:H2'	59:DA:2887:U:C6	2.48	0.48
23:CY:170:ARG:HD3	23:CY:170:ARG:N	2.28	0.48
2:AC:154:SER:HA	2:AC:165:THR:HA	1.94	0.48
59:DA:1410:G:H2'	59:DA:1411:C:C6	2.48	0.48
59:BA:1019:U:H5'	59:BA:1120:G:N2	2.28	0.48
59:DA:413:C:O2'	59:DA:1880:C:H1'	2.13	0.48
59:DA:414:C:H2'	59:DA:415:A:H8	1.77	0.48
59:BA:31:C:H2'	59:BA:32:C:H6	1.77	0.48
59:BA:1162:G:H2'	59:BA:1163:G:H8	1.77	0.48
40:BU:50:ARG:O	40:BU:54:LYS:HE2	2.13	0.48
11:CL:84:LEU:HD22	11:CL:104:VAL:HG13	1.95	0.48
39:DT:53:ARG:NH2	59:DA:2684:U:OP1	2.41	0.48
59:BA:2414:G:H2'	59:BA:2415:G:H8	1.77	0.48
28:DF:5:ALA:HB3	28:DF:8:GLN:HA	1.94	0.48
59:DA:2503:A:H4'	59:DA:2504:U:OP1	2.12	0.48
23:CY:512:ILE:HG12	23:CY:514:VAL:HG12	1.93	0.48
59:BA:1652:A:N1	59:BA:2005:A:N6	2.61	0.48
38:BS:67:ARG:CZ	38:BS:71:ARG:HH12	2.26	0.48
59:DA:579:G:O2'	59:DA:2019:A:OP1	2.30	0.48
42:DW:43:GLY:HA2	42:DW:46:PHE:HB2	1.94	0.48
59:BA:1429:G:H2'	59:BA:1430:C:H6	1.76	0.48
28:BF:170:LEU:HB3	28:BF:173:VAL:HB	1.94	0.48
13:AN:6:LEU:HD13	13:AN:23:ARG:HH22	1.79	0.48
38:BS:31:SER:O	38:BS:33:LYS:N	2.46	0.48
11:AL:80:HIS:O	11:AL:82:VAL:N	2.40	0.48
20:CA:992:U:O2	20:CA:993:G:N2	2.46	0.48
59:DA:2828:C:H2'	59:DA:2829:C:C6	2.48	0.48
34:DO:5:GLN:HG2	59:DA:1669:A:C8	2.48	0.48
45:BZ:10:ARG:HA	45:BZ:38:TYR:CE2	2.48	0.48
33:BN:36:GLY:O	33:BN:42:TRP:HB2	2.12	0.48
18:CS:59:PRO:HB3	59:DA:887:A:H5''	1.95	0.48
37:DR:53:HIS:HD2	37:DR:54:LEU:HD12	1.78	0.48
18:CS:12:ASP:HB2	18:CS:15:LEU:HG	1.95	0.48
28:BF:169:ASN:HB2	59:BA:322:A:P	2.53	0.48
10:CK:21:ILE:HD11	10:CK:98:LEU:HD11	1.95	0.48
59:BA:1807:G:N2	59:BA:1810:A:OP2	2.45	0.48
40:BU:62:ILE:HD11	40:BU:93:LYS:HD3	1.95	0.48
59:DA:2794:C:H2'	59:DA:2795:G:H5'	1.95	0.48
27:BE:25:VAL:HG22	27:BE:183:LEU:HG	1.94	0.48
59:BA:2430:A:H5'	59:BA:2431:U:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:7:LYS:HE3	26:BD:8:PRO:HD2	1.94	0.48
59:BA:1793:C:O2'	59:BA:1900:A:N1	2.37	0.48
6:CG:47:CYS:HA	6:CG:50:ILE:HD12	1.95	0.48
13:CN:5:ALA:HB2	20:CA:1216:G:H5''	1.94	0.48
5:AF:48:LEU:N	5:AF:56:PRO:O	2.38	0.48
1:CB:44:LEU:O	1:CB:47:THR:HB	2.13	0.48
59:DA:2583:G:H2'	59:DA:2584:U:H5'	1.95	0.48
59:DA:1373:A:H2'	59:DA:1374:G:O4'	2.12	0.48
20:AA:1139:G:N2	20:AA:1142:G:O6	2.46	0.48
59:BA:2165:G:N3	59:BA:2165:G:H2'	2.28	0.48
8:AI:25:LYS:O	8:AI:25:LYS:HG3	2.13	0.48
3:CD:62:GLN:NE2	20:CA:545:C:OP2	2.46	0.48
59:DA:874:G:N2	59:DA:903:C:N3	2.50	0.48
59:BA:2440:C:H5''	59:BA:2587:A:H4'	1.93	0.48
59:BA:678:C:H2'	59:BA:679:C:O4'	2.13	0.48
57:D1:30:VAL:HA	59:DA:2396:G:O2'	2.13	0.48
39:DT:50:ILE:HD12	39:DT:64:ARG:HB2	1.95	0.48
59:DA:1183:G:H2'	59:DA:1184:G:H8	1.77	0.48
59:BA:2179:C:H2'	59:BA:2180:U:H6	1.78	0.48
57:B1:22:GLY:HA2	57:B1:38:SER:N	2.28	0.48
23:CY:160:ARG:O	23:CY:162:VAL:N	2.41	0.48
26:DD:24:ILE:HG12	26:DD:25:THR:N	2.29	0.48
20:AA:284:G:H2'	20:AA:285:G:C8	2.47	0.48
59:BA:697:C:H2'	59:BA:698:C:C6	2.49	0.48
59:DA:570:G:OP1	59:DA:972:G:O2'	2.31	0.48
59:BA:1512:G:H2'	59:BA:1513:C:O4'	2.13	0.48
36:DQ:58:PHE:CZ	36:DQ:64:ILE:HD11	2.43	0.48
59:BA:2849:U:N3	59:BA:2867:G:O4'	2.47	0.48
37:BR:68:ARG:NH1	59:BA:2708:G:OP1	2.46	0.48
59:DA:481:G:H2'	59:DA:507:A:N1	2.28	0.48
20:CA:563:A:H5''	20:CA:564:C:C5	2.47	0.48
44:DY:9:LYS:HE2	44:DY:103:GLY:HA3	1.94	0.48
20:CA:130:A:C5	20:CA:264:U:H1'	2.48	0.48
59:BA:969:U:H2'	59:BA:970:C:H6	1.76	0.48
59:DA:2115:G:C6	59:DA:2117:A:H5''	2.47	0.48
26:BD:117:VAL:HG12	26:BD:129:ASN:ND2	2.28	0.48
20:CA:1152:A:H2'	20:CA:1153:C:H6	1.78	0.48
20:AA:1260:C:H42	20:AA:1274:G:H1	1.60	0.48
25:BC:60:ARG:HB2	25:BC:60:ARG:HH11	1.76	0.48
59:DA:1077:A:H5''	59:DA:1078:U:C6	2.49	0.48
57:B1:25:LYS:HB3	59:BA:388:G:P	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:659:U:H2'	20:CA:660:G:C8	2.48	0.48
20:CA:860:A:H2'	20:CA:861:G:O4'	2.13	0.48
23:CY:188:TYR:OH	23:CY:270:GLN:HG2	2.13	0.48
29:BG:135:LEU:HD21	29:BG:155:MET:HG2	1.94	0.48
20:CA:763:G:H2'	20:CA:764:C:O4'	2.13	0.48
4:AE:75:THR:OG1	4:AE:76:ILE:N	2.45	0.48
23:CY:312:LEU:HD13	23:CY:399:LEU:HD12	1.95	0.48
33:BN:19:GLU:HB3	33:BN:59:LYS:HE3	1.96	0.48
8:AI:25:LYS:O	8:AI:61:ALA:N	2.41	0.48
20:AA:571:U:H5''	20:AA:819:A:C5	2.48	0.48
20:AA:1090:U:H2'	20:AA:1091:U:C6	2.48	0.48
20:CA:890:G:O2'	20:CA:906:G:O6	2.31	0.48
30:DH:154:PRO:HA	30:DH:161:GLY:HA3	1.95	0.48
6:AG:108:ALA:HB1	6:AG:120:ILE:HD13	1.95	0.48
59:BA:2873:A:O2'	59:BA:2874:C:H5'	2.13	0.48
22:AV:18:G:H5'	22:AV:19:G:OP1	2.13	0.48
30:BH:12:PRO:HG2	30:BH:49:VAL:HG13	1.95	0.48
59:DA:918:A:N3	60:DB:80:U:O2'	2.40	0.48
23:CY:342:TYR:HA	23:CY:349:LYS:HA	1.95	0.48
59:BA:1891:G:H2'	59:BA:1892:C:C6	2.48	0.48
15:AP:2:VAL:HA	15:AP:23:ASP:HA	1.94	0.48
59:DA:2411:A:H2'	59:DA:2412:A:C8	2.48	0.48
21:AW:15:G:N2	21:AW:48:C:N4	2.16	0.48
20:CA:1394:A:N7	20:CA:1501:C:H4'	2.28	0.48
59:BA:980:A:O2'	59:BA:2037:G:O2'	2.28	0.48
59:DA:903:C:H2'	59:DA:904:C:O4'	2.14	0.48
59:DA:2294:C:H2'	59:DA:2295:C:H6	1.78	0.48
59:DA:2079:U:H2'	59:DA:2080:G:O4'	2.12	0.48
20:CA:266:G:O2'	20:CA:268:C:OP2	2.19	0.48
16:CQ:43:LEU:HD12	16:CQ:69:LYS:HA	1.96	0.48
20:AA:27:G:H2'	20:AA:28:G:C8	2.49	0.48
38:BS:85:VAL:H	38:BS:106:ARG:CG	2.26	0.48
37:BR:32:GLY:HA3	37:BR:116:LEU:HG	1.96	0.48
3:AD:175:SER:O	3:AD:183:GLY:HA2	2.14	0.48
11:CL:52:LEU:HB2	11:CL:54:LYS:HZ1	1.78	0.48
59:DA:2355:C:N4	59:DA:2362:G:H1	2.11	0.48
11:AL:76:ASN:ND2	11:AL:77:LEU:H	2.10	0.48
59:BA:591:C:H2'	59:BA:592:G:C8	2.48	0.48
57:D1:88:LYS:O	57:D1:92:LYS:N	2.45	0.48
59:DA:848:G:H2'	59:DA:849:A:H8	1.78	0.48
59:BA:1231:G:H2'	59:BA:1232:G:C8	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:117:ARG:HB3	11:CL:122:THR:O	2.13	0.48
4:CE:77:PRO:HG3	4:CE:143:ARG:O	2.13	0.48
11:AL:115:LYS:O	11:AL:117:ARG:N	2.39	0.48
20:CA:362:G:H2'	20:CA:364:A:OP2	2.13	0.48
18:CS:49:ILE:O	18:CS:59:PRO:HA	2.14	0.48
6:AG:7:ALA:HB3	20:AA:1378:C:OP1	2.13	0.48
20:CA:1056:U:H3	20:CA:1204:A:N6	2.12	0.48
29:BG:128:ARG:NH1	59:BA:2315:G:H21	2.11	0.48
23:AY:606:MET:HG2	23:AY:673:PHE:HA	1.95	0.48
27:DE:15:PHE:CD1	39:DT:80:SER:HB2	2.48	0.48
20:AA:120:A:H2'	20:AA:122:G:N7	2.28	0.48
59:DA:1710:C:H2'	59:DA:1711:C:H6	1.77	0.48
11:CL:113:ARG:HE	11:CL:116:SER:H	1.59	0.48
20:CA:1436:U:H2'	20:CA:1437:C:O4'	2.13	0.48
20:CA:341:C:H2'	20:CA:342:C:C6	2.48	0.48
59:BA:76:C:H2'	59:BA:77:C:C6	2.49	0.48
20:CA:1134:G:H1	20:CA:1140:C:H42	1.62	0.48
11:AL:123:LYS:HD2	20:AA:37:U:P	2.53	0.48
20:CA:1426:C:H2'	20:CA:1427:U:C6	2.49	0.48
59:BA:722:A:H2'	59:BA:723:G:C8	2.48	0.48
33:BN:137:LYS:NZ	33:BN:138:LEU:H	2.11	0.48
59:DA:215:G:N2	59:DA:432:A:H2	2.12	0.48
60:BB:40:U:H3'	60:BB:41:U:H5''	1.94	0.48
9:AJ:36:GLY:HA3	20:AA:1123:A:H4'	1.95	0.48
14:AO:55:GLY:O	14:AO:59:MET:HG3	2.12	0.48
15:AP:16:HIS:CE1	15:AP:38:TYR:HB2	2.48	0.48
59:DA:1003:G:H1	59:DA:1152:C:N4	2.08	0.48
3:CD:15:GLU:OE1	3:CD:19:LEU:HD21	2.13	0.48
59:DA:1115:G:H2'	59:DA:1116:C:C6	2.48	0.48
20:CA:1063:C:N3	20:CA:1193:G:N2	2.46	0.48
35:DP:58:THR:O	35:DP:61:ARG:NE	2.42	0.48
29:DG:73:ALA:HA	59:DA:2312:U:H5'	1.94	0.48
20:AA:410:G:H2'	20:AA:429:U:C5	2.48	0.48
25:BC:151:GLY:HA2	25:BC:154:ILE:HG13	1.95	0.48
25:DC:217:THR:O	25:DC:218:THR:OG1	2.24	0.48
20:AA:766:A:H2'	20:AA:767:A:O4'	2.13	0.48
20:CA:125:U:O2	20:CA:236:G:C6	2.65	0.48
12:CM:116:THR:HA	20:CA:1228:C:H4'	1.95	0.48
30:BH:123:PHE:HD1	30:BH:133:VAL:HG22	1.79	0.48
38:DS:85:VAL:O	38:DS:106:ARG:HD3	2.13	0.48
20:CA:22:G:O2'	20:CA:913:A:N1	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:100:VAL:HG21	23:AY:314:PHE:HZ	1.78	0.48
44:BY:73:ARG:NH2	44:BY:82:PRO:HD3	2.28	0.48
46:B0:11:ARG:NH2	59:BA:2279:G:O5'	2.46	0.48
59:DA:1669:A:N6	59:DA:1993:U:H3	2.11	0.48
32:DK:132:ARG:NH1	32:DK:136:VAL:O	2.45	0.48
20:AA:68(H):G:H2'	20:AA:68(H):G:N3	2.28	0.48
29:BG:60:LEU:O	29:BG:63:ILE:HG12	2.14	0.48
26:BD:118:VAL:HG22	26:BD:119:ALA:N	2.29	0.48
12:CM:78:ILE:HA	12:CM:81:LEU:HB2	1.96	0.48
20:AA:1251:A:N3	20:AA:1369:C:O2'	2.32	0.48
38:BS:40:ILE:HG13	38:BS:47:THR:H	1.78	0.48
10:CK:84:VAL:HG21	10:CK:91:ARG:HD3	1.95	0.48
23:CY:201:ILE:O	23:CY:203:GLU:N	2.39	0.48
14:AO:10:LYS:O	14:AO:14:GLU:HB2	2.13	0.48
16:AQ:86:GLU:O	16:AQ:90:ILE:HG13	2.14	0.48
59:BA:1028:A:OP2	59:BA:1126:A:N6	2.45	0.48
59:DA:2676:C:H2'	59:DA:2677:G:C8	2.49	0.48
35:BP:16:ARG:O	59:BA:661:C:O2'	2.30	0.48
51:D7:18:PHE:CE2	59:DA:117:G:H5'	2.49	0.48
4:AE:146:ALA:O	4:AE:150:ARG:NH1	2.47	0.48
8:AI:43:ALA:HA	8:AI:74:ILE:HG21	1.95	0.48
20:CA:1034:G:H2'	20:CA:1035:A:C8	2.48	0.48
59:DA:2780:G:H1'	59:DA:2781:A:OP1	2.12	0.48
60:DB:82:G:H2'	60:DB:83:G:H8	1.78	0.48
59:BA:1195:G:H2'	59:BA:1196:C:C6	2.49	0.48
3:CD:86:LYS:HE2	3:CD:86:LYS:HA	1.94	0.48
25:BC:96:GLY:HA3	25:BC:100:ILE:HG12	1.95	0.48
20:CA:1238:A:N3	20:CA:1238:A:H2'	2.27	0.48
59:BA:259:G:H2'	59:BA:260:G:C8	2.49	0.48
2:AC:24:ALA:HB3	9:AJ:11:PHE:HZ	1.77	0.48
26:DD:118:VAL:HG13	26:DD:119:ALA:H	1.79	0.48
23:CY:291:GLY:HA2	23:CY:400:GLU:N	2.29	0.48
4:CE:126:ARG:HH21	20:CA:9:G:H8	1.62	0.48
23:CY:656:ALA:HB2	23:CY:669:PHE:CE1	2.48	0.48
59:DA:251:A:H8	59:DA:251:A:O5'	1.96	0.48
26:DD:27:THR:HG23	26:DD:83:GLU:HB3	1.94	0.48
8:AI:117:HIS:HE1	8:AI:123:PRO:HB3	1.78	0.48
44:BY:9:LYS:HD2	44:BY:94:LYS:NZ	2.28	0.48
33:BN:10:GLU:CD	33:BN:11:PRO:HD2	2.34	0.48
59:BA:59:U:H4'	59:BA:73:A:C5	2.49	0.48
13:CN:6:LEU:HB3	13:CN:23:ARG:NH2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:22:LEU:HD21	6:CG:66:VAL:HG21	1.94	0.48
17:AR:36:ASN:HB3	17:AR:39:VAL:HB	1.96	0.48
20:CA:510:A:N3	20:CA:543:C:H1'	2.29	0.48
39:BT:78:LEU:HB3	39:BT:79:HIS:CD2	2.48	0.48
20:AA:1394:A:N7	20:AA:1501:C:H4'	2.28	0.48
59:BA:2037:G:C4	59:BA:2038:G:C8	3.02	0.48
59:BA:2038:G:H2'	59:BA:2039:C:H5'	1.96	0.48
3:CD:19:LEU:HB3	3:CD:67:ILE:HG12	1.96	0.48
59:BA:580:C:H2'	59:BA:581:C:H6	1.77	0.48
11:CL:58:VAL:HG21	11:CL:85:ILE:HD11	1.95	0.48
57:B1:13:ILE:HG23	57:B1:42:GLN:O	2.14	0.48
25:BC:113:ALA:O	25:BC:114:VAL:HB	2.13	0.48
25:DC:213:VAL:HG12	25:DC:224:ARG:HA	1.94	0.48
60:DB:56:G:H4'	60:DB:57:A:H8	1.79	0.48
26:BD:222:ARG:HG2	59:BA:1789:A:OP1	2.13	0.48
59:DA:1194:A:H2'	59:DA:1195:G:C8	2.49	0.48
51:D7:42:LEU:HD11	59:DA:467:G:OP2	2.14	0.48
26:BD:61:LEU:HB3	59:BA:1568:G:P	2.54	0.48
46:D0:24:LYS:HG3	59:DA:2355:C:H4'	1.96	0.48
31:DJ:111:UNK:O	31:DJ:116:UNK:HA	2.13	0.48
31:DJ:24:UNK:N	31:DJ:111:UNK:O	2.46	0.48
8:CI:112:LYS:HA	8:CI:119:ALA:HB2	1.94	0.48
59:DA:974(B):C:C4	59:DA:983:A:H5''	2.48	0.48
35:DP:41:ARG:HD3	35:DP:41:ARG:HA	1.66	0.48
47:D2:28:LYS:HD2	47:D2:53:LEU:HD11	1.94	0.48
57:D1:80:LEU:HD21	59:DA:270(T):G:O2'	2.13	0.48
46:D0:27:GLU:HG3	46:D0:69:PHE:CE1	2.49	0.48
49:B5:19:ARG:HA	59:BA:2046:G:H5'	1.95	0.48
59:DA:1049:C:N3	59:DA:2751:G:O6	2.46	0.48
20:AA:1218:C:H2'	20:AA:1219:U:H6	1.78	0.48
23:AY:96:ARG:HA	23:AY:99:ARG:CB	2.43	0.48
45:DZ:54:HIS:NE2	45:DZ:123:ASP:HB3	2.29	0.48
23:CY:13:ARG:HB2	23:CY:79:ILE:HG13	1.95	0.48
20:CA:1465:C:H2'	20:CA:1466:C:C6	2.48	0.48
8:AI:107:ARG:NH2	20:AA:1346:A:H1'	2.27	0.48
20:CA:327:A:O2'	20:CA:328:C:O4'	2.28	0.48
59:BA:2137:C:H2'	59:BA:2138:C:C6	2.48	0.48
33:BN:129:PRO:O	33:BN:131:GLN:N	2.47	0.48
46:D0:55:ARG:N	59:DA:2365:G:OP1	2.46	0.48
20:CA:1181:G:O2'	20:CA:1182:G:C8	2.67	0.48
33:DN:54:VAL:HB	33:DN:122:VAL:HG22	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:120:A:H2'	20:CA:122:G:N7	2.29	0.48
59:DA:1092:C:H2'	59:DA:1093:G:O4'	2.14	0.48
45:BZ:97:GLU:HA	45:BZ:126:VAL:O	2.12	0.48
59:DA:1642:G:H2'	59:DA:1643:G:O4'	2.14	0.48
42:BW:29:LEU:O	42:BW:33:ARG:HB2	2.13	0.48
28:DF:18:ARG:O	28:DF:18:ARG:NE	2.46	0.48
20:CA:1327:C:H2'	20:CA:1328:C:C6	2.49	0.48
23:CY:22:ASP:O	62:CY:702:GDP:O3B	2.32	0.48
59:DA:2048:G:H1	59:DA:2620:C:H42	1.62	0.48
20:AA:1419:G:H2'	20:AA:1420:C:H6	1.78	0.48
20:CA:946:A:H2'	20:CA:947:G:C8	2.49	0.48
59:BA:2133:G:H2'	59:BA:2157:G:H1	1.77	0.48
40:BU:34:LYS:NZ	59:BA:2018:G:N3	2.61	0.48
41:BV:4:ILE:O	41:BV:39:LEU:N	2.38	0.48
59:BA:381:G:H8	59:BA:381:G:O5'	1.97	0.48
25:BC:162:ILE:CD1	25:BC:175:PRO:HD2	2.43	0.48
20:AA:766:A:H61	20:AA:1511:G:H1'	1.79	0.48
37:BR:13:HIS:H	37:BR:16:HIS:HB3	1.78	0.48
20:CA:971:G:N2	20:CA:1363:A:OP2	2.30	0.48
38:BS:26:LEU:HD13	38:BS:106:ARG:NH1	2.29	0.48
37:BR:97:VAL:HG12	37:BR:112:ALA:HB1	1.95	0.48
51:D7:42:LEU:O	51:D7:44:PRO:HD3	2.14	0.48
59:BA:974(A):G:C6	59:BA:989:G:C6	3.02	0.48
59:DA:2469:A:N6	59:DA:2481:G:O2'	2.47	0.48
20:AA:553:A:H2'	20:AA:554:C:H6	1.79	0.48
6:AG:34:GLY:HA3	20:AA:1350:A:H2	1.77	0.48
59:DA:24:G:H2'	59:DA:25:U:H6	1.79	0.48
16:AQ:69:LYS:HG3	20:AA:254:G:H5"	1.96	0.48
2:AC:157:ILE:HD13	2:AC:164:ARG:NE	2.27	0.48
51:B7:27:GLY:O	51:B7:30:VAL:HB	2.13	0.48
59:BA:947:G:H1	59:BA:970:C:N4	2.10	0.48
8:AI:93:ARG:NE	8:AI:102:LEU:HD11	2.29	0.48
33:BN:27:ALA:O	33:BN:31:ALA:N	2.34	0.48
59:BA:52:A:H62	59:BA:119:A:H62	1.62	0.48
32:DK:59:ILE:HG12	32:DK:60:TYR:O	2.13	0.48
20:CA:68(P):C:H2'	20:CA:68(Q):U:O4'	2.12	0.48
1:CB:87:ARG:NH2	1:CB:233:SER:H	2.11	0.48
59:BA:690:G:H1'	59:BA:779:U:O3'	2.12	0.48
35:BP:112:LEU:HD12	35:BP:127:ALA:HB2	1.96	0.48
20:AA:131:C:H2'	20:AA:132:C:H6	1.78	0.48
33:DN:39:ARG:C	33:DN:41:ASP:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BU:76:TYR:CD2	59:BA:1010:A:H4'	2.49	0.48
59:BA:294:A:H2'	59:BA:295:G:O4'	2.14	0.48
26:BD:51:VAL:HG13	26:BD:52:ARG:H	1.79	0.48
35:DP:100:LEU:HB3	35:DP:106:LEU:HD12	1.95	0.48
59:BA:1495:A:OP1	59:BA:1495:A:H8	1.96	0.48
20:AA:590:C:H2'	20:AA:591:U:C6	2.48	0.48
59:DA:325:G:H2'	59:DA:326:G:H8	1.78	0.48
18:CS:6:LYS:HE2	18:CS:7:LYS:H	1.79	0.48
59:DA:1102:C:H2'	59:DA:1103:A:O4'	2.13	0.48
20:CA:890:G:N2	20:CA:906:G:H2'	2.28	0.48
59:DA:85:G:N1	59:DA:97:C:O2	2.38	0.48
59:DA:2367:G:H2'	59:DA:2368:C:H6	1.78	0.48
59:BA:1551:C:H2'	59:BA:1552:G:O4'	2.13	0.48
59:BA:2808:U:N3	59:BA:2809:A:N7	2.62	0.48
20:AA:62:U:H2'	20:AA:63:C:C6	2.49	0.48
20:CA:748:C:O2'	20:CA:749:C:OP2	2.28	0.48
7:CH:71:GLY:O	7:CH:73:ASP:N	2.47	0.48
57:B1:77:ALA:O	57:B1:82:LEU:HD11	2.13	0.48
2:CC:156:ARG:HD3	2:CC:194:GLY:HA3	1.95	0.48
38:BS:77:ALA:HB1	38:BS:82:ILE:HB	1.96	0.48
23:AY:199:ILE:HG12	23:AY:200:PRO:O	2.13	0.48
20:CA:815:A:O4'	20:CA:817:C:N4	2.47	0.48
29:BG:97:ASP:HA	29:BG:100:TRP:HD1	1.79	0.48
29:BG:111:LEU:HB3	29:BG:117:PHE:CZ	2.49	0.48
20:AA:1412:C:H42	20:AA:1488:G:H1	1.61	0.48
59:DA:873:G:N2	59:DA:904:C:N3	2.47	0.48
59:BA:2889:C:H2'	59:BA:2891:G:O4'	2.14	0.48
23:AY:137:ASN:ND2	23:AY:138:LYS:N	2.47	0.48
20:CA:833:U:O2	20:CA:853:G:N2	2.31	0.48
25:BC:125:GLY:HA2	25:BC:138:LEU:HD11	1.96	0.48
11:AL:45:PRO:HD2	11:AL:49:ASN:HB2	1.95	0.48
59:DA:2041:U:OP2	59:DA:2041:U:C6	2.57	0.48
41:BV:95:LEU:O	41:BV:96:ILE:O	2.32	0.48
11:AL:82:VAL:HG12	11:AL:82:VAL:O	2.14	0.48
18:CS:70:LYS:O	18:CS:73:GLU:HB3	2.14	0.48
47:D2:18:PRO:HA	47:D2:21:LEU:HD12	1.95	0.48
45:BZ:15:PRO:O	45:BZ:19:ARG:HG3	2.14	0.48
57:B1:50:ARG:NH2	59:BA:2206:C:OP2	2.46	0.48
38:DS:58:LEU:HD22	38:DS:69:VAL:HG23	1.96	0.48
59:DA:1053:C:H2'	59:DA:1054:A:O4'	2.14	0.48
59:DA:571:A:H1'	59:DA:573:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1493:C:O2	59:BA:2210:G:O2'	2.31	0.48
59:BA:273(C):C:H2'	59:BA:273(D):C:C6	2.49	0.48
45:DZ:5:LEU:HD11	45:DZ:44:PHE:CD1	2.47	0.48
16:CQ:29:HIS:HB3	16:CQ:33:GLY:N	2.28	0.48
23:CY:201:ILE:HG21	23:CY:206:LEU:N	2.27	0.48
40:BU:79:PHE:HE1	40:BU:106:PHE:CZ	2.32	0.48
59:BA:104:U:H3'	59:BA:105:C:H6	1.79	0.48
35:DP:30:THR:O	35:DP:32:THR:N	2.47	0.48
59:DA:1050:A:H2'	59:DA:1051:G:H8	1.78	0.48
20:AA:1017:G:H2'	20:AA:1018:C:C6	2.49	0.48
51:B7:23:ARG:O	51:B7:28:ARG:NH1	2.46	0.48
20:CA:1437:C:H2'	20:CA:1438:G:H8	1.78	0.48
59:DA:2572:A:OP1	59:DA:2574:G:H4'	2.14	0.48
3:CD:62:GLN:O	3:CD:65:ARG:HG3	2.13	0.48
59:DA:1855:G:H1	59:DA:1887:C:H42	1.60	0.48
20:CA:359:U:H2'	20:CA:360:A:H8	1.77	0.48
31:DJ:11:UNK:O	31:DJ:15:UNK:N	2.46	0.48
59:DA:193:U:H2'	59:DA:194:G:H8	1.79	0.48
59:BA:774:A:H4'	59:BA:777:A:O2'	2.14	0.48
30:DH:101:ARG:HG3	30:DH:117:PRO:HG2	1.96	0.48
59:DA:2309:A:H2'	59:DA:2310:A:C8	2.49	0.48
28:DF:13:SER:O	28:DF:15:SER:N	2.47	0.48
20:CA:1528:U:H4'	20:CA:1529:G:H21	1.79	0.48
58:B4:14:ILE:HD13	58:B4:22:ILE:HD12	1.95	0.48
3:CD:33:MET:HB3	3:CD:37:PRO:HB3	1.95	0.48
59:DA:2024:G:N2	59:DA:2040:C:H1'	2.27	0.48
59:BA:1537:C:H2'	59:BA:1538:G:H4'	1.95	0.48
37:DR:107:ASP:HB2	59:DA:1649:G:H21	1.79	0.48
59:DA:1224:C:H2'	59:DA:1225:G:O4'	2.14	0.48
59:BA:67:U:C2	59:BA:68:G:C8	3.01	0.48
20:AA:411:A:O2'	20:AA:413:G:OP1	2.27	0.48
44:BY:69:ALA:O	44:BY:71:LYS:N	2.43	0.48
44:BY:68:HIS:HB3	44:BY:71:LYS:HE2	1.96	0.48
43:BX:49:VAL:HB	43:BX:83:VAL:HG11	1.96	0.48
3:CD:209:ARG:HD3	20:CA:8:A:C5	2.49	0.48
59:BA:1400:G:H2'	59:BA:1401:G:C8	2.48	0.48
38:BS:26:LEU:HD11	38:BS:101:LEU:HD22	1.95	0.48
57:D1:43:TYR:CE2	59:DA:2230:G:H5''	2.40	0.48
59:DA:2110:G:H1	59:DA:2179:C:H42	1.62	0.48
53:B9:7:VAL:HG12	53:B9:34:GLN:HB3	1.96	0.48
59:DA:1290:C:H2'	59:DA:1291:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B7:33:ARG:HB2	51:B7:34:ARG:NH1	2.29	0.48
46:B0:24:LYS:N	46:B0:37:LEU:O	2.43	0.48
44:DY:47:LYS:HG2	59:DA:482:A:H4'	1.96	0.48
23:CY:15:ILE:HG13	23:CY:80:ASN:O	2.14	0.48
59:BA:1557:C:H5''	59:BA:1558:A:OP2	2.14	0.48
35:BP:7:ARG:O	35:BP:10:PRO:HD2	2.13	0.48
12:AM:39:ILE:HD12	12:AM:56:LEU:HG	1.96	0.48
59:BA:1947:C:H2'	59:BA:1948:G:H8	1.78	0.48
59:BA:531:C:H5''	59:BA:532:A:C4	2.49	0.48
43:BX:8:ILE:HB	47:B2:37:PHE:HZ	1.78	0.48
10:AK:27:ASN:ND2	10:AK:55:LYS:HD2	2.28	0.48
4:CE:18:ARG:HB2	20:CA:921:U:O2'	2.14	0.48
20:CA:68(P):C:H2'	20:CA:68(Q):U:H6	1.78	0.48
59:DA:572:A:H5''	59:DA:573:G:OP2	2.13	0.48
60:BB:9:G:H2'	60:BB:10:C:H6	1.79	0.48
35:BP:101:VAL:HG12	35:BP:106:LEU:HB3	1.96	0.48
14:CO:24:SER:OG	14:CO:25:THR:N	2.47	0.48
7:AH:32:LYS:O	7:AH:36:LEU:HG	2.13	0.48
59:DA:2592:G:H2'	59:DA:2593:U:H5'	1.95	0.48
15:CP:36:ILE:HG22	15:CP:52:ASP:HB3	1.95	0.48
57:B1:25:LYS:HD2	59:BA:388:G:P	2.54	0.48
26:DD:117:VAL:HG12	26:DD:129:ASN:HD21	1.78	0.48
42:BW:14:PRO:O	42:BW:16:LYS:N	2.46	0.48
39:BT:130:ALA:HA	39:BT:133:GLU:HB3	1.96	0.48
34:BO:6:THR:HG23	59:BA:1666:G:O3'	2.14	0.48
28:DF:106:ARG:HH12	28:DF:107:LYS:HE2	1.79	0.48
59:BA:1413:G:H2'	59:BA:1414:G:C8	2.48	0.48
59:BA:1674:G:H21	59:BA:1677:A:H61	1.60	0.48
52:B8:37:SER:HB3	59:BA:2383:G:OP2	2.13	0.48
59:BA:2663:G:H2'	59:BA:2664:G:O4'	2.14	0.48
59:BA:2113:U:H2'	59:BA:2114:A:O4'	2.14	0.48
30:BH:105:LEU:HG	30:BH:113:VAL:HB	1.96	0.48
45:BZ:95:PRO:HA	45:BZ:129:SER:HA	1.95	0.48
5:AF:1:MET:HA	5:AF:68:PRO:HA	1.96	0.48
20:CA:831:U:H2'	20:CA:832:C:H6	1.79	0.48
28:DF:184:TYR:HH	59:DA:1202:C:HO2'	1.59	0.48
20:AA:606:G:H3'	20:AA:607:A:H5'	1.95	0.48
59:BA:1988:C:H2'	59:BA:1989:G:C8	2.49	0.48
23:CY:446:THR:OG1	23:CY:447:GLY:N	2.45	0.48
59:BA:1025:G:N2	59:BA:1139:G:O6	2.45	0.48
59:BA:981:A:H1'	59:BA:2037:G:H1'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2756:U:H4'	59:BA:2757:A:OP1	2.14	0.48
41:BV:39:LEU:HA	41:BV:47:VAL:HG11	1.96	0.48
59:DA:2888:C:H2'	59:DA:2889:C:H6	1.79	0.48
27:DE:63:LEU:HB2	27:DE:65:GLY:N	2.20	0.48
44:BY:28:LYS:HA	44:BY:39:VAL:HA	1.96	0.48
28:DF:67:GLN:HG2	59:DA:675:A:O2'	2.14	0.48
25:DC:65:LEU:HD21	25:DC:193:PHE:HB2	1.96	0.48
2:AC:5:ILE:HG22	20:AA:1190:G:OP1	2.14	0.48
12:CM:102:ARG:HH21	12:CM:105:THR:HG23	1.79	0.48
12:CM:108:ARG:H	12:CM:108:ARG:HD2	1.79	0.48
20:AA:555:C:H2'	20:AA:556:C:C6	2.49	0.48
38:BS:85:VAL:H	38:BS:106:ARG:HG2	1.78	0.48
32:BK:30:HIS:NE2	32:BK:58:THR:O	2.47	0.48
19:CT:73:HIS:C	19:CT:74:LYS:HD3	2.35	0.48
26:BD:35:LYS:HG2	26:BD:62:TYR:O	2.14	0.48
20:AA:973:G:C8	20:AA:974:A:H2'	2.48	0.48
39:DT:33:LYS:HB2	39:DT:43:GLN:HB3	1.96	0.48
57:D1:45:ASN:ND2	59:DA:2230:G:H1'	2.29	0.48
59:BA:408:G:O5'	59:BA:408:G:H8	1.97	0.48
59:DA:1676:A:H2'	59:DA:1677:A:C8	2.48	0.48
59:DA:1536:A:H3'	59:DA:1537:C:C6	2.49	0.48
59:BA:2498:C:O2'	59:BA:2499:C:H5'	2.14	0.48
23:CY:67:ALA:HB3	23:CY:358:MET:HG3	1.94	0.48
60:BB:102:G:H2'	60:BB:103:U:H6	1.77	0.48
59:DA:1519:G:H2'	59:DA:1520:U:O4'	2.14	0.48
20:CA:1143:G:H2'	20:CA:1144:G:H8	1.79	0.48
7:CH:10:LEU:O	7:CH:13:ILE:HB	2.14	0.48
59:DA:131:G:H2'	59:DA:132:G:C8	2.49	0.48
59:BA:1862:G:H1	59:BA:1880:C:N4	2.11	0.48
58:D4:2:LYS:HG3	60:DB:39:A:N6	2.29	0.48
19:AT:49:ALA:O	19:AT:52:ALA:N	2.46	0.48
20:AA:1369:C:H2'	20:AA:1370:G:O4'	2.14	0.48
59:BA:1811:G:H2'	59:BA:1812:A:C8	2.48	0.48
20:AA:757:U:O2'	20:AA:879:C:O2	2.32	0.48
59:DA:15:G:H1	59:DA:525:U:H3	1.62	0.48
1:CB:175:ARG:NH2	20:CA:1075:C:O3'	2.46	0.48
59:BA:1166:C:H2'	59:BA:1167:U:H6	1.79	0.48
11:AL:5:PRO:HG2	11:AL:15:ARG:NH2	2.28	0.48
46:B0:51:VAL:HG21	46:B0:79:VAL:O	2.13	0.48
7:AH:88:LYS:C	7:AH:90:GLY:H	2.17	0.48
59:BA:271(C):G:O2'	59:BA:271(D):U:OP2	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1786:A:C8	59:BA:1938:A:C6	3.02	0.48
23:AY:187:THR:HG22	23:AY:198:GLU:HA	1.95	0.48
59:DA:1657:C:H2'	59:DA:1658:C:C6	2.49	0.48
59:DA:2453:A:O2'	59:DA:2572:A:O4'	2.30	0.48
52:D8:30:ARG:N	52:D8:32:LEU:HD23	2.29	0.48
26:DD:92:ILE:HG22	26:DD:106:ILE:HA	1.96	0.48
5:AF:51:PRO:HA	5:AF:56:PRO:HA	1.95	0.48
23:CY:549:ALA:HB1	23:CY:591:LYS:HE2	1.96	0.48
47:D2:35:LEU:HD22	47:D2:50:ILE:HG12	1.95	0.48
59:BA:2294:C:H2'	59:BA:2295:C:C6	2.49	0.48
37:BR:42:LYS:O	37:BR:45:ARG:NE	2.47	0.48
36:BQ:30:GLY:HA2	36:BQ:107:ALA:HB2	1.96	0.48
59:DA:578:A:OP1	59:DA:1255:U:O2'	2.32	0.48
5:AF:44:GLY:HA2	5:AF:59:TYR:CE1	2.49	0.48
28:BF:25:PRO:HD3	28:BF:115:ALA:O	2.14	0.48
21:AW:52:G:H1	21:AW:62:C:H42	1.62	0.48
36:DQ:77:LYS:HG2	36:DQ:78:PRO:HD2	1.96	0.48
26:BD:203:ASN:OD1	26:BD:203:ASN:N	2.46	0.48
6:AG:150:ALA:HB1	10:AK:93:GLN:HE22	1.79	0.48
23:CY:23:ALA:CB	23:CY:24:GLY:C	2.82	0.47
20:CA:1507:A:H2'	20:CA:1508:G:C8	2.49	0.47
59:BA:2618:G:H2'	59:BA:2619:C:C6	2.49	0.47
59:DA:1394:U:H5''	59:DA:1604:C:P	2.54	0.47
1:CB:164:VAL:HG12	1:CB:165:VAL:O	2.14	0.47
1:CB:69:LEU:O	1:CB:71:VAL:HG23	2.13	0.47
23:AY:137:ASN:HD22	23:AY:262:SER:HA	1.78	0.47
59:DA:688:U:H2'	59:DA:689:A:C8	2.48	0.47
39:DT:54:ARG:HA	39:DT:59:THR:HB	1.96	0.47
60:DB:56:G:H4'	60:DB:57:A:C8	2.48	0.47
61:CY:701:FUA:H16	61:CY:701:FUA:H322	1.76	0.47
39:BT:27:THR:C	39:BT:87:ASP:HB2	2.34	0.47
51:D7:31:LEU:O	51:D7:35:ARG:HG3	2.14	0.47
23:AY:631:ILE:HG22	23:AY:632:LEU:N	2.29	0.47
38:DS:84:GLN:HA	38:DS:106:ARG:HG2	1.96	0.47
38:DS:97:ARG:O	38:DS:100:ALA:N	2.32	0.47
26:BD:62:TYR:HE1	59:BA:1816:G:C8	2.32	0.47
3:CD:103:ASN:HB2	3:CD:114:ARG:HH12	1.79	0.47
26:BD:108:PRO:HA	26:BD:196:VAL:HA	1.95	0.47
46:D0:24:LYS:HB3	46:D0:25:ARG:NH1	2.29	0.47
31:DJ:82:UNK:O	31:DJ:84:UNK:N	2.47	0.47
42:DW:8:ARG:HA	42:DW:102:HIS:HD1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2002:G:H2'	59:BA:2003:G:H8	1.78	0.47
59:DA:1666:G:N2	59:DA:1669:A:N7	2.61	0.47
20:CA:715:A:H5''	20:CA:805:C:O4'	2.14	0.47
20:CA:1072:G:O6	20:CA:1103:C:N3	2.47	0.47
38:DS:78:LEU:HD11	38:DS:105:ALA:HA	1.95	0.47
20:AA:861:G:O2'	20:AA:874:G:O2'	2.23	0.47
20:CA:690:G:OP2	20:CA:690:G:H8	1.97	0.47
3:AD:62:GLN:NE2	20:AA:544:G:OP1	2.45	0.47
7:AH:109:ILE:HG13	7:AH:120:THR:HB	1.96	0.47
37:DR:38:VAL:O	37:DR:42:LYS:HG2	2.14	0.47
7:AH:9:MET:HE2	7:AH:32:LYS:HG2	1.96	0.47
59:DA:919:G:H2'	59:DA:920:G:H8	1.78	0.47
59:DA:2114:A:H2	59:DA:2168:G:H1'	1.79	0.47
16:CQ:40:LYS:HG2	16:CQ:42:TYR:HE1	1.79	0.47
15:AP:70:ALA:O	15:AP:73:LEU:N	2.47	0.47
48:B3:10:LYS:HB3	48:B3:53:LEU:HA	1.95	0.47
59:BA:1676:A:H2'	59:BA:1677:A:H8	1.79	0.47
33:BN:137:LYS:HB3	33:BN:137:LYS:NZ	2.29	0.47
59:DA:85:G:O6	59:DA:97:C:N3	2.47	0.47
30:BH:105:LEU:O	30:BH:113:VAL:N	2.44	0.47
3:AD:73:ARG:HB2	20:AA:546:G:OP1	2.14	0.47
59:DA:2873:A:O2'	59:DA:2874:C:H5'	2.14	0.47
32:DK:98:ARG:HB3	32:DK:137:GLU:HG3	1.95	0.47
20:AA:124:G:H4'	20:AA:291:C:O2'	2.14	0.47
34:BO:86:ILE:HG22	34:BO:94:ARG:HB2	1.96	0.47
16:CQ:48:GLU:O	16:CQ:50:LYS:N	2.46	0.47
9:AJ:35:SER:HB3	9:AJ:73:ASP:HB2	1.96	0.47
20:AA:125:U:H2'	20:AA:126:G:C8	2.49	0.47
59:DA:1070:A:C5	59:DA:1097:U:H4'	2.49	0.47
59:BA:2155:G:H3'	59:BA:2156:G:C8	2.49	0.47
53:D9:1:MET:HB3	53:D9:4:ARG:HD3	1.95	0.47
2:AC:87:LEU:O	2:AC:91:LEU:HG	2.14	0.47
20:CA:1503:A:N6	22:CV:14:A:H2'	2.29	0.47
59:BA:1024:G:C6	59:BA:1025:G:C6	3.02	0.47
33:DN:35:ARG:NH1	59:DA:1007:C:OP1	2.47	0.47
59:BA:529:A:N7	59:BA:2041:U:C4	2.82	0.47
59:BA:2131:G:H5'	59:BA:2133:G:H1'	1.96	0.47
49:B5:9:LYS:HZ3	59:BA:2018:G:H3'	1.79	0.47
59:BA:2576:G:H5''	59:BA:2577:A:OP1	2.13	0.47
33:DN:70:LYS:O	33:DN:87:LEU:N	2.42	0.47
59:BA:36:G:H4'	59:BA:451:C:C2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:257:PRO:O	23:CY:259:PHE:N	2.45	0.47
1:AB:171:ALA:HA	1:AB:174:VAL:CB	2.39	0.47
1:AB:97:TRP:CZ2	1:AB:176:GLU:HG3	2.48	0.47
37:BR:12:ARG:HE	37:BR:20:LEU:HD13	1.79	0.47
26:BD:221:VAL:HA	59:BA:1789:A:H5''	1.95	0.47
60:BB:14:U:H1'	60:BB:107:U:H1'	1.96	0.47
60:BB:13:A:H61	60:BB:69:G:HO2'	1.59	0.47
60:BB:66:A:H4'	60:BB:67:G:C8	2.49	0.47
45:BZ:118:GLN:HB3	45:BZ:173:ALA:N	2.28	0.47
20:CA:1499:A:H1'	20:CA:1520:G:H5'	1.95	0.47
52:B8:20:GLY:HA3	52:B8:57:ARG:HH21	1.79	0.47
37:DR:52:ILE:HD12	37:DR:79:LEU:HD11	1.95	0.47
59:BA:847:U:O2'	59:BA:848:G:H8	1.96	0.47
59:DA:2158:A:H1'	59:DA:2159:G:C8	2.48	0.47
60:BB:72:G:O2'	60:BB:73:A:O4'	2.28	0.47
59:DA:875:G:H1	59:DA:902:C:N4	2.09	0.47
35:BP:7:ARG:HG2	59:BA:1203:G:H4'	1.96	0.47
59:BA:840:C:OP2	59:BA:932:G:N2	2.47	0.47
52:D8:22:VAL:HB	52:D8:53:PRO:HB3	1.95	0.47
59:BA:1948:G:H1	59:BA:1958:C:H42	1.62	0.47
20:CA:688:G:H2'	20:CA:689:C:C6	2.49	0.47
8:AI:22:GLY:HA3	8:AI:60:ASP:CG	2.34	0.47
20:CA:582:U:H2'	20:CA:583:A:O4'	2.13	0.47
59:DA:2291:U:O2'	59:DA:2374:C:O2	2.32	0.47
59:DA:2377:A:H2'	59:DA:2378:A:C8	2.50	0.47
60:DB:15:A:H1'	60:DB:109:G:C6	2.49	0.47
44:BY:51:VAL:HG12	44:BY:53:PRO:HD2	1.95	0.47
59:DA:2095:C:H2'	59:DA:2096:U:C6	2.48	0.47
26:BD:250:TRP:CD2	59:BA:1805:U:H5''	2.48	0.47
8:AI:33:PHE:HE1	8:AI:43:ALA:HB1	1.79	0.47
3:CD:126:ILE:HG23	3:CD:146:ILE:HG23	1.95	0.47
59:DA:2628:C:O2'	59:DA:2781:A:H3'	2.14	0.47
7:CH:96:GLY:HA2	7:CH:130:GLY:HA3	1.96	0.47
59:BA:190:A:H62	59:BA:206:U:H3	1.62	0.47
15:AP:2:VAL:HG11	20:AA:228:A:O2'	2.14	0.47
2:AC:24:ALA:HB1	2:AC:29:TYR:HB2	1.95	0.47
59:DA:250:G:C6	59:DA:251:A:C2	3.02	0.47
8:AI:117:HIS:CE1	8:AI:123:PRO:HB3	2.49	0.47
20:CA:1177:G:O6	20:CA:1181:G:N7	2.47	0.47
33:DN:3:THR:HG22	33:DN:4:TYR:H	1.77	0.47
29:DG:17:PRO:O	29:DG:21:ARG:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:65:ARG:NH2	59:BA:1334:G:O3'	2.46	0.47
5:CF:5:GLU:HB2	5:CF:91:VAL:HG12	1.96	0.47
41:BV:20:LEU:HG	41:BV:93:GLU:HG3	1.96	0.47
28:BF:83:PHE:CD2	59:BA:1257:C:H4'	2.49	0.47
6:AG:139:GLU:O	6:AG:143:ARG:HG3	2.14	0.47
59:DA:2651:C:H42	59:DA:2669:G:H1	1.61	0.47
52:D8:34:TRP:HB3	59:DA:2420:C:OP1	2.14	0.47
7:AH:107:LEU:HD23	7:AH:107:LEU:H	1.79	0.47
7:CH:88:LYS:NZ	20:CA:877:C:OP1	2.43	0.47
48:B3:40:THR:HG22	48:B3:42:ALA:H	1.79	0.47
59:DA:1954:G:H22	59:DA:1986:A:P	2.36	0.47
59:DA:769:G:H4'	59:DA:1379:A:N6	2.29	0.47
20:CA:1014:A:H2	20:CA:1219:U:H1'	1.77	0.47
25:BC:173:HIS:HE1	59:BA:2176:A:C2	2.33	0.47
20:CA:1123:A:H2	20:CA:1150:U:N3	1.99	0.47
11:AL:36:VAL:H	11:AL:58:VAL:HA	1.78	0.47
25:BC:132:LEU:HB2	25:BC:138:LEU:HB2	1.96	0.47
27:DE:13:ARG:HH21	39:DT:60:THR:HG21	1.80	0.47
20:AA:436:C:H2'	20:AA:437:U:O4'	2.15	0.47
60:DB:30:C:H1'	60:DB:57:A:H61	1.79	0.47
59:BA:1791:A:H61	59:BA:1828:G:HO2'	1.60	0.47
3:CD:175:SER:HB2	3:CD:186:LEU:HD11	1.97	0.47
59:DA:1268:A:H2'	59:DA:1269:A:O4'	2.13	0.47
41:BV:76:LYS:HE2	59:BA:975:G:OP1	2.15	0.47
20:AA:558:G:C8	20:AA:559:A:H2'	2.50	0.47
59:BA:1045:A:OP1	59:BA:1046:A:O2'	2.18	0.47
44:DY:26:LYS:N	44:DY:39:VAL:HG12	2.29	0.47
42:DW:101:SER:O	42:DW:102:HIS:ND1	2.47	0.47
20:AA:1362:C:H2'	20:AA:1362(A):C:H5''	1.97	0.47
23:CY:317:MET:HB3	23:CY:327:PHE:HE2	1.78	0.47
46:B0:11:ARG:HH22	59:BA:2278:A:H3'	1.78	0.47
50:B6:48:VAL:O	50:B6:49:HIS:HB2	2.14	0.47
4:AE:18:ARG:HA	20:AA:15:G:N2	2.28	0.47
52:B8:48:PHE:O	52:B8:49:VAL:HG22	2.14	0.47
10:CK:120:ARG:HH22	20:CA:1525:G:P	2.38	0.47
20:CA:114:U:H2'	20:CA:115:G:H8	1.79	0.47
49:B5:40:LYS:NZ	49:B5:50:GLY:O	2.47	0.47
50:D6:14:THR:O	50:D6:50:ARG:N	2.40	0.47
20:CA:1417:G:H2'	20:CA:1482:G:N2	2.30	0.47
16:AQ:61:GLU:HB2	16:AQ:71:PHE:CE1	2.50	0.47
20:CA:59:A:H3'	20:CA:331:G:H22	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:633:G:H2'	20:CA:634:C:C6	2.50	0.47
26:DD:228:PRO:HB3	59:DA:2598:A:H4'	1.97	0.47
19:AT:22:ARG:HB3	20:AA:324:G:OP1	2.14	0.47
59:DA:2577:A:H5''	59:DA:2578:G:H5'	1.97	0.47
19:AT:12:ALA:O	19:AT:15:ARG:HB2	2.14	0.47
45:DZ:141:VAL:HA	45:DZ:144:LEU:HD23	1.96	0.47
38:BS:77:ALA:HA	38:BS:82:ILE:HD12	1.95	0.47
41:BV:63:GLY:O	41:BV:93:GLU:N	2.38	0.47
14:CO:43:LEU:O	14:CO:45:VAL:N	2.47	0.47
29:BG:4:ASP:HA	29:BG:8:LYS:HD3	1.95	0.47
59:BA:2480:C:OP2	59:BA:2537:U:H4'	2.14	0.47
31:DJ:97:UNK:O	31:DJ:101:UNK:N	2.47	0.47
59:BA:1474:C:H2'	59:BA:1475:G:C8	2.50	0.47
23:AY:420:ASP:O	23:AY:423:LYS:HB3	2.14	0.47
2:CC:177:THR:HB	2:CC:180:ALA:HB2	1.96	0.47
32:BK:102:GLU:O	32:BK:105:LEU:HB3	2.14	0.47
32:DK:22:PRO:HA	32:DK:25:PRO:HD2	1.95	0.47
23:AY:453:GLY:HA3	23:AY:459:LEU:HD11	1.97	0.47
20:AA:59:A:H1'	20:AA:354:G:N2	2.28	0.47
59:BA:708:C:H2'	59:BA:709:U:C6	2.48	0.47
23:CY:165:GLN:HE21	23:CY:260:LEU:HD13	1.79	0.47
59:DA:1005:C:C2	59:DA:1138:G:N2	2.70	0.47
59:DA:1498:C:H2'	59:DA:1499:C:C6	2.48	0.47
59:BA:2514:U:H2'	59:BA:2515:C:H6	1.80	0.47
31:BJ:24:UNK:HA	31:BJ:84:UNK:C	2.45	0.47
59:DA:270(C):A:H3'	59:DA:270(D):C:C6	2.49	0.47
20:AA:112:G:H2'	20:AA:113:G:C8	2.49	0.47
59:BA:2459:A:N1	59:BA:2493:U:O2	2.48	0.47
6:AG:88:PRO:HD2	6:AG:151:TYR:HB2	1.95	0.47
39:DT:53:ARG:HB3	39:DT:53:ARG:CZ	2.39	0.47
44:BY:35:TYR:HD1	44:BY:69:ALA:HB3	1.79	0.47
28:BF:7:TYR:CZ	28:BF:9:ILE:HA	2.49	0.47
14:AO:56:LEU:O	14:AO:60:VAL:HG23	2.15	0.47
1:AB:81:VAL:HG12	1:AB:215:LEU:HD11	1.96	0.47
12:CM:105:THR:HG21	20:CA:951:G:O6	2.14	0.47
59:DA:118:A:H2'	59:DA:120:U:O4	2.14	0.47
32:BK:57:ILE:HA	32:BK:66:THR:O	2.14	0.47
28:BF:154:VAL:O	28:BF:174:VAL:O	2.31	0.47
31:DJ:23:UNK:O	31:DJ:84:UNK:C	2.63	0.47
20:CA:777:A:H2'	20:CA:778:G:C8	2.49	0.47
59:BA:635:C:O2'	59:BA:639:U:H5''	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:95:GLU:O	23:CY:99:ARG:HB2	2.15	0.47
20:AA:427:U:O2'	20:AA:541:G:OP1	2.32	0.47
57:D1:84:GLY:O	57:D1:86:SER:N	2.46	0.47
20:AA:945:G:C2	20:AA:946:A:C8	3.02	0.47
1:CB:111:ARG:HD2	20:CA:1103:C:O2'	2.13	0.47
33:BN:42:TRP:O	40:BU:64:ARG:NE	2.47	0.47
20:AA:68(I):G:C2	20:AA:68(R):C:H1'	2.50	0.47
59:DA:1696:G:N2	59:DA:1977:A:O2'	2.43	0.47
11:CL:33:ARG:NH1	11:CL:61:THR:OG1	2.47	0.47
36:DQ:11:LYS:O	59:DA:911:A:N6	2.43	0.47
7:CH:6:ILE:O	7:CH:10:LEU:HG	2.14	0.47
59:BA:2834:G:H1'	59:BA:2883:A:H61	1.79	0.47
14:CO:64:ARG:NH2	20:CA:582:U:H5'	2.29	0.47
38:BS:25:ARG:HE	38:BS:27:SER:HB2	1.78	0.47
20:AA:1114:C:H2'	20:AA:1115:C:C6	2.49	0.47
3:AD:157:LEU:HA	3:AD:160:GLN:HB2	1.95	0.47
8:CI:37:PHE:CE1	8:CI:77:ILE:HD12	2.48	0.47
59:BA:389:G:C8	59:BA:2413:G:H4'	2.50	0.47
36:BQ:123:HIS:O	36:BQ:123:HIS:ND1	2.47	0.47
59:DA:1299:G:H5'	59:DA:1301:A:O4'	2.14	0.47
26:BD:151:LYS:HZ1	59:BA:2217:G:H21	1.60	0.47
21:CW:38:A:H1'	22:CV:16:A:H2	1.79	0.47
26:BD:163:ALA:HA	26:BD:177:LEU:HA	1.96	0.47
59:BA:751:A:N6	59:BA:789:A:C6	2.82	0.47
59:BA:1709:U:H1'	59:BA:2860:A:N3	2.29	0.47
20:AA:186(N):U:H2'	20:AA:186(O):G:C8	2.49	0.47
59:BA:2102:U:H2'	59:BA:2103:C:C6	2.49	0.47
14:CO:77:ARG:HA	14:CO:80:ALA:HB3	1.97	0.47
32:BK:9:LYS:HB2	32:BK:55:VAL:O	2.14	0.47
59:DA:32:C:N4	59:DA:447:A:OP2	2.47	0.47
30:BH:13:LYS:HB3	30:BH:14:GLY:H	1.52	0.47
59:DA:2863:C:H2'	59:DA:2864:G:O4'	2.15	0.47
20:AA:344:A:P	20:AA:344:A:H8	2.38	0.47
58:B4:8:LYS:HE3	58:B4:8:LYS:HB3	1.73	0.47
26:BD:126:GLN:N	26:BD:126:GLN:OE1	2.46	0.47
4:CE:41:VAL:HG21	4:CE:113:ALA:HB2	1.97	0.47
40:DU:64:ARG:NH2	40:DU:64:ARG:HB2	2.29	0.47
27:BE:67:PHE:CG	27:BE:68:ALA:N	2.81	0.47
59:BA:1529:A:C8	59:BA:1530:G:C8	3.02	0.47
26:DD:50:THR:HA	59:DA:1805:U:O2'	2.15	0.47
59:DA:380:U:H2'	59:DA:381:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BU:95:LEU:HD21	41:BV:13:ARG:HH11	1.79	0.47
25:BC:118:PRO:HD3	25:BC:147:GLY:HA2	1.95	0.47
25:BC:40:GLU:HB3	25:BC:217:THR:C	2.35	0.47
3:AD:8:VAL:HG11	3:AD:115:ARG:HD3	1.94	0.47
59:DA:600:G:H2'	59:DA:601:C:H6	1.80	0.47
20:AA:27:G:H2'	20:AA:28:G:H8	1.80	0.47
11:AL:49:ASN:ND2	20:AA:529:G:O6	2.47	0.47
26:DD:151:LYS:HZ2	59:DA:2217:G:H21	1.61	0.47
59:DA:580:C:H2'	59:DA:581:C:H6	1.79	0.47
14:AO:12:ILE:HG23	14:AO:27:VAL:HG13	1.96	0.47
13:AN:33:VAL:HA	13:AN:40:CYS:HA	1.95	0.47
59:BA:232:G:H22	59:BA:420:C:H5''	1.78	0.47
1:AB:35:GLU:HG3	1:AB:40:HIS:CG	2.50	0.47
20:AA:525:C:H2'	20:AA:526:C:C6	2.49	0.47
47:D2:18:PRO:O	47:D2:21:LEU:HB2	2.14	0.47
59:BA:2229:C:H2'	59:BA:2230:G:C8	2.47	0.47
20:CA:1511:G:H2'	20:CA:1512:U:O4'	2.15	0.47
20:CA:1480:G:H2'	20:CA:1481:U:O4'	2.15	0.47
26:BD:118:VAL:HG13	26:BD:119:ALA:H	1.79	0.47
16:AQ:5:VAL:HG12	16:AQ:59:ILE:O	2.14	0.47
59:BA:1871:A:H2'	59:BA:1872:A:C8	2.49	0.47
26:DD:134:ARG:HG3	26:DD:135:PHE:CD1	2.49	0.47
59:DA:210:C:H2'	59:DA:211:A:C8	2.48	0.47
32:BK:98:ARG:HB2	32:BK:139:VAL:HG23	1.97	0.47
20:CA:198:G:H2'	20:CA:199:G:C8	2.49	0.47
59:BA:2673:G:H2'	59:BA:2674:G:C8	2.49	0.47
34:BO:27:GLY:O	34:BO:29:ASN:N	2.42	0.47
36:BQ:128:LYS:HD2	59:BA:1029:A:H5''	1.95	0.47
20:AA:434:U:H2'	20:AA:435:C:C6	2.49	0.47
43:DX:90:GLU:HA	43:DX:93:GLU:HB2	1.95	0.47
20:CA:1504:G:H4'	20:CA:1505:G:H5'	1.96	0.47
21:CW:38:A:H1'	22:CV:16:A:C2	2.49	0.47
20:CA:942:G:C2	20:CA:1342:C:C2	3.03	0.47
23:AY:121:VAL:O	23:AY:125:ALA:HB2	2.15	0.47
33:BN:17:ASP:OD2	33:BN:18:ALA:N	2.47	0.47
59:BA:669:G:H2'	59:BA:670:A:C8	2.49	0.47
59:BA:2016:U:H5''	59:BA:2058:A:OP1	2.15	0.47
14:CO:82:ILE:HB	14:CO:87:ILE:HG12	1.95	0.47
9:AJ:28:ARG:NH2	9:AJ:34:VAL:O	2.48	0.47
26:DD:118:VAL:HG22	26:DD:119:ALA:N	2.29	0.47
39:DT:121:ILE:O	39:DT:125:ARG:HG2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:12:PRO:HG2	30:DH:49:VAL:HG13	1.97	0.47
59:BA:901:A:H2'	59:BA:902:C:H6	1.79	0.47
1:CB:155:LEU:HD21	1:CB:159:PRO:HG3	1.97	0.47
20:CA:578:C:O2'	20:CA:728:A:N3	2.37	0.47
59:BA:2863:C:H2'	59:BA:2864:G:O4'	2.13	0.47
59:BA:1856:G:H2'	59:BA:1857:G:O4'	2.14	0.47
36:BQ:66:ILE:HG12	36:BQ:66:ILE:O	2.15	0.47
59:BA:1794:U:H2'	59:BA:1795:C:O4'	2.15	0.47
9:CJ:87:THR:O	9:CJ:89:ASP:N	2.47	0.47
26:BD:112:GLN:HB3	26:BD:113:VAL:H	1.48	0.47
46:B0:55:ARG:N	59:BA:2365:G:OP1	2.47	0.47
27:BE:136:ARG:NH1	59:BA:1998:G:OP2	2.48	0.47
59:DA:1153:C:H3'	59:DA:1154:G:C8	2.49	0.47
20:CA:541:G:H2'	20:CA:542:G:H8	1.79	0.47
3:CD:12:CYS:HB3	3:CD:33:MET:SD	2.54	0.47
59:DA:412:A:H3'	59:DA:413:C:C6	2.50	0.47
20:CA:1219:U:H2'	20:CA:1220:G:C8	2.49	0.47
59:BA:2133:G:H2'	59:BA:2157:G:H22	1.78	0.47
59:DA:2093:G:N2	59:DA:2196:C:N3	2.49	0.47
59:DA:226:G:H1'	59:DA:228:A:H61	1.77	0.47
59:DA:392:C:H2'	59:DA:393:C:H6	1.79	0.47
59:BA:2179:C:H2'	59:BA:2180:U:C6	2.49	0.47
23:CY:133:ILE:HG13	23:CY:272:LEU:HD11	1.94	0.47
8:AI:2:GLU:N	8:AI:88:TYR:OH	2.45	0.47
21:AW:58:A:O2'	21:AW:60:U:O5'	2.32	0.47
8:CI:10:ARG:HG2	8:CI:105:ASP:HB2	1.95	0.47
28:DF:176:LEU:HG	28:DF:177:ALA:N	2.29	0.47
23:CY:567:LEU:O	23:CY:568:TYR:HB3	2.15	0.47
32:BK:78:ILE:HD12	32:BK:136:VAL:HG11	1.95	0.47
33:BN:38:HIS:CE1	33:BN:50:ASP:OD2	2.68	0.47
28:BF:170:LEU:HD12	28:BF:172:TRP:HE1	1.79	0.47
52:B8:60:LEU:HB3	52:B8:64:TYR:O	2.15	0.47
61:AY:701:FUA:H231	61:AY:701:FUA:H122	1.95	0.47
60:BB:72:G:H1'	60:BB:104:A:N6	2.29	0.47
59:DA:1028:A:H1'	59:DA:2487:G:H5'	1.94	0.47
51:B7:8:ASN:HB3	51:B7:11:LYS:HB3	1.95	0.47
20:CA:33:A:H5''	20:CA:364:A:H1'	1.95	0.47
15:CP:70:ALA:HA	15:CP:73:LEU:HB2	1.97	0.47
8:CI:127:LYS:HD2	20:CA:966:G:H21	1.79	0.47
48:B3:17:LYS:HB2	59:BA:969:U:OP1	2.14	0.47
20:AA:937:A:O2'	20:AA:1378:C:N4	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:46:ARG:HB3	5:AF:60:PHE:CE1	2.49	0.47
2:AC:22:TRP:HA	9:AJ:93:GLY:HA2	1.97	0.47
32:DK:21:PRO:HA	32:DK:23:VAL:N	2.30	0.47
9:CJ:13:HIS:HA	9:CJ:16:LEU:HD12	1.97	0.47
40:BU:76:TYR:OH	40:BU:93:LYS:NZ	2.47	0.47
7:AH:12:ARG:NH1	7:AH:26:VAL:HG23	2.30	0.47
23:AY:400:GLU:O	23:AY:402:ILE:HG13	2.15	0.47
60:DB:89(B):A:H8	60:DB:89(B):A:O5'	1.97	0.47
59:DA:2529:G:OP2	59:DA:2530:A:H5''	2.14	0.47
40:BU:42:ALA:HB1	59:BA:534:U:H5'	1.97	0.47
19:AT:15:ARG:NH2	20:AA:108:G:N3	2.63	0.47
20:CA:514:C:H2'	20:CA:515:G:H8	1.79	0.47
20:AA:983:A:H2	20:AA:984:C:H5	1.63	0.47
26:BD:145:VAL:HB	26:BD:155:LEU:HB2	1.96	0.47
59:DA:752:A:O3'	59:DA:753:C:H6	1.97	0.47
59:DA:753:C:H2'	59:DA:754:C:H6	1.79	0.47
43:DX:36:LYS:HE2	43:DX:56:THR:HG23	1.96	0.47
29:BG:78:SER:HA	29:BG:83:ARG:HH21	1.78	0.47
34:DO:14:THR:HG23	34:DO:86:ILE:HG13	1.97	0.47
48:D3:41:PRO:HA	48:D3:44:ARG:HB2	1.94	0.47
34:DO:15:GLY:HA3	34:DO:51:ALA:H	1.80	0.47
4:CE:98:THR:HB	4:CE:117:ASP:HB3	1.96	0.47
59:BA:2055:C:H2'	59:BA:2504:U:C5'	2.45	0.47
14:AO:33:THR:OG1	14:AO:85:LEU:HD21	2.15	0.47
39:DT:58:ASN:H	39:DT:58:ASN:HD22	1.63	0.47
10:CK:124:LYS:NZ	10:CK:124:LYS:HB3	2.30	0.47
59:DA:2798:C:H5''	59:DA:2799:A:OP2	2.14	0.47
59:BA:1897:G:H2'	59:BA:1898:U:O4'	2.14	0.47
27:BE:107:THR:HA	27:BE:164:ARG:HA	1.96	0.47
59:BA:1136:G:C4	59:BA:1137:G:C8	3.02	0.47
59:BA:1655:A:H3'	59:BA:1656:C:H6	1.80	0.47
59:BA:2023:G:N1	59:BA:2040:C:C2	2.67	0.47
3:CD:24:GLU:HB2	20:CA:409:G:OP1	2.14	0.47
20:CA:540:G:H2'	20:CA:541:G:O4'	2.14	0.47
59:DA:873:G:H2'	59:DA:874:G:H8	1.80	0.47
31:BJ:52:UNK:N	31:BJ:80:UNK:O	2.48	0.47
23:AY:25:LYS:HG3	62:AY:702:GDP:O2B	2.15	0.47
26:DD:42:GLY:O	26:DD:44:ASN:N	2.41	0.47
20:AA:114:U:H3	20:AA:313:A:H2	1.60	0.47
59:BA:227:A:H5'	59:BA:228:A:C2	2.50	0.47
59:BA:1582:C:H2'	59:BA:1583:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1058:G:H2'	20:CA:1059:C:C6	2.50	0.47
46:D0:23:VAL:HG12	46:D0:38:VAL:HG13	1.95	0.47
33:DN:74:ARG:HH11	33:DN:74:ARG:CG	2.15	0.47
11:CL:86:ARG:C	11:CL:98:TYR:HA	2.35	0.47
11:AL:85:ILE:HD12	11:AL:98:TYR:CB	2.44	0.47
3:AD:26:CYS:HA	3:AD:31:CYS:HA	1.97	0.47
26:DD:48:ARG:HE	59:DA:774:A:H5"	1.80	0.47
44:BY:28:LYS:HD3	44:BY:37:VAL:HG12	1.96	0.47
20:CA:663:A:N6	20:CA:742:G:H1	2.11	0.47
59:DA:600:G:H2'	59:DA:601:C:C6	2.49	0.47
59:DA:1019:U:O2	59:DA:1020:A:C8	2.68	0.47
28:DF:129:PHE:HE1	28:DF:193:VAL:CG1	2.28	0.47
59:BA:861:A:H2'	59:BA:862:G:O4'	2.15	0.47
41:DV:53:GLU:C	41:DV:55:ALA:H	2.18	0.47
26:BD:222:ARG:N	59:BA:1789:A:OP1	2.33	0.47
59:BA:1288:U:H3	59:BA:1326:U:H3	1.63	0.47
38:BS:97:ARG:O	38:BS:100:ALA:N	2.33	0.47
59:BA:1514:U:H2'	59:BA:1515:C:C6	2.49	0.47
41:DV:5:VAL:HG23	41:DV:37:VAL:O	2.14	0.47
23:CY:340:TYR:CZ	23:CY:351:ARG:HB2	2.50	0.47
19:CT:76:ALA:HA	19:CT:79:ARG:NH1	2.30	0.47
32:BK:30:HIS:HE1	32:BK:57:ILE:HG22	1.80	0.47
27:BE:53:PRO:O	27:BE:55:ASN:N	2.47	0.47
20:AA:1504:G:H4'	20:AA:1505:G:C5'	2.44	0.47
13:AN:45:ARG:NH2	20:AA:1059:C:O3'	2.48	0.47
11:AL:80:HIS:NE2	23:AY:425:SER:HB3	2.29	0.47
59:BA:638:G:H2'	59:BA:639:U:H6	1.79	0.47
59:BA:635:C:O2'	59:BA:639:U:OP1	2.29	0.47
26:DD:233:HIS:NE2	26:DD:246:PRO:HA	2.30	0.47
35:DP:46:LYS:HG2	35:DP:51:PHE:CE1	2.50	0.47
20:AA:1414:U:H2'	20:AA:1415:G:C8	2.43	0.47
12:AM:108:ARG:HB2	20:AA:948:C:OP2	2.15	0.47
44:DY:47:LYS:HD2	59:DA:481:G:OP2	2.14	0.47
12:AM:91:ARG:HH21	12:AM:96:LEU:HD13	1.79	0.47
26:BD:242:ARG:NH1	59:BA:1902:C:OP1	2.48	0.47
5:CF:69:GLU:O	5:CF:72:VAL:HG12	2.15	0.47
59:BA:2595:G:O2'	59:BA:2597:G:N7	2.41	0.47
20:CA:1070:U:H3	20:CA:1105:A:N6	2.13	0.47
48:B3:17:LYS:HE2	59:BA:969:U:OP1	2.14	0.47
52:D8:10:ALA:O	52:D8:14:VAL:N	2.48	0.47
20:CA:690:G:H2'	20:CA:691:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:55:ARG:HH11	59:BA:2358:G:H22	1.61	0.47
26:BD:72:LYS:HB3	26:BD:75:ILE:HB	1.97	0.47
59:DA:782:A:H5'	59:DA:1788:C:H1'	1.96	0.47
21:CW:22:G:C8	21:CW:46:G:N1	2.82	0.47
20:AA:137:C:N4	20:AA:226:G:H1	2.12	0.47
35:BP:121:LYS:HA	35:BP:122:PRO:HD3	1.81	0.47
20:CA:68(J):G:N2	20:CA:68(Q):U:H1'	2.29	0.47
12:CM:74:VAL:O	12:CM:78:ILE:HG12	2.14	0.47
59:DA:216:A:H2'	59:DA:217:G:O4'	2.15	0.47
60:DB:13:A:H2'	60:DB:14:U:H5''	1.97	0.47
27:DE:122:PHE:CZ	59:DA:2512:C:H4'	2.49	0.47
16:CQ:29:HIS:CG	16:CQ:32:TYR:HB2	2.50	0.47
9:AJ:92:THR:OG1	9:AJ:93:GLY:N	2.46	0.47
41:DV:78:LYS:H	59:DA:565:C:P	2.37	0.47
59:BA:1128:A:H1'	59:BA:1129:A:C4	2.49	0.47
59:DA:968:G:H2'	59:DA:969:U:O4'	2.15	0.47
37:DR:28:LEU:HG	37:DR:34:ILE:HD13	1.96	0.47
59:BA:1810:A:H2'	59:BA:1811:G:O4'	2.15	0.47
26:BD:9:TYR:CD2	59:BA:727:A:H2	2.32	0.47
42:BW:11:ARG:CZ	42:BW:12:ILE:H	2.28	0.47
42:BW:12:ILE:HD11	42:BW:42:ARG:HH22	1.79	0.47
20:CA:618:C:H42	20:CA:622:A:H62	1.62	0.47
59:BA:1759:A:H4'	59:BA:2715:C:O4'	2.15	0.47
7:CH:79:VAL:O	7:CH:81:HIS:ND1	2.48	0.47
43:BX:34:ALA:O	43:BX:77:LYS:NZ	2.26	0.47
28:DF:125:LEU:HD21	28:DF:199:TRP:HB2	1.96	0.47
49:B5:18:ALA:O	49:B5:21:SER:N	2.38	0.47
8:AI:70:LYS:O	8:AI:73:GLN:HB2	2.14	0.47
59:DA:1476:C:H2'	59:DA:1477:A:H8	1.79	0.47
27:BE:174:ASP:HB3	27:BE:183:LEU:HB2	1.97	0.47
15:AP:6:LEU:HG	15:AP:19:ILE:HD13	1.96	0.47
59:DA:1612:C:H42	59:DA:1619:G:H1	1.62	0.47
51:D7:1:MET:SD	59:DA:752:A:H3'	2.54	0.47
48:D3:19:GLN:NE2	60:DB:83:G:OP1	2.40	0.47
34:BO:23:ARG:NH1	59:BA:2548:G:H1'	2.30	0.47
20:CA:339:C:H6	34:DO:97:ARG:HH12	1.61	0.47
20:CA:813:U:H2'	20:CA:814:A:H8	1.80	0.47
59:DA:2554:U:H2'	59:DA:2555:U:C6	2.50	0.47
59:BA:2537:U:H2'	59:BA:2538:C:C6	2.49	0.47
59:BA:2317:C:H2'	59:BA:2318:G:O4'	2.15	0.47
20:CA:1440(J):C:H1'	20:CA:1440(K):G:N2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:67:LYS:HZ1	59:DA:2685:G:H4'	1.80	0.47
4:AE:30:ALA:O	4:AE:45:PHE:HA	2.15	0.47
8:CI:103:THR:HA	20:CA:1179:A:O3'	2.13	0.47
59:DA:1466:G:H2'	59:DA:1547:C:H41	1.78	0.47
28:DF:80:ALA:HB3	28:DF:83:PHE:CD1	2.49	0.47
10:CK:50:TYR:CG	10:CK:54:ARG:HB3	2.48	0.47
60:BB:79:C:H42	60:BB:97:G:H1	1.63	0.47
59:DA:1810:A:H8	59:DA:1810:A:O5'	1.97	0.47
59:BA:1525:G:H2'	59:BA:1526:G:C8	2.50	0.47
59:BA:341:G:H2'	59:BA:342:G:C8	2.50	0.47
59:BA:694:U:H2'	59:BA:695:G:C8	2.50	0.47
59:BA:730:C:H2'	59:BA:731:C:C6	2.50	0.47
2:AC:40:ARG:HH12	13:AN:52:GLN:HB3	1.80	0.47
46:B0:16:SER:HB2	59:BA:2262:U:OP2	2.15	0.47
27:BE:39:PRO:O	27:BE:43:GLY:N	2.48	0.47
25:DC:29:LEU:O	25:DC:32:GLU:HG3	2.14	0.47
44:DY:8:LYS:H	44:DY:8:LYS:HD2	1.80	0.47
59:BA:1422:G:H2'	59:BA:1423:G:C8	2.50	0.47
1:AB:7:VAL:HA	1:AB:11:LEU:HD12	1.96	0.47
59:BA:1137:G:H2'	59:BA:1138:G:O4'	2.15	0.47
59:BA:2620:C:C2	59:BA:2621:A:C8	3.03	0.47
20:CA:1062:U:H2'	20:CA:1063:C:C6	2.50	0.47
59:DA:2395:C:H2'	59:DA:2396:G:C8	2.49	0.47
40:BU:61:TRP:CD2	40:BU:94:ASN:HA	2.49	0.47
25:BC:75:VAL:HG21	25:BC:154:ILE:HG23	1.96	0.47
25:BC:77:ALA:HA	25:BC:114:VAL:O	2.15	0.47
26:BD:24:ILE:HG12	26:BD:25:THR:H	1.80	0.47
26:DD:157:ARG:NH2	59:DA:1818:U:O5'	2.47	0.47
11:AL:52:LEU:HG	11:AL:54:LYS:NZ	2.29	0.47
59:DA:682:G:H2'	59:DA:683:C:C6	2.50	0.47
59:DA:2469:A:H2	59:DA:2481:G:N2	2.10	0.47
27:BE:131:ALA:HB3	27:BE:134:ILE:HD11	1.97	0.47
35:BP:49:ARG:HB3	52:B8:59:LYS:NZ	2.30	0.47
35:BP:59:LEU:HA	35:BP:61:ARG:CZ	2.45	0.47
57:B1:86:SER:OG	57:B1:90:ILE:HG13	2.14	0.47
26:DD:219:PRO:HB3	59:DA:1790:C:H5'	1.96	0.47
3:AD:172:PRO:HB2	3:AD:187:ARG:HH12	1.80	0.47
18:CS:10:PHE:O	18:CS:39:THR:OG1	2.23	0.47
33:BN:49:GLY:O	33:BN:119:ARG:NH1	2.48	0.47
47:D2:21:LEU:HD23	47:D2:24:LEU:HD12	1.96	0.47
59:BA:569:U:H5''	59:BA:821:A:N1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:766:A:H61	20:CA:1511:G:H1'	1.80	0.47
57:D1:89:GLU:OE2	57:D1:89:GLU:N	2.34	0.47
28:BF:102:PRO:O	28:BF:106:ARG:HG2	2.14	0.47
10:AK:114:VAL:HG13	20:AA:675:A:O2'	2.15	0.47
44:DY:13:VAL:HG22	44:DY:74:PRO:HA	1.96	0.47
18:CS:46:GLY:HA2	18:CS:62:ILE:HG23	1.97	0.47
20:AA:663:A:N6	20:AA:742:G:H1	2.12	0.47
59:DA:2143:C:O2	59:DA:2148:G:N1	2.33	0.47
20:CA:1152:A:H2'	20:CA:1153:C:C6	2.50	0.47
28:BF:136:THR:OG1	59:BA:320:A:H3'	2.15	0.47
1:CB:50:GLU:O	1:CB:53:ARG:N	2.48	0.47
59:DA:2715:C:H2'	59:DA:2716:U:H6	1.80	0.47
20:AA:68(P):C:H2'	20:AA:68(Q):U:C6	2.50	0.47
49:B5:55:ARG:HD2	49:B5:56:LYS:HD2	1.97	0.47
1:CB:20:GLU:HB2	1:CB:190:THR:OG1	2.15	0.47
23:AY:291:GLY:HA2	23:AY:400:GLU:HB2	1.97	0.47
59:DA:111:A:H2'	59:DA:112:U:H6	1.80	0.47
59:BA:2386:C:H2'	59:BA:2387:U:C6	2.50	0.47
19:AT:76:ALA:HB2	20:AA:262:A:H5''	1.95	0.47
23:CY:647:VAL:HG11	23:CY:652:MET:SD	2.54	0.47
59:DA:2720:U:H2'	59:DA:2721:A:C8	2.49	0.47
59:DA:2824:C:H2'	59:DA:2825:U:O4'	2.15	0.47
27:BE:167:VAL:HG13	27:BE:170:LEU:HD11	1.96	0.47
19:CT:30:LYS:O	19:CT:34:LYS:HG3	2.14	0.47
59:BA:1864:U:OP1	59:BA:2410:G:O2'	2.32	0.47
51:B7:19:ARG:HD2	59:BA:124:G:H2'	1.96	0.47
20:AA:1326:C:H2'	20:AA:1327:C:H6	1.78	0.47
23:AY:455:GLY:O	23:AY:458:HIS:HB3	2.15	0.47
23:AY:520:GLY:N	23:AY:562:ASP:OD1	2.47	0.47
20:AA:1353:G:H2'	20:AA:1354:C:H6	1.80	0.47
59:DA:2852:G:H1	59:DA:2865:U:H3	1.61	0.47
27:DE:156:MET:HB2	59:DA:2620:C:H4'	1.96	0.47
59:BA:8:A:C6	59:BA:2895:U:O4	2.67	0.47
59:BA:1448:G:N3	59:BA:1529:A:H2	2.13	0.47
59:BA:1438:U:N3	59:BA:1553:A:C8	2.74	0.47
59:DA:1486:A:H2'	59:DA:1487:G:C8	2.50	0.47
27:DE:61:ARG:HD2	59:DA:2811:G:OP1	2.15	0.47
25:DC:47:LYS:HE3	25:DC:169:THR:O	2.14	0.47
26:BD:269:PHE:HE2	59:BA:2219:G:H4'	1.80	0.47
25:DC:65:LEU:HD13	25:DC:189:ASN:OD1	2.15	0.47
2:AC:72:LYS:HE3	2:AC:75:VAL:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:154:VAL:O	28:DF:156:LEU:N	2.48	0.47
28:DF:154:VAL:H	28:DF:173:VAL:HA	1.80	0.47
20:CA:1228:C:H2'	20:CA:1229:A:C8	2.49	0.47
26:DD:88:ARG:HE	59:DA:1817:G:H5''	1.80	0.47
59:DA:2842:G:H1	59:DA:2875:C:H42	1.62	0.47
28:BF:155:LEU:HD11	28:BF:176:LEU:HD22	1.95	0.47
52:B8:22:VAL:HB	52:B8:53:PRO:HB3	1.97	0.47
60:BB:57:A:H2'	60:BB:58:A:C8	2.49	0.47
59:DA:1668:A:H4'	59:DA:1669:A:H5'	1.97	0.47
59:DA:2134:A:C2	59:DA:2159:G:H1'	2.50	0.47
44:BY:44:ILE:O	44:BY:62:GLU:HB3	2.15	0.47
59:BA:2851:A:H2'	59:BA:2852:G:O4'	2.15	0.47
20:AA:627:G:H2'	20:AA:628:G:C8	2.49	0.47
50:D6:5:VAL:HG13	50:D6:6:ARG:O	2.14	0.47
59:DA:869:G:H2'	59:DA:870:A:O4'	2.15	0.47
20:AA:862:C:H42	20:AA:867:G:H1	1.61	0.47
2:CC:7:PRO:HG3	2:CC:201:TYR:OH	2.15	0.47
34:BO:18:LYS:N	34:BO:45:GLU:O	2.46	0.47
50:D6:36:LEU:HD12	50:D6:49:HIS:O	2.15	0.47
20:CA:781:A:H4'	20:CA:1522:U:O2'	2.14	0.47
59:DA:1858:G:H1'	59:DA:1884:A:H61	1.78	0.47
16:AQ:57:VAL:HG23	16:AQ:59:ILE:HG13	1.96	0.47
20:CA:68(H):G:H2'	20:CA:68(I):G:N7	2.30	0.47
20:AA:1230:C:H2'	20:AA:1231:G:C8	2.49	0.47
35:BP:109:GLY:O	35:BP:111:ARG:N	2.47	0.47
7:AH:9:MET:HB2	7:AH:26:VAL:HG21	1.97	0.47
59:BA:2700:C:H2'	59:BA:2701:C:H6	1.79	0.47
59:BA:2590:A:H2'	59:BA:2591:C:H6	1.80	0.47
20:AA:1534:A:H2'	20:AA:1535:C:H6	1.80	0.47
3:CD:105:VAL:HG21	3:CD:126:ILE:HG13	1.97	0.47
42:DW:86:LEU:HD12	42:DW:87:PRO:HD2	1.97	0.47
3:CD:86:LYS:HD3	3:CD:87:GLY:H	1.80	0.47
59:BA:2294:C:H2'	59:BA:2295:C:H6	1.80	0.47
59:BA:2155:G:H3'	59:BA:2156:G:H8	1.78	0.47
59:DA:1406:U:H2'	59:DA:1407:C:C6	2.50	0.47
19:AT:16:HIS:O	19:AT:20:LEU:HG	2.15	0.47
58:D4:13:ARG:O	58:D4:31:ILE:HG22	2.15	0.47
20:CA:157:G:H1	20:CA:164:U:H3	1.63	0.47
8:CI:28:VAL:HG12	8:CI:63:ILE:HB	1.97	0.47
42:BW:23:LEU:HD21	49:B5:28:PRO:HD3	1.96	0.47
59:DA:36:G:H4'	59:DA:451:C:C2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:492:A:H2'	59:DA:493:G:O4'	2.15	0.47
20:AA:1328:C:H2'	20:AA:1329:A:O4'	2.14	0.47
23:AY:438:PHE:HB2	23:AY:452:SER:O	2.15	0.47
14:CO:17:ARG:CZ	14:CO:17:ARG:HA	2.45	0.47
23:CY:392:GLU:CD	23:CY:392:GLU:H	2.18	0.47
20:AA:259:G:H2'	20:AA:260:G:C8	2.50	0.47
59:DA:1859:A:H2'	59:DA:1860:G:O4'	2.15	0.47
20:CA:320:C:H2'	20:CA:321:A:C8	2.50	0.47
59:DA:1631:A:C5	59:DA:1683:C:H5'	2.50	0.47
59:DA:2820:A:O2'	59:DA:2821:A:OP1	2.26	0.47
59:DA:1408:C:H2'	59:DA:1409:C:C6	2.50	0.47
29:BG:114:ILE:HB	29:BG:117:PHE:HB2	1.97	0.47
50:B6:37:ARG:NH2	59:BA:2344:U:O2	2.43	0.47
59:BA:2134:A:N3	59:BA:2134:A:H2'	2.30	0.47
20:CA:1413:A:N1	20:CA:1487:G:N2	2.49	0.47
1:CB:71:VAL:HG22	1:CB:93:VAL:CG2	2.45	0.47
20:AA:702:A:N1	59:BA:1846:G:N2	2.56	0.47
25:BC:139:PRO:HA	25:BC:145:THR:CB	2.42	0.47
2:CC:19:GLU:O	2:CC:56:ASP:HA	2.14	0.47
59:DA:401:A:H61	59:DA:422:A:N6	2.03	0.47
59:DA:2175:C:H2'	59:DA:2176:A:C8	2.50	0.47
25:DC:117:THR:O	25:DC:121:MET:HB2	2.15	0.47
26:DD:151:LYS:NZ	59:DA:2217:G:H21	2.13	0.47
42:DW:11:ARG:O	42:DW:100:THR:HA	2.14	0.47
59:DA:859:G:O2'	59:DA:916:G:O6	2.22	0.47
28:BF:191:ARG:HB3	28:BF:193:VAL:CG2	2.45	0.47
57:D1:11:ARG:HB2	57:D1:12:PRO:HD2	1.97	0.47
20:CA:1338:G:H21	21:CW:41:A:H1'	1.80	0.47
20:CA:501:C:H2'	20:CA:502:G:C8	2.50	0.47
26:DD:219:PRO:HG3	59:DA:764:A:H2	1.80	0.47
47:D2:13:ALA:O	47:D2:21:LEU:HD21	2.15	0.47
52:B8:15:LYS:HB2	52:B8:46:ARG:HH22	1.80	0.47
20:CA:186(F):C:N4	20:CA:186(K):G:H1	2.08	0.47
5:CF:72:VAL:HG13	5:CF:73:ASN:H	1.80	0.47
59:BA:291:C:N4	59:BA:349:G:H1	2.13	0.47
59:DA:734:A:H2'	59:DA:735:A:C8	2.45	0.47
59:BA:373:U:H2'	59:BA:374:A:H8	1.78	0.47
59:DA:573:G:N2	59:DA:2031:A:OP2	2.46	0.47
59:BA:2211:G:H4'	59:BA:2212:A:C5	2.50	0.47
59:DA:853:G:H2'	59:DA:854:G:C8	2.49	0.47
59:DA:211:A:H2'	59:DA:212:G:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:114:ILE:O	35:BP:131:SER:HB3	2.15	0.47
20:AA:68(O):A:C8	20:AA:68(P):C:H1'	2.50	0.47
36:BQ:46:GLN:NE2	59:BA:2484:G:O3'	2.48	0.47
1:CB:103:THR:HB	20:CA:1074:G:H4'	1.96	0.47
23:CY:661:SER:OG	59:DA:2660:A:N6	2.47	0.47
18:AS:64:GLU:O	18:AS:66:MET:N	2.43	0.47
26:DD:30:GLU:N	26:DD:30:GLU:OE2	2.47	0.47
59:BA:711:G:H2'	59:BA:712:G:H8	1.80	0.47
52:B8:12:LYS:NZ	59:BA:246:C:H41	2.13	0.47
17:CR:71:LYS:O	17:CR:75:ILE:HG13	2.15	0.47
5:CF:12:PRO:HB3	5:CF:58:GLY:N	2.29	0.47
6:AG:118:VAL:HG13	6:AG:122:HIS:CE1	2.49	0.47
19:CT:16:HIS:CE1	20:CA:333:G:H4'	2.50	0.47
20:CA:243:A:H4'	20:CA:244:U:O5'	2.15	0.47
59:BA:2330:G:H1	59:BA:2385:C:H42	1.63	0.47
59:BA:1171:G:H2'	59:BA:1173:G:O4'	2.14	0.47
35:BP:83:VAL:HG23	35:BP:105:LEU:HD22	1.97	0.47
59:DA:1424:G:H2'	59:DA:1425:G:O4'	2.15	0.47
59:DA:1332:G:N2	59:DA:1609:A:O2'	2.48	0.47
23:AY:416:LYS:HE2	23:AY:416:LYS:HB3	1.66	0.47
25:BC:21:TYR:HE2	25:BC:29:LEU:HD22	1.80	0.47
13:AN:43:CYS:O	13:AN:46:GLU:HG2	2.15	0.47
23:AY:475:ASN:OD1	23:AY:475:ASN:N	2.47	0.47
38:DS:39:ILE:HD13	38:DS:73:LEU:HD21	1.97	0.47
59:DA:1479:G:H5''	59:DA:1560:G:H4'	1.97	0.46
59:DA:1115:G:H2'	59:DA:1116:C:H6	1.79	0.46
59:BA:515:A:H1'	59:BA:581:C:H1'	1.95	0.46
59:BA:2456:C:H2'	59:BA:2457:U:O4'	2.16	0.46
29:DG:42:GLY:HA2	29:DG:88:ILE:O	2.14	0.46
31:DJ:58:UNK:O	31:DJ:60:UNK:N	2.48	0.46
60:DB:24:G:H4'	60:DB:25:A:C8	2.50	0.46
60:DB:24:G:N2	60:DB:28:C:O2	2.48	0.46
60:DB:24:G:O6	60:DB:56:G:N3	2.46	0.46
1:AB:69:LEU:H	1:AB:163:PHE:N	2.12	0.46
25:DC:14:LYS:HB3	25:DC:14:LYS:HE2	1.63	0.46
40:BU:3:ARG:NH1	59:BA:446:G:H5'	2.29	0.46
59:BA:813:U:H2'	59:BA:814:C:C6	2.50	0.46
59:BA:191:A:H2'	59:BA:192:C:C6	2.50	0.46
59:DA:1512:G:H2'	59:DA:1513:C:O4'	2.15	0.46
31:DJ:54:UNK:N	31:DJ:79:UNK:HA	2.30	0.46
33:BN:116:LEU:O	33:BN:119:ARG:HB2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DQ:41:TRP:HA	36:DQ:95:ALA:O	2.15	0.46
13:AN:17:LYS:HD2	20:AA:1316:G:H5''	1.97	0.46
36:DQ:72:LYS:HA	36:DQ:73:PRO:HD3	1.75	0.46
12:AM:125:ARG:HH12	20:AA:953:G:H5'	1.80	0.46
53:D9:16:VAL:HG13	53:D9:23:VAL:HG13	1.96	0.46
4:AE:126:ARG:HD3	20:AA:10:A:OP2	2.16	0.46
20:CA:1494:G:H2'	20:CA:1495:U:C6	2.49	0.46
20:AA:1157:A:H4'	20:AA:1158:C:O5'	2.16	0.46
59:DA:185:U:H2'	59:DA:186:G:C8	2.50	0.46
21:AW:56:C:H5'	25:BC:134:PRO:HB3	1.97	0.46
59:BA:2064:C:H1'	59:BA:2450:A:C6	2.49	0.46
47:B2:48:HIS:CG	47:B2:49:LYS:H	2.32	0.46
49:D5:6:VAL:HG12	59:DA:2016:U:H1'	1.95	0.46
59:BA:1806:C:H2'	59:BA:1807:G:O4'	2.15	0.46
20:AA:971:G:N1	20:AA:1363:A:OP2	2.44	0.46
59:DA:883:G:H2'	59:DA:884:C:C6	2.50	0.46
59:DA:2594:C:H2'	59:DA:2595:G:C8	2.50	0.46
42:BW:64:MET:HB3	42:BW:109:GLU:HB3	1.98	0.46
29:DG:33:ARG:HB2	29:DG:33:ARG:HE	1.37	0.46
12:AM:14:ARG:HB2	12:AM:17:VAL:HG23	1.97	0.46
60:BB:19:G:H2'	60:BB:20:C:O4'	2.15	0.46
30:BH:55:PRO:HG2	30:BH:61:HIS:CE1	2.50	0.46
47:D2:55:ARG:NH1	59:DA:75:G:H4'	2.30	0.46
2:AC:35:GLU:O	2:AC:39:ILE:HG13	2.15	0.46
59:DA:27:G:O5'	59:DA:27:G:H8	1.98	0.46
20:AA:694:A:H2'	20:AA:695:A:O4'	2.15	0.46
60:BB:97:G:H2'	60:BB:98:G:O4'	2.15	0.46
59:DA:488:G:H1'	59:DA:492:A:N6	2.30	0.46
4:CE:51:VAL:HG23	4:CE:52:PRO:HD3	1.97	0.46
59:DA:501:A:H2'	59:DA:502:A:C8	2.49	0.46
59:DA:1932:A:H2'	59:DA:1933:G:O4'	2.15	0.46
5:CF:1:MET:HA	5:CF:68:PRO:HA	1.96	0.46
23:AY:179:ASP:N	23:AY:184:LYS:O	2.36	0.46
59:BA:742:G:H2'	59:BA:743:G:C8	2.51	0.46
2:CC:4:LYS:HZ3	20:CA:1191:A:H4'	1.80	0.46
59:DA:2494:G:H2'	59:DA:2495:G:H8	1.80	0.46
43:BX:12:VAL:HG11	43:BX:21:PHE:CZ	2.50	0.46
23:AY:615:GLU:HG2	23:AY:615:GLU:H	1.44	0.46
20:AA:175:C:H2'	20:AA:176:C:H6	1.80	0.46
6:AG:32:ARG:HG2	20:AA:1240:U:C2	2.50	0.46
59:DA:1007:C:H5''	59:DA:1008:C:C2'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2103:C:N3	59:DA:2186:G:N2	2.48	0.46
59:BA:2785:C:H2'	59:BA:2786:U:O4'	2.15	0.46
31:BJ:82:UNK:O	31:BJ:84:UNK:N	2.48	0.46
20:AA:113:G:H2'	20:AA:114:U:H6	1.79	0.46
57:D1:16:ASN:HB3	59:DA:381:G:H5''	1.98	0.46
57:D1:16:ASN:O	59:DA:381:G:H5'	2.16	0.46
59:DA:227:A:H61	59:DA:410:G:H21	1.63	0.46
59:BA:450:G:N1	59:BA:454:A:OP2	2.48	0.46
11:AL:36:VAL:O	11:AL:37:CYS:HB3	2.15	0.46
11:AL:38:THR:HG22	11:AL:57:LYS:HB2	1.96	0.46
29:DG:87:PRO:HB2	29:DG:88:ILE:H	1.53	0.46
25:DC:45:HIS:CD2	59:DA:2177:C:H1'	2.50	0.46
59:DA:2472:G:H21	59:DA:2478:A:N6	2.05	0.46
28:DF:167:ALA:HB1	28:DF:173:VAL:HG11	1.97	0.46
28:DF:7:TYR:CZ	28:DF:9:ILE:HA	2.50	0.46
40:DU:52:ARG:O	40:DU:56:ASP:HB2	2.14	0.46
32:BK:31:GLY:HA3	32:BK:63:ARG:HG3	1.96	0.46
28:BF:62:ARG:HH21	28:BF:64:ILE:HA	1.80	0.46
59:DA:764:A:O2'	59:DA:765:G:H5'	2.15	0.46
59:BA:638:G:H2'	59:BA:639:U:C6	2.50	0.46
36:DQ:92:GLY:O	36:DQ:94:VAL:HG13	2.15	0.46
20:CA:1537:U:O2'	20:CA:1538:C:OP1	2.29	0.46
45:BZ:10:ARG:HB3	45:BZ:36:LYS:HG3	1.96	0.46
20:CA:390:C:H2'	20:CA:391:G:H8	1.79	0.46
20:CA:1407:C:O2'	59:DA:1912:A:N1	2.33	0.46
20:CA:62:U:H2'	20:CA:63:C:C6	2.50	0.46
15:AP:53:VAL:O	15:AP:57:ARG:HD3	2.15	0.46
20:AA:1376:U:H2'	20:AA:1377:A:H8	1.78	0.46
26:BD:118:VAL:O	26:BD:129:ASN:HA	2.14	0.46
59:DA:2646:C:H2'	59:DA:2647:U:O4'	2.16	0.46
2:AC:163:ALA:CB	20:AA:1056:U:H4'	2.44	0.46
9:AJ:91:PRO:HB2	9:AJ:94:VAL:HB	1.96	0.46
59:BA:2733:A:H3'	59:BA:2734:A:H8	1.80	0.46
20:AA:1401:G:H5''	22:AV:22:A:N6	2.30	0.46
59:DA:2869:G:H2'	59:DA:2870:C:H6	1.79	0.46
26:DD:115:GLN:OE1	26:DD:117:VAL:HG13	2.15	0.46
25:DC:135:ARG:HD2	59:DA:2170:A:H5'	1.97	0.46
59:BA:686:G:H21	59:BA:788:A:H61	1.62	0.46
59:DA:609(B):G:O6	59:DA:618(B):C:N3	2.49	0.46
15:CP:22:THR:OG1	15:CP:23:ASP:N	2.45	0.46
59:BA:1914:C:H3'	59:BA:1915:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1468:C:H2'	59:DA:1469:A:C8	2.50	0.46
28:DF:15:SER:O	28:DF:17:ARG:N	2.48	0.46
59:BA:2154:G:H2'	59:BA:2155:G:H8	1.80	0.46
10:CK:46:GLY:HA2	10:CK:50:TYR:O	2.14	0.46
59:BA:345:A:N3	59:BA:347:A:N6	2.63	0.46
39:DT:76:PHE:HA	39:DT:77:PRO:HD3	1.64	0.46
45:DZ:120:ILE:HG22	45:DZ:121:HIS:ND1	2.30	0.46
7:CH:39:LEU:HB3	7:CH:45:ILE:HG12	1.96	0.46
20:CA:638:G:H2'	20:CA:639:G:O4'	2.14	0.46
20:CA:1090:U:H2'	20:CA:1091:U:C6	2.50	0.46
59:DA:622:G:H2'	59:DA:623:G:C8	2.51	0.46
20:CA:917:G:H2'	20:CA:918:A:O4'	2.16	0.46
32:DK:13:PRO:HG3	32:DK:52:ILE:HG23	1.97	0.46
3:CD:51:PRO:HB2	3:CD:56:VAL:HG13	1.96	0.46
59:DA:2423:U:OP1	59:DA:2423:U:H3'	2.15	0.46
59:BA:1609:A:O2'	59:BA:1610:A:O5'	2.29	0.46
12:CM:56:LEU:O	12:CM:60:VAL:HG23	2.15	0.46
59:BA:2819:G:H2'	59:BA:2821:A:N7	2.31	0.46
59:DA:1409:C:H2'	59:DA:1410:G:H8	1.81	0.46
59:BA:980:A:C4	59:BA:1136:G:O4'	2.68	0.46
59:DA:850:C:H2'	59:DA:851:U:O4'	2.16	0.46
59:BA:2158:A:H4'	59:BA:2159:G:H5'	1.97	0.46
42:BW:79:GLY:C	59:BA:25:U:H4'	2.35	0.46
25:BC:46:ALA:O	25:BC:171:ALA:N	2.48	0.46
20:CA:700:G:H4'	20:CA:704:A:H1'	1.96	0.46
33:DN:67:LEU:HA	33:DN:87:LEU:HD13	1.97	0.46
11:CL:82:VAL:HG12	11:CL:82:VAL:O	2.16	0.46
20:AA:413:G:H1'	20:AA:428:G:N2	2.30	0.46
1:AB:70:PHE:O	1:AB:93:VAL:N	2.48	0.46
23:CY:525:PHE:HE2	23:CY:567:LEU:HD22	1.79	0.46
40:DU:95:LEU:HD11	41:DV:13:ARG:HB2	1.97	0.46
40:DU:92:ARG:HH12	41:DV:13:ARG:N	2.14	0.46
59:BA:2006:C:C2	59:BA:2007:C:C5	3.03	0.46
34:BO:104:ARG:NE	39:BT:33:LYS:HD2	2.29	0.46
38:BS:15:ARG:HB2	38:BS:18:ILE:HB	1.97	0.46
30:BH:148:ILE:HG22	30:BH:162:ILE:HD13	1.98	0.46
59:DA:2216:G:H2'	59:DA:2217:G:C8	2.49	0.46
59:DA:2330:G:H2'	59:DA:2331:G:O4'	2.15	0.46
59:DA:2385:C:H2'	59:DA:2386:C:C6	2.50	0.46
47:B2:26:ARG:O	47:B2:29:LYS:HB2	2.14	0.46
59:BA:1771:C:N4	59:BA:1980:G:H1	2.11	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:118:LYS:O	8:AI:120:ARG:N	2.48	0.46
49:D5:16:ARG:NH1	59:DA:517:C:OP1	2.46	0.46
59:BA:848:G:N3	59:BA:933:A:H1'	2.30	0.46
20:AA:976:G:H5'	20:AA:1358:U:O2'	2.14	0.46
12:CM:100:GLY:HA3	20:CA:1322:C:H5'	1.96	0.46
36:DQ:52:VAL:HG11	59:DA:2482:G:H22	1.79	0.46
46:D0:67:VAL:HG13	46:D0:81:VAL:HG22	1.97	0.46
46:D0:48:GLY:HA3	46:D0:80:HIS:HD1	1.80	0.46
20:AA:1304:G:H1'	20:AA:1333:A:N6	2.30	0.46
28:BF:63:LYS:HZ2	28:BF:66:PRO:C	2.18	0.46
12:AM:96:LEU:HD11	20:AA:1226:C:H5''	1.98	0.46
59:DA:867:C:N3	59:DA:912:C:O2'	2.40	0.46
36:BQ:69:PHE:CZ	59:BA:871:U:H5''	2.50	0.46
59:BA:1960:A:H2'	59:BA:1961:C:C6	2.50	0.46
59:BA:2838:G:H2'	59:BA:2839:G:C8	2.50	0.46
59:DA:1576:U:H2'	59:DA:1577:C:C6	2.50	0.46
1:CB:218:ALA:O	1:CB:221:LEU:HB3	2.15	0.46
7:CH:64:LYS:HB2	7:CH:64:LYS:HE3	1.68	0.46
20:CA:659:U:H3	20:CA:746:A:H61	1.63	0.46
36:BQ:123:HIS:NE2	59:BA:2466:C:O2'	2.40	0.46
59:DA:1549:C:H2'	59:DA:1550:C:O4'	2.15	0.46
25:DC:20:VAL:HG11	25:DC:226:ASN:HB2	1.96	0.46
59:BA:2298:A:H62	59:BA:2318:G:H21	1.63	0.46
59:BA:270(G):U:H2'	59:BA:270(H):C:C6	2.51	0.46
20:AA:660:G:H2'	20:AA:661:G:C8	2.51	0.46
23:AY:238:THR:O	23:AY:241:GLU:HG2	2.16	0.46
36:BQ:121:ALA:O	36:BQ:125:LEU:HD12	2.15	0.46
7:CH:115:SER:HA	20:CA:642:A:C5	2.49	0.46
1:AB:113:HIS:O	1:AB:117:GLU:HG2	2.16	0.46
59:DA:2758:A:H2'	59:DA:2759:G:O4'	2.14	0.46
59:BA:2231:C:H2'	59:BA:2232:U:C6	2.50	0.46
38:DS:31:SER:O	38:DS:33:LYS:N	2.46	0.46
59:DA:398:G:H2'	59:DA:399:G:C8	2.51	0.46
12:AM:66:LEU:HB3	12:AM:67:GLU:H	1.53	0.46
59:DA:1847:A:OP1	59:DA:1847:A:H8	1.98	0.46
26:DD:87:ASN:N	26:DD:87:ASN:OD1	2.49	0.46
20:AA:614:A:H2'	20:AA:615:C:C6	2.51	0.46
33:BN:103:VAL:O	33:BN:105:GLY:N	2.49	0.46
59:DA:1582:C:H2'	59:DA:1583:A:O4'	2.15	0.46
59:DA:1288:U:O4	59:DA:1327:C:H1'	2.14	0.46
59:DA:2432:A:H2'	59:DA:2432:A:N3	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:959:A:O2'	59:BA:2457:U:O3'	2.32	0.46
59:BA:68:G:H2'	59:BA:69:C:O4'	2.16	0.46
41:BV:38:LEU:O	41:BV:39:LEU:HD13	2.14	0.46
59:BA:1595:G:H2'	59:BA:1596:A:H8	1.80	0.46
20:AA:405:U:H5''	20:AA:406:G:O4'	2.15	0.46
26:BD:175:LEU:HD12	26:BD:185:VAL:HG21	1.97	0.46
14:AO:48:LYS:HB3	20:AA:668:G:H4'	1.96	0.46
38:BS:66:ALA:HB1	38:BS:99:LYS:HD2	1.98	0.46
59:BA:1086:A:H4'	59:BA:1103:A:H2	1.80	0.46
20:CA:519:C:N4	20:CA:520:A:N1	2.63	0.46
28:BF:154:VAL:H	28:BF:173:VAL:HA	1.81	0.46
33:BN:34:LEU:O	33:BN:49:GLY:HA3	2.15	0.46
52:B8:61:LEU:HD21	59:BA:593:G:H4'	1.98	0.46
23:AY:309:LEU:O	23:AY:394:ALA:HB1	2.16	0.46
23:AY:93:GLU:OE1	23:AY:97:SER:OG	2.32	0.46
59:DA:1474:C:N4	59:DA:1519:G:H1	2.10	0.46
23:AY:621:ILE:HD11	23:AY:643:ILE:HG12	1.96	0.46
59:DA:820:A:H1'	59:DA:943:U:H1'	1.96	0.46
23:AY:354:ARG:NH2	23:AY:378:VAL:HG21	2.31	0.46
20:CA:756:C:O2'	20:CA:878:G:N2	2.48	0.46
23:AY:29:THR:HG22	23:AY:33:LEU:HD13	1.97	0.46
49:D5:6:VAL:HG13	59:DA:2015:A:N3	2.29	0.46
59:DA:2848:G:O2'	59:DA:2867:G:N2	2.48	0.46
20:CA:149:A:H2'	20:CA:150:C:C6	2.51	0.46
11:AL:15:ARG:NH2	20:AA:567:G:N7	2.63	0.46
34:DO:11:ALA:O	34:DO:98:VAL:HA	2.15	0.46
28:DF:125:LEU:HD22	28:DF:196:LEU:HA	1.98	0.46
59:BA:841:A:H2'	59:BA:842:G:C8	2.50	0.46
15:AP:8:ARG:HA	15:AP:17:TYR:HA	1.97	0.46
14:AO:50:HIS:CG	20:AA:764:C:H5''	2.51	0.46
59:BA:1413:G:H2'	59:BA:1414:G:H8	1.80	0.46
59:DA:244:A:H2'	59:DA:245:G:O4'	2.16	0.46
31:DJ:34:UNK:N	59:DA:1056:G:OP1	2.49	0.46
59:BA:730:C:H2'	59:BA:731:C:H6	1.80	0.46
59:BA:804:A:H5''	59:BA:805:G:OP1	2.15	0.46
43:BX:89:ILE:HG22	43:BX:92:LEU:H	1.81	0.46
19:AT:53:LEU:HA	19:AT:56:MET:HB2	1.96	0.46
1:CB:169:LYS:O	1:CB:172:ILE:HG12	2.15	0.46
35:DP:77:ARG:NH2	59:DA:633:A:OP1	2.49	0.46
59:DA:46:C:H2'	59:DA:47:C:C6	2.50	0.46
36:DQ:111:GLU:O	36:DQ:115:MET:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DY:87:LYS:O	44:DY:89:PHE:N	2.49	0.46
59:BA:1408:C:H2'	59:BA:1409:C:C6	2.49	0.46
27:DE:57:LYS:HD2	27:DE:57:LYS:H	1.79	0.46
59:DA:1211:U:O2'	59:DA:1212:G:OP1	2.31	0.46
20:AA:1501:C:OP1	20:AA:1508:G:H4'	2.15	0.46
58:B4:14:ILE:HA	58:B4:32:TYR:HA	1.98	0.46
20:CA:408:A:N1	20:CA:434:U:C4	2.84	0.46
3:CD:31:CYS:HB3	3:CD:33:MET:HG2	1.97	0.46
59:DA:1880:C:H2'	59:DA:1881:C:C6	2.49	0.46
59:DA:2078:C:H2'	59:DA:2079:U:C6	2.50	0.46
59:BA:2577:A:H5''	59:BA:2578:G:H5'	1.97	0.46
20:CA:302:G:O2'	20:CA:556:C:H5''	2.16	0.46
40:BU:61:TRP:O	40:BU:65:ILE:HD13	2.15	0.46
40:BU:50:ARG:NH2	41:BV:72:VAL:HG12	2.21	0.46
26:DD:78:LYS:HZ1	26:DD:98:VAL:HG13	1.80	0.46
25:BC:73:VAL:HG11	25:BC:157:ILE:HG22	1.97	0.46
1:AB:69:LEU:H	1:AB:162:ILE:HA	1.81	0.46
1:AB:77:ALA:O	1:AB:81:VAL:HG13	2.15	0.46
59:BA:1789:A:H2'	59:BA:1790:C:O4'	2.16	0.46
59:DA:1195:G:H2'	59:DA:1196:C:H6	1.81	0.46
11:AL:71:PRO:HB2	11:AL:102:ARG:NH1	2.24	0.46
38:BS:18:ILE:HA	38:BS:21:THR:OG1	2.16	0.46
39:BT:49:VAL:HG22	39:BT:50:ILE:H	1.80	0.46
59:BA:401:A:H2'	59:BA:402:A:H8	1.79	0.46
59:BA:371:A:N6	59:BA:402:A:OP2	2.46	0.46
13:AN:29:ARG:NH2	20:AA:974:A:OP2	2.47	0.46
52:B8:55:ALA:O	52:B8:59:LYS:HB2	2.16	0.46
12:AM:115:LYS:N	20:AA:1228:C:H5'	2.31	0.46
18:CS:41:VAL:N	18:CS:67:VAL:O	2.49	0.46
59:DA:1902:C:H2'	59:DA:1903:G:O4'	2.15	0.46
36:BQ:48:GLU:O	36:BQ:52:VAL:HG23	2.16	0.46
20:CA:980:C:H5'	20:CA:981:U:C5	2.50	0.46
57:B1:45:ASN:ND2	59:BA:2230:G:H1'	2.30	0.46
49:B5:11:THR:HG21	49:B5:19:ARG:HH22	1.81	0.46
23:CY:330:VAL:O	23:CY:331:TYR:HB2	2.16	0.46
10:CK:114:VAL:HG13	20:CA:675:A:O2'	2.15	0.46
50:B6:27:LYS:HD2	50:B6:30:THR:H	1.80	0.46
15:CP:70:ALA:O	15:CP:74:LEU:HG	2.15	0.46
59:DA:1949:G:H1	59:DA:1957:C:H42	1.63	0.46
20:AA:1339:A:H4'	21:AW:40:G:O2'	2.15	0.46
59:DA:131:G:H1	59:DA:148:C:N4	2.11	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1430:C:C2'	20:CA:1431:C:H5'	2.46	0.46
4:CE:79:GLU:HA	4:CE:91:LEU:O	2.15	0.46
16:CQ:45:HIS:CB	16:CQ:72:ARG:HA	2.45	0.46
51:B7:10:ARG:HH12	59:BA:770:G:H4'	1.81	0.46
27:DE:53:PRO:HA	27:DE:74:PRO:HA	1.96	0.46
42:BW:82:LEU:O	42:BW:97:LYS:HA	2.16	0.46
20:AA:745:C:H5''	20:AA:851:G:O2'	2.15	0.46
59:BA:1027:A:C6	59:BA:1126:A:C4	3.04	0.46
59:BA:594:U:H2'	59:BA:595:C:C6	2.50	0.46
59:DA:1983:C:H4'	59:DA:2606:C:H4'	1.96	0.46
59:DA:2299:G:H2'	59:DA:2300:G:C8	2.50	0.46
59:DA:325:G:H2'	59:DA:326:G:C8	2.51	0.46
6:CG:64:GLN:HG3	6:CG:128:ALA:HB1	1.98	0.46
59:BA:1731:G:HO2'	59:BA:1732:A:H8	1.58	0.46
59:DA:1972:A:H2'	59:DA:1973:G:C8	2.49	0.46
60:DB:4:C:H2'	60:DB:5:C:H6	1.80	0.46
14:CO:87:ILE:HG13	14:CO:88:ARG:N	2.30	0.46
3:CD:87:GLY:HA3	3:CD:92:VAL:HG21	1.98	0.46
20:CA:509:A:N3	20:CA:543:C:O2'	2.33	0.46
59:BA:1526:G:H1	59:BA:154(B):C:H42	1.63	0.46
59:BA:1332:G:N2	59:BA:1610:A:N7	2.61	0.46
1:AB:113:HIS:O	1:AB:116:GLU:HG2	2.15	0.46
44:DY:89:PHE:HA	44:DY:89:PHE:HD1	1.65	0.46
34:BO:36:GLY:HA2	34:BO:106:LEU:HG	1.97	0.46
59:DA:1690:A:H2'	59:DA:1691:C:O4'	2.15	0.46
26:DD:7:LYS:HG3	59:DA:706:A:H5'	1.98	0.46
47:D2:27:GLU:O	47:D2:30:ARG:HG2	2.16	0.46
35:DP:104:GLY:O	59:DA:625:G:N2	2.46	0.46
19:AT:62:LEU:HA	19:AT:65:LYS:HG2	1.97	0.46
59:DA:1463:C:H2'	59:DA:1464:C:C6	2.51	0.46
6:AG:38:LEU:O	6:AG:42:ILE:HG12	2.15	0.46
15:CP:15:PRO:HD2	15:CP:42:ARG:NE	2.31	0.46
59:DA:1955:U:O2'	59:DA:1956:U:H5'	2.15	0.46
59:DA:388:G:H5'	59:DA:389:G:OP2	2.16	0.46
59:BA:1007:C:C5'	59:BA:1008:C:H2'	2.39	0.46
59:BA:1139:G:H1'	59:BA:1143:A:H2	1.79	0.46
59:DA:1007:C:N3	59:DA:1136:G:C6	2.83	0.46
3:CD:10:ARG:O	3:CD:13:ARG:HG2	2.16	0.46
27:BE:66:HIS:CD2	59:BA:2786:U:H4'	2.50	0.46
35:DP:39:LYS:HA	35:DP:39:LYS:HD3	1.71	0.46
59:BA:57:C:H2'	59:BA:58:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D7:3:ARG:O	59:DA:687:C:H4'	2.16	0.46
51:D7:5:TRP:NE1	51:D7:7:PRO:HD3	2.30	0.46
3:AD:5:ILE:HD13	20:AA:406:G:H4'	1.97	0.46
26:BD:125:ILE:HG13	26:BD:131:LEU:HD21	1.97	0.46
59:DA:2703:C:H2'	59:DA:2704:C:H6	1.80	0.46
20:AA:17:U:H2'	20:AA:18:C:H6	1.80	0.46
28:DF:136:THR:OG1	59:DA:320:A:H3'	2.15	0.46
20:AA:1528:U:O2'	20:AA:1530:G:H5'	2.16	0.46
1:AB:173:ALA:O	1:AB:176:GLU:HB2	2.15	0.46
60:BB:13:A:H2	60:BB:69:G:H21	1.64	0.46
50:D6:45:LYS:HB2	59:DA:2371:G:H4'	1.97	0.46
23:CY:506:GLN:HG3	23:CY:581:ALA:CB	2.39	0.46
59:BA:1514:U:H2'	59:BA:1515:C:C5	2.50	0.46
41:DV:5:VAL:HG21	41:DV:35:LEU:HG	1.97	0.46
17:CR:56:THR:OG1	17:CR:57:GLY:N	2.48	0.46
28:BF:191:ARG:O	28:BF:193:VAL:HG23	2.16	0.46
59:DA:2230:G:H2'	59:DA:2231:C:C6	2.50	0.46
21:CW:28:A:H2	21:CW:42:U:H3	1.59	0.46
60:BB:56:G:H4'	60:BB:57:A:C8	2.51	0.46
31:DJ:54:UNK:CA	31:DJ:79:UNK:HA	2.41	0.46
20:AA:1356:G:H2'	20:AA:1357:A:H8	1.75	0.46
17:CR:53:ARG:HE	17:CR:59:SER:HA	1.81	0.46
47:D2:21:LEU:HA	47:D2:24:LEU:HD12	1.97	0.46
44:BY:46:LYS:N	44:BY:62:GLU:HB2	2.30	0.46
23:CY:616:TYR:O	23:CY:620:VAL:HG13	2.15	0.46
3:CD:76:ARG:HD3	3:CD:207:TYR:CE2	2.51	0.46
44:DY:47:LYS:HE3	44:DY:47:LYS:N	2.30	0.46
20:CA:570:G:O6	20:CA:865:A:N6	2.48	0.46
20:AA:1015:A:C6	20:AA:1016:A:C6	3.03	0.46
59:BA:2520:C:C6	59:BA:2567:G:H1'	2.50	0.46
13:AN:61:TRP:CZ2	20:AA:1368:G:H4'	2.48	0.46
37:DR:53:HIS:CD2	37:DR:54:LEU:HD12	2.51	0.46
34:DO:91:LEU:HD21	34:DO:111:PHE:CE1	2.50	0.46
36:DQ:74:TYR:OH	59:DA:957:A:H4'	2.15	0.46
14:CO:7:GLU:O	14:CO:11:VAL:HG23	2.16	0.46
59:DA:2095:C:H2'	59:DA:2096:U:H6	1.79	0.46
20:AA:590:C:H2'	20:AA:591:U:H6	1.81	0.46
26:BD:177:LEU:HD23	26:BD:178:PRO:HD2	1.96	0.46
20:CA:14:U:N3	20:CA:17:U:OP2	2.48	0.46
59:DA:1341:U:C5	59:DA:1395:A:H2	2.34	0.46
23:CY:591:LYS:HA	23:CY:591:LYS:HD3	1.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:248:G:N3	59:DA:2431:U:H4'	2.31	0.46
30:DH:147:ASN:O	30:DH:151:ILE:HG13	2.16	0.46
20:AA:455:C:H2'	20:AA:456:C:C6	2.51	0.46
14:CO:42:HIS:CE1	14:CO:46:HIS:HB2	2.50	0.46
59:DA:2073:C:H2'	59:DA:2074:U:O4'	2.15	0.46
20:AA:1239:A:H62	20:AA:1299:A:H61	1.61	0.46
59:DA:842:G:H2'	59:DA:843:G:H8	1.79	0.46
20:CA:1440(A):G:H5''	20:CA:1440(B):G:O4'	2.16	0.46
59:BA:1039:G:H2'	59:BA:1040:C:C6	2.51	0.46
59:BA:2881:C:H2'	59:BA:2882:A:H8	1.81	0.46
25:DC:10:ALA:O	25:DC:13:GLU:N	2.49	0.46
30:DH:60:ARG:HG3	30:DH:61:HIS:N	2.31	0.46
9:AJ:57:LYS:HE2	20:AA:972:C:OP2	2.15	0.46
20:AA:14:U:H6	20:AA:14:U:O5'	1.99	0.46
59:BA:1681:G:OP2	59:BA:1681:G:H8	1.99	0.46
59:DA:303:U:H2'	59:DA:304:G:H8	1.79	0.46
39:BT:61:PHE:CZ	39:BT:76:PHE:HB2	2.51	0.46
59:DA:1376:C:H2'	59:DA:1377:G:C8	2.51	0.46
59:BA:2470:G:H2'	59:BA:2471:C:C6	2.49	0.46
29:BG:104:GLU:O	29:BG:108:ASN:ND2	2.39	0.46
59:DA:2038:G:H2'	59:DA:2039:C:O4'	2.16	0.46
59:DA:2050:C:H2'	59:DA:2051:A:H8	1.78	0.46
59:BA:2346:A:O2'	59:BA:2347:C:OP1	2.34	0.46
59:DA:1310:G:H2'	59:DA:1311:G:O4'	2.15	0.46
59:BA:390:A:H5'	59:BA:412:A:H4'	1.98	0.46
2:CC:186:PHE:CZ	20:CA:1058:G:H5'	2.51	0.46
20:CA:234:C:H2'	20:CA:235:C:H6	1.81	0.46
11:AL:85:ILE:HD12	11:AL:98:TYR:HB2	1.98	0.46
26:DD:78:LYS:O	26:DD:79:VAL:O	2.34	0.46
25:BC:62:THR:HA	25:BC:162:ILE:O	2.16	0.46
26:DD:25:THR:HG22	26:DD:26:LYS:H	1.81	0.46
19:CT:21:LYS:O	19:CT:24:LEU:HB3	2.15	0.46
59:DA:1290:C:H2'	59:DA:1291:C:H6	1.80	0.46
1:CB:96:ARG:HB2	1:CB:148:TYR:HE1	1.80	0.46
59:BA:658:C:H2'	59:BA:659:C:O4'	2.16	0.46
20:AA:1440(J):C:H1'	20:AA:1440(K):G:C2	2.51	0.46
39:BT:67:SER:O	39:BT:69:GLY:N	2.49	0.46
7:AH:19:VAL:HG21	20:AA:827:U:H4'	1.98	0.46
26:BD:228:PRO:HB2	59:BA:2073:C:O3'	2.16	0.46
26:BD:227:ASN:HB2	26:BD:228:PRO:HD2	1.97	0.46
26:BD:228:PRO:HG2	59:BA:2073:C:H4'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D8:52:LYS:N	52:D8:53:PRO:HD2	2.30	0.46
16:AQ:45:HIS:H	16:AQ:72:ARG:CA	2.28	0.46
26:BD:13:ARG:HA	26:BD:16:MET:HB3	1.97	0.46
3:AD:62:GLN:NE2	20:AA:545:C:OP2	2.49	0.46
59:DA:1830:C:N4	59:DA:1975:G:H1	2.10	0.46
39:BT:64:ARG:HD2	39:BT:72:VAL:O	2.16	0.46
27:DE:4:ILE:HD13	27:DE:5:LEU:N	2.31	0.46
36:DQ:14:ARG:NH2	59:DA:957:A:H3'	2.30	0.46
19:AT:71:THR:HB	19:AT:72:LEU:H	1.62	0.46
59:BA:2522:U:H1'	59:BA:2647:U:OP1	2.16	0.46
59:DA:1077:A:H3'	59:DA:1078:U:O4'	2.15	0.46
21:CW:66:C:C2	21:CW:67:G:C8	3.03	0.46
20:CA:659:U:H2'	20:CA:660:G:H8	1.80	0.46
59:BA:1312:U:H5'	59:BA:1313:U:C5	2.51	0.46
15:AP:59:TRP:HA	15:AP:62:VAL:HG22	1.98	0.46
23:AY:543:GLN:HA	23:AY:546:ILE:HD12	1.98	0.46
21:CW:56:C:H5'	25:DC:134:PRO:HG3	1.97	0.46
20:AA:692:U:H2'	20:AA:694:A:OP2	2.16	0.46
37:BR:42:LYS:O	37:BR:45:ARG:HG3	2.16	0.46
1:CB:158:LEU:HA	1:CB:159:PRO:HD3	1.78	0.46
23:CY:519:ARG:NH2	23:CY:678:GLU:H	2.13	0.46
20:AA:371:G:H1	20:AA:390:C:H42	1.64	0.46
59:DA:2171:A:O2'	59:DA:2172:U:O5'	2.33	0.46
7:CH:25:ASP:HA	7:CH:60:ARG:HA	1.97	0.46
38:BS:42:ASP:O	38:BS:44:LYS:N	2.49	0.46
26:BD:28:GLU:H	26:BD:29:PRO:HD2	1.81	0.46
59:DA:1095:A:H2'	59:DA:1096:A:C8	2.51	0.46
2:AC:195:VAL:HG12	20:AA:1057:G:H1'	1.98	0.46
42:BW:36:LEU:HD22	42:BW:48:ALA:HB2	1.98	0.46
59:DA:1650:G:H1	59:DA:2007:C:H42	1.64	0.46
38:DS:59:LYS:HG2	38:DS:60:GLY:H	1.81	0.46
59:DA:297:C:H2'	59:DA:298:G:O4'	2.16	0.46
57:D1:52:ARG:HD3	57:D1:57:GLU:HB2	1.98	0.46
39:BT:76:PHE:HA	39:BT:77:PRO:HD3	1.70	0.46
59:BA:1139:G:OP2	59:BA:1139:G:C8	2.68	0.46
50:B6:39:TYR:OH	59:BA:2346:A:H3'	2.16	0.46
59:BA:775:G:C6	59:BA:794:G:C8	3.04	0.46
59:BA:31:C:H2'	59:BA:32:C:C6	2.51	0.46
25:BC:47:LYS:HE3	25:BC:169:THR:O	2.15	0.46
59:BA:409:C:H2'	59:BA:410:G:C8	2.50	0.46
16:CQ:18:THR:HG21	20:CA:254:G:H4'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:687:A:C2	20:AA:704:A:C6	3.04	0.46
23:CY:526:VAL:HG22	23:CY:566:THR:HG23	1.97	0.46
41:DV:35:LEU:HB2	41:DV:57:VAL:O	2.15	0.46
32:BK:93:ARG:HD2	45:BZ:112:ARG:HH22	1.80	0.46
20:AA:1059:C:H2'	20:AA:1060:C:O4'	2.16	0.46
35:DP:15:ARG:HB2	59:DA:598:G:H5'	1.98	0.46
20:CA:983:A:H2	20:CA:984:C:C5	2.33	0.46
11:AL:124:LYS:O	11:AL:126:LYS:N	2.49	0.46
23:AY:333:GLY:H	23:AY:371:ALA:CB	2.27	0.46
6:AG:102:ARG:CZ	20:AA:939:G:H5''	2.45	0.46
32:DK:78:ILE:HD11	32:DK:136:VAL:HG11	1.98	0.46
26:BD:241:PRO:O	26:BD:242:ARG:HB2	2.16	0.46
38:DS:71:ARG:O	38:DS:74:ALA:HB3	2.15	0.46
57:D1:7:ILE:CD1	57:D1:62:VAL:HA	2.44	0.46
27:BE:8:LYS:HG2	27:BE:9:VAL:N	2.30	0.46
59:BA:2314:C:H2'	59:BA:2315:G:H8	1.80	0.46
21:AW:41:A:HO2'	21:AW:42:U:P	2.38	0.46
27:DE:78:LEU:HA	27:DE:78:LEU:HD23	4.45	0.46
7:AH:6:ILE:O	7:AH:10:LEU:HG	2.15	0.46
20:AA:949:A:O2'	20:AA:971:G:O6	2.22	0.46
1:CB:83:MET:HB3	1:CB:234:PRO:HG3	1.97	0.46
29:DG:114:ILE:HG22	29:DG:117:PHE:H	1.80	0.46
37:DR:44:LEU:HD13	37:DR:44:LEU:HA	1.79	0.46
20:CA:152:A:H3'	20:CA:153:C:H6	1.80	0.46
45:BZ:136:PHE:H	45:BZ:136:PHE:HD1	1.63	0.46
26:DD:9:TYR:HD2	59:DA:705:A:H1'	1.81	0.46
59:DA:2583:G:C2'	59:DA:2584:U:H5'	2.45	0.46
5:CF:1:MET:HG2	5:CF:68:PRO:N	2.31	0.46
57:D1:61:ARG:HB3	57:D1:61:ARG:HH11	1.81	0.46
46:D0:20:ARG:NE	59:DA:2357:U:OP1	2.46	0.46
20:AA:988:G:H2'	20:AA:989:C:O4'	2.15	0.46
59:BA:738:G:C6	59:BA:739:G:C2	3.03	0.46
38:DS:13:ARG:C	38:DS:15:ARG:N	2.69	0.46
23:CY:300:GLU:O	23:CY:302:HIS:N	2.49	0.46
30:DH:83:TYR:CG	30:DH:84:SER:N	2.84	0.46
12:CM:8:GLU:HG2	12:CM:22:ILE:HG12	1.98	0.46
20:CA:484:G:O2'	20:CA:485:G:OP2	2.25	0.46
52:D8:63:PRO:O	52:D8:65:GLU:N	2.49	0.46
39:BT:44:ASP:OD1	39:BT:44:ASP:N	2.48	0.46
1:AB:67:THR:HA	1:AB:90:MET:SD	2.55	0.46
45:DZ:128:VAL:HG21	45:DZ:134:PRO:HD3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:23:TYR:CE2	20:AA:1330:U:H4'	2.51	0.46
27:BE:111:ARG:HB2	27:BE:160:TYR:O	2.16	0.46
59:BA:980:A:H2	59:BA:2038:G:H1'	1.80	0.46
1:CB:167:PRO:HD2	1:CB:188:ALA:CB	2.46	0.46
39:DT:84:GLN:O	39:DT:86:ILE:N	2.39	0.46
33:DN:116:LEU:HD23	33:DN:119:ARG:HG3	1.98	0.46
27:BE:13:ARG:HG3	27:BE:15:PHE:CE2	2.50	0.46
8:AI:4:TYR:HB2	8:AI:19:LEU:CB	2.39	0.46
28:DF:68:LYS:C	28:DF:70:THR:H	2.18	0.46
2:AC:72:LYS:HD2	2:AC:73:PRO:HD2	1.97	0.46
28:DF:158:THR:HG23	28:DF:164:ARG:HD3	1.97	0.46
28:DF:170:LEU:CB	28:DF:173:VAL:HB	2.46	0.46
25:DC:26:ALA:O	25:DC:30:VAL:HB	2.16	0.46
23:CY:580:MET:HA	23:CY:583:LYS:CB	2.44	0.46
59:BA:459:U:O4	59:BA:470:A:N7	2.48	0.46
59:DA:972:G:OP2	59:DA:974(A):G:H5''	2.16	0.46
26:DD:244:ARG:HA	26:DD:246:PRO:HD3	1.97	0.46
59:DA:1675:C:C2	59:DA:1676:A:C8	3.04	0.46
10:CK:33:THR:HA	10:CK:39:PRO:HA	1.97	0.46
52:B8:15:LYS:O	52:B8:23:VAL:N	2.39	0.46
34:DO:8:LEU:O	34:DO:19:ILE:HG13	2.15	0.46
45:BZ:128:VAL:HG21	45:BZ:134:PRO:HD3	1.98	0.46
20:CA:1131:G:H2'	20:CA:1132:C:C6	2.51	0.46
59:DA:799:G:C3'	59:DA:800:A:H5''	2.46	0.46
28:DF:3:GLU:CB	28:DF:23:ASP:HA	2.45	0.46
20:AA:722:A:H4'	20:AA:723:U:C5	2.48	0.46
45:DZ:137:ILE:HG21	45:DZ:155:LEU:HD12	1.97	0.46
59:BA:118:A:OP2	59:BA:119:A:H2'	2.16	0.46
20:CA:955:U:H2'	20:CA:956:U:O4'	2.16	0.46
20:CA:352:C:H4'	20:CA:354:G:OP1	2.15	0.46
20:CA:217:C:H2'	20:CA:218:C:C6	2.48	0.46
52:B8:8:LYS:NZ	59:BA:245:G:O6	2.49	0.46
26:BD:9:TYR:HD2	59:BA:727:A:H2	1.64	0.46
20:CA:745:C:H2'	20:CA:746:A:H8	1.81	0.46
20:CA:152:A:H3'	20:CA:153:C:C6	2.51	0.46
59:DA:1221:C:H2'	59:DA:122(A):C:C6	2.51	0.46
19:AT:63:ILE:HG21	19:AT:81:LYS:HG3	1.98	0.46
57:B1:81:LYS:HG2	59:BA:270(J):G:H4'	1.98	0.46
8:AI:33:PHE:CE1	8:AI:43:ALA:HB1	2.51	0.46
5:AF:69:GLU:O	5:AF:72:VAL:HG12	2.15	0.46
3:AD:128:VAL:HA	3:AD:145:GLU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:197:ARG:CZ	23:AY:197:ARG:HA	2.46	0.46
20:CA:17:U:H2'	20:CA:18:C:H6	1.81	0.46
45:DZ:94:GLU:O	45:DZ:96:VAL:N	2.49	0.46
2:AC:6:HIS:CG	13:AN:49:HIS:HB3	2.51	0.46
20:CA:994:A:H2'	20:CA:994:A:N3	2.30	0.46
59:BA:1474:C:H2'	59:BA:1475:G:H8	1.81	0.46
37:BR:54:LEU:HD23	37:BR:57:ARG:HH21	1.80	0.46
4:AE:57:LYS:O	4:AE:60:TYR:HB3	2.16	0.46
59:DA:358:U:H2'	59:DA:359:A:C8	2.51	0.46
20:CA:1006:C:H2'	20:CA:1007:C:C6	2.50	0.46
59:DA:271(B):C:O2	59:DA:271:G:N2	2.46	0.46
23:AY:17:ILE:HA	23:AY:105:ILE:O	2.16	0.46
59:BA:1301:A:H2	59:BA:1626:G:N3	2.14	0.46
40:BU:107:ALA:O	40:BU:110:VAL:HB	2.16	0.46
20:CA:201(B):U:H2'	20:CA:201(C):U:C2	2.51	0.46
59:BA:890:A:H2'	59:BA:892:G:O4'	2.16	0.46
59:BA:1523:U:H2'	59:BA:1524:G:C8	2.51	0.46
59:DA:2679:A:H2'	59:DA:2680:C:C6	2.51	0.46
27:DE:59:VAL:HG21	27:DE:73:GLU:HG2	1.98	0.46
59:DA:1558:A:N7	59:DA:1560:G:C8	2.84	0.46
20:CA:541:G:H2'	20:CA:542:G:C8	2.51	0.46
3:CD:15:GLU:OE1	3:CD:63:LYS:HA	2.16	0.46
27:DE:147:PRO:HG3	27:DE:151:TYR:HE1	1.81	0.46
59:DA:767:U:O2'	59:DA:1622:G:H4'	2.16	0.46
59:BA:1448:G:H2'	59:BA:149(B):A:H8	1.81	0.46
20:CA:687:A:C2	20:CA:704:A:C6	3.05	0.46
59:BA:1844:C:H2'	59:BA:1845:G:O4'	2.16	0.46
33:DN:86:PRO:O	33:DN:90:MET:HB2	2.15	0.46
59:BA:1438:U:H2'	59:BA:1439:A:H8	1.81	0.46
59:BA:2109:U:H2'	59:BA:2110:G:O4'	2.15	0.46
59:DA:2400:G:N2	59:DA:2416:C:N3	2.53	0.46
28:DF:154:VAL:HG12	28:DF:156:LEU:CA	2.46	0.46
28:DF:155:LEU:HB2	28:DF:189:THR:OG1	2.16	0.46
38:DS:40:ILE:HG13	38:DS:47:THR:H	1.80	0.46
3:AD:108:LEU:HD23	3:AD:110:PHE:CZ	2.50	0.46
23:AY:272:LEU:HD12	23:AY:275:ALA:HB3	1.97	0.46
20:AA:1392:G:H2'	20:AA:1393:U:C6	2.51	0.46
31:DJ:112:UNK:O	31:DJ:114:UNK:N	2.49	0.46
13:CN:61:TRP:CZ2	20:CA:1368:G:H4'	2.49	0.46
35:DP:51:PHE:CD1	35:DP:52:GLU:HB2	2.50	0.46
23:CY:20:HIS:CD2	23:CY:21:ILE:HG23	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CY:608:VAL:O	23:CY:645:ALA:HB3	2.16	0.46
12:AM:91:ARG:NH2	12:AM:96:LEU:HB3	2.31	0.46
7:CH:19:VAL:HG21	20:CA:827:U:H4'	1.97	0.46
25:BC:26:ALA:O	25:BC:30:VAL:HB	2.16	0.46
59:BA:840:C:H42	59:BA:938:G:H1	1.63	0.46
58:B4:26:SER:OG	58:B4:27:THR:N	2.48	0.46
59:DA:1935:G:H1'	59:DA:1964:G:N2	2.30	0.46
18:AS:31:ILE:HD11	18:AS:49:ILE:HG12	1.98	0.46
59:DA:573:G:O2'	59:DA:574:C:H3'	2.16	0.46
9:AJ:46:ARG:HD2	13:AN:61:TRP:CZ3	2.50	0.46
49:D5:23:HIS:HB3	49:D5:24:ALA:H	1.44	0.46
20:AA:186:C:H2'	20:AA:186(A):C:O4'	2.16	0.46
45:DZ:167:PRO:O	45:DZ:169:GLU:N	2.49	0.46
23:AY:216:LEU:HD21	23:AY:242:LEU:HD22	1.98	0.46
6:CG:85:TYR:HB3	6:CG:151:TYR:HD2	1.81	0.46
21:CW:71:C:H2'	21:CW:72:C:C6	2.51	0.46
23:CY:341:VAL:HG22	23:CY:352:VAL:HG12	1.98	0.46
26:BD:50:THR:HB	59:BA:1805:U:H1'	1.97	0.46
59:DA:2673:G:H2'	59:DA:2674:G:H8	1.79	0.46
21:CW:19:G:N2	21:CW:56:C:N3	2.63	0.46
31:BJ:57:UNK:HA	59:BA:1106:G:OP1	2.16	0.46
59:BA:828:U:H2'	59:BA:829:A:C5	2.51	0.46
5:AF:50:TYR:CZ	17:AR:77:GLY:HA2	2.51	0.46
59:BA:2655:G:O2'	59:BA:2664:G:O6	2.32	0.46
59:BA:2410:G:H2'	59:BA:2411:A:O4'	2.16	0.46
30:DH:61:HIS:O	30:DH:64:LEU:N	2.49	0.46
59:DA:2318:G:H5"	59:DA:2319:G:OP2	2.16	0.46
59:DA:416:C:H2'	59:DA:417:C:C6	2.51	0.46
39:BT:118:ARG:O	39:BT:121:ILE:N	2.49	0.46
1:AB:160:ASP:HA	1:AB:182:ILE:HD12	1.98	0.46
25:DC:85:LYS:O	25:DC:88:GLU:HB2	2.15	0.46
40:BU:14:HIS:NE2	40:BU:32:PHE:O	2.49	0.46
59:BA:940:G:H2'	59:BA:941:A:O4'	2.16	0.46
2:AC:51:GLY:C	2:AC:115:LEU:HD21	2.36	0.46
2:AC:71:ALA:HB2	2:AC:115:LEU:HD22	1.98	0.46
59:DA:2861:G:H2'	59:DA:2862:G:C8	2.51	0.46
20:CA:1110:A:H2'	20:CA:1111:A:O4'	2.15	0.46
59:BA:2254:C:H2'	59:BA:2255:G:H8	1.81	0.46
59:DA:2588:G:H8	59:DA:2588:G:O5'	1.99	0.46
31:DJ:113:UNK:C	31:DJ:115:UNK:H	2.28	0.46
60:BB:99:A:H3'	60:BB:100:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BU:83:LEU:HG	40:BU:88:ILE:HD12	1.97	0.46
21:AW:63:C:H5'	25:BC:54:ARG:HH22	1.81	0.45
59:DA:1011:G:C6	59:DA:1151:G:C6	3.04	0.45
59:DA:926:A:H2'	59:DA:928:G:H8	1.79	0.45
59:DA:769:G:H4'	59:DA:1379:A:C6	2.51	0.45
59:BA:528:A:H61	59:BA:2042:A:H3'	1.80	0.45
59:BA:1542:G:H5'	59:BA:1542:G:N3	2.31	0.45
49:B5:8:LYS:NZ	59:BA:2056:G:H4'	2.31	0.45
59:DA:2466:C:N4	59:DA:2484:G:H1	2.10	0.45
20:CA:1113:C:H2'	20:CA:1114:C:O4'	2.16	0.45
33:DN:34:LEU:HD21	33:DN:120:LEU:HD12	1.97	0.45
57:B1:18:ILE:HG13	57:B1:20:ARG:N	2.31	0.45
20:CA:833:U:O4	20:CA:853:G:O6	2.34	0.45
20:AA:620:C:H2'	20:AA:621:A:O4'	2.16	0.45
25:BC:73:VAL:C	25:BC:75:VAL:H	2.19	0.45
1:AB:162:ILE:CG1	1:AB:184:VAL:HA	2.46	0.45
40:DU:101:ARG:O	40:DU:101:ARG:NH1	2.49	0.45
38:BS:39:ILE:HB	38:BS:49:VAL:HB	1.97	0.45
38:BS:17:ARG:HG2	38:BS:88:ASP:OD2	2.16	0.45
26:BD:206:LEU:O	26:BD:208:LYS:N	2.48	0.45
26:BD:260:ARG:HH21	26:BD:267:SER:HA	1.82	0.45
11:CL:69:TYR:CD1	11:CL:70:ILE:HG13	2.51	0.45
43:DX:50:LYS:O	43:DX:83:VAL:HG13	2.17	0.45
34:DO:71:ARG:NH1	39:DT:74:ARG:HH22	2.14	0.45
33:BN:70:LYS:HB3	33:BN:87:LEU:HB2	1.98	0.45
13:CN:53:LEU:HA	13:CN:54:PRO:HD3	1.70	0.45
8:AI:16:ARG:HH12	20:AA:1128:C:H4'	1.82	0.45
59:BA:639:U:H3	59:BA:649:G:H1	1.64	0.45
10:CK:18:ARG:HG2	10:CK:35:PRO:HA	1.98	0.45
18:AS:58:VAL:HG21	18:AS:75:ALA:HB2	1.97	0.45
40:BU:23:GLY:HA2	59:BA:19:C:OP1	2.15	0.45
20:AA:458(A):G:N2	20:AA:458(E):A:H62	2.13	0.45
7:CH:6:ILE:O	7:CH:9:MET:HB3	2.16	0.45
59:DA:2372:G:H2'	59:DA:2373:G:H8	1.80	0.45
18:CS:59:PRO:CB	59:DA:887:A:H5''	2.47	0.45
9:CJ:63:PHE:HZ	13:CN:49:HIS:NE2	2.15	0.45
23:AY:301:ILE:HG21	23:AY:331:TYR:HB3	1.97	0.45
20:AA:1252:A:H2'	20:AA:1253:G:C8	2.51	0.45
23:CY:457:LEU:HD23	23:CY:458:HIS:N	2.29	0.45
59:DA:2247:A:H2'	59:DA:2248:C:O4'	2.16	0.45
48:B3:29:ARG:HB3	48:B3:30:ARG:H	1.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:242:C:H2'	20:AA:245:C:C5	2.51	0.45
15:AP:32:TYR:OH	20:AA:608:A:H4'	2.16	0.45
26:BD:45:ASN:HB2	59:BA:1812:A:O2'	2.16	0.45
42:BW:96:ILE:HD11	59:BA:2012:G:H4'	1.99	0.45
1:AB:236:TYR:HA	1:AB:239:VAL:HB	1.97	0.45
35:DP:128:HIS:CE1	35:DP:148:LEU:HB2	2.51	0.45
39:DT:62:THR:HB	39:DT:75:ILE:HG12	1.96	0.45
59:DA:404:C:H4'	59:DA:405:U:C5'	2.46	0.45
26:DD:11:PRO:HA	26:DD:14:ARG:HB2	1.98	0.45
18:CS:6:LYS:HG3	20:CA:1314:C:OP2	2.15	0.45
59:BA:907:U:H2'	59:BA:908:C:H6	1.80	0.45
59:DA:611:C:N3	59:DA:617:G:O6	2.50	0.45
59:DA:618(A):G:H2'	59:DA:618(B):C:O4'	2.15	0.45
59:BA:436:C:H2'	59:BA:438:G:C8	2.51	0.45
44:DY:83:THR:HG22	44:DY:94:LYS:HB2	1.98	0.45
59:DA:1264:G:O3'	59:DA:2615:U:H5'	2.16	0.45
20:CA:1140:C:H2'	20:CA:1141:C:C6	2.51	0.45
59:DA:934:G:H2'	59:DA:935:C:C6	2.50	0.45
10:AK:108:ILE:HB	17:AR:87:ARG:H	1.81	0.45
53:B9:9:ARG:NH2	59:BA:1033:U:OP1	2.49	0.45
20:CA:160:A:H2'	20:CA:161:A:O4'	2.16	0.45
57:B1:30:VAL:HA	59:BA:2396:G:O2'	2.16	0.45
2:CC:141:VAL:HG11	2:CC:202:ILE:HG21	1.96	0.45
59:DA:2639:A:H2'	59:DA:2640:G:O4'	2.16	0.45
30:DH:173:PRO:HB2	30:DH:174:GLY:H	1.66	0.45
5:CF:33:TYR:CG	5:CF:75:LEU:HD13	2.51	0.45
59:BA:471:A:H2'	59:BA:472:A:O4'	2.16	0.45
59:DA:2560:C:H2'	59:DA:2561:A:H8	1.82	0.45
20:CA:1388:C:H2'	20:CA:1389:C:H6	1.80	0.45
47:B2:55:ARG:NH1	59:BA:75:G:H4'	2.31	0.45
1:CB:7:VAL:HG13	1:CB:217:ARG:CZ	2.46	0.45
33:BN:6:PRO:HG3	33:BN:41:ASP:O	2.16	0.45
1:CB:79:ASP:O	1:CB:82:ARG:HG2	2.16	0.45
36:BQ:20:ALA:C	36:BQ:22:LYS:H	2.18	0.45
27:BE:187:ALA:HB2	59:BA:2729:G:O2'	2.16	0.45
59:BA:1137:G:C2	59:BA:1138:G:C4	3.04	0.45
29:BG:112:PRO:HA	29:BG:117:PHE:CE2	2.51	0.45
59:DA:1007:C:O2	59:DA:1136:G:N1	2.37	0.45
1:CB:71:VAL:O	1:CB:165:VAL:HG23	2.16	0.45
33:BN:4:TYR:CG	33:BN:5:VAL:N	2.84	0.45
59:BA:1537:C:C4	59:BA:1538:G:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:20:C:C2	59:DA:21:A:C8	3.04	0.45
59:DA:1486:A:H2'	59:DA:1487:G:H8	1.81	0.45
59:BA:273(G):C:H3'	59:BA:274:G:H5''	1.97	0.45
43:BX:44:GLU:OE1	43:BX:51:VAL:N	2.49	0.45
59:DA:1020:A:N1	59:DA:1141:U:H1'	2.31	0.45
45:BZ:59:LEU:HD21	45:BZ:69:THR:HG23	1.97	0.45
4:CE:70:PRO:HG2	4:CE:142:LEU:HD13	1.97	0.45
41:DV:62:LEU:N	41:DV:93:GLU:O	2.49	0.45
41:DV:18:LEU:O	41:DV:96:ILE:HG13	2.16	0.45
59:DA:537:C:OP1	59:DA:995:C:N4	2.49	0.45
59:BA:1084:A:C5	59:BA:1085:A:C5	3.05	0.45
20:AA:1149:C:O2'	20:AA:1280:A:N1	2.50	0.45
26:DD:218:ARG:HA	26:DD:219:PRO:HD2	1.71	0.45
28:DF:99:TYR:CE2	59:DA:660:G:H5'	2.51	0.45
59:DA:662:G:H2'	59:DA:663:G:C8	2.47	0.45
50:B6:14:THR:O	50:B6:50:ARG:N	2.28	0.45
20:CA:1512:U:H2'	20:CA:1513:A:H8	1.80	0.45
20:AA:947:G:H2'	20:AA:948:C:O4'	2.17	0.45
23:CY:102:ASP:O	23:CY:131:PRO:HD2	2.17	0.45
59:DA:2049:G:H1	59:DA:2619:C:N4	2.11	0.45
45:DZ:65:GLN:HB3	45:DZ:67:LEU:HD13	1.98	0.45
20:AA:418:C:N4	20:AA:425:G:H1	2.13	0.45
23:CY:108:PHE:HZ	23:CY:122:TRP:CZ3	2.34	0.45
10:AK:51:LYS:HA	10:AK:55:LYS:HG3	1.99	0.45
59:DA:273(D):C:H2'	59:DA:273(E):C:O4'	2.17	0.45
9:AJ:46:ARG:NH2	20:AA:1253:G:OP1	2.42	0.45
59:DA:1495:A:H2'	59:DA:1496:A:N3	2.32	0.45
10:AK:41:THR:CG2	10:AK:71:LYS:HD3	2.45	0.45
6:CG:75:VAL:HA	6:CG:88:PRO:HA	1.98	0.45
23:AY:115:GLU:N	23:AY:116:PRO:HD3	2.31	0.45
59:DA:439:G:H2'	59:DA:440:G:H8	1.80	0.45
36:BQ:127:ILE:HB	36:BQ:128:LYS:H	1.42	0.45
20:CA:626:U:H2'	20:CA:627:G:H8	1.82	0.45
34:BO:31:LYS:HD3	59:BA:2548:G:H4'	1.98	0.45
15:AP:12:LYS:HB3	20:AA:43:C:H5''	1.99	0.45
43:DX:27:THR:HA	43:DX:80:ILE:HA	1.99	0.45
2:AC:6:HIS:O	2:AC:10:PHE:N	2.49	0.45
59:BA:2537:U:H2'	59:BA:2538:C:H6	1.80	0.45
59:BA:397:G:H1'	59:BA:2231:C:O2'	2.15	0.45
37:BR:51:LEU:HA	37:BR:54:LEU:HD12	1.97	0.45
1:CB:97:TRP:CH2	1:CB:176:GLU:HG3	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:131:G:H2'	59:BA:132:G:H8	1.80	0.45
7:CH:38:ILE:HG21	7:CH:111:ILE:HG22	1.98	0.45
60:BB:2:C:H2'	60:BB:3:C:C6	2.51	0.45
20:CA:108:G:OP2	20:CA:326:G:N1	2.43	0.45
59:BA:1211:U:O2'	59:BA:1212:G:OP1	2.34	0.45
20:AA:964:A:H8	20:AA:964:A:O5'	1.99	0.45
5:AF:35:ALA:HB2	5:AF:67:MET:HB3	1.98	0.45
59:DA:2336:A:H3'	59:DA:2337:G:C8	2.52	0.45
23:CY:27:THR:HG23	62:CY:702:GDP:O5'	2.16	0.45
37:DR:2:ARG:HB3	37:DR:5:LYS:HG2	1.98	0.45
59:DA:1773:A:H2'	59:DA:1774:C:O4'	2.16	0.45
59:BA:409:C:H2'	59:BA:410:G:H8	1.82	0.45
59:BA:1845:G:H2'	59:BA:1846:G:C8	2.51	0.45
59:BA:442:G:C2	59:BA:444:C:C5	3.04	0.45
59:BA:325:G:H2'	59:BA:326:G:H8	1.80	0.45
26:DD:98:VAL:O	59:DA:1501:C:O2'	2.32	0.45
27:BE:21:VAL:O	27:BE:23:VAL:HG13	2.17	0.45
25:DC:214:TYR:HD2	25:DC:222:SER:OG	1.99	0.45
59:DA:319:C:N4	59:DA:323:G:H1	2.14	0.45
1:AB:108:ILE:HA	1:AB:111:ARG:HG3	1.98	0.45
26:DD:264:LYS:HD3	26:DD:266:SER:H	1.80	0.45
59:BA:2377:A:N6	59:BA:2378:A:N1	2.64	0.45
25:DC:56:ASP:N	25:DC:56:ASP:OD2	2.49	0.45
33:BN:112:LEU:HD22	59:BA:558:G:OP1	2.16	0.45
32:BK:133:SER:HB2	59:BA:1088:A:N6	2.32	0.45
32:BK:90:LYS:NZ	32:BK:93:ARG:HG2	2.31	0.45
40:DU:34:LYS:NZ	59:DA:2018:G:N3	2.65	0.45
20:AA:1392:G:O2'	20:AA:1502:A:OP1	2.32	0.45
59:BA:765:G:H8	59:BA:765:G:OP2	2.00	0.45
25:DC:167:ASP:OD1	25:DC:168:LYS:N	2.43	0.45
8:AI:3:GLN:NE2	20:AA:1130:A:O2'	2.42	0.45
20:AA:1255:G:H1	20:AA:1282:C:H42	1.64	0.45
36:DQ:42:ILE:HD11	36:DQ:95:ALA:HB3	1.98	0.45
20:CA:522:C:N3	20:CA:527:G:N2	2.55	0.45
59:DA:846:C:H42	59:DA:931:G:H1	1.64	0.45
20:AA:367:U:OP1	23:AY:340:TYR:OH	2.30	0.45
39:DT:16:ARG:HH11	39:DT:19:LEU:HD21	1.81	0.45
39:BT:95:ARG:O	59:BA:2848:G:H2'	2.16	0.45
18:CS:53:ASN:HB2	18:CS:58:VAL:HG22	1.97	0.45
59:DA:1655:A:H3'	59:DA:1656:C:H6	1.80	0.45
15:CP:49:LEU:HD11	15:CP:73:LEU:HD11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:81:ARG:HA	20:AA:458(E):A:O2'	2.16	0.45
1:AB:95:GLN:HB3	1:AB:96:ARG:HD2	1.97	0.45
35:BP:22:GLY:HA2	35:BP:23:PRO:HD3	1.78	0.45
59:DA:650:C:H2'	59:DA:651:G:C8	2.51	0.45
50:D6:16:CYS:HB2	50:D6:17:LYS:HD2	1.98	0.45
47:B2:20:GLU:O	47:B2:24:LEU:HG	2.16	0.45
10:CK:53:SER:N	20:CA:695:A:OP2	2.49	0.45
20:AA:881:G:H2'	20:AA:882:C:C6	2.51	0.45
52:D8:40:GLU:O	52:D8:44:LYS:HB2	2.17	0.45
40:BU:106:PHE:O	40:BU:109:LEU:N	2.50	0.45
20:CA:335:C:H1'	20:CA:1434:A:H1'	1.97	0.45
6:CG:78:ARG:O	6:CG:84:ASN:ND2	2.47	0.45
59:BA:1321:A:H2'	59:BA:1322:A:C8	2.50	0.45
59:BA:705:A:C2	59:BA:727:A:H1'	2.51	0.45
23:AY:545:GLY:HA3	23:AY:583:LYS:O	2.16	0.45
59:BA:1495:A:C2	59:BA:1578:U:H1'	2.50	0.45
47:D2:48:HIS:HD2	47:D2:49:LYS:HE3	1.81	0.45
59:BA:297:C:H2'	59:BA:298:G:O4'	2.16	0.45
20:AA:1533:C:H3'	20:AA:1534:A:O4'	2.16	0.45
34:DO:105:GLU:O	34:DO:109:LYS:HG2	2.15	0.45
5:CF:90:VAL:O	20:CA:736:C:O2'	2.25	0.45
49:D5:29:THR:HG21	59:DA:2814:C:O2'	2.16	0.45
5:AF:19:LEU:HD11	5:AF:59:TYR:OH	2.16	0.45
59:DA:1061:U:H4'	59:DA:1070:A:O3'	2.16	0.45
23:AY:458:HIS:O	23:AY:462:ILE:HG12	2.17	0.45
15:CP:31:LYS:HG2	15:CP:32:TYR:N	2.31	0.45
36:DQ:16:ARG:HG2	36:DQ:18:LYS:HG2	1.97	0.45
31:DJ:138:UNK:C	31:DJ:140:UNK:H	2.28	0.45
20:CA:348:G:H2'	20:CA:349:A:H8	1.81	0.45
20:AA:1386:G:H2'	20:AA:1387:G:H8	1.81	0.45
20:CA:1532:U:H1'	20:CA:1533:C:OP1	2.17	0.45
36:DQ:25:ASP:HA	36:DQ:102:VAL:HG23	1.98	0.45
59:BA:1923:U:H2'	59:BA:1924:C:C6	2.52	0.45
50:B6:16:CYS:HB2	50:B6:17:LYS:HD2	1.98	0.45
26:BD:38:LYS:HB3	26:BD:38:LYS:HE3	1.72	0.45
49:B5:17:ASP:HB3	59:BA:16:G:H5''	1.97	0.45
39:BT:129:ARG:HD3	39:BT:132:LYS:HB2	1.99	0.45
59:BA:1701:A:H4'	59:BA:1765:C:O2'	2.17	0.45
29:BG:48:GLU:HB3	29:BG:49:ASP:H	1.60	0.45
39:BT:61:PHE:CE2	39:BT:76:PHE:HB2	2.52	0.45
59:BA:1803:A:N6	59:BA:1814:G:H1'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1003:G:HO2'	59:DA:1010:A:H61	1.64	0.45
59:DA:1178:C:H2'	59:DA:1179:C:C6	2.51	0.45
20:CA:945:G:C2	20:CA:946:A:C8	3.04	0.45
59:DA:1399:C:H2'	59:DA:1400:G:O4'	2.16	0.45
59:DA:2545:G:H2'	59:DA:2546:U:O4'	2.17	0.45
20:CA:1422:G:H2'	20:CA:1423:G:C8	2.51	0.45
20:CA:1276:G:H2'	20:CA:1277:C:C6	2.51	0.45
23:CY:163:VAL:HG12	23:CY:164:MET:N	2.31	0.45
59:BA:391:G:O2'	59:BA:411:G:O4'	2.34	0.45
59:BA:56:A:H2'	59:BA:57:C:H6	1.79	0.45
26:DD:48:ARG:NE	59:DA:774:A:H5''	2.32	0.45
59:DA:2810:A:H8	59:DA:2810:A:O5'	2.00	0.45
27:DE:12:THR:O	27:DE:13:ARG:HB3	2.15	0.45
25:DC:47:LYS:HB2	25:DC:169:THR:HG1	1.81	0.45
4:AE:127:ASN:HD22	20:AA:19:C:P	2.40	0.45
28:BF:3:GLU:HA	28:BF:24:LEU:N	2.30	0.45
9:AJ:63:PHE:HD1	13:AN:58:LYS:HA	1.80	0.45
60:DB:22:U:H2'	60:DB:23:G:C8	2.51	0.45
59:DA:2086:U:H2'	59:DA:2087:G:H8	1.82	0.45
39:BT:39:ARG:O	39:BT:40:THR:OG1	2.33	0.45
39:BT:99:LEU:O	39:BT:102:ILE:HG12	2.15	0.45
41:DV:24:LYS:NZ	59:DA:1163:G:H5'	2.31	0.45
40:DU:53:ARG:HD2	59:DA:536:A:H5'	1.98	0.45
38:DS:28:VAL:HG22	38:DS:88:ASP:O	2.17	0.45
59:DA:1312:U:H4'	59:DA:1313:U:O5'	2.15	0.45
59:DA:915:C:H2'	59:DA:916:G:O4'	2.16	0.45
59:BA:2467:C:H2'	59:BA:2468:G:O4'	2.16	0.45
1:AB:220:ASP:HA	1:AB:223:ILE:HD12	1.99	0.45
20:CA:1127:G:H21	20:CA:1147:C:H41	1.65	0.45
39:DT:41:ARG:NE	39:DT:43:GLN:HB2	2.31	0.45
46:D0:24:LYS:N	46:D0:37:LEU:O	2.49	0.45
20:AA:33:A:H2'	20:AA:34:C:H6	1.81	0.45
18:CS:71:LEU:C	18:CS:73:GLU:H	2.15	0.45
50:B6:14:THR:OG1	50:B6:19:ARG:O	2.33	0.45
20:AA:68(I):G:N2	20:AA:68(R):C:H1'	2.32	0.45
59:BA:19:C:H42	59:BA:521:G:H1	1.64	0.45
1:AB:175:ARG:NH2	20:AA:1076:C:H5'	2.31	0.45
9:CJ:60:ARG:NH2	20:CA:1367:C:H5'	2.32	0.45
7:CH:84:ARG:N	7:CH:136:GLU:OE2	2.49	0.45
59:DA:647:G:H2'	59:DA:648:G:O4'	2.16	0.45
23:AY:30:GLU:HG2	23:AY:31:ARG:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1204:A:H3'	20:CA:1205:U:C6	2.52	0.45
1:AB:169:LYS:O	1:AB:172:ILE:HG12	2.16	0.45
23:AY:33:LEU:HD22	23:AY:65:ILE:HG22	1.99	0.45
23:AY:604:PRO:HB2	23:AY:649:LEU:HD12	1.99	0.45
47:B2:46:GLN:HB3	47:B2:48:HIS:CE1	2.51	0.45
9:CJ:42:THR:HG23	9:CJ:68:HIS:HA	1.99	0.45
9:CJ:13:HIS:HB3	9:CJ:68:HIS:CE1	2.51	0.45
11:AL:11:VAL:HG13	16:AQ:29:HIS:HD2	1.81	0.45
4:AE:115:VAL:HG12	4:AE:116:THR:H	1.81	0.45
59:BA:565:C:H42	59:BA:576:U:H3	1.63	0.45
59:DA:2532:G:C5	59:DA:2533:A:C5	3.05	0.45
49:D5:4:HIS:O	59:DA:2056:G:N2	2.49	0.45
59:BA:736:C:H2'	59:BA:737:C:H6	1.81	0.45
59:DA:617:G:H2'	59:DA:618(A):G:H8	1.81	0.45
32:BK:91:PRO:HG3	59:BA:1062:G:N2	2.31	0.45
59:BA:2057:A:H2'	59:BA:2058:A:C8	2.51	0.45
25:BC:102:GLN:HE22	25:BC:105:LEU:HD23	1.81	0.45
20:CA:52:G:O6	20:CA:359:U:O2	2.35	0.45
53:B9:9:ARG:HH12	53:B9:16:VAL:H	1.63	0.45
59:DA:1384:A:N3	59:DA:1405:U:H1'	2.31	0.45
50:D6:23:THR:HG21	59:DA:2419:U:OP1	2.16	0.45
45:BZ:108:PRO:HB2	45:BZ:109:ALA:H	1.57	0.45
59:DA:341:G:H2'	59:DA:342:G:C8	2.51	0.45
3:CD:127:THR:HG23	3:CD:147:ALA:HB3	1.99	0.45
20:AA:1204:A:H3'	20:AA:1205:U:C6	2.52	0.45
29:BG:93:THR:HB	60:BB:43:C:H1'	1.98	0.45
59:DA:30:G:H2'	59:DA:31:C:O4'	2.16	0.45
20:CA:60:A:H62	20:CA:110:C:H42	1.64	0.45
59:DA:1381:G:C6	59:DA:1382:G:C6	3.04	0.45
59:BA:2540:C:H2'	59:BA:2541:A:O4'	2.16	0.45
19:CT:101:GLY:HA2	19:CT:104:LEU:HB3	1.97	0.45
59:BA:1611:C:H2'	59:BA:1612:C:C5	2.51	0.45
59:BA:2024:G:N2	59:BA:2025:C:C2	2.84	0.45
3:CD:18:LYS:HB3	3:CD:33:MET:HG3	1.99	0.45
27:DE:117:MET:SD	27:DE:136:ARG:HG3	2.57	0.45
27:DE:154:LYS:O	27:DE:156:MET:HG2	2.17	0.45
58:D4:33:VAL:HG12	58:D4:34:GLU:HG3	1.98	0.45
1:CB:193:ASP:HB3	1:CB:196:LEU:HD23	1.98	0.45
59:BA:2505:G:C6	59:BA:2610:C:O2	2.70	0.45
3:AD:29:PRO:O	3:AD:30:LYS:HB3	2.17	0.45
11:CL:90:VAL:HB	20:CA:523:A:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:40:GLU:HB3	25:BC:218:THR:N	2.32	0.45
25:DC:47:LYS:CB	25:DC:212:SER:HB2	2.45	0.45
25:DC:115:VAL:HG11	25:DC:154:ILE:CG1	2.47	0.45
43:BX:39:ILE:O	43:BX:43:VAL:HG23	2.17	0.45
28:DF:155:LEU:O	28:DF:191:ARG:O	2.33	0.45
28:DF:156:LEU:HD23	28:DF:164:ARG:HG2	1.99	0.45
28:DF:158:THR:OG1	28:DF:195:ASP:HB2	2.16	0.45
26:BD:53:PHE:HE1	26:BD:220:HIS:CG	2.35	0.45
23:AY:652:MET:O	23:AY:652:MET:HG3	2.15	0.45
11:CL:83:VAL:HB	11:CL:100:ILE:HG23	1.99	0.45
50:D6:27:LYS:NZ	59:DA:2285:C:OP1	2.39	0.45
10:AK:30:VAL:HG22	10:AK:43:SER:O	2.16	0.45
60:BB:24:G:C2	60:BB:56:G:N2	2.84	0.45
12:AM:113:PRO:HB2	12:AM:114:ARG:H	1.53	0.45
59:BA:479:A:C4	59:BA:481:G:O4'	2.69	0.45
36:DQ:51:ARG:HH12	36:DQ:55:VAL:HB	1.82	0.45
23:AY:333:GLY:H	23:AY:371:ALA:HB2	1.82	0.45
20:CA:186(M):G:H2'	20:CA:186(N):U:O4'	2.17	0.45
12:AM:56:LEU:O	12:AM:60:VAL:HG23	2.16	0.45
7:CH:14:ARG:HD3	7:CH:82:HIS:HE1	1.81	0.45
20:AA:237:C:H2'	20:AA:238:G:H8	1.76	0.45
59:BA:2092:U:C2	59:BA:2225:A:H2	2.35	0.45
59:DA:820:A:H2'	59:DA:821:A:O4'	2.16	0.45
20:AA:1157:A:N6	20:AA:1178:G:H1'	2.32	0.45
25:BC:7:ARG:O	25:BC:11:LEU:HG	2.17	0.45
20:CA:781:A:N7	20:CA:801:U:O2	2.49	0.45
20:CA:231:G:H2'	20:CA:232:G:C8	2.49	0.45
8:CI:116:LYS:HG2	8:CI:122:ALA:HA	1.98	0.45
16:AQ:38:ARG:HD3	20:AA:280:C:O2	2.17	0.45
6:AG:31:MET:HE1	20:AA:1374:A:H1'	1.99	0.45
20:AA:578:C:O2'	20:AA:728:A:N3	2.43	0.45
59:DA:2605:U:H2'	59:DA:2606:C:C6	2.52	0.45
2:CC:189:ALA:HB3	2:CC:196:LEU:HB2	1.98	0.45
26:DD:150:LYS:HZ3	26:DD:150:LYS:HB3	1.82	0.45
59:BA:950:G:C6	59:BA:968:G:C6	3.04	0.45
27:BE:42:ASP:HB3	27:BE:44:TYR:CZ	2.51	0.45
59:BA:2357:U:O2'	59:BA:2359:C:OP2	2.26	0.45
59:DA:308:G:C8	59:DA:501:A:H1'	2.52	0.45
44:DY:11:ASP:CG	44:DY:12:THR:H	2.19	0.45
59:BA:2106:G:H2'	59:BA:2107:C:C6	2.51	0.45
59:DA:332:A:H1'	59:DA:334:C:OP2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:930:C:H2'	20:AA:931:C:C6	2.51	0.45
42:DW:62:HIS:NE2	59:DA:495:G:O2'	2.48	0.45
20:AA:66:G:N2	20:AA:172:A:N3	2.64	0.45
59:DA:2652:C:H2'	59:DA:2653:U:O4'	2.17	0.45
4:AE:51:VAL:O	4:AE:55:VAL:HG23	2.16	0.45
27:DE:33:VAL:HG23	27:DE:47:VAL:HG13	1.98	0.45
21:AW:64:G:N1	21:AW:65:U:C4	2.85	0.45
59:BA:1308:A:H2'	59:BA:1309:G:O4'	2.17	0.45
59:DA:766:C:H2'	59:DA:767:U:C6	2.52	0.45
1:CB:194:PRO:HB2	1:CB:195:ASP:H	1.45	0.45
59:DA:272:G:H2'	59:DA:273(A):G:H8	1.79	0.45
59:BA:682:G:H2'	59:BA:683:C:C6	2.51	0.45
39:DT:29:ARG:HB3	39:DT:86:ILE:O	2.17	0.45
41:BV:24:LYS:CB	59:BA:1162:G:H4'	2.46	0.45
3:AD:22:LYS:O	3:AD:26:CYS:HB3	2.17	0.45
28:BF:157:VAL:HG22	28:BF:198:ALA:HB1	1.98	0.45
28:DF:124:LEU:O	28:DF:194:MET:HG3	2.16	0.45
1:AB:155:LEU:HD11	1:AB:159:PRO:HG3	1.98	0.45
26:BD:172:TYR:OH	59:BA:2218:G:O3'	2.35	0.45
59:DA:486:C:H2'	59:DA:487:C:C6	2.51	0.45
11:CL:43:VAL:HG12	11:CL:44:THR:H	1.82	0.45
14:AO:8:LYS:O	14:AO:12:ILE:HG13	2.16	0.45
59:DA:729:G:O2'	59:DA:763:G:H4'	2.16	0.45
59:BA:1044:G:O3'	59:BA:1047:G:H5'	2.17	0.45
59:BA:629:G:H1'	59:BA:639:U:H1'	1.98	0.45
16:AQ:68:ARG:NH1	20:AA:277:C:H5'	2.31	0.45
35:DP:41:ARG:NE	35:DP:45:LEU:HD13	2.31	0.45
50:B6:15:GLU:HB3	50:B6:20:ASN:HB2	1.98	0.45
4:AE:18:ARG:HA	20:AA:15:G:H21	1.82	0.45
32:DK:131:ALA:HB1	32:DK:136:VAL:HG13	1.98	0.45
50:D6:7:ILE:HG23	50:D6:29:ASN:HB2	1.98	0.45
36:DQ:87:LYS:HE2	59:DA:955:C:H5''	1.99	0.45
38:DS:105:ALA:O	38:DS:107:GLU:N	2.49	0.45
34:DO:23:ARG:CG	34:DO:24:VAL:H	2.29	0.45
10:CK:84:VAL:N	10:CK:109:VAL:O	2.50	0.45
7:AH:83:ILE:HA	7:AH:136:GLU:O	2.16	0.45
26:BD:9:TYR:HA	59:BA:1695:G:O2'	2.17	0.45
7:CH:79:VAL:O	7:CH:81:HIS:N	2.49	0.45
20:CA:745:C:H5''	20:CA:851:G:H1'	1.98	0.45
16:AQ:98:LEU:HD13	20:AA:279:A:C5	2.51	0.45
59:DA:197:A:H2	59:DA:2434:A:N6	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:566:G:H4'	20:AA:567:G:H5'	1.99	0.45
53:D9:7:VAL:CG1	53:D9:34:GLN:HB3	2.47	0.45
20:CA:401:C:O2'	20:CA:621:A:N3	2.46	0.45
59:DA:2663:G:C6	59:DA:2664:G:C4	3.04	0.45
20:CA:1010:G:H2'	20:CA:1011:G:C8	2.52	0.45
6:CG:61:VAL:HA	6:CG:64:GLN:HB3	1.99	0.45
20:AA:415:A:H2'	20:AA:416:G:C8	2.51	0.45
59:BA:1444:G:H2'	59:BA:1445:C:C5	2.52	0.45
27:DE:172:VAL:HA	27:DE:184:VAL:HA	1.98	0.45
34:BO:23:ARG:HD2	34:BO:23:ARG:HA	1.75	0.45
20:CA:492:G:H2'	20:CA:493:G:C8	2.51	0.45
20:AA:1352:C:H2'	20:AA:1353:G:C8	2.51	0.45
59:BA:1700:A:H3'	59:BA:1701:A:H8	1.82	0.45
16:AQ:22:LEU:HD11	16:AQ:39:SER:HB2	1.98	0.45
3:CD:23:GLY:HA3	3:CD:112:VAL:O	2.17	0.45
20:CA:1404:C:O2	20:CA:1519:A:O2'	2.28	0.45
16:CQ:22:LEU:HD11	16:CQ:39:SER:HB2	1.98	0.45
39:DT:39:ARG:O	39:DT:40:THR:OG1	2.33	0.45
12:AM:15:VAL:HG12	12:AM:45:VAL:HA	1.98	0.45
1:AB:124:SER:O	1:AB:126:GLU:N	2.44	0.45
59:DA:924:C:H2'	59:DA:925:C:C6	2.51	0.45
39:BT:107:ASP:N	39:BT:107:ASP:OD1	2.47	0.45
12:CM:54:VAL:O	12:CM:58:GLU:HG2	2.17	0.45
59:BA:1375:C:H2'	59:BA:1376:C:H6	1.82	0.45
59:BA:24:G:N1	59:BA:516:C:C2	2.65	0.45
59:BA:579:G:H2'	59:BA:580:C:C6	2.51	0.45
59:BA:392:C:H2'	59:BA:393:C:C6	2.51	0.45
59:DA:401:A:N6	59:DA:422:A:H61	2.04	0.45
25:DC:47:LYS:HB2	25:DC:169:THR:O	2.17	0.45
28:BF:123:LEU:HB3	28:BF:192:LEU:HD12	1.98	0.45
1:AB:70:PHE:HD2	1:AB:81:VAL:HB	1.81	0.45
26:DD:264:LYS:HD2	26:DD:266:SER:OG	2.16	0.45
60:BB:13:A:H2'	60:BB:14:U:H5''	1.99	0.45
39:BT:28:VAL:HG12	39:BT:29:ARG:N	2.32	0.45
59:DA:466:A:O5'	59:DA:466:A:H8	2.00	0.45
59:BA:1086:A:H3'	59:BA:1086:A:N3	2.32	0.45
38:BS:92:TYR:CG	38:BS:93:LYS:N	2.84	0.45
9:AJ:51:ARG:HG2	9:AJ:59:SER:C	2.36	0.45
59:DA:378:C:H2'	59:DA:379:G:C8	2.52	0.45
59:DA:379:G:C6	59:DA:396:G:C6	3.05	0.45
37:DR:79:LEU:HD22	37:DR:83:ILE:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:17:LYS:HG3	13:AN:18:VAL:N	2.32	0.45
27:DE:93:VAL:HG21	27:DE:180:ASN:HA	1.99	0.45
59:DA:1278:A:H2'	59:DA:1279:G:C8	2.51	0.45
47:D2:28:LYS:HG3	47:D2:60:LEU:HD11	1.98	0.45
49:D5:33:CYS:HB2	49:D5:49:CYS:HB3	1.67	0.45
23:CY:654:GLY:O	23:CY:657:THR:HG23	2.16	0.45
59:DA:1796:U:C2	59:DA:1797:C:C5	3.04	0.45
45:BZ:29:TYR:HE1	60:BB:73:A:N6	2.15	0.45
46:B0:22:GLY:H	46:B0:39:ARG:HB2	1.80	0.45
59:DA:900:A:H2'	59:DA:901:A:O4'	2.16	0.45
59:DA:634:C:H2'	59:DA:635:C:C6	2.52	0.45
27:BE:8:LYS:HD3	27:BE:192:ASN:HA	1.97	0.45
9:CJ:7:LYS:HB3	9:CJ:97:GLU:HB2	1.99	0.45
45:DZ:99:TYR:HE2	45:DZ:125:LEU:HD13	1.82	0.45
38:DS:95:HIS:NE2	60:DB:48:A:H4'	2.31	0.45
27:DE:122:PHE:CD2	27:DE:138:PRO:HA	2.52	0.45
16:CQ:32:TYR:O	16:CQ:34:LYS:N	2.44	0.45
20:CA:837:G:H1	20:CA:849:C:H42	1.64	0.45
59:DA:2013:A:H2'	59:DA:2014:A:C8	2.52	0.45
59:BA:1930:G:N2	59:BA:1968:G:H2'	2.31	0.45
2:CC:59:ARG:HH12	2:CC:97:LYS:HD3	1.80	0.45
59:DA:525:U:H5'	59:DA:556:G:OP1	2.16	0.45
23:AY:538:TYR:HB3	23:AY:542:VAL:HB	1.99	0.45
23:AY:21:ILE:O	23:AY:23:ALA:N	2.50	0.45
36:BQ:67:ARG:HH11	36:BQ:102:VAL:HB	1.80	0.45
59:BA:1666:G:H2'	59:BA:1667:G:O4'	2.16	0.45
18:CS:6:LYS:HB3	20:CA:1314:C:H5	1.82	0.45
20:CA:669:U:H2'	20:CA:670:G:H8	1.80	0.45
30:DH:163:TYR:HE2	30:DH:168:PRO:HB3	1.82	0.45
5:AF:63:TYR:N	5:AF:63:TYR:CD2	2.84	0.45
59:BA:182:A:H2'	59:BA:183:C:C6	2.52	0.45
59:DA:35:G:H2'	59:DA:36:G:O4'	2.17	0.45
34:BO:63:VAL:HA	34:BO:106:LEU:HD11	1.98	0.45
20:CA:108:G:OP1	20:CA:326:G:N2	2.48	0.45
15:AP:68:ASP:O	15:AP:71:ARG:HB3	2.17	0.45
36:BQ:44:ALA:HA	36:BQ:47:ILE:HB	1.99	0.45
23:CY:354:ARG:HH12	23:CY:378:VAL:HG11	1.81	0.45
20:CA:162:A:C8	20:CA:163:C:H1'	2.51	0.45
2:AC:30:ARG:O	2:AC:34:LEU:HG	2.17	0.45
1:CB:12:GLU:C	1:CB:14:GLY:H	2.20	0.45
36:BQ:111:GLU:O	36:BQ:115:MET:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AW:20:U:H4'	21:AW:20(A):U:C6	2.52	0.45
37:BR:75:LEU:O	37:BR:79:LEU:HB2	2.17	0.45
11:AL:108:ALA:C	11:AL:121:GLY:HA3	2.37	0.45
59:BA:127:A:H5''	59:BA:128:C:O4'	2.17	0.45
20:AA:699:C:H2'	20:AA:700:G:H5'	1.98	0.45
59:DA:2061:G:C2	59:DA:2063:C:C4	3.05	0.45
27:DE:109:LYS:HB2	37:DR:2:ARG:NE	2.31	0.45
40:DU:81:HIS:CE1	59:DA:1151:G:H5''	2.51	0.45
59:BA:28:A:C2	59:BA:513:A:C8	3.05	0.45
40:BU:50:ARG:HH21	59:BA:993:G:H5''	1.81	0.45
59:BA:38:A:H2	59:BA:441:U:H3	1.60	0.45
25:BC:41:THR:N	25:BC:217:THR:O	2.50	0.45
35:DP:66:GLY:HA3	59:DA:2415:G:O2'	2.16	0.45
20:CA:950:U:H2'	20:CA:951:G:C8	2.50	0.45
26:DD:84:TYR:CD2	26:DD:86:PRO:HD3	2.51	0.45
39:BT:51:ARG:HB3	39:BT:62:THR:CG2	2.42	0.45
3:AD:122:ARG:HD3	3:AD:136:PRO:HD3	1.99	0.45
20:AA:553:A:H2'	20:AA:554:C:C6	2.52	0.45
59:BA:629:G:H5''	59:BA:650:C:O2'	2.17	0.45
46:D0:27:GLU:HG3	46:D0:69:PHE:HE1	1.82	0.45
46:D0:27:GLU:H	46:D0:69:PHE:HE1	1.65	0.45
23:AY:315:LYS:HD3	23:AY:316:ILE:N	2.31	0.45
28:BF:102:PRO:HG3	59:BA:658:C:O2'	2.17	0.45
59:BA:2771:C:H2'	59:BA:2772:C:C6	2.52	0.45
20:CA:32:A:H1'	20:CA:48:C:N4	2.32	0.45
48:B3:17:LYS:HA	48:B3:17:LYS:HD3	1.82	0.45
59:DA:1652:A:H2'	59:DA:1653:G:O4'	2.16	0.45
57:B1:26:ARG:HG3	57:B1:27:GLU:H	1.81	0.45
20:AA:1015:A:H1'	20:AA:1218:C:O2'	2.17	0.45
8:CI:97:LYS:HB2	8:CI:102:LEU:HD12	1.99	0.45
26:BD:231:HIS:HD1	26:BD:233:HIS:HB2	1.81	0.45
20:CA:585:G:H1	20:CA:756:C:N4	2.12	0.45
43:BX:80:ILE:HG21	59:BA:1341:U:O2	2.17	0.45
27:DE:51:PHE:H	27:DE:74:PRO:HG3	1.82	0.45
23:AY:213:HIS:O	23:AY:216:LEU:HB3	2.17	0.45
21:CW:1:G:H22	21:CW:73:A:H1'	1.82	0.45
26:BD:151:LYS:NZ	59:BA:2217:G:H21	2.15	0.45
16:CQ:55:ASP:O	16:CQ:57:VAL:HG13	2.15	0.45
59:BA:2183:C:H2'	59:BA:2184:G:H8	1.82	0.45
5:CF:76:ALA:HB1	5:CF:80:ARG:NH2	2.32	0.45
59:BA:492:A:H2'	59:BA:493:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BY:85:VAL:HG13	44:BY:94:LYS:HB3	1.98	0.45
36:BQ:44:ALA:HA	36:BQ:47:ILE:HD12	1.98	0.45
23:AY:519:ARG:NH2	23:AY:678:GLU:H	2.15	0.45
27:BE:4:ILE:HG22	27:BE:198:VAL:HB	1.99	0.45
41:DV:64:HIS:CE1	41:DV:92:THR:HG23	2.52	0.45
20:AA:834:C:H2'	20:AA:835:U:H6	1.82	0.45
59:DA:1786:A:C8	59:DA:1938:A:C6	3.05	0.45
59:DA:1703:G:H2'	59:DA:1704:G:H8	1.82	0.45
37:DR:12:ARG:HG2	37:DR:16:HIS:ND1	2.32	0.45
20:AA:490:G:H2'	20:AA:491:G:C8	2.51	0.45
27:DE:141:ILE:HG13	27:DE:142:GLY:H	1.82	0.45
19:CT:51:GLU:O	19:CT:55:ILE:HG12	2.17	0.45
59:BA:101:G:H2'	59:BA:101:G:N3	2.32	0.45
31:BJ:138:UNK:C	31:BJ:140:UNK:H	2.29	0.45
21:CW:35:A:H2'	21:CW:36:U:C6	2.52	0.45
58:D4:9:LEU:HA	58:D4:9:LEU:HD22	1.87	0.45
25:BC:87:ALA:HB1	25:BC:92:ALA:HB3	1.99	0.45
39:BT:53:ARG:NH1	59:BA:2684:U:OP1	2.50	0.45
59:BA:1025:G:OP1	59:BA:1025:G:H8	1.99	0.45
59:DA:1008:C:H1'	59:DA:1009:A:C8	2.52	0.45
23:AY:137:ASN:ND2	23:AY:263:ALA:N	2.56	0.45
59:BA:679:C:H2'	59:BA:680:G:C8	2.52	0.45
42:BW:80:PRO:HB3	59:BA:26:G:OP1	2.16	0.45
59:BA:414:C:H2'	59:BA:415:A:C8	2.52	0.45
59:DA:575:A:O2'	59:DA:2501:C:OP1	2.35	0.45
27:DE:37:ARG:NH2	59:DA:2784:C:O2	2.50	0.45
25:BC:42:VAL:O	25:BC:43:GLU:C	2.54	0.45
28:DF:156:LEU:H	28:DF:176:LEU:N	2.15	0.45
1:AB:171:ALA:HA	1:AB:174:VAL:H	1.82	0.45
23:CY:566:THR:HG22	23:CY:567:LEU:N	2.24	0.45
59:BA:2822:G:H2'	59:BA:2823:A:H5''	1.97	0.45
20:AA:519:C:N4	20:AA:520:A:C6	2.84	0.45
59:BA:2376:A:H2'	59:BA:2377:A:O4'	2.16	0.45
41:DV:72:VAL:HG23	41:DV:85:LYS:HB2	1.99	0.45
42:DW:61:ASN:ND2	59:DA:496:G:O4'	2.50	0.45
26:BD:206:LEU:HB2	59:BA:1791:A:O3'	2.17	0.45
26:BD:208:LYS:HG3	26:BD:210:GLY:N	2.31	0.45
42:DW:11:ARG:HB3	42:DW:12:ILE:HD12	1.99	0.45
26:BD:78:LYS:O	26:BD:79:VAL:O	2.35	0.45
35:BP:50:ARG:NH1	59:BA:251:A:OP1	2.41	0.45
25:BC:65:LEU:HA	25:BC:66:PRO:HD2	1.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:648:G:H2'	59:BA:649:G:C8	2.49	0.45
59:BA:820:A:N3	59:BA:943:U:H4'	2.32	0.45
59:DA:270(F):G:H2'	59:DA:270(G):U:H6	1.82	0.45
59:DA:930:U:H4'	59:DA:931:G:O4'	2.17	0.45
23:CY:20:HIS:CG	23:CY:21:ILE:N	2.81	0.45
34:DO:22:ILE:HG12	34:DO:42:SER:HB3	1.99	0.45
59:DA:1131:G:C8	59:DA:2025:C:H4'	2.52	0.45
37:BR:104:ARG:HD3	37:BR:109:ALA:HB3	1.99	0.45
20:AA:860:A:H2'	20:AA:861:G:O4'	2.17	0.45
59:BA:531:C:H5''	59:BA:532:A:C5	2.51	0.45
18:AS:49:ILE:HD12	18:AS:60:VAL:HG13	1.99	0.45
51:B7:10:ARG:HG3	59:BA:125:G:C5	2.52	0.45
20:AA:226:G:H2'	20:AA:227:G:H8	1.81	0.45
23:CY:13:ARG:HD3	23:CY:79:ILE:HG13	1.98	0.45
20:AA:1253:G:H1'	20:AA:1355:G:O2'	2.17	0.45
4:AE:70:PRO:HG2	4:AE:142:LEU:HD22	1.98	0.45
59:DA:692:C:N4	59:DA:770:G:H1	2.15	0.45
20:CA:1288:A:N3	20:CA:1352:C:O2'	2.47	0.45
1:AB:141:GLU:O	1:AB:145:LEU:HB2	2.16	0.45
2:AC:43:LEU:HD22	2:AC:47:LEU:HD22	1.98	0.45
16:CQ:15:MET:SD	20:CA:276:G:H5'	2.56	0.45
59:BA:1675:C:C2	59:BA:1676:A:C8	3.04	0.45
20:AA:691:G:H1'	20:AA:696:A:H61	1.82	0.45
6:CG:94:ARG:O	6:CG:97:GLN:HB3	2.17	0.45
59:DA:432:A:H2'	59:DA:433:C:C6	2.52	0.45
59:DA:488:G:H1'	59:DA:492:A:H61	1.82	0.45
9:AJ:45:ARG:HG3	20:AA:1254:C:OP1	2.17	0.45
2:AC:178:LEU:HD23	20:AA:1112:C:H42	1.82	0.45
19:AT:38:LYS:HA	19:AT:41:ILE:HG22	1.99	0.45
15:CP:55:ARG:O	15:CP:58:TYR:HB3	2.16	0.45
44:DY:95:LYS:HD3	44:DY:100:ALA:HA	1.98	0.45
2:AC:119:ARG:O	2:AC:123:GLN:HG2	2.17	0.45
20:CA:487:A:H2'	20:CA:488:C:O4'	2.17	0.45
30:BH:155:SER:O	30:BH:157:TYR:N	2.50	0.45
28:DF:137:LYS:HB3	28:DF:137:LYS:HE2	1.87	0.45
15:AP:28:ARG:CZ	15:AP:28:ARG:HB3	2.45	0.45
59:DA:1782:C:H1'	59:DA:2609:U:H5'	1.98	0.45
10:CK:86:GLY:HA2	10:CK:112:THR:HG23	1.99	0.45
23:CY:137:ASN:HA	23:CY:261:GLY:O	2.17	0.45
20:CA:730:G:H5'	20:CA:816:A:O2'	2.16	0.45
27:BE:136:ARG:O	59:BA:1656:C:H5''	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:13:ARG:HD3	3:CD:40:PRO:HB3	1.98	0.45
3:CD:12:CYS:HA	3:CD:19:LEU:HD13	1.99	0.45
27:DE:119:ARG:HD2	27:DE:120:TRP:CD1	2.51	0.45
34:BO:47:ILE:HA	34:BO:48:PRO:HD2	1.52	0.45
59:BA:2134:A:H2	59:BA:2159:G:O2'	2.00	0.45
59:BA:2512:C:H2'	59:BA:2513:G:O4'	2.16	0.45
31:BJ:52:UNK:HA	31:BJ:81:UNK:HA	1.99	0.45
20:CA:296:U:H1'	20:CA:556:C:H1'	1.98	0.45
59:BA:1583:A:N6	20:CA:838(B):C:OP1	2.50	0.45
59:DA:787:U:H3'	59:DA:791:C:H41	1.82	0.45
39:DT:55:ASN:O	39:DT:55:ASN:ND2	2.50	0.45
21:AW:18:G:N2	21:AW:58:A:O4'	2.50	0.45
28:BF:12:LEU:HA	28:BF:12:LEU:HD22	1.82	0.45
25:DC:104:ILE:HG23	25:DC:111:PHE:HZ	1.81	0.45
20:AA:961:U:H3	20:AA:1201:A:H2	1.64	0.45
45:BZ:30:ASN:O	45:BZ:32:HIS:N	2.43	0.45
38:DS:27:SER:H	38:DS:40:ILE:HG22	1.81	0.45
59:BA:1652:A:H3'	59:BA:1653:G:C8	2.51	0.45
51:D7:27:GLY:O	51:D7:31:LEU:HG	2.16	0.45
59:BA:2468:G:O2'	59:BA:2469:A:H5''	2.17	0.45
27:BE:47:VAL:HG12	27:BE:49:LEU:HD13	1.98	0.45
13:CN:47:LEU:HA	13:CN:47:LEU:HD23	1.73	0.45
57:B1:45:ASN:CB	57:B1:64:ALA:HB2	2.44	0.45
59:BA:609(A):A:H62	59:BA:619:G:H21	1.65	0.45
6:AG:102:ARG:O	6:AG:106:GLN:HG2	2.15	0.45
6:CG:15:ASP:HB2	6:CG:20:ASP:O	2.17	0.45
59:BA:1295:C:H2'	59:BA:1296:G:O4'	2.17	0.45
59:DA:2454:G:H1	59:DA:2498:C:N4	2.13	0.45
26:BD:76:PRO:HA	26:BD:118:VAL:HB	1.98	0.45
43:DX:29:TRP:HA	43:DX:78:LYS:HA	1.99	0.45
43:DX:29:TRP:HZ3	43:DX:76:ARG:HH21	1.63	0.45
4:CE:19:MET:CG	20:CA:15:G:H1'	2.47	0.45
59:DA:573:G:N1	59:DA:2031:A:OP2	2.49	0.45
59:DA:184:C:H4'	59:DA:217:G:N2	2.32	0.45
60:BB:49:C:H2'	60:BB:50:G:C8	2.52	0.45
20:AA:1102:A:H2'	20:AA:1103:C:C6	2.51	0.45
59:BA:1930:G:O2'	59:BA:1968:G:N1	2.43	0.45
23:AY:534:ILE:HG13	23:AY:570:GLY:HA3	1.99	0.45
11:AL:10:LEU:HB3	16:AQ:32:TYR:CZ	2.52	0.45
59:BA:352:G:N2	59:BA:354:G:H3'	2.33	0.45
2:AC:49:SER:OG	2:AC:83:ARG:NH2	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:151:A:H62	20:AA:170:U:H3	1.64	0.45
4:AE:36:ASP:OD1	4:AE:40:ARG:N	2.50	0.45
59:DA:27:G:H1'	59:DA:513:A:H61	1.82	0.45
20:AA:195:A:N3	20:AA:222:U:O2'	2.44	0.45
59:DA:1418:G:H1'	59:DA:1580:A:H61	1.82	0.45
57:B1:49:VAL:O	57:B1:60:PHE:HB2	2.17	0.45
2:AC:174:PRO:HA	20:AA:1108:G:P	2.57	0.45
45:DZ:144:LEU:HG	45:DZ:150:LEU:HD22	1.98	0.45
20:CA:1268:A:H1'	20:CA:1327:C:H5'	1.98	0.45
23:AY:416:LYS:HG2	23:AY:417:THR:HG23	1.98	0.45
44:BY:45:VAL:HG13	44:BY:61:ILE:HA	1.99	0.45
59:BA:836:G:H2'	59:BA:837:C:C6	2.52	0.45
60:BB:34:U:O2'	60:BB:44:G:N7	2.46	0.45
28:DF:206:ILE:HG22	28:DF:208:GLY:H	1.82	0.45
59:DA:352:G:H21	59:DA:354:G:H3'	1.82	0.45
59:BA:934:G:H2'	59:BA:935:C:H6	1.81	0.45
5:AF:18:GLN:O	5:AF:21:LEU:HB3	2.17	0.45
13:AN:34:TYR:N	13:AN:39:LEU:O	2.50	0.45
45:BZ:93:ASP:HA	45:BZ:130:PRO:HB2	1.99	0.45
20:CA:869:G:O2'	20:CA:872:A:N7	2.49	0.45
14:AO:41:GLU:HA	14:AO:44:LYS:HG3	1.98	0.45
4:CE:45:PHE:CZ	4:CE:47:LYS:HG3	2.51	0.45
20:AA:1424:C:H2'	20:AA:1425:U:O4'	2.17	0.45
59:DA:1036:G:H2'	59:DA:1037:G:C8	2.52	0.45
23:AY:24:GLY:O	62:AY:702:GDP:O2A	2.35	0.44
23:AY:22:ASP:O	62:AY:702:GDP:O3B	2.35	0.44
26:DD:50:THR:OG1	59:DA:1813:G:N3	2.41	0.44
26:DD:44:ASN:OD1	26:DD:45:ASN:N	2.50	0.44
40:BU:51:LYS:N	40:BU:51:LYS:HD2	2.32	0.44
57:B1:19:GLN:NE2	59:BA:2233:U:OP2	2.50	0.44
59:DA:419:C:H2'	59:DA:420:C:O4'	2.17	0.44
43:BX:43:VAL:HG11	43:BX:51:VAL:HG21	2.00	0.44
59:BA:2378:A:H8	59:BA:2378:A:O5'	2.00	0.44
37:BR:33:ARG:CZ	37:BR:116:LEU:HD12	2.48	0.44
20:AA:32:A:H1'	20:AA:48:C:H41	1.82	0.44
20:AA:551:U:H2'	20:AA:552:U:C6	2.52	0.44
20:AA:1317:C:H3'	20:AA:1318:A:H8	1.82	0.44
57:D1:76:ARG:NH2	57:D1:94:LEU:O	2.45	0.44
59:DA:2730:C:H2'	59:DA:2731:G:C8	2.52	0.44
61:AY:701:FUA:H16	61:AY:701:FUA:H322	1.75	0.44
28:BF:66:PRO:O	28:BF:67:GLN:HB2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:179:LYS:NZ	20:AA:1075:C:H5''	2.31	0.44
59:DA:135:G:H1	59:DA:144:C:H42	1.65	0.44
20:CA:223:U:H2'	20:CA:224:C:O4'	2.17	0.44
28:BF:40:GLN:OE1	28:BF:183:VAL:HG23	2.17	0.44
45:DZ:139:VAL:HG12	45:DZ:155:LEU:HB2	1.99	0.44
20:CA:595:G:H21	20:CA:596:C:N4	2.16	0.44
59:BA:1809:A:H2'	59:BA:1810:A:C8	2.52	0.44
59:BA:1810:A:O5'	59:BA:1810:A:H8	1.99	0.44
59:DA:1967:C:H2'	59:DA:1968:G:O4'	2.18	0.44
59:BA:2259:G:H2'	59:BA:2260:C:H6	1.80	0.44
6:AG:30:ILE:HD13	6:AG:43:PHE:HB2	1.98	0.44
11:AL:15:ARG:O	20:AA:562:C:O2'	2.34	0.44
12:AM:5:ALA:O	12:AM:7:VAL:N	2.50	0.44
30:DH:176:ALA:HB1	59:DA:2529:G:C5'	2.47	0.44
59:BA:842:G:H2'	59:BA:843:G:C8	2.50	0.44
45:DZ:118:GLN:N	45:DZ:173:ALA:O	2.50	0.44
34:BO:23:ARG:HG3	34:BO:24:VAL:H	1.83	0.44
5:AF:63:TYR:N	5:AF:63:TYR:HD2	2.15	0.44
59:DA:1102:C:C2	59:DA:1103:A:C8	3.05	0.44
20:AA:152:A:H3'	20:AA:153:C:C6	2.52	0.44
59:DA:2367:G:H2'	59:DA:2368:C:C6	2.52	0.44
20:CA:359:U:H2'	20:CA:360:A:C8	2.52	0.44
59:DA:2825:U:H2'	59:DA:2826:A:O4'	2.17	0.44
30:DH:96:ALA:HB3	30:DH:128:PRO:HA	1.99	0.44
20:AA:198:G:H1	20:AA:219:C:H42	1.65	0.44
20:AA:838(A):U:O2'	20:AA:838(B):C:H5''	2.16	0.44
4:AE:29:GLY:HA2	4:AE:46:GLY:O	2.17	0.44
44:BY:91:GLU:HG2	44:BY:92:ASN:H	1.83	0.44
35:DP:71:VAL:H	35:DP:72:PRO:CD	2.30	0.44
28:DF:135:LYS:HB3	28:DF:138:GLU:HG3	1.99	0.44
2:CC:204:LEU:HD22	2:CC:204:LEU:HA	1.70	0.44
39:DT:114:LEU:HD23	39:DT:114:LEU:HA	1.64	0.44
1:CB:157:ARG:NH1	1:CB:157:ARG:HB3	2.32	0.44
35:DP:131:SER:HB3	35:DP:134:ALA:HB3	1.99	0.44
43:DX:15:GLU:HA	43:DX:18:TYR:CD2	2.52	0.44
39:BT:54:ARG:HA	39:BT:59:THR:CB	2.48	0.44
27:BE:117:MET:HE1	27:BE:136:ARG:HA	2.00	0.44
33:DN:36:GLY:O	33:DN:42:TRP:HB2	2.17	0.44
59:BA:2888:C:H2'	59:BA:2889:C:C6	2.51	0.44
25:BC:166:ASN:HA	25:BC:170:GLY:HA2	1.99	0.44
59:BA:414:C:H2'	59:BA:415:A:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BU:92:ARG:HH11	41:BV:4:ILE:HG23	1.82	0.44
57:B1:20:ARG:NH2	57:B1:24:ALA:HB2	2.33	0.44
29:DG:47:LYS:HA	29:DG:82:LEU:HG	1.98	0.44
3:AD:105:VAL:HG21	3:AD:126:ILE:HG13	1.99	0.44
26:BD:165:ILE:HG23	26:BD:175:LEU:HD23	1.99	0.44
33:DN:127:ASP:N	33:DN:127:ASP:OD1	2.50	0.44
33:DN:56:ASN:HA	33:DN:125:GLY:H	1.82	0.44
28:DF:153:SER:HA	28:DF:172:TRP:O	2.17	0.44
26:DD:63:ARG:CZ	26:DD:86:PRO:HD2	2.47	0.44
37:BR:97:VAL:HG22	37:BR:114:VAL:HA	1.99	0.44
41:DV:72:VAL:HG11	59:DA:992:C:O3'	2.17	0.44
41:DV:7:THR:HG23	41:DV:12:TYR:HD2	1.82	0.44
26:BD:157:ARG:HH22	59:BA:1817:G:H3'	1.82	0.44
40:BU:3:ARG:C	40:BU:5:LYS:H	2.21	0.44
28:BF:129:PHE:CE1	28:BF:193:VAL:HG12	2.49	0.44
13:CN:47:LEU:HB3	13:CN:53:LEU:HG	1.99	0.44
20:AA:1135:U:H2'	20:AA:1137:C:O4'	2.17	0.44
20:AA:1134:G:H2'	20:AA:1135:U:O4'	2.18	0.44
33:DN:137:LYS:HB3	33:DN:138:LEU:H	1.69	0.44
6:CG:150:ALA:O	10:CK:96:ARG:NH1	2.50	0.44
19:CT:21:LYS:NZ	20:CA:103:C:H5''	2.31	0.44
25:BC:82:GLU:HG3	25:BC:83:LYS:N	2.32	0.44
59:DA:270(G):U:H2'	59:DA:270(H):C:C6	2.52	0.44
23:AY:91:THR:HG22	23:AY:95:GLU:HG2	1.99	0.44
20:AA:67:C:H2'	20:AA:68:G:H8	1.77	0.44
5:CF:87:ARG:HH22	20:CA:674:G:P	2.40	0.44
33:DN:76:SER:OG	33:DN:81:GLY:HA3	2.18	0.44
20:CA:62:U:OP1	20:CA:385:C:O2'	2.34	0.44
20:CA:863:U:H2'	20:CA:865:A:OP2	2.17	0.44
59:DA:781:A:H2'	59:DA:1777:U:H1'	1.98	0.44
23:AY:27:THR:HA	23:AY:30:GLU:HB3	1.99	0.44
4:AE:78:HIS:O	4:AE:93:PRO:HD3	2.18	0.44
27:DE:5:LEU:HA	27:DE:5:LEU:HD23	1.84	0.44
5:AF:46:ARG:NH2	17:AR:37:VAL:HG21	2.32	0.44
35:BP:112:LEU:HD22	35:BP:113:LYS:N	2.32	0.44
26:BD:9:TYR:HD2	59:BA:705:A:H1'	1.82	0.44
30:BH:19:VAL:HG23	30:BH:45:VAL:HG23	1.98	0.44
20:AA:757:U:H1'	20:AA:879:C:H1'	1.99	0.44
26:BD:273:ARG:HB3	26:BD:274:ARG:H	1.51	0.44
28:DF:126:VAL:HG21	28:DF:142:TRP:CZ2	2.51	0.44
45:DZ:76:LEU:HD22	45:DZ:83:PRO:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:100:LEU:HD13	37:BR:101:ALA:N	2.32	0.44
59:DA:709:U:H2'	59:DA:710:G:H8	1.82	0.44
30:BH:126:PRO:HB2	30:BH:127:GLU:OE1	2.18	0.44
59:BA:2076:U:OP2	59:BA:2238:G:N2	2.42	0.44
59:DA:1264:G:H2'	59:DA:1265:A:C8	2.53	0.44
20:CA:1323:G:H2'	20:CA:1324:A:C8	2.52	0.44
17:CR:49:LYS:HB3	20:CA:719:C:O2'	2.18	0.44
59:BA:2663:G:H3'	59:BA:2664:G:H8	1.82	0.44
36:BQ:66:ILE:H	36:BQ:66:ILE:HD13	1.83	0.44
20:CA:1006:C:H2'	20:CA:1007:C:H6	1.83	0.44
46:D0:75:LEU:HD21	59:DA:2334:G:C2	2.52	0.44
3:CD:73:ARG:HB2	20:CA:546:G:OP1	2.17	0.44
28:DF:36:VAL:O	28:DF:39:TRP:HB3	2.17	0.44
39:DT:89:VAL:C	39:DT:90:GLN:HG3	2.38	0.44
20:CA:530:G:O6	22:CV:24:A:H4'	2.17	0.44
20:CA:177:C:H2'	20:CA:178:C:C6	2.51	0.44
59:BA:2300:G:H2'	59:BA:2301:C:C6	2.53	0.44
23:CY:301:ILE:HG22	23:CY:332:SER:HB2	1.99	0.44
23:AY:547:GLU:O	23:AY:551:GLN:NE2	2.48	0.44
20:CA:1004:A:H8	20:CA:1036:G:H1	1.63	0.44
20:AA:794:A:H4'	20:AA:1521:G:O2'	2.17	0.44
59:BA:198:C:H6	59:BA:198:C:O5'	2.00	0.44
20:AA:1170:A:O5'	20:AA:1170:A:H8	2.00	0.44
59:BA:1121:C:H2'	59:BA:1122:G:O4'	2.18	0.44
27:BE:122:PHE:CZ	59:BA:2512:C:H4'	2.51	0.44
59:BA:679:C:H2'	59:BA:680:G:H8	1.82	0.44
59:DA:227:A:C6	59:DA:2407:G:H1'	2.52	0.44
57:B1:22:GLY:HA2	57:B1:38:SER:H	1.82	0.44
3:AD:105:VAL:HG21	3:AD:121:VAL:HG22	1.98	0.44
25:DC:82:GLU:HG3	25:DC:83:LYS:HD3	1.98	0.44
59:BA:2822:G:N2	59:BA:2824:C:OP1	2.51	0.44
26:BD:219:PRO:HB3	59:BA:1790:C:H5'	2.00	0.44
38:BS:99:LYS:O	38:BS:101:LEU:N	2.50	0.44
59:DA:557:U:H2'	59:DA:558:G:H8	1.75	0.44
59:BA:1429:G:O4'	59:BA:1568:G:O2'	2.24	0.44
20:CA:186(E):C:N3	20:CA:186(L):G:N2	2.55	0.44
35:BP:126:VAL:HA	35:BP:145:PRO:HG2	1.98	0.44
59:DA:2001:A:H4'	59:DA:2689:U:C2	2.51	0.44
6:CG:15:ASP:HB3	6:CG:19:GLY:N	2.30	0.44
8:CI:107:ARG:NH2	20:CA:1346:A:N3	2.66	0.44
59:BA:1690:A:H2'	59:BA:1691:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:40:U:H3'	60:DB:41:U:C5'	2.45	0.44
59:BA:1097:U:H2'	59:BA:1098:A:H5'	2.00	0.44
7:CH:95:VAL:HG21	7:CH:133:LEU:HD22	1.98	0.44
49:B5:38:ALA:HB3	49:B5:49:CYS:SG	2.58	0.44
20:CA:864:A:H2'	20:CA:865:A:C8	2.52	0.44
20:CA:184:G:H1	20:CA:193:C:N4	2.14	0.44
5:AF:84:ASN:O	5:AF:86:ARG:N	2.48	0.44
20:AA:1260:C:N4	20:AA:1274:G:H1	2.15	0.44
20:AA:1285:A:H5'	20:AA:1286:A:C8	2.51	0.44
6:CG:102:ARG:NH2	20:CA:939:G:H5''	2.32	0.44
31:DJ:35:UNK:O	31:DJ:39:UNK:N	2.50	0.44
23:AY:604:PRO:HA	23:AY:676:TYR:HB3	1.99	0.44
20:AA:881:G:H2'	20:AA:882:C:H6	1.81	0.44
59:BA:1305:C:N4	59:BA:1623:G:H1	2.13	0.44
7:AH:103:VAL:HG11	7:AH:109:ILE:H	1.81	0.44
20:AA:582:U:H2'	20:AA:583:A:C8	2.52	0.44
59:DA:822:U:O4	59:DA:944:G:H8	2.01	0.44
59:BA:1312:U:H4'	59:BA:1313:U:O5'	2.17	0.44
59:DA:443:A:H1'	59:DA:1201:C:C1'	2.47	0.44
36:DQ:30:GLY:HA2	36:DQ:107:ALA:HB2	1.98	0.44
11:AL:15:ARG:NH1	20:AA:563:A:N3	2.65	0.44
35:BP:16:ARG:HD2	35:BP:18:ARG:HG2	1.98	0.44
59:BA:1035:U:H2'	59:BA:1036:G:H8	1.82	0.44
59:DA:1258:C:H2'	59:DA:1259:G:C8	2.52	0.44
15:AP:19:ILE:HB	15:AP:37:GLY:C	2.38	0.44
45:DZ:81:ARG:HB2	45:DZ:81:ARG:HE	1.56	0.44
25:DC:118:PRO:HD3	25:DC:147:GLY:CA	2.46	0.44
59:BA:718:A:H3'	59:BA:719:C:H6	1.83	0.44
20:AA:691:G:H1'	20:AA:696:A:N6	2.32	0.44
59:BA:2726:U:O2'	59:BA:2727:G:H8	2.00	0.44
35:BP:35:HIS:CE1	59:BA:941:A:H4'	2.52	0.44
59:DA:219:G:C6	59:DA:220:G:C6	3.06	0.44
20:AA:1152:A:H2'	20:AA:1153:C:H6	1.81	0.44
59:BA:1081:U:H2'	59:BA:1082:U:C6	2.52	0.44
20:AA:447:G:H2'	20:AA:485:G:N2	2.31	0.44
37:BR:102:GLU:O	37:BR:103:ARG:HB2	2.16	0.44
29:DG:46:ALA:HA	29:DG:53:LEU:HD23	1.99	0.44
59:DA:149(B):A:H2'	59:DA:1449:G:O4'	2.17	0.44
23:AY:147:TRP:O	23:AY:151:ARG:HB2	2.17	0.44
59:BA:1389:G:H2'	59:BA:1390:U:O4'	2.16	0.44
30:DH:89:ILE:HG22	30:DH:162:ILE:HG23	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:171:PRO:HB3	59:BA:323:G:C8	2.51	0.44
18:AS:15:LEU:HD23	18:AS:15:LEU:HA	1.75	0.44
17:AR:19:LYS:HB3	17:AR:20:ALA:H	1.61	0.44
32:DK:103:GLN:O	32:DK:107:ILE:HG12	2.17	0.44
30:DH:85:LYS:CE	30:DH:141:VAL:HG13	2.47	0.44
59:BA:1603:A:N3	59:BA:1603:A:H2'	2.32	0.44
59:DA:1016:G:C2	59:DA:1017:G:C8	3.05	0.44
3:CD:30:LYS:HE2	3:CD:30:LYS:N	2.33	0.44
20:CA:257:G:N2	20:CA:269:C:N3	2.54	0.44
59:BA:1131:G:OP2	59:BA:2515:C:H4'	2.18	0.44
27:BE:146:THR:O	59:BA:2571:C:O2'	2.35	0.44
1:CB:70:PHE:O	1:CB:93:VAL:N	2.43	0.44
1:CB:198:ASP:HA	7:CH:68:ARG:NH2	2.32	0.44
31:BJ:23:UNK:O	31:BJ:84:UNK:C	2.66	0.44
26:DD:248:SER:C	26:DD:250:TRP:H	2.21	0.44
59:DA:2629:A:O2'	59:DA:2895:U:O4	2.28	0.44
20:CA:1198:G:H2'	20:CA:1199:U:C6	2.52	0.44
59:DA:584:C:H2'	59:DA:585:G:C8	2.53	0.44
6:AG:75:VAL:HG22	6:AG:88:PRO:HB3	2.00	0.44
33:DN:74:ARG:HG3	33:DN:74:ARG:NH1	2.14	0.44
51:D7:16:HIS:ND1	59:DA:684:G:OP1	2.51	0.44
25:BC:161:ARG:O	25:BC:161:ARG:HD3	2.17	0.44
39:DT:59:THR:HG23	39:DT:78:LEU:HD23	2.00	0.44
28:DF:66:PRO:HB2	28:DF:67:GLN:H	1.61	0.44
28:DF:108:LYS:NZ	59:DA:601:C:H5'	2.32	0.44
59:DA:1889:A:H1'	59:DA:2087:G:O4'	2.17	0.44
45:BZ:44:PHE:CE1	45:BZ:88:PHE:HZ	2.36	0.44
38:BS:70:GLY:O	38:BS:73:LEU:HB3	2.17	0.44
39:BT:50:ILE:HG12	39:BT:99:LEU:HB2	1.99	0.44
57:B1:12:PRO:CA	57:B1:43:TYR:HB2	2.47	0.44
59:DA:537:C:H2'	59:DA:539:G:C8	2.53	0.44
40:DU:54:LYS:HE3	59:DA:994:C:H3'	1.98	0.44
27:BE:48:GLN:HA	27:BE:79:ARG:O	2.18	0.44
59:BA:1817:G:H2'	59:BA:1818:U:H5'	1.99	0.44
28:BF:155:LEU:O	28:BF:191:ARG:O	2.35	0.44
20:AA:26:A:N6	20:AA:558:G:H1'	2.32	0.44
31:DJ:24:UNK:HA	31:DJ:84:UNK:O	2.18	0.44
20:AA:32:A:H1'	20:AA:48:C:N4	2.32	0.44
59:DA:658:C:H2'	59:DA:659:C:O4'	2.18	0.44
9:AJ:16:LEU:O	9:AJ:19:SER:OG	2.30	0.44
20:CA:405:U:H5''	20:CA:406:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D1:91:LYS:HA	57:D1:94:LEU:HD22	1.97	0.44
59:DA:846:C:C2	59:DA:847:U:H5	2.35	0.44
59:DA:2002:G:H2'	59:DA:2003:G:C8	2.52	0.44
59:BA:2849:U:H1'	59:BA:2866:U:H6	1.82	0.44
59:BA:2599:G:H2'	59:BA:2600:A:H8	1.82	0.44
7:CH:21:LYS:O	7:CH:63:LEU:HD21	2.18	0.44
28:BF:107:LYS:NZ	59:BA:618(A):G:H5''	2.32	0.44
28:BF:100:THR:O	59:BA:659:C:H4'	2.17	0.44
6:AG:102:ARG:HD3	20:AA:940:C:OP1	2.18	0.44
46:B0:39:ARG:NH2	59:BA:2363:C:HO2'	2.14	0.44
59:BA:1902:C:H2'	59:BA:1903:G:O4'	2.17	0.44
8:AI:48:GLU:N	8:AI:49:PRO:HD2	2.33	0.44
59:BA:1952:A:C6	59:BA:1953:A:N1	2.86	0.44
34:DO:28:SER:O	59:DA:2547:U:H1'	2.17	0.44
50:D6:14:THR:O	50:D6:49:HIS:HA	2.17	0.44
20:CA:140:A:H2'	20:CA:141:A:H8	1.82	0.44
25:BC:14:LYS:HE2	25:BC:14:LYS:HB3	1.79	0.44
20:CA:939:G:H2'	20:CA:940:C:C6	2.52	0.44
23:CY:461:ILE:HA	23:CY:464:ASP:HB3	1.99	0.44
20:CA:745:C:H2'	20:CA:746:A:C8	2.53	0.44
59:BA:854:G:H1	59:BA:923:C:H42	1.66	0.44
20:CA:1200:C:O2'	20:CA:1201:A:OP2	2.32	0.44
47:D2:48:HIS:HB3	59:DA:95:G:O2'	2.17	0.44
38:DS:16:ASN:ND2	38:DS:20:ARG:HH22	2.15	0.44
23:CY:427:ALA:HB1	23:CY:466:LEU:HD11	1.99	0.44
20:AA:149:A:H2'	20:AA:150:C:H6	1.83	0.44
5:CF:80:ARG:HB2	5:CF:80:ARG:HE	1.44	0.44
28:BF:131:GLY:HA2	28:BF:138:GLU:HB3	1.98	0.44
59:BA:685:A:H5''	59:BA:774:A:H61	1.82	0.44
20:CA:1440(J):C:O2'	20:CA:1440(K):G:H5''	2.17	0.44
23:AY:437:THR:OG1	23:AY:438:PHE:N	2.50	0.44
37:BR:50:HIS:CE1	37:BR:54:LEU:HD11	2.52	0.44
59:BA:1765:C:H2'	59:BA:1766:U:H6	1.83	0.44
58:D4:9:LEU:HB3	58:D4:10:VAL:H	1.61	0.44
44:BY:49:VAL:HG12	44:BY:50:ARG:H	1.83	0.44
59:DA:2521:C:H2'	59:DA:2522:U:C6	2.53	0.44
16:AQ:46:ASP:OD2	16:AQ:50:LYS:HG2	2.17	0.44
31:BJ:36:UNK:O	31:BJ:40:UNK:N	2.51	0.44
51:D7:23:ARG:O	51:D7:28:ARG:NH1	2.51	0.44
14:CO:70:LEU:HG	14:CO:78:TYR:HB2	2.00	0.44
33:DN:128:HIS:NE2	33:DN:130:HIS:HA	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:190:ASP:H	3:CD:193:ASP:HB2	1.83	0.44
23:AY:344:THR:OG1	23:AY:390:VAL:HG13	2.17	0.44
27:BE:29:GLY:HA2	27:BE:180:ASN:HB3	1.98	0.44
29:DG:76:SER:HA	29:DG:83:ARG:HA	1.99	0.44
33:BN:61:ARG:NH1	33:BN:61:ARG:HG2	2.32	0.44
59:BA:2679:A:N6	59:BA:2728:U:H3	2.14	0.44
27:BE:12:THR:HA	59:BA:2682:U:H1'	2.00	0.44
59:DA:1005:C:H2'	59:DA:1006:C:O4'	2.17	0.44
33:DN:43:THR:HB	33:DN:46:VAL:CG1	2.47	0.44
59:DA:807:U:H2'	59:DA:808:G:O4'	2.17	0.44
26:DD:43:ARG:HE	59:DA:691:C:H4'	1.83	0.44
57:D1:20:ARG:HH12	57:D1:24:ALA:HB2	1.82	0.44
40:BU:11:ARG:HH11	59:BA:513:A:H1'	1.81	0.44
6:AG:78:ARG:HD3	6:AG:154:TYR:O	2.18	0.44
11:AL:33:ARG:N	11:AL:85:ILE:HB	2.33	0.44
25:BC:41:THR:O	25:BC:175:PRO:HA	2.16	0.44
59:BA:273(A):G:C2	59:BA:273(B):G:C8	3.05	0.44
59:BA:2612:C:C4	59:BA:2613:U:H5	2.36	0.44
23:AY:201:ILE:HG12	23:AY:206:LEU:N	2.25	0.44
38:BS:71:ARG:HG3	38:BS:103:GLU:OE2	2.17	0.44
39:BT:89:VAL:O	39:BT:91:ARG:HG3	2.17	0.44
41:DV:19:LYS:HE2	41:DV:19:LYS:HB2	1.75	0.44
40:DU:34:LYS:NZ	59:DA:2018:G:H21	2.15	0.44
42:DW:12:ILE:HD11	42:DW:42:ARG:NH2	2.26	0.44
59:DA:2070:G:H2'	59:DA:2071:A:C8	2.52	0.44
59:BA:988:A:H4'	59:BA:1155:A:C2	2.52	0.44
34:DO:104:ARG:NH2	39:DT:43:GLN:OE1	2.50	0.44
20:AA:35:G:H2'	20:AA:36:C:C6	2.53	0.44
16:AQ:10:VAL:HG21	16:AQ:51:TYR:HB3	1.99	0.44
59:DA:972:G:H8	59:DA:972:G:O5'	2.00	0.44
57:D1:60:PHE:CE2	57:D1:73:LEU:HD22	2.52	0.44
6:AG:102:ARG:NH2	20:AA:939:G:H5''	2.32	0.44
22:AV:6:G:H2'	22:AV:7:G:C8	2.53	0.44
44:DY:75:ILE:HG12	44:DY:76:CYS:N	2.32	0.44
34:BO:64:ARG:NH2	39:BT:69:GLY:HA3	2.33	0.44
20:CA:769:G:H1	20:CA:810:C:N4	2.13	0.44
59:BA:2524:G:C6	59:BA:2525:G:C5	3.05	0.44
5:AF:100:ASN:ND2	17:AR:23:LYS:HG2	2.32	0.44
46:D0:72:ARG:NH2	60:DB:10:C:H5''	2.32	0.44
34:DO:61:VAL:HG21	34:DO:111:PHE:CE2	2.52	0.44
8:AI:10:ARG:HG2	8:AI:105:ASP:HB2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:25:ASP:OD2	7:AH:26:VAL:N	2.50	0.44
59:BA:600:G:H2'	59:BA:601:C:C6	2.53	0.44
20:AA:1403:C:H1'	20:AA:1500:A:N1	2.32	0.44
26:BD:50:THR:HA	59:BA:1805:U:O2'	2.18	0.44
35:BP:63:PRO:HD2	59:BA:2394:C:OP1	2.18	0.44
59:BA:1938:A:N7	59:BA:2590:A:O2'	2.47	0.44
3:CD:135:LEU:CD1	3:CD:135:LEU:H	2.30	0.44
6:AG:91:VAL:HB	6:AG:96:GLN:HG3	2.00	0.44
5:CF:80:ARG:HD3	5:CF:88:VAL:HB	1.99	0.44
14:CO:67:LEU:HD13	14:CO:87:ILE:HD12	2.00	0.44
20:AA:1326:C:H2'	20:AA:1327:C:C6	2.53	0.44
32:DK:34:ILE:HA	32:DK:37:PHE:HB3	1.99	0.44
12:CM:111:LYS:HE3	12:CM:112:GLY:O	2.18	0.44
39:DT:131:ALA:O	39:DT:135:ALA:N	2.50	0.44
3:AD:12:CYS:SG	3:AD:21:LEU:HD12	2.58	0.44
42:DW:55:ALA:O	42:DW:59:VAL:HG23	2.18	0.44
1:AB:20:GLU:HG3	1:AB:191:ASP:N	2.32	0.44
28:DF:84:VAL:HG23	59:DA:1257:C:O2'	2.17	0.44
29:DG:63:ILE:HB	29:DG:143:GLU:CD	2.38	0.44
45:BZ:145:GLU:OE1	45:BZ:146:ILE:N	2.46	0.44
20:CA:1202:G:H2'	20:CA:1203:C:O4'	2.17	0.44
3:CD:145:GLU:OE1	3:CD:182:LYS:HD2	2.17	0.44
43:DX:88:LYS:HE2	43:DX:88:LYS:HB3	1.82	0.44
31:DJ:69:UNK:O	31:DJ:71:UNK:N	2.51	0.44
34:BO:71:ARG:O	34:BO:73:ASP:N	2.51	0.44
27:BE:109:LYS:HB2	37:BR:2:ARG:HE	1.82	0.44
59:BA:1024:G:C3'	59:BA:1025:G:H5''	2.46	0.44
59:DA:2637:U:O2	59:DA:2776:A:N7	2.50	0.44
27:DE:149:ARG:NH1	59:DA:2024:G:O2'	2.51	0.44
59:DA:768:G:H2'	59:DA:769:G:O4'	2.18	0.44
20:AA:1422:G:O2'	34:BO:49:ARG:NH2	2.51	0.44
59:DA:1416:G:H2'	59:DA:1417:C:C6	2.53	0.44
57:D1:20:ARG:HB2	57:D1:38:SER:O	2.17	0.44
59:BA:2503:A:O2'	59:BA:2505:G:OP2	2.23	0.44
25:BC:165:ARG:N	25:BC:172:ILE:HG13	2.33	0.44
41:BV:4:ILE:HD13	41:BV:40:LEU:HD23	1.99	0.44
59:DA:687:C:H2'	59:DA:688:U:O4'	2.18	0.44
59:DA:373:U:H2'	59:DA:374:A:H8	1.82	0.44
59:DA:401:A:C2	59:DA:402:A:C4	3.05	0.44
28:BF:194:MET:SD	28:BF:199:TRP:HD1	2.41	0.44
28:DF:75:HIS:HA	59:DA:674:G:H4'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:65:LEU:HD11	25:DC:162:ILE:HD11	2.00	0.44
59:DA:605:C:H2'	59:DA:606:U:O4'	2.18	0.44
28:DF:170:LEU:HD12	28:DF:172:TRP:NE1	2.32	0.44
1:AB:57:PHE:CD2	1:AB:185:ILE:HD11	2.53	0.44
41:DV:4:ILE:HB	41:DV:39:LEU:O	2.18	0.44
26:BD:222:ARG:HG2	59:BA:1789:A:P	2.57	0.44
11:AL:95:GLY:O	11:AL:97:ARG:N	2.50	0.44
38:BS:108:GLY:O	59:BA:2377:A:H4'	2.18	0.44
51:D7:41:ARG:NH1	59:DA:463:G:O6	2.49	0.44
45:BZ:102:LEU:HD21	45:BZ:124:ILE:HD12	2.00	0.44
41:DV:23:GLU:OE1	59:DA:993:G:N2	2.45	0.44
59:DA:484:C:H2'	59:DA:485:C:C6	2.53	0.44
19:CT:76:ALA:HA	19:CT:79:ARG:HH12	1.81	0.44
42:DW:11:ARG:NH2	42:DW:98:LYS:HD3	2.33	0.44
28:BF:155:LEU:HG	28:BF:176:LEU:HB3	1.98	0.44
3:CD:106:TYR:CE1	3:CD:113:SER:HA	2.53	0.44
31:DJ:116:UNK:O	31:DJ:118:UNK:N	2.51	0.44
51:B7:49:ARG:HB2	59:BA:1601:G:H4'	1.98	0.44
20:AA:130:A:N1	20:AA:233:C:H1'	2.32	0.44
16:AQ:69:LYS:CG	20:AA:254:G:H5''	2.47	0.44
26:DD:231:HIS:HD1	26:DD:233:HIS:HB2	1.82	0.44
23:CY:658:ASP:OD2	23:CY:658:ASP:N	2.38	0.44
59:BA:1230:C:H2'	59:BA:1231:G:H8	1.80	0.44
46:B0:25:ARG:HG2	46:B0:37:LEU:HB3	1.99	0.44
18:CS:36:ARG:HH11	18:CS:53:ASN:HA	1.82	0.44
3:AD:15:GLU:OE2	3:AD:63:LYS:HG3	2.17	0.44
23:CY:311:ALA:HB3	23:CY:389:LEU:O	2.18	0.44
42:BW:92:ARG:HH22	59:BA:2015:A:P	2.38	0.44
27:BE:93:VAL:C	27:BE:95:ILE:H	2.21	0.44
20:CA:299:G:H2'	20:CA:300:A:C8	2.52	0.44
20:AA:68:G:H2'	20:AA:68(A):G:O4'	2.18	0.44
26:DD:162:SER:O	26:DD:164:GLN:N	2.51	0.44
42:BW:101:SER:O	42:BW:102:HIS:ND1	2.51	0.44
42:BW:9:TYR:H	42:BW:102:HIS:HE1	1.65	0.44
20:CA:1142:G:H2'	20:CA:1143:G:O4'	2.18	0.44
12:CM:5:ALA:O	12:CM:7:VAL:N	2.51	0.44
2:CC:7:PRO:O	2:CC:11:ARG:HG2	2.18	0.44
16:AQ:62:SER:HB2	16:AQ:72:ARG:HG3	1.99	0.44
50:D6:19:ARG:HB3	50:D6:20:ASN:H	1.54	0.44
50:D6:38:LYS:HA	50:D6:48:VAL:O	2.17	0.44
20:AA:1181:G:O2'	20:AA:1182:G:N7	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1481:U:H2'	20:CA:1482:G:H8	1.81	0.44
20:AA:226:G:H2'	20:AA:227:G:C8	2.53	0.44
31:DJ:32:UNK:O	59:DA:1055:G:H4'	2.18	0.44
20:CA:581:G:H2'	20:CA:582:U:H6	1.83	0.44
26:BD:27:THR:HG21	26:BD:94:LEU:HD12	2.00	0.44
15:AP:18:ARG:HD3	15:AP:35:LYS:HD2	2.00	0.44
33:DN:40:PRO:HA	40:DU:67:ALA:CB	2.47	0.44
1:CB:83:MET:HB2	1:CB:234:PRO:HG3	1.98	0.44
36:BQ:38:GLU:OE1	36:BQ:128:LYS:HE2	2.18	0.44
20:AA:329:A:C5	20:AA:332:G:C6	3.06	0.44
59:BA:2630:G:H1'	59:BA:2894:G:O2'	2.17	0.44
23:CY:146:LEU:H	23:CY:146:LEU:HD12	1.83	0.44
59:DA:1838:C:O2'	59:DA:1898:U:O4	2.35	0.44
59:DA:618(B):C:H2'	59:DA:619:G:O4'	2.18	0.44
59:DA:753:C:H2'	59:DA:754:C:C6	2.53	0.44
59:DA:2778:A:O2'	59:DA:2780:G:O2'	2.25	0.44
20:CA:614:A:H61	20:CA:626:U:H3	1.66	0.44
23:CY:393:ASP:HB2	23:CY:394:ALA:H	1.43	0.44
10:AK:44:SER:OG	10:AK:45:GLY:N	2.48	0.44
23:CY:247:ARG:HG3	23:CY:279:TYR:HA	2.00	0.44
59:DA:2886:G:H2'	59:DA:2887:U:H6	1.82	0.44
33:BN:137:LYS:HZ3	33:BN:138:LEU:N	2.15	0.44
59:DA:493:G:H2'	59:DA:494:G:O4'	2.17	0.44
59:BA:270(H):C:H42	59:BA:270(T):G:H1	1.64	0.44
36:DQ:35:VAL:HB	36:DQ:102:VAL:HA	1.99	0.44
13:CN:29:ARG:HD3	20:CA:1202:G:O2'	2.17	0.44
16:AQ:7:THR:HA	16:AQ:58:GLU:HA	1.99	0.44
59:BA:2074:U:H2'	59:BA:2075:U:C6	2.52	0.44
35:DP:68:GLN:NE2	59:DA:249:C:N3	2.65	0.44
59:BA:734:A:H2'	59:BA:735:A:H8	1.82	0.44
59:DA:1569:A:H2'	59:DA:1570:A:C8	2.53	0.44
19:CT:64:ASP:OD2	20:CA:194:C:H4'	2.17	0.44
20:CA:645:C:H2'	20:CA:646:U:H6	1.83	0.44
59:BA:2446:G:HO2'	59:BA:2448:A:H8	1.64	0.44
11:CL:24:VAL:O	11:CL:26:ALA:N	2.47	0.44
59:DA:179:G:H2'	59:DA:180:G:O4'	2.18	0.44
11:AL:73:GLU:HA	20:AA:521:G:OP1	2.17	0.44
3:AD:200:GLU:O	3:AD:204:ILE:HG12	2.18	0.44
23:CY:471:LYS:NZ	23:CY:471:LYS:HB2	2.33	0.44
23:CY:416:LYS:HB3	23:CY:416:LYS:HE2	1.90	0.44
59:DA:2884:U:H2'	59:DA:2885:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1518:C:H2'	59:BA:1519:G:C8	2.52	0.44
37:DR:86:ARG:C	37:DR:88:ARG:H	2.21	0.44
59:BA:1605:C:H5''	59:BA:1606:G:OP2	2.17	0.44
59:DA:141(B):C:H2'	59:DA:142:G:O4'	2.17	0.44
59:DA:1498:C:H2'	59:DA:1499:C:H6	1.83	0.44
34:BO:48:PRO:HB2	34:BO:49:ARG:H	1.53	0.44
23:AY:18:ALA:HA	23:AY:25:LYS:HD3	2.00	0.44
59:BA:513:A:H2	59:BA:582:G:C4'	2.29	0.44
10:CK:44:SER:H	10:CK:47:VAL:CG2	2.30	0.44
59:BA:310:A:H2'	59:BA:312:G:N7	2.32	0.44
20:AA:1513:A:H2'	20:AA:1514:C:H6	1.83	0.44
28:BF:3:GLU:HB2	28:BF:22:ALA:O	2.16	0.44
28:DF:136:THR:O	28:DF:140:LEU:HB2	2.18	0.44
12:CM:107:ALA:H	12:CM:108:ARG:HD2	1.83	0.44
59:DA:795:C:H2'	59:DA:796:C:C6	2.52	0.44
40:DU:49:HIS:O	40:DU:53:ARG:HB2	2.16	0.44
20:AA:1149:C:H2'	20:AA:1150:U:C6	2.53	0.44
20:AA:672:U:O2'	20:AA:673:G:O5'	2.27	0.44
42:DW:79:GLY:HA2	59:DA:25:U:H5'	2.00	0.44
59:DA:974(A):G:C6	59:DA:989:G:C6	3.06	0.44
9:AJ:16:LEU:HD21	9:AJ:70:ARG:HD3	2.00	0.44
20:AA:501:C:H2'	20:AA:502:G:H8	1.82	0.44
34:DO:21:CYS:O	34:DO:22:ILE:HD13	2.18	0.44
11:AL:114:LYS:HA	11:AL:117:ARG:HH11	1.83	0.44
18:AS:78:ARG:HH11	20:AA:1225:A:H5'	1.82	0.44
20:CA:1269:A:H1'	20:CA:1326:C:H1'	2.00	0.44
23:CY:648:PRO:O	23:CY:651:GLU:N	2.50	0.44
59:DA:2146:C:H4'	59:DA:2147:G:C8	2.52	0.44
59:DA:43:G:H2'	59:DA:44:A:O4'	2.18	0.44
4:CE:19:MET:SD	20:CA:15:G:H1'	2.58	0.44
59:DA:921:G:H2'	59:DA:922:U:C6	2.53	0.44
20:CA:635:G:H2'	20:CA:636:U:O4'	2.18	0.44
59:BA:1000:A:OP2	59:BA:1154:G:N1	2.47	0.44
42:BW:12:ILE:HD11	42:BW:42:ARG:NH2	2.33	0.44
42:BW:1:MET:HG3	42:BW:2:GLU:H	1.82	0.44
59:BA:1975:G:H2'	59:BA:1976:U:H6	1.82	0.44
36:DQ:21:THR:C	36:DQ:23:GLY:H	2.21	0.44
23:AY:118:SER:C	23:AY:120:THR:H	2.21	0.44
59:DA:2661:G:C6	59:DA:2662:A:C2	3.06	0.44
59:DA:2606:C:H2'	59:DA:2607:G:H8	1.81	0.44
59:BA:2306:C:H5''	59:BA:2307:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:204:A:O3'	59:BA:205:G:H4'	2.18	0.44
5:CF:3:ARG:HD3	5:CF:64:GLN:HE21	1.83	0.44
43:DX:5:TYR:HE1	43:DX:42:ALA:HB1	1.83	0.44
20:CA:440:A:OP2	20:CA:493:G:N2	2.50	0.44
59:DA:229:A:HO2'	59:DA:230:U:H5	1.65	0.44
60:DB:18:G:H2'	60:DB:19:G:C8	2.53	0.44
33:BN:10:GLU:OE2	33:BN:11:PRO:HD2	2.18	0.44
20:AA:62:U:H5''	20:AA:385:C:H1'	1.99	0.44
14:CO:47:LYS:H	14:CO:47:LYS:HD3	1.81	0.44
48:B3:41:PRO:HA	48:B3:44:ARG:HB2	1.99	0.44
44:BY:87:LYS:O	44:BY:89:PHE:N	2.50	0.44
59:BA:2050:C:H2'	59:BA:2051:A:O4'	2.16	0.44
10:CK:128:ALA:HA	22:CV:12:A:OP2	2.17	0.44
58:B4:10:VAL:HG22	58:B4:11:PRO:HD2	2.00	0.44
37:DR:59:ASP:OD1	37:DR:60:LEU:N	2.51	0.44
12:AM:111:LYS:HE2	12:AM:111:LYS:HB3	1.69	0.44
26:DD:276:LYS:HA	26:DD:276:LYS:HD3	1.78	0.44
59:DA:1546:A:H8	59:DA:1546:A:O5'	2.01	0.44
45:DZ:135:GLU:HB3	45:DZ:136:PHE:HD1	1.83	0.44
23:AY:103:GLY:HA2	23:AY:130:VAL:HG23	1.99	0.44
33:DN:42:TRP:CG	33:DN:43:THR:N	2.85	0.44
59:DA:2514:U:H2'	59:DA:2515:C:C6	2.52	0.44
59:BA:2347:C:C2	59:BA:2348:U:C5	3.06	0.44
59:BA:2130:U:H4'	59:BA:2133:G:O2'	2.18	0.44
59:DA:1287:A:N7	59:DA:1288:U:C5	2.86	0.44
20:AA:123:C:OP1	20:AA:311:C:O2'	2.33	0.44
59:DA:410:G:H2'	59:DA:2407:G:N7	2.33	0.44
36:DQ:46:GLN:HG3	59:DA:2484:G:O2'	2.18	0.44
59:DA:2395:C:H2'	59:DA:2396:G:O4'	2.17	0.44
29:DG:73:ALA:HA	59:DA:2312:U:C5'	2.47	0.44
59:DA:223:A:H2	59:DA:407:G:HO2'	1.65	0.44
44:BY:28:LYS:HB3	44:BY:28:LYS:HE2	1.51	0.44
25:DC:215:VAL:HG23	25:DC:222:SER:O	2.18	0.44
26:BD:173:VAL:O	26:BD:184:LYS:HA	2.18	0.44
25:DC:132:LEU:HB3	25:DC:137:LEU:HB2	2.00	0.44
59:BA:1491:G:P	59:BA:1494:A:H62	2.40	0.44
59:BA:2414:G:C4	59:BA:2415:G:C8	3.06	0.44
28:DF:193:VAL:O	28:DF:194:MET:HG2	2.18	0.44
1:AB:158:LEU:HA	1:AB:159:PRO:HD3	1.78	0.44
1:AB:187:LEU:HB2	1:AB:201:ILE:HB	1.99	0.44
59:DA:2347:C:N3	59:DA:2370:G:O6	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:539:G:H2'	59:DA:540:G:C8	2.53	0.44
41:BV:18:LEU:HG	41:BV:19:LYS:H	1.83	0.44
19:CT:71:THR:OG1	19:CT:72:LEU:N	2.47	0.44
27:BE:82:ARG:HH22	59:BA:2638:G:P	2.41	0.44
41:BV:76:LYS:HG3	41:BV:81:TYR:CD1	2.53	0.44
26:BD:105:ILE:HG12	26:BD:106:ILE:H	1.83	0.44
59:DA:1541:U:H3'	59:DA:1542:G:C3'	2.47	0.44
20:AA:48:C:H2'	20:AA:365:U:O4	2.18	0.44
26:DD:208:LYS:HE3	26:DD:210:GLY:HA3	1.98	0.44
16:AQ:70:ARG:HH22	20:AA:234:C:H5"	1.83	0.44
32:DK:91:PRO:HA	32:DK:135:GLY:HA3	2.00	0.44
57:D1:88:LYS:HB3	57:D1:88:LYS:HE2	1.75	0.44
59:DA:2730:C:H2'	59:DA:2731:G:H8	1.83	0.44
10:AK:114:VAL:O	20:AA:675:A:O2'	2.26	0.44
12:AM:104:ARG:HA	20:AA:1226:C:C4	2.53	0.44
10:CK:120:ARG:N	10:CK:121:PRO:HD3	2.28	0.44
8:AI:89:ASN:HB3	8:AI:92:TYR:HD1	1.82	0.44
59:BA:1951:U:H2'	59:BA:1953:A:OP2	2.17	0.44
20:CA:1430:C:N4	20:CA:1470:G:H1	2.12	0.44
20:CA:68(P):C:H2'	20:CA:68(Q):U:C6	2.53	0.44
4:AE:35:GLY:N	4:AE:112:LEU:HD13	2.33	0.44
59:BA:2331:G:H21	59:BA:2336:A:H2	1.64	0.44
59:BA:1463:C:H2'	59:BA:1464:C:H6	1.81	0.44
28:BF:42:ALA:HA	28:BF:45:ARG:HB2	2.00	0.44
14:CO:11:VAL:HG21	14:CO:34:LEU:HD22	2.00	0.44
12:CM:23:TYR:OH	12:CM:71:ARG:HG3	2.17	0.44
23:AY:663:THR:C	23:AY:665:GLY:H	2.21	0.44
59:DA:2455:G:H2'	59:DA:2456:C:C6	2.52	0.44
59:BA:493:G:H2'	59:BA:494:G:O4'	2.18	0.44
20:CA:657:G:H1	20:CA:749:C:H42	1.66	0.44
30:BH:105:LEU:HD23	30:BH:105:LEU:H	1.83	0.44
14:CO:43:LEU:C	14:CO:45:VAL:H	2.21	0.44
20:AA:1352:C:H2'	20:AA:1353:G:H8	1.82	0.44
59:BA:934:G:H2'	59:BA:935:C:C6	2.53	0.44
20:AA:198:G:H2'	20:AA:199:G:H8	1.82	0.44
20:AA:1170:A:C5	20:AA:1171:G:H1'	2.52	0.44
26:BD:226:MET:HG2	59:BA:782:A:N3	2.33	0.44
3:CD:79:PHE:HB2	3:CD:93:PHE:CZ	2.52	0.44
51:D7:20:ALA:O	51:D7:24:THR:HG22	2.17	0.44
59:DA:818:G:H4'	59:DA:838:C:O3'	2.18	0.44
46:B0:47:PRO:HG3	46:B0:53:MET:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:33:ILE:HD13	20:AA:229:U:H5''	1.99	0.44
23:AY:165:GLN:HB3	23:AY:177:ILE:HG21	2.00	0.44
20:CA:1496:C:OP2	23:CY:501:THR:CG2	2.65	0.44
1:AB:32:ILE:HD13	1:AB:32:ILE:HA	1.79	0.44
10:CK:13:GLN:NE2	59:DA:2142:C:OP1	2.51	0.44
40:BU:87:GLY:O	40:BU:89:GLU:N	2.51	0.44
57:D1:5:CYS:SG	57:D1:8:SER:N	2.83	0.44
27:BE:169:ASN:O	59:BA:2730:C:H4'	2.18	0.44
21:AW:64:G:C2	21:AW:65:U:N3	2.85	0.44
20:CA:922:G:H2'	20:CA:923:A:H8	1.83	0.44
57:D1:37:ILE:HG23	59:DA:200:U:H4'	2.00	0.44
39:DT:28:VAL:HG12	39:DT:29:ARG:N	2.33	0.44
59:DA:1614:A:C5'	59:DA:1617:C:H41	2.30	0.44
59:DA:2632:A:H4'	59:DA:2811:G:O2'	2.18	0.44
25:DC:131:ILE:HG12	25:DC:132:LEU:H	1.82	0.44
60:DB:57:A:H2'	60:DB:58:A:H8	1.82	0.44
26:BD:218:ARG:HA	26:BD:219:PRO:HD2	1.76	0.44
23:AY:497:PHE:HD2	23:AY:507:TYR:HA	1.82	0.44
41:DV:10:LYS:HZ1	41:DV:23:GLU:CG	2.31	0.44
26:DD:147:LEU:HD21	26:DD:183:ARG:NH1	2.33	0.44
25:DC:157:ILE:HG12	25:DC:161:ARG:CG	2.44	0.44
59:DA:2262:U:O2'	59:DA:2328:A:H1'	2.18	0.44
20:AA:677:U:H3	20:AA:713:G:H22	1.64	0.44
20:AA:1127:G:H2'	20:AA:1128:C:O4'	2.18	0.44
59:BA:1498:C:H2'	59:BA:1499:C:H6	1.83	0.44
11:AL:30:ALA:HA	20:AA:363:A:N6	2.33	0.44
59:DA:975:G:H1'	59:DA:990:A:C2	2.52	0.44
26:BD:264:LYS:HG2	26:BD:265:PRO:HD2	1.99	0.44
3:AD:60:GLU:O	3:AD:63:LYS:HB3	2.16	0.44
28:BF:74:ARG:HE	59:BA:674:G:H1'	1.82	0.44
42:BW:18:ARG:HH12	42:BW:77:ASP:HA	1.83	0.44
20:CA:115:G:O2'	20:CA:116:A:OP2	2.31	0.44
20:CA:570:G:H1'	20:CA:820:U:C4	2.53	0.44
23:AY:311:ALA:HB3	23:AY:389:LEU:O	2.18	0.44
20:CA:1304:G:C6	20:CA:1305:G:N1	2.85	0.44
20:AA:54:C:O2'	20:AA:55:A:H5'	2.18	0.44
26:DD:132:PRO:HB2	26:DD:135:PHE:CD1	2.53	0.44
59:BA:2646:C:H2'	59:BA:2647:U:O4'	2.17	0.44
59:DA:1758:G:H3'	59:DA:1759:A:H8	1.83	0.44
11:AL:5:PRO:HB2	11:AL:10:LEU:HG	1.99	0.44
4:AE:118:ILE:HG13	4:AE:120:THR:HG22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:403:U:H4'	59:DA:404:C:H5''	1.99	0.44
59:DA:819:A:H62	59:DA:1188:U:H3	1.66	0.44
34:BO:5:GLN:O	59:BA:1667:G:H4'	2.18	0.44
34:DO:36:GLY:HA3	34:DO:109:LYS:HG3	2.00	0.44
50:B6:10:LEU:HD11	59:BA:2420:C:H5''	1.99	0.44
5:AF:9:VAL:HB	5:AF:87:ARG:CB	2.48	0.44
59:DA:2270:G:H3'	59:DA:2271:G:C8	2.53	0.44
26:DD:105:ILE:HD13	26:DD:106:ILE:N	2.33	0.44
59:BA:2489:G:C6	59:BA:2490:G:C6	3.06	0.44
59:DA:7:G:N2	59:DA:2897:U:O2	2.51	0.44
44:DY:30:VAL:HB	59:DA:85:G:O5'	2.18	0.44
32:DK:98:ARG:HB2	32:DK:139:VAL:HG23	2.00	0.44
3:CD:49:ARG:O	3:CD:51:PRO:HD3	2.18	0.44
32:BK:117:THR:O	32:BK:119:ASP:N	2.44	0.44
59:DA:1427:A:H4'	59:DA:1428:C:O4'	2.17	0.44
23:AY:406:GLU:HG3	23:AY:407:PRO:HD2	1.99	0.44
51:B7:9:ARG:NH1	51:B7:46:VAL:O	2.50	0.44
59:DA:1430:C:H2'	59:DA:1431:U:O4'	2.18	0.44
4:CE:82:VAL:HG21	4:CE:138:ALA:HA	1.99	0.44
59:DA:2006:C:O2'	59:DA:2823:A:N3	2.49	0.44
59:DA:1446:C:H2'	59:DA:1447:G:C8	2.53	0.44
20:CA:124:G:H4'	20:CA:291:C:O2'	2.18	0.44
12:AM:54:VAL:O	12:AM:57:ARG:HG2	2.18	0.44
59:DA:202:U:H2'	59:DA:203:C:O4'	2.18	0.44
59:DA:1241:A:N7	59:DA:1242:A:C5	2.85	0.44
3:AD:96:LEU:HD12	3:AD:139:ARG:HH22	1.83	0.44
33:DN:32:THR:HG22	33:DN:37:LYS:HD3	2.00	0.44
59:BA:2038:G:C3'	59:BA:2039:C:H5'	2.47	0.43
37:DR:64:ARG:NH2	59:DA:2851:A:O2'	2.46	0.43
27:DE:82:ARG:NH2	59:DA:2637:U:OP1	2.41	0.43
20:AA:1420:C:N4	20:AA:1480:G:H1	2.16	0.43
51:D7:40:TRP:HZ2	59:DA:458:G:H1'	1.82	0.43
8:CI:19:LEU:HD13	8:CI:59:PHE:CE2	2.53	0.43
40:BU:55:ARG:NE	59:BA:1156:A:OP1	2.51	0.43
51:D7:5:TRP:CZ2	51:D7:7:PRO:HB3	2.53	0.43
44:BY:27:VAL:O	44:BY:28:LYS:HB3	2.17	0.43
25:DC:42:VAL:H	25:DC:217:THR:HA	1.82	0.43
26:BD:24:ILE:HG12	26:BD:25:THR:N	2.33	0.43
2:AC:5:ILE:HD11	13:AN:58:LYS:HE3	2.00	0.43
39:BT:66:VAL:HA	39:BT:71:GLY:HA2	1.99	0.43
13:AN:27:CYS:CB	20:AA:1202:G:H21	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2478:A:H1'	59:DA:2528:U:O2'	2.18	0.43
28:DF:9:ILE:HD13	28:DF:124:LEU:HB2	2.00	0.43
28:DF:129:PHE:HE1	28:DF:193:VAL:HG12	1.83	0.43
38:DS:47:THR:O	38:DS:48:LEU:HB2	2.18	0.43
11:AL:97:ARG:H	11:AL:97:ARG:HG2	1.53	0.43
38:BS:74:ALA:HB2	38:BS:104:GLY:HA2	2.00	0.43
59:DA:804:A:H5''	59:DA:805:G:OP1	2.18	0.43
20:CA:67:C:H2'	20:CA:68:G:H8	1.82	0.43
59:BA:820:A:H2'	59:BA:821:A:O4'	2.17	0.43
52:D8:11:LYS:NZ	59:DA:243:U:OP1	2.51	0.43
57:B1:64:ALA:HB1	59:BA:398:G:P	2.58	0.43
59:BA:2771:C:H2'	59:BA:2772:C:H6	1.82	0.43
1:AB:194:PRO:O	1:AB:196:LEU:N	2.51	0.43
59:DA:2303:G:H1	59:DA:2313:C:N4	2.14	0.43
59:DA:2726:U:O2'	59:DA:2727:G:H8	2.01	0.43
43:DX:76:ARG:H	43:DX:76:ARG:NH1	2.16	0.43
1:CB:87:ARG:NH1	1:CB:232:PRO:HA	2.33	0.43
59:BA:320:A:H4'	59:BA:322:A:N7	2.32	0.43
14:AO:7:GLU:O	14:AO:11:VAL:HG23	2.18	0.43
59:BA:2564:A:C6	59:BA:2647:U:H4'	2.53	0.43
59:BA:600:G:H2'	59:BA:601:C:H6	1.82	0.43
14:CO:5:LYS:O	14:CO:9:GLN:HG2	2.18	0.43
59:DA:2869:G:H2'	59:DA:2870:C:C6	2.53	0.43
6:AG:26:PHE:CD2	6:AG:30:ILE:HD11	2.53	0.43
23:AY:7:TYR:CE2	23:AY:9:LEU:HG	2.53	0.43
59:DA:197:A:H2'	59:DA:198:C:O4'	2.17	0.43
59:BA:1214:A:H2'	59:BA:1215:G:O4'	2.17	0.43
4:AE:110:LEU:HB3	4:AE:115:VAL:CG2	2.48	0.43
4:AE:115:VAL:HG12	4:AE:116:THR:N	2.33	0.43
26:BD:148:GLU:HB3	26:BD:151:LYS:HG3	1.99	0.43
1:AB:22:LYS:HA	1:AB:24:TRP:HD1	1.83	0.43
51:B7:7:PRO:HA	59:BA:686:G:H8	1.83	0.43
20:AA:1343:G:H2'	20:AA:1344:C:H6	1.82	0.43
47:B2:64:LEU:O	47:B2:68:ARG:N	2.51	0.43
2:AC:182:ILE:HG12	2:AC:203:PHE:HA	1.99	0.43
48:B3:10:LYS:HE2	48:B3:15:TYR:OH	2.18	0.43
59:BA:1676:A:H2'	59:BA:1677:A:C8	2.53	0.43
20:CA:1324:A:H4'	20:CA:1362:C:H4'	1.99	0.43
59:DA:1059:G:H2'	59:DA:1060:U:C5	2.53	0.43
20:AA:1107:C:C4	20:AA:1108:G:C8	3.05	0.43
1:AB:217:ARG:O	1:AB:221:LEU:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:100:ILE:HG23	25:BC:103:LYS:HB2	1.99	0.43
20:CA:1238:A:H2	20:CA:1241:G:N3	2.15	0.43
30:DH:144:VAL:O	30:DH:147:ASN:HB3	2.17	0.43
2:CC:119:ARG:HD3	2:CC:140:ARG:HH22	1.83	0.43
10:AK:97:ALA:O	10:AK:101:SER:OG	2.18	0.43
59:DA:2257:U:H2'	59:DA:2258:C:C6	2.53	0.43
16:CQ:26:GLN:HA	16:CQ:36:ILE:O	2.18	0.43
59:BA:2464:C:H42	59:BA:2486:G:H1	1.66	0.43
20:AA:1476:G:H2'	20:AA:1477:C:C6	2.52	0.43
45:BZ:61:LEU:HD22	45:BZ:63:ASP:HB3	2.00	0.43
12:AM:75:ALA:O	12:AM:79:LYS:HG3	2.18	0.43
59:BA:1292:U:H2'	59:BA:1293:C:C6	2.52	0.43
2:CC:149:ALA:O	2:CC:169:ALA:HA	2.18	0.43
4:AE:7:GLU:O	4:AE:34:VAL:HA	2.18	0.43
31:BJ:97:UNK:C	31:BJ:99:UNK:H	2.30	0.43
23:AY:160:ARG:HH22	23:AY:222:ASP:HB2	1.83	0.43
59:BA:1221:C:H2'	59:BA:122(A):C:H6	1.83	0.43
1:CB:208:ILE:H	1:CB:208:ILE:HD12	1.83	0.43
4:CE:81:GLU:OE1	4:CE:81:GLU:N	2.51	0.43
16:CQ:83:ASP:N	16:CQ:83:ASP:OD1	2.51	0.43
33:BN:1:MET:SD	33:BN:2:LYS:N	2.90	0.43
19:CT:84:LEU:O	19:CT:88:VAL:HG23	2.17	0.43
23:CY:19:ALA:N	23:CY:25:LYS:HZ2	2.16	0.43
59:DA:2849:U:O2	59:DA:2866:U:H1'	2.18	0.43
27:BE:61:ARG:HG2	59:BA:2811:G:OP1	2.17	0.43
1:CB:166:ASP:O	1:CB:170:GLU:HB2	2.17	0.43
1:CB:184:VAL:H	1:CB:198:ASP:CB	2.27	0.43
31:BJ:83:UNK:C	31:BJ:85:UNK:N	2.82	0.43
20:CA:1423:G:H2'	20:CA:1424:C:C6	2.53	0.43
33:DN:5:VAL:HB	33:DN:7:LYS:NZ	2.33	0.43
59:BA:447:A:H4'	59:BA:448:U:C5'	2.48	0.43
59:BA:1439:A:H2'	59:BA:1440:G:O4'	2.18	0.43
14:CO:39:LEU:HD21	14:CO:52:SER:HB3	2.00	0.43
28:DF:62:ARG:NH2	28:DF:64:ILE:HA	2.32	0.43
26:DD:266:SER:HG	59:DA:1800:C:P	2.40	0.43
59:DA:881:G:O6	59:DA:895:U:O4	2.36	0.43
51:D7:29:LYS:O	51:D7:33:ARG:HG3	2.18	0.43
23:AY:133:ILE:H	23:AY:133:ILE:HD13	1.83	0.43
23:AY:607:ARG:HG2	23:AY:646:PHE:CE1	2.52	0.43
9:CJ:55:LYS:HE3	20:CA:973:G:H1'	1.99	0.43
20:CA:521:G:C6	20:CA:529:G:N1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:51:ARG:HB3	20:AA:1060:C:C4'	2.46	0.43
59:BA:813:U:H2'	59:BA:814:C:H6	1.82	0.43
13:AN:6:LEU:HB3	13:AN:23:ARG:NH2	2.33	0.43
33:BN:70:LYS:HG2	33:BN:87:LEU:HG	1.99	0.43
26:BD:14:ARG:NH2	59:BA:1693:U:O2	2.51	0.43
2:AC:157:ILE:HB	2:AC:164:ARG:HH21	1.83	0.43
34:DO:6:THR:HA	59:DA:1667:G:H5'	2.00	0.43
20:AA:1304:G:H1'	20:AA:1333:A:H61	1.83	0.43
20:CA:39:G:N1	20:CA:403:C:O2	2.45	0.43
1:CB:111:ARG:NH2	20:CA:1104:G:H4'	2.33	0.43
23:CY:487:ILE:HB	23:CY:597:GLY:O	2.18	0.43
8:CI:107:ARG:HE	20:CA:1347:G:H5''	1.83	0.43
29:DG:97:ASP:HA	29:DG:100:TRP:CD1	2.53	0.43
20:CA:299:G:C6	20:CA:300:A:C6	3.07	0.43
27:DE:199:ARG:HH12	27:DE:202:LYS:HZ3	1.66	0.43
20:AA:68(C):C:H2'	20:AA:68(D):C:C6	2.54	0.43
26:BD:255:LYS:HA	26:BD:255:LYS:HD3	1.74	0.43
59:DA:2372:G:H1	59:DA:2381:C:N4	2.14	0.43
35:BP:33:ARG:HD3	59:BA:810:U:O2'	2.18	0.43
52:D8:17:THR:OG1	59:DA:651:G:OP1	2.36	0.43
20:CA:1369:C:H2'	20:CA:1370:G:O4'	2.17	0.43
39:DT:132:LYS:O	39:DT:132:LYS:HD3	2.18	0.43
20:CA:1417:G:N2	20:CA:1482:G:H2'	2.33	0.43
1:CB:220:ASP:OD1	1:CB:220:ASP:N	2.50	0.43
20:CA:1354:C:H2'	20:CA:1355:G:C8	2.53	0.43
59:DA:856:C:H2'	59:DA:857:C:H6	1.79	0.43
21:AW:28:A:H2	21:AW:42:U:H3	1.62	0.43
59:DA:996:A:H61	59:DA:1159:U:H3	1.66	0.43
20:AA:971:G:H3'	20:AA:971:G:OP1	2.18	0.43
59:BA:1054:A:H2'	59:BA:1055:G:H8	1.83	0.43
4:AE:101:ILE:HG13	4:AE:118:ILE:O	2.18	0.43
20:AA:161:A:H61	20:AA:347:G:HO2'	1.61	0.43
25:BC:78:ILE:O	25:BC:120:VAL:HG21	2.17	0.43
59:DA:2604:U:H2'	59:DA:2605:U:C6	2.54	0.43
23:CY:424:LEU:O	23:CY:427:ALA:HB3	2.18	0.43
59:BA:270(K):G:H2'	59:BA:270(L):C:O4'	2.18	0.43
27:DE:132:HIS:NE2	59:DA:743:G:H4'	2.32	0.43
59:DA:2782:G:H3'	59:DA:2783:G:H8	1.83	0.43
43:DX:39:ILE:O	43:DX:43:VAL:HG23	2.18	0.43
59:DA:1356:G:H2'	59:DA:1357:U:C6	2.53	0.43
59:BA:828:U:H2'	59:BA:829:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2238:G:N3	59:DA:2238:G:H2'	2.33	0.43
36:BQ:21:THR:C	36:BQ:23:GLY:H	2.21	0.43
59:BA:1987:G:H2'	59:BA:1988:C:H6	1.82	0.43
57:D1:52:ARG:HA	57:D1:57:GLU:HA	1.99	0.43
59:DA:2336:A:H3'	59:DA:2337:G:H8	1.81	0.43
2:CC:119:ARG:O	2:CC:123:GLN:HG2	2.18	0.43
1:CB:105:PHE:HB3	1:CB:106:LYS:NZ	2.33	0.43
25:DC:66:PRO:HD2	25:DC:192:ALA:HB1	2.00	0.43
23:CY:335:LEU:O	23:CY:368:GLU:HB2	2.18	0.43
52:B8:34:TRP:CG	52:B8:35:GLN:N	2.85	0.43
32:BK:8:VAL:HG11	32:BK:26:ALA:HB1	2.01	0.43
59:DA:1071:G:H1'	59:DA:1089:G:C8	2.53	0.43
39:BT:101:PHE:N	39:BT:101:PHE:CD1	2.85	0.43
3:AD:124:GLY:O	3:AD:132:ARG:HB2	2.18	0.43
13:AN:8:GLU:HA	13:AN:11:LYS:HB2	1.99	0.43
59:BA:2252:G:H2'	59:BA:2253:G:C8	2.53	0.43
26:DD:171:ASP:N	26:DD:171:ASP:OD2	2.50	0.43
39:BT:114:LEU:HD23	39:BT:114:LEU:HA	1.72	0.43
59:DA:115:C:H2'	59:DA:116:C:O4'	2.18	0.43
59:BA:604:G:C6	59:BA:625:G:C2	3.06	0.43
34:DO:10:VAL:HG22	34:DO:17:ARG:HA	2.00	0.43
28:BF:51:THR:O	28:BF:52:LYS:HB2	2.18	0.43
34:BO:71:ARG:HH11	39:BT:74:ARG:NH2	2.15	0.43
59:BA:2049:G:H1	59:BA:2619:C:N4	2.10	0.43
59:DA:114(B):A:C4	59:DA:1144:G:C8	3.07	0.43
59:DA:2038:G:C5	59:DA:2039:C:C6	3.06	0.43
38:DS:92:TYR:CE2	38:DS:94:TYR:HB2	2.53	0.43
38:DS:94:TYR:CZ	59:DA:2376:A:H1'	2.53	0.43
59:DA:1305:C:H2'	59:DA:1306:C:H5'	2.00	0.43
59:DA:1583:A:H4'	59:DA:1586:A:C5	2.53	0.43
59:BA:2056:G:H2'	59:BA:2056:G:N3	2.34	0.43
59:DA:576:U:H2'	59:DA:577:G:C8	2.53	0.43
59:BA:1437:C:H2'	59:BA:1438:U:C6	2.53	0.43
59:DA:1184:G:H2'	59:DA:1185:C:H5'	2.01	0.43
59:BA:1289:C:H4'	59:BA:1330:C:H1'	1.99	0.43
25:BC:77:ALA:HB3	25:BC:95:VAL:HG13	2.00	0.43
26:BD:175:LEU:O	26:BD:182:LEU:HA	2.19	0.43
20:CA:949:A:H2'	20:CA:950:U:C6	2.53	0.43
20:AA:303:A:H2'	20:AA:304:U:O4'	2.18	0.43
38:BS:13:ARG:C	38:BS:15:ARG:N	2.71	0.43
4:CE:76:ILE:HG13	4:CE:142:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:259:PHE:CB	23:AY:272:LEU:HD13	2.48	0.43
59:DA:563:G:H2'	59:DA:564:C:H6	1.83	0.43
39:BT:51:ARG:HH21	39:BT:100:TYR:HH	1.63	0.43
11:CL:73:GLU:HA	20:CA:521:G:OP1	2.18	0.43
20:CA:346:G:C4'	39:DT:41:ARG:HH22	2.28	0.43
10:AK:30:VAL:O	10:AK:42:TRP:HA	2.18	0.43
52:B8:27:THR:O	52:B8:44:LYS:HE2	2.18	0.43
11:AL:78:GLN:HG3	11:AL:79:GLU:H	1.82	0.43
23:AY:425:SER:HA	23:AY:428:LEU:HD23	2.00	0.43
8:AI:118:LYS:HD2	20:AA:1349:A:OP2	2.18	0.43
25:BC:67:HIS:CG	25:BC:185:LYS:HG3	2.53	0.43
52:B8:61:LEU:C	52:B8:64:TYR:H	2.20	0.43
36:DQ:69:PHE:CD1	36:DQ:70:PRO:HD2	2.53	0.43
23:CY:314:PHE:CZ	23:CY:329:ARG:HB3	2.53	0.43
37:DR:27:SER:HB3	59:DA:1278:A:O2'	2.18	0.43
4:AE:20:GLN:N	4:AE:23:GLY:O	2.51	0.43
20:AA:947:G:H4'	20:AA:1332:A:H2	1.83	0.43
3:CD:122:ARG:NE	20:CA:403:C:H4'	2.31	0.43
59:BA:1571:A:H2'	59:BA:1572:A:C8	2.53	0.43
20:AA:784:C:H2'	20:AA:785:G:H8	1.83	0.43
29:DG:97:ASP:HB2	29:DG:98:ARG:NH1	2.33	0.43
20:AA:68(K):U:H2'	20:AA:68(M):U:C5	2.53	0.43
44:DY:9:LYS:CE	44:DY:103:GLY:HA3	2.48	0.43
59:DA:131:G:H2'	59:DA:132:G:H8	1.83	0.43
50:D6:47:THR:OG1	50:D6:48:VAL:HG22	2.18	0.43
23:AY:496:LYS:HG3	23:AY:509:HIS:CG	2.53	0.43
35:BP:52:GLU:CG	35:BP:53:GLY:H	2.30	0.43
59:BA:1912:A:C8	59:BA:1917:U:N3	2.80	0.43
57:D1:15:ALA:HA	57:D1:40:ARG:O	2.18	0.43
36:DQ:137:TYR:N	36:DQ:137:TYR:CD1	2.84	0.43
59:DA:186:G:H2'	59:DA:187:G:H8	1.83	0.43
23:AY:28:THR:HG21	23:AY:107:VAL:HG21	2.00	0.43
23:AY:28:THR:O	23:AY:32:ILE:HG12	2.18	0.43
34:BO:13:ASN:HB3	34:BO:97:ARG:HG3	2.00	0.43
20:AA:1346:A:N1	20:AA:1374:A:H5''	2.32	0.43
37:BR:83:ILE:O	37:BR:87:TYR:HD2	2.00	0.43
2:AC:156:ARG:HE	2:AC:159:GLY:HA2	1.83	0.43
36:BQ:24:GLY:HA3	36:BQ:67:ARG:HH22	1.82	0.43
26:DD:14:ARG:NH1	59:DA:1695:G:N7	2.66	0.43
59:DA:2075:U:H4'	59:DA:2596:U:O2	2.18	0.43
20:CA:507:C:P	20:CA:508:C:H3'	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:958:A:N6	20:CA:959:A:N1	2.67	0.43
20:AA:833:U:O2'	20:AA:834:C:O5'	2.30	0.43
2:CC:134:ILE:O	2:CC:138:VAL:HG23	2.19	0.43
20:AA:118:U:O4	20:AA:288:A:H2'	2.18	0.43
59:BA:924:C:H2'	59:BA:925:C:C6	2.53	0.43
30:BH:76:VAL:O	30:BH:80:SER:OG	2.26	0.43
20:AA:134:A:H2'	20:AA:135:C:C6	2.54	0.43
2:AC:114:PRO:HA	2:AC:185:GLY:HA3	1.99	0.43
36:BQ:131:ILE:HG13	36:BQ:131:ILE:H	1.57	0.43
59:BA:1886:C:H2'	59:BA:1887:C:H6	1.83	0.43
23:AY:188:TYR:OH	23:AY:270:GLN:HG2	2.18	0.43
13:CN:33:VAL:HA	13:CN:40:CYS:HA	2.00	0.43
23:CY:263:ALA:C	23:CY:266:ASN:H	2.21	0.43
59:BA:432:A:H2'	59:BA:433:C:C6	2.54	0.43
29:BG:100:TRP:CE3	29:BG:103:LEU:HD21	2.53	0.43
59:DA:1455:G:O2'	59:DA:2853:C:OP1	2.26	0.43
20:CA:591:U:H2'	20:CA:592:G:H8	1.80	0.43
59:DA:270(C):A:H3'	59:DA:270(D):C:H6	1.83	0.43
20:CA:1422:G:OP1	34:DO:48:PRO:HA	2.19	0.43
39:DT:28:VAL:O	39:DT:46:GLU:HA	2.18	0.43
59:BA:1438:U:H2'	59:BA:1439:A:C8	2.53	0.43
11:CL:32:PHE:HA	11:CL:85:ILE:O	2.18	0.43
44:BY:39:VAL:HB	44:BY:40:GLU:H	1.48	0.43
20:AA:919:A:H8	20:AA:919:A:O5'	2.02	0.43
43:BX:51:VAL:HG22	43:BX:83:VAL:HG22	2.01	0.43
60:DB:25:A:H2'	60:DB:26:A:H8	1.82	0.43
61:CY:701:FUA:H151	61:CY:701:FUA:H203	1.79	0.43
59:BA:1598:C:H2'	59:BA:1599:C:C6	2.54	0.43
3:AD:61:LYS:HE2	3:AD:206:PHE:CE2	2.53	0.43
3:AD:57:ARG:HG3	3:AD:206:PHE:HB2	2.00	0.43
59:DA:463:G:H2'	59:DA:464:U:H5''	2.00	0.43
59:DA:794:G:C6	59:DA:795:C:C4	3.05	0.43
32:BK:33:ASN:HB3	32:BK:65:PHE:CD1	2.53	0.43
38:DS:24:LEU:HB3	38:DS:85:VAL:HA	1.99	0.43
51:B7:40:TRP:HB3	59:BA:460:A:OP2	2.18	0.43
28:BF:59:TYR:OH	59:BA:470:A:OP1	2.18	0.43
11:CL:53:ARG:HG3	11:CL:69:TYR:CE1	2.53	0.43
28:BF:155:LEU:HA	28:BF:176:LEU:HB3	2.01	0.43
23:AY:491:VAL:O	23:AY:514:VAL:HG22	2.18	0.43
59:DA:277:C:H3'	59:DA:278:A:C8	2.41	0.43
59:DA:1541:U:H3'	59:DA:1542:G:H3'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:719:C:H2'	20:AA:720:C:O4'	2.18	0.43
59:DA:2744:G:H1	59:DA:2760:C:H42	1.67	0.43
20:AA:130:A:H2	20:AA:263:A:C2	2.37	0.43
20:AA:1317:C:H3'	20:AA:1318:A:C8	2.54	0.43
59:DA:1279:G:N2	59:DA:1291:C:N3	2.59	0.43
25:BC:82:GLU:OE2	25:BC:83:LYS:HD3	2.19	0.43
50:B6:14:THR:OG1	50:B6:20:ASN:O	2.34	0.43
23:AY:322:VAL:HG23	23:AY:325:LEU:HD11	1.99	0.43
23:CY:343:ASN:OD1	23:CY:346:LYS:N	2.30	0.43
23:CY:614:GLU:O	23:CY:617:MET:HB3	2.18	0.43
2:AC:4:LYS:HE3	20:AA:1191:A:C5'	2.45	0.43
45:BZ:15:PRO:HB2	45:BZ:19:ARG:NE	2.33	0.43
59:BA:1273:U:H4'	59:BA:1275:A:OP2	2.18	0.43
59:DA:901:A:H2'	59:DA:902:C:H6	1.83	0.43
20:CA:186(G):C:H1'	20:CA:186(K):G:N2	2.32	0.43
2:CC:6:HIS:O	2:CC:10:PHE:N	2.52	0.43
7:CH:112:LEU:HB3	7:CH:133:LEU:HD12	2.00	0.43
20:CA:924:C:H2'	20:CA:925:G:H8	1.84	0.43
20:AA:987:G:H1	20:AA:1218:C:H42	1.65	0.43
27:BE:8:LYS:HA	27:BE:26:ILE:HG22	2.01	0.43
4:AE:42:GLY:HA3	4:AE:62:ALA:O	2.18	0.43
42:DW:74:ALA:HA	42:DW:104:THR:O	2.18	0.43
36:BQ:135:ASP:OD1	36:BQ:135:ASP:N	2.50	0.43
47:B2:48:HIS:CE1	59:BA:95:G:H4'	2.53	0.43
7:AH:13:ILE:O	7:AH:17:THR:HG23	2.19	0.43
2:CC:187:ALA:HB3	2:CC:198:VAL:HB	2.01	0.43
16:AQ:82:MET:O	16:AQ:86:GLU:HB2	2.18	0.43
7:CH:44:PHE:O	7:CH:64:LYS:HE3	2.17	0.43
20:AA:563:A:O4'	20:AA:566:G:N2	2.51	0.43
59:DA:2113:U:H2'	59:DA:2114:A:O4'	2.18	0.43
8:AI:70:LYS:O	8:AI:74:ILE:HG13	2.18	0.43
16:CQ:19:VAL:O	16:CQ:44:ALA:HB3	2.18	0.43
20:CA:770:C:O2'	20:CA:899:C:N3	2.45	0.43
59:BA:1174:A:N7	59:BA:1175:U:H1'	2.33	0.43
23:AY:555:LEU:HB2	23:AY:556:ILE:HD13	2.00	0.43
1:AB:213:LEU:O	1:AB:217:ARG:HB2	2.19	0.43
15:AP:16:HIS:HE1	15:AP:38:TYR:HB2	1.82	0.43
59:DA:1070:A:H2'	59:DA:1097:U:OP1	2.18	0.43
27:BE:104:VAL:O	27:BE:167:VAL:HG12	2.18	0.43
59:DA:46:C:H2'	59:DA:47:C:H6	1.83	0.43
38:DS:15:ARG:O	38:DS:18:ILE:HB	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:868:C:H2'	20:CA:869:G:O4'	2.18	0.43
20:CA:1496:C:OP2	23:CY:501:THR:HG22	2.19	0.43
59:DA:1882:C:H2'	59:DA:1883:G:O4'	2.18	0.43
33:DN:105:GLY:C	33:DN:107:LEU:H	2.22	0.43
59:DA:2092:U:OP1	59:DA:2199:A:O2'	2.35	0.43
59:BA:641:C:H2'	59:BA:642:G:O4'	2.19	0.43
7:AH:78:GLN:HE21	7:AH:80:ILE:HB	1.82	0.43
59:BA:2528:U:OP2	59:BA:2530:A:N6	2.52	0.43
17:AR:68:LYS:HB3	17:AR:72:ARG:NH2	2.33	0.43
19:CT:61:SER:O	19:CT:65:LYS:HG2	2.19	0.43
7:CH:8:ASP:OD2	7:CH:12:ARG:NH2	2.51	0.43
20:CA:42:G:H2'	20:CA:43:C:C6	2.54	0.43
38:BS:59:LYS:HG2	38:BS:60:GLY:H	1.84	0.43
34:DO:101:PRO:HA	34:DO:120:GLU:O	2.18	0.43
28:BF:43:LYS:HE3	28:BF:43:LYS:HB2	1.82	0.43
23:CY:197:ARG:HA	23:CY:197:ARG:CZ	2.48	0.43
49:D5:58:LEU:HG	49:D5:58:LEU:H	1.65	0.43
17:CR:61:LYS:HE3	17:CR:61:LYS:HB2	1.74	0.43
15:AP:40:ASP:HA	15:AP:41:PRO:HD2	1.83	0.43
26:DD:182:LEU:HB2	26:DD:271:ILE:O	2.19	0.43
45:BZ:176:PRO:HA	45:BZ:177:PRO:HD3	1.76	0.43
40:BU:86:ALA:HB2	40:BU:116:ALA:HB2	2.00	0.43
20:CA:817:C:C2	20:CA:819:A:H5'	2.53	0.43
29:BG:104:GLU:C	29:BG:108:ASN:HD22	2.20	0.43
20:AA:1489:G:H2'	20:AA:1490:C:O4'	2.19	0.43
59:DA:1435:G:H2'	59:DA:1436:G:C8	2.53	0.43
3:CD:14:ARG:CZ	3:CD:40:PRO:HD2	2.48	0.43
59:DA:2173:A:H2'	59:DA:2174:C:O4'	2.18	0.43
27:BE:144:ARG:O	59:BA:2053:G:H5'	2.18	0.43
31:BJ:111:UNK:O	31:BJ:116:UNK:HA	2.19	0.43
59:BA:1534:G:H1'	59:BA:1538:G:N2	2.34	0.43
59:DA:1812:A:H2'	59:DA:1813:G:H8	1.78	0.43
26:DD:43:ARG:NH2	59:DA:690:G:O2'	2.52	0.43
59:DA:8:A:H2'	59:DA:9:U:C6	2.53	0.43
59:DA:227:A:H5'	59:DA:228:A:C2	2.53	0.43
59:DA:2421:G:H5''	59:DA:2422:A:OP2	2.18	0.43
39:DT:64:ARG:HH12	39:DT:103:ARG:HG2	1.83	0.43
40:BU:92:ARG:NH1	41:BV:4:ILE:HG23	2.32	0.43
59:BA:141(A):A:C8	59:BA:1596:A:H1'	2.53	0.43
11:AL:33:ARG:H	11:AL:85:ILE:HB	1.83	0.43
26:DD:78:LYS:HB3	26:DD:78:LYS:HE3	1.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:101:MET:HB3	1:AB:152:PHE:CE1	2.52	0.43
1:AB:186:ALA:O	1:AB:201:ILE:HG12	2.19	0.43
21:CW:31:A:H2	21:CW:39:U:H3	1.60	0.43
41:DV:97:LYS:HD3	41:DV:97:LYS:HA	1.67	0.43
28:BF:154:VAL:HG13	28:BF:191:ARG:HB2	2.00	0.43
25:DC:37:LYS:HB2	25:DC:38:PHE:CD1	2.54	0.43
20:AA:1307:U:H2'	20:AA:1308:U:O4'	2.19	0.43
18:AS:39:THR:HB	18:AS:41:VAL:HG13	2.00	0.43
23:CY:343:ASN:HA	23:CY:389:LEU:HG	2.01	0.43
52:B8:15:LYS:HE2	52:B8:16:ILE:N	2.34	0.43
28:BF:63:LYS:HZ3	28:BF:65:TRP:HB2	1.83	0.43
39:DT:67:SER:O	39:DT:69:GLY:N	2.51	0.43
35:BP:60:MET:HB3	59:BA:2392:A:C8	2.52	0.43
18:AS:40:ILE:HG12	18:AS:71:LEU:HA	2.00	0.43
59:DA:734:A:C4	59:DA:735:A:C8	3.07	0.43
26:DD:133:LEU:O	26:DD:136:ILE:HB	2.18	0.43
59:DA:2352:A:H2'	59:DA:2353:G:O4'	2.19	0.43
59:DA:960:A:O5'	59:DA:960:A:H8	2.01	0.43
33:DN:9:VAL:HG21	33:DN:39:ARG:NH1	2.33	0.43
37:DR:24:GLN:O	37:DR:28:LEU:HB2	2.18	0.43
37:DR:38:VAL:O	37:DR:41:ALA:HB3	2.18	0.43
59:DA:919:G:H5''	60:DB:81:G:O2'	2.18	0.43
20:AA:1401:G:H5''	22:AV:22:A:H61	1.83	0.43
26:BD:17:THR:OG1	26:BD:205:VAL:N	2.42	0.43
20:AA:1533:C:N4	22:AV:12:A:N1	2.67	0.43
51:B7:28:ARG:HA	51:B7:31:LEU:HG	2.00	0.43
16:CQ:95:TYR:CE1	20:CA:279:A:H2'	2.53	0.43
23:AY:543:GLN:O	23:AY:546:ILE:HB	2.19	0.43
25:DC:194:ILE:O	25:DC:197:LEU:HB2	2.19	0.43
59:BA:898:C:H2'	59:BA:899:A:H8	1.83	0.43
42:BW:35:ILE:O	42:BW:39:THR:OG1	2.36	0.43
20:CA:201:C:N4	20:CA:201(B):U:O2	2.52	0.43
5:CF:75:LEU:O	5:CF:79:LEU:HG	2.18	0.43
20:AA:834:C:H2'	20:AA:835:U:C6	2.53	0.43
59:DA:311:A:O2'	59:DA:312:G:O5'	2.25	0.43
31:DJ:135:UNK:C	31:DJ:137:UNK:H	2.31	0.43
42:DW:19:LEU:HA	42:DW:19:LEU:HD13	1.79	0.43
23:CY:522:GLY:O	23:CY:562:ASP:HA	2.18	0.43
17:CR:30:ASP:O	17:CR:36:ASN:ND2	2.51	0.43
25:BC:38:PHE:O	25:BC:179:ALA:HB3	2.19	0.43
59:BA:1927:A:H2'	59:BA:1928:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BU:27:LEU:O	40:BU:31:SER:N	2.52	0.43
20:CA:828:A:H2'	20:CA:829:G:O4'	2.19	0.43
45:BZ:158:PRO:HA	45:BZ:159:PRO:HD3	1.88	0.43
59:DA:2769:C:H2'	59:DA:2770:G:C8	2.53	0.43
40:DU:13:LYS:O	40:DU:16:LYS:HB3	2.18	0.43
35:BP:17:LYS:HE3	35:BP:19:VAL:O	2.18	0.43
45:DZ:98:MET:HE3	45:DZ:126:VAL:HG23	2.00	0.43
23:CY:22:ASP:O	23:CY:23:ALA:HB3	2.19	0.43
59:DA:1375:C:C2	59:DA:1376:C:C5	3.06	0.43
59:BA:979:G:H3'	59:BA:980:A:C5'	2.48	0.43
59:BA:1802:A:P	59:BA:1815:A:H61	2.41	0.43
29:BG:98:ARG:HG3	58:B4:1:MET:SD	2.59	0.43
3:CD:25:ARG:N	20:CA:409:G:OP1	2.45	0.43
20:CA:1486:G:H2'	20:CA:1487:G:O4'	2.19	0.43
26:DD:250:TRP:NE1	59:DA:1805:U:H5''	2.34	0.43
40:BU:58:ARG:HA	40:BU:61:TRP:CE3	2.53	0.43
2:CC:54:ARG:HB3	2:CC:56:ASP:OD1	2.19	0.43
23:CY:255:ILE:HG23	23:CY:257:PRO:HD3	2.00	0.43
20:AA:680:C:H2'	20:AA:681:C:C6	2.53	0.43
20:AA:1066:C:H3'	20:AA:1067:A:C8	2.53	0.43
28:DF:189:THR:O	28:DF:190:GLU:HG3	2.19	0.43
37:BR:40:LYS:HE3	59:BA:1651:G:OP2	2.19	0.43
59:BA:1287:A:N6	59:BA:1648:C:O2'	2.51	0.43
41:DV:6:LYS:O	41:DV:37:VAL:HG21	2.18	0.43
43:DX:62:LYS:HE2	59:DA:1339:G:O6	2.19	0.43
26:BD:92:ILE:HB	26:BD:105:ILE:O	2.19	0.43
35:BP:61:ARG:HA	52:B8:27:THR:CG2	2.47	0.43
11:AL:82:VAL:O	11:AL:104:VAL:HG11	2.18	0.43
44:DY:28:LYS:HE2	44:DY:28:LYS:HB3	1.51	0.43
59:BA:223:A:H4'	59:BA:420:C:O2'	2.18	0.43
20:CA:996:A:H2'	20:CA:997:U:C6	2.54	0.43
59:DA:1899:G:H21	59:DA:1902:C:N4	2.15	0.43
23:CY:329:ARG:HD3	23:CY:374:LEU:HG	2.01	0.43
58:B4:28:LYS:HB3	58:B4:31:ILE:CD1	2.48	0.43
1:CB:96:ARG:HB2	1:CB:148:TYR:CE1	2.53	0.43
51:B7:39:ARG:NH1	51:B7:39:ARG:HA	2.34	0.43
59:DA:1674:G:H21	59:DA:1677:A:H61	1.65	0.43
39:BT:96:ARG:HA	59:BA:2848:G:OP2	2.18	0.43
32:DK:116:ASN:HD21	59:DA:1057:A:H2	1.65	0.43
30:DH:41:MET:SD	30:DH:52:VAL:HG13	2.58	0.43
10:AK:113:PRO:CB	20:AA:676:A:H5''	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:68(G):G:C5	20:AA:68(H):G:H1'	2.53	0.43
20:AA:68(H):G:H2'	20:AA:68(I):G:C8	2.54	0.43
11:CL:61:THR:CB	20:CA:362:G:H5''	2.49	0.43
19:CT:12:ALA:O	19:CT:15:ARG:HB2	2.18	0.43
60:BB:17:C:H2'	60:BB:18:G:O4'	2.18	0.43
59:DA:723:G:H2'	59:DA:724:U:H6	1.84	0.43
19:AT:52:ALA:HA	19:AT:55:ILE:HB	2.00	0.43
21:AW:27:C:H2'	21:AW:28:A:H8	1.84	0.43
20:CA:1120:G:H1	20:CA:1153:C:N4	2.14	0.43
26:DD:132:PRO:HG3	26:DD:190:TYR:CE1	2.54	0.43
59:BA:2839:G:H2'	59:BA:2840:C:H6	1.83	0.43
26:BD:94:LEU:HG	26:BD:104:TYR:HE2	1.83	0.43
59:DA:822:U:C5	59:DA:944:G:H1'	2.53	0.43
42:BW:75:TYR:CE1	42:BW:104:THR:HB	2.54	0.43
27:DE:14:ILE:HD11	27:DE:183:LEU:HD23	2.00	0.43
23:CY:421:GLN:O	23:CY:424:LEU:HG	2.18	0.43
59:DA:1321:A:H2'	59:DA:1322:A:C8	2.53	0.43
59:DA:262:A:H5'	59:DA:609(B):G:O2'	2.18	0.43
59:BA:276:A:H2'	59:BA:277:C:C5	2.54	0.43
23:AY:627:ARG:O	23:AY:629:GLY:N	2.52	0.43
59:BA:2479:G:OP1	59:BA:2537:U:H1'	2.19	0.43
31:BJ:97:UNK:O	31:BJ:101:UNK:N	2.51	0.43
23:AY:188:TYR:CD2	23:AY:188:TYR:N	2.87	0.43
50:B6:41:PRO:HG2	50:B6:43:CYS:O	2.19	0.43
20:AA:922:G:H2'	20:AA:923:A:C8	2.53	0.43
33:BN:95:PRO:O	33:BN:98:VAL:HG22	2.19	0.43
1:AB:140:HIS:O	1:AB:144:ARG:HG2	2.18	0.43
33:DN:78:TYR:HA	33:DN:79:PRO:HD3	1.90	0.43
59:DA:363(E):G:H2'	59:DA:363(F):U:C6	2.53	0.43
14:AO:32:LEU:HA	14:AO:35:ARG:HD2	2.00	0.43
50:B6:7:ILE:HD13	50:B6:7:ILE:HA	1.76	0.43
23:CY:127:LYS:HA	23:CY:127:LYS:HE2	2.00	0.43
25:DC:48:LEU:HB2	25:DC:49:GLY:H	1.60	0.43
39:DT:105:LEU:HB3	39:DT:109:GLU:OE1	2.19	0.43
1:AB:161:ALA:HA	1:AB:183:PRO:HB2	1.99	0.43
20:CA:143:A:H5'	20:CA:196:A:N1	2.33	0.43
39:BT:61:PHE:CD2	39:BT:78:LEU:HD12	2.53	0.43
59:BA:1604:C:H2'	59:BA:1605:C:H6	1.78	0.43
27:DE:115:GLY:O	27:DE:119:ARG:HB2	2.18	0.43
59:BA:2513:G:H2'	59:BA:2514:U:C6	2.53	0.43
59:BA:2572:A:H3'	59:BA:2574:G:H5''	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:59:VAL:HG13	27:BE:60:ASN:H	1.84	0.43
27:BE:61:ARG:HB2	27:BE:62:PRO:HD3	2.00	0.43
59:DA:1774:C:O2	59:DA:1774:C:H2'	2.18	0.43
59:DA:391:G:H2'	59:DA:392:C:H6	1.82	0.43
3:AD:138:TYR:HB2	20:AA:620:C:H1'	2.01	0.43
25:BC:75:VAL:O	25:BC:77:ALA:N	2.52	0.43
25:BC:76:LEU:O	25:BC:95:VAL:HA	2.19	0.43
57:D1:66:HIS:NE2	59:DA:372:G:H5'	2.33	0.43
59:DA:407:G:H2'	59:DA:408:G:C8	2.54	0.43
25:DC:173:HIS:NE2	59:DA:2176:A:C2	2.87	0.43
59:BA:308:G:C8	59:BA:501:A:H1'	2.54	0.43
28:DF:102:PRO:HB2	28:DF:105:VAL:CG2	2.48	0.43
12:CM:108:ARG:N	12:CM:108:ARG:HD2	2.34	0.43
26:DD:35:LYS:HA	26:DD:63:ARG:HA	1.99	0.43
45:BZ:102:LEU:N	45:BZ:122:ARG:O	2.51	0.43
59:BA:459:U:C4	59:BA:470:A:N7	2.87	0.43
11:CL:83:VAL:HG11	11:CL:100:ILE:HD13	1.99	0.43
59:BA:988:A:H2	59:BA:989:G:N2	2.17	0.43
40:BU:37:GLU:O	40:BU:40:PHE:HB2	2.18	0.43
41:BV:83:ARG:HH21	59:BA:1187:G:P	2.41	0.43
10:AK:38:ASN:HA	10:AK:39:PRO:HD3	1.74	0.43
52:D8:61:LEU:CG	59:DA:593:G:H4'	2.48	0.43
59:BA:500:G:N1	59:BA:503:A:OP2	2.51	0.43
16:AQ:25:ARG:NH1	20:AA:237:C:H5''	2.32	0.43
51:B7:16:HIS:HE1	59:BA:684:G:H5'	1.84	0.43
59:DA:1651:G:H2'	59:DA:1652:A:O4'	2.18	0.43
59:DA:2043:C:P	59:DA:2777:G:HO2'	2.36	0.43
59:DA:2111:C:H1'	59:DA:2118:U:H4'	2.00	0.43
20:AA:1219:U:H2'	20:AA:1220:G:C8	2.53	0.43
59:DA:41:C:H2'	59:DA:43:G:C8	2.54	0.43
48:D3:30:ARG:NH1	48:D3:32:GLN:O	2.52	0.43
59:BA:2838:G:C6	59:BA:2839:G:C5	3.07	0.43
59:BA:2171:A:H2'	59:BA:2172:U:C6	2.54	0.43
25:BC:135:ARG:NH1	59:BA:2170:A:OP1	2.52	0.43
36:DQ:14:ARG:HH21	59:DA:957:A:H3'	1.84	0.43
19:CT:49:ALA:O	19:CT:53:LEU:HG	2.19	0.43
59:BA:2646:C:OP2	59:BA:2732:G:O2'	2.35	0.43
6:CG:78:ARG:HB3	6:CG:85:TYR:HB2	2.01	0.43
20:AA:583:A:N6	20:AA:758:G:O2'	2.51	0.43
29:DG:114:ILE:HG22	29:DG:115:ARG:N	2.33	0.43
36:BQ:123:HIS:CE1	59:BA:2466:C:HO2'	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:512:G:OP1	59:BA:1234:U:O2'	2.34	0.43
7:CH:32:LYS:O	7:CH:36:LEU:HG	2.19	0.43
57:B1:49:VAL:HG21	57:B1:67:ILE:HG22	2.00	0.43
32:DK:51:ALA:O	32:DK:53:VAL:HG23	2.19	0.43
20:AA:389:A:C6	20:AA:390:C:H1'	2.54	0.43
1:CB:12:GLU:OE2	1:CB:16:HIS:NE2	2.51	0.43
59:DA:219:G:H2'	59:DA:220:G:C8	2.53	0.43
59:BA:1633:G:C6	59:BA:1635:G:C2	3.06	0.43
58:B4:9:LEU:HB3	58:B4:10:VAL:H	1.58	0.43
49:B5:52:TYR:C	49:B5:54:GLY:H	2.22	0.43
30:DH:23:ARG:HB3	30:DH:36:PRO:HB3	1.99	0.43
59:DA:257:A:H2'	59:DA:258:G:O4'	2.19	0.43
40:DU:61:TRP:CD2	40:DU:94:ASN:HA	2.53	0.43
40:BU:25:TRP:HD1	40:BU:26:GLY:N	2.17	0.43
59:DA:2748:A:H2'	59:DA:2749:A:C8	2.54	0.43
59:DA:1174:A:N7	59:DA:1175:U:H1'	2.34	0.43
10:AK:65:ALA:HB1	10:AK:98:LEU:HD23	2.00	0.43
35:BP:148:LEU:HB3	35:BP:149:GLU:H	1.44	0.43
59:BA:1940:U:P	59:BA:1965:C:H41	2.42	0.43
3:AD:49:ARG:HB3	3:AD:50:ARG:H	1.58	0.43
20:CA:1021:G:H2'	20:CA:1022:G:H8	1.83	0.43
3:AD:106:TYR:HB2	3:AD:117:ALA:HB2	2.01	0.43
18:CS:25:LYS:HA	18:CS:25:LYS:HD2	1.82	0.43
28:DF:78:ILE:HG12	28:DF:78:ILE:H	1.65	0.43
1:AB:208:ILE:HD12	1:AB:208:ILE:H	1.84	0.43
23:AY:190:ASN:HD21	23:AY:195:ASP:H	1.67	0.43
9:AJ:15:THR:HA	9:AJ:18:ALA:HB3	2.00	0.43
20:CA:1507:A:C2	20:CA:1508:G:C5	3.07	0.43
33:DN:35:ARG:HB2	33:DN:42:TRP:HZ3	1.84	0.43
59:DA:1434:A:H61	59:DA:1558:A:N6	2.15	0.43
11:CL:91:LYS:HE2	20:CA:526:C:OP2	2.19	0.43
3:CD:36:ARG:NH1	20:CA:427:U:OP2	2.52	0.43
3:CD:10:ARG:HH21	20:CA:542:G:P	2.41	0.43
3:CD:29:PRO:HG2	3:CD:30:LYS:HZ3	1.84	0.43
7:CH:30:ARG:O	7:CH:34:GLU:HG2	2.19	0.43
27:BE:144:ARG:HD2	59:BA:2572:A:C8	2.54	0.43
23:CY:133:ILE:H	23:CY:133:ILE:HD13	1.84	0.43
25:DC:173:HIS:CD2	59:DA:2123:G:H1'	2.53	0.43
20:CA:666:G:N2	20:CA:740:U:O2	2.42	0.43
14:AO:46:HIS:O	14:AO:48:LYS:N	2.52	0.43
59:DA:2471:C:H2'	59:DA:2472:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:701:FUA:H5	61:CY:701:FUA:C20	2.36	0.43
23:CY:565:VAL:O	23:CY:566:THR:HB	2.19	0.43
11:AL:102:ARG:HA	11:AL:107:ALA:HB3	2.01	0.43
51:D7:34:ARG:HH12	59:DA:467:G:P	2.41	0.43
32:BK:90:LYS:HG3	59:BA:1063:G:N2	2.24	0.43
28:BF:158:THR:O	28:BF:178:PRO:HD3	2.19	0.43
30:DH:143:GLN:HG2	59:DA:2745:C:H1'	2.00	0.43
20:AA:956:U:H2'	20:AA:957:U:O4'	2.19	0.43
42:DW:8:ARG:HE	42:DW:102:HIS:CE1	2.37	0.43
18:AS:10:PHE:CD2	20:AA:1318:A:H4'	2.53	0.43
20:CA:101:A:H2'	20:CA:102:G:H8	1.83	0.43
57:D1:76:ARG:HG3	59:DA:270(T):G:H5'	2.01	0.43
13:CN:10:ALA:HB2	13:CN:21:TYR:CE1	2.53	0.43
25:BC:20:VAL:HG13	25:BC:226:ASN:N	2.34	0.43
59:DA:2002:G:H2'	59:DA:2003:G:H8	1.83	0.43
23:CY:69:VAL:O	23:CY:358:MET:HB3	2.19	0.43
23:CY:617:MET:HG3	23:CY:643:ILE:CD1	2.48	0.43
11:CL:5:PRO:O	11:CL:9:GLN:HG3	2.19	0.43
50:D6:5:VAL:HB	59:DA:2283:C:H5'	2.01	0.43
59:BA:1435:G:H2'	59:BA:1436:G:C8	2.54	0.43
8:AI:92:TYR:O	8:AI:96:LEU:HB2	2.19	0.43
59:BA:2815:C:H2'	59:BA:2816:C:O4'	2.19	0.43
35:BP:46:LYS:HD2	35:BP:46:LYS:N	2.33	0.43
32:DK:30:HIS:CG	32:DK:32:ALA:HB2	2.54	0.43
59:DA:1577:C:H2'	59:DA:1578:U:C6	2.54	0.43
57:B1:76:ARG:HH22	57:B1:95:LEU:HD13	1.84	0.43
59:DA:987:G:O2'	59:DA:1000:A:N3	2.46	0.43
59:BA:1346:G:H1	59:BA:1600:C:N4	2.16	0.43
20:CA:199:G:H1	20:CA:218:C:H42	1.67	0.43
1:AB:12:GLU:C	1:AB:14:GLY:H	2.21	0.43
40:BU:99:ALA:HB2	40:BU:106:PHE:CE2	2.54	0.43
59:BA:2258:C:H3'	59:BA:2259:G:H8	1.83	0.43
43:DX:21:PHE:HE2	43:DX:26:TYR:HA	1.83	0.43
15:AP:72:ARG:NH1	20:AA:452:A:N3	2.66	0.43
34:BO:39:ILE:HG23	34:BO:60:ALA:HB3	2.00	0.43
2:AC:176:HIS:HB2	20:AA:1108:G:P	2.59	0.43
32:DK:13:PRO:HA	32:DK:53:VAL:H	1.82	0.43
7:CH:49:GLU:OE2	7:CH:60:ARG:HB3	2.18	0.43
12:AM:23:TYR:CZ	20:AA:1330:U:H4'	2.54	0.43
59:BA:799:G:H3'	59:BA:800:A:H5''	2.01	0.43
59:BA:1359:A:C6	59:BA:1360:A:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:126:MET:HA	59:BA:1080:C:O2'	2.19	0.43
35:DP:47:ASP:OD1	35:DP:49:ARG:HB2	2.19	0.43
20:CA:1097:C:H1'	20:CA:1170:A:H1'	1.99	0.43
45:BZ:77:ASP:O	45:BZ:79:ARG:N	2.52	0.43
59:BA:2535:G:H2'	59:BA:2536:G:C8	2.54	0.43
35:DP:5:ASP:OD2	35:DP:6:LEU:N	2.52	0.43
5:AF:5:GLU:HB3	5:AF:62:TRP:CZ2	2.53	0.43
2:AC:113:ALA:HB2	2:AC:202:ILE:HG13	2.01	0.43
20:CA:1108:G:H2'	20:CA:1109:C:H5'	1.99	0.43
3:AD:100:ARG:O	3:AD:104:VAL:HG23	2.18	0.43
35:DP:86:LYS:HD2	35:DP:86:LYS:HA	1.85	0.43
59:DA:189:G:H2'	59:DA:205:G:N2	2.34	0.43
12:AM:88:ARG:HA	12:AM:98:VAL:HG13	2.00	0.43
20:AA:514:C:H2'	20:AA:515:G:O4'	2.19	0.43
29:BG:114:ILE:HD12	29:BG:117:PHE:CD1	2.53	0.43
59:DA:2038:G:C2	59:DA:2039:C:H1'	2.54	0.43
59:DA:2023:G:OP1	59:DA:2034:U:H1'	2.19	0.43
59:DA:1306:C:N3	59:DA:1622:G:O6	2.51	0.43
1:CB:72:GLY:HA3	1:CB:81:VAL:HG21	2.01	0.43
8:CI:4:TYR:HD1	8:CI:19:LEU:O	2.01	0.43
36:DQ:126:PRO:HA	59:DA:2485:G:H4'	2.01	0.43
25:BC:164:PHE:CA	25:BC:172:ILE:HG13	2.42	0.43
36:BQ:14:ARG:NH1	59:BA:956:G:N7	2.55	0.43
25:BC:73:VAL:HG22	25:BC:75:VAL:N	2.34	0.43
25:DC:213:VAL:O	25:DC:214:TYR:C	2.57	0.43
25:DC:22:THR:HA	25:DC:225:ILE:O	2.19	0.43
17:CR:64:ARG:NH2	20:CA:663:A:O3'	2.50	0.43
59:BA:2414:G:H2'	59:BA:2415:G:C8	2.54	0.43
59:DA:612:G:H2'	59:DA:613:U:C6	2.54	0.43
4:CE:119:LEU:HD21	20:CA:6:G:C2	2.53	0.43
41:DV:59:ALA:HB1	41:DV:96:ILE:HA	2.00	0.43
39:BT:62:THR:OG1	39:BT:75:ILE:HG12	2.18	0.43
59:BA:814:C:H2'	59:BA:815:C:C6	2.53	0.43
59:BA:975:G:H1'	59:BA:990:A:C2	2.54	0.43
52:B8:52:LYS:N	52:B8:53:PRO:HD2	2.34	0.43
20:AA:955:U:H2'	20:AA:956:U:O4'	2.19	0.43
16:CQ:54:GLY:O	16:CQ:56:VAL:N	2.51	0.43
51:B7:41:ARG:HH12	51:B7:44:PRO:HG3	1.84	0.43
34:DO:6:THR:HG23	59:DA:1666:G:O3'	2.18	0.43
13:CN:21:TYR:CE2	20:CA:981:U:H4'	2.54	0.43
39:DT:16:ARG:NH1	39:DT:19:LEU:HD21	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1229:A:H5''	21:AW:29:U:O2'	2.17	0.43
2:CC:6:HIS:HA	2:CC:7:PRO:HD3	1.68	0.43
20:CA:901:A:O5'	20:CA:901:A:H8	2.01	0.43
35:BP:60:MET:HG2	35:BP:60:MET:H	1.54	0.43
59:DA:528:A:C2	59:DA:2043:C:H4'	2.54	0.43
59:DA:2116:G:H2'	59:DA:2117:A:C5	2.54	0.43
50:D6:15:GLU:HA	50:D6:49:HIS:HA	2.01	0.43
20:CA:68(G):G:C4	20:CA:68(H):G:H1'	2.54	0.43
6:CG:102:ARG:NH2	20:CA:939:G:OP1	2.45	0.43
1:AB:42:ILE:HG23	1:AB:44:LEU:HG	2.01	0.43
59:BA:2564:A:OP1	59:BA:2648:C:H4'	2.18	0.43
35:DP:79:ARG:HH21	35:DP:109:GLY:HA2	1.83	0.43
15:CP:38:TYR:CE2	20:CA:626:U:H5''	2.54	0.43
59:BA:1412:A:H2'	59:BA:1413:G:H8	1.84	0.43
59:BA:2553:G:C2	59:BA:2583:G:H1'	2.54	0.43
41:DV:75:PHE:HB2	41:DV:81:TYR:O	2.19	0.43
59:DA:2583:G:N1	59:DA:2584:U:O2	2.52	0.43
59:BA:901:A:H2'	59:BA:902:C:C6	2.54	0.43
5:AF:21:LEU:O	5:AF:25:ILE:HG12	2.19	0.43
20:AA:637:G:H2'	20:AA:638:G:O4'	2.19	0.43
59:BA:997:G:H2'	59:BA:998:C:H6	1.83	0.43
36:DQ:38:GLU:OE1	36:DQ:128:LYS:HE2	2.19	0.43
49:B5:22:HIS:CE1	59:BA:2045:C:H1'	2.54	0.43
20:CA:920:U:O2'	20:CA:1081:G:O2'	2.30	0.43
59:DA:715:G:C6	59:DA:716:A:C6	3.07	0.43
29:BG:139:LEU:HA	29:BG:144:ILE:HG23	2.01	0.43
19:CT:63:ILE:HG22	19:CT:77:ALA:HB1	2.00	0.43
25:BC:119:ASP:OD2	25:BC:119:ASP:N	2.47	0.43
30:BH:25:LYS:H	30:BH:25:LYS:HG3	1.58	0.43
20:CA:503:C:H2'	20:CA:504:C:C6	2.53	0.43
59:DA:2821:A:H2'	59:DA:2822:G:C8	2.54	0.43
27:BE:22:PRO:HG2	59:BA:2729:G:H5'	2.01	0.43
59:DA:1024:G:H21	59:DA:1144:G:C4'	2.31	0.43
37:DR:107:ASP:HB2	59:DA:1649:G:N2	2.33	0.43
59:DA:227:A:N6	59:DA:410:G:H21	2.17	0.43
59:DA:227:A:H61	59:DA:410:G:N2	2.17	0.43
20:CA:28:G:H2'	20:CA:29:G:C8	2.54	0.43
59:BA:2439:A:H8	59:BA:2586:C:O3'	2.02	0.43
57:B1:18:ILE:HG13	57:B1:20:ARG:H	1.84	0.43
28:BF:50:SER:O	59:BA:37:C:O2'	2.35	0.43
11:AL:58:VAL:HG11	11:AL:85:ILE:CG1	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BY:8:LYS:NZ	59:BA:336:C:H4'	2.32	0.43
26:DD:78:LYS:HB2	26:DD:116:GLN:HB2	2.01	0.43
25:BC:131:ILE:HG12	25:BC:132:LEU:H	1.83	0.43
59:DA:2703:C:H2'	59:DA:2704:C:C6	2.53	0.43
44:BY:14:LEU:O	44:BY:72:VAL:HG12	2.19	0.43
53:D9:31:LYS:HD2	59:DA:2478:A:O4'	2.18	0.43
59:BA:864:G:H2'	59:BA:865:C:C6	2.54	0.43
59:DA:681:G:H2'	59:DA:682:G:C8	2.54	0.43
59:DA:2211:G:H2'	59:DA:2211:G:N3	2.34	0.43
17:CR:56:THR:HB	17:CR:58:LEU:HD23	2.01	0.43
59:BA:250:G:N1	59:BA:251:A:C2	2.87	0.43
20:AA:33:A:H5''	20:AA:364:A:H1'	2.01	0.43
11:AL:30:ALA:HA	11:AL:31:PRO:HD3	1.72	0.43
59:BA:1659:U:O2	59:BA:2001:A:N1	2.52	0.43
20:CA:513:C:N4	20:CA:538:G:H1	2.16	0.43
42:BW:3:ALA:O	42:BW:106:ILE:HA	2.18	0.43
23:CY:610:VAL:O	23:CY:642:VAL:HA	2.19	0.43
41:BV:36:PRO:HD2	41:BV:37:VAL:HG22	2.01	0.43
20:AA:68(A):G:C2	20:AA:68(B):G:C8	3.07	0.43
5:CF:67:MET:O	5:CF:69:GLU:N	2.52	0.43
7:CH:7:ALA:HA	7:CH:10:LEU:HD12	2.00	0.43
34:DO:63:VAL:HG23	34:DO:64:ARG:HG3	2.01	0.43
59:BA:839:U:H2'	59:BA:840:C:H6	1.80	0.43
20:AA:867:G:H2'	20:AA:868:C:C6	2.54	0.43
59:BA:948:G:H2'	59:BA:949:C:C6	2.54	0.43
49:B5:31:VAL:HA	49:B5:32:PRO:HD3	1.86	0.43
4:CE:80:ILE:HG22	7:CH:104:ARG:NH2	2.34	0.43
32:DK:17:ALA:HB2	32:DK:38:VAL:HG11	2.01	0.43
35:BP:55:ARG:NH1	59:BA:2358:G:H22	2.17	0.43
59:BA:2119:A:C2	59:BA:2171:A:H1'	2.54	0.43
19:AT:89:ARG:NH2	20:AA:186(A):C:O3'	2.52	0.43
29:DG:133:LEU:HD11	29:DG:157:ILE:HD12	2.00	0.43
57:B1:23:LYS:HD2	57:B1:23:LYS:HA	1.81	0.43
4:AE:110:LEU:HD13	4:AE:115:VAL:HG21	2.01	0.43
20:AA:479:C:H2'	20:AA:480:U:C6	2.54	0.43
25:BC:101:ILE:HD13	25:BC:124:VAL:HG13	2.00	0.43
7:AH:31:PHE:O	7:AH:35:ILE:HG12	2.19	0.43
59:DA:1732:A:H2'	59:DA:1733:G:O4'	2.19	0.43
20:AA:1108:G:H2'	20:AA:1109:C:H5'	2.01	0.43
59:DA:1056:G:H4'	59:DA:1086:A:C8	2.54	0.43
46:D0:40:GLN:HE21	46:D0:57:PHE:HB3	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:12:PRO:HD2	30:BH:49:VAL:HG22	2.00	0.43
20:AA:62:U:H2'	20:AA:63:C:H6	1.84	0.43
59:DA:1463:C:H2'	59:DA:1464:C:H6	1.84	0.43
2:AC:34:LEU:HD22	13:AN:25:VAL:HG21	2.00	0.43
5:AF:18:GLN:O	5:AF:22:GLU:HG2	2.18	0.43
5:AF:5:GLU:HB3	5:AF:62:TRP:HZ2	1.83	0.43
19:CT:67:ALA:HB2	19:CT:77:ALA:HB3	2.01	0.43
34:BO:103:ALA:HB1	34:BO:105:GLU:OE1	2.19	0.43
46:D0:70:GLN:HB3	46:D0:78:TYR:HB2	2.00	0.43
41:BV:1:MET:HB2	41:BV:42:GLY:HA3	2.01	0.43
14:CO:55:GLY:O	14:CO:59:MET:HG3	2.19	0.43
20:CA:1534:A:H2'	20:CA:1535:C:H6	1.84	0.43
28:BF:47:GLY:O	28:BF:94:PRO:HA	2.19	0.43
9:CJ:33:GLN:HB2	9:CJ:75:ILE:HD12	2.01	0.43
3:AD:37:PRO:O	3:AD:38:TYR:HB3	2.19	0.43
20:CA:287:U:H2'	20:CA:288:A:C8	2.54	0.43
25:DC:152:GLU:O	25:DC:155:ARG:HB2	2.19	0.43
45:DZ:48:PHE:HA	45:DZ:51:ALA:HB3	2.01	0.43
20:AA:1410:G:H2'	20:AA:1411:C:C6	2.53	0.43
23:AY:357:ARG:NH1	23:AY:373:ASP:OD1	2.52	0.43
10:CK:70:LYS:HE2	10:CK:70:LYS:HB3	1.77	0.43
27:BE:94:GLU:H	27:BE:94:GLU:CD	2.23	0.43
20:CA:721:G:H8	20:CA:721:G:OP1	2.02	0.43
45:BZ:81:ARG:HE	45:BZ:81:ARG:HB2	1.36	0.43
59:DA:664:C:H4'	59:DA:940:G:H5''	2.00	0.43
59:BA:2451:A:C8	59:BA:2452:C:C5	3.07	0.43
31:DJ:123:UNK:C	31:DJ:125:UNK:H	2.31	0.43
2:CC:161:GLU:HG3	20:CA:1055:A:O3'	2.19	0.43
59:BA:1309:G:H1	59:BA:1605:C:H42	1.67	0.42
59:DA:2020:A:O2'	59:DA:2021:C:H2'	2.18	0.42
20:CA:987:G:H2'	20:CA:988:G:C8	2.53	0.42
1:CB:71:VAL:CB	1:CB:164:VAL:HG22	2.41	0.42
59:DA:1772:G:H2'	59:DA:1773:A:O3'	2.19	0.42
49:B5:9:LYS:HA	59:BA:2017:U:H4'	2.00	0.42
40:BU:94:ASN:HB2	59:BA:996:A:H5'	2.00	0.42
33:DN:120:LEU:C	33:DN:121:LYS:HD2	2.40	0.42
59:BA:377:C:H2'	59:BA:378:C:H6	1.83	0.42
28:DF:154:VAL:C	28:DF:174:VAL:O	2.58	0.42
28:DF:178:PRO:O	28:DF:180:GLY:N	2.52	0.42
20:AA:301:G:H2'	20:AA:302:G:C8	2.53	0.42
23:AY:201:ILE:C	23:AY:203:GLU:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D6:45:LYS:CB	59:DA:2371:G:H4'	2.49	0.42
23:CY:506:GLN:NE2	23:CY:580:MET:HE2	2.34	0.42
59:DA:2211:G:H2'	59:DA:2212:A:H5''	2.01	0.42
38:DS:26:LEU:O	38:DS:28:VAL:HG13	2.19	0.42
38:DS:63:THR:O	38:DS:67:ARG:HG2	2.19	0.42
28:BF:154:VAL:HG11	28:BF:156:LEU:HD12	2.01	0.42
34:DO:107:ARG:HB2	34:DO:115:VAL:HG21	2.01	0.42
39:DT:33:LYS:H	39:DT:42:ILE:HA	1.84	0.42
2:AC:102:ASN:ND2	2:AC:104:GLN:HG2	2.28	0.42
27:BE:134:ILE:N	27:BE:134:ILE:HD13	2.34	0.42
20:AA:957:U:H1'	20:AA:960:U:N3	2.33	0.42
12:AM:115:LYS:H	20:AA:1228:C:H5'	1.84	0.42
18:CS:39:THR:HB	18:CS:41:VAL:HG13	2.01	0.42
16:AQ:63:ARG:HB2	20:AA:130:A:C8	2.54	0.42
59:DA:1278:A:H2'	59:DA:1279:G:H8	1.84	0.42
59:BA:2247:A:H2'	59:BA:2248:C:O4'	2.19	0.42
59:BA:464:U:H2'	59:BA:465:G:O4'	2.19	0.42
12:AM:105:THR:HG22	20:AA:1229:A:H61	1.85	0.42
32:DK:131:ALA:HA	32:DK:134:MET:HE2	2.00	0.42
23:CY:620:VAL:HA	23:CY:623:ASP:OD1	2.18	0.42
23:CY:624:LEU:HB3	23:CY:631:ILE:HD11	2.01	0.42
23:CY:251:ILE:HG12	23:CY:281:PRO:HB3	2.01	0.42
15:AP:80:PHE:O	20:AA:458(E):A:H4'	2.18	0.42
20:CA:454:C:N4	20:CA:479:C:C4	2.87	0.42
1:AB:95:GLN:HG3	1:AB:147:LYS:HG3	2.01	0.42
9:CJ:60:ARG:NH2	20:CA:1366:C:O2'	2.50	0.42
7:CH:83:ILE:HA	7:CH:136:GLU:O	2.18	0.42
59:BA:1950:G:C8	59:BA:1951:U:H5	2.36	0.42
23:AY:328:ILE:HG13	23:AY:330:VAL:H	1.84	0.42
23:CY:122:TRP:O	23:CY:125:ALA:HB3	2.19	0.42
23:CY:92:ILE:HG23	23:CY:93:GLU:N	2.33	0.42
59:DA:37:C:H2'	59:DA:38:A:C8	2.54	0.42
20:CA:1355:G:H2'	20:CA:1356:G:C8	2.54	0.42
20:CA:581:G:N2	20:CA:760:G:N7	2.67	0.42
12:AM:77:ASN:O	12:AM:81:LEU:HD13	2.19	0.42
59:BA:2212:A:H1'	59:BA:2215:G:C4	2.54	0.42
20:CA:1128:C:O2'	20:CA:1130:A:N7	2.49	0.42
60:DB:66:A:O2'	60:DB:67:G:OP2	2.30	0.42
6:CG:151:TYR:HA	6:CG:154:TYR:CD1	2.53	0.42
23:CY:180:VAL:HB	23:CY:213:HIS:HB2	2.01	0.42
26:DD:115:GLN:HE22	26:DD:117:VAL:HG13	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DX:26:TYR:OH	43:DX:93:GLU:HG2	2.19	0.42
39:DT:51:ARG:HB3	39:DT:62:THR:HG22	2.01	0.42
59:BA:236:C:H2'	59:BA:237:C:C6	2.54	0.42
34:DO:30:ALA:HB2	59:DA:2674:G:H4'	2.01	0.42
2:AC:36:ASP:OD1	2:AC:57:ILE:HD13	2.19	0.42
13:CN:35:ARG:HG3	13:CN:35:ARG:H	1.59	0.42
6:CG:79:ARG:H	6:CG:79:ARG:HD3	1.83	0.42
20:AA:62:U:OP1	20:AA:385:C:O2'	2.35	0.42
2:CC:176:HIS:HB3	20:CA:1111:A:H61	1.84	0.42
36:BQ:20:ALA:O	36:BQ:22:LYS:N	2.51	0.42
36:DQ:16:ARG:NH1	59:DA:952:G:OP2	2.51	0.42
20:AA:197:A:N3	20:AA:198:G:H1'	2.34	0.42
59:BA:734:A:O2'	59:BA:1635:G:H5'	2.19	0.42
42:DW:19:LEU:HD12	49:D5:25:LEU:HB2	2.01	0.42
7:CH:28:ALA:HB2	7:CH:57:PRO:HB2	2.00	0.42
27:DE:197:ILE:HG12	27:DE:198:VAL:N	2.34	0.42
59:DA:2359:C:H2'	59:DA:2360:A:O4'	2.19	0.42
7:AH:115:SER:HB2	20:AA:640:A:H1'	1.99	0.42
22:AV:16:A:H2'	22:AV:17:U:C6	2.54	0.42
43:DX:63:LYS:HE2	43:DX:72:LYS:HE3	2.01	0.42
59:DA:22:C:N3	59:DA:518:G:O6	2.52	0.42
20:AA:1210:C:H1'	20:AA:1214:C:O2	2.18	0.42
59:BA:2884:U:H2'	59:BA:2885:C:O4'	2.19	0.42
46:D0:29:GLN:O	46:D0:66:VAL:HA	2.19	0.42
28:BF:164:ARG:O	28:BF:168:ARG:N	2.52	0.42
57:B1:7:ILE:CD1	57:B1:62:VAL:HA	2.49	0.42
59:DA:1832:C:H2'	59:DA:1833:U:O4'	2.19	0.42
19:AT:36:LEU:HD13	19:AT:36:LEU:HA	1.83	0.42
20:AA:358:U:OP1	23:AY:381:LYS:NZ	2.42	0.42
30:DH:105:LEU:H	30:DH:105:LEU:HD23	1.84	0.42
9:AJ:99:LYS:HD2	9:AJ:99:LYS:HA	1.68	0.42
11:AL:120:TYR:CD2	11:AL:120:TYR:N	2.87	0.42
15:AP:42:ARG:NH1	20:AA:449:C:O2	2.52	0.42
32:BK:132:ARG:HH12	32:BK:138:VAL:HG23	1.84	0.42
20:AA:1073:U:H2'	20:AA:1074:G:H8	1.84	0.42
20:CA:219:C:H2'	20:CA:220:G:O4'	2.19	0.42
23:CY:443:HIS:ND1	23:CY:444:PRO:HD2	2.33	0.42
8:AI:28:VAL:N	8:AI:31:GLN:O	2.48	0.42
3:CD:22:LYS:HG3	20:CA:408:A:OP2	2.18	0.42
3:CD:30:LYS:HG2	3:CD:30:LYS:O	2.18	0.42
59:BA:24:G:H2'	59:BA:25:U:H6	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:412:A:H3'	59:BA:413:C:C6	2.54	0.42
41:BV:2:PHE:CD2	41:BV:13:ARG:HD2	2.54	0.42
25:BC:151:GLY:O	25:BC:154:ILE:HB	2.18	0.42
25:BC:217:THR:O	25:BC:218:THR:OG1	2.28	0.42
11:AL:17:LYS:NZ	20:AA:303:A:H5'	2.34	0.42
40:DU:92:ARG:HD3	40:DU:95:LEU:HB2	2.00	0.42
20:AA:909:A:H2'	20:AA:910:C:O4'	2.19	0.42
3:AD:54:TYR:HA	3:AD:57:ARG:HE	1.83	0.42
3:AD:61:LYS:HD3	3:AD:207:TYR:OH	2.20	0.42
38:BS:99:LYS:HE3	38:BS:101:LEU:HG	2.00	0.42
59:DA:2875:C:H2'	59:DA:2876:G:O4'	2.18	0.42
41:BV:15:GLU:CB	41:BV:16:PRO:HD2	2.49	0.42
33:BN:14:VAL:HG23	33:BN:50:ASP:HB3	2.01	0.42
27:BE:51:PHE:C	27:BE:74:PRO:HB3	2.39	0.42
11:CL:45:PRO:HA	11:CL:92:ASP:HB3	2.01	0.42
14:CO:18:PHE:O	14:CO:20:GLY:N	2.52	0.42
17:CR:74:ARG:HG3	17:CR:79:LEU:HD22	2.01	0.42
20:AA:756:C:O2'	20:AA:878:G:N2	2.52	0.42
59:DA:172:C:H2'	59:DA:173:G:O4'	2.19	0.42
20:AA:1148:U:H2'	20:AA:1149:C:O4'	2.18	0.42
59:DA:660:G:H2'	59:DA:661:C:O4'	2.19	0.42
59:DA:570:G:H1'	59:DA:983:A:N6	2.34	0.42
59:DA:989:G:O2'	59:DA:990:A:OP2	2.34	0.42
34:BO:8:LEU:HA	34:BO:82:ASN:ND2	2.34	0.42
23:AY:603:GLU:HG2	23:AY:679:VAL:HG13	2.00	0.42
20:AA:266:G:O2'	20:AA:268:C:OP2	2.22	0.42
25:DC:61:GLY:HA3	25:DC:164:PHE:CD1	2.53	0.42
59:DA:848:G:C8	59:DA:933:A:H8	2.37	0.42
52:D8:5:LYS:HA	59:DA:242:G:H8	1.83	0.42
11:CL:114:LYS:O	11:CL:115:LYS:HD3	2.19	0.42
59:DA:221:A:HO2'	59:DA:222:A:P	2.41	0.42
59:BA:2852:G:H2'	59:BA:2853:C:C6	2.54	0.42
20:CA:298:A:H2'	20:CA:299:G:O4'	2.18	0.42
28:DF:51:THR:H	28:DF:92:PRO:HB2	1.84	0.42
59:BA:1899:G:H21	59:BA:1902:C:H41	1.67	0.42
59:BA:1784:A:H4'	59:BA:1785:A:O5'	2.19	0.42
59:DA:2115:G:H8	59:DA:2115:G:OP2	2.02	0.42
20:AA:1313:U:H2'	20:AA:1314:C:C6	2.54	0.42
59:DA:2524:G:H2'	59:DA:2525:G:H8	1.84	0.42
59:BA:2168:G:N1	59:BA:2171:A:OP2	2.53	0.42
32:BK:100:THR:OG1	32:BK:101:TRP:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:74:PRO:HG2	27:DE:77:ILE:HA	2.01	0.42
49:D5:6:VAL:HG13	59:DA:2015:A:C2	2.54	0.42
1:AB:12:GLU:HB3	1:AB:44:LEU:HD22	2.01	0.42
59:BA:1811:G:C4	59:BA:1812:A:C8	3.07	0.42
59:DA:884:C:N4	59:DA:892:G:H1	2.17	0.42
42:BW:84:ARG:HB2	42:BW:96:ILE:HG23	2.00	0.42
29:DG:114:ILE:CG2	29:DG:115:ARG:N	2.82	0.42
21:CW:69:A:O2'	21:CW:70:G:H5'	2.18	0.42
20:AA:745:C:H1'	20:AA:836:G:O2'	2.19	0.42
59:BA:15:G:H1	59:BA:525:U:H3	1.66	0.42
28:DF:45:ARG:HD2	59:DA:443:A:C5	2.54	0.42
59:BA:621:A:N3	59:BA:621:A:H2'	2.33	0.42
30:BH:60:ARG:HG3	30:BH:61:HIS:N	2.34	0.42
20:CA:1504:G:O2'	20:CA:1505:G:P	2.77	0.42
35:BP:135:LEU:HA	35:BP:135:LEU:HD22	1.86	0.42
43:DX:54:VAL:HG13	43:DX:81:VAL:HG12	2.02	0.42
20:AA:487:A:H2'	20:AA:488:C:O4'	2.19	0.42
59:BA:670:A:H4'	59:BA:671:C:H5'	2.01	0.42
25:BC:102:GLN:NE2	25:BC:105:LEU:HD23	2.34	0.42
22:AV:18:G:OP2	22:AV:18:G:H8	2.01	0.42
21:AW:35:A:N6	22:AV:18:G:O6	2.51	0.42
59:BA:1987:G:H2'	59:BA:1988:C:C6	2.54	0.42
9:AJ:35:SER:N	9:AJ:73:ASP:O	2.46	0.42
59:BA:2154:G:H2'	59:BA:2155:G:C8	2.52	0.42
20:CA:1004:A:H2'	20:CA:1005:A:O4'	2.19	0.42
50:B6:43:CYS:C	50:B6:44:ARG:HE	2.20	0.42
5:AF:90:VAL:O	20:AA:736:C:O2'	2.18	0.42
20:AA:158:G:H2'	20:AA:159:G:O4'	2.19	0.42
23:AY:86:GLY:O	23:AY:88:VAL:N	2.52	0.42
8:AI:29:ASN:HB2	8:AI:65:VAL:H	1.84	0.42
3:AD:24:GLU:O	3:AD:28:SER:HB3	2.19	0.42
4:CE:86:ALA:CB	20:CA:19:C:H5''	2.49	0.42
59:BA:1378:A:OP1	59:BA:1378:A:H3'	2.19	0.42
19:AT:87:LYS:HA	19:AT:87:LYS:HD2	1.84	0.42
20:CA:316:G:C8	20:CA:351:G:C2	3.07	0.42
59:DA:1589:C:H2'	59:DA:1590:U:H6	1.84	0.42
20:CA:697:U:O2	20:CA:785:G:N2	2.41	0.42
7:CH:30:ARG:NH1	20:CA:591:U:OP2	2.53	0.42
37:DR:107:ASP:O	59:DA:2009:G:H1'	2.18	0.42
11:CL:58:VAL:C	11:CL:60:LEU:H	2.23	0.42
16:CQ:70:ARG:HG2	20:CA:235:C:H5'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:66:SER:O	16:CQ:70:ARG:NH2	2.33	0.42
20:AA:431:A:H2'	20:AA:432:A:C8	2.54	0.42
28:DF:65:TRP:HZ3	28:DF:75:HIS:NE2	2.17	0.42
45:BZ:59:LEU:HG	45:BZ:67:LEU:O	2.20	0.42
59:BA:1649:G:H2'	59:BA:1650:G:H8	1.83	0.42
39:BT:27:THR:OG1	39:BT:28:VAL:N	2.49	0.42
4:CE:78:HIS:O	4:CE:93:PRO:HD3	2.18	0.42
59:BA:1076:C:H2'	59:BA:1077:A:C4'	2.49	0.42
59:BA:2781:A:C8	59:BA:2781:A:H5''	2.53	0.42
26:BD:78:LYS:HE3	26:BD:78:LYS:HB3	1.51	0.42
20:CA:992:U:HO2'	20:CA:993:G:P	2.37	0.42
18:CS:66:MET:H	18:CS:66:MET:HG2	1.65	0.42
20:CA:68(Y):C:H2'	20:CA:101:A:C8	2.54	0.42
26:DD:244:ARG:NH2	59:DA:1841:U:H1'	2.34	0.42
23:CY:99:ARG:HD3	23:CY:128:TYR:HB2	2.01	0.42
59:BA:2688:U:C5	59:BA:2719:G:H2'	2.54	0.42
59:BA:2688:U:C5	59:BA:2720:U:H5	2.37	0.42
33:BN:36:GLY:CA	33:BN:42:TRP:HE3	2.32	0.42
20:AA:68(H):G:N2	20:AA:68(R):C:C2	2.84	0.42
20:CA:966:G:C6	20:CA:967:C:C2	3.07	0.42
35:BP:85:LEU:HD23	35:BP:115:LEU:O	2.19	0.42
59:BA:2816:C:O2	59:BA:2883:A:O2'	2.36	0.42
50:D6:17:LYS:HD2	50:D6:17:LYS:N	2.34	0.42
50:D6:48:VAL:HG23	50:D6:49:HIS:H	1.84	0.42
45:DZ:26:GLY:HA2	45:DZ:85:HIS:CD2	2.54	0.42
26:DD:134:ARG:HG2	26:DD:187:GLY:O	2.20	0.42
7:AH:10:LEU:O	7:AH:13:ILE:HB	2.19	0.42
29:DG:107:LEU:HD22	29:DG:177:GLY:O	2.20	0.42
47:D2:49:LYS:HA	47:D2:52:ASP:HB3	2.01	0.42
8:CI:69:GLY:O	8:CI:73:GLN:HG3	2.18	0.42
45:DZ:118:GLN:HB3	45:DZ:173:ALA:H	1.83	0.42
59:DA:75:G:H2'	59:DA:75:G:N3	2.34	0.42
26:BD:146:GLU:OE2	26:BD:152:GLY:N	2.53	0.42
59:BA:144(B):A:O2'	59:BA:1445:C:H5'	2.19	0.42
59:BA:2793:G:C6	59:BA:2794:C:N4	2.87	0.42
59:BA:2582:G:C2	59:BA:2583:G:C8	3.07	0.42
47:B2:25:VAL:HG22	47:B2:60:LEU:HB3	2.02	0.42
41:DV:89:GLN:HA	41:DV:90:PRO:HD3	1.88	0.42
59:BA:2135:A:H3'	59:BA:2136:C:C5	2.55	0.42
35:DP:107:LYS:HB2	35:DP:107:LYS:NZ	2.34	0.42
59:BA:241:A:H62	59:BA:256:A:H62	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:54:VAL:HB	33:DN:122:VAL:HG13	2.01	0.42
36:BQ:30:GLY:H	36:BQ:105:GLU:HG3	1.83	0.42
42:BW:35:ILE:HG23	49:B5:28:PRO:HG3	2.01	0.42
6:AG:115:ARG:O	6:AG:119:ARG:HG3	2.20	0.42
59:DA:622:G:H2'	59:DA:623:G:H8	1.85	0.42
32:DK:41:PHE:HE1	32:DK:53:VAL:HG21	1.83	0.42
19:CT:101:GLY:O	20:CA:191:G:O2'	2.35	0.42
23:AY:523:PHE:CE2	23:AY:547:GLU:HG2	2.54	0.42
20:AA:1152:A:H2'	20:AA:1153:C:C6	2.55	0.42
59:BA:997:G:H2'	59:BA:998:C:C6	2.54	0.42
59:DA:1589:C:H2'	59:DA:1590:U:C6	2.53	0.42
42:DW:34:ASN:OD1	49:D5:39:MET:HB2	2.18	0.42
20:AA:1366:C:H2'	20:AA:1367:C:C6	2.55	0.42
20:CA:889:A:H5'	20:CA:891:U:O4'	2.19	0.42
20:AA:386:C:H2'	20:AA:387:U:O4'	2.20	0.42
33:BN:68:GLU:HG2	33:BN:88:GLU:OE1	2.19	0.42
20:AA:652:U:H3	20:AA:753:A:H62	1.66	0.42
20:CA:445:G:H2'	20:CA:446:G:C8	2.54	0.42
59:BA:2686:G:C2	59:BA:2687:U:H1'	2.54	0.42
59:BA:474:G:O2'	59:BA:475:U:H5''	2.19	0.42
6:CG:116:ALA:O	6:CG:120:ILE:HG12	2.20	0.42
2:CC:23:TYR:CG	2:CC:24:ALA:N	2.87	0.42
30:DH:106:THR:OG1	30:DH:112:PRO:HB3	2.19	0.42
25:BC:69:LEU:HB3	25:BC:70:GLY:H	1.70	0.42
43:DX:33:LYS:HD2	43:DX:33:LYS:HA	1.91	0.42
33:BN:89:LYS:NZ	33:BN:89:LYS:HB3	2.34	0.42
16:CQ:89:LEU:HD22	16:CQ:89:LEU:HA	1.82	0.42
10:CK:78:GLN:O	10:CK:104:GLN:N	2.52	0.42
20:AA:443:C:H2'	20:AA:444:C:C6	2.55	0.42
59:BA:1311:G:N2	59:BA:1603:A:N6	2.36	0.42
59:DA:1151:G:H2'	59:DA:1152:C:C6	2.54	0.42
59:DA:2040:C:C5'	59:DA:2040:C:C6	2.97	0.42
27:DE:154:LYS:HA	27:DE:154:LYS:HE3	2.01	0.42
20:CA:922:G:H2'	20:CA:923:A:C8	2.55	0.42
20:AA:113:G:H2'	20:AA:114:U:C6	2.53	0.42
11:CL:104:VAL:HB	11:CL:105:TYR:H	1.34	0.42
29:DG:82:LEU:HD13	29:DG:87:PRO:HB3	2.00	0.42
59:DA:1106:G:C6	59:DA:1107:G:C5	3.07	0.42
26:DD:95:LEU:HD12	26:DD:95:LEU:H	1.83	0.42
25:BC:186:LEU:O	25:BC:190:ILE:HG12	2.19	0.42
26:BD:140:THR:H	26:BD:165:ILE:HD12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:125:SER:C	4:AE:127:ASN:H	2.23	0.42
25:DC:83:LYS:HG3	25:DC:117:THR:CG2	2.41	0.42
25:DC:174:ALA:HB2	25:DC:193:PHE:CZ	2.54	0.42
59:DA:306:U:H3'	59:DA:307:G:C8	2.55	0.42
26:DD:260:ARG:HD2	26:DD:273:ARG:HH21	1.84	0.42
26:BD:209:ALA:CB	59:BA:1790:C:H4'	2.44	0.42
59:BA:1326:U:H2'	59:BA:1327:C:O4'	2.20	0.42
11:AL:69:TYR:CE1	11:AL:70:ILE:HG13	2.54	0.42
41:DV:19:LYS:HG3	41:DV:20:LEU:N	2.33	0.42
59:DA:541:C:H2'	59:DA:542:C:H6	1.84	0.42
59:BA:2284:C:O2'	59:BA:2288:A:N6	2.53	0.42
32:BK:78:ILE:HA	32:BK:81:ALA:HB3	2.01	0.42
1:AB:219:VAL:O	1:AB:223:ILE:HG13	2.19	0.42
13:AN:29:ARG:HH22	20:AA:974:A:P	2.42	0.42
17:AR:71:LYS:HE2	20:AA:719:C:N4	2.35	0.42
26:DD:208:LYS:HB2	59:DA:729:G:C6	2.55	0.42
38:BS:31:SER:HB2	60:BB:29:A:P	2.58	0.42
11:AL:104:VAL:C	11:AL:105:TYR:HD1	2.22	0.42
47:D2:25:VAL:O	47:D2:29:LYS:HG2	2.19	0.42
11:CL:115:LYS:C	11:CL:117:ARG:H	2.18	0.42
8:CI:120:ARG:NH1	20:CA:1345:U:H5''	2.33	0.42
18:AS:36:ARG:HD3	20:AA:1221:G:H5'	2.01	0.42
28:BF:67:GLN:NE2	59:BA:674:G:O2'	2.52	0.42
20:AA:68(B):G:H3'	20:AA:68(C):C:H6	1.84	0.42
20:CA:824:C:H2'	20:CA:825:G:C8	2.53	0.42
20:AA:68(L):U:H5''	20:AA:68(M):U:OP2	2.20	0.42
8:AI:49:PRO:HD3	8:AI:101:PHE:HE2	1.84	0.42
59:DA:640:C:N4	59:DA:648:G:H1	2.16	0.42
18:CS:46:GLY:HA2	18:CS:62:ILE:O	2.19	0.42
59:DA:1652:A:H3'	59:DA:1653:G:C8	2.55	0.42
20:CA:688:G:H2'	20:CA:689:C:H6	1.84	0.42
29:DG:132:ASN:ND2	59:DA:2303:G:N3	2.61	0.42
21:AW:69:A:H2'	21:AW:70:G:C8	2.49	0.42
59:DA:186:G:H2'	59:DA:187:G:C8	2.54	0.42
35:BP:113:LYS:HA	35:BP:129:ALA:O	2.20	0.42
59:BA:2171:A:O2'	59:BA:2172:U:O5'	2.34	0.42
59:DA:1495:A:H8	59:DA:1495:A:OP1	2.02	0.42
34:BO:12:ASP:OD2	34:BO:14:THR:OG1	2.35	0.42
27:BE:98:PRO:HG3	27:BE:175:VAL:HG12	2.01	0.42
59:BA:884:C:H2'	59:BA:885:C:O4'	2.19	0.42
59:DA:941:A:O2'	59:DA:1190:G:H4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:151:LYS:HE3	59:BA:2208:U:H1'	2.01	0.42
20:AA:778:G:H2'	20:AA:779:C:O4'	2.19	0.42
28:DF:106:ARG:NH2	59:DA:618(A):G:OP2	2.53	0.42
20:AA:163:C:H2'	20:AA:164:U:C6	2.54	0.42
23:AY:519:ARG:HH12	23:AY:678:GLU:HB2	1.84	0.42
59:DA:1937:A:H1'	59:DA:1938:A:OP1	2.19	0.42
1:CB:157:ARG:HH11	1:CB:157:ARG:HB3	1.84	0.42
12:AM:111:LYS:HG2	12:AM:112:GLY:H	1.84	0.42
59:DA:82:G:H5''	59:DA:296:C:H5''	2.01	0.42
19:AT:28:ALA:O	19:AT:31:SER:OG	2.28	0.42
59:BA:280:C:H2'	59:BA:281:G:H5'	2.02	0.42
26:BD:253:GLN:OE1	59:BA:1843:C:H5'	2.19	0.42
33:DN:96:GLU:O	33:DN:100:GLU:HG3	2.19	0.42
13:CN:8:GLU:HA	13:CN:11:LYS:HB2	2.01	0.42
20:AA:507:C:P	20:AA:508:C:H3'	2.60	0.42
4:CE:48:ALA:HB3	4:CE:54:ALA:HB2	2.00	0.42
11:CL:76:ASN:O	11:CL:78:GLN:N	2.52	0.42
37:BR:2:ARG:HB3	37:BR:5:LYS:HG2	2.01	0.42
59:BA:1007:C:C2	59:BA:1136:G:N1	2.82	0.42
59:DA:1478:G:N2	59:DA:1515:C:N3	2.51	0.42
26:DD:42:GLY:O	26:DD:43:ARG:HG3	2.19	0.42
59:DA:8:A:C2	59:DA:9:U:C2	3.08	0.42
41:BV:6:LYS:HE2	41:BV:7:THR:HA	2.01	0.42
16:CQ:67:LYS:O	16:CQ:68:ARG:HB3	2.19	0.42
26:BD:173:VAL:HG22	26:BD:185:VAL:O	2.20	0.42
59:DA:2227:A:H8	59:DA:2227:A:O5'	2.02	0.42
28:BF:6:VAL:HG23	28:BF:7:TYR:H	1.84	0.42
8:CI:104:ARG:HB3	8:CI:105:ASP:H	1.64	0.42
20:AA:680:C:H2'	20:AA:681:C:H6	1.84	0.42
1:AB:69:LEU:HG	1:AB:159:PRO:HG2	2.02	0.42
45:BZ:5:LEU:O	45:BZ:59:LEU:HA	2.19	0.42
37:BR:24:GLN:HB3	37:BR:44:LEU:HD11	2.01	0.42
26:BD:219:PRO:HG3	59:BA:764:A:C2	2.46	0.42
59:DA:966:G:O4'	59:DA:2267:A:N6	2.52	0.42
45:BZ:120:ILE:HG13	45:BZ:172:ALA:HA	2.02	0.42
41:DV:8:GLY:HA3	41:DV:23:GLU:HB2	2.02	0.42
59:BA:1057:A:N7	59:BA:1086:A:H2'	2.34	0.42
59:DA:377:C:H2'	59:DA:378:C:O4'	2.18	0.42
20:AA:713:G:OP2	20:AA:713:G:H8	2.02	0.42
33:BN:126:PRO:HB2	33:BN:127:ASP:H	1.50	0.42
60:BB:30:C:H2'	60:BB:31:C:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1509:A:H5'	59:BA:1510:A:O4'	2.20	0.42
59:BA:2689:U:H5''	59:BA:2690:C:O4'	2.20	0.42
10:AK:109:VAL:HA	17:AR:85:LEU:O	2.19	0.42
59:BA:568:U:H2'	59:BA:570:G:C8	2.54	0.42
7:CH:46:LYS:H	7:CH:63:LEU:HA	1.85	0.42
44:BY:46:LYS:H	44:BY:62:GLU:HB2	1.84	0.42
23:CY:631:ILE:HA	23:CY:645:ALA:CA	2.47	0.42
59:DA:221:A:C4	59:DA:233:A:H1'	2.55	0.42
27:BE:199:ARG:HH12	27:BE:202:LYS:HE3	1.83	0.42
23:AY:255:ILE:HA	23:AY:255:ILE:HD12	1.74	0.42
26:DD:211:ARG:O	26:DD:215:LEU:HG	2.19	0.42
2:CC:150:LYS:O	2:CC:201:TYR:HB2	2.19	0.42
59:DA:2564:A:OP1	59:DA:2648:C:H4'	2.19	0.42
59:DA:2648:C:H2'	59:DA:2649:U:C6	2.54	0.42
23:AY:70:THR:HG23	23:AY:358:MET:SD	2.59	0.42
3:AD:158:ILE:O	3:AD:162:LEU:HG	2.20	0.42
26:BD:13:ARG:HD2	59:BA:729:G:OP2	2.19	0.42
50:D6:16:CYS:H	50:D6:48:VAL:HG23	1.83	0.42
59:BA:824:A:H2'	59:BA:825:C:C6	2.55	0.42
35:DP:115:LEU:HD13	59:DA:627:A:N6	2.33	0.42
59:DA:854:G:H1	59:DA:923:C:H42	1.66	0.42
20:AA:339:C:H2'	20:AA:340:U:H6	1.81	0.42
33:DN:40:PRO:HA	40:DU:67:ALA:HB1	2.02	0.42
59:BA:2762:G:H2'	59:BA:2763:G:O4'	2.20	0.42
20:AA:328:C:H4'	20:AA:329:A:C5'	2.49	0.42
2:AC:156:ARG:H	2:AC:196:LEU:HD12	1.84	0.42
46:B0:48:GLY:H	46:B0:51:VAL:HB	1.84	0.42
8:AI:37:PHE:CD2	8:AI:70:LYS:HG3	2.54	0.42
8:AI:71:SER:HA	8:AI:74:ILE:HG13	2.01	0.42
20:AA:169:C:H2'	20:AA:170:U:C6	2.54	0.42
30:BH:153:LYS:HG2	30:BH:154:PRO:HD2	2.01	0.42
59:DA:1927:A:C6	59:DA:1928:A:C6	3.07	0.42
20:CA:1324:A:H2'	20:CA:1325:C:H6	1.83	0.42
20:AA:695:A:H2'	20:AA:696:A:C8	2.54	0.42
20:CA:119:A:H4'	20:CA:120:A:C8	2.55	0.42
33:DN:4:TYR:HB3	40:DU:100:VAL:HG11	2.01	0.42
59:BA:1332:G:C5	59:BA:1609:A:C6	3.08	0.42
1:CB:169:LYS:O	1:CB:172:ILE:N	2.47	0.42
59:DA:842:G:H2'	59:DA:843:G:C8	2.54	0.42
20:CA:177:C:H2'	20:CA:178:C:C5	2.54	0.42
29:DG:60:LEU:O	29:DG:63:ILE:HG12	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:398:ILE:HG22	23:AY:399:LEU:H	1.84	0.42
3:CD:200:GLU:O	3:CD:204:ILE:HG12	2.19	0.42
50:B6:40:CYS:HB2	50:B6:46:HIS:CD2	2.54	0.42
40:DU:110:VAL:O	40:DU:114:LYS:HD2	2.19	0.42
17:AR:53:ARG:HD2	17:AR:63:GLN:HE21	1.83	0.42
25:BC:52:PRO:HB3	25:BC:168:LYS:HA	2.00	0.42
49:B5:25:LEU:HD23	49:B5:25:LEU:HA	1.76	0.42
7:CH:1:MET:HE1	20:CA:823:G:H21	1.85	0.42
59:BA:247:G:H4'	59:BA:386:G:C4	2.54	0.42
59:DA:1806:C:H2'	59:DA:1807:G:C8	2.54	0.42
1:CB:24:TRP:CZ3	1:CB:26:PRO:HA	2.54	0.42
47:B2:19:VAL:O	47:B2:22:GLU:HB3	2.19	0.42
23:CY:598:ASP:N	23:CY:598:ASP:OD1	2.53	0.42
8:CI:68:GLY:O	20:CA:1249:C:O2'	2.32	0.42
37:BR:85:PRO:O	37:BR:88:ARG:HB2	2.20	0.42
59:BA:301:G:O2'	59:BA:302:C:O5'	2.29	0.42
20:AA:609:A:H2'	20:AA:610:G:O4'	2.20	0.42
50:D6:33:LYS:HE3	50:D6:33:LYS:HB3	1.90	0.42
59:BA:144:C:H2'	59:BA:145:G:C8	2.55	0.42
59:DA:1681:G:N3	59:DA:1762:A:H2'	2.35	0.42
23:CY:27:THR:CG2	62:CY:702:GDP:O5'	2.67	0.42
59:BA:2048:G:C6	59:BA:2049:G:N7	2.87	0.42
59:DA:1135:C:N4	59:DA:1138:G:OP2	2.36	0.42
3:CD:30:LYS:HD3	3:CD:35:ARG:NH1	2.34	0.42
20:AA:1423:G:H5'	34:BO:49:ARG:HH21	1.84	0.42
23:AY:25:LYS:CG	62:AY:702:GDP:O2B	2.68	0.42
11:CL:35:GLY:CA	11:CL:58:VAL:HG13	2.42	0.42
3:AD:22:LYS:HD3	20:AA:409:G:OP2	2.19	0.42
23:CY:567:LEU:HG	23:CY:568:TYR:N	2.33	0.42
23:CY:568:TYR:CD2	23:CY:569:ASP:HB2	2.55	0.42
20:CA:774:G:H2'	20:CA:775:G:H8	1.84	0.42
26:DD:35:LYS:HG2	26:DD:62:TYR:O	2.20	0.42
38:BS:71:ARG:N	38:BS:71:ARG:HD2	2.34	0.42
25:DC:11:LEU:HB3	25:DC:221:PRO:HD3	2.02	0.42
38:DS:26:LEU:HD13	38:DS:106:ARG:NH1	2.33	0.42
59:DA:1312:U:H5'	59:DA:1313:U:C5	2.55	0.42
26:BD:35:LYS:HA	26:BD:63:ARG:HA	2.02	0.42
28:BF:170:LEU:CB	28:BF:173:VAL:HB	2.48	0.42
28:BF:154:VAL:CB	28:BF:173:VAL:HG13	2.49	0.42
41:BV:81:TYR:CE2	59:BA:1187:G:H5''	2.55	0.42
59:DA:1913:A:H4'	59:DA:1914:C:C5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:5:TYR:HH	20:AA:1147:C:HO2'	1.66	0.42
35:DP:16:ARG:NH1	59:DA:661:C:H4'	2.35	0.42
9:AJ:19:SER:O	9:AJ:23:ILE:HG12	2.19	0.42
50:B6:47:THR:OG1	50:B6:48:VAL:HG22	2.19	0.42
6:AG:57:GLU:CD	6:AG:57:GLU:H	2.23	0.42
20:AA:776:G:N2	20:AA:803:G:N7	2.67	0.42
59:DA:2711:A:C4	59:DA:2714:G:H1'	2.55	0.42
20:CA:883:C:H2'	20:CA:884:U:C6	2.54	0.42
59:BA:2244:U:H1'	59:BA:2434:A:C4	2.55	0.42
59:DA:1655:A:C2	59:DA:2049:G:H4'	2.55	0.42
50:B6:27:LYS:HE2	50:B6:29:ASN:HB3	2.01	0.42
25:DC:60:ARG:NE	25:DC:142:LYS:HB3	2.34	0.42
25:BC:26:ALA:HA	25:BC:30:VAL:HG23	2.01	0.42
23:AY:614:GLU:CD	23:AY:614:GLU:H	2.22	0.42
59:DA:635:C:O2'	59:DA:639:U:H5''	2.20	0.42
28:DF:4:VAL:N	28:DF:24:LEU:HG	2.34	0.42
23:AY:511:LYS:HB3	23:AY:568:TYR:CZ	2.54	0.42
59:BA:2525:G:H2'	59:BA:2526:G:C8	2.48	0.42
28:BF:183:VAL:O	28:BF:187:VAL:HG23	2.20	0.42
27:DE:38:THR:HG23	27:DE:40:GLU:N	2.35	0.42
21:AW:27:C:H2'	21:AW:28:A:C8	2.55	0.42
59:BA:1960:A:H2'	59:BA:1961:C:H6	1.83	0.42
4:CE:107:ARG:HB3	4:CE:107:ARG:NH1	2.35	0.42
15:AP:20:VAL:HG21	15:AP:32:TYR:CD1	2.54	0.42
20:AA:971:G:H22	20:AA:1363:A:P	2.42	0.42
59:BA:2741:A:H2'	59:BA:2742:C:O4'	2.20	0.42
59:BA:1344:G:H4'	59:BA:1384:A:C6	2.54	0.42
59:DA:2461:C:H42	59:DA:2489:G:H1	1.67	0.42
59:DA:2168:G:H22	59:DA:2170:A:H3'	1.85	0.42
2:CC:70:VAL:HG21	2:CC:103:VAL:HG13	2.01	0.42
7:AH:62:TYR:N	7:AH:62:TYR:CD2	2.87	0.42
59:BA:1990:C:H2'	59:BA:1991:U:C6	2.54	0.42
59:BA:270(L):C:H2'	59:BA:270(M):U:H5''	2.02	0.42
59:DA:1657:C:H2'	59:DA:1658:C:H6	1.85	0.42
59:DA:1927:A:H2'	59:DA:1928:A:C8	2.55	0.42
27:BE:37:ARG:NH1	27:BE:44:TYR:OH	2.51	0.42
3:AD:134:ASP:HB2	3:AD:135:LEU:H	1.58	0.42
1:AB:218:ALA:O	1:AB:221:LEU:HB3	2.19	0.42
5:AF:50:TYR:HA	5:AF:51:PRO:HD2	1.77	0.42
25:BC:96:GLY:HA3	25:BC:100:ILE:CG1	2.49	0.42
59:BA:1986:A:H2'	59:BA:1987:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:23:LEU:HD11	49:B5:27:PRO:HA	2.02	0.42
32:DK:37:PHE:O	32:DK:41:PHE:HD2	2.02	0.42
23:CY:301:ILE:HG12	23:CY:301:ILE:H	1.56	0.42
37:DR:59:ASP:OD2	37:DR:61:HIS:HB3	2.20	0.42
23:AY:188:TYR:N	23:AY:188:TYR:HD2	2.17	0.42
25:DC:48:LEU:HD22	25:DC:209:PHE:CE1	2.54	0.42
45:BZ:77:ASP:N	45:BZ:77:ASP:OD2	2.51	0.42
20:AA:1195:C:H5''	20:AA:1196:U:OP2	2.18	0.42
59:BA:2391:G:H1'	59:BA:2424:C:N4	2.34	0.42
6:AG:137:LYS:HA	6:AG:140:ASP:HB3	2.00	0.42
22:CV:21:A:H2'	22:CV:22:A:O4'	2.18	0.42
60:BB:89(A):G:H2'	60:BB:89(B):A:C8	2.54	0.42
59:BA:416:C:H2'	59:BA:417:C:C6	2.54	0.42
23:CY:615:GLU:H	23:CY:615:GLU:HG3	1.42	0.42
16:AQ:53:LEU:HG	16:AQ:53:LEU:H	1.66	0.42
20:CA:1398:A:N3	20:CA:1398:A:H2'	2.35	0.42
23:CY:141:LYS:HD2	23:CY:141:LYS:HA	1.78	0.42
12:AM:84:ILE:HB	18:AS:74:PHE:CE1	2.55	0.42
20:AA:623:C:H2'	20:AA:624:C:C6	2.55	0.42
60:DB:68:C:H2'	60:DB:69:G:O4'	2.19	0.42
59:DA:2037:G:C4	59:DA:2038:G:C8	3.07	0.42
40:DU:78:THR:HA	40:DU:81:HIS:HB3	2.02	0.42
50:B6:24:GLU:OE1	59:BA:2346:A:O2'	2.27	0.42
59:DA:391:G:C2	59:DA:411:G:C6	3.08	0.42
59:DA:2422:A:H4'	59:DA:2422:A:OP1	2.19	0.42
33:DN:90:MET:HA	33:DN:90:MET:CE	2.50	0.42
59:DA:374:A:H61	59:DA:400:G:H1'	1.84	0.42
59:BA:330:A:H2	59:BA:1210:A:H2'	1.84	0.42
8:AI:4:TYR:HA	8:AI:87:GLN:OE1	2.20	0.42
10:AK:120:ARG:HH22	20:AA:1525:G:P	2.42	0.42
59:BA:270(C):A:H62	59:BA:270(Y):G:N2	2.17	0.42
28:DF:178:PRO:C	28:DF:180:GLY:H	2.23	0.42
45:BZ:5:LEU:HD11	45:BZ:44:PHE:HA	2.01	0.42
40:DU:90:VAL:C	40:DU:92:ARG:H	2.22	0.42
59:BA:2005:A:C8	59:BA:2006:C:C5	3.08	0.42
20:CA:22:G:H2'	20:CA:23:C:H6	1.83	0.42
59:DA:776:G:H1	59:DA:2072:G:H5''	1.84	0.42
9:AJ:54:PHE:CD1	9:AJ:55:LYS:HD2	2.55	0.42
59:DA:188:G:HO2'	59:DA:1365:A:N6	2.18	0.42
59:BA:634:C:H2'	59:BA:635:C:C6	2.55	0.42
23:CY:96:ARG:HA	23:CY:99:ARG:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:59:VAL:HG12	25:DC:200:HIS:HB3	2.01	0.42
47:D2:10:LEU:HA	47:D2:13:ALA:HB3	2.01	0.42
59:BA:2849:U:H1'	59:BA:2866:U:C6	2.54	0.42
52:B8:16:ILE:HD12	52:B8:21:LYS:O	2.20	0.42
23:CY:609:GLU:HA	23:CY:643:ILE:O	2.20	0.42
45:DZ:15:PRO:HB2	45:DZ:19:ARG:HE	1.85	0.42
15:CP:63:GLY:HA2	20:CA:137:C:O4'	2.19	0.42
59:DA:1316:U:H2'	59:DA:1317:A:H8	1.81	0.42
2:AC:150:LYS:O	2:AC:201:TYR:HB2	2.20	0.42
25:BC:220:GLY:HA3	25:BC:221:PRO:HD2	1.79	0.42
7:CH:4:ASP:OD2	7:CH:6:ILE:HB	2.20	0.42
59:DA:638:G:H2'	59:DA:639:U:C6	2.55	0.42
59:DA:636:G:H4'	59:DA:638:G:H4'	2.00	0.42
52:D8:7:HIS:CE1	52:D8:10:ALA:H	2.38	0.42
20:CA:1306:A:H1'	20:CA:1332:A:N1	2.35	0.42
59:BA:1824:G:H2'	59:BA:1825:A:C8	2.54	0.42
8:AI:11:LYS:HE3	20:AA:1371:G:OP2	2.20	0.42
27:DE:79:ARG:HH22	32:DK:3:LYS:HD2	97.13	0.42
7:AH:12:ARG:O	7:AH:15:ASN:HB2	2.20	0.42
59:BA:1758:G:H3'	59:BA:1759:A:H8	1.83	0.42
59:BA:883:G:H2'	59:BA:884:C:H6	1.83	0.42
43:DX:6:ASP:N	43:DX:6:ASP:OD1	2.53	0.42
23:AY:537:GLU:HG3	23:AY:538:TYR:CD1	2.55	0.42
20:CA:1064:G:P	20:CA:1386:G:H4'	2.60	0.42
43:DX:26:TYR:CG	43:DX:89:ILE:HD12	2.55	0.42
36:BQ:25:ASP:HB3	36:BQ:100:GLY:O	2.19	0.42
20:AA:1340:A:C6	20:AA:1341:U:C4	3.08	0.42
30:DH:54:ARG:HA	30:DH:55:PRO:HD3	1.82	0.42
12:CM:23:TYR:CE2	20:CA:1330:U:H4'	2.55	0.42
21:CW:56:C:C6	59:DA:2169:A:H1'	2.55	0.42
59:BA:1727:U:C4	59:BA:1728:G:C6	3.08	0.42
59:BA:723:G:H2'	59:BA:724:U:O4'	2.19	0.42
23:CY:291:GLY:HA2	23:CY:400:GLU:HB2	2.01	0.42
59:DA:2366:A:H2'	59:DA:2367:G:O4'	2.19	0.42
20:AA:186(C):G:O6	20:AA:186(N):U:O2	2.37	0.42
59:BA:1611:C:H2'	59:BA:1612:C:C6	2.54	0.42
23:AY:519:ARG:NH1	23:AY:678:GLU:HB2	2.34	0.42
59:BA:2301:C:H2'	59:BA:2302:G:H8	1.85	0.42
17:CR:33:ASP:HB3	17:CR:36:ASN:HD22	1.85	0.42
46:D0:30:VAL:HG12	46:D0:66:VAL:HG22	2.02	0.42
52:B8:5:LYS:NZ	59:BA:253:C:OP2	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2340:G:H2'	59:DA:2341:G:H8	1.85	0.42
59:BA:17:G:H2'	59:BA:18:C:H6	1.85	0.42
59:DA:2077:A:H1'	59:DA:2435:A:C8	2.55	0.42
7:AH:71:GLY:O	7:AH:73:ASP:N	2.52	0.42
59:DA:893:C:H2'	59:DA:894:C:C6	2.54	0.42
2:CC:160:ALA:O	2:CC:162:GLN:N	2.53	0.42
20:CA:68(N):U:H3'	20:CA:68(O):A:C8	2.54	0.42
23:CY:238:THR:OG1	23:CY:240:GLU:OE1	2.38	0.42
35:DP:18:ARG:HD2	35:DP:18:ARG:HA	1.54	0.42
2:CC:152:ILE:HG12	2:CC:152:ILE:O	2.19	0.42
59:BA:1654:A:H2'	59:BA:1655:A:H8	1.85	0.42
59:BA:1814:G:H2'	59:BA:1815:A:C8	2.55	0.42
59:BA:2287:A:H2	59:BA:2346:A:N1	2.18	0.42
59:DA:459:U:H5	59:DA:460:A:C5	2.38	0.42
23:AY:83:ASP:O	23:AY:85:PRO:HD3	2.19	0.42
9:CJ:45:ARG:HD3	13:CN:36:PHE:CE2	2.54	0.42
59:DA:772:C:H2'	59:DA:773:U:H6	1.82	0.42
21:CW:75:C:H5"	57:D1:30:VAL:HG21	2.01	0.42
43:BX:75:ASP:H	59:BA:58:G:P	2.43	0.42
40:BU:92:ARG:HG2	40:BU:94:ASN:HB3	2.00	0.42
6:AG:151:TYR:HA	6:AG:154:TYR:CD1	2.55	0.42
59:DA:2810:A:H62	59:DA:2891:G:N2	2.15	0.42
26:BD:147:LEU:HD11	26:BD:183:ARG:HH11	1.83	0.42
59:DA:2838:G:N2	59:DA:2880:C:N3	2.53	0.42
28:DF:68:LYS:O	28:DF:70:THR:N	2.52	0.42
35:DP:24:GLY:HA3	35:DP:33:ARG:CZ	2.50	0.42
59:DA:307:G:N2	59:DA:309:G:H3'	2.35	0.42
1:AB:69:LEU:N	1:AB:163:PHE:H	2.15	0.42
37:BR:23:ASN:OD1	59:BA:1277:G:H1'	2.20	0.42
20:AA:1003:G:C2	20:AA:1037:C:O2	2.73	0.42
38:BS:85:VAL:C	38:BS:106:ARG:HD3	2.40	0.42
20:CA:53:A:H2'	20:CA:54:C:O4'	2.20	0.42
59:DA:579:G:H4'	59:DA:2017:U:H2'	2.01	0.42
42:DW:12:ILE:HD13	42:DW:46:PHE:CZ	2.55	0.42
28:BF:155:LEU:HA	28:BF:176:LEU:CB	2.50	0.42
59:DA:1540:G:H2'	59:DA:1541:U:O4'	2.20	0.42
53:B9:7:VAL:CG2	53:B9:36:GLN:HG2	2.49	0.42
8:AI:5:TYR:HA	8:AI:17:VAL:O	2.19	0.42
25:DC:71:LYS:HD3	25:DC:71:LYS:HA	1.74	0.42
60:BB:24:G:N2	60:BB:28:C:O2	2.53	0.42
59:BA:640:C:H42	59:BA:648:G:H1	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:245:PRO:HA	26:DD:246:PRO:HD2	1.92	0.42
23:CY:620:VAL:O	23:CY:624:LEU:HB2	2.20	0.42
50:D6:7:ILE:HA	50:D6:7:ILE:HD13	1.95	0.42
20:CA:32:A:H2'	20:CA:33:A:C8	2.55	0.42
20:CA:1495:U:P	23:CY:504:ARG:HH11	2.43	0.42
35:BP:45:LEU:HG	35:BP:46:LYS:H	1.85	0.42
20:AA:889:A:H4'	20:AA:890:G:H4'	2.02	0.42
14:CO:64:ARG:HH21	20:CA:581:G:H4'	1.85	0.42
19:AT:43:LEU:CB	19:AT:52:ALA:HB2	2.48	0.42
23:AY:647:VAL:HA	23:AY:648:PRO:HD3	1.89	0.42
59:DA:2525:G:O2'	59:DA:2526:G:H5'	2.20	0.42
59:BA:2837:G:H2'	59:BA:2838:G:O4'	2.19	0.42
4:AE:70:PRO:HG2	4:AE:142:LEU:HD13	2.02	0.42
38:BS:40:ILE:HG13	38:BS:47:THR:N	2.35	0.42
26:BD:45:ASN:N	26:BD:45:ASN:OD1	2.52	0.42
41:DV:41:GLY:H	41:DV:45:THR:CB	2.31	0.42
59:BA:921:G:H2'	59:BA:922:U:C6	2.55	0.42
35:DP:100:LEU:HD13	35:DP:103:ALA:HB3	2.01	0.42
39:BT:108:ARG:O	39:BT:112:ARG:N	2.49	0.42
3:CD:108:LEU:HD23	3:CD:110:PHE:HE2	1.83	0.42
14:AO:61:GLY:O	14:AO:65:ARG:HG3	2.20	0.42
59:BA:1215:G:C4	59:BA:1216:G:C8	3.08	0.42
23:AY:443:HIS:ND1	23:AY:446:THR:HG22	2.35	0.42
59:BA:1709:U:O3'	59:BA:2859:G:O2'	2.35	0.42
59:DA:2615:U:H2'	59:DA:2616:C:C6	2.54	0.42
33:DN:3:THR:HG22	33:DN:4:TYR:N	2.34	0.42
20:AA:371:G:H21	20:AA:374:A:N6	2.18	0.42
20:AA:1386:G:H2'	20:AA:1387:G:C8	2.55	0.42
59:BA:1310:G:O2'	59:BA:1611:C:OP1	2.21	0.42
15:AP:22:THR:HA	15:AP:33:ILE:HG13	2.02	0.42
59:BA:1359:A:OP2	59:BA:1371:G:N1	2.46	0.42
42:DW:34:ASN:HB3	49:D5:30:LEU:HD13	2.02	0.42
49:B5:25:LEU:HD22	49:B5:26:THR:H	1.84	0.42
29:BG:46:ALA:HB1	29:BG:51:ARG:HH22	1.85	0.42
16:CQ:100:LYS:HE2	20:CA:246:A:OP2	2.20	0.42
59:BA:930:U:H4'	59:BA:931:G:O4'	2.20	0.42
3:AD:173:TRP:CH2	3:AD:194:LEU:HD21	2.54	0.42
59:DA:1181:C:H2'	59:DA:1182:A:H8	1.85	0.42
3:CD:196:LEU:HA	3:CD:197:PRO:HD2	1.75	0.42
14:CO:15:PHE:HA	14:CO:15:PHE:HD2	1.62	0.42
19:AT:25:ARG:HB2	19:AT:25:ARG:CZ	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:139:LEU:HA	29:DG:144:ILE:HG23	2.01	0.42
23:CY:22:ASP:C	23:CY:24:GLY:HA2	2.37	0.42
29:BG:3:LEU:HD13	29:BG:98:ARG:HH12	1.85	0.42
59:DA:767:U:H2'	59:DA:768:G:C8	2.54	0.42
59:BA:794:G:C6	59:BA:795:C:C4	3.08	0.42
40:BU:95:LEU:HD13	41:BV:4:ILE:HG12	2.00	0.42
57:B1:39:LYS:HG2	57:B1:40:ARG:N	2.34	0.42
20:CA:234:C:H2'	20:CA:235:C:C6	2.55	0.42
16:CQ:68:ARG:NH2	20:CA:277:C:H5"	2.30	0.42
27:DE:21:VAL:HA	27:DE:22:PRO:HD2	1.74	0.42
20:AA:766:A:C8	20:AA:814:A:N6	2.88	0.42
28:BF:197:ASP:OD2	28:BF:198:ALA:N	2.51	0.42
60:DB:27:C:C4	60:DB:28:C:C4	3.07	0.42
28:DF:161:GLU:O	28:DF:164:ARG:N	2.53	0.42
59:DA:1889:A:H61	59:DA:2234:G:H1'	1.84	0.42
20:CA:1037:C:H2'	20:CA:1038:C:C6	2.55	0.42
20:CA:774:G:H2'	20:CA:775:G:C8	2.54	0.42
26:DD:62:TYR:HE2	26:DD:88:ARG:NH2	2.12	0.42
38:BS:70:GLY:O	38:BS:74:ALA:N	2.52	0.42
26:DD:222:ARG:HG3	59:DA:1789:A:OP1	2.20	0.42
46:D0:42:GLY:HA3	59:DA:2331:G:O4'	2.20	0.42
20:AA:1126:U:H2'	20:AA:1127:G:O4'	2.19	0.42
11:AL:79:GLU:O	11:AL:80:HIS:CG	2.72	0.42
36:DQ:69:PHE:HE2	36:DQ:71:ASP:HB3	1.82	0.42
20:AA:978:A:C6	20:AA:1318:A:C6	3.08	0.42
23:CY:311:ALA:CA	23:CY:330:VAL:HA	2.50	0.42
12:AM:87:TYR:HA	12:AM:90:LEU:HB3	2.02	0.42
27:DE:199:ARG:NH2	59:DA:2772:C:OP1	2.53	0.42
23:AY:162:VAL:HB	23:AY:255:ILE:CG1	2.48	0.42
20:CA:115:G:O2'	20:CA:116:A:P	2.78	0.42
20:AA:598:U:H2'	20:AA:599:C:H6	1.84	0.42
36:BQ:109:VAL:HB	36:BQ:110:THR:H	1.62	0.42
29:DG:124:SER:HB2	29:DG:132:ASN:O	2.19	0.42
39:DT:137:LYS:HD3	39:DT:138:ALA:N	2.35	0.42
28:DF:34:TRP:CG	35:DP:11:GLY:HA2	2.55	0.42
59:DA:41:C:C2	59:DA:43:G:C8	3.08	0.42
23:CY:612:THR:HA	23:CY:613:PRO:HD3	1.92	0.42
59:BA:689:A:H2'	59:BA:690:G:H8	1.83	0.42
47:D2:2:LYS:O	47:D2:6:VAL:N	2.52	0.42
27:DE:79:ARG:HD3	32:DK:63:ARG:HE	103.86	0.42
49:D5:6:VAL:HG13	59:DA:2015:A:C4	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1403:C:H5''	59:DA:1471:A:C1'	2.49	0.42
59:BA:105:C:H2'	59:BA:106:C:H6	1.83	0.42
52:D8:23:VAL:HG12	52:D8:46:ARG:NH1	2.34	0.42
34:DO:90:GLN:HB2	34:DO:92:GLU:OE2	2.20	0.42
43:DX:12:VAL:HG11	43:DX:21:PHE:HZ	1.82	0.42
2:AC:189:ALA:HB1	2:AC:196:LEU:HD23	2.01	0.42
2:AC:36:ASP:HA	2:AC:39:ILE:HD12	2.00	0.42
38:DS:52:SER:HB2	38:DS:56:LEU:N	2.34	0.42
15:CP:38:TYR:CZ	15:CP:50:LYS:HD3	2.55	0.42
30:DH:149:ARG:CZ	30:DH:164:TYR:H	2.33	0.42
59:BA:751:A:H8	59:BA:751:A:O5'	2.03	0.42
25:BC:10:ALA:C	25:BC:12:LEU:H	2.21	0.42
59:DA:1086:A:H3'	59:DA:1086:A:N3	2.34	0.42
20:CA:831:U:H2'	20:CA:832:C:C6	2.54	0.42
30:DH:83:TYR:HD2	30:DH:83:TYR:H	1.65	0.42
30:DH:85:LYS:HE2	30:DH:133:VAL:HB	2.02	0.42
23:AY:379:GLY:HA2	23:AY:381:LYS:HE3	2.00	0.42
20:AA:443:C:H2'	20:AA:444:C:H6	1.85	0.42
3:CD:61:LYS:HA	3:CD:203:VAL:HG22	2.00	0.42
23:AY:212:TYR:O	23:AY:215:LYS:HB2	2.20	0.42
7:AH:20:TYR:OH	7:AH:76:PRO:O	2.24	0.42
45:DZ:116:VAL:O	45:DZ:174:VAL:HA	2.19	0.42
59:BA:1641:A:H2'	59:BA:1642:G:O4'	2.20	0.42
23:CY:481:VAL:HB	23:CY:483:TYR:CZ	2.55	0.42
59:DA:527:C:N3	59:DA:2779:U:H2'	2.35	0.42
23:AY:414:GLU:HA	23:AY:415:PRO:HD2	1.86	0.42
29:BG:131:TYR:C	29:BG:132:ASN:HD22	2.23	0.42
29:DG:51:ARG:HA	29:DG:54:GLU:HB3	2.01	0.42
27:DE:80:GLU:HB3	59:DA:2636:U:O5'	2.20	0.42
20:CA:1384:C:H2'	20:CA:1385:G:O4'	2.20	0.42
59:BA:1589:C:H2'	59:BA:1590:U:H6	1.85	0.42
28:BF:17:ARG:HE	28:BF:17:ARG:HB2	1.46	0.42
1:CB:49:GLU:O	1:CB:52:GLU:HB3	2.19	0.42
29:BG:36:LYS:HG2	29:BG:160:VAL:HB	2.02	0.42
59:DA:2320:A:N3	59:DA:2320:A:H2'	2.34	0.42
4:AE:121:LYS:HD2	4:AE:121:LYS:HA	1.73	0.42
23:CY:289:ILE:H	23:CY:289:ILE:HD12	1.85	0.42
20:CA:1286:A:H3'	20:CA:1286:A:N3	2.35	0.42
48:B3:28:LEU:HA	48:B3:28:LEU:HD13	1.82	0.42
20:AA:511:C:C2	20:AA:512:U:C5	3.08	0.42
23:CY:435:ASP:HA	23:CY:436:PRO:HD2	1.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:499:U:H2'	59:DA:500:G:O4'	2.19	0.42
23:AY:474:ALA:O	23:AY:476:VAL:N	2.53	0.42
14:CO:32:LEU:HA	14:CO:35:ARG:HG2	2.01	0.42
59:DA:1499:C:C2	59:DA:1500:G:C8	3.07	0.42
3:CD:13:ARG:HH21	3:CD:36:ARG:HG3	1.84	0.42
59:BA:1019:U:H2'	59:BA:1020:A:H8	1.82	0.42
59:BA:2348:U:O4	59:BA:2382:G:N1	2.53	0.42
59:DA:1923:U:H2'	59:DA:1924:C:C6	2.55	0.42
26:BD:258:LYS:HG3	59:BA:1797:C:H5''	2.02	0.42
11:CL:56:ALA:CB	11:CL:68:ALA:HB3	2.38	0.42
39:DT:27:THR:CG2	39:DT:49:VAL:HB	2.50	0.42
39:DT:65:LYS:HE3	39:DT:66:VAL:O	2.20	0.42
40:BU:54:LYS:NZ	59:BA:994:C:H3'	2.34	0.42
33:DN:70:LYS:HE2	33:DN:72:TYR:CZ	2.55	0.42
59:DA:1856:G:H2'	59:DA:1857:G:O4'	2.19	0.42
26:BD:131:LEU:HD13	26:BD:136:ILE:CD1	2.46	0.42
28:DF:63:LYS:HA	28:DF:76:GLY:HA3	2.02	0.42
25:DC:174:ALA:HA	25:DC:175:PRO:HD3	1.56	0.42
28:DF:155:LEU:HD13	28:DF:189:THR:OG1	2.20	0.42
28:DF:187:VAL:HB	35:DP:7:ARG:HH22	1.85	0.42
1:AB:69:LEU:HA	1:AB:69:LEU:HD22	1.81	0.42
12:CM:113:PRO:HB2	12:CM:114:ARG:H	1.67	0.42
59:DA:1800:C:C2	59:DA:1818:U:N3	2.88	0.42
23:AY:201:ILE:HG22	23:AY:203:GLU:H	1.85	0.42
59:DA:1802:A:H3'	59:DA:1803:A:C8	2.55	0.42
23:AY:608:VAL:HG13	23:AY:669:PHE:HB2	2.01	0.42
28:BF:57:VAL:C	28:BF:59:TYR:H	2.23	0.42
59:DA:1532:C:C2	59:DA:1540:G:N2	2.88	0.42
53:B9:1:MET:SD	53:B9:1:MET:N	2.78	0.42
3:AD:172:PRO:HB2	3:AD:187:ARG:NH2	2.32	0.42
29:BG:129:GLY:HA3	29:BG:163:ALA:O	2.19	0.42
37:DR:29:LEU:HD12	37:DR:83:ILE:HD13	2.00	0.42
20:AA:267:C:H2'	20:AA:268:C:C6	2.55	0.42
25:DC:164:PHE:CB	25:DC:172:ILE:HG13	2.50	0.42
23:CY:117:GLN:HA	23:CY:117:GLN:OE1	2.18	0.42
23:CY:71:THR:HG23	23:CY:358:MET:O	2.20	0.42
59:BA:609(A):A:H2'	59:BA:609(B):G:O4'	2.20	0.42
29:DG:98:ARG:HA	29:DG:98:ARG:HD3	1.61	0.42
59:DA:868:U:N3	59:DA:869:G:N7	2.68	0.42
42:BW:15:ARG:HG2	59:BA:1266:G:N7	2.34	0.42
52:B8:25:MET:C	52:B8:47:LYS:HB2	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:1406:U:H2'	20:CA:1407:C:O4'	2.20	0.42
23:AY:494:GLU:CG	23:AY:496:LYS:HB2	2.50	0.42
4:CE:18:ARG:HA	20:CA:15:G:N2	2.35	0.42
49:D5:19:ARG:HA	59:DA:2046:G:H5'	2.01	0.42
58:D4:6:HIS:HA	58:D4:7:PRO:HD3	1.84	0.42
34:DO:91:LEU:HD11	34:DO:111:PHE:HE1	1.85	0.42
23:AY:271:LEU:H	23:AY:271:LEU:HG	1.69	0.42
20:CA:837:G:H2'	20:CA:838:G:O4'	2.20	0.42
40:BU:99:ALA:HB2	40:BU:106:PHE:CZ	2.55	0.42
7:AH:10:LEU:HD22	7:AH:83:ILE:HD11	2.02	0.42
47:B2:66:GLU:HA	47:B2:69:ARG:NH2	2.35	0.42
26:BD:9:TYR:CD2	59:BA:705:A:H1'	2.55	0.42
1:AB:209:ARG:HH11	1:AB:239:VAL:HG13	1.84	0.42
28:BF:45:ARG:HB3	28:BF:97:TYR:CD2	2.55	0.42
59:BA:1403:C:H2'	59:BA:1404:C:O4'	2.19	0.42
23:CY:210:ARG:HA	23:CY:210:ARG:HD3	1.92	0.42
59:DA:2867:G:O2'	59:DA:2868:A:OP2	2.33	0.42
28:BF:39:TRP:HA	28:BF:99:TYR:CE1	2.55	0.42
20:AA:829:G:H8	20:AA:829:G:OP2	2.03	0.42
59:BA:49:A:N3	59:BA:49:A:H2'	2.35	0.42
59:DA:1904:G:H1'	59:DA:1927:A:N1	2.35	0.42
14:CO:50:HIS:HD1	20:CA:765:G:P	2.43	0.42
30:DH:103:LEU:HD13	30:DH:125:VAL:HG21	2.02	0.42
35:BP:30:THR:O	35:BP:32:THR:N	2.53	0.42
59:BA:197:A:C5	59:BA:2430:A:H2'	2.55	0.42
23:AY:179:ASP:OD1	23:AY:181:LEU:HB3	2.20	0.42
20:AA:660:G:H2'	20:AA:661:G:H8	1.85	0.42
40:BU:72:HIS:NE2	40:BU:107:ALA:HB2	2.35	0.42
3:AD:96:LEU:HD12	3:AD:139:ARG:NH2	2.35	0.42
59:DA:962:G:H2'	59:DA:963:U:O4'	2.20	0.42
44:BY:56:PRO:HB2	44:BY:57:GLN:H	1.56	0.42
25:DC:80:LYS:HB2	25:DC:120:VAL:CG1	2.50	0.42
20:CA:812:C:OP1	20:CA:903:G:H1'	2.20	0.42
40:BU:85:LYS:HD2	40:BU:117:GLN:HG3	2.01	0.42
59:DA:2657:A:H2'	59:DA:2658:C:O4'	2.20	0.42
10:AK:69:ALA:HA	10:AK:103:LEU:HD21	2.02	0.42
23:CY:679:VAL:HB	23:CY:683:VAL:HB	2.02	0.42
36:DQ:60:ARG:HA	45:DZ:179:ASP:HB3	2.02	0.42
7:CH:99:GLU:N	7:CH:99:GLU:OE1	2.51	0.42
29:BG:182:LYS:HD3	29:BG:182:LYS:HA	1.88	0.42
17:AR:61:LYS:HB2	17:AR:61:LYS:HE3	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:31:LYS:HA	26:BD:31:LYS:HD2	1.84	0.42
39:BT:111:ARG:H	39:BT:111:ARG:HG3	1.65	0.42
27:DE:144:ARG:HB3	27:DE:145:LYS:H	1.45	0.42
20:AA:420:U:N3	20:AA:422:C:N3	2.68	0.42
21:AW:14:A:C2	21:AW:22:G:H1'	2.54	0.41
59:DA:1136:G:H3'	59:DA:1137:G:H8	1.85	0.41
33:DN:108:PRO:HG3	59:DA:1007:C:H4'	2.02	0.41
59:DA:1499:C:H2'	59:DA:1500:G:C8	2.55	0.41
59:DA:391:G:C4	59:DA:392:C:C5	3.08	0.41
27:BE:13:ARG:HA	27:BE:21:VAL:C	2.38	0.41
25:DC:186:LEU:O	25:DC:190:ILE:HG12	2.20	0.41
28:BF:125:LEU:HA	28:BF:194:MET:O	2.19	0.41
25:DC:94:TYR:O	25:DC:100:ILE:HG13	2.20	0.41
29:DG:29:TRP:HB3	60:DB:57:A:C2	2.55	0.41
60:DB:58:A:C5	60:DB:59:A:N7	2.88	0.41
23:AY:201:ILE:HG21	23:AY:206:LEU:N	2.35	0.41
37:BR:24:GLN:OE1	59:BA:1277:G:O2'	2.38	0.41
11:AL:92:ASP:CG	20:AA:523:A:H61	2.16	0.41
59:DA:682:G:H2'	59:DA:683:C:H6	1.85	0.41
25:DC:53:ARG:O	25:DC:55:SER:N	2.53	0.41
32:BK:90:LYS:HZ3	59:BA:1076:C:C1'	2.33	0.41
32:BK:134:MET:HA	59:BA:1063:G:H4'	2.02	0.41
26:BD:86:PRO:HB3	59:BA:1567:A:OP2	2.20	0.41
20:AA:1504:G:O2'	20:AA:1505:G:O5'	2.36	0.41
9:AJ:55:LYS:HG3	20:AA:973:G:C1'	2.50	0.41
57:D1:3:LYS:HD3	59:DA:1365:A:OP2	2.20	0.41
59:BA:1141:U:H4'	59:BA:114(B):A:C8	2.55	0.41
59:DA:765:G:OP2	59:DA:765:G:H8	2.03	0.41
12:AM:120:LYS:NZ	20:AA:955:U:H4'	2.35	0.41
8:CI:112:LYS:HG2	8:CI:119:ALA:H	1.84	0.41
37:DR:73:VAL:O	37:DR:76:VAL:HG12	2.20	0.41
34:BO:20:MET:HG2	34:BO:21:CYS:N	2.34	0.41
36:DQ:12:GLN:HG2	36:DQ:73:PRO:HD2	2.02	0.41
59:DA:1993:U:H2'	59:DA:1994:C:O4'	2.19	0.41
61:AY:701:FUA:C20	61:AY:701:FUA:O1	2.68	0.41
8:CI:71:SER:O	8:CI:74:ILE:HB	2.20	0.41
3:CD:122:ARG:HB2	3:CD:136:PRO:HG3	2.01	0.41
20:CA:1308:U:H2'	20:CA:1309:G:C8	2.55	0.41
60:BB:73:A:N3	60:BB:73:A:H2'	2.35	0.41
59:DA:531:C:H4'	59:DA:532:A:O5'	2.20	0.41
44:DY:102:CYS:HB3	44:DY:108:THR:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AW:38:A:H2'	21:AW:39:U:O4'	2.20	0.41
19:CT:18:GLN:O	19:CT:22:ARG:HG3	2.20	0.41
20:CA:310:G:H2'	20:CA:311:C:C6	2.55	0.41
59:BA:746:A:H5'	59:BA:748:G:H1'	2.01	0.41
20:CA:801:U:H2'	20:CA:802:A:H8	1.82	0.41
35:BP:122:PRO:HG3	35:BP:141:ALA:HB1	2.02	0.41
20:CA:771:G:N1	20:CA:808:C:O2	2.50	0.41
59:BA:2086:U:H2'	59:BA:2087:G:H8	1.85	0.41
34:DO:7:TYR:HE1	34:DO:44:LYS:HG3	1.85	0.41
20:AA:22:G:H4'	20:AA:885:G:C8	2.55	0.41
59:BA:2066:C:N4	59:BA:2444:G:H1	2.16	0.41
59:DA:49:A:N3	59:DA:49:A:H2'	2.34	0.41
11:CL:71:PRO:HG2	11:CL:102:ARG:HG2	2.02	0.41
37:DR:34:ILE:O	37:DR:113:LEU:HA	2.20	0.41
2:CC:121:ALA:HA	2:CC:198:VAL:HG21	2.01	0.41
59:DA:1759:A:H4'	59:DA:2715:C:O4'	2.19	0.41
42:BW:6:ILE:HG13	42:BW:104:THR:OG1	2.20	0.41
23:AY:580:MET:HA	23:AY:583:LYS:HB3	2.02	0.41
59:BA:1577:C:H2'	59:BA:1578:U:C6	2.55	0.41
7:AH:29:SER:HA	20:AA:590:C:P	2.60	0.41
16:AQ:9:VAL:HG22	16:AQ:56:VAL:HG22	2.01	0.41
20:AA:578:C:H2'	20:AA:579:G:H8	1.82	0.41
28:DF:160:ASN:HD21	28:DF:162:LEU:HD13	1.85	0.41
59:BA:1413:G:C4	59:BA:1414:G:C8	3.08	0.41
59:DA:1341:U:H5	59:DA:1395:A:H2	1.67	0.41
2:AC:91:LEU:O	2:AC:95:THR:N	2.52	0.41
50:D6:12:GLU:OE1	59:DA:2419:U:O2'	2.33	0.41
20:CA:1497:G:N2	20:CA:1519:A:H1'	2.34	0.41
20:AA:515:G:H2'	20:AA:516:U:C6	2.55	0.41
36:DQ:127:ILE:HB	36:DQ:128:LYS:H	1.67	0.41
27:DE:80:GLU:N	59:DA:2636:U:OP1	2.53	0.41
45:BZ:45:ASP:O	45:BZ:49:ARG:HG2	2.20	0.41
59:BA:1636:C:H2'	59:BA:1637:A:C8	2.55	0.41
33:DN:1:MET:SD	33:DN:2:LYS:N	2.93	0.41
59:BA:2774:C:H5''	59:BA:2775:A:OP2	2.20	0.41
59:DA:144(B):A:O2'	59:DA:1445:C:H5'	2.20	0.41
59:DA:667:U:H2'	59:DA:668:G:O4'	2.19	0.41
44:DY:105:ALA:O	44:DY:107:ASP:N	2.53	0.41
8:CI:53:VAL:HG23	8:CI:55:ALA:H	1.84	0.41
20:CA:293:G:H4'	20:CA:609:A:N1	2.35	0.41
59:BA:2601:C:N4	59:BA:2603:G:O6	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AY:10:LYS:HG2	23:AY:284:LEU:HD22	2.01	0.41
35:DP:76:LYS:HE3	35:DP:76:LYS:HB3	1.84	0.41
26:BD:123:ALA:HA	26:BD:124:PRO:HD2	1.89	0.41
59:BA:2282:G:H21	59:BA:2390:U:H3	1.67	0.41
21:AW:50:C:N4	21:AW:64:G:N1	2.31	0.41
37:DR:64:ARG:O	37:DR:68:ARG:HB2	2.20	0.41
59:DA:1348:G:H2'	59:DA:1349:A:H5''	2.01	0.41
59:DA:391:G:H1'	59:DA:411:G:C4	2.55	0.41
59:BA:26:G:C6	59:BA:27:G:C6	3.09	0.41
25:BC:62:THR:HB	25:BC:161:ARG:CZ	2.51	0.41
3:AD:115:ARG:NH1	20:AA:407:G:OP1	2.53	0.41
20:AA:18:C:H2'	20:AA:19:C:C6	2.55	0.41
25:DC:109:MET:HA	25:DC:111:PHE:CE2	2.54	0.41
25:DC:41:THR:HA	25:DC:176:VAL:O	2.19	0.41
21:CW:31:A:N1	21:CW:39:U:O4	2.53	0.41
39:BT:33:LYS:HZ2	39:BT:34:VAL:HG23	1.84	0.41
41:DV:20:LEU:HG	41:DV:93:GLU:HG3	2.02	0.41
30:BH:89:ILE:HG22	30:BH:162:ILE:HG23	2.02	0.41
40:DU:48:ALA:O	40:DU:52:ARG:HB3	2.20	0.41
32:BK:58:THR:O	32:BK:65:PHE:HA	2.20	0.41
18:CS:48:THR:HG22	18:CS:61:TYR:CE2	2.44	0.41
38:BS:93:LYS:HG2	60:BB:47:C:O2'	2.21	0.41
20:CA:521:G:H1	20:CA:528:C:H42	1.69	0.41
23:AY:526:VAL:CG2	23:AY:566:THR:HG23	2.50	0.41
39:DT:33:LYS:N	39:DT:42:ILE:HA	2.35	0.41
57:D1:3:LYS:HZ3	57:D1:3:LYS:HG2	1.74	0.41
50:D6:27:LYS:O	50:D6:32:ASN:HB2	2.20	0.41
20:AA:755:G:H2'	20:AA:756:C:C6	2.55	0.41
20:AA:33:A:H5''	20:AA:364:A:O2'	2.20	0.41
23:AY:13:ARG:HD3	23:AY:79:ILE:HG12	2.01	0.41
59:BA:592:G:H2'	59:BA:593:G:O4'	2.20	0.41
18:AS:10:PHE:CG	20:AA:1318:A:H4'	2.55	0.41
59:BA:1508:A:H2'	59:BA:1509:A:O4'	2.19	0.41
49:D5:33:CYS:SG	49:D5:38:ALA:N	2.92	0.41
20:AA:1415:G:H2'	20:AA:1416:G:O4'	2.20	0.41
61:AY:701:FUA:H151	61:AY:701:FUA:H203	1.86	0.41
59:BA:2501:C:H2'	59:BA:2501:C:H6	1.67	0.41
59:DA:2711:A:H5''	59:DA:2712:U:H3'	2.01	0.41
59:DA:233:A:H2'	59:DA:234:C:O4'	2.20	0.41
45:BZ:29:TYR:HB2	45:BZ:33:LEU:O	2.19	0.41
20:AA:784:C:H2'	20:AA:785:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:113:ARG:HH12	20:AA:537:G:P	2.43	0.41
7:CH:91:ARG:NH2	20:CA:564:C:O3'	2.53	0.41
27:DE:202:LYS:HG3	59:DA:2733:A:H61	1.85	0.41
15:CP:74:LEU:HD22	15:CP:79:VAL:HG11	2.01	0.41
42:BW:68:ARG:HB3	42:BW:110:LYS:HB2	2.01	0.41
38:DS:71:ARG:N	38:DS:71:ARG:HD2	2.36	0.41
59:BA:817:C:H4'	59:BA:932:G:C6	2.55	0.41
59:DA:2350:C:H2'	59:DA:2351:G:O4'	2.20	0.41
20:CA:1494:G:N2	59:DA:1912:A:N3	2.69	0.41
59:BA:729:G:O2'	59:BA:763:G:H4'	2.19	0.41
26:DD:163:ALA:HB1	26:DD:175:LEU:CD2	2.50	0.41
59:BA:1197:G:H2'	59:BA:1198:U:C6	2.51	0.41
59:DA:721:C:H2'	59:DA:722:A:C8	2.55	0.41
1:CB:87:ARG:HG2	1:CB:223:ILE:HD11	2.01	0.41
59:DA:210:C:H2'	59:DA:211:A:H8	1.84	0.41
59:BA:2167:U:C4	59:BA:2168:G:C6	3.08	0.41
25:BC:130:ARG:HA	25:BC:134:PRO:HG2	2.02	0.41
20:AA:241:C:H2'	20:AA:242:C:H6	1.85	0.41
42:BW:11:ARG:NH2	42:BW:98:LYS:HB3	2.35	0.41
20:AA:320:C:H2'	20:AA:321:A:C8	2.55	0.41
20:CA:1300:G:O5'	20:CA:1335:C:N4	2.53	0.41
59:DA:405:U:H3'	59:DA:406:G:H5'	2.00	0.41
28:DF:125:LEU:CD2	28:DF:196:LEU:HA	2.49	0.41
7:AH:41:ARG:HE	7:AH:41:ARG:HB3	1.73	0.41
7:AH:91:ARG:NH2	20:AA:564:C:O3'	2.53	0.41
59:BA:270(L):C:C2'	59:BA:270(M):U:H5''	2.50	0.41
59:DA:2314:C:H2'	59:DA:2315:G:H8	1.83	0.41
37:DR:26:LYS:HZ3	59:DA:1294:U:H4'	1.86	0.41
59:BA:1914:C:H5'	59:BA:1915:U:OP2	2.20	0.41
4:AE:64:ARG:O	4:AE:66:MET:N	2.53	0.41
20:AA:382:A:H2'	20:AA:383:A:C8	2.54	0.41
50:D6:53:LYS:HD2	50:D6:53:LYS:HA	1.83	0.41
59:DA:2814:C:H42	59:DA:2886:G:H1	1.67	0.41
49:D5:32:PRO:HG2	59:DA:2887:U:H5'	2.02	0.41
20:CA:1440(A):G:H5''	20:CA:1440(B):G:O5'	2.20	0.41
1:CB:176:GLU:O	1:CB:180:LEU:HD12	2.20	0.41
28:DF:135:LYS:HA	59:DA:321:G:OP1	2.20	0.41
4:CE:84:PHE:HB3	4:CE:134:ALA:HB2	2.02	0.41
59:BA:17:G:H2'	59:BA:18:C:C6	2.55	0.41
30:BH:38:SER:HA	30:BH:39:PRO:HD3	1.92	0.41
59:BA:2841:C:H2'	59:BA:2842:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:9:ARG:HB3	8:AI:104:ARG:NH1	2.34	0.41
59:DA:1854:A:H2	59:DA:2088:G:H1'	1.85	0.41
59:BA:289:A:H2'	59:BA:290:G:O4'	2.20	0.41
14:CO:79:ARG:O	14:CO:83:GLU:HB2	2.20	0.41
19:CT:36:LEU:HG	19:CT:62:LEU:HD12	2.02	0.41
20:AA:110:C:H2'	20:AA:111:G:O4'	2.20	0.41
8:CI:48:GLU:N	8:CI:49:PRO:HD2	2.35	0.41
8:AI:81:ILE:HG22	8:AI:85:LEU:HD11	2.02	0.41
8:AI:81:ILE:O	8:AI:85:LEU:HG	2.19	0.41
23:AY:168:ILE:H	23:AY:174:PHE:HE1	1.68	0.41
26:BD:132:PRO:HA	26:BD:189:CYS:O	2.20	0.41
45:BZ:141:VAL:O	45:BZ:143:GLY:N	2.53	0.41
59:DA:745:G:O6	59:DA:746:A:N6	2.53	0.41
45:DZ:11:GLU:H	45:DZ:11:GLU:CD	2.22	0.41
35:BP:76:LYS:HE3	35:BP:76:LYS:HB3	1.89	0.41
15:CP:16:HIS:ND1	20:CA:625:G:H4'	2.35	0.41
59:DA:1027:A:C6	59:DA:1126:A:C4	3.08	0.41
59:DA:489:G:H2'	59:DA:491:G:O4'	2.19	0.41
30:DH:98:LEU:HD22	30:DH:124:GLU:HA	2.03	0.41
59:BA:2023:G:C8	59:BA:2023:G:P	3.12	0.41
29:BG:114:ILE:O	29:BG:117:PHE:HB2	2.21	0.41
59:BA:8:A:C2	59:BA:9:U:C2	3.08	0.41
23:AY:25:LYS:CB	62:AY:702:GDP:O2B	2.68	0.41
20:CA:28:G:H1	20:CA:555:C:H42	1.69	0.41
20:CA:838(A):U:O2'	20:CA:838(B):C:H5''	2.21	0.41
59:BA:956:G:N2	59:BA:960:A:OP2	2.49	0.41
57:B1:18:ILE:CG1	57:B1:20:ARG:HB3	2.49	0.41
59:BA:1852:C:O2'	59:BA:1853:A:H5'	2.20	0.41
59:BA:450:G:H1	59:BA:454:A:P	2.43	0.41
21:CW:14:A:H2'	21:CW:15:G:O4'	2.19	0.41
28:DF:67:GLN:O	28:DF:68:LYS:HD2	2.21	0.41
25:DC:153:ILE:HA	25:DC:156:GLU:HB2	2.00	0.41
49:B5:3:LYS:HD3	59:BA:747:U:C5	2.56	0.41
59:DA:2471:C:H2'	59:DA:2472:G:O4'	2.19	0.41
59:DA:1799:G:H4'	59:DA:1800:C:O5'	2.19	0.41
23:AY:206:LEU:HB3	23:AY:207:ASP:H	1.64	0.41
39:BT:33:LYS:N	39:BT:42:ILE:HA	2.35	0.41
11:AL:50:SER:HB2	20:AA:519:C:OP2	2.20	0.41
59:DA:1248:G:O2'	59:DA:1249:U:OP1	2.34	0.41
45:BZ:99:TYR:HE2	45:BZ:125:LEU:HB2	1.86	0.41
32:BK:78:ILE:HG21	32:BK:134:MET:CE	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:85:ASP:HA	26:BD:86:PRO:HD2	1.80	0.41
59:BA:2628:C:H1'	59:BA:2781:A:H2'	2.02	0.41
59:BA:2781:A:H3'	59:BA:2782:G:H5'	2.02	0.41
44:BY:63:LYS:HB3	44:BY:64:GLU:H	1.72	0.41
60:BB:29:A:H2'	60:BB:30:C:H6	1.84	0.41
60:BB:24:G:N1	60:BB:56:G:N2	2.68	0.41
11:AL:34:ARG:HG3	11:AL:82:VAL:CG1	2.49	0.41
34:DO:1:MET:H2	59:DA:1665:A:HO2'	1.57	0.41
26:BD:15:PHE:HE1	59:BA:1830:C:H4'	1.85	0.41
52:B8:61:LEU:HD11	59:BA:593:G:O2'	2.20	0.41
16:AQ:64:PRO:HD2	20:AA:130:A:N7	2.35	0.41
16:AQ:66:SER:HA	20:AA:265:G:O3'	2.20	0.41
4:AE:144:THR:O	4:AE:148:VAL:HG23	2.20	0.41
59:BA:465:G:H2'	59:BA:466:A:C5	2.55	0.41
36:BQ:52:VAL:O	36:BQ:54:MET:N	2.53	0.41
27:DE:129:HIS:CE1	59:DA:1675:C:N4	2.89	0.41
23:AY:339:SER:O	23:AY:351:ARG:HD2	2.20	0.41
59:BA:2090:G:H1	59:BA:2229:C:H42	1.67	0.41
10:CK:18:ARG:NH1	10:CK:81:ASP:OD2	2.53	0.41
32:DK:78:ILE:HG21	32:DK:134:MET:SD	2.60	0.41
59:DA:560:C:H2'	59:DA:561:G:C8	2.45	0.41
11:CL:5:PRO:HB2	11:CL:10:LEU:HG	2.02	0.41
60:DB:105:G:H2'	60:DB:106:G:H8	1.86	0.41
20:CA:818:G:HO2'	20:CA:820:U:H6	1.69	0.41
23:CY:91:THR:HB	23:CY:92:ILE:H	1.65	0.41
23:CY:72:CYS:SG	23:CY:79:ILE:HB	2.60	0.41
27:DE:146:THR:O	59:DA:2571:C:O2'	2.37	0.41
49:B5:44:THR:HG22	49:B5:45:VAL:N	2.33	0.41
1:CB:51:LEU:O	1:CB:55:PHE:HB2	2.20	0.41
49:D5:43:HIS:NE2	59:DA:2883:A:O3'	2.51	0.41
26:DD:115:GLN:NE2	26:DD:117:VAL:HG13	2.35	0.41
43:BX:5:TYR:HE1	43:BX:42:ALA:HB1	1.85	0.41
39:DT:51:ARG:HB3	39:DT:62:THR:CG2	2.50	0.41
29:BG:135:LEU:O	59:BA:2305:A:H1'	2.21	0.41
7:CH:127:LEU:HB3	7:CH:129:VAL:HG22	2.01	0.41
20:AA:1534:A:O5'	20:AA:1534:A:H8	2.03	0.41
20:CA:1349:A:H3'	20:CA:1350:A:H8	1.84	0.41
23:AY:197:ARG:NH2	23:AY:198:GLU:HG2	2.36	0.41
59:DA:705:A:C4	59:DA:727:A:C2	3.09	0.41
16:AQ:12:SER:HA	16:AQ:14:LYS:NZ	2.35	0.41
23:CY:656:ALA:HB2	23:CY:669:PHE:HE1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2663:G:C6	59:BA:2664:G:C4	3.08	0.41
59:DA:1954:G:N2	59:DA:1986:A:OP1	2.49	0.41
14:AO:33:THR:O	14:AO:36:ILE:HB	2.20	0.41
43:BX:13:LEU:HD11	47:B2:40:SER:OG	2.21	0.41
43:BX:12:VAL:HG23	43:BX:13:LEU:H	1.85	0.41
59:DA:2074:U:O3'	59:DA:2597:G:O2'	2.37	0.41
20:CA:178:C:H2'	20:CA:179:A:O4'	2.20	0.41
39:BT:101:PHE:CE2	59:BA:1754:C:H5'	2.55	0.41
35:BP:107:LYS:HD2	59:BA:625:G:O6	2.20	0.41
15:AP:25:ARG:HH22	20:AA:134:A:H61	1.68	0.41
59:BA:473:G:O2'	59:BA:474:G:H5'	2.20	0.41
33:DN:97:ARG:O	33:DN:100:GLU:N	2.53	0.41
60:BB:88:C:H2'	60:BB:89(A):G:C8	2.55	0.41
20:AA:510:A:H5''	20:AA:511:C:OP2	2.20	0.41
59:BA:2773:C:H2'	59:BA:2774:C:H6	1.86	0.41
5:CF:14:LEU:CD2	5:CF:18:GLN:HB2	2.50	0.41
3:AD:170:VAL:HG21	3:AD:176:LEU:HB2	2.01	0.41
45:DZ:61:LEU:HB3	45:DZ:63:ASP:OD1	2.19	0.41
42:DW:90:ARG:NH2	59:DA:748:G:H1	2.18	0.41
15:CP:27:LYS:HE3	15:CP:27:LYS:HB2	1.88	0.41
16:CQ:16:GLN:H	16:CQ:16:GLN:NE2	2.18	0.41
6:AG:136:LYS:HD2	6:AG:136:LYS:HA	1.91	0.41
59:BA:234:C:H2'	59:BA:235:U:H6	1.84	0.41
12:AM:36:LYS:HA	12:AM:36:LYS:HD3	1.84	0.41
29:BG:166:ASP:N	29:BG:166:ASP:OD2	2.52	0.41
11:AL:72:GLY:HA3	20:AA:522:C:OP1	2.21	0.41
60:DB:99:A:H2'	60:DB:100:G:O4'	2.19	0.41
3:CD:6:GLY:HA3	3:CD:7:PRO:HD3	1.90	0.41
23:CY:27:THR:HG23	62:CY:702:GDP:O2A	2.19	0.41
37:DR:2:ARG:HB3	37:DR:5:LYS:HE2	2.02	0.41
59:BA:2820:A:O2'	59:BA:2821:A:OP1	2.37	0.41
27:BE:140:SER:HB3	59:BA:2512:C:H1'	2.00	0.41
27:BE:60:ASN:C	27:BE:61:ARG:HG3	2.40	0.41
1:CB:71:VAL:CG2	1:CB:164:VAL:HG22	2.50	0.41
9:CJ:45:ARG:NH2	20:CA:1255:G:OP1	2.50	0.41
20:CA:1255:G:N2	20:CA:1282:C:N3	2.48	0.41
26:DD:51:VAL:O	26:DD:52:ARG:HB2	2.20	0.41
59:DA:1771:C:N4	59:DA:1980:G:H1	2.16	0.41
40:BU:92:ARG:NH1	40:BU:95:LEU:HD12	2.36	0.41
6:AG:87:VAL:HG11	6:AG:155:ARG:HA	2.01	0.41
16:CQ:43:LEU:HD23	16:CQ:43:LEU:HA	1.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:76:LEU:HD12	25:BC:94:TYR:HD2	1.85	0.41
26:BD:24:ILE:HG23	26:BD:25:THR:H	1.84	0.41
4:AE:125:SER:OG	4:AE:125:SER:O	2.39	0.41
28:DF:164:ARG:O	28:DF:168:ARG:HB2	2.20	0.41
1:AB:68:ILE:CG2	1:AB:163:PHE:HB2	2.51	0.41
41:DV:4:ILE:HB	41:DV:39:LEU:HB2	2.02	0.41
41:DV:55:ALA:CB	41:DV:101:GLY:HA2	2.50	0.41
39:BT:26:ASP:HB3	39:BT:91:ARG:HB2	2.01	0.41
45:BZ:118:GLN:O	45:BZ:172:ALA:HA	2.20	0.41
26:BD:206:LEU:HD12	59:BA:1792:G:OP2	2.20	0.41
59:BA:1799:G:C6	59:BA:1819:A:N7	2.89	0.41
11:CL:44:THR:HB	11:CL:49:ASN:O	2.20	0.41
34:DO:107:ARG:NH2	39:DT:36:GLU:HG3	2.34	0.41
57:D1:13:ILE:C	57:D1:17:SER:HG	2.24	0.41
57:B1:86:SER:HA	57:B1:87:PRO:HD2	1.84	0.41
20:AA:955:U:H2'	20:AA:956:U:C6	2.55	0.41
44:DY:28:LYS:HD3	44:DY:37:VAL:HG12	2.03	0.41
40:DU:85:LYS:HD3	40:DU:85:LYS:O	2.21	0.41
36:DQ:72:LYS:HB3	36:DQ:94:VAL:HG23	2.01	0.41
20:AA:426:G:H2'	20:AA:427:U:O4'	2.20	0.41
20:AA:244:U:O4	20:AA:893:C:N3	2.53	0.41
1:CB:32:ILE:HG21	1:CB:40:HIS:HD2	1.85	0.41
37:BR:60:LEU:HG	37:BR:64:ARG:HH11	1.86	0.41
20:AA:626:U:H2'	20:AA:627:G:H8	1.86	0.41
59:DA:479:A:C4	59:DA:481:G:O4'	2.73	0.41
30:DH:41:MET:O	30:DH:42:ARG:HB2	2.20	0.41
11:CL:61:THR:HB	20:CA:362:G:H5''	2.02	0.41
44:DY:73:ARG:HH22	59:DA:302:C:P	2.43	0.41
48:B3:17:LYS:NZ	59:BA:969:U:H5''	2.34	0.41
49:B5:31:VAL:HG21	49:B5:42:PRO:HA	2.03	0.41
35:BP:51:PHE:CE1	35:BP:52:GLU:HB2	2.55	0.41
59:DA:572:A:H3'	59:DA:573:G:C8	2.55	0.41
20:AA:55:A:H2'	20:AA:56:U:O4'	2.20	0.41
8:AI:111:ARG:HG3	20:AA:1369:C:OP2	2.21	0.41
59:BA:2838:G:C6	59:BA:2839:G:C6	3.08	0.41
16:CQ:28:PRO:HB2	16:CQ:29:HIS:H	1.49	0.41
33:DN:38:HIS:CG	33:DN:39:ARG:N	2.89	0.41
20:CA:634:C:H2'	20:CA:635:G:H8	1.84	0.41
23:CY:355:LEU:HD22	23:CY:355:LEU:H	1.84	0.41
59:DA:2599:G:H2'	59:DA:2600:A:C8	2.55	0.41
59:BA:1975:G:H2'	59:BA:1976:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:744:C:H2'	20:CA:745:C:C6	2.55	0.41
59:BA:41:C:H2'	59:BA:43:G:H8	1.82	0.41
37:DR:37:THR:O	37:DR:40:LYS:HB2	2.20	0.41
7:AH:97:VAL:HG12	20:AA:600:C:OP1	2.19	0.41
59:DA:443:A:H1'	59:DA:1201:C:H1'	2.02	0.41
16:AQ:29:HIS:O	16:AQ:31:LEU:N	2.54	0.41
43:BX:38:GLU:O	43:BX:41:ASN:HB2	2.19	0.41
42:BW:14:PRO:O	42:BW:17:VAL:N	2.53	0.41
23:AY:20:HIS:HB3	23:AY:118:SER:CA	2.51	0.41
23:AY:166:LEU:HB2	23:AY:178:ILE:HG22	2.02	0.41
20:CA:1440(D):A:C2	39:DT:118:ARG:HG2	2.56	0.41
59:DA:199:A:H61	59:DA:2433:A:H2'	1.83	0.41
18:CS:30:LEU:HA	18:CS:30:LEU:HD23	1.85	0.41
59:BA:2795:G:H3'	59:BA:2797:U:C5'	2.51	0.41
34:BO:23:ARG:HH12	59:BA:2548:G:H1'	1.84	0.41
52:D8:27:THR:OG1	59:DA:2361:A:O5'	2.38	0.41
33:BN:57:ALA:O	33:BN:60:ILE:HG13	2.20	0.41
59:BA:2726:U:HO2'	59:BA:2727:G:P	2.44	0.41
59:BA:685:A:C5'	59:BA:774:A:H61	2.33	0.41
59:BA:2396:G:H2'	59:BA:2397:G:H8	1.84	0.41
26:BD:38:LYS:HD2	26:BD:39:LYS:O	2.20	0.41
15:AP:66:PRO:CG	15:AP:71:ARG:HH22	2.33	0.41
26:BD:226:MET:HE2	26:BD:230:ASP:HB3	2.02	0.41
46:B0:47:PRO:CG	46:B0:53:MET:HB2	2.50	0.41
29:BG:121:ASN:O	29:BG:131:TYR:OH	2.36	0.41
59:DA:746:A:O2'	59:DA:2611:U:O2'	2.33	0.41
23:CY:379:GLY:HA2	23:CY:381:LYS:HZ2	1.85	0.41
59:BA:2116:G:O6	59:BA:2166:G:N2	2.53	0.41
28:BF:33:LEU:O	28:BF:37:VAL:HG23	2.21	0.41
23:CY:304:ASP:HA	23:CY:305:PRO:HD2	1.94	0.41
59:BA:733:G:O6	59:BA:761:A:H2'	2.20	0.41
59:DA:730:C:H2'	59:DA:731:C:O4'	2.20	0.41
44:BY:13:VAL:N	44:BY:25:GLY:O	2.51	0.41
20:CA:68(R):C:H2'	20:CA:68(S):C:C6	2.55	0.41
23:AY:489:LYS:HE3	23:AY:489:LYS:HB2	1.87	0.41
12:AM:21:TYR:HA	12:AM:21:TYR:HD2	1.70	0.41
8:CI:50:LEU:HD23	8:CI:50:LEU:HA	1.95	0.41
20:AA:633:G:H2'	20:AA:634:C:C6	2.55	0.41
53:D9:3:VAL:HB	59:DA:2538:C:O2'	2.20	0.41
12:CM:2:ALA:HB3	12:CM:9:ILE:HG23	2.02	0.41
37:BR:18:LEU:O	37:BR:22:ARG:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:301:G:C6	59:DA:317:G:C5	3.08	0.41
59:BA:875:G:H2'	59:BA:876:C:O4'	2.20	0.41
10:AK:14:VAL:HB	10:AK:15:ALA:H	1.64	0.41
23:CY:17:ILE:HG22	23:CY:25:LYS:CG	2.49	0.41
59:BA:1138:G:H2'	59:BA:1139:G:O4'	2.21	0.41
27:DE:119:ARG:HG2	27:DE:160:TYR:CG	2.56	0.41
59:DA:2064:C:H2'	59:DA:2065:C:C6	2.55	0.41
59:BA:956:G:N2	59:BA:959:A:H3'	2.36	0.41
59:BA:69:C:H2'	59:BA:70:G:H8	1.83	0.41
33:DN:34:LEU:HD13	33:DN:50:ASP:O	2.20	0.41
57:B1:17:SER:O	57:B1:18:ILE:HD12	2.21	0.41
3:AD:101:LEU:O	3:AD:105:VAL:HG23	2.21	0.41
25:BC:118:PRO:HD3	25:BC:147:GLY:CA	2.51	0.41
59:BA:2400:G:H1	59:BA:2416:C:H42	1.66	0.41
28:DF:6:VAL:HG23	28:DF:7:TYR:CD1	2.55	0.41
3:AD:57:ARG:NH1	3:AD:205:GLU:HB3	2.36	0.41
11:AL:83:VAL:HG11	11:AL:100:ILE:HD13	2.01	0.41
23:AY:668:SER:HB2	23:AY:669:PHE:CD1	2.56	0.41
26:BD:37:LEU:HA	26:BD:37:LEU:HD23	1.89	0.41
1:AB:87:ARG:NH2	1:AB:233:SER:OG	2.54	0.41
11:CL:69:TYR:O	11:CL:70:ILE:HG23	2.21	0.41
40:BU:37:GLU:HA	40:BU:40:PHE:HD1	1.84	0.41
23:AY:329:ARG:O	23:AY:329:ARG:HG3	2.19	0.41
35:BP:48:PRO:O	35:BP:50:ARG:N	2.54	0.41
60:BB:24:G:H1	60:BB:59:A:H61	1.67	0.41
59:DA:1508:A:H2'	59:DA:1509:A:O4'	2.19	0.41
20:AA:505:G:N2	20:AA:526:C:N3	2.62	0.41
20:CA:102:G:H2'	20:CA:103:C:C6	2.56	0.41
59:BA:821:A:N6	59:BA:972:G:O2'	2.52	0.41
44:DY:2:ARG:NE	59:DA:295:G:OP1	2.54	0.41
8:AI:23:ASN:O	8:AI:57:GLY:HA2	2.21	0.41
57:B1:3:LYS:CG	57:B1:4:VAL:H	2.25	0.41
60:BB:51:G:H21	60:BB:52:A:N6	2.13	0.41
8:CI:40:LEU:HD13	8:CI:74:ILE:HD12	2.03	0.41
41:BV:53:GLU:O	41:BV:55:ALA:N	2.45	0.41
32:DK:114:ASP:HB2	32:DK:115:LEU:H	1.50	0.41
59:BA:1690:A:H62	59:BA:1697:G:N2	2.11	0.41
59:BA:2426:A:H3'	59:BA:2427:C:C5'	2.48	0.41
23:AY:30:GLU:HG2	23:AY:31:ARG:HG2	2.01	0.41
59:BA:1299:G:N1	59:BA:1640:C:OP2	2.47	0.41
59:DA:2090:G:H1	59:DA:2229:C:N4	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:852:G:H2'	59:DA:853:G:H8	1.85	0.41
59:BA:778:G:C5	59:BA:779:U:C4	3.08	0.41
35:BP:112:LEU:HD22	35:BP:113:LYS:H	1.85	0.41
38:DS:19:LYS:HA	38:DS:19:LYS:HD2	1.76	0.41
10:CK:32:ILE:CD1	10:CK:72:ALA:HB2	2.50	0.41
19:AT:89:ARG:NH2	20:AA:186(A):C:O2'	2.53	0.41
32:DK:3:LYS:HD3	32:DK:29:GLN:HB3	2.01	0.41
9:CJ:16:LEU:HG	9:CJ:68:HIS:HB2	2.02	0.41
20:AA:509:A:H2	20:AA:543:C:O2	2.04	0.41
59:BA:1290:C:H2'	59:BA:1291:C:H6	1.84	0.41
4:CE:57:LYS:O	4:CE:60:TYR:HB3	2.19	0.41
20:AA:68(O):A:H3'	20:AA:68(P):C:O4'	2.19	0.41
21:CW:69:A:H2'	21:CW:70:G:H8	1.86	0.41
20:AA:600:C:H2'	20:AA:601:C:C6	2.55	0.41
35:DP:99:LEU:HA	35:DP:102:ARG:NH2	2.36	0.41
20:CA:1315:U:H2'	20:CA:1316:G:O4'	2.20	0.41
8:AI:69:GLY:HA2	20:AA:1249:C:O2	2.21	0.41
4:AE:75:THR:OG1	4:AE:76:ILE:O	2.37	0.41
20:AA:1051:C:H2'	20:AA:1052:U:H6	1.85	0.41
23:CY:167:PRO:HB2	23:CY:170:ARG:HD2	2.02	0.41
59:BA:721:C:H2'	59:BA:722:A:C8	2.56	0.41
59:DA:447:A:H4'	59:DA:448:U:C5'	2.51	0.41
59:BA:890:A:H2'	59:BA:892:G:H8	1.86	0.41
19:CT:103:GLY:C	20:CA:191:G:H21	2.24	0.41
32:BK:117:THR:HB	59:BA:1082:U:H5'	2.02	0.41
59:DA:1175:U:H2'	59:DA:1176:G:N7	2.36	0.41
59:BA:2535:G:H2'	59:BA:2536:G:H8	1.85	0.41
20:AA:652:U:O4	20:AA:753:A:N7	2.53	0.41
20:CA:445:G:H2'	20:CA:446:G:H8	1.86	0.41
59:BA:733:G:N7	59:BA:761:A:C6	2.89	0.41
21:CW:7:G:C6	21:CW:49:A:N7	2.89	0.41
38:DS:12:PHE:CD1	38:DS:91:PRO:HD3	2.56	0.41
20:AA:395:C:H2'	20:AA:396:G:H8	1.85	0.41
1:AB:114:ARG:O	1:AB:118:LEU:HG	2.21	0.41
36:DQ:3:MET:HB2	36:DQ:4:PRO:HD2	2.02	0.41
20:AA:993:G:C5	20:AA:1046:A:C2	3.08	0.41
24:CU:2:DPP:NG	24:CU:3:SER:N	2.69	0.41
33:DN:17:ASP:O	33:DN:18:ALA:HB2	2.20	0.41
60:DB:37:C:H2'	60:DB:38:C:O4'	2.20	0.41
41:BV:99:ILE:O	41:BV:99:ILE:HG12	2.20	0.41
4:AE:82:VAL:HG11	4:AE:138:ALA:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AW:64:G:C2	21:AW:65:U:C4	3.09	0.41
3:CD:30:LYS:HB2	3:CD:33:MET:N	2.34	0.41
59:BA:2287:A:C2	59:BA:2346:A:N1	2.88	0.41
59:BA:2133:G:HO2'	59:BA:2134:A:H8	1.66	0.41
59:BA:2888:C:H2'	59:BA:2889:C:H6	1.84	0.41
59:BA:513:A:C2	59:BA:582:G:H4'	2.54	0.41
40:BU:12:ARG:O	40:BU:15:LYS:HB2	2.21	0.41
41:BV:89:GLN:NE2	59:BA:993:G:N3	2.39	0.41
59:DA:2307:G:N2	59:DA:2312:U:O4	2.53	0.41
26:BD:183:ARG:NH2	26:BD:269:PHE:HB3	2.35	0.41
59:BA:747:U:C4	59:BA:2613:U:C4	3.08	0.41
60:DB:25:A:H2'	60:DB:26:A:C8	2.55	0.41
59:DA:2107:C:N3	59:DA:2182:G:N2	2.55	0.41
59:BA:965:C:O5'	59:BA:2273:A:H1'	2.21	0.41
38:BS:67:ARG:O	38:BS:71:ARG:HD3	2.19	0.41
45:BZ:119:GLU:HB2	45:BZ:122:ARG:NH1	2.25	0.41
23:AY:651:GLU:O	23:AY:652:MET:HB3	2.20	0.41
17:CR:51:LEU:HA	17:CR:52:PRO:HD3	1.98	0.41
38:DS:70:GLY:CA	38:DS:99:LYS:HG3	2.44	0.41
27:BE:49:LEU:O	27:BE:78:LEU:HA	2.19	0.41
28:BF:156:LEU:O	28:BF:158:THR:HG22	2.21	0.41
52:B8:59:LYS:HD3	52:B8:59:LYS:HA	1.87	0.41
20:AA:32:A:H2'	20:AA:33:A:H8	1.82	0.41
20:AA:1324:A:C4'	20:AA:1362:C:H4'	2.48	0.41
20:AA:978:A:OP2	20:AA:1362(A):C:N4	2.53	0.41
25:DC:61:GLY:HA2	25:DC:200:HIS:NE2	2.35	0.41
23:CY:657:THR:OG1	23:CY:658:ASP:N	2.54	0.41
51:B7:39:ARG:CZ	51:B7:39:ARG:HA	2.50	0.41
36:BQ:58:PHE:CE1	36:BQ:64:ILE:HD11	2.55	0.41
48:D3:24:LYS:HB2	48:D3:24:LYS:HE2	1.81	0.41
25:BC:225:ILE:O	25:BC:226:ASN:HB3	2.21	0.41
59:DA:531:C:C5	59:DA:2035:G:C2	3.08	0.41
59:DA:2734:A:H2'	59:DA:2735:G:O4'	2.21	0.41
10:CK:126:ARG:O	10:CK:126:ARG:HG3	2.21	0.41
16:CQ:63:ARG:HB2	20:CA:130:A:C8	2.56	0.41
20:CA:1070:U:H2'	20:CA:1071:C:C6	2.56	0.41
20:CA:1250:A:H2	20:CA:1370:G:H1'	1.86	0.41
20:AA:986:A:H2'	20:AA:987:G:C8	2.56	0.41
25:BC:7:ARG:NH2	59:BA:2128:C:H5"	2.36	0.41
4:AE:78:HIS:HB2	7:AH:104:ARG:HG3	2.02	0.41
59:DA:922:U:H2'	59:DA:923:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:46:ARG:HD2	13:AN:61:TRP:HZ3	1.86	0.41
59:DA:2353:G:H1	59:DA:2364:C:H42	1.69	0.41
6:CG:70:LYS:O	6:CG:138:LYS:HE3	2.21	0.41
14:CO:9:GLN:NE2	20:CA:659:U:OP1	2.53	0.41
59:BA:2328:A:H2'	59:BA:2329:G:H8	1.84	0.41
7:AH:29:SER:HA	20:AA:590:C:OP1	2.21	0.41
59:DA:863:A:H2'	59:DA:864:G:H8	1.85	0.41
19:AT:18:GLN:O	19:AT:22:ARG:HG3	2.21	0.41
20:AA:715:A:H1'	20:AA:777:A:N1	2.36	0.41
59:DA:642:G:H8	59:DA:642:G:O5'	2.04	0.41
20:CA:1314:C:H2'	20:CA:1315:U:H6	1.84	0.41
20:AA:1093:A:O2'	20:AA:1095:U:OP1	2.26	0.41
28:DF:72:ARG:HD2	28:DF:73:ALA:H	1.86	0.41
20:CA:975:A:H4'	20:CA:976:G:H5''	2.02	0.41
20:CA:935:A:H61	20:CA:1380:U:H3	1.69	0.41
7:AH:112:LEU:HA	7:AH:134:ILE:HG13	2.03	0.41
59:BA:1708:C:H2'	59:BA:1709:U:H6	1.84	0.41
40:DU:40:PHE:HB3	41:DV:75:PHE:HE1	1.85	0.41
45:BZ:52:SER:OG	45:BZ:53:ILE:N	2.53	0.41
15:CP:14:ASN:N	15:CP:15:PRO:HD3	2.36	0.41
4:CE:30:ALA:O	4:CE:45:PHE:HA	2.21	0.41
12:CM:111:LYS:HB3	12:CM:111:LYS:HE2	1.94	0.41
59:DA:1429:G:H2'	59:DA:1430:C:H6	1.85	0.41
59:DA:2769:C:H2'	59:DA:2770:G:H8	1.86	0.41
59:BA:1636:C:H2'	59:BA:1637:A:H8	1.85	0.41
40:BU:10:ARG:NE	59:BA:1251:C:OP2	2.48	0.41
20:AA:820:U:H3'	20:AA:821:G:H5'	2.02	0.41
30:BH:54:ARG:NH2	30:BH:57:ASP:OD2	2.53	0.41
51:B7:32:LYS:HE2	59:BA:180:G:OP2	2.20	0.41
30:DH:170:ARG:O	30:DH:171:LEU:HB2	2.20	0.41
59:DA:1420:U:O2'	59:DA:1421:G:OP1	2.32	0.41
33:DN:99:LEU:O	33:DN:103:VAL:HG23	2.21	0.41
32:BK:10:LEU:HD13	32:BK:23:VAL:HG22	2.03	0.41
49:D5:42:PRO:HB2	59:DA:2815:C:O2'	2.19	0.41
59:DA:2194:G:H2'	59:DA:2195:C:C6	2.56	0.41
20:AA:1110:A:H2'	20:AA:1111:A:O4'	2.20	0.41
38:BS:52:SER:H	38:BS:56:LEU:HB2	1.85	0.41
59:BA:216:A:H2'	59:BA:217:G:O4'	2.21	0.41
60:BB:111:U:H2'	60:BB:112:G:C8	2.55	0.41
19:AT:88:VAL:O	19:AT:92:LEU:HG	2.20	0.41
1:AB:135:GLN:HA	1:AB:138:LEU:HG	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1916:A:H8	59:BA:1916:A:O5'	2.03	0.41
7:CH:69:ARG:HG3	7:CH:69:ARG:H	1.57	0.41
16:AQ:27:PHE:O	16:AQ:36:ILE:HG12	2.21	0.41
40:DU:60:LEU:O	40:DU:63:VAL:HB	2.21	0.41
59:BA:1531:C:N4	59:BA:1540:G:H1	2.13	0.41
36:BQ:77:LYS:HG2	36:BQ:78:PRO:HD2	2.02	0.41
59:BA:137(B):G:H1	59:BA:141(B):C:N4	2.15	0.41
59:BA:378:C:H2'	59:BA:379:G:C8	2.55	0.41
27:DE:66:HIS:CD2	59:DA:2786:U:H4'	2.56	0.41
21:AW:53:G:N2	21:AW:61:C:N3	2.57	0.41
26:BD:20:ASP:OD2	26:BD:22:SER:OG	2.25	0.41
28:BF:195:ASP:HB3	28:BF:197:ASP:OD2	2.20	0.41
25:DC:78:ILE:HA	25:DC:96:GLY:O	2.21	0.41
39:BT:65:LYS:HZ2	39:BT:66:VAL:H	1.68	0.41
1:AB:57:PHE:O	1:AB:60:ASP:HB2	2.21	0.41
26:DD:148:GLU:HB3	26:DD:151:LYS:CG	2.50	0.41
59:BA:1100:C:H2'	59:BA:1101:U:O4'	2.19	0.41
33:BN:38:HIS:NE2	33:BN:50:ASP:OD2	2.53	0.41
38:DS:66:ALA:HB1	38:DS:99:LYS:HD2	2.03	0.41
26:BD:78:LYS:NZ	59:BA:1502:C:H5'	2.35	0.41
8:AI:5:TYR:O	8:AI:84:ALA:HA	2.21	0.41
26:DD:208:LYS:HB2	59:DA:729:G:C5	2.55	0.41
60:BB:28:C:H2'	60:BB:29:A:C8	2.55	0.41
59:BA:1830:C:H2'	59:BA:1831:G:C8	2.53	0.41
14:AO:38:ARG:HA	14:AO:38:ARG:HD3	1.57	0.41
59:DA:25:U:H3	59:DA:515:A:H62	1.69	0.41
47:D2:21:LEU:O	47:D2:25:VAL:HG23	2.19	0.41
20:CA:374:A:H5''	20:CA:452:A:H61	1.86	0.41
36:BQ:72:LYS:HD2	36:BQ:96:VAL:HG13	2.03	0.41
8:CI:118:LYS:C	8:CI:120:ARG:H	2.23	0.41
18:AS:58:VAL:HG21	18:AS:75:ALA:CB	2.50	0.41
20:AA:1537:U:H2'	20:AA:1538:C:H6	1.86	0.41
20:CA:674:G:H2'	20:CA:675:A:C8	2.55	0.41
59:BA:1070:A:H2'	59:BA:1097:U:OP1	2.20	0.41
20:AA:458:C:H2'	20:AA:458(A):G:O4'	2.21	0.41
20:CA:310:G:H2'	20:CA:311:C:H6	1.84	0.41
59:DA:880:G:H1	59:DA:897:C:N4	2.14	0.41
20:CA:1354:C:H2'	20:CA:1355:G:H8	1.84	0.41
45:BZ:58:VAL:HA	45:BZ:68:PRO:HA	2.01	0.41
20:AA:971:G:N2	20:AA:1363:A:OP2	2.48	0.41
20:CA:745:C:OP1	20:CA:851:G:O2'	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:14:ILE:HD12	27:DE:23:VAL:HG11	2.03	0.41
28:DF:45:ARG:HG2	59:DA:443:A:N7	2.35	0.41
20:CA:861:G:O2'	20:CA:874:G:O2'	2.29	0.41
20:CA:601:C:H2'	20:CA:602:A:H8	1.85	0.41
23:AY:247:ARG:HB2	23:AY:279:TYR:CD1	2.54	0.41
8:AI:46:ALA:HB2	8:AI:74:ILE:HG22	2.02	0.41
23:AY:655:TYR:OH	23:AY:659:LEU:HD23	2.20	0.41
59:BA:736:C:H2'	59:BA:737:C:C6	2.55	0.41
59:DA:547:A:H3'	59:DA:548:A:C8	2.55	0.41
59:BA:822:U:H2'	59:BA:823:G:H8	1.85	0.41
6:AG:119:ARG:NH2	20:AA:1240:U:OP1	2.53	0.41
32:DK:53:VAL:HA	32:DK:54:PRO:HD3	1.94	0.41
4:CE:84:PHE:O	4:CE:86:ALA:N	2.54	0.41
3:CD:201:GLN:O	3:CD:204:ILE:HB	2.21	0.41
60:DB:74:U:H2'	60:DB:75:G:C8	2.56	0.41
6:AG:4:ARG:HG2	20:AA:932:C:OP1	2.21	0.41
59:DA:1437:C:O2'	59:DA:1518:C:H4'	2.20	0.41
12:CM:65:LYS:HG2	12:CM:65:LYS:H	1.72	0.41
59:DA:1963:U:O2	59:DA:1963:U:H2'	2.20	0.41
6:AG:149:ARG:O	6:AG:149:ARG:HD3	2.21	0.41
41:BV:66:ARG:O	41:BV:68:LYS:N	2.42	0.41
31:BJ:129:UNK:O	31:BJ:131:UNK:N	2.54	0.41
22:CV:5:A:H2'	22:CV:6:G:C8	2.56	0.41
58:B4:6:HIS:HA	58:B4:7:PRO:HD3	1.89	0.41
59:DA:1024:G:C3'	59:DA:1025:G:H5''	2.45	0.41
59:DA:2180:U:H2'	59:DA:2181:G:C8	2.55	0.41
59:DA:1388:G:O2'	59:DA:1526:G:H5'	2.20	0.41
59:DA:1603:A:H2'	59:DA:1603:A:N3	2.35	0.41
20:AA:123:C:H5''	20:AA:311:C:O2'	2.20	0.41
35:DP:60:MET:HB3	59:DA:2392:A:C8	2.56	0.41
20:CA:259:G:H2'	20:CA:260:G:C8	2.56	0.41
59:DA:712:G:N2	59:DA:719:C:N3	2.57	0.41
51:D7:11:LYS:NZ	59:DA:685:A:OP1	2.37	0.41
26:DD:3:VAL:N	26:DD:20:ASP:HB2	2.20	0.41
25:DC:146:VAL:O	25:DC:150:ILE:HD13	2.21	0.41
60:DB:29:A:H2'	60:DB:30:C:H6	1.85	0.41
61:CY:701:FUA:H213	61:CY:701:FUA:H9	1.81	0.41
1:AB:68:ILE:HG23	1:AB:163:PHE:N	2.36	0.41
1:AB:71:VAL:CG2	1:AB:164:VAL:HG22	2.50	0.41
20:CA:1001:G:H1	20:CA:1039:C:H42	1.69	0.41
39:BT:26:ASP:CG	39:BT:27:THR:H	2.22	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:144:VAL:O	30:BH:148:ILE:HG12	2.20	0.41
59:DA:2210:G:N2	59:DA:2211:G:H5'	2.36	0.41
20:CA:357:G:H1'	20:CA:368:U:O2	2.20	0.41
17:CR:52:PRO:O	17:CR:56:THR:HG23	2.20	0.41
33:BN:33:LEU:HG	33:BN:50:ASP:OD2	2.20	0.41
59:DA:2328:A:H2'	59:DA:2329:G:H8	1.86	0.41
11:CL:42:THR:HG23	11:CL:43:VAL:H	1.84	0.41
31:DJ:50:UNK:O	31:DJ:52:UNK:N	2.53	0.41
59:DA:188:G:O2'	59:DA:1365:A:N6	2.53	0.41
59:DA:1324:G:C2	59:DA:1328:G:C6	3.09	0.41
25:BC:44:VAL:HA	25:BC:215:VAL:HA	2.01	0.41
23:AY:341:VAL:HB	23:AY:342:TYR:H	1.74	0.41
45:BZ:72:ARG:HH12	60:BB:104:A:P	2.44	0.41
29:DG:98:ARG:HH11	29:DG:98:ARG:CG	2.29	0.41
41:BV:34:GLU:O	41:BV:36:PRO:HD3	2.20	0.41
59:DA:1948:G:H2'	59:DA:1949:G:C8	2.56	0.41
48:B3:7:LYS:O	48:B3:54:VAL:HG22	2.20	0.41
29:BG:57:ALA:HB1	29:BG:90:LEU:HD13	2.02	0.41
59:DA:634:C:H2'	59:DA:635:C:H6	1.85	0.41
26:DD:165:ILE:HA	26:DD:175:LEU:HD23	2.02	0.41
26:BD:75:ILE:HA	26:BD:76:PRO:HD2	1.91	0.41
23:AY:35:TYR:CE1	23:AY:266:ASN:HB3	2.56	0.41
34:DO:23:ARG:HD2	34:DO:23:ARG:HA	1.70	0.41
59:DA:1076:C:H2'	59:DA:1077:A:C4'	2.51	0.41
59:BA:2741:A:H62	59:BA:2763:G:H21	1.69	0.41
27:DE:134:ILE:HG13	59:DA:2579:C:H4'	2.01	0.41
23:AY:9:LEU:HD13	23:AY:303:PRO:HB2	2.02	0.41
59:DA:155:C:N4	59:DA:171:G:H1	2.18	0.41
59:DA:2167:U:C4	59:DA:2168:G:C6	3.09	0.41
20:AA:1404:C:H2'	20:AA:1405:G:C8	2.55	0.41
38:DS:17:ARG:HA	38:DS:20:ARG:HB3	2.02	0.41
26:BD:263:ARG:CZ	26:BD:263:ARG:HB3	2.51	0.41
40:BU:24:TYR:CD2	59:BA:533:G:H5'	2.55	0.41
59:DA:2259:G:H2'	59:DA:2260:C:C6	2.55	0.41
8:AI:70:LYS:NZ	20:AA:1248:A:O2'	2.52	0.41
34:BO:23:ARG:HD3	59:BA:2561:A:C2	2.56	0.41
20:CA:441:A:H62	20:CA:493:G:H21	1.68	0.41
5:CF:11:ASN:HA	5:CF:12:PRO:HD2	1.78	0.41
23:AY:181:LEU:HG	23:AY:182:ARG:HG3	2.02	0.41
46:D0:2:ALA:HA	59:DA:2494:G:H5'	2.03	0.41
35:DP:75:ILE:HG22	35:DP:77:ARG:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:54:VAL:O	12:CM:57:ARG:HG2	2.20	0.41
10:AK:62:GLN:HG3	10:AK:97:ALA:HB2	2.03	0.41
23:AY:188:TYR:HA	23:AY:196:ILE:HB	2.03	0.41
45:DZ:51:ALA:HA	45:DZ:55:HIS:HB2	2.03	0.41
28:BF:33:LEU:HA	28:BF:33:LEU:HD13	1.90	0.41
20:AA:604:G:H1	20:AA:634:C:H42	1.69	0.41
59:BA:1992:G:C6	59:BA:1997:G:C2	3.09	0.41
20:AA:1276:G:H2'	20:AA:1277:C:C6	2.56	0.41
9:AJ:38:ILE:HG12	9:AJ:71:LEU:HB3	2.03	0.41
20:CA:25:C:H5'	20:CA:524:G:H1'	2.02	0.41
40:BU:13:LYS:O	40:BU:16:LYS:HB3	2.20	0.41
59:BA:560:C:H2'	59:BA:561:G:C8	2.56	0.41
28:DF:60:SER:HB3	28:DF:61:GLY:H	1.65	0.41
59:DA:1625:C:H2'	59:DA:1626:G:O4'	2.20	0.41
35:BP:95:VAL:CG2	35:BP:125:VAL:HA	2.50	0.41
42:BW:10:VAL:O	42:BW:100:THR:OG1	2.27	0.41
1:AB:128:GLU:HB3	1:AB:129:GLU:H	1.69	0.41
39:BT:117:ASP:OD2	39:BT:119:LYS:HB3	2.20	0.41
59:DA:329:G:H8	59:DA:329:G:P	2.43	0.41
15:AP:55:ARG:O	15:AP:58:TYR:HB3	2.20	0.41
60:DB:111:U:H2'	60:DB:112:G:C8	2.56	0.41
59:BA:1999:C:H4'	59:BA:2723:C:O2	2.21	0.41
20:CA:815:A:C8	20:CA:1529:G:C6	3.09	0.41
59:DA:141(A):A:H1'	59:DA:1408:C:O4'	2.20	0.41
59:BA:2023:G:C6	59:BA:2040:C:C2	3.09	0.41
59:DA:980:A:C4	59:DA:1136:G:O4'	2.73	0.41
38:DS:109:GLY:OXT	59:DA:2376:A:O2'	2.36	0.41
59:DA:413:C:H2'	59:DA:414:C:H6	1.86	0.41
18:CS:37:ARG:HD2	20:CA:1220:G:OP1	2.21	0.41
59:BA:2811:G:H1	59:BA:2889:C:H42	1.68	0.41
59:DA:459:U:C5	59:DA:470:A:C5	3.08	0.41
20:CA:1422:G:N2	20:CA:1478:C:N3	2.53	0.41
59:BA:29:U:H2'	59:BA:30:G:H8	1.85	0.41
11:CL:20:LYS:HE3	20:CA:555:C:OP1	2.21	0.41
21:CW:76:A:P	59:DA:2432:A:H4'	2.61	0.41
59:BA:227:A:C5	59:BA:2407:G:H1'	2.56	0.41
36:BQ:76:LYS:H	36:BQ:89:ASN:H	1.69	0.41
33:BN:9:VAL:HG21	33:BN:39:ARG:NH1	2.36	0.41
39:DT:50:ILE:HD11	39:DT:102:ILE:HG12	2.02	0.41
41:BV:39:LEU:O	41:BV:40:LEU:HB2	2.21	0.41
33:DN:66:LYS:O	33:DN:70:LYS:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:85:ILE:HG22	33:DN:86:PRO:HD2	2.03	0.41
59:BA:2109:U:O4	59:BA:2180:U:C4	2.73	0.41
11:CL:82:VAL:HB	11:CL:105:TYR:HB2	2.03	0.41
11:AL:32:PHE:HA	11:AL:85:ILE:O	2.21	0.41
20:AA:429:U:H1'	20:AA:430:A:H5''	2.03	0.41
25:BC:42:VAL:HG21	25:BC:190:ILE:HD11	2.01	0.41
59:DA:223:A:C5	59:DA:422:A:H1'	2.55	0.41
44:BY:68:HIS:ND1	44:BY:69:ALA:N	2.69	0.41
26:BD:183:ARG:HH21	26:BD:269:PHE:HB3	1.86	0.41
25:DC:139:PRO:HA	25:DC:145:THR:CB	2.51	0.41
25:DC:176:VAL:O	25:DC:178:LYS:HG2	2.21	0.41
33:DN:126:PRO:HB2	33:DN:127:ASP:H	1.53	0.41
60:DB:61:G:H2'	60:DB:62:C:C6	2.56	0.41
28:DF:129:PHE:HE2	28:DF:158:THR:HG1	1.67	0.41
1:AB:187:LEU:HD22	1:AB:188:ALA:N	2.36	0.41
12:CM:108:ARG:HH21	12:CM:114:ARG:CZ	2.34	0.41
3:CD:54:TYR:HA	3:CD:57:ARG:HE	1.85	0.41
20:AA:302:G:H21	20:AA:556:C:H4'	1.86	0.41
59:DA:270(Q):C:OP1	59:DA:270(Q):C:H2'	2.21	0.41
37:BR:4:LEU:HD12	59:BA:2822:G:O6	2.21	0.41
59:DA:812:C:N3	59:DA:1195:G:N2	2.57	0.41
38:BS:26:LEU:HD21	38:BS:101:LEU:HD22	2.02	0.41
38:BS:17:ARG:O	38:BS:21:THR:N	2.54	0.41
38:BS:99:LYS:HG2	38:BS:101:LEU:H	1.86	0.41
25:DC:15:VAL:HG12	25:DC:223:VAL:HG22	2.03	0.41
30:BH:52:VAL:HG21	30:BH:69:ARG:HA	2.03	0.41
59:DA:540:G:C6	59:DA:541:C:C4	3.08	0.41
59:DA:485:C:H2'	59:DA:486:C:C6	2.54	0.41
59:DA:558:G:O2'	59:DA:559:G:O5'	2.26	0.41
59:DA:1801:G:N2	59:DA:2207:C:H4'	2.36	0.41
26:DD:148:GLU:HA	26:DD:149:PRO:HD3	1.87	0.41
38:DS:99:LYS:HE3	38:DS:101:LEU:HG	2.03	0.41
38:DS:106:ARG:HE	38:DS:108:GLY:HA3	1.86	0.41
27:BE:84:PHE:CZ	27:BE:86:PRO:HB3	2.56	0.41
27:BE:32:PRO:O	27:BE:49:LEU:HA	2.21	0.41
20:CA:11:G:O6	20:CA:23:C:N3	2.54	0.41
59:DA:793:A:OP2	59:DA:2071:A:O2'	2.32	0.41
28:BF:154:VAL:HG13	28:BF:191:ARG:CB	2.51	0.41
20:CA:1145:C:HO2'	20:CA:1146:A:P	2.43	0.41
59:DA:278:A:HO2'	59:DA:279:C:C5'	2.32	0.41
26:BD:79:VAL:O	26:BD:96:HIS:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B8:55:ALA:O	52:B8:59:LYS:NZ	2.50	0.41
31:DJ:111:UNK:C	31:DJ:116:UNK:HA	2.51	0.41
45:BZ:82:ARG:CZ	45:BZ:82:ARG:HB3	2.51	0.41
59:BA:1499:C:H2'	59:BA:1500:G:O4'	2.20	0.41
11:AL:104:VAL:HG12	11:AL:105:TYR:CD1	2.56	0.41
59:BA:231:C:H2'	59:BA:232:G:O4'	2.20	0.41
20:AA:129(A):G:C6	20:AA:186(H):U:H4'	2.56	0.41
49:D5:33:CYS:HA	49:D5:34:PRO:HD2	1.92	0.41
36:DQ:72:LYS:N	36:DQ:94:VAL:O	2.54	0.41
48:D3:24:LYS:NZ	59:DA:931:G:H4'	2.36	0.41
23:AY:341:VAL:HG23	23:AY:350:GLU:HB2	2.03	0.41
46:B0:37:LEU:HG	46:B0:60:PHE:HA	2.02	0.41
36:BQ:72:LYS:HA	36:BQ:73:PRO:HD3	1.78	0.41
59:DA:2713:A:O2'	59:DA:2714:G:H5'	2.21	0.41
10:CK:38:ASN:HA	10:CK:39:PRO:HD3	1.71	0.41
59:BA:1294:U:H2'	59:BA:1295:C:H6	1.86	0.41
44:BY:97:ARG:NH1	44:BY:98:VAL:HG23	2.36	0.41
11:CL:5:PRO:HG2	11:CL:15:ARG:NH2	2.29	0.41
45:BZ:133:ILE:HA	45:BZ:134:PRO:HD2	1.94	0.41
20:CA:1265:G:O6	20:CA:1270:C:N3	2.53	0.41
59:BA:750:A:H4'	59:BA:1617:C:O2	2.21	0.41
42:BW:18:ARG:HH11	42:BW:76:VAL:HG13	1.85	0.41
20:CA:1399:C:C2	20:CA:1502:A:N6	2.89	0.41
59:DA:1700:A:H3'	59:DA:1701:A:H8	1.85	0.41
59:DA:314:A:H2'	59:DA:315:G:C8	2.55	0.41
34:BO:64:ARG:NH2	39:BT:70:VAL:HG23	2.36	0.41
36:DQ:11:LYS:HD3	36:DQ:87:LYS:HD3	2.02	0.41
7:CH:11:THR:HG21	20:CA:876:G:H1'	2.03	0.41
20:AA:862:C:H1'	20:AA:874:G:H4'	2.02	0.41
59:BA:1266:G:O2'	59:BA:1267:U:OP2	2.39	0.41
23:AY:617:MET:HA	23:AY:620:VAL:HG22	2.01	0.41
34:BO:18:LYS:HB2	34:BO:45:GLU:CB	2.48	0.41
21:CW:64:G:N1	21:CW:65:U:N3	2.69	0.41
5:AF:99:ALA:HB2	17:AR:31:LEU:HD21	2.02	0.41
57:B1:27:GLU:HA	57:B1:31:GLY:HA2	2.02	0.41
23:AY:354:ARG:HH12	23:AY:378:VAL:HG11	1.86	0.41
47:B2:17:SER:O	47:B2:20:GLU:HB3	2.21	0.41
45:DZ:102:LEU:HD21	45:DZ:124:ILE:HD12	2.03	0.41
57:D1:39:LYS:HG2	57:D1:40:ARG:H	1.86	0.41
57:D1:14:VAL:HA	57:D1:41:ARG:HG2	2.02	0.41
57:D1:39:LYS:HG2	57:D1:40:ARG:N	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CA:68(J):G:H2'	20:CA:68(K):U:O4'	2.20	0.41
20:CA:1285:A:H62	20:CA:1355:G:H5'	1.86	0.41
20:CA:583:A:H2'	20:CA:584:G:O4'	2.20	0.41
13:AN:53:LEU:HA	13:AN:54:PRO:HD3	1.59	0.41
12:AM:73:GLU:O	12:AM:77:ASN:ND2	2.38	0.41
3:AD:64:LEU:HD23	3:AD:203:VAL:HG21	2.03	0.41
23:CY:89:ASP:HB3	23:CY:457:LEU:CD2	2.51	0.41
34:DO:37:ASP:O	34:DO:61:VAL:HA	2.20	0.41
20:AA:588:G:H1	20:AA:651:C:N4	2.18	0.41
20:CA:58:C:N3	20:CA:354:G:O6	2.54	0.41
34:BO:37:ASP:O	34:BO:61:VAL:HA	2.20	0.41
23:CY:201:ILE:HG12	23:CY:206:LEU:H	1.85	0.41
1:CB:55:PHE:HE1	1:CB:218:ALA:HA	1.86	0.41
7:AH:12:ARG:HH11	7:AH:26:VAL:HG23	1.85	0.41
59:BA:489:G:N2	59:BA:1321:A:OP1	2.53	0.41
26:BD:42:GLY:O	26:BD:43:ARG:HG3	2.21	0.41
14:CO:10:LYS:O	14:CO:14:GLU:HB2	2.21	0.41
59:BA:1028:A:N6	59:BA:1125:G:H2'	2.36	0.41
59:BA:242:G:H1'	59:BA:254:G:N1	2.35	0.41
20:AA:322:C:H5	20:AA:328:C:H5	1.69	0.41
46:B0:23:VAL:HA	46:B0:38:VAL:HA	2.03	0.41
11:AL:11:VAL:HG22	16:AQ:32:TYR:HB3	2.03	0.41
59:DA:817:C:N4	59:DA:1190:G:H1	2.18	0.41
20:CA:859:A:H2'	20:CA:860:A:C8	2.56	0.41
29:DG:169:ALA:O	29:DG:173:LEU:HG	2.21	0.41
26:BD:248:SER:C	26:BD:250:TRP:H	2.24	0.41
25:BC:78:ILE:HG21	25:BC:124:VAL:HG21	2.02	0.41
23:CY:524:GLU:OE1	23:CY:564:LYS:HG3	2.20	0.41
59:DA:1695:G:H3'	59:DA:1695:G:N3	2.36	0.41
20:AA:115:G:O2'	20:AA:116:A:P	2.78	0.41
51:B7:6:GLN:O	59:BA:686:G:H8	2.03	0.41
23:CY:168:ILE:HG23	23:CY:205:TYR:CE2	2.55	0.41
44:DY:44:ILE:O	44:DY:62:GLU:HB3	2.21	0.41
8:AI:69:GLY:O	8:AI:73:GLN:N	2.49	0.41
5:AF:2:ARG:CZ	5:AF:69:GLU:HB3	2.51	0.41
3:CD:135:LEU:H	3:CD:135:LEU:HD13	1.86	0.41
2:CC:157:ILE:HD11	2:CC:164:ARG:N	2.35	0.41
20:AA:1534:A:H2'	20:AA:1535:C:C6	2.55	0.41
20:CA:1343:G:H2'	20:CA:1344:C:C6	2.56	0.41
45:DZ:81:ARG:O	45:DZ:82:ARG:HB2	2.21	0.41
59:BA:2795:G:O2'	59:BA:2801:A:N6	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:171:GLU:H	27:DE:184:VAL:HG12	1.86	0.41
26:BD:177:LEU:HD23	26:BD:178:PRO:CD	2.51	0.41
34:DO:12:ASP:HA	34:DO:97:ARG:O	2.21	0.41
59:DA:1765:C:H2'	59:DA:1766:U:H6	1.86	0.41
36:BQ:21:THR:HG23	36:BQ:101:ARG:HB2	2.03	0.41
35:DP:127:ALA:HB3	35:DP:130:PHE:CZ	2.56	0.41
47:B2:28:LYS:HD3	47:B2:28:LYS:HA	1.79	0.41
17:CR:71:LYS:HE2	20:CA:719:C:N4	2.36	0.41
2:AC:29:TYR:HE2	13:AN:37:PHE:CD2	2.38	0.41
44:DY:6:HIS:NE2	44:DY:30:VAL:HG11	2.36	0.41
59:DA:1069:A:H4'	59:DA:1070:A:H5''	2.03	0.41
2:AC:40:ARG:O	2:AC:44:GLU:HG3	2.21	0.41
43:BX:12:VAL:HG12	43:BX:17:ALA:HB1	2.01	0.41
6:AG:115:ARG:HH12	6:AG:117:ALA:HB3	1.85	0.41
59:DA:621:A:C2	59:DA:622:G:H1'	2.56	0.41
12:AM:67:GLU:HB2	12:AM:71:ARG:HH21	1.85	0.41
59:BA:195:A:H5''	59:BA:196:A:OP2	2.21	0.41
7:CH:49:GLU:HG2	7:CH:51:VAL:HG13	2.02	0.41
12:CM:19:LEU:HD13	12:CM:22:ILE:HD12	2.03	0.41
20:AA:1440(C):G:N7	39:BT:118:ARG:HD3	2.36	0.41
26:BD:226:MET:HG2	59:BA:782:A:C2	2.56	0.41
59:BA:2835:A:N6	59:BA:2879:C:O5'	2.54	0.41
35:DP:8:PRO:HG3	59:DA:1242:A:C2	2.56	0.41
3:AD:92:VAL:O	3:AD:96:LEU:HD13	2.21	0.41
49:B5:51:TYR:HD2	49:B5:52:TYR:H	1.67	0.41
3:AD:100:ARG:HH11	3:AD:137:SER:HA	1.86	0.41
59:DA:715:G:H2'	59:DA:716:A:C8	2.56	0.41
20:AA:377:G:H1	20:AA:386:C:H42	1.68	0.41
20:AA:1196:U:O2	20:AA:1196:U:H2'	2.21	0.41
1:AB:178:ARG:HH22	7:AH:71:GLY:H	1.68	0.41
45:DZ:146:ILE:HA	45:DZ:174:VAL:HB	2.03	0.41
59:BA:2773:C:H2'	59:BA:2774:C:C6	2.55	0.41
8:AI:85:LEU:HG	8:AI:85:LEU:H	1.65	0.41
2:AC:177:THR:HG23	20:AA:1111:A:H2	1.86	0.41
39:BT:117:ASP:HB3	39:BT:120:ARG:HG2	2.03	0.41
29:DG:165:THR:OG1	29:DG:168:GLU:HG2	2.20	0.41
59:BA:771:G:O2'	59:BA:1355:G:H4'	2.21	0.41
42:DW:36:LEU:HD13	42:DW:48:ALA:HA	2.03	0.41
20:CA:148:G:H1	20:CA:174:C:H42	1.69	0.41
19:CT:10:LEU:HD12	19:CT:11:SER:H	1.86	0.41
34:DO:118:ALA:HA	34:DO:119:PRO:HD2	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:5:TYR:O	8:CI:84:ALA:HA	2.20	0.41
16:CQ:61:GLU:HB2	16:CQ:71:PHE:CE1	2.55	0.41
25:DC:64:SER:HA	25:DC:160:GLY:O	2.21	0.41
20:AA:138:G:H2'	20:AA:139:G:C8	2.56	0.41
57:D1:26:ARG:O	57:D1:32:LYS:N	2.33	0.41
44:BY:11:ASP:CG	44:BY:12:THR:H	2.24	0.41
16:AQ:52:LYS:HB3	16:AQ:52:LYS:HE3	1.64	0.41
25:DC:130:ARG:HA	25:DC:130:ARG:HD3	1.87	0.41
8:AI:128:ARG:H	8:AI:128:ARG:HD3	1.86	0.41
59:DA:2235:G:H2'	59:DA:2236:C:C6	2.56	0.41
20:AA:997:U:H2'	20:AA:998:G:O4'	2.21	0.41
28:BF:196:LEU:O	28:BF:200:GLU:HG2	2.21	0.41
15:AP:36:ILE:HB	15:AP:52:ASP:HB3	2.01	0.41
20:AA:1465:C:H2'	20:AA:1466:C:C6	2.56	0.41
58:B4:33:VAL:HB	58:B4:34:GLU:H	1.72	0.41
1:AB:83:MET:HB2	1:AB:234:PRO:HG3	2.03	0.41
36:DQ:20:ALA:C	36:DQ:22:LYS:H	2.25	0.41
37:DR:115:GLU:CD	37:DR:117:VAL:H	2.24	0.41
6:CG:8:GLU:HB2	6:CG:9:VAL:H	1.60	0.41
35:BP:67:MET:CE	35:BP:70:GLN:HG2	2.50	0.41
53:B9:30:PRO:HB2	59:BA:2527:C:H5''	2.03	0.41
23:AY:412:ALA:HB2	23:AY:479:PRO:HA	2.03	0.41
46:B0:33:ALA:HB1	59:BA:2352:A:H2	1.85	0.41
2:AC:64:VAL:HB	2:AC:99:VAL:HA	2.02	0.41
14:AO:43:LEU:HD21	14:AO:53:HIS:HB2	2.02	0.41
59:DA:2121:G:H2'	59:DA:2122:U:C6	2.56	0.41
59:DA:945:A:OP2	59:DA:945:A:H4'	2.20	0.41
9:AJ:43:ARG:HA	9:AJ:43:ARG:HD3	1.70	0.41
26:DD:65:ILE:H	26:DD:65:ILE:HD13	1.86	0.41
21:AW:14:A:H2'	21:AW:15:G:O4'	2.21	0.41
29:BG:100:TRP:O	29:BG:104:GLU:HB2	2.20	0.41
59:DA:1007:C:H5''	59:DA:1008:C:C3'	2.51	0.41
33:DN:62:VAL:HG23	59:DA:1140:C:OP1	2.21	0.41
59:DA:2037:G:H2'	59:DA:2038:G:O4'	2.20	0.41
3:CD:15:GLU:CD	3:CD:19:LEU:HD11	2.41	0.41
3:CD:14:ARG:HG2	3:CD:66:ARG:HH12	1.86	0.41
27:DE:82:ARG:HH22	59:DA:2638:G:P	2.43	0.41
59:DA:1179:C:H2'	59:DA:1180:C:C6	2.55	0.41
1:CB:187:LEU:HB2	1:CB:201:ILE:HB	2.03	0.41
35:DP:56:SER:OG	35:DP:60:MET:SD	2.77	0.41
59:BA:2492:U:H2'	59:BA:2493:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DT:64:ARG:NH1	39:DT:103:ARG:HG2	2.36	0.41
59:BA:137(A):C:H2'	59:BA:137(B):G:H8	1.85	0.41
57:B1:41:ARG:HE	57:B1:41:ARG:HB3	1.38	0.41
25:DC:42:VAL:HA	25:DC:217:THR:HA	2.02	0.41
28:DF:66:PRO:HD2	28:DF:70:THR:HG23	2.03	0.41
20:CA:774:G:OP1	26:DD:202:LYS:HE3	2.21	0.41
4:CE:93:PRO:HG3	7:CH:105:ARG:HG2	2.03	0.41
30:BH:42:ARG:HD2	30:BH:42:ARG:HA	1.84	0.41
59:DA:680:G:H2'	59:DA:681:G:C8	2.56	0.41
59:DA:529:A:N7	59:DA:2041:U:O4	2.54	0.41
59:DA:563:G:C6	59:DA:2018:G:C5	3.08	0.41
19:CT:72:LEU:HD22	19:CT:76:ALA:HB1	2.02	0.41
42:DW:16:LYS:O	42:DW:20:VAL:HG23	2.20	0.41
9:CJ:49:VAL:HG23	13:CN:41:ARG:HB2	2.03	0.41
27:BE:74:PRO:HG2	27:BE:77:ILE:HA	2.03	0.41
11:CL:42:THR:HA	11:CL:52:LEU:HA	2.03	0.41
28:DF:37:VAL:O	28:DF:41:LEU:HG	2.21	0.41
59:DA:1539:G:C6	59:DA:1540:G:C5	3.08	0.41
12:CM:97:PRO:HA	12:CM:110:ARG:HG3	2.03	0.41
30:DH:94:TYR:CD2	30:DH:107:VAL:HB	2.56	0.41
20:CA:678:U:H1'	20:CA:777:A:O3'	2.20	0.41
11:AL:84:LEU:HD13	11:AL:104:VAL:CG1	2.50	0.41
20:AA:1350:A:H2'	20:AA:1351:U:H6	1.86	0.41
36:DQ:1:MET:H1	36:DQ:48:GLU:HB2	1.84	0.41
20:AA:263:A:O2'	20:AA:264:U:O5'	2.35	0.41
16:AQ:67:LYS:C	16:AQ:69:LYS:H	2.24	0.41
23:CY:315:LYS:H	23:CY:327:PHE:HB2	1.86	0.41
58:B4:12:ALA:HB2	58:B4:28:LYS:O	2.21	0.41
59:BA:570:G:C5'	59:BA:972:G:H4'	2.47	0.41
20:AA:357:G:OP1	20:AA:367:U:H5''	2.21	0.41
23:CY:70:THR:HG22	23:CY:71:THR:O	2.21	0.41
59:BA:618(A):G:H2'	59:BA:618(B):C:H6	1.83	0.41
53:D9:9:ARG:NH1	53:D9:16:VAL:H	2.19	0.41
59:DA:2733:A:C8	59:DA:2734:A:C8	3.09	0.41
59:BA:1614:A:OP1	59:BA:1617:C:N4	2.52	0.41
59:BA:1696:G:H2'	59:BA:1697:G:O4'	2.21	0.41
59:DA:1689:A:N6	59:DA:1697:G:H2'	2.36	0.41
8:AI:99:LEU:HD12	8:AI:101:PHE:CE1	2.55	0.41
35:BP:24:GLY:HA3	35:BP:33:ARG:NH1	2.36	0.41
59:BA:2199:A:N6	59:BA:2224:G:O2'	2.54	0.41
35:DP:50:ARG:NH2	52:D8:59:LYS:HD2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:40:GLN:HB2	28:BF:40:GLN:HE21	1.62	0.41
59:DA:2645:G:H3'	59:DA:2646:C:C5'	2.51	0.41
43:BX:10:ALA:O	43:BX:29:TRP:HD1	2.04	0.41
23:CY:72:CYS:CB	23:CY:79:ILE:HB	2.49	0.41
60:DB:46:A:C5	60:DB:47:C:C4	3.09	0.41
59:DA:723:G:H2'	59:DA:724:U:C6	2.56	0.41
20:CA:68(I):G:C2	20:CA:68(J):G:C8	3.09	0.41
7:CH:89:PRO:HG2	20:CA:878:G:H5'	2.03	0.41
59:BA:2211:G:O2'	59:BA:2212:A:H3'	2.21	0.41
38:DS:19:LYS:HG3	59:DA:2378:A:C2	2.56	0.41
60:BB:49:C:N4	60:BB:50:G:O6	2.54	0.41
33:DN:9:VAL:HG11	33:DN:39:ARG:HH12	1.86	0.41
34:BO:12:ASP:HA	34:BO:97:ARG:O	2.21	0.41
12:AM:40:ASN:HA	12:AM:41:PRO:HD3	1.84	0.41
59:DA:1077:A:N1	59:DA:1088:A:H2'	2.36	0.41
36:DQ:24:GLY:O	36:DQ:101:ARG:HA	2.21	0.41
42:BW:1:MET:HB3	42:BW:64:MET:SD	2.61	0.41
52:D8:23:VAL:HA	52:D8:48:PHE:O	2.21	0.41
35:DP:101:VAL:HG12	35:DP:108:LYS:H	1.86	0.41
7:AH:88:LYS:H	7:AH:91:ARG:HB2	1.86	0.41
59:DA:1635:G:H2'	59:DA:1636:C:C6	2.55	0.41
20:AA:764:C:H2'	20:AA:765:G:C8	2.55	0.41
27:DE:143:ASN:CG	59:DA:2574:G:HO2'	2.25	0.41
59:BA:1241:A:N7	59:BA:1242:A:C5	2.89	0.41
59:DA:548:A:H8	59:DA:548:A:O5'	2.04	0.41
59:DA:1731:G:O2'	59:DA:1732:A:H8	2.03	0.41
15:CP:80:PHE:O	20:CA:458(E):A:H4'	2.20	0.41
25:BC:9:ARG:O	25:BC:12:LEU:HB3	2.21	0.41
20:AA:615:C:H2'	20:AA:616:G:O4'	2.20	0.41
39:BT:129:ARG:NE	39:BT:129:ARG:HA	2.36	0.41
59:BA:2541:A:H8	59:BA:2541:A:O5'	2.04	0.41
40:BU:26:GLY:O	40:BU:29:SER:OG	2.34	0.41
35:DP:49:ARG:O	52:D8:55:ALA:HB1	2.21	0.41
43:DX:63:LYS:HE2	43:DX:63:LYS:HB3	1.96	0.41
45:DZ:61:LEU:HD22	45:DZ:63:ASP:HB3	2.03	0.41
20:AA:603:U:H2'	20:AA:604:G:C8	2.56	0.41
57:D1:26:ARG:HA	57:D1:26:ARG:HD2	1.80	0.41
33:BN:78:TYR:CG	59:BA:2642:G:H5'	2.56	0.41
59:BA:1362:C:H2'	59:BA:1363:C:O4'	2.20	0.41
28:BF:90:PHE:HB2	59:BA:588:U:H1'	2.02	0.41
59:DA:10:G:N2	59:DA:2801:A:O3'	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:121:LYS:HA	35:DP:122:PRO:HD3	1.88	0.41
5:CF:89:MET:HB3	17:CR:76:LEU:HD21	2.03	0.41
20:AA:1212:U:H5'	20:AA:1213:A:OP1	2.20	0.41
27:BE:16:ARG:NE	27:BE:173:VAL:HG11	2.34	0.41
6:CG:4:ARG:HG2	20:CA:932:C:OP1	2.21	0.41
32:BK:112:MET:HB3	32:BK:113:PRO:HD3	2.02	0.41
45:BZ:57:ILE:HA	45:BZ:57:ILE:HD12	1.94	0.41
19:CT:38:LYS:HA	19:CT:38:LYS:HD3	1.86	0.41
3:CD:179:GLU:HG2	3:CD:179:GLU:H	1.76	0.41
4:CE:39:GLY:HA2	4:CE:69:VAL:HB	2.02	0.41
29:BG:34:LEU:HD13	29:BG:99:MET:HE1	2.03	0.41
59:DA:998:C:H2'	59:DA:999:U:O4'	2.21	0.40
59:BA:1663:C:O2'	59:BA:1664:A:H8	2.04	0.40
34:BO:68:GLU:OE2	34:BO:68:GLU:N	2.50	0.40
27:BE:116:VAL:HG13	27:BE:122:PHE:HB2	2.01	0.40
1:CB:27:LYS:HB2	1:CB:194:PRO:CG	2.51	0.40
59:BA:1539:G:H2'	59:BA:1540:G:O4'	2.21	0.40
20:CA:1409:C:H2'	20:CA:1410:G:C8	2.56	0.40
57:D1:37:ILE:HG21	59:DA:200:U:O2'	2.22	0.40
59:BA:2173:A:P	59:BA:2173:A:H8	2.44	0.40
25:BC:74:ARG:O	25:BC:76:LEU:N	2.46	0.40
59:BA:308:G:H2'	59:BA:309:G:O4'	2.22	0.40
59:BA:274:G:H2'	59:BA:275:G:O4'	2.22	0.40
20:AA:961:U:C2	20:AA:1201:A:N1	2.87	0.40
1:AB:108:ILE:HG21	1:AB:152:PHE:CE1	2.56	0.40
23:CY:526:VAL:CG2	23:CY:566:THR:HG23	2.51	0.40
38:DS:41:ASP:HB3	38:DS:47:THR:O	2.20	0.40
59:BA:2826:A:C5	59:BA:2827:C:C5	3.08	0.40
42:BW:40:ASN:O	42:BW:41:LYS:HG2	2.21	0.40
59:BA:395:U:O2	59:BA:396:G:N7	2.53	0.40
59:DA:992:C:N4	59:DA:1162:G:H1	2.16	0.40
40:BU:49:HIS:CD2	59:BA:559:G:N2	2.87	0.40
59:DA:2842:G:H2'	59:DA:2843:G:C8	2.56	0.40
59:BA:1088:A:N3	59:BA:1088:A:H5'	2.36	0.40
59:DA:2468:G:O2'	59:DA:2469:A:H5''	2.21	0.40
59:DA:277:C:C6	59:DA:278:A:C8	3.09	0.40
59:BA:1937:A:H8	59:BA:1937:A:H2'	1.74	0.40
30:DH:27:LYS:HE3	30:DH:28:GLY:C	2.41	0.40
20:CA:1225:A:H2'	20:CA:1226:C:C5	2.55	0.40
57:B1:71:TYR:O	57:B1:74:VAL:HB	2.21	0.40
59:DA:1324:G:H1'	59:DA:1616:A:N6	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:976:G:N2	20:AA:1362(A):C:OP2	2.23	0.40
35:DP:52:GLU:CG	35:DP:53:GLY:H	2.34	0.40
10:AK:89:ALA:O	10:AK:91:ARG:N	2.54	0.40
47:D2:20:GLU:O	47:D2:24:LEU:HG	2.21	0.40
36:BQ:52:VAL:CG1	59:BA:2482:G:H22	2.34	0.40
23:CY:611:THR:HA	23:CY:642:VAL:HG22	2.03	0.40
60:BB:73:A:H3'	60:BB:74:U:C5	2.56	0.40
45:BZ:10:ARG:H	45:BZ:37:VAL:HA	1.86	0.40
59:BA:2850:A:H2'	59:BA:2851:A:C8	2.56	0.40
23:CY:14:ASN:ND2	23:CY:80:ASN:HB2	2.36	0.40
20:CA:673:G:H2'	20:CA:674:G:H8	1.80	0.40
59:DA:1474:C:H2'	59:DA:1475:G:C8	2.52	0.40
59:DA:1474:C:C2	59:DA:1475:G:C8	3.09	0.40
15:CP:49:LEU:HA	15:CP:49:LEU:HD12	1.76	0.40
2:AC:184:TYR:HB2	2:AC:201:TYR:CD2	2.57	0.40
59:DA:2148:G:H2'	59:DA:2149:G:O4'	2.21	0.40
59:DA:2344:U:H4'	59:DA:2345:G:OP1	2.21	0.40
20:AA:599:C:N4	20:AA:639:G:H1	2.13	0.40
59:DA:1121:C:H2'	59:DA:1122:G:O4'	2.21	0.40
59:BA:2111:C:H1'	59:BA:2118:U:C4'	2.52	0.40
37:BR:61:HIS:NE2	59:BA:2870:C:H5'	2.36	0.40
11:AL:86:ARG:HB3	11:AL:99:HIS:H	1.86	0.40
59:BA:1954:G:N3	59:BA:1956:U:N3	2.69	0.40
6:CG:87:VAL:HG21	6:CG:154:TYR:HB2	2.03	0.40
23:CY:151:ARG:HB2	23:CY:151:ARG:CZ	2.51	0.40
4:AE:52:PRO:O	4:AE:56:GLN:HG2	2.20	0.40
4:AE:48:ALA:HA	4:AE:49:PRO:HD3	1.93	0.40
26:DD:258:LYS:HG2	59:DA:1798:U:OP2	2.21	0.40
20:CA:150:C:H2'	20:CA:151:A:O4'	2.21	0.40
20:CA:303:A:H2'	20:CA:304:U:O4'	2.20	0.40
42:BW:16:LYS:O	42:BW:20:VAL:HG23	2.21	0.40
59:DA:2531:A:H2'	59:DA:2532:G:O4'	2.21	0.40
18:CS:6:LYS:HG2	18:CS:7:LYS:N	2.36	0.40
26:DD:30:GLU:H	26:DD:30:GLU:CD	2.24	0.40
59:BA:2181:G:H2'	59:BA:2182:G:O4'	2.21	0.40
20:AA:1372:U:H2'	20:AA:1373:G:O4'	2.20	0.40
14:AO:5:LYS:CD	14:AO:5:LYS:H	2.33	0.40
34:DO:86:ILE:HD13	34:DO:86:ILE:HA	1.89	0.40
59:BA:1347:G:H2'	59:BA:1348:G:H8	1.85	0.40
20:CA:17:U:H2'	20:CA:18:C:C6	2.56	0.40
4:AE:64:ARG:NE	4:AE:64:ARG:HA	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D8:8:LYS:HA	52:D8:8:LYS:HD3	1.73	0.40
59:BA:2507:C:H2'	59:BA:2508:G:C8	2.56	0.40
59:BA:110:G:C2	59:BA:111:A:C8	3.09	0.40
1:AB:110:GLN:HA	1:AB:113:HIS:HB2	2.02	0.40
19:AT:53:LEU:HD23	19:AT:53:LEU:HA	1.90	0.40
33:DN:100:GLU:HB3	33:DN:117:PHE:CZ	2.56	0.40
59:DA:1806:C:H2'	59:DA:1807:G:H8	1.85	0.40
19:AT:84:LEU:O	19:AT:88:VAL:HG23	2.21	0.40
23:CY:440:VAL:HG13	23:CY:451:ILE:HD13	2.03	0.40
20:CA:985:C:H2'	20:CA:986:A:C8	2.57	0.40
30:DH:15:VAL:HG11	30:DH:76:VAL:HG13	2.03	0.40
20:CA:343:U:O3'	20:CA:344:A:H8	2.04	0.40
26:DD:75:ILE:HA	26:DD:76:PRO:HD2	1.87	0.40
18:AS:50:ALA:HA	18:AS:59:PRO:HA	2.03	0.40
6:CG:29:LYS:HB3	6:CG:105:VAL:HG21	2.03	0.40
20:CA:369:C:OP2	20:CA:388:G:N2	2.51	0.40
40:DU:11:ARG:HH12	59:DA:28:A:H2	1.69	0.40
30:DH:70:THR:HA	30:DH:73:ALA:HB3	2.02	0.40
6:CG:104:LEU:HA	6:CG:104:LEU:HD13	1.92	0.40
23:AY:430:ARG:HB2	23:AY:430:ARG:CZ	2.51	0.40
59:DA:779:U:H2'	59:DA:780:G:C8	2.56	0.40
27:DE:82:ARG:HG3	27:DE:83:ASP:CG	2.42	0.40
59:BA:1418:G:C2	59:BA:1580:A:N6	2.87	0.40
59:DA:767:U:H2'	59:DA:768:G:H8	1.85	0.40
59:BA:516:C:H2'	59:BA:517:C:C6	2.57	0.40
36:BQ:14:ARG:NH2	59:BA:957:A:H3'	2.36	0.40
11:CL:85:ILE:HD12	11:CL:98:TYR:CB	2.50	0.40
16:CQ:64:PRO:HB3	16:CQ:70:ARG:NH1	2.37	0.40
26:DD:78:LYS:O	26:DD:96:HIS:HB2	2.21	0.40
59:DA:1613:G:H2'	59:DA:1617:C:H42	1.86	0.40
26:BD:147:LEU:HA	26:BD:185:VAL:CG1	2.50	0.40
4:AE:127:ASN:O	4:AE:131:ILE:HG12	2.21	0.40
28:BF:9:ILE:CG2	28:BF:125:LEU:H	2.30	0.40
25:DC:78:ILE:HG22	25:DC:97:GLY:O	2.21	0.40
42:BW:41:LYS:HD3	59:BA:2010:G:OP1	2.22	0.40
59:BA:869:G:H2'	59:BA:870:A:O4'	2.20	0.40
25:DC:11:LEU:O	25:DC:221:PRO:HG3	2.21	0.40
59:BA:370:G:H4'	59:BA:371:A:OP2	2.22	0.40
59:DA:680:G:N2	59:DA:797:C:N3	2.56	0.40
26:DD:147:LEU:HD23	26:DD:148:GLU:N	2.37	0.40
41:BV:59:ALA:HB1	41:BV:96:ILE:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1077:A:N1	59:BA:1088:A:H2'	2.36	0.40
20:CA:12:U:O2	20:CA:22:G:N2	2.46	0.40
20:CA:885:G:H1	20:CA:912:C:N4	2.16	0.40
20:CA:521:G:O2'	20:CA:536:C:O2'	2.18	0.40
9:AJ:52:GLY:HA2	20:AA:1059:C:O2'	2.21	0.40
35:BP:27:HIS:CE1	59:BA:814:C:H3'	2.57	0.40
9:AJ:49:VAL:HG22	9:AJ:50:ILE:N	2.37	0.40
59:BA:1935:G:H1'	59:BA:1937:A:C2	2.56	0.40
2:AC:66:VAL:O	2:AC:102:ASN:N	2.54	0.40
52:B8:22:VAL:HB	52:B8:53:PRO:HG3	2.03	0.40
20:CA:713:G:H21	20:CA:777:A:C1'	2.33	0.40
59:BA:2656:U:O2	59:BA:2656:U:H2'	2.21	0.40
20:CA:992:U:H3	20:CA:1044:A:H62	1.69	0.40
26:DD:242:ARG:HE	59:DA:1826:G:H4'	1.85	0.40
17:CR:59:SER:O	17:CR:63:GLN:N	2.47	0.40
20:AA:892:A:H2'	20:AA:893:C:H6	1.86	0.40
25:BC:19:LYS:HB3	25:BC:20:VAL:H	1.79	0.40
59:DA:2134:A:N6	59:DA:2157:G:H1'	2.36	0.40
59:DA:479:A:H4'	59:DA:480:A:C5'	2.50	0.40
40:BU:28:ARG:HD3	40:BU:38:THR:HG21	2.03	0.40
59:DA:1654:A:H2'	59:DA:1655:A:H8	1.87	0.40
45:DZ:67:LEU:HA	45:DZ:68:PRO:HD3	1.99	0.40
1:AB:133:LYS:HD3	20:AA:1158:C:H5''	2.03	0.40
21:CW:21:A:H2'	21:CW:46:G:O6	2.21	0.40
43:BX:10:ALA:HA	43:BX:11:PRO:HD2	1.93	0.40
60:DB:49:C:H2'	60:DB:50:G:H8	1.84	0.40
8:AI:111:ARG:HD2	13:AN:61:TRP:HE1	1.86	0.40
53:D9:2:LYS:HE3	53:D9:2:LYS:HB3	1.86	0.40
59:DA:184:C:H42	59:DA:212:G:H1	1.68	0.40
48:B3:31:LEU:HD22	48:B3:32:GLN:HG2	2.03	0.40
2:AC:32:LEU:HD23	2:AC:59:ARG:HH21	1.85	0.40
30:DH:121:ILE:HG22	30:DH:135:GLY:HA2	2.03	0.40
49:D5:45:VAL:HG13	49:D5:51:TYR:N	2.35	0.40
29:DG:107:LEU:HA	29:DG:111:LEU:HD12	2.03	0.40
21:CW:72:C:H2'	21:CW:73:A:O4'	2.21	0.40
28:DF:29:ASN:O	28:DF:33:LEU:HD22	2.21	0.40
11:AL:10:LEU:HB3	16:AQ:32:TYR:CE1	2.56	0.40
7:CH:37:ARG:O	7:CH:41:ARG:HB2	2.21	0.40
59:DA:1207:C:N4	59:DA:1239:G:H1	2.19	0.40
59:DA:2119:A:H61	59:DA:2168:G:H21	1.69	0.40
16:AQ:8:GLY:O	16:AQ:56:VAL:HA	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B9:2:LYS:HA	53:B9:33:LYS:O	2.21	0.40
20:AA:120:A:C6	20:AA:122:G:C2	3.08	0.40
20:CA:1349:A:H2'	20:CA:1350:A:O4'	2.21	0.40
28:DF:107:LYS:HZ3	59:DA:618(A):G:H5''	1.86	0.40
46:D0:12:ASN:C	46:D0:14:ARG:H	2.23	0.40
23:AY:197:ARG:HH21	23:AY:198:GLU:HG2	1.86	0.40
17:AR:44:LEU:HD21	17:AR:50:ILE:HG12	2.03	0.40
45:DZ:82:ARG:CZ	45:DZ:82:ARG:HB3	2.50	0.40
20:AA:180:U:H2'	20:AA:181:G:H5'	2.03	0.40
59:BA:1565:C:H1'	59:BA:1566:A:H8	1.85	0.40
59:DA:2555:U:H2'	59:DA:2556:C:H5'	2.03	0.40
23:CY:167:PRO:HG2	23:CY:170:ARG:HE	1.85	0.40
53:D9:1:MET:HG2	59:DA:2477:C:C5	2.56	0.40
45:BZ:110:GLY:HA2	45:BZ:146:ILE:HG13	2.02	0.40
59:BA:1292:U:H2'	59:BA:1293:C:H6	1.86	0.40
15:AP:15:PRO:HD2	15:AP:42:ARG:NE	2.37	0.40
23:CY:598:ASP:HA	23:CY:599:PRO:HD2	1.86	0.40
59:BA:2841:C:H2'	59:BA:2842:G:C8	2.55	0.40
59:BA:163:U:H2'	59:BA:164:U:H5'	2.03	0.40
27:DE:39:PRO:HA	27:DE:43:GLY:H	1.87	0.40
16:CQ:101:ARG:HG2	20:CA:247:G:OP2	2.22	0.40
6:AG:121:ALA:O	6:AG:125:MET:HG2	2.22	0.40
20:CA:373:A:O4'	20:CA:481:G:H5'	2.21	0.40
20:CA:1253:G:H1	20:CA:1284:C:H42	1.69	0.40
20:AA:306:G:O2'	20:AA:307:C:H5'	2.20	0.40
11:AL:55:VAL:HG12	11:AL:67:THR:HG22	2.03	0.40
32:BK:3:LYS:O	32:BK:61:ALA:HA	2.21	0.40
59:DA:287:C:H2'	59:DA:288:C:O4'	2.22	0.40
31:BJ:86:UNK:O	31:BJ:87:UNK:C	2.69	0.40
35:BP:87:ASP:N	35:BP:87:ASP:OD1	2.54	0.40
6:CG:149:ARG:O	6:CG:149:ARG:HD3	2.21	0.40
41:DV:74:LYS:HB2	41:DV:74:LYS:NZ	2.36	0.40
27:DE:176:ILE:HD13	27:DE:176:ILE:HA	1.89	0.40
20:CA:227:G:H2'	20:CA:228:A:C8	2.57	0.40
21:AW:76:A:H1'	59:BA:2395:C:C2	2.56	0.40
59:BA:2554:U:H2'	59:BA:2555:U:C5	2.57	0.40
58:D4:18:CYS:SG	58:D4:20:ASN:HB2	2.61	0.40
27:BE:119:ARG:NE	27:BE:159:HIS:O	2.54	0.40
3:CD:14:ARG:NH2	20:CA:542:G:O3'	2.54	0.40
27:DE:120:TRP:CD2	27:DE:155:LYS:HB3	2.56	0.40
59:DA:670:A:H4'	59:DA:671:C:H5'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:365(A):C:H2'	59:DA:366(B):C:O4'	2.21	0.40
59:BA:1532:C:C2	59:BA:1540:G:N2	2.90	0.40
20:CA:27:G:H1	20:CA:556:C:H42	1.68	0.40
35:DP:60:MET:HA	59:DA:2392:A:H8	1.86	0.40
6:AG:87:VAL:HG13	6:AG:151:TYR:O	2.22	0.40
11:CL:35:GLY:HA2	11:CL:58:VAL:HA	2.04	0.40
57:B1:18:ILE:HG21	59:BA:380:U:C4'	2.49	0.40
59:DA:2307:G:O5'	59:DA:2307:G:H8	2.04	0.40
3:AD:112:VAL:O	3:AD:113:SER:HB2	2.21	0.40
23:CY:257:PRO:HB2	23:CY:259:PHE:CE1	2.57	0.40
25:DC:40:GLU:CB	25:DC:217:THR:HB	2.51	0.40
25:DC:43:GLU:HB2	25:DC:216:THR:HG23	2.03	0.40
14:CO:39:LEU:HD22	20:CA:740:U:H4'	2.02	0.40
35:DP:22:GLY:HA2	35:DP:23:PRO:HD3	1.84	0.40
14:AO:42:HIS:HE1	14:AO:46:HIS:HD2	1.69	0.40
28:DF:157:VAL:HG13	28:DF:194:MET:HG2	2.02	0.40
28:DF:155:LEU:HD11	28:DF:176:LEU:HD22	2.02	0.40
1:AB:71:VAL:CB	1:AB:164:VAL:HG22	2.51	0.40
3:CD:57:ARG:NH1	3:CD:205:GLU:OE1	2.55	0.40
37:BR:28:LEU:HG	37:BR:34:ILE:HD13	2.03	0.40
59:BA:1479:G:H2'	59:BA:1480:G:O4'	2.22	0.40
26:DD:148:GLU:OE1	26:DD:151:LYS:HE2	2.22	0.40
27:BE:74:PRO:HB2	27:BE:75:VAL:H	1.56	0.40
13:AN:29:ARG:O	13:AN:33:VAL:HG21	2.21	0.40
14:CO:18:PHE:HZ	20:CA:750:G:H4'	1.86	0.40
57:B1:53:VAL:HG13	57:B1:74:VAL:HG13	2.02	0.40
44:BY:73:ARG:NH2	44:BY:81:LYS:H	2.19	0.40
16:AQ:64:PRO:HG3	20:AA:234:C:H4'	2.03	0.40
20:AA:427:U:H5''	20:AA:542:G:OP1	2.21	0.40
23:AY:339:SER:C	23:AY:352:VAL:HG13	2.42	0.40
11:CL:114:LYS:N	20:CA:538:G:OP1	2.40	0.40
42:BW:4:LYS:HA	42:BW:106:ILE:HG12	2.02	0.40
1:CB:108:ILE:HG21	1:CB:152:PHE:CZ	2.56	0.40
18:CS:75:ALA:HA	18:CS:76:PRO:HD2	1.97	0.40
59:DA:1090:U:H2'	59:DA:1091:G:H8	1.83	0.40
59:BA:2072:G:C5	59:BA:2073:C:C5	3.09	0.40
5:AF:97:PHE:O	17:AR:31:LEU:HB2	2.21	0.40
44:BY:15:VAL:HG23	44:BY:23:ARG:O	2.21	0.40
59:DA:68:G:H2'	59:DA:69:C:O4'	2.21	0.40
35:DP:38:GLN:HB3	59:DA:943:U:P	2.61	0.40
44:DY:38:ILE:HD11	44:DY:64:GLU:CB	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:127:LEU:HA	7:AH:127:LEU:HD13	1.91	0.40
12:AM:81:LEU:HB3	12:AM:89:GLY:HA3	2.02	0.40
35:BP:114:ILE:HG12	35:BP:130:PHE:HD1	1.86	0.40
20:CA:200:G:H1	20:CA:217:C:N4	2.18	0.40
40:BU:66:ASN:HA	40:BU:76:TYR:HB2	2.04	0.40
59:DA:1064:C:N4	59:DA:1074:G:H1	2.19	0.40
12:AM:31:LYS:HA	12:AM:34:LEU:HB2	2.03	0.40
40:DU:108:GLU:HG2	41:DV:44:LYS:HE3	2.02	0.40
8:AI:107:ARG:NE	20:AA:1347:G:O4'	2.55	0.40
26:DD:117:VAL:HG12	26:DD:129:ASN:ND2	2.36	0.40
59:DA:2459:A:C5	59:DA:2460:U:C5	3.10	0.40
59:DA:2460:U:H2'	59:DA:2461:C:O4'	2.21	0.40
16:AQ:29:HIS:C	16:AQ:31:LEU:H	2.25	0.40
23:AY:117:GLN:HE22	23:AY:664:GLN:HB3	1.86	0.40
43:BX:31:HIS:HB3	43:BX:34:ALA:HB2	2.04	0.40
8:CI:70:LYS:O	8:CI:73:GLN:HB2	2.21	0.40
7:AH:90:GLY:O	11:AL:7:ILE:HD13	2.21	0.40
59:DA:71:A:H4'	59:DA:72:U:H5''	2.03	0.40
59:BA:737:C:H42	59:BA:759:G:H1	1.69	0.40
20:AA:643:C:H2'	20:AA:644:G:C8	2.56	0.40
59:BA:1710:C:H2'	59:BA:1711:C:H6	1.87	0.40
9:AJ:27:ALA:HB3	9:AJ:34:VAL:HG21	2.03	0.40
20:CA:994:A:H8	20:CA:1216:G:HO2'	1.67	0.40
39:DT:121:ILE:HG23	39:DT:125:ARG:HE	1.85	0.40
59:DA:608:A:H2'	59:DA:609(A):A:C8	2.56	0.40
59:DA:398:G:H2'	59:DA:399:G:H8	1.86	0.40
57:D1:6:GLU:HG3	57:D1:61:ARG:HB2	2.03	0.40
59:BA:1364:G:H2'	59:BA:1366:A:OP2	2.21	0.40
59:BA:218:A:H2'	59:BA:219:G:O4'	2.21	0.40
37:DR:16:HIS:O	37:DR:20:LEU:HB2	2.22	0.40
14:AO:41:GLU:OE1	14:AO:44:LYS:HE2	2.21	0.40
12:AM:57:ARG:HE	12:AM:57:ARG:HB3	1.51	0.40
17:CR:33:ASP:HB3	17:CR:36:ASN:ND2	2.36	0.40
4:CE:48:ALA:HA	4:CE:49:PRO:HD3	2.00	0.40
15:AP:10:GLY:HA2	20:AA:624:C:H4'	2.04	0.40
27:DE:145:LYS:NZ	59:DA:2054:A:OP1	2.34	0.40
33:BN:78:TYR:HA	33:BN:79:PRO:HD3	1.91	0.40
20:AA:1213:A:C8	20:AA:1215:G:C5	3.08	0.40
40:DU:44:ASN:OD1	41:DV:74:LYS:NZ	2.54	0.40
27:DE:176:ILE:HA	27:DE:177:PRO:HD2	1.92	0.40
20:AA:1242:C:H2'	20:AA:1243:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:94:ASN:O	16:CQ:98:LEU:HG	2.20	0.40
60:DB:88:C:H2'	60:DB:89(A):G:C8	2.55	0.40
59:BA:542:C:H2'	59:BA:543:C:H6	1.86	0.40
23:AY:319:ASP:HA	23:AY:320:PRO:HD3	1.94	0.40
4:CE:135:THR:HG22	4:CE:139:LEU:HD21	2.03	0.40
30:BH:70:THR:HA	30:BH:73:ALA:HB3	2.03	0.40
46:D0:9:SER:OG	46:D0:10:THR:N	2.55	0.40
59:BA:757:U:H2'	59:BA:758:C:O4'	2.21	0.40
59:DA:1283:G:O2'	59:DA:1285:G:N7	2.40	0.40
30:DH:138:LYS:HB2	30:DH:138:LYS:HE2	1.92	0.40
23:CY:413:ILE:HA	23:CY:413:ILE:HD12	1.88	0.40
20:CA:134:A:H2'	20:CA:135:C:C6	2.56	0.40
59:DA:1663:C:H1'	59:DA:2686:G:O2'	2.21	0.40
48:D3:42:ALA:O	59:DA:851:U:O2'	2.40	0.40
20:AA:1420:C:H2'	20:AA:1421:G:H5'	2.04	0.40
59:BA:1664:A:H3'	59:BA:1665:A:C8	2.52	0.40
31:BJ:25:UNK:O	31:BJ:27:UNK:N	2.55	0.40
59:BA:681:G:H2'	59:BA:682:G:C8	2.56	0.40
40:BU:2:PRO:HD3	59:BA:444:C:O5'	2.20	0.40
16:CQ:65:ILE:HB	16:CQ:69:LYS:HB3	2.03	0.40
26:DD:78:LYS:HE3	26:DD:98:VAL:HG22	2.02	0.40
59:DA:684:G:H21	59:DA:788:A:P	2.44	0.40
59:DA:2632:A:H2'	59:DA:2633:G:H8	1.85	0.40
27:DE:67:PHE:CG	27:DE:68:ALA:N	2.88	0.40
21:AW:17:U:H5'	21:AW:18:G:H4'	2.03	0.40
25:DC:45:HIS:ND1	25:DC:171:ALA:O	2.55	0.40
25:DC:181:PHE:O	25:DC:185:LYS:HB2	2.22	0.40
59:BA:363(G):A:O2'	59:BA:364:C:H6	2.05	0.40
43:BX:44:GLU:CD	43:BX:50:LYS:HA	2.42	0.40
28:DF:5:ALA:HB3	28:DF:8:GLN:H	1.86	0.40
1:AB:185:ILE:HD13	1:AB:199:TYR:CD1	2.56	0.40
26:DD:202:LYS:HD3	59:DA:1820:U:C6	2.57	0.40
26:DD:67:PHE:HZ	26:DD:157:ARG:NH1	2.15	0.40
38:BS:103:GLU:O	38:BS:105:ALA:N	2.54	0.40
38:BS:20:ARG:CZ	38:BS:88:ASP:HA	2.51	0.40
25:DC:54:ARG:HD2	25:DC:54:ARG:HA	1.80	0.40
1:AB:220:ASP:N	1:AB:220:ASP:OD1	2.53	0.40
1:AB:87:ARG:NH2	1:AB:233:SER:H	2.20	0.40
57:D1:13:ILE:O	57:D1:42:GLN:O	2.39	0.40
20:AA:1130:A:H61	20:AA:1143:G:N2	2.19	0.40
20:AA:1128:C:O2'	20:AA:1130:A:N7	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AA:1350:A:H2'	20:AA:1351:U:C6	2.57	0.40
59:BA:846:C:H4'	59:BA:847:U:H5''	2.02	0.40
51:B7:34:ARG:CD	51:B7:42:LEU:HD22	2.51	0.40
59:BA:499:U:C2	59:BA:503:A:N7	2.90	0.40
8:CI:46:ALA:HA	8:CI:78:LYS:HB2	2.03	0.40
23:CY:607:ARG:HA	23:CY:645:ALA:O	2.22	0.40
60:BB:71:C:N4	60:BB:105:G:H1	2.17	0.40
59:BA:1275:A:OP2	59:BA:1646:C:N4	2.49	0.40
28:BF:63:LYS:HG2	28:BF:65:TRP:O	2.22	0.40
20:CA:1265:G:C6	20:CA:1266:G:C6	3.10	0.40
26:DD:161:THR:OG1	26:DD:178:PRO:HG2	2.22	0.40
15:AP:80:PHE:HD2	15:AP:80:PHE:HA	1.80	0.40
20:CA:272:C:H2'	20:CA:273:A:N7	2.36	0.40
20:CA:810:C:C4	20:CA:811:C:C4	3.10	0.40
35:BP:24:GLY:HA3	35:BP:33:ARG:HH11	1.87	0.40
6:CG:57:GLU:N	6:CG:57:GLU:OE1	2.54	0.40
20:AA:966:G:H2'	20:AA:967:C:O4'	2.21	0.40
36:BQ:109:VAL:H	36:BQ:109:VAL:HG22	1.63	0.40
23:AY:353:ALA:O	23:AY:354:ARG:HG3	2.21	0.40
60:DB:48:A:H2'	60:DB:49:C:C6	2.57	0.40
20:AA:1494:G:H2'	20:AA:1495:U:C6	2.57	0.40
44:BY:31:LEU:HA	44:BY:32:PRO:HA	1.90	0.40
20:AA:1260:C:OP1	20:AA:1284:C:H4'	2.22	0.40
20:AA:865:A:C2	20:AA:918:A:H4'	2.56	0.40
37:DR:8:ARG:HD3	37:DR:8:ARG:HA	1.83	0.40
7:AH:109:ILE:HG12	7:AH:111:ILE:HD13	2.03	0.40
52:D8:25:MET:HG3	52:D8:26:LYS:N	2.36	0.40
59:DA:2816:C:O2	59:DA:2883:A:O2'	2.35	0.40
59:BA:1758:G:H3'	59:BA:1759:A:C8	2.56	0.40
6:AG:27:ILE:HA	6:AG:30:ILE:HD12	2.04	0.40
59:BA:1165:U:C2	59:BA:1166:C:C5	3.09	0.40
29:DG:91:ARG:NH1	59:DA:2314:C:OP1	2.46	0.40
59:BA:671:C:H2'	59:BA:672:C:C6	2.56	0.40
59:BA:1748:G:H2'	59:BA:1749:A:H8	1.84	0.40
59:BA:721:C:H2'	59:BA:722:A:H8	1.86	0.40
14:AO:59:MET:HB2	14:AO:59:MET:HE3	1.93	0.40
14:CO:43:LEU:O	14:CO:47:LYS:N	2.54	0.40
20:CA:243:A:H1'	20:CA:244:U:OP2	2.21	0.40
59:DA:608:A:C8	59:DA:621:A:N6	2.90	0.40
59:BA:2088:G:H1	59:BA:2231:C:H42	1.69	0.40
59:BA:1209:G:O3'	59:BA:1212:G:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:28:PHE:CE1	4:AE:51:VAL:HG22	2.56	0.40
15:AP:71:ARG:NH1	15:AP:71:ARG:HB2	2.36	0.40
1:CB:15:VAL:HG23	1:CB:16:HIS:CE1	2.56	0.40
19:AT:41:ILE:O	19:AT:45:GLN:HB2	2.22	0.40
29:DG:63:ILE:HA	58:D4:27:THR:HG21	2.03	0.40
20:CA:1096:C:H2'	20:CA:1097:C:C6	2.56	0.40
28:BF:15:SER:O	28:BF:17:ARG:HG3	2.21	0.40
20:AA:269:C:H2'	20:AA:270:A:O4'	2.20	0.40
5:CF:50:TYR:CD2	5:CF:52:ILE:HD11	2.57	0.40
42:DW:1:MET:HG3	42:DW:2:GLU:H	1.87	0.40
27:DE:103:ASP:OD2	27:DE:201:THR:HA	2.22	0.40
5:CF:10:LEU:HD13	5:CF:61:LEU:HD13	2.03	0.40
4:CE:75:THR:HG21	4:CE:94:ALA:O	2.22	0.40
59:DA:717:G:H2'	59:DA:718:A:O4'	2.22	0.40
23:AY:435:ASP:HA	23:AY:436:PRO:HD2	1.82	0.40
10:AK:122:LYS:NZ	20:AA:780:A:OP2	2.30	0.40
29:BG:10:LYS:O	29:BG:14:GLU:N	2.52	0.40
30:DH:25:LYS:H	30:DH:25:LYS:HD2	1.86	0.40
30:DH:86:GLU:HB3	30:DH:132:ARG:HG3	2.04	0.40
6:AG:99:LEU:HD22	6:AG:103:TRP:HE1	1.87	0.40
9:CJ:91:PRO:HB2	9:CJ:94:VAL:HB	2.02	0.40
23:AY:108:PHE:HZ	23:AY:122:TRP:CE3	2.39	0.40
23:CY:107:VAL:HA	23:CY:135:PHE:O	2.21	0.40
59:BA:1802:A:N7	59:BA:1815:A:N7	2.70	0.40
59:DA:1023:U:H2'	59:DA:1024:G:H5'	2.04	0.40
37:DR:68:ARG:HG3	59:DA:2707:G:O3'	2.21	0.40
20:AA:1421:G:H2'	20:AA:1422:G:O4'	2.22	0.40
59:BA:2041:U:H2'	59:BA:2042:A:O4'	2.21	0.40
20:CA:68(V):G:H2'	20:CA:68(W):G:O4'	2.21	0.40
20:CA:946:A:C6	20:CA:947:G:C6	3.10	0.40
26:DD:39:LYS:HB3	26:DD:40:THR:H	1.74	0.40
20:AA:123:C:OP1	20:AA:312:C:H5'	2.22	0.40
57:D1:20:ARG:HD2	57:D1:21:ARG:H	1.87	0.40
59:BA:582:G:H2'	59:BA:583:G:C8	2.57	0.40
59:BA:2505:G:H3'	59:BA:2576:G:H22	1.87	0.40
59:DA:2485:G:H2'	59:DA:2486:G:C8	2.56	0.40
36:BQ:77:LYS:HG3	36:BQ:87:LYS:O	2.21	0.40
39:DT:29:ARG:HG2	39:DT:30:VAL:N	2.36	0.40
40:BU:54:LYS:O	40:BU:58:ARG:HG3	2.22	0.40
11:AL:57:LYS:HA	11:AL:65:GLU:O	2.22	0.40
59:DA:685:A:H1'	59:DA:688:U:H3	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:61:ARG:HB2	27:DE:62:PRO:CD	2.46	0.40
25:BC:75:VAL:O	25:BC:114:VAL:HA	2.21	0.40
2:CC:19:GLU:C	2:CC:40:ARG:HH22	2.23	0.40
25:DC:213:VAL:CG1	25:DC:215:VAL:HG22	2.52	0.40
39:BT:46:GLU:HB2	39:BT:47:GLY:H	1.67	0.40
28:DF:170:LEU:HD12	28:DF:172:TRP:HE1	1.87	0.40
1:AB:51:LEU:HA	1:AB:54:THR:HB	2.04	0.40
20:AA:297:G:H2'	20:AA:299:G:N7	2.37	0.40
59:DA:270(P):U:H4'	59:DA:270(Q):C:OP2	2.21	0.40
59:BA:712(B):A:H5''	59:BA:2713:A:OP2	2.21	0.40
38:DS:67:ARG:HH12	38:DS:98:VAL:HB	1.87	0.40
36:BQ:56:ARG:HD3	59:BA:2469:A:O2'	2.21	0.40
27:BE:79:ARG:C	27:BE:81:ILE:H	4.30	0.40
28:BF:60:SER:HB3	28:BF:61:GLY:H	1.73	0.40
23:AY:515:GLU:O	23:AY:564:LYS:HB3	2.21	0.40
23:AY:100:VAL:HG11	23:AY:314:PHE:CZ	2.57	0.40
20:AA:720:C:H3'	20:AA:721:G:H2'	2.03	0.40
20:AA:364:A:H2'	20:AA:365:U:O2	2.22	0.40
8:CI:111:ARG:NH2	20:CA:1368:G:OP1	2.54	0.40
20:AA:1316:G:H1'	20:AA:1360:A:H2	1.87	0.40
59:DA:1278:A:H2'	59:DA:1279:G:O4'	2.22	0.40
20:AA:243:A:H4'	20:AA:244:U:H3'	2.03	0.40
20:CA:597:G:H2'	20:CA:598:U:O4'	2.21	0.40
59:BA:1272:A:O2'	59:BA:1273:U:H5''	2.21	0.40
20:CA:186(C):G:C6	20:CA:186(O):G:C6	3.10	0.40
20:CA:112:G:H2'	20:CA:113:G:H8	1.86	0.40
59:BA:1949:G:H2'	59:BA:1950:G:C8	2.57	0.40
3:AD:155:LEU:HB3	3:AD:158:ILE:HD13	2.03	0.40
28:DF:24:LEU:HD13	28:DF:119:ARG:HH21	1.85	0.40
59:DA:572:A:H3'	59:DA:573:G:H8	1.86	0.40
23:CY:458:HIS:O	23:CY:462:ILE:HG12	2.22	0.40
35:BP:127:ALA:HB3	35:BP:130:PHE:CE1	2.57	0.40
27:DE:79:ARG:C	27:DE:81:ILE:H	4.24	0.40
59:BA:1657:C:H2'	59:BA:1658:C:H6	1.86	0.40
59:BA:2081:C:H2'	59:BA:2082:A:H8	1.86	0.40
28:BF:45:ARG:HD3	28:BF:97:TYR:CZ	2.57	0.40
36:DQ:24:GLY:O	36:DQ:101:ARG:HD2	2.21	0.40
8:AI:107:ARG:NH2	20:AA:1347:G:O4'	2.54	0.40
3:CD:108:LEU:HD23	3:CD:110:PHE:CE2	2.56	0.40
59:DA:2068:U:C2	59:DA:2430:A:H2	2.39	0.40
23:AY:20:HIS:H	23:AY:20:HIS:CD2	2.38	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:878:A:H3'	59:DA:879:G:H8	1.85	0.40
52:B8:13:ARG:NH2	59:BA:249:C:O2'	2.55	0.40
43:DX:61:GLY:HA3	43:DX:73:ARG:O	2.21	0.40
30:BH:60:ARG:O	30:BH:64:LEU:HG	2.21	0.40
3:CD:135:LEU:HG	20:CA:620:C:N3	2.36	0.40
23:AY:98:MET:SD	23:AY:125:ALA:HB1	2.62	0.40
21:CW:56:C:H2'	21:CW:57:G:H8	1.86	0.40
27:DE:170:LEU:HB3	27:DE:184:VAL:CG1	2.51	0.40
20:CA:441:A:H3'	20:CA:442:C:H6	1.86	0.40
4:CE:125:SER:C	4:CE:127:ASN:H	2.25	0.40
59:DA:2366:A:H3'	59:DA:2367:G:H8	1.87	0.40
20:AA:1353:G:H2'	20:AA:1354:C:C6	2.57	0.40
59:BA:196:A:C5	59:BA:805:G:C6	3.10	0.40
49:B5:14:ALA:O	49:B5:17:ASP:HB2	2.21	0.40
51:D7:17:GLY:O	51:D7:20:ALA:N	2.46	0.40
59:BA:2792:G:C2	59:BA:2805:G:C6	3.09	0.40
59:DA:1366:A:H2'	59:DA:1367:A:O4'	2.22	0.40
35:DP:91:PHE:O	35:DP:121:LYS:NZ	2.42	0.40
59:DA:2437:U:H2'	59:DA:2438:U:O4'	2.22	0.40
7:AH:64:LYS:HG2	7:AH:65:TYR:N	2.36	0.40
59:BA:270(W):G:H2'	59:BA:270(X):G:H8	1.86	0.40
59:DA:2630:G:H2'	59:DA:2631:G:C8	2.56	0.40
23:CY:559:PRO:O	23:CY:561:VAL:N	2.55	0.40
20:AA:60:A:N3	20:AA:61:G:H1'	2.37	0.40
59:BA:1016:G:C2	59:BA:1017:G:C8	3.10	0.40
28:DF:77:ASP:C	28:DF:79:GLY:H	2.25	0.40
32:BK:14:ALA:HB3	32:BK:50:ASP:HA	2.04	0.40
52:D8:38:GLY:HA2	52:D8:41:ILE:HD12	2.04	0.40
35:DP:95:VAL:HG23	35:DP:125:VAL:HA	2.04	0.40
2:AC:116:VAL:O	2:AC:120:VAL:HG23	2.21	0.40
39:DT:44:ASP:OD1	39:DT:44:ASP:N	2.53	0.40
32:BK:86:LYS:HE3	32:BK:86:LYS:HB2	1.95	0.40
59:DA:60:G:C4	59:DA:74:A:C2	3.09	0.40
45:DZ:6:LYS:HA	45:DZ:6:LYS:HD3	1.86	0.40
20:AA:990:C:H2'	20:AA:991:U:O4'	2.21	0.40
57:D1:53:VAL:HG21	57:D1:74:VAL:HG22	2.03	0.40

All (1) 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)
59:BA:1015:G:O2'	40:DU:118:GLY:O[3_545]	2.09	0.11

## 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	AB	233/235 (99%)	154 (66%)	51 (22%)	28 (12%)	0	6
1	CB	233/235 (99%)	159 (68%)	50 (22%)	24 (10%)	1	9
2	AC	205/207 (99%)	154 (75%)	32 (16%)	19 (9%)	1	11
2	CC	205/207 (99%)	156 (76%)	36 (18%)	13 (6%)	2	21
3	AD	206/208 (99%)	149 (72%)	31 (15%)	26 (13%)	0	6
3	CD	206/208 (99%)	153 (74%)	32 (16%)	21 (10%)	1	9
4	AE	149/151 (99%)	117 (78%)	22 (15%)	10 (7%)	1	19
4	CE	149/151 (99%)	117 (78%)	25 (17%)	7 (5%)	3	29
5	AF	99/101 (98%)	75 (76%)	15 (15%)	9 (9%)	1	11
5	CF	99/101 (98%)	74 (75%)	16 (16%)	9 (9%)	1	11
6	AG	153/155 (99%)	121 (79%)	25 (16%)	7 (5%)	3	29
6	CG	153/155 (99%)	124 (81%)	22 (14%)	7 (5%)	3	29
7	AH	136/138 (99%)	97 (71%)	27 (20%)	12 (9%)	1	12
7	CH	136/138 (99%)	97 (71%)	28 (21%)	11 (8%)	1	13
8	AI	125/127 (98%)	93 (74%)	27 (22%)	5 (4%)	4	33
8	CI	125/127 (98%)	99 (79%)	22 (18%)	4 (3%)	5	40
9	AJ	97/99 (98%)	75 (77%)	13 (13%)	9 (9%)	1	11
9	CJ	97/99 (98%)	75 (77%)	17 (18%)	5 (5%)	2	25
10	AK	117/119 (98%)	82 (70%)	21 (18%)	14 (12%)	0	6
10	CK	117/119 (98%)	82 (70%)	22 (19%)	13 (11%)	0	7
11	AL	123/125 (98%)	38 (31%)	52 (42%)	33 (27%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	CL	123/125 (98%)	47 (38%)	43 (35%)	33 (27%)	0	0
12	AM	123/125 (98%)	93 (76%)	20 (16%)	10 (8%)	1	13
12	CM	123/125 (98%)	91 (74%)	25 (20%)	7 (6%)	2	23
13	AN	58/60 (97%)	44 (76%)	7 (12%)	7 (12%)	0	6
13	CN	58/60 (97%)	44 (76%)	10 (17%)	4 (7%)	1	18
14	AO	86/88 (98%)	65 (76%)	14 (16%)	7 (8%)	1	13
14	CO	86/88 (98%)	60 (70%)	21 (24%)	5 (6%)	2	23
15	AP	82/84 (98%)	66 (80%)	15 (18%)	1 (1%)	16	61
15	CP	82/84 (98%)	64 (78%)	14 (17%)	4 (5%)	3	27
16	AQ	98/100 (98%)	70 (71%)	18 (18%)	10 (10%)	1	9
16	CQ	98/100 (98%)	70 (71%)	18 (18%)	10 (10%)	1	9
17	AR	68/70 (97%)	51 (75%)	10 (15%)	7 (10%)	1	9
17	CR	68/70 (97%)	48 (71%)	13 (19%)	7 (10%)	1	9
18	AS	77/79 (98%)	41 (53%)	23 (30%)	13 (17%)	0	3
18	CS	77/79 (98%)	46 (60%)	17 (22%)	14 (18%)	0	2
19	AT	97/99 (98%)	82 (84%)	11 (11%)	4 (4%)	3	33
19	CT	97/99 (98%)	79 (81%)	12 (12%)	6 (6%)	2	21
23	AY	663/687 (96%)	451 (68%)	138 (21%)	74 (11%)	0	7
23	CY	663/687 (96%)	461 (70%)	134 (20%)	68 (10%)	1	9
24	AU	2/6 (33%)	1 (50%)	1 (50%)	0	100	100
24	CU	2/6 (33%)	1 (50%)	0	1 (50%)	0	0
25	BC	226/228 (99%)	110 (49%)	66 (29%)	50 (22%)	0	1
25	DC	226/228 (99%)	123 (54%)	59 (26%)	44 (20%)	0	2
26	BD	273/275 (99%)	174 (64%)	47 (17%)	52 (19%)	0	2
26	DD	273/275 (99%)	165 (60%)	61 (22%)	47 (17%)	0	2
27	BE	203/205 (99%)	128 (63%)	40 (20%)	35 (17%)	0	2
27	DE	203/205 (99%)	122 (60%)	45 (22%)	36 (18%)	0	2
28	BF	206/208 (99%)	130 (63%)	46 (22%)	30 (15%)	0	4
28	DF	206/208 (99%)	128 (62%)	44 (21%)	34 (16%)	0	3
29	BG	179/181 (99%)	122 (68%)	48 (27%)	9 (5%)	3	27
29	DG	179/181 (99%)	134 (75%)	36 (20%)	9 (5%)	3	27

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	BH	165/167 (99%)	118 (72%)	27 (16%)	20 (12%)	0	6
30	DH	165/167 (99%)	111 (67%)	33 (20%)	21 (13%)	0	6
32	BK	138/140 (99%)	96 (70%)	30 (22%)	12 (9%)	1	12
32	DK	138/140 (99%)	97 (70%)	34 (25%)	7 (5%)	2	26
33	BN	136/138 (99%)	86 (63%)	28 (21%)	22 (16%)	0	3
33	DN	136/138 (99%)	88 (65%)	35 (26%)	13 (10%)	1	10
34	BO	120/122 (98%)	86 (72%)	24 (20%)	10 (8%)	1	13
34	DO	120/122 (98%)	87 (72%)	25 (21%)	8 (7%)	1	19
35	BP	144/146 (99%)	85 (59%)	39 (27%)	20 (14%)	0	4
35	DP	144/146 (99%)	81 (56%)	38 (26%)	25 (17%)	0	2
36	BQ	139/141 (99%)	96 (69%)	27 (19%)	16 (12%)	0	7
36	DQ	139/141 (99%)	97 (70%)	29 (21%)	13 (9%)	1	10
37	BR	115/117 (98%)	80 (70%)	27 (24%)	8 (7%)	1	18
37	DR	115/117 (98%)	83 (72%)	20 (17%)	12 (10%)	1	8
38	BS	97/99 (98%)	56 (58%)	21 (22%)	20 (21%)	0	1
38	DS	97/99 (98%)	56 (58%)	21 (22%)	20 (21%)	0	1
39	BT	136/138 (99%)	80 (59%)	31 (23%)	25 (18%)	0	2
39	DT	136/138 (99%)	85 (62%)	29 (21%)	22 (16%)	0	3
40	BU	115/117 (98%)	84 (73%)	25 (22%)	6 (5%)	2	25
40	DU	115/117 (98%)	90 (78%)	16 (14%)	9 (8%)	1	14
41	BV	99/101 (98%)	66 (67%)	16 (16%)	17 (17%)	0	2
41	DV	99/101 (98%)	63 (64%)	22 (22%)	14 (14%)	0	4
42	BW	111/113 (98%)	85 (77%)	11 (10%)	15 (14%)	0	4
42	DW	111/113 (98%)	85 (77%)	15 (14%)	11 (10%)	1	10
43	BX	91/93 (98%)	72 (79%)	15 (16%)	4 (4%)	3	30
43	DX	91/93 (98%)	72 (79%)	14 (15%)	5 (6%)	2	24
44	BY	105/107 (98%)	51 (49%)	30 (29%)	24 (23%)	0	1
44	DY	105/107 (98%)	46 (44%)	26 (25%)	33 (31%)	0	0
45	BZ	183/185 (99%)	132 (72%)	33 (18%)	18 (10%)	1	10
45	DZ	183/185 (99%)	132 (72%)	32 (18%)	19 (10%)	1	8
46	B0	82/84 (98%)	59 (72%)	16 (20%)	7 (8%)	1	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	D0	82/84 (98%)	57 (70%)	15 (18%)	10 (12%)	0	6
47	B2	69/71 (97%)	51 (74%)	14 (20%)	4 (6%)	2	23
47	D2	69/71 (97%)	56 (81%)	10 (14%)	3 (4%)	3	31
48	B3	58/60 (97%)	48 (83%)	6 (10%)	4 (7%)	1	18
48	D3	58/60 (97%)	42 (72%)	10 (17%)	6 (10%)	1	9
49	B5	57/59 (97%)	43 (75%)	11 (19%)	3 (5%)	2	25
49	D5	57/59 (97%)	41 (72%)	12 (21%)	4 (7%)	1	18
50	B6	48/50 (96%)	28 (58%)	13 (27%)	7 (15%)	0	4
50	D6	48/50 (96%)	29 (60%)	8 (17%)	11 (23%)	0	1
51	B7	47/49 (96%)	35 (74%)	8 (17%)	4 (8%)	1	13
51	D7	47/49 (96%)	32 (68%)	9 (19%)	6 (13%)	0	5
52	B8	62/64 (97%)	35 (56%)	17 (27%)	10 (16%)	0	3
52	D8	62/64 (97%)	36 (58%)	18 (29%)	8 (13%)	0	5
53	B9	35/37 (95%)	18 (51%)	12 (34%)	5 (14%)	0	4
53	D9	35/37 (95%)	24 (69%)	8 (23%)	3 (9%)	1	12
54	Be	70/102 (69%)	38 (54%)	24 (34%)	8 (11%)	0	7
54	De	70/102 (69%)	41 (59%)	23 (33%)	6 (9%)	1	12
57	B1	91/93 (98%)	60 (66%)	19 (21%)	12 (13%)	0	5
57	D1	91/93 (98%)	56 (62%)	18 (20%)	17 (19%)	0	2
58	B4	33/35 (94%)	15 (46%)	13 (39%)	5 (15%)	0	3
58	D4	33/35 (94%)	17 (52%)	9 (27%)	7 (21%)	0	1
All	All	13260/13576 (98%)	9009 (68%)	2708 (20%)	1543 (12%)	0	7

All (1543) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	9	GLU
1	AB	76	GLN
1	AB	165	VAL
1	AB	194	PRO
2	AC	4	LYS
2	AC	26	LYS
2	AC	49	SER
3	AD	4	TYR
3	AD	5	ILE

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Mol	Chain	Res	Type
3	AD	24	GLU
3	AD	28	SER
3	AD	34	GLU
3	AD	43	HIS
3	AD	62	GLN
3	AD	63	LYS
3	AD	69	GLY
3	AD	113	SER
3	AD	156	GLU
4	AE	36	ASP
4	AE	125	SER
5	AF	69	GLU
5	AF	70	ASP
6	AG	37	ASN
7	AH	22	GLU
7	AH	103	VAL
7	AH	107	LEU
8	AI	58	HIS
9	AJ	88	LEU
9	AJ	92	THR
10	AK	42	TRP
10	AK	109	VAL
10	AK	120	ARG
11	AL	6	THR
11	AL	7	ILE
11	AL	13	LYS
11	AL	39	VAL
11	AL	43	VAL
11	AL	48	PRO
11	AL	55	VAL
11	AL	78	GLN
11	AL	94	PRO
11	AL	102	ARG
11	AL	104	VAL
11	AL	107	ALA
11	AL	115	LYS
11	AL	123	LYS
12	AM	3	ARG
12	AM	6	GLY
12	AM	113	PRO
13	AN	3	ARG
14	AO	19	PRO

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Mol	Chain	Res	Type
15	AP	28	ARG
16	AQ	28	PRO
16	AQ	55	ASP
16	AQ	69	LYS
17	AR	36	ASN
17	AR	37	VAL
17	AR	45	SER
18	AS	37	ARG
18	AS	38	SER
18	AS	53	ASN
18	AS	70	LYS
19	AT	74	LYS
23	AY	22	ASP
23	AY	84	THR
23	AY	87	HIS
23	AY	92	ILE
23	AY	171	GLU
23	AY	224	ASP
23	AY	244	ALA
23	AY	266	ASN
23	AY	330	VAL
23	AY	331	TYR
23	AY	384	ILE
23	AY	395	PRO
23	AY	448	GLN
23	AY	518	PRO
23	AY	527	ASN
23	AY	565	VAL
23	AY	568	TYR
23	AY	628	ARG
23	AY	659	LEU
23	AY	681	LYS
25	BC	17	PRO
25	BC	42	VAL
25	BC	52	PRO
25	BC	66	PRO
25	BC	96	GLY
25	BC	109	MET
25	BC	114	VAL
25	BC	115	VAL
25	BC	139	PRO
25	BC	141	PRO

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Mol	Chain	Res	Type
25	BC	142	LYS
25	BC	162	ILE
25	BC	167	ASP
25	BC	182	PRO
25	BC	210	LEU
25	BC	223	VAL
25	BC	227	PRO
26	BD	24	ILE
26	BD	36	PRO
26	BD	43	ARG
26	BD	79	VAL
26	BD	87	ASN
26	BD	89	SER
26	BD	98	VAL
26	BD	99	ASP
26	BD	118	VAL
26	BD	123	ALA
26	BD	166	GLN
26	BD	226	MET
26	BD	242	ARG
26	BD	273	ARG
27	BE	12	THR
27	BE	14	ILE
27	BE	45	THR
27	BE	54	GLN
27	BE	56	PRO
27	BE	61	ARG
27	BE	66	HIS
27	BE	67	PHE
27	BE	68	ALA
27	BE	72	VAL
27	BE	74	PRO
27	BE	75	VAL
27	BE	126	PRO
27	BE	144	ARG
27	BE	147	PRO
27	BE	162	ALA
28	BF	3	GLU
28	BF	8	GLN
28	BF	10	PRO
28	BF	11	VAL
28	BF	66	PRO

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Mol	Chain	Res	Type
28	BF	67	GLN
28	BF	84	VAL
28	BF	90	PHE
28	BF	134	GLY
28	BF	149	ASP
29	BG	87	PRO
29	BG	96	ARG
30	BH	41	MET
30	BH	84	SER
30	BH	123	PHE
30	BH	124	GLU
30	BH	156	ALA
30	BH	170	ARG
32	BK	5	VAL
32	BK	116	ASN
33	BN	17	ASP
33	BN	18	ALA
33	BN	56	ASN
33	BN	69	GLN
33	BN	111	PRO
33	BN	126	PRO
33	BN	130	HIS
33	BN	133	GLN
34	BO	48	PRO
34	BO	80	ASP
35	BP	9	ASN
35	BP	57	THR
35	BP	110	TYR
35	BP	149	GLU
36	BQ	2	LEU
36	BQ	20	ALA
36	BQ	52	VAL
36	BQ	90	VAL
36	BQ	140	ALA
37	BR	5	LYS
38	BS	13	ARG
38	BS	32	LEU
38	BS	48	LEU
38	BS	53	SER
38	BS	98	VAL
38	BS	100	ALA
38	BS	106	ARG

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Mol	Chain	Res	Type
39	BT	28	VAL
39	BT	30	VAL
39	BT	38	ASN
39	BT	49	VAL
39	BT	68	TYR
39	BT	78	LEU
39	BT	86	ILE
39	BT	90	GLN
40	BU	9	VAL
41	BV	15	GLU
41	BV	46	VAL
41	BV	49	THR
41	BV	50	PRO
41	BV	96	ILE
41	BV	97	LYS
42	BW	15	ARG
42	BW	73	ALA
42	BW	77	ASP
44	BY	32	PRO
44	BY	53	PRO
44	BY	56	PRO
44	BY	66	PRO
44	BY	78	ALA
44	BY	97	ARG
44	BY	102	CYS
45	BZ	71	VAL
45	BZ	72	ARG
45	BZ	73	GLN
45	BZ	81	ARG
47	B2	47	ASN
47	B2	48	HIS
48	B3	51	ALA
49	B5	56	LYS
50	B6	7	ILE
50	B6	9	LEU
50	B6	31	PRO
52	B8	3	LYS
52	B8	30	ARG
52	B8	49	VAL
52	B8	62	LEU
53	B9	10	ILE
53	B9	20	HIS

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Mol	Chain	Res	Type
57	B1	20	ARG
57	B1	87	PRO
1	CB	35	GLU
1	CB	165	VAL
1	CB	194	PRO
1	CB	195	ASP
1	CB	235	SER
2	CC	12	LEU
2	CC	49	SER
2	CC	130	VAL
2	CC	207	VAL
3	CD	4	TYR
3	CD	5	ILE
3	CD	28	SER
3	CD	34	GLU
3	CD	43	HIS
3	CD	113	SER
5	CF	38	GLU
5	CF	70	ASP
6	CG	12	LEU
6	CG	15	ASP
7	CH	22	GLU
10	CK	42	TRP
10	CK	43	SER
10	CK	109	VAL
10	CK	111	ASP
10	CK	120	ARG
11	CL	7	ILE
11	CL	36	VAL
11	CL	37	CYS
11	CL	39	VAL
11	CL	43	VAL
11	CL	78	GLN
11	CL	81	SER
11	CL	94	PRO
11	CL	96	VAL
11	CL	104	VAL
11	CL	108	ALA
11	CL	115	LYS
11	CL	116	SER
11	CL	122	THR
11	CL	123	LYS

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Mol	Chain	Res	Type
12	CM	6	GLY
12	CM	12	ASN
12	CM	107	ALA
12	CM	113	PRO
15	CP	66	PRO
16	CQ	14	LYS
16	CQ	49	GLU
16	CQ	55	ASP
16	CQ	69	LYS
17	CR	36	ASN
18	CS	37	ARG
18	CS	38	SER
18	CS	41	VAL
18	CS	70	LYS
19	CT	46	GLU
23	CY	9	LEU
23	CY	84	THR
23	CY	87	HIS
23	CY	92	ILE
23	CY	111	SER
23	CY	128	TYR
23	CY	129	LYS
23	CY	171	GLU
23	CY	301	ILE
23	CY	330	VAL
23	CY	331	TYR
23	CY	384	ILE
23	CY	395	PRO
23	CY	436	PRO
23	CY	448	GLN
23	CY	498	ILE
23	CY	501	THR
23	CY	555	LEU
23	CY	565	VAL
23	CY	568	TYR
23	CY	614	GLU
23	CY	649	LEU
23	CY	681	LYS
25	DC	17	PRO
25	DC	52	PRO
25	DC	54	ARG
25	DC	66	PRO

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Mol	Chain	Res	Type
25	DC	80	LYS
25	DC	96	GLY
25	DC	109	MET
25	DC	114	VAL
25	DC	139	PRO
25	DC	141	PRO
25	DC	142	LYS
25	DC	162	ILE
25	DC	167	ASP
25	DC	177	GLY
25	DC	182	PRO
25	DC	212	SER
25	DC	223	VAL
25	DC	227	PRO
26	DD	9	TYR
26	DD	24	ILE
26	DD	36	PRO
26	DD	52	ARG
26	DD	79	VAL
26	DD	99	ASP
26	DD	118	VAL
26	DD	123	ALA
26	DD	166	GLN
26	DD	236	GLY
26	DD	246	PRO
26	DD	273	ARG
27	DE	12	THR
27	DE	13	ARG
27	DE	56	PRO
27	DE	60	ASN
27	DE	61	ARG
27	DE	66	HIS
27	DE	68	ALA
27	DE	72	VAL
27	DE	74	PRO
27	DE	75	VAL
27	DE	77	ILE
27	DE	126	PRO
27	DE	143	ASN
27	DE	144	ARG
27	DE	155	LYS
28	DF	3	GLU

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Mol	Chain	Res	Type
28	DF	9	ILE
28	DF	10	PRO
28	DF	52	LYS
28	DF	66	PRO
28	DF	149	ASP
28	DF	153	SER
28	DF	192	LEU
29	DG	43	LEU
29	DG	96	ARG
29	DG	117	PHE
30	DH	40	GLU
30	DH	42	ARG
30	DH	108	GLY
30	DH	170	ARG
30	DH	176	ALA
32	DK	5	VAL
33	DN	17	ASP
33	DN	18	ALA
33	DN	126	PRO
33	DN	133	GLN
34	DO	28	SER
35	DP	13	ASN
35	DP	31	ALA
35	DP	49	ARG
35	DP	50	ARG
35	DP	57	THR
35	DP	65	ARG
35	DP	71	VAL
36	DQ	14	ARG
36	DQ	52	VAL
36	DQ	90	VAL
37	DR	4	LEU
37	DR	8	ARG
38	DS	43	GLU
38	DS	47	THR
38	DS	98	VAL
38	DS	100	ALA
38	DS	101	LEU
38	DS	106	ARG
38	DS	108	GLY
39	DT	28	VAL
39	DT	30	VAL

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Mol	Chain	Res	Type
39	DT	35	LYS
39	DT	36	GLU
39	DT	50	ILE
39	DT	86	ILE
39	DT	91	ARG
40	DU	116	ALA
41	DV	16	PRO
41	DV	29	PRO
41	DV	46	VAL
41	DV	50	PRO
41	DV	96	ILE
42	DW	11	ARG
42	DW	12	ILE
42	DW	73	ALA
42	DW	77	ASP
44	DY	28	LYS
44	DY	32	PRO
44	DY	38	ILE
44	DY	50	ARG
44	DY	56	PRO
44	DY	66	PRO
44	DY	77	PRO
44	DY	78	ALA
44	DY	97	ARG
44	DY	107	ASP
45	DZ	71	VAL
45	DZ	72	ARG
45	DZ	73	GLN
45	DZ	81	ARG
45	DZ	95	PRO
45	DZ	152	ALA
46	D0	56	ASP
48	D3	41	PRO
48	D3	52	HIS
49	D5	56	LYS
50	D6	9	LEU
50	D6	16	CYS
50	D6	33	LYS
51	D7	9	ARG
51	D7	18	PHE
51	D7	45	ALA
52	D8	18	ALA

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Mol	Chain	Res	Type
52	D8	30	ARG
52	D8	49	VAL
52	D8	62	LEU
54	De	65	LYS
57	D1	21	ARG
57	D1	52	ARG
1	AB	15	VAL
1	AB	34	ALA
1	AB	129	GLU
1	AB	186	ALA
1	AB	195	ASP
1	AB	229	VAL
2	AC	44	GLU
2	AC	48	TYR
2	AC	51	GLY
2	AC	60	ALA
2	AC	73	PRO
2	AC	76	VAL
2	AC	130	VAL
2	AC	161	GLU
3	AD	27	TYR
3	AD	44	GLY
3	AD	134	ASP
3	AD	186	LEU
4	AE	6	PHE
4	AE	85	GLY
4	AE	104	ALA
5	AF	85	VAL
6	AG	15	ASP
6	AG	80	VAL
7	AH	27	PRO
7	AH	92	ARG
7	AH	134	ILE
9	AJ	51	ARG
9	AJ	55	LYS
9	AJ	59	SER
10	AK	12	ARG
10	AK	36	ASP
10	AK	43	SER
10	AK	90	GLY
10	AK	91	ARG
11	AL	19	ARG

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Mol	Chain	Res	Type
11	AL	31	PRO
11	AL	34	ARG
11	AL	35	GLY
11	AL	37	CYS
11	AL	50	SER
11	AL	66	VAL
11	AL	80	HIS
11	AL	116	SER
11	AL	121	GLY
11	AL	125	PRO
12	AM	12	ASN
12	AM	101	GLN
16	AQ	12	SER
16	AQ	34	LYS
16	AQ	53	LEU
18	AS	45	VAL
18	AS	66	MET
18	AS	67	VAL
19	AT	71	THR
19	AT	94	ALA
23	AY	20	HIS
23	AY	21	ILE
23	AY	25	LYS
23	AY	39	ILE
23	AY	40	HIS
23	AY	66	THR
23	AY	86	GLY
23	AY	129	LYS
23	AY	205	TYR
23	AY	258	VAL
23	AY	297	GLU
23	AY	436	PRO
23	AY	471	LYS
23	AY	475	ASN
23	AY	476	VAL
23	AY	521	SER
23	AY	555	LEU
23	AY	615	GLU
23	AY	631	ILE
23	AY	658	ASP
23	AY	661	SER
23	AY	668	SER

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Mol	Chain	Res	Type
25	BC	33	LEU
25	BC	43	GLU
25	BC	59	VAL
25	BC	60	ARG
25	BC	71	LYS
25	BC	80	LYS
25	BC	94	TYR
25	BC	113	ALA
25	BC	119	ASP
25	BC	175	PRO
25	BC	177	GLY
25	BC	212	SER
25	BC	214	TYR
25	BC	218	THR
26	BD	23	GLU
26	BD	42	GLY
26	BD	45	ASN
26	BD	53	PHE
26	BD	165	ILE
26	BD	197	GLY
26	BD	222	ARG
26	BD	223	GLY
26	BD	224	ALA
26	BD	232	PRO
26	BD	239	ARG
26	BD	244	ARG
26	BD	246	PRO
27	BE	11	MET
27	BE	13	ARG
27	BE	60	ASN
27	BE	63	LEU
27	BE	119	ARG
27	BE	121	ASN
27	BE	185	LYS
27	BE	186	GLY
28	BF	103	LYS
28	BF	192	LEU
30	BH	13	LYS
30	BH	15	VAL
30	BH	171	LEU
30	BH	173	PRO
30	BH	174	GLY

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Mol	Chain	Res	Type
32	BK	30	HIS
32	BK	78	ILE
32	BK	96	VAL
33	BN	8	GLN
33	BN	64	GLY
33	BN	70	LYS
34	BO	28	SER
34	BO	49	ARG
34	BO	96	THR
35	BP	31	ALA
35	BP	50	ARG
35	BP	54	GLY
35	BP	103	ALA
36	BQ	109	VAL
36	BQ	115	MET
36	BQ	127	ILE
37	BR	6	SER
37	BR	57	ARG
37	BR	93	GLY
38	BS	15	ARG
38	BS	43	GLU
38	BS	47	THR
38	BS	101	LEU
38	BS	104	GLY
38	BS	108	GLY
39	BT	3	ARG
39	BT	36	GLU
39	BT	50	ILE
39	BT	83	ILE
40	BU	88	ILE
40	BU	90	VAL
40	BU	97	ASP
41	BV	29	PRO
41	BV	48	GLY
41	BV	78	LYS
41	BV	80	GLN
42	BW	11	ARG
42	BW	12	ILE
42	BW	61	ASN
42	BW	63	ASP
43	BX	12	VAL
44	BY	38	ILE

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Mol	Chain	Res	Type
44	BY	60	PHE
44	BY	74	PRO
44	BY	80	GLY
45	BZ	78	LYS
45	BZ	142	SER
45	BZ	168	GLU
46	B0	11	ARG
46	B0	49	LYS
46	B0	83	PRO
47	B2	50	ILE
48	B3	52	HIS
49	B5	23	HIS
50	B6	27	LYS
50	B6	33	LYS
50	B6	49	HIS
51	B7	44	PRO
52	B8	19	SER
52	B8	48	PHE
53	B9	2	LYS
53	B9	33	LYS
54	Be	62	VAL
54	Be	100	LYS
57	B1	23	LYS
57	B1	34	THR
57	B1	36	GLY
57	B1	52	ARG
57	B1	53	VAL
57	B1	94	LEU
58	B4	14	ILE
58	B4	33	VAL
1	CB	9	GLU
1	CB	17	PHE
1	CB	20	GLU
1	CB	94	ASN
1	CB	128	GLU
1	CB	230	VAL
2	CC	51	GLY
2	CC	96	GLY
2	CC	161	GLU
3	CD	3	ARG
3	CD	21	LEU
3	CD	27	TYR

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Mol	Chain	Res	Type
3	CD	30	LYS
3	CD	84	LYS
4	CE	85	GLY
6	CG	3	ARG
6	CG	8	GLU
6	CG	80	VAL
7	CH	27	PRO
7	CH	29	SER
7	CH	80	ILE
7	CH	100	ILE
7	CH	134	ILE
8	CI	127	LYS
9	CJ	51	ARG
9	CJ	88	LEU
10	CK	36	ASP
10	CK	41	THR
10	CK	107	SER
10	CK	121	PRO
11	CL	34	ARG
11	CL	35	GLY
11	CL	55	VAL
11	CL	66	VAL
11	CL	69	TYR
11	CL	91	LYS
12	CM	99	ARG
12	CM	118	ALA
13	CN	14	PRO
14	CO	19	PRO
14	CO	44	LYS
16	CQ	12	SER
16	CQ	28	PRO
16	CQ	53	LEU
17	CR	37	VAL
18	CS	29	ARG
18	CS	45	VAL
18	CS	63	THR
18	CS	67	VAL
18	CS	77	THR
18	CS	78	ARG
19	CT	71	THR
23	CY	148	LEU
23	CY	205	TYR

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Mol	Chain	Res	Type
23	CY	206	LEU
23	CY	333	GLY
23	CY	393	ASP
23	CY	401	SER
23	CY	554	PRO
23	CY	631	ILE
23	CY	652	MET
23	CY	668	SER
25	DC	20	VAL
25	DC	42	VAL
25	DC	43	GLU
25	DC	53	ARG
25	DC	55	SER
25	DC	59	VAL
25	DC	60	ARG
25	DC	81	GLY
25	DC	176	VAL
25	DC	210	LEU
25	DC	214	TYR
25	DC	218	THR
25	DC	228	HIS
26	DD	23	GLU
26	DD	43	ARG
26	DD	45	ASN
26	DD	53	PHE
26	DD	89	SER
26	DD	127	VAL
26	DD	158	ALA
26	DD	163	ALA
26	DD	165	ILE
26	DD	197	GLY
26	DD	226	MET
26	DD	232	PRO
26	DD	237	GLU
26	DD	239	ARG
27	DE	14	ILE
27	DE	18	ASP
27	DE	54	GLN
27	DE	67	PHE
27	DE	90	THR
27	DE	119	ARG
27	DE	162	ALA

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Mol	Chain	Res	Type
27	DE	186	GLY
28	DF	5	ALA
28	DF	7	TYR
28	DF	11	VAL
28	DF	16	GLY
28	DF	22	ALA
28	DF	46	ARG
28	DF	48	THR
28	DF	67	GLN
28	DF	69	HIS
28	DF	84	VAL
28	DF	105	VAL
28	DF	134	GLY
28	DF	158	THR
28	DF	172	TRP
28	DF	179	GLU
29	DG	142	PRO
30	DH	13	LYS
30	DH	41	MET
32	DK	51	ALA
33	DN	23	LEU
33	DN	28	THR
33	DN	56	ASN
33	DN	130	HIS
34	DO	5	GLN
34	DO	26	LYS
34	DO	29	ASN
35	DP	25	SER
35	DP	28	GLY
35	DP	54	GLY
35	DP	103	ALA
36	DQ	18	LYS
36	DQ	53	ALA
36	DQ	135	ASP
37	DR	5	LYS
37	DR	12	ARG
37	DR	88	ARG
38	DS	14	VAL
38	DS	15	ARG
38	DS	32	LEU
38	DS	48	LEU
38	DS	93	LYS

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Mol	Chain	Res	Type
38	DS	104	GLY
39	DT	3	ARG
39	DT	29	ARG
39	DT	31	SER
39	DT	49	VAL
39	DT	90	GLN
39	DT	104	ASN
40	DU	86	ALA
40	DU	90	VAL
40	DU	97	ASP
41	DV	8	GLY
41	DV	67	GLY
42	DW	61	ASN
42	DW	75	TYR
44	DY	41	GLY
44	DY	53	PRO
44	DY	60	PHE
44	DY	74	PRO
44	DY	80	GLY
44	DY	88	LYS
44	DY	89	PHE
44	DY	91	GLU
44	DY	101	LYS
44	DY	102	CYS
45	DZ	108	PRO
45	DZ	168	GLU
45	DZ	186	GLU
46	D0	13	GLY
47	D2	48	HIS
48	D3	29	ARG
49	D5	23	HIS
50	D6	7	ILE
50	D6	17	LYS
50	D6	31	PRO
50	D6	37	ARG
52	D8	19	SER
52	D8	64	TYR
53	D9	33	LYS
57	D1	12	PRO
57	D1	22	GLY
57	D1	23	LYS
57	D1	34	THR

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Mol	Chain	Res	Type
57	D1	85	LEU
57	D1	87	PRO
57	D1	94	LEU
58	D4	4	GLY
1	AB	17	PHE
1	AB	20	GLU
1	AB	94	ASN
1	AB	95	GLN
1	AB	100	GLY
1	AB	175	ARG
1	AB	183	PRO
1	AB	235	SER
2	AC	112	SER
2	AC	162	GLN
3	AD	21	LEU
3	AD	88	VAL
3	AD	89	THR
3	AD	197	PRO
4	AE	126	ARG
5	AF	14	LEU
5	AF	96	PRO
6	AG	10	ARG
6	AG	100	ALA
7	AH	90	GLY
7	AH	99	GLU
8	AI	24	GLY
9	AJ	14	LYS
9	AJ	37	PRO
9	AJ	57	LYS
11	AL	18	VAL
11	AL	64	TYR
11	AL	69	TYR
11	AL	96	VAL
12	AM	99	ARG
12	AM	107	ALA
13	AN	58	LYS
18	AS	65	ASN
18	AS	77	THR
18	AS	80	TYR
23	AY	6	GLU
23	AY	91	THR
23	AY	111	SER

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Mol	Chain	Res	Type
23	AY	128	TYR
23	AY	148	LEU
23	AY	203	GLU
23	AY	245	ALA
23	AY	257	PRO
23	AY	320	PRO
23	AY	437	THR
23	AY	498	ILE
23	AY	574	GLU
23	AY	660	ARG
25	BC	11	LEU
25	BC	53	ARG
25	BC	67	HIS
25	BC	81	GLY
25	BC	164	PHE
25	BC	176	VAL
25	BC	179	ALA
25	BC	222	SER
25	BC	228	HIS
26	BD	25	THR
26	BD	119	ALA
26	BD	127	VAL
26	BD	178	PRO
26	BD	247	ALA
26	BD	260	ARG
26	BD	272	ALA
27	BE	39	PRO
27	BE	77	ILE
27	BE	129	HIS
27	BE	130	GLY
28	BF	5	ALA
28	BF	14	PRO
28	BF	48	THR
28	BF	52	LYS
28	BF	72	ARG
28	BF	150	GLY
29	BG	48	GLU
29	BG	84	LYS
30	BH	16	SER
30	BH	126	PRO
30	BH	137	ASP
32	BK	89	HIS

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Mol	Chain	Res	Type
32	BK	122	ALA
33	BN	42	TRP
33	BN	51	PHE
33	BN	58	ASP
34	BO	14	THR
34	BO	23	ARG
35	BP	21	ARG
35	BP	23	PRO
35	BP	29	LYS
35	BP	43	GLY
35	BP	141	ALA
35	BP	145	PRO
36	BQ	54	MET
36	BQ	111	GLU
37	BR	11	ASN
37	BR	58	GLY
37	BR	108	GLY
38	BS	14	VAL
38	BS	24	LEU
38	BS	93	LYS
38	BS	105	ALA
39	BT	29	ARG
39	BT	35	LYS
39	BT	46	GLU
39	BT	80	SER
39	BT	91	ARG
41	BV	16	PRO
41	BV	18	LEU
41	BV	55	ALA
42	BW	14	PRO
42	BW	42	ARG
42	BW	65	LEU
42	BW	75	TYR
42	BW	110	LYS
43	BX	4	ALA
44	BY	67	LEU
44	BY	77	PRO
45	BZ	92	SER
45	BZ	93	ASP
45	BZ	108	PRO
45	BZ	152	ALA
45	BZ	166	SER

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Mol	Chain	Res	Type
46	B0	3	HIS
47	B2	17	SER
48	B3	29	ARG
51	B7	45	ALA
52	B8	64	TYR
54	Be	68	GLY
54	Be	81	ILE
57	B1	12	PRO
57	B1	35	THR
57	B1	40	ARG
1	CB	70	PHE
1	CB	191	ASP
1	CB	229	VAL
2	CC	112	SER
3	CD	24	GLU
3	CD	32	ALA
3	CD	33	MET
3	CD	197	PRO
4	CE	6	PHE
4	CE	126	ARG
5	CF	34	GLY
7	CH	72	PRO
7	CH	74	PRO
10	CK	35	PRO
10	CK	37	GLY
11	CL	6	THR
11	CL	19	ARG
11	CL	77	LEU
11	CL	102	ARG
11	CL	125	PRO
13	CN	27	CYS
14	CO	23	GLY
14	CO	47	LYS
16	CQ	33	GLY
17	CR	21	LYS
17	CR	33	ASP
18	CS	71	LEU
18	CS	72	GLY
19	CT	74	LYS
23	CY	8	ASP
23	CY	20	HIS
23	CY	21	ILE

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Mol	Chain	Res	Type
23	CY	23	ALA
23	CY	158	GLY
23	CY	188	TYR
23	CY	257	PRO
23	CY	258	VAL
23	CY	444	PRO
23	CY	532	GLY
23	CY	533	VAL
23	CY	559	PRO
23	CY	560	VAL
23	CY	566	THR
23	CY	664	GLN
24	CU	3	SER
25	DC	61	GLY
25	DC	115	VAL
25	DC	116	ALA
25	DC	119	ASP
25	DC	222	SER
26	DD	28	GLU
26	DD	39	LYS
26	DD	48	ARG
26	DD	51	VAL
26	DD	59	LYS
26	DD	87	ASN
26	DD	98	VAL
26	DD	100	GLY
26	DD	109	ASP
26	DD	260	ARG
27	DE	11	MET
27	DE	160	TYR
28	DF	14	PRO
28	DF	178	PRO
29	DG	50	ALA
29	DG	87	PRO
30	DH	47	GLU
30	DH	61	HIS
30	DH	155	SER
30	DH	160	LYS
30	DH	164	TYR
30	DH	165	ALA
30	DH	173	PRO
32	DK	63	ARG

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Mol	Chain	Res	Type
33	DN	128	HIS
34	DO	23	ARG
34	DO	119	PRO
35	DP	9	ASN
35	DP	76	LYS
35	DP	110	TYR
35	DP	149	GLU
36	DQ	20	ALA
36	DQ	80	GLU
37	DR	6	SER
37	DR	83	ILE
38	DS	13	ARG
38	DS	24	LEU
39	DT	68	TYR
39	DT	70	VAL
39	DT	80	SER
39	DT	107	ASP
40	DU	35	ALA
41	DV	48	GLY
41	DV	53	GLU
41	DV	80	GLN
41	DV	81	TYR
41	DV	97	LYS
42	DW	15	ARG
42	DW	63	ASP
42	DW	65	LEU
43	DX	4	ALA
44	DY	29	GLU
44	DY	48	ALA
44	DY	70	SER
45	DZ	21	ALA
45	DZ	146	ILE
45	DZ	151	HIS
46	D0	3	HIS
46	D0	11	ARG
46	D0	33	ALA
46	D0	41	ARG
46	D0	49	LYS
47	D2	50	ILE
50	D6	20	ASN
50	D6	44	ARG
51	D7	42	LEU

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Mol	Chain	Res	Type
52	D8	48	PHE
54	De	62	VAL
54	De	81	ILE
57	D1	20	ARG
57	D1	40	ARG
57	D1	65	SER
58	D4	2	LYS
1	AB	54	THR
1	AB	157	ARG
1	AB	184	VAL
1	AB	215	LEU
1	AB	237	ALA
2	AC	85	ARG
2	AC	96	GLY
3	AD	30	LYS
3	AD	33	MET
5	AF	34	GLY
6	AG	12	LEU
6	AG	33	ASP
7	AH	2	LEU
7	AH	100	ILE
8	AI	12	GLU
8	AI	119	ALA
10	AK	15	ALA
10	AK	35	PRO
11	AL	127	GLU
12	AM	10	PRO
12	AM	21	TYR
12	AM	117	VAL
13	AN	13	THR
13	AN	27	CYS
14	AO	20	GLY
14	AO	24	SER
14	AO	47	LYS
16	AQ	33	GLY
16	AQ	71	PHE
17	AR	55	ARG
18	AS	40	ILE
23	AY	304	ASP
23	AY	341	VAL
23	AY	381	LYS
23	AY	531	GLY

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Mol	Chain	Res	Type
23	AY	567	LEU
23	AY	600	VAL
25	BC	69	LEU
25	BC	76	LEU
26	BD	69	ARG
26	BD	100	GLY
26	BD	158	ALA
26	BD	207	GLY
26	BD	219	PRO
27	BE	17	ASP
27	BE	51	PHE
27	BE	90	THR
27	BE	123	ALA
27	BE	155	LYS
28	BF	7	TYR
28	BF	73	ALA
28	BF	133	ASN
28	BF	172	TRP
28	BF	178	PRO
28	BF	206	ILE
29	BG	82	LEU
29	BG	85	GLY
30	BH	118	PRO
30	BH	138	LYS
30	BH	160	LYS
32	BK	61	ALA
32	BK	90	LYS
32	BK	102	GLU
32	BK	113	PRO
33	BN	3	THR
33	BN	47	ALA
33	BN	88	GLU
34	BO	34	THR
34	BO	72	PRO
35	BP	20	GLY
35	BP	106	LEU
36	BQ	139	GLU
37	BR	28	LEU
38	BS	20	ARG
38	BS	67	ARG
38	BS	85	VAL
39	BT	27	THR

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Mol	Chain	Res	Type
39	BT	31	SER
39	BT	107	ASP
39	BT	128	GLU
40	BU	22	LYS
43	BX	24	GLY
44	BY	26	LYS
44	BY	29	GLU
44	BY	39	VAL
44	BY	70	SER
44	BY	103	GLY
45	BZ	22	GLY
45	BZ	32	HIS
45	BZ	51	ALA
45	BZ	95	PRO
45	BZ	179	ASP
46	B0	17	GLN
46	B0	33	ALA
48	B3	28	LEU
51	B7	42	LEU
52	B8	53	PRO
54	Be	53	PRO
54	Be	65	LYS
58	B4	4	GLY
58	B4	7	PRO
1	CB	34	ALA
1	CB	51	LEU
1	CB	76	GLN
1	CB	100	GLY
1	CB	104	ASN
1	CB	153	ARG
2	CC	20	SER
2	CC	60	ALA
3	CD	47	ARG
3	CD	186	LEU
4	CE	125	SER
5	CF	14	LEU
5	CF	69	GLU
6	CG	10	ARG
7	CH	2	LEU
7	CH	97	VAL
8	CI	24	GLY
8	CI	104	ARG

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Mol	Chain	Res	Type
9	CJ	41	PRO
10	CK	14	VAL
11	CL	79	GLU
13	CN	13	THR
14	CO	15	PHE
17	CR	53	ARG
17	CR	60	ALA
18	CS	80	TYR
19	CT	47	GLY
23	CY	6	GLU
23	CY	39	ILE
23	CY	40	HIS
23	CY	244	ALA
23	CY	288	PRO
23	CY	320	PRO
23	CY	447	GLY
23	CY	615	GLU
25	DC	67	HIS
25	DC	175	PRO
25	DC	215	VAL
26	DD	241	PRO
26	DD	245	PRO
26	DD	272	ALA
27	DE	63	LEU
27	DE	86	PRO
27	DE	121	ASN
27	DE	123	ALA
27	DE	147	PRO
27	DE	193	GLY
28	DF	58	ALA
30	DH	124	GLU
30	DH	137	ASP
30	DH	171	LEU
32	DK	13	PRO
32	DK	122	ALA
33	DN	42	TRP
34	DO	14	THR
35	DP	17	LYS
35	DP	29	LYS
37	DR	107	ASP
38	DS	66	ALA
38	DS	94	TYR

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Mol	Chain	Res	Type
38	DS	105	ALA
39	DT	2	ASN
39	DT	34	VAL
40	DU	32	PHE
40	DU	92	ARG
42	DW	14	PRO
43	DX	12	VAL
44	DY	5	MET
44	DY	75	ILE
44	DY	81	LYS
44	DY	106	LEU
45	DZ	32	HIS
45	DZ	78	LYS
46	D0	17	GLN
46	D0	83	PRO
47	D2	17	SER
50	D6	18	ARG
57	D1	10	LYS
57	D1	53	VAL
58	D4	33	VAL
1	AB	67	THR
1	AB	103	THR
2	AC	75	VAL
3	AD	84	LYS
3	AD	204	ILE
4	AE	100	VAL
4	AE	106	PRO
5	AF	38	GLU
8	AI	101	PHE
9	AJ	32	ALA
10	AK	111	ASP
11	AL	79	GLU
13	AN	15	LYS
14	AO	18	PHE
17	AR	33	ASP
17	AR	87	ARG
23	AY	206	LEU
23	AY	225	GLU
23	AY	347	GLY
23	AY	532	GLY
23	AY	533	VAL
23	AY	688	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BC	24	ASP
26	BD	3	VAL
26	BD	9	TYR
26	BD	26	LYS
26	BD	28	GLU
26	BD	76	PRO
26	BD	137	PRO
26	BD	147	LEU
26	BD	200	ASP
26	BD	225	ALA
27	BE	94	GLU
28	BF	46	ARG
28	BF	155	LEU
29	BG	17	PRO
29	BG	24	GLY
29	BG	106	LEU
30	BH	59	ARG
30	BH	107	VAL
30	BH	165	ALA
34	BO	119	PRO
35	BP	60	MET
36	BQ	53	ALA
39	BT	2	ASN
39	BT	34	VAL
39	BT	136	GLN
42	BW	31	GLU
42	BW	80	PRO
42	BW	89	ALA
44	BY	76	CYS
44	BY	81	LYS
44	BY	88	LYS
44	BY	100	ALA
44	BY	101	LYS
46	B0	47	PRO
51	B7	23	ARG
52	B8	60	LEU
53	B9	3	VAL
1	CB	101	MET
1	CB	129	GLU
3	CD	62	GLN
3	CD	135	LEU
4	CE	39	GLY

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Mol	Chain	Res	Type
4	CE	100	VAL
5	CF	13	ASN
5	CF	96	PRO
8	CI	35	GLU
9	CJ	90	LEU
11	CL	47	LYS
11	CL	48	PRO
11	CL	56	ALA
11	CL	67	THR
16	CQ	61	GLU
17	CR	34	TYR
19	CT	99	LEU
23	CY	360	ALA
25	DC	3	LYS
26	DD	3	VAL
26	DD	41	GLY
26	DD	178	PRO
27	DE	17	ASP
27	DE	51	PHE
27	DE	187	ALA
28	DF	45	ARG
28	DF	78	ILE
28	DF	132	VAL
28	DF	133	ASN
28	DF	155	LEU
30	DH	62	LYS
33	DN	111	PRO
34	DO	34	THR
35	DP	23	PRO
35	DP	106	LEU
35	DP	141	ALA
35	DP	145	PRO
36	DQ	85	LYS
36	DQ	115	MET
37	DR	91	GLN
38	DS	85	VAL
39	DT	56	GLY
39	DT	85	LYS
41	DV	24	LYS
41	DV	40	LEU
42	DW	46	PHE
43	DX	13	LEU

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Mol	Chain	Res	Type
43	DX	24	GLY
44	DY	18	GLY
45	DZ	92	SER
45	DZ	166	SER
48	D3	28	LEU
49	D5	28	PRO
50	D6	49	HIS
51	D7	39	ARG
52	D8	53	PRO
53	D9	3	VAL
54	De	68	GLY
57	D1	35	THR
57	D1	64	ALA
58	D4	5	ILE
1	AB	230	VAL
2	AC	13	GLY
3	AD	7	PRO
3	AD	47	ARG
4	AE	65	ASN
7	AH	72	PRO
11	AL	93	LEU
14	AO	5	LYS
23	AY	360	ALA
23	AY	361	ASN
25	BC	37	LYS
25	BC	104	ILE
26	BD	121	PRO
26	BD	243	GLY
26	BD	250	TRP
28	BF	9	ILE
32	BK	51	ALA
33	BN	119	ARG
33	BN	127	ASP
33	BN	128	HIS
35	BP	48	PRO
35	BP	107	LYS
36	BQ	24	GLY
41	BV	19	LYS
44	BY	51	VAL
49	B5	54	GLY
54	Be	60	PHE
57	B1	37	ILE

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Mol	Chain	Res	Type
1	CB	13	ALA
1	CB	26	PRO
2	CC	129	ALA
2	CC	181	ASN
3	CD	40	PRO
9	CJ	37	PRO
11	CL	88	GLY
11	CL	95	GLY
15	CP	43	LYS
16	CQ	31	LEU
23	CY	519	ARG
23	CY	574	GLU
23	CY	598	ASP
23	CY	628	ARG
25	DC	169	THR
26	DD	180	GLY
27	DE	53	PRO
28	DF	150	GLY
28	DF	159	GLY
29	DG	27	ASN
30	DH	15	VAL
30	DH	48	GLY
33	DN	46	VAL
35	DP	20	GLY
35	DP	26	GLY
37	DR	103	ARG
39	DT	83	ILE
40	DU	9	VAL
44	DY	76	CYS
46	D0	74	ARG
57	D1	24	ALA
2	AC	109	PRO
2	AC	174	PRO
3	AD	23	GLY
4	AE	74	GLY
5	AF	37	VAL
7	AH	97	VAL
10	AK	113	PRO
14	AO	23	GLY
16	AQ	30	PRO
18	AS	46	GLY
23	AY	116	PRO

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Mol	Chain	Res	Type
23	AY	638	GLY
23	AY	680	PRO
33	BN	46	VAL
35	BP	71	VAL
41	BV	67	GLY
41	BV	79	VAL
45	BZ	53	ILE
52	B8	45	GLY
4	CE	67	VAL
7	CH	103	VAL
12	CM	85	GLY
15	CP	33	ILE
15	CP	63	GLY
23	CY	202	PRO
23	CY	638	GLY
25	DC	136	GLY
25	DC	221	PRO
26	DD	238	GLY
28	DF	91	GLY
29	DG	85	GLY
35	DP	104	GLY
37	DR	32	GLY
43	DX	7	VAL
44	DY	39	VAL
45	DZ	53	ILE
48	D3	16	PRO
48	D3	27	GLY
54	De	63	ILE
10	AK	14	VAL
23	AY	65	ILE
23	AY	301	ILE
36	BQ	27	VAL
39	BT	70	VAL
5	CF	85	VAL
10	CK	90	GLY
23	CY	341	VAL
26	DD	110	GLY
27	DE	30	PRO
30	DH	154	PRO
36	DQ	127	ILE
37	DR	117	VAL
40	DU	88	ILE

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Mol	Chain	Res	Type
49	D5	7	PRO
51	D7	38	GLY
1	AB	164	VAL
1	AB	174	VAL
5	AF	51	PRO
13	AN	14	PRO
18	AS	59	PRO
25	BC	215	VAL
28	BF	92	PRO
28	BF	105	VAL
33	BN	129	PRO
36	BQ	62	GLY
36	BQ	81	VAL
41	BV	51	VAL
50	B6	48	VAL
2	CC	13	GLY
3	CD	44	GLY
5	CF	72	VAL
6	CG	14	PRO
18	CS	46	GLY
23	CY	69	VAL
23	CY	557	GLY
25	DC	181	PHE
26	DD	235	GLY
29	DG	68	PRO
33	DN	14	VAL
36	DQ	27	VAL
38	DS	81	GLY
44	DY	49	VAL
53	D9	30	PRO
58	D4	10	VAL
58	D4	29	PRO
10	AK	48	ILE
11	AL	95	GLY
13	AN	18	VAL
16	AQ	64	PRO
17	AR	39	VAL
19	AT	47	GLY
25	BC	20	VAL
26	BD	238	GLY
27	BE	175	VAL
28	BF	61	GLY

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Mol	Chain	Res	Type
54	Be	63	ILE
58	B4	10	VAL
13	CN	18	VAL
19	CT	98	PRO
26	DD	137	PRO
32	DK	90	LYS
44	DY	82	PRO
44	DY	98	VAL
45	DZ	39	VAL
45	DZ	165	VAL
54	De	53	PRO
58	D4	15	ILE
25	BC	65	LEU
25	BC	75	VAL
25	BC	181	PHE
40	BU	102	GLU
43	BX	49	VAL
23	CY	531	GLY
23	CY	600	VAL
36	DQ	109	VAL
35	DP	48	PRO
32	DK	22	PRO

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	AB	203/203 (100%)	164 (81%)	39 (19%)	2	10
1	CB	203/203 (100%)	167 (82%)	36 (18%)	2	13
2	AC	161/161 (100%)	132 (82%)	29 (18%)	2	12
2	CC	161/161 (100%)	136 (84%)	25 (16%)	3	20
3	AD	180/180 (100%)	145 (81%)	35 (19%)	2	10
3	CD	180/180 (100%)	150 (83%)	30 (17%)	3	16
4	AE	116/116 (100%)	93 (80%)	23 (20%)	1	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	CE	116/116 (100%)	98 (84%)	18 (16%)	3	20
5	AF	90/90 (100%)	78 (87%)	12 (13%)	5	26
5	CF	90/90 (100%)	82 (91%)	8 (9%)	12	47
6	AG	126/126 (100%)	113 (90%)	13 (10%)	9	40
6	CG	126/126 (100%)	115 (91%)	11 (9%)	13	48
7	AH	119/119 (100%)	98 (82%)	21 (18%)	2	13
7	CH	119/119 (100%)	105 (88%)	14 (12%)	6	31
8	AI	98/98 (100%)	82 (84%)	16 (16%)	3	17
8	CI	98/98 (100%)	84 (86%)	14 (14%)	4	24
9	AJ	89/89 (100%)	75 (84%)	14 (16%)	3	19
9	CJ	89/89 (100%)	72 (81%)	17 (19%)	2	10
10	AK	90/90 (100%)	71 (79%)	19 (21%)	1	8
10	CK	90/90 (100%)	73 (81%)	17 (19%)	2	10
11	AL	104/104 (100%)	77 (74%)	27 (26%)	0	4
11	CL	104/104 (100%)	72 (69%)	32 (31%)	0	3
12	AM	100/100 (100%)	83 (83%)	17 (17%)	2	15
12	CM	100/100 (100%)	89 (89%)	11 (11%)	8	36
13	AN	49/49 (100%)	43 (88%)	6 (12%)	6	29
13	CN	49/49 (100%)	43 (88%)	6 (12%)	6	29
14	AO	79/79 (100%)	71 (90%)	8 (10%)	9	40
14	CO	79/79 (100%)	65 (82%)	14 (18%)	2	13
15	AP	72/72 (100%)	66 (92%)	6 (8%)	14	50
15	CP	72/72 (100%)	62 (86%)	10 (14%)	4	25
16	AQ	95/95 (100%)	81 (85%)	14 (15%)	4	22
16	CQ	95/95 (100%)	79 (83%)	16 (17%)	2	15
17	AR	61/61 (100%)	51 (84%)	10 (16%)	3	17
17	CR	61/61 (100%)	53 (87%)	8 (13%)	5	27
18	AS	69/69 (100%)	55 (80%)	14 (20%)	1	9
18	CS	69/69 (100%)	54 (78%)	15 (22%)	1	7
19	AT	76/76 (100%)	64 (84%)	12 (16%)	3	19
19	CT	76/76 (100%)	67 (88%)	9 (12%)	6	31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	AY	563/579 (97%)	470 (84%)	93 (16%)	3	16
23	CY	563/579 (97%)	463 (82%)	100 (18%)	2	13
24	AU	2/2 (100%)	2 (100%)	0	100	100
24	CU	2/2 (100%)	2 (100%)	0	100	100
25	BC	180/180 (100%)	140 (78%)	40 (22%)	1	6
25	DC	180/180 (100%)	138 (77%)	42 (23%)	1	5
26	BD	217/217 (100%)	169 (78%)	48 (22%)	1	6
26	DD	217/217 (100%)	164 (76%)	53 (24%)	1	5
27	BE	165/165 (100%)	134 (81%)	31 (19%)	2	11
27	DE	165/165 (100%)	127 (77%)	38 (23%)	1	5
28	BF	165/165 (100%)	133 (81%)	32 (19%)	2	10
28	DF	165/165 (100%)	135 (82%)	30 (18%)	2	12
29	BG	155/155 (100%)	130 (84%)	25 (16%)	3	18
29	DG	155/155 (100%)	127 (82%)	28 (18%)	2	12
30	BH	136/136 (100%)	116 (85%)	20 (15%)	4	22
30	DH	136/136 (100%)	125 (92%)	11 (8%)	15	52
32	BK	105/105 (100%)	90 (86%)	15 (14%)	4	24
32	DK	105/105 (100%)	89 (85%)	16 (15%)	3	21
33	BN	117/117 (100%)	95 (81%)	22 (19%)	2	11
33	DN	117/117 (100%)	94 (80%)	23 (20%)	1	9
34	BO	100/100 (100%)	80 (80%)	20 (20%)	1	9
34	DO	100/100 (100%)	81 (81%)	19 (19%)	2	10
35	BP	112/112 (100%)	87 (78%)	25 (22%)	1	6
35	DP	112/112 (100%)	94 (84%)	18 (16%)	3	18
36	BQ	111/111 (100%)	82 (74%)	29 (26%)	0	4
36	DQ	111/111 (100%)	86 (78%)	25 (22%)	1	6
37	BR	100/100 (100%)	87 (87%)	13 (13%)	5	27
37	DR	100/100 (100%)	82 (82%)	18 (18%)	2	12
38	BS	77/77 (100%)	62 (80%)	15 (20%)	2	10
38	DS	77/77 (100%)	58 (75%)	19 (25%)	1	5
39	BT	120/120 (100%)	94 (78%)	26 (22%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	DT	120/120 (100%)	92 (77%)	28 (23%)	1	5
40	BU	93/93 (100%)	72 (77%)	21 (23%)	1	6
40	DU	93/93 (100%)	73 (78%)	20 (22%)	1	7
41	BV	82/82 (100%)	60 (73%)	22 (27%)	0	4
41	DV	82/82 (100%)	59 (72%)	23 (28%)	0	3
42	BW	92/92 (100%)	68 (74%)	24 (26%)	0	4
42	DW	92/92 (100%)	72 (78%)	20 (22%)	1	7
43	BX	75/75 (100%)	64 (85%)	11 (15%)	4	22
43	DX	75/75 (100%)	60 (80%)	15 (20%)	1	9
44	BY	88/88 (100%)	69 (78%)	19 (22%)	1	7
44	DY	88/88 (100%)	72 (82%)	16 (18%)	2	12
45	BZ	162/162 (100%)	133 (82%)	29 (18%)	2	13
45	DZ	162/162 (100%)	134 (83%)	28 (17%)	2	14
46	B0	66/66 (100%)	54 (82%)	12 (18%)	2	12
46	D0	66/66 (100%)	51 (77%)	15 (23%)	1	6
47	B2	66/66 (100%)	62 (94%)	4 (6%)	23	64
47	D2	66/66 (100%)	60 (91%)	6 (9%)	12	46
48	B3	52/52 (100%)	45 (86%)	7 (14%)	5	26
48	D3	52/52 (100%)	45 (86%)	7 (14%)	5	26
49	B5	51/51 (100%)	44 (86%)	7 (14%)	4	25
49	D5	51/51 (100%)	41 (80%)	10 (20%)	1	9
50	B6	49/49 (100%)	38 (78%)	11 (22%)	1	6
50	D6	49/49 (100%)	37 (76%)	12 (24%)	1	5
51	B7	42/42 (100%)	35 (83%)	7 (17%)	3	16
51	D7	42/42 (100%)	38 (90%)	4 (10%)	11	43
52	B8	54/54 (100%)	39 (72%)	15 (28%)	0	3
52	D8	54/54 (100%)	37 (68%)	17 (32%)	0	3
53	B9	34/34 (100%)	28 (82%)	6 (18%)	2	13
53	D9	34/34 (100%)	32 (94%)	2 (6%)	24	65
54	Be	54/54 (100%)	47 (87%)	7 (13%)	5	27
54	De	54/54 (100%)	46 (85%)	8 (15%)	4	22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
57	B1	78/78 (100%)	59 (76%)	19 (24%)	1	5
57	D1	78/78 (100%)	58 (74%)	20 (26%)	0	4
58	B4	31/31 (100%)	23 (74%)	8 (26%)	0	4
58	D4	31/31 (100%)	26 (84%)	5 (16%)	3	18
All	All	11142/11174 (100%)	9117 (82%)	2025 (18%)	2	12

All (2025) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	7	VAL
1	AB	9	GLU
1	AB	12	GLU
1	AB	15	VAL
1	AB	17	PHE
1	AB	36	ARG
1	AB	40	HIS
1	AB	42	ILE
1	AB	49	GLU
1	AB	69	LEU
1	AB	70	PHE
1	AB	74	LYS
1	AB	96	ARG
1	AB	103	THR
1	AB	115	LEU
1	AB	128	GLU
1	AB	134	GLU
1	AB	137	ARG
1	AB	140	HIS
1	AB	141	GLU
1	AB	142	LEU
1	AB	145	LEU
1	AB	157	ARG
1	AB	160	ASP
1	AB	162	ILE
1	AB	163	PHE
1	AB	168	THR
1	AB	172	ILE
1	AB	175	ARG
1	AB	185	ILE
1	AB	187	LEU
1	AB	190	THR

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Mol	Chain	Res	Type
1	AB	191	ASP
1	AB	198	ASP
1	AB	212	GLN
1	AB	213	LEU
1	AB	226	ARG
1	AB	230	VAL
1	AB	239	VAL
2	AC	4	LYS
2	AC	5	ILE
2	AC	6	HIS
2	AC	10	PHE
2	AC	15	THR
2	AC	22	TRP
2	AC	32	LEU
2	AC	38	ARG
2	AC	57	ILE
2	AC	67	THR
2	AC	76	VAL
2	AC	83	ARG
2	AC	84	ILE
2	AC	101	LEU
2	AC	110	ASN
2	AC	124	ILE
2	AC	125	GLU
2	AC	128	PHE
2	AC	132	ARG
2	AC	134	ILE
2	AC	136	GLN
2	AC	153	VAL
2	AC	167	TRP
2	AC	175	LEU
2	AC	176	HIS
2	AC	184	TYR
2	AC	196	LEU
2	AC	204	LEU
2	AC	208	ILE
3	AD	3	ARG
3	AD	5	ILE
3	AD	10	ARG
3	AD	19	LEU
3	AD	30	LYS
3	AD	53	ASP

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Mol	Chain	Res	Type
3	AD	54	TYR
3	AD	57	ARG
3	AD	61	LYS
3	AD	66	ARG
3	AD	72	GLU
3	AD	80	GLU
3	AD	86	LYS
3	AD	89	THR
3	AD	96	LEU
3	AD	102	ASP
3	AD	107	ARG
3	AD	127	THR
3	AD	131	ARG
3	AD	132	ARG
3	AD	134	ASP
3	AD	138	TYR
3	AD	140	VAL
3	AD	141	ARG
3	AD	150	GLU
3	AD	156	GLU
3	AD	170	VAL
3	AD	177	ASP
3	AD	178	VAL
3	AD	181	MET
3	AD	187	ARG
3	AD	191	ARG
3	AD	193	ASP
3	AD	196	LEU
3	AD	200	GLU
4	AE	11	ILE
4	AE	12	LEU
4	AE	26	PHE
4	AE	31	LEU
4	AE	34	VAL
4	AE	36	ASP
4	AE	41	VAL
4	AE	47	LYS
4	AE	51	VAL
4	AE	63	ARG
4	AE	64	ARG
4	AE	72	GLN
4	AE	75	THR

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Mol	Chain	Res	Type
4	AE	78	HIS
4	AE	80	ILE
4	AE	91	LEU
4	AE	98	THR
4	AE	100	VAL
4	AE	107	ARG
4	AE	119	LEU
4	AE	125	SER
4	AE	139	LEU
4	AE	145	LYS
5	AF	2	ARG
5	AF	13	ASN
5	AF	16	GLN
5	AF	31	GLU
5	AF	33	TYR
5	AF	61	LEU
5	AF	63	TYR
5	AF	64	GLN
5	AF	67	MET
5	AF	80	ARG
5	AF	89	MET
5	AF	98	LEU
6	AG	5	ARG
6	AG	11	GLN
6	AG	13	GLN
6	AG	24	THR
6	AG	32	ARG
6	AG	56	GLN
6	AG	68	ASN
6	AG	79	ARG
6	AG	80	VAL
6	AG	94	ARG
6	AG	97	GLN
6	AG	122	HIS
6	AG	149	ARG
7	AH	21	LYS
7	AH	31	PHE
7	AH	37	ARG
7	AH	44	PHE
7	AH	48	TYR
7	AH	51	VAL
7	AH	59	LEU

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Mol	Chain	Res	Type
7	AH	62	TYR
7	AH	63	LEU
7	AH	69	ARG
7	AH	73	ASP
7	AH	82	HIS
7	AH	92	ARG
7	AH	95	VAL
7	AH	102	ARG
7	AH	103	VAL
7	AH	107	LEU
7	AH	111	ILE
7	AH	112	LEU
7	AH	120	THR
7	AH	138	TRP
8	AI	25	LYS
8	AI	28	VAL
8	AI	40	LEU
8	AI	66	ARG
8	AI	79	LEU
8	AI	85	LEU
8	AI	88	TYR
8	AI	95	LYS
8	AI	97	LYS
8	AI	99	LEU
8	AI	102	LEU
8	AI	104	ARG
8	AI	111	ARG
8	AI	113	LYS
8	AI	121	ARG
8	AI	128	ARG
9	AJ	6	ILE
9	AJ	15	THR
9	AJ	16	LEU
9	AJ	38	ILE
9	AJ	43	ARG
9	AJ	55	LYS
9	AJ	70	ARG
9	AJ	73	ASP
9	AJ	75	ILE
9	AJ	78	ASN
9	AJ	79	ARG
9	AJ	83	GLU

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Mol	Chain	Res	Type
9	AJ	96	ILE
9	AJ	101	VAL
10	AK	25	TYR
10	AK	29	ILE
10	AK	31	THR
10	AK	34	ASP
10	AK	40	ILE
10	AK	41	THR
10	AK	48	ILE
10	AK	57	THR
10	AK	73	MET
10	AK	77	MET
10	AK	80	VAL
10	AK	81	ASP
10	AK	84	VAL
10	AK	98	LEU
10	AK	110	ASP
10	AK	116	HIS
10	AK	117	ASN
10	AK	120	ARG
10	AK	124	LYS
11	AL	18	VAL
11	AL	20	LYS
11	AL	24	VAL
11	AL	33	ARG
11	AL	38	THR
11	AL	42	THR
11	AL	43	VAL
11	AL	44	THR
11	AL	53	ARG
11	AL	54	LYS
11	AL	55	VAL
11	AL	59	ARG
11	AL	61	THR
11	AL	67	THR
11	AL	70	ILE
11	AL	75	HIS
11	AL	76	ASN
11	AL	79	GLU
11	AL	85	ILE
11	AL	90	VAL
11	AL	92	ASP

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Mol	Chain	Res	Type
11	AL	96	VAL
11	AL	102	ARG
11	AL	105	TYR
11	AL	116	SER
11	AL	120	TYR
11	AL	127	GLU
12	AM	8	GLU
12	AM	16	ASP
12	AM	21	TYR
12	AM	27	LYS
12	AM	56	LEU
12	AM	61	GLU
12	AM	67	GLU
12	AM	71	ARG
12	AM	73	GLU
12	AM	82	MET
12	AM	83	ASP
12	AM	108	ARG
12	AM	110	ARG
12	AM	115	LYS
12	AM	120	LYS
12	AM	121	LYS
12	AM	125	ARG
13	AN	7	ILE
13	AN	21	TYR
13	AN	35	ARG
13	AN	40	CYS
13	AN	41	ARG
13	AN	61	TRP
14	AO	5	LYS
14	AO	10	LYS
14	AO	31	LEU
14	AO	38	ARG
14	AO	41	GLU
14	AO	82	ILE
14	AO	85	LEU
14	AO	88	ARG
15	AP	28	ARG
15	AP	29	ASP
15	AP	57	ARG
15	AP	67	THR
15	AP	69	THR

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Mol	Chain	Res	Type
15	AP	71	ARG
16	AQ	5	VAL
16	AQ	6	LEU
16	AQ	7	THR
16	AQ	16	GLN
16	AQ	24	GLU
16	AQ	32	TYR
16	AQ	48	GLU
16	AQ	52	LYS
16	AQ	59	ILE
16	AQ	63	ARG
16	AQ	66	SER
16	AQ	69	LYS
16	AQ	74	LEU
16	AQ	93	GLN
17	AR	19	LYS
17	AR	29	PHE
17	AR	32	ARG
17	AR	37	VAL
17	AR	43	PHE
17	AR	47	THR
17	AR	53	ARG
17	AR	54	ARG
17	AR	69	THR
17	AR	83	GLU
18	AS	5	LEU
18	AS	6	LYS
18	AS	7	LYS
18	AS	23	ASN
18	AS	25	LYS
18	AS	28	LYS
18	AS	32	LYS
18	AS	47	HIS
18	AS	51	VAL
18	AS	58	VAL
18	AS	61	TYR
18	AS	62	ILE
18	AS	79	THR
18	AS	81	ARG
19	AT	13	LEU
19	AT	25	ARG
19	AT	35	THR

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Mol	Chain	Res	Type
19	AT	36	LEU
19	AT	50	GLU
19	AT	54	LYS
19	AT	56	MET
19	AT	57	ARG
19	AT	71	THR
19	AT	73	HIS
19	AT	74	LYS
19	AT	80	ARG
23	AY	20	HIS
23	AY	29	THR
23	AY	30	GLU
23	AY	35	TYR
23	AY	36	THR
23	AY	72	CYS
23	AY	73	PHE
23	AY	87	HIS
23	AY	92	ILE
23	AY	93	GLU
23	AY	112	GLN
23	AY	119	GLU
23	AY	121	VAL
23	AY	126	GLU
23	AY	132	ARG
23	AY	133	ILE
23	AY	137	ASN
23	AY	139	MET
23	AY	140	ASP
23	AY	146	LEU
23	AY	157	LEU
23	AY	165	GLN
23	AY	170	ARG
23	AY	174	PHE
23	AY	178	ILE
23	AY	186	TYR
23	AY	188	TYR
23	AY	191	ASP
23	AY	197	ARG
23	AY	199	ILE
23	AY	210	ARG
23	AY	227	ILE
23	AY	229	LEU

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Mol	Chain	Res	Type
23	AY	240	GLU
23	AY	252	ASP
23	AY	255	ILE
23	AY	260	LEU
23	AY	264	LEU
23	AY	266	ASN
23	AY	271	LEU
23	AY	273	LEU
23	AY	282	SER
23	AY	299	VAL
23	AY	302	HIS
23	AY	312	LEU
23	AY	314	PHE
23	AY	319	ASP
23	AY	321	TYR
23	AY	328	ILE
23	AY	340	TYR
23	AY	341	VAL
23	AY	342	TYR
23	AY	344	THR
23	AY	352	VAL
23	AY	358	MET
23	AY	364	GLU
23	AY	368	GLU
23	AY	393	ASP
23	AY	404	VAL
23	AY	406	GLU
23	AY	428	LEU
23	AY	440	VAL
23	AY	454	MET
23	AY	456	GLU
23	AY	460	GLU
23	AY	464	ASP
23	AY	468	ARG
23	AY	475	ASN
23	AY	487	ILE
23	AY	488	THR
23	AY	498	ILE
23	AY	499	ARG
23	AY	504	ARG
23	AY	506	GLN
23	AY	507	TYR

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Mol	Chain	Res	Type
23	AY	512	ILE
23	AY	517	LEU
23	AY	525	PHE
23	AY	526	VAL
23	AY	529	ILE
23	AY	556	ILE
23	AY	563	ILE
23	AY	572	TYR
23	AY	574	GLU
23	AY	580	MET
23	AY	603	GLU
23	AY	610	VAL
23	AY	614	GLU
23	AY	617	MET
23	AY	641	GLN
23	AY	647	VAL
23	AY	666	ARG
23	AY	676	TYR
25	BC	7	ARG
25	BC	15	VAL
25	BC	19	LYS
25	BC	28	ARG
25	BC	31	LYS
25	BC	32	GLU
25	BC	41	THR
25	BC	42	VAL
25	BC	47	LYS
25	BC	48	LEU
25	BC	50	ILE
25	BC	53	ARG
25	BC	59	VAL
25	BC	60	ARG
25	BC	62	THR
25	BC	63	VAL
25	BC	64	SER
25	BC	73	VAL
25	BC	74	ARG
25	BC	82	GLU
25	BC	94	TYR
25	BC	106	ASP
25	BC	112	ASP
25	BC	115	VAL

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Mol	Chain	Res	Type
25	BC	119	ASP
25	BC	130	ARG
25	BC	131	ILE
25	BC	145	THR
25	BC	148	PHE
25	BC	150	ILE
25	BC	161	ARG
25	BC	164	PHE
25	BC	166	ASN
25	BC	169	THR
25	BC	172	ILE
25	BC	176	VAL
25	BC	185	LYS
25	BC	198	GLU
25	BC	215	VAL
25	BC	224	ARG
26	BD	4	LYS
26	BD	5	LYS
26	BD	9	TYR
26	BD	10	THR
26	BD	12	SER
26	BD	20	ASP
26	BD	23	GLU
26	BD	25	THR
26	BD	26	LYS
26	BD	30	GLU
26	BD	33	LEU
26	BD	34	VAL
26	BD	40	THR
26	BD	64	ILE
26	BD	65	ILE
26	BD	67	PHE
26	BD	78	LYS
26	BD	82	ILE
26	BD	87	ASN
26	BD	94	LEU
26	BD	95	LEU
26	BD	96	HIS
26	BD	97	TYR
26	BD	105	ILE
26	BD	106	ILE
26	BD	112	GLN

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Mol	Chain	Res	Type
26	BD	113	VAL
26	BD	115	GLN
26	BD	117	VAL
26	BD	122	ASP
26	BD	131	LEU
26	BD	140	THR
26	BD	142	VAL
26	BD	148	GLU
26	BD	165	ILE
26	BD	169	GLU
26	BD	171	ASP
26	BD	183	ARG
26	BD	190	TYR
26	BD	203	ASN
26	BD	221	VAL
26	BD	233	HIS
26	BD	239	ARG
26	BD	250	TRP
26	BD	254	THR
26	BD	257	LEU
26	BD	259	THR
26	BD	268	ARG
27	BE	4	ILE
27	BE	26	ILE
27	BE	27	LEU
27	BE	33	VAL
27	BE	34	VAL
27	BE	38	THR
27	BE	44	TYR
27	BE	49	LEU
27	BE	51	PHE
27	BE	61	ARG
27	BE	63	LEU
27	BE	72	VAL
27	BE	78	LEU
27	BE	79	ARG
27	BE	85	ASN
27	BE	87	GLU
27	BE	113	PHE
27	BE	119	ARG
27	BE	120	TRP
27	BE	121	ASN

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Mol	Chain	Res	Type
27	BE	122	PHE
27	BE	134	ILE
27	BE	140	SER
27	BE	144	ARG
27	BE	145	LYS
27	BE	146	THR
27	BE	154	LYS
27	BE	164	ARG
27	BE	184	VAL
27	BE	197	ILE
27	BE	200	GLU
28	BF	10	PRO
28	BF	12	LEU
28	BF	17	ARG
28	BF	18	ARG
28	BF	19	GLU
28	BF	28	ILE
28	BF	33	LEU
28	BF	38	ARG
28	BF	40	GLN
28	BF	43	LYS
28	BF	45	ARG
28	BF	46	ARG
28	BF	53	THR
28	BF	62	ARG
28	BF	68	LYS
28	BF	72	ARG
28	BF	74	ARG
28	BF	78	ILE
28	BF	82	ILE
28	BF	90	PHE
28	BF	116	ASP
28	BF	124	LEU
28	BF	136	THR
28	BF	149	ASP
28	BF	152	GLU
28	BF	154	VAL
28	BF	170	LEU
28	BF	175	THR
28	BF	183	VAL
28	BF	186	ILE
28	BF	190	GLU

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Mol	Chain	Res	Type
28	BF	194	MET
29	BG	5	VAL
29	BG	11	TYR
29	BG	15	VAL
29	BG	16	ARG
29	BG	33	ARG
29	BG	35	GLU
29	BG	48	GLU
29	BG	54	GLU
29	BG	55	LYS
29	BG	59	GLU
29	BG	63	ILE
29	BG	67	LYS
29	BG	80	PHE
29	BG	86	MET
29	BG	92	VAL
29	BG	103	LEU
29	BG	107	LEU
29	BG	109	VAL
29	BG	113	ARG
29	BG	133	LEU
29	BG	139	LEU
29	BG	146	TYR
29	BG	161	THR
29	BG	167	GLU
29	BG	170	ARG
30	BH	17	VAL
30	BH	34	GLU
30	BH	37	VAL
30	BH	41	MET
30	BH	43	VAL
30	BH	44	VAL
30	BH	65	HIS
30	BH	71	LEU
30	BH	85	LYS
30	BH	86	GLU
30	BH	95	ARG
30	BH	103	LEU
30	BH	114	VAL
30	BH	116	GLU
30	BH	121	ILE
30	BH	124	GLU

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Mol	Chain	Res	Type
30	BH	157	TYR
30	BH	159	GLU
30	BH	160	LYS
30	BH	171	LEU
32	BK	2	LYS
32	BK	9	LYS
32	BK	37	PHE
32	BK	41	PHE
32	BK	57	ILE
32	BK	59	ILE
32	BK	65	PHE
32	BK	66	THR
32	BK	69	THR
32	BK	78	ILE
32	BK	105	LEU
32	BK	117	THR
32	BK	119	ASP
32	BK	125	ARG
32	BK	132	ARG
33	BN	1	MET
33	BN	28	THR
33	BN	29	LYS
33	BN	32	THR
33	BN	48	MET
33	BN	62	VAL
33	BN	63	THR
33	BN	71	ILE
33	BN	73	THR
33	BN	84	LYS
33	BN	85	ILE
33	BN	87	LEU
33	BN	90	MET
33	BN	99	LEU
33	BN	109	LYS
33	BN	112	LEU
33	BN	114	ARG
33	BN	119	ARG
33	BN	127	ASP
33	BN	134	ARG
33	BN	137	LYS
33	BN	138	LEU
34	BO	3	GLN

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Mol	Chain	Res	Type
34	BO	8	LEU
34	BO	9	GLU
34	BO	14	THR
34	BO	17	ARG
34	BO	28	SER
34	BO	29	ASN
34	BO	34	THR
34	BO	37	ASP
34	BO	38	VAL
34	BO	39	ILE
34	BO	52	VAL
34	BO	82	ASN
34	BO	86	ILE
34	BO	89	ASN
34	BO	91	LEU
34	BO	98	VAL
34	BO	107	ARG
34	BO	112	MET
34	BO	117	LEU
35	BP	5	ASP
35	BP	7	ARG
35	BP	16	ARG
35	BP	18	ARG
35	BP	27	HIS
35	BP	30	THR
35	BP	35	HIS
35	BP	39	LYS
35	BP	42	SER
35	BP	46	LYS
35	BP	55	ARG
35	BP	60	MET
35	BP	61	ARG
35	BP	68	GLN
35	BP	85	LEU
35	BP	87	ASP
35	BP	90	ARG
35	BP	98	GLU
35	BP	100	LEU
35	BP	106	LEU
35	BP	107	LYS
35	BP	115	LEU
35	BP	125	VAL

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Mol	Chain	Res	Type
35	BP	131	SER
35	BP	135	LEU
36	BQ	1	MET
36	BQ	3	MET
36	BQ	7	MET
36	BQ	8	LYS
36	BQ	10	ARG
36	BQ	14	ARG
36	BQ	17	LEU
36	BQ	25	ASP
36	BQ	31	ASP
36	BQ	42	ILE
36	BQ	46	GLN
36	BQ	56	ARG
36	BQ	60	ARG
36	BQ	65	PHE
36	BQ	66	ILE
36	BQ	68	ILE
36	BQ	75	THR
36	BQ	79	LEU
36	BQ	80	GLU
36	BQ	90	VAL
36	BQ	91	GLU
36	BQ	93	TYR
36	BQ	96	VAL
36	BQ	105	GLU
36	BQ	109	VAL
36	BQ	128	LYS
36	BQ	131	ILE
36	BQ	137	TYR
36	BQ	141	GLN
37	BR	3	HIS
37	BR	5	LYS
37	BR	8	ARG
37	BR	23	ASN
37	BR	43	GLU
37	BR	44	LEU
37	BR	45	ARG
37	BR	71	GLN
37	BR	79	LEU
37	BR	82	GLU
37	BR	99	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	BR	113	LEU
37	BR	115	GLU
38	BS	12	PHE
38	BS	13	ARG
38	BS	16	ASN
38	BS	18	ILE
38	BS	30	ARG
38	BS	41	ASP
38	BS	47	THR
38	BS	54	LEU
38	BS	71	ARG
38	BS	98	VAL
38	BS	99	LYS
38	BS	101	LEU
38	BS	103	GLU
38	BS	106	ARG
38	BS	107	GLU
39	BT	13	ARG
39	BT	15	VAL
39	BT	27	THR
39	BT	30	VAL
39	BT	33	LYS
39	BT	42	ILE
39	BT	44	ASP
39	BT	48	ILE
39	BT	49	VAL
39	BT	57	PHE
39	BT	58	ASN
39	BT	59	THR
39	BT	65	LYS
39	BT	70	VAL
39	BT	72	VAL
39	BT	74	ARG
39	BT	75	ILE
39	BT	78	LEU
39	BT	80	SER
39	BT	82	LEU
39	BT	84	GLN
39	BT	95	ARG
39	BT	96	ARG
39	BT	101	PHE
39	BT	103	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	BT	115	ARG
40	BU	14	HIS
40	BU	16	LYS
40	BU	17	ILE
40	BU	18	LEU
40	BU	20	LEU
40	BU	29	SER
40	BU	51	LYS
40	BU	52	ARG
40	BU	53	ARG
40	BU	54	LYS
40	BU	55	ARG
40	BU	60	LEU
40	BU	64	ARG
40	BU	74	LEU
40	BU	79	PHE
40	BU	90	VAL
40	BU	91	ASP
40	BU	98	LEU
40	BU	101	ARG
40	BU	104	GLN
40	BU	108	GLU
41	BV	1	MET
41	BV	5	VAL
41	BV	6	LYS
41	BV	15	GLU
41	BV	18	LEU
41	BV	19	LYS
41	BV	21	ARG
41	BV	25	LEU
41	BV	33	VAL
41	BV	37	VAL
41	BV	40	LEU
41	BV	47	VAL
41	BV	57	VAL
41	BV	61	VAL
41	BV	70	ILE
41	BV	74	LYS
41	BV	75	PHE
41	BV	83	ARG
41	BV	95	LEU
41	BV	97	LYS

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Mol	Chain	Res	Type
41	BV	98	GLU
41	BV	99	ILE
42	BW	8	ARG
42	BW	9	TYR
42	BW	15	ARG
42	BW	17	VAL
42	BW	19	LEU
42	BW	28	SER
42	BW	30	GLU
42	BW	37	ARG
42	BW	39	THR
42	BW	40	ASN
42	BW	51	LEU
42	BW	61	ASN
42	BW	66	GLU
42	BW	68	ARG
42	BW	72	LYS
42	BW	75	TYR
42	BW	77	ASP
42	BW	88	ARG
42	BW	95	ILE
42	BW	99	ARG
42	BW	105	VAL
42	BW	107	LEU
42	BW	109	GLU
42	BW	113	LYS
43	BX	5	TYR
43	BX	6	ASP
43	BX	35	THR
43	BX	54	VAL
43	BX	57	LEU
43	BX	58	HIS
43	BX	59	VAL
43	BX	68	ARG
43	BX	76	ARG
43	BX	78	LYS
43	BX	80	ILE
44	BY	2	ARG
44	BY	5	MET
44	BY	6	HIS
44	BY	8	LYS
44	BY	9	LYS

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Mol	Chain	Res	Type
44	BY	13	VAL
44	BY	28	LYS
44	BY	33	LYS
44	BY	35	TYR
44	BY	39	VAL
44	BY	47	LYS
44	BY	49	VAL
44	BY	50	ARG
44	BY	60	PHE
44	BY	72	VAL
44	BY	75	ILE
44	BY	85	VAL
44	BY	89	PHE
44	BY	90	LEU
45	BZ	5	LEU
45	BZ	8	TYR
45	BZ	9	TYR
45	BZ	11	GLU
45	BZ	28	MET
45	BZ	29	TYR
45	BZ	43	GLU
45	BZ	46	LYS
45	BZ	56	VAL
45	BZ	59	LEU
45	BZ	71	VAL
45	BZ	81	ARG
45	BZ	86	VAL
45	BZ	98	MET
45	BZ	112	ARG
45	BZ	119	GLU
45	BZ	122	ARG
45	BZ	123	ASP
45	BZ	124	ILE
45	BZ	127	LYS
45	BZ	136	PHE
45	BZ	150	LEU
45	BZ	154	ASP
45	BZ	155	LEU
45	BZ	162	GLU
45	BZ	165	VAL
45	BZ	166	SER
45	BZ	181	GLU

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Mol	Chain	Res	Type
45	BZ	186	GLU
46	B0	10	THR
46	B0	27	GLU
46	B0	29	GLN
46	B0	31	VAL
46	B0	32	ARG
46	B0	35	ASN
46	B0	36	ILE
46	B0	37	LEU
46	B0	39	ARG
46	B0	43	THR
46	B0	55	ARG
46	B0	84	LEU
47	B2	8	LYS
47	B2	35	LEU
47	B2	47	ASN
47	B2	65	ASN
48	B3	9	VAL
48	B3	17	LYS
48	B3	18	ASP
48	B3	28	LEU
48	B3	31	LEU
48	B3	37	LEU
48	B3	52	HIS
49	B5	3	LYS
49	B5	23	HIS
49	B5	25	LEU
49	B5	36	CYS
49	B5	46	CYS
49	B5	55	ARG
49	B5	58	LEU
50	B6	6	ARG
50	B6	7	ILE
50	B6	9	LEU
50	B6	11	LEU
50	B6	13	CYS
50	B6	18	ARG
50	B6	27	LYS
50	B6	39	TYR
50	B6	47	THR
50	B6	48	VAL
50	B6	51	GLU

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Mol	Chain	Res	Type
51	B7	1	MET
51	B7	15	THR
51	B7	24	THR
51	B7	40	TRP
51	B7	41	ARG
51	B7	47	ARG
51	B7	49	ARG
52	B8	4	MET
52	B8	14	VAL
52	B8	15	LYS
52	B8	16	ILE
52	B8	30	ARG
52	B8	31	HIS
52	B8	32	LEU
52	B8	40	GLU
52	B8	42	ARG
52	B8	46	ARG
52	B8	53	PRO
52	B8	54	GLU
52	B8	56	GLU
52	B8	59	LYS
52	B8	61	LEU
53	B9	1	MET
53	B9	2	LYS
53	B9	17	ILE
53	B9	18	ARG
53	B9	29	ASN
53	B9	32	HIS
54	Be	62	VAL
54	Be	78	LEU
54	Be	86	LEU
54	Be	90	LYS
54	Be	94	GLU
54	Be	106	GLN
54	Be	118	VAL
57	B1	4	VAL
57	B1	5	CYS
57	B1	10	LYS
57	B1	11	ARG
57	B1	14	VAL
57	B1	18	ILE
57	B1	27	GLU

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Mol	Chain	Res	Type
57	B1	32	LYS
57	B1	39	LYS
57	B1	41	ARG
57	B1	43	TYR
57	B1	46	LEU
57	B1	47	GLN
57	B1	50	ARG
57	B1	58	ILE
57	B1	61	ARG
57	B1	67	ILE
57	B1	73	LEU
57	B1	88	LYS
58	B4	1	MET
58	B4	6	HIS
58	B4	8	LYS
58	B4	9	LEU
58	B4	14	ILE
58	B4	23	GLU
58	B4	30	GLU
58	B4	32	TYR
1	CB	7	VAL
1	CB	8	LYS
1	CB	9	GLU
1	CB	12	GLU
1	CB	17	PHE
1	CB	21	ARG
1	CB	36	ARG
1	CB	42	ILE
1	CB	49	GLU
1	CB	56	ARG
1	CB	68	ILE
1	CB	74	LYS
1	CB	76	GLN
1	CB	96	ARG
1	CB	103	THR
1	CB	106	LYS
1	CB	108	ILE
1	CB	141	GLU
1	CB	145	LEU
1	CB	146	GLN
1	CB	152	PHE
1	CB	155	LEU

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Mol	Chain	Res	Type
1	CB	163	PHE
1	CB	168	THR
1	CB	172	ILE
1	CB	175	ARG
1	CB	180	LEU
1	CB	185	ILE
1	CB	187	LEU
1	CB	190	THR
1	CB	210	SER
1	CB	212	GLN
1	CB	213	LEU
1	CB	226	ARG
1	CB	230	VAL
1	CB	239	VAL
2	CC	4	LYS
2	CC	5	ILE
2	CC	10	PHE
2	CC	15	THR
2	CC	22	TRP
2	CC	33	LEU
2	CC	40	ARG
2	CC	52	LEU
2	CC	62	ASP
2	CC	67	THR
2	CC	84	ILE
2	CC	101	LEU
2	CC	110	ASN
2	CC	124	ILE
2	CC	128	PHE
2	CC	132	ARG
2	CC	134	ILE
2	CC	152	ILE
2	CC	157	ILE
2	CC	176	HIS
2	CC	178	LEU
2	CC	201	TYR
2	CC	204	LEU
2	CC	206	GLU
2	CC	208	ILE
3	CD	3	ARG
3	CD	8	VAL
3	CD	9	CYS

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Mol	Chain	Res	Type
3	CD	12	CYS
3	CD	30	LYS
3	CD	50	ARG
3	CD	53	ASP
3	CD	54	TYR
3	CD	61	LYS
3	CD	65	ARG
3	CD	67	ILE
3	CD	72	GLU
3	CD	86	LYS
3	CD	101	LEU
3	CD	114	ARG
3	CD	127	THR
3	CD	131	ARG
3	CD	134	ASP
3	CD	135	LEU
3	CD	140	VAL
3	CD	141	ARG
3	CD	148	VAL
3	CD	150	GLU
3	CD	156	GLU
3	CD	165	MET
3	CD	170	VAL
3	CD	177	ASP
3	CD	193	ASP
3	CD	196	LEU
3	CD	198	VAL
4	CE	10	MET
4	CE	11	ILE
4	CE	12	LEU
4	CE	31	LEU
4	CE	41	VAL
4	CE	45	PHE
4	CE	47	LYS
4	CE	51	VAL
4	CE	57	LYS
4	CE	64	ARG
4	CE	75	THR
4	CE	78	HIS
4	CE	120	THR
4	CE	126	ARG
4	CE	137	GLU

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Mol	Chain	Res	Type
4	CE	139	LEU
4	CE	144	THR
4	CE	147	ASP
5	CF	2	ARG
5	CF	14	LEU
5	CF	22	GLU
5	CF	55	ASP
5	CF	57	GLN
5	CF	65	VAL
5	CF	67	MET
5	CF	80	ARG
6	CG	3	ARG
6	CG	11	GLN
6	CG	20	ASP
6	CG	35	LYS
6	CG	68	ASN
6	CG	79	ARG
6	CG	80	VAL
6	CG	89	MET
6	CG	94	ARG
6	CG	104	LEU
6	CG	149	ARG
7	CH	37	ARG
7	CH	39	LEU
7	CH	49	GLU
7	CH	63	LEU
7	CH	69	ARG
7	CH	73	ASP
7	CH	83	ILE
7	CH	102	ARG
7	CH	107	LEU
7	CH	111	ILE
7	CH	112	LEU
7	CH	120	THR
7	CH	136	GLU
7	CH	138	TRP
8	CI	25	LYS
8	CI	32	ASP
8	CI	33	PHE
8	CI	34	ASN
8	CI	40	LEU
8	CI	85	LEU

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Mol	Chain	Res	Type
8	CI	88	TYR
8	CI	95	LYS
8	CI	97	LYS
8	CI	99	LEU
8	CI	104	ARG
8	CI	121	ARG
8	CI	125	TYR
8	CI	128	ARG
9	CJ	3	LYS
9	CJ	8	LEU
9	CJ	11	PHE
9	CJ	16	LEU
9	CJ	35	SER
9	CJ	38	ILE
9	CJ	46	ARG
9	CJ	48	THR
9	CJ	50	ILE
9	CJ	65	LEU
9	CJ	74	ILE
9	CJ	75	ILE
9	CJ	78	ASN
9	CJ	79	ARG
9	CJ	81	THR
9	CJ	89	ASP
9	CJ	96	ILE
10	CK	14	VAL
10	CK	29	ILE
10	CK	31	THR
10	CK	33	THR
10	CK	34	ASP
10	CK	48	ILE
10	CK	57	THR
10	CK	66	LEU
10	CK	67	ASP
10	CK	75	TYR
10	CK	80	VAL
10	CK	105	VAL
10	CK	107	SER
10	CK	120	ARG
10	CK	122	LYS
10	CK	124	LYS
10	CK	126	ARG

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Mol	Chain	Res	Type
11	CL	9	GLN
11	CL	15	ARG
11	CL	18	VAL
11	CL	20	LYS
11	CL	24	VAL
11	CL	33	ARG
11	CL	34	ARG
11	CL	38	THR
11	CL	42	THR
11	CL	46	LYS
11	CL	49	ASN
11	CL	52	LEU
11	CL	53	ARG
11	CL	54	LYS
11	CL	55	VAL
11	CL	59	ARG
11	CL	67	THR
11	CL	70	ILE
11	CL	77	LEU
11	CL	79	GLU
11	CL	84	LEU
11	CL	85	ILE
11	CL	89	ARG
11	CL	92	ASP
11	CL	93	LEU
11	CL	96	VAL
11	CL	97	ARG
11	CL	98	TYR
11	CL	104	VAL
11	CL	105	TYR
11	CL	119	LYS
11	CL	127	GLU
12	CM	8	GLU
12	CM	21	TYR
12	CM	27	LYS
12	CM	31	LYS
12	CM	48	LEU
12	CM	61	GLU
12	CM	65	LYS
12	CM	82	MET
12	CM	108	ARG
12	CM	110	ARG

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Mol	Chain	Res	Type
12	CM	121	LYS
13	CN	9	LYS
13	CN	18	VAL
13	CN	21	TYR
13	CN	35	ARG
13	CN	40	CYS
13	CN	61	TRP
14	CO	5	LYS
14	CO	6	GLU
14	CO	10	LYS
14	CO	12	ILE
14	CO	15	PHE
14	CO	38	ARG
14	CO	41	GLU
14	CO	42	HIS
14	CO	47	LYS
14	CO	54	ARG
14	CO	62	GLN
14	CO	64	ARG
14	CO	83	GLU
14	CO	87	ILE
15	CP	14	ASN
15	CP	20	VAL
15	CP	23	ASP
15	CP	28	ARG
15	CP	36	ILE
15	CP	54	GLU
15	CP	57	ARG
15	CP	58	TYR
15	CP	67	THR
15	CP	69	THR
16	CQ	6	LEU
16	CQ	10	VAL
16	CQ	16	GLN
16	CQ	19	VAL
16	CQ	24	GLU
16	CQ	52	LYS
16	CQ	59	ILE
16	CQ	63	ARG
16	CQ	68	ARG
16	CQ	69	LYS
16	CQ	70	ARG

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Mol	Chain	Res	Type
16	CQ	74	LEU
16	CQ	75	ARG
16	CQ	76	LEU
16	CQ	89	LEU
16	CQ	93	GLN
17	CR	23	LYS
17	CR	32	ARG
17	CR	37	VAL
17	CR	43	PHE
17	CR	51	LEU
17	CR	53	ARG
17	CR	79	LEU
17	CR	85	LEU
18	CS	5	LEU
18	CS	6	LYS
18	CS	11	VAL
18	CS	14	HIS
18	CS	30	LEU
18	CS	31	ILE
18	CS	37	ARG
18	CS	38	SER
18	CS	39	THR
18	CS	47	HIS
18	CS	58	VAL
18	CS	61	TYR
18	CS	62	ILE
18	CS	66	MET
18	CS	79	THR
19	CT	13	LEU
19	CT	23	ARG
19	CT	41	ILE
19	CT	50	GLU
19	CT	54	LYS
19	CT	57	ARG
19	CT	64	ASP
19	CT	74	LYS
19	CT	80	ARG
23	CY	8	ASP
23	CY	14	ASN
23	CY	15	ILE
23	CY	20	HIS
23	CY	22	ASP

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Mol	Chain	Res	Type
23	CY	30	GLU
23	CY	35	TYR
23	CY	72	CYS
23	CY	80	ASN
23	CY	84	THR
23	CY	87	HIS
23	CY	92	ILE
23	CY	119	GLU
23	CY	126	GLU
23	CY	132	ARG
23	CY	133	ILE
23	CY	137	ASN
23	CY	139	MET
23	CY	140	ASP
23	CY	146	LEU
23	CY	147	TRP
23	CY	153	MET
23	CY	157	LEU
23	CY	170	ARG
23	CY	171	GLU
23	CY	172	ASP
23	CY	175	SER
23	CY	177	ILE
23	CY	178	ILE
23	CY	187	THR
23	CY	197	ARG
23	CY	199	ILE
23	CY	211	GLU
23	CY	224	ASP
23	CY	225	GLU
23	CY	226	ASN
23	CY	227	ILE
23	CY	228	MET
23	CY	229	LEU
23	CY	235	GLU
23	CY	240	GLU
23	CY	260	LEU
23	CY	270	GLN
23	CY	273	LEU
23	CY	285	ASP
23	CY	299	VAL
23	CY	300	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	CY	301	ILE
23	CY	302	HIS
23	CY	314	PHE
23	CY	316	ILE
23	CY	328	ILE
23	CY	336	THR
23	CY	340	TYR
23	CY	341	VAL
23	CY	348	ARG
23	CY	352	VAL
23	CY	355	LEU
23	CY	357	ARG
23	CY	358	MET
23	CY	364	GLU
23	CY	390	VAL
23	CY	393	ASP
23	CY	397	VAL
23	CY	406	GLU
23	CY	422	GLU
23	CY	428	LEU
23	CY	431	LEU
23	CY	440	VAL
23	CY	454	MET
23	CY	456	GLU
23	CY	464	ASP
23	CY	471	LYS
23	CY	487	ILE
23	CY	488	THR
23	CY	504	ARG
23	CY	506	GLN
23	CY	512	ILE
23	CY	514	VAL
23	CY	529	ILE
23	CY	555	LEU
23	CY	556	ILE
23	CY	563	ILE
23	CY	572	TYR
23	CY	580	MET
23	CY	584	ILE
23	CY	598	ASP
23	CY	600	VAL
23	CY	603	GLU

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Mol	Chain	Res	Type
23	CY	607	ARG
23	CY	610	VAL
23	CY	614	GLU
23	CY	615	GLU
23	CY	617	MET
23	CY	635	GLU
23	CY	649	LEU
23	CY	658	ASP
23	CY	666	ARG
23	CY	676	TYR
23	CY	685	GLU
25	DC	7	ARG
25	DC	9	ARG
25	DC	15	VAL
25	DC	19	LYS
25	DC	20	VAL
25	DC	24	ASP
25	DC	28	ARG
25	DC	32	GLU
25	DC	37	LYS
25	DC	39	ASP
25	DC	41	THR
25	DC	42	VAL
25	DC	47	LYS
25	DC	48	LEU
25	DC	53	ARG
25	DC	60	ARG
25	DC	73	VAL
25	DC	74	ARG
25	DC	83	LYS
25	DC	94	TYR
25	DC	104	ILE
25	DC	106	ASP
25	DC	114	VAL
25	DC	119	ASP
25	DC	131	ILE
25	DC	138	LEU
25	DC	148	PHE
25	DC	161	ARG
25	DC	164	PHE
25	DC	166	ASN
25	DC	169	THR

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Mol	Chain	Res	Type
25	DC	172	ILE
25	DC	176	VAL
25	DC	185	LYS
25	DC	189	ASN
25	DC	198	GLU
25	DC	201	LYS
25	DC	211	ARG
25	DC	213	VAL
25	DC	215	VAL
25	DC	216	THR
25	DC	224	ARG
26	DD	4	LYS
26	DD	5	LYS
26	DD	9	TYR
26	DD	13	ARG
26	DD	23	GLU
26	DD	25	THR
26	DD	26	LYS
26	DD	30	GLU
26	DD	33	LEU
26	DD	34	VAL
26	DD	35	LYS
26	DD	38	LYS
26	DD	40	THR
26	DD	43	ARG
26	DD	44	ASN
26	DD	60	ARG
26	DD	63	ARG
26	DD	64	ILE
26	DD	65	ILE
26	DD	69	ARG
26	DD	71	ASP
26	DD	78	LYS
26	DD	82	ILE
26	DD	87	ASN
26	DD	88	ARG
26	DD	95	LEU
26	DD	97	TYR
26	DD	101	GLU
26	DD	105	ILE
26	DD	106	ILE
26	DD	113	VAL

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Mol	Chain	Res	Type
26	DD	115	GLN
26	DD	117	VAL
26	DD	140	THR
26	DD	142	VAL
26	DD	147	LEU
26	DD	148	GLU
26	DD	150	LYS
26	DD	161	THR
26	DD	164	GLN
26	DD	165	ILE
26	DD	171	ASP
26	DD	173	VAL
26	DD	175	LEU
26	DD	190	TYR
26	DD	212	SER
26	DD	226	MET
26	DD	233	HIS
26	DD	242	ARG
26	DD	250	TRP
26	DD	254	THR
26	DD	257	LEU
26	DD	259	THR
27	DE	4	ILE
27	DE	21	VAL
27	DE	24	THR
27	DE	27	LEU
27	DE	33	VAL
27	DE	36	ARG
27	DE	38	THR
27	DE	45	THR
27	DE	48	GLN
27	DE	49	LEU
27	DE	51	PHE
27	DE	55	ASN
27	DE	61	ARG
27	DE	63	LEU
27	DE	73	GLU
27	DE	78	LEU
27	DE	79	ARG
27	DE	84	PHE
27	DE	87	GLU
27	DE	91	VAL

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Mol	Chain	Res	Type
27	DE	109	LYS
27	DE	113	PHE
27	DE	119	ARG
27	DE	120	TRP
27	DE	127	ASP
27	DE	132	HIS
27	DE	133	LYS
27	DE	134	ILE
27	DE	144	ARG
27	DE	154	LYS
27	DE	164	ARG
27	DE	174	ASP
27	DE	175	VAL
27	DE	184	VAL
27	DE	191	PRO
27	DE	196	VAL
27	DE	197	ILE
27	DE	202	LYS
28	DF	8	GLN
28	DF	9	ILE
28	DF	18	ARG
28	DF	19	GLU
28	DF	28	ILE
28	DF	33	LEU
28	DF	35	GLU
28	DF	40	GLN
28	DF	43	LYS
28	DF	45	ARG
28	DF	46	ARG
28	DF	53	THR
28	DF	62	ARG
28	DF	68	LYS
28	DF	72	ARG
28	DF	74	ARG
28	DF	75	HIS
28	DF	78	ILE
28	DF	82	ILE
28	DF	90	PHE
28	DF	106	ARG
28	DF	124	LEU
28	DF	136	THR
28	DF	149	ASP

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Mol	Chain	Res	Type
28	DF	154	VAL
28	DF	175	THR
28	DF	179	GLU
28	DF	185	ASP
28	DF	186	ILE
28	DF	204	ASN
29	DG	5	VAL
29	DG	11	TYR
29	DG	27	ASN
29	DG	33	ARG
29	DG	34	LEU
29	DG	35	GLU
29	DG	45	GLU
29	DG	48	GLU
29	DG	53	LEU
29	DG	54	GLU
29	DG	55	LYS
29	DG	59	GLU
29	DG	63	ILE
29	DG	67	LYS
29	DG	80	PHE
29	DG	86	MET
29	DG	92	VAL
29	DG	98	ARG
29	DG	99	MET
29	DG	109	VAL
29	DG	113	ARG
29	DG	120	LEU
29	DG	121	ASN
29	DG	143	GLU
29	DG	144	ILE
29	DG	152	LEU
29	DG	153	ARG
29	DG	168	GLU
30	DH	18	GLU
30	DH	34	GLU
30	DH	41	MET
30	DH	43	VAL
30	DH	71	LEU
30	DH	83	TYR
30	DH	85	LYS
30	DH	122	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	DH	157	TYR
30	DH	158	HIS
30	DH	171	LEU
32	DK	2	LYS
32	DK	9	LYS
32	DK	11	GLN
32	DK	37	PHE
32	DK	41	PHE
32	DK	42	ASN
32	DK	57	ILE
32	DK	59	ILE
32	DK	65	PHE
32	DK	66	THR
32	DK	78	ILE
32	DK	114	ASP
32	DK	117	THR
32	DK	120	LEU
32	DK	125	ARG
32	DK	132	ARG
33	DN	1	MET
33	DN	32	THR
33	DN	33	LEU
33	DN	35	ARG
33	DN	48	MET
33	DN	58	ASP
33	DN	63	THR
33	DN	69	GLN
33	DN	71	ILE
33	DN	74	ARG
33	DN	76	SER
33	DN	85	ILE
33	DN	87	LEU
33	DN	88	GLU
33	DN	90	MET
33	DN	99	LEU
33	DN	112	LEU
33	DN	114	ARG
33	DN	119	ARG
33	DN	127	ASP
33	DN	130	HIS
33	DN	134	ARG
33	DN	137	LYS

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Mol	Chain	Res	Type
34	DO	9	GLU
34	DO	17	ARG
34	DO	24	VAL
34	DO	28	SER
34	DO	31	LYS
34	DO	34	THR
34	DO	38	VAL
34	DO	39	ILE
34	DO	47	ILE
34	DO	52	VAL
34	DO	66	LYS
34	DO	78	ARG
34	DO	82	ASN
34	DO	87	ILE
34	DO	91	LEU
34	DO	92	GLU
34	DO	98	VAL
34	DO	108	GLU
34	DO	112	MET
35	DP	7	ARG
35	DP	16	ARG
35	DP	18	ARG
35	DP	32	THR
35	DP	39	LYS
35	DP	41	ARG
35	DP	42	SER
35	DP	55	ARG
35	DP	60	MET
35	DP	61	ARG
35	DP	62	LEU
35	DP	79	ARG
35	DP	84	ASN
35	DP	85	LEU
35	DP	100	LEU
35	DP	107	LYS
35	DP	123	LEU
35	DP	135	LEU
36	DQ	1	MET
36	DQ	2	LEU
36	DQ	3	MET
36	DQ	6	ARG
36	DQ	7	MET

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Mol	Chain	Res	Type
36	DQ	10	ARG
36	DQ	12	GLN
36	DQ	31	ASP
36	DQ	35	VAL
36	DQ	46	GLN
36	DQ	60	ARG
36	DQ	66	ILE
36	DQ	68	ILE
36	DQ	74	TYR
36	DQ	76	LYS
36	DQ	77	LYS
36	DQ	79	LEU
36	DQ	90	VAL
36	DQ	91	GLU
36	DQ	93	TYR
36	DQ	96	VAL
36	DQ	125	LEU
36	DQ	128	LYS
36	DQ	135	ASP
36	DQ	137	TYR
37	DR	3	HIS
37	DR	4	LEU
37	DR	6	SER
37	DR	8	ARG
37	DR	14	SER
37	DR	36	THR
37	DR	43	GLU
37	DR	44	LEU
37	DR	45	ARG
37	DR	56	LYS
37	DR	65	LEU
37	DR	67	LEU
37	DR	72	ASP
37	DR	79	LEU
37	DR	88	ARG
37	DR	99	LYS
37	DR	102	GLU
37	DR	115	GLU
38	DS	12	PHE
38	DS	13	ARG
38	DS	29	PHE
38	DS	41	ASP

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Mol	Chain	Res	Type
38	DS	42	ASP
38	DS	47	THR
38	DS	52	SER
38	DS	54	LEU
38	DS	69	VAL
38	DS	84	GLN
38	DS	87	PHE
38	DS	88	ASP
38	DS	97	ARG
38	DS	98	VAL
38	DS	99	LYS
38	DS	101	LEU
38	DS	103	GLU
38	DS	106	ARG
38	DS	107	GLU
39	DT	1	MET
39	DT	13	ARG
39	DT	22	PHE
39	DT	23	ARG
39	DT	27	THR
39	DT	29	ARG
39	DT	30	VAL
39	DT	33	LYS
39	DT	44	ASP
39	DT	48	ILE
39	DT	50	ILE
39	DT	53	ARG
39	DT	57	PHE
39	DT	58	ASN
39	DT	59	THR
39	DT	65	LYS
39	DT	70	VAL
39	DT	73	GLU
39	DT	74	ARG
39	DT	82	LEU
39	DT	84	GLN
39	DT	85	LYS
39	DT	90	GLN
39	DT	95	ARG
39	DT	101	PHE
39	DT	102	ILE
39	DT	115	ARG

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Mol	Chain	Res	Type
39	DT	134	GLU
40	DU	8	VAL
40	DU	11	ARG
40	DU	14	HIS
40	DU	18	LEU
40	DU	20	LEU
40	DU	28	ARG
40	DU	49	HIS
40	DU	51	LYS
40	DU	52	ARG
40	DU	54	LYS
40	DU	55	ARG
40	DU	60	LEU
40	DU	64	ARG
40	DU	74	LEU
40	DU	76	TYR
40	DU	90	VAL
40	DU	95	LEU
40	DU	101	ARG
40	DU	104	GLN
40	DU	114	LYS
41	DV	1	MET
41	DV	2	PHE
41	DV	7	THR
41	DV	11	GLN
41	DV	14	VAL
41	DV	19	LYS
41	DV	20	LEU
41	DV	21	ARG
41	DV	33	VAL
41	DV	37	VAL
41	DV	39	LEU
41	DV	40	LEU
41	DV	49	THR
41	DV	57	VAL
41	DV	61	VAL
41	DV	62	LEU
41	DV	70	ILE
41	DV	74	LYS
41	DV	78	LYS
41	DV	80	GLN
41	DV	92	THR

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Mol	Chain	Res	Type
41	DV	98	GLU
41	DV	99	ILE
42	DW	9	TYR
42	DW	11	ARG
42	DW	15	ARG
42	DW	17	VAL
42	DW	19	LEU
42	DW	30	GLU
42	DW	34	ASN
42	DW	37	ARG
42	DW	51	LEU
42	DW	66	GLU
42	DW	76	VAL
42	DW	88	ARG
42	DW	92	ARG
42	DW	95	ILE
42	DW	100	THR
42	DW	103	ILE
42	DW	105	VAL
42	DW	107	LEU
42	DW	109	GLU
42	DW	113	LYS
43	DX	5	TYR
43	DX	6	ASP
43	DX	8	ILE
43	DX	9	LEU
43	DX	27	THR
43	DX	45	THR
43	DX	54	VAL
43	DX	57	LEU
43	DX	59	VAL
43	DX	63	LYS
43	DX	68	ARG
43	DX	76	ARG
43	DX	78	LYS
43	DX	80	ILE
43	DX	87	GLN
44	DY	2	ARG
44	DY	5	MET
44	DY	7	VAL
44	DY	9	LYS
44	DY	28	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	DY	31	LEU
44	DY	35	TYR
44	DY	39	VAL
44	DY	47	LYS
44	DY	50	ARG
44	DY	60	PHE
44	DY	76	CYS
44	DY	84	ARG
44	DY	89	PHE
44	DY	90	LEU
44	DY	97	ARG
45	DZ	6	LYS
45	DZ	9	TYR
45	DZ	11	GLU
45	DZ	28	MET
45	DZ	29	TYR
45	DZ	32	HIS
45	DZ	52	SER
45	DZ	59	LEU
45	DZ	66	SER
45	DZ	70	LEU
45	DZ	71	VAL
45	DZ	81	ARG
45	DZ	86	VAL
45	DZ	87	ASP
45	DZ	94	GLU
45	DZ	96	VAL
45	DZ	98	MET
45	DZ	112	ARG
45	DZ	119	GLU
45	DZ	123	ASP
45	DZ	124	ILE
45	DZ	126	VAL
45	DZ	127	LYS
45	DZ	150	LEU
45	DZ	162	GLU
45	DZ	165	VAL
45	DZ	175	VAL
45	DZ	185	GLU
46	D0	3	HIS
46	D0	10	THR
46	D0	27	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
46	D0	29	GLN
46	D0	31	VAL
46	D0	32	ARG
46	D0	36	ILE
46	D0	37	LEU
46	D0	41	ARG
46	D0	44	ARG
46	D0	50	ASN
46	D0	55	ARG
46	D0	64	ASP
46	D0	75	LEU
46	D0	84	LEU
47	D2	8	LYS
47	D2	35	LEU
47	D2	37	PHE
47	D2	40	SER
47	D2	64	LEU
47	D2	70	GLN
48	D3	11	SER
48	D3	17	LYS
48	D3	24	LYS
48	D3	31	LEU
48	D3	37	LEU
48	D3	54	VAL
48	D3	59	VAL
49	D5	3	LYS
49	D5	8	LYS
49	D5	25	LEU
49	D5	26	THR
49	D5	29	THR
49	D5	30	LEU
49	D5	44	THR
49	D5	51	TYR
49	D5	55	ARG
49	D5	58	LEU
50	D6	6	ARG
50	D6	9	LEU
50	D6	10	LEU
50	D6	11	LEU
50	D6	18	ARG
50	D6	19	ARG
50	D6	27	LYS

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Mol	Chain	Res	Type
50	D6	30	THR
50	D6	39	TYR
50	D6	42	TRP
50	D6	43	CYS
50	D6	48	VAL
51	D7	1	MET
51	D7	22	MET
51	D7	40	TRP
51	D7	42	LEU
52	D8	4	MET
52	D8	6	THR
52	D8	16	ILE
52	D8	17	THR
52	D8	30	ARG
52	D8	31	HIS
52	D8	34	TRP
52	D8	36	LYS
52	D8	42	ARG
52	D8	44	LYS
52	D8	48	PHE
52	D8	49	VAL
52	D8	50	LEU
52	D8	54	GLU
52	D8	56	GLU
52	D8	59	LYS
52	D8	61	LEU
53	D9	22	ARG
53	D9	28	GLU
54	De	62	VAL
54	De	73	GLU
54	De	75	ILE
54	De	78	LEU
54	De	81	ILE
54	De	86	LEU
54	De	94	GLU
54	De	118	VAL
57	D1	3	LYS
57	D1	5	CYS
57	D1	17	SER
57	D1	20	ARG
57	D1	32	LYS
57	D1	34	THR

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Mol	Chain	Res	Type
57	D1	37	ILE
57	D1	39	LYS
57	D1	41	ARG
57	D1	43	TYR
57	D1	46	LEU
57	D1	51	VAL
57	D1	56	GLN
57	D1	58	ILE
57	D1	60	PHE
57	D1	61	ARG
57	D1	62	VAL
57	D1	67	ILE
57	D1	82	LEU
57	D1	94	LEU
58	D4	1	MET
58	D4	9	LEU
58	D4	10	VAL
58	D4	30	GLU
58	D4	31	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (70) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	69	HIS
2	AC	102	ASN
3	AD	77	ASN
5	AF	100	ASN
6	AG	97	GLN
7	AH	78	GLN
8	AI	117	HIS
10	AK	62	GLN
10	AK	93	GLN
10	AK	116	HIS
11	AL	49	ASN
11	AL	76	ASN
15	AP	16	HIS
17	AR	63	GLN
23	AY	20	HIS
23	AY	117	GLN
23	AY	137	ASN
23	AY	190	ASN
25	BC	58	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	BD	115	GLN
26	BD	198	ASN
28	BF	8	GLN
28	BF	40	GLN
28	BF	67	GLN
32	BK	30	HIS
33	BN	69	GLN
34	BO	82	ASN
35	BP	128	HIS
36	BQ	46	GLN
38	BS	16	ASN
39	BT	55	ASN
39	BT	58	ASN
39	BT	84	GLN
40	BU	71	GLN
57	B1	45	ASN
3	CD	119	GLN
7	CH	15	ASN
10	CK	26	ASN
10	CK	62	GLN
10	CK	93	GLN
10	CK	116	HIS
11	CL	8	ASN
16	CQ	16	GLN
17	CR	36	ASN
23	CY	14	ASN
23	CY	137	ASN
23	CY	165	GLN
23	CY	421	GLN
23	CY	595	GLN
26	DD	115	GLN
27	DE	48	GLN
28	DF	40	GLN
28	DF	67	GLN
28	DF	169	ASN
29	DG	40	ASN
29	DG	121	ASN
32	DK	116	ASN
33	DN	131	GLN
34	DO	82	ASN
35	DP	13	ASN
36	DQ	45	GLN

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Mol	Chain	Res	Type
37	DR	53	HIS
39	DT	58	ASN
40	DU	49	HIS
40	DU	71	GLN
42	DW	57	ASN
46	D0	35	ASN
46	D0	70	GLN
47	D2	48	HIS
49	D5	22	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
20	AA	1510/1511 (99%)	305 (20%)	17 (1%)
20	CA	1510/1511 (99%)	285 (18%)	16 (1%)
21	AW	76/77 (98%)	23 (30%)	1 (1%)
21	CW	76/77 (98%)	22 (28%)	1 (1%)
22	AV	22/23 (95%)	8 (36%)	1 (4%)
22	CV	22/23 (95%)	8 (36%)	2 (9%)
59	BA	2878/2879 (99%)	665 (23%)	27 (0%)
59	DA	2878/2879 (99%)	666 (23%)	21 (0%)
60	BB	118/119 (99%)	21 (17%)	1 (0%)
60	DB	118/119 (99%)	17 (14%)	1 (0%)
All	All	9208/9218 (99%)	2020 (21%)	88 (0%)

All (2020) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
20	AA	6	G
20	AA	9	G
20	AA	13	U
20	AA	15	G
20	AA	29	G
20	AA	32	A
20	AA	39	G
20	AA	47	C
20	AA	48	C
20	AA	50	A
20	AA	51	A
20	AA	68(H)	G
20	AA	68(L)	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	AA	68(M)	U
20	AA	68(P)	C
20	AA	68(W)	G
20	AA	106	C
20	AA	108	G
20	AA	109	A
20	AA	116	A
20	AA	121	C
20	AA	122	G
20	AA	129(A)	G
20	AA	131	C
20	AA	144	G
20	AA	152	A
20	AA	163	C
20	AA	175	C
20	AA	179	A
20	AA	186(G)	C
20	AA	186(I)	U
20	AA	186(L)	G
20	AA	195	A
20	AA	197	A
20	AA	201(C)	U
20	AA	216	G
20	AA	220	G
20	AA	231	G
20	AA	244	U
20	AA	245	C
20	AA	247	G
20	AA	251	G
20	AA	253	U
20	AA	264	U
20	AA	267	C
20	AA	273	A
20	AA	279	A
20	AA	280	C
20	AA	281	G
20	AA	289	G
20	AA	306	G
20	AA	309	G
20	AA	316	G
20	AA	321	A
20	AA	328	C

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Mol	Chain	Res	Type
20	AA	329	A
20	AA	332	G
20	AA	338	A
20	AA	345	C
20	AA	347	G
20	AA	352	C
20	AA	353	A
20	AA	354	G
20	AA	357	G
20	AA	367	U
20	AA	372	C
20	AA	373	A
20	AA	384	G
20	AA	390	C
20	AA	397	A
20	AA	398	C
20	AA	407	G
20	AA	411	A
20	AA	412	A
20	AA	413	G
20	AA	414	A
20	AA	422	C
20	AA	423	G
20	AA	424	G
20	AA	430	A
20	AA	440	A
20	AA	452	A
20	AA	453	A
20	AA	458	C
20	AA	458(B)	A
20	AA	481	G
20	AA	485	G
20	AA	492	G
20	AA	495	A
20	AA	497	A
20	AA	498	U
20	AA	505	G
20	AA	509	A
20	AA	511	C
20	AA	514	C
20	AA	518	C
20	AA	519	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	AA	521	G
20	AA	522	C
20	AA	524	G
20	AA	527	G
20	AA	531	U
20	AA	532	A
20	AA	533	A
20	AA	534	U
20	AA	538	G
20	AA	547	A
20	AA	559	A
20	AA	560	U
20	AA	562	C
20	AA	564	C
20	AA	567	G
20	AA	568	G
20	AA	572	A
20	AA	573	A
20	AA	574	A
20	AA	575	G
20	AA	576	G
20	AA	577	G
20	AA	579	G
20	AA	596	C
20	AA	653	A
20	AA	661	G
20	AA	665	A
20	AA	673	G
20	AA	685	G
20	AA	688	G
20	AA	703	G
20	AA	713	G
20	AA	723	U
20	AA	724	G
20	AA	730	G
20	AA	731	G
20	AA	733	A
20	AA	734	G
20	AA	737	A
20	AA	740	U
20	AA	749	C
20	AA	754	C

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Mol	Chain	Res	Type
20	AA	755	G
20	AA	777	A
20	AA	793	U
20	AA	794	A
20	AA	807	A
20	AA	811	C
20	AA	812	C
20	AA	816	A
20	AA	817	C
20	AA	818	G
20	AA	819	A
20	AA	821	G
20	AA	827	U
20	AA	828	A
20	AA	834	C
20	AA	838(A)	U
20	AA	838(B)	C
20	AA	838(C)	U
20	AA	848	C
20	AA	859	A
20	AA	867	G
20	AA	869	G
20	AA	870	U
20	AA	873	A
20	AA	874	G
20	AA	877	C
20	AA	897	C
20	AA	902	G
20	AA	907	A
20	AA	916	G
20	AA	923	A
20	AA	926	G
20	AA	927	G
20	AA	934	C
20	AA	935	A
20	AA	960	U
20	AA	961	U
20	AA	962	C
20	AA	966	G
20	AA	969	A
20	AA	971	G
20	AA	972	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	AA	974	A
20	AA	976	G
20	AA	977	A
20	AA	978	A
20	AA	979	C
20	AA	980	C
20	AA	983	A
20	AA	992	U
20	AA	993	G
20	AA	1004	A
20	AA	1025	U
20	AA	1045	C
20	AA	1046	A
20	AA	1047	G
20	AA	1049	U
20	AA	1054	C
20	AA	1055	A
20	AA	1065	U
20	AA	1066	C
20	AA	1067	A
20	AA	1069	C
20	AA	1081	G
20	AA	1085	U
20	AA	1094	G
20	AA	1095	U
20	AA	1097	C
20	AA	1101	A
20	AA	1102	A
20	AA	1125	U
20	AA	1126	U
20	AA	1129	C
20	AA	1130	A
20	AA	1137	C
20	AA	1138	G
20	AA	1139	G
20	AA	1140	C
20	AA	1146	A
20	AA	1152	A
20	AA	1154	G
20	AA	1158	C
20	AA	1159	U
20	AA	1181	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	AA	1187	G
20	AA	1191	A
20	AA	1196	U
20	AA	1197	G
20	AA	1198	G
20	AA	1200	C
20	AA	1201	A
20	AA	1203	C
20	AA	1204	A
20	AA	1212	U
20	AA	1213	A
20	AA	1214	C
20	AA	1220	G
20	AA	1225	A
20	AA	1226	C
20	AA	1227	A
20	AA	1238	A
20	AA	1239	A
20	AA	1247	U
20	AA	1249	C
20	AA	1256	A
20	AA	1257	U
20	AA	1260	C
20	AA	1275	A
20	AA	1279	A
20	AA	1280	A
20	AA	1281	U
20	AA	1283	G
20	AA	1287	A
20	AA	1300	G
20	AA	1301	U
20	AA	1302	U
20	AA	1303	C
20	AA	1305	G
20	AA	1311	G
20	AA	1317	C
20	AA	1320	C
20	AA	1322	C
20	AA	1331	G
20	AA	1338	G
20	AA	1339	A
20	AA	1347	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	AA	1362(A)	C
20	AA	1364	U
20	AA	1370	G
20	AA	1377	A
20	AA	1397	C
20	AA	1398	A
20	AA	1402	C
20	AA	1403	C
20	AA	1406	U
20	AA	1413	A
20	AA	1419	G
20	AA	1440(C)	G
20	AA	1440(D)	A
20	AA	1440(E)	G
20	AA	1440(I)	A
20	AA	1440(J)	C
20	AA	1440(K)	G
20	AA	1440(L)	G
20	AA	1475	G
20	AA	1489	G
20	AA	1492	A
20	AA	1493	A
20	AA	1494	G
20	AA	1497	G
20	AA	1499	A
20	AA	1502	A
20	AA	1504	G
20	AA	1505	G
20	AA	1506	U
20	AA	1517	G
20	AA	1519	A
20	AA	1520	G
20	AA	1529	G
20	AA	1530	G
20	AA	1532	U
20	AA	1533	C
20	AA	1534	A
20	AA	1535	C
20	AA	1536	C
20	AA	1538	C
21	AW	8	U
21	AW	16	U

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Mol	Chain	Res	Type
21	AW	17	U
21	AW	18	G
21	AW	19	G
21	AW	20	U
21	AW	20(A)	U
21	AW	21	A
21	AW	22	G
21	AW	25	C
21	AW	30	C
21	AW	36	U
21	AW	42	U
21	AW	46	G
21	AW	47	U
21	AW	48	C
21	AW	49	A
21	AW	50	C
21	AW	51	A
21	AW	58	A
21	AW	59	A
21	AW	60	U
21	AW	61	C
22	AV	5	A
22	AV	12	A
22	AV	15	A
22	AV	16	A
22	AV	18	G
22	AV	19	G
22	AV	23	A
22	AV	24	A
59	BA	12	U
59	BA	15	G
59	BA	17	G
59	BA	34	C
59	BA	35	G
59	BA	46	C
59	BA	49	A
59	BA	55	G
59	BA	58	G
59	BA	61	G
59	BA	66	C
59	BA	73	A
59	BA	75	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	78	A
59	BA	84	A
59	BA	87	C
59	BA	90	U
59	BA	98	G
59	BA	99	U
59	BA	101	G
59	BA	102	G
59	BA	104	U
59	BA	110	G
59	BA	118	A
59	BA	119	A
59	BA	120	U
59	BA	141(B)	C
59	BA	155	C
59	BA	162	U
59	BA	171	G
59	BA	181	A
59	BA	188	G
59	BA	196	A
59	BA	197	A
59	BA	199	A
59	BA	201	C
59	BA	205	G
59	BA	216	A
59	BA	221	A
59	BA	222	A
59	BA	227	A
59	BA	228	A
59	BA	229	A
59	BA	230	U
59	BA	233	A
59	BA	242	G
59	BA	248	G
59	BA	252	G
59	BA	255	A
59	BA	256	A
59	BA	264	C
59	BA	265	A
59	BA	266	G
59	BA	270(M)	U
59	BA	270(N)	U

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Mol	Chain	Res	Type
59	BA	270(O)	G
59	BA	270(P)	U
59	BA	270(Q)	C
59	BA	270(R)	C
59	BA	271(C)	G
59	BA	271(D)	U
59	BA	271	G
59	BA	274	G
59	BA	275	G
59	BA	277	C
59	BA	279	C
59	BA	283	A
59	BA	299	A
59	BA	302	C
59	BA	310	A
59	BA	321	G
59	BA	322	A
59	BA	323	G
59	BA	324	A
59	BA	325	G
59	BA	329	G
59	BA	330	A
59	BA	331	A
59	BA	345	A
59	BA	349	G
59	BA	352	G
59	BA	363(A)	G
59	BA	364	C
59	BA	380	U
59	BA	381	G
59	BA	386	G
59	BA	387	U
59	BA	388	G
59	BA	389	G
59	BA	390	A
59	BA	391	G
59	BA	396	G
59	BA	405	U
59	BA	406	G
59	BA	407	G
59	BA	411	G
59	BA	412	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	434	U
59	BA	444	C
59	BA	448	U
59	BA	449	A
59	BA	451	C
59	BA	456	C
59	BA	457	A
59	BA	459	U
59	BA	464	U
59	BA	467	G
59	BA	470	A
59	BA	475	U
59	BA	480	A
59	BA	481	G
59	BA	491	G
59	BA	495	G
59	BA	505	A
59	BA	508	G
59	BA	509	C
59	BA	527	C
59	BA	528	A
59	BA	529	A
59	BA	530	G
59	BA	531	C
59	BA	532	A
59	BA	533	G
59	BA	537	C
59	BA	544	C
59	BA	556	G
59	BA	559	G
59	BA	563	G
59	BA	572	A
59	BA	573	G
59	BA	574	C
59	BA	575	A
59	BA	586	A
59	BA	587	C
59	BA	599	G
59	BA	603	A
59	BA	616	A
59	BA	617	G
59	BA	620	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	627	A
59	BA	637	A
59	BA	641	C
59	BA	645	C
59	BA	646	A
59	BA	652	U
59	BA	654	U
59	BA	668	G
59	BA	670	A
59	BA	671	C
59	BA	672	C
59	BA	683	C
59	BA	685	A
59	BA	686	G
59	BA	689	A
59	BA	695	G
59	BA	706	A
59	BA	717	G
59	BA	720	C
59	BA	728	G
59	BA	730	C
59	BA	738	G
59	BA	741	G
59	BA	748	G
59	BA	761	A
59	BA	763	G
59	BA	764	A
59	BA	765	G
59	BA	776	G
59	BA	779	U
59	BA	782	A
59	BA	784	A
59	BA	785	G
59	BA	788	A
59	BA	792	G
59	BA	794	G
59	BA	800	A
59	BA	805	G
59	BA	812	C
59	BA	819	A
59	BA	821	A
59	BA	827	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	829	A
59	BA	845	G
59	BA	846	C
59	BA	847	U
59	BA	852	G
59	BA	859	G
59	BA	866	A
59	BA	869	G
59	BA	870	A
59	BA	890	A
59	BA	896	A
59	BA	897	C
59	BA	906	G
59	BA	910	A
59	BA	917	A
59	BA	919	G
59	BA	929	G
59	BA	932	G
59	BA	935	C
59	BA	939	G
59	BA	941	A
59	BA	946	G
59	BA	959	A
59	BA	961	C
59	BA	962	G
59	BA	971	C
59	BA	974(A)	G
59	BA	974(B)	C
59	BA	980	A
59	BA	983	A
59	BA	986	C
59	BA	996	A
59	BA	1002	G
59	BA	1007	C
59	BA	1008	C
59	BA	1009	A
59	BA	1012	U
59	BA	1013	C
59	BA	1020	A
59	BA	1022	G
59	BA	1023	U
59	BA	1025	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	1026	U
59	BA	1027	A
59	BA	1033	U
59	BA	1041	C
59	BA	1042	G
59	BA	1045	A
59	BA	1046	A
59	BA	1047	G
59	BA	1048	A
59	BA	1061	U
59	BA	1070	A
59	BA	1072	C
59	BA	1075	C
59	BA	1077	A
59	BA	1078	U
59	BA	1079	C
59	BA	1085	A
59	BA	1086	A
59	BA	1088	A
59	BA	1090	U
59	BA	1098	A
59	BA	1106	G
59	BA	1107	G
59	BA	1112	G
59	BA	1123	C
59	BA	1127	A
59	BA	1131	G
59	BA	1135	C
59	BA	1136	G
59	BA	1139	G
59	BA	1155	A
59	BA	1157	G
59	BA	1175	U
59	BA	1176	G
59	BA	1186	G
59	BA	1199	U
59	BA	1204	A
59	BA	1206	G
59	BA	1212	G
59	BA	1215	G
59	BA	1221	C
59	BA	1231	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	1236	G
59	BA	1237	A
59	BA	1241	A
59	BA	1242	A
59	BA	1244	G
59	BA	1247	A
59	BA	1248	G
59	BA	1249	U
59	BA	1253	A
59	BA	1255	U
59	BA	1256	G
59	BA	1265	A
59	BA	1271	G
59	BA	1272	A
59	BA	1273	U
59	BA	1274	A
59	BA	1286	A
59	BA	1288	U
59	BA	1289	C
59	BA	1300	U
59	BA	1301	A
59	BA	1302	A
59	BA	1306	C
59	BA	1307	A
59	BA	1312	U
59	BA	1314	C
59	BA	1321	A
59	BA	1325	G
59	BA	1328	G
59	BA	1329	U
59	BA	1332	G
59	BA	1338	G
59	BA	1341	U
59	BA	1343	G
59	BA	1349	A
59	BA	1359	A
59	BA	1365	A
59	BA	1379	A
59	BA	1384	A
59	BA	1385	G
59	BA	1387	C
59	BA	1388	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	1395	A
59	BA	1396	U
59	BA	1398	C
59	BA	1416	G
59	BA	1420	U
59	BA	1421	G
59	BA	1423	G
59	BA	1428	C
59	BA	144(B)	A
59	BA	1451	C
59	BA	1453	A
59	BA	1454	U
59	BA	1455	G
59	BA	1458	C
59	BA	1460	A
59	BA	1461	G
59	BA	1463	C
59	BA	1467	C
59	BA	1483	G
59	BA	1490	A
59	BA	1491	G
59	BA	1493	C
59	BA	1494	A
59	BA	1495	A
59	BA	1497	U
59	BA	1498	C
59	BA	1529	A
59	BA	1535	U
59	BA	1536	A
59	BA	1538	G
59	BA	1542	G
59	BA	1543	A
59	BA	1544	C
59	BA	1545	A
59	BA	1546	A
59	BA	1554	A
59	BA	1558	A
59	BA	1559	G
59	BA	1569	A
59	BA	1572	A
59	BA	1576	U
59	BA	1581	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	1585	C
59	BA	1587	A
59	BA	1598	C
59	BA	1602	U
59	BA	1603	A
59	BA	1607	C
59	BA	1608	A
59	BA	1610	A
59	BA	1613	G
59	BA	1614	A
59	BA	1615	C
59	BA	1616	A
59	BA	1617	C
59	BA	163(B)	C
59	BA	1631	A
59	BA	1640	C
59	BA	1643	G
59	BA	1648	C
59	BA	1652	A
59	BA	1664	A
59	BA	1668	A
59	BA	1669	A
59	BA	1674	G
59	BA	1675	C
59	BA	1681	G
59	BA	1682	G
59	BA	1690	A
59	BA	1691	C
59	BA	1694	C
59	BA	1696	G
59	BA	1698	A
59	BA	1699	G
59	BA	1702	G
59	BA	1705	G
59	BA	1707	G
59	BA	1729	A
59	BA	1732	A
59	BA	1742	C
59	BA	1756	G
59	BA	1762	A
59	BA	1763	G
59	BA	1764	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	1773	A
59	BA	1780	A
59	BA	1781	C
59	BA	1783	A
59	BA	1787	A
59	BA	1791	A
59	BA	1796	U
59	BA	1800	C
59	BA	1802	A
59	BA	1803	A
59	BA	1810	A
59	BA	1811	G
59	BA	1814	G
59	BA	1815	A
59	BA	1816	G
59	BA	1820	U
59	BA	1821	A
59	BA	1829	A
59	BA	1831	G
59	BA	1838	C
59	BA	1840	G
59	BA	1847	A
59	BA	1848	A
59	BA	1851	U
59	BA	1860	G
59	BA	1888	G
59	BA	1889	A
59	BA	1896	G
59	BA	1900	A
59	BA	1901	A
59	BA	1906	G
59	BA	1912	A
59	BA	1913	A
59	BA	1914	C
59	BA	1920	C
59	BA	1929	G
59	BA	1930	G
59	BA	1931	U
59	BA	1936	A
59	BA	1937	A
59	BA	1938	A
59	BA	1939	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	1940	U
59	BA	1955	U
59	BA	1956	U
59	BA	1963	U
59	BA	1967	C
59	BA	1970	A
59	BA	1971	A
59	BA	1972	A
59	BA	1977	A
59	BA	1978	A
59	BA	1981	A
59	BA	1982	C
59	BA	1992	G
59	BA	2006	C
59	BA	2013	A
59	BA	2020	A
59	BA	2021	C
59	BA	2022	U
59	BA	2023	G
59	BA	2024	G
59	BA	2031	A
59	BA	2032	G
59	BA	2033	A
59	BA	2034	U
59	BA	2036	C
59	BA	2039	C
59	BA	2040	C
59	BA	2041	U
59	BA	2043	C
59	BA	2044	C
59	BA	2052	G
59	BA	2055	C
59	BA	2056	G
59	BA	2060	A
59	BA	2061	G
59	BA	2062	A
59	BA	2067	G
59	BA	2068	U
59	BA	2069	G
59	BA	2093	G
59	BA	2111	C
59	BA	2115	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	2116	G
59	BA	2117	A
59	BA	2118	U
59	BA	2120	G
59	BA	2130	U
59	BA	2132	U
59	BA	2133	G
59	BA	2136	C
59	BA	2144	U
59	BA	2148	G
59	BA	2154	G
59	BA	2158	A
59	BA	2159	G
59	BA	2166	G
59	BA	2168	G
59	BA	2171	A
59	BA	2172	U
59	BA	2173	A
59	BA	2198	A
59	BA	2210	G
59	BA	2211	G
59	BA	2212	A
59	BA	2213	U
59	BA	2215	G
59	BA	2225	A
59	BA	2239	G
59	BA	2245	U
59	BA	2251	G
59	BA	2266	A
59	BA	2268	A
59	BA	2269	A
59	BA	2275	C
59	BA	2278	A
59	BA	2279	G
59	BA	2282	G
59	BA	2283	C
59	BA	2287	A
59	BA	2305	A
59	BA	2308	G
59	BA	2309	A
59	BA	2310	A
59	BA	2319	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	2320	A
59	BA	2325	G
59	BA	2327	A
59	BA	2334	G
59	BA	2336	A
59	BA	2343	C
59	BA	2345	G
59	BA	2346	A
59	BA	2347	C
59	BA	2350	C
59	BA	2361	A
59	BA	2371	G
59	BA	2377	A
59	BA	2378	A
59	BA	2379	G
59	BA	2383	G
59	BA	2385	C
59	BA	2391	G
59	BA	2402	C
59	BA	2403	C
59	BA	2406	U
59	BA	2407	G
59	BA	2422	A
59	BA	2423	U
59	BA	2425	A
59	BA	2426	A
59	BA	2427	C
59	BA	2428	G
59	BA	2429	G
59	BA	2430	A
59	BA	2434	A
59	BA	2435	A
59	BA	2436	G
59	BA	2439	A
59	BA	2440	C
59	BA	2441	C
59	BA	2448	A
59	BA	2460	U
59	BA	2469	A
59	BA	2470	G
59	BA	2475	C
59	BA	2476	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	2477	C
59	BA	2479	G
59	BA	2480	C
59	BA	2483	C
59	BA	2487	G
59	BA	2491	U
59	BA	2502	G
59	BA	2505	G
59	BA	2509	G
59	BA	2518	A
59	BA	2529	G
59	BA	2530	A
59	BA	2532	G
59	BA	2539	C
59	BA	2542	A
59	BA	2543	G
59	BA	2546	U
59	BA	2554	U
59	BA	2555	U
59	BA	2556	C
59	BA	2566	A
59	BA	2567	G
59	BA	2572	A
59	BA	2573	C
59	BA	2574	G
59	BA	2577	A
59	BA	2578	G
59	BA	2582	G
59	BA	2584	U
59	BA	2585	U
59	BA	2586	C
59	BA	2597	G
59	BA	2602	A
59	BA	2603	G
59	BA	2609	U
59	BA	2610	C
59	BA	2611	U
59	BA	2612	C
59	BA	2615	U
59	BA	2618	G
59	BA	2621	A
59	BA	2623	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	2630	G
59	BA	2645	G
59	BA	2646	C
59	BA	2663	G
59	BA	2665	A
59	BA	2667	C
59	BA	2672	G
59	BA	2682	U
59	BA	2689	U
59	BA	2690	C
59	BA	2702	U
59	BA	2703	C
59	BA	2711	A
59	BA	2712	U
59	BA	712(B)	A
59	BA	2713	A
59	BA	2715	C
59	BA	2726	U
59	BA	2727	G
59	BA	2730	C
59	BA	2731	G
59	BA	2733	A
59	BA	2740	A
59	BA	2748	A
59	BA	2751	G
59	BA	2755	C
59	BA	2757	A
59	BA	2764	A
59	BA	2765	A
59	BA	2774	C
59	BA	2777	G
59	BA	2778	A
59	BA	2779	U
59	BA	2780	G
59	BA	2781	A
59	BA	2782	G
59	BA	2790	A
59	BA	2791	C
59	BA	2792	G
59	BA	2793	G
59	BA	2797	U
59	BA	2799	A

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Mol	Chain	Res	Type
59	BA	2805	G
59	BA	2811	G
59	BA	2818	G
59	BA	2820	A
59	BA	2821	A
59	BA	2823	A
59	BA	2827	C
59	BA	2833	G
59	BA	2834	G
59	BA	2835	A
59	BA	2849	U
59	BA	2851	A
59	BA	2856	C
59	BA	2862	G
59	BA	2866	U
59	BA	2872	G
59	BA	2879	C
59	BA	2880	C
59	BA	2881	C
59	BA	2886	G
59	BA	2892	A
59	BA	2894	G
60	BB	2	C
60	BB	13	A
60	BB	14	U
60	BB	15	A
60	BB	16	G
60	BB	25	A
60	BB	27	C
60	BB	41	U
60	BB	42	C
60	BB	47	C
60	BB	48	A
60	BB	52	A
60	BB	56	G
60	BB	57	A
60	BB	66	A
60	BB	67	G
60	BB	71	C
60	BB	72	G
60	BB	73	A
60	BB	74	U

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Mol	Chain	Res	Type
60	BB	90	C
20	CA	6	G
20	CA	7	G
20	CA	9	G
20	CA	32	A
20	CA	39	G
20	CA	47	C
20	CA	48	C
20	CA	51	A
20	CA	54	C
20	CA	59	A
20	CA	68(H)	G
20	CA	68(M)	U
20	CA	68(P)	C
20	CA	68(W)	G
20	CA	101	A
20	CA	109	A
20	CA	116	A
20	CA	117	G
20	CA	121	C
20	CA	129(A)	G
20	CA	131	C
20	CA	134	A
20	CA	151	A
20	CA	156	G
20	CA	163	C
20	CA	179	A
20	CA	183	G
20	CA	186(E)	C
20	CA	186(H)	U
20	CA	186(I)	U
20	CA	186(K)	G
20	CA	195	A
20	CA	197	A
20	CA	201(C)	U
20	CA	216	G
20	CA	233	C
20	CA	244	U
20	CA	247	G
20	CA	251	G
20	CA	267	C
20	CA	272	C

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Mol	Chain	Res	Type
20	CA	279	A
20	CA	280	C
20	CA	281	G
20	CA	289	G
20	CA	295	C
20	CA	301	G
20	CA	309	G
20	CA	315	A
20	CA	321	A
20	CA	328	C
20	CA	329	A
20	CA	332	G
20	CA	345	C
20	CA	347	G
20	CA	352	C
20	CA	353	A
20	CA	354	G
20	CA	356	A
20	CA	364	A
20	CA	367	U
20	CA	372	C
20	CA	373	A
20	CA	390	C
20	CA	392	G
20	CA	397	A
20	CA	398	C
20	CA	408	A
20	CA	412	A
20	CA	413	G
20	CA	414	A
20	CA	422	C
20	CA	423	G
20	CA	424	G
20	CA	427	U
20	CA	429	U
20	CA	440	A
20	CA	452	A
20	CA	453	A
20	CA	458(B)	A
20	CA	458(D)	G
20	CA	458(E)	A
20	CA	485	G

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Mol	Chain	Res	Type
20	CA	492	G
20	CA	495	A
20	CA	497	A
20	CA	498	U
20	CA	505	G
20	CA	508	C
20	CA	510	A
20	CA	511	C
20	CA	512	U
20	CA	518	C
20	CA	521	G
20	CA	524	G
20	CA	527	G
20	CA	529	G
20	CA	531	U
20	CA	532	A
20	CA	533	A
20	CA	547	A
20	CA	562	C
20	CA	564	C
20	CA	565	U
20	CA	567	G
20	CA	568	G
20	CA	572	A
20	CA	573	A
20	CA	574	A
20	CA	575	G
20	CA	576	G
20	CA	577	G
20	CA	596	C
20	CA	619	U
20	CA	644	G
20	CA	653	A
20	CA	665	A
20	CA	666	G
20	CA	669	U
20	CA	688	G
20	CA	690	G
20	CA	694	A
20	CA	695	A
20	CA	701	C
20	CA	702	A

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Mol	Chain	Res	Type
20	CA	714	G
20	CA	749	C
20	CA	753	A
20	CA	777	A
20	CA	778	G
20	CA	787	A
20	CA	793	U
20	CA	794	A
20	CA	805	C
20	CA	815	A
20	CA	816	A
20	CA	817	C
20	CA	818	G
20	CA	819	A
20	CA	821	G
20	CA	828	A
20	CA	838(A)	U
20	CA	838(B)	C
20	CA	848	C
20	CA	859	A
20	CA	867	G
20	CA	873	A
20	CA	874	G
20	CA	885	G
20	CA	888	G
20	CA	902	G
20	CA	926	G
20	CA	927	G
20	CA	934	C
20	CA	946	A
20	CA	960	U
20	CA	961	U
20	CA	964	A
20	CA	966	G
20	CA	968	A
20	CA	969	A
20	CA	971	G
20	CA	972	C
20	CA	974	A
20	CA	976	G
20	CA	977	A
20	CA	978	A

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Mol	Chain	Res	Type
20	CA	979	C
20	CA	980	C
20	CA	981	U
20	CA	983	A
20	CA	992	U
20	CA	993	G
20	CA	998(A)	C
20	CA	1004	A
20	CA	1025	U
20	CA	1028(B)	C
20	CA	1045	C
20	CA	1054	C
20	CA	1055	A
20	CA	1064	G
20	CA	1068	G
20	CA	1070	U
20	CA	1086	U
20	CA	1094	G
20	CA	1095	U
20	CA	1101	A
20	CA	1102	A
20	CA	1108	G
20	CA	1117	G
20	CA	1125	U
20	CA	1126	U
20	CA	1129	C
20	CA	1130	A
20	CA	1137	C
20	CA	1138	G
20	CA	1139	G
20	CA	1140	C
20	CA	1146	A
20	CA	1159	U
20	CA	1171	G
20	CA	1181	G
20	CA	1184	G
20	CA	1190	G
20	CA	1191	A
20	CA	1192	C
20	CA	1193	G
20	CA	1196	U
20	CA	1197	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	CA	1200	C
20	CA	1201	A
20	CA	1212	U
20	CA	1213	A
20	CA	1214	C
20	CA	1220	G
20	CA	1225	A
20	CA	1227	A
20	CA	1233	G
20	CA	1238	A
20	CA	1239	A
20	CA	1241	G
20	CA	1256	A
20	CA	1257	U
20	CA	1260	C
20	CA	1273	G
20	CA	1279	A
20	CA	1280	A
20	CA	1281	U
20	CA	1283	G
20	CA	1287	A
20	CA	1300	G
20	CA	1301	U
20	CA	1302	U
20	CA	1317	C
20	CA	1320	C
20	CA	1322	C
20	CA	1331	G
20	CA	1338	G
20	CA	1347	G
20	CA	1353	G
20	CA	1359	C
20	CA	1362(A)	C
20	CA	1364	U
20	CA	1370	G
20	CA	1377	A
20	CA	1394	A
20	CA	1397	C
20	CA	1398	A
20	CA	1411	C
20	CA	1419	G
20	CA	1431	C

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Mol	Chain	Res	Type
20	CA	1440(B)	G
20	CA	1440(C)	G
20	CA	1440(D)	A
20	CA	1440(E)	G
20	CA	1440(G)	C
20	CA	1440(I)	A
20	CA	1440(J)	C
20	CA	1440(K)	G
20	CA	1440(L)	G
20	CA	1466	C
20	CA	1483	A
20	CA	1487	G
20	CA	1489	G
20	CA	1492	A
20	CA	1493	A
20	CA	1494	G
20	CA	1497	G
20	CA	1502	A
20	CA	1503	A
20	CA	1504	G
20	CA	1505	G
20	CA	1506	U
20	CA	1517	G
20	CA	1518	A
20	CA	1520	G
20	CA	1528	U
20	CA	1529	G
20	CA	1530	G
20	CA	1532	U
20	CA	1533	C
20	CA	1534	A
20	CA	1535	C
20	CA	1536	C
20	CA	1538	C
21	CW	8	U
21	CW	16	U
21	CW	17	U
21	CW	18	G
21	CW	19	G
21	CW	20	U
21	CW	20(A)	U
21	CW	21	A

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Mol	Chain	Res	Type
21	CW	22	G
21	CW	25	C
21	CW	36	U
21	CW	42	U
21	CW	46	G
21	CW	47	U
21	CW	48	C
21	CW	50	C
21	CW	51	A
21	CW	58	A
21	CW	59	A
21	CW	60	U
21	CW	61	C
21	CW	68	U
22	CV	9	G
22	CV	12	A
22	CV	16	A
22	CV	18	G
22	CV	19	G
22	CV	21	A
22	CV	23	A
22	CV	24	A
59	DA	7	G
59	DA	10	G
59	DA	12	U
59	DA	15	G
59	DA	17	G
59	DA	28	A
59	DA	34	C
59	DA	35	G
59	DA	46	C
59	DA	49	A
59	DA	55	G
59	DA	58	G
59	DA	61	G
59	DA	64	A
59	DA	73	A
59	DA	75	G
59	DA	84	A
59	DA	90	U
59	DA	98	G
59	DA	99	U

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Mol	Chain	Res	Type
59	DA	101	G
59	DA	102	G
59	DA	104	U
59	DA	110	G
59	DA	117	G
59	DA	118	A
59	DA	119	A
59	DA	120	U
59	DA	138	G
59	DA	140	A
59	DA	149	A
59	DA	181	A
59	DA	188	G
59	DA	196	A
59	DA	197	A
59	DA	199	A
59	DA	205	G
59	DA	215	G
59	DA	216	A
59	DA	221	A
59	DA	222	A
59	DA	227	A
59	DA	229	A
59	DA	230	U
59	DA	233	A
59	DA	248	G
59	DA	249	C
59	DA	250	G
59	DA	252	G
59	DA	256	A
59	DA	261	G
59	DA	265	A
59	DA	266	G
59	DA	270(M)	U
59	DA	270(N)	U
59	DA	270(O)	G
59	DA	270(P)	U
59	DA	270(R)	C
59	DA	270(Y)	G
59	DA	271(C)	G
59	DA	271(D)	U
59	DA	271	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	274	G
59	DA	275	G
59	DA	277	C
59	DA	279	C
59	DA	299	A
59	DA	302	C
59	DA	310	A
59	DA	312	G
59	DA	321	G
59	DA	322	A
59	DA	323	G
59	DA	324	A
59	DA	327	G
59	DA	329	G
59	DA	330	A
59	DA	349	G
59	DA	352	G
59	DA	353	G
59	DA	363(A)	G
59	DA	363(C)	G
59	DA	364	C
59	DA	380	U
59	DA	386	G
59	DA	387	U
59	DA	389	G
59	DA	396	G
59	DA	404	C
59	DA	405	U
59	DA	406	G
59	DA	411	G
59	DA	412	A
59	DA	431	U
59	DA	434	U
59	DA	444	C
59	DA	446	G
59	DA	448	U
59	DA	449	A
59	DA	451	C
59	DA	456	C
59	DA	457	A
59	DA	459	U
59	DA	464	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	465	G
59	DA	469	G
59	DA	470	A
59	DA	473	G
59	DA	475	U
59	DA	480	A
59	DA	481	G
59	DA	505	A
59	DA	508	G
59	DA	509	C
59	DA	527	C
59	DA	530	G
59	DA	531	C
59	DA	532	A
59	DA	533	G
59	DA	535	C
59	DA	541	C
59	DA	546	C
59	DA	556	G
59	DA	558	G
59	DA	559	G
59	DA	563	G
59	DA	573	G
59	DA	575	A
59	DA	586	A
59	DA	587	C
59	DA	595	C
59	DA	599	G
59	DA	600	G
59	DA	603	A
59	DA	614	U
59	DA	615	G
59	DA	616	A
59	DA	617	G
59	DA	620	G
59	DA	621	A
59	DA	627	A
59	DA	628	G
59	DA	634	C
59	DA	637	A
59	DA	645	C
59	DA	646	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	652	U
59	DA	654	U
59	DA	667	U
59	DA	671	C
59	DA	672	C
59	DA	685	A
59	DA	686	G
59	DA	695	G
59	DA	716	A
59	DA	717	G
59	DA	730	C
59	DA	738	G
59	DA	742	G
59	DA	748	G
59	DA	753	C
59	DA	765	G
59	DA	771	G
59	DA	776	G
59	DA	779	U
59	DA	782	A
59	DA	784	A
59	DA	785	G
59	DA	789	A
59	DA	790	C
59	DA	792	G
59	DA	794	G
59	DA	800	A
59	DA	805	G
59	DA	812	C
59	DA	814	C
59	DA	819	A
59	DA	821	A
59	DA	822	U
59	DA	823	G
59	DA	826	U
59	DA	827	U
59	DA	829	A
59	DA	838	C
59	DA	845	G
59	DA	846	C
59	DA	847	U
59	DA	852	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	859	G
59	DA	866	A
59	DA	870	A
59	DA	889	C
59	DA	890	A
59	DA	896	A
59	DA	897	C
59	DA	910	A
59	DA	917	A
59	DA	919	G
59	DA	932	G
59	DA	933	A
59	DA	938	G
59	DA	941	A
59	DA	946	G
59	DA	951	C
59	DA	959	A
59	DA	961	C
59	DA	973	A
59	DA	974(A)	G
59	DA	974(B)	C
59	DA	975	G
59	DA	978	G
59	DA	980	A
59	DA	983	A
59	DA	989	G
59	DA	990	A
59	DA	991	C
59	DA	996	A
59	DA	1002	G
59	DA	1005	C
59	DA	1007	C
59	DA	1008	C
59	DA	1009	A
59	DA	1012	U
59	DA	1013	C
59	DA	1022	G
59	DA	1023	U
59	DA	1024	G
59	DA	1025	G
59	DA	1026	U
59	DA	1033	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1042	G
59	DA	1045	A
59	DA	1046	A
59	DA	1047	G
59	DA	1048	A
59	DA	1058	G
59	DA	1066	U
59	DA	1070	A
59	DA	1072	C
59	DA	1075	C
59	DA	1078	U
59	DA	1079	C
59	DA	1085	A
59	DA	1086	A
59	DA	1088	A
59	DA	1090	U
59	DA	1096	A
59	DA	1105	U
59	DA	1107	G
59	DA	1112	G
59	DA	1117	G
59	DA	1123	C
59	DA	1125	G
59	DA	1130	U
59	DA	1135	C
59	DA	1136	G
59	DA	1138	G
59	DA	1139	G
59	DA	114(B)	A
59	DA	1153	C
59	DA	1175	U
59	DA	1176	G
59	DA	1186	G
59	DA	1187	G
59	DA	1194	A
59	DA	1199	U
59	DA	1204	A
59	DA	1206	G
59	DA	1210	A
59	DA	1212	G
59	DA	1214	A
59	DA	1215	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1221	C
59	DA	1226	A
59	DA	1227	G
59	DA	1241	A
59	DA	1244	G
59	DA	1247	A
59	DA	1248	G
59	DA	1249	U
59	DA	1253	A
59	DA	1254	A
59	DA	1256	G
59	DA	1262	A
59	DA	1265	A
59	DA	1271	G
59	DA	1272	A
59	DA	1273	U
59	DA	1274	A
59	DA	1286	A
59	DA	1289	C
59	DA	1300	U
59	DA	1301	A
59	DA	1302	A
59	DA	1305	C
59	DA	1307	A
59	DA	1312	U
59	DA	1314	C
59	DA	1325	G
59	DA	1329	U
59	DA	1332	G
59	DA	1333	C
59	DA	1341	U
59	DA	1343	G
59	DA	1349	A
59	DA	1352	U
59	DA	1355	G
59	DA	1359	A
59	DA	1365	A
59	DA	1368	G
59	DA	1379	A
59	DA	1384	A
59	DA	1385	G
59	DA	1396	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1398	C
59	DA	1404	C
59	DA	1416	G
59	DA	1420	U
59	DA	1421	G
59	DA	1428	C
59	DA	144(B)	A
59	DA	149(B)	A
59	DA	1451	C
59	DA	1453	A
59	DA	1454	U
59	DA	1455	G
59	DA	1460	A
59	DA	1461	G
59	DA	1467	C
59	DA	1480	G
59	DA	1483	G
59	DA	1490	A
59	DA	1491	G
59	DA	1493	C
59	DA	1494	A
59	DA	1495	A
59	DA	1497	U
59	DA	1498	C
59	DA	1499	C
59	DA	1536	A
59	DA	1537	C
59	DA	1538	G
59	DA	1540	G
59	DA	1542	G
59	DA	1543	A
59	DA	1544	C
59	DA	1545	A
59	DA	1546	A
59	DA	1547	C
59	DA	1555	G
59	DA	1558	A
59	DA	1559	G
59	DA	1568	G
59	DA	1569	A
59	DA	1572	A
59	DA	1578	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1579	A
59	DA	1583	A
59	DA	1585	C
59	DA	1602	U
59	DA	1603	A
59	DA	1607	C
59	DA	1608	A
59	DA	1610	A
59	DA	1614	A
59	DA	1615	C
59	DA	1616	A
59	DA	1617	C
59	DA	1618	A
59	DA	1619	G
59	DA	1631	A
59	DA	1639	U
59	DA	1640	C
59	DA	1646	C
59	DA	1648	C
59	DA	1654	A
59	DA	1657	C
59	DA	1659	U
59	DA	1664	A
59	DA	1667	G
59	DA	1668	A
59	DA	1669	A
59	DA	1670	C
59	DA	1674	G
59	DA	1678	G
59	DA	1681	G
59	DA	1694	C
59	DA	1695	G
59	DA	1698	A
59	DA	1699	G
59	DA	1707	G
59	DA	1729	A
59	DA	1732	A
59	DA	1759	A
59	DA	1763	G
59	DA	1764	G
59	DA	1773	A
59	DA	1779	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1780	A
59	DA	1781	C
59	DA	1782	C
59	DA	1783	A
59	DA	1784	A
59	DA	1786	A
59	DA	1787	A
59	DA	1791	A
59	DA	1796	U
59	DA	1799	G
59	DA	1800	C
59	DA	1801	G
59	DA	1802	A
59	DA	1815	A
59	DA	1816	G
59	DA	1820	U
59	DA	1821	A
59	DA	1826	G
59	DA	1829	A
59	DA	1833	U
59	DA	1847	A
59	DA	1848	A
59	DA	1857	G
59	DA	1858	G
59	DA	1878	G
59	DA	1886	C
59	DA	1888	G
59	DA	1889	A
59	DA	1898	U
59	DA	1900	A
59	DA	1905	C
59	DA	1906	G
59	DA	1912	A
59	DA	1913	A
59	DA	1914	C
59	DA	1929	G
59	DA	1930	G
59	DA	1936	A
59	DA	1937	A
59	DA	1938	A
59	DA	1939	U
59	DA	1940	U

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Mol	Chain	Res	Type
59	DA	1943	U
59	DA	1944	U
59	DA	1952	A
59	DA	1954	G
59	DA	1955	U
59	DA	1956	U
59	DA	1963	U
59	DA	1965	C
59	DA	1967	C
59	DA	1970	A
59	DA	1971	A
59	DA	1972	A
59	DA	1976	U
59	DA	1977	A
59	DA	1981	A
59	DA	1982	C
59	DA	1984	G
59	DA	1989	G
59	DA	1992	G
59	DA	1993	U
59	DA	1999	C
59	DA	2013	A
59	DA	2020	A
59	DA	2021	C
59	DA	2022	U
59	DA	2023	G
59	DA	2030	A
59	DA	2031	A
59	DA	2032	G
59	DA	2033	A
59	DA	2034	U
59	DA	2036	C
59	DA	2040	C
59	DA	2041	U
59	DA	2042	A
59	DA	2043	C
59	DA	2044	C
59	DA	2052	G
59	DA	2055	C
59	DA	2056	G
59	DA	2060	A
59	DA	2061	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	2062	A
59	DA	2067	G
59	DA	2068	U
59	DA	2069	G
59	DA	2089	U
59	DA	2092	U
59	DA	2093	G
59	DA	2115	G
59	DA	2116	G
59	DA	2117	A
59	DA	2118	U
59	DA	2120	G
59	DA	2131	G
59	DA	2132	U
59	DA	2133	G
59	DA	2136	C
59	DA	2144	U
59	DA	2148	G
59	DA	2154	G
59	DA	2159	G
59	DA	2170	A
59	DA	2171	A
59	DA	2173	A
59	DA	2190	G
59	DA	2198	A
59	DA	2199	A
59	DA	2209	C
59	DA	2210	G
59	DA	2211	G
59	DA	2212	A
59	DA	2213	U
59	DA	2225	A
59	DA	2238	G
59	DA	2239	G
59	DA	2261	C
59	DA	2266	A
59	DA	2268	A
59	DA	2269	A
59	DA	2275	C
59	DA	2278	A
59	DA	2279	G
59	DA	2282	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	2283	C
59	DA	2287	A
59	DA	2305	A
59	DA	2308	G
59	DA	2309	A
59	DA	2310	A
59	DA	2311	A
59	DA	2319	G
59	DA	2320	A
59	DA	2322	A
59	DA	2325	G
59	DA	2327	A
59	DA	2334	G
59	DA	2336	A
59	DA	2345	G
59	DA	2346	A
59	DA	2347	C
59	DA	2350	C
59	DA	2358	G
59	DA	2361	A
59	DA	2377	A
59	DA	2383	G
59	DA	2385	C
59	DA	2400	G
59	DA	2402	C
59	DA	2405	G
59	DA	2410	G
59	DA	2411	A
59	DA	2422	A
59	DA	2423	U
59	DA	2425	A
59	DA	2427	C
59	DA	2428	G
59	DA	2429	G
59	DA	2430	A
59	DA	2431	U
59	DA	2435	A
59	DA	2436	G
59	DA	2439	A
59	DA	2441	C
59	DA	2448	A
59	DA	2468	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	2469	A
59	DA	2470	G
59	DA	2476	A
59	DA	2477	C
59	DA	2479	G
59	DA	2480	C
59	DA	2482	G
59	DA	2484	G
59	DA	2491	U
59	DA	2497	A
59	DA	2502	G
59	DA	2503	A
59	DA	2504	U
59	DA	2505	G
59	DA	2509	G
59	DA	2517	C
59	DA	2518	A
59	DA	2519	U
59	DA	2529	G
59	DA	2530	A
59	DA	2532	G
59	DA	2542	A
59	DA	2543	G
59	DA	2554	U
59	DA	2556	C
59	DA	2565	A
59	DA	2566	A
59	DA	2567	G
59	DA	2572	A
59	DA	2573	C
59	DA	2574	G
59	DA	2576	G
59	DA	2577	A
59	DA	2584	U
59	DA	2602	A
59	DA	2606	C
59	DA	2609	U
59	DA	2610	C
59	DA	2611	U
59	DA	2612	C
59	DA	2615	U
59	DA	2618	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	2630	G
59	DA	2637	U
59	DA	2646	C
59	DA	2663	G
59	DA	2665	A
59	DA	2666	C
59	DA	2667	C
59	DA	2682	U
59	DA	2689	U
59	DA	2702	U
59	DA	2703	C
59	DA	2711	A
59	DA	2712	U
59	DA	712(B)	A
59	DA	2713	A
59	DA	2715	C
59	DA	2716	U
59	DA	2725	A
59	DA	2726	U
59	DA	2727	G
59	DA	2730	C
59	DA	2731	G
59	DA	2732	G
59	DA	2733	A
59	DA	2744	G
59	DA	2755	C
59	DA	2758	A
59	DA	2764	A
59	DA	2765	A
59	DA	2769	C
59	DA	2777	G
59	DA	2778	A
59	DA	2779	U
59	DA	2780	G
59	DA	2781	A
59	DA	2782	G
59	DA	2790	A
59	DA	2791	C
59	DA	2797	U
59	DA	2799	A
59	DA	2815	C
59	DA	2818	G

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Mol	Chain	Res	Type
59	DA	2820	A
59	DA	2821	A
59	DA	2823	A
59	DA	2833	G
59	DA	2834	G
59	DA	2835	A
59	DA	2849	U
59	DA	2851	A
59	DA	2856	C
59	DA	2862	G
59	DA	2866	U
59	DA	2872	G
59	DA	2880	C
59	DA	2886	G
59	DA	2892	A
59	DA	2894	G
60	DB	2	C
60	DB	13	A
60	DB	15	A
60	DB	16	G
60	DB	25	A
60	DB	35	U
60	DB	41	U
60	DB	45	A
60	DB	46	A
60	DB	48	A
60	DB	52	A
60	DB	67	G
60	DB	73	A
60	DB	74	U
60	DB	85	G
60	DB	90	C
60	DB	108	C

All (88) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
20	AA	115	G
20	AA	243	A
20	AA	266	G
20	AA	281	G
20	AA	328	C

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Mol	Chain	Res	Type
20	AA	429	U
20	AA	484	G
20	AA	687	A
20	AA	739	C
20	AA	748	C
20	AA	992	U
20	AA	1064	G
20	AA	1101	A
20	AA	1145	C
20	AA	1504	G
20	AA	1532	U
20	AA	1537	U
21	AW	41	A
22	AV	18	G
59	BA	221	A
59	BA	241	A
59	BA	271(C)	G
59	BA	278	A
59	BA	363(G)	A
59	BA	474	G
59	BA	479	A
59	BA	586	A
59	BA	1007	C
59	BA	1022	G
59	BA	1240	U
59	BA	1542	G
59	BA	1558	A
59	BA	1786	A
59	BA	1912	A
59	BA	1913	A
59	BA	1937	A
59	BA	2039	C
59	BA	2040	C
59	BA	2092	U
59	BA	2171	A
59	BA	2447	G
59	BA	2688	U
59	BA	2750	A
59	BA	2780	G
59	BA	2781	A
59	BA	2791	C
60	BB	66	A

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Mol	Chain	Res	Type
20	CA	115	G
20	CA	186(J)	G
20	CA	243	A
20	CA	266	G
20	CA	328	C
20	CA	484	G
20	CA	687	A
20	CA	748	C
20	CA	992	U
20	CA	1101	A
20	CA	1145	C
20	CA	1200	C
20	CA	1504	G
20	CA	1532	U
20	CA	1535	C
20	CA	1537	U
21	CW	41	A
22	CV	8	A
22	CV	18	G
59	DA	221	A
59	DA	271(C)	G
59	DA	363(G)	A
59	DA	464	U
59	DA	474	G
59	DA	479	A
59	DA	1022	G
59	DA	1240	U
59	DA	1542	G
59	DA	1558	A
59	DA	1786	A
59	DA	1912	A
59	DA	1913	A
59	DA	1937	A
59	DA	2040	C
59	DA	2092	U
59	DA	2212	A
59	DA	2447	G
59	DA	2481	G
59	DA	2518	A
59	DA	2780	G
60	DB	66	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
24	KBE	AU	1	24	8,8,9	0.55	0	7,8,10	1.48	2 (28%)
24	DPP	AU	2	24	3,5,6	0.35	0	1,5,7	0.16	0
24	UAL	AU	5	24	7,8,9	2.52	2 (28%)	4,9,11	1.37	1 (25%)
24	5OH	AU	6	24	7,12,13	0.60	0	7,16,18	2.65	3 (42%)
24	KBE	CU	1	24	8,8,9	0.59	0	7,8,10	1.80	1 (14%)
24	DPP	CU	2	24	3,5,6	0.32	0	1,5,7	0.16	0
24	UAL	CU	5	24	7,8,9	2.58	2 (28%)	4,9,11	1.63	1 (25%)
24	5OH	CU	6	24	7,12,13	0.66	0	7,16,18	2.84	4 (57%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	KBE	AU	1	24	-	0/7/7/8	0/0/0/0
24	DPP	AU	2	24	-	0/1/4/6	0/0/0/0
24	UAL	AU	5	24	-	0/3/7/9	0/0/0/0
24	5OH	AU	6	24	-	0/1/18/20	0/1/1/1
24	KBE	CU	1	24	-	0/7/7/8	0/0/0/0
24	DPP	CU	2	24	-	0/1/4/6	0/0/0/0
24	UAL	CU	5	24	-	0/3/7/9	0/0/0/0
24	5OH	CU	6	24	-	0/1/18/20	0/1/1/1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CU	5	UAL	C1-N1	-2.97	1.35	1.40
24	AU	5	UAL	C1-N1	-2.61	1.35	1.40
24	AU	5	UAL	C-CA	5.70	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CU	5	UAL	C-CA	5.71	1.53	1.45

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CU	5	UAL	O-C-CA	-3.14	120.78	125.40
24	CU	6	5OH	O-C-CA	-2.48	118.88	125.44
24	AU	5	UAL	O-C-CA	-2.38	121.90	125.40
24	AU	1	KBE	CD-CG-CB	-2.11	108.27	115.16
24	AU	6	5OH	O-C-CA	-2.11	119.88	125.44
24	CU	6	5OH	CR-CB-CA	2.65	115.44	112.71
24	AU	1	KBE	CB-CA-C	3.10	117.24	112.32
24	CU	6	5OH	CR-CS-NR	4.01	120.74	109.19
24	AU	6	5OH	CR-CS-NR	4.03	120.78	109.19
24	CU	1	KBE	CB-CA-C	4.23	119.03	112.32
24	AU	6	5OH	CR-CB-CA	4.79	117.65	112.71
24	CU	6	5OH	C-CA-N	4.95	120.18	109.83

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CU	1	KBE	2	0
24	CU	2	DPP	1	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 6 ligands modelled in this entry, 2 are monoatomic - leaving 4 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected

value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
61	FUA	AY	701	-	37,40,40	1.71	6 (16%)	45,64,64	1.98	11 (24%)
62	GDP	AY	702	-	23,30,30	1.36	3 (13%)	30,47,47	1.81	7 (23%)
61	FUA	CY	701	-	37,40,40	1.65	6 (16%)	45,64,64	2.17	12 (26%)
62	GDP	CY	702	-	23,30,30	1.36	3 (13%)	30,47,47	1.81	7 (23%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
61	FUA	AY	701	-	-	0/10/92/92	0/4/4/4
62	GDP	AY	702	-	-	0/12/32/32	0/3/3/3
61	FUA	CY	701	-	-	0/10/92/92	0/4/4/4
62	GDP	CY	702	-	-	0/12/32/32	0/3/3/3

All (18) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AY	701	FUA	C23-C22	-5.87	1.40	1.51
61	CY	701	FUA	C23-C22	-5.43	1.41	1.51
61	AY	701	FUA	C23-C24	-4.21	1.39	1.53
61	CY	701	FUA	C23-C24	-4.03	1.39	1.53
61	AY	701	FUA	C24-C25	-3.84	1.39	1.50
61	CY	701	FUA	C24-C25	-3.52	1.40	1.50
61	CY	701	FUA	C14-C8	-3.06	1.53	1.58
61	AY	701	FUA	C14-C8	-2.67	1.53	1.58
61	AY	701	FUA	O6-C3	-2.41	1.38	1.43
61	CY	701	FUA	C16-C17	2.14	1.54	1.50
61	AY	701	FUA	C25-C26	2.25	1.39	1.32
62	AY	702	GDP	O4'-C1'	2.36	1.44	1.41
62	CY	702	GDP	O4'-C1'	2.38	1.44	1.41
61	CY	701	FUA	C25-C26	2.52	1.40	1.32
62	CY	702	GDP	C2-N1	2.93	1.40	1.35
62	AY	702	GDP	C2-N1	2.96	1.40	1.35
62	AY	702	GDP	C6-N1	3.80	1.40	1.33
62	CY	702	GDP	C6-N1	3.84	1.40	1.33

All (37) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	CY	701	FUA	C13-C12-C11	-6.65	102.94	111.95
61	AY	701	FUA	C13-C12-C11	-6.07	103.73	111.95
62	AY	702	GDP	N3-C2-N1	-4.75	120.21	127.44
62	CY	702	GDP	N3-C2-N1	-4.72	120.26	127.44
62	CY	702	GDP	PA-O3A-PB	-3.98	119.33	132.67
62	AY	702	GDP	PA-O3A-PB	-3.97	119.34	132.67
61	AY	701	FUA	C16-O2-C31	-3.81	110.99	117.14
62	CY	702	GDP	C5-C6-N1	-3.65	118.59	123.59
62	AY	702	GDP	C5-C6-N1	-3.65	118.60	123.59
62	CY	702	GDP	C4'-O4'-C1'	-3.47	105.90	109.72
62	AY	702	GDP	C4'-O4'-C1'	-3.47	105.90	109.72
61	CY	701	FUA	C15-C14-C8	-3.24	112.99	116.75
61	CY	701	FUA	C16-O2-C31	-3.07	112.18	117.14
61	AY	701	FUA	C21-C14-C8	-2.69	109.53	112.33
62	CY	702	GDP	C4-C5-N7	-2.58	107.11	109.48
61	CY	701	FUA	C21-C14-C8	-2.53	109.69	112.33
62	AY	702	GDP	C4-C5-N7	-2.52	107.16	109.48
61	AY	701	FUA	C1-C2-C3	-2.43	106.51	111.48
61	CY	701	FUA	C1-C2-C3	-2.38	106.60	111.48
61	CY	701	FUA	C20-C8-C14	-2.29	106.72	110.84
61	CY	701	FUA	C13-C17-C16	-2.28	103.53	107.19
61	AY	701	FUA	C7-C8-C14	-2.15	108.71	110.72
61	AY	701	FUA	C28-C26-C27	2.03	119.64	114.64
62	CY	702	GDP	O4'-C1'-N9	2.07	112.43	108.10
62	AY	702	GDP	O4'-C1'-N9	2.07	112.44	108.10
61	AY	701	FUA	C23-C24-C25	2.17	117.38	111.69
62	CY	702	GDP	C6-N1-C2	2.40	119.27	115.94
62	AY	702	GDP	C6-N1-C2	2.41	119.28	115.94
61	AY	701	FUA	C10-C9-C11	2.70	120.05	114.79
61	CY	701	FUA	C23-C24-C25	2.74	118.86	111.69
61	AY	701	FUA	O2-C31-C32	2.99	116.73	111.10
61	CY	701	FUA	C10-C9-C11	3.14	120.90	114.79
61	AY	701	FUA	C1-C10-C5	3.22	112.30	107.90
61	CY	701	FUA	O2-C31-C32	3.48	117.66	111.10
61	CY	701	FUA	C1-C10-C5	4.47	114.02	107.90
61	AY	701	FUA	C24-C23-C22	5.46	125.63	112.02
61	CY	701	FUA	C24-C23-C22	6.17	127.40	112.02

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 38 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	AY	701	FUA	6	0
62	AY	702	GDP	12	0
61	CY	701	FUA	7	0
62	CY	702	GDP	13	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
54	Be	1
54	De	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	De	30:UNK	C	51:ALA	N	37.69
1	Be	30:UNK	C	51:ALA	N	36.65

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	AB	235/235 (100%)	0.07	6 (2%) 59 49	4, 59, 144, 223	0
1	CB	235/235 (100%)	0.28	21 (8%) 12 10	5, 60, 155, 214	0
2	AC	207/207 (100%)	0.05	10 (4%) 34 27	4, 63, 136, 190	0
2	CC	207/207 (100%)	0.08	11 (5%) 30 23	3, 57, 130, 186	0
3	AD	208/208 (100%)	0.11	17 (8%) 14 12	4, 57, 142, 206	0
3	CD	208/208 (100%)	-0.03	5 (2%) 62 52	14, 72, 144, 196	0
4	AE	151/151 (100%)	0.61	25 (16%) 2 2	5, 34, 122, 151	0
4	CE	151/151 (100%)	0.40	18 (11%) 6 6	4, 35, 133, 165	0
5	AF	101/101 (100%)	-0.58	0 100 100	4, 27, 93, 145	0
5	CF	101/101 (100%)	-0.41	0 100 100	5, 37, 115, 163	0
6	AG	155/155 (100%)	-0.09	4 (2%) 59 49	10, 78, 153, 229	0
6	CG	155/155 (100%)	0.07	11 (7%) 19 15	3, 84, 172, 210	0
7	AH	138/138 (100%)	-0.25	2 (1%) 78 68	3, 31, 89, 166	0
7	CH	138/138 (100%)	-0.09	3 (2%) 65 55	1, 37, 130, 199	0
8	AI	127/127 (100%)	0.95	28 (22%) 1 1	6, 72, 140, 199	0
8	CI	127/127 (100%)	0.49	13 (10%) 9 8	14, 84, 152, 237	0
9	AJ	99/99 (100%)	0.35	12 (12%) 6 6	9, 68, 136, 163	0
9	CJ	99/99 (100%)	0.22	7 (7%) 19 15	13, 65, 154, 217	0
10	AK	119/119 (100%)	0.17	10 (8%) 14 12	7, 56, 137, 180	0
10	CK	119/119 (100%)	0.27	14 (11%) 6 6	8, 55, 145, 175	0
11	AL	125/125 (100%)	0.24	13 (10%) 8 8	5, 39, 105, 171	0
11	CL	125/125 (100%)	0.51	13 (10%) 8 8	8, 52, 134, 176	0
12	AM	125/125 (100%)	0.68	18 (14%) 3 4	23, 90, 167, 199	0
12	CM	125/125 (100%)	0.60	21 (16%) 2 2	14, 90, 166, 190	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AN	60/60 (100%)	0.62	6 (10%) 9 9	8, 38, 114, 139	0
13	CN	60/60 (100%)	0.51	3 (5%) 32 25	8, 42, 131, 166	0
14	AO	88/88 (100%)	-0.14	3 (3%) 49 40	5, 37, 108, 158	0
14	CO	88/88 (100%)	0.00	1 (1%) 82 73	8, 49, 130, 197	0
15	AP	84/84 (100%)	0.77	16 (19%) 2 2	18, 68, 131, 171	0
15	CP	84/84 (100%)	0.60	10 (11%) 6 6	8, 79, 159, 224	0
16	AQ	100/100 (100%)	0.27	6 (6%) 25 19	9, 43, 120, 169	0
16	CQ	100/100 (100%)	0.35	7 (7%) 19 15	5, 43, 118, 142	0
17	AR	70/70 (100%)	-0.16	2 (2%) 55 45	7, 30, 134, 185	0
17	CR	70/70 (100%)	-0.10	4 (5%) 27 21	7, 28, 130, 193	0
18	AS	79/79 (100%)	0.82	13 (16%) 2 3	15, 78, 159, 206	0
18	CS	79/79 (100%)	0.32	6 (7%) 17 14	10, 80, 154, 204	0
19	AT	99/99 (100%)	0.28	7 (7%) 19 15	4, 64, 120, 187	0
19	CT	99/99 (100%)	0.60	10 (10%) 9 9	16, 71, 155, 187	0
20	AA	1511/1511 (100%)	-0.18	24 (1%) 74 65	3, 62, 163, 289	0
20	CA	1511/1511 (100%)	-0.16	23 (1%) 76 67	5, 63, 173, 323	0
21	AW	77/77 (100%)	-0.25	0 100 100	21, 91, 179, 234	0
21	CW	77/77 (100%)	0.00	2 (2%) 59 49	44, 97, 221, 273	0
22	AV	23/23 (100%)	0.66	1 (4%) 39 30	56, 136, 187, 205	0
22	CV	23/23 (100%)	0.77	2 (8%) 13 12	66, 119, 215, 230	0
23	AY	667/687 (97%)	-0.11	23 (3%) 49 40	5, 64, 147, 208	0
23	CY	667/687 (97%)	-0.03	22 (3%) 50 41	4, 68, 150, 203	0
24	AU	2/6 (33%)	0.84	0 100 100	155, 155, 155, 155	0
24	CU	2/6 (33%)	0.54	0 100 100	81, 81, 81, 88	0
25	BC	228/228 (100%)	1.15	56 (24%) 1 1	45, 128, 217, 259	0
25	DC	228/228 (100%)	1.23	60 (26%) 1 1	33, 153, 230, 287	0
26	BD	275/275 (100%)	-0.21	1 (0%) 93 90	4, 26, 103, 166	0
26	DD	275/275 (100%)	-0.17	2 (0%) 89 82	4, 25, 107, 210	0
27	BE	205/205 (100%)	-0.08	10 (4%) 33 25	1, 31, 135, 229	0
27	DE	205/205 (100%)	-0.19	3 (1%) 76 67	6, 41, 144, 221	0
28	BF	208/208 (100%)	0.75	31 (14%) 3 3	6, 49, 162, 216	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DF	208/208 (100%)	0.64	27 (12%) 5 5	10, 62, 162, 266	0
29	BG	181/181 (100%)	0.75	28 (15%) 3 3	11, 91, 152, 197	0
29	DG	181/181 (100%)	0.58	18 (9%) 9 9	33, 105, 176, 209	0
30	BH	167/167 (100%)	-0.11	8 (4%) 34 27	3, 47, 130, 224	0
30	DH	167/167 (100%)	-0.22	3 (1%) 71 62	6, 56, 141, 187	0
31	BJ	0/170	-	-	-	-
31	DJ	0/170	-	-	-	-
32	BK	140/140 (100%)	1.14	28 (20%) 1 2	17, 104, 194, 230	0
32	DK	140/140 (100%)	1.07	35 (25%) 1 1	37, 124, 205, 244	0
33	BN	138/138 (100%)	0.23	5 (3%) 46 37	59, 83, 108, 111	0
33	DN	138/138 (100%)	0.47	11 (7%) 15 12	59, 81, 104, 111	0
34	BO	122/122 (100%)	-0.07	3 (2%) 61 50	5, 33, 94, 148	0
34	DO	122/122 (100%)	-0.11	1 (0%) 87 80	4, 30, 131, 183	0
35	BP	146/146 (100%)	0.20	9 (6%) 24 19	7, 55, 131, 173	0
35	DP	146/146 (100%)	0.27	15 (10%) 9 8	1, 60, 152, 204	0
36	BQ	141/141 (100%)	-0.10	8 (5%) 27 21	20, 43, 113, 170	0
36	DQ	141/141 (100%)	0.07	12 (8%) 13 12	8, 32, 107, 219	0
37	BR	117/117 (100%)	0.10	4 (3%) 49 40	7, 38, 125, 156	0
37	DR	117/117 (100%)	0.02	5 (4%) 39 30	2, 38, 126, 213	0
38	BS	99/99 (100%)	0.88	19 (19%) 2 2	27, 104, 191, 225	0
38	DS	99/99 (100%)	1.31	28 (28%) 1 1	11, 106, 194, 248	0
39	BT	138/138 (100%)	-0.15	5 (3%) 46 37	6, 53, 139, 225	0
39	DT	138/138 (100%)	-0.09	4 (2%) 55 45	3, 68, 141, 201	0
40	BU	117/117 (100%)	-0.12	1 (0%) 85 78	11, 22, 80, 175	0
40	DU	117/117 (100%)	-0.24	1 (0%) 85 78	6, 20, 94, 136	0
41	BV	101/101 (100%)	-0.16	2 (1%) 68 59	0, 32, 104, 143	0
41	DV	101/101 (100%)	-0.18	1 (0%) 84 76	2, 32, 117, 147	0
42	BW	113/113 (100%)	0.35	7 (6%) 24 19	8, 32, 103, 140	0
42	DW	113/113 (100%)	0.48	8 (7%) 19 15	2, 31, 116, 157	0
43	BX	93/93 (100%)	0.33	7 (7%) 17 14	5, 51, 118, 172	0
43	DX	93/93 (100%)	0.36	8 (8%) 13 12	7, 50, 136, 198	0
44	BY	107/107 (100%)	0.62	15 (14%) 4 4	12, 69, 151, 213	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	DY	107/107 (100%)	0.59	13 (12%) 6 6	6, 70, 150, 196	0
45	BZ	185/185 (100%)	-0.24	5 (2%) 58 47	13, 52, 123, 175	0
45	DZ	185/185 (100%)	-0.00	10 (5%) 29 23	10, 61, 135, 194	0
46	B0	84/84 (100%)	0.08	4 (4%) 34 27	6, 53, 127, 163	0
46	D0	84/84 (100%)	0.42	9 (10%) 8 7	7, 58, 132, 217	0
47	B2	71/71 (100%)	-0.20	1 (1%) 78 68	12, 61, 137, 175	0
47	D2	71/71 (100%)	-0.40	0 100 100	9, 60, 127, 145	0
48	B3	60/60 (100%)	-0.29	1 (1%) 73 64	8, 31, 96, 111	0
48	D3	60/60 (100%)	-0.07	1 (1%) 73 64	13, 29, 101, 126	0
49	B5	59/59 (100%)	-0.06	0 100 100	8, 37, 148, 208	0
49	D5	59/59 (100%)	0.29	3 (5%) 32 24	6, 44, 156, 223	0
50	B6	50/50 (100%)	0.39	5 (10%) 9 9	12, 92, 147, 163	0
50	D6	50/50 (100%)	0.78	9 (18%) 2 2	31, 89, 175, 242	0
51	B7	49/49 (100%)	0.46	5 (10%) 9 8	9, 16, 135, 218	0
51	D7	49/49 (100%)	0.32	4 (8%) 14 12	11, 32, 107, 180	0
52	B8	64/64 (100%)	0.81	9 (14%) 4 4	5, 46, 98, 130	0
52	D8	64/64 (100%)	1.39	20 (31%) 1 1	7, 56, 123, 178	0
53	B9	37/37 (100%)	0.23	1 (2%) 58 47	10, 26, 148, 246	0
53	D9	37/37 (100%)	0.19	1 (2%) 58 47	8, 19, 104, 158	0
54	Be	72/102 (70%)	1.30	17 (23%) 1 1	24, 113, 183, 201	0
54	De	72/102 (70%)	1.32	16 (22%) 1 1	18, 114, 206, 259	0
55	Bf	0/31	-	-	-	-
55	Bg	0/31	-	-	-	-
55	Df	0/31	-	-	-	-
55	Dg	0/31	-	-	-	-
56	Bh	0/30	-	-	-	-
56	Dh	0/30	-	-	-	-
57	B1	93/93 (100%)	1.07	26 (27%) 1 1	1, 79, 187, 243	0
57	D1	93/93 (100%)	1.00	27 (29%) 1 1	8, 72, 174, 241	0
58	B4	35/35 (100%)	1.60	13 (37%) 0 0	74, 144, 233, 266	0
58	D4	35/35 (100%)	2.23	16 (45%) 0 0	64, 158, 226, 275	0
59	BA	2879/2879 (100%)	-0.18	14 (0%) 91 88	3, 43, 145, 276	0
59	DA	2879/2879 (100%)	-0.12	20 (0%) 89 82	0, 47, 163, 315	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
60	BB	119/119 (100%)	0.01	4 (3%) 49 40	21, 108, 175, 210	0
60	DB	119/119 (100%)	0.11	5 (4%) 40 31	23, 97, 186, 258	0
All	All	22686/23318 (97%)	0.09	1221 (5%) 29 23	0, 57, 160, 323	0

All (1221) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	DC	113	ALA	11.6
54	De	122	VAL	10.4
58	D4	4	GLY	10.1
44	DY	107	ASP	9.3
38	BS	44	LYS	8.2
32	BK	66	THR	8.2
38	DS	37	ALA	8.1
8	CI	15	ALA	7.6
28	DF	11	VAL	7.6
32	BK	14	ALA	7.6
25	BC	30	VAL	7.5
44	BY	102	CYS	7.4
28	DF	194	MET	7.4
28	DF	125	LEU	7.1
12	AM	124	PRO	7.0
38	DS	55	ALA	6.9
25	DC	30	VAL	6.9
58	B4	24	THR	6.7
44	DY	106	LEU	6.7
6	AG	80	VAL	6.6
32	BK	62	ASP	6.5
7	CH	25	ASP	6.4
57	D1	38	SER	6.3
28	DF	10	PRO	6.3
54	De	52	ALA	6.2
57	B1	15	ALA	6.2
25	DC	227	PRO	6.2
38	BS	41	ASP	6.2
39	DT	138	ALA	6.2
54	Be	122	VAL	6.1
50	D6	37	ARG	6.1
9	CJ	58	ASP	6.1
8	AI	15	ALA	6.0
8	AI	62	TYR	6.0

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Mol	Chain	Res	Type	RSRZ
32	DK	115	LEU	6.0
10	CK	41	THR	5.9
1	AB	16	HIS	5.9
38	DS	33	LYS	5.9
25	DC	175	PRO	5.9
36	DQ	141	GLN	5.9
50	D6	24	GLU	5.9
57	D1	24	ALA	5.9
59	DA	2894	G	5.9
23	AY	107	VAL	5.8
12	CM	125	ARG	5.8
57	B1	38	SER	5.8
28	DF	133	ASN	5.7
57	B1	34	THR	5.7
25	BC	33	LEU	5.6
57	D1	29	GLY	5.6
28	BF	193	VAL	5.6
25	DC	210	LEU	5.5
12	CM	39	ILE	5.5
52	D8	14	VAL	5.5
8	AI	4	TYR	5.5
54	Be	99	VAL	5.5
58	D4	24	THR	5.5
8	CI	4	TYR	5.4
25	DC	138	LEU	5.4
10	CK	42	TRP	5.4
50	D6	12	GLU	5.4
4	AE	29	GLY	5.4
18	AS	33	THR	5.4
25	DC	48	LEU	5.3
25	DC	107	GLY	5.3
28	BF	11	VAL	5.3
32	BK	21	PRO	5.3
12	AM	125	ARG	5.3
54	Be	119	GLY	5.3
12	CM	40	ASN	5.2
8	AI	63	ILE	5.2
35	DP	65	ARG	5.2
38	DS	54	LEU	5.2
4	AE	49	PRO	5.2
39	DT	137	LYS	5.2
10	CK	31	THR	5.1

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Mol	Chain	Res	Type	RSRZ
38	DS	41	ASP	5.1
4	AE	120	THR	5.1
6	CG	82	GLY	5.1
3	AD	122	ARG	5.1
25	BC	126	SER	5.1
23	AY	123	ARG	5.1
39	BT	1	MET	5.1
38	DS	53	SER	5.1
4	CE	29	GLY	5.0
8	AI	19	LEU	5.0
23	AY	104	ALA	5.0
18	AS	35	SER	5.0
29	BG	64	THR	5.0
57	D1	39	LYS	5.0
28	BF	114	VAL	5.0
1	CB	29	ALA	4.9
58	D4	31	ILE	4.9
36	DQ	40	ALA	4.9
28	DF	193	VAL	4.9
32	BK	57	ILE	4.9
25	BC	69	LEU	4.8
38	DS	38	GLN	4.8
57	D1	15	ALA	4.8
28	BF	125	LEU	4.8
51	D7	48	LYS	4.8
15	CP	39	TYR	4.8
27	BE	205	ALA	4.8
44	BY	36	ALA	4.8
19	AT	9	ASN	4.8
58	D4	29	PRO	4.8
28	BF	189	THR	4.7
38	DS	48	LEU	4.8
9	AJ	58	ASP	4.7
8	AI	8	GLY	4.7
35	DP	73	GLY	4.7
25	BC	124	VAL	4.7
59	DA	2144	U	4.7
57	B1	19	GLN	4.7
54	Be	58	THR	4.7
19	CT	75	ASN	4.7
54	De	82	THR	4.7
32	DK	19	PRO	4.7

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Mol	Chain	Res	Type	RSRZ
23	CY	83	ASP	4.6
38	BS	59	LYS	4.6
60	DB	5	C	4.6
9	AJ	59	SER	4.6
28	BF	27	GLU	4.6
57	D1	16	ASN	4.6
38	DS	60	GLY	4.6
28	DF	176	LEU	4.6
28	DF	192	LEU	4.6
20	CA	1362(A)	C	4.6
25	BC	42	VAL	4.6
54	Be	121	VAL	4.6
25	DC	34	ALA	4.6
44	BY	104	GLY	4.6
12	AM	20	THR	4.5
8	AI	61	ALA	4.5
8	CI	5	TYR	4.5
4	CE	28	PHE	4.5
15	AP	19	ILE	4.5
32	BK	115	LEU	4.5
25	DC	75	VAL	4.5
32	DK	62	ASP	4.5
32	BK	5	VAL	4.4
38	BS	87	PHE	4.4
23	AY	181	LEU	4.4
54	De	99	VAL	4.4
18	AS	66	MET	4.4
57	B1	35	THR	4.4
57	B1	16	ASN	4.4
58	D4	22	ILE	4.4
12	CM	47	ASP	4.4
51	D7	47	ARG	4.4
20	CA	1028(C)	G	4.4
6	AG	79	ARG	4.4
25	DC	215	VAL	4.4
57	B1	25	LYS	4.4
25	DC	137	LEU	4.4
51	B7	49	ARG	4.4
32	DK	10	LEU	4.4
44	BY	108	THR	4.3
15	CP	42	ARG	4.3
59	DA	2146	C	4.3

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Mol	Chain	Res	Type	RSRZ
44	BY	107	ASP	4.3
57	B1	13	ILE	4.3
57	B1	28	GLY	4.3
57	D1	19	GLN	4.3
52	D8	24	ALA	4.3
25	DC	49	GLY	4.3
18	AS	48	THR	4.2
45	DZ	155	LEU	4.2
1	AB	99	GLY	4.2
35	BP	23	PRO	4.2
58	B4	14	ILE	4.2
28	BF	18	ARG	4.2
11	CL	112	ASP	4.2
57	D1	34	THR	4.2
44	BY	106	LEU	4.2
54	De	51	ALA	4.2
2	AC	3	ASN	4.2
26	DD	262	ARG	4.2
25	DC	114	VAL	4.2
15	CP	19	ILE	4.2
4	AE	48	ALA	4.2
59	BA	407	G	4.2
45	DZ	165	VAL	4.1
29	DG	141	PHE	4.1
32	DK	37	PHE	4.1
12	AM	126	LYS	4.1
25	DC	176	VAL	4.1
4	AE	106	PRO	4.1
35	DP	150	ALA	4.1
25	DC	112	ASP	4.1
23	CY	65	ILE	4.1
14	CO	2	PRO	4.1
52	D8	63	PRO	4.1
32	DK	57	ILE	4.1
59	DA	407	G	4.1
25	DC	46	ALA	4.1
8	CI	3	GLN	4.1
25	BC	101	ILE	4.0
8	AI	128	ARG	4.0
25	BC	63	VAL	4.0
25	DC	136	GLY	4.0
13	AN	2	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
25	DC	132	LEU	4.0
32	BK	61	ALA	4.0
11	CL	122	THR	4.0
3	AD	93	PHE	4.0
15	AP	22	THR	4.0
32	DK	112	MET	4.0
23	CY	311	ALA	4.0
58	B4	11	PRO	4.0
25	BC	162	ILE	4.0
58	D4	6	HIS	4.0
6	CG	32	ARG	4.0
23	CY	666	ARG	4.0
51	B7	41	ARG	4.0
25	BC	32	GLU	3.9
35	BP	24	GLY	3.9
16	CQ	38	ARG	3.9
32	BK	114	ASP	3.9
4	AE	135	THR	3.9
54	De	53	PRO	3.9
32	DK	23	VAL	3.9
11	CL	68	ALA	3.9
28	BF	10	PRO	3.9
57	D1	42	GLN	3.9
28	BF	115	ALA	3.9
4	CE	135	THR	3.9
52	D8	12	LYS	3.9
23	CY	104	ALA	3.9
60	DB	4	C	3.9
25	BC	113	ALA	3.9
25	BC	128	LEU	3.9
44	BY	83	THR	3.9
44	DY	108	THR	3.9
33	DN	47	ALA	3.9
42	DW	20	VAL	3.9
44	DY	102	CYS	3.9
12	AM	85	GLY	3.9
39	DT	1	MET	3.9
29	BG	66	GLN	3.8
33	DN	43	THR	3.8
10	CK	32	ILE	3.8
25	BC	39	ASP	3.8
6	CG	80	VAL	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	BF	155	LEU	3.8
4	CE	8	GLU	3.8
8	AI	84	ALA	3.8
49	D5	31	VAL	3.8
18	AS	16	LEU	3.8
32	DK	114	ASP	3.8
22	CV	12	A	3.8
32	DK	12	LEU	3.8
38	BS	43	GLU	3.8
54	Be	73	GLU	3.8
57	D1	13	ILE	3.8
25	DC	209	PHE	3.8
10	AK	128	ALA	3.8
26	DD	267	SER	3.8
38	DS	101	LEU	3.8
29	DG	135	LEU	3.8
17	CR	19	LYS	3.8
32	BK	20	ALA	3.7
9	AJ	8	LEU	3.7
18	AS	65	ASN	3.7
59	BA	2793	G	3.7
28	DF	172	TRP	3.7
1	CB	137	ARG	3.7
58	D4	13	ARG	3.7
23	CY	107	VAL	3.7
28	BF	113	ALA	3.7
1	CB	131	PRO	3.7
28	DF	191	ARG	3.7
23	AY	122	TRP	3.7
1	AB	12	GLU	3.7
51	B7	47	ARG	3.7
29	BG	137	GLU	3.7
11	AL	83	VAL	3.7
54	Be	55	GLU	3.7
33	BN	84	LYS	3.7
25	DC	179	ALA	3.7
15	AP	69	THR	3.6
38	DS	39	ILE	3.6
8	AI	5	TYR	3.6
57	B1	14	VAL	3.6
25	BC	41	THR	3.6
59	DA	2132	U	3.6

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Mol	Chain	Res	Type	RSRZ
23	AY	310	ALA	3.6
12	AM	19	LEU	3.6
54	De	58	THR	3.6
58	B4	31	ILE	3.6
39	BT	138	ALA	3.6
11	AL	86	ARG	3.6
25	BC	59	VAL	3.6
28	DF	8	GLN	3.6
10	AK	129	SER	3.6
19	AT	75	ASN	3.6
29	BG	90	LEU	3.6
58	B4	30	GLU	3.6
60	BB	60	C	3.6
28	DF	185	ASP	3.6
2	AC	2	GLY	3.6
19	CT	89	ARG	3.6
32	BK	112	MET	3.6
33	BN	1	MET	3.6
1	CB	135	GLN	3.5
23	CY	135	PHE	3.5
43	BX	60	ARG	3.5
8	AI	26	VAL	3.5
32	DK	21	PRO	3.5
25	BC	190	ILE	3.5
3	AD	197	PRO	3.5
28	BF	192	LEU	3.5
25	DC	140	ASN	3.5
38	BS	101	LEU	3.5
1	CB	101	MET	3.5
28	BF	194	MET	3.5
32	BK	23	VAL	3.5
6	CG	79	ARG	3.5
52	D8	46	ARG	3.5
38	DS	34	HIS	3.5
23	CY	310	ALA	3.5
32	BK	10	LEU	3.5
32	DK	67	PHE	3.5
52	B8	48	PHE	3.5
36	DQ	27	VAL	3.5
3	CD	122	ARG	3.4
36	DQ	19	GLY	3.4
25	DC	162	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
36	DQ	103	MET	3.4
4	AE	28	PHE	3.4
25	BC	111	PHE	3.4
3	AD	86	LYS	3.4
38	BS	105	ALA	3.4
51	B7	40	TRP	3.4
20	AA	975	A	3.4
50	B6	40	CYS	3.4
52	D8	60	LEU	3.4
25	BC	26	ALA	3.4
57	D1	33	LYS	3.4
20	AA	172	A	3.4
23	CY	531	GLY	3.4
13	AN	37	PHE	3.4
28	DF	155	LEU	3.4
57	D1	18	ILE	3.4
59	DA	2804	C	3.4
8	CI	8	GLY	3.4
28	BF	154	VAL	3.4
51	D7	49	ARG	3.4
54	De	55	GLU	3.4
38	BS	29	PHE	3.4
18	CS	32	LYS	3.4
29	BG	140	ILE	3.4
38	DS	82	ILE	3.4
20	CA	239	U	3.3
9	AJ	47	PHE	3.3
23	AY	103	GLY	3.3
44	BY	30	VAL	3.3
52	D8	54	GLU	3.3
2	CC	3	ASN	3.3
3	AD	125	HIS	3.3
57	D1	35	THR	3.3
59	DA	311	A	3.3
9	AJ	57	LYS	3.3
57	B1	60	PHE	3.3
29	DG	51	ARG	3.3
25	DC	91	GLY	3.3
18	CS	65	ASN	3.3
11	CL	83	VAL	3.3
32	DK	18	THR	3.3
1	CB	170	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
28	BF	157	VAL	3.3
3	AD	84	LYS	3.3
28	DF	134	GLY	3.3
57	B1	43	TYR	3.3
32	DK	84	LEU	3.3
4	AE	18	ARG	3.3
4	CE	120	THR	3.3
25	DC	169	THR	3.3
60	DB	60	C	3.3
25	DC	109	MET	3.3
38	DS	44	LYS	3.3
44	DY	72	VAL	3.3
25	BC	40	GLU	3.3
58	B4	1	MET	3.3
32	DK	16	LYS	3.3
6	CG	156	TRP	3.2
25	DC	170	GLY	3.2
4	AE	9	LYS	3.2
50	D6	13	CYS	3.2
52	D8	15	LYS	3.2
29	BG	136	ARG	3.2
38	DS	40	ILE	3.2
59	DA	2145	C	3.2
43	BX	56	THR	3.2
2	CC	201	TYR	3.2
25	BC	8	TYR	3.2
29	BG	51	ARG	3.2
29	DG	102	PHE	3.2
43	DX	16	LYS	3.2
29	BG	115	ARG	3.2
8	AI	17	VAL	3.2
32	DK	133	SER	3.2
8	CI	16	ARG	3.2
46	D0	75	LEU	3.2
44	BY	103	GLY	3.2
17	CR	20	ALA	3.2
25	DC	92	ALA	3.2
58	B4	12	ALA	3.2
23	CY	66	THR	3.2
25	BC	35	THR	3.2
29	BG	96	ARG	3.2
42	DW	17	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
29	BG	68	PRO	3.2
29	BG	179	PRO	3.2
33	DN	73	THR	3.2
4	CE	14	ARG	3.2
57	B1	42	GLN	3.2
20	CA	974	A	3.2
32	BK	85	GLU	3.2
15	AP	10	GLY	3.2
46	D0	41	ARG	3.2
25	BC	109	MET	3.2
38	BS	35	ILE	3.2
29	BG	135	LEU	3.2
32	DK	27	LEU	3.2
15	CP	18	ARG	3.2
54	De	70	LYS	3.2
23	CY	231	TYR	3.1
25	DC	139	PRO	3.1
36	BQ	19	GLY	3.1
59	BA	2894	G	3.1
59	BA	2161	C	3.1
4	CE	86	ALA	3.1
25	BC	104	ILE	3.1
6	AG	153	HIS	3.1
45	BZ	138	GLU	3.1
33	DN	72	TYR	3.1
32	BK	53	VAL	3.1
38	DS	51	ALA	3.1
46	D0	40	GLN	3.1
8	AI	85	LEU	3.1
10	CK	11	LYS	3.1
15	AP	71	ARG	3.1
46	D0	53	MET	3.1
20	AA	1362(A)	C	3.1
20	AA	353	A	3.1
36	BQ	33	GLY	3.1
46	D0	74	ARG	3.1
37	BR	58	GLY	3.1
10	CK	127	LYS	3.1
54	De	56	GLU	3.1
23	AY	619	ASP	3.1
44	DY	103	GLY	3.1
58	D4	1	MET	3.1

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Mol	Chain	Res	Type	RSRZ
23	CY	105	ILE	3.1
20	CA	1367	C	3.1
16	CQ	69	LYS	3.1
23	CY	18	ALA	3.1
57	B1	18	ILE	3.1
25	BC	138	LEU	3.1
20	AA	1367	C	3.1
20	CA	1098	C	3.1
32	BK	18	THR	3.1
32	BK	120	LEU	3.1
23	AY	106	VAL	3.1
46	B0	19	LYS	3.1
13	AN	3	ARG	3.1
43	DX	34	ALA	3.1
46	D0	85	ALA	3.1
38	BS	33	LYS	3.1
57	D1	40	ARG	3.1
2	CC	200	ALA	3.1
23	AY	255	ILE	3.1
32	BK	65	PHE	3.1
32	DK	41	PHE	3.1
23	AY	612	THR	3.1
20	AA	112	G	3.1
25	DC	79	ALA	3.0
32	DK	120	LEU	3.0
13	AN	15	LYS	3.0
25	DC	135	ARG	3.0
18	CS	33	THR	3.0
27	BE	8	LYS	3.0
8	CI	121	ARG	3.0
28	BF	28	ILE	3.0
29	BG	141	PHE	3.0
10	CK	38	ASN	3.0
8	CI	62	TYR	3.0
23	AY	531	GLY	3.0
32	BK	41	PHE	3.0
54	De	101	GLU	3.0
19	CT	10	LEU	3.0
54	Be	59	GLU	3.0
23	CY	122	TRP	3.0
57	D1	21	ARG	3.0
28	BF	8	GLN	3.0

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Mol	Chain	Res	Type	RSRZ
8	CI	61	ALA	3.0
25	BC	164	PHE	3.0
35	DP	84	ASN	3.0
25	BC	132	LEU	3.0
44	BY	5	MET	3.0
38	DS	59	LYS	3.0
20	AA	1049	U	3.0
8	AI	20	ARG	3.0
10	AK	31	THR	3.0
19	AT	33	ILE	3.0
29	BG	157	ILE	3.0
29	DG	14	GLU	3.0
38	BS	40	ILE	3.0
57	B1	41	ARG	3.0
29	BG	74	LYS	3.0
45	DZ	156	LYS	3.0
28	BF	116	ASP	3.0
15	CP	35	LYS	3.0
1	CB	99	GLY	3.0
19	AT	28	ALA	3.0
20	CA	353	A	3.0
4	AE	27	ARG	3.0
10	CK	128	ALA	3.0
12	AM	10	PRO	3.0
4	AE	44	GLY	3.0
50	D6	33	LYS	3.0
51	B7	48	LYS	3.0
2	CC	190	ARG	3.0
11	AL	56	ALA	3.0
57	B1	17	SER	3.0
1	CB	16	HIS	2.9
13	AN	14	PRO	2.9
29	DG	2	PRO	2.9
12	AM	83	ASP	2.9
16	AQ	63	ARG	2.9
35	DP	67	MET	2.9
38	BS	88	ASP	2.9
28	BF	176	LEU	2.9
28	DF	181	LEU	2.9
9	AJ	53	PRO	2.9
25	BC	115	VAL	2.9
15	CP	14	ASN	2.9

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Mol	Chain	Res	Type	RSRZ
25	BC	68	GLY	2.9
46	D0	22	GLY	2.9
4	CE	106	PRO	2.9
32	BK	58	THR	2.9
32	BK	37	PHE	2.9
3	AD	94	LEU	2.9
33	DN	41	ASP	2.9
57	B1	24	ALA	2.9
25	BC	83	LYS	2.9
3	CD	93	PHE	2.9
57	D1	32	LYS	2.9
25	BC	125	GLY	2.9
52	B8	43	GLN	2.9
11	AL	119	LYS	2.9
38	DS	49	VAL	2.9
9	CJ	55	LYS	2.9
58	D4	30	GLU	2.9
11	AL	68	ALA	2.9
20	AA	1302	U	2.9
16	CQ	85	VAL	2.9
44	BY	31	LEU	2.9
35	DP	75	ILE	2.9
59	DA	2612	C	2.9
2	CC	59	ARG	2.9
50	D6	23	THR	2.9
23	AY	228	MET	2.9
25	DC	133	GLY	2.9
18	AS	17	GLU	2.9
20	AA	104	G	2.9
59	DA	2893	G	2.9
25	BC	65	LEU	2.9
29	DG	155	MET	2.9
35	BP	22	GLY	2.9
20	AA	389	A	2.9
2	CC	163	ALA	2.9
9	CJ	59	SER	2.9
29	BG	39	ILE	2.9
46	B0	56	ASP	2.9
54	De	59	GLU	2.9
8	CI	60	ASP	2.8
53	B9	37	GLY	2.8
28	DF	118	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
4	CE	85	GLY	2.8
20	AA	1440(B)	G	2.8
10	AK	44	SER	2.8
2	CC	131	ARG	2.8
41	BV	12	TYR	2.8
12	AM	15	VAL	2.8
25	DC	124	VAL	2.8
35	DP	105	LEU	2.8
57	D1	23	LYS	2.8
52	D8	11	LYS	2.8
52	D8	65	GLU	2.8
25	BC	34	ALA	2.8
25	BC	79	ALA	2.8
12	AM	39	ILE	2.8
45	BZ	95	PRO	2.8
59	DA	2333	A	2.8
2	AC	97	LYS	2.8
35	DP	63	PRO	2.8
14	AO	54	ARG	2.8
11	AL	87	GLY	2.8
37	DR	98	LEU	2.8
25	DC	163	GLU	2.8
43	BX	8	ILE	2.8
32	BK	3	LYS	2.8
23	AY	19	ALA	2.8
25	DC	26	ALA	2.8
20	CA	1129	C	2.8
25	DC	128	LEU	2.8
50	B6	28	ARG	2.8
54	Be	63	ILE	2.8
57	D1	37	ILE	2.8
38	BS	42	ASP	2.8
46	D0	73	GLY	2.8
28	BF	186	ILE	2.8
20	AA	390	C	2.8
54	De	54	ALA	2.8
10	AK	127	LYS	2.8
38	DS	35	ILE	2.8
58	B4	25	TYR	2.8
41	BV	75	PHE	2.8
58	B4	29	PRO	2.8
4	CE	132	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
15	AP	34	GLU	2.8
59	BA	2807	G	2.8
9	AJ	67	THR	2.8
23	AY	132	ARG	2.8
12	CM	124	PRO	2.8
15	AP	14	ASN	2.7
29	DG	179	PRO	2.7
2	AC	26	LYS	2.7
52	D8	34	TRP	2.7
12	CM	85	GLY	2.7
20	AA	1129	C	2.7
23	CY	382	GLU	2.7
29	DG	90	LEU	2.7
44	DY	36	ALA	2.7
46	D0	58	THR	2.7
11	AL	32	PHE	2.7
11	CL	87	GLY	2.7
25	DC	76	LEU	2.7
8	AI	123	PRO	2.7
59	DA	1600	C	2.7
29	DG	41	GLN	2.7
3	AD	126	ILE	2.7
13	CN	37	PHE	2.7
20	CA	68(L)	U	2.7
8	AI	88	TYR	2.7
1	CB	70	PHE	2.7
4	AE	131	ILE	2.7
23	AY	105	ILE	2.7
32	DK	56	GLU	2.7
54	Be	77	GLU	2.7
33	DN	1	MET	2.7
15	AP	16	HIS	2.7
28	BF	134	GLY	2.7
29	BG	178	PHE	2.7
34	DO	76	ALA	2.7
3	AD	75	PHE	2.7
36	DQ	28	ALA	2.7
12	AM	98	VAL	2.7
20	CA	1363	A	2.7
36	BQ	103	MET	2.7
29	BG	75	LYS	2.7
4	AE	14	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
43	BX	21	PHE	2.7
19	CT	20	LEU	2.7
57	D1	43	TYR	2.7
2	AC	185	GLY	2.7
28	DF	124	LEU	2.7
44	BY	6	HIS	2.7
10	AK	42	TRP	2.7
28	BF	135	LYS	2.7
27	BE	163	GLU	2.6
30	DH	178	ALA	2.6
38	BS	39	ILE	2.6
30	BH	161	GLY	2.6
7	CH	24	THR	2.6
9	AJ	55	LYS	2.6
18	AS	63	THR	2.6
32	DK	60	TYR	2.6
13	AN	19	ARG	2.6
25	DC	52	PRO	2.6
29	DG	92	VAL	2.6
36	DQ	140	ALA	2.6
38	DS	106	ARG	2.6
25	DC	174	ALA	2.6
50	D6	36	LEU	2.6
15	AP	35	LYS	2.6
7	AH	70	GLN	2.6
9	AJ	56	HIS	2.6
29	DG	39	ILE	2.6
45	DZ	144	LEU	2.6
32	DK	64	SER	2.6
8	AI	86	VAL	2.6
43	DX	33	LYS	2.6
3	AD	209	ARG	2.6
16	CQ	20	THR	2.6
57	B1	21	ARG	2.6
12	AM	34	LEU	2.6
19	CT	55	ILE	2.6
23	AY	369	LEU	2.6
57	B1	40	ARG	2.6
38	DS	27	SER	2.6
12	CM	122	LYS	2.6
4	AE	15	ARG	2.6
19	AT	23	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
22	CV	13	A	2.6
25	DC	129	GLY	2.6
57	D1	20	ARG	2.6
59	DA	2351	G	2.6
23	AY	4	LYS	2.6
23	AY	118	SER	2.6
29	BG	182	LYS	2.6
44	DY	3	VAL	2.6
50	D6	54	ILE	2.6
57	B1	10	LYS	2.6
11	CL	102	ARG	2.6
30	BH	170	ARG	2.6
33	BN	50	ASP	2.6
34	BO	11	ALA	2.6
42	DW	73	ALA	2.6
8	CI	88	TYR	2.6
29	BG	5	VAL	2.6
57	B1	39	LYS	2.6
25	BC	145	THR	2.6
40	DU	6	THR	2.6
4	CE	48	ALA	2.6
28	DF	129	PHE	2.6
35	BP	110	TYR	2.6
20	CA	706	A	2.6
57	B1	12	PRO	2.6
59	BA	2802	G	2.6
25	BC	58	ASN	2.6
17	AR	22	VAL	2.6
25	BC	137	LEU	2.6
4	AE	104	ALA	2.6
15	AP	31	LYS	2.6
19	AT	18	GLN	2.6
2	CC	26	LYS	2.6
15	CP	37	GLY	2.6
19	CT	71	THR	2.6
42	BW	105	VAL	2.6
32	BK	84	LEU	2.6
57	B1	20	ARG	2.6
58	B4	27	THR	2.6
6	CG	86	GLN	2.6
28	BF	92	PRO	2.6
8	AI	60	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
25	DC	111	PHE	2.6
28	DF	23	ASP	2.6
15	AP	59	TRP	2.5
1	CB	54	THR	2.5
58	D4	23	GLU	2.5
52	B8	33	ASN	2.5
2	AC	190	ARG	2.5
25	DC	190	ILE	2.5
25	BC	221	PRO	2.5
60	BB	5	C	2.5
11	AL	93	LEU	2.5
25	BC	87	ALA	2.5
35	DP	7	ARG	2.5
57	D1	14	VAL	2.5
9	CJ	42	THR	2.5
29	BG	102	PHE	2.5
36	DQ	106	VAL	2.5
42	DW	111	HIS	2.5
57	D1	12	PRO	2.5
28	BF	181	LEU	2.5
44	DY	22	GLY	2.5
29	BG	54	GLU	2.5
25	BC	49	GLY	2.5
8	AI	77	ILE	2.5
42	BW	2	GLU	2.5
30	BH	115	VAL	2.5
4	AE	128	PRO	2.5
25	DC	47	LYS	2.5
29	BG	6	ALA	2.5
57	D1	30	VAL	2.5
20	AA	971	G	2.5
39	DT	106	SER	2.5
58	D4	25	TYR	2.5
60	BB	26	A	2.5
3	CD	2	GLY	2.5
25	DC	39	ASP	2.5
4	CE	131	ILE	2.5
9	CJ	48	THR	2.5
11	CL	99	HIS	2.5
45	DZ	97	GLU	2.5
20	AA	31	G	2.5
32	DK	24	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
35	BP	47	ASP	2.5
38	DS	109	GLY	2.5
27	BE	204	ALA	2.5
59	DA	1637	A	2.5
20	AA	1066	C	2.5
8	AI	6	GLY	2.5
25	BC	112	ASP	2.5
36	BQ	97	VAL	2.5
44	DY	70	SER	2.5
12	CM	123	ALA	2.5
25	BC	140	ASN	2.5
29	DG	178	PHE	2.5
44	DY	33	LYS	2.5
27	DE	73	GLU	2.5
28	BF	19	GLU	2.5
2	CC	24	ALA	2.5
4	CE	27	ARG	2.5
25	DC	125	GLY	2.5
1	CB	28	PHE	2.5
23	AY	311	ALA	2.5
29	DG	87	PRO	2.5
35	DP	74	GLU	2.5
3	CD	118	ARG	2.5
8	AI	117	HIS	2.5
20	CA	330	C	2.5
20	CA	1028(D)	C	2.5
28	BF	190	GLU	2.5
52	B8	46	ARG	2.5
25	BC	136	GLY	2.5
28	BF	139	PHE	2.5
29	BG	49	ASP	2.5
25	BC	44	VAL	2.5
3	AD	138	TYR	2.4
12	AM	122	LYS	2.4
16	AQ	70	ARG	2.4
29	BG	151	ALA	2.4
52	D8	23	VAL	2.4
58	B4	16	CYS	2.4
1	CB	90	MET	2.4
52	B8	47	LYS	2.4
12	CM	52	GLU	2.4
15	AP	66	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
35	DP	70	GLN	2.4
59	DA	1008	C	2.4
12	AM	123	ALA	2.4
19	CT	16	HIS	2.4
21	CW	20(A)	U	2.4
54	Be	118	VAL	2.4
37	BR	2	ARG	2.4
42	BW	113	LYS	2.4
15	CP	11	SER	2.4
4	CE	11	ILE	2.4
20	CA	824	C	2.4
57	D1	17	SER	2.4
16	CQ	10	VAL	2.4
57	B1	37	ILE	2.4
28	BF	172	TRP	2.4
28	DF	189	THR	2.4
33	DN	37	LYS	2.4
52	B8	57	ARG	2.4
15	AP	32	TYR	2.4
25	DC	44	VAL	2.4
54	Be	53	PRO	2.4
9	AJ	48	THR	2.4
20	CA	1238	A	2.4
6	AG	32	ARG	2.4
17	AR	29	PHE	2.4
10	CK	30	VAL	2.4
18	AS	36	ARG	2.4
33	DN	84	LYS	2.4
32	DK	85	GLU	2.4
35	BP	27	HIS	2.4
52	D8	28	GLY	2.4
45	DZ	163	LEU	2.4
19	CT	98	PRO	2.4
3	AD	85	LYS	2.4
35	DP	71	VAL	2.4
43	BX	3	THR	2.4
36	DQ	33	GLY	2.4
25	DC	32	GLU	2.4
7	CH	31	PHE	2.4
15	CP	36	ILE	2.4
1	CB	114	ARG	2.4
20	AA	916	G	2.4

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Mol	Chain	Res	Type	RSRZ
25	BC	139	PRO	2.4
25	DC	110	ASP	2.4
45	DZ	149	SER	2.4
25	BC	4	HIS	2.4
49	D5	30	LEU	2.4
12	CM	87	TYR	2.4
18	CS	42	PRO	2.4
23	CY	181	LEU	2.4
32	DK	66	THR	2.4
20	CA	173	U	2.4
59	BA	382	G	2.4
59	BA	2116	G	2.4
59	BA	2144	U	2.4
60	DB	25	A	2.4
47	B2	37	PHE	2.4
38	DS	14	VAL	2.4
12	AM	119	GLY	2.4
18	CS	15	LEU	2.4
23	AY	356	LEU	2.4
23	CY	532	GLY	2.4
20	AA	306	G	2.4
28	DF	157	VAL	2.4
32	BK	108	ALA	2.4
43	DX	56	THR	2.4
54	Be	120	ALA	2.4
54	De	60	PHE	2.4
11	CL	82	VAL	2.4
32	BK	116	ASN	2.4
3	AD	87	GLY	2.3
25	DC	106	ASP	2.3
39	BT	2	ASN	2.3
40	BU	94	ASN	2.3
32	BK	22	PRO	2.3
1	CB	144	ARG	2.3
44	BY	88	LYS	2.3
29	BG	46	ALA	2.3
60	DB	28	C	2.3
10	AK	75	TYR	2.3
11	CL	53	ARG	2.3
18	AS	32	LYS	2.3
33	DN	44	PRO	2.3
53	D9	28	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
10	CK	73	MET	2.3
1	CB	30	ARG	2.3
37	DR	47	PHE	2.3
59	BA	2147	G	2.3
12	CM	8	GLU	2.3
25	DC	50	ILE	2.3
28	DF	154	VAL	2.3
28	BF	111	ALA	2.3
12	CM	83	ASP	2.3
32	DK	79	ARG	2.3
52	D8	13	ARG	2.3
25	BC	62	THR	2.3
9	CJ	57	LYS	2.3
12	CM	56	LEU	2.3
25	DC	81	GLY	2.3
25	DC	15	VAL	2.3
16	AQ	96	GLU	2.3
45	DZ	83	PRO	2.3
23	CY	19	ALA	2.3
33	DN	4	TYR	2.3
51	D7	41	ARG	2.3
52	D8	16	ILE	2.3
20	CA	1230	C	2.3
38	DS	57	LYS	2.3
59	BA	2804	C	2.3
20	CA	66	G	2.3
20	CA	104	G	2.3
59	DA	2334	G	2.3
25	DC	127	LYS	2.3
43	BX	58	HIS	2.3
45	BZ	127	LYS	2.3
14	AO	88	ARG	2.3
28	DF	156	LEU	2.3
20	CA	975	A	2.3
32	DK	65	PHE	2.3
16	AQ	21	VAL	2.3
16	AQ	23	VAL	2.3
26	BD	38	LYS	2.3
39	BT	137	LYS	2.3
52	D8	7	HIS	2.3
11	AL	31	PRO	2.3
59	BA	2115	G	2.3

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Mol	Chain	Res	Type	RSRZ
11	AL	85	ILE	2.3
23	AY	133	ILE	2.3
36	DQ	97	VAL	2.3
8	AI	126	SER	2.3
18	CS	35	SER	2.3
52	D8	29	LYS	2.3
27	BE	104	VAL	2.3
12	CM	49	THR	2.3
1	CB	102	LEU	2.3
44	DY	84	ARG	2.3
10	CK	39	PRO	2.3
25	DC	164	PHE	2.3
32	DK	61	ALA	2.3
36	DQ	104	PHE	2.3
50	B6	24	GLU	2.3
38	BS	20	ARG	2.3
4	AE	43	LEU	2.3
20	AA	1319	A	2.3
25	BC	43	GLU	2.3
32	DK	20	ALA	2.3
20	CA	1235	U	2.3
27	BE	76	ARG	2.3
11	CL	67	THR	2.3
28	DF	18	ARG	2.3
27	DE	54	GLN	2.2
8	CI	25	LYS	2.2
32	BK	9	LYS	2.2
4	AE	8	GLU	2.2
4	AE	11	ILE	2.2
8	AI	81	ILE	2.2
12	CM	15	VAL	2.2
29	BG	25	TYR	2.2
44	BY	105	ALA	2.2
20	AA	121	C	2.2
20	CA	1296	C	2.2
4	CE	12	LEU	2.2
29	BG	2	PRO	2.2
30	BH	154	PRO	2.2
33	BN	83	LYS	2.2
12	CM	88	ARG	2.2
37	DR	2	ARG	2.2
11	CL	35	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
8	AI	124	GLN	2.2
16	AQ	2	PRO	2.2
30	BH	123	PHE	2.2
38	DS	65	VAL	2.2
2	AC	20	SER	2.2
43	BX	7	VAL	2.2
10	AK	86	GLY	2.2
23	CY	209	ALA	2.2
25	DC	131	ILE	2.2
30	BH	120	GLY	2.2
43	DX	8	ILE	2.2
4	CE	47	LYS	2.2
14	AO	87	ILE	2.2
10	AK	11	LYS	2.2
12	CM	126	LYS	2.2
52	D8	59	LYS	2.2
2	CC	31	HIS	2.2
8	AI	14	VAL	2.2
20	AA	974	A	2.2
6	CG	38	LEU	2.2
9	AJ	65	LEU	2.2
38	BS	37	ALA	2.2
48	D3	28	LEU	2.2
28	BF	129	PHE	2.2
38	DS	29	PHE	2.2
23	CY	330	VAL	2.2
32	DK	107	ILE	2.2
25	DC	69	LEU	2.2
42	BW	73	ALA	2.2
46	B0	77	ARG	2.2
58	B4	13	ARG	2.2
3	AD	198	VAL	2.2
25	DC	33	LEU	2.2
3	AD	200	GLU	2.2
8	AI	46	ALA	2.2
11	AL	69	TYR	2.2
29	DG	106	LEU	2.2
35	BP	30	THR	2.2
35	DP	5	ASP	2.2
13	CN	19	ARG	2.2
44	BY	3	VAL	2.2
2	AC	186	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
9	AJ	54	PHE	2.2
25	BC	74	ARG	2.2
20	AA	1079	G	2.2
29	DG	103	LEU	2.2
58	D4	14	ILE	2.2
27	BE	162	ALA	2.2
35	DP	50	ARG	2.2
17	CR	29	PHE	2.2
38	BS	34	HIS	2.2
38	BS	53	SER	2.2
28	BF	58	ALA	2.2
10	CK	33	THR	2.2
42	BW	94	ASP	2.2
59	DA	2382	G	2.2
43	DX	39	ILE	2.2
6	CG	85	TYR	2.2
10	AK	43	SER	2.2
42	BW	101	SER	2.2
43	DX	18	TYR	2.2
50	D6	39	TYR	2.2
17	CR	22	VAL	2.2
25	DC	172	ILE	2.2
25	DC	165	ARG	2.2
1	CB	66	GLY	2.2
1	CB	150	SER	2.2
54	Be	54	ALA	2.2
12	AM	18	ALA	2.2
59	DA	1759	A	2.2
25	BC	2	PRO	2.2
30	BH	155	SER	2.2
35	BP	72	PRO	2.2
8	CI	117	HIS	2.1
58	D4	9	LEU	2.1
12	CM	43	THR	2.1
18	AS	41	VAL	2.1
45	BZ	96	VAL	2.1
58	B4	4	GLY	2.1
36	DQ	25	ASP	2.1
50	B6	35	GLU	2.1
12	AM	91	ARG	2.1
4	AE	132	ALA	2.1
20	AA	1364	U	2.1

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Mol	Chain	Res	Type	RSRZ
25	DC	77	ALA	2.1
27	BE	193	GLY	2.1
1	AB	148	TYR	2.1
28	DF	112	MET	2.1
29	DG	54	GLU	2.1
54	De	98	PRO	2.1
19	AT	19	SER	2.1
21	CW	16	U	2.1
32	DK	96	VAL	2.1
3	CD	198	VAL	2.1
18	AS	74	PHE	2.1
32	DK	11	GLN	2.1
8	AI	76	ALA	2.1
10	CK	29	ILE	2.1
23	CY	227	ILE	2.1
28	DF	27	GLU	2.1
30	DH	162	ILE	2.1
50	B6	17	LYS	2.1
52	B8	27	THR	2.1
49	D5	41	PRO	2.1
12	CM	102	ARG	2.1
45	DZ	137	ILE	2.1
15	AP	15	PRO	2.1
35	DP	57	THR	2.1
54	Be	82	THR	2.1
4	CE	87	SER	2.1
34	BO	76	ALA	2.1
20	AA	1097	C	2.1
36	BQ	34	LEU	2.1
12	AM	17	VAL	2.1
3	AD	90	GLY	2.1
23	CY	116	PRO	2.1
37	DR	36	THR	2.1
25	BC	5	GLY	2.1
1	CB	154	LEU	2.1
22	AV	5	A	2.1
34	BO	2	ILE	2.1
52	D8	10	ALA	2.1
4	AE	33	VAL	2.1
11	AL	74	GLY	2.1
25	BC	50	ILE	2.1
33	DN	42	TRP	2.1

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Mol	Chain	Res	Type	RSRZ
37	BR	73	VAL	2.1
25	BC	207	GLY	2.1
58	D4	32	TYR	2.1
12	CM	20	THR	2.1
25	BC	123	ALA	2.1
41	DV	7	THR	2.1
4	AE	45	PHE	2.1
52	B8	25	MET	2.1
11	CL	66	VAL	2.1
58	D4	3	GLU	2.1
59	DA	426	C	2.1
4	AE	12	LEU	2.1
30	DH	170	ARG	2.1
44	DY	34	LYS	2.1
52	D8	5	LYS	2.1
1	CB	98	LEU	2.1
4	CE	30	ALA	2.1
32	DK	13	PRO	2.1
7	AH	129	VAL	2.1
16	CQ	71	PHE	2.1
35	BP	67	MET	2.1
59	BA	2815	C	2.1
60	BB	4	C	2.1
2	AC	188	LEU	2.1
45	BZ	166	SER	2.1
48	B3	23	LEU	2.1
54	Be	97	GLY	2.1
36	BQ	40	ALA	2.1
42	BW	3	ALA	2.1
32	DK	39	LYS	2.1
19	CT	84	LEU	2.1
57	B1	85	LEU	2.1
25	BC	150	ILE	2.1
15	CP	9	PHE	2.1
1	AB	101	MET	2.1
32	BK	123	ALA	2.1
36	BQ	20	ALA	2.1
59	BA	2132	U	2.1
13	CN	13	THR	2.0
1	AB	210	SER	2.0
38	DS	20	ARG	2.0
2	AC	24	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
6	CG	83	ALA	2.0
15	AP	1	MET	2.0
19	CT	26	ASN	2.0
27	DE	162	ALA	2.0
42	DW	16	LYS	2.0
45	DZ	166	SER	2.0
52	B8	49	VAL	2.0
54	De	120	ALA	2.0
29	DG	152	LEU	2.0
8	AI	121	ARG	2.0
9	CJ	56	HIS	2.0
36	BQ	132	VAL	2.0
38	BS	52	SER	2.0
39	BT	63	VAL	2.0
42	DW	105	VAL	2.0
46	B0	57	PHE	2.0
6	CG	116	ALA	2.0
43	DX	32	PRO	2.0
54	Be	104	SER	2.0
38	DS	68	GLN	2.0
58	D4	28	LYS	2.0
18	AS	44	MET	2.0
20	CA	962	C	2.0
25	BC	163	GLU	2.0
27	BE	10	GLY	2.0
59	DA	1948	G	2.0
4	AE	138	ALA	2.0
37	BR	50	HIS	2.0
27	BE	11	MET	2.0
2	CC	185	GLY	2.0
6	CG	137	LYS	2.0
10	CK	43	SER	2.0
57	B1	44	PRO	2.0
37	DR	69	ASP	2.0
16	CQ	45	HIS	2.0
32	DK	88	ALA	2.0
3	AD	118	ARG	2.0
4	AE	25	ARG	2.0
11	CL	113	ARG	2.0
57	D1	22	GLY	2.0
12	CM	19	LEU	2.0
25	BC	210	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
42	DW	113	LYS	2.0
57	D1	25	LYS	2.0
15	AP	37	GLY	2.0
23	AY	119	GLU	2.0
28	DF	174	VAL	2.0
30	BH	89	ILE	2.0
42	DW	45	TYR	2.0
57	D1	36	GLY	2.0
1	CB	97	TRP	2.0
11	AL	129	ALA	2.0
33	BN	74	ARG	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
24	UAL	AU	5	9/10	0.65	0.51	-	149,151,153,154	0
24	DPP	AU	2	6/7	0.64	0.32	-	153,153,154,154	0
24	KBE	AU	1	9/10	0.81	0.34	-	154,155,156,156	0
24	KBE	CU	1	9/10	0.86	0.34	-	69,74,77,77	0
24	DPP	CU	2	6/7	0.83	0.21	-	77,79,80,82	0
24	5OH	AU	6	12/13	0.81	0.50	-	151,153,154,154	0
24	5OH	CU	6	12/13	0.75	0.42	-	84,88,89,89	0
24	UAL	CU	5	9/10	0.88	0.39	-	89,90,91,91	0

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors

of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
61	FUA	AY	701	37/37	0.82	0.47	4.41	154,155,156,156	0
62	GDP	AY	702	28/28	0.80	0.27	2.86	78,82,83,84	0
62	GDP	CY	702	28/28	0.74	0.36	2.18	78,82,83,84	0
61	FUA	CY	701	37/37	0.52	0.62	1.23	199,200,202,202	0
63	MG	BA	2901	1/1	0.89	0.14	-0.38	5,5,5,5	0
63	MG	CY	703	1/1	0.98	0.08	-	1,1,1,1	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.